

As filed with the Securities and Exchange Commission on March 23, 2001

Registration No. 333-57444

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO.1

TO

FORM S-8

REGISTRATION STATEMENT UNDER  
THE SECURITIES ACT OF 1933

ANALOG DEVICES, INC.

(Exact name of registrant as specified in its charter)

MASSACHUSETTS  
(State or other jurisdiction of  
incorporation or organization)

04-2348234  
(I.R.S. Employer  
Identification No.)

ONE TECHNOLOGY WAY  
NORWOOD, MASSACHUSETTS  
(Address of principal executive offices)

02062-9106  
(Zip Code)

VARIOUS INDIVIDUAL STOCK RESTRICTION  
AND SIMILAR AGREEMENTS BETWEEN THE  
REGISTRANT AND EMPLOYEES THEREOF  
RELATING TO CHIPLOGIC, INC.  
(Full title of the Plan)

Paul P. Brontas, Esq.  
Hale and Dorr LLP  
60 State Street  
Boston, Massachusetts 02109  
(Name and address of agent for service)

(617) 526-6000  
(Telephone number, including area code, of agent for service)

This Post-Effective Amendment No. 1 on Form S-8 amends and restates the Exhibit Index and Exhibit 4.4 of the Registration Statement on Form S-8 of Analog Devices, Inc. (the "Company") pertaining to various individual stock restriction and similar agreements between the Company and employees thereof relating to ChipLogic, Inc. filed on March 22, 2001, for the purpose of correcting a transmission error which resulted in the inadvertent omission of various pages of Exhibit 4.4.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Post-Effective Amendment No. 1 to Registration Statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Norwood, Commonwealth of Massachusetts, on this March 23, 2001.

ANALOG DEVICES, INC.

By: /s/ Joseph E. McDonough

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Joseph E. McDonough  
Vice President-Finance and  
Chief Financial Officer

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
* ----- JERALD G. FISHMAN	President, Chief Executive Officer and Director (Principal Executive Officer)	March 23, 2001
* ----- RAY STATA	Chairman of the Board and Director	March 23, 2001
/s/ Joseph E. McDonough ----- JOSEPH E. MCDONOUGH	Vice President-Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 23, 2001
* ----- JOHN L. DOYLE	Director	March 23, 2001
* ----- CHARLES O. HOLLIDAY, JR.	Director	March 23, 2001
* ----- JOEL MOSES	Director	March 23, 2001
* ----- F. GRANT SAVIERS	Director	March 23, 2001
* ----- LESTER C. THUROW	Director	March 23, 2001

\*By: /s/ Joseph E. McDonough  
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Joseph E. McDonough  
Attorney-in-Fact

## EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION
4.1 (1)	Restated Articles of Organization of the Registrant
4.2 (2)	By-Laws of the Registrant
4.3 (3)	Rights Agreement dated as of March 18, 1998 between the Registrant and BankBoston, N.A. as Rights Agent
4.4	Form of Stock Restriction Agreement
5*	Opinion of Hale and Dorr LLP
23.1*	Consent of Hale and Dorr LLP (included in Exhibit 5)
23.2*	Consent of Independent Auditors
24*	Power of Attorney (included on the signature page to this Registration Statement)

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- (1) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended January 30, 1999, filed on March 15, 1999.
  - (2) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended October 31, 1998, filed on January 28, 1999.
  - (3) Incorporated herein by reference to the Registrant's Registration Statement on Form 8-K (File No. 001-07819) filed on March 19, 1998, as amended by Amendment No. 1 to Rights Agreement, entered into as of October 14, 1999 (incorporated herein by reference to the Registrant's Registration Statement on Form 8-K/A (File No. 001-07819) filed on November 19, 1999).

\* Previously filed.

## ANALOG DEVICES, INC.

## Form of Stock Restriction Agreement

AGREEMENT made this \_\_\_\_ day of \_\_\_\_\_, 2001, between Analog Devices, Inc., a Massachusetts corporation, and \_\_\_\_\_ (the "Employee").

Reference is made to Section 1.10 of that certain Agreement and Plan of Reorganization, dated as of October 25, 2000 (the "Merger Agreement"), entered into by and among the Company, CAD, Inc. ("ChipLogic Subsidiary"), a Massachusetts corporation, ChipLogic, Inc., a California corporation ("ChipLogic"), Roshan B. Gudapati and Hari R. Surapeneni, pursuant to which the Employee will receive the Shares (as defined below). For purposes of this Agreement, "Company" shall mean Analog Devices, Inc. and its subsidiaries, including ChipLogic, Inc. Capitalized terms used but not defined herein shall have the respective meanings assigned to them in the Merger Agreement.

The Employee agrees that the Shares (as defined below) shall be subject to the forfeiture provisions set forth in Section 2 of this Agreement and the restrictions on transfer set forth in Section 3 of this Agreement. For valuable consideration, receipt of which is acknowledged, the parties hereto agree as follows:

1. ISSUANCE OF SHARES.

Pursuant to Section 1.10 of the Merger Agreement, the Company has issued to the Employee subject to the terms and conditions set forth in this Agreement, an aggregate of \_\_\_\_ shares of Milestone Restricted Stock (the "Shares"). The Employee has paid an amount equal to \$.16 2/3 per share for the Shares which is equal to the par value per share of the Shares.

2. FORFEITURE.

(a) In the event that ChipLogic, Inc. or such successor division or subsidiary of the Company which is engaged in the development of the "Falcon" project in which ChipLogic is engaged as of the date hereof fails to satisfy a Technology Development Milestone (as defined below) by the required Target Date (as defined below) set forth below, then the percentage set forth in column 4 below of the number of Shares set forth in column 3 below opposite each respective Technology Development Milestone shall immediately and automatically be forfeited in favor of the Company, for no consideration paid by the Company ("Forfeiture"). For the avoidance of doubt, the parties hereto agree that the Employee shall have forfeited 15% of the shares associated with a Technology Development Milestone listed in the following table (e.g., 15% of the Milestone 4 shares) if the Technology Development Milestone is not met by the second Target Date for such Technology Development Milestone (e.g., Target Date 4-II), and shall have forfeited all of the shares associated with such Technology Development Milestone (e.g., all of the Milestone 4 shares) if the Technology Development is not met by the third Target Date for such Technology Development Milestone (e.g., Target Date 4-III), as set forth in EXHIBIT B.

1	2	3	4
TECHNOLOGY DEVELOPMENT MILESTONE	IF MILESTONE IS MET:	NUMBER OF SHARES ELIGIBLE FOR RETENTION	PERCENTAGE OF MILESTONE-RELATED SHARES FORFEITED
MILESTONE 1A	On or before Target Date 1A-I	_____ shares ("Milestone 1A shares") [20% of the Shares]	0%
	After Target Date 1A-I		0.3061% of the Milestone 1A shares for each day after Target Date 1A-I that the milestone is not met, through Target Date 1A-II
	After Target Date 1A-II		all shares forfeited pursuant to the prior row plus 3.0357% of the Milestone 1A shares for each day after Target Date 1A-II that the milestone is not met
MILESTONE 1B	On or before Target Date 1B-I	_____ shares ("Milestone 1B shares") [5% of the Shares]	0%
	After Target Date 1B-I		0.3061% of the Milestone 1B shares for each day after Target Date 1B-I that the milestone is not met, through Target Date 1A-II
	After Target Date 1B-II		all shares forfeited pursuant to the prior row plus 3.0357% of the Milestone 1B shares for each day after Target Date 1B-II that the milestone is not met
MILESTONE 3	On or before Target Date 3-I	_____ shares ("Milestone 3 shares") [30% of	0 %

the Shares]

After Target Date 3-I

.7143% of the Milestone 3 shares for each day after Target Date 3-I that the milestone is not met, through Target Date 3-II

After Target Date 3-II

all shares forfeited pursuant to the prior row plus 3.0357% of the Milestone 3 shares for each day after Target Date 3-II that the milestone is not met

MILESTONE 4

On or before Target Date 4-I

\_\_\_\_\_ shares  
("Milestone 4 shares") [45% of the Shares]

0%

After Target Date 4-I

0.7143% of the Milestone 4 shares for each day after Target Date 4-I that the milestone is not met, through Target Date 4-II

After Target Date 4-II

all shares forfeited pursuant to the prior row plus 1.441% of the Milestone 4 shares for each day after Target Date 4-II that the milestone is not met

(b) The "Technology Development Milestones" referenced in paragraph (a) above shall be as defined on EXHIBIT A hereto. In order for a Technology Development Milestone to be satisfied, all preceding Technology Development Milestones, other than Milestone 1B, must have been completed, whether or not completed by their respective Target Dates.

(c) The "Target Dates" referenced in paragraph (a) above shall be defined on EXHIBIT B hereto.

(d) Notwithstanding the foregoing, in the event that the Employee ceases to be employed by the Company for any reason, then all of the Shares which remain subject to Forfeiture as of such date ("Unvested Shares"), shall immediately and automatically be forfeited in favor of the Company, for no consideration paid by the Company.

(e) Within 10 days after delivery to the Employee of the Company's notice of Forfeiture (which the Company may give at any time following a Forfeiture), the Employee (or



his estate) shall, pursuant to the provisions of the Joint Escrow Instructions referred to in Section 4, tender to the Company at its principal offices the certificate or certificates representing the Shares which have been forfeited in accordance with the terms of this Agreement, duly endorsed in blank or with duly endorsed stock powers attached thereto, all in form suitable for the transfer of such Shares to the Company.

(f) After a Forfeiture of Shares, the Company shall not pay any dividend to the Employee on account of such Shares or permit the Employee to exercise any of the privileges or rights of a stockholder with respect to such Shares, but shall, insofar as permitted by law, treat the Company as the owner of such Shares.

(g) No certificates or scrip representing fractional Shares shall be issued to the Employee upon a Forfeiture of Shares, and the Employee shall not be entitled to any voting rights, rights to receive any dividends or distributions or other rights as a stockholder of the Company with respect to any fractional Shares that would have otherwise been issued to the Employee. In lieu of any fractional Shares that would have otherwise been issued, each Employee who would have been entitled to receive a fractional Share shall, upon proper surrender of such person's certificate or certificates in the manner described in Section 2(e) of this Agreement, receive a cash payment equal to the closing price per share of the Company's Common Stock on the New York Stock Exchange ("NYSE"), as reported by NYSE, on the Target Date to which the Forfeiture relates, multiplied by the fraction of a share that such Employee would otherwise be entitled to receive.

### 3. RESTRICTIONS ON TRANSFER.

The Employee shall not sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively "transfer") any Unvested Shares.

### 4. ESCROW.

The Employee shall, upon the execution of this Agreement, execute Joint Escrow Instructions in the form attached to this Agreement as EXHIBIT C. The Joint Escrow Instructions shall be delivered to the Clerk of the Company, as escrow agent thereunder. The Employee shall deliver to such escrow agent a stock assignment duly endorsed in blank and hereby instructs the Company to deliver to such escrow agent, on behalf of the Employee, the certificate(s) evidencing the Shares issued hereunder. Such materials shall be held by such escrow agent pursuant to the terms of such Joint Escrow Instructions.

### 5. RESTRICTIVE LEGENDS.

All certificates representing Shares shall have affixed thereto legends in substantially the following form, in addition to any other legends that may be required under federal or state securities laws:

"The shares of stock represented by this certificate are subject to forfeiture and restrictions on transfer set forth in a certain Stock Restriction Agreement between the corporation and the registered owner of these shares (or his predecessor in interest), and such Agreement is available for inspection without charge at the office of the Clerk of the corporation."

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be sold, transferred or otherwise disposed of in the absence of an effective registration statement under such Act or an opinion of counsel satisfactory to the corporation to the effect that such registration is not required."

### 6. ADJUSTMENTS FOR STOCK SPLITS, STOCK DIVIDENDS, ETC.

(a) If from time to time there is any stock split, stock dividend, stock distribution or other reclassification of the Common Stock of the Company, any and all new, substituted or additional securities to which the Employee is entitled by reason of his ownership of the Shares shall be immediately subject to Forfeiture, the restrictions on transfer and the other provisions of this Agreement in the same manner and to the same extent as the Shares.

(b) If the Shares are converted into or exchanged for, or stockholders of the Company receive by reason of any distribution in total or partial liquidation, securities of another corporation, or other property (including cash), pursuant to any merger of the Company or acquisition of its assets, then the rights of the Company under this Agreement shall inure to the benefit of the Company's successor and this Agreement shall apply to the securities or other property received upon such conversion, exchange or distribution in the same manner and to the same extent as to the Shares.

7. WITHHOLDING TAXES; SECTION 83(b) ELECTION.

(a) The Employee acknowledges and agrees that the Company has the right to deduct from payments of any kind otherwise due to the Employee any federal, state or local taxes of any kind required by law to be withheld with respect to the acquisition of the Shares by the Employee or the lapse of the Forfeiture provisions.

(b) The Employee has reviewed with the Employee's own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. The Employee is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Employee understands that the Employee (and not the Company) shall be responsible for the Employee's own tax liability that may arise as a result of the transactions contemplated by this Agreement. The Employee understands that it may be beneficial in many circumstances to elect to be taxed at the time the Shares are acquired rather than when and as the forfeiture provisions expire by filing an election under Section 83(b) of the Code with the IRS within 30 days from the date of acquisition.

THE EMPLOYEE ACKNOWLEDGES THAT IT IS THE EMPLOYEE'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(B), EVEN IF THE EMPLOYEE REQUESTS THE COMPANY OR ITS REPRESENTATIVES TO MAKE THIS FILING ON THE EMPLOYEE'S BEHALF.

8. NO RIGHTS TO EMPLOYMENT.

Nothing contained in this Agreement shall be construed as giving the Employee any right to be retained, in any position, as an employee of the Company. The Employee acknowledges and agrees that the vesting of the Shares pursuant to Section 2 hereof is earned only by continuing service as an employee at the will of the Company and attaining the milestones set forth above. The Employee further acknowledges and agrees that the transactions contemplated hereunder and the vesting schedule set forth herein do not constitute an express or implied promise of continued engagement as an employee for the vesting period, for any period, or at all.

9. SEVERABILITY.

The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each other provision of this Agreement shall be severable and enforceable to the extent permitted by law.

10. WAIVER.

Any provision for the benefit of the Company contained in this Agreement may be waived, either generally or in any particular instance, by the Board of Directors of the Company.

11. BINDING EFFECT.

This Agreement shall be binding upon and inure to the benefit of the Company and the Employee and their respective heirs, executors, administrators, legal representatives, successors and assigns, subject to the restrictions on transfer set forth in Section 3 of this Agreement.

12. NOTICE.

All notices required or permitted hereunder shall be in writing and deemed effectively given upon personal delivery or five days after deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to the other party hereto at the address shown beneath his or its respective signature to this Agreement, or at such other address or addresses as either party shall designate to the other in accordance with this Section 12.

13. PRONOUNS.

Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

14. ENTIRE AGREEMENT.

This Agreement and the Merger Agreement constitute the entire agreement between the parties, and supersede all prior agreements and understandings relating to the subject matter of this Agreement.

15. AMENDMENT.

This Agreement may be amended or modified only by a written instrument executed by both the Company and the Employee.

16. GOVERNING LAW.

This Agreement shall be construed, interpreted and enforced in accordance with the internal laws of the Commonwealth of Massachusetts without regard to any applicable conflicts of laws.

17. EMPLOYEE'S ACKNOWLEDGEMENTS.

The Employee acknowledges that he: (a) has read this Agreement; (b) has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of the Employee's own choice or has voluntarily declined to seek such counsel; (c) understands the terms and consequences of this Agreement; and (d) is fully aware of the legal and binding effect of this Agreement.

18. ABANDONMENT.

In the event that Falcon is abandoned by the Company, the Vice President of the Company's Communications Product Division and Hari R. Surapeneni shall discuss in good faith alternative Technology Development Milestones with respect to any unforfeited Shares.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

ANALOG DEVICES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

EMPLOYEE

\_\_\_\_\_  
Name:

Address: \_\_\_\_\_  
\_\_\_\_\_

## EXHIBIT A

## Technology Development Milestones

## Milestones

This term sheet outlines an agreement between ChipLogic and ADI to develop an Integrated Access Device (IAD) product (defined as the combination of silicon, software and reference platform) to be developed by ChipLogic using the technology developed by ChipLogic and ADI. This term sheet defines the feature set of the product, deliverables and acceptance criteria for deliverables, milestones and interdependencies. This term sheet covers two stages of the development. Stage I is defined as the development of a reference platform based on commercially available components and is referred to as the "Convergence Exchange Platform" (CEP). The CEP platform will be used for:

- - testing of all software modules
- - customer's evaluation of all technology components
- - customer's demo
- - providing a basis for an architecturally-similar integrated silicon solution Stage II of the plan is to develop an ASIC that integrates the main functional blocks of the CEP into one silicon device code-named "Falcon" which is architecturally similar to the CEP.

## Features of the Falcon

The CEP and Falcon (device, software and reference platform) will support the following features. Additional features can be added in the later versions of the silicon, but that is outside the scope of this term sheet.

## 1- Voice Processing

Both CEP and Falcon will support voice processing software running on ADI DSP. CEP will use a 218x chip and Falcon will use a 219x core. ADI will provide all the voice processing software modules.

- - 16 analog POTS RJ-11 interfaces (16 G.711 or 8 G.726 simultaneously) (only 4 analog voice ports will be available on the CEP)
- - SLIC/SLAC interface
- - Loop start, Ground start
- - Voice coders G.711, G.726, G.728
- - Jitter removal buffer, adaptive playout
- - Tone detection/generation
- - Echo canceller (G.165, G.168)
- - Voice activity detection
- - Silent suppression and comfort noise generation
- - DTMF encoder/decoder
- - RTP packetization

ChipLogic will provide the following:

Loop Emulation Service (ATMF, STR-VMOA-LES-01.00, AF-VMOA-0145.00, CAS-specific only) CAS signaling, ABCD Mapping for call establishment

## 2- Data Processing and Networking

ChipLogic will provide the entire following software modules (unless otherwise stated):

- - 1 Ethernet 10/100 Mbps RJ-45 interfaces
- - TCP/IP/UDP/ICMP
- - PPPoA, IPoA, RFC 1483 (LLC-SNAP)
- - IP over HDLC, PPP over HDLC (addition of this feature will impact the schedule. ChipLogic does not provide this today. Marketing needs to make a decision based on schedule and delivery of the product.)
- - NAT, DHCP client
- - IP bridging and routing (IP forwarding), RIP I/II
- - IP QoS
- - Telnet, FTP, SNMP v.1/2, TFTP, BootP, HTTP
- - IPsec (DES, 3DES, MD5, IKE), L2TP (note: DES, 3DES and MD5 are hardware engines designed and incorporated by ChipLogic in the Falcon architecture. L2TP is a software module.). This feature is Falcon specific.
- - Firewall and packet filtering

## 3- ATM Processing

ChipLogic will provide the following:

- - ATM UNI 3.1, 4.0 compliant
- - AAL2/AAL5
- - ATM Traffic Management (UBR, nrt-VBR, rt-VBR) TM 4.1, ATM QoS (up to 6 simultaneous shaped channels) Support for up to 32 PVC's

## 4- WAN Interfaces

ChipLogic will provide the following:

- - UTOPIA L1/L2.(8 bit data, 3 address bits, 4 PHY devices)
- - Synchronous serial interface
- - Max WAN throughput: 12 Mbps

Note: ADSL data pump (max. 12 Mbps ANSI T1E1, G.992.1, G.992.2) will be provided by ADI. This is used for testing purposes.

## 5- Miscellaneous

ChipLogic will provide the following:

RS-232 console port for Command Line Interface (password protected for configuration)

The following will be supported in a later version of the software (Not part of the milestones in this document):

- - Remote software upgrade
- - Web-based management in addition to console and Telnet
- - DSL Forum CPE auto configuration for DSL, ATM and VoDSL components (provided by ADI and integrated by ChipLogic)

## Falcon Hardware Architecture

The architecture of Falcon will include a 219x code from ADI to run voice software in conjunction with commercially available SLAC circuits. Two MIPS-compatible cores will be running all TCP/IP stack and related software including AAL5 and Ethernet device driver, full ATM LES using AAL2 in addition to ATM cell multiplexing, ATM traffic shaping, scheduler and CPE configuration and management software modules.

ChipLogic deliverables (unless otherwise stated):

All the references to the size of the memory in the following list are subject to change based on the final architecture requirements.

- - CPE (Control Processor Engine) core with minimum 4Kbyte I and D cache
- - WPE (WAN Processor Engine) I-cache 16 K, PM 16 K, DM 16K
- - VPE (Voice Processing Engine) 16Kx16 DM, 32Kx24 PM (provided by ADI)
- - High performance bus architecture
- - Bus Bridge for each engine
- - External memory controller (SDRAM and Flash) 24-bit for address, 32-bit data
- - Ethernet MAC
- - SLAC interface (based on modifications performed on 219x extended core package) DMA engine with link-list capability and high performance bus interface. It supports peripheral to memory and memory-memory transfers with flexible burst capability.UTOPIA L1/L2, capable of connecting to 4physical devices, cell/octet-level handshake, size of FIFO 2-cell for Tx and 2-cell for Rx.
- - High-speed synchronous serial interface (clock edge configurable, slave to external phy device clock)
- - Interrupt controller, power-on reset, clock circuitry, JTAG will be based on ADI schemes (2 ADI schemes will be analyzed)
- - UART, SPI, general purpose timers, GPIO



## ADI deliverables:

- 1) 219x extended core package and all related documents (test cases, test environment, RTL portions, timing views, simulation models, JTAG methodology, core test plan at chip level, synthesis scripts). Based on ChipLogic requirements, the memory blocks will be integrated in the extended 219x core. The 219x core in 0.18(mu) will be used to run all needed speech and voice processing software and will be supplied by ADI. The extended 219x core will run in worst case at 250MHz with all the peripherals running at half the speed and will support up to 16 G.711 or 8 G.726 channels. Other components include PLL and tap controller. 2) The software to support voice coded running on 219x-based device. In a multi-channel environment, the speech algorithms should be code-re-entrant stack-based with pre-emptive schedulers. ADI needs to provide schedule for the delivery of the pre-emptive version of the code, which is currently non pre-emptive.

## Milestones:

- 1) MS0: Mutually agreed-upon system test plan to verify functional blocks and software of CEP and Falcon Reference Platform (voice, ATM, data networking, signaling)

## ASSUMPTIONS

- - Manuals of ATM/Telecom test equipment available from ADI no later than 10/18/00
  - - Documentation of ADI voice processing software no later than 10/18/00
  - - The test plan will be released in 3 phases (data networking, voice processing, and AAL/ATM processing). We are budgeting one week for ADI's review and closure of test plan.
- 2) MS0A: Mutually agreed-upon VLSI test plan to verify functional blocks of Falcon

## ASSUMPTIONS

- Telecom Workbench is available no later than 11/1/00.
  - One week is being budgeted for ADI's review and one week for incorporating the feedback.
- 3) MS1: Convergence Exchange Platform (CEP) demonstration (4 POTS, 2 MIPS processors, commercially available MAC device, ADI 2188 or applicable 219x platform, SLIC/SLAC, PCI controller and 2 PCI slots, 2 RS232 ports, PCI ADSL NIC (provided by ADI, but the MIPS driver will be developed by ChipLogic based on the source supplied by ADI), WAN processor will run AAL2/AAL5/ATM, control processor will run PSOS, BSP's, Ethernet driver, Ethernet bridging, CAS signaling over AAL2). CEP tested and functioning to the specs defined in this document (available documented bug list acceptable for use by customers for their product development)

DELIVERABLES: Operational hardware with software according to the specs defined in this document, BOM, schematics, layout and Gerber files, user manuals, software manuals, documented source code, test reports

ACCEPTANCE CRITERIA: Successful execution of mutually agreed upon test plan in accordance with the features defined in this document for voice, data and ATM functions. ChipLogic will generate this test plan that will be submitted to ADI for approval. The bugs, which do not impede customer product development, are acceptable.

- 4) MS1A: Successful end-to-end tests of CEP on a test-bed to verify the data networking, AAL5, AAL2 and ATM Traffic Management implementation. This test bed will use ADI ADSL PCI NIC and test equipment will be provided by ADI.

#### ASSUMPTIONS

- - ADI will provide the working PCI ADSL NIC and driver source no later than 10/16/2000
- - ADI will provide timely support in CEP component procurement
- - ADI voice processing s/w for 2188 non re-entrant version available by 10/13/00 (no later than 10/27/00) and re-entrant version by 11/17/00 (but no later than 1/2/01).
- - Availability of ATM/Telecom test equipment by 12/1/00 (no later than 1/2/01) and proposed lab equipment as per dates provided earlier in a separate list.

- 5) MS1B: Extension of the test bed described in ML1A to 3rd party DSLAM's connected to 3rd party voice gateways with VoDSL functionality to prove interoperability with 3rd party VoDSL devices. ChipLogic and ADI will jointly work on establishing the relationships required for these tests.

#### ASSUMPTIONS

- - ChipLogic and ADI will jointly work on establishing the relationships required for these tests with a 3rd party vendor who is supportive.
- - All equipment required for this testing is available by 3/15/01 but no later than 3/30/01.
- - Certification testing is performed on the premises of the 3rd party gateway vendor. The lead time to schedule certification testing is less than 2 weeks.

- 6) MS2: Falcon device RTL complete and fully simulated  
 DELIVERABLES: RTL source code, test cases, test environment, architecture documents and micro-architectures for all blocks, VLSI test plan document  
 ACCEPTANCE CRITERIA: regression test report with zero failure for all identified test cases (test cases are documented in the "Falcon-1 Verification Plan" document)

#### ASSUMPTIONS

- Current architecture is based on Palm Pak. ADI's AMBA bus based solution is being reviewed. Insilicon Ethernet core will be used with Palm Pak or Sierra Research core will be used with AMBA.
- Sierra Research Ethernet core is assumed to be available on AMBA through ADI by 10/31/00 but no later than 11/15/00.
- ADI deliverables for Extended core (verilog simulation model for custom core, RTL code for extended core, RTL for peripherals) are assumed to be available no later than 10/15/00.
- Accelerator availability is assumed on 11/1/00 but no later than 11/15/00.

Memories, PLL are assumed to be working for full function and models available for system simulation by 10/30/00 but no later than 11/15/00.

- 7) MS3: Samplable silicon. Falcon device tested in its own reference platform AKA "Falcon Reference Platform" and functioning to the specs defined in this document (available documented bug list acceptable for use by customers for their product development)  
 DELIVERABLES: Functionally operational silicon in the system environment with documented bug list. Sufficient documents to be used by lead customer who agree to work on alpha product.  
 ACCEPTANCE CRITERIA: The system functions according to the specs defined in this document. All bugs will be documented. The bugs, which do not impede customer product development, are acceptable. Successful execution of mutually agreed upon test plan (MS0) in accordance with the features defined in this document for voice, data and ATM

#### ASSUMPTIONS

- - Hot lot status is assumed. 6wk FAB time is based on hot lot status.
- - Parts are assumed to be blind assembled.
- - All hard macros (extended core, Memories, PLL) are assumed to be available no later than 1/15/01.
- - 4wk of time is assumed for Silicon characterization at ADI for samplable silicon.
- - All libraries/views (synthesis, physical, technology) for hard macros and TSMC 0.18 micron standard cell library are made available by 10/15/00 but no later than 11/1/00.

- 8) MS4: Final Falcon Silicon

DELIVERABLES: Final Falcon device fully characterized in ATE and system environment over temperature and voltage. Reliability testing is not part of this deliverable. Operational hardware with software running on final Falcon device according to the specs defined in this document, BOM, schematics, layout, Gerber files for Falcon Reference Platform, user manual, software manual, full technical data sheet including all physical specifications of the silicon. Analog Devices Inc. will provide product and test engineering support in a timely manner to support this deliverable.  
 ACCEPTANCE CRITERIA: The system functions according to the specs defined in this document over temperature and voltage. Successful execution of mutually agreed upon test plan in accordance with the features defined in this document for voice, data and ATM

#### ASSUMPTIONS

- Hot lot status is assumed.
- 9wks accounted for a metal fix based on input from ADI

#### SPECIFICATION, DELIVERABLES, ACCEPTANCE CRITERIA AND SCHEDULE "CHANGE CONTROL" POLICY

Any changes or clarifications to the specifications, deliverables, acceptance criteria and schedules defined in this document must be made in writing and should be submitted to the "Change Control Approval Board" that comprises of Russ Johnsen and Hari Surapaneni or their

designated representative assigned in writing. It is Analog Devices Inc. intent to make appropriate allowances for schedules missed due to Analog Devices Inc. fault.

Employee restricted share participation in the earn out will be determined by the Vice President of the Communications Product Division of ADI, along with Hari Surapeneni. Employee restricted shares will be determined by the following matrix, and are limited to current employees of ChipLogic, employees who have accepted offers from ChipLogic as of the date of the closing of the purchase agreement and who start within thirty days of the closing of the purchase agreement, and other employees, on an exception basis only, who are nominated by the management of ChipLogic and approved by both the Vice President of the Communications Product Division and the Chief Executive Officer of ADI.

Determination of whether the targeted milestone was achieved will be made by the Vice President of the Communications Products Division of ADI, with advice from a team of technical advisors. The achievement criteria will be based on meeting the acceptance criteria defined above in each of the milestones, and based on the specific agreed to test plans associated with milestones MS0 and MS0A.

## EXHIBIT B

## TARGET DATE

0	November 13, 2000
0A	December 18, 2000
1	
1A-I	April 9, 2001
1A-II	May 28, 2001
1A-III	June 25, 2001
1B-I	May 21, 2001
1B-II	July 9, 2001
1B-III	August 6, 2001
2	May 15, 2001
3-I	August 6, 2001
3-II	August 27, 2001
3-III	September 24, 2001
4-I	October 15, 2001
4-II	November 5, 2001
4-III	January 3, 2002

EXHIBIT C  
ANALOG DEVICES, INC.  
JOINT ESCROW INSTRUCTIONS

\_\_\_\_\_, 2001

Paul P. Broutas  
Clerk  
Analog Devices, Inc.  
c/o Hale and Dorr LLP  
60 State Street  
Boston, MA 02109

Dear Sir:

As Escrow Agent for Analog Devices, Inc., a Massachusetts corporation, and its successors in interest under the Stock Restriction Agreement (the "Agreement") of even date herewith, to which a copy of these Joint Escrow Instructions is attached between Analog Devices, Inc. a Massachusetts corporation (the "Company"), and the undersigned person ("Holder"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of the Agreement in accordance with the following instructions:

1. APPOINTMENT. Holder irrevocably authorizes the Company to deposit with you any certificates evidencing Shares (as defined in the Agreement) to be held by you hereunder and any additions and substitutions to said Shares. For purposes of these Joint Escrow Instructions, "Shares" shall be deemed to include any additional or substitute property. Holder does hereby irrevocably constitute and appoint you as his attorney-in-fact and agent for the term of this escrow to execute with respect to such Shares all documents necessary or appropriate to make such Shares negotiable and to complete any transaction herein contemplated. Subject to the provisions of this paragraph 1 and the terms of the Agreement, Holder shall exercise all rights and privileges of a stockholder of the Company while the Shares are held by you.

2. CLOSING.

(a) Upon any Forfeiture by the Holder of the Shares pursuant to the Agreement, the Company shall give to Holder and you a written notice, specifying the time for a closing hereunder (the "Closing") at the principal office of the Company. Holder and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

(b) At the Closing, you are directed (i) to date the stock assignment form or forms necessary for the transfer of the Shares, (ii) to fill in on such form or forms the number of Shares

being transferred, and (iii) to deliver same, together with the certificate or certificates evidencing the Shares to be transferred, to the Company.

3. WITHDRAWAL. The Holder shall have the right to withdraw from this escrow any Shares as to which the Forfeiture provisions set forth in the Agreement have terminated or expired.

4. DUTIES OF ESCROW AGENT.

(a) Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

(b) You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact of Holder while acting in good faith and in the exercise of your own good judgment, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

(c) You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or company, excepting only orders or process of courts of law, and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree of any court, you shall not be liable to any of the parties hereto or to any other person, firm or company by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

(d) You shall not be liable in any respect on account of the identity, authority or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

(e) You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, including Hale and Dorr LLP, and may rely upon the advice of such counsel.

(f) Your rights and responsibilities as Escrow Agent hereunder shall terminate if (i) you cease to be Clerk of the Company or (ii) you resign by written notice to each party. In the event of a termination under clause (i), your successor as Clerk shall become Escrow Agent hereunder; in the event of a termination under clause (ii), the Company shall appoint a successor Escrow Agent hereunder.

(g) If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

(h) It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such dispute shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

(i) These Joint Escrow Instructions set forth your sole duties with respect to any and all matters pertinent hereto and no implied duties or obligations shall be read into these Joint Escrow Instructions against you.

(j) The Company shall indemnify you and hold you harmless against any and all damages, losses, liabilities, costs, and expenses, including attorneys' fees and disbursements, for anything done or omitted to be done by you as Escrow Agent in connection with this Agreement or the performance of your duties hereunder, except such as shall result from your gross negligence or willful misconduct.

5. NOTICE. All notices required or permitted hereunder shall be in writing and deemed effectively given upon personal delivery or five days after deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to the other party hereto at the address shown beneath his or its respective signature to this Agreement, or at such other address or addresses as either party shall designate to the other in accordance with this Section 5.

#### 6. MISCELLANEOUS.

(a) By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions, and you do not become a party to the Agreement.

(b) This instrument shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.



Very truly yours,  
ANALOG DEVICES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

HOLDER:

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Name:

Address:  
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Date Signed: \_\_\_\_\_

ESCROW AGENT:  
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