XCPC-9200

Conduction Cooled/Air Cooled Dual PMC Carrier

 Printed in the United States of America

Revision	*Description*	*Date*
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Part Number 649200

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WARNING

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

European Union Directive 89/336/EEC requires that this apparatus comply with relevant ITE EMC standards. EMC compliance demands that this apparatus is installed within a CompactPCI enclosure designed to contain electromagnetic radiation and which will provide protection for the apparatus with regard to electromagnetic immunity. This enclosure must be fully shielded. An example of such an enclosure is a 6U EMC-RFI CompactPCI System chassis, which includes a front cover to complete the enclosure.

The connection of non-shielded equipment interface cables to this equipment will invalidate European Free Trade Area (EFTA) EMC compliance and may result in electromagnetic interference and/or susceptibility levels that are in violation of regulations which apply to the legal operation of this device. It is the responsibility of the system integrator and/or user to apply the following directions, as well as those in the user manual, which relate to installation and configuration:

> All interface cables should be shielded, both inside and outside of the CompactPCI enclosure. Braid/foil type shields are recommended for serial, parallel, and SCSI interface cables. Where as external mouse cables are not generally shielded, an internal mouse interface cable must either be shielded or looped (1 turn) through a ferrite bead at the enclosure point of exit (bulkhead connector). External cable connectors must be metal with metal back-shells and provide 360-degree protection about the interface wires. The cable shield must be terminated directly to the metal connector shell; shield ground drain wires alone are not adequate. CompactPCI panel mount connectors that provide interface to external cables (e.g., RS232, USB, keyboard, mouse, etc.) must have metal housings and provide direct connection to the metal CompactPCI chassis. Connector ground drain wires are not adequate.

About This Manual

The Xembedded reference manual provides functional, architectural, and mechanical descriptions of the XCPC-9200. This manual is intended for anyone who designs OEM products which have requirements for a Dual PMC Carrier that require large amounts of power on each PMC site.

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Feedback

Xembedded welcomes feedback on how we can make our manuals and technical documentation more useful to our customers. Please feel free to send comments and suggestions to support@xembedded.com.

References

PICMG 2.0 R3.0 ECN2.0-3.0-002
PICMG 2.3 R1.0
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Chapter 1 *General Description*

The XCPC-9200 is the most advanced CompactPCI (cPCI) carrier in the market that offers two IEEE.1-2201-compliant conduction-cooled PMC sites with 25 watts of power to each site.

- Conduction-cooled module that is also available as an air cooled module.
- High current/wattage power supply to deliver up to 25 watts of power to each PMC site.
- 64/32-bit, 133/66/33MHz PCI bus on the CompactPCI bus. The PMC side supports 64/32-bit operation at 133MHz or 66MHz speeds (user selectable).
- It supports the interrupts INTA, INTB, INTC, and INTD.
- CompactPCI I/O signaling is auto-configured and supports both 3.3V and 5V backplanes. The PMC interfaces support 3.3V I/O signaling only.
- The PMC connectors on the carrier include all the signals of a 66/33 MHz, 64/32-bit, multi-master PCI bus, the power rails for 3.3V, 5V, V(I/O) and other specialized signals for board detection.
- Each PMC site provides full rear I/O capability through its J14/J24 connector. The rear I/O is routed through the J3 and J5 connectors on the backplane.
- A PCI-to-PCI bridge provides for coupling of the PMC sites to the CompactPCI backplane, so that two independent PCI busses exist. The CompactPCI interface is the PLX PCI6540 PCI-to-PCI bridge. It is software transparent and consequently a software driver is not required to manage data transfer between the PMC module and the CompactPCI bus.
- The XCPC-9200 has been designed to function with all CompactPCI backplanes.
- The J4 connector is not present on the XCPC_9200 so this carrier module can also be used in systems employing an H110 backplane.

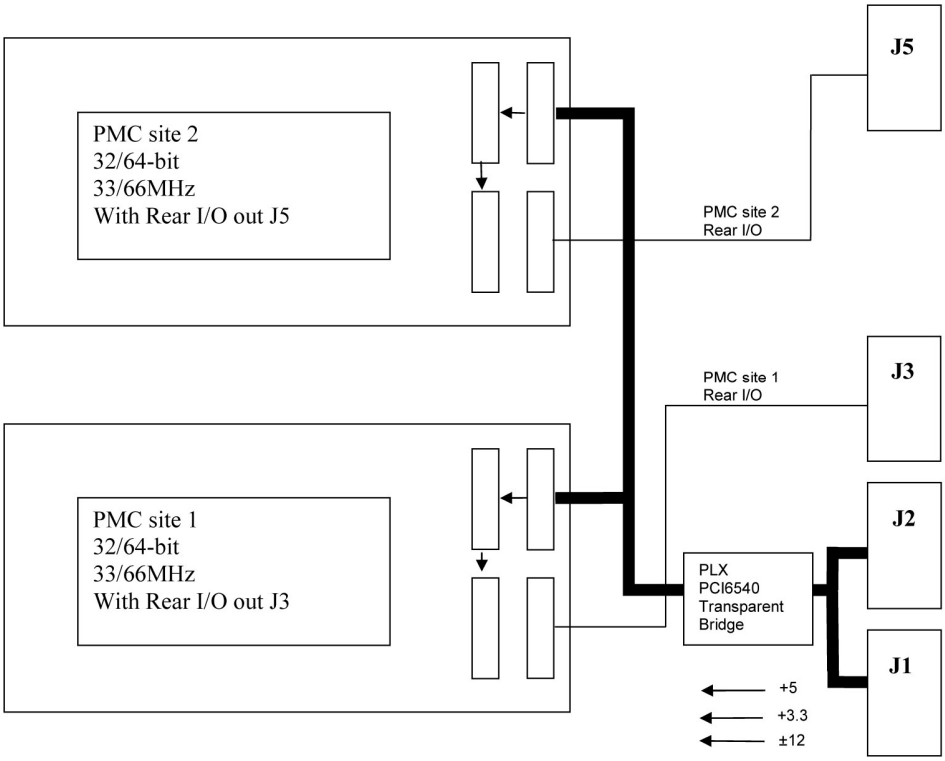
Versions of the XCPC-9200

The conduction cooled version of the XCPC-9200 module uses a custom conduction cooled assembly consisting of a conduction cooled frame, thermo bars, ejector/injectors and Wedge-Loks® designed to thermally conduct heat away from the conduction-cooled PMC modules per ANSI/VITA 30.1-2001. In a conduction-cooled assembly, adequate thermal conduction must be provided to prevent a temperature rise above the maximum operating temperature. This version of the XCPC-9200 is design for use in an ATR type chassis.

The XCPC-9200 is also available in an extended temperature version which uses a standard CompactPCI 6U front panel shown in Fig. 2-2.

The air cooled XCPC-9200 requires adequate air circulation (200 to 300LFM) to prevent a temperature rise above the maximum operating temperature and to prolong the life of the electronics. If the installation is in an industrial environment and the board is exposed to environmental air, careful consideration should be given to air filtering.

Figure 1-1 below shows the Architectural of the board.



PMC Interface

The two single-width PMC slots on the XCPC-9200 provide an easy way to extend a CompactPCI system. PMC double-wide modules can also be used on the XCPC-9200. PMC modules are available in a wide range of interfaces and functions available from a large number of PMC vendors.

The secondary (PMC) side of the PCI-to-PCI bridge provides a 32/64-bit wide PCI data path for speeds up to 133 MHz (PCI-X), which is routed to the onboard connectors Jn1, Jn2 and Jn3. These connectors also provide the power for the PMC module. The PMC slots have been designed to comply with the IEEE 1386.1 specification, which defines the PCI electrical interface for the CMC (Common Mezzanine Card) form factor.

Fig 1-2 PMC connector layout

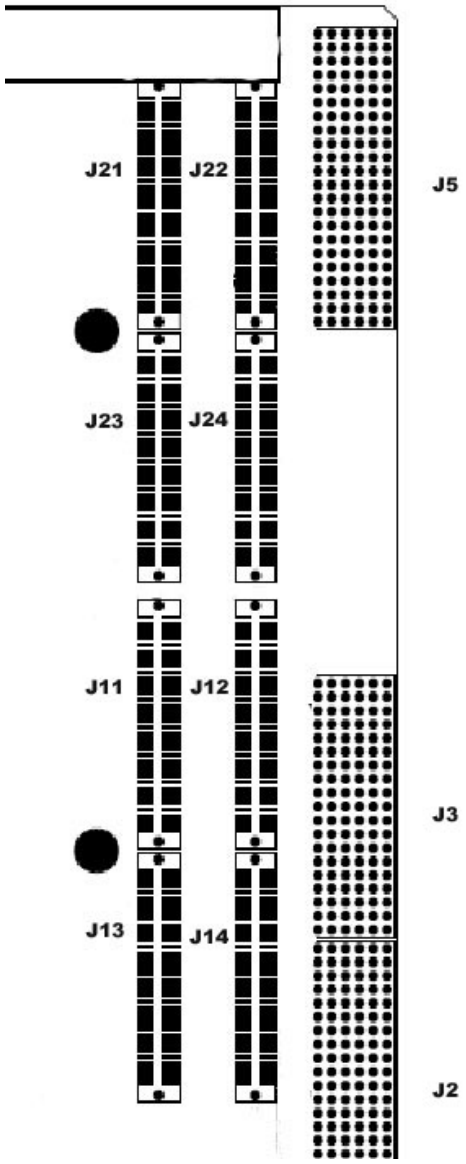


Table 1-1 PMC 1 and PMC 2 Connector Pin Out

Connectors J11 and J21				**Connectors J12 and J22**			
Signal	PIN	PIN	Signal	Signal	PIN	PIN	Signal
TCK	1	2	-12V	+12V	1	2	TRST*
Ground	3	4	INTA*	TMS	3	4	TDO
INTB*	5	6	INTC*	TDI	5	6	Ground
BUSMODE1*	7	8	+5V	Ground	7	8	PCI-RSVD*
INTD*	9	10	PCI-RSVD*	PCI-RSVD*	9	10	PCI-RSVD*
Ground	11	12	PCI-RSVD*	BUSMODE2*	11	12	+3.3V
CLK	13	14	Ground	RST*	13	14	BUSMODE3*
Ground	15	16	GNT*	+3.3V	15	16	BUSMODE4*
REQ*	17	18	+5V	PCI-RSVD*	17	18	Ground
V(I/O)	19	20	AD(31)	AD(30)	19	20	AD(29)
AD(28	21	22	AD(27)	Ground	21	22	AD(26)
AD(25)	23	24	Ground	AD(24)	23	24	+3.3V
Ground	25	26	C/BE(3)*	IDSEL	25	26	AD(23)
AD(22)	27	28	AD(21)	+3.3V	27	28	AD(20)
AD(19)	29	30	+5V	AD(18)	29	30	Ground
V(I/O)	31	32	AD(17)	AD(16)	31	32	C/BE(2)*
FRAME*	33	34	Ground	Ground	33	34	PMC-RSVD
Ground	35	36	IRDY*	TRDY*	35	36	+3.3V
DEVSEL*	37	38	+5V	Ground	37	38	STOP*
Ground	39	40	LOCK*	PERR*	39	40	Ground
SDONE*	41	42	SBO*	+3.3V	41	42	SERR*
PAR	43	44	Ground	C/BE(1)*	43	44	Ground
V(I/O)	45	46	AD(15)	AD(14)	45	46	AD(13)
AD(12)	47	48	AD(11)	M66EN	47	48	AD(10)
AD(09)	49	50	+5V	AD(08)	49	50	+3.3V
Ground	51	52	C/BE(0)*	AD(07)	51	52	PMC-RSVD
AD(06)	53	54	AD(05)	+3.3V	53	54	PMC-RSVD
AD(04)	55	56	Ground	PMC-RSVD	55	56	Ground
V(I/O)	57	58	AD(03)	PMC-RSVD	57	58	PMC-RSVD
AD(02)	59	60	AD(01)	Ground	59	60	PMC-RSVD
AD(00)	61	62	+5V	ACK64*	61	62	+3.3V
Ground	63	64	REQ64*	Ground	63	64	PMC-RSVD

Table 1-2 PMC 1 and PMC 2 J13 and J23 Connector Pin Out

Connectors J13 and J23			
Signal	PIN	PIN	Signal
PCI-RSVD	1	2	Ground
Ground	3	4	C/BE(7)*
C/BE(6)*	5	6	C/BE(5)*
C/BE(4)*	7	8	Ground
V(I/O)	9	10	PAR64
AD(63)	11	12	AD(62)
AD(61)	13	14	Ground
Ground	15	16	AD(60)
AD(59)	17	18	AD(58)
AD(57)	19	20	Ground
V(I/O)	21	22	AD(56)
AD(55)	23	24	AD(54)
AD(53)	25	26	Ground
Ground	27	28	AD(52)
AD(51)	29	30	AD(50)
AD(49)	31	32	Ground
Ground	33	34	AD(48)
AD(47)	35	36	AD(46)
AD(45)	37	38	Ground
V(I/O)	39	40	AD(44)
AD(43)	41	42	AD(42)
AD(41)	43	44	Ground
Ground	45	46	AD(40)
AD(39)	47	48	AD(38)
AD(37)	49	50	Ground
Ground	51	52	AD(36)
AD(35)	53	54	AD(34)
AD(33)	55	56	Ground
V(I/O)	57	58	AD(32)
PCI-RSVD	59	60	PCI_RSVD
PCI-RSVD	61	62	Ground
Ground	63	64	PCI-RSVD

Table 1-3 PMC 1 and PMC 2 Connector Pin Out

Connectors J14				**Connectors J24**			
Signal	PIN	PIN	Signal	Signal	PIN	PIN	Signal
PMC1I/O-1	1	2	PMC1I/O-2	PMC2 I/O-1	1	2	PMC2 I/O-2
PMC1I/O-3	3	4	PMC1I/O-4	PMC2 I/O-3	3	4	PMC2 I/O-4
PMC1I/O-5	5	6	PMC1I/O-6	PMC2 I/O-5	5	6	PMC2 I/O-6
PMC1I/O-7	7	8	PMC1I/O-8	PMC2 I/O-7	7	8	PMC2 I/O-8
PMC1I/O-9	9	10	PMC1I/O-10	PMC2 I/O-9	9	10	PMC2 I/O-10
PMC1I/O-11	11	12	PMC1I/O-12	PMC2 I/O-11	11	12	PMC2 I/O-12
PMC1I/O-13	13	14	PMC1I/O-14	PMC2 I/O-13	13	14	PMC2 I/O-14
PMC1I/O-15	15	16	PMC1I/O-16	PMC2 I/O-15	15	16	PMC2 I/O-16
PMC1I/O-17	17	18	PMC1I/O-18	PMC2 I/O-17	17	18	PMC2 I/O-18
PMC1I/O-19	19	20	PMC1I/O-20	PMC2 I/O-19	19	20	PMC2 I/O-20
PMC1I/O-21	21	22	PMC1I/O-22	PMC2 I/O-21	21	22	PMC2 I/O-22
PMC1I/O-23	23	24	PMC1I/O-24	PMC2 I/O-23	23	24	PMC2 I/O-24
PMC1I/O-25	25	26	PMC1I/O-26	PMC2 I/O-25	25	26	PMC2 I/O-26
PMC1I/O-27	27	28	PMC1I/O-28	PMC2 I/O-27	27	28	PMC2 I/O-28
PMC1I/O-29	29	30	PMC1I/O-30	PMC2 I/O-29	29	30	PMC2 I/O-30
PMC1I/O-31	31	32	PMC1I/O-32	PMC2 I/O-31	31	32	PMC2 I/O-32
PMC1I/O-33	33	34	PMC1I/O-34	PMC2 I/O-33	33	34	PMC2 I/O-34
PMC1I/O-35	35	36	PMC1I/O-36	PMC2 I/O-35	35	36	PMC2 I/O-36
PMC1I/O-37	37	38	PMC1I/O-38	PMC2 I/O-37	37	38	PMC2 I/O-38
PMC1I/O-39	39	40	PMC1I/O-40	PMC2 I/O-39	39	40	PMC2 I/O-40
PMC1I/O-41	41	42	PMC1I/O-42	PMC2 I/O-41	41	42	PMC2 I/O-42
PMC1I/O-43	43	44	PMC1I/O-44	PMC2 I/O-43	43	44	PMC2 I/O-44
PMC1I/O-45	45	46	PMC1I/O-46	PMC2 I/O-45	45	46	PMC2 I/O-46
PMC1I/O-47	47	48	PMC1I/O-48	PMC2 I/O-47	47	48	PMC2 I/O-48
PMC1I/O-49	49	50	PMC1I/O-50	PMC2 I/O-49	49	50	PMC2 I/O-50
PMC1I/O-51	51	52	PMC1I/O-52	PMC2 I/O-51	51	52	PMC2 I/O-52
PMC1I/O-53	53	54	PMC1I/O-54	PMC2 I/O-53	53	54	PMC2 I/O-54
PMC1I/O-55	55	56	PMC1I/O-56	PMC2 I/O-55	55	56	PMC2 I/O-56
PMC1I/O-57	57	58	PMC1I/O-58	PMC2 I/O-57	57	58	PMC2 I/O-58
PMC1I/O-59	59	60	PMC1I/O-60	PMC2 I/O-59	59	60	PMC2 I/O-60
PMC1I/O-61	61	62	PMC1I/O-62	PMC2 I/O-61	61	62	PMC2 I/O-62
PMC1I/O-63	63	64	PMC1I/O-64	PMC2 I/O-63	63	64	PMC2 I/O-64

Note: The PMC rear I/O signals from Jn4 (CON8 and CON12) are routed to CompactPCI connectors J3 and J5, the pin-out for which is described later in this chapter.

CompactPCI Interface

The XCPC-9200 utilizes a PLX PCI6540 chip for its interface to the cPCI back plane. The chip is a high-performance asynchronous 133MHz, 64-bit PCI-X to PCI-X bridge. The XCPC-9200 runs in transparent mode. All bus signals are provided on the CompactPCI connectors J1 and J2 (64-bit extension). The XCPC-9200 meets the requirements of the interface definition of the CompactPCI Specification PICMG 2.1 R1.0, a consequence of which is that the CompactPCI interface of the board will be pre-charged when the board is plugged into a running system. The complete CompactPCI connector configuration comprises four connectors named J1, J2, J3, and J5. Their functions are as follows:

- J1 and J2: 64-bit CompactPCI interface with PCI bus signals, arbitration, clock, and power.

- J3 and J5 provide rear I/O interface functionality from the PMC module.

CompactPCI Connector Keying

CompactPCI connectors support guide keys to ensure a correct polarized mating. A proper mating is further assured by the use of color coded keys for 3.3V and 5V operation.

Color coded keys prevent inadvertent installation of a 5V peripheral board into a 3.3V slot. The XCPC-9200 module will work in both 3.3V and 5V systems. Backplane connectors are always keyed according to the signaling (VIO) level to prevent plugging a CompactPCI connector into the wrong backplane slot, although with the XCPC-9200 this is not a problem due to the dual I/O voltage support within the PLX PCI6540.

Coding key colors on J1 are defined as followed:

Signal Voltage	Key Color
3.3V	Cadmium Yellow
5V	Brilliant Blue

Main Features

PCI Bus interface

The XCPC-9200 uses the PLX-6540 bridge for the PCI-X bus interface to the cPCI bus. The bridge has the following features:

- PCI R2.3 capable
- PICMG 2.1 Hot swappable
- PCIX 64-bit, 33MHz to 133Mhz PCI clock speed
- Asynchronous operation across the primary (Compact PCI backplane) and secondary (PMC sites) interfaces. This allows the two interfaces to run at two different speeds.
- 10KB FIFO
- Transparent mode operation.
- Support for 8 Bus Masters

Specifications

The following table is the XCPC-9200 Specifications, showing the recommended operating conditions.

Condition	**Recommendation**
Compliance	PCI R2.3, PICMG 2.0, PICMG 2.1,
Air Flow	200LFM with no PrPMC/PMC installed (air flow is mostly driven by the PMC requirements)
Power	Each PMC site is capable of sourcing 25 watts of power; the carrier alone requires 2 watts.
Dimensions	Height-233 mm, Depth- 160 mm, Width – 20.27 mm
Operating Temperature	-40 to 85° C
Storage Temperature	-55 to 105° C
Relative Humidity	5-95% Non-Condensing
Shock	40g
Vibration	Vibration Class: V3
MTBF	189,000 hrs

Safety:

Design to meet or exceed UL 60950 3rd Ed.; CSA C22.2 No.60950-00; EN60950; IEC 60950-a

EMC:

Design to meet or exceed FCC 47 CFR Part 15, Class B; CE Mark to EN55022/EN55024

Warranty: 2 year limited

Chapter 2 Installation Guide Introduction

The XCPC-9200 allows up to two PMC modules on a carrier, providing 25 watts of power to each site. The PMC sites support a variety of FPGA, ethernet, and storage PMC modules that are in the market.

XCPC-9200 Rear I/O

The XCPC-9200 has rear I/O consisting of the following, see Table 2-1 below.

Signal	Connector
PCI 32-bit interface PICMG 2.0 R3.0	J1
PCI 64-bit interface PICMG 2.0 R3.0	J2
User defined I/O to J3 Per PICMG 2.3 R1.0	J3
User defined I/O to J5 Per PICMG 2.3 R1.0	J5

Table 2-1 XCPC-9200 Rear I/O

CompactPCI Interface Connector Pin Definitions

CompactPCI Interface J1 Pin-out

The CompactPCI interface connector J1 is a 150-pin connector with pins assigned as follows.

Pin	A	B	C	D	E	F	
25	5V	REQ64#	ENUM#	3.3V	5V	GND	
24	AD[1]	5V	V(I/O)	AD[0]	ACK64#	GND	
23	3.3V	AD[4]	AD[3]	5V	AD[2]	GND	
22	AD[7]	GND	3.3V	AD[6]	AD[5]	GND	
21	3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND	
20	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND	
19	3.3V	AD[15]	AD[14]	GND	AD[13]	GND	J1
18	SERR#	GND	3.3V	PAR	C/BE[1]#	GND	
17	3.3V	NC	NC	GND	PERR#	GND	C
16	DEVSEL#	PCIXCAP	V(I/O)	STOP#	LOCK#	GND	O
15	3.3V	FRAME#	IRDY#	BD_SEL#	TRDY#	GND	N
12-14	KEY AREA						N
11	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND	E
10	AD[21]	GND	3.3V	AD[20]	AD[19]	GND	C
9	C/BE[3]#	IDSEL	AD[23]	GND	AD[22]	GND	T
8	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND	O
7	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND	R
6	REQ0#	GND	3.3V	CLK	AD[31]	GND	
5	NC	NC	PCI_RST#	GND	GNT0#	GND	
4	NC	HEALTHY#	V(I/O)	NC	NC	GND	
3	INTA#	INTB#	INTC#	5V	INTD#	GND	
2	TCK	5V	TMS	TDO	TDI	GND	
1	5V	-12V	TRST*	+12V	5V	GND	
Pin	**A**	**B**	**C**	**D**	**E**	**F**	

Table 2-2 CompactPCI J1 Connector

CompactPCI Interface J2 Pin-out

The CompactPCI interface connector J2 is a 132-pin connector with pins assigned as follows.

Pin	A	B	C	D	E	F	
22	GA4	GA3	GA2	GA1	GA0	GND	
21	NC	GND	NC	NC	NC	GND	
20	**NC**	**GND**	**NC**	**NC**	**NC**	**GND**	
19	GND	GND	NC	NC	NC	GND	
18	NC	NC	NC	GND	NC	GND	
17	NC	GND	NC	NC	GNT6#	GND	
16	NC	NC	NC	GND	NC	GND	J2
15	**NC**	**GND**	**NC**	**NC**	**NC**	**GND**	
14	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND	C
13	AD[38]	GND	V(I/O)	AD[37]	AD[36]	GND	O
12	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND	N
11	AD[45]	GND	V(I/O)	AD[44]	AD[43]	GND	N
10	**AD[49]**	**AD[48]**	**AD[47]**	**GND**	**AD[46]**	**GND**	E
9	AD[52]	GND	V(I/O)	AD[51]	AD[50]	GND	C
8	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND	T
7	AD[59]	GND	V(I/O)	AD[58]	AD[57]	GND	O
6	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND	R
5	**C/BE[5]#**	**GND**	**V(I/O)**	**C/BE[4]#**	**PAR64**	**GND**	
4	V(I/O)	NC	C/BE[7]#	GND	C/BE[6]#	GND	
3	NC	GND	NC	NC	NC	GND	
2	NC	NC	NC	NC	NC	GND	
1	NC	GND	NC	NC	NC	GND	
Pin	**A**	**B**	**C**	**D**	**E**	**F**	

Table 2-3 CompactPCI J2 Connector

CompactPCI Interface J3 Pin-out

The CompactPCI Interface I/O connector J3 provides PMC rear I/O. The 144pin connector has the following pin assignments.

19	NC	NC	NC	NC	NC	GND
18	NC	NC	NC	NC	NC	GND
17	NC	NC	NC	NC	NC	GND
16	NC	NC	NC	NC	NC	GND
15	**NC**	**NC**	**NC**	**NC**	**NC**	**GND**
14	RIO_3.3V	RIO_3.3V	RIO_3.3V	RIO_5V	RIO_5V	GND
13	PMC1_I/O-05	PMC1_I/O-04	PMC1_I/O-03	PMC1_I/O-02	PMC1_I/O-01	GND
12	PMC1_I/O-10	PMC1_I/O-09	PMC1_I/O-08	PMC1_I/O-07	PMC1_I/O-06	GND
11	PMC1_I/O-15	PMC1_I/O-14	PMC1_I/O-13	PMC1_I/O-12	PMC1_I/O-11	GND
10	**PMC1_I/O-20**	**PMC1_I/O-19**	**PMC1_I/O-18**	**PMC1_I/O-17**	**PMC1_I/O-16**	**GND**
9	PMC1_I/O-25	PMC1_I/O-24	PMC1_I/O-23	PMC1_I/O-22	PMC1_I/O-21	GND
8	PMC1_I/O-30	PMC1_I/O-29	PMC1_I/O-28	PMC1_I/O-27	PMC1_I/O-26	GND
7	PMC1_I/O-35	PMC1_I/O-34	PMC1_I/O-33	PMC1_I/O-32	PMC1_I/O-31	GND
6	PMC1_I/O-40	PMC1_I/O-39	PMC1_I/O-38	PMC1_I/O-37	PMC1_I/O-36	GND
5	**PMC1_I/O-45**	**PMC1_I/O-44**	**PMC1_I/O-43**	**PMC1_I/O-42**	**PMC1_I/O-41**	**GND**
4	PMC1_I/O-50	PMC1_I/O-49	PMC1_I/O-48	PMC1_I/O-47	PMC1_I/O-46	GND
3	PMC1_I/O-55	PMC1_I/O-54	PMC1_I/O-53	PMC1_I/O-52	PMC1_I/O-51	GND
2	PMC1_I/O-60	PMC1_I/O-59	PMC1_I/O-58	PMC1_I/O-57	PMC1_I/O-56	GND
1	NC	PMC1_I/O-64	PMC1_I/O-63	PMC1_I/O-62	PMC1_I/O-61	GND
Pin	**A**	**B**	**C**	**D**	**E**	**F**

Table 2-4 CompactPCI J3 Connector for Rear I/O

NOTE: CompactPCI J4 Connector is not used on our boards, this connector is associated with the H 1.11 specification for Telecomm and is not supported by our products.

CompactPCI Interface J5 Pin-out

The 132-pin CompactPCI J5 connector provides PMC User I/O.

Pin	A	B	C	D	E	F
22	NC	NC	NC	NC	NC	GND
21	NC	NC	NC	NC	NC	GND
20	**NC**	**NC**	**NC**	**NC**	**NC**	**GND**
19	NC	NC	NC	NC	NC	GND
18	NC	NC	NC	NC	NC	GND
17	NC	NC	NC	NC	NC	GND
16	NC	NC	NC	NC	NC	GND
15	**NC**	**NC**	**NC**	**NC**	**NC**	**GND**
14	RIO_3.3V[1]	NC	NC	RIO2_5V[1]	NC	GND
13	PMC2_I/O-05	PMC2_I/O-04	PMC2_I/O-03	PMC2_I/O-02	PMC2_I/O-01	GND
12	PMC2_I/O-10	PMC2_I/O-09	PMC2_I/O-08	PMC2_I/O-07	PMC2_I/O-06	GND
11	PMC2_I/O-15	PMC2_I/O-14	PMC2_I/O-13	PMC2_I/O-12	PMC2_I/O-11	GND
10	**PMC2_I/O-20**	**PMC2_I/O-19**	**PMC2_I/O-18**	**PMC2_I/O-17**	**PMC2_I/O-16**	**GND**
9	PMC2_I/O-25	PMC2_I/O-24	PMC2_I/O-23	PMC2_I/O-22	PMC2_I/O-21	GND
8	PMC2_I/O-30	PMC2_I/O-29	PMC2_I/O-28	PMC2_I/O-27	PMC2_I/O-26	GND
7	PMC2_I/O-35	PMC2_I/O-34	PMC2_I/O-33	PMC2_I/O-32	PMC2_I/O-31	GND
6	PMC2_I/O-40	PMC2_I/O-39	PMC2_I/O-38	PMC2_I/O-37	PMC2_I/O-36	GND
5	**PMC2_I/O-45**	**PMC2_I/O-44**	**PMC2_I/O-43**	**PMC2_I/O-42**	**PMC2_I/O-41**	**GND**
4	PMC2_I/O-50	PMC2_I/O-49	PMC2_I/O-48	PMC2_I/O-47	PMC2_I/O-46	GND
3	PMC2_I/O-55	PMC2_I/O-54	PMC2_I/O-53	PMC2_I/O-52	PMC2_I/O-51	GND
2	PMC2_I/O-60	PMC2_I/O-59	PMC2_I/O-58	PMC2_I/O-57	PMC2_I/O-56	GND
1	NC	PMC2_I/O-64	PMC2_I/O-63	PMC2_I/O-62	PMC2_I/O-61	GND
Pin	**A**	**B**	**C**	**D**	**E**	**F**

[1]THE REAR I/O POWER ON J5 IS SEPARATE FROM THE REAR I/O POWER ON J3, AND THE TWO RAILS SHOULD NOT BE TIED TOGETHER ON REAR TRANSITION MODULES.

Table 2-5 CompactPCI J5 Connector for Rear I/O

Installation into rack

The XCPC-9200 can be installed in a standard cPCI 32-bit or 64-bit PCI bus.

1. Configure and install the PMC modules according to the manufacturer's suggested installation procedure. Tighten the four screws per PMC.
2. With the solder side facing up on the carrier (depending on the chassis), Slide the XCPC-9200 into the chassis. Press firmly on the board until the connectors are fully mated. Tighten the front screws ensuring that the carrier is secured to the backplane.

WARNING: Make sure the front handles are closed firmly.

4. Installation is complete, power up the board.

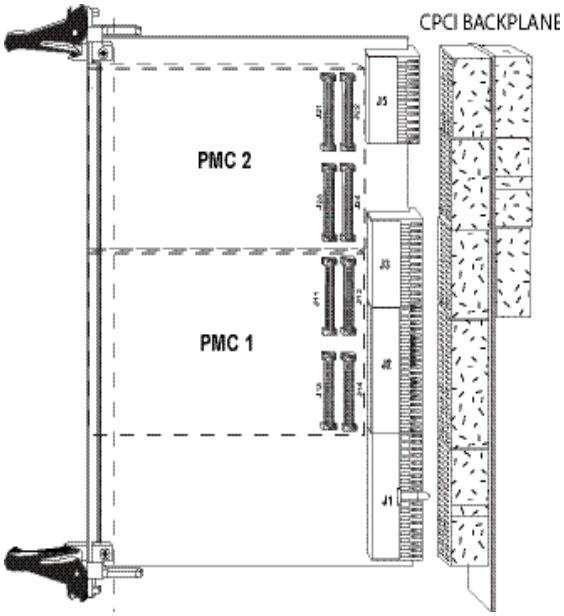


Figure 2-1 Typical Installation

XCPC-9200 Mechanical Description

The XCPC-9200 is single slot 6U cPCI module. The unit follows all the specification of the single slot cPCI module. Below figure is the front panel:

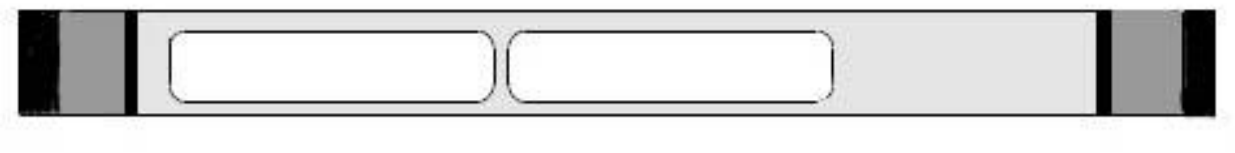


Figure 2-2 Front Panel of the XCPC-9200

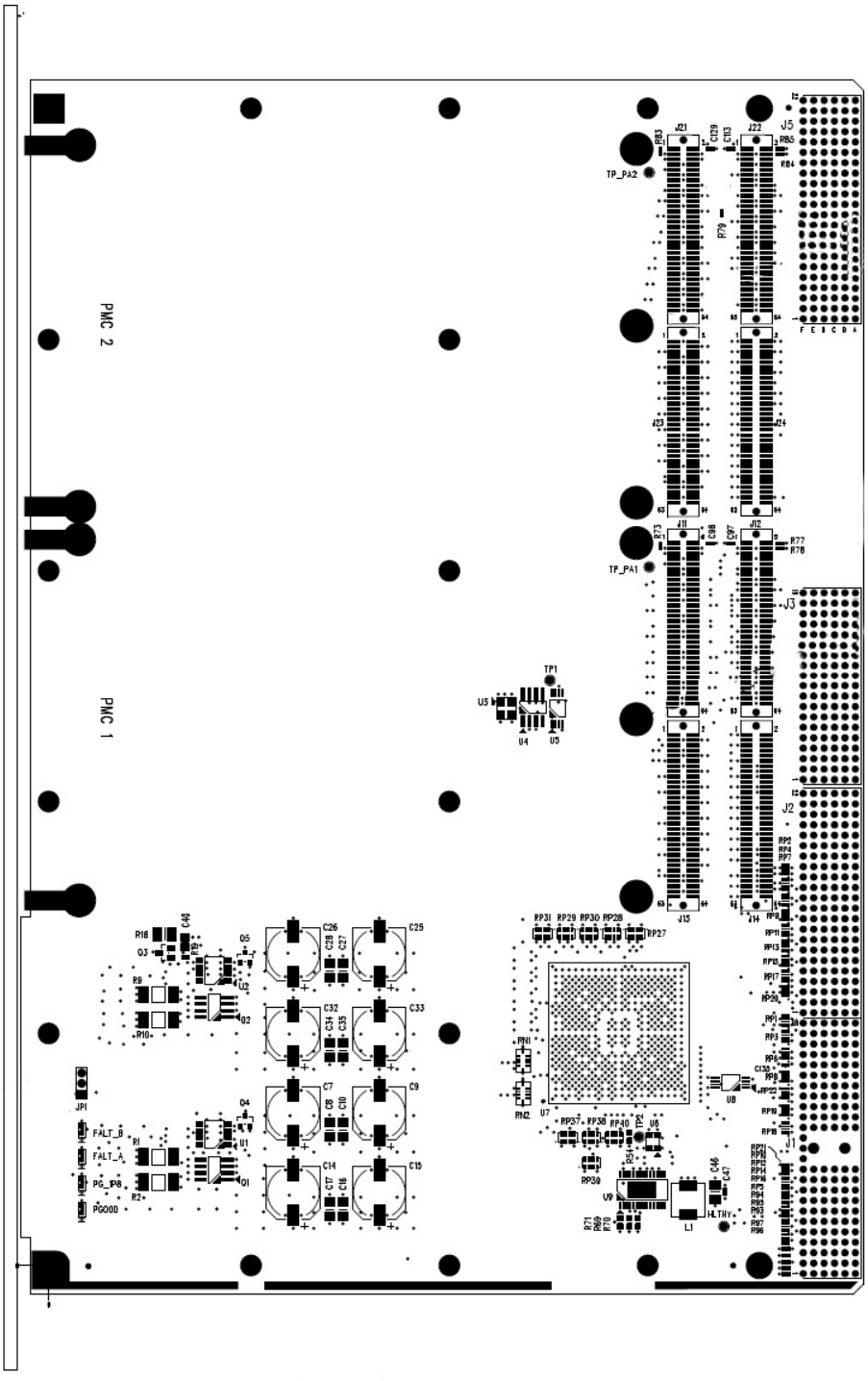


Figure 2-3 Board Layout

Jumper Settings and Locations

The cPCI-9200 has only one jumper on the board, designated JP1. This jumper sets the bus speed for the two PMC sites. The PMC sites can be set for either 66MHz or 133MHZ operation.

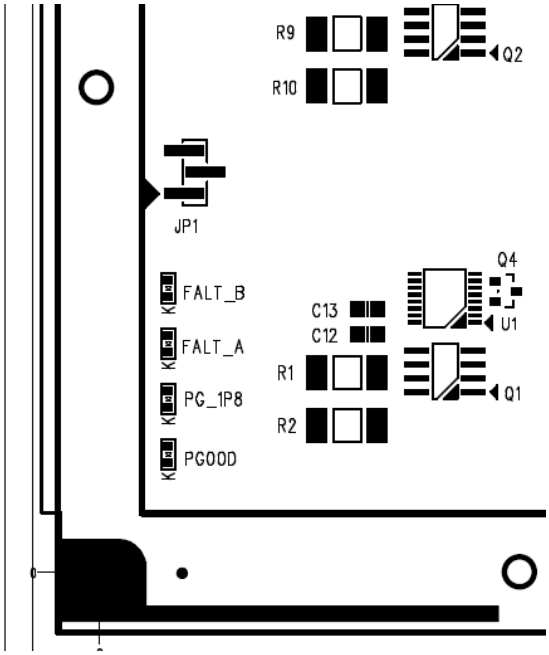


Figure 2-4 XCPC-9200 Switch Settings and Diagnostic LEDs.

Carrier PMC PCI clock speed

The PMC sites of the carrier support operation at 133MHz. If both PMC sites are populated with 133MHz-capable PMC modules or a single 133MHz-capable card is installed, the carrier will operate at this speed provided that the jumper at JP1 has been set for 133MHz operation as noted in Table 2-6 below. If one or both of the PMC runs slower then 133Mhz, the carrier can be set to operate at 66MHz as noted in Table 2-6 below.

Jumper Position	Output Clock
1-2 (default)	66MHz
2-3	133MHz

Table 2-6 PMC clock speed

Fault Indicators

The LEDs on the XCPC-9200 (shown in Figure 2-4) can be used as an indication of trouble on the module with the power supplies. Normal operation will show both green LEDs (PGOOD and PG_1P8) on indicating the power supplies are functioning correctly. If either of the red LEDs (FALT_A and FALT_B) are on, a power supply failure is indicated and the board should be powered down.