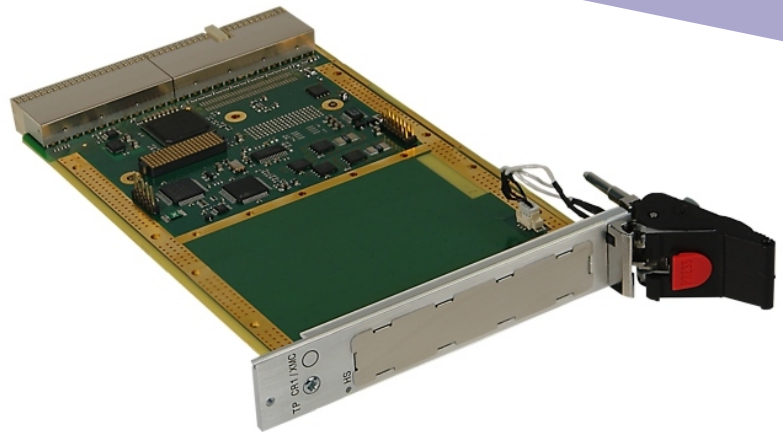


## 3U CompactPCI XMC Carrier Board



### APPLICATIONS

The TP CR1/XMC 3U PMC carrier board provides a flexible solution for designers wishing to add XMC I/O functionality to a CompactPCI® 32-bit 33/66MHz system. The carrier accommodates one single width XMC module conforming to the IEEE 1386 Common Mezzanine Card standard, with front panel I/O and 64-bit rear I/O. XMC modules supporting up to x4 PCI Express® interfaces can be used. A wide range of commercial and proprietary designed XMC modules can be supported such as SAS,

LAN, WAN, Graphics and Communications Controllers. The XMC site provides XMC rear I/O via either a PMC Pn4 or XMC Pn6 connector, where the rear I/O signals are routed to the CompactPCI J2 connector. There is an optional rear panel I/O Transition Module. Options to operate in temperatures ranging from -40°C to +85°C are available. This board is rear I/O plug compatible with the ruggedized air-cooled and conduction-cooled versions.

### HIGHLIGHTS

- 3U CompactPCI XMC Carrier supports one single size XMC module
- XMC PCI Express interface supports:
  - x1, x2 or x4 PCI Express
- Front panel I/O
- 64-bit rear I/O via J2 connector:
  - conforms to PICMG 2.3 R1.0 pinouts
  - rear I/O routed as differential pairs
  - rear I/O options for XMC Pn6 or PMC Pn4 connector
- 3.3 Volt, 5 Volt, +12 Volt and -12 Volt provided for XMC modules via CompactPCI backplane
- Occupies one 3U CompactPCI slot:
  - 32-bit 33/66 MHz PCI bus
  - 5 Volt or 3.3 Volt signaling
- Extended temperature version planned:
  - -25°C to +70°C (E-Series)
  - -40°C to +85°C (K-Series, includes humidity sealant)
- Ruggedized air-cooled version (RA-Series):
  - -40°C to +75°C, conformally coated
  - see separate TP CR1/XMC-RA datasheet
- Ruggedized conduction-cooled version (RC-Series):
  - conduction cooled to ANSI/VITA 20-2001 (R2005)
  - -40°C to +85°C, conformally coated
  - see separate TP CR1/XMC-RC datasheet
- Occupies one 3U CompactPCI slot
- A Rear Transition Module is available

## 3U CompactPCI XMC Carrier

- 3U CompactPCI® XMC Carrier supports:-
  - one single size XMC module
  - supports non-Monarch Processor XMC modules
- complies with CMC (Common Mezzanine Card) standard IEEE 1386-2001 and PMC (PCI Mezzanine Card) standard IEEE 1386.1-2001

## XMC Interface

- XMC module interface implemented via PLX Technology PEX8114 PCI to PCI Express® bridge :-
  - supports x1, x2 or x4 Gen 1 PCI Express
  - logical and electrical layer meets specification PCI Express 1.1
- front panel I/O
- 64-bit rear I/O via J2 connector:-
  - conforms to PICMG 2.3 R1.0 pinouts
  - rear I/O routed as differential pairs
  - rear I/O options for XMC Pn6 or PMC Pn4 connector
  - optional Rear Transition Module

## CompactPCI Bus Interface

- pinout conforms to PICMG 2.0 R3.0:-
  - 32-bit 33/66 MHz PCI bus
  - supports 3.3V and 5V signaling
- CompactPCI bus interfaces to XMC site via a PCI to PCI Express bridge

## Electrical Specification

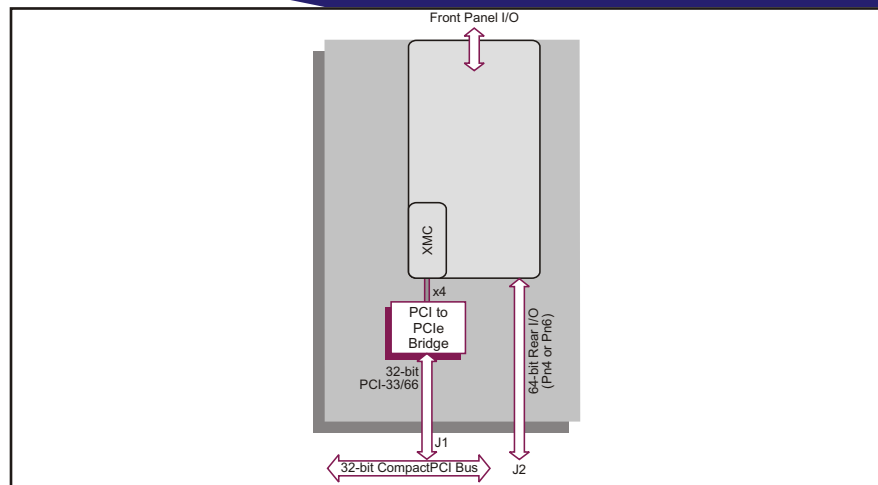
- all power supply rails available to XMC site:-
  - overall power consumption dependent on the XMC module fitted
  - maximum power for XMC module is 25 Watts
- typical current figures without XMC module fitted:-
  - +5V@ 0.1A; voltage +5% / -3%
  - +3.3V@ 0.5A; voltage +5% / -3%
  - +12V@ 0.0A; voltage +5% / -5%
  - -12V@ 0.0A; voltage +5% / -5%

## Safety

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

## 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 temperatures:-
  - -40°C to +85°C
- Relative Humidity, non condensing (operating and storage):-
  - 5% to 95%
  - K-Series includes humidity sealant
- ruggedized air-cooled and conduction-cooled versions, see separate datasheets:-
  - rear plug compatible
  - air-cooled: TP CR1/XMC-RA
  - commercial: TP CR1/XMC-RC



## Mechanical Specification

- 3U form-factor: 3.9 inches x 6.3 inches (100mm x 160mm)
- single slot
- connectors: IEC-1076-4-101 for J1-J2
- shock:-
  - 20g, 11ms, ½ sine (operating);
  - 30g, 11ms, ½ sine (non-operating)
- vibration:-
  - 5Hz-2000Hz at 2g, 0.38mm peak displacement (operating);
  - 5Hz-2000Hz at 5g, 0.76mm peak displacement (non-operating)

## ORDERING INFORMATION

### Order Number Product Description (Hardware)

TP CR1/XMC-10	XMC Carrier Board for 3U 32-bit CPCI, with 64-bit rear I/O via PMC Pn4 rear I/O connector
TP CR1/XMC-20	XMC Carrier Board for 3U 32-bit CPCI, without rear I/O connector
TP CR1/XMC-30	XMC Carrier Board for 3U 32-bit CPCI, with 64-bit rear I/O via XMC Pn6 rear I/O connector
AD TP1/103-00	3U Rear Transition Module with 68-way front panel I/O interface connector
AP TP1/103-10	3U Rear Transition Module with PIM site

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