Intel® StrongARM® SA-1100 Multimedia Development and SA-1101 Development Boards

Specification Update

April 1999

Notice: The Intel® StrongARM® SA-1100 multimedia development and SA-1101 development boards may contain design defects or errors known as errata. Characterized errata that may cause the board's behavior to deviate from published specifications are documented in this specification update.

Order Number: 278245-001

Contents

Revision History

Date	Version	Description
04/22/98	001	This is the new Specification Update document. It contains all identified errata published prior to this date.

Preface

As of July, 1996, Intel's Computing Enhancement Group has consolidated available historical device and documentation errata into this new document type called the Specification Update. We have endeavored to include all documented errata in the consolidation process, however, we make no representations or warranties concerning the completeness of the Specification Update.

This document is an update to the specifications contained in the Affected Documents/Related Documents table below. This document is a compilation of device and documentation errata, specification clarifications and changes. It is intended for hardware system manufacturers and software developers of applications, operating systems, or tools.

Information types defined in Nomenclature are consolidated into the specification update and are no longer published in other documents.

This document may also contain information that was not previously published.

Affected Documents/Related Documents

Title	Order
StrongARM SA-1100 Multimedia Development Board with Companion SA-1101 Development Board User's Guide	278114-001

Nomenclature

Errata are design defects or errors. These may cause the published (component, board, system) behavior to deviate from published specifications. Hardware and software designed to be used with any component, board, and system must consider all errata documented.

Specification Changes are modifications to the current published specifications. These changes will be incorporated in any new release of the specification.

Specification Clarifications describe a specification in greater detail or further highlight a specification's impact to a complex design situation. These clarifications will be incorporated in any new release of the specification.

Documentation Changes include typos, errors, or omissions from the current published specifications. These will be incorporated in any new release of the specification.

Note: Errata remain in the specification update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the specification update are archived and available upon request. Specification changes, specification clarifications and documentation changes are removed from the specification update when the appropriate changes are made to the appropriate product specification or user documentation (datasheets, manuals, etc.).

Summary Table of Changes

The following table indicates the errata, specification changes, specification clarifications, or documentation changes which apply to the Intel® StrongARM® SA-1100 multimedia development and SA-1101 development boards (SA-1100 multimedia and SA-1101 development boards). Intel may fix some of the errata in a future stepping of the component, and account for the other outstanding issues through documentation or specification changes as noted. This table uses the following notations:

Codes Used in Summary Table

Stepping

X:	Errata exists in the stepping indicated. Specification Change or Clarification that applies to this stepping.
(No mark)	
or (Blank box):	This erratum is fixed in listed stepping or specification change does not apply to listed stepping.

Page

(Page):	Page location of item in this document.

Status

Doc:	Document change or update will be implemented.
Fix:	This erratum is intended to be fixed in a future step of the component.
Fixed:	This erratum has been previously fixed.
NoFix:	There are no plans to fix this erratum.
Eval:	Plans to fix this erratum are under evaluation.

Row

|	Change bar to left of table row indicates this erratum is either new or modified from the previous version of the document.

SA-1100 Multimedia Development Errata

No.	Steppings			Page	Status	ERRATA
	E	#	#			
1	X			13	Fix	“Local Bus Power Supervisor Reset Delay May Not be Stabilized.”
2	X			13	Fix	“SA-1100 Multimedia Development Board Does Not Boot from Power-up or Reset.”

SA-1100 Multimedia Development Specification Changes

No.	Steppings		Page	Status	SPECIFICATION CHANGES
	E	#			
	X			—	None for this revision of this specification update.

SA-1100 Multimedia Development Specification Clarifications

No.	Steppings			Page	Status	SPECIFICATION CLARIFICATIONS
	#	#	#			
						None for this revision of this specification update.

SA-1100 Multimedia Development Documentation Changes

No.	Document Revision	Page	Status	DOCUMENTATION CHANGES
1	278088-001	19	Doc	Physical Description: Section 3.1
2	278088-001	19	Doc	SA-1100 Multimedia Development Board: Figure 3-1
3	278088-001	21	Doc	SA-1100 Multimedia Development Board Kit Contents: Section 3.2.1
4	278088-001	21	Doc	Small Outline Dual-Inline Memory Module (SODIMM): Section 3.2.2.1
5	278088-001	21	Doc	Before Installing the SA-1100 Multimedia Development Board: Section 3.2.2.2
6	278088-001	21	Doc	SA-1101 Development Board Kit Contents: Section 3.2.3
7	278088-001	21	Doc	Video Connections: Section 3.3
8	278088-001	22	Doc	Component S1 Switch Combinations for ROM Image Selections: Table 3-1
9	278088-001	22	Doc	Using the ARM SDT with the Multimedia Development Board: Section 3.10
10	278088-001	22	Doc	Differences Between SA-1100 Development Board and SA-1100/SA-1101 Development Board PCMCIA Implementations: Section 4.12.1.1

SA-1100 Multimedia Development Documentation Changes

No.	Document Revision	Page	Status	DOCUMENTATION CHANGES
11	278088-001	22	Doc	SA-1100 Multimedia Development Board: Figure A-1
12	278088-001	22	Doc	SA-1100 Headers and Connectors: Table A-1
13	278088-001	23	Doc	S1, S2, LEDs, Keypad, Debug, X Bus, Daughter Card and SODIMM Connector: Figure A-2
14	278088-001	24	Doc	SA-1101 Daughter Card Connector: Table A-3
15	278088-001	27	Doc	X Bus Connector: J3: Table A-4
16	278088-001	29	Doc	Debug Connector Number 1: J11: Section A.2.7
17	278088-001	30	Doc	IrDA, JTAG, LCD, and Debug Ports and Headers: Figure A-6
18	278088-001	30	Doc	Debug Port Number 1: J11: Table A-18
19	278088-001	30	Doc	Debug Port Number 2: J8: Table A-19

SA-1101 Development Errata

No.	Steppings			Page	Status	ERRATA
	E	#	#			
1	X			15	Fix	“Video from VGA may be unstable due to value for IREF Resistor.”
2	X			14	Fix	“Loading on signal”
3	X			15	Fix	“Connecting the Narrow Flex Print Cable of the Fujitsu Keyboard”

SA-1101 Development Specification Changes

No.	Steppings		Page	Status	SPECIFICATION CHANGES
	E	#			
1	X		17		None

SA-1101 Development Specification Clarifications

No.	Steppings			Page	Status	SPECIFICATION CLARIFICATIONS
	#	#	#			
1				18		None

SA-1101 Development Documentation Changes

No.	Document Revision	Page	Status	DOCUMENTATION CHANGES
1	278088-001	31	Doc	Optional SA-1101 Development Board: Figure 3-2, Figure B-1
2	278088-001	32	Doc	Cables for Optional SA-1101 Development Board: Section 3.5
3	278088-001	33	Doc	Optional SA-1101 Development Board: Figure B-1
4	278088-001	34	Doc	SA-1101 Headers and Connectors: Table B-1
5	278088-001	35	Doc	Keyboard Connectors: Figure B-2

Identification Information

Markings

This document contains errata for the SA-1100 multimedia development and SA-1101 development boards. The board's revision that is affected by this errata can be identified as order numbers DE-1S110-OB and DE-1S110-OC, respectively.

Intel® StrongARM® SA-1100 Multimedia Development Board Errata

1. Local Bus Power Supervisor Reset Delay May Not be Stabilized.

Problem: The reset delay for the LMC6953 may not be stable.

Implication: The system may not reset when switch S2 is applied. Original factory-installed component values may not allow ample time for the power supervisor to stabilize.

Workaround: Change the following components:
- C1 – original value was 47pfd; new value is 0.10ufd.
- C2 – original value was 47pfd; new value is 0.10ufd.
- C28 – original value was 15nfd; new value is 0.01ufd.

Status: These changes have been implemented in Revision B01 builds.

2. SA-1100 Multimedia Development Board Does Not Boot from Power-up or Reset.

Problem: The Signals SW_2 and SW2 should be connected on the printed circuit board.

Implication: On power-up the SA1100 multimedia development board will not boot from flash.

Workaround: Connect a 30-gauge wire between the following two nodes:
- E21 pin 33.
- E27 pin 4.

Status: This change has been implemented in Revision B01 builds.

Intel® StrongARM® SA-1101 Development Board Errata

1. Video from VGA may be unstable due to value for IREF Resistor.

Problem: The original factory-installed IREF resistor value of 24K Ohms is incorrect.

Implication: This IREF value may cause an unstable SA1101 PLL signal, which may result in video jitter or intermittent USB errors.

Workaround: Change the IREF resistor to 26.7K Ohms.

Status: The change has been implemented in Revision B01 builds.

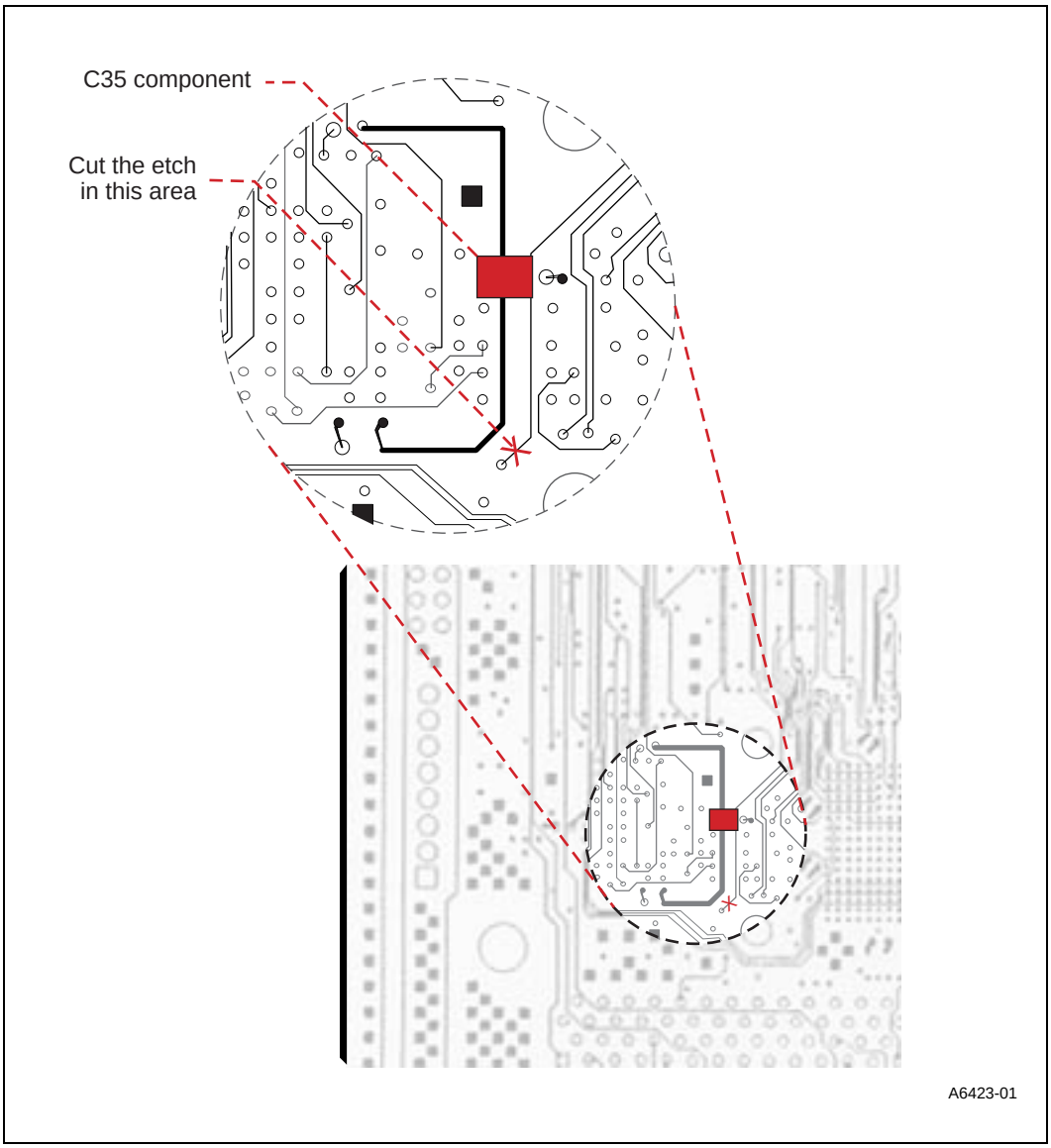
2. Loading on signal

Problem: Video from VGA may be unstable due to loading on signal GPIO_CLK_27 is incorrect.

Implication: May cause an unstable SA1100 PLL signal, which may result in video jitter or intermittent USB errors.

Workaround: Cut the etch that runs under the side two component C35 (see Figure 1).

Figure 1. Etch Cut under C35



Status: The change has been implemented in Revision B01 builds.

3. Connecting the Narrow Flex Print Cable of the Fujitsu Keyboard

Problem: The narrow flex print cable for the Fujitsu keyboard, model number N860-1406-T001, will not make an electrical contact with J10 on the SA-1101 development board.

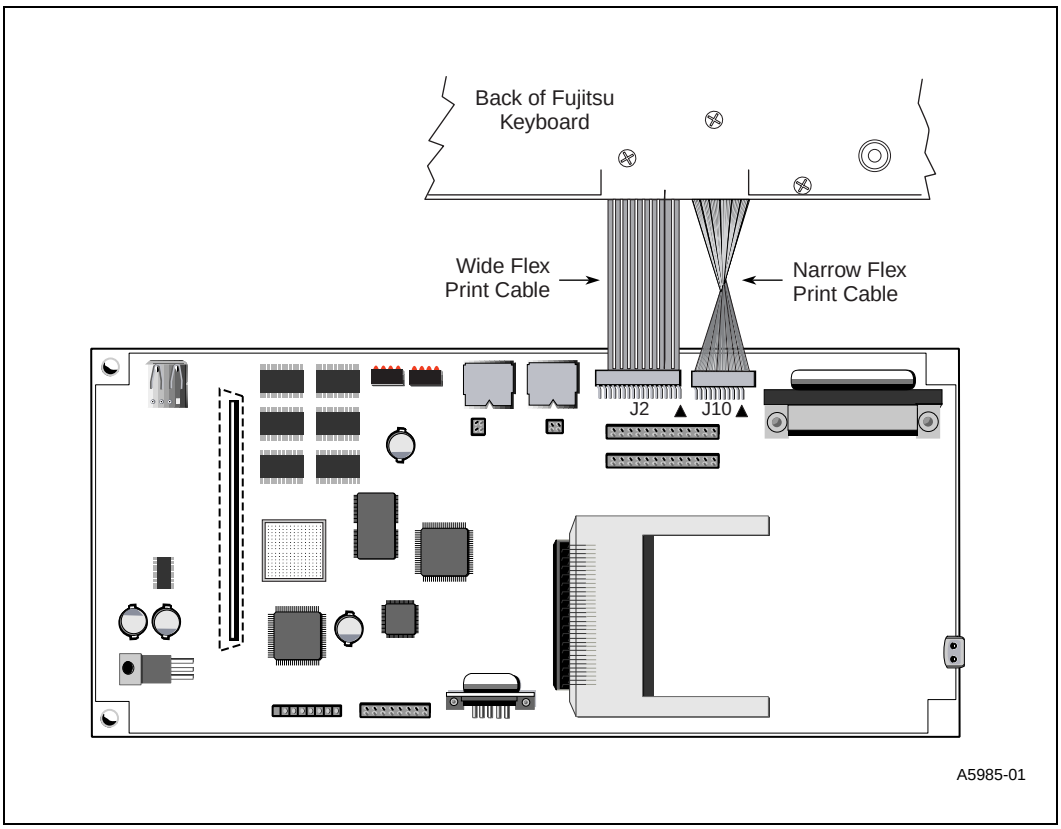
Implication: The Fujitsu keyboard will not function.

Workaround: Use the following procedure for connecting the Fujitsu keyboard to the SA-1101 development board (see Figure 2):

1. Locate J2 and J10 on side one of the SA-1101 development board.

2. Turn over the Fujitsu keyboard onto its keys and align pin 1 of the wide flex print cable with pin 1 of J2.
3. Insert the wide flex print cable into J2.
4. Twist the narrow flex print cable so that the black surface of the cable is facing upward, similar to the wide flex print cable.
5. Align pin 10 of the twisted narrow flex print cable with pin 10 of J2.
6. Insert the twisted narrow flex print cable into connector J10.

Figure 2. Keyboard Connectors



Status: Fixed.

Specification Changes

1. None

None for this revision of this specification update.

Specification Clarifications

1. None

None for this revision of this specification update.

Intel® StrongARM® SA-1100 Multimedia Development Board Documentation Changes

1. Physical Description: Section 3.1

- Changed the name of “Component S1” to “Switch block S1.”
- Changed the name of “female 9-way D-type” to “9F D-Sub.”
- Changed the name of “D-type connector” to “D-Sub connector.”

Section 3.1 contains the following information:

> “Switch block S1 is used for configuring the card for ROM selection and disabling interrupts.
>
> The bulkhead mounting bracket of the board holds a 9F D-Sub connector and an IrDA header block. The D-sub connector provides an RS232 terminal connection to a host system.”

2. SA-1100 Multimedia Development Board: Figure 3-1

- Changed the name of J11,“Debug Serial Header #2” to “Debug Serial D-Sub.”
- Changed the name of J8, “Debug Serial Header #1” to “Debug Serial Header.”
- Added “Boot ROM Select,” “Main FIFO IRQ,” and “PIP FIFO IRQ” to S1.

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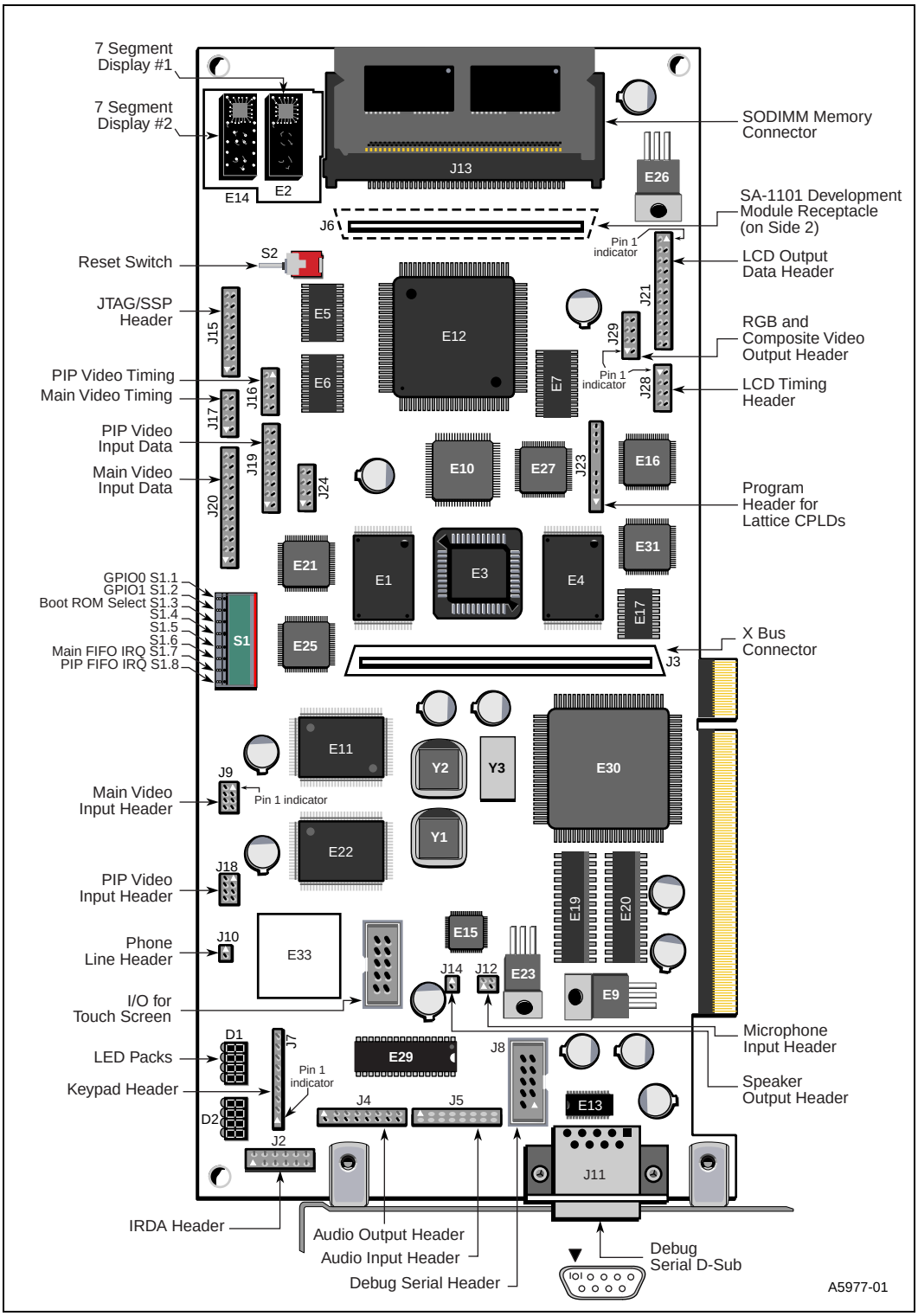
Figure 3-1. SA-1100 Multimedia Development Board



3. SA-1100 Multimedia Development Board Kit Contents: Section 3.2.1

Changed the fourth bullet from SDRAM to DRAM. The fourth bullet now appears as follows:

- A SODIMM double-sided module containing 16 MB or 32 MB of DRAM memory, already pre-installed

Added a tenth and eleventh bullet to the kit contents. These bullets now appear as follows:

- *SA-1100/SA-1101 Hardware Release Notes*
- *Advanced RISC Machines Architecture Reference Manual*

4. Small Outline Dual-Inline Memory Module (SODIMM): Section 3.2.2.1

Changed the reference of SDRAM to DRAM. The description now appears as follows:

The SA-1100 multimedia development board is normally supplied with a single, 72-pin plug-in SODIMM double-sided board containing 16 MB or 32 MB of DRAM memory.

5. Before Installing the SA-1100 Multimedia Development Board: Section 3.2.2.2

Changed the name of “component S1” to “switch block S1.”

Section 3.2.2.2 contains the following information:

> “2). Ensure that all switches for switch block S1 are closed except for Switch Positions 7 and 8 for the video pass through application.”

6. SA-1101 Development Board Kit Contents: Section 3.2.3

Added a third and fourth bullet to the kit contents. The additions appear as follows:

- *SA-1100/SA-1101 Hardware Release Notes*
- *README*

7. Video Connections: Section 3.3

Changed the name of “Debug Serial Header #2” to “Debug Serial D-Sub.”

Section 3.3 contains the following information:

> “4). Insert the RS232 null-modem cable to J11, Debug Serial D-Sub, aligning the connectors. Attach the other end to an RS232 port on a terminal or terminal emulator.”

8. Component S1 Switch Combinations for ROM Image Selections: Table 3-1

Changed the names of Switch Position 1 and Switch Position 0 to Switch Position 2 and Switch Position 1, respectively. The table now appears as follows:

Table 3-1. Switch Block S1 Switch Combinations for ROM Image Selections

Switch Position 2	Switch Position 1	ROM Image Loaded by Bootloader
Closed	Closed	Angel
Closed	Open	ROM image 1
Open	Closed	ROM image 2
Open	Open	ROM image 3

9. Using the ARM SDT with the Multimedia Development Board: Section 3.10

Changed the name of Debug Serial Header #1 to Debug Serial Header and changed the name of Debug Serial Header #2 to Debug Serial D-Sub. Section 3.10 contains the following information:

The host and target communicate across a communications channel. By default, the SA-1100 multimedia development board uses the Debug Serial D-Sub or the Debug Serial Header to communicate with the host.

Use an RS232 null-modem cable between the Debug Serial D-Sub on the SA-1100 multimedia development board and the RS232 port on the machine on which the SDT has been installed.

This requires the Debug Serial D-Sub to be connected to one of the COM ports on the host.

10. Differences Between SA-1100 Development Board and SA-1100/SA-1101 Development Board PCMCIA Implementations: Section 4.12.1.1

Changed the bit description in the second bullet in the bulleted list from GPIO 7:3 to GPIO 7:2. The second bullet now appears as follows:

- SA-1100 development board uses six SA-1100 GPIO pins (GPIO 7:2) for PCMCIA status and interrupts.

11. SA-1100 Multimedia Development Board: Figure A-1

- Changed the name of J11,“Debug Serial Header #2” to “Debug Serial D-Sub.”
- Changed the name of J8, “Debug Serial Header #1” to “Debug Serial Header.”
- Added “Boot ROM Select,” “Main FIFO IRQ,” and “PIP FIFO IRQ” to S1.

The new drawing is shown on page 20 of this specification.

12. SA-1100 Headers and Connectors: Table A-1

Changed the name of J11,“Debug serial header #2” to “Debug Serial D-Sub Header.”

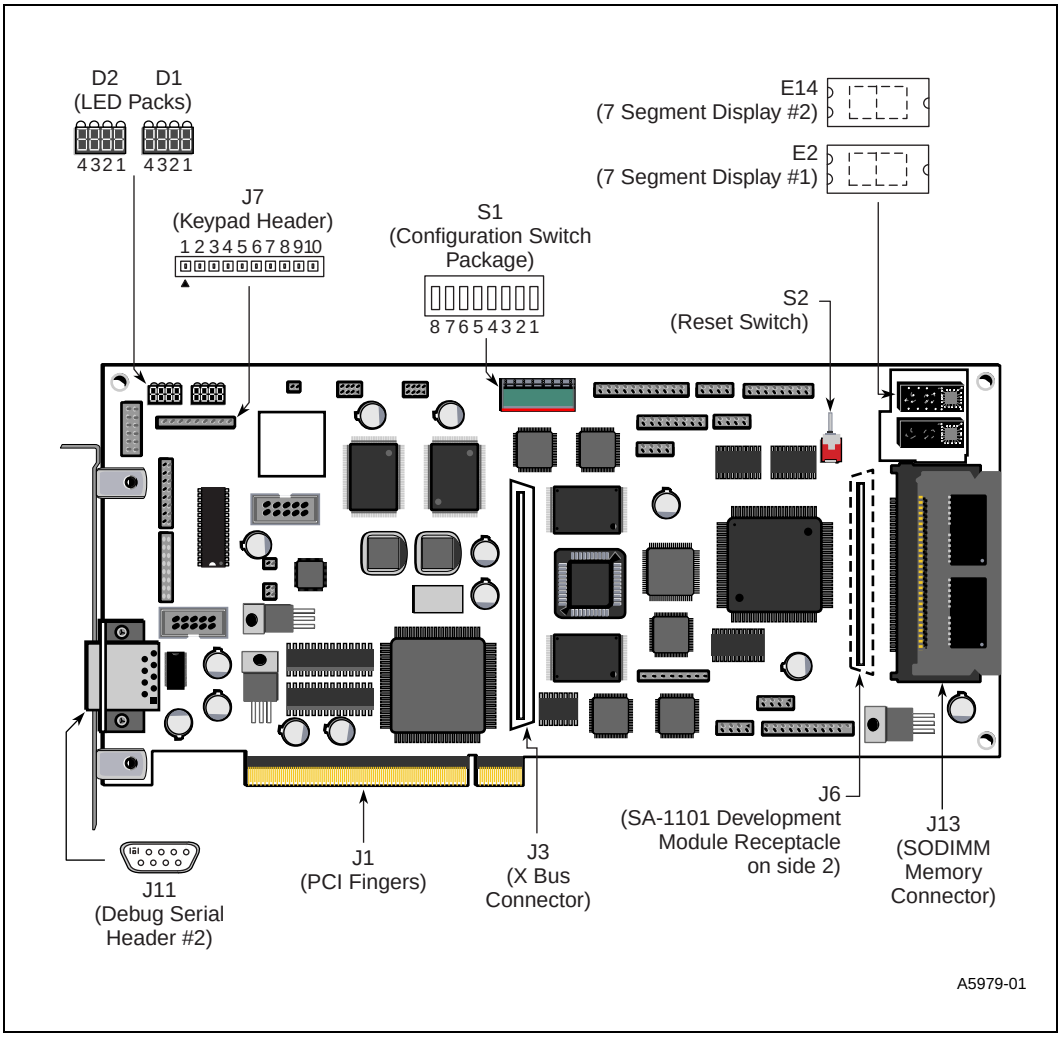
Table A-1. SA-1100 Headers and Connectors

Ref	Description
J2	IrDA Header
J3	Xbus Connector
J4	Audio Output Header
J5	Audio Input Header
J6	SA-1101 Development Board Receptacle (side 2)
J7	Keypad Header
J8	Debug Serial Header
J9	Main Video Input Header
J10	Phone Line Header
J11	Debug Serial D-sub Header
J12	Microphone Input Header
J13	SODIMM Memory Connector
J14	Speaker Output Header
J15	JTAG/SSP Header
J16	PIP Video Timing
J17	Main Video Timing
J18	PIP Video Input Header
J19	PIP Video Input Data
J20	Main Video Input Data
J21	LCD Output Data Header
J23	Program Header for Lattice CPLD's
J28	LCD Timing Header
J29	RGB and Composite Video Output Header

13. S1, S2, LEDs, Keypad, Debug, X Bus, Daughter Card and SODIMM Connector: Figure A-2

Added J6, SA-1101 Development Board Receptacle and J3, X Bus Connector.

Figure A-2. S1, S2, LEDs, Keypad, Debug, X Bus, Daughter Card and SODIMM Connector



14. SA-1101 Daughter Card Connector: Table A-3

Added Table A-3 describes the pins in J6.

Table A-3. SA-1101 Daughter Card Connector: J6 (Sheet 1 of 4)

Connector and Pin	Signal Name
J6 pin 1	XSPARE_8
J6 pin 2	SA_VDD_FLT
J6 pin 3	SA_BATT_FLT
J6 pin 4	VCC
J6 pin 5	GND
J6 pin 6	X_ADR_25
J6 pin 7	X_ADR_24
J6 pin 8	X_ADR_23
J6 pin 9	X_ADR_22

Table A-3. SA-1101 Daughter Card Connector: J6 (Sheet 2 of 4)

Connector and Pin	Signal Name
J6 pin 10	SA_D_31
J6 pin 11	SA_D_30
J6 pin 12	SA_D_29
J6 pin 13	SA_D_28
J6 pin 14	SA_D_27
J6 pin 15	SA_D_26
J6 pin 16	VCC
J6 pin 17	SA_D_25
J6 pin 18	SA_D_24
J6 pin 19	SA_D_23
J6 pin 20	SA_D_22
J6 pin 21	SA_D_21
J6 pin 22	SA_D_20
J6 pin 23	SA_D_19
J6 pin 24	SA_D_18
J6 pin 25	GND
J6 pin 26	SA_D_17
J6 pin 27	SA_D_15
J6 pin 28	SA_D_16
J6 pin 29	SA_A_19
J6 pin 30	SA_A_18
J6 pin 31	SA_A_21
J6 pin 32	SA_A_17
J6 pin 33	SA_A_20
J6 pin 34	GND
J6 pin 35	SA_A_16
J6 pin 36	SA_A_15
J6 pin 37	SA_A_12
J6 pin 38	SA_A_11
J6 pin 39	SA_A_10
J6 pin 40	SA_D_6
J6 pin 41	SA_D_4
J6 pin 42	SA_D_2
J6 pin 43	XD1
J6 pin 44	XD3
J6 pin 45	XD5
J6 pin 46	XD7
J6 pin 47	XD9
J6 pin 48	XD11
J6 pin 49	XD13
J6 pin 50	XD15
J6 pin 51	GND
J6 pin 52	X_ADR_0
J6 pin 53	X_ADR_1
J6 pin 54	X_ADR_3
J6 pin 55	X_ADR_5
J6 pin 56	X_ADR_7

Table A-3. SA-1101 Daughter Card Connector: J6 (Sheet 3 of 4)

Connector and Pin	Signal Name
J6 pin 57	X_ADR_9
J6 pin 58	X_ADR_11
J6 pin 59	GND
J6 pin 60	X_ADR_13
J6 pin 61	X_ADR_16
J6 pin 62	X_ADR_18
J6 pin 63	X_ADR_20
J6 pin 64	X_ADR_21
J6 pin 65	XSPARE_7
J6 pin 66	SA_CS_2
J6 pin 67	SK_IRQ
J6 pin 68	SA_IOS16
J6 pin 69	SA_PWAIT
J6 pin 70	SA_PREG
J6 pin 71	SA_PSKTSEL
J6 pin 72	SA_PCE_1
J6 pin 73	SA_PCE_2
J6 pin 74	SA_PIOW
J6 pin 75	SA_PIOR
J6 pin 76	SA_PWE
J6 pin 77	SA_POE
J6 pin 78	SK_VOUT_RESET
J6 pin 79	GPIO_22_MBREQ
J6 pin 80	GPIO_21_MBGNT
J6 pin 81	GPIO_27_CLK
J6 pin 82	GND
J6 pin 83	SA_WE
J6 pin 84	SA_OE
J6 pin 85	SA_CAS_3
J6 pin 86	SA_CAS_2
J6 pin 87	SA_CAS_1
J6 pin 88	SA_CAS_0
J6 pin 89	SA_RAS_3
J6 pin 90	SA_RAS_2
J6 pin 91	SA_RAS_1
J6 pin 92	SA_RAS_0
J6 pin 93	SA_D_14
J6 pin 94	SA_D_13
J6 pin 95	SA_D_12
J6 pin 96	SA_D_11
J6 pin 97	SA_D_10
J6 pin 98	SA_D_9
J6 pin 99	SA_D_8
J6 pin 100	SA_A_14
J6 pin 101	GND
J6 pin 102	SA_A_13
J6 pin 103	SA_D_7

Table A-3. SA-1101 Daughter Card Connector: J6 (Sheet 4 of 4)

Connector and Pin	Signal Name
J6 pin 104	SA_D_5
J6 pin 105	SA_D_3
J6 pin 106	SA_D_1
J6 pin 107	SA_D_0
J6 pin 108	XD0
J6 pin 109	XD2
J6 pin 110	GND
J6 pin 111	XD4
J6 pin 112	XD6
J6 pin 113	XD8
J6 pin 114	XD10
J6 pin 115	XD12
J6 pin 116	XD14
J6 pin 117	X_ADR_2
J6 pin 118	X_ADR_4
J6 pin 119	GND
J6 pin 120	X_ADR_6
J6 pin 121	X_ADR_8
J6 pin 122	X_ADR_10
J6 pin 123	X_ADR_12
J6 pin 124	X_ADR_14
J6 pin 125	X_ADR_15
J6 pin 126	X_ADR_17
J6 pin 127	X_ADR_19
J6 pin 128	PP12

15. X Bus Connector: J3: Table A-4

Added Table A-4, X Bus Connector.

Table A-4. X Bus Connector: J3 (Sheet 1 of 3)

Connector and Pin	Signal Name
J3 pin 1	XD31
J3 pin 2	XD29
J3 pin 3	XD27
J3 pin 4	XD25
J3 pin 5	XD23
J3 pin 6	GND
J3 pin 7	XD21
J3 pin 8	XD19
J3 pin 9	XD17
J3 pin 10	XD15
J3 pin 11	XD13
J3 pin 12	XD11
J3 pin 13	XD9
J3 pin 14	XD7
J3 pin 15	GND
J3 pin 16	XD5

Table A-4. X Bus Connector: J3 (Sheet 2 of 3)

Connector and Pin	Signal Name
J3 pin 17	XD3
J3 pin 18	XD1
J3 pin 19	VCC
J3 pin 20	XSPARE_7
J3 pin 21	XSPARE_5
J3 pin 22	XSPARE_3
J3 pin 23	XSPARE_1
J3 pin 24	GND
J3 pin 25	~XOE
J3 pin 26	XSPARE_8
J3 pin 27	PP12
J3 pin 28	NO CONNECT
J3 pin 29	VCC
J3 pin 30	SA_RXD_1
J3 pin 31	SA_TXD_1
J3 pin 32	SA_SCLK_C
J3 pin 33	GND
J3 pin 34	X_ADR_25
J3 pin 35	X_ADR_23
J3 pin 36	X_ADR_21
J3 pin 37	X_ADR_19
J3 pin 38	X_ADR_17
J3 pin 39	X_ADR_15
J3 pin 40	X_ADR_13
J3 pin 41	X_ADR_11
J3 pin 42	GND
J3 pin 43	X_ADR_9
J3 pin 44	X_ADR_7
J3 pin 45	X_ADR_5
J3 pin 46	X_ADR_3
J3 pin 47	X_ADR_1
J3 pin 48	NO CONNECT
J3 pin 49	GND
J3 pin 50	XD30
J3 pin 51	XD28
J3 pin 52	XD26
J3 pin 53	XD24
J3 pin 54	XD22
J3 pin 55	XD20
J3 pin 56	XD18
J3 pin 57	XD16
J3 pin 58	GND
J3 pin 59	XD14
J3 pin 60	XD12
J3 pin 61	XD10
J3 pin 62	XD8
J3 pin 63	XD6

Table A-4. X Bus Connector: J3 (Sheet 3 of 3)

Connector and Pin	Signal Name
J3 pin 64	XD4
J3 pin 65	XD2
J3 pin 66	XD0
J3 pin 67	GND
J3 pin 68	XSPARE_6
J3 pin 69	XSPARE_4
J3 pin 70	XSPARE_2
J3 pin 71	XSPARE_0
J3 pin 72	VCC
J3 pin 73	IIC_SCL
J3 pin 74	~XWE
J3 pin 75	IIC_SDA
J3 pin 76	GND
J3 pin 77	~DSP_CODEC_RESET
J3 pin 78	SA_RXD_C
J3 pin 79	SA_TXD_C
J3 pin 80	SA_SFRM_C
J3 pin 81	VCC
J3 pin 82	X_ADR_24
J3 pin 83	X_ADR_22
J3 pin 84	X_ADR_20
J3 pin 85	GND
J3 pin 86	X_ADR_18
J3 pin 87	X_ADR_16
J3 pin 88	X_ADR_14
J3 pin 89	X_ADR_12
J3 pin 90	X_ADR_10
J3 pin 91	X_ADR_8
J3 pin 92	X_ADR_6
J3 pin 93	X_ADR_4
J3 pin 94	GND
J3 pin 95	X_ADR_2
J3 pin 96	X_ADR_0

Note: The X Bus connector is a 96 pin female connector from Honda Connectors, part number PCR-96FDNKG1, which can accept one of two male connectors. The most common connector is the PCR-96MDSEKG1, which is a straight, 96 pin, male connector used when mounting parallel to the SA-1100 multimedia development module. The other option is the PCR-96LMDK01, which is a right angle, 96 pin, male connector used when mounting perpendicular to the SA-1100 multimedia development module.

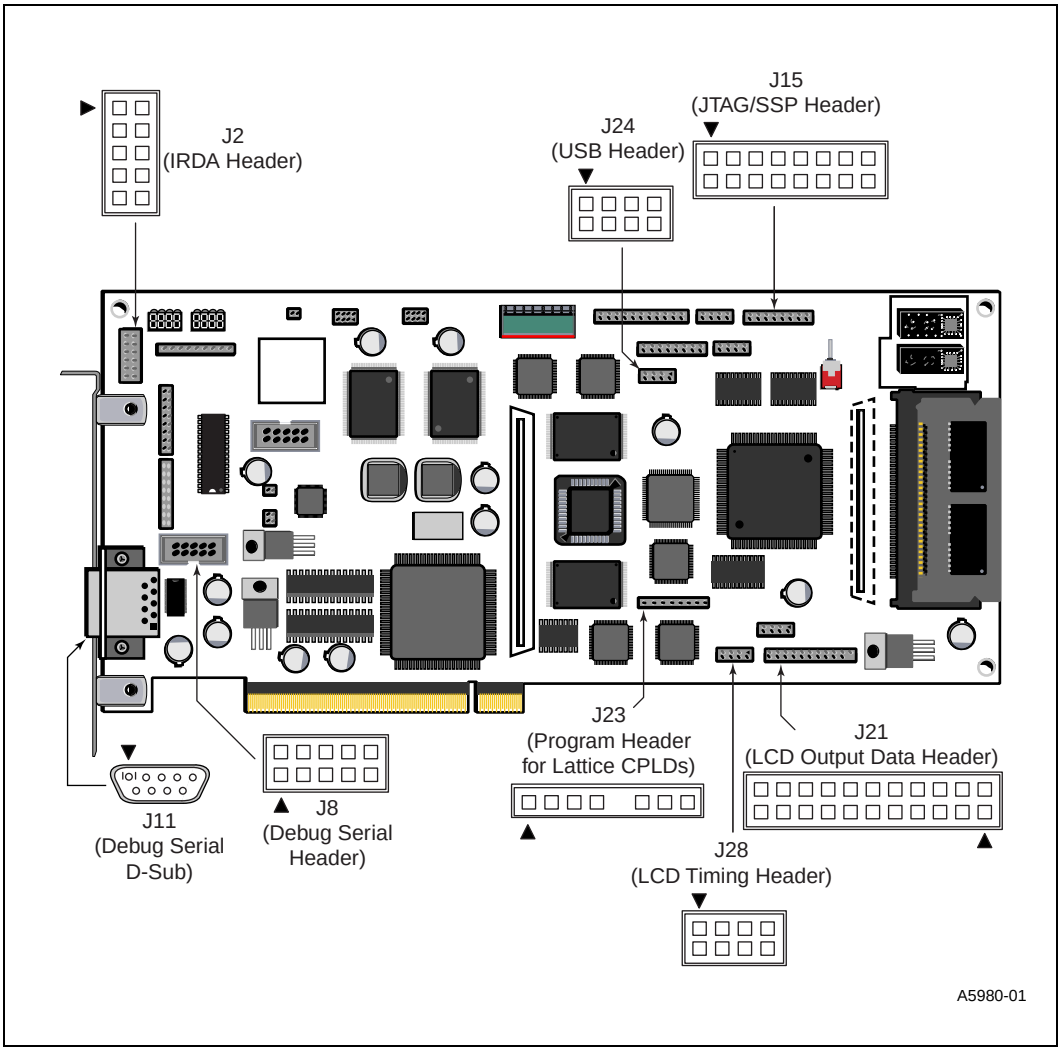
16. Debug Connector Number 1: J11: Section A.2.7

Changed the section title from “Debug Connector Number 1: J11” to “Debug Serial D-Sub: J11.”

17. IrDA, JTAG, LCD, and Debug Ports and Headers: Figure A-6

- Changed the name of J8, “Debug Serial Header #1” to “Debug Serial Header.”
- Changed the name of J11, “Debug Serial Header #2” to "Debug Serial D-Sub."

Figure A-6. IrDA, JTAG, LCD, and Debug Ports and Headers



18. Debug Port Number 1: J11: Table A-18

Changed the name of J11, “Debug Serial Header #1” to "Debug Serial D-Sub."

19. Debug Port Number 2: J8: Table A-19

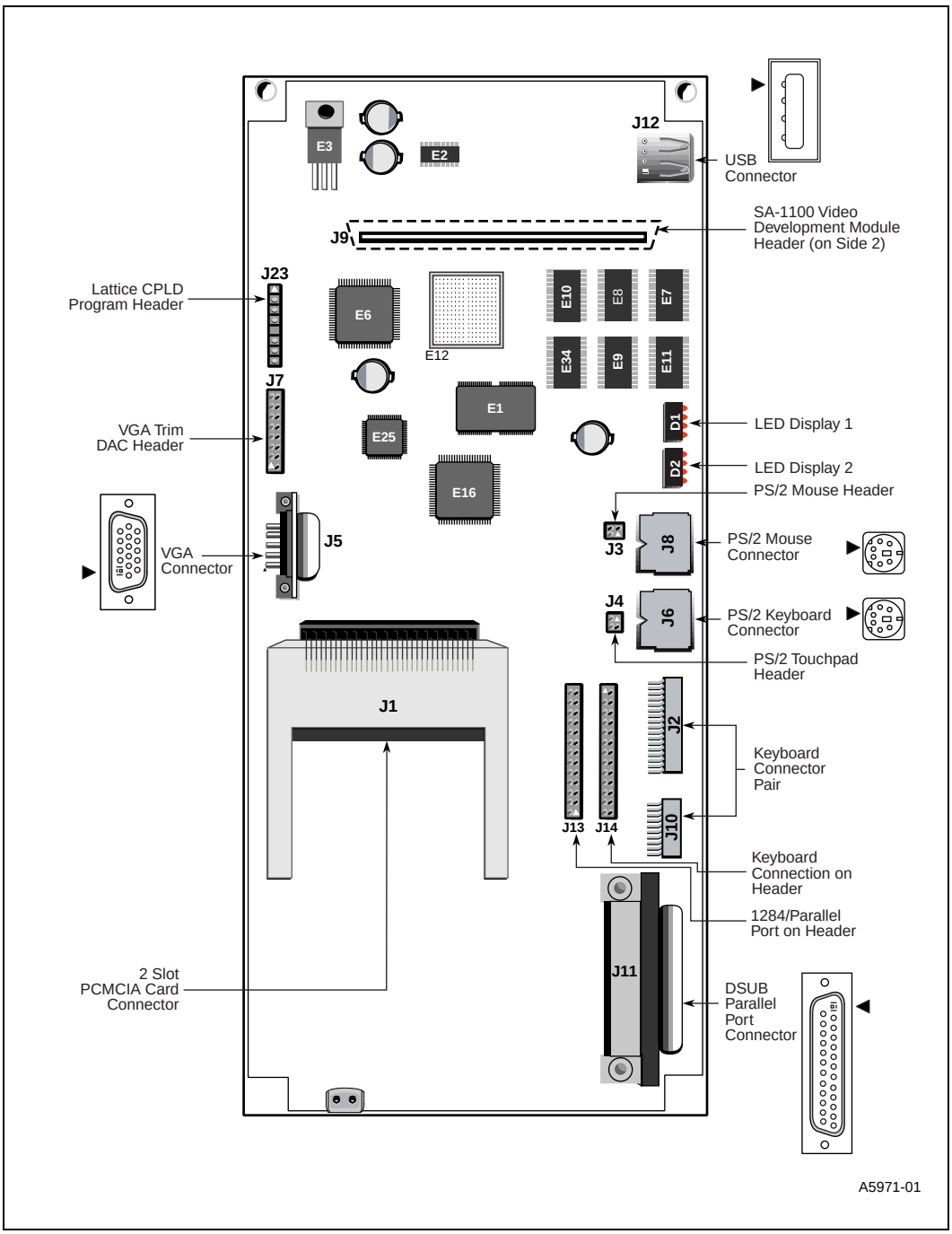
Changed the name of J11, “Debug Port Number 2” to "Debug Serial Header."

Intel® StrongARM® SA-1101 Development Board Documentation Changes

1. Optional SA-1101 Development Board: Figure 3-2, Figure B-1

- Changed the name of J5, “RGB Cable Connector” to “VGA Cable Connector.”
- Changed the name of J7, “RGB Trim DAC Header” to VGA Trim DAC Header.”

Figure 3-2. SA-1101 Development Board



2. Cables for Optional SA-1101 Development Board: Section 3.5

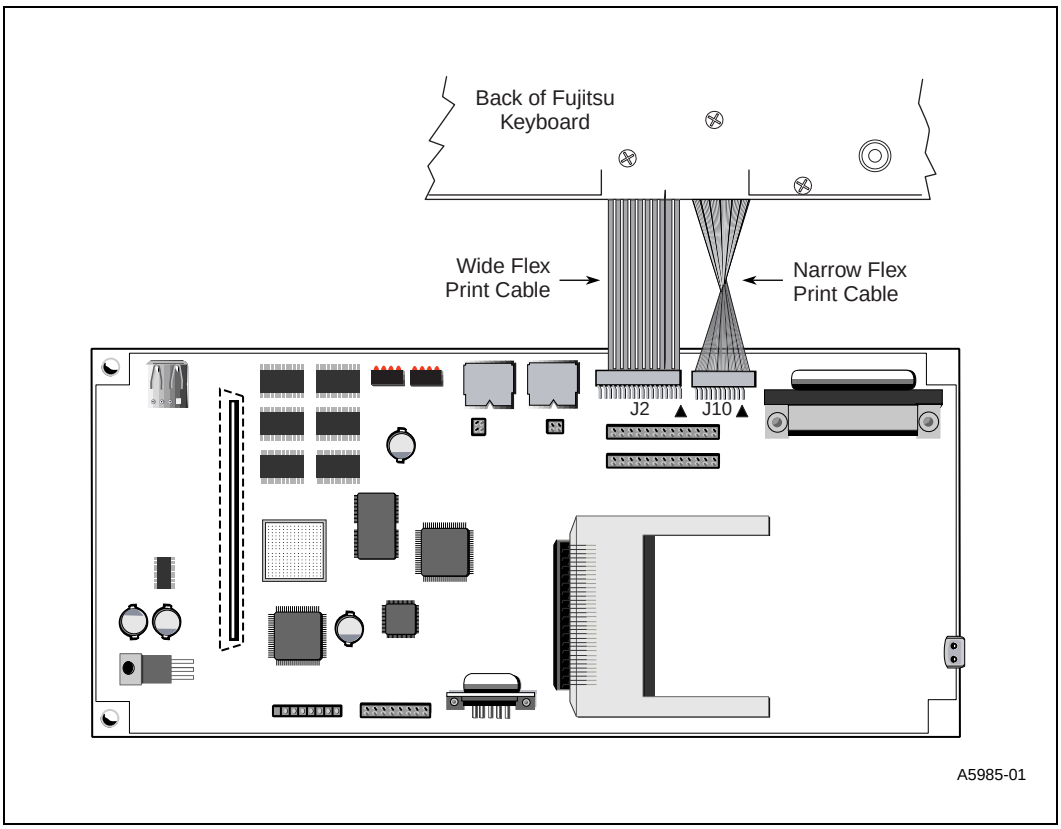
Changed the procedure for connecting the narrow flex print cable, changed the number of pins from 9 pins to 15 pins, changed the name of “RGB connector” to “VGA connector,” and “RGB Cable Connector” to “VGA Cable Connector,” and ribbon cable to flex print cable.

Section 3.5 contains the following information:

1. Locate J2 and J10 on side one of the SA-1101 development board.
2. Turn over the Fujitsu keyboard onto its keys and align pin 1 of the wide flex print cable with pin 1 of J2.
3. Insert the wide flex print cable into J2.
4. Twist the narrow flex print cable so that the black surface of the cable is facing upward, similar to the wide flex print cable.
5. Align pin 10 of the twisted narrow flex print cable with pin 10 of J2.
6. Insert the twisted narrow flex print cable into connector J10.
7. Attach the 15-pin VGA connector (not provided) into J5, VGA Cable Connector, aligning the socket connections. Attach the other end of the connector to a color monitor or LCD display.

Note: The flex print cables for the keyboard are center justified with connectors J2 and J10, resulting in unused pins on the left side of J2 and on the right side of J10. Please see Figure 3-5 for proper insertion of the keyboards two flex print cables.

Figure 3-5. Keyboard Connectors



3. Optional SA-1101 Development Board: Figure B-1

- Changed the name of J5, “RGB Cable Connector” to “VGA Cable Connector.”
- Changed the name of J7, “RGB Trim DAC Header” to “VGA Trim DAC Header.”

The new drawing is shown on page 32 of this specification.

4. SA-1101 Headers and Connectors: Table B-1

- Changed the name of J5, “RGB Cable Connector” to “VGA Cable Connector.”
- Changed the name of J7, “RGB Trim DAC Header” to “VGA Trim DAC Header.”

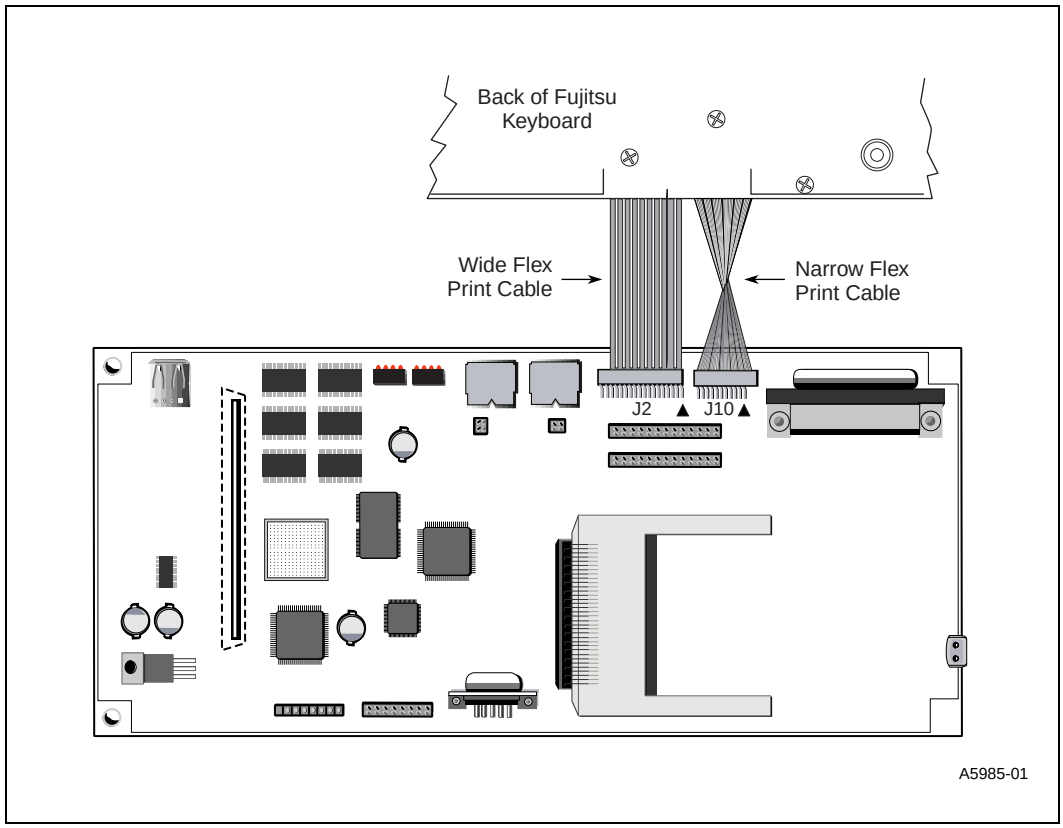
Table B-1. SA-1101 Headers and Connectors

Ref	Description
J1	PCMCIA Card Connector (2 slot)
J2	Keyboard Connector Pair (see J10)
J3	PS/2 Mouse Header
J4	PS/2 Touch Pad Header
J5	VGA Cable Connector
J6	PS/2 Keyboard Connector
J7	VGA Trim DAC Header
J8	PS/2 Mouse Connector
J9	128 Pin Connector to SA-1100 Board (side 2)
J10	Keyboard Connector Pair (see J2)
J11	DSUB Parallel Port Connector
J12	USB Connector
J14	Keyboard Connection on Header
J13	1284/Parellel Port Header
J23	Lattice CPLD Program Header

5. Keyboard Connectors: Figure B-2

The figure now appears as follows, indicating a twist in the narrow flex print cable:

Figure B-3. Keyboard Connectors



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