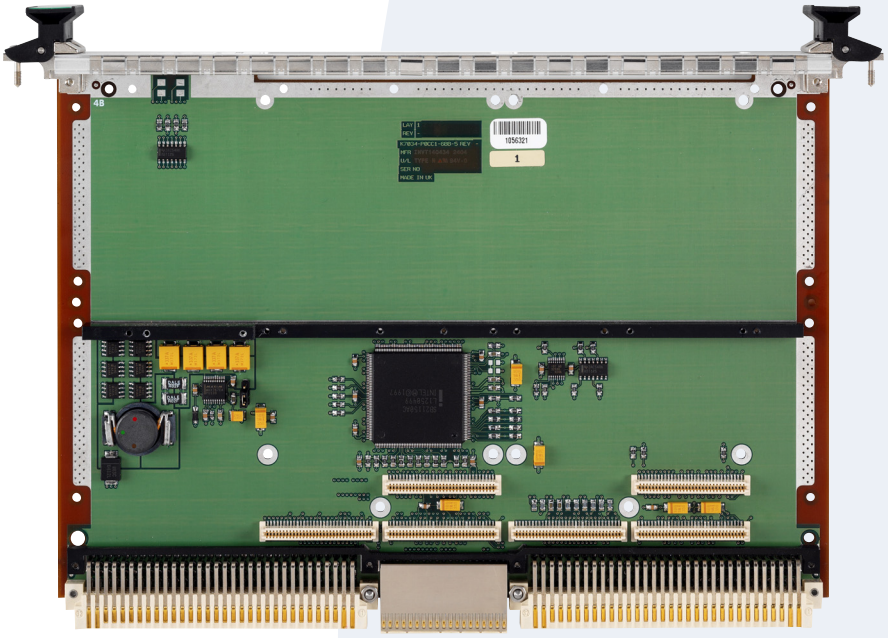
P0CC1

PMC Carrier Card

- Supports PCI extension over P0
- Two PMCs per card
- Front or rear I/O
- 5 ruggedization levels
- Air- or conduction-cooled versions
- Provides 3.3V power for PMCs
- Offers 3.3V or 5V signaling to PMCs



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DIGITAL PROCESSING

The P0CC1 is a 6U PMC (PCI Mezzanine Card) carrier which can accommodate two PMCs in a standard VME environment. Up to four P0CC1 carrier cards can be used with one single board computer (SBC), allowing access to a maximum of nine PMCs from the SBC. This offers easy system upgrade at low incremental cost, using Radstone's proven range of SBCs and PMCs designed for networking, graphics, signal processing and other standard or customized I/0 functions.

The P0CC1 is attached via its P0 connector to a host PCI infrastructure. This is provided by an SBC fitted with a PMCPCIM (a half size PMC adapter card), which links the SBC's internal PCI to a P0 PCI backplane. The SBC is plugged into the master slot of the P0BP range of P0 PCI backplanes, with the P0CC1s being plugged into any of the other available slots on the same PCI backplane. The P0CC1 cards and the PMCPCIM adapter both employ PCI-to-PCI bridges to create secondary PCI buses, which support concurrent transactions with their primary PCI buses. These bridge chips also allow buffering of PCI data and addresses for posted memory write operations. The primary bus for the PMCPCIM adapter is that of the SBC: its secondary bus forms the P0 PCI backplane bus, which is also the primary bus for all of the attached P0CC1 cards. The secondary bus on each P0CC1 is connected to its PMC sites.

Block Diagram

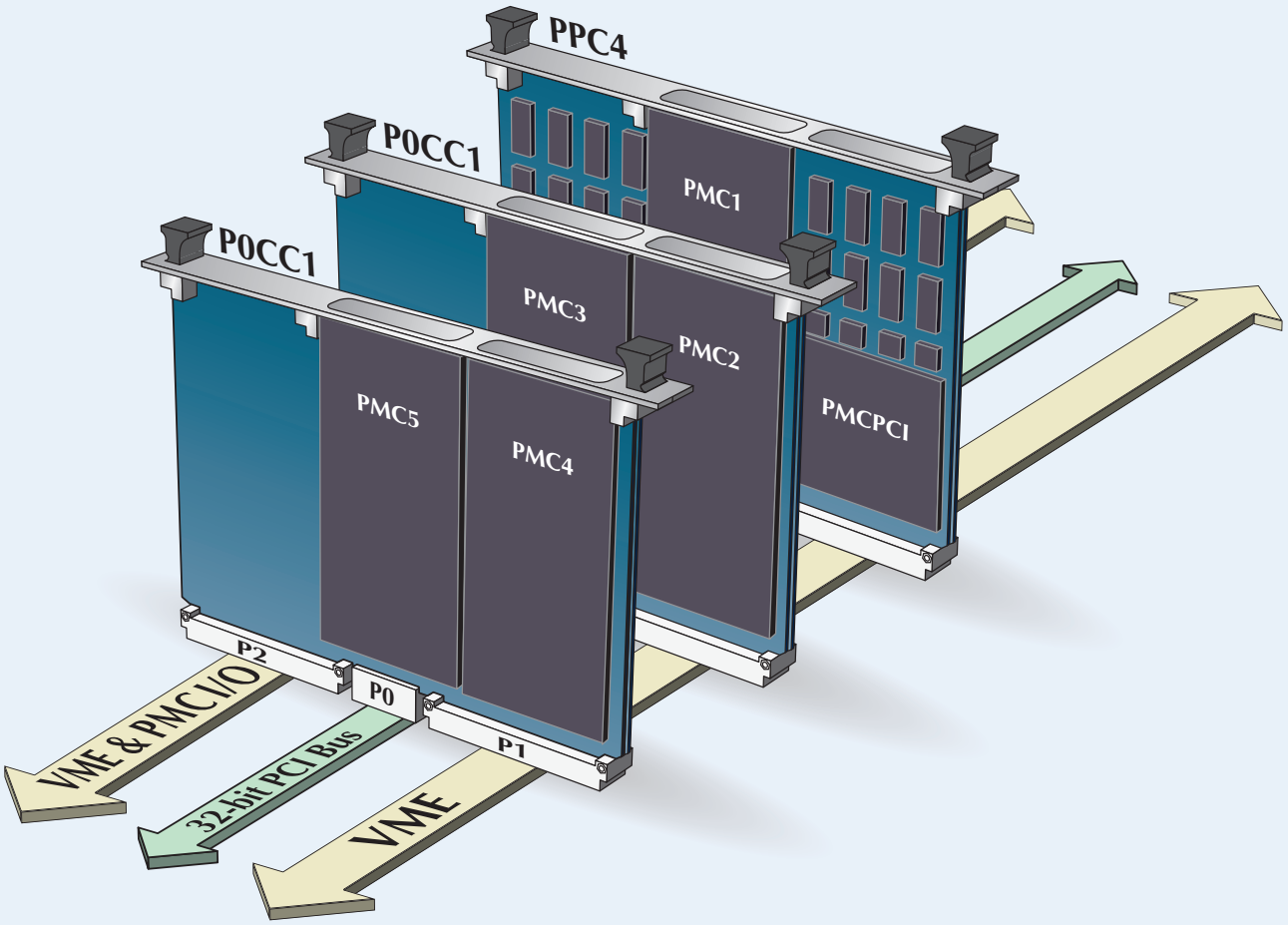

Figure 1: P0CC1 Functional Block Diagram

Offered in five air- and conduction-cooled ruggedization levels, the P0CC1 offers fully compatible system expansion for Radstone's PowerXtreme, PowerXpress, EmPower and XtraPower families of VME SBCs, providing both front and rear PMC I/O. High density rear I/O is achieved using 5-row VME 64 connectors, the I/O being located on P2.

Full front and rear I/O is available on air-cooled versions, with some limited front I/O also being available for those conduction-cooled PMCs which have suitable connectors.

Specification

Form factor	Single slot 6U VME board
PCI-to-PCI bridge	Intel 21150
PMC sites	Two single or one double width
High density rear I/O	5-row VME64 P1 and P2 and type A or B P0 connector
Power requirements	+5V (+5%, -2.5%)
PMC power	5V from backplane / 3.3V from onboard supplies
PCI signaling to PMCs	3.3V or 5V
Weight	Approximately 460 gms

Standard Ordering Information

Sales Code	Description
POCC1-1000A	6U PMC Carrier. Level 1 for use with air-cooled PMCs & PPCs fitted with PMCPCI & P0BP1 J0 modules. 2 PMC slots, front I/O, 5-row P1, P2 and type A 80 way P0 fitted. PMC1 46 pins routed to P2 rows Z & D; PMC2 64 pins routed to P2 rows A & C
POCC1-2000A	Air-cooled ruggedization Level 2 as above
POCC1-3000A	Air-cooled ruggedization Level 3 as above
POCC1-4000A	Conduction-cooled ruggedization Level 4 as above, except only limited front panel I/O. See product manual for details
POCC1-5000A	Conduction-cooled ruggedization Level 5 as above, except only limited front panel I/O. See product manual for details
	POCCI with a B-type connector. **Note:** Use the sales code reference above but change the suffix 'A' to 'B'
POCC1-1000B	6U PMC Carrier. Level 1 for use with air-cooled PMCs & PPCs fitted with PMCPCI & P0BP1 J0 modules. 2 PMC slots, front I/O, 5-row P1, P2 and type B 95-way P0 fitted. PMC1 46 pins routed to P2 rows Z & D; PMC2 64 pins routed to P2 rows A & C
PMCPCIM-1000A	Half sized PMC bridge card which routes the host PCI bus onto a PCI bus on the PMC I/O pins, which are in turn connected to a PCI backplane subsystem via the host's P0 connector. Receives the PCI interrupts from the backplane; includes all the clocks and bus arbitration logic
PMCPCIM-2000A	Air-cooled ruggedization Level 2 as above
PMCPCIM-3000A	Air-cooled ruggedization Level 3 as above
PMCPCIM-4000A	Conduction-cooled ruggedization Level 4 as above
PMCPCIM-5000A	Conduction-cooled ruggedization Level 5 as above
P0BP1-502	J0 backplane PCB for fitment to the system backplane; routes PCIBus signals from P0/J0 of the adjacent VME slot (must be soldered onto the J0 system backplane)
P0BP1-503	J0 backplane PCB for fitment to the system backplane; routes PCIBus signals from P0/J0 of the adjacent 2 VME slots (must be soldered onto the J0 system backplane)
P0BP1-504	J0 backplane PCB for fitment to the system backplane; routes PCIBus signals from P0/J0 of the adjacent 3 VME slots (must be soldered onto the J0 system backplane)
P0BP1-505	J0 backplane PCB for fitment to the system backplane; routes PCIBus signals from P0/J0 of the adjacent 4 VME slots (must be soldered onto the J0 system backplane)

Ordering Information

All P0CC1s are designed to be used with a PMCPCIM bridge and a P0BP1 backplane, both of which must be ordered separately.

The standard ordering information (above) defines the standard build variant. Consult your local Radstone sales office for availability of further build options.

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