Addendum

BP20-C2P19
Passive Backplane

This document supplements the Service Manual, providing additional information concerning the BP20-C2P19 Passive Backplane. Refer to the Service Manual for more information.

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BP20-C2P19 Passive Backplane

Overview

The BP20-C2P19 passive backplane provides the following:

- 19 PCI (Peripheral Component Interconnect) expansion slots for 5 V signaling or 5 / 3.3 V universal signaling PCI expansion cards

  Note: Dedicated 3.3 V signaling expansion cards are not supported.

- 2 CPU or "platform" slots, each made up of one ISA connector and one PCI connector

  Note: The BP20-C2P19 supports one Single Board Computer. The SBC can be installed in either of the two CPU or "platform" slots; an ISA card can be installed in the remaining slot, using the ISA connector.

PCI Bridge Controller

Due to electrical limitations, a single PCI bus can support only up to five PCI slots. The BP20-C2P19 uses five 21150 PCI bridge controllers to interconnect multiple buses and thereby surpass the electrical limitation.

PCI Interrupt Rotation

Interrupt rotation mapping, also referred to as interrupt binding, is the mechanism through which a PCI expansion card is identified by the processor and memory systems. A PCI expansion card can be the source of any of four possible interrupts as shown in the heading of the following table. The remaining rows of the table show how the passive backplane maps the individual PCI slots to the CPU slot, enabling the processor and memory systems to identify the interrupt source.

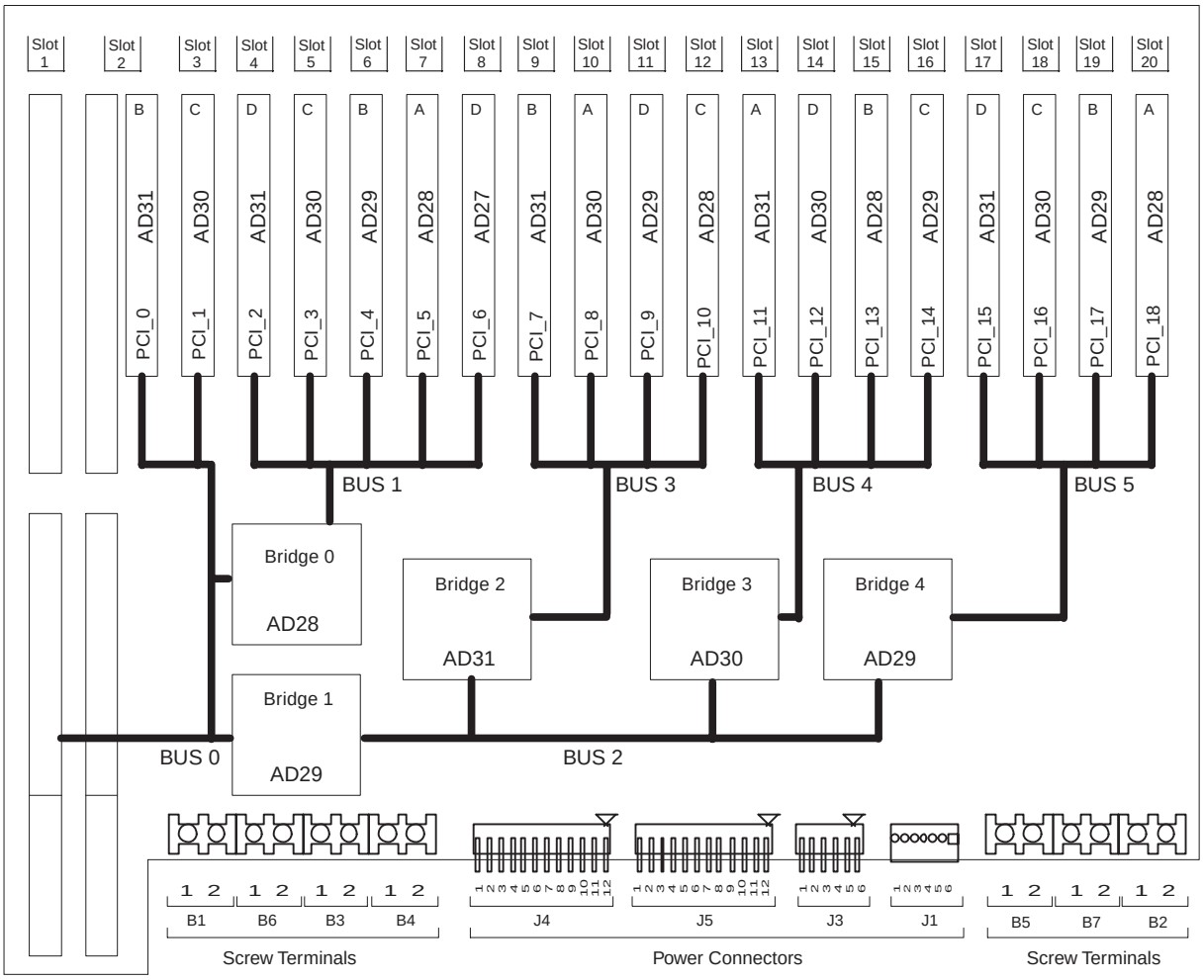
Note: PCI slots and controllers are identified by the SBC according to their respective bus and device numbers (Bus:Device). See Figure 1 on page 3 for slot positions on the backplane.

	PCI Card Interrupts					
	IntA	IntB	IntC	IntD	IDSel	Notes
PCI_0	B	C	D	A	AD31	Not behind a Bridge
PCI_1	C	D	A	B	AD30	
PCI_2	D	A	B	C	AD31	Behind Bridge 0
PCI_3	C	D	A	B	AD30	
PCI_4	B	C	D	A	AD29	
PCI_5	A	B	C	D	AD28	
PCI_6	D	A	B	C	AD27	
PCI_7	B	C	D	A	AD31	Behind Bridge 1 and Bridge 2
PCI_8	A	B	C	D	AD30	
PC_9	D	A	B	C	AD29	
PCI_10	C	D	A	B	AD28	
PCI_11	A	B	C	D	AD31	Behind Bridge 1 and Bridge 3
PCI_12	D	A	B	C	AD30	
PCI_13	B	C	D	A	AD28	
PCI_14	C	D	A	B	AD29	
PCI_15	D	A	B	C	AD31	Behind Bridge 1 and Bridge 4
PCI_16	C	D	A	B	AD30	
PCI_17	B	C	D	A	AD29	
PCI_18	A	B	C	D	AD28	

	PCI Card Interrupts					
	IntA	IntB	IntC	IntD	IDSel	Notes
Bridge 0	—	—	—	—	AD28	Bus 0 to Bus 1
Bridge 1	—	—	—	—	AD29	Bus 0 to Bus 2
Bridge 2	—	—	—	—	AD31	Bus 2 to Bus 3
Bridge 3	—	—	—	—	AD30	Bus 2 to Bus 4
Bridge 4	—	—	—	—	AD29	Bus 2 to Bus 5

The RadiSys Setup Utility denotes each PCI Interrupt as a PCI IRQ Line Number. For example, PCI IRQ Line 1 is equivalent to IntA, IRQ Line 2 is equivalent to IntB, and so forth.

Figure 1 BP20-C2P19 Components



More...

For more information, contact:

Company	Telephone	Web Site
PCI Special Interest Group	(503) 696-2000	http://www.pcisig.com
PICMG	(781) 246-9318	http://www.picmg.com

Power Supply

The BP20-C2P19 accepts standard ±5, ±12, and +3.3 VDC from the power supply.
Note: For more information, see the Power Supply Addendum.

Power Connectors

The labels **J4, J5,** and **J3** (Figure 1 on page 3) correspond to industry standards for PCI-compatible power supplies. Before attaching other power connectors, consult the documentation provided by the power supply manufacturer.

The label **J1** corresponds to a connection for power supplies with sense capability.

The tables below list the pin signals for the power connectors. Figure 1 on page 3 indicates the pin positions for each.

J4 and J5	
Pin	**Description**
1	Not Connected
2	+5 V
3	+12 V
4	-12 V
5	Ground
6	Ground
7	Ground
8	Ground
9	-5 V
10	+5 V
11	+5 V
12	+5 V

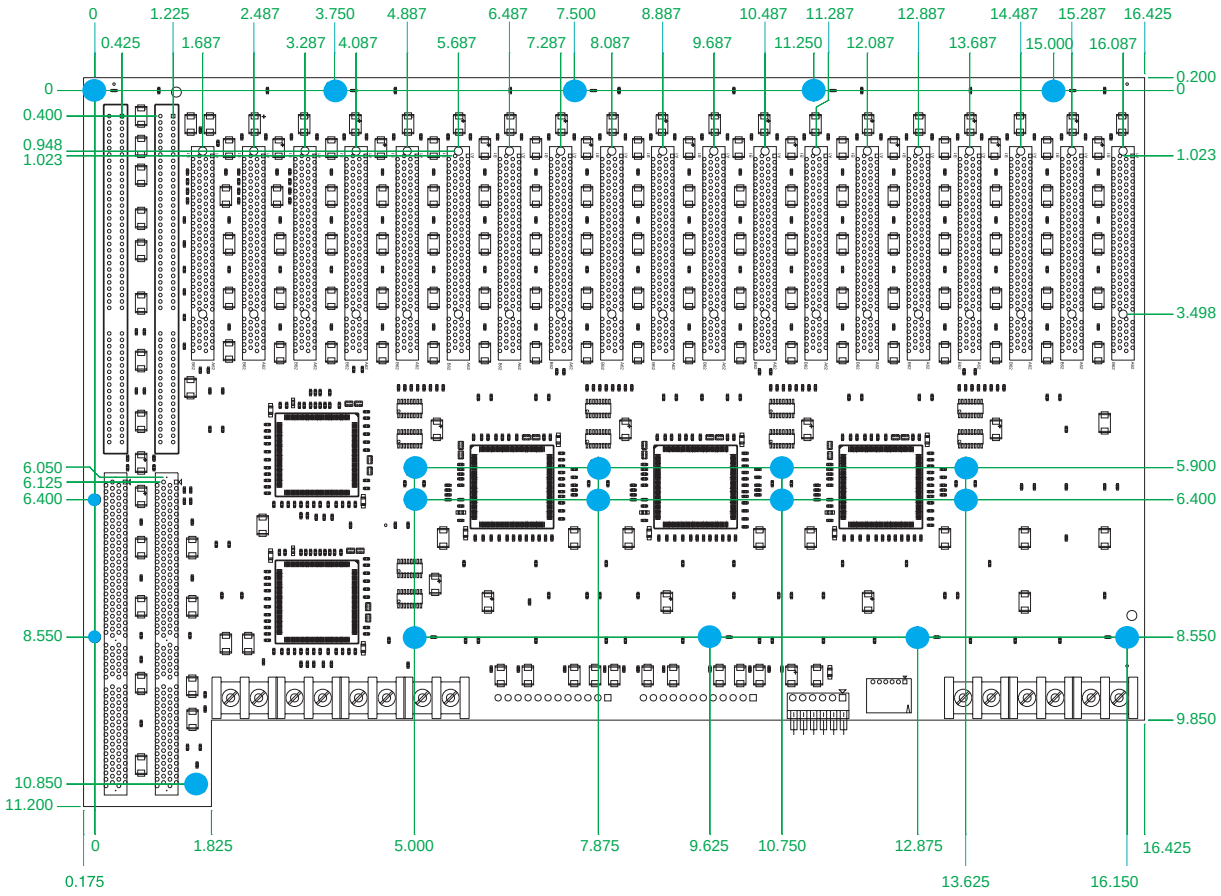
J3	
Pin	**Description**
1	Not Connected
2	+5 V
3	+12 V
4	-12 V
5	Ground
6	Ground

J1	
Pin	**Description**
1	+5 V
2	Ground
3	+3.3 V
4	Ground
5	+12 V
6	Ground

The labels B1 through B7 correspond to screw terminals with the following connections. Figure 1 on page 3 indicates the pin positions for each.

	B1	B2	B3	B4	B5	B6	B7
Pin 1	+3.3 V	+3.3 V	+3.3 V	+5 V	+5 V	Ground	Ground
Pin 2	+3.3 V	+3.3 V	+3.3 V	+3.3 V	+5 V	Ground	Ground

Figure 2 BP20-C2P19 Dimensions



- Dimensions are given in inches.
- Each of the 20 mounting holes has a diameter of 0.156 inches.

Notes