

## KEY FEATURES

MPC7448 PowerPC G4 processor running at up to 1.4 GHz

Highly integrated Marvell Discovery III system controller

133 MHz front side bus

Fully compliant to the VITA-32 Processor PMC and VITA-39 PCI-X Auxiliary standards

PTMC compliant P4 connector

Memory configurations possible up to 1GB with ECC support

1MB L2 cache

Supporting MontaVista CGE3.1, PE3.1 and kernel.org 2.6.10

VxWorks support for hard real-time applications and supporting VxWorks 5.5 and 5.5.1

4MB of boot flash and 128MB of user flash

128-bit wide AltiVec technology support

64-bit, 66-133 MHz PCI-X bus interface

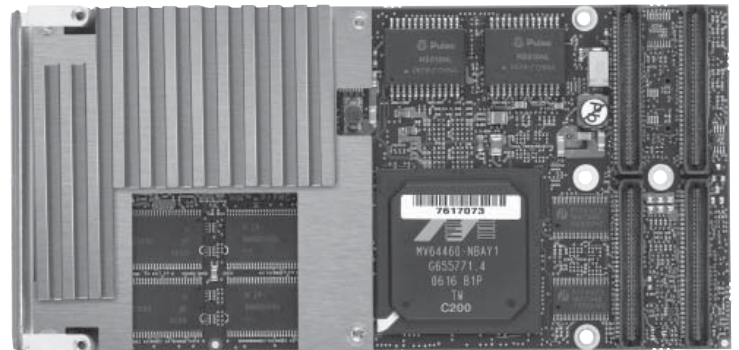
Configurable monarch/non-monarch mode

Dual independent Gigabit Ethernet (GbE) interfaces. 2nd GbE interface has optional SerDes support for fiber transceiver

Dual serial interfaces

Optional JTAG support for debugging

The Motorola PrPMC6001 PCI mezzanine card (PMC) is a perfect fit for embedded applications requiring low power and high performance with PowerPC® architecture. The Marvell Discovery III system controller, with its feature-rich functionality, adds performance value to the end application. The PrPMC6001's ability to support hard real-time applications using VxWorks RTOSs and cost-conscious applications with the Linux OS will enable this product to be used in wide variety of applications.



# PrPMC6001

## PCI Mezzanine Card

PCI Mezzanine Card products from Motorola provide the flexibility to easily expand I/O functionality and performance within an embedded computer system. Our PMC building blocks offer a range of options that help optimize your application to meet your customer's requirements.





## MISCELLANEOUS

JTAG/COP: Yes

LEDs: 10 (one each: power, user, Monarch, EREADY;  
six Ethernet)

Temperature sensor (I<sup>2</sup>C): Analog Devices ADT7461

## POWER REQUIREMENTS

|                       | 3.3V   | 5V    |
|-----------------------|--------|-------|
| PrPMC6001M (TYPICAL): | 11.6W  | 7.8W  |
| PrPMC6001M (MAX):     | 14.0W  | 9.5W  |
| PrPMC6001S (TYPICAL): | 13.10W | 6.58W |
| PrPMC6001S (MAX):     | 16.49W | 9.87W |

## MEAN TIME BETWEEN FAILURES

2,564,103 hours (controlled environment, ground benign)

## STANDARDS COMPLIANCE

PCI 2.2; IEEE P1386.1; VITA 32-2003; VITA 39-2002

## SAFETY

All printed wiring boards (PWBs) are manufactured with a flammability rating of 94V-0 by UL recognized manufacturers.

## ENVIRONMENTAL

|                | Operating                                    | Non-operating                                |
|----------------|--|--|
| Temperature:   | 0° C to 55° C<br>300 LFM forced air          | -40° C to +85° C                             |
| Humidity (NC): | 5% to 95% @ 40° C                            | 5% to 95% @ 40° C                            |
| Shock:         | 5g/11 ms half sine                           | 15g/11 ms half sine                          |
| Vibration:     | 10-15 MHz 2mm<br>amplitude,<br>15-150 MHz 2g | 10-15 MHz 5mm<br>amplitude,<br>15-150 MHz 5g |

## ELECTROMAGNETIC COMPATIBILITY (EMC)

Intended for use in systems meeting the following regulations:

U.S.: FCC Part 15, Subpart B, Class A (non-residential)

Canada: ICES-003, Class A (non-residential)

Motorola board products are tested in a representative system to the following standards:

CE Mark per European EMC Directive 89/336/EEC with Amendments;

Emissions: EN55022 Class \* (see note below);

Immunity: EN55024;

RoHS Directive 2002/95/EC

\*Note: Class A (nonresidential) for front Ethernet versions and Class B for rear and no Ethernet versions.

## ORDERING INFORMATION

| Part Number    | Description                                |
|----------------|--|
| PRPMC6001M-001 | Single MPC7448 @ 1.4 GHz, 512MB DDR memory |
| PRPMC6001S-001 | Single MPC7448 @ 1.4 GHz, 1GB DDR memory   |

## SOFTWARE

MontaVista CGE3.1

PE3.1

Kernel.org 2.6.10

Wind River VxWorks 5.5 and 5.5.1

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## SOLUTION SERVICES

Motorola provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh. And solution extras include enhanced warranty and repairs.

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### Sales Offices

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