

Flexibility:

Orion's **PMC7525** PowerPC™ PCI Mezzanine Card (PrPMC) provides an ideal solution as a stand-alone CPU on a carrier card or when additional processing power and flexibility is required.

The **PMC7525** is a low-power, compact, single-width Processor PMC (PrPMC) module that can be configured to suit your requirements. This product is capable of both Monarch and Non-Monarch applications and supports a 64-bit PCI/PCI-X interface at speeds up to 133 MHz.



Power:

The **PMC7525's** power originates from the PowerPC™ core architecture. Processor speeds range from 600 MHz to 1 GHz operation.

The **PMC7525** is designed to support the IBM 750FX & 750GX PowerPC™ processors.



Generally, Processor PMC cards are used where modular attachment of a processor is desired. Processor PMC cards may be used in conjunction with PMC I/O cards, traditional PCI cards, or with directly attached PCI components. As such, Processor PMCs increase the modularity of a computer system and thus complement, rather than compete with, the existing family of PMC cards.



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PMC7525 (CCPMC)

Conduction-cooled

Extended Temperature

**High-Performance PowerPC™
Processor PMC Module (PrPMC)**

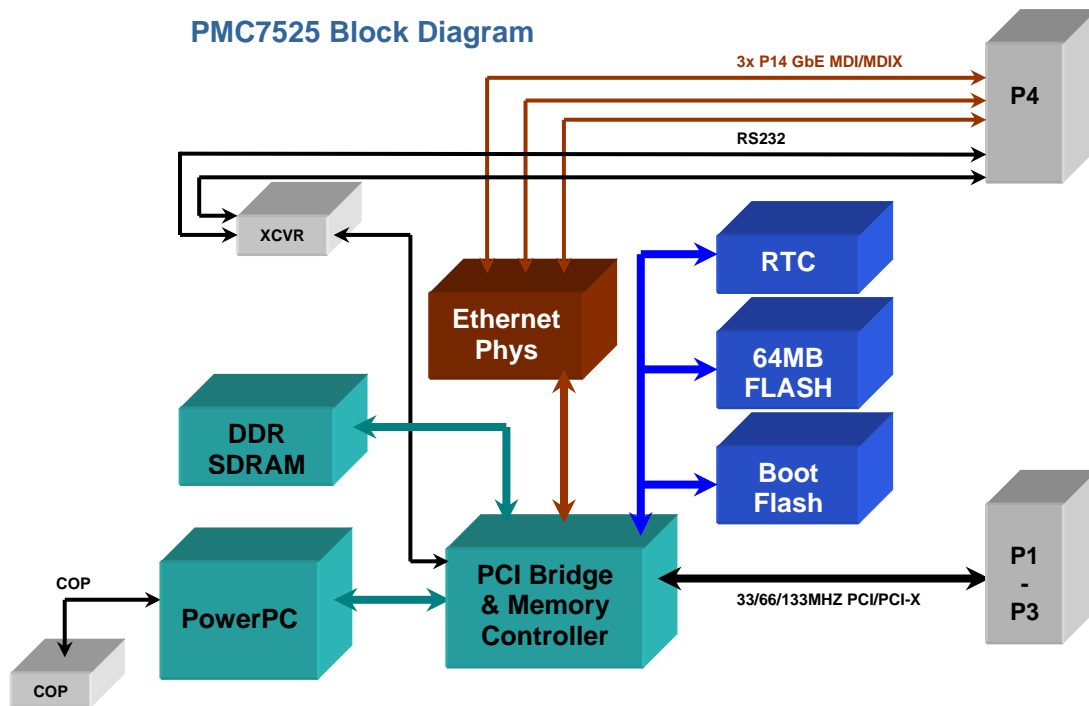
Available Q2 2007

Features:

- ◆ PowerPC™ IBM750FX/GX
- ◆ 512MB (FX), 1MB (GX) L2 Cache
- ◆ 64MB of on-board FLASH option
- ◆ Three MDI/MDIX P14 Ethernet Ports (PICMG 2.15, ECN 2.15-1.0-001)
- ◆ Up to 1GB of on-board DDR memory
- ◆ Monarch & Non-Monarch applications
- ◆ 33/66/133Mhz 64-bit PCI/PCI-X Interface
- ◆ PICMG PCI R2.2 compliant
- ◆ Single-wide, standard height PMC form factor
- ◆ P14 COP/JTAG emulator header
- ◆ Two P14 RS-232 communication ports
- ◆ Non-Volatile Real Time Clock
- ◆ VxWorks™ & Linux Board Support Packages
- ◆ U Boot ROM Monitor Debugger
- ◆ Orion's Two-Year Warranty & support

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PMC7525 Block Diagram



Hardware Specifications

Processor:

PowerPC™:	<u>750FX</u>	<u>750GX</u>
Max Core Frequency	800 MHz	1 GHz
Inst. Cache:	32KB	32KB
Data Cache:	32KB	32KB
L2 Cache:	512KB	1MB
L2 Cache Frequency:	Core Frequency	

Processor Bus:

PowerPC Bus Frequency:	133 MHz
PowerPC Bus Width:	A32/D64
Address Parity:	Yes
Data Parity:	Yes

PCI Bus:

PCI Bus Frequency:	PCI/PCI-X 33/66/133 MHz
PCI Bus Width:	32/64-bit
PCI Signal Voltage:	+3.3V
PCI Revision:	PCI SIG 2.2, PCI-X Rev 1.0
PrPMC:	ANSI VITA 32-2003

Memory:

SDRAM Memory Type:	Soldered DDR SDRAM
SDRAM Memory Size:	128, 256, 512 or 1GB
On-Board FLASH Size:	64MB (Optional)

Peripherals:

Two Serial Communication Ports:

Type:	Standard UART Mode
Access:	Both P14
Signal levels:	RS-232

Three 10/100/1000 Ethernet Ports:

Controller:	Internal Discovery III MACs
Configuration:	Three PMC P14 MDI/MID-X (PICMG 2.15, ECN 2.15-1.0-001)

Miscellaneous:

Timers:	Four Programmable 32-bit timers
Reset Switch:	Momentary switch generates PCI Reset out when Monarch configuration. Resets local logic when Non-Monarch.
JTAG/COP:	P14 JTAG/COP debug interface
LEDS:	P14 JTAG/COP debug interface Indicator LEDES

Power:

	<u>750FX</u>	<u>750GX</u>
PCI Typical +3.3v:	TBD	TBD
PCI Maximum +3.3v:	TBD	TBD
PCI Typical +5v:	TBD	TBD
PCI Maximum +5v:	TBD	TBD

Environmental:

Operating Temperature:	-40 to 75°C
Storage Temperature:	-40° to 85°C
Relative Humidity:	5% to 95% non-condensing
Board Size:	Single-width & height PMC 149mm x 74mm
Weight:	4.25 ounces, 121 grams

Ordering Information

IBM 750FX PowerPC

600Mhz 750FX, Three P14 Ethernet & Two P14 Serial

128MB DDR SDRAM	PMC7525-00
256MB DDR SDRAM	PMC7525-01
512MB DDR SDRAM	PMC7525-02
1GB DDR SDRAM	PMC7525-03
2GB DDR SDRAM	PMC7525-04
128MB DDR SDRAM, 64MB On-board FLASH	PMC7525-05
256MB DDR SDRAM, 64MB On-board FLASH	PMC7525-06
512MB DDR SDRAM, 64MB On-board FLASH	PMC7525-07
1GB DDR SDRAM, 64MB On-board FLASH	PMC7525-08
2GB DDR SDRAM, 64MB On-board FLASH	PMC7525-09

800Mhz 750FX, Three P14 Ethernet & Two P14 Serial

128MB DDR SDRAM	PMC7525-10
256MB DDR SDRAM	PMC7525-11
512MB DDR SDRAM	PMC7525-12
1GB DDR SDRAM	PMC7525-13
2GB DDR SDRAM	PMC7525-14
128MB DDR SDRAM, 64MB On-board FLASH	PMC7525-15
256MB DDR SDRAM, 64MB On-board FLASH	PMC7525-16
512MB DDR SDRAM, 64MB On-board FLASH	PMC7525-17
1GB DDR SDRAM, 64MB On-board FLASH	PMC7525-18
2GB DDR SDRAM, 64MB On-board FLASH	PMC7525-19

IBM 750GX PowerPC

1Ghz 750GX, Three P14 Ethernet & Two P14 Serial

128MB DDR SDRAM	PMC7525-20
256MB DDR SDRAM	PMC7525-21
512MB DDR SDRAM	PMC7525-22
1GB DDR SDRAM	PMC7525-23
2GB DDR SDRAM	PMC7525-24
128MB DDR SDRAM, 64MB On-board FLASH	PMC7525-25
256MB DDR SDRAM, 64MB On-board FLASH	PMC7525-26
512MB DDR SDRAM, 64MB On-board FLASH	PMC7525-27
1GB DDR SDRAM, 64MB On-board FLASH	PMC7525-28
2GB DDR SDRAM, 64MB On-board FLASH	PMC7525-29

We will gladly modify any of our products to meet your requirements. Just ask.

At Orion Technologies, our goal is to serve you, our customers. We are dedicated to finding high-quality, cost-effective solutions to meet your application. We will modify any Orion Technologies product or will design a custom solution to fill your requirements.

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Orion Technologies, Incorporated

690 Cone Park Court Suite A
Merritt Island, FL 32952

Phone: 321-452-1670

Fax: 321-452-1678

Email: info@OTIsolutions.com

WWW.OTISOLUTIONS.COM