

Form 5500 Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Annual Return/Report of Employee Benefit Plan This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6047(e), and 6058(a) of the Internal Revenue Code (the Code). <p style="text-align: center;">▶ Complete all entries in accordance with the instructions to the Form 5500.</p>	OMB Nos. 1210-0110 1210-0089 2010 This Form is Open to Public Inspection
---	--	---

Part I	Annual Report Identification Information
For calendar plan year 2010 or fiscal plan year beginning <u>11/01/2010</u> and ending <u>12/31/2010</u>	
A This return/report is for:	☐ a multiemployer plan; ☐ a multiple-employer plan; or ☒ a single-employer plan; ☐ a DFE (specify) ____
B This return/report is:	☒ the first return/report; ☐ the final return/report; ☐ an amended return/report; ☒ a short plan year return/report (less than 12 months).
C If the plan is a collectively-bargained plan, check here.	☐
D Check box if filing under:	☒ Form 5558; ☐ automatic extension; ☐ the DFVC program; ☐ special extension (enter description)

Part II	Basic Plan Information —enter all requested information										
1a Name of plan <u>AST SERVICES 401(K) PLAN</u> 2a Plan sponsor's name and address (employer, if for a single-employer plan) (Address should include room or suite no.) <u>APPLIED SIGNAL TECHNOLOGY, INC</u> <u>400 WEST CALIFORNIA AVE</u> <u>SUNNYVALE, CA 94086</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1b Three-digit plan number (PN) ▶</td> <td style="width: 20%; text-align: center;"><u>002</u></td> </tr> <tr> <td colspan="2">1c Effective date of plan <u>11/01/2010</u></td> </tr> <tr> <td colspan="2">2b Employer Identification Number (EIN) <u>77-0015491</u></td> </tr> <tr> <td colspan="2">2c Sponsor's telephone number <u>408-523-4592</u></td> </tr> <tr> <td colspan="2">2d Business code (see instructions) <u>334200</u></td> </tr> </table>	1b Three-digit plan number (PN) ▶	<u>002</u>	1c Effective date of plan <u>11/01/2010</u>		2b Employer Identification Number (EIN) <u>77-0015491</u>		2c Sponsor's telephone number <u>408-523-4592</u>		2d Business code (see instructions) <u>334200</u>	
1b Three-digit plan number (PN) ▶	<u>002</u>										
1c Effective date of plan <u>11/01/2010</u>											
2b Employer Identification Number (EIN) <u>77-0015491</u>											
2c Sponsor's telephone number <u>408-523-4592</u>											
2d Business code (see instructions) <u>334200</u>											

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	10/14/2011	GAYLE MCKIM
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

For Paperwork Reduction Act Notice and OMB Control Numbers, see the instructions for Form 5500.

Form 5500 (2010)
v.092307.1

3a Plan administrator's name and address (if same as plan sponsor, enter "Same")

APPLIED SIGNAL TECHNOLOGY, INC

400 WEST CALIFORNIA AVE
SUNNYVALE, CA 94086**3b** Administrator's EIN

77-0015491

3c Administrator's telephone number

408-523-4592

4 If the name and/or EIN of the plan sponsor has changed since the last return/report filed for this plan, enter the name, EIN and the plan number from the last return/report:**a** Sponsor's name**4b** EIN**4c** PN**5** Total number of participants at the beginning of the plan year**5**

0

6 Number of participants as of the end of the plan year (welfare plans complete only lines **6a**, **6b**, **6c**, and **6d**).**a** Active participants.....**6a**

219

b Retired or separated participants receiving benefits.....**6b**

0

c Other retired or separated participants entitled to future benefits.....**6c**

37

d Subtotal. Add lines **6a**, **6b**, and **6c**.....**6d**

256

e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.....**6e**

0

f Total. Add lines **6d** and **6e**.....**6f**

256

g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....**6g**

256

h Number of participants that terminated employment during the plan year with accrued benefits that were less than 100% vested.....**6h**

1

7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)**7****8a** If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristic Codes in the instructions:

2E 2F 2G 2J 2K 2T 3D

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristic Codes in the instructions:**9a** Plan funding arrangement (check all that apply)(1) ☐

Insurance

(2) ☐

Code section 412(e)(3) insurance contracts

(3) ☒

Trust

(4) ☐

General assets of the sponsor

9b Plan benefit arrangement (check all that apply)(1) ☐

Insurance

(2) ☐

Code section 412(e)(3) insurance contracts

(3) ☒

Trust

(4) ☐

General assets of the sponsor

10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)**a Pension Schedules**(1) ☒**R** (Retirement Plan Information)(2) ☐**MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary(3) ☐**SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary**b General Schedules**(1) ☒**H** (Financial Information)(2) ☐**I** (Financial Information - Small Plan)(3) ☐**A** (Insurance Information)(4) ☒**C** (Service Provider Information)(5) ☐**D** (DFE/Participating Plan Information)(6) ☐**G** (Financial Transaction Schedules)

SCHEDULE C (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Service Provider Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110
		2010
		This Form is Open to Public Inspection.
For calendar plan year 2010 or fiscal plan year beginning 11/01/2010 and ending 12/31/2010		
A Name of plan AST SERVICES 401(K) PLAN	B Three-digit plan number (PN) ▶	002
C Plan sponsor's name as shown on line 2a of Form 5500 APPLIED SIGNAL TECHNOLOGY, INC	D Employer Identification Number (EIN) 77-0015491	

Part I	Service Provider Information (see instructions)
---------------	--

You must complete this Part, in accordance with the instructions, to report the information required for **each person** who received, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of monetary value) in connection with services rendered to the plan or the person's position with the plan during the plan year. If a person received **only** eligible indirect compensation for which the plan received the required disclosures, you are required to answer line 1 but are not required to include that person when completing the remainder of this Part.

1 Information on Persons Receiving Only Eligible Indirect Compensation

a Check "Yes" or "No" to indicate whether you are excluding a person from the remainder of this Part because they received only eligible indirect compensation for which the plan received the required disclosures (see instructions for definitions and conditions)..... ☒ Yes ☐ No

b If you answered line 1a "Yes," enter the name and EIN or address of each person providing the required disclosures for the service providers who received only eligible indirect compensation. Complete as many entries as needed (see instructions).

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
DIVERSIFIED INVESTMENT ADVISORS
13-3689044

(b) Enter name and EIN or address of person who provided you disclosure on eligible indirect compensation
(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, \$5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

DIVERSIFIED INVESTMENT ADVISORS

13-3689044

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
12 15 28 37 38 50 54 59 61 62 63 64 65	RECORDKEEPER	75	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☒ No ☐

(a) Enter name and EIN or address (see instructions)

NATIONAL FINANCIAL SERVICES

04-3523567

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
33	BROKER	0	Yes ☒ No ☐	Yes ☐ No ☒	0	Yes ☒ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes ☐ No ☐	Yes ☐ No ☐		Yes ☐ No ☐

Part I Service Provider Information (continued)

3 If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received \$1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
DIVERSIFIED INVESTMENT ADVISORS	12 15 28 37 38 50 54 59 61 62 63 64 65	0

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
AMERICAN FUNDS 5300 ROBIN HOOD ROAD NORFOLK, VA 23513	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
DIVERSIFIED INVESTMENT ADVISORS	12 15 28 37 38 50 54 59 61 62 63 64 65	0

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
T ROWE PRICE 100 EAST PRATT STREET BALTIMORE, MD 21202	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
DIVERSIFIED INVESTMENT ADVISORS	12 15 28 37 38 50 54 59 61 62 63 64 65	0

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
BLACKROCK 40 EAST 52ND ST NEW YORK, NY 10022	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)

Part I Service Provider Information (continued)

3 If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received \$1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
DIVERSIFIED INVESTMENT ADVISORS	12 15 28 37 38 50 54 59 61 62 63 64 65	0
(d) Enter name and EIN (address) of source of indirect compensation		(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
ROYCE 745 FIFTH AVENUE NEW YORK, NY 10151	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)	
<hr/>		
(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
NATIONAL FINANCIAL SERVICES	33	0
(d) Enter name and EIN (address) of source of indirect compensation		(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
AMERICAN FUNDS 5300 ROBIN HOOD ROAD NORFOLK, VA 23513	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)	
<hr/>		
(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
NATIONAL FINANCIAL SERVICES	33	0
(d) Enter name and EIN (address) of source of indirect compensation		(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
T ROWE PRICE 100 EAST PRATT STREET BALTIMORE, MD 21202	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)	

Part I Service Provider Information (continued)

3 If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received \$1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
NATIONAL FINANCIAL SERVICES	33	0

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
BLACKROCK 40 EAST 52ND ST NEW YORK, NY 10022	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation
NATIONAL FINANCIAL SERVICES	33	0

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.
ROYCE 745 FIFTH AVENUE NEW YORK, NY 10151	REVENUE SHARING SEE ATTACHMENT TO LINE 2(H)

(a) Enter service provider name as it appears on line 2	(b) Service Codes (see instructions)	(c) Enter amount of indirect compensation

(d) Enter name and EIN (address) of source of indirect compensation	(e) Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.

Part II Service Providers Who Fail or Refuse to Provide Information

4 Provide, to the extent possible, the following information for each service provider who failed or refused to provide the information necessary to complete this Schedule.

(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide
(a) Enter name and EIN or address of service provider (see instructions)	(b) Nature of Service Code(s)	(c) Describe the information that the service provider failed or refused to provide

Part III	Termination Information on Accountants and Enrolled Actuaries (see instructions) (complete as many entries as needed)
-----------------	---

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN:
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN;
c Position:	
d Address:	e Telephone:

Explanation:

a Name:	b EIN;
c Position:	
d Address:	e Telephone:

Explanation:

SCHEDULE H (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Financial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ► File as an attachment to Form 5500.	OMB No. 1210-0110
		2010
		This Form is Open to Public Inspection

For calendar plan year 2010 or fiscal plan year beginning 11/01/2010 and ending 12/31/2010		
A Name of plan AST SERVICES 401(K) PLAN	B Three-digit plan number (PN) ►	002
C Plan sponsor's name as shown on line 2a of Form 5500 APPLIED SIGNAL TECHNOLOGY, INC	D Employer Identification Number (EIN) 77-0015491	

Part I	Asset and Liability Statement
---------------	--------------------------------------

1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. **Round off amounts to the nearest dollar.** MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.

Assets		(a) Beginning of Year	(b) End of Year
a Total noninterest-bearing cash	1a		
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions	1b(1)		
(2) Participant contributions	1b(2)		
(3) Other.....	1b(3)		
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)	0	3107
(2) U.S. Government securities.....	1c(2)		
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred	1c(3)(A)		
(B) All other.....	1c(3)(B)		
(4) Corporate stocks (other than employer securities):			
(A) Preferred	1c(4)(A)		
(B) Common	1c(4)(B)		
(5) Partnership/joint venture interests	1c(5)		
(6) Real estate (other than employer real property)	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans	1c(8)	0	257581
(9) Value of interest in common/collective trusts.....	1c(9)		
(10) Value of interest in pooled separate accounts.....	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities	1c(12)		
(13) Value of interest in registered investment companies (e.g., mutual funds).....	1c(13)	0	13288406
(14) Value of funds held in insurance company general account (unallocated contracts).....	1c(14)		
(15) Other	1c(15)	0	12023

1d Employer-related investments:

		(a) Beginning of Year	(b) End of Year
(1) Employer securities	1d(1)		
(2) Employer real property	1d(2)		
e Buildings and other property used in plan operation	1e		
f Total assets (add all amounts in lines 1a through 1e)	1f	0	13561117

Liabilities

g Benefit claims payable	1g		
h Operating payables	1h		
i Acquisition indebtedness	1i		
j Other liabilities	1j		
k Total liabilities (add all amounts in lines 1g through 1j)	1k		

Net Assets

l Net assets (subtract line 1k from line 1f)	1l	0	13561117
---	-----------	---	----------

Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

Income**a Contributions:**

		(a) Amount	(b) Total
(1) Received or receivable in cash from: (A) Employers	2a(1)(A)	448259	
(B) Participants	2a(1)(B)	354354	
(C) Others (including rollovers)	2a(1)(C)	65736	
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)		868349

b Earnings on investments:**(1) Interest:**

(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)	3	
(B) U.S. Government securities	2b(1)(B)		
(C) Corporate debt instruments	2b(1)(C)		
(D) Loans (other than to participants)	2b(1)(D)		
(E) Participant loans	2b(1)(E)	1408	
(F) Other	2b(1)(F)		
(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)		1411

(2) Dividends: (A) Preferred stock	2b(2)(A)		
(B) Common stock	2b(2)(B)		
(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)	121205	
(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)		121205

(3) Rents	2b(3)		
-----------------	--------------	--	--

(4) Net gain (loss) on sale of assets: (A) Aggregate proceeds	2b(4)(A)		
(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
(C) Subtract line 2b(4)(B) from line 2b(4)(A) and enter result	2b(4)(C)		

		(a) Amount	(b) Total
2b (5) Unrealized appreciation (depreciation) of assets: (A) Real estate.....	2b(5)(A)		
(B) Other	2b(5)(B)		
(C) Total unrealized appreciation of assets. Add lines 2b(5)(A) and (B)	2b(5)(C)		
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds).....	2b(10)		339338
c Other income.....	2c		12023
d Total income. Add all income amounts in column (b) and enter total.....	2d		1342326

Expenses

e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	35617	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines 2e(1) through (3)	2e(4)		35617
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions).....	2g		
h Interest expense.....	2h		
i Administrative expenses: (1) Professional fees	2i(1)		
(2) Contract administrator fees	2i(2)		
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)	75	
(5) Total administrative expenses. Add lines 2i(1) through (4)	2i(5)		75
j Total expenses. Add all expense amounts in column (b) and enter total.....	2j		35692

Net Income and Reconciliation

k Net income (loss). Subtract line 2j from line 2d	2k		1306634
l Transfers of assets:			
(1) To this plan.....	2l(1)		12254483
(2) From this plan	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) ☐ Unqualified (2) ☐ Qualified (3) ☐ Disclaimer (4) ☐ Adverse

b Did the accountant perform a limited scope audit pursuant to 29 CFR 2520.103-8 and/or 103-12(d)? ☐ Yes ☐ No

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name:

(2) EIN:

d The opinion of an independent qualified public accountant is **not attached** because:

(1) ☐ This form is filed for a CCT, PSA, or MTIA. (2) ☒ It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

- 4** CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete 4j and 4l. MTIAs also do not complete 4l.

During the plan year:

	Yes	No	Amount
a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.).....		X	
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.).....		X	
c Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)		X	
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.).....		X	
e Was this plan covered by a fidelity bond?.....	X		500000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?		X	
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.).....	X		
j Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked, and see instructions for format requirements.).....		X	
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?.....		X	
l Has the plan failed to provide any benefit when due under the plan?		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.).....	X		
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.	X		

- 5a** Has a resolution to terminate the plan been adopted during the plan year or any prior plan year?
If yes, enter the amount of any plan assets that reverted to the employer this year ☐ Yes ☒ No Amount:

- 5b** If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)

5b(2) EIN(s)	5b(3) PN(s)

SCHEDULE R (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Retirement Plan Information This schedule is required to be filed under section 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110 2010 This Form is Open to Public Inspection.
For calendar plan year 2010 or fiscal plan year beginning <u>11/01/2010</u> and ending <u>12/31/2010</u>		
A Name of plan <u>AST SERVICES 401(K) PLAN</u>		B Three-digit plan number (PN) ▶ <u>002</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>APPLIED SIGNAL TECHNOLOGY, INC</u>		D Employer Identification Number (EIN) <u>77-0015491</u>

Part I	Distributions
---------------	----------------------

All references to distributions relate only to payments of benefits during the plan year.

1	Total value of distributions paid in property other than in cash or the forms of property specified in the instructions.....	<u>1</u>	<u>0</u>
2	Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits): EIN(s): <u>13-3689044</u>		
Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.			
3	Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year.....	<u>3</u>	

Part II	Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part)
----------------	--

4	Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)?.....	☐ Yes	☐ No	☐ N/A
If the plan is a defined benefit plan, go to line 8.				
5	If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. Date: Month _____ Day _____ Year _____			
If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.				
6 a	Enter the minimum required contribution for this plan year	<u>6a</u>		
b	Enter the amount contributed by the employer to the plan for this plan year	<u>6b</u>		
c	Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount).....	<u>6c</u>		
If you completed line 6c, skip lines 8 and 9.				
7	Will the minimum funding amount reported on line 6c be met by the funding deadline?	☐ Yes	☐ No	☐ N/A
8	If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change?.....	☐ Yes	☐ No	☐ N/A

Part III	Amendments
-----------------	-------------------

9	If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box(es). If no, check the "No" box.....	☐ Increase	☐ Decrease	☐ Both	☐ No
----------	---	-----------------------------------	-----------------------------------	-------------------------------	-----------------------------

Part IV	ESOPs (see instructions). If this is not a plan described under Section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.
----------------	---

10	Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan?.....	☐ Yes	☐ No
11 a	Does the ESOP hold any preferred stock?	☐ Yes	☐ No
b	If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.)	☐ Yes	☐ No
12	Does the ESOP hold any stock that is not readily tradable on an established securities market?	☐ Yes	☐ No

For Paperwork Reduction Act Notice and OMB Control Numbers, see the instructions for Form 5500.

Schedule R (Form 5500) 2010
v.092308.1

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than 5% of total contributions to the plan during the plan year (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

a Name of contributing employer

b EIN

c Dollar amount contributed by employer

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box ☐ and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month Day Year

e Contribution rate information (If more than one rate applies, check this box ☐ and see instructions regarding required attachment. Otherwise, complete items 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents)

(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

- 14** Enter the number of participants on whose behalf no contributions were made by an employer as an employer of the participant for:

a The current year	14a	
b The plan year immediately preceding the current plan year	14b	
c The second preceding plan year	14c	

- 15** Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	15a	
b The corresponding number for the second preceding plan year	15b	

- 16** Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	16a	
b If item 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers	16b	

- 17** If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

- 18** If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment. ☐

- 19** If the total number of participants is 1,000 or more, complete items (a) through (c)

- a** Enter the percentage of plan assets held as:

Stock: _____% Investment-Grade Debt: _____% High-Yield Debt: _____% Real Estate: _____% Other: _____%

- b** Provide the average duration of the combined investment-grade and high-yield debt:

☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more

- c** What duration measure was used to calculate item 19(b)?

☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify): _____

Schedule C, Line 2(h) Formula Descriptions

AST Services 401(k) Plan
 EIN No.: 77-0015491, Plan No. 002
 Plan Year Ending: 12/31/2010

Indirect Compensation in the form of revenue sharing was paid to the following Service Providers:

Diversified Investment Advisors (13-3689044)
 National Financial Services (04-3523567)

Revenue amounts are shown in annualized basis points of plan assets invested in applicable fund

Fund Family	Fund Name	Start Date	End Date	Revenue to Diversified Investment Advisors	Revenue to National Financial Services
AMERICAN FUNDS	AMERICAN FUNDAMENTAL INVESTORS	11/1/2010	12/31/2010	63.245	1.755
AMERICAN FUNDS	AMERICAN FUNDS EUROPACIFIC R3	11/1/2010	12/31/2010	63.245	1.755
T ROWE PRICE	T. ROWE PRICE RETIRE 2010, ADV	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIRE 2020, ADV	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIRE 2030, ADV	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIRE 2040, ADV	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIRE INC, ADV	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIREMENT 2050	11/1/2010	12/31/2010	38.920	1.080
BLACKROCK	BLACKROCK EQUITY DIVIDEND, A	11/1/2010	12/31/2010	48.650	1.350
T ROWE PRICE	T. ROWE PRICE RETIREMENT 2015	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIREMENT 2025	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIREMENT 2035	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE RETIREMENT 2045	11/1/2010	12/31/2010	38.920	1.080
T ROWE PRICE	T. ROWE PRICE MD CP GRTH, ADV	11/1/2010	12/31/2010	38.920	1.080
ROYCE	ROYCE PENNSYLVANIA MUTUAL	11/1/2010	12/31/2010	38.920	1.080
ROYCE	ROYCE PENNSYLVANIA MUTUAL	11/1/2010	12/31/2010	43.785	1.215

AST Services 401(k) Plan
EIN No.: 77-0015491, Plan No. 002
Schedule H, Line 4i - Schedule of Assets
Plan Year Ending: 12/31/2010

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment, Including Maturity Date, Rate of Interest, Par or Maturity Value	(e) CURRENT VALUE
*	State Street Bank & Trust Co.	Cash Reserve Account	\$ 3,107
	American Funds	American Funds EuroPacific Growth R3	\$ 1,597,960
	American Funds	American Funds Fundamental Investor R3	331,889
	BlackRock	BlackRock Equity Dividend A	713,649
	Dimensional	DFA Global Equity I	1,255,995
	Dimensional	DFA Real Estate Securities I	157,689
	Fidelity	Fidelity Spartan Extended Market Adv	193,818
	PIMCO	PIMCO Real Return Instl	454,673
	PIMCO	PIMCO Total Return Instl	1,166,096
	Royce	Royce Pennsylvania Mutual Service	1,005,421
	T. Rowe Price	T. Rowe Price Mid Cap Growth Adv	452,266
	T. Rowe Price	T. Rowe Price Retirement 2010 Adv	134,828
	T. Rowe Price	T. Rowe Price Retirement 2015 Adv	369,490
	T. Rowe Price	T. Rowe Price Retirement 2020 Adv	15,845
	T. Rowe Price	T. Rowe Price Retirement 2025 Adv	15,555
	T. Rowe Price	T. Rowe Price Retirement 2030 Adv	528,778
	T. Rowe Price	T. Rowe Price Retirement 2035 Adv	79,357
	T. Rowe Price	T. Rowe Price Retirement 2040 Adv	258,462
	T. Rowe Price	T. Rowe Price Retirement 2045 Adv	127,882
	T. Rowe Price	T. Rowe Price Retirement 2050 Adv	113,128
	T. Rowe Price	T. Rowe Price Retirement Income Adv	350,855
	Transamerica Partners Funds Group	Transamerica Partners Instl High Quality Bond	141,407
	Transamerica Partners Funds Group	Transamerica Partners Instl High Yield Bond	154,893
	Transamerica Partners Funds Group	Transamerica Partners Instl Large Growth	1,340,271
	Transamerica Partners Funds Group	Transamerica Partners Instl Mid Value	501,898
	Transamerica Partners Funds Group	Transamerica Partners Instl Money Market	360,504
	Vanguard	Vanguard Institutional Index	1,186,367
	Vanguard	Vanguard Total International Stock Index	279,430
		Mutual Funds Total	\$ 13,288,406
	Charles Schwab Institutional	Personal Choice Retirement Account (Other Funds)	\$ 12,023
*	Participants	Notes Receivable with interest rates of 3.25% to 8.58%	\$ 257,581
		TOTAL PLAN ASSETS	\$ 13,561,117

* Indicates Party-In-Interest to the Plan