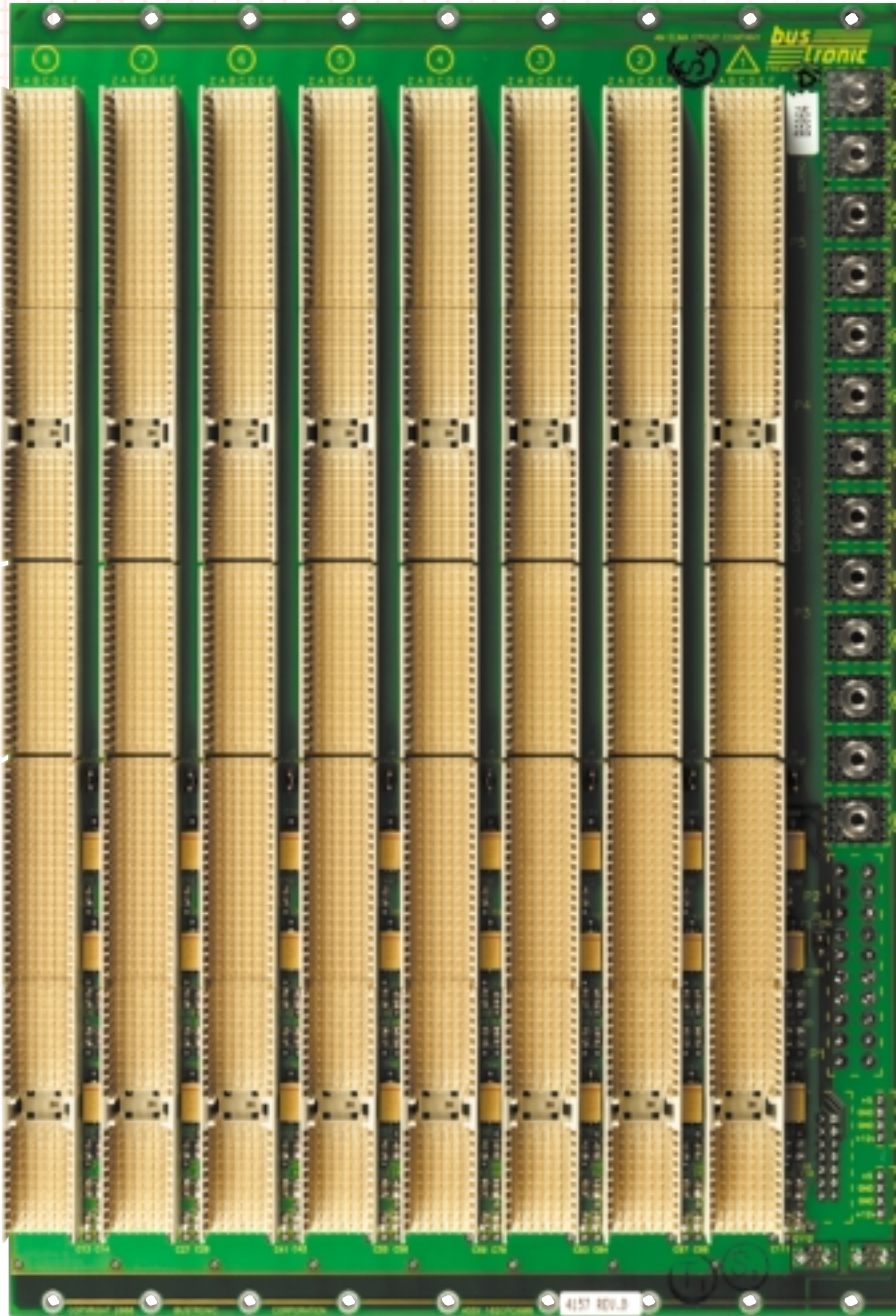


CPCI BACKPLANE WITH ATX



MECHANICAL SPECIFICATIONS

Slots: 3, 4, 5, 6, and 8 standard
(see Low Profile cPCI for 2-slot size)
Height: 6U
64-bit (32-bit capable)

BOARD SPECIFICATIONS

8-layer board
2 oz. copper power and ground
PCB UL-recognized 94V-0
PCB FR-4 or equivalent
PCB .125" thick

The Bustronic 6U CompactPCI backplane series is designed to be fully compliant with PICMG standards. Bustronic also offers a Low Profile cPCI series to save a slot-size of width on the backplanes. (See LowProfile cPCI datasheet) We provide all standard features required for full compatibility, including all pin connections for bussed signal lines and all defined power and ground pins connected to their respective planes. User-defined VI/O is standard. All standard CPCI backplanes conform to the PICMG basic specification 2.0 R3.0 and Hot Swap specification 2.1 R1.0

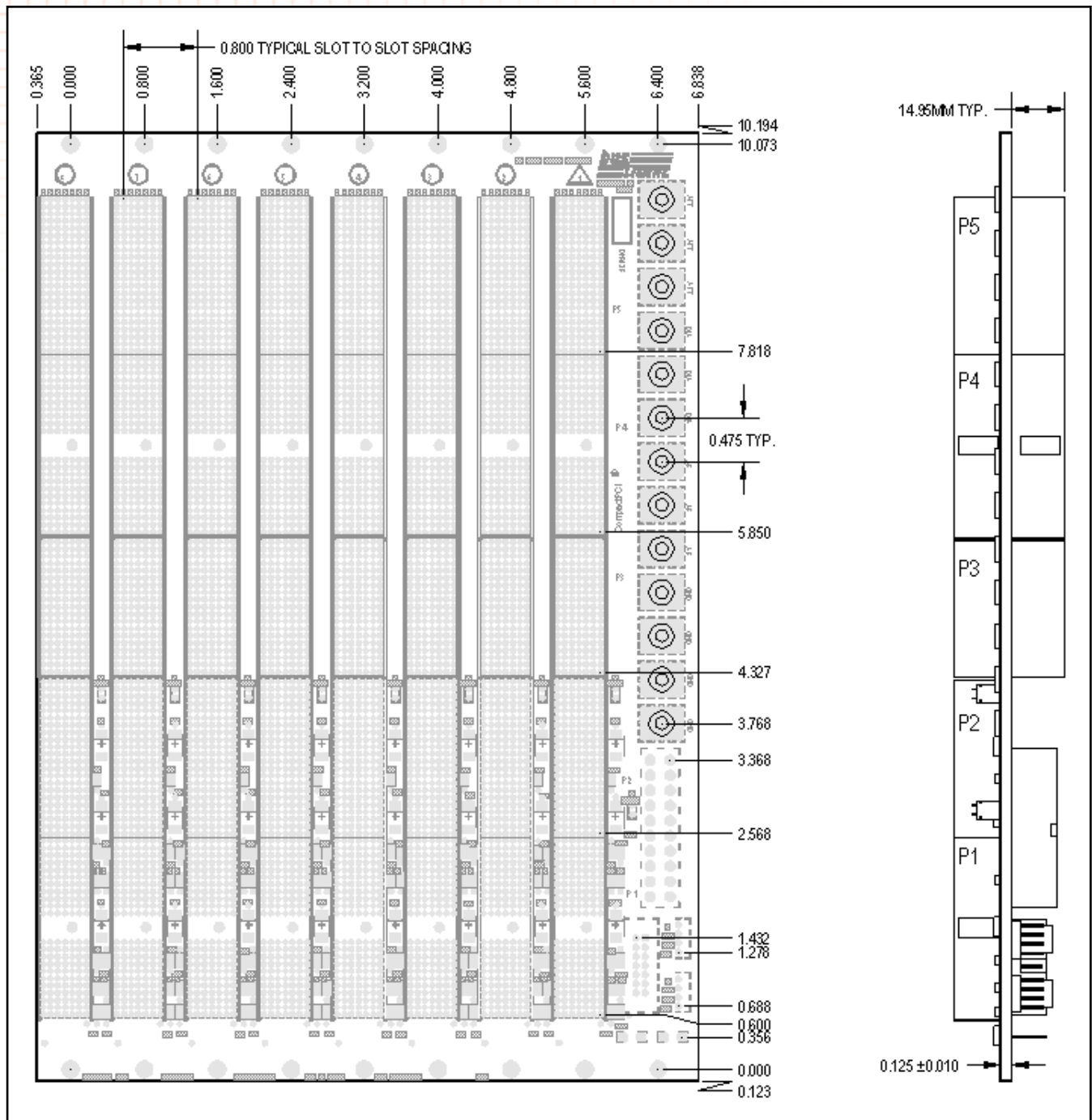
All Bustronic backplanes are designed to maximize performance, minimize noise, and give the customer the most reliable, cost-effective products possible. To achieve superior performance, we construct the board in eight layers—three signal layers, five power and ground planes. We incorporate a full stripline design, generously distributed high and low frequency decoupling capacitors, 2 oz. power and ground planes to minimize noise.

Our standard design with two 2 oz. copper ground planes fully shield the backplane, minimize EMI/RFI emissions susceptibility, minimize crosstalk, and maximize power distribution.

Two 2 oz. copper voltage planes allow us to maximize power distribution while they act as virtual ground planes for the signals in order to minimize noise and crosstalk. There is also a full VI/O plane. The high frequency decoupling capacitors at every slot and distributed low

FEATURES

- Conforms to PICMG basic specification 2.0 R3.0
- PICMG Hot Swap specification 2.1 R1.0
- 8-layer controlled impedance stripline design
- Superior power distribution
- Virtually zero crosstalk
- Logical slot #1 (system controller) is right justified



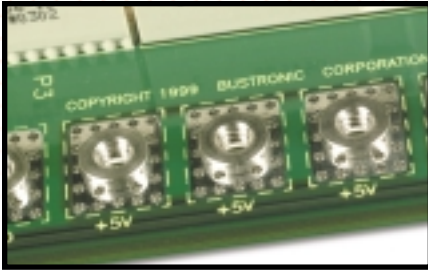
frequency electrolytic capacitors across the board also help this effort. Measured results verify that Bustronic backplanes are among the quietest in the industry.

We use stripline construction to assure the highest possible performance. By exclusively utilizing stripline construction, we eliminate a significant source of EMI/RFI radiation and give all signals similar characteristic impedances and minimal signal skew. All these items allow for significantly higher data transfer rates, since signal skew factors into the data transfer rate calculations four times.

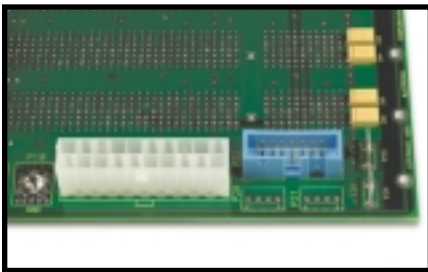
Ordering Information

Slots	Height		Width		Order Number
	in	mm	in	mm	
3	10.316	262.030	3.202	81.330	102CPCI603
4	10.316	262.030	4.002	101.650	102CPCI604
5	10.316	262.030	4.802	121.970	102CPCI605
6	10.316	262.030	5.602	142.290	102CPCI606
8	10.316	262.030	7.202	182.930	102CPCI608

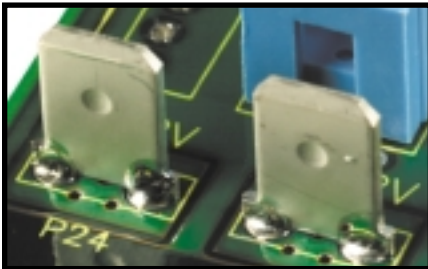
DESIGN ELEMENTS



Power nuts



ATX and utility connectors



Fastons

OTHER OPTIONS



Power bugs

Power Distribution

The Bustronic CPCI backplane family is designed with the power insertion area beside the signal slots, allowing for easy and efficient system integration. Adequate numbers of 6/32 nuts and an ATX connector have been inserted in this area to accommodate more power than the 28 amps required per slot. The ATX connector allows for an ATX power supply to be plugged in. The connector has 20 pins standard on our 6U CPCI backplane. The fastons have been added to allow additional power while taking a minimum of space. The blades are rated at 12A each.

Signal Layout

The Bustronic design conforms to the PICMG basic specification 2.0 R3.0 and basic Hot Swap specifications 2.0 R1.0. A minimum stub length is utilized in routing and interconnecting to the signal traces. Our design techniques avoid crosstalk and noise caused by inadequate ground and power. Every Bustronic backplane is designed with the customer's system in mind—ensuring the highest performance, reliability, and value.

Jumpering

Jumpers can be installed to close a circuit. The backplane has labeled areas for jumper installation. The following applies to all of Bustronic's CompactPCI and H.110 backplanes in 2-8 slot sizes. Configurations with 2-5 slots have an addition jumper consideration, the M66EN# jumper.

64-EN# Jumper

If the jumper is installed, 64-EN# P2-B5 (see Hot Swap specification, PICMG 2.1) is ground, and 64-bit boards will initialize for 64-bit operation. If the jumper is not installed, 64-EN# is open, and 64-bit boards will initialize for 32-bit operation.

PS-ON# Jumper

If the jumper is installed, pin 14 PS-ON# on the ATX power connector is grounded. The ATX power supply will turn on immediately when plugged in. If the jumper is not installed, pin 14 PS-ON# on the ATX power connector is open. The ATX power supply will not turn on when plugged in. The PS-ON# jumper pins may be used to wire an on/off switch for the power supply.

2-5 Slot Backplanes Only:

M66EN# Jumper

If the jumper is installed M66EN# P1-D21 is ground and the backplane operates in 33MHz mode. If the jumper is not installed M66EN# is bussed and the backplane operates in 66MHz mode.