MIC-330V2

3U CompactPCI® Serial Intel® 11th Gen. Processor Blade



Features

- 11th Gen. Intel® XEON/Core processor with RM590E PCH
- Up to 64 GB DDR4 by two channels, with ECC/non-ECC options
- Up to 3 x 10 Gbps USB Type-C, 2 in 3 display port alternate mode enabled, and 2 x 2.5 Gbps RJ-45 Ethernet ports on front panel
- Up to 2 M.2 sockets for SATA 3.0 SSD module on MIC-330V2 with Mezzanine-1 Card
- Reserved 1 x M.2 socket for SATA 3.0 SSD module, Fe-RAM function, and super cap. on MIC-330V2 with Mezzanine-2 card
- Designed to meet EN50121-4, EN50121-3-2 and EN50155
- PICMG CompactPCI Serial(CPCI-S.0 R2.0) compliant

Introduction

The Advantech MIC-330V2 series utilizes 11th Generation Intel® Tiger Lake-H 10nm technology for high performance and energy efficiency. This 3U CompactPCI serial processor blade comes with an 8-core, 16-thread XEON or Core i7 processor. It's paired with Intel's RM590E PCH, supporting dual-channel 64 GB DDR4-3200 ECC RAM. Of this, 32 GB is onboard for rugged applications, and an additional 32GB can be added via the SODIMM socket.

The 4HP front panel of the MIC-330V2 features three 10Gbps USB Type-C ports, with USB1/USB2 also supporting DisplayPort Alternate Mode, and two 2.5 Gbps RJ-45 Ethernet ports with TSN/TCC functions. AMT is available upon user request.

For local expansion, two types of mezzanine cards are suggested. Configuration-1 with card M-1 supports two 2280 M.2 sockets for SATA 3.0 SSDs. Configuration-2, customizable by user request, adds two M12 X-code GbE Ethernet ports, one 2280 M.2 socket for a SATA 3.0 SSD, Fe-RAM, and a super capacitor function.

The MIC-330V2 also offers high-speed I/O options, including up to 2 x PCIe x8, 4 x PCIe x4, 2 x PCIe x1, 2 x USB 3.2, 8 x USB 2.0, 2 x SATA, and 2 x GbE to the CompactPCI Serial backplane. This allows for high-speed peripheral expansion like graphics, storage, Ethernet, COM, WiFi, and 4G/5G.

Thermal dissipation is optimized through two heatsink options, depending on the airflow. The full-size heatsink supports up to 32GB of memory down, while the half-size heatsink allows for a total of 64 GB memory.

Designed for excellent thermal and EMC performance, the MIC-330V2 is ideal for harsh environments, making it suitable for railway rolling stock and high-performance computing applications.

Specifications

Processor System	CPU	Intel® Xeon® W-11865MLE, 8C/16T, TDP 25 W, ECC Intel® Xeon® W-11865MRE, 8C/16T, TDP 45 W/35 W, ECC Intel® Xeon® W-11555MRE,6C/12T, TDP 45W/35W, ECC Intel® Core™ i7-11850HE, 8C/16T, TDP 45W/35W, non-ECC
	PCH	Intel® RM590E Chipset
	BIOS	AMI 256 Mb SPI flash
Memory	Technology	DDR4 3200 MHz, Dual Channel and ECC support (optional)
	Max. Capacity	Up to 64 GB (Max. 32 GB on board, Max. 32 GB via SODIMM socket)
Graphics	Controller	Intel® UHD Graphics for 11th Gen Intel® processors
	I/O Connector	2 x USB Type-C ports: USB 1/USB 2 can support DisplayPort Alternate Mode
	Resolution	DP: 7680 x 4320 @ 60 Hz
Ethernet	Interface	Up to six Ethernet in total 2 x 2.5GBASE-T RJ45 on front panel 2 x 1000BASE-T M12 on front 8HP panel with Mezzanine-2 Card 2 x 1000BASE-T to P6 connector on Mezzanine Card
	Controller	Intel i226 2.5 Gbps Ethernet controller Intel i210 1 Gbps Ethernet controller
	I/O Connector	2 x RJ45 to front 4HP support 1 Gbps / 2.5 Gbps 2 x M12 X-coding to front 8HP, with 1 Gbps speed on M-2 card
Storage	Mode	SATA III
	Channels	Up to 2 x channels onboard 2280 M.2 type module (M-Key socket) 2 x channels to CPCI-S backplane

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All product specifications are subject to change without notice.

Specifications (Cont.)

Front I/O	USB	3 10 Gbps USB Type-C ports USB 1/USB 2 support DisplayPort Alternate Mode USB-PD of USB 1/USB 2 downstream facing ports 5 V/3 A (maximum power not concurrently available on any port); USB-PD of USB 3 downstream port 5 V/1.5 A	
	LAN	2 RJ45 2.5 GbE on 4HP, 2 x M12 GbE reserved on 8HP M-2 card TSN/TCC capable, AMT function reserved by user request	
	Front Panel LEDs	1 x blue/orange for hot swap/HDD, 1 x green for power, 1 x green for master/drone	
	Buttons	System reset button	
CompactPCI Serial Backplane Resources	PCIe	PCIe Gen III speed 2 x PCIe x8, 4 x PCIe x4, 2 x PCIe x1	
	SATA	SATA Gen III speed 2 x SATA III	
	USB	2 x USB 3.2 @ 5 Gbps speed 8 x USB 2.0 @ 480 MHz speed	
	GbE	2 x GbE to P6 on Mezzanine Card (M-1 & M-2)	
To P1-P6 Signal	P1	1 x PCIe3.0 x4 of lower 4-Lane (port 8~11 of PCIe 16), 1 x USB 3.2 gen 1, 1 x USB 2.0	
	P2	1 x PCIe3.0 x4 of upper 4-Lane (port 12~15 of PCIe 16), 1 x PCIe3.0 x8 (port 0~7 of PCIe 16), 3 x USB 2.0, Update to 5 x GPIO	
	P3	3 x USB 3.2 gen 1, 4 x USB 2.0, 2 x SATA 3.0, 1 x DP signal reserved	
	P4	4 x PCIe3.0 x4	
	P5	2 x PCIe3.0 x1, 5 x PCIe clock REQ	
	P6	Up to 2 x GbE on Mezzanine Card	
BIOS	Boot Options	SATA, USB, network (PXE)	
Watchdog Timer	Output	Local reset	
	Interval	Programmable	
Security	Trusted Platform Module	TPM 2.0 support	
Operating System	Compatibility	Windows 10, Windows 11, Ubuntu 22.04, VxWorks	
Physical	Dimension & Weight	4HP or 8HP, 160.00 mm x 100.00 mm	
Environment		**Operating(depending on forced airflow)**	**Non-operating**
	Temperature	-40°C ~70°C (-40°F ~158°F) (EN50155 OT4 -85°C for 10 minutes) , industrial product support 0°C ~70°C (32°F ~158°F), commercial product support	-40°C ~ 85°C (-40°F ~ 185°F)
	Humidity	95% @ 40°C, non-condensing	95 % @ 60°C, non-condensing
	Vibration	2 Grms, random (5 Hz ~ 500 Hz)	
	Shock	10 G, 11 ms, each axis three times, operation mode	
Regulatory	Conformance	FCC Class A, CE, FCC, UKCA, RoHS	
Compliance	Standards	PICMG® CompactPCI® Serial	

Supported CPU Configurations

Intel® CPU Model Number	# Cores	Cache	Max Turbo Frequency	Configurable TDP-up/TDP-down	Memory Types	ECC Support	Industrial Support (-40°C ~70°C)
Intel® Xeon® W-11865MLE	8	24 MB	4.5 GHz	25 W	DDR4-3200	Yes	No
Intel® Xeon® W-11865MRE	8	24 MB	4.7 GHz	45 W / 35 W	DDR4-3200	Yes	Yes
Intel® Xeon® W-11555MRE	6	12 MB	4.5 GHz	45 W / 35 W	DDR4-3200	Yes	Yes
Intel® Core™ i7-11850HE	8	24 MB	4.7 GHz	45 W / 35 W	DDR4-3200	No	No

Ordering Information

System Board	Front Panel		Onboard Features					Others		
	LAN (RJ45)	USB (Type-C)	CPU	Memory Onboard	SODIMM Socket	ECC	SATA (M.2)	Width Height	To P6 Conn. GbE Signal	TPM
MIC-330V2-A1S1	2	3	Xeon® W-11865MLE	32 GB	Max. 32 GB	Yes	2	4HP	2	Yes
MIC-330V2-B1S1	2	3	Core™ i7-11850HE	32 GB	-	No	2	4HP	2	No

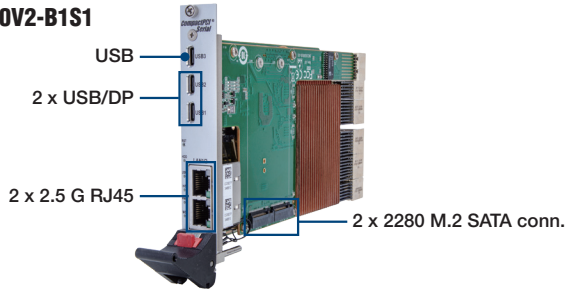
Remark: Please consult with local sales for Industrial product.

Related Products

Peripheral Board	Description
MIC-300A Series	3U CPCI-Serial 84HP/44HP width, 3U/4U height chassis, with 8 slots backplane & mini fan
MIC-3954D Series	3U CPCI-Serial quad Mini-PCIe carrier board
MIC-3954E Series	3U CPCI-Serial quad M.2 (1x E-Key, 3 x B-Key) carrier board for Wi-Fi/ LTE/GPS module
MIC-3810 Series	3U CPCI-Serial PCIe x8/x16 carrier board
MIC-3820 Series	3U CPCI-Serial 2.5" SATA SSD carrier board
MIC-3811 Series	3U CPCI-Serial dual mini PCIe carrier to carrier i-Door module like DIO/ AIO/CAN/COM/Wi-Fi, etc
MIC-3860 Series	3U CPCI-Serial quad RJ45 or 4 M12 2.5 Gbps LAN board, with PoE support option
MIC-3812 Series	3U CPCI-Serial MXM carrier board for type A/B/B+ module
MIC-3821 Series	3U CPCI-Serial quad M.2 M-Key NvME carrier board
MIC-3890	3U CPCI-Serial DC-DC power module, module, 110 V in/ 12 V & 5 V out, 250 W
XMIC330-HAC300S	3U CPCI-Serial AC-DC power module, 12 V & 5 V output, 300 W

Product Image

MIC-330V2-A1S1
MIC-330V2-B1S1



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