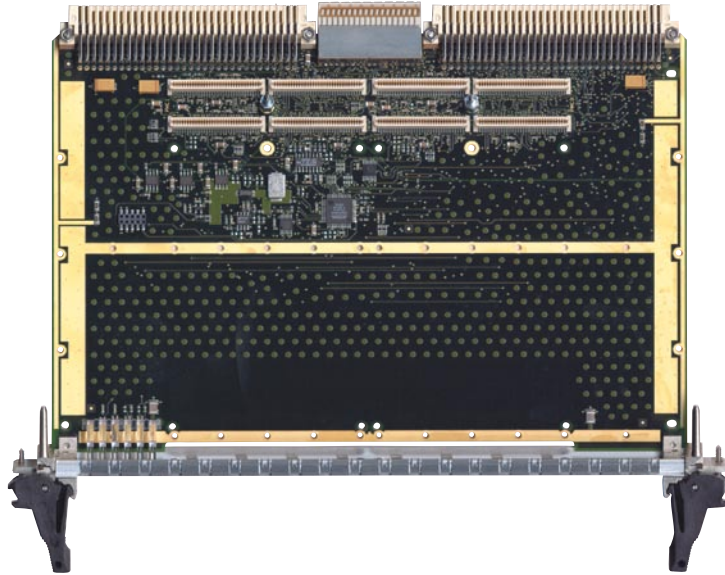
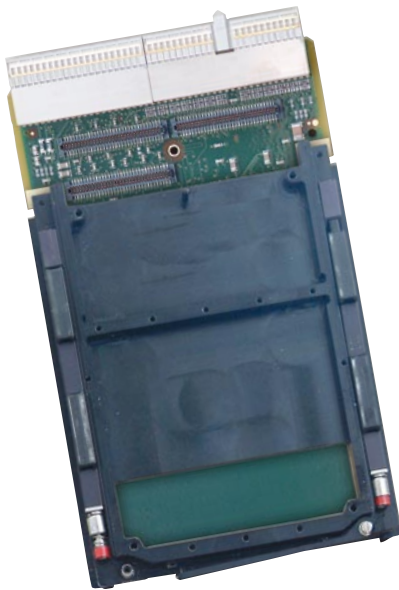


► PMC Carriers

V2PMC, V2PMC2, CPMC1



V2PMC



CPMC1



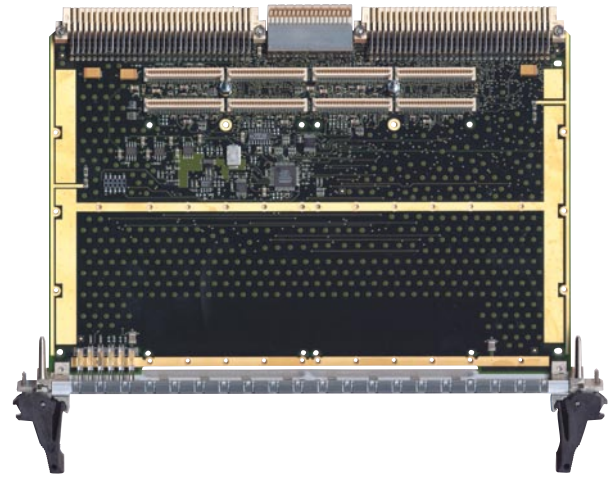
V2PMC2

► V2PMC

Dual-Slot, Low-Latency, 64-bit PMC Carrier

The V2PMC is an expansion board for Kontron SBCs and Computing Nodes:

- PowerEngine7 (Version VMPC6a like)
- VMPC6x
- VxG4



Dual PMC Extension

The V2PMC expands the motherboard PCI bus, as shown in the diagram below, using the P0 connector of the VME backplane to directly couple the carrier to the motherboard.

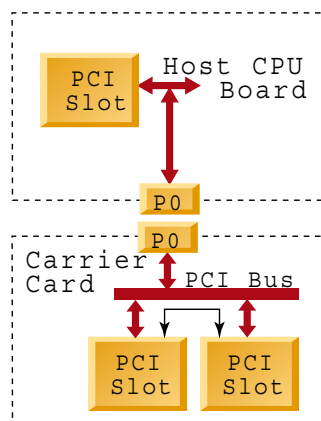
Up to two additional PMC modules can be hosted for each carrier without encumbering any PMC sites resident on the motherboard. The two PMC sites on the carrier also have their PMC I/O routed to the VME P2 connector.

Note:

- The V2PMC supports double PMC format boards per IEEE P1386.
- The default version requires 3.3V to be supplied

Front or Rear I/O

Both PMC slots are equipped with the PMC P4 connector for rear I/O capability via the VME P2 in accordance with the VITA-35-2000 standard.



PCI Extension

The V2PMC extends the board's PCI bus via the P0 connector as follows:

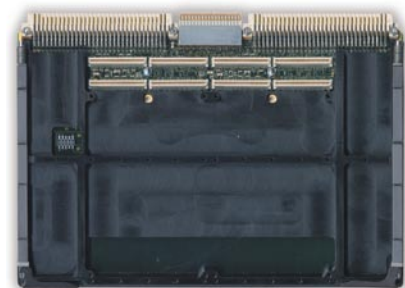
- 64-bit 33 MHz mode for both PMC sites
- VIO provided by the Kontron motherboard allowing for 5V or 3.3V signaling.
- Voltage keyed pin location sensing for VIO and PMC mismatch detection.
- Low-latency implementation (no PCI-PCI bridge) P0 to P0 connection is made through the backplane using the IFDPP0 passive backplane overlay.

Note:

PCI bus expansion through P0 is limited to 32-bit on the VMPC6x CPU board. It is 64-bit wide.

Commercial or Rugged Versions

The various versions of V2PMC are tested against environmental constraints which match those used for Kontron SBCs.



► Ordering Information

		SA	WA	RA	RC	V2PMC-				
Environnement Class	Standard	X				SA	↑			
	Rugged Convection		*	X		RA	↑			
	Rugged Conduction				X	RC	↑			
PMC VIO key (PCI Signaling Voltage)	5V is default	X		X	X		0	↑		
	3.3V	X		X	X		1	↑		
Embedded 3.3V	Use 3.3V from Backplane	X		X	X			0	↑	
	Creates 3.3V from 5V	X		X	X			1	↑	
Standard Coating Option		Option	(Default)	(Default)	(Default)					V

➤ **V2PMC2**

Dual-Slot, High Performance 64-bit/66 MHz PCI-X PMC Carrier

The V2PMC2 is an expansion board for Kontron SBCs:

- PENTXM2
- PENTXM4

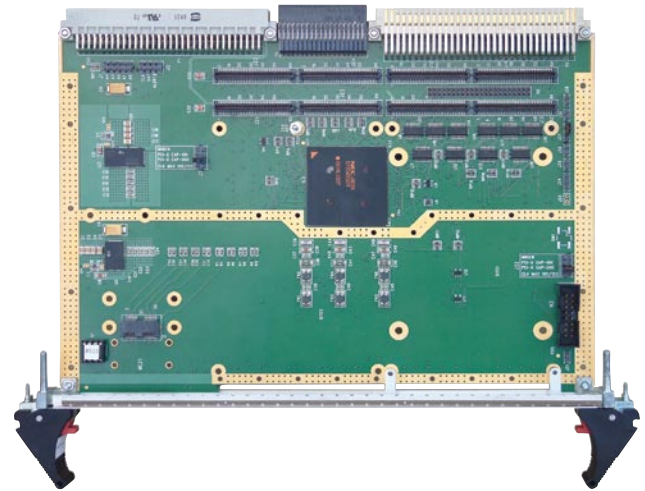
The V2PMC2 PCI-X/PMC carrier card is a 6U VME that holds up to two single-width or one double-width PCI-X/PMC modules.

The V2PMC2 works in association with a PCI-Express host which is connected to it through a x4 PCI-Express serial link.

PCI-X/PMC Slots

- 64/32 bit data path-100/66/33 MHz
- PMC #1 : 3.3V signaling, 5V tolerant
Rear I/O signals are routed on VME P2-64ac (VITA.35)
- PMC #2 : 3.3V signaling only
Rear I/O signals are routed on VME P2-44dz (VITA.35)
Pins 45 to 64 are routed to P0 connector.

NOTE: The V2PMC2 supports a different PCI signaling level onto the two PMC sites.



PCI-Express to PCI-X Bridge

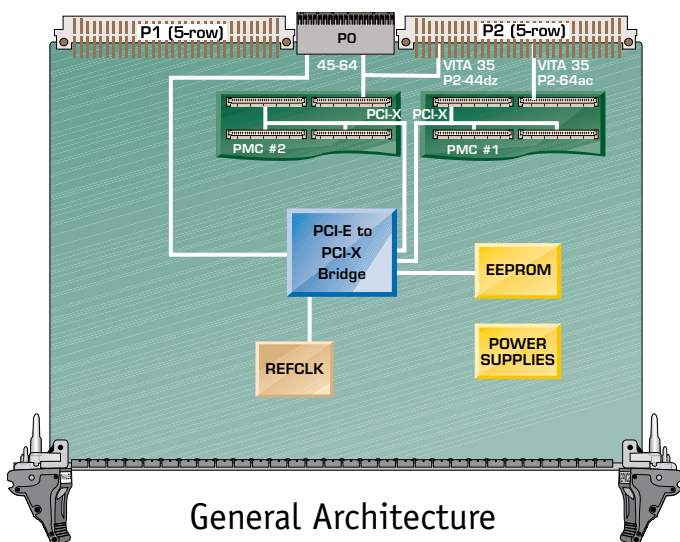
An NEC uPD720400 component provides the bridging function between the PCI express serial interconnect and two PMC sites. The bridge is hardwired for forward transparent mode operation and provides the PCI clocks and arbitration functions. The PCI/PCI-X clock frequency and protocol selections for each PMC site are independently determined by the installed PMC's and may be downscaled by jumpers. The valid auto-selectable combinations are PCI-X at 100 or 66 MHz, and PCI at 66 or 33 MHz.

Since the bridge expects the host to be external to the carrier board a PCI reset (asserts RST#) is generated during power up or when a reset message is received over the serial link.

Commercial or Rugged Versions

The V2PMC2 has been designed to be available in rugged air-cooled (RA) or rugged conduction-cooled (RC) builds. Please contact Kontron for availability.

Power Requirements
➤ +5V: 1A Typical
➤ ±12V: Routed from backplane to PMC
➤ Onboard +3.3V power generation for PMC



➤ **Ordering Information**

Order Code	
V2PMCX-SA-010	6U Dual PMC VME Blade Carrier
CABL-ZPACK-X4-022	22 cm P0 to P0 x4 PCI-E Cable

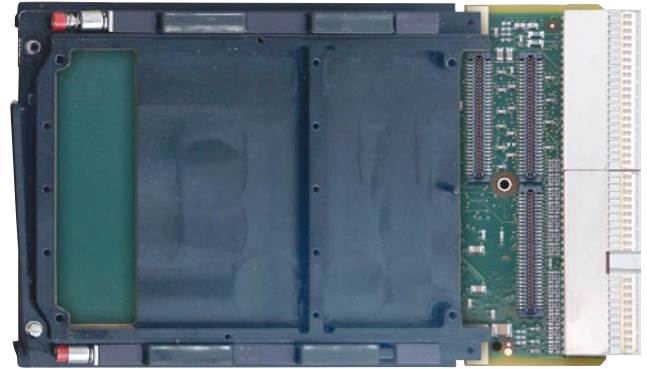
➤ **CPMC1**

Single Slot, Bridgeless, Rugged Conduction-cooled 32-bit/33 MHz PMC Carrier

The CPMC1 is an expansion board for every 3U cPCI SBC, particularly:

- PowerEngineC7

The CPMC1 is a standard 3U Compact PCI carrier that provides rear I/O for a single width PMC module. All the 64 rear I/O of the PMC P4 connector are routed to the cPCI J2 backplane connector.



➤ **Ordering Information**

Order Code	
CPMC1-RC-000	3U cPCI PMC VME Blade Carrier

➤ **V2PMC, V2PMC2, CPMC1 - Common Specifications**

Product Warranty and Services

- All of Kontron's hardware products are covered by a two-year return-to-factory warranty.
- Several service programs are available, including update services, hotline access, product repair and exchange services, technical assistance, on-site or remote technical assistance.
- ISO 9001: Kontron's ISO 9001 certification is just another way for us to back our commitment to quality products and customer service.

Finally, in addition to its standard support services, Kontron offers customized consultation to system integrators.

Miscellaneous
➤ Board size: VME double Eurocard <ul style="list-style-type: none"> ➤ V2PMC, V2PMC2: 233.3 mm x 160 mm ➤ CPMC1: 160 mm x 100 mm
➤ Electromagnetic compatibility: <ul style="list-style-type: none"> ➤ NF EN 55022 Class B ➤ NF EN 50082-2
➤ All Kontron boards are EC-compliant.



With AFAQ ISO 9001 2000 Version Certification Kontron Modular Computers S.A. guarantees Total Customer Satisfaction

Environmental Specifications				
	SA Standard Commercial	WA Extended Temperature	RA Rugged Air-Cooled	RC Rugged Conduction-Cooled
Conformal Coating	Optional	Standard	Standard	Standard
Airflow	1.2 m/s	1.5 m/s	1.8 m/s	NA
Temperature	VITA 47-Class AC1	VITA 47-Class AC2	VITA 47-Class AC3	VITA 47-Class CC4
Cooling Method	Convection	Convection	Convection	Conduction
Operating	0° to +55°C	-20° to +65°C	-40° to +75°C	-40° to +85°C
Storage	-45° to +85°C	-40° to +85°C	-40° to +100°C	-45° to +100°C
Vibration Sine (Operating)	20/500 Hz: 2g	20/500 Hz: 2g	20/2,000 Hz: 3g	22/2,000 Hz: 5g
Random	VITA 47-Class V1	VITA 47-Class V1	VITA 47-Class V2	VITA 47-Class V3
Shock (Operating)	20g/11 ms Half Sine	20g/11 ms Half Sine	40g/20 ms Half Sine	40g/20 ms Half Sine
Altitude (Operating)	-1,640 to 15,000 ft	-1,640 to 33,000 ft	-1,640 to 33,000 ft	-1,640 to 50,000 ft
Relative Humidity	90% without condensation	95% without condensation	95% without condensation	95% without condensation

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