

SDP Breakout Board User Guide UG-282

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SDP Breakout Board User Guide

INTRODUCTION

This user guide is written for system engineers who use the system demonstration platform (SDP); it discusses how to use the SDP breakout board when designing SDP-compatible hardware and software.

The ADZS-BRKOUT-EX3 SDP breakout board from Analog Devices, Inc., can be used in conjunction with SDP controller boards and daughter boards designed on the SDP system. The breakout board allows signals travelling between SDP controller boards and compatible daughter boards to be monitored by the insertion of the breakout board between the SDP controller board and the daughter board. SDP controller boards are used as part of the evaluation system for many Analog Devices components. The SDP breakout board exposes each of the 120 pins of the SDP controller board's connector allowing users to monitor signals between the controlling board and the attached daughter evaluation board or Circuit from the Lab[™] reference circuit board.

This user guide describes the SDP breakout board (ADZS-BRKOUT-EX3). The Getting Started section provides information on how to use the SDP breakout board as a debug tool for the SDP 120-pin connector signals. The Hardware Description section describes the ADZS-BRKOUT-EX3 hardware. This includes details of the connectors on the board and how these signals are exposed. The ADZS-BRKOUT-EX3 schematics are provided in the Schematic section.

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REVISION HISTORY

9/11—Revision 0: Initial Version

PRODUCT OVERVIEW

The SDP breakout board features

- 4-pin × 120-pin small footprint connectors
- Hirose FX8-120P-SV1(91),120-pin header
- Hirose FX8-120S-SV(21), 120-pin receptacle
- ID EEPROM
- 240 through-hole probe points

For more information, go to http://www.analog.com/sdp.

TECHNICAL OR CUSTOMER SUPPORT

You can reach Analog Devices, Inc., Customer Support in the following ways:

• Visit the SDP website at

http://www.analog.com/sdp

- Email processor questions to processor.support@analog.com (worldwide support) processor.europe@analog.com (Europe support) processor.china@analog.com (China support)
- Phone questions to 1-800-ANALOGD
- Contact your Analog Devices local sales office or authorized distributor.
- Send questions by mail to:

Analog Devices, Inc.

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PRODUCT INFORMATION

Product information can be obtained from the Analog Devices website.

Analog Devices Website

The Analog Devices website, http://www.analog.com, provides information about a broad range of products—analog integrated circuits, amplifiers, converters, and digital signal processors.

Note that MyAnalog.com is a free feature of the Analog Devices website that allows customization of a web page to display only the latest information about products of interest to you. You can choose to receive weekly email notifications containing updates to the web pages that meet your interests, including documentation errata. MyAnalog.com provides access to books, application notes, data sheets, code examples, and more.

Visit MyAnalog.com to sign up. If you are a registered user, just log on. Your user name is your email address.

REGULATORY COMPLIANCE

The ADZS-BRKOUT-EX3 is designed for use solely in a laboratory environment. The board is not intended for use as a consumer end product or as a portion of a consumer end product. The board is an open system design, which does not include a shielded enclosure and therefore may cause interference to other electrical devices in close proximity. This board should not be used in or near any medical equipment or RF devices. Store unused boards in the protective shipping package.

The ADZS-BRKOUT-EX3board has been certified to comply with the essential requirements of the European EMC directive 89/36/EC, amended by 93/68/EEC, and therefore carries the CE mark.

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GETTING STARTED

This section provides specific information to assist you with using the SDP breakout board as part of an SDP system.

The following topics are covered.

- Package contents
- PC configuration
- Breakout board installation

PACKAGE CONTENTS

The ADZS-BRKOUT-EX3 board package contains one ADZS-BRKOUT-EX3 board.

Contact the vendor where you purchased the SDP breakout board or contact Analog Devices if this item is missing.

PC CONFIGURATION

For correct operation of an SDP controller board and SDP breakout board, your computer must have the following minimum configuration:

- Windows XP Service Pack 2 or Windows Vista[®]
- USB 2.0 port

BREAKOUT BOARD INSTALLATION

When removing the SDP breakout board from the package, handle the board carefully to avoid the discharge of static electricity, which can damage some components. The SDP breakout board is designed for use with an SDP controller board. The SDP breakout board must be connected to a PC via the SDP controller board and a USB cable.

Figure 1 shows the SDP breakout board connected to an SDP-B controller board and a Circuit from the Lab reference circuit or component evaluation board.

The SDP breakout board exposes each of the 120 pins on the SDP-B board connector. The breakout board has a 120-pin receptacle connector (J1) which attaches to the 120-pin connector on the SDP controller board; it also has a 120-pin header connector (P1) for attaching SDP-compatible daughter boards to the system.

Pin 1 to Pin 30 and Pin 91 to Pin 120 from receptacle J1 are exposed in the P6 set of probe points. Pin 31 to Pin 90 are exposed in the P5 set of probe points. In this way, the SDP breakout board can be used to monitor signals travelling between the SDP controller board and the attached daughter board.

The SDP breakout board can also be used as a proof of concept tool through the insertion of pin headers in the exposed, relevant signal through-hole locations. These pin headers can be connected to existing hardware when building up a mock-up system prior to the design of SDP-specific hardware.



Figure 1. Connecting the SDP Breakout Board

HARDWARE DESCRIPTION

This section describes the hardware design of the ADZS-BRKOUT-EX3 board.

The following topics are covered.

- LEDs—This section describes the SDP breakout board LEDs.
- Through-hole probe points—This section provides layouts of through-hole probe points on the SDP breakout board.
- Connector Pin Assignments—This section details the pin assignments on the 120-pin connectors.

LEDS

There is a single LED located on the SDP breakout board. It is connected to the input power line on the 120-pin header connector on the SDP breakout board. Therefore, when power is provided from an attached daughter board, this LED is on. If there is no power coming through the VIN pin on P1, this LED remains off.

THROUGH-HOLE PROBE POINTS

The SDP breakout board contains 240 through-hole probe points, 2×120 pin receptacle connector and 2×120 pin header connectors. One of the 120-pin receptacle connectors (J1) can be used to connect to the 120-pin connector on the SDP controller board. One of the 120-pin header connectors (P1), on the back of the SDP board, can be used to connect to a daughter board (P1).

Figure 2 and Figure 3 show both sides of the SDP breakout board; the shading indicates the signal path from the receptacle to the header via the through-hole probe points. Connector J2 and P2 are for use with future Blackfin* EZ-Kit products.

The signal lines between these two connectors are exposed through the probe points on P3 and P4.



Figure 2. SDP Breakout Board—Top View



Figure 3. SDP Breakout Board—Bottom View

CONNECTOR PIN ASSIGNMENTS

The SDP breakout board should be connected to an SDP controller board via connector J1 and to an SDP daughter board via connector P1. With this configuration, pin assignments for P6 and P5 through-hole probe points are listed in Table 1.

Pin No.	Pin Name	Description
1	VIN	Power to SDP Board. Requires 200 mA at 5 V.
2	NC	No Connect. Leave this pin unconnected. Do not ground.
3	GND	Connect to ground plane of board.
4	GND	Connect to ground plane of board.
5	USB_VBUS	Connected directly to the USB +5 V supply.
6	GND	Connect to ground plane of board.
7	PAR_D23	Parallel Data Bus Bit 23. (No connect.) ¹
8	PAR_D21	Parallel Data Bus Bit 21. (No connect.) ¹
9	PAR_D19	Parallel Data Bus Bit 19. (No connect.) ¹
10	PAR_D17	Parallel Data Bus Bit 17. (No connect.) ¹
11	GND	Connect to ground plane of board.
12	PAR_D14	Parallel Data Bus Bit 14.
13	PAR_D13	Parallel Data Bus Bit 13.
14	PAR_D11	Parallel Data Bus Bit 11.
15	PAR_D9	Parallel Data Bus Bit 9.
16	PAR_D7	Parallel Data Bus Bit 7.
17	GND	Connect to ground plane of board.
18	PAR_D5	Parallel Data Bus Bit 5.
19	PAR_D3	Parallel Data Bus Bit 3.
20	PAR_D1	Parallel Data Bus Bit 1.
21	PAR_RD	Asynchronous Parallel Read Strobe.
22	PAR_CS	Asynchronous Parallel Chip Select.
23	GND	Connect to ground plane of board.
24	PAR_A3	Parallel Address Bus Bit 3.
25	PAR_A1	Parallel Address Bus Bit 1.
26	PAR_FS3	Synchronous (PPI) Parallel Frame Sync 3.
27	PAR_FS1	Synchronous (PPI) Parallel Frame Sync 1.
28	GND	Connect to ground plane of board.
29	SPORT_TDV0	SPI Data Line 3. (No connect.) ¹
30	SPORT_TDV1	SPI Data Line 2. (No connect.) ¹
31	SPORT_DR1	SPORT Data Receive 1. Secondary SPORT data into processor.
32	SPORT_DT1	SPORT Data Transmit 1. Secondary SPORT data from processor.
33	SPI_D2	SPORT Data Line. (No connect.) ¹
34	SPI_D3	SPORT Data Line. (No connect.) ¹
35	SERIAL_INT	Serial Interrupt. Used to trigger a nonperiodic serial event.
36	GND	Connect to ground plane of board.
37	SPI_SEL_B	SPI Chip Select B. Use this to control a second device on the SPI bus.
38	SPI_SEL_C	SPI Chip Select C. Use this for a third device on the SPI bus.
39	SPI_SEL1/SPI_SS	SPI Chip Select 1. Used to connect to SPI boot flash, if required. Also used as chip select when Blackfin processor is operating as SPI slave.
40	GND	Connect to ground plane of board.
41	SDA_1	I ² C Data 1.
42	SCL_1	I ² C Data 1.
43	GPIO0	General-Purpose Input/Output.
44	GPIO2	General-Purpose Input/Output.
45	GPIO4	General-Purpose Input/Output.
46	GND	Connect to ground plane of board.

Table 1. 120-Pin Connector Pin Assignments

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Pin No.	Pin Name	Description
47	GPIO6	General-Purpose Input/Output.
47	TMR_A	Timer A Flag Pin. Use as first timer, if required.
48 49	TMR_C	Timer C Flag Pin.1 (No connect.)
49 50	NC	No Connect. Leave this pin unconnected. Do not ground.
	NC	
51 52	GND	No Connect. Leave this pin unconnected. Do not ground.
52		Connect to ground plane of board.
53	NC	No Connect. Leave this pin unconnected. Do not ground.
54	NC	No Connect. Leave this pin unconnected. Do not ground.
55	NC	No Connect. Leave this pin unconnected. Do not ground.
56	EEPROM_A0	EEPROM A0. Connect to A0 Address line of the EEPROM.
57	RESET_OUT	Active low reset signal from processor board.
58	GND	Connect to ground plane of board.
59	UART_RX	UART Receive Data.
60	RESET_IN	Active low pin to reset controller board.
61	BMODE1	Boot Mode 1. Pull up with 10 k Ω resistor to set SDP to boot from SPI Flash. Enabled on Connector A only.
62	UART_TX	UART Transmit Data.
63	GND	Connect to ground plane of board.
64	SLEEP	Active low sleep from processor board.
65	WAKE	External wake up to processor board.
66	NC	No Connect. Leave this pin unconnected. Do not ground.
67	NC	No Connect. Leave this pin unconnected. Do not ground.
68	NC	No Connect. Leave this pin unconnected. Do not ground.
69	GND	Connect to ground plane of board.
70	NC	No Connect. Leave this pin unconnected. Do not ground.
71	CLKOUT	CLKOUT from processor.
72	TMR_D	Timer D Flag Pin.
73	TMR_B	Timer B Flag Pin. Use as second timer, if required.
74	GPIO7	General-Purpose Input/Output.
75	GND	Connect to ground plane of board.
76	GPIO5	General-Purpose Input/Output.
77	GPIO3	General-Purpose Input/Output.
78	GPIO1	General-Purpose Input/Output.
79	SCL_0	I ² C Clock 0. Daughter board EEPROM must be connected to this bus.
80	SDA_0	I ² C Data 0. Daughter board EEPROM must be connected to this bus.
81	GND	Connect to ground plane of board.
82	SPI_CLK	SPI Clock.
83	SPI_MISO	SPI Master In, Slave Out Data.
84	SPI_MOSI	SPI Master Out, Slave In Data.
85		SPI Chip Select A. Use this to control the first device on the SPI bus.
86	GND	Connect to ground plane of board.
87	SPORT_TSCLK	SPORT Transmit Clock.
88	SPORT_DT0	SPORT Data Transmit 0. Primary SPORT data from processor.
89	SPORT_TFS	SPORT Transmit Frame Sync.
90	SPORT_RFS	SPORT Receive Frame Sync.
91	SPORT_DR0	SPORT Data Receive 0. Primary SPORT data into processor.
92	SPORT_RSCLK	SPORT Receive Clock.
93	GND	Connect to ground plane of board.
94	PAR_CLK	Clock for Synchronous Parallel Interface (PPI).
94 95	PAR_FS2	Synchronous (PPI) Parallel Frame Sync 2.
95 96	PAR_A0	Parallel Address Bus Bit 0.
90 97	PAR_A0 PAR_A2	Parallel Address Bus Bit 2.
97 98	GND	Connect to ground plane of board.
98 99	PAR_INT	Parallel Interrupt. Used to trigger a nonperiodic parallel event.
77		י מימויכי ווונכודעור. ספט נס נוועשבי מ ווסווויפווסטור ומומוופו פיפוונ.

Pin No.	Pin Name	Description
100	PAR_WR	Asynchronous Parallel Write Strobe.
101	PAR_D0	Parallel Data Bus Bit 0.
102	PAR_D2	Parallel Data Bus Bit 2.
103	PAR_D4	Parallel Data Bus Bit 4.
104	GND	Connect to ground plane of board.
105	PAR_D6	Parallel Data Bus Bit 6.
106	PAR_D8	Parallel Data Bus Bit 8.
107	PAR_D10	Parallel Data Bus Bit 10.
108	PAR_D12	Parallel Data Bus Bit 12.
109	GND	Connect to ground plane of board.
110	PAR_D15	Parallel Data Bus Bit 15.
111	PAR_D16	Parallel Data Bus Bit 16.1 (No connect.) ¹
112	PAR_D18	Parallel Data Bus Bit 18.1 (No connect.) ¹
113	PAR_D20	Parallel Data Bus Bit 20.1 (No connect.) ¹
114	PAR_D22	Parallel Data Bus Bit 22. (No connect.) ¹
115	GND	Connect to ground plane of board.
116	VIO (+3.3 V)	+3.3 V Output. 20 mA maximum current available to power IO voltage on daughter board.
117	GND	Connect to ground plane of board.
118	GND	Connect to ground plane of board.
119	NC	No Connect. Leave this pin unconnected. Do not ground.
120	NC	No Connect. Leave this pin unconnected. Do not ground.

¹ Functionality not implemented on the SDP board.

Each interface provided by the SDP is available on unique pins of the SDP 120-pin connector. The connector pin numbering scheme is outlined in Figure 4.

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60	RESET IN		BMODE1	61	
59	UART_RX		UART_TX	62	
58	GND		GND	63	
57	RESET_OUT		SLEEP	64	
56	EEPROM_A0	SDP	WAKE	65	
55	NC	STANDARD	NC	66	
54	NC	CONNECTOR	NC	67	
53	NC		NC	68	
52	GND		GND	69	
51	NC		NC	70	
50	NC		NC	71	
49	TMR_C*		TMR D	72	
48	TMR A	TIMERS	TMR_D	73	
47	GPIO6		GPIO7	74	
46				75	
45	GND	GENERAL	GND	76	
44	GPIO4	INPUT/OUTPUT	GPIO5	77	
43	GPIO2		GPIO3	78	
42	GPIO0		GPIO1	79	
41	SCL_1	12C	SCL_0	80	
40	SDA_1		SDA_0	81	
39	GND		GND	82	
38	SPI_SEL1/SPI_	55	SPI_CLK	83	
37	SPI_SEL_C	SPI	SPI_MISO	84	
36	SPI_SEL_B	011	SPI_MOSI	85	
35	GND		SPI_SEL_A	86	
34	SERIAL_INT		GND	87	
33	SPI_D3*		SPORT_TSCLK	88	
32	SPI_D2*	SPORT	SPORT_DT0	89	
31	SPORT_DT1	SPORT	SPORT_TFS	90	
30	SPORT_DR1		SPORT_RFS	91	
29	SPORT_TDV1*		SPORT_DR0	92	
28	SPORT_TDV0*		SPORT_RSCLK	93	
27	GND		GND	94	
26	PAR_FS1		PAR_CLK	95	
25	PAR_FS3		PAR_FS2	96	
24	PAR_A1		PAR_A0	97	
23	PAR_A3		PAR_A2	98	
22	GND		GND	99	
21	PAR_CS		PAR_INT	100	
20	PAR_RD		PAR_WR	101	
19	PAR_D1		PAR_D0	102	
18	PAR_D3	PARALLEL	PAR_D2	102	
17	PAR_D5	PORT	PAR_D4	103	
16	GND		GND		
15	PAR_D7		PAR_D6	105 106	
14	PAR_D9		PAR_D8		
13	PAR_D11		PAR_D10	107	
12	PAR_D13		PAR_D12	108	
	PAR_D14		GND		
<u>11</u> 10	GND		PAR_D15	<u>110</u> 111	
9	PAR_D17 *		* PAR_D16	112	
	PAR_D19 *		* PAR_D18		
8	PAR_D21 *		* PAR_D20	<u>113</u> 114	
	PAR_D23 *		* PAR_D22	114	
<u>6</u> 5	GND		GND		
	USB_VBUS		VIO(+3.3V)	<u>116</u> 117	
- 4	GND		GND		
	GND		GND	118	-
<u>2</u> 1	NC		NC	119	-004
	VIN ^{*NO}	C ON BLACKFIN S	SDP NC	120	00-96860
				I	30

Figure 4. 120-Pin Connector Outline

SCHEMATICS

This section provides the schematic drawings for the ADZS-BRKOUT-EX3 board. The schematic pages include

- SDP breakout board—EI3 connectors
- SDP breakout board—probing connectors
- SDP breakout board—EEPROM and power

J1-94 - 94	J1				P1		
31-34	PPI0 CLK	PPI FS1	27 J1-27	J1-94 ■ 94	PPI0 CLK	PPI FS1	27 J1-27
J1-95 - 95	PPI0 FS2	PPI0 FS3	26 J1-26	51-54	-	PPI0 FS3	26 J1-26
J1-95	-			J1-3J -	PPI0_FS2		51-20
J1-101 102	PPI0_D0	PPI0_D1	= 01-20	51-101	PPI0_D0	PPI0_D1	10
J1-102 - 102	PPI0_D2	PPI0_D3	J10	J1-102 ∎ 102	PPI0_D2	PPI0_D3	19 J1-19
J1-103 - 103	PPI0_D4	PPI0_D5	18 J1-18	J1-103 ∎ <u>103</u>	PPI0_D4	PPI0_D5	18 J1-18
J1-105 - 105	PPI0 D6	PPI0_D7	16 J1-16	J1-105 – 105	PPI0 D6	PPI0_D7	16 J1-16
J1-106 🖬 <u>106</u>	PPI0 D8	PPI0 D9	15 J1-15	J1-106 ■ 106	PPI0 D8	PPI0 D9	15 J1-15
J1-107 107	PPI0 D10	PPI0 D11	14 J1-14	J1-107	PPI0 D10	PPI0 D11	14 J1-14
108	-	-	40	31-107	-	_	J1-14
J1-108 - 108	PPI0_D12	PPI0_D13	-01-10	······ ·	PPI0_D12	PPI0_D13	
J1-12 12	PPI0_D14	PPI0_D15	110 J1-110	J1-12 ∎ <u>12</u>	PPI0_D14	PPI0_D15	110 J1-110
J1-111 🖬 111	PPI0_D16	PPI0_D17	10 J1-10	J1-111 ∎ <u>111</u>	PPI0_D16	PPI0_D17	10 J1-10
J1-112 - 112	PPI0 D18	PPI0_D19	9 J1-9	J1-112 = 112	PPI0 D18	PPI0 D19	9 J1-9
J1-113 113	PPI0 D20	PPI0_D21	8 J1-8	J1-113 ■ 113	PPI0 D20	PPI0_D21	8 J1-8
J1-114 114	PPI0 D22	PPI0 D23	7	J1-114 114	PPI0 D22		7J1-7
	_	PPI0_D23	∎ J1-7	••••••	-	PPI0_D23	J1-/
J1-99 ∎99	PPI0_INT			J1-99 ∎	PPI0_INT		
J1-87 - 87	SPORT0_CLK	SPORT1_CLK	92 J1-92	J1-87 ∎ <u>87</u>	SPORTO_CLK SPO	ORT1_CLK	92 J1-92
J1-89 🗕 89	SPORT0 FS	SPORT1 FS	90 J1-90	J1-89 = 89	SPORT0 FS S	PORT1 FS	90 J1-90
J1-29 29	SPORTO TDV	SPORT1 TDV	30 J1-30	J1-29 ∎ 29	-	ORT1 TDV	30 J1-30
J1-88	SPORTO DO	SPORT1 D0	91 J1-91	J1-88 88		PORT1_D0	91 J1-91
01.00	-	-	J1-31	0.000			JI-31
0.021	0.0	SPORT1_D1	J1-31 ■ J1-31	01 02 0	-	PORT1_D1	31 ∎ J1-31
J1-35 ∎ <u>35</u>	SPORT_INT			J1-35 ∎ <u>35</u>	SPORT_INT		
J1-82 - 82		SPI0_RDY	50 J1-50	J1-82 ■ 82	SPI0_CLK	SPI0_RDY	50 J1-50
J1-83 - 83		SPI0 MOSI	84 J1-84	J1-83 83		SPI0 MOSI	84 J1-84
	SPI0_D2	SPI0_D3	34J1-34	J1-33 33	SPI0_MISC SPI0 D2	SPI0_D3	34 J1-34
01 00	SPI0 SEL1/		05	01 00 -			J1-34
J1-J3	SPI0_SS*	SPI0_SEL_A	J1-05	0.00 -		PI0_SEL_A	01-05
	SPI0_SEL_B	SPI0_SEL_C	38 ∎ J1-38	01 07	SPI0_SEL_B SI	PI0_SEL_C	38_∎ J1-38
J1-61 ∎ <u>61</u>	EXT_BOOT			J1-61 ∎ <u>61</u>	EXT_BOOT		
TWI0_A0	TWIO A0*			TWI0 A0 ∎ <u>56</u>	TWI0 A0*		
SCL0 79	SCL0*	SCL1*	42 J1-42	SCL0 79	SCL0*	SCL1*	42 J1-42
3CLU				3010			
SDA0 - 80	SDA0*	SDA1*	41∎ J1-41	SDA0 = 80	SDA0*	SDA1*	41∎ J1-41
J1-43 - 43	GPIO0	GPI01	78 J1-78	J1-43 ∎ <u>43</u>	GPI00	GPI01	78 J1-78
J1-44 - 44	GPIO2	GPIO3	77 J1-77	J1-44 ∎ <u>44</u>	GPIO2	GPIO3	77 J1-77
J1-4545		GPI05	76 J1-76	J1-45 ■ 45	GPIO4	GPI05	
J1-47	GPIO6	GPIO7*	74 J1-74	J1-45 ∎ J1-47 ∎47	GPIO6	GPIO7*	74 J1-74
				••••	0.100		-
J1-48 💶48	TMR_A	TMR_B	73 J1-73	J1-48 ∎ <u>48</u>	TMR_A	TMR_B	73 J1-73
J1-49 💶49	TMR_C	TMR_D*	72 J1-72	J1-49 ∎ <u>49</u>	TMR_C	TMR_D*	72 J1-72
50			62	50			C 2
J1-59 🖬 59	UART0_RX	UART0_TX	62∎ J1-62	J1-59 ∎ <u>59</u>	UART0_RX	UART0_TX	<u>62</u> ∎ J1-62
J1-65 ∎ <u>65</u>	WAKE*	SLEEP*	64 ∎ J1-64	J1-65 ∎ <u>65</u>	WAKE*	SLEEP*	64_∎ J1-64
J1-65 ∎ <u>65</u> J1-60 ∎ <u>60</u>	WAKE* RESET_IN*	SLEEP* RESET_OUT*	64 ∎ J1-64 57 ∎ J1-57	J1-65 <u>∎ 65</u> J1-60 ∎ 60		SLEEP*	64 ∎ J1-64 57 ∎ J1-57
01-00							-
J1-60 ∎ <u>60</u> J1-71 ∎ <u>71</u>	RESET_IN*	RESET_OUT*	57 J1-57	J1-60 ■ 60 J1-71 ■ 71	RESET_IN* RE	SET_OUT*	57 ∎ J1-57
J1-60 ∎ <u>60</u> J1-71 ∎ <u>71</u>	RESET_IN* CLKOUT VIN			J1-60 ■ 60	RESET_IN* RE CLKOUT VIN		-
J1-60 <u>60</u> J1-71 <u>71</u> VIN <u>120</u>	RESET_IN* CLKOUT VIN PS_IN	RESET_OUT* USB_VCC VIO	57 J1-57	J1-60 = 60 J1-71 = 71 VIN = 1	RESET_IN* RE CLKOUT VIN PS_IN	SET_OUT* USB_VCC VIO	J1-57 J1-57 USB_VC
J1-60 <u>60</u> J1-71 <u>71</u> VIN <u>120</u> PS_IN <u>2006</u>	RESET_IN* CLKOUT VIN PS_IN GND1	RESET_OUT*	57 J1-57	J1-60 ■ 60 J1-71 ■ 71 VIN ■ 1 PS_IN ■ 120	RESET_IN* RE CLKOUT VIN PS_IN GND1	SET_OUT* USB_VCC VIO GND2	57 J1-57 5 USB_VC 116 VIO
J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GNB	RESET_IN* CLKOUT VIN PS_IN GND1 GND3	RESET_OUT*	57 JJ1-57 5 USB_VCC 116 VIO 4 11	J1-60 ■ 60 J1-71 ■ 71 VIN ■ 1 PS_IN ■ 120 GNE	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3	SET_OUT* USB_VCC VIO GND2 GND4	57 J1-57 5 USB_VC 116 VIO
J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 6 6	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5	RESET_OUT* USB_VCC VIO GND2 GND4 GND4	57 JI-57 5 USB_VCC 116 VIO	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 17	RESET_IN* RE CLKOUT VIN PS_IN GND1	SET_OUT* USB_VCC VIO GND2	57 J1-57 5 USB_VC 116 VIO 4 11 23
J1-60 60 J1-711 VIN1 PS_IN1 GND 60 61 28	RESET_IN* CLKOUT VIN PS_IN GND1 GND3	RESET_OUT*	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND 17 28	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3	SET_OUT* USB_VCC VIO GND2 GND4	57 J1-57 5 USB_VC 116 VIO 4 11 23 36
J1-60 • 60 J1-71 • 71 VIN • 1 PS_IN • 120 6 6	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5	RESET_OUT* USB_VCC VIO GND2 GND4 GND4	57 JI-57 5 USB_VCC 116 VIO	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 17	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8	57 J1-57 5 USB_VC 116 VIO 4 11 23
J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 60 6 17 28	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND3 GND7 GND7 GND9	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND8	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND 17 28	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND10	57 J1-57 5 USB_VC 116 VIO 4 11 23 36
J1-60 • 60 J1-71 • 71 VIN • 1 PS_IN • 120 6ND 6 177 28 40	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND5 GND9 GND9	RESET_OUT* USB_VCC VIO GND2 GND4 GND4 GND6 GND12	57 JJ1-57 5 USB_VCC 116 VIO 4 11 23 36 46	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 17 28 40	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND5 GND9 GND9 GND11	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND10 GND12	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46
J1-60 60 J1-71 71 VIN 1 PS_IN 120 6 17 28 40 52 63	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 GND 6 17 28 40 50 6 3	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND7 GND7 GND13	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69
J1-60 60 J1-71 71 VIN 1 PS_IN 120 60 6 17 28 40 52 63 75	RESET_IN* CLKOUT VIN PS_IN GND1 GND5 GND7 GND9 GND11 GND13 GND13 GND14	RESET_OUT* USB_VCC VIO GND2 GND4 GND4 GND4 GND4 GND4 GND4	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 60 - 67 - 28 - 40 - 52 - 63 - 75	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND5 GND5 GND7 GND9 GND11 GND3 GND15	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81
J1-60 60 J1-71 71 VIN 120 GND 6 177 28 40 52 63 75 86	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND15 GND15	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18	57 JI-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 77 28 40 52 63 75 86	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND13 GND15 GND17	SET_OUT* USB_VCC VIO GND2 GND4 GND10 GND12 GND14 GND16 GND18	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93
J1-60 60 J1-71 71 VIN 120 FS_IN 66 177 28 40 52 63 75 86 98	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19	RESET_OUT* USB_VCC VIO GND2 GND4 GND14 GND16 GND18 GND14 GND16 GND18 GND18 GND18 GND18 GND18 GND18 GND18 GND19 GND18 GND20	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 93 104	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 17 28 40 52 63 75 86 98	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND5 GND5 GND7 GND9 GND11 GND3 GND15	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104
J1-60 60 J1-71 71 VIN 1 PS_IN 120 6 6 17 288 40 52 63 75 866 98 98	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND15 GND15	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 17 28 40 52 63 75 86 96 98	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND13 GND15 GND17	SET_OUT* USB_VCC VIO GND2 GND4 GND10 GND12 GND14 GND16 GND18	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93
J1-60 60 J1-71 71 VIN 120 FS_IN 120 6 177 28 40 52 63 75 86 98	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19	RESET_OUT* USB_VCC VIO GND2 GND4 GND14 GND16 GND18 GND14 GND16 GND18 GND18 GND18 GND18 GND18 GND18 GND18 GND19 GND18 GND20	57 JJ-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 93 104	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 6 6 17 28 40 52 63 75 86 98	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND15 GND17 GND19	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND16 GND16 GND20	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104
J1-60 60 J1-71 71 VIN 1 PS_IN 120 GNB 6 17 28 40 52 63 75 86 98 109 117	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND15 GND15 GND15 GND15 GND15 GND15 GND15 GND13 GND15 GND13 GND15 GND13 GND15 GND13 GND15 GND13 GND13 GND13 GND14 GND13 GND14 GND15 GND15 GND17 GND15 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND24 GND24 GND15 GND24 GND24 GND24 GND24 GND15 GND24 GN	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND18 GND20 GND24 GND24	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 6 - 177 - 28 - 40 - 52 - 6 - 177 - 28 - 6 - 120 - 52 - 6 - 120 - 6 - 120 - 120	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND19 GND21 GND21 GND21	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND10 GND14 GND14 GND18 GND20 GND22 GND24	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 C4
J1-60 60 J1-71 71 VIN 120 GND 6 6 6 75 75 86 98 109 117 J1-2 2 2	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND17 GND19 GND21 GND23 RSVD1	RESET_OUT* USB_VCC VIO GND2 GND4 GND10 GND14 GND16 GND18 GND10 GND12 GND14 GND18 GND20 GND24 GND24 RSVD2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 21 21 21 21 21 21 21 21 21	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 GND 6 6 75 6 75 6 75 6 6 75 6 6 75 6 86 98 109 117 17 J1-2 = 22	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND15 GND17 GND19 GND21 GND21 GND23 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND12 GND14 GND16 GND16 GND20 GND22 GND24 RSVD2	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 21 J1-21
J1-60 60 J1-71 71 VIN 1 PS_IN 120 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND13 GND15 GND15 GND15 GND17 GND15 GND17 GND17 GND17 RSVD1 RSVD1 RSVD3	RESET_OUT* USB_VCC VIO GND2 GND4 GND14 GND16 GND18 GND16 GND16 GND12 GND24 GND24 RSVD2 RSVD4	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 93 104 115 118 21 J1-21 24 J1-24	J1-60 = 60 J1-71 = 71 VIN = 1 PS_IN = 120 GND G GND G GND G GND G GND G GND G GND G G 17 22 G 3 109 117 117 22 J1-22 J1-22 22 J1-22 22 J1-22 22 J1-22 22 J1-22	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19 GND19 GND21 GND21 GND23 RSVD1 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 93 104 115 118 21 J1-21 24 J1-24
J1-60 60 J1-71 71 PS_IN 120 GND 6 75 86 98 98 109 117 J1-22 22 J1-25 25	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND17 GND19 GND121 GND23 RSVD1	RESET_OUT* USB_VCC VIO GND2 GND4 GND10 GND14 GND16 GND18 GND10 GND12 GND14 GND18 GND20 GND24 GND24 RSVD2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 21 21 21 21 21 21 21 21 21	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 17 28 40 52 6 52 52 52 52 52 52 52 52 52 52 52 52 52	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND15 GND17 GND19 GND21 GND21 GND23 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND12 GND14 GND16 GND16 GND20 GND22 GND24 RSVD2	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 21 J1-21
J1-60 60 J1-71 71 VIN 1 PS_IN 120 6 6 17 28 40 52 63 75 8 6 98 109 117 J1-22 22 J1-25 25 5	RESET_IN* CLKOUT VIN PS_IN GND1 GND5 GND7 GND9 GND11 GND15 GND17 GND13 GND14 GND15 GND17 GND23	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND16 GND18 GND20 GND24 GND26 GND24 GND26 GND2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 115 115 118 21 21 24 J1-21 24 J1-21 24 J1-51	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 60 - 7 - 71 VIN - 1 PS_IN - 120 - 71 - 71 - 71 - 71 - 71 - 71 - 71 - 71	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND17 GND19 GND21 GND21 GND23 RSVD1 RSVD3 RSVD5	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND70 GND712 GND712 GND714 GND714 GND714 GND712 GND714 GND714 GND712 GND724 RSVD2 RSVD4 RSVD6	57 J1-57 5 USB_VC 116 VIO 4 4 11 23 36 46 58 69 81 93 104 115 118 21 J1-21 24 J1-24 51 J1-51
J1-60 60 J1-71 71 PS_IN 120 GN0 6 75 86 98 109 117 J1-22 2 J1-22 22 J1-25 25 J1-53 53	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND7 GND9 GND11 GND15 GND15 GND17 GND19 GND19 GND11 GND13 GND14 GND15 GND17 GND18 RSVD17 RSVD1 RSVD5 RSVD7	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND24 GND24 RSVD2 RSVD2 RSVD2 RSVD2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 115 115 115 115 115 115 11	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 120 - 120	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND9 GND11 GND13 GND13 GND13 GND13 GND19 GND19 GND19 GND19 GND19 GND21 GND21 SVD1 RSVD1 RSVD1 RSVD5 RSVD5 RSVD5 RSVD7	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND10 GND12 GND14 GND18 GND20 GND24 RSVD2 RSVD2 RSVD4 RSVD4 RSVD6	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 93 104 115 118 21 J1-21 24 J1-21 54 J1-54 54 J1-54
J1-60 60 J1-71 71 PS_IN 120 6NB 6 177 28 40 52 63 75 86 98 109 117 J1-22 22 J1-25 25 J1-53 53 J1-55 55	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND7 GND7 GND1 GND7 GND7 GND7 GND7 GND11 GND7 GND13 GND15 GND15 GND19 GND121 GND23 RSVD1 RSVD5 RSVD7 RSVD9	RESET_OUT* USB_VCC VIO GND2 GND4 GND16 GND19 GND14 GND16 GND18 GND20 GND24 GND24 RSVD2 RSVD2 RSVD2 RSVD2 RSVD4 RSVD6 RSVD6 RSVD6	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 104 115 118 21 21 36 46 58 104 115 118 21 21 21 21 21 21 24 31-51 54 55 54 55 55 57 57 57 57 57 57 57 57	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND 6 6 7 2 8 4 0 52 6 98 109 117 J1-22 - 2 J1-25 - 25 J1-55 - 55 J1-55 - 55	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND15 GND17 GND19 GND21 GND21 GND21 GND21 GND23 RSVD3 RSVD5 RSVD7 RSVD9	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND12 GND14 GND16 GND16 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD8 RSVD10	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 24 J1-21 24 J1-21 51 J1-51 51 J1-54 66 9 J1-56
J1-60 60 J1-71 71 VIN 1 PS_IN 120 6NB 6 6 177 28 40 52 63 75 86 98 109 117 J1-22 22 J1-25 25 J1-53 53 J1-55 55 J1-67 67	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND4 GND5 GND7 GND1 GND5 GND1 GND5 GND1 GND5 GND13 GND15 GND17 GND13 GND14 GND15 GND17 GND21 GND23 RSVD1 RSVD5 RSVD7 RSVD9 RSVD11	RESET_OUT* USB_VCC VIO GND2 GND4 GND16 GND18 GND16 GND16 GND16 GND20 GND22 GND24 RSVD2 RSVD2 RSVD2 RSVD2 RSVD12	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 93 104 115 118 21 J1-21 24 J1-21 24 J1-24 51 93 104 115 116 116 116 116 116 116 116	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 - 6 - 6 - 6 - 7 - 7 - 71 VIN - 1 PS_IN - 120 - 6 - 6 - 7 - 71 - 75 - 80 - 98 - 10-75 - 55 - 75 - 7	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND13 GND14 GND13 GND15 GND17 GND17 GND21 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD5 RSVD9 RSVD9 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND16 GND16 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD12	57 J1-57 5 USB_VC 116 VIO 4 111 23 36 69 81 93 104 115 118 21 J1-21 24 J1-24 51 J1-51 54 J1-66 82 J1-68
J1-60 60 J1-71 71 PS_IN 120 GND 6 6 7 7 7 8 6 9 8 40 52 6 3 75 86 6 3 75 86 9 8 109 117 17 28 40 52 53 175 86 6 3 3 75 86 98 109 1177 17 7 1 28 10 120 120 120 120 120 120 120 120 120	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND4 GND5 GND7 GND9 GND15 GND17 GND18 GND19 GND23 RSVD1 RSVD5 RSVD7 RSVD9 RSVD11	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND16 GND18 GND20 GND22 GND24 GND26 GND2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 J1-21 224 J1-21 224 J1-21 224 J1-21 224 J1-51 54 69 69 69 81 93 104 115 115 115 115 115 115 115 11	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND GND - 6 - 71 - 70 - 70	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19 GND17 GND19 GND17 GND19 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD9 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND70 GND10 GND12 GND14 GND14 GND14 GND14 GND14 GND24 RSVD2 RSVD2 RSVD14	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 93 104 115 118 21 J1-21 24 J1-24 51 J1-54 66 J1-66 69 J1-66 90 J1-66
J1-60 60 J1-71 71 PS_IN 120 GND 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND7 GND9 GND11 GND15 GND15 GND15 GND17 GND18 GND19 GND17 GND18 RSVD17 RSVD1 RSVD5 RSVD7 RSVD7 RSVD11 RSVD13 RSVD13 RSVD15	RESET_OUT* USB_VCC VIO GND2 GND4 GND16 GND18 GND16 GND16 GND16 GND20 GND22 GND24 RSVD2 RSVD2 RSVD2 RSVD2 RSVD12	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 93 104 115 118 21 J1-21 24 J1-21 24 J1-24 51 93 104 115 116 116 116 116 116 116 116	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND - 6 - 71 VIN - 1 PS_IN - 120 - 71 -	RESET_IN* RE	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND16 GND16 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD12	57 J1-57 5 USB_VC 116 VIO 4 111 23 36 69 81 93 104 115 118 21 J1-21 24 J1-24 51 J1-51 54 J1-66 82 J1-68
J1-60 60 J1-71 71 PS_IN 120 GND 6 6 7 7 7 8 6 9 8 109 117 J1-22 22 J1-25 25 J1-55 55 J1-57 55 J1-67 67 J1-70 70	RESET_IN* CLKOUT VIN PS_IN GND1 GND3 GND4 GND5 GND7 GND9 GND15 GND17 GND18 GND19 GND23 RSVD1 RSVD5 RSVD7 RSVD9 RSVD11	RESET_OUT* USB_VCC VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND16 GND18 GND20 GND22 GND24 GND26 GND2	57 J1-57 5 USB_VCC 116 VIO 4 11 23 36 46 58 69 81 93 104 115 118 21 J1-21 224 J1-21 224 J1-21 224 J1-21 224 J1-51 54 69 69 69 81 93 104 115 115 115 115 115 115 115 11	J1-60 - 60 J1-71 - 71 VIN - 1 PS_IN - 120 GND GND - 6 - 71 - 70 - 70	RESET_IN* RE CLKOUT VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19 GND17 GND19 GND17 GND19 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD9 RSVD1	SET_OUT* USB_VCC VIO GND2 GND4 GND6 GND70 GND10 GND12 GND14 GND14 GND14 GND14 GND14 GND24 RSVD2 RSVD2 RSVD14	57 J1-57 5 USB_VC 116 VIO 4 11 23 36 46 93 104 115 118 21 J1-21 24 J1-24 51 J1-54 66 J1-66 69 J1-66 90 J1-66

Figure 5. SDP Breakout Board—EI3 Connectors

	SDP	Brea	akout	Board	User	Guide
8 - 8	P2 ASYNC_AI	MSO	ASYNC_AMS2	9∎ J2-9		

	10				22	
12-8 - 8			9 - 120	J2-8 = 8	ASYNC_AMSO ASYNC_A	MS2 9 J2-9
J2-0 - 10	-	C_AMS2	∎ J2-9 7	J2-10 10	ASYNC_AMS0 ASYNC_A	7
J2-10 - 21		NC_AOE	25	32-10	ASTNC_ARDY ASYNC_E	SOL 05
J2-21			24	J2-21 ■ <u>21</u> J2-22 ■ <u>22</u>	ASYNC_BR ASYNC_	
52-22			- 02-24	J2-22 J2-26 <u>26</u>	ASTNC_BR ASTNC_ ASYNC_A4 ASYNC	
02 20 2	-		20	20 20	ASYNC_A6 ASYNC	
02 23			202 000	32-23 =		= 52-50
02-01		YNC_A9	24	32-31	ASYNC_A8 ASYNC	_A9 = 32-32
02 00		10_AU	27	02-00 -	ASYNC_A10 ASYNC_	
32-33 - 20	-	NC_A13	37 J2-37 39 J2-30		ASYNC_A12 ASYNC_	
JZ-JO - /1		NC_A15	42	02-00	ASYNC_A14 ASYNC_	40
52-41		NC_A17	42∎ J2-42	42	ASYNC_A16 ASYNC_	44
J2-43 ■ 43		NC_A19	44∎ J2-44		ASYNC_A18 ASYNC_	
52-45		10_721	94∎ J2-94	02 10 -	ASYNC_A20 ASYNC_	06
J2-95 ■ 95		110_7120	96∎ J2-96	02-00 - 07	ASYNC_A22 ASYNC_	
52-57	-	NC_A25	99∎ J2-99 20	52-57	ASYNC_A24 ASYNC_	20
32-101 -		NC_D17	20∎ J2-20	402	ASYNC_D16 ASYNC_	10
32-102		NC_D19	19∎ J2-19 18	402	ASYNC_D18 ASYNC_	40
J2-103 = 103			18∎ J2-18 16	105	ASYNC_D120 ASYNC_	40
32-103		NC_D23	16∎ J2-16	32-103	ASYNC_D22 ASYNC_	15
J2-106 <u>■ 106</u> 12.107 ■ 107		NC_D25	<u>15</u> J2-15	107	ASYNC_D24 ASYNC_	= 32-15
J2-107		NC_D27	14∎ J2-14 13	32-107	ASYNC_D26 ASYNC_	13
32-100		110_023	13∎ J2-13	32-100	ASYNC_D28 ASYNC_	10
J2-110 <u>■ 110</u>	ASYNC_D31 ASY	NC_D30	12∎ J2-12	J2-110 ■ 110	ASYNC_D31 ASYNC_	D30 12 J2-12
12-47 47		VMO AL	48 12-48	J2-47 47	PWM0 AH PWM0	AL 48 J2-48
02-47 =			= 02 +0 50	J2-49 49	PWM0_BH PWM0	
02 40 -		VM0_BL VM0 CL	E 02 00	J2-51 51	PWM0_CH PWM0	02.00
02-01 -	-	VM0_CL		J2-54 = 54	PWM0_DH PWM0_	
62-54 -	-	-	55∎ J2-55 59∎ J2-59	J2-57 57	PWM0_TRIP0 PWM0_TF	= 02-00
52-51	-	0_TRIP1	J2-59	J2-56 = 56	PWM0_SYNC	UF1 02-35
J2-56 ■ <u> </u>	PWM0_SYNC			02.00		
J2-73 - 73	ACM0_CLK AC	CM0_FS	<u>70</u> ∎ J2-70	J2-73 - 73	ACM0_CLK ACM0	_FS 70 J2-70
J2-64 64		CM0 A1	65 J2-65	J2-64 ■ 64	ACM0_A0 ACM0	_A1 65 J2-65
J2-66 66		- 1	67 J2-67	J2-66 ■ 66	ACM0_A2 ACM0	_A3 67 J2-67
J2-68 - 68		смо_то	<u>71</u> ∎ J2-71	J2-68 =68	ACM0_A4 ACM0	_T0 71 J2-71
J2-72 - 72	ACM0_T1			J2-72 ■ 72	ACM0_T1	
			_			
VIN — 1	VIN US	D_+001	5 USB_VCC	VIN = 1	VIN USB_V	
PS_IN ■120	PS_IN	vio	116 ∎ VIO	PS_IN <u>120</u>	PS_IN V	10 116 VIO
3	GND1	GND2	4	3	GND1 GN	D2 4
6		GND2 GND4	11	<u> </u>	GND3 GN	11
17	GND3		23	17	GND5 GN	
28	GND5 GND7	GND6 GND8	36		GND7 GN	
40		GND10	46	40	GND9 GNE	46
52			58	52	GND11 GNE	50
63		GND12 GND14	69	63	GND13 GNE	
75			81	75	GND15 GND	91
86			93	86	GND17 GNE	03
98			104	98	GND19 GNE	101
109	GINDIS	GND20	115	109	GND21 GND	445
117		GND22	118	117	GND23 GNE	
		0.1221				
J2-2 💶 2	RSVD1	RSVD2	<u>60</u> ∎ J2-60	J2-2 ■ 2	RSVD1 RSV	D2 60 J2-60
J2-61 ∎ <u>61</u>	RSVD3	RSVD4	62∎ J2-62	J2-61 ■ 61	RSVD3 RSV	D4 62 J2-62
J2-74 💻 74	RSVD5	RSVD6	76∎ J2-76	J2-74 —	RSVD5 RSV	D6 76 J2-76
J2-77 =77		RSVD8	78 J2-78	J2-77 ■ 77	RSVD7 RSV	
J2-79 - 79	RSVD9 F	RSVD10	80∎ J2-80	J2-79 ■ 79	RSVD9 RSVD	
J2-82 = 82	RSVD11 F	RSVD12	83∎ J2-83	J2-82 ■ 82	RSVD11 RSVD	
J2-84 = 84	RSVD13 F	RSVD14	85∎ J2-85	J2-84 ■ 84	RSVD13 RSVE	
J2-87 - 87	RSVD15 F	RSVD16	<u>88</u> ∎ J2-88	J2-87 ■87	RSVD15 RSVD	
J2-89 - 89	RSVD17 F	RSVD18	<u>90</u> ∎ J2-90	J2-89 =89	RSVD17 RSVD	
J2-91 ■91	RSVD19 F	RSVD20	92∎ J2-92	J2-91 ∎ <u>91</u>	RSVD19 RSVD	
J2-100 - 100		RSVD22	111 J2-111	J2-100 <mark>■ 100</mark>	RSVD21 RSVD	
J2-112 - 112		RSVD24	113 J2-113	J2-112∎ <u>112</u>	RSVD23 RSVD	
J2-114 ∎ <u>114</u>	RSVD25 F	RSVD26	119 J 2-119	J2-114∎ <u>114</u>	RSVD25 RSVD	026 119 ∎ J2-119 👸
				l		026 119 J2-119 Ģ
	HIROSE FX8-120S-SV	(21)			HIROSE EX8-120P-SV1(91)	

HIROSE_FX8-120S-SV(21)

HIROSE_FX8-120P-SV1(91)

800-96860

Figure 6. SDP Breakout Board—Probing Connectors

SDP Breakout Board User Guide





Figure 7. SDP Breakout Board—EEPROM and Power

UG-282

200-96860

NOTES

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ESD Caution

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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