

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

**CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
ACT OF 1934**

Date of Report (Date of earliest event reported): **May 2, 2006**

Axcelis Technologies, Inc.
(Exact name of registrant as specified in charter)

Delaware
(State or other jurisdiction of
incorporation)

000-30941
(Commission File Number)

34-1818596
(IRS Employer Identification No.)

108 Cherry Hill Drive, Beverly, Massachusetts
(Address of principal executive offices)

01915
(Zip Code)

Registrant's telephone number, including area code: **(978) 787-4000**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement

On May 2, 2006, Axcelis Technologies, Inc. (the "Company") entered into an exchange and purchase agreement pursuant to which Quantum Partners LDC ("Quantum"), the holder of an aggregate of approximately \$50.8 million of the Company's existing 4.25% Convertible Subordinated Notes due January 15, 2007 (the "Old Notes"), agreed to exchange its Old Notes for \$50.8 million in aggregate principal amount of the Company's newly issued 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "New Notes"), plus accrued and unpaid interest on the Old Notes through but excluding May 2, 2006, the closing date of the exchange. In addition, the Company issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes outstanding.

Following the execution of the exchange and purchase agreement, on May 2, 2006 the Company issued the New Notes pursuant to an indenture, dated as of May 2, 2006, between the Company and U.S. Bank National Association, as trustee, a copy of which (including the form of New Note) is filed as Exhibit 4.1 to this Current Report on Form 8-K and is incorporated by reference into this Item 1.01. The Company also paid an aggregate of approximately \$641 thousand in accrued and unpaid interest on the Old Notes that were exchanged for New Notes. Following the completion of the exchange, approximately \$74.2 million in aggregate principal amount of Old Notes remains outstanding.

The New Notes are unsecured senior indebtedness of the Company and bear interest at the rate of 4.25% per annum. Interest is payable on January 15 and July 15 of each year, commencing July 15, 2006. The New Notes mature on January 15, 2009. At maturity, the Company is required to repay the outstanding principal of the New Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%.

The terms of the indenture restrict the Company's ability to incur any new indebtedness senior to or pari passu with the New Notes, or for any of its subsidiaries to incur any new indebtedness without becoming a guarantor of the New Notes, in each case subject to a number of exceptions and qualifications.

The principal amount of the New Notes, together with the Applicable Premium (as defined in the indenture), which increases over the term of the notes in accordance with the schedule below, as of the conversion date, are convertible at the option of the holder, at any time on or prior to maturity, into

shares of the Company's common stock at a conversion price equal to \$20.00 per share, which also is the conversion price of the Old Notes, subject to adjustment in certain circumstances.

<u>Date</u>	<u>Applicable Premium (percentage of principal amount)</u>
May 2, 2006	0.850%
July 15, 2006	0.850%
January 15, 2007	2.685%
July 15, 2007	4.670%
January 15, 2008	6.750%
July 15, 2008	8.900%
January 14, 2009	11.125%

The Applicable Premium increases over time between the dates specified above as set forth in the indenture.

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At any time prior to maturity, the Company may redeem the New Notes in whole or in part at the Repurchase Value (as defined in the indenture), which increases over the term of the notes in accordance with the schedule below, as of the redemption date (plus any and all accrued and unpaid interest):

<u>Date</u>	<u>Redemption Value (percentage of principal amount)</u>
May 2, 2006	100.85%
July 15, 2006	101.21%
January 15, 2007	104.12%
July 15, 2007	107.20%
January 15, 2008	110.45%
July 15, 2008	113.85%
January 14, 2009	117.40%

The Repurchase Value increases over time between the dates specified above as set forth in the indenture.

If a Fundamental Change (as defined in the indenture) occurs at any time prior to maturity, the holder of the New Notes may require the Company to redeem all or a portion of the New Notes for cash at the Repurchase Value as of the redemption date, plus any and all accrued and unpaid interest.

If there is an event of default on the New Notes, the principal amount of the New Notes, the Applicable Premium thereon and accrued interest may be declared immediately due and payable, subject to certain conditions set forth in the indenture. These amounts automatically become due and payable in the case of certain types of bankruptcy or insolvency events involving the Company. The following are events of default under the New Notes:

- the Company fails to pay any interest on the New Notes when due and such failure continues for a period of 30 days;
- the Company fails to pay principal, premium or Repurchase Value when due at maturity, upon redemption or otherwise on the notes;
- the Company fails to perform or observe any of the covenants in the indenture for 60 days after notice;
- specified events involving the Company's bankruptcy, insolvency or reorganization. and
- default under certain other indebtedness of the Company if that default results in acceleration of such other indebtedness.

Also on May 2, 2006, in connection with the issuance of the New Notes, the Company entered into a registration rights agreement with Quantum, a copy of which is filed as Exhibit 10.1 to this Current Report on Form 8-K and is incorporated by reference into this Item 1.01. Pursuant to the terms of the registration rights agreement, the Company agreed to file on or before 90 days after May 2, 2006, and to use its reasonable best efforts to cause to become effective on or before 180 days after May 2, 2006, a shelf registration statement covering resales of the New Notes and the shares of common stock issuable upon conversion of the New Notes. If the Company fails to satisfy certain filing and other obligations with respect to the shelf registration statement, including failing to file within 90 days or to cause the shelf registration statement to be declared effective within 180 days, then the Company will be obligated to make additional payments on the New Notes at the rate of 0.50% per annum.

The foregoing descriptions of the indenture and the registration rights agreement are only summaries and are qualified in their entirety by the full text of the indenture and the registration rights agreement, which are incorporated by reference herein.

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The New Notes were issued in a private offering to a qualified institutional buyer. The offering was exempt from registration under Section 4(2) of the Securities Act of 1933 based on the qualifications of the investor and the manner of offering.

Item 2.02 Results of Operations and Financial Condition

On May 4, 2006, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended March 31, 2006. The Company's press release is attached as Exhibit 99.2 to this Current Report on Form 8-K and incorporated by reference herein.

The information under this Item in this Current Report on Form 8-K and Exhibit 99.2 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, regardless of any general incorporation language in such filing.

Item 2.03 Creation of a Direct Financial Obligation or an Obligation Under an Off-Balance Sheet Arrangement of a Registrant

See Item 1.01 above, which is incorporated by reference herein.

Item 3.02 Unregistered Sales of Equity Securities

See Item 1.01 above, which is incorporated by reference herein.

Item 8.01 Other Events

On May 3, 2006, the Company issued a press release announcing the completion of an institutional private placement of convertible senior subordinated notes. The press release is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

Item 9.01 Financial Statements and Exhibits

- (c) Exhibits
- 4.12 Indenture, dated as of May 2, 2006, between Axcelis Technologies, Inc. and U.S. Bank National Association, as Trustee.
- 10.1 Registration Rights Agreement dated as of May 2, 2006 between Axcelis Technologies, Inc. and Quantum Partners LDC.
- 99.1 Press release, dated May 3, 2006.
- 99.2 Press release, dated May 4, 2006.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: May 4, 2006

Axcelis Technologies, Inc.

By: /S/ STEPHEN G. BASSETT
Stephen G. Bassett
Executive Vice President and Chief Financial Officer

EXHIBIT INDEX

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- 99.1 Press release, dated May 3, 2006.
- 99.2 Press release, dated May 4, 2006.

AXCELIS TECHNOLOGIES, INC.

To

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

INDENTURE

Dated as of

May 2, 2006

4¼% Convertible Senior Subordinated Notes Due 2009

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INDENTURE

INDENTURE dated as of May 2, 2006 between Axcelis Technologies, Inc., a Delaware corporation (hereinafter called the “**Company**”), having its principal office at 108 Cherry Hill Drive, Beverly, Massachusetts 01915 and U.S. Bank National Association, a national banking association, as trustee hereunder (hereinafter called the “**Trustee**”), having its principal corporate trust office at One Federal Street, 3rd Floor, Boston, Massachusetts 02110.

WITNESSETH:

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the issue of its 4¼% Convertible Senior Subordinated Notes Due 2009 (hereinafter called the “**Notes**”), in an aggregate principal amount not to exceed \$75,000,000 and, to provide the terms and conditions upon which the Notes are to be authenticated, issued and delivered, the Company has duly authorized the execution and delivery of this Indenture; and

WHEREAS, the Notes, the certificate of authentication to be borne by the Notes, a form of assignment, a form of option to elect repayment upon a Fundamental Change, and a form of conversion notice to be borne by the Notes are to be substantially in the forms hereinafter provided for; and

WHEREAS, all acts and things necessary to make the Notes, when executed by the Company and authenticated and delivered by the Trustee or a duly authorized authenticating agent, as in this Indenture provided, the valid, binding and legal obligations of the Company, and to constitute this Indenture a valid agreement according to its terms, have been done and performed, and the execution of this Indenture and the issue hereunder of the Notes have in all respects been duly authorized,

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That in order to declare the terms and conditions upon which the Notes are, and are to be, authenticated, issued and delivered, and in consideration of the premises and of the purchase and acceptance of the Notes by the holders thereof, the Company covenants and agrees with the Trustee for the equal and proportionate benefit of the respective holders from time to time of the Notes (except as otherwise provided below), as follows:

ARTICLE 1

DEFINITIONS

SECTION 1.01. *Definitions.* The terms defined in this Section 1.01 (except as herein otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section 1.01 All other terms used in this Indenture that are defined in the Trust Indenture Act or which are by reference therein defined in the Securities Act (except as herein otherwise expressly provided or unless the context otherwise requires) shall have the meanings assigned to

such terms in said Trust Indenture Act and in said Securities Act as in force at the date of the execution of this Indenture. The words “herein”, “hereof”, “hereunder”, and words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other Subdivision. The terms defined in this Article include the plural as well as the singular.

“**Accepted Purchased Shares**” has the meaning specified in Section 15.05(g).

“**Accrual Date**” has the meaning specified in the definition of “Repurchase Value”.

“**Acquired Indebtedness**” means, with respect to any specified Person, Indebtedness of any other Person existing at the time such other Person is merged or consolidated with or becomes a Subsidiary of such specified Person or is assumed in connection with the acquisition of assets from such other Person.

“**Adjustment Event**” has the meaning specified in Section 15.05(l).

“**Affiliate**” of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, “**control**”, when used with respect to any specified Person means the power to direct or cause the direction of the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise, and the terms “**controlling**” and “**controlled**” have meanings correlative to the foregoing.

“**Applicable Premium**” means, as of any date (the “**Specified Premium Date**”), the amount provided for below expressed as a percentage of the principal amount of the Notes:

- (1) if the Specified Premium Date occurs on one of the following dates (each, a “**Premium Accrual Date**”), the Applicable Premium will equal the amount set forth below for such Premium Accrual Date

<u>Premium Accrual Date</u>	<u>Applicable Premium</u>
May 2, 2006	0.850%
July 15, 2006	0.850%
January 15, 2007	2.685%
July 15, 2007	4.670%
January 15, 2008	6.750%
July 15, 2008	8.900%
January 15, 2009	11.125%

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- (2) *provided that*, if the Specified Premium Date occurs between two Premium Accrual Dates, the Applicable Premium will equal the sum of (A) the Applicable Premium for the Premium Accrual Date immediately preceding such Specified Premium Date and (B) an amount equal to the product of (x) the Applicable Premium for the immediately following Premium Accrual Date less the Applicable Premium for the Premium Accrual Date immediately preceding such Specified Premium Date multiplied by (y) a fraction, the numerator of which is the number of days from the immediately preceding Premium Accrual Date to (and including) the Specified Premium Date, using a 360-day year of twelve 30-day months, and the denominator of which is the number of days from the immediately preceding Premium Accrual Date to (and including) the immediately following Premium Accrual Date, using a 360-day year of twelve 30-day months. For the avoidance of doubt, by way of example only, if the Specified Premium Date were June 1, 2007, the Applicable Premium would be 4.18% and if \$1,000 of principal amount of Notes were converted into shares of Common Stock as of such date, such principal amount would convert into (assuming no adjustment to the Conversion Rate) 52 shares of Common Stock plus a fractional share equal to 9/100 of a share.

“**Board of Directors**” means the Board of Directors of the Company or a committee of such Board duly authorized to act for it hereunder.

“**Business Day**” means each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which the banking institutions in The City of New York or the city in which the Corporate Trust Office is located are authorized or obligated by law or executive order to close or be closed.

“**Capitalized Lease Obligations**” means all obligations and liabilities (contingent or otherwise) in respect of leases of any Person required, in conformity with generally accepted accounting principles, to be accounted for as capitalized lease obligations on the balance sheet of such Person.

“**Closing Price**” has the meaning specified in Section 15.05(h)(1).

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act, or, if at any time after the execution of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

“**Common Stock**” means any stock of any class of the Company which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company and which is not subject to redemption by the Company. Subject to the provisions of Section 15.06, however, shares issuable on conversion of Notes shall include only shares of the class designated as common stock of the Company at the date of this Indenture (namely, the Common Stock, \$0.001 par value) or shares of any class

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or classes resulting from any reclassification or reclassifications thereof and which have no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company and which are not subject to redemption by the Company; *provided that* if at any time there shall be more than one such resulting class, the shares of each such class then so issuable on conversion shall be substantially in the proportion which the total number of shares of such class resulting from all such reclassifications bears to the total number of shares of all such classes resulting from all such reclassifications.

“**Company**” means the corporation named as the “Company” in the first paragraph of this Indenture, and, subject to the provisions of Article 12, shall include its successors and assigns.

“**Company Notice**” has the meaning specified in Section 3.05(b).

“**Conversion Price**” as of any day will equal \$1,000 divided by the Conversion Rate as of such date.

“**Conversion Rate**” has the meaning specified in Section 15.04.

“**Corporate Trust Office**” or other similar term, means the principal office of the Trustee at which at any particular time its corporate trust business as it relates to this Indenture shall be administered, which office is, at the date as of which this Indenture is dated, located at One Federal Street, 3rd Floor, Boston, Massachusetts 02110.

“**Credit Agreement**” means that certain Revolving Credit Agreement dated as of October 3, 2003, as amended, by and among the Company, the Lenders identified therein and ABN AMRO Bank N.V., as Agent for such Lenders, including any related notes, guarantees, collateral documents, instruments and agreements executed in connection therewith, in each case as amended (including any amendment and restatement thereof), modified, renewed, refunded, replaced or refinanced from time to time, including any agreement extending the maturity, consolidating or otherwise restructuring (including adding Subsidiaries of the Company as additional guarantors thereunder) all or any portion of the Indebtedness under such agreement or successor or replacement agreement or whether by the same or any other agent, lender or group and whether or not increasing the amount of the Indebtedness that may be incurred thereunder, *provided* that the aggregate principal amount of such Indebtedness may not exceed the principal amount provided for in clause (i) of the definition of “Permitted Senior and Pari Passu Debt.”

“**Current Market Price**” has the meaning specified in Section 15.05(h)(2).

“**Custodian**” means U.S. Bank National Association, as custodian with respect to the Notes in global form, or any successor entity thereto.

“**default**” means any event that is, or after notice or passage of time, or both, would be, an Event of Default.

“**Defaulted Interest**” has the meaning specified in Section 2.03.

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“**Depository**” means, with respect to the Notes issuable or issued in whole or in part in global form, the Person specified in Section 2.05(d) as the Depository with respect to such Notes, until a successor shall have been appointed and become such pursuant to the applicable provisions of this Indenture, and thereafter, “Depository” shall mean or include such successor.

“**Designated Senior Indebtedness**” means any Senior Indebtedness under or in respect of (a) the Credit Agreement, (b) the Line of Credit Agreement or (c) the Indebtedness described in clause (iii) of the definition of “Permitted Senior and Pari Passu Debt.” If any payment made to any holder of any Designated Senior Indebtedness or its Representative with respect to such Designated Senior Indebtedness is rescinded or must otherwise be returned by such holder or Representative upon the insolvency, bankruptcy or reorganization of the Company or otherwise, the reinstated Indebtedness of the Company arising as a result of such rescission or return shall constitute Designated Senior Indebtedness effective as of the date of such rescission or return.

“**Determination Date**” has the meaning specified in Section 15.05(l).

“**Event of Default**” means any event specified in Section 7.01(a), (b), (c), (d) or (e).

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder, as in effect from time to time.

“**Expiration Time**” has the meaning specified in Section 15.05(f).

“**Fair Market Value**” has the meaning specified in Section 15.05(h)(3).

“**Fundamental Change**” means the occurrence of any transaction or event in connection with which all or substantially all of the Common Stock shall be exchanged for, converted into, acquired for or constitute solely the right to receive, consideration (whether by means of an exchange offer, liquidation, tender offer, consolidation, merger, combination, reclassification, recapitalization or otherwise) which is not all or substantially all common stock that is (or, upon consummation of or immediately following such transaction or event, which will be) listed on a United States national securities exchange or approved (or, upon consummation of or immediately following such transaction or event, which will be approved) for quotation on the NASDAQ National Market or any similar United States system of automated dissemination of quotations of securities prices.

“**Fundamental Change Expiration Time**” has the meaning specified in Section 3.05(b).

“**Global Note**” has the meaning set forth in Section 2.05(b).

“**Indebtedness**” means, with respect to any Person, and without duplication, (a) all indebtedness, obligations and other liabilities (contingent or otherwise) of such Person for borrowed money (including obligations of such Person in respect of overdrafts, foreign exchange contracts, currency exchange agreements, interest rate protection agreements, and any loans or advances from banks, whether or not evidenced by notes or similar instruments) or evidenced by bonds, debentures, notes or similar instruments (whether or not the recourse of the lender is to the whole of the assets of such Person or to only a portion thereof), other than any account

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payable or other accrued current liability or obligation incurred in the ordinary course of business in connection with the obtaining of materials or services; (b) all reimbursement obligations and other liabilities (contingent or otherwise) of such Person with respect to letters of credit, bank guarantees or bankers' acceptances; (c) all obligations and liabilities (contingent or otherwise) in respect of leases of such Person required, in conformity with generally accepted accounting principles, to be accounted for as capitalized lease obligations on the balance sheet of such Person and all obligations and other liabilities (contingent or otherwise) under any lease or related document (including a purchase agreement) in connection with the lease of real property which provides that such Person is contractually obligated to purchase or cause a third party to purchase the leased property and thereby guarantee a minimum residual value of the leased property to the lessor and the obligations of such Person under such lease or related document to purchase or to cause a third party to purchase such leased property; (d) all obligations of such Person (contingent or otherwise) with respect to an interest rate or other swap, cap or collar agreement or other similar instrument or agreement or foreign currency hedge, exchange, purchase or similar instrument or agreement; (e) all direct or indirect guaranties

or similar agreements by such Person in respect of, and obligations or liabilities (contingent or otherwise) of such Person to purchase or otherwise acquire or otherwise assure a creditor against loss in respect of, indebtedness, obligations or liabilities of another Person of the kind described in clauses (a) through (d); (f) any indebtedness or other obligations described in clauses (a) through (e) secured by any mortgage, pledge, lien or other encumbrance existing on property which is owned or held by such Person, regardless of whether the indebtedness or other obligation secured thereby shall have been assumed by such Person; and (g) any and all deferrals, renewals, extensions and refundings of, or amendments, modifications or supplements to, any indebtedness, obligation or liability of the kind described in clauses (a) through (f).

“**Indenture**” means this instrument as originally executed or, if amended or supplemented as herein provided, as so amended or supplemented.

“**interest**” means, when used with reference to the Notes, any interest payable under the terms of the Notes and Liquidated Damages, if any, payable under the terms of the Registration Rights Agreement.

“**junior securities**” has the meaning specified in Section 4.08.

“**Line of Credit Agreement**” means that certain Master Letter of Credit Agreement dated as of July 24, 2003, as amended, by and between the Company and ABN AMRO Bank N.V., including any related notes, guarantees, collateral documents, instruments and agreements executed in connection therewith, in each case as amended (including any amendment and restatement thereof), modified, renewed, refunded, replaced or refinanced from time to time, including any agreement extending the maturity, consolidating or otherwise restructuring (including adding Subsidiaries of the Company as additional guarantors thereunder) all or any portion of the Indebtedness under such agreement or successor or replacement agreement or whether by the same or any other agent, lender or group and whether or not increasing the amount of the Indebtedness that may be incurred thereunder, *provided* that the aggregate principal amount of such Indebtedness may not exceed the principal amount provided for in clause (ii) of the definition of “Permitted Senior and Pari Passu Debt.”

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“**Liquidated Damages**” has the meaning specified for “Liquidated Damages Amount” in Section 2(e) of the Registration Rights Agreement.

“**Liquidated Damages Notice**” has the meaning specified in Section 5.11.

“**nonelecting share**” has the meaning specified in Section 15.06.

“**Non-Payment Default**” has the meaning specified in Section 4.02(ii).

“**Note**” or “**Notes**” means any Note or Notes, as the case may be, authenticated and delivered under this Indenture, including the Global Note.

“**Note Guarantee**” has the meaning specified in Section 5.13(a).

“**Note register**” has the meaning specified in Section 2.05(a).

“**Note registrar**” has the meaning specified in Section 2.05(a).

“**Noteholder**” or “**holder**” as applied to any Note, or other similar terms (but excluding the term “beneficial holder”), means any Person in whose name at the time a particular Note is registered on the Note registrar’s books.

“**Notice Date**” means the date of mailing of the notice of redemption pursuant to Section 3.02.

“**Offer Expiration Time**” has the meaning specified in Section 15.05(g).

“**Officers’ Certificate**”, when used with respect to the Company, means a certificate signed by both (a) the Chairman of the Board, the Chief Executive Officer, the President or any Vice President (whether or not designated by a number or numbers or word or words added before or after the title “Vice President”) and (b) the Treasurer or any Assistant Treasurer, the Controller or any Assistant Controller, or the Secretary or any Assistant Secretary of the Company.

“**Opinion of Counsel**” means an opinion in writing signed by legal counsel, who may be an employee of or counsel to the Company, or other counsel reasonably acceptable to the Trustee.

“**outstanding**”, when used with reference to Notes and subject to the provisions of Section 9.04, means, as of any particular time, all Notes authenticated and delivered by the Trustee under this Indenture, except:

(a) Notes theretofore canceled by the Trustee or delivered to the Trustee for cancellation;

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(b) Notes, or portions thereof, (i) for the redemption of which monies in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or (ii) which shall have been otherwise defeased in accordance with Article 13;

(c) Notes in lieu of which, or in substitution for which, other Notes shall have been authenticated and delivered pursuant to the terms of Section 2.06; and

(d) Notes converted into Common Stock pursuant to Article 15 and Notes deemed not outstanding pursuant to Article 3.

“**Pari Passu Indebtedness**” means Indebtedness that is both (i) subordinate in right of payment to any Designated Senior Indebtedness of the Company and (ii) “pari passu” in right of payment with the Notes.

“**Payment Blockage Notice**” has the meaning specified in Section 4.02(ii).

“**Payment Default**” has the meaning specified in Section 4.02(i).

“**Permitted Senior and Pari Passu Debt**” has the meaning specified in Section 5.12.

“**Person**” means a corporation, an association, a partnership, a limited liability company, an individual, a joint venture, a joint stock company, a trust, an unincorporated organization or a government or an agency or a political subdivision thereof.

“**Portal Market**” means The Portal Market operated by the National Association of Securities Dealers, Inc. or any successor thereto.

“**Predecessor Note**” of any particular Note means every previous Note evidencing all or a portion of the same debt as that evidenced by such particular Note, and, for the purposes of this definition, any Note authenticated and delivered under Section 2.06 in lieu of a lost, destroyed or stolen Note shall be deemed to evidence the same debt as the lost, destroyed or stolen Note that it replaces.

“**premium**” means any premium payable under the terms of the Notes or this Indenture, including, without limitation, the Applicable Premium.

“**Purchase Money Indebtedness**” means any Indebtedness incurred by a Person to finance the cost (including the cost of construction or improvement and in the case of any Capitalized Lease Obligation, the lease) of any real or personal property, the principal amount of which Indebtedness does not exceed the sum of (i) 100% of such cost and (ii) reasonable fees and expenses of such Person incurred in connection therewith.

“**Purchased Shares**” has the meaning specified in Section 15.05(f).

“**QIB**” means a “qualified institutional buyer” as defined in Rule 144A.

“**Record Date**” has the meaning specified in Section 15.05(h)(4).

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“**Refinancing Indebtedness**” means, with respect to the Indebtedness described in clauses (iii) and (iv) of the definition of “Permitted Senior and Pari Passu Debt,” Indebtedness that refunds, refinances or extends any such Indebtedness, but only to the extent that:

(i) the Refinancing Indebtedness is scheduled to mature or is redeemable at the sole option of the holder thereof, in whole or in part, in each case either (a) no earlier than the Indebtedness being refunded, refinanced or extended, or (b) after the maturity date of the Notes,

(ii) the portion of the Refinancing Indebtedness that is scheduled to mature or is redeemable at the sole option of the holder thereof, in whole or in part, in each case on or prior to the maturity date of the Notes has a weighted average life to maturity at the time such Refinancing Indebtedness is incurred that is equal to or greater than the weighted average life to maturity of the portion of the Indebtedness being refunded, refinanced or extended that is scheduled to mature on or prior to the maturity date of the Notes;

(iii) such Refinancing Indebtedness is in an aggregate principal amount that is equal to or less than the sum of (a) the aggregate principal amount then outstanding under the Indebtedness being refunded, refinanced or extended, (b) the amount of any premium required to be paid in connection with such refunding, refinancing or extension pursuant to the terms of such Indebtedness or the amount of any premium reasonably determined by the Board of Directors of the Company as necessary to accomplish such refunding, refinancing or extension by means of a tender offer or privately negotiated purchase and (c) the amount of customary fees, expenses and costs related to the incurrence of such Refinancing Indebtedness; and

(iv) such Refinancing Indebtedness is incurred by the same Person that initially incurred the Indebtedness being refunded, refinanced or extended, except that the Company may incur Refinancing Indebtedness to refund, refinance or extend Indebtedness of any Wholly-Owned Subsidiary.

“**Registration Rights Agreement**” means the Registration Rights Agreement, dated as of May 2, 2006, between the Company and Quantum Partners LDC, as amended from time to time in accordance with its terms.

“**Representative**” means the (a) indenture trustee or other trustee, agent or representative for any Designated Senior Indebtedness or (b) with respect to any Designated Senior Indebtedness that does not have any such trustee, agent or other representative, (i) in the case of such Designated Senior Indebtedness issued pursuant to an agreement providing for voting arrangements as among the holders or owners of such Designated Senior Indebtedness, any holder or owner of such Designated Senior Indebtedness acting with the consent of the required Persons necessary to bind such holders or owners of such Designated Senior Indebtedness and (ii) in the case of all other such Designated Senior Indebtedness, the holder or owner of such Designated Senior Indebtedness.

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“**Repurchase Date**” has the meaning specified in Section 3.05(a).

“**Repurchase Value**” means, as of any date (the “**Specified Date**”), the amount provided for below expressed as a percentage of the principal amount of the Notes:

- (1) if the Specified Date occurs on one of the following dates (each, an “**Accrual Date**”), the Repurchase Value will equal the amount set forth below for such Accrual Date

<u>Accrual Date</u>	<u>Repurchase Value</u>
May 2, 2006	100.85%
July 15, 2006	101.21%
January 15, 2007	104.12%
July 15, 2007	107.2%
January 15, 2008	110.45%
July 15, 2008	113.85%
January 14, 2009	117.4%

- (2) *provided that*, if the Specified Date occurs between two Accrual Dates, the Repurchase Value will equal the sum of (A) the Repurchase Value for the Accrual Date immediately preceding such Specified Date and (B) an amount equal to the product of (x) the Repurchase Value for the immediately following Accrual Date less the Repurchase Value for the Accrual Date immediately preceding such Specified Date multiplied by (y) a fraction, the numerator of which is the number of days from the immediately preceding Accrual Date to (and including) the Specified Date, using a 360-day year of twelve 30-day months, and the denominator of which is the number of days from the immediately preceding Accrual Date to (and including) the immediately following Accrual Date, using a 360-day year of twelve 30-day months. For the avoidance of doubt, by way of example only, if the Specified Date were June 1, 2007, the Repurchase Value would be 106.45%.

“**Responsible Officer**”, when used with respect to the Trustee, means an officer of the Trustee in the Corporate Trust Office assigned and duly authorized by the Trustee to administer this Indenture.

“**Restricted Securities**” has the meaning specified in Section 2.05(d).

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“**Rights**” has the meaning specified in Section 15.11(a).

“**Rights Agreement**” has the meaning specified in Section 15.11(a).

“**Rule 144A**” means Rule 144A as promulgated under the Securities Act.

“**Securities**” has the meaning specified in Section 15.05(d).

“**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder, as in effect from time to time.

“**Senior Indebtedness**” means the principal of, premium, if any, interest (including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding) and rent payable on or in connection with, and all fees, costs, expenses and other amounts accrued or due on or in connection with, Indebtedness of the Company, whether outstanding on the date of this Indenture or thereafter created, incurred, assumed, guaranteed or in effect guaranteed by the Company (including all deferrals, renewals, extensions or refundings of, or amendments, modifications or supplements to, the foregoing), unless in the case of any particular Indebtedness the instrument creating or evidencing the same or the assumption or guarantee thereof expressly provides that such Indebtedness shall not be senior in right of payment to the Notes or expressly provides that such Indebtedness is “*pari passu*” with or “*junior*” to the Notes. Notwithstanding the foregoing, the term Senior Indebtedness shall not include any Indebtedness of the Company to any Subsidiary of the Company.

“**Significant Subsidiary**” means, as of any date of determination, a Subsidiary of the Company that would constitute a “significant subsidiary” as such term is defined under Rule 1-02 of Regulation S-X of the Commission as in effect on the date of this Indenture.

“**Specified Date**” has the meaning specified in the definition of “Repurchase Value”.

“**Subsidiary**” means, with respect to any Person, (i) any corporation, association or other business entity of which more than 50% of the total voting power of shares of capital stock or other equity interest entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other subsidiaries of that Person (or a combination thereof) and (ii) any partnership (a) the sole general partner or managing general partner of which is such Person or a subsidiary of such Person or (b) the only general partners of which are such Person or of one or more subsidiaries of such Person (or any combination thereof).

“**Trading Day**” has the meaning specified in Section 15.05(h)(5).

“**transfer**” has the meaning specified in Section 2.05(d).

“**Trigger Event**” has the meaning specified in Section 15.05(d).

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“**Trust Indenture Act**” means the Trust Indenture Act of 1939, as amended, as it was in force at the date of this Indenture, except as provided in Sections 11.03 and 15.06; *provided* that, in the event the Trust Indenture Act of 1939 is amended after the date hereof, the term “Trust Indenture Act” shall mean, to the extent required by such amendment, the Trust Indenture Act of 1939 as so amended.

“**Trustee**” means U.S. Bank National Association and its successors and any corporation resulting from or surviving any consolidation or merger to which it or its successors may be a party and any successor trustee at the time serving as successor trustee hereunder.

“**Wholly-Owned Subsidiary**” means any Subsidiary, all of the outstanding voting stock and other equity interests (other than directors’ qualifying shares), as applicable, of which is owned, directly or indirectly, by the Company.

The definitions of certain other terms are as specified in Sections 2.05 and 3.05 and Article 15.

ARTICLE 2

ISSUE, DESCRIPTION, EXECUTION, REGISTRATION AND EXCHANGE OF NOTES

SECTION 2.01. *Designation, Amount and Issue of Notes.* The Notes shall be designated as “4¼% Convertible Senior Subordinated Notes Due 2009”. Notes not to exceed the aggregate principal amount of \$75,000,000 (except pursuant to Sections 2.05, 2.06, 3.03, 3.05 and 15.02 hereof) upon the execution of this Indenture, or from time to time thereafter, may be executed by the Company and delivered to the Trustee for authentication, and the Trustee shall thereupon authenticate and deliver said Notes to or upon the written order of the Company, signed by (a) its Chairman of the Board, Chief Executive Officer, President or any Vice President (whether or not designated by a number or numbers or word or words added before or after the title “Vice President”) and (b) its Treasurer or any Assistant Treasurer, its Controller or any Assistant Controller or its Secretary or any Assistant Secretary, without any further action by the Company hereunder.

SECTION 2.02. *Form of Notes.* The Notes and the Trustee’s certificate of authentication to be borne by such Notes shall be substantially in the form set forth in Exhibit A, which is incorporated in and made a part of this Indenture.

Any of the Notes may have such letters, numbers or other marks of identification and such notations, legends and endorsements as the officers executing the same may approve (execution thereof to be conclusive evidence of such approval) and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange or automated quotation system on which the Notes may be listed, or to conform to usage.

Any Global Note shall represent such of the outstanding Notes as shall be specified therein and shall provide that it shall represent the aggregate amount of outstanding Notes from

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time to time endorsed thereon and that the aggregate amount of outstanding Notes represented thereby may from time to time be increased or reduced to reflect transfers or exchanges permitted hereby. Any endorsement of a Global Note to reflect the amount of any increase or decrease in the amount of outstanding Notes represented thereby shall be made by the Trustee or the Custodian, at the direction of the Trustee, in such manner and upon instructions given by the holder of such Notes in accordance with this Indenture. Payment of principal of and interest and premium, if any, on any Global Note shall be made to the holder of such Note.

The terms and provisions contained in the form of Note attached as Exhibit A hereto shall constitute, and are hereby expressly made, a part of this Indenture and, to the extent applicable, the Company and the Trustee, by their execution and delivery of this Indenture, expressly agree to such terms and provisions and to be bound thereby.

SECTION 2.03. *Date and Denomination of Notes, Payments of Interest.* The Notes shall be issuable in registered form without coupons in denominations of \$1,000 principal amount and integral multiples thereof. Every Note shall be dated the date of its authentication and shall bear interest from the applicable date in each case as specified on the face of the form of Note attached as Exhibit A hereto. Interest on the Notes shall be computed on the basis of a 360-day year comprised of twelve (12) 30-day months.

The Person in whose name any Note (or its Predecessor Note) is registered on the Note register at the close of business on any record date with respect to any interest payment date shall be entitled to receive the interest payable on such interest payment date, except that the interest payable upon redemption will be payable to the Person to whom principal is payable pursuant to such redemption (unless the date of redemption is an interest payment date, in which case the semi-annual payment of interest becoming due on such date shall be payable to the holders of such Notes registered as such on the applicable record date). Notwithstanding the foregoing, if any Note (or portion thereof) is converted into Common Stock during the period after a record date for the payment of interest to (but excluding) the next succeeding interest payment date and such Note (or portion thereof) has been called for redemption on a redemption date or Repurchase Date which occurs during such period, the Company shall not be required to pay interest on such interest payment date in respect of any such Note (or portion thereof). Interest shall be payable at the office of the paying agent which shall initially be the Corporate Trust Office and may, as the Company shall specify to the paying agent in writing by each record date, be paid either (i) by check mailed to the address of the Person entitled thereto as it appears in the Note register (*provided* that any holder of Notes with an aggregate principal amount in excess of \$2,000,000 shall, at the written election of such holder, be paid by wire transfer in immediately available funds) or (ii) by transfer to an account maintained by such Person located in the United States; *provided* that payments to the Depository will be made by wire transfer of immediately available funds to the account of the Depository or its nominee. The term “**record date**” with respect to any interest payment date shall mean the January 1 or July 1 preceding the relevant January 15 or July 15, respectively.

Any interest on any Note which is payable, but is not punctually paid or duly provided for, on any January 15 or July 15 (herein called “**Defaulted Interest**”) shall forthwith cease to be payable to the Noteholder on the relevant record date by virtue of his having been such

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Noteholder, and such Defaulted Interest shall be paid by the Company, at its election in each case, as provided in clause (1) or (2) below:

(1) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Notes (or their respective Predecessor Notes) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest to be paid on each Note and the date of the payment (which shall be not less than twenty-five (25) days after the receipt by the Trustee of such notice, unless the Trustee shall consent to an earlier date), and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Person entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall be not more than fifteen (15) days and not less than ten (10) days prior to the date of the proposed payment, and not less than ten (10) days after the receipt by the Trustee of the notice of the proposed payment, the Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first-class postage prepaid, to each Noteholder at his address as it appears in the Note register, not less than ten (10) days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Notes (or their respective Predecessor Notes) were registered at the close of business on such special record date and shall no longer be payable pursuant to the following clause (2) of this Section 2.03.

(2) The Company may make payment of any Defaulted Interest in any other lawful manner not inconsistent with the requirements of any securities exchange or automated quotation system on which the Notes may be listed or designated for issuance, and upon such notice as may be required by such exchange or automated quotation system, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause, such manner of payment shall be deemed practicable by the Trustee.

SECTION 2.04. *Execution of Notes.* The Notes shall be signed in the name and on behalf of the Company by the manual or facsimile signature of its Chairman of the Board, Chief Executive Officer, President or any Vice President (whether or not designated by a number or numbers or word or words added before or after the title "Vice President") and attested by the manual or facsimile signature of its Secretary or any of its Assistant Secretaries or its Treasurer or any of its Assistant Treasurers (which may be printed, engraved or otherwise reproduced thereon, by facsimile or otherwise). Only such Notes as shall bear thereon a certificate of authentication substantially in the form set forth on the form of Note attached as Exhibit A hereto, manually executed by the Trustee (or an authenticating agent appointed by the Trustee as provided by Section 16.11), shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. Such certificate by the Trustee (or such an authenticating agent) upon any Note executed by the Company shall be conclusive evidence that the Note so authenticated

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has been duly authenticated and delivered hereunder and that the holder is entitled to the benefits of this Indenture.

In case any officer of the Company who shall have signed any of the Notes shall cease to be such officer before the Notes so signed shall have been authenticated and delivered by the Trustee, or disposed of by the Company, such Notes nevertheless may be authenticated and delivered or disposed of as though the person who signed such Notes had not ceased to be such officer of the Company, and any Note may be signed on behalf of the Company by such persons as, at the actual date of the execution of such Note, shall be the proper officers of the Company, although at the date of the execution of this Indenture any such person was not such an officer.

SECTION 2.05. *Exchange and Registration of Transfer of Notes; Restrictions on Transfer; Depositary.* (a) The Company shall cause to be kept at the Corporate Trust Office a register (the register maintained in such office and in any other office or agency of the Company designated pursuant to Section 5.02 being herein sometimes collectively referred to as the "Note register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Notes and of transfers of Notes. The Note register shall be in written form or in any form capable of being converted into written form within a reasonably prompt period of time. The Trustee is hereby appointed "Note registrar" for the purpose of registering Notes and transfers of Notes as herein provided. The Company may appoint one or more co-registrars in accordance with Section 5.02.

Upon surrender for registration of transfer of any Note to the Note registrar or any co-registrar, and satisfaction of the requirements for such transfer set forth in this Section 2.05, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Notes of any authorized denominations and of a like aggregate principal amount and bearing such restrictive legends as may be required by this Indenture.

Notes may be exchanged for other Notes of any authorized denominations and of a like aggregate principal amount, upon surrender of the Notes to be exchanged at any such office or agency maintained by the Company pursuant to Section 5.02. Whenever any Notes are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Notes which the Noteholder making the exchange is entitled to receive bearing registration numbers not contemporaneously outstanding.

All Notes issued upon any registration of transfer or exchange of Notes shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Notes surrendered upon such registration of transfer or exchange.

All Notes presented or surrendered for registration of transfer or for exchange, redemption or conversion shall (if so required by the Company or the Note registrar) be duly endorsed, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Company, and the Notes shall be duly executed by the Noteholder thereof or his attorney duly authorized in writing.

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No service charge shall be made to any holder for any registration of transfer or exchange of Notes, but the Company may require payment by the holder of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Notes.

Neither the Company nor the Trustee nor any Note registrar shall be required to exchange or register a transfer of (a) any Notes for a period of fifteen (15) days next preceding any selection of Notes to be redeemed, (b) any Notes or portions thereof called for redemption pursuant to Section 3.02, (c) any Notes or portions thereof surrendered for conversion pursuant to Article 15 or (d) any Notes or portions thereof tendered for redemption (and not withdrawn) pursuant to Section 3.05.

(b) So long as the Notes are eligible for book-entry settlement with the Depository, or unless otherwise required by law, all of the Notes will be represented by one or more Notes in global form registered in the name of the Depository or the nominee of the Depository (the “**Global Note**”), except as otherwise specified below. The transfer and exchange of beneficial interests in any such Global Note shall be effected through the Depository in accordance with this Indenture and the procedures of the Depository therefor. Except as provided below, beneficial owners of a Global Note shall not be entitled to have certificates registered in their names, will not receive or be entitled to receive physical delivery of certificates in definitive form and will not be considered holders of such Global Note.

(c) Any Global Note may be endorsed with or have incorporated in the text thereof such legends or recitals or changes not inconsistent with the provisions of this Indenture as may be required by the Custodian, the Depository or by the National Association of Securities Dealers, Inc. in order for the Notes to be tradeable on The Portal Market or as may be required for the Notes to be tradeable on any other market developed for trading of securities pursuant to Rule 144A or required to comply with any applicable law or any regulation thereunder or with the rules and regulations of any securities exchange or automated quotation system upon which the Notes may be listed or traded or to conform with any usage with respect thereto, or to indicate any special limitations or restrictions to which any particular Notes are subject.

(d) Every Note that bears or is required under this Section 2.05(d) to bear the legend set forth in this Section (together with any Common Stock issued upon conversion of the Notes and required to bear the legend set forth in Section 2.05(e), collectively, the “**Restricted Securities**”) shall be subject to the restrictions on transfer set forth in this Section 2.05(d) (including those set forth in the legend set forth below) unless such restrictions on transfer shall be waived by written consent of the Company, and the holder of each such Restricted Security, by such Noteholder’s acceptance thereof, agrees to be bound by all such restrictions on transfer. As used in Sections 2.05(d) and 2.05(e), the term “**transfer**” encompasses any sale, pledge, loan, transfer or other disposition whatsoever of any Restricted Security.

Until the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), any certificate evidencing such Note (and all securities issued in exchange therefor or substitution thereof, other than Common Stock, if any, issued upon conversion thereof, which shall bear the legend set forth in Section 2.05(e), if

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applicable) shall bear a legend in substantially the following form, unless such Note has been sold pursuant to a registration statement that has been declared effective under the Securities Act (and which continues to be effective at the time of such transfer), or unless otherwise agreed by the Company in writing, with written notice thereof to the Trustee:

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (1) REPRESENTS THAT IT IS A “QUALIFIED INSTITUTIONAL BUYER” (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT); (2) AGREES THAT IT WILL NOT, PRIOR TO EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THIS NOTE UNDER RULE 144(k) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), RESELL OR OTHERWISE TRANSFER THIS NOTE OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS NOTE EXCEPT (A) TO AXCELIS TECHNOLOGIES, INC. OR ANY SUBSIDIARY THEREOF, (B) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT, (C) PURSUANT TO ANOTHER EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT, INCLUDING THE EXEMPTION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (3) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (2)(D) ABOVE), IT WILL FURNISH TO U.S. BANK NATIONAL ASSOCIATION, AS TRUSTEE (OR A SUCCESSOR TRUSTEE, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT; AND (4) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THIS NOTE PURSUANT TO CLAUSE (2)(D) ABOVE OR UPON ANY TRANSFER OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION). THE INDENTURE CONTAINS A PROVISION REQUIRING THE TRUSTEE TO REFUSE TO REGISTER ANY TRANSFER OF THIS NOTE IN VIOLATION OF THE FOREGOING RESTRICTION.

Any Note (or security issued in exchange or substitution therefor) as to which such restrictions on transfer shall have expired in accordance with their terms or as to conditions for

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removal of the foregoing legend set forth therein have been satisfied may, upon surrender of such Note for exchange to the Note registrar in accordance with the provisions of this Section 2.05, be exchanged for a new Note or Notes, of like tenor and aggregate principal amount, which shall not bear the restrictive legend required by this Section 2.05(d). Any Person having a beneficial interest in a Note that is a Restricted Security may upon request, subject to the rules and procedures of the Depository that are applicable to such transfer, transfer such beneficial interest to a Person who is permitted to take delivery thereof in the form of a Note that does bear the legend set forth in this Section 2.05(d). Upon receipt by the Trustee of written instructions and, if the Company or the Trustee so requests, an opinion of counsel, certificates or other information reasonably acceptable to the Company and the Trustee to the effect that such transfer will result in such note ceasing to be a “restricted security” within the meaning of Rule 144 under the Securities Act, the Trustee, as registrar and custodian shall reduce or cause to be reduced the aggregate principal amount of the Global Note that is a Restricted Security by the appropriate principal amount and shall increase or cause to be increased the aggregate principal amount of a Global Note that does bear the legend set forth in this Section 2.05(d)

by a like principal amount or issue a Note that is not a Global Note in a like principal amount. If the transfer is to be effected through an unlegended Global Note and no unlegended Global Note is then outstanding, the Company shall execute and the Trustee shall, upon receipt of a Company order (which the Company agrees to deliver promptly), authenticate and deliver an unlegended Global Note.

Notwithstanding any other provisions of this Indenture (other than the provisions set forth in this Section 2.05(d)), a Global Note may not be transferred as a whole or in part except by the Depository to a nominee of the Depository or by a nominee of the Depository to the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such successor Depository.

The Depository shall be a clearing agency registered under the Exchange Act. The Company initially appoints The Depository Trust Company to act as Depository with respect to the Notes in global form. Initially, the Global Note shall be issued to the Depository, registered in the name of Cede & Co., as the nominee of the Depository, and deposited with the Custodian for Cede & Co.

If at any time the Depository for a Global Note notifies the Company that it is unwilling or unable to continue as Depository for such Note, the Company may appoint a successor Depository with respect to such Note. If a successor Depository is not appointed by the Company within ninety (90) days after the Company receives such notice, the Company will execute, and the Trustee, upon receipt of an Officers' Certificate for the authentication and delivery of Notes, will authenticate and deliver, Notes in certificated form, in aggregate principal amount equal to the principal amount of such Global Note, in exchange for such Global Note.

Notes in certificated form issued in exchange for a Global Note pursuant to this Section 2.05 shall be registered in such names and in such authorized denominations as the Depository, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. Upon execution and authentication, the Trustee shall deliver such Notes in certificated form to the Persons in whose names such Notes in certificated form are so registered.

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At such time as all interests in a Global Note have been redeemed, converted, canceled or the Global Note is exchanged for Notes in certificated form, such Global Note shall, upon receipt thereof, be canceled by the Trustee in accordance with standing procedures and instructions existing between the Depository and the Custodian. At any time prior to such cancellation, if any interest in a Global Note is redeemed, converted, repurchased or canceled, the principal amount of such Global Note shall, in accordance with the standing procedures and instructions existing between the Depository and the Custodian, be appropriately reduced or increased, as the case may be, and an endorsement shall be made on such Global Note, by the Trustee or the Custodian, at the direction of the Trustee, to reflect such reduction or increase.

(e) Until the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), any stock certificate representing Common Stock issued upon conversion of any Note shall bear a legend in substantially the following form, unless such Common Stock has been sold pursuant to a registration statement that has been declared effective under the Securities Act (and which continues to be effective at the time of such transfer) or such Common Stock has been issued upon conversion of Notes that have been transferred pursuant to a registration statement that has been declared effective under the Securities Act, or unless otherwise agreed by the Company in writing with written notice thereof to the transfer agent:

THE COMMON STOCK EVIDENCED HEREBY HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. THE HOLDER HEREOF AGREES THAT, UNTIL THE EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THE COMMON STOCK EVIDENCED HEREBY UNDER RULE 144(k) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), (1) IT WILL NOT RESELL OR OTHERWISE TRANSFER THE COMMON STOCK EVIDENCED HEREBY EXCEPT (A) TO AXCELIS TECHNOLOGIES, INC. OR TO ANY SUBSIDIARY THEREOF, (B) TO A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) IN COMPLIANCE WITH RULE 144A, (C) PURSUANT TO ANOTHER EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT, INCLUDING THE EXEMPTION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE), OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (2) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (1)(D) ABOVE), IT WILL FURNISH TO REGISTRAR & TRANSFER COMPANY, AS TRANSFER AGENT (OR A SUCCESSOR TRANSFER AGENT, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS SUCH TRANSFER AGENT MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A

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TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND (3) IT WILL DELIVER TO EACH PERSON TO WHOM THE COMMON STOCK EVIDENCED HEREBY IS TRANSFERRED (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (1)(D) ABOVE) A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THE COMMON STOCK EVIDENCED HEREBY PURSUANT TO CLAUSE (1)(D) ABOVE OR UPON ANY TRANSFER OF THE COMMON STOCK EVIDENCED HEREBY AFTER THE EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THE SECURITY EVIDENCED HEREBY UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION).

Any such Common Stock as to which such restrictions on transfer shall have expired in accordance with their terms or as to which the conditions for removal of the foregoing legend set forth therein have been satisfied may, upon surrender of the certificates representing such shares of Common Stock for exchange in accordance with the procedures of the transfer agent for the Common Stock, be exchanged for a new certificate or certificates for a like number of shares of Common Stock, which shall not bear the restrictive legend required by this Section 2.05(e).

(f) Any Note or Common Stock issued upon the conversion or exchange of a Note that, prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), is purchased or owned by the Company or any Affiliate thereof may not be resold by the Company or such Affiliate unless registered under the Securities Act or resold pursuant to an exemption from the registration

requirements of the Securities Act in a transaction which results in such Notes or Common Stock, as the case may be, no longer being "restricted securities" (as defined under Rule 144).

(g) The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Note (including any transfers between or among beneficial owners of interest in any Global Note) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof. The Trustee shall have no responsibility for the actions or omissions of the Depository, or for the accuracy of the books or records of the Depository.

SECTION 2.06. *Mutilated, Destroyed, Lost or Stolen Notes.* In case any Note shall become mutilated or be destroyed, lost or stolen, the Company in its discretion may execute, and upon its written request the Trustee or an authenticating agent appointed by the Trustee shall authenticate and make available for delivery, a new Note, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Note, or in lieu of and in substitution for the Note so destroyed, lost or stolen. In every case the applicant for a substituted Note shall furnish to the Company, to the Trustee and, if applicable, to such authenticating agent such security or indemnity as may be required by them to save each of them

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harmless for any loss, liability, cost or expense caused by or connected with such substitution, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company, to the Trustee and, if applicable, to such authenticating agent evidence to their satisfaction of the destruction, loss or theft of such Note and of the ownership thereof.

Following receipt by the Trustee or such authenticating agent, as the case may be, of satisfactory security or indemnity and evidence, as described in the preceding paragraph, the Trustee or such authenticating agent may authenticate any such substituted Note and make available for delivery such Note. Upon the issuance of any substituted Note, the Company may require the payment by the holder of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in relation thereto and any other expenses connected therewith. In case any Note which has matured or is about to mature or has been called for redemption or has been tendered for redemption (and not withdrawn) or is to be converted into Common Stock shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Note, pay or authorize the payment of or convert or authorize the conversion of the same (without surrender thereof except in the case of a mutilated Note), as the case may be, if the applicant for such payment or conversion shall furnish to the Company, to the Trustee and, if applicable, to such authenticating agent such security or indemnity as may be required by them to save each of them harmless for any loss, liability, cost or expense caused by or connected with such substitution, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company, the Trustee and, if applicable, any paying agent or conversion agent evidence to their satisfaction of the destruction, loss or theft of such Note and of the ownership thereof.

Every substitute Note issued pursuant to the provisions of this Section 2.06 by virtue of the fact that any Note is destroyed, lost or stolen shall constitute an additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Note shall be found at any time, and shall be entitled to all the benefits of (but shall be subject to all the limitations set forth in) this Indenture equally and proportionately with any and all other Notes duly issued hereunder. To the extent permitted by law, all Notes shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment or conversion of mutilated, destroyed, lost or stolen Notes and shall preclude any and all other rights or remedies notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment or conversion of negotiable instruments or other securities without their surrender.

SECTION 2.07. *Temporary Notes.* Pending the preparation of Notes in certificated form, the Company may execute and the Trustee or an authenticating agent appointed by the Trustee shall, upon the written request of the Company, authenticate and deliver temporary Notes (printed or lithographed). Temporary Notes shall be issuable in any authorized denomination, and substantially in the form of the Notes in certificated form, but with such omissions, insertions and variations as may be appropriate for temporary Notes, all as may be determined by the Company. Every such temporary Note shall be executed by the Company and authenticated by the Trustee or such authenticating agent upon the same conditions and in substantially the same manner, and with the same effect, as the Notes in certificated form. Without unreasonable delay the Company will execute and deliver to the Trustee or such authenticating agent Notes in

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certificated form and thereupon any or all temporary Notes may be surrendered in exchange therefor, at each office or agency maintained by the Company pursuant to Section 5.02 and the Trustee or such authenticating agent shall authenticate and make available for delivery in exchange for such temporary Notes an equal aggregate principal amount of Notes in certificated form. Such exchange shall be made by the Company at its own expense and without any charge therefor. Until so exchanged, the temporary Notes shall in all respects be entitled to the same benefits and subject to the same limitations under this Indenture as Notes in certificated form authenticated and delivered hereunder.

SECTION 2.08. *Cancellation of Notes Paid, Etc.* All Notes surrendered for the purpose of payment, redemption, conversion, exchange or registration of transfer shall, if surrendered to the Company or any paying agent or any Note registrar or any conversion agent, be surrendered to the Trustee and promptly canceled by it, or, if surrendered to the Trustee, shall be promptly canceled by it, and no Notes shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of such canceled Notes in accordance with its customary procedures. If the Company shall acquire any of the Notes, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Notes unless and until the same are delivered to the Trustee for cancellation.

SECTION 2.09. *CUSIP Numbers.* The Company in issuing the Notes may use "CUSIP" numbers (if then generally in use), and, if so, the Trustee shall use "CUSIP" numbers in notices of redemption as a convenience to Noteholders; *provided* that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers. The Company will promptly notify the Trustee of any change in the "CUSIP" numbers.

REDEMPTION OF NOTES

SECTION 3.01. *Redemption of Notes.* The Notes may be redeemed at the option of the Company, in whole or in part, upon notice as set forth in Section 3.02, at the Repurchase Value, together with accrued and unpaid interest, if any, to, but excluding, the date fixed for redemption.

SECTION 3.02. *Notice of Redemptions, Selection of Notes.* In case the Company shall desire to exercise the right to redeem all or, as the case may be, any part of the Notes pursuant to Section 3.01, it shall fix a date for redemption and it or, at its written request received by the Trustee not fewer than forty-five (45) days prior (or such shorter period of time as may be acceptable to the Trustee) to the date fixed for redemption, the Trustee in the name of and at the expense of the Company, shall mail or cause to be mailed a notice of such redemption not fewer than thirty (30) nor more than sixty (60) days prior to the date fixed for redemption to the holders of Notes so to be redeemed as a whole or in part at their last addresses as the same appear on the Note register; *provided* that if the Company shall give such notice, it shall also give written notice, and written notice of the Notes to be redeemed, to the Trustee. Such mailing shall be by

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first class mail. The notice if mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the holder receives such notice. In any case, failure to give such notice by mail or any defect in the notice to the holder of any Note designated for redemption as a whole or in part shall not affect the validity of the proceedings for the redemption of any other Note. Concurrently with the mailing of any such notice of redemption, the Company shall issue a press release announcing such redemption, the form and content of which press release shall be determined by the Company in its sole discretion. The failure to issue any such press release or any defect therein shall not affect the validity of the redemption notice or any of the proceedings for the redemption of any Note called for redemption.

Each such notice of redemption shall specify the aggregate principal amount of Notes to be redeemed, the CUSIP number or numbers of the Notes being redeemed, the date fixed for redemption (which shall be a Business Day), the Repurchase Value at which Notes are to be redeemed, the place or places of payment, that payment will be made upon presentation and surrender of such Notes, that interest accrued to the date fixed for redemption will be paid as specified in said notice, and that on and after said date interest thereon or on the portion thereof to be redeemed will cease to accrue. Such notice shall also state the current Conversion Rate (as determined by the Company and certified to the Trustee in writing) and the date on which the right to convert such Notes or portions thereof into Common Stock will expire. If fewer than all the Notes are to be redeemed, the notice of redemption shall identify the Notes to be redeemed (including CUSIP numbers, if any). In case any Note is to be redeemed in part only, the notice of redemption shall state the portion of the principal amount thereof to be redeemed and shall state that, on and after the date fixed for redemption, upon surrender of such Note, a new Note or Notes in principal amount equal to the unredeemed portion thereof will be issued.

On or prior to the redemption date specified in the notice of redemption given as provided in this Section 3.02, the Company will deposit with the Trustee or with one or more paying agents (or, if the Company is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 5.04) an amount of money in immediately available funds sufficient to redeem on the redemption date all the Notes (or portions thereof) so called for redemption (other than those theretofore surrendered for conversion into Common Stock) at the appropriate Repurchase Value together with accrued interest to, but excluding, the date fixed for redemption; *provided* that if such payment is made on the redemption date it must be received by the Trustee or paying agent, as the case may be, by 10:00 a.m. New York City time on such date. The Company shall be entitled to retain any interest, yield or gain on amounts deposited with the Trustee or any paying agent pursuant to this Section 3.02 in excess of amounts required hereunder to pay the Repurchase Value, and accrued interest to, but excluding, the date fixed for redemption. If any Note called for redemption is converted pursuant hereto prior to such redemption, any money deposited with the Trustee or any paying agent or so segregated and held in trust for the redemption of such Note shall be paid to the Company upon its written request, or, if then held by the Company, shall be discharged from such trust. Whenever any Notes are to be redeemed, the Company will give the Trustee written notice in the form of an Officers' Certificate not fewer than forty-five (45) days (or such shorter period of time as may be acceptable to the Trustee) prior to the redemption date as to the aggregate principal amount of Notes to be redeemed.

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If less than all of the outstanding Notes are to be redeemed, the Trustee shall select the Notes or portions thereof of the Global Note or the Notes in certificated form to be redeemed (in principal amounts of \$1,000 or integral multiples thereof) by lot, on a pro rata basis or by another method the Trustee deems fair and appropriate. If any Note selected for partial redemption is submitted for conversion in part after such selection, the portion of such Note submitted for conversion shall be deemed (so far as may be) to be the portion to be selected for redemption. The Notes (or portions thereof) so selected shall be deemed duly selected for redemption for all purposes hereof, notwithstanding that any such Note is submitted for conversion in part before the mailing of the notice of redemption.

Upon any redemption of less than all of the outstanding Notes, the Company and the Trustee may (but need not), solely for purposes of determining the pro rata allocation among such Notes as are unconverted and outstanding at the time of redemption, treat as outstanding any Notes surrendered for conversion during the period of fifteen (15) days next preceding the mailing of a notice of redemption and may (but need not) treat as outstanding any Note authenticated and delivered during such period in exchange for the unconverted portion of any Note converted in part during such period.

SECTION 3.03. *Payment of Notes Called for Redemption.* If notice of redemption has been given as above provided, the Notes or portion of Notes with respect to which such notice has been given shall, unless converted into Common Stock pursuant to the terms hereof, become due and payable on the date fixed for redemption and at the place or places stated in such notice at the applicable Repurchase Value together with interest accrued to (but excluding) the date fixed for redemption, and on and after said date (unless the Company shall default in the payment of such Notes at the Repurchase Value together with interest accrued to said date) interest on the Notes or portion of Notes so called for redemption shall cease to accrue and, after the close of business on the Business Day next preceding the date fixed for redemption, such Notes shall cease to be convertible into Common Stock and, except as provided in Sections 8.05 and 13.04, to be entitled to any benefit or security under this Indenture, and the holders thereof shall have no right in respect of such Notes except the right to receive the Repurchase Value thereof, and, unpaid interest to, but excluding, the date fixed for redemption. On presentation and surrender of such Notes at a place of payment in said notice specified, the said Notes or the specified portions thereof shall be paid and redeemed by the Company at the applicable Repurchase Value together with interest accrued thereon to (but excluding) the date fixed for redemption; *provided* that if the applicable redemption date is an interest payment date, the interest payable on such interest payment date shall be payable to the holders of record of such Notes on the applicable record date instead of the holders surrendering such Notes for redemption on such date.

Upon presentation of any Note redeemed in part only, the Company shall execute and the Trustee shall authenticate and make available for delivery to the holder thereof, at the expense of the Company, a new Note or Notes, of authorized denominations, in principal amount equal to the unredeemed portion of the Notes so presented.

Notwithstanding the foregoing, the Trustee shall not redeem any Notes or mail any notice of redemption during the continuance of a default in payment of interest or premium, if any, on the Notes. If any Note called for redemption shall not be so paid upon surrender thereof for

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redemption, the then applicable Repurchase Value shall, until paid or duly provided for, bear interest from the date fixed for redemption at the rate borne by the Note and such Note shall remain convertible into Common Stock until the then applicable Repurchase Value and interest shall have been paid or duly provided for.

SECTION 3.04. Conversion Arrangement on Call for Redemption. In connection with any redemption of Notes, the Company may arrange for the purchase and conversion of any Notes by an agreement with one or more investment bankers or other purchasers to purchase such Notes by paying to the Trustee in trust for the Noteholders, on or before the date fixed for redemption, an amount not less than the applicable Repurchase Value together with interest accrued to (but excluding) the date fixed for redemption, of such Notes. Notwithstanding anything to the contrary contained in this Article 3, the obligation of the Company to pay the Repurchase Value of such Notes together with interest accrued to (but excluding) the date fixed for redemption, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers. If such an agreement is entered into, a copy of which will be filed with the Trustee prior to the date fixed for redemption, any Notes not duly surrendered for conversion by the holders thereof may, at the option of the Company, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such holders and (notwithstanding anything to the contrary contained in Article 15) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the date fixed for redemption (and the right to convert any such Notes shall be extended through such time), subject to payment of the above amount as aforesaid. At the direction of the Company, the Trustee shall hold and dispose of any such amount paid to it in the same manner as it would monies deposited with it by the Company for the redemption of Notes. Without the Trustee's prior written consent, no arrangement between the Company and such purchasers for the purchase and conversion of any Notes shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Trustee as set forth in this Indenture.

SECTION 3.05. Redemption at Option of Holders. (a) If there shall occur a Fundamental Change at any time prior to maturity of the Notes, then each Noteholder shall have the right, at such holder's option, to require the Company to redeem all of such holder's Notes, or any portion thereof that is an integral multiple of \$1,000 principal amount, on the date (the "**Repurchase Date**") that is thirty (30) days after the date of the Company Notice (as defined in Section 3.05(b) below) of such Fundamental Change (or, if such 30th day is not a Business Day, the next succeeding Business Day) at the Repurchase Value (expressed as a percentage of the principal amount), together with accrued interest to, but excluding, the Repurchase Date; *provided* that, if such Repurchase Date is an interest payment date, then the interest payable on such interest payment date shall be paid to the holders of record of the Notes on the applicable record date instead of the holders surrendering the Notes for redemption on such date.

Upon presentation of any Note redeemed in part only, the Company shall execute and, upon the Company's written direction to the Trustee, the Trustee shall authenticate and deliver to the holder thereof, at the expense of the Company, a new Note or Notes, of authorized denominations, in principal amount equal to the unredeemed portion of the Notes so presented.

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(b) On or before the tenth day after the occurrence of a Fundamental Change, the Company or at its written request (which must be received by the Trustee at least five (5) Business Days prior to the date the Trustee is requested to give notice as described below, unless the Trustee shall agree in writing to a shorter period), the Trustee, in the name of and at the expense of the Company, shall mail or cause to be mailed to all holders of record on the date of the Fundamental Change a notice (the "**Company Notice**") of the occurrence of such Fundamental Change and of the redemption right at the option of the holders arising as a result thereof. Such notice shall be mailed in the manner and with the effect set forth in the first paragraph of Section 3.02 (without regard for the time limits set forth therein). If the Company shall give such notice, the Company shall also deliver a copy of the Company Notice to the Trustee at such time as it is mailed to Noteholders. Concurrently with the mailing of any Company Notice, the Company shall issue a press release announcing such Fundamental Change referred to in the Company Notice, the form and content of which press release shall be determined by the Company in its sole discretion. The failure to issue any such press release or any defect therein shall not affect the validity of the Company Notice or any proceedings for the redemption of any Note which any Noteholder may elect to have the Company redeem as provided in this Section 3.05.

Each Company Notice shall specify the circumstances constituting the Fundamental Change, the Repurchase Date, the price at which the Company shall be obligated to redeem Notes, that the holder must exercise the redemption right on or prior to the close of business on the Repurchase Date (the "**Fundamental Change Expiration Time**"), that the holder shall have the right to withdraw any Notes surrendered prior to the Fundamental Change Expiration Time, a description of the procedure which a Noteholder must follow to exercise such redemption right and to withdraw any surrendered Notes, the place or places where the holder is to surrender such holder's Notes, the amount of interest accrued on each \$1,000 principal amount of the Notes to the Repurchase Date and the "CUSIP" number or numbers of the Notes (if then generally in use).

No failure of the Company to give the foregoing notices and no defect therein shall limit the Noteholders' redemption rights or affect the validity of the proceedings for the redemption of the Notes pursuant to this Section 3.05.

(c) For a Note to be so redeemed at the option of the holder, the Company must receive at the office or agency of the Company maintained for that purpose or, at the option of such holder, the Corporate Trust Office, such Note with the form entitled "Option to Elect Repayment Upon A Fundamental Change" on the reverse thereof duly completed, together with such Notes duly endorsed for transfer, on or before the Fundamental Change Expiration Time. All questions as to the validity, eligibility (including time of receipt) and acceptance of any Note for repayment shall be determined by the Company, whose determination shall be final and binding absent manifest error.

(d) On or prior to the Repurchase Date, the Company will deposit with the Trustee or with one or more paying agents (or, if the Company is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 5.04) an amount of money sufficient to redeem on the Repurchase

such payment is made on the Repurchase Date it must be received by the Trustee or paying agent, as the case may be, by 10:00 a.m. New York City time, on such date. Payment for Notes surrendered for redemption (and not withdrawn) prior to the Fundamental Change Expiration Time will be made promptly (but in no event more than five (5) Business Days) following the Repurchase Date by mailing checks for the amount payable to the holders of such Notes entitled thereto as they shall appear on the registry books of the Company.

(e) In the case of a reclassification, change, consolidation, merger, combination, sale or conveyance to which Section 15.06 applies, in which the Common Stock of the Company is changed or exchanged as a result into the right to receive stock, securities or other property or assets (including cash), which includes shares of Common Stock of the Company or shares of common stock of another Person that are, or upon issuance will be, traded on a United States national securities exchange or approved for trading on an established automated over-the-counter trading market in the United States and such shares constitute at the time such change or exchange becomes effective in excess of 50% of the aggregate fair market value of such stock, securities or other property or assets (including cash) (as determined by the Company, which determination shall be conclusive and binding), then the Person formed by such consolidation or resulting from such merger or which acquires such assets, as the case may be, shall execute and deliver to the Trustee a supplemental indenture (accompanied by an Opinion of Counsel that such supplemental indenture complies with the Trust Indenture Act as in force at the date of execution of such supplemental indenture) modifying the provisions of this Indenture relating to the right of holders of the Notes to cause the Company to repurchase the Notes following a Fundamental Change, including without limitation the applicable provisions of this Section 3.05 and the definitions of Common Stock and Fundamental Change, as appropriate, as determined in good faith by the Company (which determination shall be conclusive and binding), to make such provisions apply to such other Person if different from the Company and the common stock issued by such Person (in lieu of the Company and the Common Stock of the Company).

(f) The Company will comply with the provisions of Rule 13e-4 and any other tender offer rules under the Exchange Act to the extent then applicable in connection with the redemption rights of the holders of Notes in the event of a Fundamental Change.

ARTICLE 4

SUBORDINATION OF NOTES

SECTION 4.01. *Agreement of Subordination.* The Company covenants and agrees, and each holder of Notes issued hereunder by its acceptance thereof likewise covenants and agrees, that all Notes shall be issued subject to the provisions of this Article 4, and each Person holding any Note, whether upon original issue or upon registration of transfer, assignment or exchange thereof, accepts and agrees to be bound by such provisions.

The payment of the principal of, and premium and interest on, all Notes (including, but not limited to, the Repurchase Value payable with respect to the Notes called for redemption in accordance with Section 3.02 or submitted for redemption in accordance with Section 3.05, as the case may be, as provided in this Indenture) issued hereunder shall, to the extent and in the

manner hereinafter set forth, be subordinated and subject in right of payment to the prior payment in full of all Designated Senior Indebtedness, whether outstanding at the date of this Indenture or thereafter incurred.

No provision of this Article 4 shall prevent the occurrence of any default or Event of Default hereunder.

SECTION 4.02. *Payments to Noteholders.* No payment shall be made with respect to the principal of, and premium or interest on, the Notes (including, but not limited to, the Repurchase Value payable with respect to the Notes to be called for redemption in accordance with Section 3.02 or submitted for redemption in accordance with Section 3.05, as the case may be, as provided in this Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 4.05, if:

(i) a default in the payment of principal, premium, if any, interest, or other obligations in respect of Designated Senior Indebtedness occurs and is continuing (or, in the case of Designated Senior Indebtedness for which there is a period of grace, in the event of such a default that continues beyond the period of grace, if any, specified in the instrument or lease evidencing such Designated Senior Indebtedness) (a “**Payment Default**”), unless and until such Payment Default shall have been cured or waived or shall have ceased to exist; or

(ii) a default, other than a Payment Default, on any Designated Senior Indebtedness occurs and is continuing that then permits holders of such Designated Senior Indebtedness to accelerate its maturity and the Trustee receives a notice of the default (a “**Payment Blockage Notice**”) from a holder of Designated Senior Indebtedness, a Representative of Designated Senior Indebtedness or the Company (a “**Non-Payment Default**”).

If the Trustee receives any Payment Blockage Notice pursuant to clause (ii) above, no subsequent Payment Blockage Notice shall be effective for purposes of this Section 4.02 unless and until at least 365 days shall have elapsed since the initial effectiveness of the immediately prior Payment Blockage Notice. No Non-Payment Default that existed or was continuing on the date of delivery of any Payment Blockage Notice to the Trustee shall be, or be made, the basis for a subsequent Payment Blockage Notice.

The Company may and shall resume payments on and distributions in respect of the Notes upon the earlier of:

(1) the date upon which any such Payment Default is cured or waived or ceases to exist, or

(2) in the case of a Non-Payment Default, the earlier of (a) the date upon which such default is cured or waived or ceases to exist or (b) 179 days after the applicable Payment Blockage Notice is received by the Trustee if the maturity of such Designated

Senior Indebtedness has not been accelerated, unless this Article 4 otherwise prohibits the payment or distribution at the time of such payment or distribution.

Upon any payment by the Company, or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to creditors upon any dissolution or winding up or liquidation or reorganization of the Company, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other proceedings, all amounts due or to become due upon all Designated Senior Indebtedness shall first be paid in full in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness, or payment thereof in accordance with its terms shall be provided for in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness before any payment is made on account of the principal or Repurchase Value of, premium, if any, or interest on the Notes (except payments made pursuant to Article 13 from monies deposited with the Trustee pursuant thereto prior to commencement of proceedings for such dissolution, winding up, liquidation or reorganization), and upon any such dissolution or winding up or liquidation or reorganization of the Company or bankruptcy, insolvency, receivership or other similar proceeding, any payment by the Company, or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to which the holders of the Notes or the Trustee would be entitled, except for the provisions of this Article 4, shall (except as aforesaid) be paid by the Company or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, or by the holders of the Notes or by the Trustee under this Indenture if received by them or it, directly to the holders of Designated Senior Indebtedness (pro rata to such holders on the basis of the respective amounts of Designated Senior Indebtedness held by such holders, or as otherwise required by law or a court order) or their Representative or Representatives, as their respective interests may appear, to the extent necessary to pay all Designated Senior Indebtedness in full, in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness, after giving effect to any concurrent payment or distribution to or for the holders of Designated Senior Indebtedness, before any payment or distribution is made to the holders of the Notes or to the Trustee.

For purposes of this Article 4, the words, "cash, property or securities" shall not be deemed to include shares of stock of the Company as reorganized or readjusted, or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment, the payment of which is subordinated at least to the extent provided in this Article 4 with respect to the Notes to the payment of all Designated Senior Indebtedness which may at the time be outstanding, *provided* that (i) the Designated Senior Indebtedness is assumed by the new corporation, if any, resulting from any reorganization or readjustment, and (ii) the rights of the holders of Designated Senior Indebtedness are not, without the consent of such holders, altered by such reorganization or readjustment. The consolidation of the Company with, or the merger of the Company into, another corporation or the liquidation or dissolution of the Company following the conveyance or transfer of its property as an entirety, or substantially as an entirety, to another Person upon the terms and conditions provided for in Article 12 shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section 4.02 if such other Person shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in Article 12.

In the event of the acceleration of the Notes because of an Event of Default, no payment or distribution shall be made to the Trustee or any holder of Notes in respect of the principal of, and premium or interest on, the Notes (including, but not limited to, the Repurchase Value payable with respect to the Notes called for redemption in accordance with Section 3.02 or submitted for redemption in accordance with Section 3.05, as the case may be, as provided in this Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 4.05, until all Designated Senior Indebtedness has been paid in full in cash or other payment satisfactory to the holders of Designated Senior Indebtedness or such acceleration is rescinded in accordance with the terms of this Indenture. If payment of the Notes is accelerated because of an Event of Default, the Company or the Trustee shall promptly notify holders of Designated Senior Indebtedness of the acceleration.

If, notwithstanding the foregoing provisions, any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities (including, without limitation, by way of setoff or otherwise), prohibited by the foregoing provisions in this Section 4.02, shall be received by the Trustee or the holders of the Notes before all Designated Senior Indebtedness is paid in full in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness, or provision is made for such payment thereof in accordance with its terms in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness, such payment or distribution shall be held in trust for the benefit of and shall be paid over or delivered to the holders of Designated Senior Indebtedness or their Representative or Representatives, as their respective interests may appear, as calculated by the Company, for application to the payment of any Designated Senior Indebtedness remaining unpaid to the extent necessary to pay all Designated Senior Indebtedness in full in cash or other payment satisfactory to the holders of such Designated Senior Indebtedness, after giving effect to any concurrent payment or distribution to or for the holders of such Designated Senior Indebtedness.

Nothing in this Section 4.02 shall apply to claims of, or payments to, the Trustee under or pursuant to Section 8.06. This Section 4.02 shall be subject to the further provisions of Section 4.05.

SECTION 4.03. *Subrogation of Notes.* Subject to the payment in full of all Designated Senior Indebtedness, the rights of the holders of the Notes shall be subrogated to the extent of the payments or distributions made to the holders of such Designated Senior Indebtedness pursuant to the provisions of this Article 4 (equally and ratably with the holders of all Indebtedness of the Company which by its express terms is subordinated to other indebtedness of the Company to substantially the same extent as the Notes are subordinated and is entitled to like rights of subrogation) to the rights of the holders of Designated Senior Indebtedness to receive payments or distributions of cash, property or securities of the Company applicable to the Designated Senior Indebtedness until the principal, premium, Repurchase Value, if any, and interest on the Notes shall be paid in full, and, for the purposes of such subrogation, no payments or distributions to the holders of the Designated Senior Indebtedness of any cash, property or securities to which the holders of the Notes or the Trustee would be entitled except for the provisions of this Article 4, and no payment pursuant to the provisions of this Article 4, to or for the benefit of the holders of Designated Senior Indebtedness by holders of the Notes or the Trustee, shall, as among the Company, its creditors other than holders of Designated Senior

4, which would otherwise have been paid to the holders of Designated Senior Indebtedness, shall be deemed to be a payment by the Company to or for the account of the Notes. It is understood that the provisions of this Article 4 are intended solely for the purposes of defining the relative rights of the holders of the Notes, on the one hand, and the holders of the Designated Senior Indebtedness, on the other hand.

Nothing contained in this Article 4 or elsewhere in this Indenture or in the Notes is intended to or shall impair, as among the Company, its creditors other than the holders of Designated Senior Indebtedness, and the holders of the Notes, the obligation of the Company, which is absolute and unconditional, to pay to the holders of the Notes the principal of, premium on, or Repurchase Value of, and interest on the Notes as and when the same shall become due and payable in accordance with their terms, or is intended to or shall affect the relative rights of the holders of the Notes and creditors of the Company other than the holders of the Designated Senior Indebtedness, nor shall anything herein or therein prevent the Trustee or the holder of any Note from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this Article 4 of the holders of Designated Senior Indebtedness in respect of cash, property or securities of the Company received upon the exercise of any such remedy.

SECTION 4.04. *Authorization to Effect Subordination.* Each holder of a Note by the holder's acceptance thereof authorizes and directs the Trustee on the holder's behalf to take such action as may be necessary or appropriate to effectuate the subordination as provided in this Article 4 and appoints the Trustee to act as the holder's attorney-in-fact for any and all such purposes. If the Trustee does not file a proper proof of claim or proof of debt in the form required in any proceeding referred to in the third paragraph of Section 7.02 hereof at least thirty (30) days before the expiration of the time to file such claim, the holders of any Designated Senior Indebtedness or their Representatives are hereby authorized to file an appropriate claim for and on behalf of the holders of the Notes.

SECTION 4.05. *Notice to Trustee.* The Company shall give prompt written notice in the form of an Officers' Certificate to a Responsible Officer of the Trustee and to any paying agent of any fact known to the Company that would prohibit the making of any payment of monies to or by the Trustee or any paying agent in respect of the Notes pursuant to the provisions of this Article 4. Notwithstanding the provisions of this Article 4 or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts that would prohibit the making of any payment of monies to or by the Trustee in respect of the Notes pursuant to the provisions of this Article 4, unless and until a Responsible Officer of the Trustee shall have received written notice thereof at the Corporate Trust Office from the Company (in the form of an Officers' Certificate) or a Representative or a holder or holders of Designated Senior Indebtedness, and before the receipt of any such written notice, the Trustee, subject to the provisions of Section 8.01, shall be entitled in all respects to assume that no such facts exist; *provided* that if on a date not less than three Business Days prior to the date upon which by the terms hereof any such monies may become payable for any purpose (including, without

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limitation, the payment of the principal of, premium on, or Repurchase Value of, and interest on any Note) the Trustee shall not have received, with respect to such monies, the notice provided for in this Section 4.05, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to apply monies received to the purpose for which they were received, and shall not be affected by any notice to the contrary that may be received by it on or after such prior date.

Notwithstanding anything in this Article 4 to the contrary, nothing shall prevent any payment by the Trustee to the Noteholders of monies deposited with it pursuant to Section 13.01, if a Responsible Officer of the Trustee shall not have received written notice at the Corporate Trust Office on or before one Business Day prior to the date such payment is due that such payment is not permitted under Section 4.01 or 4.02.

The Trustee, subject to the provisions of Section 8.01, shall be entitled to rely on the delivery to it of a written notice by a Representative or a person representing himself to be a holder of Designated Senior Indebtedness to establish that such notice has been given by a Representative or a holder of Designated Senior Indebtedness. The Trustee shall not be required to make any payment or distribution to or on behalf of a holder of Designated Senior Indebtedness pursuant to this Article 4 unless it has received satisfactory evidence as to the amount of Designated Senior Indebtedness held by such Person, the extent to which such Person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such Person under this Article 4.

SECTION 4.06. *Trustee's Relation to Designated Senior Indebtedness.* The Trustee, in its individual capacity, shall be entitled to all the rights set forth in this Article 4 in respect of any Designated Senior Indebtedness at any time held by it, to the same extent as any other holder of Designated Senior Indebtedness, and nothing in Section 8.13 or elsewhere in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Designated Senior Indebtedness, the Trustee undertakes to perform or to observe only such of its covenants and obligations as are specifically set forth in this Article 4, and no implied covenants or obligations with respect to the holders of Designated Senior Indebtedness shall be read into this Indenture against the Trustee. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Designated Senior Indebtedness and, subject to the provisions of Section 8.01, the Trustee shall not be liable to any holder of Designated Senior Indebtedness (i) for any failure to make any payments or distributions to such holder or (ii) if it shall pay over or deliver to holders of Notes, the Company or any other Person money in compliance with this Article 4.

SECTION 4.07. *No Impairment of Subordination.* No right of any present or future holder of any Designated Senior Indebtedness to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Company or by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Company with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof which any such holder may have or otherwise be charged with. Designated Senior Indebtedness may be created, renewed or extended and holders of Designated Senior

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Indebtedness may exercise any rights under any instrument creating or evidencing such Designated Senior Indebtedness, including, without limitation, any waiver of default thereunder, without any notice to or consent from the holders of the Notes or the Trustee. No compromise, alteration, amendment, modification, extension, renewal or other change of, or waiver, consent or other action in respect of, any liability or obligation under or in respect of the Designated Senior Indebtedness or any terms or conditions of any instrument creating or evidencing such Designated Senior Indebtedness shall in any way alter or affect any of the provisions of this Article 4 or the subordination of the Notes provided thereby.

SECTION 4.08. *Certain Conversions Not Deemed Payment.* For the purposes of this Article 4 only, (1) the issuance and delivery of junior securities upon conversion of Notes in accordance with Article 15 shall not be deemed to constitute a payment or distribution on account of the principal of, and premium on, or Repurchase Value of, and interest on Notes or on account of the purchase or other acquisition of Notes, and (2) the payment, issuance or delivery of cash (except in satisfaction of fractional shares pursuant to Section 15.03), property or securities (other than junior securities) upon conversion of a Note shall be deemed to constitute payment on account of the principal of, and premium on, or Repurchase Value of, or interest on such Note. For the purposes of this Section 4.08, the term “**junior securities**” means (a) shares of any stock of any class of the Company or (b) securities of the Company that are subordinated in right of payment to all Designated Senior Indebtedness that may be outstanding at the time of issuance or delivery of such securities to substantially the same extent as, or to a greater extent than, the Notes are so subordinated as provided in this Article 4. Nothing contained in this Article 4 or elsewhere in this Indenture or in the Notes is intended to or shall impair, as among the Company, its creditors (other than holders of Designated Senior Indebtedness) and the Noteholders, the right, which is absolute and unconditional, of the Holder of any Note to convert such Note in accordance with Article 15.

SECTION 4.09. *Article Applicable to Paying Agents.* If at any time any paying agent other than the Trustee shall have been appointed by the Company and be then acting hereunder, the term “**Trustee**” as used in this Article 4 shall (unless the context otherwise requires) be construed as extending to and including such paying agent within its meaning as fully for all intents and purposes as if such paying agent were named in this Article 4 in addition to or in place of the Trustee; *provided* that the first paragraph of Section 4.05 shall not apply to the Company or any Affiliate of the Company if it or such Affiliate acts as paying agent.

The Trustee shall not be responsible for the actions or inactions of any other paying agents (including the Company if acting as its own paying agent) and shall have no control of any funds held by such other paying agents.

SECTION 4.10. *Designated Senior Indebtedness Entitled to Rely.* The holders of Designated Senior Indebtedness shall have the right to rely upon this Article 4, and no amendment or modification of the provisions contained herein shall diminish the rights of such holders unless such holders shall have agreed in writing thereto.

SECTION 4.11. *Reliance on Judicial Order or Certificate of Liquidating Agent.* Upon any payment or distribution of assets of the Company referred to in this Article 4, the Trustee and the

Noteholders shall be entitled to rely upon any order or decree entered by any court of competent jurisdiction in which such insolvency, bankruptcy, receivership, liquidation, reorganization, dissolution, winding up or similar case or proceeding is pending, or a certificate of the trustee in bankruptcy, liquidating trustee, custodian, receiver, assignee for the benefit of creditors, agent or other Person making such payment or distribution, delivered to the Trustee or to the Noteholders, for the purpose of ascertaining the Persons entitled to participate in such payment or distribution, the holders of Designated Senior Indebtedness and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article 4.

ARTICLE 5

PARTICULAR COVENANTS OF THE COMPANY

SECTION 5.01. *Payment of Principal, Premium, Repurchase Value and Interest.* The Company covenants and agrees that it will duly and punctually pay or cause to be paid the principal of, and premium on, or the Repurchase Value of, and interest on each of the Notes at the places, at the respective times and in the manner provided herein and in the Notes. The Company covenants and agrees to pay interest on overdue principal, Repurchase Value, premium, if any, or (to the extent that payment of such interest is enforceable under applicable law) interest at the rate per annum specified in the Notes.

SECTION 5.02. *Maintenance of Office or Agency.* The Company will maintain an office or agency in the Borough of Manhattan, The City of New York, where the Notes may be surrendered for registration of transfer or exchange or for presentation for payment or for conversion or redemption and where notices and demands to or upon the Company in respect of the Notes and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency not designated or appointed by the Trustee. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office or the office of the agency of the Trustee in The Borough of Manhattan, The City of New York (which shall initially be U.S. Bank Trust National Association, Corporate Trust Services, 100 Wall Street, Suite 1600, New York, New York 10005).

The Company may also from time to time designate co-registrars and one or more offices or agencies where the Notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations. The Company will give prompt written notice of any such designation or rescission and of any change in the location of any such other office or agency.

The Company hereby initially designates the Trustee as paying agent, Note registrar, Custodian and conversion agent and each of the Corporate Trust Office and the office of agency of the Trustee in the Borough of Manhattan, initially U.S. Bank Trust National Association, Corporate Trust Services, 100 Wall Street, Suite 1600, New York, New York 10005, shall be considered as one such office or agency of the Company for each of the aforesaid purposes.

So long as the Trustee is the Note registrar, the Trustee agrees to mail, or cause to be mailed, the notices set forth in Section 8.10(a) and the third paragraph of Section 8.11. If co-registrars have been appointed in accordance with this Section, the Trustee shall mail such notices only to the Company and the holders of Notes it can identify from its records.

SECTION 5.03. *Appointments to Fill Vacancies in Trustee's Office.* The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 8.10, a Trustee, so that there shall at all times be a Trustee hereunder.

SECTION 5.04. *Provisions as to Paying Agent.* (a) If the Company shall appoint a paying agent other than the Trustee, or if the Trustee shall appoint such a paying agent, the Company will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section 5.04:

- (1) that it will hold all sums held by it as such agent for the payment of the principal of, and premium on, or Repurchase Value of, and interest on the Notes (whether such sums have been paid to it by the Company or by any other obligor on the Notes) in trust for the benefit of the holders of the Notes;
- (2) that it will give the Trustee notice of any failure by the Company (or by any other obligor on the Notes) to make any payment of the principal of and premium on, or Repurchase Value of, and interest on the Notes when the same shall be due and payable; and
- (3) that at any time during the continuance of an Event of Default, upon request of the Trustee, it will forthwith pay to the Trustee all sums so held in trust.

The Company shall, on or before each due date of the principal of, and premium on, or Repurchase Value of, or interest on the Notes, deposit with the paying agent a sum (in funds which are immediately available on the due date for such payment) sufficient to pay such principal, premium, Repurchase Value, if any, or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of any failure to take such action; *provided* that if such deposit is made on the due date, such deposit shall be received by the paying agent by 10:00 a.m. New York City time, on such date.

(b) If the Company shall act as its own paying agent, it will, on or before each due date of the principal of, and premium on, or Repurchase Value of, and interest on the Notes, set aside, segregate and hold in trust for the benefit of the holders of the Notes a sum sufficient to pay such principal, premium, Repurchase Value, if any, or interest so becoming due and will promptly notify the Trustee of any failure to take such action and of any failure by the Company (or any other obligor under the Notes) to make any payment of the principal of, and premium on, or Repurchase Value of, and interest on the Notes when the same shall become due and payable.

(c) Anything in this Section 5.04 to the contrary notwithstanding, the Company may, at any time, for the purpose of obtaining a satisfaction and discharge of this Indenture, or for any other reason, pay or cause to be paid to the Trustee all sums held in trust by the Company or any

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paying agent hereunder as required by this Section 5.04, such sums to be held by the Trustee upon the trusts herein contained and upon such payment by the Company or any paying agent to the Trustee, the Company or such paying agent shall be released from all further liability with respect to such sums.

(d) Anything in this Section 5.04 to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section 5.04 is subject to Sections 13.03 and 13.04.

The Trustee shall not be responsible for the actions of any other paying agents (including the Company if acting as its own paying agent) and shall have no control of any funds held by such other paying agents.

SECTION 5.05. *Existence.* Subject to Article 12, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its existence and rights (charter and statutory); *provided* that the Company shall not be required to preserve any such right if the Company shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company.

SECTION 5.06. *Maintenance of Properties.* The Company will cause all properties used or useful in the conduct of its business or the business of any Significant Subsidiary to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as in the judgment of the Company may be necessary so that the business carried on in connection therewith may be properly and advantageously conducted at all times; *provided* that nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business or the business of any subsidiary and not disadvantageous in any material respect to the Noteholders.

SECTION 5.07. *Payment of Taxes and Other Claims.* The Company will pay or discharge, or cause to be paid or discharged, before the same may become delinquent, (i) all taxes, assessments and governmental charges levied or imposed upon the Company or any Significant Subsidiary or upon the income, profits or property of the Company or any Significant Subsidiary, (ii) all claims for labor, materials and supplies which, if unpaid, might by law become a lien or charge upon the property of the Company or any Significant Subsidiary and (iii) all stamp and other duties, if any, which may be imposed by the United States or any political subdivision thereof or therein in connection with the issuance, transfer, exchange or conversion of any Notes or with respect to this Indenture; *provided* that, in the case of clauses (i) and (ii), the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim (A) if the failure to do so will not, in the aggregate, have a material adverse impact on the Company, or (B) if the amount, applicability or validity is being contested in good faith by appropriate proceedings.

SECTION 5.08. *Rule 144A Information Requirement.* Within the period prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), the Company covenants and agrees that it shall,

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during any period in which it is not subject to Section 13 or 15(d) under the Exchange Act, make available to any holder or beneficial holder of Notes or any Common Stock issued upon conversion thereof which continue to be Restricted Securities in connection with any sale thereof and any prospective purchaser of Notes or such Common Stock designated by such holder or beneficial holder, the information required pursuant to Rule 144A(d)(4) under the Securities Act upon the request of any holder or beneficial holder of the Notes or such Common Stock and it will take such further action as any holder or beneficial holder of such Notes or such Common Stock may reasonably request, all to the extent required from time to time to enable such holder or beneficial holder to sell its Notes or Common Stock without registration under the Securities Act within the limitation of the exemption provided by Rule 144A, as such Rule may be amended from time to time. Upon the request of any holder or any beneficial holder of the Notes or such Common Stock, the Company will deliver to such holder a written statement as to whether it has complied with such requirements.

SECTION 5.09. *Stay, Extension and Usury Laws.* The Company covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law or other law which would prohibit or forgive the Company from paying all or any portion of the principal of, premium, if any, or interest on the Notes as contemplated herein, wherever enacted, now or at any time hereafter in force, or which may affect the covenants or the performance of this Indenture and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

SECTION 5.10. *Compliance Certificate.* The Company shall deliver to the Trustee, within one hundred twenty (120) days after the end of each fiscal year of the Company, a certificate signed by either the principal executive officer, principal financial officer or principal accounting officer of the Company, stating whether or not to the best knowledge of the signer thereof the Company is in default in the performance and observance of any of the terms, provisions and conditions of this Indenture (without regard to any period of grace or requirement of notice provided hereunder) and, if the Company shall be in default, specifying all such defaults and the nature and the status thereof of which the signer may have knowledge.

The Company will deliver to the Trustee, forthwith upon becoming aware of (i) any default in the performance or observance of any covenant, agreement or condition contained in this Indenture, or (ii) any Event of Default, an Officers' Certificate specifying with particularity such default or Event of Default and further stating what action the Company has taken, is taking or proposes to take with respect thereto.

Any notice required to be given under this Section 5.10 or Section 4.05 shall be delivered to a Responsible Officer of the Trustee at its Corporate Trust Office. In the event that the payment of the Notes is accelerated because of an Event of Default, the Company shall promptly provide written notice to the Trustee specifying the names and addresses of the holders of Designated Senior Indebtedness if the Trustee (and not the Company) is to provide holders of Designated Senior Indebtedness notice of such acceleration.

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SECTION 5.11. *Liquidated Damages Notice.* In the event that the Company is required to pay Liquidated Damages to holders of Notes pursuant to the Registration Rights Agreement, the Company will provide written notice ("**Liquidated Damages Notice**") to the Trustee of its obligation to pay Liquidated Damages no later than fifteen days prior to the proposed payment date for the Liquidated Damages, and the Liquidated Damages Notice shall set forth the amount of Liquidated Damages to be paid by the Company on such payment date. The Trustee shall not at any time be under any duty to responsibility to any holder of Notes to determine the Liquidated Damages, or with respect to the nature, extent or calculation of the amount of Liquidated Damages when made, or with respect to the method employed in such calculation of the Liquidated Damages.

SECTION 5.12. *Limitation on Additional Senior Indebtedness and Pari Passu Indebtedness.* The Company will not, directly or indirectly, create, incur, assume, guarantee or suffer to exist, or otherwise become or remain liable with respect to, or permit any of its Subsidiaries to create, incur, assume, guarantee or suffer to exist, or otherwise become or remain liable with respect to, any Senior Indebtedness (including Acquired Indebtedness) or Pari Passu Indebtedness (including Acquired Indebtedness). The provisions of the foregoing sentence of this Section 5.12 will not prohibit incurrence of any of the following Indebtedness (collectively, "**Permitted Senior and Pari Passu Debt**"):

(i) the incurrence by the Company of Indebtedness (and the guaranty by any Subsidiary of the Company of such Indebtedness), including letters of credit, under the Credit Agreement in an aggregate principal amount at any one time outstanding under this clause (i) (with letters of credit being deemed to have a principal amount equal to the maximum potential liability of the Company thereunder) not to exceed \$50,000,000;

(ii) the incurrence by the Company of Indebtedness, consisting solely of letters of credit under the Line of Credit Agreement in an aggregate principal amount of any one time outstanding under this clause (ii) (with letters of credit being deemed to have a principal amount equal to the maximum potential liability of the Company thereunder) not to exceed \$15,000,000;

(iii) the incurrence by the Company of Indebtedness with respect to the Company's guaranty of Indebtedness of Axcelis Technologies, GmbH related to letters of credit, bank guarantees and similar instruments obtained by Axcelis Technologies, GmbH in conjunction with value added tax recovery initiatives in an aggregate principal amount at any one time outstanding under this clause (iii) (with letters of credit, bank guarantees and such similar instruments being deemed to have a principal amount equal to the maximum potential liability of Axcelis Technologies, GmbH or the Company thereunder) not to exceed \$10,000,000;

(iv) the incurrence by the Company of Indebtedness represented by the Notes to be issued on the date of this Indenture;

(v) Indebtedness of any Subsidiary of the Company to the Company or another Subsidiary of the Company;

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(vi) Purchase Money Indebtedness and Capitalized Lease Obligations incurred by the Company or any Subsidiary to acquire or lease property in the ordinary course of business; *provided, however*, that (a) the aggregate amount of such Purchase Money Indebtedness and Capitalized Lease Obligations outstanding at any time shall not exceed \$200,000;

(vii) Indebtedness outstanding on the date hereof of Axcelis Technologies, GmbH to the Company's Subsidiaries organized under the laws of Singapore and Taiwan in the aggregate principal amount of \$14,000,000, and the Company's guarantees of such Indebtedness;

(viii) Indebtedness of a Subsidiary of the Company to any other person other than the Company, provided that the aggregate principal amount of all such Indebtedness under this Section 5.12(viii) does not exceed \$2,000,000 outstanding at any time; and

(viii) Refinancing Indebtedness.

SECTION 5.13. *Limitation on Subsidiary and Intercompany Debt.* (a) The Company will not permit any of its Subsidiaries to create, incur, assume, guarantee or suffer to exist, or otherwise become or remain liable for, any Indebtedness other than the Indebtedness described in the definition of

“Permitted Senior and Pari Passu Debt” (other than clause (ii) thereof), unless (i) within 10 days thereof, such Subsidiary becomes a guarantor with respect to the Notes by executing a supplemental indenture substantially in the form of Exhibit B hereto (each, a “**Note Guarantee**”) and delivering it to the Trustee and (ii) such Indebtedness is subordinated in right of payment to the Notes substantially to the same extent as the obligations in respect of the Notes are subordinated to Designated Senior Indebtedness under this Indenture.

(b) The Company will not, directly or indirectly, create, incur, assume, guarantee or suffer to exist, or otherwise become or remain liable for, any Indebtedness of the Company to any Subsidiary of the Company. The provisions of the foregoing sentence will not prohibit the incurrence of any Indebtedness of the Company to any domestic Wholly-Owned Subsidiary of the Company; provided that (i) within 10 days thereof, such domestic Wholly-Owned Subsidiary becomes a guarantor with respect to the Notes by executing a Note Guarantee and delivering it to the Trustee and (ii) such Indebtedness is subordinated in right of payment to the Notes substantially to the same extent as the obligations in respect of the Notes are subordinated to Designated Senior Indebtedness under this Indenture.

ARTICLE 6

NOTEHOLDERS’ LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE

SECTION 6.01. *Noteholders’ Lists.* The Company covenants and agrees that it will furnish or cause to be furnished to the Trustee, semiannually, not more than fifteen (15) days after each June 1 and December 1 in each year beginning with June 1, 2006, and at such other times as the Trustee may request in writing, within thirty (30) days after receipt by the Company of any such request (or such lesser time as the Trustee may reasonably request in order to enable

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it to timely provide any notice to be provided by it hereunder), a list in such form as the Trustee may reasonably require of the names and addresses of the holders of Notes as of a date not more than fifteen (15) days (or such other date as the Trustee may reasonably request in order to so provide any such notices) prior to the time such information is furnished, except that no such list need be furnished by the Company to the Trustee so long as the Trustee is acting as the sole Note registrar.

SECTION 6.02. *Preservation and Disclosure of Lists.* (a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Notes contained in the most recent list furnished to it as provided in Section 6.01 or maintained by the Trustee in its capacity as Note registrar or co-registrar in respect of the Notes, if so acting. The Trustee may destroy any list furnished to it as provided in Section 6.01 upon receipt of a new list so furnished.

(b) The rights of Noteholders to communicate with other holders of Notes with respect to their rights under this Indenture or under the Notes, and the corresponding rights and duties of the Trustee, shall be as provided by the Trust Indenture Act.

(c) Every Noteholder, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of any disclosure of information as to names and addresses of holders of Notes made pursuant to the Trust Indenture Act.

SECTION 6.03. *Reports by Trustee.* (a) Within sixty (60) days after December 1 of each year commencing with the year 2006, the Trustee shall transmit to holders of Notes such reports dated as of December 1 of the year in which such reports are made concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto.

(b) A copy of such report shall, at the time of such transmission to holders of Notes, be filed by the Trustee with each stock exchange and automated quotation system upon which the Notes are listed and with the Company. The Company will promptly notify the Trustee in writing when the Notes are listed on any stock exchange or automated quotation system or delisted therefrom.

SECTION 6.04. *Reports by Company.* The Company shall file with the Trustee (and the Commission if at any time after this Indenture becomes qualified under the Trust Indenture Act), and transmit to holders of Notes, such information, documents and other reports and such summaries thereof, as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant to such Act, whether or not the Notes are governed by such Act; *provided* that any such information, documents or reports required to be filed with the Commission pursuant to Section 13 or 15(d) of the Exchange Act shall be filed with the Trustee within fifteen (15) days after the same is so required to be filed with the Commission. Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee’s receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company’s

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compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers’ Certificates). The Trustee shall not be under a duty to review or evaluate such reports or information available to it and to holders of Notes who may request such information.

ARTICLE 7

REMEDIES OF THE TRUSTEE AND NOTEHOLDERS ON AN EVENT OF DEFAULT

SECTION 7.01. *Events of Default.* In case one or more of the following Events of Default (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body) shall have occurred and be continuing:

(a) default in the payment of any installment of interest upon any of the Notes as and when the same shall become due and payable, and continuance of such default for a period of thirty (30) days, whether or not such payment is permitted under Article 4 hereof; or

(b) default in the payment of the principal of, and premium on, or Repurchase Value of, any of the Notes as and when the same shall become due and payable either at maturity or in connection with any redemption pursuant to Article 3, by acceleration or otherwise, whether or not such payment is permitted under Article 4 hereof; or

(c) failure on the part of the Company duly to observe or perform any other of the covenants or agreements on the part of the Company in the Notes or in this Indenture (other than a covenant or agreement a default in whose performance or whose breach is elsewhere in this Section 7.01 specifically dealt with) continued for a period of sixty (60) days after the date on which written notice of such failure, requiring the Company to remedy the same, shall have been given to the Company by the Trustee, or the Company and a Responsible Officer of the Trustee by the holders of at least twenty-five percent (25%) in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04; or

(d) the Company shall commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to the Company or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of the Company or any substantial part of the property of the Company, or shall consent to any such relief or to the appointment of or taking possession by any such official in an involuntary case or other proceeding commenced against the Company, or shall make a general assignment for the benefit of creditors, or shall fail generally to pay its debts as they become due; or

(e) an involuntary case or other proceeding shall be commenced against the Company seeking liquidation, reorganization or other relief with respect to the Company or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of the Company

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or any substantial part of the property of the Company, and such involuntary case or other proceeding shall remain undismissed and unstayed for a period of ninety (90) consecutive days; or

(f) default under any Designated Senior Indebtedness, whether such Indebtedness now exists or is created after the date of this Indenture, or default under any other agreement(s) with respect to other Indebtedness of the Company or any of its Subsidiaries in an amount in excess of \$5,000,000 in the aggregate, in each case if that default results in the acceleration of such Indebtedness prior to its express maturity;

then, and in each and every such case (other than an Event of Default specified in Section 7.01(d) or 7.01(e)), unless the principal of (or, in the case of a redemption pursuant to Article 3, the Repurchase Value of) all of the Notes shall have already become due and payable, either the Trustee or the holders of not less than twenty-five percent (25%) in aggregate principal amount of the Notes then outstanding hereunder determined in accordance with Section 9.04, by notice in writing to the Company (and to the Trustee if given by Noteholders), may declare the principal and the Applicable Premium (except in the case of any Notes being redeemed pursuant to Article 3, for which the Repurchase Value shall be due and payable) on all the Notes and the interest accrued thereon to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable, anything in this Indenture or in the Notes contained to the contrary notwithstanding. For the avoidance of doubt, upon such acceleration, the Applicable Premium on the outstanding principal amount of the Notes accelerated shall become due and payable (except in the case of any Notes being redeemed pursuant to Article 3, for which the Repurchase Value shall be due and payable), together with accrued interest, and the Specified Premium Date for such purpose shall be the effective date of such acceleration. If an Event of Default specified in Section 7.01(d) or 7.01(e) occurs, the principal and the Applicable Premium (except in the case of any Notes being redeemed pursuant to Article 3, for which the Repurchase Value shall be due and payable) on all the Notes and the interest accrued thereon shall be immediately and automatically due and payable without necessity of further action. This provision, however, is subject to the conditions that if, at any time after the principal of the Notes shall have been so declared due and payable, and before any judgment or decree for the payment of the monies due shall have been obtained or entered as hereinafter provided, the Company shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all Notes and the principal and Applicable Premium (or Repurchase Value, as applicable), of, any and all Notes, in each case which shall have become due otherwise than by acceleration (with interest on overdue installments of interest (to the extent that payment of such interest is enforceable under applicable law) and on such principal and Applicable Premium (or Repurchase Value, as applicable), at the rate borne by the Notes, to the date of such payment or deposit) and amounts due to the Trustee pursuant to Section 8.06, and if any and all defaults under this Indenture, other than the nonpayment of principal of and the Applicable Premium (or Repurchase Value, as applicable) on and any accrued interest on Notes which shall have become solely due by acceleration, shall have been cured or waived pursuant to Section 7.07, then and in every such case the holders of a majority in aggregate principal amount of the Notes then outstanding, by written notice to the Company and to the Trustee, may waive all defaults or Events of Default and rescind and annul such declaration and its consequences; but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or Event of Default, or shall

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impair any right consequent thereon. The Company shall notify in writing a Responsible Officer of the Trustee, promptly upon becoming aware thereof, of any Event of Default.

In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned because of such waiver or rescission and annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case the Company, the holders of Notes, and the Trustee shall be restored respectively to their several positions and rights hereunder, and all rights, remedies and powers of the Company, the holders of Notes, and the Trustee shall continue as though no such proceeding had been taken.

SECTION 7.02. *Payments of Notes on Default; Suit Therefor.* The Company covenants that (a) in case default shall be made in the payment of any installment of interest upon any of the Notes as and when the same shall become due and payable, and such default shall have continued for a period of thirty (30) days, or (b) in case default shall be made in the payment of the principal or Repurchase Value, as applicable, of or premium, if any, on any of the Notes as and when the same shall have become due and payable, whether at maturity of the Notes or in connection with any redemption, by or under this Indenture declaration or otherwise, then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Notes, the whole amount that then shall have become due and payable on all such Notes for principal of, and premium on, or Repurchase Value of, or interest, as the case may be, with interest upon the overdue principal and Applicable Premium, or Repurchase Value, as applicable, and (to the extent that payment of such interest is enforceable under applicable law) upon the overdue installments of interest, in each case at the rate borne by the Notes, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee, its agents, attorneys and

counsel, and all other amounts due the Trustee under Section 8.06. Until such demand by the Trustee, the Company may pay the principal or Repurchase Value, as applicable, of and premium, if any, and interest on the Notes to the registered holders, whether or not the Notes are overdue.

In case the Company shall fail forthwith to pay such amounts upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any actions or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or any other obligor on the Notes and collect in the manner provided by law out of the property of the Company or any other obligor on the Notes wherever situated the monies adjudged or decreed to be payable.

In case there shall be pending proceedings for the bankruptcy or for the reorganization of the Company or any other obligor on the Notes under Title 11 of the United States Code, or any other applicable law, or in case a receiver, assignee or trustee in bankruptcy or reorganization, liquidator, sequestrator or similar official shall have been appointed for or taken possession of the Company or such other obligor, the property of the Company or such other obligor, or in the case of any other judicial proceedings relative to the Company or such other obligor upon the Notes, or to the creditors or property of the Company or such other obligor, the Trustee, irrespective of whether the principal or Repurchase Value, as applicable, of the Notes shall then

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be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand pursuant to the provisions of this Section 7.02, shall be entitled and empowered, by intervention in such proceedings or otherwise, to file and prove a claim or claims for the whole amount of principal of, and premium on, or Repurchase Value, and interest owing and unpaid in respect of the Notes, and, in case of any judicial proceedings, to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee and of the Noteholders allowed in such judicial proceedings relative to the Company or any other obligor on the Notes, its or their creditors, or its or their property, to collect and receive any monies or other property payable or deliverable on any such claims, and to distribute the same after the deduction of any amounts due the Trustee under Section 8.06, and to take any other action with respect to such claims, including participating as a member of any official committee of creditors, as it deems necessary or advisable, and any receiver, assignee or trustee in bankruptcy or reorganization, liquidator, custodian or similar official is hereby authorized by each of the Noteholders to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to the Noteholders, to pay to the Trustee any amount due it for reasonable compensation, expenses, advances and disbursements, including counsel fees incurred by it up to the date of such distribution. To the extent that such payment of reasonable compensation, expenses, advances and disbursements out of the estate in any such proceedings shall be denied for any reason, payment of the same shall be secured by a lien on, and shall be paid out of, any and all distributions, dividends, monies, securities and other property which the holders of the Notes may be entitled to receive in such proceedings, whether in liquidation or under any plan of reorganization or arrangement or otherwise.

All rights of action and of asserting claims under this Indenture, or under any of the Notes, may be enforced by the Trustee without the possession of any of the Notes, or the production thereof at any trial or other proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the holders of the Notes.

In any proceedings brought by the Trustee (and in any proceedings involving the interpretation of any provision of this Indenture to which the Trustee shall be a party) the Trustee shall be held to represent all the holders of the Notes, and it shall not be necessary to make any holders of the Notes parties to any such proceedings.

SECTION 7.03. *Application of Monies Collected by Trustee.* Any monies collected by the Trustee pursuant to this Article 7 shall be applied in the order following, at the date or dates fixed by the Trustee for the distribution of such monies, upon presentation of the several Notes, and stamping thereon the payment, if only partially paid, and upon surrender thereof, if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 8.06;

SECOND: Subject to the provisions of Article 4, in case the principal of the outstanding Notes shall not have become due and be unpaid, to the payment of

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interest on the Notes in default in the order of the maturity of the installments of such interest, with interest (to the extent that such interest has been collected by the Trustee) upon the overdue installments of interest at the rate borne by the Notes, such payments to be made ratably to the Persons entitled thereto;

THIRD: Subject to the provisions of Article 4, in case the principal of, and premium on, or Repurchase Value of, the outstanding Notes shall have become due, by declaration or otherwise, and be unpaid to the payment of the whole amount then owing and unpaid upon the Notes for such principal of, and premium on, or Repurchase Value, as applicable, and interest, with interest on the overdue principal or Repurchase Value, as applicable, and premium, if any, and (to the extent that such interest has been collected by the Trustee) upon overdue installments of interest, in each case at the rate borne by the Notes, and in case such monies shall be insufficient to pay in full the whole amounts so due and unpaid upon the Notes, then to the payment of such principal of, and premium on, or Repurchase Value, as applicable, and interest without preference or priority of principal of, and premium on, or Repurchase Value, as applicable, over interest, or of interest over principal of, and premium on, or Repurchase Value, as applicable, or of any installment of interest over any other installment of interest, or of any Note over any other Note, ratably to the aggregate of such principal of, and premium on, or Repurchase Value, as applicable, and accrued and unpaid interest; and

FOURTH: Subject to the provisions of Article 4, to the payment of the remainder, if any, to the Company or any other Person lawfully entitled thereto.

SECTION 7.04. *Proceedings by Noteholder.* No holder of any Note shall have any right by virtue of or by reference to any provision of this Indenture to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture, or for the appointment of a receiver,

trustee, liquidator, custodian or other similar official, or for any other remedy hereunder, unless such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof, as hereinbefore provided, and unless also the holders of not less than twenty-five percent (25%) in aggregate principal amount of the Notes then outstanding shall have made written request upon the Trustee to institute such action, suit or proceeding in its own name as Trustee hereunder and shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee for sixty (60) days after its receipt of such notice, request and offer of indemnity, shall have neglected or refused to institute any such action, suit or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 7.07; it being understood and intended, and being expressly covenanted by the taker and holder of every Note with every other taker and holder and the Trustee, that no one or more holders of Notes shall have any right in any manner whatever by virtue of or by reference to any provision of this Indenture to affect, disturb or prejudice the rights of any other holder of Notes, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Notes (except as otherwise provided herein). For the

protection and enforcement of this Section 7.04, each and every Noteholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Notwithstanding any other provision of this Indenture and any provision of any Note, the right of any holder of any Note to receive payment of the principal of, and premium on, or Repurchase Value, as applicable, and accrued interest on such Note, on or after the respective due dates expressed in such Note, upon acceleration or in the event of redemption, or to institute suit for the enforcement of any such payment on or after such respective dates against the Company shall not be impaired or affected without the consent of such holder.

Anything in this Indenture or the Notes to the contrary notwithstanding, the holder of any Note, without the consent of either the Trustee or the holder of any other Note, in its own behalf and for its own benefit, may enforce, and may institute and maintain any proceeding suitable to enforce, its rights of conversion as provided herein.

SECTION 7.05. *Proceedings by Trustee.* In case of an Event of Default, the Trustee may, in its discretion, proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as are necessary to protect and enforce any of such rights, either by suit in equity or by action at law or by proceeding in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture, or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

SECTION 7.06. *Remedies Cumulative and Continuing.* Except as provided in Section 2.06, all powers and remedies given by this Article 7 to the Trustee or to the Noteholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any thereof or of any other powers and remedies available to the Trustee or the holders of the Notes, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture, and no delay or omission of the Trustee or of any holder of any of the Notes to exercise any right or power accruing upon any default or Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or any acquiescence therein, and, subject to the provisions of Section 7.04, every power and remedy given by this Article 7 or by law to the Trustee or to the Noteholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Noteholders.

SECTION 7.07. *Direction of Proceedings and Waiver of Defaults by Majority of Noteholders.* The holders of a majority in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04 shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee; *provided* that (a) such direction shall not be in conflict with any rule of law or with this Indenture, (b) the Trustee may take any other action which is not inconsistent with such direction and (c) the Trustee may decline to take any action that would benefit some Noteholder to the detriment of other Noteholders. The holders of a majority in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04 may, on behalf of the holders of all of the Notes, waive any past

default or Event of Default hereunder and its consequences except (i) a default in the payment of interest or premium, if any, on, or the principal of, the Notes, (ii) a failure by the Company to convert any Notes into Common Stock, (iii) a default in the payment of the Repurchase Value payable pursuant to Article 3 or (iv) a default in respect of a covenant or provisions hereof which under Article 11 cannot be modified or amended without the consent of the holders of each or all Notes then outstanding or affected thereby. Upon any such waiver, the Company, the Trustee and the holders of the Notes shall be restored to their former positions and rights hereunder; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon. Whenever any default or Event of Default hereunder shall have been waived as permitted by this Section 7.07, said default or Event of Default shall for all purposes of the Notes and this Indenture be deemed to have been cured and to be not continuing; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon.

SECTION 7.08. *Notice of Defaults.* The Trustee shall, within ninety (90) days after a Responsible Officer of the Trustee has knowledge of the occurrence and continuance of a default, or Event of Default, mail to all Noteholders, as the names and addresses of such holders appear upon the Note register, notice of all defaults known to a Responsible Officer, unless such defaults shall have been cured or waived before the giving of such notice; *provided* that except in the case of default in the payment of the principal or Repurchase Value, as applicable, of, or premium, if any, or interest on any of the Notes, the Trustee shall be protected in withholding such notice if and so long as a trust committee of directors and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Noteholders.

SECTION 7.09. *Undertaking to Pay Costs.* All parties to this Indenture agree, and each holder of any Note by his acceptance thereof shall be deemed to have agreed, that any court may, in its discretion, require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees and expenses, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; *provided* that the provisions of this Section 7.09 (to the extent permitted by law) shall not apply to any suit instituted by the Trustee, to any suit instituted by any Noteholder, or group of Noteholders, holding in the aggregate more than ten percent in principal amount of the Notes at the time outstanding determined in accordance with Section 9.04, or to any suit instituted

ARTICLE 8

THE TRUSTEE

SECTION 8.01. *Duties and Responsibilities of Trustee.* The Trustee, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default has occurred (which has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(a) prior to the occurrence of an Event of Default and after the curing or waiving of all Events of Default which may have occurred:

(i) the duties and obligations of the Trustee shall be determined solely by the express provisions of this Indenture and the Trust Indenture Act, and the Trustee shall not be liable except for the performance of such duties and obligations as are specifically set forth in this Indenture and no implied covenants or obligations shall be read into this Indenture and the Trust Indenture Act against the Trustee; and

(ii) in the absence of bad faith and willful misconduct on the part of the Trustee, the Trustee may conclusively rely as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but, in the case of any such certificates or opinions which by any provisions hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;

(b) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Officers of the Trustee, unless the Trustee was negligent in ascertaining the pertinent facts;

(c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the written direction of the holders of not less than a majority in principal amount of the Notes at the time outstanding determined as provided in Section 9.04 relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture;

(d) whether or not therein provided, every provision of this Indenture relating to the conduct or affecting the liability of, or affording protection to, the Trustee shall be subject to the provisions of this Section;

(e) the Trustee shall not be liable in respect of any payment (as to the correctness of amount, entitlement to receive or any other matters relating to payment) or notice effected by the Company or any paying agent or any records maintained by any co-registrar with respect to the Notes;

(f) if any party fails to deliver a notice relating to an event the fact of which, pursuant to this Indenture, requires notice to be sent to the Trustee, the Trustee may conclusively rely on its failure to receive such notice as reason to act as if no such event occurred; and

(g) the Trustee shall not be deemed to have knowledge of any default or Event of Default hereunder unless a Responsible Officer of the Trustee has actual knowledge thereof or written notice of any event which is in fact such a default or Event of Default has been received by the Trustee at the Corporate Trust Office, and such notice specifically references the Notes.

None of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there is reasonable ground for believing that the repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

SECTION 8.02. *Reliance on Documents, Opinions, Etc.* Except as otherwise provided in Section 8.01:

(a) the Trustee may rely and shall be protected in acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, bond, debenture, note, coupon or other paper or document (whether in its original or facsimile form) believed by it in good faith to be genuine and to have been signed or presented by the proper party or parties;

(b) any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be evidenced to the Trustee by a copy thereof certified by the Secretary or an Assistant Secretary of the Company;

(c) the Trustee may consult with counsel of its own selection and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or omitted by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;

(d) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Noteholders pursuant to the provisions of this Indenture, unless such Noteholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which may be incurred therein or thereby;

(e) the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney;

(f) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed by it with due care hereunder;

(g) the rights, privileges, immunities and benefits given to the Trustee hereunder, including without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and to each agent, custodian and other Person employed by the Trustee consistent with the terms of this Indenture to act hereunder; and

(h) any permissive right or authority granted to the Trustee shall not be construed as a mandatory duty.

SECTION 8.03. *No Responsibility for Recitals, Etc.* The recitals contained herein and in the Notes (except in the Trustee's certificate of authentication) shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Notes. The Trustee shall not be accountable for the use or application by the Company of any Notes or the proceeds of any Notes authenticated and delivered by the Trustee in conformity with the provisions of this Indenture.

SECTION 8.04. *Trustee, Paying Agents, Conversion Agents or Registrar May Own Notes.* The Trustee, any paying agent, any conversion agent or Note registrar, in its individual or any other capacity, may become the owner or pledgee of Notes with the same rights it would have if it were not Trustee, paying agent, conversion agent or Note registrar.

SECTION 8.05. *Monies to Be Held in Trust.* Subject to the provisions of Section 13.04 and Section 4.02, all monies received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received. Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as may be agreed in writing from time to time by the Company and the Trustee.

SECTION 8.06. *Compensation and Expenses of Trustee.* The Company covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, reasonable compensation for all services rendered by it hereunder in any capacity (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) as mutually agreed to from time to time in writing between the Company and the Trustee, and the Company

will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances reasonably incurred or made by the Trustee in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all Persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence, willful misconduct or bad faith. The Company also covenants to indemnify the Trustee (or any officer, director or employee of the Trustee), in any capacity under this Indenture and its agents and any authenticating agent for, and to hold them harmless against, any and all loss, liability, claim or expense incurred without negligence, willful misconduct or bad faith on the part of the Trustee or such officers, directors, employees and agent or authenticating agent, as the case may be, and arising out of or in connection with the acceptance or administration of this trust or in any other capacity hereunder, including the costs and expenses of defending themselves against any claim of liability in the premises. The obligations of the Company under this Section 8.06 to compensate or indemnify the Trustee and to pay or reimburse the Trustee for expenses, disbursements and advances shall be secured by a lien prior to that of the Notes upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the holders of particular Notes. The obligation of the Company under this Section shall survive the satisfaction and discharge of this Indenture.

When the Trustee and its agents and any authenticating agent incur expenses or render services after an Event of Default specified in Section 7.01(d) or 7.01(e) with respect to the Company occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any bankruptcy, insolvency or similar laws.

SECTION 8.07. *Officers' Certificate as Evidence.* Except as otherwise provided in Section 8.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or omitting any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of bad faith or willful misconduct on the part of the Trustee, be deemed to be conclusively proved and established by an Officers' Certificate delivered to the Trustee.

SECTION 8.08. *Conflicting Interests of Trustee.* If the Trustee has or shall acquire a conflicting interest within the meaning of the Trust Indenture Act, the Trustee shall either eliminate such interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and this Indenture.

SECTION 8.09. *Eligibility of Trustee.* There shall at all times be a Trustee hereunder which shall be a Person that is eligible pursuant to the Trust Indenture Act to act as such and has a combined capital and surplus of at least \$50,000,000 (or if such Person is a member of a bank holding company system, its bank holding company shall have a combined capital and surplus of at least \$50,000,000). If such Person publishes reports of condition at least annually, pursuant to law or to the requirements of any supervising or examining authority, then for the purposes of this Section the combined capital and surplus of such Person shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section 8.09, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

SECTION 8.10. *Resignation or Removal of Trustee.*

(a) The Trustee may at any time resign by giving written notice of such resignation to the Company and to the holders of Notes. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment sixty (60) days after the mailing of such notice of resignation to the Noteholders, the resigning Trustee may, upon ten (10) business days' notice to the Company and the Noteholders, appoint a successor identified in such notice or may petition, at the expense of the Company, any court of competent jurisdiction for the appointment of a successor trustee, or, if any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months may, subject to the provisions of Section 7.09, on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any of the following shall occur:

- (i) the Trustee shall fail to comply with Section 8.08 after written request therefor by the Company or by any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months; or
- (ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 8.09 and shall fail to resign after written request therefor by the Company or by any such Noteholder; or
- (iii) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or a receiver of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation;

then, in any such case, the Company may remove the Trustee and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, subject to the provisions of Section 7.09, any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months may, on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee; *provided* that if no successor Trustee shall have been appointed and have accepted appointment sixty (60) days after either the Company or the Noteholders has removed the Trustee, the Trustee so removed may petition, at the expense of the Company, any court of competent jurisdiction for an appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) So long as no default or Event of Default has occurred and is continuing, the Company may, in its sole discretion, elect to remove the Trustee and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and copy to the successor trustee.

(d) The holders of a majority in aggregate principal amount of the Notes at the time outstanding may at any time remove the Trustee and nominate a successor trustee which shall be deemed appointed as successor trustee unless, within ten (10) days after notice to the Company of such nomination, the Company objects thereto, in which case the Trustee so removed or any Noteholder, or if such Trustee so removed or any Noteholder fails to act, the Company, upon the terms and conditions and otherwise as in Section 8.10(a) provided, may petition any court of competent jurisdiction for an appointment of a successor trustee.

(e) Any resignation or removal of the Trustee and appointment of a successor trustee pursuant to any of the provisions of this Section 8.10 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 8.11.

SECTION 8.11. *Acceptance by Successor Trustee.* Any successor trustee appointed as provided in Section 8.10 shall execute, acknowledge and deliver to the Company and to its predecessor trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, duties and obligations of its predecessor hereunder, with like effect as if originally named as trustee herein; but, nevertheless, on the written request of the Company or of the successor trustee, the trustee ceasing to act shall, upon payment of any amount then due it pursuant to the provisions of Section 8.06, execute and deliver an instrument transferring to such successor trustee all the rights and powers of the trustee so ceasing to act. Upon request of any such successor trustee, the Company shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor trustee all such rights and powers. Any trustee ceasing to act shall, nevertheless, retain a lien upon all property and funds held or collected by such trustee as such, except for funds held in trust for the benefit of holders of particular Notes, to secure any amounts then due it pursuant to the provisions of Section 8.06.

No successor trustee shall accept appointment as provided in this Section 8.11 unless, at the time of such acceptance, such successor trustee shall be qualified under the provisions of Section 8.08 and be eligible under the provisions of Section 8.09.

Upon acceptance of appointment by a successor trustee as provided in this Section 8.11, the Company (or the former trustee, at the written direction of the Company) shall mail or cause to be mailed notice of the succession of such trustee hereunder to the holders of Notes at their addresses as they shall appear on the Note register. If the Company fails to mail such notice within ten (10) days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be mailed at the expense of the Company.

SECTION 8.12. *Succession by Merger, Etc.* Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from

any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all of the corporate trust business of the Trustee (including any trust created by this Indenture), shall be the successor to the Trustee hereunder without the execution or filing of any paper or any further act on the part of any of the parties hereto, *provided* that in the case of any corporation succeeding to all or substantially all of the corporate trust business of the Trustee, such corporation shall be qualified under the provisions of Section 8.08 and eligible under the provisions of Section 8.09.

In case at the time such successor to the Trustee shall succeed to the trusts created by this Indenture, any of the Notes shall have been authenticated but not delivered, any such successor to the Trustee may adopt the certificate of authentication of any predecessor trustee or authenticating agent appointed by such predecessor trustee, and deliver such Notes so authenticated; and in case at that time any of the Notes shall not have been authenticated, any successor to the Trustee or any authenticating agent appointed by such successor trustee may authenticate such Notes in the name of the successor trustee; and in all such cases such certificates shall have the full force that is provided in the Notes or in this Indenture; *provided* that the right to adopt the certificate of authentication of any predecessor Trustee or authenticate Notes in the name of any predecessor Trustee shall apply only to its successor or successors by merger, conversion or consolidation.

SECTION 8.13. *Preferential Collection of Claims.* If and when the Trustee shall be or become a creditor of the Company (or any other obligor upon the Notes), the Trustee shall be subject to the provisions of the Trust Indenture Act regarding the collection of the claims against the Company (or any such other obligor).

SECTION 8.14. *Trustee's Application for Instructions from the Company.* Any application by the Trustee for written instructions from the Company (other than with regard to any action proposed to be taken or omitted to be taken by the Trustee that affects the rights of the holders of the Notes or holders of Designated Senior Indebtedness under this Indenture, including, without limitation, under Article 4 hereof) may, at the option of the Trustee, set forth in writing any action proposed to be taken or omitted by the Trustee under this Indenture and the date on and/or after which such action shall be taken or such omission shall be effective. The Trustee shall not be liable for any action taken by, or omission of, the Trustee in accordance with a proposal included in such application on or after the date specified in such application (which date shall not be less than three (3) Business Days after the date any officer of the Company actually receives such application, unless any such officer shall have consented in writing to any earlier date) unless prior to taking any such action (or the effective date in the case of an omission), the Trustee shall have received written instructions in response to such application specifying the action to be taken or omitted.

ARTICLE 9

THE NOTEHOLDERS

SECTION 9.01. *Action by Noteholders.* Whenever in this Indenture it is provided that the holders of a specified percentage in aggregate principal amount of the Notes may take any action

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(including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action, the holders of such specified percentage have joined therein may be evidenced (a) by any instrument or any number of instruments of similar tenor executed by Noteholders in person or by agent or proxy appointed in writing, or (b) by the record of the holders of Notes voting in favor thereof at any meeting of Noteholders duly called and held in accordance with the provisions of Article 10, or (c) by a combination of such instrument or instruments and any such record of such a meeting of Noteholders. Whenever the Company or the Trustee solicits the taking of any action by the holders of the Notes, the Company or the Trustee may fix in advance of such solicitation, a date as the record date for determining holders entitled to take such action. The record date shall be not more than fifteen (15) days prior to the date of commencement of solicitation of such action.

SECTION 9.02. *Proof of Execution by Noteholders.* Subject to the provisions of Sections 8.01, 8.02 and 10.05, proof of the execution of any instrument by a Noteholder or its agent or proxy shall be sufficient if made in accordance with such reasonable rules and regulations as may be prescribed by the Trustee or in such manner as shall be satisfactory to the Trustee. The holding of Notes shall be proved by the registry of such Notes or by a certificate of the Note registrar.

The record of any Noteholders' meeting shall be proved in the manner provided in Section 10.06.

SECTION 9.03. *Who Are Deemed Absolute Owners.* The Company, the Trustee, any paying agent, any conversion agent and any Note registrar may deem the Person in whose name such Note shall be registered upon the Note register to be, and may treat it as, the absolute owner of such Note (whether or not such Note shall be overdue and notwithstanding any notation of ownership or other writing thereon made by any Person other than the Company or any Note registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and interest on such Note, for conversion of such Note and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any conversion agent nor any Note registrar shall be affected by any notice to the contrary. All such payments so made to any holder for the time being, or upon his order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for monies payable upon any such Note.

SECTION 9.04. *Company-owned Notes Disregarded.* In determining whether the holders of the requisite aggregate principal amount of Notes have concurred in any direction, consent, waiver or other action under this Indenture, Notes which are owned by the Company or any other obligor on the Notes or any Affiliate of the Company or any other obligor on the Notes shall be disregarded and deemed not to be outstanding for the purpose of any such determination; *provided* that, for the purposes of determining whether the Trustee shall be protected in relying on any such direction, consent, waiver or other action, only Notes which a Responsible Officer knows are so owned shall be so disregarded. Notes so owned which have been pledged in good faith may be regarded as outstanding for the purposes of this Section 9.04 if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right to vote such Notes and that the pledgee is not the Company, any other obligor on the Notes or any Affiliate of the Company or any such other obligor. In the case of a dispute as to such right, any decision by the Trustee taken

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upon the advice of counsel shall be full protection to the Trustee. Upon request of the Trustee, the Company shall furnish to the Trustee promptly an Officers' Certificate listing and identifying all Notes, if any, known by the Company to be owned or held by or for the account of any of the above described Persons, and, subject to Section 8.01, the Trustee shall be entitled to accept such Officers' Certificate as conclusive evidence of the facts therein set forth and of the fact that all Notes not listed therein are outstanding for the purpose of any such determination.

SECTION 9.05. *Revocation of Consents, Future Holders Bound.* At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 9.01, of the taking of any action by the holders of the percentage in aggregate principal amount of the Notes specified in this Indenture in connection with such action, any holder of a Note which is shown by the evidence to be included in the Notes the holders of which have consented to such action may, by filing written notice with the Trustee at its Corporate Trust Office and upon proof of holding as provided in Section 9.02, revoke such action so far as concerns such Note. Except as aforesaid, any such action taken by the holder of any Note shall be conclusive and binding upon such holder and upon all future holders and owners of such Note and of any Notes issued in exchange or substitution therefor, irrespective of whether any notation in regard thereto is made upon such Note or any Note issued in exchange or substitution therefor.

ARTICLE 10

MEETINGS OF NOTEHOLDERS

SECTION 10.01. *Purpose of Meetings.* A meeting of Noteholders may be called at any time and from time to time pursuant to the provisions of this Article 10 for any of the following purposes:

- (1) to give any notice to the Company or to the Trustee or to give any directions to the Trustee permitted under this Indenture, or to consent to the waiving of any default or Event of Default hereunder and its consequences, or to take any other action authorized to be taken by Noteholders pursuant to any of the provisions of Article 7;
- (2) to remove the Trustee and nominate a successor trustee pursuant to the provisions of Article 8;
- (3) to consent to the execution of an indenture or indentures supplemental hereto pursuant to the provisions of Section 11.02; or
- (4) to take any other action authorized to be taken by or on behalf of the holders of any specified aggregate principal amount of the Notes under any other provision of this Indenture or under applicable law.

SECTION 10.02. *Call of Meetings by Trustee.* The Trustee may at any time call a meeting of Noteholders to take any action specified in Section 10.01, to be held at such time and at such place as the Trustee shall determine. Notice of every meeting of the Noteholders, setting forth the time and the place of such meeting and in general terms the action proposed to be taken at such

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meeting and the establishment of any record date pursuant to Section 9.01, shall be mailed to holders of Notes at their addresses as they shall appear on the Note register. Such notice shall also be mailed to the Company. Such notices shall be mailed not less than twenty (20) nor more than ninety (90) days prior to the date fixed for the meeting.

Any meeting of Noteholders shall be valid without notice if the holders of all Notes then outstanding are present in person or by proxy or if notice is waived before or after the meeting by the holders of all Notes outstanding, and if the Company and the Trustee are either present by duly authorized representatives or have, before or after the meeting, waived notice.

SECTION 10.03. *Call of Meetings by Company or Noteholders.* In case at any time the Company, pursuant to a resolution of its Board of Directors, or the holders of at least ten percent (10%) in aggregate principal amount of the Notes then outstanding, shall have requested the Trustee to call a meeting of Noteholders, by written request setting forth in reasonable detail the action proposed to be taken at the meeting, and the Trustee shall not have mailed the notice of such meeting within twenty (20) days after receipt of such request, then the Company or such Noteholders may determine the time and the place for such meeting and may call such meeting to take any action authorized in Section 10.01, by mailing notice thereof as provided in Section 10.02.

SECTION 10.04. *Qualifications for Voting.* To be entitled to vote at any meeting of Noteholders a person shall (a) be a holder of one or more Notes on the record date pertaining to such meeting or (b) be a person appointed by an instrument in writing as proxy by a holder of one or more Notes on the record date pertaining to such meeting. The only persons who shall be entitled to be present or to speak at any meeting of Noteholders shall be the persons entitled to vote at such meeting and their counsel and any representatives of the Trustee and its counsel and any representatives of the Company and its counsel.

SECTION 10.05. *Regulations.* Notwithstanding any other provisions of this Indenture, the Trustee may make such reasonable regulations as it may deem advisable for any meeting of Noteholders, in regard to proof of the holding of Notes and of the appointment of proxies, and in regard to the appointment and duties of inspectors of votes, the submission and examination of proxies, certificates and other evidence of the right to vote, and such other matters concerning the conduct of the meeting as it shall think fit.

The Trustee shall, by an instrument in writing, appoint a temporary chairman of the meeting, unless the meeting shall have been called by the Company or by Noteholders as provided in Section 10.03, in which case the Company or the Noteholders calling the meeting, as the case may be, shall in like manner appoint a temporary chairman. A permanent chairman and a permanent secretary of the meeting shall be elected by vote of the holders of a majority in principal amount of the Notes represented at the meeting and entitled to vote at the meeting.

Subject to the provisions of Section 9.04, at any meeting each Noteholder or proxyholder shall be entitled to one vote for each \$1,000 principal amount of Notes held or represented by him; *provided* that no vote shall be cast or counted at any meeting in respect of any Note challenged as not outstanding and ruled by the chairman of the meeting to be not outstanding.

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The chairman of the meeting shall have no right to vote other than by virtue of Notes held by him or instruments in writing as aforesaid duly designating him as the proxy to vote on behalf of other Noteholders. Any meeting of Noteholders duly called pursuant to the provisions of Section 10.02 or 10.03 may be adjourned from time to time by the holders of a majority of the aggregate principal amount of Notes represented at the meeting, whether or not constituting a quorum, and the meeting may be held as so adjourned without further notice.

SECTION 10.06. *Voting.* The vote upon any resolution submitted to any meeting of Noteholders shall be by written ballot on which shall be subscribed the signatures of the holders of Notes or of their representatives by proxy and the outstanding principal amount of the Notes held or represented by them. The permanent chairman of the meeting shall appoint two inspectors of votes who shall count all votes cast at the meeting for or against any resolution and who shall make and file with the secretary of the meeting their verified written reports in duplicate of all votes cast at the meeting. A record in duplicate of the proceedings of each meeting of Noteholders shall be prepared by the secretary of the meeting and there shall be attached to said record the original reports of the inspectors of votes on any vote by ballot taken thereat and affidavits by one or more persons having knowledge of the facts setting forth a copy of the notice of the meeting and showing that said notice was mailed as provided in Section 10.02. The record shall show the principal amount of the Notes voting in favor of or against any resolution. The record shall be signed and verified by the affidavits of the permanent chairman and secretary of the meeting and one of the duplicates shall be delivered to the Company and the other to the Trustee to be preserved by the Trustee, the latter to have attached thereto the ballots voted at the meeting.

Any record so signed and verified shall be conclusive evidence of the matters therein stated.

SECTION 10.07. *No Delay of Rights by Meeting.* Nothing contained in this Article 10 shall be deemed or construed to authorize or permit, by reason of any call of a meeting of Noteholders or any rights expressly or impliedly conferred hereunder to make such call, any hindrance or delay in the exercise of any right or rights conferred upon or reserved to the Trustee or to the Noteholders under any of the provisions of this Indenture or of the Notes.

ARTICLE 11

SUPPLEMENTAL INDENTURES

SECTION 11.01. *Supplemental Indentures Without Consent of Noteholders.* The Company, when authorized by the resolutions of the Board of Directors, and the Trustee may, from time to time, and at any time enter into an indenture or indentures supplemental hereto for one or more of the following purposes:

(a) make provision with respect to the conversion rights of the holders of Notes pursuant to the requirements of Section 15.06 and the redemption obligations of the Company pursuant to the requirements of Section 3.05(e);

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(b) subject to Article 4, to convey, transfer, assign, mortgage or pledge to the Trustee as security for the Notes, any property or assets;

(c) to evidence the succession of another Person to the Company, or successive successions, and the assumption by the successor Person of the covenants, agreements and obligations of the Company pursuant to Article 12;

(d) to add to the covenants of the Company such further covenants, restrictions or conditions as the Board of Directors and the Trustee shall consider to be for the benefit of the holders of Notes, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions or conditions a default or an Event of Default permitting the enforcement of all or any of the several remedies provided in this Indenture as herein set forth; *provided* that in respect of any such additional covenant, restriction or condition, such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such default or may limit the remedies available to the Trustee upon such default;

(e) to provide for the issuance under this Indenture of Notes in coupon form (including Notes registrable as to principal only) and to provide for exchangeability of such Notes with the Notes issued hereunder in fully registered form and to make all appropriate changes for such purpose;

(f) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture that may be defective or inconsistent with any other provision contained herein or in any supplemental indenture, or to make such other provisions in regard to matters or questions arising under this Indenture that shall not materially adversely affect the interests of the holders of the Notes;

(g) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Notes;

(h) to modify, eliminate or add to the provisions of this Indenture to such extent as shall be necessary to effect the qualifications of this Indenture under the Trust Indenture Act, or under any similar federal statute hereafter enacted; or

(i) to allow any Subsidiary of the Company to execute a Note Guarantee with respect to the Notes pursuant to the terms of this Indenture.

Upon the written request of the Company, accompanied by a copy of the resolutions of the Board of Directors certified by its Secretary or Assistant Secretary authorizing the execution of any supplemental indenture, the Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, to make any further appropriate agreements and stipulations that may be therein contained and to accept the conveyance, transfer and assignment of any property thereunder, but the Trustee shall not be obligated to, but may in its discretion,

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enter into any supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section 11.01 may be executed by the Company and the Trustee without the consent of the holders of any of the Notes at the time outstanding, notwithstanding any of the provisions of Section 11.02.

Notwithstanding any other provision of this Indenture or the Notes, the Registration Rights Agreement and the obligation to pay Liquidated Damages thereunder may be amended, modified or waived in accordance with the provisions of the Registration Rights Agreement.

SECTION 11.02. *Supplemental Indenture with Consent of Noteholders.* With the consent (evidenced as provided in Article 9) of the holders of not less than a majority in aggregate principal amount of the Notes at the time outstanding, the Company, when authorized by the resolutions of the Board of Directors, and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or any supplemental indenture or of modifying in any manner the rights of the holders of the Notes; *provided* that no such supplemental indenture shall (i) extend the fixed maturity of any Note, or reduce the rate or extend the time for payment of interest thereon, or reduce the principal amount thereof or premium, if any, thereon, or reduce any amount payable on redemption or repurchase thereof, or impair the right of any Noteholder to institute suit for the payment thereof, or make the principal or Repurchase Value thereof or interest or premium, if any, thereon payable in any coin or currency other than that provided in the Notes, or modify the provisions of this Indenture with respect to the subordination of the Notes in a manner adverse to the Noteholders in any material respect, or change the obligation of the Company to redeem any Note upon the happening of a Fundamental Change in a manner adverse to the holder of Notes, or impair the right to convert the Notes into Common Stock subject to the terms set forth herein, including Section 15.06, in each case, without the consent of the holder of each Note so affected, or (ii) reduce the aforesaid percentage of Notes, the holders of which are required to consent to any such supplemental indenture or reduce the quorum or voting requirements of this Indenture, without the consent of the holders of all Notes then outstanding.

Upon the written request of the Company, accompanied by a copy of the resolutions of the Board of Directors certified by its Secretary or Assistant Secretary authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Noteholders as aforesaid, the Trustee shall join with the Company in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

It shall not be necessary for the consent of the Noteholders under this Section 11.02 to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

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SECTION 11.03. *Effect of Supplemental Indenture.* Any supplemental indenture executed pursuant to the provisions of this Article 11 shall comply with the Trust Indenture Act, as then in effect, *provided* that this Section 11.03 shall not require such supplemental indenture or the Trustee to be qualified under the Trust Indenture Act prior to the time such qualification is in fact required under the terms of the Trust Indenture Act or the Indenture has been qualified under the Trust Indenture Act, nor shall it constitute any admission or acknowledgment by any party to such supplemental indenture that any such qualification is required prior to the time such qualification is in fact required under the terms of the Trust Indenture Act or the Indenture has been qualified under the Trust Indenture Act. Upon the execution of any supplemental indenture pursuant to the provisions of this Article 11, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitation of rights, obligations, duties and immunities under this Indenture of the Trustee, the Company and the holders of Notes shall thereafter be determined, exercised and enforced hereunder, subject in all respects to such modifications and amendments and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

SECTION 11.04. *Notation on Notes.* Notes authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article 11 may bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company or the Trustee shall so determine, new Notes so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may, at the Company's expense, be prepared and executed by the Company, authenticated by the Trustee (or an authenticating agent duly appointed by the Trustee pursuant to Section 16.10) and delivered in exchange for the Notes then outstanding, upon surrender of such Notes then outstanding.

SECTION 11.05. *Evidence of Compliance of Supplemental Indenture to be Furnished to Trustee.* Prior to entering into any supplemental indenture, the Trustee shall receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant hereto is authorized or permitted by this Indenture.

ARTICLE 12

CONSOLIDATION, MERGER, SALE, CONVEYANCE AND LEASE

SECTION 12.01. *Company May Consolidate on Certain Terms.* Subject to the provisions of Section 12.02, nothing contained in this Indenture or in any of the Notes shall prevent any consolidation or merger of the Company with or into any other Person or Persons (whether or not affiliated with the Company), or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance or lease (or successive sales, conveyances or leases) of all or substantially all of the property of the Company, to any other corporation (whether or not affiliated with the Company), authorized to acquire and operate the same and that shall be organized under the laws of the United States of America, any state thereof or the District of Columbia; *provided* that upon any such

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consolidation, merger, sale, conveyance or lease, the due and punctual payment of the principal of and premium, if any, and interest on all of the Notes, according to their tenor and the due and punctual performance and observance of all of the covenants and conditions of this Indenture to be performed by the Company, shall be expressly assumed, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee by the corporation (if other than the Company) formed by such consolidation, or into which the Company shall have been merged, or by the corporation that shall have acquired or leased such property, and such supplemental indenture shall provide for the applicable conversion rights set forth in Section 15.06.

SECTION 12.02. *Successor Corporation to Be Substituted.* In case of any such consolidation, merger, sale, conveyance or lease and upon the assumption by the successor corporation, by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the due and punctual payment of the principal or Repurchase Value, as applicable, of and premium, if any, and interest on all of the Notes and the due and punctual performance of all of the covenants and conditions of this Indenture to be performed by the Company, such successor corporation shall succeed to and be substituted for the Company, with the same effect as if it had been named herein as the party of this first part. Such successor corporation thereupon may cause to be signed, and may issue either in its own name or in the name of Axcelis Technologies, Inc. any or all of the Notes, issuable hereunder that theretofore shall not have been signed by the Company and delivered to the Trustee; and, upon the order of such successor corporation instead of the Company and subject to all the terms, conditions and limitations in this Indenture prescribed, the Trustee shall authenticate and shall deliver, or cause to be authenticated and delivered, any Notes that previously shall have been signed and delivered by the officers of the Company to the Trustee for authentication, and any Notes that such successor corporation thereafter shall cause to be signed and delivered to the Trustee for that purpose. All the Notes so issued shall in all respects have the same legal rank and benefit under this Indenture as the Notes theretofore or thereafter issued in accordance with the terms of this Indenture as though all of such Notes had been issued at the date of the execution hereof. In the event of any such consolidation, merger, sale, conveyance or lease, the corporation named as the "Company" in the first paragraph of this Indenture or any successor that shall thereafter have become such in the manner prescribed in this Article 12 may be dissolved, wound up and liquidated at any time thereafter and such corporation shall be released from its liabilities as obligor and maker of the Notes and from its obligations under this Indenture.

In case of any such consolidation, merger, sale, conveyance or lease, such changes in phraseology and form (but not in substance) may be made in the Notes thereafter to be issued as may be appropriate.

SECTION 12.03. *Opinion of Counsel to Be Given Trustee.* The Trustee shall receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any such consolidation, merger, sale, conveyance or lease and any such assumption complies with the provisions of this Article 12.

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ARTICLE 13

SATISFACTION AND DISCHARGE OF INDENTURE

SECTION 13.01. *Discharge of Indenture.* When (a) the Company shall deliver to the Trustee for cancellation all Notes theretofore authenticated (other than any Notes that have been destroyed, lost or stolen and in lieu of or in substitution for which other Notes shall have been authenticated and delivered) and not theretofore canceled, or (b) all the Notes not theretofore canceled or delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit with the Trustee, in trust, funds sufficient to pay at maturity the principal of and Applicable Premium on, or upon redemption the Repurchase Value of all of the Notes (other than any Notes that shall have been mutilated, destroyed, lost or stolen and in lieu of or in substitution for which other Notes shall have been authenticated and delivered) not theretofore canceled or delivered to the Trustee for cancellation, calculated as of such date of maturity or redemption date, as applicable, and interest due or to become due to such date of maturity or redemption date, as applicable, accompanied by a verification report, as to the sufficiency of the deposited amount, from an independent certified accountant or other financial professional satisfactory to the Trustee, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company, then this Indenture shall cease to be of further effect (except as to (i) remaining rights of registration of transfer, substitution and exchange and conversion of Notes, (ii) rights hereunder of Noteholders to receive payments of the principal of, and premium on, or the Repurchase Value (which, for clarification, includes principal) of, as applicable, and interest on, the Notes and the other rights, duties and obligations of Noteholders, as beneficiaries hereof with respect to the amounts, if any, so deposited with the Trustee and (iii) the rights, obligations and immunities of the Trustee hereunder), and the Trustee, on written demand of the Company accompanied by an Officers' Certificate and an Opinion of Counsel as required by Section 16.05 and at the cost and expense of the Company, shall execute proper instruments acknowledging satisfaction of and discharging this Indenture; the Company, however, hereby agrees to reimburse the Trustee for any costs or expenses thereafter reasonably and properly incurred by the Trustee and to compensate the Trustee for any services thereafter reasonably and properly rendered by the Trustee in connection with this Indenture or the Notes.

SECTION 13.02. *Deposited Monies to Be Held in Trust by Trustee.* Subject to Section 13.04, all monies deposited with the Trustee pursuant to Section 13.01, provided such deposit was not in violation of Article 4, shall be held in trust for the sole benefit of the Noteholders and not to be subject to the subordination provisions of Article 4, and such monies shall be applied by the Trustee to the payment, either directly or through any paying agent (including the Company if acting as its own paying agent), to the holders of the particular Notes for the payment or redemption of which such monies have been deposited with the Trustee, of all sums due and to become due thereon for principal of, and premium on, or Repurchase Value of, and interest.

SECTION 13.03. *Paying Agent to Repay Monies Held.* Upon the satisfaction and discharge of this Indenture, all monies then held by any paying agent of the Notes (other than the Trustee) shall, upon written request of the Company, be repaid to it or paid to the Trustee, and

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thereupon such paying agent shall be released from all further liability with respect to such monies.

SECTION 13.04. *Return of Unclaimed Monies.* Subject to the requirements of applicable law, any monies deposited with or paid to the Trustee for payment of the principal of, premium, if any, or interest on Notes and not applied but remaining unclaimed by the holders of Notes for two years after the date upon which the principal of, premium, if any, or interest on such Notes, as the case may be, shall have become due and payable, shall be repaid to the Company by the Trustee on demand and all liability of the Trustee shall thereupon cease with respect to such monies; and the holder of any of the Notes shall thereafter look only to the Company for any payment that such holder may be entitled to collect unless an applicable abandoned property law designates another Person.

SECTION 13.05. *Reinstatement.* If the Trustee or the paying agent is unable to apply any money in accordance with Section 13.02 by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the Notes shall be revived and reinstated as though no deposit had occurred pursuant to Section 13.01 until such time as the Trustee or the paying agent is permitted to apply all such money in accordance with Section 13.02; *provided* that if the Company makes any payment of interest or premium

on or principal or Repurchase Value, as applicable, of any Note following the reinstatement of its obligations, the Company shall be subrogated to the rights of the holders of such Notes to receive such payment from the money held by the Trustee or paying agent.

ARTICLE 14

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS

SECTION 14.01. *Indenture and Notes Solely Corporate Obligations.* No recourse for the payment of the principal or Repurchase Value of or premium, if any, or interest on any Note, or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Company in this Indenture or in any supplemental indenture or in any Note, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer, director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that all such liability is hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issue of the Notes.

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ARTICLE 15

CONVERSION OF NOTES

SECTION 15.01. *Right to Convert.* Subject to and upon compliance with the provisions of this Indenture, including, without limitation, Article 4, the holder of any Note shall have the right, at its option, at any time after the original issuance of the Notes hereunder through the close of business on the final maturity date of the Notes (except that, with respect to any Note or portion of a Note that shall be called for redemption, such right shall terminate, except as provided in Section 15.02, Section 3.02 or Section 3.04, at the close of business on the Business Day next preceding the date fixed for redemption of such Note or portion of a Note unless the Company shall default in payment due upon redemption thereof) to convert the principal amount, plus the Applicable Premium on such principal amount as of the conversion date, of the Note, or any portion of such principal amount, plus the Applicable Premium on such principal amount as of the conversion date, which is an integral multiple of \$1,000 into fully paid and non-assessable shares of Common Stock (as such shares shall then be constituted) at the Conversion Rate in effect at such time, by surrender of the Note so to be converted in whole or in part in the manner provided, together with any required funds, in Section 15.02. A Note in respect of which a holder is exercising its option to require redemption upon a Fundamental Change pursuant to Section 3.05(a) may be converted only if such holder withdraws its election to exercise in accordance with Section 3.05(b). A holder of Notes is not entitled to any rights of a holder of Common Stock until such holder has converted his Notes to Common Stock, and only to the extent such Notes are deemed to have been converted to Common Stock under this Article 15.

SECTION 15.02. *Exercise of Conversion Privilege; Issuance of Common Stock on Conversion, No Adjustment for Interest or Dividends.* In order to exercise the conversion privilege with respect to any Note in certificated form, the holder of any such Note to be converted in whole or in part shall surrender such Note, duly endorsed, at an office or agency maintained by the Company for such purpose pursuant to Section 5.02, accompanied by the funds, if any, required by the penultimate paragraph of this Section 15.02, and shall give written notice of conversion in the form provided on the Notes (or such other notice which is acceptable to the Company) to the office or agency that the holder elects to convert such Note or the portion thereof specified in said notice. Such notice shall also state the name or names (with address or addresses) in which the certificate or certificates for shares of Common Stock which shall be issuable on such conversion shall be issued, and shall be accompanied by transfer taxes, if required pursuant to Section 15.07. Each such Note surrendered for conversion shall, unless the shares issuable on conversion are to be issued in the same name as the registration of such Note, be duly endorsed by, or be accompanied by instruments of transfer in form satisfactory to the Company duly executed by, the holder or his duly authorized attorney.

In order to exercise the conversion privilege with respect to any interest in a Global Note, the beneficial holder must complete, or cause to be completed, the appropriate instruction form for conversion pursuant to the Depository's book-entry conversion program, deliver, or cause to be delivered, by book-entry delivery an interest in such Global Note, furnish appropriate endorsements and transfer documents if required by the Company or the Trustee or conversion

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agent, and pay the funds, if any, required by this Section 15.02 and any transfer taxes if required pursuant to Section 15.07.

As promptly as practicable after satisfaction of the requirements for conversion set forth above, subject to compliance with any restrictions on transfer if shares issuable on conversion are to be issued in a name other than that of the Noteholder (as if such transfer were a transfer of the Note or Notes (or portion thereof) so converted), the Company shall issue and shall deliver to such Noteholder at the office or agency maintained by the Company for such purpose pursuant to Section 5.02, a certificate or certificates for the number of full shares of Common Stock issuable upon the conversion of such Note or portion thereof as determined by the Company in accordance with the provisions of this Article 15 and a check or cash in respect of any fractional interest in respect of a share of Common Stock arising upon such conversion, calculated by the Company as provided in Section 15.03. In case any Note of a denomination greater than \$1,000 shall be surrendered for partial conversion, and subject to Section 2.03, the Company shall execute and the Trustee shall authenticate and deliver to the holder of the Note so surrendered, without charge to him, a new Note or Notes in authorized denominations in an aggregate principal amount equal to the unconverted portion of the surrendered Note.

Each conversion shall be deemed to have been effected as to any such Note (or portion thereof) on the date on which the requirements set forth above in this Section 15.02 have been satisfied as to such Note (or portion thereof), and the Person in whose name any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become on said date the holder of record of the shares represented thereby; *provided* that any such surrender on any date when the stock transfer books of the Company shall be closed shall constitute the Person in whose name the certificates are to be issued as the record holder thereof for all purposes on the next succeeding day on which such stock transfer books are open, but such conversion shall be at the Conversion Rate in effect on the date upon which such Note shall be surrendered.

Any Note or portion thereof surrendered for conversion during the period from the close of business on the record date for any interest payment date to the close of business on the Business Day preceding the following interest payment date that has not been called for redemption during such period shall be

accompanied by payment, in immediately available funds or other funds acceptable to the Company, of an amount equal to the interest otherwise payable on such interest payment date on the principal amount being converted; *provided* that no such payment need be made if there shall exist at the time of conversion a default in the payment of interest on the Notes. Except as provided above in this Section 15.01, no payment or other adjustment shall be made for interest accrued on any Note converted or for dividends on any shares issued upon the conversion of such Note as provided in this Article.

Upon the conversion of an interest in a Global Note, the Trustee (or other conversion agent appointed by the Company), or the Custodian at the direction of the Trustee (or other conversion agent appointed by the Company), shall make a notation on such Global Note as to the reduction in the principal amount represented thereby. The Company shall notify the Trustee in writing of any conversions of Notes effected through any conversion agent other than the Trustee.

SECTION 15.03. *Cash Payments in Lieu of Fractional Shares.* No fractional shares of Common Stock or scrip representing fractional shares shall be issued upon conversion of Notes. If more than one Note shall be surrendered for conversion at one time by the same holder, the number of full shares that shall be issuable upon conversion shall be computed on the basis of the aggregate principal amount of the Notes (or specified portions thereof to the extent permitted hereby) so surrendered. If any fractional share of stock would be issuable upon the conversion of any Note or Notes, the Company shall make an adjustment and payment therefor in cash at the current market price thereof to the holder of Notes. The current market price of a share of Common Stock shall be the Closing Price on the last Business Day immediately preceding the day on which the Notes (or specified portions thereof) are deemed to have been converted.

SECTION 15.04. *Conversion Rate.* Each \$1,000 of principal amount of the Notes, together with the Applicable Premium on such principal amount as of the date of conversion, shall be convertible into the number of shares of Common Stock specified in the form of Note (herein called the “**Conversion Rate**”) attached as Exhibit A hereto, subject to adjustment as provided in this Article 15.

SECTION 15.05. *Adjustment of Conversion Rate.* The Conversion Rate shall be adjusted from time to time by the Company as follows:

(a) In case the Company shall hereafter pay a dividend or make a distribution to all holders of the outstanding Common Stock in shares of Common Stock, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect at the opening of business on the date following the date fixed for the determination of stockholders entitled to receive such dividend or other distribution by a fraction,

(i) the numerator of which shall be the sum of the number of shares of Common Stock outstanding at the close of business on the date fixed for the determination of stockholders entitled to receive such dividend or other distribution plus the total number of shares of Common Stock constituting such dividend or other distribution; and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding at the close of business on the date fixed for such determination,

such increase to become effective immediately after the opening of business on the day following the date fixed for such determination. For the purpose of this paragraph (a), the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Company. The Company will not pay any dividend or make any distribution on shares of Common Stock held in the treasury of the Company. If any dividend or distribution of the type described in this Section 15.05(a) is declared but not so paid or made, the Conversion Rate shall again be adjusted to the Conversion Rate that would then be in effect if such dividend or distribution had not been declared.

(b) In case the Company shall issue rights or warrants to all holders of its outstanding shares of Common Stock entitling them (for a period expiring within forty-five (45) days after

the date fixed for determination of stockholders entitled to receive such rights or warrants) to subscribe for or purchase shares of Common Stock at a price per share less than the Current Market Price (as defined below) on the date fixed for determination of stockholders entitled to receive such rights or warrants, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the date fixed for determination of stockholders entitled to receive such rights or warrants by a fraction,

(i) the numerator of which shall be the sum of the number of shares of Common Stock outstanding on the date fixed for determination of stockholders entitled to receive such rights or warrants plus the total number of additional shares of Common Stock offered for subscription or purchase, and

(ii) the denominator of which shall be the sum of the number of shares of Common Stock outstanding at the close of business on the date fixed for determination of stockholders entitled to receive such rights or warrants plus the number of shares that the aggregate offering price of the total number of shares so offered would purchase at such Current Market Price.

Such adjustment shall be successively made whenever any such rights or warrants are issued, and shall become effective immediately after the opening of business on the day following the date fixed for determination of stockholders entitled to receive such rights or warrants. To the extent that shares of Common Stock are not delivered after the expiration of such rights or warrants, the Conversion Rate shall be readjusted to the Conversion Rate that would then be in effect had the adjustments made upon the issuance of such rights or warrants been made on the basis of delivery of only the number of shares of Common Stock actually delivered. If such rights or warrants are not so issued, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such date fixed for the determination of stockholders entitled to receive such rights or warrants had not been fixed. In determining whether any rights or warrants entitle the holders to subscribe for or purchase shares of Common Stock at less than such Current Market Price, and in determining the aggregate offering price of such shares of Common Stock, there shall be taken into account any consideration received by the Company for such rights or warrants and any amount payable on exercise or conversion thereof, the value of such consideration, if other than cash, to be determined by the Board of Directors.

(c) In case outstanding shares of Common Stock shall be subdivided into a greater number of shares of Common Stock, the Conversion Rate in effect at the opening of business on the day following the day upon which such subdivision becomes effective shall be proportionately increased, and conversely, in case outstanding shares of Common Stock shall be combined into a smaller number of shares of Common Stock, the Conversion Rate in effect at the opening of business on the day following the day upon which such combination becomes effective shall be proportionately reduced, such increase or reduction, as the case may be, to become effective immediately after the opening of business on the day following the day upon which such subdivision or combination becomes effective.

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(d) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock shares of any class of capital stock of the Company or evidences of its indebtedness or assets (including securities, but excluding any rights or warrants referred to in Section 15.05(b), and excluding any dividend or distribution (x) paid exclusively in cash or (y) referred to in Section 15.05(a) (any of the foregoing hereinafter in this Section 15.05(d) called the “**Securities**”)), then, in each such case (unless the Company elects to reserve such Securities for distribution to the Noteholders upon the conversion of the Notes so that any such holder converting Notes will receive upon such conversion, in addition to the shares of Common Stock to which such holder is entitled, the amount and kind of such Securities which such holder would have received if such holder had converted its Notes into Common Stock immediately prior to the Record Date (as defined in Section 15.05(h)(4)) for such distribution of the Securities), the Conversion Rate shall be increased so that the same shall be equal to the rate determined by multiplying the Conversion Rate in effect on the Record Date with respect to such distribution by a fraction,

(i) the numerator of which shall be the Current Market Price on such Record Date; and

(ii) the denominator of which shall be the Current Market Price on such Record Date less the fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a resolution of the Board of Directors) on the Record Date of the portion of the Securities so distributed applicable to one share of Common Stock,

such adjustment to become effective immediately prior to the opening of business on the day following such Record Date; *provided* that if the then fair market value (as so determined) of the portion of the Securities so distributed applicable to one share of Common Stock is equal to or greater than the Current Market Price on the Record Date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Noteholder shall have the right to receive upon conversion the amount of Securities such holder would have received had such holder converted each Note on the Record Date. If such dividend or distribution is not so paid or made, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such dividend or distribution had not been declared. If the Board of Directors determines the fair market value of any distribution for purposes of this Section 15.05(d) by reference to the actual or when issued trading market for any securities, it must in doing so consider the prices in such market over the same period used in computing the Current Market Price on the applicable Record Date.

Rights or warrants distributed by the Company to all holders of Common Stock entitling the holders thereof to subscribe for or purchase shares of the Company’s capital stock (either initially or under certain circumstances), which rights or warrants, until the occurrence of a specified event or events (“**Trigger Event**”): (i) are deemed to be transferred with such shares of Common Stock; (ii) are not exercisable; and (iii) are also issued in respect of future issuances of Common Stock, shall be deemed not to have been distributed for purposes of this Section 15.05 (and no adjustment to the Conversion Rate under this Section 15.05 will be required) until the occurrence of the earliest Trigger Event, whereupon such rights and warrants shall be deemed to

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have been distributed and an appropriate adjustment (if any is required) to the Conversion Rate shall be made under this Section 15.05(d). If any such right or warrant, including any such existing rights or warrants distributed prior to the date of this Indenture, are subject to events, upon the occurrence of which such rights or warrants become exercisable to purchase different securities, evidences of indebtedness or other assets, then the date of the occurrence of any and each such event shall be deemed to be the date of distribution and record date with respect to new rights or warrants with such rights (and a termination or expiration of the existing rights or warrants without exercise by any of the holders thereof). In addition, in the event of any distribution (or deemed distribution) of rights or warrants, or any Trigger Event or other event (of the type described in the preceding sentence) with respect thereto that was counted for purposes of calculating a distribution amount for which an adjustment to the Conversion Rate under this Section 15.05 was made, (1) in the case of any such rights or warrants that shall all have been redeemed or repurchased without exercise by any holders thereof, the Conversion Rate shall be readjusted upon such final redemption or repurchase to give effect to such distribution or Trigger Event, as the case may be, as though it were a cash distribution, equal to the per share redemption or repurchase price received by a holder or holders of Common Stock with respect to such rights or warrants (assuming such holder had retained such rights or warrants), made to all holders of Common Stock as of the date of such redemption or repurchase, and (2) in the case of such rights or warrants that shall have expired or been terminated without exercise by any holders thereof, the Conversion Rate shall be readjusted as if such rights and warrants had not been issued.

No adjustment of the Conversion Rate shall be made pursuant to this Section 15.05(d) in respect of rights or warrants distributed or deemed distributed on any Trigger Event to the extent that such rights or warrants are actually distributed, or reserved by the Company for distribution to holders of Notes upon conversion by such holders of Notes to Common Stock.

For purposes of this Section 15.05(d) and Sections 15.05(a) and (b), any dividend or distribution to which this Section 15.05(d) is applicable that also includes shares of Common Stock, or rights or warrants to subscribe for or purchase shares of Common Stock (or both), shall be deemed instead to be (1) a dividend or distribution of the evidences of indebtedness, assets or shares of capital stock other than such shares of Common Stock or rights or warrants (and any Conversion Rate adjustment required by this Section 15.05(d) with respect to such dividend or distribution shall then be made) immediately followed by (2) a dividend or distribution of such shares of Common Stock or such rights or warrants (and any further Conversion Rate adjustment required by Sections 15.05(a) and (b) with respect to such dividend or distribution shall then be made), except (A) the Record Date of such dividend or distribution shall be substituted as “the date fixed for the determination of stockholders entitled to receive such dividend or other distribution”, “the date fixed for the determination of stockholders entitled to receive such rights or warrants” and “the date fixed for such determination” within the meaning of Sections 15.05(a) and (b), and (B) any shares of Common Stock included in such dividend or distribution shall not be deemed “outstanding at the close of business on the date fixed for such determination” within the meaning of Section 15.05(a).

(e) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock cash (excluding (x) any quarterly cash dividend on the Common Stock to the extent the aggregate cash dividend per share of Common Stock in any fiscal quarter does not

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exceed the greater of (A) the amount per share of Common Stock of the next preceding quarterly cash dividend on the Common Stock to the extent that such preceding quarterly dividend did not require any adjustment of the Conversion Rate pursuant to this Section 15.05(e) (as adjusted to reflect subdivisions, or combinations of the Common Stock), and (B) 3.75% of the arithmetic average of the Closing Price (determined as set forth in Section 15.05(h)) during the ten Trading Days (as defined in Section 15.05(h)) immediately prior to the date of declaration of such dividend, and (y) any dividend or distribution in connection with the liquidation, dissolution or winding up of the Company, whether voluntary or involuntary), then, in such case, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the close of business on such record date by a fraction,

(i) the numerator of which shall be the Current Market Price on such record date; and

(ii) the denominator of which shall be the Current Market Price on such record date less the amount of cash so distributed (and not excluded as provided above) applicable to one share of Common Stock,

such adjustment to be effective immediately prior to the opening of business on the day following the record date; *provided* that if the portion of the cash so distributed applicable to one share of Common Stock is equal to or greater than the Current Market Price on the record date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Noteholder shall have the right to receive upon conversion the amount of cash such holder would have received had such holder converted each Note on the record date. If such dividend or distribution is not so paid or made, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such dividend or distribution had not been declared. If any adjustment is required to be made as set forth in this Section 15.05(e) as a result of a distribution that is a quarterly dividend, such adjustment shall be based upon the amount by which such distribution exceeds the amount of the quarterly cash dividend permitted to be excluded pursuant hereto. If an adjustment is required to be made as set forth in this Section 15.05(e) above as a result of a distribution that is not a quarterly dividend, such adjustment shall be based upon the full amount of the distribution.

(f) In case a tender or exchange offer made by the Company or any Subsidiary for all or any portion of the Common Stock shall expire and such tender or exchange offer (as amended upon the expiration thereof) shall require the payment to stockholders of consideration per share of Common Stock having a fair market value (as determined by the Board of Directors, whose determination shall be conclusive and described in a resolution of the Board of Directors) that as of the last time (the “**Expiration Time**”) tenders or exchanges may be made pursuant to such tender or exchange offer (as it may be amended) exceeds the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the Expiration Time by a fraction

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(i) the numerator of which shall be the sum of (x) the fair market value (determined as aforesaid) of the aggregate consideration payable to stockholders based on the acceptance (up to any maximum specified in the terms of the tender or exchange offer) of all shares validly tendered or exchanged and not withdrawn as of the Expiration Time (the shares deemed so accepted up to any such maximum, being referred to as the “**Purchased Shares**”) and (y) the product of the number of shares of Common Stock outstanding (less any Purchased Shares) at the Expiration Time and the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time, and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Expiration Time multiplied by the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time

such adjustment to become effective immediately prior to the opening of business on the day following the Expiration Time. If the Company is obligated to purchase shares pursuant to any such tender or exchange offer, but the Company is permanently prevented by applicable law from effecting any such purchases or all such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such tender or exchange offer had not been made.

(g) In case of a tender or exchange offer made by a Person other than the Company or any Subsidiary for an amount that increases the offeror’s ownership of Common Stock to more than twenty-five percent (25%) of the Common Stock outstanding and shall involve the payment by such Person of consideration per share of Common Stock having a fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a resolution of the Board of Directors) that as of the last time (the “**Offer Expiration Time**”) tenders or exchanges may be made pursuant to such tender or exchange offer (as it shall have been amended) that exceeds the Closing Price of a share of Common Stock on the Trading Day next succeeding the Offer Expiration Time, and in which, as of the Offer Expiration Time the Board of Directors is not recommending rejection of the offer, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the Offer Expiration Time by a fraction

(i) the numerator of which shall be the sum of (x) the fair market value (determined as aforesaid) of the aggregate consideration payable to stockholders based on the acceptance (up to any maximum specified in the terms of the tender or exchange offer) of all shares validly tendered or exchanged and not withdrawn as of the Offer Expiration Time (the shares deemed so accepted, up to any such maximum, being referred to as the “**Accepted Purchased Shares**”) and (y) the product of the number of shares of Common Stock outstanding (less any Accepted Purchased Shares) at the Offer Expiration Time and the Closing Price of a share of Common Stock on the Trading Day next succeeding the Offer Expiration Time, and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Offer Expiration Time

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multiplied by the Closing Price of a share of Common Stock on the Trading Day next succeeding the Offer Expiration Time,

such adjustment to become effective immediately prior to the opening of business on the day following the Offer Expiration Time. If such Person is obligated to purchase shares pursuant to any such tender or exchange offer, but such Person is permanently prevented by applicable law from effecting any such purchases or all such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such tender or exchange offer had not been made. Notwithstanding the foregoing, the adjustment described in this Section 15.05(g) shall not be made if, as of the Offer Expiration Time, the offering documents with respect to such offer disclose a plan or intention to cause the Company to engage in any transaction described in Article 12.

(h) For purposes of this Section 15.05, the following terms shall have the meaning indicated:

(1) “**Closing Price**” with respect to any security on any day shall mean the last sale price, regular way, on such day or, in case no such sale takes place on such day, the average of the reported closing bid and asked prices, regular way as of 4:00 p.m. (New York City time), in each case as quoted on the NASDAQ National Market or, if such security is not quoted or listed or admitted to trading on such NASDAQ National Market, on the principal national securities exchange or quotation system on which such security is quoted or listed or admitted to trading or, if not quoted or listed or admitted to trading on any national securities exchange or quotation system, the average of the closing bid and asked prices of such security on the over-the-counter market on the day in question as reported by the National Quotation Bureau Incorporated, or a similar generally accepted reporting service, or if not so available, in such manner as furnished by any New York Stock Exchange member firm selected from time to time by the Board of Directors for that purpose, or a price determined in good faith by the Board of Directors or, to the extent permitted by applicable law, a duly authorized committee thereof, whose determination shall be conclusive.

(2) “**Current Market Price**” shall mean the average of the daily Closing Prices per share of Common Stock for the ten consecutive Trading Days selected by the Company commencing no more than 30 Trading Days before and ending not later than the earlier of such date of determination and the day before the “ex” date with respect to the issuance, distribution, subdivision or combination requiring such computation immediately prior to the date in question. For purpose of this paragraph, the term “ex” date, (1) when used with respect to any issuance or distribution, means the first date on which the Common Stock trades, regular way, on the relevant exchange or in the relevant market from which the Closing Price was obtained without the right to receive such issuance or distribution, and (2) when used with respect to any subdivision or combination of shares of Common Stock, means the first date on which the Common Stock trades, regular way, on such exchange or in such market after the time at which such subdivision or combination becomes effective.

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If another issuance, distribution, subdivision or combination to which Section 15.05 applies occurs during the period applicable for calculating “Current Market Price” pursuant to the definition in the preceding paragraph, “Current Market Price” shall be calculated for such period in a manner determined by the Board of Directors to reflect the impact of such issuance, distribution, subdivision or combination on the Closing Price of the Common Stock during such period.

(3) “**Fair Market Value**” shall mean the amount which a willing buyer would pay a willing seller in an arm’s-length transaction.

(4) “**Record Date**” shall mean, with respect to any dividend, distribution or other transaction or event in which the holders of Common Stock have the right to receive any cash, securities or other property or in which the Common Stock (or other applicable security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of stockholders entitled to receive such cash, securities or other property (whether such date is fixed by the Board of Directors or by statute, contract or otherwise).

(5) “**Trading Day**” shall mean (x) if the applicable security is quoted on the NASDAQ National Market, a day on which trades may be made thereon or (y) if the applicable security is listed or admitted for trading on the New York Stock Exchange or another national securities exchange, a day on which the New York Stock Exchange or another national securities exchange is open for business or (z) if the applicable security is not so listed, admitted for trading or quoted, any day other than a Saturday or Sunday or a day on which banking institutions in the State of New York are authorized or obligated by law or executive order to close.

(i) The Company may make such increases in the Conversion Rate, in addition to those required by Sections 15.05(a), (b), (c), (d), (e), (f) or (g) as the Board of Directors considers to be advisable to avoid or diminish any income tax to holders of Common Stock or rights to purchase Common Stock resulting from any dividend or distribution of stock (or rights to acquire stock) or from any event treated as such for income tax purposes.

To the extent permitted by applicable law, the Company from time to time may increase the Conversion Rate by any amount for any period of time if the period is at least twenty (20) days, the increase is irrevocable during the period and the Board of Directors shall have made a determination that such increase would be in the best interests of the Company, which determination shall be conclusive. Whenever the Conversion Rate is increased pursuant to the preceding sentence, the Company shall mail to holders of record of the Notes a notice of the increase at least fifteen (15) days prior to the date the increased Conversion Rate takes effect, and such notice shall state the increased Conversion Rate and the period during which it will be in effect.

(j) No adjustment in the Conversion Rate shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in such rate; *provided* that any adjustments that by reason of this Section 15.05) are not required to be made shall be carried

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forward and taken into account in any subsequent adjustment. All calculations under this Article 15 shall be made by the Company and shall be made to the nearest cent or to the nearest one-ten thousandth (1/10,000) of a share, as the case may be. No adjustment need be made for rights to purchase Common Stock pursuant to a Company plan for reinvestment of dividends or interest. To the extent the Notes become convertible into cash, assets, property or securities (other than capital stock of the Company), no adjustment need be made thereafter as to the cash, assets, property or such securities. Interest will not accrue on any cash into which the Notes are convertible.

(k) Whenever the Conversion Rate is adjusted as herein provided, the Company shall promptly file with the Trustee and any conversion agent other than the Trustee an Officers' Certificate setting forth the Conversion Rate after such adjustment and setting forth a brief statement of the facts requiring such adjustment. Unless and until a Responsible Officer of the Trustee shall have received such Officers' Certificate, the Trustee shall not be deemed to have knowledge of any adjustment of the Conversion Rate and may assume that the last Conversion Rate of which it has knowledge is still in effect. Promptly after delivery of such certificate, the Company shall prepare a notice of such adjustment of the Conversion Rate setting forth the adjusted Conversion Rate and the date on which each adjustment becomes effective and shall mail such notice of such adjustment of the Conversion Rate to the holder of each Note at his last address appearing on the Note register provided for in Section 2.05 of this Indenture, within twenty (20) days after execution thereof. Failure to deliver such notice shall not affect the legality or validity of any such adjustment.

(l) In any case in which this Section 15.05 provides that an adjustment shall become effective immediately after (1) a record date or Record Date for an event, (2) the date fixed for the determination of stockholders entitled to receive a dividend or distribution pursuant to Section 15.05(a), (3) a date fixed for the determination of stockholders entitled to receive rights or warrants pursuant to Section 15.05(b), (4) the Expiration Time for any tender or exchange offer pursuant to Section 15.05(f), or (5) the Offer Expiration Time for a tender or exchange offer pursuant to Section 15.05(g) (each a "**Determination Date**"), the Company may elect to defer until the occurrence of the applicable Adjustment Event (as hereinafter defined) (x) issuing to the holder of any Note converted after such Determination Date and before the occurrence of such Adjustment Event, the additional shares of Common Stock or other securities issuable upon such conversion by reason of the adjustment required by such Adjustment Event over and above the Common Stock issuable upon such conversion before giving effect to such adjustment and (y) paying to such holder any amount in cash in lieu of any fraction pursuant to Section 15.03. For purposes of this Section 15.05(l), the term "**Adjustment Event**" shall mean:

- (i) in any case referred to in clause (1) hereof, the occurrence of such event,
- (ii) in any case referred to in clause (2) hereof, the date any such dividend or distribution is paid or made,
- (iii) in any case referred to in clause (3) hereof, the date of expiration of such rights or warrants, and

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(iv) in any case referred to in clause (4) or clause (5) hereof, the date a sale or exchange of Common Stock pursuant to such tender or exchange offer is consummated and becomes irrevocable.

(m) For purposes of this Section 15.05, the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Company but shall include shares issuable in respect of scrip certificates issued in lieu of fractions of shares of Common Stock. The Company will not pay any dividend or make any distribution on shares of Common Stock held in the treasury of the Company.

SECTION 15.06. *Effect of Reclassification, Consolidation, Merger or Sale.* If any of the following events occur, namely (i) any reclassification or change of the outstanding shares of Common Stock (other than a subdivision or combination to which Section 15.05(c) applies), (ii) any consolidation, merger or combination of the Company with another Person as a result of which holders of Common Stock shall be entitled to receive stock, other securities or other property or assets (including cash) with respect to or in exchange for such Common Stock, or (iii) any sale or conveyance of all or substantially all of the properties and assets of the Company to any other Person as a result of which holders of Common Stock shall be entitled to receive stock, other securities or other property or assets (including cash) with respect to or in exchange for such Common Stock, then the Company or the successor or purchasing Person, as the case may be, shall execute with the Trustee a supplemental indenture (which shall comply with the Trust Indenture Act as in force at the date of execution of such supplemental indenture) providing that each Note shall be convertible into the kind and amount of shares of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance by a holder of a number of shares of Common Stock issuable upon conversion of such Notes (assuming, for such purposes, a sufficient number of authorized shares of Common Stock are available to convert all such Notes) immediately prior to such reclassification, change, consolidation, merger, combination, sale or conveyance assuming such holder of Common Stock did not exercise his rights of election, if any, as to the kind or amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance (*provided that, if the kind or amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance is not the same for each share of Common Stock in respect of which such rights of election shall not have been exercised ("nonelecting share"), then for the purposes of this Section 15.06 the kind and amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance for each non-electing share shall be deemed to be the kind and amount so receivable per share by a plurality of the non-electing shares*). Such supplemental indenture shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 15.

The Company shall cause notice of the execution of such supplemental indenture to be mailed to each holder of Notes, at its address appearing on the Note register provided for in Section 2.05 of this Indenture, within twenty (20) days after execution thereof. Failure to deliver such notice shall not affect the legality or validity of such supplemental indenture.

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The above provisions of this Section shall similarly apply to successive reclassifications, changes, consolidations, mergers, combinations, sales and conveyances.

If this Section 15.06 applies to any event or occurrence, Section 15.05 shall not apply.

SECTION 15.07. *Taxes on Shares Issued.* The issue of stock certificates on conversions of Notes shall be made without charge to the converting Noteholder for any documentary, stamp or similar issue or transfer tax in respect of the issue thereof. The Company shall not, however, be required to pay any such tax which may be payable in respect of any transfer involved in the issue and delivery of stock in any name other than that of the holder of any Note converted, and the Company shall not be required to issue or deliver any such stock certificate unless and until the Person or Persons requesting the issue thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid.

SECTION 15.08. *Reservation of Shares, Shares to Be Fully Paid; Compliance with Governmental Requirements; Listing of Common Stock.* The Company shall provide, free from preemptive rights, out of its authorized but unissued shares or shares held in treasury, sufficient shares of Common Stock to provide for the conversion of the Notes from time to time as such Notes are presented for conversion.

Before taking any action which would cause an adjustment increasing the Conversion Rate to an amount that would cause the Conversion Price to be reduced below the then par value, if any, of the shares of Common Stock issuable upon conversion of the Notes, the Company will take all corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue shares of such Common Stock at such adjusted Conversion Rate.

The Company covenants that all shares of Common Stock which may be issued upon conversion of Notes will upon issue be fully paid and non-assessable by the Company and free from all taxes, liens and charges with respect to the issue thereof.

The Company covenants that, if any shares of Common Stock to be provided for the purpose of conversion of Notes hereunder require registration with or approval of any governmental authority under any federal or state law before such shares may be validly issued upon conversion, the Company will in good faith and as expeditiously as possible, to the extent then permitted by the rules and interpretations of the Securities and Exchange Commission (or any successor thereto), endeavor to secure such registration or approval, as the case may be.

The Company further covenants that, if at any time the Common Stock shall be listed on the NASDAQ National Market or any other national securities exchange or automated quotation system, the Company will, if permitted by the rules of such exchange or automated quotation system, list and keep listed, so long as the Common Stock shall be so listed on such exchange or automated quotation system, all Common Stock issuable upon conversion of the Note; *provided* that, if the rules of such exchange or automated quotation system permit the Company to defer the listing of such Common Stock until the first conversion of the Notes into Common Stock in accordance with the provisions of this Indenture, the Company covenants to list such Common

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Stock issuable upon conversion of the Notes in accordance with the requirements of such exchange or automated quotation system at such time.

SECTION 15.09. *Responsibility of Trustee.* The Trustee and any other conversion agent shall not at any time be under any duty or responsibility to any holder of Notes to determine the Conversion Rate or whether any facts exist which may require any adjustment of the Conversion Rate, or with respect to the nature or extent or calculation of any such adjustment when made, or with respect to the method employed, or herein or in any supplemental indenture provided to be employed, in making the same. The Trustee and any other conversion agent shall not be accountable with respect to the validity or value (or the kind or amount) of any shares of Common Stock, or of any securities or property, which may at any time be issued or delivered upon the conversion of any Note; and the Trustee and any other conversion agent make no representations with respect thereto. Neither the Trustee nor any conversion agent shall be responsible for any failure of the Company to issue, transfer or deliver any shares of Common Stock or stock certificates or other securities or property or cash upon the surrender of any Note for the purpose of conversion or to comply with any of the duties, responsibilities or covenants of the Company contained in this Article 15. Without limiting the generality of the foregoing, neither the Trustee nor any conversion agent shall be under any responsibility to determine the correctness of any provisions contained in any supplemental indenture entered into pursuant to Section 15.06 relating either to the kind or amount of shares of stock or securities or property (including cash) receivable by Noteholders upon the conversion of their Notes after any event referred to in such Section 15.06 or to any adjustment to be made with respect thereto, but, subject to the provisions of Section 8.01, may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, the Officers' Certificate (which the Company shall be obligated to file with the Trustee prior to the execution of any such supplemental indenture) with respect thereto.

SECTION 15.10. *Notice to Holders Prior to Certain Actions.* In case:

- (a) the Company shall declare a dividend (or any other distribution) on its Common Stock that would require an adjustment in the Conversion Rate pursuant to Section 15.05; or
- (b) the Company shall authorize the granting to the holders of all or substantially all of its Common Stock of rights or warrants to subscribe for or purchase any share of any class or any other rights or warrants; or
- (c) of any reclassification or reorganization of the Common Stock of the Company (other than a subdivision or combination of its outstanding Common Stock, or a change in par value, or from par value to no par value, or from no par value to par value), or of any consolidation or merger to which the Company is a party and for which approval of any stockholders of the Company is required, or of the sale or transfer of all or substantially all of the assets of the Company; or
- (d) of the voluntary or involuntary dissolution, liquidation or winding up of the Company;

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the Company shall cause to be filed with the Trustee and to be mailed to each holder of Notes at his address appearing on the Note register provided for in Section 2.05 of this Indenture, as promptly as possible but in any event at least ten (10) days prior to the applicable date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution or rights or warrants, or, if a record is not to be taken, the date as of which the holders of Common Stock of record to be entitled to such dividend, distribution or rights are to be determined, or (y) the date on which such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up is expected to become effective or occur, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their Common Stock for securities or other property deliverable upon such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up. Failure to give such notice, or any defect therein, shall not affect the legality or validity of such dividend, distribution, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up.

SECTION 15.11. *Rights Issued under the Outstanding Rights Agreement; Future Stockholder Rights Plans.* (a) The Company has entered into a Rights Agreement dated as of June 30, 2000 (the "**Rights Agreement**") with Equiserve Trust Company, N.A. Under the Rights Agreement, preferred share purchase rights (the "**Rights**") have been, and may in the future be, issued in respect of shares of Common Stock. Each share of Common Stock issued upon conversion of any Note pursuant to this Article 15 shall be entitled to receive the appropriate number of Rights, if any, and the certificates representing the

Common Stock issued upon such conversion shall bear such legends, if any, in each case as provided by and subject to the terms of the Rights Agreement as in effect at the time of such conversion. If hereafter the Rights separate from the Common Stock in accordance with the provisions of the Rights Agreement so that a Noteholder would thereafter not be entitled to receive any Rights in respect of the Common Stock issuable upon conversion of such Note, the Conversion Rate will be adjusted as provided in Section 15.05(d) on the separation date. In lieu of any such adjustment, the Company may amend the Rights Agreement to provide that upon conversion Noteholders will receive, in addition to the Common Stock issuable upon such conversion, the Rights which would have attached to such shares of Common Stock if the Rights had not become separated from the Common Stock pursuant to the provisions of the Rights Agreement.

(b) If the Company hereafter adopts any stockholder rights plan similar to the Rights Agreement, a Noteholder shall be entitled to receive upon conversion of their Notes in addition to the shares of Common Stock issuable upon conversion the related rights for the Common Stock whether or not the rights under the future stockholder rights plan have separated from the Common Stock at the time of conversion but otherwise subject to the generally applicable terms of such plan and no additional adjustment to the Conversion Rate shall be made for the future stockholder rights plan under Section 15.05(d).

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ARTICLE 16

MISCELLANEOUS PROVISIONS

SECTION 16.01. *Provisions Binding on Company's Successors.* All the covenants, stipulations, promises and agreements by the Company contained in this Indenture shall bind its successors and assigns whether so expressed or not.

SECTION 16.02. *Official Acts by Successor Corporation.* Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the like board, committee or officer of any Person that shall at the time be the lawful sole successor of the Company.

SECTION 16.03. *Addresses for Notices, Etc.* Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the holders of Notes on the Company shall be deemed to have been sufficiently given or made, for all purposes, if given or served by being deposited postage prepaid by registered or certified mail in a post office letter box addressed (until another address is filed by the Company with the Trustee) to Axcelis Technologies, Inc., 108 Cherry Hill Road, Beverly, Massachusetts 01915, Attention: Chief Financial Officer. Any notice, direction, request or demand hereunder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or served by being deposited, postage prepaid, by registered or certified mail in a post office letter box addressed to the Corporate Trust Office, which office is, at the date as of which this Indenture is dated, located at One Federal Street, 3rd Floor, Boston, Massachusetts 02109.

The Trustee, by notice to the Company, may designate additional or different addresses for subsequent notices or communications.

Any notice or communication mailed to a Noteholder shall be mailed to him by first class mail, postage prepaid, at his address as it appears on the Note register and shall be sufficiently given to him if so mailed within the time prescribed.

Failure to mail a notice or communication to a Noteholder or any defect in it shall not affect its sufficiency with respect to other Noteholders. If a notice or communication is mailed in the manner provided above, it is duly given, whether or not the addressee receives it.

SECTION 16.04. *Governing Law.* This Indenture and each Note shall be deemed to be a contract made under the laws of the State of New York, and for all purposes shall be construed in accordance with the laws of the State of New York.

SECTION 16.05. *Evidence of Compliance with Conditions Precedent, Certificates to Trustee.* Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with, and an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall

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include: (1) a statement that the person making such certificate or opinion has read such covenant or condition; (2) a brief statement as to the nature and scope of the examination or investigation upon which the statement or opinion contained in such certificate or opinion is based; (3) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (4) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

SECTION 16.06. *Legal Holidays.* In any case in which the date of maturity of interest on or principal of the Notes or the date fixed for redemption of any Note will not be a Business Day, then payment of such interest on or principal of the Notes need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption, and no interest shall accrue for the period from and after such date.

SECTION 16.07. *Trust Indenture Act.* This Indenture is hereby made subject to, and shall be governed by, the provisions of the Trust Indenture Act required to be part of and to govern indentures qualified under the Trust Indenture Act; *provided* that this Section 16.07 shall not require this Indenture or the Trustee to be qualified under the Trust Indenture Act prior to the time such qualification is in fact required under the terms of the Trust Indenture Act, nor shall it constitute any admission or acknowledgment by any party to the Indenture that any such qualification is required prior to the time such qualification is in fact required under the terms of the Trust Indenture Act. If any provision hereof limits, qualifies or conflicts with another provision hereof which is required to be included in an indenture qualified under the Trust Indenture Act, such required provision shall control.

SECTION 16.08. *No Security Interest Created.* Nothing in this Indenture or in the Notes, expressed or implied, shall be construed to constitute a security interest under the Uniform Commercial Code or similar legislation, as now or hereafter enacted and in effect, in any jurisdiction in which property of the Company or its subsidiaries is located.

SECTION 16.09. *Benefits of Indenture.* Nothing in this Indenture or in the Notes, express or implied, shall give to any Person, other than the parties hereto, any paying agent, any authenticating agent, any Note registrar and their successors hereunder, the holders of Notes and the holders of Designated Senior Indebtedness, any benefit or any legal or equitable right, remedy or claim under this Indenture.

SECTION 16.10. *Table of Contents, Headings, Etc.* The table of contents and the titles and headings of the articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

SECTION 16.11. *Authenticating Agent.* The Trustee may appoint an authenticating agent that shall be authorized to act on its behalf, and subject to its direction, in the authentication and delivery of Notes in connection with the original issuance thereof and transfers and exchanges of Notes hereunder, including under Sections 2.04, 2.05, 2.06, 2.07, 3.03 and 3.05, as fully to all

intents and purposes as though the authenticating agent had been expressly authorized by this Indenture and those Sections to authenticate and deliver Notes. For all purposes of this Indenture, the authentication and delivery of Notes by the authenticating agent shall be deemed to be authentication and delivery of such Notes "by the Trustee" and a certificate of authentication executed on behalf of the Trustee by an authenticating agent shall be deemed to satisfy any requirement hereunder or in the Notes for the Trustee's certificate of authentication. Such authenticating agent shall at all times be a Person eligible to serve as trustee hereunder pursuant to Section 8.09.

Any corporation into which any authenticating agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, consolidation or conversion to which any authenticating agent shall be a party, or any corporation succeeding to the corporate trust business of any authenticating agent, shall be the successor of the authenticating agent hereunder, if such successor corporation is otherwise eligible under this Section 16.11, without the execution or filing of any paper or any further act on the part of the parties hereto or the authenticating agent or such successor corporation.

Any authenticating agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time terminate the agency of any authenticating agent by giving written notice of termination to such authenticating agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time any authenticating agent shall cease to be eligible under this Section, the Trustee shall either promptly appoint a successor authenticating agent or itself assume the duties and obligations of the former authenticating agent under this Indenture and, upon such appointment of a successor authenticating agent, if made, shall give written notice of such appointment of a successor authenticating agent to the Company and shall mail notice of such appointment of a successor authenticating agent to all holders of Notes as the names and addresses of such holders appear on the Note register.

The Company agrees to pay to the authenticating agent from time to time such reasonable compensation for its services as shall be agreed upon in writing between the Company and the authenticating agent.

The provisions of Sections 8.02, 8.03, 8.04, 9.03 and this Section 16.11 shall be applicable to any authenticating agent.

SECTION 16.12. *Execution in Counterparts.* This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one and the same instrument.

SECTION 16.13. *Severability.* In case any provision in this Indenture or in the Notes shall be invalid, illegal or unenforceable, then (to the extent permitted by law) the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

SECTION 16.14. *Improper Payments.* Each holder, by acceptance of its Note, agrees with the Company and with each other holder that if notwithstanding the provisions of this Indenture,

it receives any payment or distribution in respect of its Note contrary to the provisions of this Indenture, such payment or distribution shall be received and held in trust for the benefit of, and shall upon demand of the Company or the Trustee be forthwith paid over and delivered to, the Trustee, which shall pay and deliver such amount to the Persons then entitled thereto in accordance with this Indenture.

SECTION 16.15. *Subordination Agreements.* The Company agrees, represents and warrants that the respective subordination provisions of the Company's 4 ¼% Convertible Subordinated Notes due 2007 (the "**2007 Notes**") contained in the Indenture, dated as of January 15, 2002, as amended, governing the 2007 Notes (the "**2007 Note Indenture**") are and will be enforceable against the holders of the "Notes" (as defined in the 2007 Note Indenture) hereunder to the holders of any "Senior Indebtedness" (as defined in the 2007 Note Indenture) and "Designated Senior Indebtedness" (as defined in the 2007 Note Indenture) which have not effectively waived the benefits thereof, in accordance with the terms of the 2007 Note Indenture. All obligations in respect of the Notes issued under this Indenture shall constitute "Senior Indebtedness" (as defined in the 2007 Note Indenture) and, following the earlier of (i) the "Revolving Loan Commitment Maturity Date" under the Credit Agreement in effect as of the date of this Indenture (and without giving effect to any amendment, modification, renewal, replacement or refinancing of the Credit Agreement after the date of this Indenture), which, for purposes of clarity, is October 11, 2006, and (ii) the date on which such Credit Agreement is terminated (the earlier of such dates, the "**Credit Agreement Termination Date**"), "Designated Senior Indebtedness" (as defined in the 2007 Note Indenture), for purposes of the 2007 Indenture and all such obligations in respect of the Notes are (or in the case of "Designated Senior Indebtedness," following the Credit Agreement Termination Date will be) entitled to the benefits of the subordination created thereunder. Nothing herein is intended, and nothing herein shall be construed, to amend, modify or otherwise alter the terms of the 2007 Indenture.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed.

AXCELIS TECHNOLOGIES, INC.

By: /s/ Mary G. Puma
Name: Mary G. Puma
Title: Chairman, CEO, and President

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: /s/ John A. Brennan
Name: John A. Brennan
Title: Officer

EXHIBIT A

[Include only for Global Notes:]

[UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) (THE “**DEPOSITARY**”, WHICH TERM INCLUDES ANY SUCCESSOR DEPOSITARY FOR THE CERTIFICATES) TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY (AND ANY PAYMENT HEREIN IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.]

[Include only for Notes that are Restricted Securities]

[THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “**SECURITIES ACT**”), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (1) REPRESENTS THAT IT IS A “QUALIFIED INSTITUTIONAL BUYER” (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT); (2) AGREES THAT IT WILL NOT, PRIOR TO EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), RESELL OR OTHERWISE TRANSFER THIS NOTE OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS NOTE EXCEPT (A) TO AXCELIS TECHNOLOGIES, INC. OR ANY SUBSIDIARY THEREOF, (B) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT, (C) PURSUANT TO ANOTHER EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT, INCLUDING THE EXEMPTION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (3) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (2)(D) ABOVE), IT WILL FURNISH TO U.S. BANK NATIONAL ASSOCIATION, AS TRUSTEE (OR A SUCCESSOR TRUSTEE, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT; AND (4) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THIS NOTE PURSUANT

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TO CLAUSE (2)(D) ABOVE OR UPON ANY TRANSFER OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION). THE INDENTURE CONTAINS A PROVISION REQUIRING THE TRUSTEE TO REFUSE TO REGISTER ANY TRANSFER OF THIS NOTE IN VIOLATION OF THE FOREGOING RESTRICTION.]

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CUSIP:

No.

\$

Axcelis Technologies, Inc., a corporation duly organized and validly existing under the laws of the State of Delaware (herein called the “**Company**”, which term includes any successor corporation under the Indenture referred to on the reverse hereof), for value received hereby promises to pay to [CEDE & Co.]* or its registered assigns, [the principal sum set forth on Schedule I hereto]* [the principal sum of _____ DOLLARS] on January 15, 2009, plus the Applicable Premium (as defined and provided for in the Indenture defined below) on such principal sum as of such maturity date, at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts, and to pay interest, semiannually on January 15 and July 15 of each year, commencing July 15, 2006, on said principal sum at said office or agency, in like coin or currency, at the rate per annum of 4¼%, from the January 15 or July 15, as the case may be, next preceding the date of this Note to which interest has been paid or duly provided for, unless the date hereof is a date to which interest has been paid or duly provided for, in which case from the date of this Note, or unless no interest has been paid or duly provided for on the Notes, in which case from May 2, 2006, until payment of said principal sum has been made or duly provided for. Notwithstanding the foregoing, if the date hereof is after any January 1 or July 1, as the case may be, and before the following January 15 or July 15, this Note shall bear interest from such January 15 or July 15; *provided* that if the Company shall default in the payment of interest due on such January 15 or July 15, then this Note shall bear interest from the next preceding January 15 or July 15 to which interest has been paid or duly provided for or, if no interest has been paid or duly provided for on such Note, from May 2, 2006. Except as otherwise provided in the Indenture, the interest payable on the Note pursuant to the Indenture on any January 15 or July 15 will be paid to the Person entitled thereto as it appears in the Note register at the close of business on the record date, which shall be the January 1 or July 1 (whether or not a Business Day) next preceding such January 15 or July 15, as provided in the Indenture; *provided* that any such interest not punctually paid or duly provided for shall be payable as provided in the Indenture. Interest may, at the option of the Company, be paid either (i) by check mailed to the registered address of such Person (*provided* that the holder of Notes with an aggregate principal amount in excess of \$2,000,000 shall, at the written election of such holder, be paid by wire transfer of immediately available funds) or (ii) by transfer to an account maintained by such Person located in the United States; *provided* that payments to the Depository will be made by wire transfer of immediately available funds to the account of the Depository or its nominee.

*For Global Notes only.

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The Company promises to pay interest on overdue principal and Applicable Premium, or Repurchase Value (as defined in the Indenture), as applicable, and (to the extent that payment of such interest is enforceable under applicable law) interest, in each case, at the rate of 8.0% per annum.

Reference is made to the further provisions of this Note set forth on the reverse hereof, including, without limitation, provisions subordinating the payment of principal of and premium, if any, on, or Repurchase Value, as applicable, of and interest on the Notes to the prior payment in full of all Designated Senior Indebtedness, as defined in the Indenture, and provisions giving the holder of this Note the right to convert this Note into Common Stock of the Company on the terms and subject to the limitations referred to on the reverse hereof and as more fully specified in the Indenture. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

This Note shall be deemed to be a contract made under the laws of the State of New York, and for all purposes shall be construed in accordance with and governed by the laws of the State of New York.

This Note shall not be valid or become obligatory for any purpose until the certificate of authentication hereon shall have been manually signed by the Trustee or a duly authorized authenticating agent under the Indenture.

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IN WITNESS WHEREOF, the Company has caused this Note to be duly executed.

AXCELIS TECHNOLOGIES, INC.

By: _____

Name:

Title:

Attest: _____

Name:

Title:

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

Date: _____

This is one of the Notes described in the within-named Indenture.

U.S. BANK NATIONAL ASSOCIATION, as Trustee

By: _____

, or

[AUTHENTICATING AGENT], as Authenticating Agent

By:

Authorized Officer

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FORM OF REVERSE OF NOTE

AXCELIS TECHNOLOGIES, INC.

4¼% CONVERTIBLE SENIOR SUBORDINATED NOTE DUE 2009

This Note is one of a duly authorized issue of Notes of the Company, designated as its 4¼% Convertible Senior Subordinated Notes due 2009 (herein called the “Notes”), limited to the aggregate principal amount of \$75,000,000, all issued or to be issued under and pursuant to an Indenture dated as of May 2, 2006 (herein called the “Indenture”), between the Company and U.S. Bank National Association, as trustee (herein called the “Trustee”), to which Indenture and all indentures supplemental thereto reference is hereby made for a description of the rights, limitations of rights, obligations, duties and immunities thereunder of the Trustee, the Company and the holders of the Notes.

In case an Event of Default (as defined in the Indenture) shall have occurred and be continuing, the principal of and Applicable Premium (as defined in the Indenture) (except in the case of any Notes being redeemed pursuant to Article 3 of the Indenture, for which the Repurchase Value shall be due and payable) on, and accrued interest on all Notes may be declared by either the Trustee or the holders of not less than 25% in aggregate principal amount of the Notes then outstanding, and upon said declaration shall become, due and payable, in the manner, with the effect and subject to the conditions provided in the Indenture.

The Indenture contains provisions permitting the Company and the Trustee, with the consent of the holders of not less than a majority in aggregate principal amount of the Notes at the time outstanding, to execute supplemental indentures adding any provisions to or changing in any manner or eliminating any of the provisions of the Indenture or of any supplemental indenture or modifying in any manner the rights of the holders of the Notes; *provided* that no such supplemental indenture shall (i) extend the fixed maturity of any Note, or reduce the rate or extend the time for payment of interest thereon, or reduce the principal amount thereof or premium, if any, thereon, or reduce any amount payable upon redemption or repurchase thereof, or impair the right of any Noteholder to institute suit for the payment thereof, or make the principal thereof or interest or premium, if any, thereon payable in any coin or currency other than that provided in the Notes, or modify the provisions of the Indenture with respect to the subordination of the Notes in a manner adverse to the Noteholders in any material respect, or change the obligation of the Company to redeem any Note upon the happening of a Fundamental Change (as defined in the Indenture) in a manner adverse to the holder of the Notes, or impair the right to convert the Notes into Common Stock subject to the terms set forth in the Indenture, including Section 15.06 thereof, without the consent of the holder of each Note so affected or (ii) reduce the aforesaid percentage of Notes, the holders of which are required to consent to any such supplemental indenture, or reduce the quorum or voting requirements of the Indenture, without the consent of the holders of all Notes then outstanding. Subject to the provisions of the Indenture, the holders of a majority in aggregate principal amount of the Notes at the time outstanding may on behalf of the holders of all of the Notes waive any past default or Event of Default under the Indenture and its consequences except a default in the payment of interest or any premium on, or the principal of, any of the Notes, or a failure by the Company to convert any

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Notes into Common Stock of the Company, or a default in the payment of the Repurchase Value pursuant to Article 3 of the Indenture, or a default in respect of a covenant or provisions of the Indenture which under Article 11 of the Indenture cannot be modified or amended without the consent of the holders of each or all Notes then outstanding or affected thereby. Any such consent or waiver by the holder of this Note (unless revoked as provided in the Indenture) shall be conclusive and binding upon such holder and upon all future holders and owners of this Note and any Notes which may be issued in exchange or substitution hereof, irrespective of whether or not any notation thereof is made upon this Note or such other Notes.

The indebtedness evidenced by the Notes is, to the extent and in the manner provided in the Indenture, expressly subordinated and subject in right of payment to the prior payment in full of all Designated Senior Indebtedness of the Company, whether outstanding at the date of the Indenture or thereafter incurred, and this Note is issued subject to the provisions of the Indenture with respect to such subordination. Each holder of this Note, by accepting the same, agrees to and shall be bound by such provisions and authorizes the Trustee on its behalf to take such action as may be necessary or appropriate to effectuate the subordination so provided and appoints the Trustee his attorney-in-fact for such purpose.

No reference herein to the Indenture and no provision of this Note or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and any premium and interest on this Note at the place, at the respective times, at the rate and in the coin or currency herein prescribed.

Interest on the Notes shall be computed on the basis of a 360-day year of twelve 30-day months.

The Notes are issuable in fully registered form, without coupons, in denominations of \$1,000 principal amount and any integral multiple of \$1,000. At the office or agency of the Company referred to on the face hereof, and in the manner and subject to the limitations provided in the Indenture, without payment of any service charge but with payment of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in connection with any registration or exchange of Notes, Notes may be exchanged for a like aggregate principal amount of Notes of any other authorized denominations.

At any time prior to maturity, the Notes may be redeemed at the option of the Company, in whole or in part, upon mailing a notice of such redemption not less than 30 days but not more than 60 days before the date fixed for redemption to the holders of Notes at their last registered addresses, all as provided in the Indenture, at the Repurchase Value (as defined in the Indenture) (expressed as a percentage of the principal amount), together in each case with accrued and unpaid interest to, but excluding, the date fixed for redemption; *provided* that if the date fixed for redemption is on a January 15 or July 15, then the interest payable on such date shall be paid to the holder of record on the preceding January 1 or July 1, respectively.

The Company may not give notice of any redemption of the Notes if a default in the payment of interest or premium, if any, on the Notes has occurred and is continuing.

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The Notes are not subject to redemption through the operation of any sinking fund.

If a Fundamental Change occurs at any time prior to maturity of the Notes, the Notes will be redeemable on the 30th day after notice thereof (the “**Repurchase Date**”) at the option of the holder of the Notes at a redemption price equal to the applicable Repurchase Value thereof, together with accrued interest to, but excluding, the date of redemption; *provided* that, if such Repurchase Date is a January 15 or July 15, the interest payable on such date shall be paid to the holder of record of the Notes on the preceding January 1 or July 1, respectively. The Notes will be redeemable in multiples of \$1,000 principal amount. The Company shall mail to all holders of record of the Notes a notice of the occurrence of a Fundamental Change and of the redemption right arising as a result thereof on or before the 10th day after the occurrence of such Fundamental Change. For a Note to be so redeemed at the option of the holder, the Company must receive at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, such Note with the form entitled “Option to Elect Repayment Upon a Fundamental Change” on the reverse thereof duly completed, together with such Note, duly endorsed for transfer, on or before the 30th day after the date of such notice of a Fundamental Change (or if such 30th day is not a Business Day, the immediately succeeding Business Day).

Subject to the provisions of the Indenture, the holder hereof has the right, at its option, at any time after the original issuance of any Notes through the close of business on the final maturity date of the Notes, or, as to all or any portion hereof called for redemption, prior to the close of business on the Business Day immediately preceding the date fixed for redemption (unless the Company shall default in payment due upon redemption thereof), to convert each \$1,000 of principal amount of the Notes into the number of shares of the Company’s Common Stock equal to (i) the sum of (x) such principal amount of the Notes to be converted plus (y) the Applicable Premium on such principal amount as of the date of conversion, divided by (ii) \$20.00 (such rate, the “**Conversion Rate**”), as such shares shall be constituted at the date of conversion and subject to further adjustment from time to time as provided in the Indenture, upon surrender of this Note, together with a conversion notice as provided in the Indenture (the form entitled “**Conversion Notice**” on the reverse hereof), to the Company at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, or at the option of such holder, the Corporate Trust Office, and, unless the shares issuable on conversion are to be issued in the same name as this Note, duly endorsed by, or accompanied by instruments of transfer in form satisfactory to the Company duly executed by, the holder or by his duly authorized attorney.

No adjustment in respect of interest on any Note converted or dividends on any shares issued upon conversion of such Note will be made upon any conversion except as set forth in the next sentence. If this Note (or portion hereof) is surrendered for conversion during the period after the close of business on any record date for the payment of interest to the close of business on the Business Day preceding the following interest payment date and has not been called for redemption by the Company on a redemption date that occurs during such period, this Note (or portion hereof being converted) must be accompanied by payment, in immediately available funds or other funds acceptable to the Company, of an amount equal to the interest payable on such interest payment date on the principal amount being converted; *provided* that no such

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payment shall be required if there shall exist at the time of conversion a default in the payment of interest on the Notes.

No fractional shares will be issued upon any conversion, but an adjustment and payment in cash will be made, as provided in the Indenture, in respect of any fraction of a share which would otherwise be issuable upon the surrender of any Note or Notes for conversion.

A Note in respect of which a holder is exercising its right to require redemption upon a Fundamental Change may be converted only if such holder withdraws its election to exercise such right in accordance with the terms of the Indenture. Any Notes called for redemption, unless surrendered for conversion by the holders thereof on or before the close of business on the Business Day preceding the date fixed for redemption, may be deemed to be redeemed from the holders of such Notes for an amount equal to the applicable Repurchase Value together with accrued but unpaid interest to, but excluding, the date fixed for redemption, by one or more investment banks or other purchasers who may agree with the Company (i) to purchase such Notes from the holders thereof and convert them into shares of the Company’s Common Stock and (ii) to make payment for such Notes as aforesaid to the Trustee in trust for the holders.

Upon due presentment for registration of transfer of this Note at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, a new Note or Notes of authorized denominations for an equal aggregate principal amount will be issued to the transferee in exchange thereof; subject to the limitations provided in the Indenture, without charge except for any tax, assessment or other governmental charge imposed in connection therewith.

The Company, the Trustee, any authenticating agent, any paying agent, any conversion agent and any Note registrar may deem and treat the registered holder hereof as the absolute owner of this Note (whether or not this Note shall be overdue and notwithstanding any notation of ownership or other writing hereon made by anyone other than the Company or any Note registrar) for the purpose of receiving payment hereof, or on account hereof, for the conversion hereof and for all other purposes, and neither the Company nor the Trustee nor any other authenticating agent nor any paying agent nor other conversion agent nor any Note registrar shall be affected by any notice to the contrary. All payments made to or upon the order of such registered holder shall, to the extent of the sum or sums paid, satisfy and discharge liability for monies payable on this Note.

No recourse for the payment of the principal of, and premium on, or Repurchase Value of, and interest on this Note, or for any claim based hereon or otherwise in respect hereof, and no recourse under or upon any obligation, covenant or agreement of the Company in the Indenture or any supplemental

indenture or in any Note, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer or director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any successor corporation, whether by virtue of any constitution, statute or rule of law or by the enforcement of any assessment or penalty or otherwise, all such liability being, by acceptance hereof and as part of the consideration for the issue hereof, expressly waived and released.

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This Note shall be deemed to be a contract made under the laws of New York, and for all purposes shall be construed in accordance with the laws of New York.

Terms used in this Note and defined in the Indenture are used herein as therein defined.

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ABBREVIATIONS

The following abbreviations, when used in the inscription of the face of this Note, shall be construed as though they were written out in full according to applicable laws or regulations.

TEN COM -	as tenants in common	UNIF GIFT MIN ACT -	Custodian
TEN ENT -	as tenant by the entireties	(Cust)	(Minor)
JT TEN -	as joint tenants with right of survivorship and not as under Uniform Gifts to Minors Act tenants in common		

(State)

Additional abbreviations may also be used though not in the above list.

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CONVERSION NOTICE

TO: AXCELIS TECHNOLOGIES, INC.
U.S. BANK NATIONAL ASSOCIATION

The undersigned registered owner of this Note hereby irrevocably exercises the option to convert this Note, or the portion thereof (which is \$1,000 of the principal amount or an integral multiple thereof) below designated, into shares of Common Stock of Axcelis Technologies, Inc. in accordance with the terms of the Indenture referred to in this Note, and directs that the shares issuable and deliverable upon such conversion, together with any check in payment for fractional shares and any Notes representing any unconverted principal amount hereof, be issued and delivered to the registered holder hereof unless a different name has been indicated below. If shares or any portion of this Note not converted are to be issued in the name of a person other than the undersigned, the undersigned will provide the appropriate information below and pay all transfer taxes payable with respect thereto. Any amount required to be paid by the undersigned on account of interest accompanies this Note.

Dated: _____

Signature(s)

Signature(s) must be guaranteed by an "eligible guarantor institution" meeting the requirements of the Note registrar, which requirements include membership or participation in the Security Transfer Agent Medallion Program ("STAMP") or such other "signature guarantee program" as may be determined by the Note registrar in addition to, or in substitution for, STAMP, all in accordance with the Securities Exchange Act of 1934, as amended.

Signature Guarantee

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Fill in the registration of shares of Common Stock if to be issued, and Notes if to be delivered, other than to and in the name of the registered holder:

(Name)

(Street Address)

(City, State and Zip Code)

Please print name and address

Principal amount to be converted
(if less than all):

\$ _____

Social Security or Other Taxpayer
Identification Number:

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OPTION TO ELECT REPAYMENT
UPON A FUNDAMENTAL CHANGE

TO: AXCELIS TECHNOLOGIES, INC.
U.S. BANK NATIONAL ASSOCIATION

The undersigned registered owner of this Note hereby irrevocably acknowledges receipt of a notice from Axcelis Technologies, Inc. (the “Company”) as to the occurrence of a Fundamental Change with respect to the Company and requests and instructs the Company to repay the entire principal amount of this Note, or the portion thereof (which is \$1,000 or an integral multiple thereof) below designated, in accordance with the terms of the Indenture referred to in this Note at the then applicable Repurchase Value, together with accrued interest to, but excluding, such repayment date, to the registered holder hereof.

Dated: _____

Signature(s)

NOTICE: The above signatures of the holder(s) hereof must correspond with the name as written upon the face of the Note in every particular without alteration or enlargement or any change whatever.

Principal amount to be repaid (if less than all):

\$ _____

Social Security or Other Taxpayer
Identification Number

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ASSIGNMENT

For value received _____ hereby sell(s) assign(s) and transfer(s) unto _____ (Please insert social security or other Taxpayer Identification Number of assignee) the within Note, and hereby irrevocably constitutes and appoints attorney to transfer said Note on the books of the Company, with full power of substitution in the premises.

In connection with any transfer of the Note prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act of 1933 (or any successor provision) (other than any transfer pursuant to a registration statement that has been declared effective under the Securities Act of 1933), the undersigned confirms that such Note is being transferred:

- o To Axcelis Technologies, Inc. or a subsidiary thereof; or
- o To a “qualified institutional buyer” in compliance with Rule 144A under the Securities Act of 1933, as amended; or
- o Pursuant to and in compliance with Rule 144 under the Securities Act of 1933, as amended; or
- o Pursuant to a Registration Statement which has been declared effective under the Securities Act of 1933, as amended, and which continues to be effective at the time of transfer; or

o Pursuant to "Rule 4(1/2)" under the Securities Act of 1933, as amended;

and unless the Note has been transferred to Axcelis Technologies, Inc. or a subsidiary thereof, the undersigned confirms that such Note is not being transferred to an "affiliate" of the Company as defined in Rule 144 under the Securities Act of 1933, as amended (an "Affiliate").

Dated: _____

Signature(s)

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Signature(s) must be guaranteed by an "eligible guarantor institution" meeting the requirements of the Note registrar, which requirements include membership or participation in the Security Transfer Agent Medallion Program ("STAMP") or such other "signature guarantee program" as may be determined by the Note registrar in addition to, or in substitution for, STAMP, all in accordance with the Securities Exchange Act of 1934, as amended.

Signature Guarantee

NOTICE: The signature of the conversion notice, the option to elect repayment upon a Fundamental Change or the assignment must correspond with the name as written upon the face of the Note in every particular without alteration or enlargement or any change whatever.

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SCHEDULE I*
AXCELIS TECHNOLOGIES, INC.
4¼% Convertible Senior Subordinated Note Due 2009

Date	Principal Amount	Notation

* Include Schedule For Global Notes only.

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EXHIBIT B

FORM OF SUPPLEMENTAL INDENTURE

This Supplemental Indenture, dated as of _____ (this "Supplemental Indenture" or "Note Guarantee"), among [name of future Guarantor] (the "Guarantor"), Axcelis Technologies, Inc. (together with its successors and assigns, the "Company") and U.S. Bank National Association, as Trustee under the Indenture referred to below.

WITNESSETH:

WHEREAS, the Company and the Trustee have heretofore executed and delivered an Indenture, dated as of May 2, 2006 (as amended, supplemented, waived or otherwise modified, the "Indenture"), providing for the initial issuance of an aggregate principal amount of \$75,000,000 of 4 ¼% Senior Subordinated Notes due 2009 of the Company (the "Notes");

WHEREAS, Section 5.13 of the Indenture provides that the Company is required to cause Subsidiaries, to the extent set forth in the Indenture, to execute and deliver to the Trustee a Note Guarantee pursuant to which such Subsidiary will unconditionally guarantee, on a joint and several basis, the full and prompt payment of the principal or Repurchase Value, as applicable, of, Applicable Premium, any other premium and interest on the Notes on a senior basis; and

WHEREAS, pursuant to Section 11.01 of the Indenture, the Trustee and the Company are authorized to execute and deliver this Supplemental Indenture to amend the Indenture, without the consent of any Holder;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guarantor, the Company and the Trustee mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

ARTICLE I

SECTION 1.1 Defined Terms. Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the Indenture. The words “herein,” “hereof” and “hereby” and other words of similar import used in this Supplemental Indenture refer to this Supplemental Indenture as a whole and not to any particular section hereof.

ARTICLE II

Agreement to be Bound, Note Guarantee

SECTION 2.1 Agreement to be Bound. The Guarantor hereby becomes a party to the Indenture as a Guarantor and as such will have all of the rights and be subject to all of the

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obligations and agreements of a Guarantor under the Indenture. The Guarantor agrees to be bound by all of the provisions of the Indenture applicable to a Guarantor and to perform all of the obligations and agreements of a Guarantor under the Indenture.

SECTION 2.2 Note Guarantee. The Guarantor hereby fully, unconditionally and irrevocably guarantees, as primary obligor and not merely as surety, jointly and severally with each other Person that guarantees the Notes, to each Holder of the Notes and the Trustee the full and punctual payment when due, whether at maturity, by acceleration, by redemption or otherwise, of the principal or Repurchase Value, as applicable, of, premium, if any, interest and Liquidated Damages, if any, on the Notes and all other monetary obligations of the Company under the Indenture. The Guarantor further agrees (to the extent permitted by law) that the obligations in respect of the Notes may be extended or renewed, in whole or in part, without notice or further assent from it, and that it will remain bound under this Note Guarantee notwithstanding any extension or renewal of any obligation in respect of the Notes.

The Guarantor waives presentation to, demand of payment from and protest to the Company of any of the obligations in respect of the Notes and also waives notice of protest for nonpayment. The Guarantor waives notice of any default under the Notes or the obligations in respect of the Notes. The obligations of the Guarantor hereunder shall not be affected by (a) the failure of any Holder to assert any claim or demand or to enforce any right or remedy against the Company or any other Person under the Indenture, the Notes or any other agreement or otherwise; (b) any extension or renewal of any thereof; (c) any rescission, waiver, amendment or modification of any of the terms or provisions of the Indenture, the Notes or any other agreement; (d) the release of any Note held by any Holder or the Trustee for the liabilities or obligations of any of them; (e) the failure of any Holder to exercise any right or remedy against any other Guarantor; or (f) any change in the ownership of the Company.

The Guarantor further agrees that its Note Guarantee herein constitutes a guarantee of payment when due (and not a guarantee of collection) and waives any right to require that any resort be had by any Holder to any Note held for payment of the obligations in respect of the Notes.

Except as expressly set forth in Section 2.3 hereof, the obligations of the Guarantor hereunder shall not be subject to any reduction, limitation, impairment or termination for any reason (other than payment of the obligations in respect of the Notes in full), including any claim of waiver, release, surrender, alteration or compromise, and shall not be subject to any defense of setoff, counterclaim, recoupment or termination whatsoever or by reason of the invalidity, illegality or unenforceability of the obligations in respect of the Notes or otherwise. Without limiting the generality of the foregoing, the obligations of the Guarantor herein shall not be discharged or impaired or otherwise affected by the failure of the Trustee or any Holder to assert any claim or demand or to enforce any remedy under the Indenture, the Notes or any other agreement, by any waiver or modification of any thereof, by any default, failure or delay, willful or otherwise, in the performance of the obligations in respect of the Notes, or by any other act or thing or omission or delay to do any other act or thing which may or might in any manner or to any extent vary the risk of the Guarantor or would otherwise operate as a discharge of the Guarantor as a matter of law or equity.

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The Guarantor further agrees that its Note Guarantee herein shall continue to be effective or be reinstated, as the case may be, if at any time payment, or any part thereof, of principal or Repurchase Value, as applicable, of or the Applicable Premium, any other premium or interest on any of the Notes is rescinded or must otherwise be restored by any Holder upon the bankruptcy or reorganization of the Company or otherwise.

In furtherance of the foregoing and not in limitation of any other right which any Holder has at law or in equity against the Guarantor by virtue hereof, upon the failure of the Company to pay any of the obligations in respect of the Notes when and as the same shall become due, whether at maturity, by acceleration, by redemption or otherwise, the Guarantor hereby promises to and will, upon receipt of written demand by the Trustee, forthwith pay, or cause to be paid, in cash, to the Holders an amount equal to the sum of (i) the unpaid amount of such obligations in respect of the Notes then due and owing and (ii) accrued and unpaid interest on such obligations in respect of the Notes then due and owing (but only to the extent not prohibited by law) and except as provided in Section 2.3 hereof.

The Guarantor further agrees that, as between such Guarantor, on the one hand, and the Holders, on the other hand, (x) the maturity of the obligations in respect of the Notes guaranteed hereby may be accelerated as provided in the Indenture for the purposes of its Note Guarantee herein, notwithstanding any stay, injunction or other prohibition preventing such acceleration in respect of the obligations in respect of the Notes guaranteed hereby and (y) in the event of any such declaration of acceleration of such obligations, such obligations (whether or not due and payable) shall forthwith become due and payable by the Guarantor for the purposes of this Note Guarantee.

The Guarantor also agrees to pay any and all reasonable costs and expenses (including reasonable attorneys' fees) incurred by the Trustee or the Holders in enforcing any rights under this Note Guarantee.

SECTION 2.2 Limitation on Liability; Termination, Release and Discharge. (a) The obligations of the Guarantor hereunder will be limited to the maximum amount as will, after giving effect to all other contingent and fixed liabilities of such Guarantor (including, but not limited to, Permitted Senior and Pari Passu Debt of a Guarantor) and after giving effect to any collections from or payments made by or on behalf of any other guarantor in respect of the

obligations of such other guarantor under its Note Guarantee or pursuant to its contribution obligations under this Note Guarantee, result in the obligations of such Guarantor under its Note Guarantee not constituting a fraudulent conveyance or fraudulent transfer under federal or state law.

(b) The Note Guarantee of the Guarantor will be deemed released and the Guarantor will be relieved of its obligations under the Indenture and this Note Guarantee without any further action required on the part of the Company or such Guarantor:

(i) in connection with any sale or other disposition of all or substantially all of the assets of the Guarantor (including by way of merger, amalgamation or consolidation) to a Person that is not (either before or after giving effect to such transaction) the

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Company or a Subsidiary of the Company;

(ii) in connection with any sale or other disposition of all of the capital stock of the Guarantor to a Person that is not (either before or after giving effect to such transaction) the Company or a Subsidiary of the Company;

(iv) upon satisfaction and discharge of the Indenture as provided in Article 13 of the Indenture;

(v) upon the liquidation or dissolution of the Guarantor provided no Default or Event of Default has occurred or is continuing;

or

(vi) upon the Guarantor consolidating or amalgamating with, merging into or transferring all of its properties or assets to the Company or another Person that is a guarantor of the Notes, and as a result of, or in connection with, such transaction the Guarantor dissolving or otherwise ceasing to exist.

SECTION 2.3 Limitation of Guarantor's Liability. The Guarantor, and by its acceptance hereof each Holder, hereby confirms that it is the intention of all such parties that the guarantee by such Guarantor pursuant to this Note Guarantee not constitute a fraudulent transfer or conveyance for purposes of the Federal Bankruptcy Code, the Uniform Fraudulent Conveyance Act, the Uniform Fraudulent Transfer Act or any similar federal, state or foreign law. To effectuate the foregoing intention, the Holders and the Guarantor hereby irrevocably agree that the obligations of such Guarantor under this Note Guarantee will be limited to the maximum amount as will, after giving effect to all other contingent and fixed liabilities (including, but not limited to, Permitted Senior and Pari Passu Debt of the Guarantor) of such Guarantor and after giving effect to any collections from or payments made by or on behalf of any other guarantor in respect of the obligations of such other guarantor under its Note Guarantee or pursuant to Section 2.4 hereof, result in the obligations of such Guarantor under this Note Guarantee not constituting such a fraudulent conveyance or fraudulent transfer. This Section 2.3 is for the benefit of the creditors of the Guarantor.

SECTION 2.4 Contribution. In order to provide for just and equitable contribution among the Guarantor and each other guarantor of the Notes, the Guarantor agrees that in the event any payment or distribution is made by the Guarantor or any other guarantor of the Notes (a "**Funding Guarantor**") under its Note Guarantee, such Funding Guarantor will be entitled to a contribution from each other guarantor (if any) in a pro rata amount based on the Adjusted Net Assets (as defined below) of each guarantor (including the Funding Guarantor) for all payments, damages and expenses incurred by that Funding Guarantor in discharging the Company's obligations with respect to the Notes or any other guarantor's obligations with respect to its Note Guarantee. "**Adjusted Net Assets**" of a guarantor at any date means the amount by which the fair value of the properties and assets of such guarantor exceeds the total amount of liabilities, including, without limitation, contingent liabilities (after giving effect to all other fixed and contingent liabilities incurred or assumed on such date), but excluding liabilities under its Note Guarantee, of such guarantor at such date.

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ARTICLE III

Miscellaneous

SECTION 3.1 Notices. All notices and other communications to the Guarantor shall be given as provided in the Indenture to the Guarantor, at its address set forth below, with a copy to the Company as provided in the Indenture for notices to the Company.

SECTION 3.2 Parties. Nothing expressed or mentioned herein is intended or shall be construed to give any Person, firm or corporation, other than the Holders and the Trustee, any legal or equitable right, remedy or claim under or in respect of this Supplemental Indenture or the Indenture or any provision herein or therein contained.

SECTION 3.3 Governing Law. This Supplemental Indenture shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 3.4 Severability Clause. In case any provision in this Supplemental Indenture shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby and such provision shall be ineffective only to the extent of such invalidity, illegality or unenforceability.

SECTION 3.5 Ratification of Indenture; Supplemental Indenture Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby. The Trustee makes no representation or warranty as to the validity or sufficiency of this Supplemental Indenture.

SECTION 3.6 Counterparts. The parties hereto may sign one or more copies of this Supplemental Indenture in counterparts, all of which together shall constitute one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

[GUARANTOR],
as a Guarantor

By: _____
Name:
Title:

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: _____
Name:
Title:

AXCELIS TECHNOLOGIES, INC.

By: _____
Name:
Title:

REGISTRATION RIGHTS AGREEMENT

by and between

AXCELIS TECHNOLOGIES, INC.,

as Issuer,

and

QUANTUM PARTNERS LDC,

as Purchaser

Dated as of May 2, 2006

REGISTRATION RIGHTS AGREEMENT dated as of May 2, 2006 by and between Axcelis Technologies, Inc., a Delaware corporation (the "**Company**"), and Quantum Partners LDC, a Cayman Islands limited duration company (the "**Purchaser**"), pursuant to the Exchange and Purchase Agreement dated May 2, 2006 (the "**Purchase Agreement**"), between the Company and the Purchaser. In order to induce the Purchaser to enter into the Purchase Agreement, the Company has agreed to provide the registration rights set forth in this Agreement. The execution of this Agreement is a condition to the closing under the Purchase Agreement.

The Company agrees with the Purchaser, (i) for its benefit as Purchaser and (ii) for the benefit of the beneficial owners (including the Purchaser) from time to time of the Notes (as defined herein) and the beneficial owners from time to time of the Underlying Common Stock (as defined herein) issued upon conversion of the Notes (each of the foregoing a "**Holder**" and together the "**Holders**"), as follows:

(a) Definitions. Capitalized terms used herein without definition shall have their respective meanings set forth in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

"Affiliate" means with respect to any specified person, an "affiliate," as defined in Rule 144, of such person.

"Amendment Effectiveness Deadline Date" has the meaning set forth in Section 2(d) hereof.

"Business Day" means each Monday, Tuesday, Wednesday, Thursday and Friday that is not a day on which either banking institutions in The City of New York are authorized or obligated by law or executive order to close or the SEC is closed.

"Common Stock" means the shares of common stock, \$0.001 par value, of the Company, together with the rights evidenced by such common stock to the extent provided in the Rights Agreement dated as of June 30, 2000 between the Company and EquiServe Trust Company N.A. (or any substitute rights), and any other shares of common stock (and accompanying rights) as may constitute "Common Stock" for purposes of the Indenture, including the Underlying Common Stock.

"Conversion Price" has the meaning assigned such term in the Indenture.

"Damages Accrual Period" has the meaning set forth in Section 2(e) hereof.

"Damages Payment Date" means each January 15 and July 15.

"Deferral Notice" has the meaning set forth in Section 3(i) hereof.

"Deferral Period" has the meaning set forth in Section 3(i) hereof.

"Effectiveness Deadline Date" has the meaning set forth in Section 2(a) hereof.

"Effectiveness Period" means the period commencing on the date hereof and ending on the date that all Registrable Securities have ceased to be Registrable Securities.

"Event" has the meaning set forth in Section 2(e) hereof.

"Event Date" has the meaning set forth in Section 2(e) hereof.

"Event Termination Date" has the meaning set forth in Section 2(e) hereof.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder.

“Filing Deadline Date” has the meaning set forth in Section 2(a) hereof.

“Holder” has the meaning set forth in the second paragraph of this Agreement.

“Indenture” means the Indenture, dated as of May 2, 2006, between the Company and U.S. Bank National Association, as trustee, pursuant to which the Notes are being issued.

“Initial Shelf Registration Statement” has the meaning set forth in Section 2(a) hereof.

“Issue Date” means the first date of original issuance of the Notes.

“Liquidated Damages Amount” has the meaning set forth in Section 2(e) hereof.

“Losses” has the meaning set forth in Section 6 hereof.

“Material Event” has the meaning set forth in Section 3(i) hereof.

“Notes” means the 4 1/4% Convertible Senior Subordinated Notes due 2009 of the Company to be purchased or exchanged for pursuant to the Purchase Agreement.

“Notice and Questionnaire” has the meaning set forth in Section 2(d) hereof.

“Notice Holder” has the meaning set forth in Section 2(a) hereof.

“Purchase Agreement” has the meaning set forth in the preamble hereof.

“Prospectus” means the prospectus included in any Registration Statement (including, without limitation, a prospectus that discloses information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated under the Securities Act), as amended or supplemented by any amendment or prospectus supplement, including post-effective amendments, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such Prospectus.

“Purchaser” has the meaning set forth in the preamble hereof.

“Record Holder” means with respect to any Damages Payment Date relating to any Notes or Underlying Common Stock as to which any Liquidated Damages Amount has accrued, the

registered holder of such Note or Underlying Common Stock on the January 1 immediately preceding a Damages Payment Date occurring on a January 15, and on the July 1 immediately preceding a Damages Payment Date occurring on a July 15.

“Registrable Securities” means the Notes until such Notes have been converted into or exchanged for the Underlying Common Stock and, at all times subsequent to any such conversion or exchange the Underlying Common Stock and any securities into or for which such Underlying Common Stock has been converted or exchanged, and any security issued with respect thereto upon any stock dividend, split or similar event until, in the case of any such security, (A) the earliest of (i) its effective registration under the Securities Act and resale in accordance with the Registration Statement covering it, (ii) expiration of the holding period that would be applicable under Rule 144(k) to a sale by a non-Affiliate of the Company or (iii) its sale to the public pursuant to Rule 144 (or any similar provision then in force, but not Rule 144A) under the Securities Act, and (B) as a result of the event or circumstance described in any of the foregoing clauses (i) through (iii), the legend with respect to transfer restrictions required under the Indenture are removed or removable in accordance with the terms of the Indenture or such legend, as the case may be.

“Registration Expenses” has the meaning set forth in Section 5 hereof.

“Registration Statement” means any registration statement of the Company that covers any of the Registrable Securities pursuant to the provisions of this Agreement including the Prospectus, amendments and supplements to such registration statement, including post-effective amendments, all exhibits, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such registration statement.

“Restricted Securities” means “Restricted Securities” as defined in Rule 144.

“Rule 144” means Rule 144 under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

“Rule 144A” means Rule 144A under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

“SEC” means the Securities and Exchange Commission.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated by the SEC thereunder.

“Shelf Registration Statement” has the meaning set forth in Section 2(a) hereof.

“Special Counsel” means Akin Gump Strauss Hauer & Feld LLP or one such other successor counsel as shall be specified by the Holders of a majority of the Registrable Securities, but which may, with the written consent of the Purchaser (which shall not be unreasonably withheld), be another

nationally recognized law firm experienced in securities law matters designated by the Company, the reasonable fees and expenses of which will be paid by the Company pursuant to Section 5 hereof. For purposes of determining the holders of a majority of the Registrable Securities in this definition, Holders of Notes shall be deemed to be the Holders

of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date the consent is requested.

“Subsequent Shelf Registration Statement” has the meaning set forth in Section 2(b) hereof.

“TIA” means the Trust Indenture Act of 1939, as amended.

“Trustee” means U.S. Bank National Association, the Trustee under the Indenture.

“Underlying Common Stock” means the Common Stock into which the Notes are convertible or issued upon any such conversion.

SECTION 2. Shelf Registration. (a) The Company shall prepare and file or cause to be prepared and filed with the SEC, as soon as practicable but in any event by the date (the “**Filing Deadline Date**”) ninety (90) days after the Issue Date, a Registration Statement for an offering to be made on a delayed or continuous basis pursuant to Rule 415 of the Securities Act (a “**Shelf Registration Statement**”) registering the resale from time to time by Holders thereof of all of the Registrable Securities (the “**Initial Shelf Registration Statement**”). Any Shelf Registration Statement shall be on Form S-3 or another appropriate form permitting registration of such Registrable Securities for resale by such Holders in accordance with the methods of distribution elected by the Holders and set forth in the Initial Shelf Registration Statement. The Company shall use its reasonable best efforts to cause the Initial Shelf Registration Statement to be declared effective under the Securities Act as promptly as is practicable but in any event by the date (the “**Effectiveness Deadline Date**”) that is one hundred eighty (180) days after the Issue Date, and, subject to the exceptions provided herein, to keep the Initial Shelf Registration Statement (or any Subsequent Shelf Registration Statement) continuously effective under the Securities Act until the expiration of the Effectiveness Period. At the time the Initial Shelf Registration Statement is declared effective, each Holder that delivered a Notice and Questionnaire (each, a “**Notice Holder**”) on or prior to the date ten (10) Business Days prior to such time of effectiveness shall be named as a selling securityholder in the Initial Shelf Registration Statement and the related Prospectus in such a manner as to permit such Holder to deliver such Prospectus to purchasers of Registrable Securities in accordance with applicable law. None of the Company’s security holders (other than the Holders of Registrable Securities) shall have the right to include any of the Company’s securities in the Shelf Registration Statement.

(b) If the Initial Shelf Registration Statement or any Subsequent Shelf Registration Statement ceases to be effective for any reason at any time during the Effectiveness Period (other than because all Registrable Securities registered thereunder shall have been resold pursuant thereto or shall have otherwise ceased to be Registrable Securities), the Company shall use its reasonable best efforts to obtain the prompt withdrawal of any order suspending the effectiveness thereof, and in any event shall within thirty (30) days of such cessation of effectiveness amend the Shelf Registration Statement in a manner reasonably expected to obtain the withdrawal of the order suspending the effectiveness thereof, or file an additional Shelf Registration Statement covering all of the securities that as of the date of such filing are Registrable Securities (a “**Subsequent Shelf Registration Statement**”). If a Subsequent Shelf Registration Statement is

filed, the Company shall use its reasonable best efforts to cause the Subsequent Shelf Registration Statement to become effective as promptly as is practicable after such filing and to keep such Registration Statement (or subsequent Shelf Registration Statement) continuously effective until the end of the Effectiveness Period.

(c) The Company shall supplement and amend the Shelf Registration Statement if required by the rules, regulations or instructions applicable to the registration form used by the Company for such Shelf Registration Statement, if required by the Securities Act or as reasonably requested by the Purchaser or by the Trustee on behalf of the Holders of the Registrable Securities covered by such Shelf Registration Statement.

(d) Each Holder agrees that if such Holder wishes to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus, it will do so only in accordance with this Section 2(d) and Section 3(i). Each Holder wishing to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus agrees to deliver at least three (3) Business Days prior to any intended distribution of Registrable Securities under the Shelf Registration Statement such information regarding such Holder, the Registrable Securities held by such Holder and such Holder’s intended plan of distribution as the Company shall reasonably request and as shall be required by applicable securities laws in order to effect any registration by the Company pursuant to this Agreement (a “**Notice and Questionnaire**”); provided, that a Holder shall not be required to deliver such Notice and Questionnaire prior to any such intended distribution to the extent it has previously provided a Notice and Questionnaire and otherwise is in compliance with its obligations set forth in Section 4 below. The Company will provide any desired Notice and Questionnaire to the Purchaser within 10 days of the Issue Date and within 10 days of a request from any other Holder. From and after the date the Initial Shelf Registration Statement is declared effective, the Company shall, as promptly as practicable after the date a Notice and Questionnaire is delivered, and in any event upon the later of (x) ten (10) Business Days after such date (but no earlier than ten (10) Business Days after effectiveness) or (y) ten (10) Business Days after the expiration of any Deferral Period in effect when the Notice and Questionnaire is delivered or put into effect within ten (10) Business Days of such delivery date:

(1) if required by applicable law, file with the SEC a post-effective amendment to the Shelf Registration Statement or prepare and, if required by applicable law, file a supplement to the related Prospectus or a supplement or amendment to any document incorporated therein by reference or file any other required document so that the Holder delivering such Notice and Questionnaire is named as a selling securityholder in the Shelf Registration Statement and the related Prospectus in such a manner as to permit such Holder to deliver such Prospectus to purchasers of the Registrable Securities in accordance with applicable law and, if the Company shall file a post-effective amendment to the Shelf Registration Statement, use its reasonable best efforts to cause such post-effective amendment to be declared effective under the Securities Act as promptly as is practicable, but in any event by the date (the “**Amendment Effectiveness Deadline Date**”) that is forty-five (45) days after the date such post-effective amendment is required by this clause to be filed;

(2) provide such Holder copies of any documents filed pursuant to Section 2(d)(i); and

(3) notify such Holder as promptly as practicable after the effectiveness under the Securities Act of any post-effective amendment filed pursuant to Section 2(d)(i);

provided that if such Notice and Questionnaire is delivered during a Deferral Period, the Company shall so inform the Holder delivering such Notice and Questionnaire and shall take the actions set forth in clauses (i), (ii) and (iii) above upon expiration of the Deferral Period in accordance with Section 3(i). Notwithstanding anything contained herein to the contrary, (i) the Company shall be under no obligation to name any Holder that is not a Notice Holder as a selling securityholder in any Registration Statement or related Prospectus and (ii) the Amendment Effectiveness Deadline Date shall be extended by up to ten (10) Business Days from the expiration of a Deferral Period (and the Company shall incur no obligation to pay Liquidated Damages during such extension) if such Deferral Period shall be in effect on the Amendment Effectiveness Deadline Date.

(e) The parties hereto agree that the Holders of Registrable Securities will suffer damages, and that it would not be feasible to ascertain the extent of such damages with precision, if

(1) the Initial Shelf Registration Statement has not been filed on or prior to the Filing Deadline Date,

(2) the Initial Shelf Registration Statement has not been declared effective under the Securities Act on or prior to the Effectiveness Deadline Date,

(3) the Company has failed to perform its obligations set forth in Section 2(d) within the time period required therein,

(4) any post-effective amendment to a Shelf Registration Statement filed pursuant to Section 2(d)(i) has not become effective under the Securities Act on or prior to the Amendment Effectiveness Deadline Date,

(5) the aggregate duration of Deferral Periods in any period exceeds the number of days permitted in respect of such period pursuant to Section 3(i) hereof, or

(6) the number of Deferral Periods in any period exceeds the number permitted in respect of such period pursuant to Section 3(i) hereof.

Each event described in any of the foregoing clauses (i) through (vi) is individually referred to herein as an “Event.” For purposes of this Agreement, each Event set forth above shall begin and end on the dates set forth in the table set forth below:

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Type of Event by Clause	Beginning Date	Ending Date
(i)	Filing Deadline Date	the date the Initial Shelf Registration Statement is filed
(ii)	Effectiveness Deadline Date	the date the Initial Shelf Registration Statement becomes effective under the Securities Act
(iii)	the date by which the Company is required to perform its obligations under Section 2(d)	the date the Company performs its obligations set forth in Section 2(d)
(iv)	the Amendment Effectiveness Deadline Date	the date the applicable post-effective amendment to a Shelf Registration Statement becomes effective under the Securities Act
(v)	the date on which the aggregate duration of Deferral Periods in any period exceeds the number of days permitted by Section 3(i)	termination of the Deferral Period that caused the limit on the aggregate duration of Deferral Periods to be exceeded
(vi)	the date of commencement of a Deferral Period that causes the number of Deferral Periods to exceed the number permitted by Section 3(i)	termination of the Deferral Period that caused the number of Deferral Periods to exceed the number permitted by Section 3(i)

For purposes of this Agreement, Events shall begin on the beginning dates set forth in the table above and shall continue until the ending dates set forth in the table above.

Commencing on (and including) any date that an Event has begun and ending on (but excluding) the next date on which there are no Events that have occurred and are continuing (a “**Damages Accrual Period**”), the Company shall pay, as liquidated damages and not as a penalty, to Record Holders of Registrable Securities an amount (the “**Liquidated Damages Amount**”) accruing, for each day in the Damages Accrual Period, (i) in respect of any Note, at a rate per annum equal to 0.5% of the aggregate principal amount of such Note and (ii) in respect of each share of Underlying Common Stock at a rate per annum equal to 0.5% on the Conversion Price on such date; provided that in the case of a Damages Accrual Period that is in effect solely as a result of an Event of the type described in clause (iii) or (iv) of the preceding paragraph, such Liquidated Damages Amount shall be paid only to the Holders (as set forth in the succeeding paragraph) that have delivered Notices and Questionnaires that caused the Company to incur the obligations set forth in Section 2(d) the non-performance of which is the basis of such Event, and only with respect to the Notes covered by such Notices and Questionnaires. In calculating the Liquidated Damages Amount on any date on which no Notes are outstanding, the Conversion

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Price and the Liquidated Damages Amount shall be calculated as if the Notes were still outstanding. Notwithstanding the foregoing, no Liquidated Damages Amount shall accrue as to any Registrable Security from and after the earlier of (x) the date such security is no longer a Registrable Security and (y) expiration of the Effectiveness Period. The rate of accrual of the Liquidated Damages Amount with respect to any period shall not exceed the rate provided for in this paragraph notwithstanding the occurrence of multiple concurrent Events.

The Liquidated Damages Amount shall accrue from the first day of the applicable Damages Accrual Period, and shall be payable on each Damages Payment Date during the Damages Accrual Period (and on the Damages Payment Date next succeeding the end of the Damages Accrual Period if the Damages Accrual Period does not end on a Damages Payment Date) to the Record Holders of the Registrable Securities entitled thereto; provided that any Liquidated Damages Amount accrued with respect to any Note or portion thereof redeemed by the Company on a redemption date or converted into Underlying Common Stock on a conversion date prior to the Damages Payment Date, shall, in any such event, be paid instead to the Holder who submitted such Note or portion thereof for redemption or conversion on the applicable redemption date or conversion date, as the case may be, on such date (or promptly following the conversion date, in the case of conversion); provided further, that, in the case of an Event of the type described in clause (iii) or (iv) of the first paragraph of this Section 2(e), such Liquidated Damages Amount shall be paid only to the Holders entitled thereto pursuant to such first paragraph by check mailed to the address set forth in the Notice and Questionnaire delivered by such Holder. The Trustee shall be entitled, on behalf of registered holders of Notes or Underlying Common Stock, to seek any available remedy for the enforcement of this Agreement, including for the payment of such Liquidated Damages Amount. Notwithstanding the foregoing, the parties agree that the sole damages payable for a violation of the terms of this Agreement with respect to which liquidated damages are expressly provided shall be such liquidated damages except to the extent such violation relates to a violation by the Company of this Section 3 and such violation is willful or intentional, in which case the Holder shall be entitled to seek actual damages. Nothing shall preclude any Holder from pursuing or obtaining specific performance or other equitable relief with respect to this Agreement.

All of the Company's obligations set forth in this Section 2(e) that are outstanding with respect to any Registrable Security at the time such security ceases to be a Registrable Security shall survive until such time as all such obligations with respect to such security have been satisfied in full (notwithstanding termination of this Agreement pursuant to Section 8(k)).

The parties hereto agree that the liquidated damages provided for in this Section 2(e) constitute a reasonable estimate of the damages that may be incurred by Holders of Registrable Securities by reason of the failure of a Shelf Registration Statement to be filed or declared effective or available for effecting resales of Registrable Securities in accordance with the provisions hereof.

SECTION 3. Registration Procedures. In connection with the registration obligations of the Company under Section 2 hereof, the Company shall:

(a) Prepare and file with the SEC a Registration Statement or Registration Statements on any appropriate form under the Securities Act available for the sale of the Registrable

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Securities by the Holders thereof in accordance with all intended methods of distribution thereof of which the Holder has given notice to the Company (including making all requisite filings and taking all actions to qualify the Indenture under the TIA), and use its reasonable best efforts to cause each such Registration Statement to become effective and remain effective as provided herein; provided that before filing any Registration Statement or Prospectus or any amendments or supplements thereto with the SEC, the Company shall furnish to the Purchaser and the Special Counsel of such offering, if any, subject to an obligation of confidentiality, copies of all such documents proposed to be filed and use its reasonable best efforts to reflect in each such document when so filed with the SEC such comments as the Purchaser or the Special Counsel, if any, reasonably shall propose within five (5) Business Days of the delivery of such copies to the Purchaser and the Special Counsel.

(b) Prepare and file with the SEC such amendments and post-effective amendments to each Registration Statement as may be necessary to keep such Registration Statement continuously effective for the applicable period specified in Section 2(a); cause the related Prospectus to be supplemented by any required prospectus supplement, and as so supplemented to be filed pursuant to Rule 424 (or any similar provisions then in force) under the Securities Act; and use its reasonable best efforts to comply with the provisions of the Securities Act applicable to it with respect to the disposition of all securities covered by such Registration Statement during the Effectiveness Period in accordance with the intended methods of disposition by the sellers thereof set forth in such Registration Statement as so amended or such Prospectus as so supplemented.

(c) As promptly as practicable give notice to the Notice Holders, the Purchaser and the Special Counsel, (i) when any Prospectus, prospectus supplement, Registration Statement or post-effective amendment to a Registration Statement has been filed with the SEC and, with respect to a Registration Statement or any post-effective amendment, when the same has been declared effective, (ii) of any request, following the effectiveness of the Initial Shelf Registration Statement under the Securities Act, by the SEC or any other federal or state governmental authority for amendments or supplements to any Registration Statement or related Prospectus or for additional information, (iii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of any Registration Statement or the initiation or threatening of any proceedings for that purpose, (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose, (v) of the occurrence of a Material Event and (vi) of the determination by the Company that a post-effective amendment to a Registration Statement will be filed with the SEC, which notice may, at the discretion of the Company (or as required pursuant to Section 3(i)), state that it constitutes a Deferral Notice, in which event the provisions of Section 3(i) shall apply.

(d) Use its reasonable best efforts to obtain the withdrawal of any order suspending the effectiveness of a Registration Statement or the lifting of any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction in which they have been qualified for sale, in either case at the earliest possible moment, and provide immediate notice to each Notice Holder and the Purchaser of the withdrawal of any such order.

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(e) If reasonably requested by the Purchaser or any Notice Holder, as promptly as practicable incorporate in a prospectus supplement or post-effective amendment to a Registration Statement such information as the Purchaser and the Special Counsel, or such Notice Holder shall on the basis of a written opinion of nationally-recognized counsel experienced in such matters, determine to be required to be included therein by applicable law and make any required filings of such prospectus supplement or post-effective amendment.

(f) Upon request, as promptly as practicable furnish to each Notice Holder, the Special Counsel and the Purchaser, without charge, at least one (1) conformed copy of the Registration Statement and any amendment thereto, including exhibits and all documents incorporated or deemed to be incorporated therein by reference.

(g) During the Effectiveness Period, deliver to each Notice Holder, the Special Counsel, if any, and the Purchaser, in connection with any sale of Registrable Securities pursuant to a Registration Statement, without charge, as many copies of the Prospectus or Prospectuses relating to such Registrable Securities (including each preliminary prospectus) and any amendment or supplement thereto as such Notice Holder may reasonably request; and the Company hereby consents (except during such periods that a Deferral Notice is outstanding and has not been revoked) to the use of such Prospectus or each amendment or supplement thereto by each Notice Holder in connection with any offering and sale of the Registrable Securities covered by such Prospectus or any amendment or supplement thereto in the manner set forth therein.

(h) Prior to any public offering of the Registrable Securities pursuant to a Registration Statement, use its reasonable best efforts to register or qualify or cooperate with the Notice Holders and the Special Counsel in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions within the United States as any Notice Holder reasonably requests in writing (which request may be included in the Notice and Questionnaire); prior to any public offering of the Registrable Securities pursuant to the Shelf Registration Statement, use its reasonable best efforts to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period in connection with such Notice Holder's offer and sale of Registrable Securities pursuant to such registration or qualification (or exemption therefrom) and do any and all other acts or things reasonably necessary or advisable to enable the disposition in such jurisdictions of such Registrable Securities in the manner set forth in the relevant Registration Statement and the related Prospectus; provided that the Company will not be required to (i) qualify as a foreign corporation or as a dealer in securities in any jurisdiction where it would not otherwise be required to qualify but for this Agreement or (ii) take any action that would subject it to general service of process in suits or to additional taxation in any such jurisdiction.

(i) Upon (A) the issuance by the SEC of a stop order suspending the effectiveness of the Shelf Registration Statement or the initiation of proceedings with respect to the Shelf Registration Statement under Section 8(d) or 8(e) of the Securities Act, (B) the occurrence of any event or the existence of any fact (a "**Material Event**") as a result of which any Registration Statement shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or any

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Prospectus shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (C) the occurrence or existence of any pending corporate development that, in the reasonable discretion of the Company, makes it appropriate to suspend the availability of the Shelf Registration Statement and the related Prospectus for a discrete period of time:

(1) in the case of clause (B) above, subject to the next sentence, as promptly as practicable prepare and file, if necessary pursuant to applicable law, a post-effective amendment to such Registration Statement or a supplement to the related Prospectus or any document incorporated therein by reference or file any other required document that would be incorporated by reference into such Registration Statement and Prospectus so that such Registration Statement does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and such Prospectus does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, as thereafter delivered to the purchasers of the Registrable Securities being sold thereunder, and, in the case of a post-effective amendment to a Registration Statement, subject to the next sentence, use its reasonable best efforts to cause it to be declared effective as promptly as is practicable, and

(2) give notice to the Notice Holders, and the Special Counsel, if any, that the availability of the Shelf Registration Statement is suspended (a "**Deferral Notice**") and, upon receipt of any Deferral Notice, each Notice Holder agrees not to sell any Registrable Securities pursuant to the Registration Statement until such Notice Holder's receipt of copies of the supplemented or amended Prospectus provided for in clause (i) above, or until it is advised in writing by the Company that the Prospectus may be used, and has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in such Prospectus.

The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed (x) in the case of clause (A) above, as promptly as is practicable, (y) in the case of clause (B) above, as soon as, in the sole judgment of the Company, public disclosure of such Material Event would not be prejudicial to or contrary to the interests of the Company or, if necessary to avoid unreasonable burden or expense, as soon as practicable thereafter and (z) in the case of clause (C) above, as soon as in the reasonable discretion of the Company, such suspension is no longer appropriate. The Company shall be entitled to exercise its right under this Section 3(i) to suspend the availability of the Shelf Registration Statement or any Prospectus, without incurring or accruing any obligation to pay liquidated damages pursuant to Section 2(e), no more than one (1) time in any three month period or three (3) times in any twelve month period, and any such period during which the availability of the Registration Statement and any Prospectus is suspended (the "**Deferral Period**") shall, without incurring any obligation to pay liquidated damages pursuant to Section 2(e), not exceed 30 days; provided that the aggregate duration of any Deferral Periods shall not exceed 30 days in any three month period (or 60 days in any three month period in the event of a Material Event pursuant to which the Company has delivered a second notice as required below) or 90 days in any twelve (12)

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month period; provided that in the case of a Material Event relating to an acquisition or a probable acquisition or financing, recapitalization, business combination or other similar transaction, the Company may, without incurring any obligation to pay liquidated damages pursuant to Section 2(e), deliver to Notice Holders a second notice to the effect set forth above, which shall have the effect of extending the Deferral Period by up to an additional 30 days, or such shorter period of time as is specified in such second notice.

(j) If requested in writing in connection with a disposition of Registrable Securities pursuant to a Registration Statement, make reasonably available for inspection during normal business hours by a representative for the Notice Holders of such Registrable Securities, any broker-dealers, attorneys and accountants retained by such Notice Holders, and any attorneys or other agents retained by a broker-dealer engaged by such Notice Holders, all relevant financial and other records and pertinent corporate documents and properties of the Company and its subsidiaries, and cause the appropriate officers, directors and employees of the Company and its subsidiaries to make reasonably available for inspection during normal business hours on reasonable notice all relevant information reasonably requested by such representative for the Notice Holders, or any such broker-dealers, attorneys or accountants in connection with such disposition, in each case as is customary for similar "due diligence" examinations; provided that such persons shall first agree in writing with the Company that any information that is reasonably and in good faith designated by the Company in writing as confidential at the time of delivery of such information shall be kept confidential by such persons and shall be used solely for the purposes of exercising rights under this Agreement, unless (i) disclosure of such information is required by court or administrative order or is necessary to respond to inquiries of regulatory authorities, (ii) disclosure of such information is required by law (including any disclosure requirements pursuant to federal securities laws in connection with the filing of any Registration Statement or the use of any prospectus referred to in this Agreement), (iii) such information becomes generally available to the public other than as a result of a disclosure or failure to safeguard by any such person or (iv) such information becomes available to any such person from a source other than the Company and such source is not bound by a confidentiality agreement, and provided further that the foregoing inspection and information gathering shall, to the greatest extent possible, be coordinated on behalf of all the Notice Holders and the other parties entitled thereto by the Special Counsel.

(k) Comply with all applicable rules and regulations of the SEC and make generally available to its securityholders earning statements (which need not be audited) satisfying the provisions of Section 11(a) of the Securities Act and Rule 158 thereunder (or any similar rule promulgated under the Securities Act) for a 12-month period commencing on the first day of the first fiscal quarter of the Company commencing after the effective date of a Registration Statement, which statements shall be made available no later than 45 days after the end of the 12-month period or 90 days if the 12-month period coincides with a fiscal year of the Company.

(l) Cooperate with each Notice Holder to facilitate the timely preparation and delivery of certificates representing Registrable Securities sold or to be sold pursuant to a Registration Statement, which certificates shall not bear any restrictive legends, and cause such Registrable Securities to be in such denominations as are permitted by the Indenture and registered in such names as such Notice Holder may request in writing at least one (1) Business Day prior to any sale of such Registrable Securities.

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(m) Provide a CUSIP number for all Registrable Securities covered by each Registration Statement not later than the effective date of such Registration Statement and provide the Trustee and the transfer agent for the Common Stock with printed certificates for the Registrable Securities that are in a form eligible for deposit with The Depository Trust Company.

(n) Cooperate and assist in any filings required to be made with the National Association of Securities Dealers, Inc.

(o) Upon (i) the filing of the Initial Shelf Registration Statement and (ii) the effectiveness of the Initial Shelf Registration Statement, announce the same, in each case by release to Reuters Economic Services and Bloomberg Business News.

(p) If for any reason from time to time the Company shall not be eligible under applicable SEC regulations to use a Shelf Registration Statement, at the request of the Purchaser, the Company shall use its reasonable best efforts to file, have declared effective and maintain continuously effective a registration statement on such form as the SEC regulations shall permit and the provisions of this Agreement shall, to the extent relevant, apply to such registration statement; provided, that the Holders shall additionally be entitled to the Liquidated Damages Amount as contemplated by Section 2(e) during the period the Shelf Registration Statement is not effective as otherwise contemplated by this Agreement.

SECTION 4. Holder's Obligations. Each Holder agrees, by acquisition of the Registrable Securities, that no Holder shall be entitled to sell any of such Registrable Securities pursuant to a Registration Statement or to receive a Prospectus relating thereto, unless such Holder has furnished the Company with a Notice and Questionnaire as required pursuant to Section 2(d) hereof (including the information required to be included in such Notice and Questionnaire) and the information set forth in the next sentence. Each Notice Holder agrees promptly to furnish to the Company all information required to be disclosed in order to make the information previously furnished to the Company by such Notice Holder not misleading and any other information regarding such Notice Holder and the distribution of such Registrable Securities as the Company may from time to time reasonably request. Any sale of any Registrable Securities by any Holder shall constitute a representation and warranty by such Holder that the information relating to such Holder and its plan of distribution is as set forth in the Prospectus delivered by such Holder in connection with such disposition, that such Prospectus does not as of the time of such sale contain any untrue statement of a material fact relating to or provided by such Holder or its plan of distribution and that such Prospectus does not as of the time of such sale omit to state any material fact relating to or provided by such Holder or its plan of distribution necessary to make the statements in such Prospectus, in the light of the circumstances under which they were made, not misleading. The Holder's liability for any breach of this Section 4 shall be limited to the dollar amount of the proceeds received by such Holder upon the sale of the Registrable Securities pursuant to the Registration Statement affected by such breach and giving rise to such liability (without duplicating any liability of the Holder otherwise payable under Section 6(b)).

SECTION 5. Registration Expenses. The Company shall bear all fees and expenses incurred in connection with the performance by the Company of its obligations under Sections 2

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and 3 of this Agreement whether or not any Registration Statement is declared effective. Such fees and expenses shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (x) with respect to filings required to be made with the National Association of Securities Dealers, Inc. and (y) of compliance with federal and state securities or Blue Sky laws (including, without limitation, reasonable fees and disbursements of the Special Counsel in connection with Blue Sky qualifications of the Registrable Securities under the laws of such jurisdictions as Notice Holders of a majority of the Registrable Securities being sold pursuant to a Registration Statement may designate), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities in a form eligible for deposit with The Depository Trust Company), (iii) duplication expenses relating to copies of any Registration Statement or Prospectus delivered to any Holders hereunder, (iv) fees and disbursements of counsel for the Company and the Special Counsel in connection with the Shelf Registration Statement (provided that the Company shall not be liable for the fees and

expenses of more than one separate firm for all parties participating in any transaction hereunder), (v) reasonable fees and disbursements of the Trustee and its counsel and of the registrar and transfer agent for the Common Stock and (vi) Securities Act liability insurance obtained by the Company in its sole discretion. In addition, the Company shall pay the internal expenses of the Company (including, without limitation, all salaries and expenses of officers and employees performing legal or accounting duties), the expense of any annual audit, the fees and expenses incurred in connection with the listing by the Company of the Registrable Securities on any securities exchange on which similar securities of the Company are then listed and the fees and expenses of any person, including special experts, retained by the Company. Notwithstanding the provisions of this Section 5, each seller of Registrable Securities shall pay selling expenses and, to the extent, but only to the extent, required by applicable law, all registration expenses.

SECTION 6. Indemnification.

(a) Indemnification by the Company. The Company shall indemnify and hold harmless each Notice Holder and each person, if any, who controls any Notice Holder (within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act) from and against any losses, liabilities, claims, damages and expenses (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) (collectively, “*Losses*”), arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or based upon any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, provided that the Company shall not be liable in any such case to the extent that any such Losses arise out of or are based upon an untrue statement or alleged untrue statement contained in or omission or alleged omission from any of such documents in reliance upon and conformity with any of the information relating to the Holders furnished to the Company in writing by a Holder expressly for use therein; provided further, that the indemnification contained in this paragraph shall not inure to the benefit of any Holder (or to the benefit of any person controlling such Holder) on account of any such Losses arising out of or based upon an untrue statement or alleged untrue statement or omission or alleged omission made in any preliminary prospectus or Prospectus provided in each case the Company has performed its obligations under Section 3(a) hereof if (A) (i) such Holder failed to send or deliver a copy of the Prospectus with or prior to the

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delivery of written confirmation of the sale by such Holder to the person asserting the claim from which such Losses arise and (ii) the Prospectus would have corrected such untrue statement or alleged untrue statement or such omission or alleged omission, (B) (x) such untrue statement or alleged untrue statement, omission or alleged omission is corrected in an amendment or supplement to the Prospectus and (y) having previously been furnished by or on behalf of the Company with copies of the Prospectus as so amended or supplemented, such Holder thereafter fails to deliver such Prospectus as so amended or supplemented, with or prior to the delivery of written confirmation of the sale of a Registrable Security to the person asserting the claim from which such Losses arise, or (C) such untrue or alleged untrue statement or omission is contained in a preliminary prospectus or Prospectus used during a Deferral Period.

(b) Indemnification by Holders. Each Holder agrees severally and not jointly to indemnify and hold harmless the Company and its respective directors and officers, and each person, if any, who controls the Company (within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act) or any other Holder, from and against all Losses arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or based upon any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with information furnished to the Company by such Holder expressly for use in such Registration Statement or Prospectus or amendment or supplement thereto. In no event shall the liability of any Holder hereunder be greater in amount than the dollar amount of the proceeds received by such Holder upon the sale of the Registrable Securities pursuant to the Registration Statement giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to Section 6(a) or 6(b) hereof, such person (the “*indemnified party*”) shall promptly notify the person against whom such indemnity may be sought (the “*indemnifying party*”) in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay the reasonable fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel or (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all indemnified parties, and that all such fees and expenses shall be reimbursed as they are incurred. Such separate firm shall be designated in writing by, in the case of parties indemnified pursuant to Section 6(a), the Holders of a majority (with Holders of Notes deemed

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to be the Holders, for purposes of determining such majority, of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date on which such designation is made) of the Registrable Securities covered by the Registration Statement held by Holders that are indemnified parties pursuant to Section 6(a) and, in the case of parties indemnified pursuant to Section 6(b), the Company. The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement; provided that the indemnifying party shall not be so liable for a settlement effected without its written consent so long as it is reasonably contesting in good faith the amount of the fees and expenses of counsel of the indemnified party that must be reimbursed. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any

indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding.

(d) Contribution. To the extent that the indemnification provided for in this Section 6 is unavailable to an indemnified party under Section 6(a) or 6(b) hereof in respect of any Losses or is insufficient to hold such indemnified party harmless, then each applicable indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified party as a result of such Losses (i) in such proportion as is appropriate to reflect the relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the indemnifying party or parties on the one hand and of the indemnified party or parties on the other hand in connection with the statements or omissions that resulted in such Losses, as well as any other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the initial placement pursuant to the Purchase Agreement (before deducting expenses) of the Registrable Securities to which such Losses relate. Benefits received by any Holder shall be deemed to be equal to the value of receiving Registrable Securities that are registered under the Securities Act. The relative fault of the Holders on the one hand and the Company on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Holders or by the Company, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Holders' respective obligations to contribute pursuant to this paragraph are several in proportion to the respective

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number of Registrable Securities they have sold pursuant to a Registration Statement, and not joint.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6(d) were determined by pro rata allocation or by any other method or allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. The amount paid or payable by an indemnified party as a result of the Losses referred to in the immediately preceding paragraph shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding this Section 6(d), an indemnifying party that is a selling Holder shall not be required to contribute any amount in excess of the amount by which the total price at which the Registrable Securities sold by such indemnifying party and distributed to the public were offered to the public exceeds the amount of any damages that such indemnifying party has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) The indemnity, contribution and expense reimbursement obligations of the parties hereunder shall be in addition to any liability any indemnified party may otherwise have hereunder, under the Purchase Agreement or otherwise.

(f) The indemnity and contribution provisions contained in this Section 6 shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Holder or any person controlling any Holder, or the Company, or the Company's officers or directors or any person controlling the Company and (iii) the sale of any Registrable Securities by any Holder.

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SECTION 7. Information Requirements. The Company covenants that, if at any time before the end of the Effectiveness Period the Company is not subject to the reporting requirements of the Exchange Act, it will cooperate with any Holder and take such further reasonable action as any Holder may reasonably request in writing (including, without limitation, making such reasonable representations as any such Holder may reasonably request), all to the extent required from time to time to enable such Holder to sell Registrable Securities without registration under the Securities Act within the limitation of the exemptions provided by Rule 144 and Rule 144A under the Securities Act and customarily taken in connection with sales pursuant to such exemptions. Upon the written request of any Holder, the Company shall deliver to such Holder a written statement as to whether it has complied with such filing requirements, unless such a statement has been included in the Company's most recent report filed pursuant to Section 13 or Section 15(d) of Exchange Act. Notwithstanding the foregoing, nothing in this Section 7 shall be deemed to require the Company to register any of its securities (other than the Common Stock) under any section of the Exchange Act.

SECTION 8. Miscellaneous.

(a) No Conflicting Agreements. The Company is not, as of the date hereof, a party to, nor shall it, on or after the date of this Agreement, enter into, any agreement with respect to its securities that conflicts with the rights granted to the Holders in this Agreement. The Company represents and warrants that the rights granted to the Holders hereunder do not in any way conflict with the rights granted to the holders of the Company's securities under any other agreements.

(b) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the Company has obtained the written consent of Holders of a majority of the then outstanding Registrable Securities (with Holders of Notes deemed to be the Holders, for purposes of this Section, of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date on which such consent is requested). Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders whose securities are being sold pursuant to a Registration Statement and that does not directly or indirectly affect the rights of other Holders may be given by Holders of at least a majority of the Registrable Securities being sold by such Holders pursuant to such Registration Statement; provided, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence. Each Holder of Registrable Securities outstanding at the time of any such amendment, modification, supplement, waiver or consent or thereafter shall be bound by any such amendment, modification, supplement, waiver or consent effected pursuant to this Section 8(b), whether or not any notice, writing or marking indicating such amendment, modification, supplement, waiver or consent appears on the Registrable Securities or is delivered to such Holder.

(c) Notices. All notices and other communications provided for or permitted hereunder shall be made in writing by hand delivery, by telecopier, by courier guaranteeing overnight delivery or by first-class mail, return receipt requested, and shall be deemed given

(i) when made, if made by hand delivery, (ii) upon confirmation, if made by telecopier, (iii) one (1) Business Day after being deposited with such courier, if made by overnight courier or (iv) on the date indicated on the notice of receipt, if made by first-class mail, to the parties as follows:

(1) if to a Holder, at the most current address given by such Holder to the Company in a Notice and Questionnaire or any amendment thereto;

(2) if to the Company, to:

Axcelis Technologies, Inc.
108 Cherry Hill Drive
Beverly, Massachusetts 01915
Attention: General Counsel
Telecopy No.: (978) 787-4200

with a copy to (which shall not constitute notice):

Edwards Angell Palmer & Dodge LLP
111 Huntington Avenue
Boston, MA 02199-7613
Attention: Matthew Dallett
Telecopy No.: (617) 227-4420

(3) if to the Purchaser, to:

Quantum Partners LDC
c/o Soros Fund Management LLC
888 Seventh Avenue
New York, NY 10106
Attention: Cynthia Paul
Telecopy No.: (646) 731-5431

with a copy to:

Akin, Gump, Strauss, Hauer and Feld, LLP
590 Madison Avenue
New York, NY 10022
Attention: Patrick J. Dooley, Esq.
Telecopy No.: (212) 872-1002

or to such other address as such person may have furnished to the other persons identified in this Section 8(c) in writing in accordance herewith.

(d) Approval of Holders. Whenever the consent or approval of Holders of a specified percentage of Registrable Securities is required hereunder, Registrable Securities held by the Company or its affiliates (as such term is defined in Rule 405 under the Securities Act) (other than the Purchaser or subsequent Holders if such subsequent Holders are deemed to be such

affiliates solely by reason of their holdings of such Registrable Securities) shall not be counted in determining whether such consent or approval was given by the Holders of such required percentage.

(e) Successors and Assigns. Any person who purchases any Registrable Securities from the Purchaser shall be deemed, for purposes of this Agreement, to be an assignee of the Purchaser. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of each of the parties and shall inure to the benefit of and be binding upon each Holder of any Registrable Securities.

(f) Counterparts. This Agreement may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be original and all of which taken together shall constitute one and the same agreement.

(g) Headings. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(h) Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REFERENCE TO ITS CHOICE OF LAW RULES.

(i) Severability. If any term, provision, covenant or restriction of this Agreement is held to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated thereby, and the parties hereto shall use their reasonable best efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction, it being intended that all of the rights and privileges of the parties shall be enforceable to the fullest extent permitted by law.

(j) Entire Agreement. This Agreement is intended by the parties as a final expression of their agreement and is intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein and the registration rights granted by the Company with respect to the Registrable Securities. Except as provided in the Purchase Agreement, there are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein, with respect to the registration rights granted by the Company with respect to the Registrable Securities. This Agreement supersedes all prior agreements and undertakings among the parties with respect to such registration rights. No party hereto shall have any rights, duties or obligations other than those specifically set forth in this Agreement. In no event will such methods of distribution take the form of an underwritten offering of the Registrable Securities without the prior agreement of the Company.

(k) Termination. This Agreement and the obligations of the parties hereunder shall terminate upon the end of the Effectiveness Period, except for any liabilities or obligations under Section 4, 5 or 6 hereof and the obligations to make payments of and provide for liquidated

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damages under Section 2(e) hereof to the extent such damages accrue prior to the end of the Effectiveness Period, each of which shall remain in effect in accordance with its terms.

[signature page follows]

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IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

AXCELIS TECHNOLOGIES, INC.

By /s/ Mary G. Puma
Name: Mary G. Puma
Title: Chairman, CEO, and President

Confirmed and accepted as of
the date first above written:

QUANTUM PARTNERS LDC

By /s/ Jay Schoenfarber
Name: Jay Schoenfarber
Title: Attorney-in-fact

[Registration Rights Agreement]

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AXCELIS ANNOUNCES REFINANCING OF LONG-TERM DEBT

BEVERLY, Mass. —May 3, 2006 – Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced it has issued \$75 million of 4.25% Convertible Senior Subordinated Notes due January 2009 in a private placement to an institutional investor, and concurrently retired \$50.8 million of existing 4.25% Convertible Subordinated Notes due January 2007. The Company intends to use the net proceeds of the transaction of approximately \$24.2 million for working capital and general corporate purposes.

The new notes are unsecured senior subordinated indebtedness of Axcelis that carry a coupon rate of 4.25%, payable semiannually, and are convertible into Axcelis common stock at \$20 per share, subject to adjustment in certain circumstances. When the notes become payable in January 2009, or are converted, they bear a premium intended to give the holder an 8% yield to maturity. Axcelis may redeem the notes at any time at a redemption price equal to the principal amount of the notes to be redeemed plus a premium as provided for in the indenture. The notes prohibit Axcelis from incurring any new debt senior to the notes, except as provided for in the indenture. Axcelis has agreed to file a registration statement for the resale of the notes and the shares of its common stock issuable upon conversion of the notes.

Stephen Bassett, executive vice president and chief financial officer, commented, “We are very pleased to complete this transaction. After evaluating various alternatives, we found this to be the most cost-effective option for our shareholders. The refinancing is intended to assure that we will have sufficient liquidity to repay the remaining debt when it comes due in January 2007 and to continue to support ongoing operations.”

This announcement is neither an offer to sell nor a solicitation of an offer to buy any of these securities. The securities were offered and sold only to a qualified institutional buyer in reliance on Section 4(2) of the Securities Act of 1933. The securities offered and sold have not been registered under the Securities Act or any state securities laws. Unless so registered, the notes and any common stock issued on conversion of the notes may not be offered or sold in the United States except pursuant to an exemption from registration requirements of the Securities Act of 1933 and applicable state securities laws.

Safe Harbor Statement

This document contains forward-looking statements under the SEC safe harbor provisions. These statements, which include those relating to the Company’s liquidity in January 2007, are based on management’s current expectations and should be viewed with caution. They are subject to various risks and uncertainties, many of which are outside the control of the Company, including the timing of orders and shipments, the conversion of orders to revenue in any particular quarter, or at all, our ability to implement successfully our profit plans, the continuing demand for semiconductor equipment, relative market growth, continuity of business relationships with and purchases by major customers, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions. These risks and other risk factors relating to Axcelis are described more fully in the most recent Form 10-K filed by Axcelis and in other documents filed from time to time with the Securities and Exchange Commission.

About Axcelis Technologies, Inc.

Axcelis Technologies, Inc., headquartered in Beverly, Massachusetts, provides innovative, high-productivity solutions for the semiconductor industry. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation, rapid thermal processing, and cleaning and curing systems. Axcelis Technologies has key product development centers in Beverly, Massachusetts, as well as in Toyo, Japan through its joint venture, SEN Corporation, an SHI and Axcelis Company. The company’s Internet address is: www.axcelis.com.

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AXCELIS ANNOUNCES FINANCIAL RESULTS FOR THE FIRST QUARTER 2006

BEVERLY, Mass. — May 4, 2006 – Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for its first quarter ended March 31, 2006. The Company reported revenues of \$97.9 million, compared to \$92.9 million for the fourth quarter of 2005. Worldwide revenues for the first quarter, which include revenues of SEN Corporation, an SHI and Axcelis Company, the Company's 50% owned joint venture in Japan, were \$145.8 million, compared to \$155.1 million for the preceding quarter. Net income for the first quarter was \$0.5 million, or \$0.01 per share, compared to a net loss for the fourth quarter of 2005 of \$1.3 million, or \$0.01 per share. In the corresponding quarter for the previous year, the Company reported net revenues of \$100.0 million, worldwide revenues of \$154.7 million, and net income of \$1.9 million, or \$0.02 per share.

Commenting on the Company's performance, Chairman and CEO Mary Puma said, "Operating results were in line with our expectations. We are experiencing robust demand for our products, as underlying business conditions continue to strengthen. Overall, the year is looking strong and we are on track to achieve our operating and design win goals."

"During the quarter, we continued to gain traction with our new Optima HD implanter," Puma continued. "Our recent design win at one of the world's largest manufacturers of memory devices, is testament to the product's compelling benefits. With the new Optima HD, we now offer chipmakers the industry's most innovative technology to deliver unmatched manufacturing flexibility and capital efficiency. This customer chose the Optima HD because of its ability to perform traditional high dose implants as well as emerging device manufacturing trends, including molecular implant and hydrogen applications."

Axcelis believes that reporting the combined revenues of SEN, a 50% owned unconsolidated subsidiary of Axcelis, with Axcelis' own revenues, is useful to investors. SEN's ion implant products are covered by a license from Axcelis and therefore the combined revenue of the two companies indicates the full market penetration of Axcelis' technology.

First Quarter Detail

Shipments and Margins

Shipments before provision for deferred revenue for the first quarter totaled \$98.5 million with worldwide shipments, including SEN, totaling \$148.6 million. Axcelis shipments, excluding SEN, were up 15.1% from the fourth quarter of 2005 and worldwide shipments, including SEN, were up 2.6%.

Geographically, Axcelis systems shipments, excluding SEN, were to: Asia 71%, North America 18% and Europe 11%.

The ion implantation business (excluding SEN) accounted for 77% of total shipments in the first quarter while other products (RTP, Dry Strip and Curing) accounted for 23%.

Service revenue (service labor, spare parts and consumables), excluding SEN, was \$44.1 million for the quarter, up 7.7% from the fourth quarter of 2005.

Gross margin for the first quarter was 39.9%, at the same level reported for the preceding quarter.

Orders and Backlog

Orders (new systems bookings and service excluding SEN) received for the first quarter totaled \$96.9 million, compared to \$98.8 million for the fourth quarter of 2005. New system bookings, excluding service, amounted to \$52.8 million compared to \$57.9 million for the preceding quarter. Worldwide orders, including SEN, were \$178.7 million, compared to \$151.0 million for the fourth quarter of 2005.

Backlog plus deferred systems revenue at quarter end was \$88.6 million. Backlog consists of systems only (i.e., excluding service contracts) that are generally scheduled to ship within six months.

Balance Sheet

Cash, cash equivalents and short-term investments decreased by \$25.6 million to \$150.8 million at March 31, 2006. The Company ended the quarter with working capital of \$231.8 million.

On May 3rd, The Company announced it had issued \$75 million of 4.25% Convertible Senior Subordinated Notes due January 2009 in a private placement to an institutional investor, and concurrently retired \$50.8 million of existing 4.25% Convertible Subordinated Notes due January 2007. The new notes are unsecured senior subordinated indebtedness of Axcelis that carry a coupon rate of 4.25%, payable semiannually, and are convertible into Axcelis common stock at \$20 per share, subject to adjustment in certain circumstances. When the notes become payable in January 2009, or are converted, they bear a premium intended to give the holder an 8% yield to maturity.

Business Outlook

Axcelis' financial outlook for the second quarter of 2006 assumes no material change in the semiconductor spending environment. Revenues in the second quarter are expected to be in a range of \$112.0 million to \$122.0 million. Worldwide revenues, including SEN, are expected to be in a range of \$192.0 million to \$207.0 million. The Company anticipates gross margins to be approximately 40% and results of operations to provide earnings per share in the range of \$0.10 to \$0.14 per share.

Axcelis assumes no responsibility to update guidance. Axcelis will only confirm or update guidance via a press release.

First Quarter 2006 Conference Call

The Company will be hosting a conference call today, Thursday, May 4, 2006, beginning at 5:00 pm ET. The purpose of the call is to discuss first quarter results and to provide guidance for the second quarter of 2006. The call will be available to interested listeners via an audio webcast that can be accessed through Axcelis' home page at www.axcelis.com, or by dialing 1-800-310-1961 (1-719-457-2692 outside North America). Participants calling into the conference call will be requested to provide the company name: Axcelis Technologies, the conference leader: Maureen Hart, and pass code: #3747910. A telephone replay will be available from 8:00 pm ET on May 4, 2006 until 11:59 pm ET on May 11, 2006. Dial 1-888-203-1112 (1-719-457-0820 outside North America), and enter conference ID code #3747910. A webcast replay will be available from 8:00 pm ET on May 4, 2006 until 5:00 pm ET June 1, 2006.

Safe Harbor Statement

This document contains forward-looking statements under the SEC safe harbor provisions. These statements, which include those relating to the company developing new products, building its position in the ion implant market, and its guidance for future financial performance, are based on management's current expectations and should be viewed with caution. They are subject to various risks and uncertainties, many of which are outside the control of the Company, including the timing of orders and shipments, the conversion of orders to revenue in any particular quarter, or at all, our ability to implement successfully our profit plans, the continuing demand for semiconductor equipment, relative market growth, continuity of business relationships with and purchases by major customers, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions. These risks and other risk factors relating to Axcelis are described more fully in the most recent Form 10-K filed by Axcelis and in other documents filed from time to time with the Securities and Exchange Commission.

About Axcelis Technologies, Inc.

Axcelis Technologies, Inc., headquartered in Beverly, Massachusetts, provides innovative, high-productivity solutions for the semiconductor industry. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation, rapid thermal processing, and cleaning and curing systems. Axcelis Technologies has key product development centers in Beverly, Massachusetts, as well as in Toyo, Japan through its joint venture, SEN Corporation, an SHI and Axcelis Company. The company's Internet address is: www.axcelis.com.



Axcelis Technologies, Inc.
Consolidated Balance Sheets
In thousands
(Unaudited)

	<u>March 31,</u> <u>2006</u>	<u>December 31,</u> <u>2005</u>
Assets		
Current assets		
Cash and cash equivalents	\$ 59,222	\$ 71,417
Marketable securities	80,145	93,797
Restricted cash	8,878	8,037
Accounts receivable, net	91,707	79,379
Inventories, net	127,133	109,972
Prepaid expenses and other current assets	34,896	32,767
Total current assets	401,981	395,369
Property, plant & equipment, net	68,056	71,443
Investment in SEN	111,317	108,815
Goodwill	46,773	46,773
Intangible assets	15,488	16,100
Restricted cash, long-term portion	2,576	3,195
Other assets	21,375	19,748
	<u>\$ 667,566</u>	<u>\$ 661,443</u>
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 33,707	\$ 25,556
Accrued compensation	12,030	18,437
Warranty	4,910	5,739
Income taxes	2,869	3,021
Deferred revenue	32,408	30,140
Other current liabilities	10,089	11,333
Current portion, long term debt	74,217	—
Total current liabilities	170,230	94,226
Long-term debt	50,783	125,000
Long-term deferred revenue	10,671	11,177
Other long-term liabilities	4,335	4,999

Commitments and contingencies	—	—
Stockholders' equity		
Preferred Stock	—	—
Common stock	101	101
Additional paid-in capital	464,647	466,454
Deferred compensation	—	(5,385)
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(30,642)	(31,187)
Accumulated other comprehensive loss	(1,341)	(2,724)
	<u>431,547</u>	<u>426,041</u>
	<u>\$ 667,566</u>	<u>\$ 661,443</u>

Axcelis Technologies, Inc.
Consolidated Statements of Operations
In thousands, except per share amounts
(Unaudited)

	Three months ended	
	March 31,	
	2006	2005
Revenue		
Systems	\$ 52,404	\$ 59,693
Services	44,081	38,441
Royalties, primarily from SEN	1,436	1,902
	<u>97,921</u>	<u>100,036</u>
Cost of Revenue	<u>58,879</u>	<u>58,239</u>
Gross profit	39,042	41,797
Operating expenses		
Research & development	18,212	15,867
Sales and marketing	10,607	11,870
General and administrative	10,853	11,183
Amortization of intangible assets	612	612
Restructuring charges	(305)	1,799
	<u>39,979</u>	<u>41,331</u>
Income (loss) from operations	(937)	466
Other income (expense)		
Equity income of SEN	2,216	2,339
Interest income	1,651	1,010
Interest expense	(1,641)	(1,654)
Other-net	(655)	(14)
	<u>1,571</u>	<u>1,681</u>
Income before income taxes	634	2,147
Income taxes	89	249
Net income	<u>\$ 545</u>	<u>\$ 1,898</u>
Net income per share		
Basic	\$ 0.01	\$ 0.02
Diluted	\$ 0.01	\$ 0.02
Shares used in computing net income per share		
Basic	100,883	100,138
Diluted	101,823	100,929