Dual XMC/PMC Carrier Board

PP XMC/202-10 with rear I/O via Pn4 connectors

APPLICATIONS

The PP XMC/202 XMC/PMC carrier board provides a flexible solution for designers wishing to add functionality to 6U CompactPCI® systems in using XMC or PMC modules. The carrier can accommodate two single or one dual width, PMC or XMC modules conforming to the IEEE 1386 Common Mezzanine Card standard. PMC modules supporting up to 66 MHz PCI/PCI-X or XMC modules supporting up to x4 PCI Express® interfaces can be used. A wide range of XMC/PMC modules can be supported such as SAS, SATA, LAN, WAN, Graphics and Communications Controllers. Hot Swap support enables live insertion and extraction of the PP XMC/202 so that I/O and network interfaces can be added, replaced or upgraded without interruption to the system operation. Rear I/O signals from each of the XMC/PMC sites are routed to the CompactPCI J3 and J5 connectors and there is an optional rear panel I/O Transition Module. Options to operate in temperatures ranging from -40°C to +85°C are available. A ruggedized conduction-cooled version is also supported.

HIGHLIGHTS

- Supports 2 single size XMC or PMC modules (or as one dual width module)
- A single PMC and a single XMC module can be used simultaneously
- XMC module interface supports:
  - x1, x2 or x4 PCI Express
- PMC module interface supports:
  - 5 Volt or 3.3 Volt signaling
  - 32/64-bit and 33/66 MHz PCI/PCI-X
- Front panel I/O, and rear I/O via J3 and J5 connectors:
  - rear I/O routed as differential pairs
  - rear I/O options for XMC Pn6 or PMC Pn4 connectors
- 3.3 Volt, 5 Volt, +12 Volt and -12 Volt provided for XMC and PMC modules via CompactPCI backplane

- Occupies one 6U CompactPCI slot:
  - 5 Volt or 3.3 Volt signaling
  - 32/64-bit and 33/66 MHz
- "Hot Swap" live insertion and extraction
- Extended temperature versions (E-Series, K-Series):
  - E: -25°C to +70°C, air-cooled
  - K: -40°C to +85°C, humidity sealant, air-cooled
- Ruggedized version (RC-Series):
  - RC: -40°C to +85°C, conformally coated, conduction-cooled (at card edge) to IEEE 1101.2
- Rear Transition Modules are available
- Rear I/O compatible option with PP XMC/302

6U CompactPCI Dual PMC/XMC Carrier

- 6U CompactPCI® Dual PMC/XMC Carrier supports:
  → 2 single size XMC or PMC modules (or as one dual width module)
  → a single PMC and a single XMC module can be used simultaneously
  → supports non-Monarch Processor XMC/PMC modules
  → operation with 33/66 MHz backplanes
  → commercial air-cooled
- rear I/O compatible option with PP XMC/302
- for ruggedized version, see separate datasheet:
  → rear plug compatible
 → conduction-cooled: PP XMC/202-RC

XMC and PMC Interfaces

- Supports 2 single size XMC or PMC modules (or as one dual width module):
  → a single PMC and a single XMC module can be used simultaneously
  → supports non-Monarch Processor XMC/PMC modules
- XMC module interface requirements:
  → x1, x2 or x4 PCI Express
  → logical and electrical layer meets specification PCI Express 1.1
- PMC module interface requirements:
  → 5 Volt or 3.3 Volt signaling
  → 32/64-bit and 33/66 MHz PCI/PCI-X
  → logical and electrical layer meets specification PCI-X 1.0
- complies with CMC (Common Mezzanine Card) standard IEEE 1386-2001 and PMC (PCI Mezzanine Card) standard IEEE 1386.1-2001
- front panel I/O, and rear I/O via J3 and J5 connectors:
  → 64 I/O signals per XMC/PMC site
  → rear I/O routed as differential pairs
  → rear I/O options for XMC Pn6 or PMC Pn4 connectors
  → can connect to an optional Rear Transition Module (AD PP5/002 or AD PP5/003)

Hot Swap Function

- permits live insertion and extraction of PP XMC/202 carrier
- supports Basic and Full Hot Swap
- compatible with PICMG® 2.1, Rev 2.0 Hot Swap specification
- Hot Swap capable register:
  → insertion
  → extraction
  → ENUM mask/enable
  → front panel blue LED
- CompactPCI backplane interface signals:
  → ENUM (board insertion/extraction indication)
  → healthy (power)

CompactPCI Bus Interface

- occupies one 6U CompactPCI slot
- conforms to PICMG 2.0 R3.0:
  → supports 3.3V and 5V signaling
  → 32/64-bits at 33/66 MHz
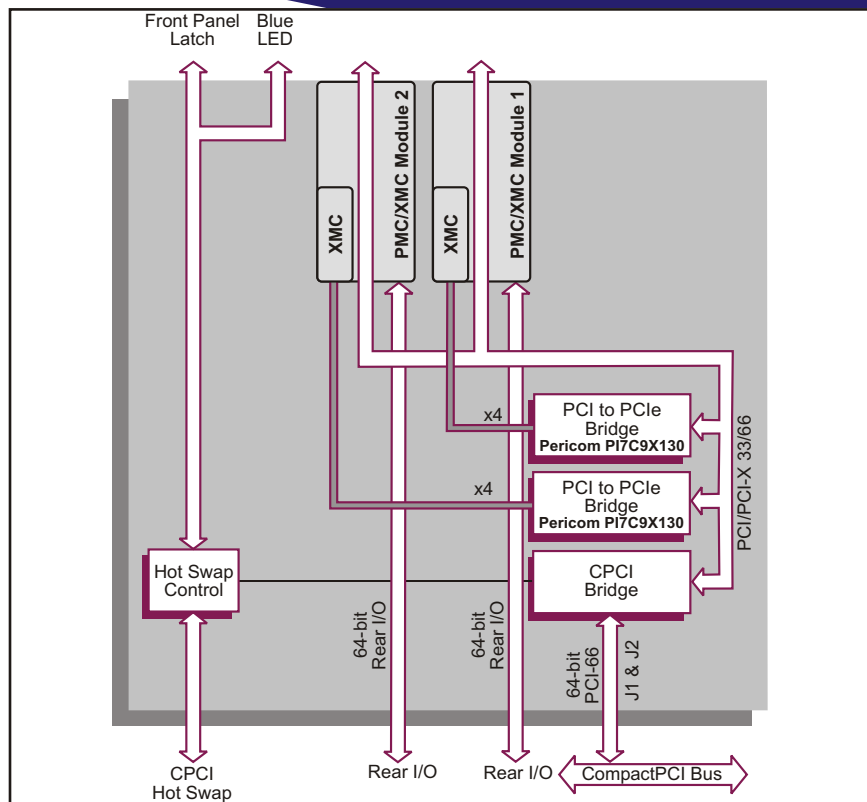
Other Features

- front panel activity LED:
  → flashes with on-board PCI bus activity
- front panel fault LED:
  → reports power fault or PCI bus error conditions

Electrical Specification

- all figures are typical and do not include PMC/XMC module requirements:
  → PMC/XMC module not fitted
- +5V @ 0.02A; +5%/-3%
- +3.3V @ 1.0A; +5%/-3%
- +12V @ 0.002A; +5%/-5%
- -12V @ 0.0A; +5%/-5%

Environmental Specification

- operating temperatures:
  → 0°C to +55°C (N-Series)
  → -25°C to +70°C (E-Series)
  → -40°C to +85°C (K-Series)
- storage temperature: -40°C to +85°C
- 5% to 95% Relative Humidity, non condensing (operating or storage):
  → K-Series includes humidity sealant

Safety

- PCB (PWB) manufactured with flammability rating of 94V-0

Mechanical Specification

- 6U form-factor: 9.2" x 6.3" (233.4mm x 160mm)
- utilizes a single CompactPCI slot: 0.8" (20.3mm)
- connectors: IEC-1076-4-101 for J1, J2, J3, J5
- shock: 20g, 11ms, ½ sine
- vibration: 5Hz-2000Hz at 2g, 0.38mm peak displacement

ORDERING INFORMATION

Order Number	Product Description (Hardware)
PP XMC/202-10	Dual XMC/PMC Carrier Board with rear I/O via PMC Pn4 rear I/O connectors
PP XMC/202-20	Dual XMC/PMC Carrier Board with rear I/O via XMC Pn6 rear I/O connectors
AD PP5/002-00	Rear Transition Module with front panel I/O interface
AD PP5/003-00	Rear Transition Module with PIM sites

For extended temperature E and K-Series, or ruggedized RC-Series, please contact your local sales office.