



CERVOZ

MEC-LAN-M102

Mini PCI-e 2 port 10/100/1000 Ethernet board

Product Datasheet



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Revision: 1.2

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Revision History

Date	Revision	Description
2026.04.10	1.2	New datasheet format and add PoE+ daughter board



Table of Contents

1. Product Overview.....	4
1.1 Introduction.....	4
1.2 Feature.....	4
1.3 MECFIX–Versatile.....	5
2. Product Specifications.....	6
3. Ordering Information.....	7
4. Dimensions.....	7
4.1 Main Board.....	7
4.2 Daughter Board.....	8
5. Package Checklist.....	9

1. Product Overview

1.1 Introduction

MEC-LAN-M102 is a dual-port GbE LAN module designed for embedded systems and industrial PCs. It features a Mini PCIe form factor with a PCI Express x1 interface and a compact size of 30 × 50.95 mm. The module provides a cost-effective solution for Gigabit network expansion in systems with available Mini PCIe slots.

MEC-LAN-M102 features dual Ethernet ports with support for 10/100/1000Mbps auto-negotiation and IEEE 802.3x flow control, ensuring stable and high-throughput network performance.

MEC-LAN-M102 is powered by the Intel I210 Ethernet Controller, providing reliable performance, high efficiency, and stable network connectivity. An external PoE+ module is available to support both power and data transmission over a single Ethernet cable, delivering higher power output than standard PoE.

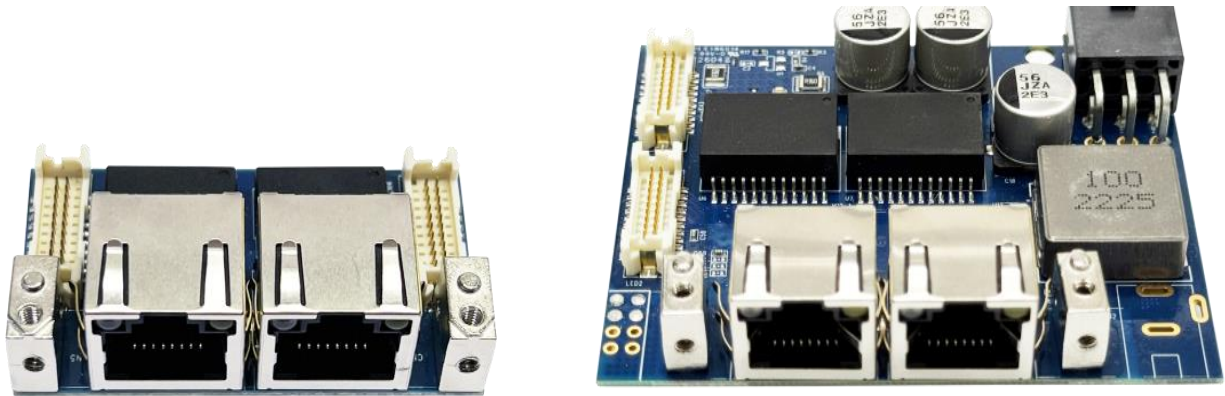
MEC-LAN-M102 adopts a modular design with a daughter board, making it suitable for space-constrained or multi-channel deployments. To support diverse installation requirements, the module includes a daughter board, bracket, and connection cables in the standard package for flexible system integration.

1.2 Feature

- Single-Lane (x1) PCI-Express with throughput up to 5.0/2.5GT/s
- Fully compliant with PCI-Express Base Specification Rev.2.0
- Integrated 10/100/1000Mbps transceiver
- IEEE 802.3, IEEE802.3u, IEEE 802.3ab, and IEEE 802.3z compliant
- IEEE 802.3x Full-Duplex flow control
- Support Wake-on-LAN
- Complies with EN61000-4-2(ESD)Air-15kV, Contact-8kV
- Complies with EN61000-4-4(EFT)2kV
- Complies with EN61000-4-5 2kV Surge protection
- Two independent PSE channels

1.3 MECFIX – Versatile

MECFIX is the unique mounting mechanism designed especially for MEC daughter board. The feature of the mounting unit allows the following mounting options:



1. Standard PCI/PCIe Bracket
2. Low Profile PCI/PCIe Bracket
3. Internal Mounting inside of PC system from any position and angle.
4. Customizing Front/Rear Plate of PC system according to dimension of MEC daughter board.

2. Product Specifications

General	
PCI-Express Revision	PCI-Express Base Specification Rev. 2.0
PCI-Express Electromechanical Revision	PCI-Express Mini Card Electromechanical Rev. 2.0
Hardware	
Controller	Intel I210 x2
Bus	Single-Lane (x1) PCI-Express with throughput up to 5.0/2.5GT/s
Interface (Connector)	
Ethernet 10/100/1000Mbps	2 (RJ45)



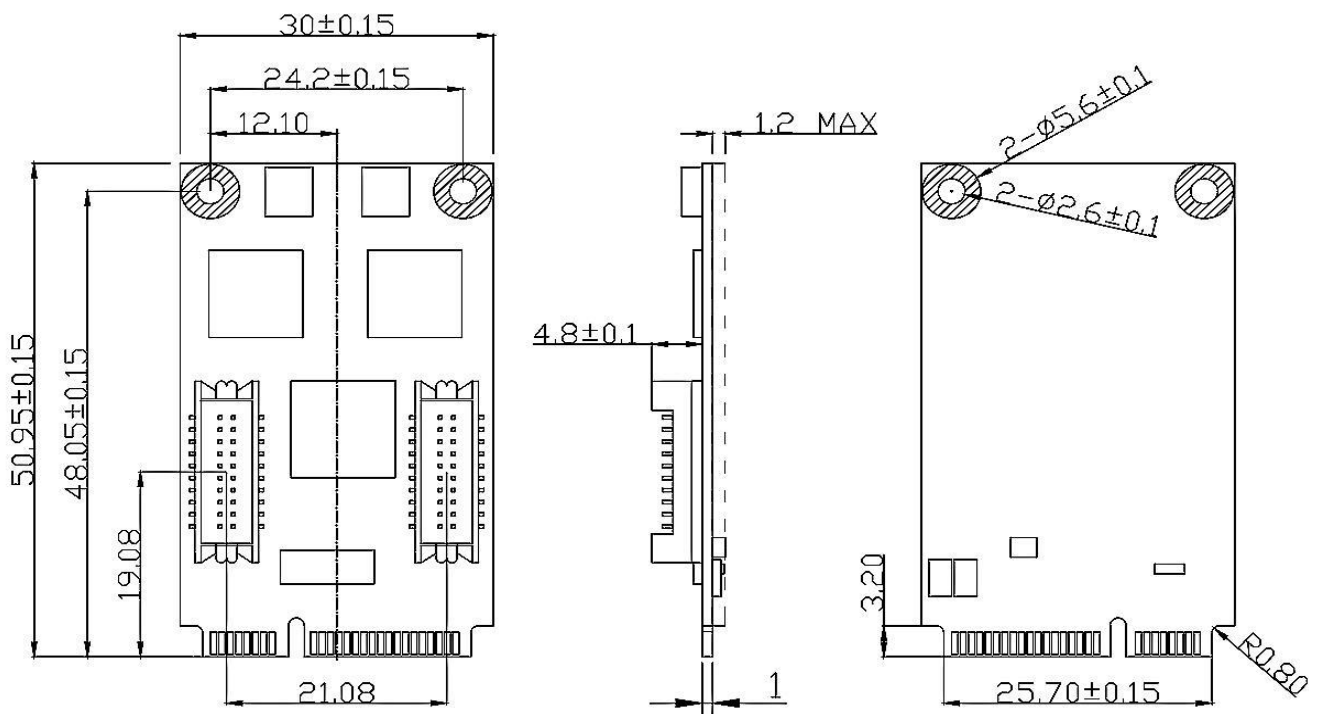
Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX
Flow Control	IEEE 802.3x flow control
Driver Support	
Operating Systems	Win 10, Win 11
Power Requirement	
Power Consumption	705mA@3.3V
PoE+	Maximum 5.5A @ 12V w/ 6 pin PCIE-ATX
Dimensions	
Width x Length (mm)	30.00 x 50.95
Environmental Limits	
Operating Temperature	MEC-LAN-M102 : -40 ~ 85°C MEC-LAN-M102-S : 0 ~ 70°C
Storage Temperature	-40 ~ 125°C
Humidity (non-condensing)	5% ~ 95%
Regulatory Approvals	
EMC	CE, FCC, UKCA
EMI	EN 55032, EN61000-3-2, EN61000-3-3, FCC Part 15 Subpart B, Class B
EMS	EN 55035, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Reliability	
Warranty	3 years
MTBF	>20,161,919

3. Ordering Information

Model Name	Description
MEC-LAN-M102i	Mini PCI-e 2 port 10/100/1000 isolated Ethernet board (-40°C~+85°C)
MEC-LAN-M102i-S	Mini PCI-e 2 port 10/100/1000 isolated Ethernet board (0°C~+70°C)
MEC-LAN-M102P	Mini PCI-e 2 port 10/100/1000 PoE+ Ethernet board (-40°C~+85°C)
MEC-LAN-M102P-S	Mini PCI-e 2 port 10/100/1000 PoE+ Ethernet board (0°C~+70°C)

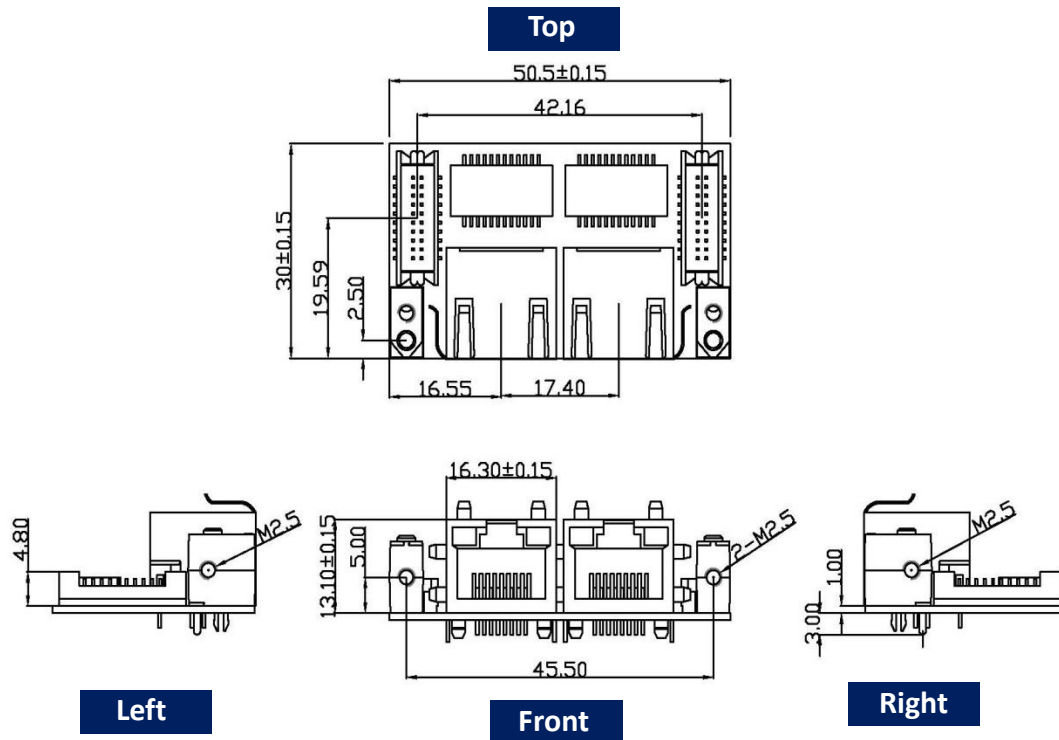
4. Dimensions

4.1 Main Board

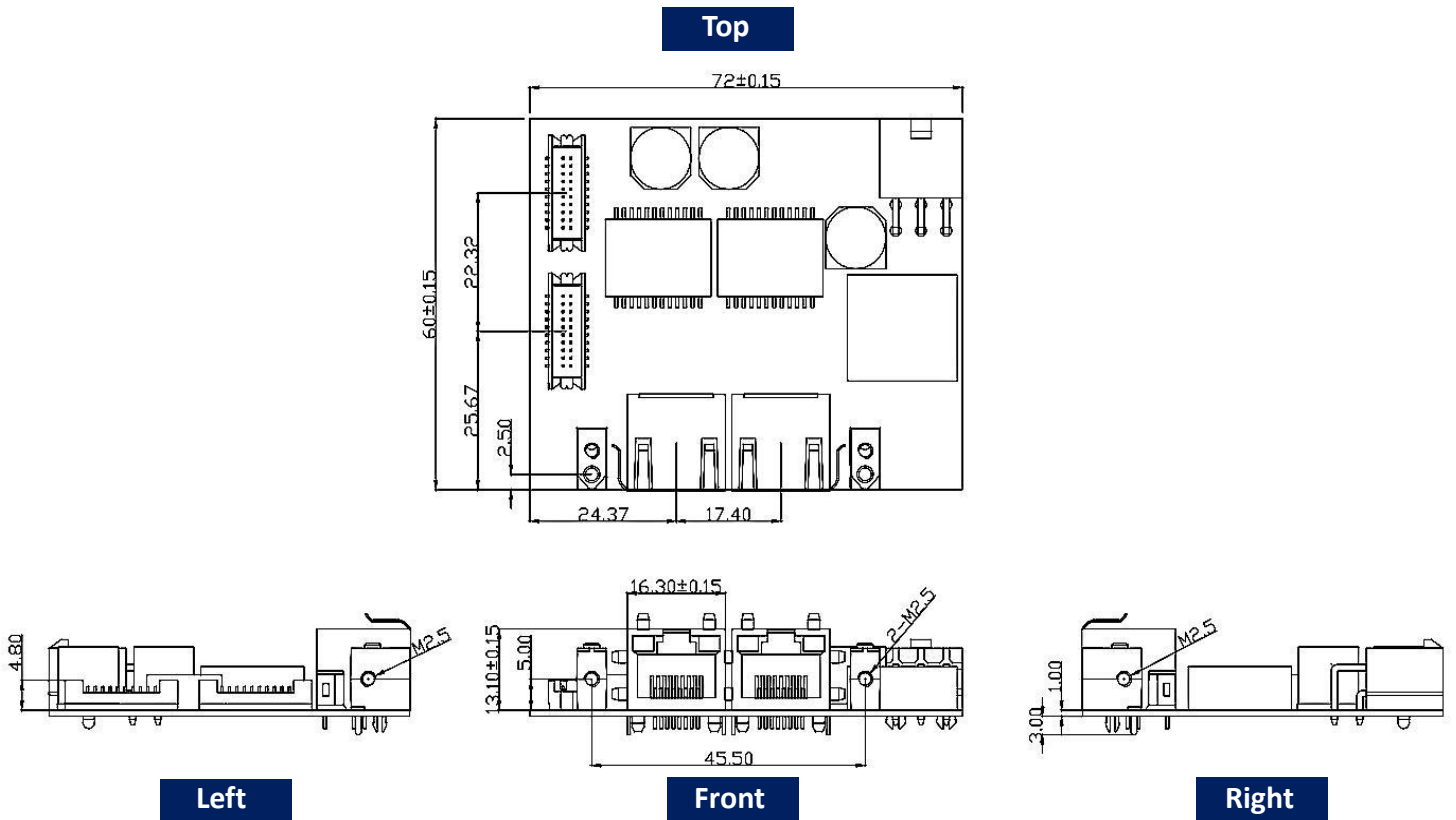




4.2 MEC-LAN-M102i Daughter Board



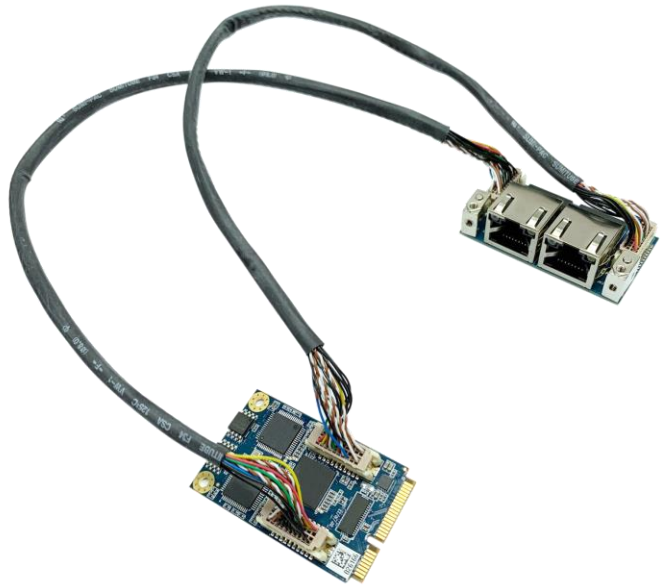
4.3 MEC-LAN-M102P Daughter Board



5. Package Checklist

MEC-LAN-M102i / MEC-LAN-M102i-S

- Mini PCIe Card x 1
- Daughter Board x 1
- Bracket x 1
- M2.5 Screw x 2
- 20Pin Internal Cable (30cm) x 2
- Quick Installation Guide (Printed) x 1



MEC-LAN-M102P / MEC-LAN-M102P-S

- Mini PCIe Card x 1
- PoE+ Daughter Board x 1
- Bracket x 1
- M2.5 Screw x 2
- 20Pin Internal Cable (30cm) x 2
- Quick Installation Guide (Printed) x 1

