



CERVOZ

MEC-LAN-M602

Mini PCI-e 2 port 2.5GbE Ethernet board
(-40°C ~ +85°C)

Product Datasheet



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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-M602 is a dual-port 2.5GbE 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-M602 features two Ethernet ports supporting auto-negotiation for 10/100/1000/2500Mbps connections, with compliance to IEEE 802.3x and IEEE 802.3z standards for stable and efficient data transmission.

MEC-LAN-M602 is powered by the Intel I226 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.

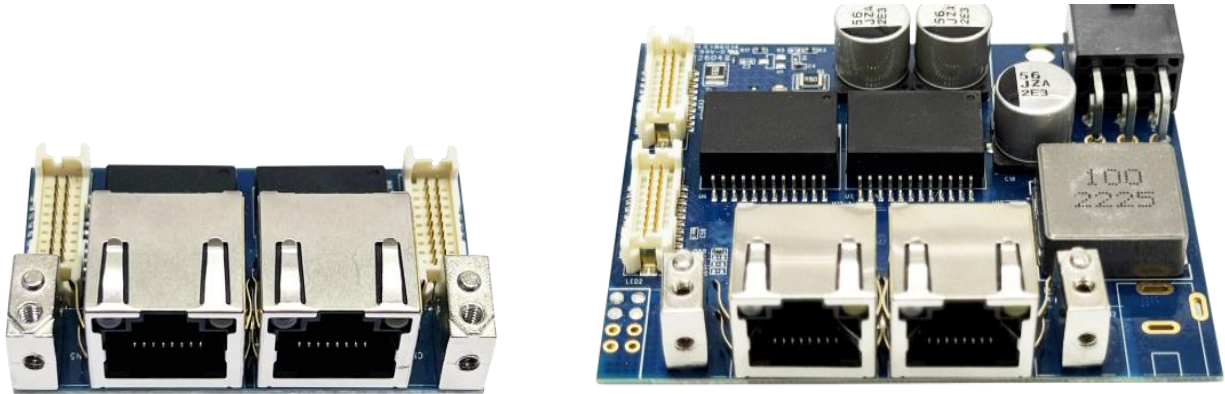
MEC-LAN-M602 adopts a modular design with a daughter board, making it suitable for space-constrained or multi-channel deployments. To support diverse installation requirements, the module includes a daughter board, bracket, and connection cables in the standard package for flexible system integration.

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.2.1
- Integrated 10/100/1000/2500Mbps transceiver
- IEEE 802.3, IEEE802.3u, IEEE 802.3ab, IEEE 802.3z and IEEE 802.3bz compliant
- IEEE 802.3x and IEEE 802.3z 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. 2.1 |
| PCI-Express Electromechanical Revision | PCI-Express Mini Card Electromechanical Rev. 2.0 |
| Hardware | |
| Controller | Intel I226-IT x2 |
| Bus | Single-Lane (x1) PCI-Express with throughput up to 5.0/2.5GT/s |
| Interface (Connector) | |
| Ethernet 10/100/1000/2500Mbps | 2 (RJ45) ** Based on PCI-Express Mini Card Electromechanical specification, It is not able to operate at 2port 2.5GbE full speed simultaneously. |

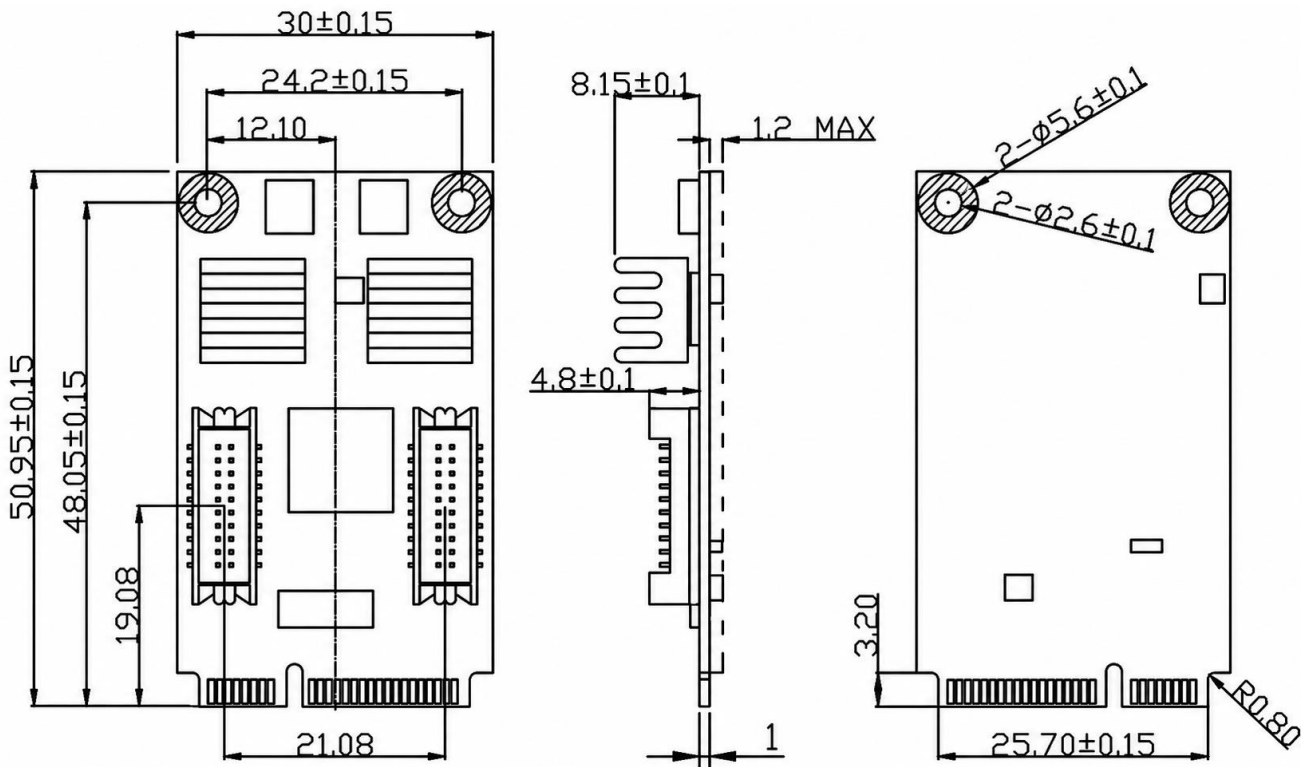
| Technology | |
|--|---|
| Standards | IEEE 802.3 for 10Base-TE IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3bz for 2500Base-T |
| Time Sensitive Networking Capabilities | IEEE 802.1Qbu 、 802.3br 、 802.1Qbv 、 802.1AS-REV 、 802.1p/Q 、 802.1Qav |
| Flow Control | IEEE 802.3x and IEEE 802.3z flow control |
| Isolated 2.5GbE LAN port | Dual |
| Driver Support | |
| Operating Systems | Win 10, Win 11 |
| Power Requirement | |
| Power Consumption | 970mA@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 | -40 ~ 85°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-M602i | Mini PCI-e 2 port 2.5GbE isolated Ethernet board (-40°C~+85°C) |
| MEC-LAN-M602P | Mini PCI-e 2 port 2.5GbE PoE+ Ethernet board (-40°C~+85°C) |

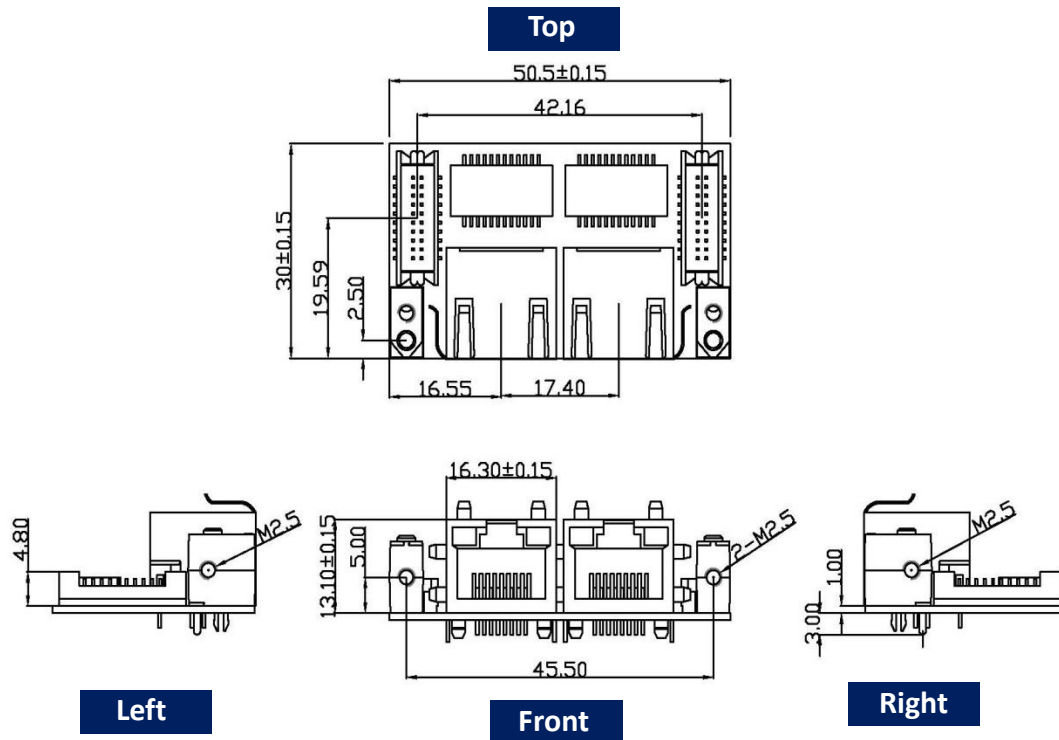
4. Dimensions

4.1 Main Board

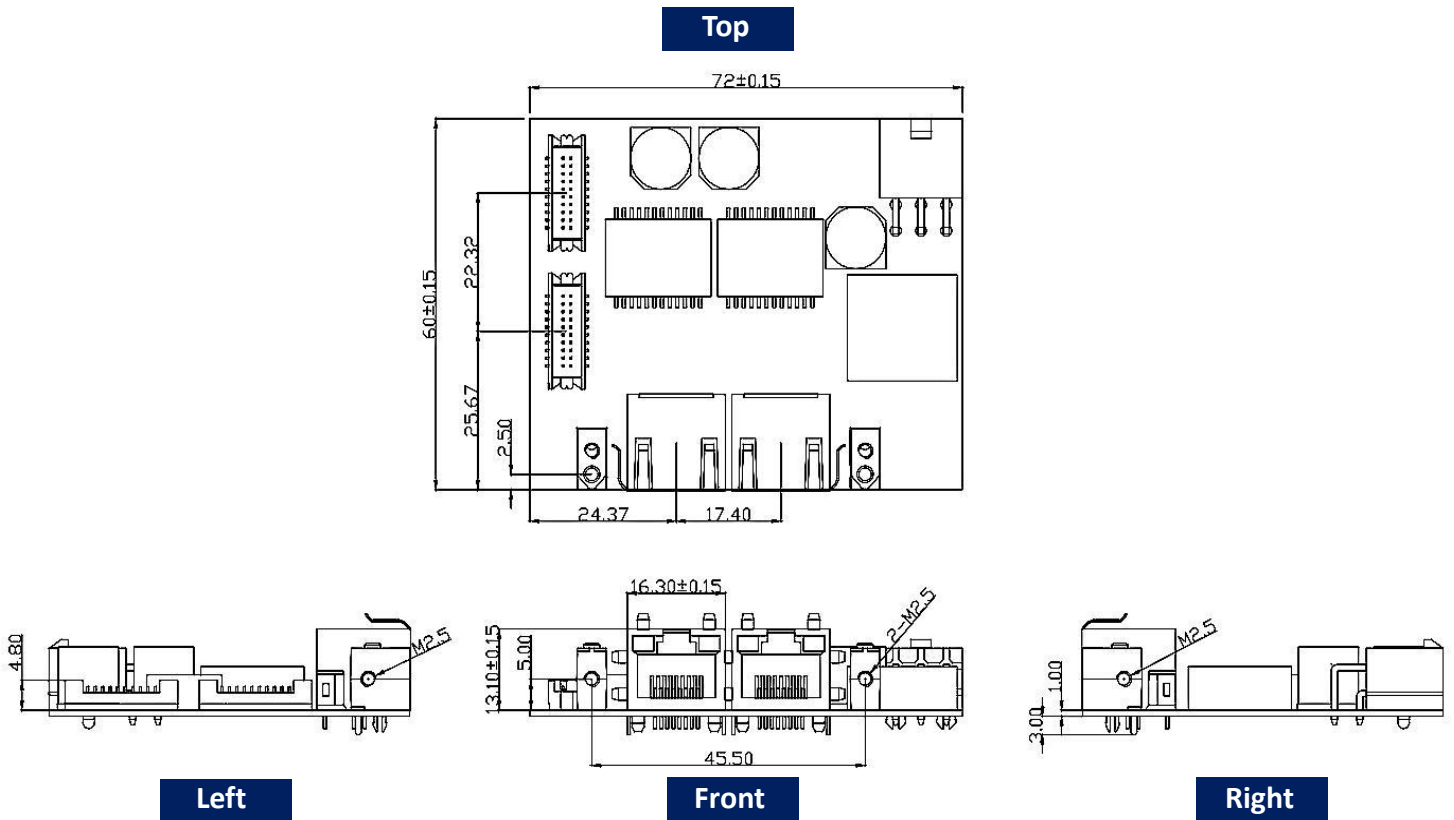




4.2 MEC-LAN-M602i Daughter Board



4.3 MEC-LAN-M602P Daughter Board

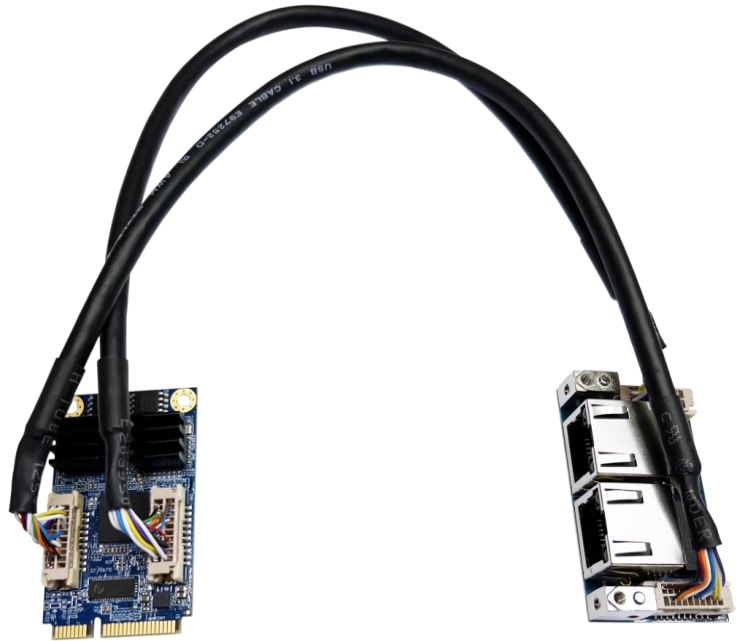




5. Package Checklist

MEC-LAN-M602i

- Mini PCIe Card (with Heatsink x2) 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-M602P

- Mini PCIe Card (with Heatsink x2) 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

