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

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**FORM 11-K**

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**ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year e nded December 31, 2008

OR

**TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from                    to

Commission File Number 0-24612

**ADTRAN, INC. 401(k) RETIREMENT PLAN**  
(Full title of the plan)

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**ADTRAN, INC.**

(Name of issuer of the securities held pursuant to the plan)

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**901 Explorer Boulevard**  
**Huntsville, Alabama 35806-2807**  
(Address of the plan and address of issuer's principal executive offices)

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**ADTRAN, INC. 401(k) RETIREMENT PLAN**  
**Financial Statements and Supplemental Schedule**  
**As of December 31, 2008 and 2007**  
**and for the Year Ended December 31, 2008**

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Note: Other schedules required by 29 CFR 2520.103-10 of the Department of Labor’s Rules and Regulations for Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

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**Report of Independent Registered Public Accounting Firm**

To the Participants and Administrator of the  
ADTRAN, Inc. 401(k) Retirement Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of the ADTRAN, Inc. 401(k) Retirement Plan (the "Plan") at December 31, 2008 and 2007, and the changes in net assets available for benefits for the year ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedule of Assets (Held at End of Year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ PricewaterhouseCoopers LLP  
Birmingham, Alabama  
June 12, 2009

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**ADTRAN, INC. 401(k) RETIREMENT PLAN  
Statements of Net Assets Available for Benefits**

|                                                                                                | <u>December 31,<br/>2008</u> | <u>December 31,<br/>2007</u> |
|------------------------------------------------------------------------------------------------|------------------------------|------------------------------|
| <b>Assets</b>                                                                                  |                              |                              |
| Investments, at fair value                                                                     | \$76,388,050                 | \$101,493,687                |
| Employer contributions receivable                                                              | 391,573                      | 132,329                      |
| Employee contributions receivable                                                              | 71,716                       | 362,104                      |
| <b>Net Assets Available for Benefits at Fair Value</b>                                         | <b>76,851,339</b>            | <b>101,988,120</b>           |
| Adjustment from fair value to contract value for fully benefit-responsive investment contracts | 212,660                      | 46,176                       |
| <b>Net Assets Available for Benefits</b>                                                       | <b><u>\$77,063,999</u></b>   | <b><u>\$102,034,296</u></b>  |

See notes to consolidated financial statements

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**ADTRAN, INC. 401(k) RETIREMENT PLAN**  
**Statement of Changes in Net Assets Available for Benefits**  
**Year Ended December 31, 2008**

| <b>Additions to net assets attributed to:</b>         |                             |
|-------------------------------------------------------|-----------------------------|
| Interest and dividend income                          | \$ 3,234,092                |
| <b>Contributions:</b>                                 |                             |
| Participants                                          | 8,768,559                   |
| Employer                                              | 3,877,076                   |
| Rollovers from other qualified plans                  | 537,579                     |
| Total contributions                                   | <u>13,183,214</u>           |
| <b>Total additions</b>                                | <b><u>16,417,306</u></b>    |
| <b>Deductions from net assets attributed to:</b>      |                             |
| Net depreciation in fair value of investments         | 35,587,091                  |
| Distributions to participants                         | 5,765,918                   |
| Administrative expenses                               | 34,594                      |
| <b>Total deductions</b>                               | <b><u>41,387,603</u></b>    |
| Net decrease in net assets available for benefits     | (24,970,297)                |
| Net assets available for benefits, beginning of year  | <u>102,034,296</u>          |
| <b>Net assets available for benefits, end of year</b> | <b><u>\$ 77,063,999</u></b> |

See notes to consolidated financial statements

**ADTRAN, INC. 401(k) RETIREMENT PLAN**  
**Notes to Financial Statements**  
**December 31, 2008 and 2007**

**1. Description of the Plan**

The following description of the ADTRAN, Inc. 401(k) Retirement Plan (Plan) provides only general information. Participants should refer to the Plan document and summary Plan description for a more complete description of the Plan's provisions.

**General**

ADTRAN, Inc. (Company) (Employer) formed the Plan effective January 1, 1990 to provide certain retirement benefits for its employees. ADTRAN, Inc. designs, manufactures, markets and services network access solutions for communications networks. ADTRAN, Inc. solutions are widely deployed by providers of telecommunications services and small and mid-sized businesses and enterprises, and enable voice, data, video and Internet communications across copper, fiber and wireless networks. The Plan is a defined contribution plan subject to the provisions set forth in the Employee Retirement Income Security Act of 1974 (ERISA) and the provisions of Internal Revenue Code (IRC) Sections 401(a) and 401(k). The Plan is funded by discretionary employee contributions as well as nondiscretionary employer contributions. The plan assets are held by Fidelity Management Trust Company (Fidelity) which executes investment transactions, receives the plan contributions, credits participants' individual accounts and pays benefits to participants and their beneficiaries in accordance with the provisions of the Plan. The Plan was amended, effective July 1, 1997, to allow the Company's common stock to be an investment option of the Plan.

Beginning in 2001, the Company's Board of Directors adopted various amendments to bring the Plan into compliance with the provisions of IRC Section 401(k)(12)(c) as a "design-based safe harbor" plan for nondiscrimination purposes. Pursuant to these amendments, the Plan provided that the Company make nonelective contributions of 3% of each eligible participant's annual compensation (subject to certain limits). In addition, the Plan did not require (or permit) the Company to make matching contributions for employee elective deferrals. Under the Plan, there was no minimum age requirement for employees to be eligible to participate, and there was no minimum service requirement for employees to be eligible to make elective deferrals under the Plan. However, employees were required to complete twelve months of service to be eligible for the "safe harbor" contribution of 3% of their eligible compensation. The Plan permits participants to change their contribution rate as of the first payroll period of each quarter.

The Plan permits participants to elect to receive distributions from the Plan in the form of company stock. The Plan's loan provisions limit outstanding loans to two at a time. Co-op employees hired on or after December 1, 2001, seasonal employees, leased employees, interns and nonresident aliens with no U.S. income are excluded from participation in the Plan.

Effective for the plan year beginning January 1, 2002, the Plan elected to implement the "catch-up" provision provided for in IRC Section 414(v). This provision enables applicable employer plans to allow eligible participants who are age 50 or over to make additional deferrals, beginning in 2002.

Effective January 3, 2003, the Plan Document was restated in order to comply with the IRS deadline for GUST ( G eneral Agreement on Tariffs and Trade – 1994, U niform Services Employment and Reemployment Rights Act of 1994, S mall Business Job Protection Act of 1996 and T axpayer Relief Act of 1997) adoption by prototype plans.

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Effective January 1, 2008 the Plan Document was amended to cease making the safe harbor nonelective contributions of 3% and begin making safe harbor matching contributions. Active participants must complete twelve months of service to be eligible for the Company's safe harbor matching contributions, which are as follows: 100% of an employee's first 3% of contributions and 50% of his or her next 2% of contributions.

### Eligibility

All regular employees are eligible to participate in the elective deferral portion of the Plan immediately upon hire, and in the safe harbor nonelective portion of the Plan following the completion of twelve months of service (except seasonal and co-op employees, leased employees, interns and nonresident aliens with no U.S.-source income).

### Contributions

Effective January 1, 2003, the amended Plan allows for contributions up to 60% of a participant's eligible compensation (as defined in the Plan Document and subject to annual limitations established by the Internal Revenue Service).

Under the terms of the Plan, the Company is required to make safe harbor matching contributions of 100% of an eligible participant's first 3% of contributions and 50% of his or her next 2% of contributions (subject to certain limits).

### Participant Accounts

Each participant's account is credited with the employee's contribution and the Company's matching contribution, plus Plan earnings. Allocations of earnings are based on account balances, as defined more fully in the Plan document. Each participant directs how contributions made to the Plan on his/her behalf are to be invested among the investment options available under the Plan. The Plan currently offers thirty-five investment options including a Company stock fund. Contributions to the Company stock fund are limited to 20% of a participant's total contributions to the Plan. The benefit to which a participant is entitled is the benefit that can be provided from the participant's account.

### Vesting

Employees are always 100% vested under the Plan.

### Retirement Date

The normal retirement date is the first day of the calendar month following the date a participant reaches age 62. Early retirement is permitted on the first day of the calendar month after a participant reaches age 59- <sup>1</sup>/<sub>2</sub>.

### Distribution of Benefits

Benefits commence upon one of several dates: normal retirement, early retirement, date of disability, pre-retirement death and upon termination other than described above. Benefits are distributed by means of a lump sum payment. In-kind distribution of the Company common stock is permitted. Corrective distributions are made for excess deferrals and contributions.

### Other

The Plan allows for participant in-service withdrawals at or after age 59- <sup>1</sup>/<sub>2</sub> and hardship withdrawals at any time from the participant's account if certain conditions are met.

### Participant Loans

Participants may borrow a minimum of \$1,000 from their accounts up to a maximum equal to the lesser of \$50,000 or 50% of their account balance. Loan transactions are treated as transfers between the investment fund and the participant loan fund. Loan terms range from one to five years unless such loan is used to acquire a principal residence, in which case the loan term can be up to ten years. The Plan's outstanding loans at December 31, 2008 are collateralized by the balances in the participants' accounts and bear interest at rates commensurate with local prevailing rates as determined quarterly by the plan administrator. Interest rates range from 5% to 10.5% for loans that were outstanding as of December 31, 2008.

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### **Administrative Expenses**

All expenses incident to the functioning of the Plan may be paid out of Plan assets unless paid by the Company. On behalf of the Plan, the Company paid the Plan trustee \$20,175 for administrative fees incurred during the Plan year ended December 31, 2008. This amount is not included in the financial statements of the Plan.

### **Plan Termination**

While it is the intention of the Company to permanently continue the Plan, the Company has the right to amend or terminate the Plan at any time upon written notice to the Plan administrator and Plan trustee. No amendment may permit any plan assets to revert to the Employer or be used for any purpose other than to provide benefits to participants and their beneficiaries. Upon termination of the Plan, the plan assets will be distributed to participants and their beneficiaries in accordance with the Plan and subject to IRC and ERISA guidelines.

## **2. Summary of Significant Accounting Policies**

The following is a summary of accounting policies utilized in the financial statements which were prepared in accordance with accounting principles generally accepted in the United States of America.

### **Basis of Accounting**

The accompanying financial statements of the Plan are maintained on the accrual basis of accounting.

### **Valuation of Investments**

The money market funds, mutual funds and common stock investments are valued at fair value based on quoted market prices. Quoted market prices are based on the last reported sales price on the last business day of the Plan year as reported by the principal securities exchange on which the security is traded.

Units in commingled trust funds are valued at the unit value, as reported by the trustee of the commingled trust fund on each valuation date.

Participant loans are valued at their outstanding balances, which approximate market value.

Purchases and sales of investments are reflected as of the trade date. Interest income is recorded when earned. Dividend income is recorded on the ex-dividend date.

The Plan presents, in the statement of changes in net assets available for benefits, the net depreciation in the fair value of its investments which consists of the realized gains or losses and the unrealized depreciation on those investments.

As described in the Financial Accounting Standards Board Staff Position FSP AAG INV-1 and SOP 94-4-1, *Reporting of Fully Benefit-Responsive Investment Contracts Held by Certain Investment Companies Subject to the AICPA Investment Company Guide and Defined-Contribution Health and Welfare and Pension Plans* (the FSP), investment contracts held by a defined-contribution plan are required to be reported at fair value. However, contract value is the relevant measurement attribute for that portion of the net assets available for benefits of a defined-contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants would receive if they were able to initiate permitted transactions under the terms of the Plan. As required by the FSP, the accompanying Statements of Net Assets Available for Benefits present the fair value of the investment contracts as well as the adjustment of the fully benefit-responsive investment contracts from fair value to contract value. The accompanying Statement of Changes in Net Assets Available for Benefits is prepared on a contract value basis. The FSP was adopted as of December 31, 2006.

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### Contributions

Contributions from the Company are accrued based on the safe harbor contribution provisions of the Plan. Contributions from employees are recorded and remitted in the period in which the Company makes the deductions from the participants' payroll.

### Benefit Payments

Benefits are recognized when paid.

### Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting periods. Actual results could differ from those estimates.

## 3. Investments

Investment information as of December 31, 2008 and 2007 is as follows:

| <u>Description</u>                                                                                                                 | <u>2008</u> | <u>2007</u> |
|------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|
| Fidelity Managed Income Portfolio Fund (contract value of \$4,155,058 and \$4,295,171 at December 31, 2008 and 2007, respectively) | \$3,942,398 | \$4,248,995 |
| Fidelity Retirement Money Market Fund                                                                                              | 6,131,880   | 4,820,580   |
| Fidelity Equity Income Fund                                                                                                        | 4,054,380   | 7,112,322   |
| Fidelity Fund                                                                                                                      | 4,422,819   | 7,492,706   |
| Morgan Stanley Small Company Growth Portfolio                                                                                      | 5,091,500   | 9,028,305   |
| Fidelity Government Income Fund                                                                                                    | 5,275,362   | 2,303,924   |
| Fidelity Balanced Fund                                                                                                             | 6,418,600   | 9,408,086   |
| Fidelity US BD Index Fund                                                                                                          | 2,584,196   | 1,992,313   |
| Fidelity Freedom 2000 Fund                                                                                                         | 2,090,107   | 2,361,515   |
| Fidelity Freedom 2010 Fund                                                                                                         | 1,417,595   | 1,987,461   |
| Fidelity Freedom 2020 Fund                                                                                                         | 4,451,860   | 6,217,221   |
| Spartan US Equity Index Fund                                                                                                       | 3,426,067   | 5,386,613   |
| Fidelity Aggressive Growth Fund                                                                                                    | 1,617,944   | 3,708,871   |
| Fidelity Blue Chip Fund                                                                                                            | 1,269,688   | 2,123,435   |
| Fidelity Diversified International Fund                                                                                            | 4,251,903   | 7,950,330   |
| Fidelity Growth Company Fund                                                                                                       | 1,834,894   | 2,827,294   |
| Fidelity Freedom Income Fund                                                                                                       | 148,530     | 142,120     |
| Fidelity Freedom 2030 Fund                                                                                                         | 924,831     | 1,231,854   |
| Fidelity Freedom 2040 Fund                                                                                                         | 798,206     | 1,266,072   |
| Fidelity Freedom 2005 Fund                                                                                                         | 13,368      | 29,483      |
| Fidelity Freedom 2015 Fund                                                                                                         | 949,360     | 884,375     |
| Fidelity Freedom 2025 Fund                                                                                                         | 722,898     | 1,010,106   |
| Fidelity Freedom 2035 Fund                                                                                                         | 618,621     | 629,125     |
| Fidelity Freedom 2045 Fund                                                                                                         | 51,688      | 33,147      |
| Fidelity Freedom 2050 Fund                                                                                                         | 141,395     | 48,870      |

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| <u>Description</u>                                           | <u>2008</u>                | <u>2007</u>                 |
|--------------------------------------------------------------|----------------------------|-----------------------------|
| Investment information (continued)                           |                            |                             |
| Fidelity Low Price Stock Fund                                | 2,899,438                  | 4,357,133                   |
| ABF Large Cap Valuation Plan Ahead Class                     | —                          | 562,679                     |
| NB Partners Trust                                            | —                          | 265,793                     |
| Rainier Small/Mid Cap Equity Portfolio                       | —                          | 1,618,807                   |
| Loomis Bond Fund Administration                              | —                          | 450,076                     |
| Wells Fargo Advantage C&B MIDCAP Value Fund                  | —                          | 322,985                     |
| RS Partners Fund                                             | —                          | 457,349                     |
| Wells Fargo Advantage Mid Cap Disciplined                    | —                          | 274,907                     |
| Fidelity Contra Fund                                         | 1,819,326                  | 1,791,655                   |
| Fidelity Leveraged Company Stock                             | 968,284                    | 1,818,345                   |
| Neuberger Berman Partners Investment                         | 116,678                    | —                           |
| Wells Fargo Advantage Mid Cap Disciplined Institutional Fund | 303,898                    | —                           |
| Wells Fargo Advantage C&B Mid Cap Value Institutional Fund   | 237,458                    | —                           |
| RS Partners Y                                                | 391,702                    | —                           |
| Loomis Sayles Bond Institutional Fund                        | 793,922                    | —                           |
| Rainier Small/Mid Cap Equity Institutional Fund              | 878,368                    | —                           |
| American Beacon Large Cap Value Institutional Fund           | 340,520                    | —                           |
| Fidelity U.S. Treasury Money Market Fund                     | 11,378                     | —                           |
| ADTRAN Common Stock                                          | 2,697,919                  | 3,299,461                   |
| Participant Loans                                            | 2,279,069                  | 2,029,374                   |
| <b>Investments at fair value</b>                             | <b><u>\$76,388,050</u></b> | <b><u>\$101,493,687</u></b> |

The following is a summary of assets held in excess of 5% of the Plan's net assets available for benefits at December 31, 2008 and 2007:

|                                               | <u>2008</u> | <u>2007</u> |
|-----------------------------------------------|-------------|-------------|
| Fidelity Equity Income Fund                   | \$4,054,380 | \$7,112,322 |
| Fidelity Fund                                 | 4,422,819   | 7,492,706   |
| Morgan Stanley Small Company Growth Portfolio | 5,091,500   | 9,028,305   |
| Fidelity Government Income Fund               | 5,275,362   | —           |
| Fidelity Balanced Fund                        | 6,418,600   | 9,408,086   |
| Fidelity Freedom 2020 Fund                    | 4,451,860   | 6,217,221   |
| Spartan US Equity Index Fund                  | —           | 5,386,613   |
| Fidelity Diversified International Fund       | 4,251,903   | 7,950,330   |
| Fidelity Retirement Money Market Fund         | 6,131,880   | —           |
| Fidelity Managed Income Portfolio Fund        | \$4,155,058 | \$ —        |

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The Plan's investments (including investments bought and sold, as well as held, during the year) depreciated in value by \$35,587,091 during the year ended December 31, 2008, as follows:

|                                        | 2008                         |
|----------------------------------------|------------------------------|
| Mutual funds and commingled trust fund | \$(34,537,249)               |
| ADTRAN stock fund                      | (1,049,842)                  |
| <b>Total</b>                           | <b><u>\$(35,587,091)</u></b> |

### 4. Related Party Transaction

The Plan allows for transactions with certain parties who may perform services or have fiduciary responsibilities to the Plan, including the Company. The Plan invests in shares of mutual funds or commingled trust funds managed by an affiliate of Fidelity, a subsidiary of which is the trustee of the Plan. The Plan invests in common stock of the Company and issues loans to participants, which are secured by the balances in the participants' accounts. During the year ended December 31, 2008, the Plan purchased 34,997 units of ADTRAN, Inc. Stock Fund for \$596,102 and disposed of 9,413 units for \$158,968. Quarterly dividends of \$0.09 per share were declared and paid by the Company on various dates throughout the year. The Plan received \$58,064 in dividend payments related to the common stock of the Company for the year ended December 31, 2008. These transactions qualify as party-in-interest transactions.

### 5. Income Tax Status

The Plan obtained its latest determination letter on October 25, 2005 from the Internal Revenue Service stating that the Plan, as then designed, was in compliance with the applicable requirements of the IRS. Although the Plan has subsequently been amended to conform with regulatory requirements and for minor administrative items, the Plan administrator believes that the Plan is operating in such a manner so as not to jeopardize its favorable tax status. Accordingly, no provision for income taxes has been included in the Plan's financial statements.

### 6. Reconciliation to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements at December 31, 2008 and 2007 to Form 5500:

|                                                                                                | 2008                       | 2007                        |
|------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
| Net assets available for benefits per the financial statements                                 | \$77,063,999               | \$102,034,296               |
| Adjustment from fair value to contract value for fully benefit-responsive investment contracts | (212,660)                  | (46,176)                    |
| Contributions receivable                                                                       | (463,289)                  | (494,433)                   |
| <b>Net assets available for benefits per the Form 5500</b>                                     | <b><u>\$76,388,050</u></b> | <b><u>\$101,493,687</u></b> |

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The following is a reconciliation of contributions per the financial statements at December 31, 2008 to Form 5500:

|                                                     |                            |
|-----------------------------------------------------|----------------------------|
|                                                     | <u>2008</u>                |
| Contributions per the financial statements          | \$13,183,214               |
| Less: Contributions receivable at December 31, 2008 | (463,289)                  |
| Add: Contributions receivable at December 31, 2007  | 494,433                    |
| <b>Contributions per Form 5500</b>                  | <b><u>\$13,214,358</u></b> |

Contributions that are not received by the Plan until the subsequent year are not accrued on the Form 5500.

### 7. Risks and Uncertainties

The Plan provides for various investment options which in turn invest in any combination of stocks, bonds and other investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

### 8. Fair Value Measurements

Financial Accounting Standards Board Statement No. 157, *Fair Value Measurements* (SFAS 157), establishes a definition of fair value and a framework for measuring fair value, and expands disclosures about fair value measurements. The definition of fair value focuses on the price that would be received upon the sale of an asset or the amount paid to transfer a liability. Under SFAS 157, the fair value measurement should reflect all of the assumptions that market participants would use in pricing the asset or liability. SFAS 157 establishes a three-level hierarchy to prioritize the inputs used in valuation techniques for fair value, consisting of: 1) observable inputs that reflect quoted prices in active markets; 2) inputs other than quoted prices with observable market data; and 3) unobservable data. The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. We adopted SFAS 157 in its entirety and the initial application of SFAS 157 had no effect on the Plan's net assets available for benefits.

The following table sets forth by level, within the fair value hierarchy, the Plan's investments at fair value as of December 31, 2008:

|                                        | Fair Value                 | Fair Value Measurements at December 31, 2008 Using                         |                                                           |                                                    |
|----------------------------------------|----------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|
|                                        |                            | Quoted Prices<br>in Active<br>Markets for<br>Identical<br>Assets (Level 1) | Significant<br>Other<br>Observable<br>Inputs<br>(Level 2) | Significant<br>Unobservable<br>Inputs<br>(Level 3) |
| Money market funds                     | \$ 6,143,258               | \$ 6,143,258                                                               | \$ —                                                      | \$ —                                               |
| Commingled trust fund                  | 3,942,398                  | —                                                                          | 3,942,398                                                 | —                                                  |
| Common stock –Adtran, Inc.             | 2,697,919                  | 2,697,919                                                                  | —                                                         | —                                                  |
| Mutual funds                           | 61,325,406                 | 61,325,406                                                                 | —                                                         | —                                                  |
| Participant loans                      | 2,279,069                  | —                                                                          | —                                                         | 2,279,069                                          |
| <b>Total investments at fair value</b> | <b><u>\$76,388,050</u></b> | <b><u>\$ 70,166,583</u></b>                                                | <b><u>\$ 3,942,398</u></b>                                | <b><u>\$ 2,279,069</u></b>                         |

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The valuation methodology for participant loans is amortized cost, which approximates fair value. The following table sets forth a summary of changes in the fair value of participant loans for the year ended December 31, 2008:

|                                     | 2008                      |
|-------------------------------------|---------------------------|
| Balance, beginning of year          | \$2,029,374               |
| Loan withdrawals, net of repayments | <u>249,695</u>            |
| <b>Balance, end of year</b>         | <b><u>\$2,279,069</u></b> |

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**ADTRAN, INC. 401(k) RETIREMENT PLAN**

**EIN: 63-0918200 Plan 001**

**Schedule H, line 4i – Schedule of Assets (Held at End of Year)  
As of December 31, 2008**

| (a) | (b) Identity of issue, borrower,<br>lessor or similar party | (c) Description of investment including maturity date, rate<br>of interest, collateral, par or maturity value | (d)<br>Cost<br>** | (e) Current<br>Value |
|-----|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------|----------------------|
|     | Money Market Funds:                                         |                                                                                                               |                   |                      |
| *   | Fidelity Investments                                        | Retirement Money Market Fund                                                                                  |                   | \$6,131,880          |
| *   | Fidelity Investments                                        | U. S. Treasury Money Market Fund                                                                              |                   | 11,378               |
|     | Commingled Trust Fund:                                      |                                                                                                               |                   |                      |
| *   | Fidelity Investments                                        | Managed Income Portfolio Fund                                                                                 |                   | 3,942,398            |
|     | Common Stock:                                               |                                                                                                               |                   |                      |
| *   | Adtran, Inc.                                                | Common stock (173,097 shares and \$98,571 cash)                                                               |                   | 2,697,919            |
|     | Mutual Funds:                                               |                                                                                                               |                   |                      |
| *   | Fidelity Investments                                        | Equity Income Fund –value and income fund                                                                     |                   | 4,054,380            |
| *   | Fidelity Investments                                        | Fidelity Fund –growth and income                                                                              |                   | 4,422,819            |
|     | Morgan Stanley                                              | Small Company Growth Portfolio –special equity fund                                                           |                   | 5,091,500            |
| *   | Fidelity Investments                                        | Government Income Fund –intermediate government                                                               |                   | 5,275,362            |
| *   | Fidelity Investments                                        | Balanced Fund                                                                                                 |                   | 6,418,600            |
| *   | Fidelity Investments                                        | US BD Index Fund –government/corporate bond fund                                                              |                   | 2,584,196            |
| *   | Fidelity Investments                                        | Freedom 2000 Fund –short horizon SAF fund                                                                     |                   | 2,090,107            |
| *   | Fidelity Investments                                        | Freedom 2010 Fund –intermediate horizon SAF fund                                                              |                   | 1,417,595            |
| *   | Fidelity Investments                                        | Freedom 2020 Fund –Inter/Long horizon SAF fund                                                                |                   | 4,451,860            |
| *   | Fidelity Investments                                        | Spartan US Equity Index Fund                                                                                  |                   | 3,426,067            |
| *   | Fidelity Investments                                        | Aggressive Growth Fund –aggressive equity fund                                                                |                   | 1,617,944            |
| *   | Fidelity Investments                                        | Blue Chip Fund –Equity growth fund                                                                            |                   | 1,269,688            |
| *   | Fidelity Investments                                        | Diversified International Fund                                                                                |                   | 4,251,903            |
| *   | Fidelity Investments                                        | Growth Company Fund                                                                                           |                   | 1,834,894            |
| *   | Fidelity Investments                                        | Freedom Income Fund                                                                                           |                   | 148,530              |
| *   | Fidelity Investments                                        | Freedom 2030 Fund                                                                                             |                   | 924,831              |
| *   | Fidelity Investments                                        | Freedom 2040 Fund                                                                                             |                   | 798,206              |
| *   | Fidelity Investments                                        | Freedom 2005 Fund                                                                                             |                   | 13,368               |
| *   | Fidelity Investments                                        | Freedom 2015 Fund                                                                                             |                   | 949,360              |
| *   | Fidelity Investments                                        | Freedom 2025 Fund                                                                                             |                   | 722,898              |
| *   | Fidelity Investments                                        | Freedom 2035 Fund                                                                                             |                   | 618,621              |
| *   | Fidelity Investments                                        | Freedom 2045 Fund                                                                                             |                   | 51,688               |
| *   | Fidelity Investments                                        | Freedom 2050 Fund                                                                                             |                   | 141,395              |

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**ADTRAN, INC. 401(k) RETIREMENT PLAN**

**EIN: 63-0918200 Plan 001**

**Schedule H, line 4i – Schedule of Assets (Held at End of Year)  
As of December 31, 2008**

| (a)                                       | (b) Identity of issue, borrower,<br>lessor or similar party | (c) Description of investment including maturity date, rate<br>of interest, collateral, par or maturity value | (d)<br>Cost<br>** | (e) Current<br>Value       |
|-------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------|----------------------------|
| <b>Mutual Funds (Continued)</b>           |                                                             |                                                                                                               |                   |                            |
| *                                         | Fidelity Investments                                        | Low Price Stock Fund                                                                                          |                   | 2,899,438                  |
|                                           | Wells Fargo                                                 | Advantage C&B Mid Cap Value Institutional –domestic equity                                                    |                   | 237,458                    |
|                                           | Neuberger Berman                                            | Partners Investment –domestic equity                                                                          |                   | 116,678                    |
|                                           | Rainer Investment<br>Management Inc.                        | Small/Mid Cap Equity Institutional Fund –domestic equity                                                      |                   | 878,368                    |
|                                           | Loomis, Sayles & Company                                    | Bond Institutional Fund –domestic equity                                                                      |                   | 793,922                    |
|                                           | American Beacon Advisors,<br>Inc.                           | Large Cap Value Institutional Fund –domestic equity                                                           |                   | 340,520                    |
|                                           | RS Investments                                              | RS Partners Y –domestic equity                                                                                |                   | 391,702                    |
|                                           | Wells Fargo                                                 | Advantage Mid Cap Disciplined –domestic equity                                                                |                   | 303,898                    |
| *                                         | Fidelity Investments                                        | Contra Fund –domestic equity                                                                                  |                   | 1,819,326                  |
| *                                         | Fidelity Investments                                        | Leveraged Company Stock –domestic equity                                                                      |                   | 968,284                    |
| <b>Participant's Loans:</b>               |                                                             |                                                                                                               |                   |                            |
| *                                         | Participants                                                | Loans with interest rates ranging from 5.0% to 10.5%                                                          |                   | 2,279,069                  |
| <b>Total Assets (held at end of year)</b> |                                                             |                                                                                                               |                   | <b><u>\$76,388,050</u></b> |

\* Party-in-interest to the Plan

\*\* Cost information has not been disclosed as all investments are participant directed.

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

**ADTRAN, INC. 401(k) RETIREMENT PLAN**

Date: June 12, 2009

/s/ James E. Matthews

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James E. Matthews  
Senior Vice President – Finance, Chief Financial Officer,  
Treasurer, Secretary and Director

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**EXHIBIT INDEX**

| <b><u>Exhibit No.</u></b> | <b><u>Description</u></b>             |
|---------------------------|---------------------------------------|
| 23                        | Consent of PricewaterhouseCoopers LLP |

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statement on Forms S-8 (Nos. 333-133927, 333-126734, 333-66000, 333-41458, 333-78417, 333-30375 and 333-29899) of ADTRAN, Inc. of our report dated June 12, 2009 relating to the financial statements and supplemental schedule of ADTRAN, Inc. 401(k) Retirement Plan as of December 31, 2008 and 2007, and for the year ended December 31, 2008, which appears in this Form 11-K.

/s/ PricewaterhouseCoopers LLP  
Birmingham, Alabama  
June 12, 2009