



Interface Connectors

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Interface Connectors

The board has two connectors that provide power and interface connections to external devices. All of the connectors belong to the SEARAY® Connector Series from SAMTEC.

Board to Board Connectors

Depending on the mating connector selected by the integrator, a stacking height from 7 mm to 18mm (not all increments are supported). The following table lists the board connectors, and the mating connector options that are available to achieve specific stacking heights below.



Note Contact your local Samtec sales representatives for specific Samtec part numbers.

Table 1: SEAM Mating Height

SEAM Lead Style	-05.0 SEAF Lead Style
-02.0	7mm
-03.0	8mm
-03.5	8.5mm
-07.0	12mm
-09.0	14mm

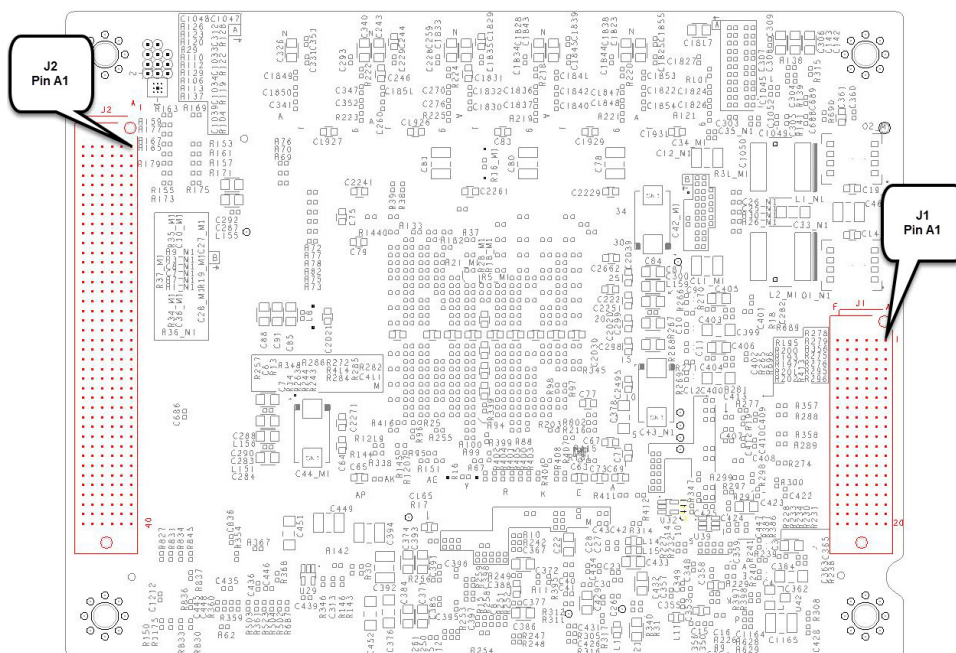
SEAM Lead Style	-05.0 SEAF Lead Style
-11.0	16mm

Board Interface Connectors (I/O and Network Interface)

The board I/O connectors are SAMTEC SEAF-20-05.0-S-06-2-A-K 120-pin (J1) and SAMTEC SEAF-40-05.0-S-06-2-A-K 240-pin (J2) connectors respectively.

The following figures show the J1 and J2 connectors as well as the pin 1 designations.

Figure 1: Interface Connectors Bottom Side View



ESS-9300 I/O Connector (J1)

Table 2: I/O Connector (J1)

PIN #	Row A	Row B	Row C	Row D	Row E	Row F
1	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE
2	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE
3	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE	P5V_MODULE
4	GND	GND	GND	GND	GND	GND

PIN #	Row A	Row B	Row C	Row D	Row E	Row F
5	P3_3V_MODULE	P3_3V_MODULE	P3_3V_MODULE	P3_3V_MODULE	P3_3V_MODULE	P3_3V_MODULE
6	GND	GND	GND	RSVD	GND	GND
7	GND	GND	GND	RSVD	RSVD	RSVD
8	CLK_156M25_P	RSVD	RSVD	RSVD	RSVD	RSVD
9	CLK_156M25_N	RSVD	RSVD	RSVD	RSVD	RSVD
10	GND	GND	GND	RSVD	GND	GND
11	GND	GPIO_RST_L	P3_3V_RTC	RSVD	GND	GND
12	GND	IOEXP_INT_L	GND	RSVD	GND	CLK_125M_P
13	RSVD	GND	CNS_RJ45_TXD_L	GND	GND	CLK_125M_N
14	RSVD	I2C_GPIO_SCL	CNS_RJ45_RTS_L	LED_SH_DIN	GND	GND
15	GND	I2C_GPIO_SDA	CNS_RJ45_RXD_L	LED_SH_CLK	RSVD	GND
16	RSVD	GND	CNS_RJ45_CTS_L	LED_SH_EN_L	RSVD	RSVD
17	RSVD	I2C_MUX_SCL	GND	LED_SH_LATCH	RSVD	RSVD
18	GND	I2C_MUX_SDA	USB_CONSOLE_P	PUSH_BUTTON_	GND	GND
19	RSVD	GND	USB_CONSOLE_N	GND	RSVD	RSVD
20	RSVD	I2C_MUX_RST_L	P5V_USB_CONSOLE	RT_DBG_PPS	RSVD	RSVD

ESS-9300 I/O Connector (J2)

Table 3: Board I/O Connector (J2)

Pin #	Row A	Row B	Row C	Row D	Row E	Row F
1	RSVD	RSVD	RSVD	RSVD	RSVD	RSVD
2	RSVD	RSVD	RSVD	RSVD	RSVD	RSVD
3	GND	RSVD	RSVD	RSVD	GND	RSVD
4	GND	RSVD	GND	GND	GND	RSVD
5	TE1_1_TXDATA_P	GND	TE1_2_TXDATA_P	GND	TE1_1_RXDATA_P	GND
6	TE1_1_TXDATA_N	GND	TE1_2_TXDATA_N	GND	TE1_1_RXDATA_N	GND

Pin #	Row A	Row B	Row C	Row D	Row E	Row F
7	GND	TE1_3_TXDATA_P	GND	TE1_2_RXDATA_P	GND	TE1_3_RXDATA_P
8	GND	TE1_3_TXDATA_N	GND	TE1_2_RXDATA_N	GND	TE1_3_RXDATA_N
9	TE1_4_TXDATA_P	GND	TE1_5_TXDATA_P	GND	TE1_4_RXDATA_P	GND
10	TE1_4_TXDATA_N	GND	TE1_5_TXDATA_N	GND	TE1_4_RXDATA_N	GND
11	GND	TE1_6_TXDATA_P	GND	TE1_5_RXDATA_P	GND	TE1_6_RXDATA_P
12	GND	TE1_6_TXDATA_N	GND	TE1_5_RXDATA_N	GND	TE1_6_RXDATA_N
13	TE1_7_TXDATA_P	GND	TE1_8_TXDATA_P	GND	TE1_7_RXDATA_P	GND
14	TE1_7_TXDATA_N	GND	TE1_8_TXDATA_N	GND	TE1_7_RXDATA_N	GND
15	GND	TE1_9_TXDATA_P	GND	TE1_8_RXDATA_P	GND	TE1_9_RXDATA_P
16	GND	TE1_9_TXDATA_N	GND	TE1_8_RXDATA_N	GND	TE1_9_RXDATA_N
17	TE1_10_TXDATA_P	GND	RSVD	GND	TE1_10_RXDATA_P	GND
18	TE1_10_TXDATA_N	GND	RSVD	GND	TE1_10_RXDATA_N	GND
19	GND	RSVD	GND	RSVD	GND	RSVD
20	GND	RSVD	GND	RSVD	GND	RSVD
21	SFP_TE1_1_PRES_L	GND	SFP_TE1_5_PRES_L	GND	GND	GND
22	SFP_TE1_2_PRES_L	GND	SFP_TE1_6_PRES_L	GND	GND	GND
23	GND	SFP_TE1_3_PRES_L	GND	SFP_TE1_7_PRES_L	SFP_TE1_9_PRES_L	SFP_TE1_10_PRES_L
24	RSVD	SFP_TE1_4_PRES_L	RSVD	SFP_TE1_8_PRES_L	GND	GND
25	RSVD	GND	RSVD	GND	MGMT_PORT_RXDATA_P	MGMT_PORT_RXDATA_P
26	GND	RSVD	GND	RSVD	MGMT_PORT_RXDATA_N	MGMT_PORT_RXDATA_N
27	USB1_A_FAULT_L	RSVD	GND	RSVD	GND	GND
28	USB1_A_PWR_EN	GND	DCA_PWR_GOOD	GND	MGMT_PHY_RST_L	GND
29	GND	USB2_A_FAULT_L	DCB_PWR_GOOD	GND	GND	GND
30	USB1_A_D_P	USB2_A_PWR_EN	DYING_GASP_L	GND	MDIO_MGMT_PHY	GND
31	USB1_A_D_N	GND	RSVD	GND	MDC_MGMT_PHY	GND
32	GND	USB2_A_D_P	GND	GND	GND	GND
33	GND	USB2_A_D_N	RSVD	GND	GND	RSVD

Pin #	Row A	Row B	Row C	Row D	Row E	Row F
34	GND	GND	RSVD	GND	GND	GND
35	GND	GND	RSVD	GND	RSVD	RSVD
36	RSVD	GND	GND	TEMP_SENSOR_N	RSVD	RSVD
37	RSVD	GND	RSVD	TEMP_SENSOR_P	GND	RSVD
38	GND	RSVD	RSVD	GND	RSVD	GND
39	GND	RSVD	RSVD	RSVD	RSVD	RSVD
40	RESET_HOLD_OFF_L	GND	RSVD	RSVD	RSVD	RSVD

