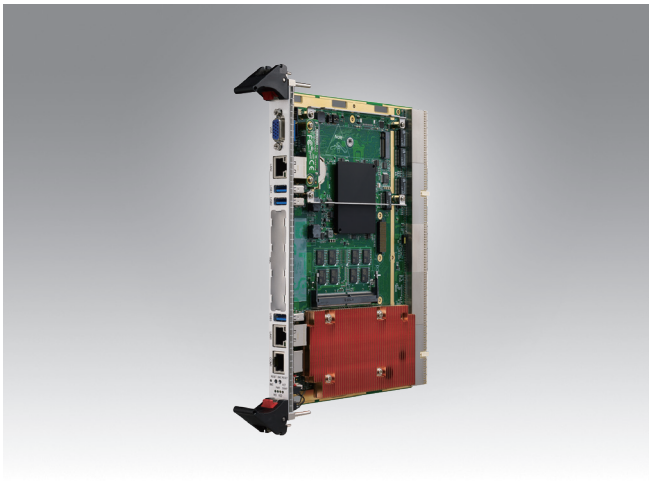
MIC-3399

6U CompactPCI Intel® 6th Gen. Core™ i3/i5/i7 Processor Blade with ECC support



Features

- Supports 6th Generation Intel® Core™ i3/i5/i7 processors and Intel® CM236 PCH with embedded graphic (up to 3 independent displays)
- Up to 32GB (DDR4-2133) memory (max 16GB on board, socket SO-DIMM x1, max 16GB)
- Optimized dual-slot SBC with 2.5" SATA-III HDD/SSD, 2240 or 2280 M.2 socket, on-board Nandflash (optional)
- TPM (Optional)
- Up to five GbE Ethernet interfaces, two COM interfaces, two SATA3.0 interfaces, one PS/2 interface, one Audio interface, two DDI interfaces for DP, one LVDS interface, two USB3.0 interfaces ,six USB2.0 interfaces and one PCIE X8 bus to the Rear Transition Module(RTM)
- Five Gigabit Ethernet ports including two PICMG 2.16 for front and rear connectivity
- PICMG 2.16 R1.0, PICMG 2.1 R2.0, PICMG 2.0 R3.0, PICMG2.9 R1.0 compliant

CE FCC

Introduction

Using 6th generation Intel® Core™ i3/i5/i7 processors based on 14nm process technology supporting up to four cores / eight threads at 2.8GHz and 8MB last level cache, the MIC-3399 blade boosts computing performance deploying the latest virtualization, techniques and CPU enhancements. Onboard soldered low voltage DRAM (1.2V) with ECC support (optional) and optional memory expansion via an SODIMM socket extend the memory to a maximum of 32GB supporting the most demanding applications in high performance or virtualized environments. Dual channel design and memory speeds up to 2133MT/s along with increased cache size and cache algorithms guarantee maximum memory performance. Combined with the powerful Intel® C230 Series Chipset, which offer improved I/O performance by leveraging 8GT/s DMI and 3rd generation PCIe interfaces. An onboard XMC site, with PCIe x8 gen.3 connectivity can host high speed offload or I/O mezzanines such as the MIC-3666 dual 10GE XMC card. With SATA-III support and up to 7Gbps I/O, the latest enhancements in storage technology such as high speed SSDs or traditional HDDs can be used on the MIC-3399. Five gigabit Ethernet ports based on Intel® GbE controllers for front and rear,including two PICMG 2.16, ensure best in class network connectivity.

The processor's integrated enhanced graphics engine (Iris) offers twice the performance over previous generations. With triple independent display support, the MIC-3399 is an ideal fit for demanding workstation applications.

RASUM features integrated in the CPU and chipset combined with PICMG 2.9, IPMI-based management make the MIC-3399 a highly available and reliable computing engine.

The Rear Transition Module named RIO-3316 supports PS/2 connector with both keyboard and mouse ports, USB 3.0, USB 2.0 ports, RS-232 ports, SATA ports, DVI ports, and Gigabit Ethernet ports. Details please refer to RIO-3316 datasheet.

Specifications

Processor System	CPU	6th Generation Intel® Core™ i3/i5/i7 mobile processors up to 2.8 GHz (8MB LLC)
	Platform Controller Hub	Intel® C230 Series Chipsets
	BIOS	Redundant AMI 16MByte SPI flash
CompactPCI Interface	J1 Connector	32-bit PCI local bus
	J2 Connector	64-bit PCI local bus
	J3 Connector	PICMG2.16 + RTM area, 1x PCIex8
	J4~J5 Connectors	RTM area
XMC Socket	PCIex8	Gen3 (7GT/s)
Memory	Technology	DDR4 2133 MHz, dual channel and ECC support (optional)
	Max. Capacity	Up to 32GB (max. 16GB on-board, max. 16GB SODIMM)
	Socket	SODIMM x1
Graphics	Controller	Intel® embedded graphic controller Iris (triple independent display)
	VRAM	Dynamic
	Resolution	4096 x 2304 @ 60Hz
Ethernet	Controller	5 Intel® I210AT single-port Gigabit Ethernet controllers (on PCIe x1 channel)
	Interface	10/100/1000Base-TX Ethernet
	I/O Connector	RJ-45 x 2 (front panel), four interfaces to rear J3 & J5, one interface can be switched between front and rear (J5) connectivity
Storage	Onboard Mode	SATA-III
	Channels	On board 2.5" HDD/SSD, 1st site default, 2nd site for optional On board M.2, form factor: 2242 or 2280 On board Nand flash (Optional)
	To Rear Mode	SATA
	Channels	2 ports to J3
Front I/O	USB3.0	3 type A, compatible with USB2.0
	VGA	1
	Console	RJ-45
	LAN	2 x 1GbE on RJ-45
	Front Panel LEDs	x1 blue for Hot Swap, 1x yellow for HDD, x1 green for Master/Drone mode, x1 green BMC Heartbeat, and x1 green for Power
	Buttons	CPU reset button and BMC reset button

All product specifications are subject to change without notice.

Specifications (Cont.)

Rear Interface (via J3-J5)	USB2.0	6	
	USB3.0	2	
	COM	2	
	LAN	4 interfaces and 1 connectivity with front port	
	SATA	2	
	PCIe	1 PCIex8	
	Display	2 DDI for DP	
	Others	1 PS/2 for keyboard & mouse, Audio	
Watchdog Timer	Output	Local Rest and Interrupt	
	Interval	Programmable 1s ~ 255s	
Hardware Monitor	HWM	NCT7904	
BMC	Controller	LPC1768, IPMI v2.0 compliant	
Operating System	Compatibility	Win7 64bit, Win10 64bit, Linux, VxWorks (on request)	
Power Requirement	Configuration	4HP	
	TDP	Maximum: up to 75W depending on CPU type, +5V: 12A, +3.3V: 5.5A	
Physical	Dimensions (W x D)	233.35 x 160.0 mm	
Environment		Operating	Non-operating
	Temperature	0 ~ 55 °C (32 ~ 131 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95 % @ 40 °C, non-condensing	95 % @ 60 °C, non-condensing
	Vibration (5-500 Hz)	2Grms (With on board 2.5" SSD)	Sine, 4.4mm@5-15Hz, 2G@15-500Hz
	Altitude	15000ft, 55 °C above sea level	40000 ft, -40 °C above sea level
Regulatory	Conformance	FCC Class A, CE, RoHS	
Compliance	Standards	PICMG2.0 R3.0, PICMG2.1 R1.0, PICMG2.9 R1.0, PICMG2.16 R1.0,	

Ordering Information

Model Number	Front Panel				Main On-board Features								Others
	VGA	USB3.0 (Type A)	Ethernet (RJ45)	Console (RJ45)	CPU	Memory		Storage		ECC	XMC	BMC	J3
						On Board	SODIMM Socket	M.2	2.5"				
MIC-3399A2-M6E	1	3	2	1	i7-6820EQ	16GB	Yes	SATA III	SATA III	No	Yes	Yes	Legacy
MIC-3399A3-M8E	1	3	2	1	i7-6820EQ	8GB	Yes	SATA III	SATA III	No	Yes	No	Legacy
MIC-3399C1-M8E	1	3	2	1	I3-6100E	8GB	Yes	SATA III	SATA III	Yes	No	No	Legacy

*Note: For other SKUs available by request, please contact your local sales office.

CPU Configurations

Intel® CPU Model Number	CPU Architecture	# Cores	# Threads	Freq.	Cache	CPU TDP	ECC
i3-6100E	14 nm	2	4	2.7 GHz	3 MB	35W	Yes
i7-6820EQ	14 nm	4	8	2.8 GHz	8 MB	45W	No

Related Products

Model number	Configuration
RIO-3316-C1E	RTM Module with 4 LAN ports and USB 3.0
MIC-3666-AE	Dual 10 Gigabit Ethernet XMC
MIC-3667-AE	Quad copper (RJ-45) Gigabit Ethernet XMC
MIC-3042CE	4U CompactPCI® Enclosure w/o CT-Bus, no PSU

MIC-3399 Series

