

MIC-336

3U CompactPCI® Serial Intel® Atom Processor Blade



Features

- Intel® Atom X7433RE/ X7835RE platform
- Max 16GB DDR5 4800 MT/s, with ECC
- 1 x DP, 2 x USB3.2, 2 x 2.5GbE RJ45/M12 LAN ports on front 4HP panel, 2 x COM, 1 x Line out on front 8HP panel
- 1 x On board SATA 3.0/PCIe 2.0 M.2 storage connector on XTM board, Compatible with 2280/2242 size
- Reserved 1 x 64G eMMC 5.1 storage , 1 x TPM2.0, 1 x wafer for USB 2.0 function
- Supports fanless application with optimized heatsink design
- Designed to meet EN50121-4 and EN50155
- PICMG CompactPCI Serial(CPCI-S.0 R2.0) compliant

Introduction

Advantech MIC-336 series is a low power CompactPCI Serial CPU board, based on an Intel® Atom 4 cores or 8 cores processor, It provides up to 16GB DDR5-4800MHz soldered RAM. The MIC-336 provides with 1 x DP, 2 x USB 3.2, and 2 x 2.5GbE RJ45/M12 Ethernet ports with TSN/TCC on front 4HP panel, Also extra 2 x COM ports, 1 x Line out on front 8HP panel. The MIC-336 accommodates 1 x 2280/2242 size M.2 socket at high speed SATA 3.0/PCIe 2.0, reserved on board 1 x 64G eMMC 5.1 storage, 1 x TPM2.0, 1 x wafer for USB2.0 function per user request.

The MIC-336 series also provides extensible I/O resources: 4 x PCIe x1, 1 x USB3.2, 4 x USB2.0, 1 x SATA 3.0, 1 x 2.5 GbE to the CompactPCI® Serial backplane for peripheral I/O expansion like storage, Ethernet, Wifi etc.. The MIC-336 with excellent thermal and EMC design makes it suitable for harsh environments and provides an ideal solution for railway rolling stock and high-performance computing applications.

Specifications

Processor System	CPU	Intel Atom® X7433RE, 4C/9W, Max Turbo Frequency: 3.4GHz, ECC Intel Atom® X7835RE, 8C/12W, Max Turbo Frequency: 3.6GHz, ECC
	BIOS	AMI 256Mb SPI flash
Memory	Technology	DDR5 4800 MT/s, ECC
	Max. Capacity	Up to 16GB on board
Graphics	Controller	Intel® UHD Graphics
	I/O connector	1 x DisplayPort
	Resolution	4096 x 2160@60Hz
Ethernet	Interface	Up to three Ethernet in total 2 x 2.5GBASE-T RJ45/M12 on front panel 1 x 2.5GBASE-T to backplane via P6
	Controller	Intel i226IT 2.5Gbps Ethernet Controller
	I/O Connector	2 x RJ45/M12 to front 4HP W/ 2.5Gbps speed
Storage	Mode	SATA 3.0
	Channels	1 x onboard 2280/2242 M.2 type module((M-key socket) 1 x channel to CPCI-S backplane
Front I/O	USB	2x USB3.2 with gen1 speed
	LAN	2 x 2.5GBASE-T RJ45/M12 on 4HP, With TSN/TCC function
	Front Panel LEDs	1 x blue LED for hot swap 1 x green LED for PWR 1 x green LED for master/drone 1 x yellow LED for HDD 2 x green/orange LEDs for LAN speed(green indicates 2.5Gbps; orange indicates 1Gbps) 3 x green LEDs for LAN activity
	Buttons	System reset button
CompactPCI Serial Backplane Resources	PCIe	4 x PCIe x1
	SATA	1 x SATA 3.0
	USB	1 x USB3.2 @ 5Gbps speed 4 x USB2.0 @ 480MHz speed
	GbE	1 x 2.5 GbE to backplane via P6

Specifications (Cont.)

To P1-P6 Signal	P1	1 x PCIe3.0 x 1, 1 x SATA 3.0, 1 x USB3.2 gen1, 1 x USB2.0, reserve 1 x I2C, SMBUS
	P2	1 x PCIe3.0 x 1, 3 x USB2.0, 1 x UART, reserve 5 x GPIO
	P3	n.a
	P4	2 x PCIe2.0 x 1
	P5	4 x PCIe clock REQ
	P6	1 x 2.5GbE
BIOS	Boot Options	SATA, USB, network (PXE) eMMC (by option BOM)
Watchdog Timer	Output	Local reset
	Interval	Programmable 1s~255s
Security	Trusted Platform Module	Reserved TPM 2.0 function
Power Requirement	Configuration	CPU TDP 9W/12W
	Consumption	22W/25W
Operating System	Compatibility	Windows 11, Windows 10, Ubuntu 22.04, Vxworks
Physical	Dimension & Weight	8HP, 160.00 x 100.00 mm 700g
	Environment	Operating Non-operating Temperature -40 ~ 70 °C (-40 ~ 158 °F), fanless -40 ~ 85 °C (-40 ~ 185 °F) Humidity 95% @40 °C, non-condensing 95 % @ 60 °C, non-condensing Vibration 2Grms Shock 10 G, 11ms, each axis three times, operation mode
Regulatory	Conformance	FCC Class A, CE, RoHS
Compliance	Standards	PICMG® CompactPCI® Serial

Supported CPU Configurations

Intel® CPU Model Number	# Cores	Max Turbo Frequency	Cache	Memory Types	ECC Support	TDP
Intel Atom® X7433RE	4	3.4GHz	6MB	DDR5-4800	Yes	9W
Intel Atom® X7835RE	8	3.6GHz	6MB	DDR5-4800	Yes	12W

Ordering Information

System board	Front Panel						Onboard Features			Others To P6 Conn. GbE Signal
	DP	USB (Type-A)	LAN (RJ45)	LAN (M12)	COM	Line out	CPU	Memory Onboard	SATA (M.2)	
MIC-336-A1D1	1	2	2	-	2	1	Atom® X7433RE	16GB, ECC	1	1
MIC-336-B1D1	1	2	-	2	2	1	Atom® X7835RE	16GB, ECC	1	1

Related Products

Peripheral board	Description
MIC-3954D	3U CPCI-Serial quad M.2 carrier board
MIC-3954E	3U CPCI-Serial quad Mini-PCIe carrier board for Wi-Fi/LTE/ GPS module
MIC-3954F	3U CPCI-S 4 x USB typeA, 1 x M.2 E key carrier board
MIC-3820	3U CPCI-Serial 2.5" SSD carrier board
MIC-3811	3U CPCI-Serial dual mini PCIe carrier for wifi/BT/i-door module
MIC-3860	3U CPCI-Serial 4 x RJ45/4 x M12 2.5 Gbps LAN board
MIC-3840	3U CPCI-Serial 8-port Serial Communication Board
MIC-300B	3U CPCI-Serial fanless chassis
MIC-3890DC	3U CPCI-Serial DC-DC power module, 110V in / 12V out, 300W
MIC-3890AC	3U CPCI-Serial AC-DC power module, 12 V & 5 V output, 300 W

Product Picture

MIC-336-A1D1



MIC-336-B1D1

