MIC-3812

3U CompactPCI® Serial MXM Carrier Board



Features

- 3U Height CompactPCI Serial interface peripheral board
- Carrier board for a MXM 3.1 graphics module
- 2 HDMI & 2 DisplayPort connectors on front panel
- Supports type A (82 mm x 70 mm), type B & Type B+ (82 mm x 105 mm) MXM graphics module, built on the NVIDIA Turing & Ampere architecture
- Designed to meet EN50121-4, EN50121-3-2 and EN50155 standards
- PICMG CompactPCI Serial (CPCI-S.0 R2.0) compliant

Introduction

MIC-3812 is a 3U 8HP MXM carrier peripheral board, following the CPCI-S.0 standard. It can support 2 x HDMI 2.0 and 2 x DisplayPort 1.4a connectors on the front panel, with 1 x DP switchable to the backplane via P3 connectors, customizable by user request. The carrier is able to accommodate either type A (82 mm x 70 mm), type B, or type B+ (82 mm x 105 mm) graphics modules, which built on the NVIDIA Turing & Ampere architecture; an extra power board is necessary to support TGP over 60 W for stable module operation, which is assembled on the carrier's second layer from the P1 connector. P6 is not assembled by default but can be provided upon request for even more mechanical stability.

To optimize computing performance, it is recommended to install the board in a CompactPCI® Serial fat pipe slot, which provides a PCI Express® x8 interface. In embedded mission-critical applications, a GPU TGP power less than 115 W is preferable, and forced air is needed in the chassis.

MIC-3812 is designed to meet EN50155, EN50121-3-2, and EN50121-4 standards, with its excellent capabilities in mechanical, EMC, safety, and wide temperature range features. It is especially suited for harsh and rugged applications like railway, medical, and defense, etc.

Specifications

Backplane Interface		PCIe Gen3 x8 to backplane from P1/P2 1 x DP (switch to front IO) to backplane from P3	
Front Panel		2 x HDMI 2.0 2 x DisplayPorts 1.4a	
Dimension		3U/8HP, 100 mm x 160 mm	
		Weight: 200 g (not including heatsink), 660 g (including MXM module and heatsink)	
OS Support		Windows 10 , Linux Centos (dependent on MXM module)	
Environment		**Operating**	**Non-Operating**
	Temperature	-40°C ~ 70°C (-40°F ~ 158°F) (dependent on MXM module and heatsink solution)	-40°C ~ 85°C (-40°F ~ 176°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	

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Ordering Information

Part Number	Description	MXM Module	Heatsink
MIC-3812-A1D1	MXM carrier for type A MXM module	No	No
MIC-3812-B1D1	MXM carrier for type B MXM module	No	No
MIC-3812G-A2000	MXM carrier with MXM A2000 module & heatsink	RTX A2000, 8 GB GDDR6	Yes
MIC-3812G-A4500	MXM carrier with MXM A4500 module & heatsink	RTX A4500, 16GB GDDR6	Yes

Note:
1. All thermal solution is validated under Advantech designed MXM modules.
2. Forced air is mandatory.
3. Heatsink design is based on different MXM modules, please contact local sales for optimum solution.
4. 4HP height card on request.

Optional Accessory

Part Number	Description
1970005623T001	Heatsink for Type A MXM module
1970005756N101	Heatsink for Type B MXM module
1970005756N001	Heatsink for Type B+ MXM module

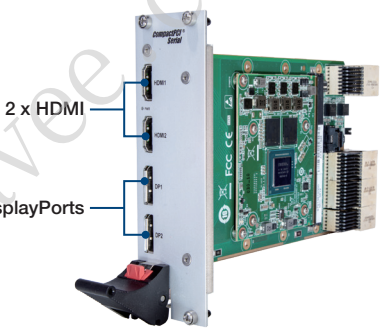
Related Products

CPU board	Description
MIC-330 Series	3U CPCI-Serial Intel® 9th Gen. Processor Blade
MIC-330V2 Series	3U CPCI-Serial Intel® 11th Gen. Processor Blade
MIC-3821 Series	3U CPCI-Serial quad M.2 M-Key NvME carrier board
MIC-300A Series	3U CPCI-Serial 84HP/44HP width, 3U/4U height chassis, with 8 slots backplane & mini fan
MIC-3890DC	3U CPCI-Serial DC-DC power module, module, 110V in / 12V out, 300W
MIC-3890AC	3U CPCI-Serial AC-DC power module, 12 V & 5 V output, 300 W

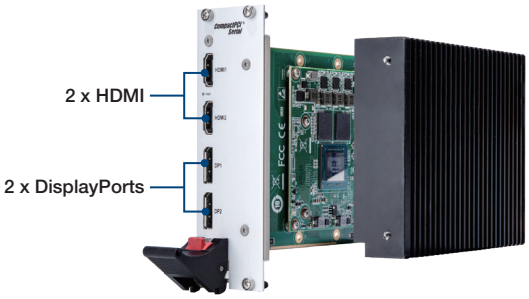
Recommended MXM Module	Description
SKY-MXM-T1000	Quadro T1000 MXM 4 GB Discrete mode type A
SKY-MXM-A1000	Quadro A1000 MXM 4 GB Discrete mode type A
SKY-MXM-A2000	Quadro A2000 MXM 8 GB Discrete mode type A
SKY-MXM-A500	Quadro A500 MXM 4 GB MS Hybrid mode type A
SKY-MXM-RTX3000	Quadro RTX 3000 MXM 6 GB Discrete mode type B
SKY-MXM-A4500	Quadro RTX A4500 MXM 16 GB Discrete mode type B+

Product Pictures

MIC-3812 with Type A



Without Heatsink



With Heatsink

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