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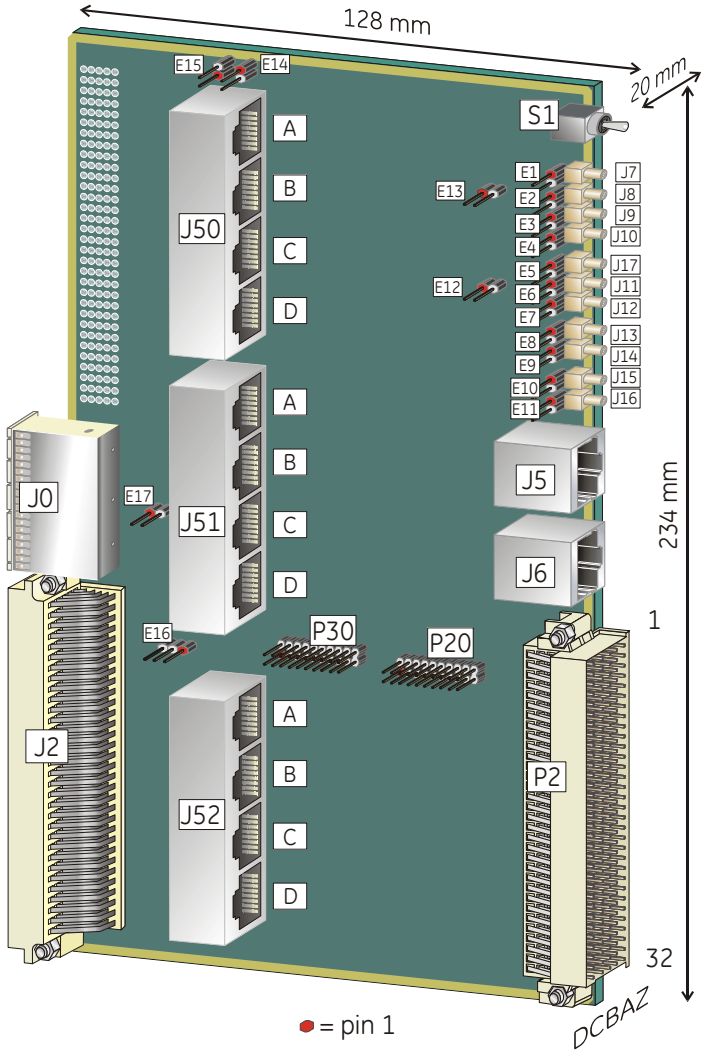
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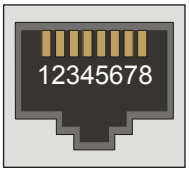
Find the *Abaco Systems G4DSPXEIO-11* at our website: ***Click HERE***

G4DSPXEIO Rev1 Backplane Module Edition 1QD

Publication No. G4DSPXEIO-0HH/1QD

G4DSPXEIO Layout





LINK

The information contained in this document must be used in conjunction with the I/O Modules Manual, publication number RT5154.

abaco SYSTEMS

Description

The G4DSPXEIO module is a customised combined P0 and P2 interface adapter. It is compatible with 5-row VME backplanes in the P2 position and with Type B connectors in the P0 position. The G4DSPXEIO fits directly onto the rear P2/P0 position of the backplane and is suitable exclusively for interconnection with the G4DSPXE/G4DSPXD3. See the I/O Modules Manual - Compatibility Tables for further information.

The G4DSPXEIO provides four Gigabit Ethernet connectors, four Transmit/receive pairs of StarFabric channels, one Point-to-point StarFabric Transmit/receive pair, a number of interrupt and general connections, four Serial comms. ports, and an IO Module expansion connector.

Connector/Header Designations

Table 1-1

Connector	Function	Type	Connector	Function	Type
E1 to E17	See separate table	2 and 3 pin headers	J50	StarFabric SF3, SF4	4 x RJ45 jack
J0	G4DSPXEIO interface	95-way, Type B	J51	StarFabric SF0, SF1	4 x RJ45 jack
J2	G4DSPXEIO interface	160-way, 5-row	J52	Gigabit Ethernet	4 x RJ45 jack
J5, J6	StarFabric Point-to-point	2 x RJ45 jack	P2	IO Module expansion	160-way, 5-row
J7,8,9,10	StarFabric interrupts	4 x SSMB mini coax	P20	Serial COM1/COM2	20-pin header
J17,11,12	G4DSPXE general	3 x SSMB mini coax	P30	Serial COM3/COM4	20-pin header
J13,14,15,16	G4DSPXE time stamping	4 x SSMB mini coax	S1	Reset switch	

Coupling StarFabric Signals

StarFabric's point-to-point topology requires that the signals are cross-coupled.

Consequently, care should be taken to ensure that Transmit signals (e.g. SF0_TX1P) are connected to Receive signals (e.g. SF0_RX1P).

Pinouts

E1 to E17

Table 1-2

Link	Signal
E1 to E11	Use as alternative header for J7 to J17 connectors. Pin 2 = GND.
E12	Time Stamp Direction. Fit link for transmit (Master). Do not fit link for receive (Slave). Pin 1 = GND.
E13	P3V3 probe point. Pin 1 and 2 = P3V3
E14	GND probe point. Pin 1 and 2 = GND
E15	VCC probe point. Pin 1 and 2 = VCC.
E16	Pin 1 = P2/C6. Pin 2 = GND. Pin 3 = P2/C5
E17	Flash SROM_HOLD. Pin 1 = GND. Pin 2 = J0, E10 and VCC via 4k7 pull-up.

J5/J6 StarFabric

Table 1-3

Pin	J5 Signal	J6 Signal
1	SF2_TX0P	SF2_RX0P
2	SF2_TX0N	SF2_RX0N
3	SF2_TX1P	SF2_RX1P
4	SF2_TX2P	SF2_RX2P
5	SF2_TX2N	SF2_RX2N
6	SF2_TX1N	SF2_RX1N
7	SF2_TX3P	SF2_RX3P
8	SF2_TX3N	SF2_RX3N



NOTE

Signal names correspond with PMC Starlite fitted to PMC Site 1 on G4DSPXE.
Please see general note regarding Coupling StarFabric Signals.

J7, J8, J9, J10 (StarFabric Interrupts)

Table 1-4

Connector	Signal
J7	SF_INT_W (buffered)
J8	SF_INT_X (buffered)
J9	SF_INT_Y (buffered)
J10	SF_INT_Z (buffered)

J11, J12, J17 (General)

Table 1-5

Connector	Signal
J11	GEN INT (I/P)
J12	FAST_BIT (I/P)
J17	GEN FLAG (O/P)

J13, J14, J15, J16 (Time Stamping)

Table 1-6

Connector	Signal
J13	TS CLOCK (Daisy-chain I/P)
J14	TS CLOCK (Daisy-chain O/P)
J15	TS RESET (Daisy-chain I/P)
J16	TS RESET(Daisy-chain O/P)



NOTE

The Time Stamp direction is set by Link E12. When fitted, the Clock and Reset signals are output from the G4DSPXE. With the link not fitted, the G4DSPXE is configured to receive these signals.

J50 A/B/C/D (StarFabric)

Table 1-7

Pins	J50 A Signal	J50 B Signal	J50 C Signal	J50 D Signal
1	SF4_TX0P	SF4_RX0P	SF3_TX0P	SF3_RX0P
2	SF4_TX0N	SF4_RX0N	SF3_TX0N	SF3_RX0N
3	SF4_TX1P	SF4_RX1P	SF3_TX1P	SF3_RX1P
4	SF4_TX2P	SF4_RX2P	SF3_TX2P	SF3_RX2P
5	SF4_TX2N	SF4_RX2N	SF3_TX2N	SF3_RX2N
6	SF4_TX1N	SF4_RX1N	SF3_TX1N	SF3_RX1N
7	SF4_TX3P	SF4_RX3P	SF3_TX3P	SF3_RX3P
8	SF4_TX3N	SF4_RX3N	SF3_TX3N	SF3_RX3N



NOTE

Signal names correspond with PMC Starlite fitted to PMC Site 1 on G4DSPXE.
Please see general note regarding Coupling StarFabric Signals.

J51 A/B/C/D (StarFabric)

Table 1-8

Pins	J51 A Signal	J51 B Signal	J51 C Signal	J51 D Signal
1	SF0_TX0P	SF0_RX0P	SF1_TX0P	SF1_RX0P
2	SF0_TX0N	SF0_RX0N	SF1_TX0N	SF1_RX0N
3	SF0_TX1P	SF0_RX1P	SF1_TX1P	SF1_RX1P
4	SF0_TX2P	SF0_RX2P	SF1_TX2P	SF1_RX2P
5	SF0_TX2N	SF0_RX2N	SF1_TX2N	SF1_RX2N
6	SF0_TX1N	SF0_RX1N	SF1_TX1N	SF1_RX1N
7	SF0_TX3P	SF0_RX3P	SF1_TX3P	SF1_RX3P
8	SF0_TX3N	SF0_RX3N	SF1_TX3N	SF1_RX3N



NOTE

Signal names correspond with on-board (G4DSPXE-derived) StarFabric channels. Please see general note regarding Coupling StarFabric Signals.

J52 A/B/C/D (Gigabit Ethernet)

Table 1-9

Pins	J52 A Signal	J52 B Signal	J52 C Signal	J52 D Signal
1	ETHER_M0P_CN_A	ETHER_M0P_CN_B	ETHER_M0P_CN_C	ETHER_M0P_CN_D
2	ETHER_M0N_CN_A	ETHER_M0N_CN_B	ETHER_M0N_CN_C	ETHER_M0N_CN_D
3	ETHER_M1P_CN_A	ETHER_M1P_CN_B	ETHER_M1P_CN_C	ETHER_M1P_CN_D
4	ETHER_M2P_CN_A	ETHER_M2P_CN_B	ETHER_M2P_CN_C	ETHER_M2P_CN_D
5	ETHER_M2N_CN_A	ETHER_M2N_CN_B	ETHER_M2N_CN_C	ETHER_M2N_CN_D
6	ETHER_M1N_CN_A	ETHER_M1N_CN_B	ETHER_M1N_CN_C	ETHER_M1N_CN_D
7	ETHER_M3P_CN_A	ETHER_M3P_CN_B	ETHER_M3P_CN_C	ETHER_M3P_CN_D
8	ETHER_M3N_CN_A	ETHER_M3N_CN_B	ETHER_M3N_CN_C	ETHER_M3N_CN_D

For 10/100 BaseT Ethernet, these are Transmit signals.
For 10/100 BaseT Ethernet, these are Receive signals.
CN A/B/C/D refers to G4DSPXE Compute Node A/B/C/D

P2 (Defined and User IO)

This connector enables other IO Modules to be attached to the G4DSPXEIO to access signals from the PMC Site 2 on the G4DSPXE.

Table 1-10

Pin	Row Z	Row A	Row B	Row C	Row D
1	J24 pin 2		VCC	S1 (RESET)	J24 pin 1
2	GND		GND		J24 pin 3
3	J24 pin 5				J24 pin 4
4	GND				J24 pin 6
5	J24 pin 8			SER_TX1_CN_A/ E16 pin 3	J24 pin 7
6	GND			SER_RX1_CN_A/ E16 pin 1	J24 pin 9
7	J24 pin 10				J24 pin 11
8	GND				J24 pin 12
9	J24 pin 14				J24 pin 13
10	GND				J24 pin 15
11	J24 pin 17				J24 pin 16
12	GND		GND		J24 pin 18
13	J24 pin 20		VCC		J24 pin 19
14	GND				J24 pin 21
15	J24 pin 23			GND	J24 pin 22
16	GND				J24 pin 24
17	J24 pin 26				J24 pin 25
18	GND			J24 pin 62	J24 pin 27
19	J24 pin 29			J24 pin 50	J24 pin 28
20	GND			J24 pin 52	J24 pin 30
21	J24 pin 32			J24 pin 48	J24 pin 31
22	GND		GND	J24 pin 56	J24 pin 33
23	J24 pin 35			J24 pin 58	J24 pin 34
24	GND			J24 pin 64	J24 pin 36
25	J24 pin 38			J24 pin 59	J24 pin 37
26	GND			J24 pin 61	J24 pin 39
27	J24 pin 41			J24 pin 49	J24 pin 40
28	GND			J24 pin 51	J24 pin 42
29	J24 pin 44			J24 pin 47	J24 pin 43
30	GND			J24 pin 55	J24 pin 45
31	J24 pin 46		GND	J24 pin 57	GND
32	GND		VCC	J24 pin 63	VCC

These P2 connections are routed via the G4DSPXE to PMC Site 2 J24 connector.
No connection
CN_A refers to G4DSPXE Compute Node A

P20 (Serial Comms. CN_A/B)

Table 1-11

Pin	Signal	Pin	Signal
1,3	NC	2,4	NC
5	TX_CN_A	6	RX_CN_A
7,9,11	NC	8,10,12	NC
13	TX_CN_B	14	NC
15	NC	16	RX_CN_B
17	NC	18	NC
19	GND	20	GND



NOTE

CN = G4DSPXE Compute Node.

P30 (Serial Comms. CN_C/D)

Table 1-12

Pin	Signal	Pin	Signal
1,3	NC	2,4	NC
5	TX_CN_C	6	RX_CN_C
7,9,11	NC	8,10,12	NC
13	TX_CN_D	14	NC
15	NC	16	RX_CN_D
17	NC	18	NC
19	GND	20	GND



NOTE

CN = G4DSPXE Compute Node.

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