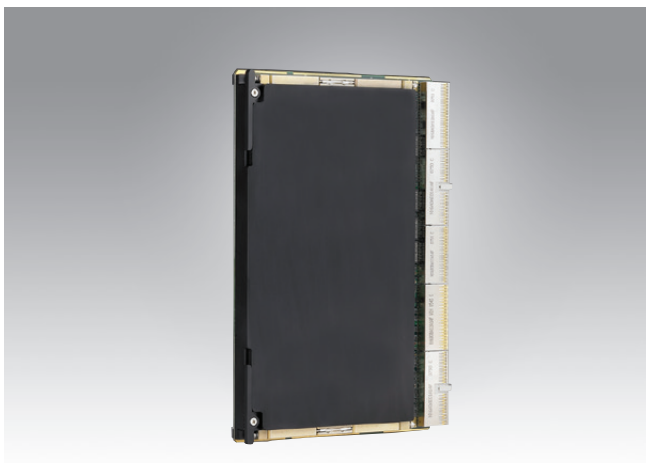


# MIC-3392MIL

## 6U CompactPCI® Intel® Core™2 Duo Rugged Processor Blade



### Features

- Supports Intel® Core™ Duo Low Voltage or Core™2 Duo Ultra Low Voltage mobile processor
- Intel® 945GME chipset supports 533/667 MHz FSB
- Up to 3 GB (DDR2 533/667) memory with SODIMM expansion
- Conduction cooled with ANSI/VITA30.1-2002 compliancy
- Pre-heat circuitry for reliable cold-booting in low temperature environment, or optional support for IPMI v1.5 without pre-heat
- Boot from network, Compact Flash, or local 2.5" SATA HDD
- Four GbE ports, two USB 2.0 ports, two DVI-I ports, one P/S2 port, and one COM interface to the Rear Transition Module
- Optional one VGA port and two USB 2.0 ports to front panel
- Optional conformal coating and SODIMM gluing service
- PICMG 2.16 R1.0, PICMG 2.1 R2.0, PICMG 2.6 R1.0 compliant



### Introduction

MIC-3392MIL, a CompactPCI PICMG 2.16 compliant single slot 6 U CPU board, comes with three different configurations that meet a wide range of environmental requirements for ruggedized applications. Based on the Intel® Core™ Duo LV or Core 2 Duo ULV processor, it offers a low power dissipation design without the need of on-board forced ventilation. Ruggedized requirements are addressed by a conduction cooled design and extended operating temperature range (-40° C ~ 70° C). Shock and vibration resistances of the board are increased by using wedge locks and a single-piece CNC-milled aluminum alloy plate that conforms to the major IC packages. With highly integrated functional capabilities, the MIC-3392MIL fully utilizes the I/O features of the Intel chipsets. It supports up to 3 GB of 667 MHz DDR2 RAM, an onboard 2.5" Serial ATA HDD, a CompactFlash slot, and a set of I/O functions brought through the backplane to a unique rear transition module, which contains four LAN ports, two DVI-I ports, two USB 2.0 ports, one P/S2 port, and one RS-232 port on the panel.

### Specifications

Processor System	CPU	Intel Core 2 Duo ULV or Core Duo LV up to 1.6 GHz (2 MB L2 cache)
	Chipset	Intel 945GME/ICH7M
	BIOS	Award 4Mb flash
CompactPCI Interface	J1 Connector	32-bit PCI local bus
	J2 Connector	64-bit PCI local bus
	J3~J5 Connectors	PICMG2.16 + RTM area
PCI-X to cPCI Bridge	Controller	PLX PCI 6540CB
	Interface	Master/Drone
Bus	Front Side Bus	533/667 MHz
	PCI	Up to 64-bit/66 MHz
Memory	Technology	DDR2 533/667 MHz
	Max. Capacity	3 GB
	Socket	SODIMM x1 2 GB memory integrated on board
Graphics	Controller	Intel 945GME integrated
	VRAM	Dynamic
	Resolution	Up to 2048 x 1536, 64k color at 75 Hz
Ethernet	Controller	Intel 82571EB dual-port Gigabit Ethernet controller
	Interface	10/100/1000 Mbps Ethernet (on PCIe x4 channel)
	I/O Connector	PICMG2.16 and RJ-45 x2 (RTM rear panel)
	Controller	Intel 82546GB dual-port Gigabit Ethernet controller
	Interface	10/100/1000 Mbps Ethernet (on PCI 32bits/33Mhz)
Storage	I/O Connector	RJ-45 x 2 (RTM rear panel)
	Mode	SATA
	Channel	2 interfaces to CompactPCI connector
	Storage Site	1 SATA connector and space reserved for a 2.5" HDD on one of the two channels (optional for non-conduction cooled product configuration)
	Mode	IDE
	Channel	1 interface to CompactPCI connector
	Storage Site	1 on-board CompactFlash socket on the same channel

## Specifications (Cont.)

Expansion I/O	USB 2.0	2 host ports (std. USB connectors) on front panel and 4 host interfaces to cPCI connectors	
	DVI-I	2 interfaces to CompactPCI connector	
	Serial	3 interfaces to CompactPCI connector (1 reserved for BMC IPMI F/W update)	
	Parallel, FDD, PS2	Each with 1 interface to CompactPCI connector	
Watchdog Timer	Output	Local Reset and Interrupt	
	Interval	Programmable 1s ~ 255s	
Hardware Monitor	Controller	Winbond 83627HG	
BMC	Controller	Renesas H8S 2167, IPMIv1.5 compliant for standard CompactPCI SKU/Pre-heat F/W for conduction-cool SKU, mutually exclusive	
Operating System	Compatibility	Windows XP/2000, Linux, VxWorks 6.4 (on request)	
Miscellaneous	Front Panel LEDs (standard cPCI SKU only)	x1 blue/yellow for Hot Swap/HDD, x1 green for Master/Drone, x1 yellow BMC Heartbeat, and x1 green for Power	
Power Requirement	Configuration	Conduction cooled SKU (with Intel U7500 processor)	
	TDP	25 watts (tested by mem test 86)	
Physical Characteristics	Dimensions (W x D)	233.35 x 160 mm (9.19" x 6.3")	
Environment		Operating	Non-operating
	Temperature	0 ~ 70° C (std CompactPCI SKU) -40 ~ 70° C (conduction-cool with pre-heat)	-40 ~ 70° C
	Humidity	10 ~ 95% @ 40° C, non-condensing	10 ~ 95% @ 60° C, non-condensing
	Vibration (5-500 Hz)	1.5 Grms (without on-board 2.5" SATA HDD)	2 G
	Shock	10G (without on-board 2.5" SATA HDD)	30G
	Altitude	6394 feet above sea level	40000 feet above sea level
Regulatory	Conformance	FCC Class A, CE, RoHS	
	NEBS Level 3	Designed for GR-63-Core and GR-1089-Core	
Compliance	Standards	PICMG 2.0 R3.0, PICMG 2.1 R.0, PICMG 2.9 R1.0 (std cPCI SKU), PICMG 2.16 R1.0, ANSI/VITA 30.1-2002	

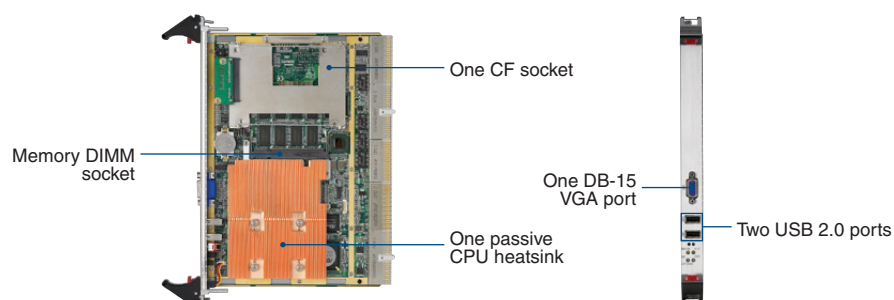
## Recommended Configurations

CPU Board	Rear I/O Board	Enclosure
MIC-3392MILS-PxE Series	RIO-3392MIL-AxE Series	MIC-3039-BE, MIC-3042A/B, MIC-3043A/B/C/D, MIC-3056A, MIC-3081B
MIC-3392MILC-P1E	RIO-3392MIL-AxE Series	Customized conduction cool enclosure

## Ordering Information

System Board	Front Panel				Conduction Cool	Main On-board Features					Conformal Coating
	VGA	USB2.0	BMC Reset	System Reset		CPU	Memory	CF Socket	Storage Channel	SODIMM Socket	
MIC-3392MILS-P1E	1	2	Yes	Yes	-	Intel U7500	2 GB	1	1	1	-
MIC-3392MILS-P2E	1	2	Yes	Yes	-	Intel L2400	2 GB	1	1	1	-
MIC-3392MILC-P1E	-	-	-	-	Yes	Intel U7500	2 GB	1	-	-	Yes

RTM Model	Rear Panel					On-board Header/Socket/Connector							CPCI Conn.	Conformal Coating
	LAN	COM	DVI-I	PS2	USB	IDE	FDD	LPT	SATA	COM Interface	Console Interface	USB Interface		
RIO-3392MIL-A1E	4	1	2	1	2	1	1	1	2	1	1	2	J3 ~ J5	-
RIO-3392MIL-A2E	4	1	2	1	2	1	1	1	2	1	1	2	J3 ~ J5	Yes



MIC-3392MILS-PxE Series



MIC-3392MILC-P1E