

# SDP Breakout Board User Guide UG-282

One Technology Way • P.O. Box 9106 • Norwood, MA 02062-9106, U.S.A. • Tel: 781.329.4700 • Fax: 781.461.3113 • www.analog.com

### **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<sup>™</sup> 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.

Three Technology Way

P.O. Box 9106

Norwood, MA 02062-9106 USA

#### **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.

# SDP Breakout Board User Guide

### **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,  $2 \times 120$  pin receptacle connector and  $2 \times 120$  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.

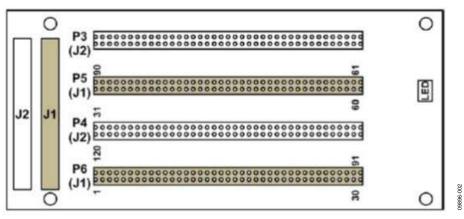


Figure 2. SDP Breakout Board—Top View

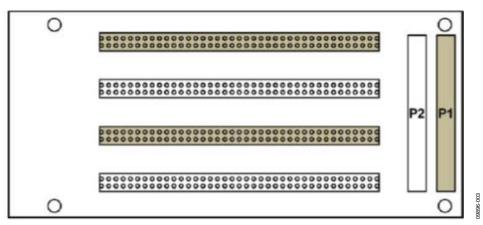


Figure 3. SDP Breakout Board—Bottom View

#### **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.) <sup>1</sup>
8	PAR_D21	Parallel Data Bus Bit 21. (No connect.) <sup>1</sup>
9	PAR_D19	Parallel Data Bus Bit 19. (No connect.) <sup>1</sup>
10	PAR_D17	Parallel Data Bus Bit 17. (No connect.) <sup>1</sup>
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.) <sup>1</sup>
30	SPORT_TDV1	SPI Data Line 2. (No connect.) <sup>1</sup>
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.) <sup>1</sup>
34	SPI_D3	SPORT Data Line. (No connect.) <sup>1</sup>
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 <sup>2</sup> C Data 1.
42	SCL_1	I <sup>2</sup> 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 $\Omega$ 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 <sup>2</sup> C Clock 0. Daughter board EEPROM must be connected to this bus.
80	SDA_0	I <sup>2</sup> 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_SEL_A	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.
93 94	PAR_CLK	Clock for Synchronous Parallel Interface (PPI).
94 95	PAR_CLK PAR_FS2	Synchronous (PPI) Parallel Frame Sync 2.
95 96	PAR_P32 PAR_A0	Parallel Address Bus Bit 0.
		Parallel Address Bus Bit 2.
97 08	PAR_A2	
98 00	GND	Connect to ground plane of board.
99	PAR_INT	Parallel Interrupt. Used to trigger a nonperiodic parallel event.

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.) <sup>1</sup>
112	PAR_D18	Parallel Data Bus Bit 18.1 (No connect.) <sup>1</sup>
113	PAR_D20	Parallel Data Bus Bit 20.1 (No connect.) <sup>1</sup>
114	PAR_D22	Parallel Data Bus Bit 22. (No connect.) <sup>1</sup>
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.

 $^{\rm 1}$  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				69	
51	GND		GND	70	
50	NC		NC	71	
49	NC		NC	72	
48	TMR_C*	TIMERS	TMR_D	73	
47	TMR_A	THMEINO	TMR_B	74	
46	GPIO6		GPIO7	75	
45	GND		GND	76	
44	GPIO4	GENERAL	GPIO5	77	
43	GPIO2	INPUT/OUTPUT	GPIO3	78	
43	GPIO0		GPIO1		
-	SCL 1		SCL 0	79	
41	SDA 1	I2C	SDA_0	80	
40	GND		GND	81	
39	SPI SEL1/SPI	SS	SPI_CLK	82	
38	SPI_SEL_C		SPI MISO	83	
37	SPI SEL B	SPI	SPI MOSI	84	
36	GND		SPI SEL A	85	
35	-			86	
34	SERIAL_INT			87	
33	SPI_D3*		SPORT_TSCLK	88	
32	SPI_D2*	SPORT	SPORT_DT0	89	
31	SPORT_DT1	0.0111	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	
23	GND		GND		
	PAR CS		PAR INT	99	
21	PAR RD		PARWR	100	
20	PAR D1		PAR D0	101	
19	PAR D3	PARALLEL	PAR D2	102	
18	PAR D5	PORT	PAR D4	103	
17	GND		GND	104	
16	PAR D7		PAR D6	105	
15	PAR D9		PAR D8	106	
14	PAR D11		PAR D10	107	
13	PAR D13		PAR D12	108	
12	PAR_DIS		GND	109	
11	-			110	
10			PAR_D15	111	
9	PAR_D17*		* PAR_D16	112	
8	PAR_D19*		* PAR_D18	113	
7	PAR_D21 *		* PAR_D20	114	
6	PAR_D23 *		* PAR_D22	115	
5	GND		GND	116	
4	USB_VBUS		VIO(+3.3V)	117	
3	GND		GND	118	
2	GND		GND	119	4
1	NC *N		NC	120	00-(
<b>.</b>	VIN <sup>^</sup> N	C ON BLACKFIN S	NC NC	120	00-96860
				,	ŏ

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				P1		
J1-94 <b>=</b> 94	PPI0 CLK	PPI FS1	27 J1-27	J1-94 <b>■</b> 94	PPI0 CLK	PPI FS1	27 J1-27
J1-9495		PPI0 FS3	26J1-26	J1-94 J1-95	FFI0_OEK	PPI0 FS3	26 J1-27
01-30	1110_102		- 01-20	01-55 =	1110_102	_	01-20
J1-101 = 101	PPI0_D0	PPI0_D1	= 01-20	01-101		PPI0_D1	10
J1-102 102	PPI0_D2	PPI0_D3	10	01 102 -		PPI0_D3	01-13
J1-103 = 103		PPI0_D5	18 J1-18	J1-103 = 103		PPI0_D5	18 J1-18
J1-105 - 105	1110_00	PPI0_D7	16∎ J1-16	J1-105 = 105	1110_00	PPI0_D7	<u>16</u> ∎ J1-16
J1-106 🖬 <u>106</u>	PPI0_D8	PPI0_D9	15 J1-15	J1-106 ∎ <u>106</u>		PPI0_D9	15 J1-15
J1-107 🖬 107	PPI0_D10	PPI0_D11	14 J1-14	J1-107 = 107	PPI0 D10	PPI0_D11	14 J1-14
J1-108 <u>108</u>		PPI0 D13	13 J1-13	J1-108 - 108		PPI0 D13	13 J1-13
J1-12 12		PPI0 D15	110 J1-110	J1-12	PPI0 D14	PPI0 D15	110 J1-110
	1110_014	-	10	01-12 - 111		_	10 J1-10
01-111	PPI0_D16	PPI0_D17		01-111		PPI0_D17	
J1-112 = 112		PPI0_D19	<b>- 0 1</b> - <b>3</b>	J1-112 = 112	1110_010	PPI0_D19	01-5
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∎ J1-7	J1-114 🖬 114	PPI0 D22	PPI0 D23	7 J1-7
J1-99 <b>-</b> 99	PPI0_INT	_		J1-99 <b>=</b> 99	PPI0_INT	_	
J1-87 - 87	SPORTO CLK	SPORT1_CLK	92 J1-92	J1-87 ∎ <u>87</u>	SPORT0_CLK	SPORT1 CLK	92 J1-92
J1-89 - 89		SPORT1 FS	90 J1-90	J1-89 89	SPORTO FS	SPORT1 FS	90 J1-92
J1-09	J SPORIO_FS		<b>U</b> 01-30	01-05 -		_	
0.201	0.0.0.0	SPORT1_TDV	01	01-20	SPORT0_TDV	SPORT1_TDV	01-00
J1-88 ∎88		SPORT1_D0	91∎ J1-91	J1-88 <b>∎</b> 88	0.0	SPORT1_D0	91 J1-91
J1-32 ∎32	0.0	SPORT1_D1	31∎ J1-31	J1-32 🖬 32	SPORT0_D1	SPORT1_D1	31 J1-31
J1-35 - 35	SPORT_INT			J1-35 ∎ <u>35</u>	SPORT_INT		
J1-82 =82	SPI0_CLK	SPI0 RDY	50 J1-50	J1-82 <b>■</b> 82	SPI0_CLK	SPI0 RDY	50 J1-50
J1-82			84J1-84	J1-82		SPI0_KD1	84 J1-84
01-03	SPI0_MISO SPI0_D2	SPI0_MOSI		01-00			
01-00	SPI0_52	SPI0_D3		01-00		SPI0_D3	01-34
JI-39	1900 99*	SPI0_SEL_A	85 J1-85	J1-39 ∎ <u>39</u>	SPI0_SEL1/ SPI0_SS*	SPI0_SEL_A	85 J1-85
J1-37 - 37	SPI0 SEL B	SPI0_SEL_C	38_∎ J1-38	J1-37 ∎ <u>37</u>	SPI0_SS	SPI0_SEL_C	38 J1-38
J1-61 ∎ <u>6</u>				J1-61 ∎ <u>61</u>	EXT_BOOT		
TWI0_A056	TWIO AO*	-		TWI0_A0 = 56	TWIO A0*		
1010_A0		001.44	42 11-42	11110_40 - 70	11110_40	00144	42 J1-42
SCLU	3010	SCL1*	01-42	SCLU	SCL0*	SCL1*	
SDA0 - 80	SDA0*	SDA1*	41 ∎ J1-41	SDA0 = 80	SDA0*	SDA1*	41∎ J1-41
J1-43 💻 43	GPIO0	GPIO1	78 J1-78	J1-43 <b>–</b> 43	GPIO0	GPIO1	78 J1-78
J1-44 🖬 🛄 44	GPIO2	GPIO3	77 J1-77	J1-44 ∎ <u>44</u>	GPIO2	GPIO3	77 J1-77
J1-45 - 4	GPIO4	GPIO5	76 J1-76	J1-45 ∎ 45	GPIO4	GPIO5	76 J1-76
J1-47		GPIO7*	74 J1-74	J1-47 - 47		GPIO7*	74 J1-74
11_48 - 48			73 - 11-73	40			73 11-73
01-40		TMR_B		J1-48 ■ 48		TMR_B	01-73
J1-49 ■49	TMR_C	TMR_D*	72∎ J1-72	J1-49 ∎ <u>49</u>	TMR_C	TMR_D*	72 J1-72
J1-59 - 59	UART0_RX	UART0_TX	62∎ J1-62	J1-59 <b>∎</b> 59	UART0_RX	UART0_TX	62 J1-62
J1-65 💶6	WAKE*	SLEEP*	J1-64	J1-65 ∎ <u>65</u>	WAKE*	SLEEP*	
01-05				0.00			
J1-60 ∎ <u>60</u>	RESET_IN*	RESET_OUT*	<u>57</u> _∎ J1-57	J1-60 ∎ <u>60</u>	RESET_IN*	RESET_OUT*	57 J1-57
.11.71 7	CLKOUT						-
J1-71 ∎—/	CLKOUI			J1-71 ∎ <u>71</u>	CLKOUT		
J1-71 ■ <u> </u>		USB_VCC	5∎ USB_VCC	J1-71 ∎ <u>71</u> VIN ∎ <u>1</u>		USB VCC	USB VC
	VIN	USB_VCC VIO	5∎ USB_VCC 116∎ VIO	01-77 -	VIN	USB_VCC VIO	- 00D_00
VIN <b>=</b> 1		_		VIN <b>•</b> 1	VIN PS_IN		- 00D_00
VIN ∎ <u>1</u> PS_IN ∎ <u>12</u>	- VIN PS_IN - GND1	VIO GND2		VIN ■1 PS_IN ■120	VIN PS_IN GND1	VIO GND2	116 VIO
VIN <u>12</u> PS_IN <u>12</u> GND	VIN PS_IN GND1 GND3	GND2 GND4	116 VIO	VIN = PS_IN = GND 6	VIN PS_IN GND1 GND3	VIO GND2 GND4	116 VIO
VIN1 PS_IN12 GNB 6 17	- VIN PS_IN - GND1 - GND3 - GND5	GND2 GND4 GND6	116 VIO	VIN =1 PS_IN =20 GND 6 17	VIN PS_IN GND1 GND3 GND5	GND2 GND4 GND6	116 VIO
VIN 12 PS_IN 12 GND 6 17 28	- VIN PS_IN - GND1 - GND3 - GND5 - GND7	VIO GND2 GND4 GND6 GND8	116 VIO 4 11 23 36	VIN = PS_IN = 6 17 28	VIN PS_IN GND1 GND3 GND5 GND7	GND2 GND4 GND6 GND8	116 VIO 4 11 23 36
VIN = 1 PS_IN = 120 GND 6 177 288 400	- VIN PS_IN - GND1 - GND3 - GND5	GND2 GND4 GND6	116 VIO 4 11 23 36 46	VIN = 1 PS_IN = 120 6 6 17 28 40	VIN PS_IN GND1 GND3 GND5	GND2 GND4 GND6	116 VIO 4 11 23 36 46
VIN =1 PS_IN =12 GND 6 17 228 40 52	- VIN PS_IN - GND1 - GND3 - GND5 - GND7	VIO GND2 GND4 GND6 GND8	116 VIO 4 11 23 36 46 58	VIN = PS_IN = 6 17 28	VIN PS_IN GND1 GND3 GND5 GND7	GND2 GND4 GND6 GND8	116 VIO 4 11 23 36
VIN = 1 PS_IN = 120 GND 6 177 288 400	- VIN - PS_IN - GND1 - GND3 - GND5 - GND7 - GND9	GND2 GND4 GND6 GND8 GND10	116 VIO 4 11 23 36 46	VIN = 1 PS_IN = 120 6 6 17 28 40	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11	GND2 GND4 GND6 GND8 GND10 GND12	116 VIO 4 11 23 36 46
VIN =1 PS_IN =12 GND 6 17 228 40 52	- VIN - VIN - GND1 - GND3 - GND5 - GND7 - GND9 - GND9 - GND11 - GND13	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND12	116 VIO 4 11 23 36 46 58	VIN = _1 PS_IN = _120 6 17 28 40 52	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13	GND2 GND4 GND6 GND8 GND10 GND12 GND14	116 VIO 4 11 23 36 46 58
VIN =1 PS_IN =12 GND 6 17 28 40 52 63 75	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16	116 VIO 4 111 23 36 4 69 81	VIN = PS_IN = GND 6 17 28 40 53 75	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15	GND2 GND4 GND4 GND8 GND8 GND10 GND12 GND14 GND16	116 VIO 4 4 11 23 36 46 58 69 81
VIN =1 PS_IN =12 GND 6 f7 728 40 52 675 86	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND15 GND17	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18	116 VIO 4 111 23 36 4 69 81 93	VIN = 1 PS_IN = 120 6 6 75 6 40 52 86	VIN PS_IN GND1 GND3 GND5 GND7 GND1 GND13 GND15 GND15 GND17	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18	116 VIO 4 11 23 36 46 58 69 81 93
VIN =1 PS_IN =12	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND18	116 VIO 4 11 23 36 46 58 69 81 93 104	VIN 1 PS_IN 120 6 17 28 52 63 52 63 98	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND18 GND18	116_VIO 4 11 12 36 46 58 69 81 93 104
VIN =1 PS_IN =12 GNB 6 17 288 40 52 63 756 898 109	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND19 GND19	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18	116      VIO        4      11        11      11        23      36        58      69        81      93        104      115	VIN 1 PS_IN 120 6 17 28 40 52 63 75 86 98 90 90 90 90 90 90 90 90	VIN PS_IN GND1 GND3 GND5 GND7 GND11 GND13 GND15 GND17 GND19 GND19 GND21	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18	116 VIO 4 111 23 36 46 58 69 81 93 104 115
VIN =1 PS_IN =12 GNB 6 6 6 7 7 7 8 8 6 9 8 9 8	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND15 GND17 GND19 GND19 GND19	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND18	116 VIO 4 11 23 36 46 58 69 81 93 104	VIN 1 PS_IN 120 6 17 28 52 63 52 63 98	VIN PS_IN GND1 GND3 GND5 GND7 GND11 GND13 GND15 GND17 GND19 GND19 GND21	GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND18 GND18	116_VIO 4 11 12 36 46 58 69 81 93 104
VIN = PS_IN =2 GNB  6  75 866 998 109 117 117 228	VIN PS_IN GND1 GND3 GND5 GND9 GND1 GND1 GND1 GND1 GND1 GND1 GND1 GND1 GND1 GND1 GND2 GND1 GND1 GND2 GND2 GND1 GND3 GND2 GND3 GND3 GND4 GND4 GND5 GND4 GND5 GND4 GND5 GND4 GND5 GND4 GND5 GND4 GND5 GND4 GND4 GND5 GND4 GND5 GND4 GND5 GND5 GND5 GND4 GND5 GND5 GND4 GND5 GND4 GND5	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24	116  VIO    4  11    11  11    23  36    46  58    69  81    93  104    115  118	VIN = 1 PS_IN = 120 6 6 7 7 8 6 9 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND15 GND15 GND15 GND15 GND15 GND15	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24	116 VIO 4 111 23 36 46 58 69 81 93 104 115 118 cc
VIN ■1 PS_IN ■12	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19 GND17 GND19 GND21 GND23 RSVD1	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND22 GND24 RSVD2	116  VIO    4  11    11  23    36  46    58  69    81  93    104  115    118  21    21  J1-21	VIN = 1 PS_IN = 120 6 6 75 6 40 52 63 75 86 98 99 109 117 J1-2 = 2	VIN PS_IN GND1 GND3 GND5 GND7 GND1 GND13 GND13 GND13 GND13 GND17 GND19 GND21 GND23 RSVD1	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2	116 VIO 4 111 23 36 46 93 104 115 118 21 21 J1-21
VIN =1 PS_IN =12	VIN        PS_IN        GND1        GND3        GND5        GND7        GND11        GND13        GND15        GND15        GND17        GND18        GND21        GND23	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND22 GND24 RSVD2 RSVD2	116  VIO    4  11    111  11    23  36    46  58    69  81    93  104    115  115    118  11-21    24	VIN 1 PS_IN 120 GND 6 17 28 4 52 53 55 53 109 109 117 J1-22 2 J1-22 222	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND15 GND17 GND21 GND23 RSVD1 RSVD1 RSVD3	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2	116 VIO 4 111 23 36 46 58 69 81 93 104 115 118 21 J1-21 24 J1-24 55
VIN =1 PS_IN =12 PS_IN =12 GNB	VIN        PS_IN        GND1        GND3        GND5        GND7        GND11        GND13        GND15        GND17        GND21        GND23        RSVD1        RSVD1        RSVD5	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD4	116  VIO    4  4    11  11    23  36    46  58    69  81    93  104    115  118    21  J1-21    24  J1-21    24  J1-21    24  J1-21	VIN = 1 PS_IN = 120 GND 6 17 20 6 40 52 6 40 52 52 56 98 109 117 217 217 217 217 217 217 217	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND11 GND13 GND15 GND15 GND17 GND23 RSVD1 RSVD1 RSVD3 RSVD5	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD2	116 VIO 4 111 23 36 46 58 69 81 93 104 115 118 21 21 J1-21 24 J1-21 24 J1-21 24 J1-21 24 J1-21
VIN =1 PS_IN =12 $PS_IN = _12$ GND 40 52 40 52 40 52 60 909 107 1-22 22 $J1-22$ = _22 $J1-22$ = _22 $J1-25$ = _55 $J1-53$ = _53	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND13 GND14 GND13 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND14 GND3 GND15 GND14 GND3 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND5 GND7 GND14 GND13 GND15 GND14 GND14 GND13 GND15 GND14 GND14 GND13 GND15 GND14 GND15 GND14 GND13 GND15 GND17 GND14 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND5	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND22 GND24 RSVD2 RSVD2	116  VIO    4  11    111  11    23  36    46  58    69  81    93  104    115  115    118  11-21    24	VIN 1 PS_IN 120 GND 6 17 28 4 52 53 55 53 109 109 117 J1-22 2 J1-22 222	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND15 GND15 GND15 GND15 GND15 GND21 GND21 GND23 RSVD1 RSVD3 RSVD5	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2	116 VIO 4 111 23 36 46 58 69 81 93 104 115 118 21 J1-21 24 J1-24 55
VIN 12 PS_IN 12	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND13 GND14 GND13 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND13 GND14 GND14 GND3 GND15 GND14 GND3 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND14 GND3 GND5 GND7 GND14 GND3 GND5 GND7 GND14 GND13 GND15 GND14 GND14 GND13 GND15 GND14 GND14 GND13 GND15 GND14 GND15 GND14 GND13 GND15 GND17 GND14 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND17 GND15 GND5	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD4	116  VIO    4  4    11  11    23  36    46  58    69  81    93  104    115  118    21  J1-21    24  J1-21    24  J1-21    24  J1-21	VIN 12 PS_IN 120 6 120 6 120 6 120 6 120 6 120 6 120 120 120 120 120 120 120 120	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND13 GND13 GND13 GND13 GND13 GND13 GND13 GND13 GND14 GND23 RSVD1 RSVD3 RSVD5 RSVD7	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD2	116 VIO 4 111 23 36 46 58 69 81 93 104 115 118 21 21 J1-21 24 J1-21 24 J1-21 24 J1-21 24 J1-21
VIN =1 PS_IN =12	VIN PS_IN OND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND17 GND19 GND17 GND19 GND21 GND21 RSVD1 RSVD3 RSVD5 RSVD7 RSVD7 RSVD9	VIO GND2 GND4 GND6 GND16 GND12 GND14 GND16 GND18 GND20 GND22 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD1	116  VIO    4  11    11  23    36  46    58  69    93  104    115  115    115  115    115  115    154  J1-21    24  J1-21    54  J1-51    54  J1-54    66  J1-66	VIN = 1 PS_IN = 120 GND GND GND GND GND GND CS GND CS CS CS CS CS CS CS CS CS CS	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND13 GND13 GND17 GND19 GND17 GND19 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD9	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND22 GND22 GND24 RSVD2 RSVD2 RSVD4 RSVD6 RSVD8 RSVD10	116      VIO        4      11        23      36        58      69        81      93        104      115        115      118        21      J1-21        24      J1-24        51      J1-54        54      J1-56
VIN =1 PS_IN =12	VIN        PS_IN        GND1        GND3        GND5        GND7        GND1        GND21        GND23        RSVD1        RSVD5        RSVD7        RSV09        RSV11	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD1 RSVD12	116  VIO    4	VIN 1 PS_IN 120 6 17 28 40 52 63 52 63 52 63 98 109 117 J1-22 2 J1-25 25 J1-53 55 J1-55 55 J1-57 67	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND15 GND17 GND15 GND17 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD9 RSVD11	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD6 RSVD12	116      002_10        4      11        23      36        46      58        69      81        93      104        115      118        21      J1-21        24      J1-24        51      J1-51        54      J1-56        93      J1-66
VIN 12 PS_IN 12 PS_IN 12 GNB 6 6 7 7 8 6 9 9 9 109 117 J1-22 22 J1-25 225 J1-53 555 J1-67 67 J1-70 707 7 7 7 7 7 7 7 7 7 7 7 7 7	VIN        PS_IN        GND1        GND3        GND7        GND9        GND11        GND15        GND17        GND18        GND19        GND121        GND19        GND19        GND19        GND19        GND21        GND21        GND21        RSVD1        RSVD5        RSVD1        RSVD11        RSVD13	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD4 RSVD10 RSVD12	116  VIO    4  11    23  36    46  58    69  81    93  104    115  118    21  J1-21    24  J1-21    24  J1-51    54  J1-51    54  J1-51    54  J1-51    54  J1-66    96  J1-96	VIN = 1 PS_IN = 120 GND GND GND GND GND GND GND GND	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND15 GND15 GND15 GND17 GND13 GND15 GND17 GND13 GND21 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD5 RSVD9 RSVD11 RSVD11 RSVD11 RSVD11	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD10 RSVD12 RSVD14	116      002_10        4      11        23      36        46      58        69      81        93      104        115      118        21      J1-21        24      J1-24        51      J1-51        54      66        51      J1-54        66      J1-68        96      J1-96
VIN =1 PS_IN =12 PS_IN =12 GNB	VIN        PS_IN        GND1        GND3        GND7        GND7        GND7        GND7        GND11        GND7        GND7        GND7        GND7        GND13        GND14        GND15        GND15        GND16        GND17        GND18        SVD16        RSVD1        RSVD5        RSVD1        RSVD11        RSVD13        RSVD15	VIO GND2 GND4 GND6 GND7 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD1 RSVD12	116  VIO    4	VIN = 1 PS_IN = 120 GND GND GND GND GND GND GND GND	VIN PS_IN GND1 GND3 GND5 GND7 GND9 GND11 GND13 GND15 GND13 GND15 GND17 GND13 GND15 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD5 RSVD7 RSVD9 RSVD11 RSVD13 RSVD13 RSVD13 RSVD13 RSVD15	VIO GND2 GND4 GND6 GND8 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD6 RSVD12	116      002_10        4      11        23      36        46      58        69      81        93      104        115      118        21      J1-21        24      J1-24        51      J1-51        54      J1-56        93      J1-66
VIN 12 PS_IN 12 PS_IN 12 GNB 6 6 7 7 8 6 9 8 6 9 8 109 109 117 J1-22 22 J1-22 22 J1-25 225 J1-53 555 J1-67 67 J1-67 67 J1-70 700	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND1 GND1 GND13 GND13 GND13 GND13 GND14 GND13 GND14 GND13 GND17 GND19 GND21 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD1 RSVD13 RSVD13 RSVD15	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD2 RSVD4 RSVD10 RSVD12	116  VIO    4  11    23  36    46  58    69  81    93  104    115  118    21  J1-21    24  J1-21    24  J1-51    54  J1-51    54  J1-51    54  J1-51    54  J1-66    96  J1-96	VIN = 1 PS_IN = 120 GND GND GND GND GND GND GND GND	VIN PS_IN GND1 GND3 GND5 GND7 GND7 GND7 GND13 GND13 GND15 GND17 GND13 GND15 GND21 GND23 RSVD1 RSVD3 RSVD5 RSVD7 RSVD9 RSVD1 RSVD1 RSVD13 RSVD15	VIO GND2 GND4 GND6 GND10 GND12 GND14 GND16 GND18 GND20 GND22 GND24 RSVD2 RSVD4 RSVD6 RSVD10 RSVD12 RSVD14	116      002_16        111      002_16        23      36        46      58        69      81        93      104        115      118        21      J1-21        24      J1-24        51      J1-51        54      66        51      J1-54        66      J1-68        96      J1-96

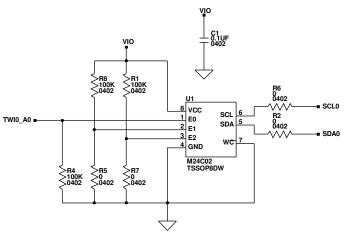
Figure 5. SDP Breakout Board—EI3 Connectors

# **SDP Breakout Board User Guide**

	10				P2		
J2-8 - 8	ASYNC_AMS0	ASYNC AMS2	9 J2-9	J2-8 <b>■</b> 8	ASYNC_AMS0	ASYNC_AMS2	9 <b>9</b> J2-9
J2-8 J2-10 J2-10	ASYNC_AMS0 ASYNC AMS3	ASYNC_AMSZ	-	J2-10 =10	ASYNC_AMS3	ASYNC AOE	7 J2-7
J2-10 J2-21	ASYNC_AMS3 ASYNC_ARDY	ASYNC_AOE ASYNC_BGH	<b>-</b> 52-7	J2-21 = 21	ASYNC_ARDY	ASYNC_BGH	25 J2-25
J2-22 = 22	ASYNC_BR	ASYNC_BG	24 J2-24	J2-22 =22	ASYNC_BR	ASYNC BG	24 J2-24
J2-26 = 26	ASYNC_A4	ASYNC A5	27 J2-27	J2-26 <u>26</u>	ASYNC_A4	ASYNC_A5	27 J2-27
J2-29 29	ASYNC A6	ASYNC_A7	30 J2-30	J2-29 =29	ASYNC_A6	ASYNC_A7	30 J2-30
J2-31 = 31	ASYNC_A8	ASYNC_A9	32 J2-32	J2-31 ■ <u>31</u>	ASYNC_A8	ASYNC_A9	32 J2-32
J2-33 - 33	ASYNC_A10	ASYNC_A11	34 J2-34	J2-33 <b>■</b> 33	ASYNC_A10	ASYNC_A11	34∎ J2-34
J2-35 = <u>35</u>	ASYNC_A12	ASYNC_A13	37 J2-37	J2-35 ∎ <u>35</u>	ASYNC_A12	ASYNC_A13	37 J2-37
J2-38 - 38	ASYNC_A14	ASYNC_A15	39 J2-39	J2-38 <b>■</b> <u>38</u>	ASYNC_A14	ASYNC_A15	39∎ J2-39
J2-41 = 41	ASYNC_A16	ASYNC_A17	42 J2-42	J2-41 = 41	ASYNC_A16	ASYNC_A17	42∎ J2-42
J2-43 = <u>43</u>	ASYNC_A18	ASYNC_A19	∎ J2-44	J2-43 = 43	ASYNC_A18	ASYNC_A19	44∎ J2-44
J2-45 = 45	ASYNC_A20	ASYNC_A21	94 <b>J</b> 2-94	J2-45 = 45	ASYNC_A20	ASYNC_A21	94∎ J2-94
J2-95 <b>■</b> <u>95</u>	ASYNC_A22	ASYNC_A23		J2-95 ■ <u>95</u>  2-07 ■97	ASYNC_A22	ASYNC_A23	96 ∎ J2-96
J2-97 ■ <u>97</u>	ASYNC_A24	ASYNC_A25	99 J2-99	02-57	ASYNC_A24	ASYNC_A25	99 J2-99 20 J2-20
J2-101 ■ 101	ASYNC_D16	ASYNC_D17	20∎ J2-20	J2-101 ■ <u>101</u> .12-102 ■ <u>102</u>	ASYNC_D16	ASYNC_D17	- 02-20
J2-102 = 102	ASTINC_DID	ASYNC_D19	10	100	ASYNC_D18	ASYNC_D19	10
J2-103 = 103	Aorno_Dizo	ASYNC_D21	18 J2-18	105	ASYNC_D120	ASYNC_D21	
02-103	ASYNC_D22	ASYNC_D23	4.5	02-103 Inc.	ASYNC_D22	ASYNC_D23	15
107	Aorno_b24	ASYNC_D25		107	ASYNC_D24	ASYNC_D25	15 ∎ J2-15 14 ∎ J2-14
J2-107	ASYNC_D26	ASYNC_D27		J2-107 ■ J2-108 ■108	ASYNC_D26 ASYNC D28	ASYNC_D27	13 J2-14 J2-13
02-100	ASYNC_D28	ASYNC_D29 ASYNC_D30		J2-108∎ J2-110∎110	ASTNC_D28 ASYNC D31	ASYNC_D29 ASYNC_D30	12 J2-13
J2-110 <b>■</b> 110	ASYNC_D31	ASYNC_D30	J2-12	J2-110	ASTNC_D31	ASTNC_D30	J2-12
J2-47 = 47	PWM0_AH	PWM0 AL	48∎ J2-48	J2-47 <b>4</b> 7	PWM0 AH	PWM0_AL	48∎ J2-48
J2-47 J2-49 J2-49	PWM0_AH PWM0_BH	PWM0_AL	50 J2-48	J2-49 <u>49</u>	PWM0_BH	PWM0_BL	50 J2-50
J2-49 J2-51	PWM0_CH		53 J2-53	J2-51	PWM0 CH	PWM0_CL	53 J2-53
J2-54 54	PWM0_DH	PWM0_CL	55 J2-55	J2-54 = 54	PWM0_DH	PWM0_DL	55 J2-55
J2-57	PWM0_TRIP0	PWM0_TRIP1		J2-57 <b>5</b> 7	PWM0 TRIP0	PWM0 TRIP1	59 J2-59
J2-56 = 56	PWM0 SYNC			J2-56 <b>■</b> 56	PWM0_SYNC	_	
	_						
J2-73 - 73	ACM0_CLK	ACM0_FS	70∎ J2-70	J2-73 = 73	ACM0_CLK	ACM0_FS	70 J2-70
J2-64 - 64	ACM0_A0	ACM0_A1	65 J2-65	J2-64 <b>■</b> 64	ACM0_A0	ACM0_A1	65 ∎ J2-65
J2-66 66	ACM0_A2	ACM0_A3	67∎ J2-67	J2-66 <b>■</b> 66	ACM0_A2	ACM0_A3	67 ■ J2-67
J2-68 = <u>68</u>	ACM0_A4	ACM0_T0	71∎ J2-71	J2-68 = 68	ACM0_A4	ACM0_T0	71 <b>■</b> J2-71
J2-72 ∎ <u>72</u>	ACM0_T1			J2-72 <mark>■</mark> 72	ACM0_T1		
va 1				VIN <b>=</b> 1	VIN	USB_VCC	
VIN ■ PS IN ■120	VIN PS_IN	USB_VCC VIO	<sup>5</sup> ∎ USB_VCC 116 VIO	PS_IN	PS_IN	VIO	116 VIO
P3_IN	F3_IN	10		· •=			
3	GND1	GND2	4	3	GND1	GND2	4
6	GND3	GND4	11	6	GND3	GND4	11
	GND5	GND6	23	17	GND5	GND6	23
28	GND7	GND8	36	28	GND7	GND8	36
40	GND9	GND10	46	40	GND9	GND10	46
52	GND11	GND12	58	52	GND11	GND12	58
63	GND13	GND14	69	63	GND13	GND14	69
75	GND15	GND16	81	75	GND15	GND16	81
86	GND17	GND18	93	86	GND17	GND18	93
98	GND19	GND20	104	<u>98</u> 109	GND19	GND20	115
109	GND21	GND22	115 118	117	GND21	GND22	118
	GND23	GND24	110		GND23	GND24	
12-2 - 2			60 12-60	12.2 - 2	B0)/D4	501/50	60 12-60
02-2	RSVD1	RSVD2	L 02-00	JZ-Z	RSVD1 RSVD3	RSVD2	60 ∎ J2-60 62 ∎ J2-62
32-01	RSVD3	RSVD4	- 02-02	J2-61 ■ <u> </u>	RSVD3	RSVD4 RSVD6	76 J2-76
J2-74 <b>-</b>	RSVD5	RSVD6 RSVD8	76 J2-76 78 J2-78	J2-77 <b>–</b> 77	RSVD7	RSVD0	78 J2-78
J2-77 ■7 J2-79 ■79	RSVD7 RSVD9	RSVD8 RSVD10	32-78 80∎ J2-80	J2-77	RSVD9	RSVD0	80 J2-78
J2-79 J2-82	RSVD9	RSVD10	B3 J2-80	J2-82 <b>82</b>	RSVD1	RSVD12	83 J2-83
J2-82	RSVD13	RSVD12	85 J2-85	J2-84 <b>=</b> 84	RSVD13	RSVD14	85 J2-85
J2-84 J2-87	RSVD15	RSVD14	88 J2-85	J2-87	RSVD15	RSVD16	88 J2-88
J2-89	RSVD17	RSVD18	90 J2-90	J2-89 <b>8</b> 9	RSVD17	RSVD18	90 J2-90
J2-91 91	RSVD19	RSVD20	92 J2-92	J2-91 91	RSVD19	RSVD20	92 J2-92
J2-100 = 100		RSVD22	111 J2-111	J2-100 = 100	RSVD21	RSVD22	111 J2-111
J2-112 = 112		RSVD24	113 J2-113	J2-112 112	RSVD23	RSVD24	113 J2-113
J2-114 = 114		RSVD26	119 J2-119	J2-114∎ <u>114</u>	RSVD25	RSVD26	
							119 ∎ J2-119
	HIROSE_F	X8-120S-SV(21)			HIROSE_FX	8-120P-SV1(91)	e e
			< < > > > > < /				

Figure 6. SDP Breakout Board—Probing Connectors

# SDP Breakout Board User Guide



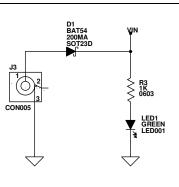


Figure 7. SDP Breakout Board—EEPROM and Power

## UG-282

200-96860

## NOTES

## NOTES

### NOTES



#### 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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