



CERVOZ

MEC-LAN-2101i

M.2 2280 (B+M key) 1 port 10GbE isolated Ethernet board

Product Datasheet



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Revision History

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1. Product Overview

1.1 Introduction

MEC-LAN-2101i is a single-port isolated 10GbE LAN module designed for embedded PC application. It adopts the M.2 standard with a PCI Express x2 interface and M.2 form factor, allowing seamless integration into host systems equipped with an M.2 slot. This module provides a cost-effective solution for upgrading system network performance to 10GbE connectivity.

MEC-LAN-2101i features one Ethernet port supporting auto-negotiation for 100Mbps, 1Gbps, 2.5Gbps, 5Gbps, and 10Gbps, and is compliant with IEEE 802.3x, IEEE 802.3z, and IEEE 802.3an standards.

Powered by the high-performance, energy-efficient, and reliable Intel E610-XAT Ethernet controller, MEC-LAN-2101i ensures stable and efficient network operation.

MEC-LAN-2101i supports flexible deployment across various applications. The standard package includes a daughter board, mounting bracket, and connection cables for system integration.

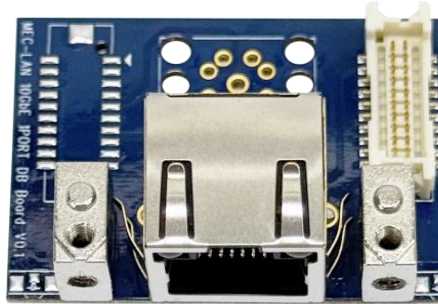
1.2 Feature

- Dual-Lane (x2) PCI-Express with throughput up to 16GT/s
- Fully compliant with PCI-Express Base Specification Rev.4.0
- Integrated 100M/1000M/2.5G/5G/10Gbps transceiver
- Compliant with IEEE 802.3, IEEE802.3u, IEEE 802.3ab, IEEE 802.3bz and IEEE 802.3an
- Complies with EN61000
- IEEE 802.3x and IEEE 802.3z flow control
- Support single isolated 10GbE LAN port
- Lowest power consumption 10GbE expansion solution



1.3 MECFIX – Versatile

MECFIX is the unique mounting mechanism designed especially for MEC daughterboard. 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 daughterboard.

2. Product Specifications

General	
PCI-Express Revision	PCI-Express Base Specification Rev. 4.0
PCI-Express Electromechanical Revision	PCI-Express M.2 Electromechanical Rev. 1.1
Hardware	
Controller	Intel E610-XAT x1
Bus	Dual-Lane (x2) PCI-Express with throughput up to 16 GT/s
Interface (Connector)	
Ethernet 100M/1000M/2.5G/5G/10Gbps	1 (RJ45)
Technology	
Standards	IEEE 802.3an for 10GBase-T IEEE 802.3bz for 5G/2.5GBASE-T IEEE 802.3u for 100Base-T(X) IEEE 802.3ab for 1000Base-T IEEE 802.3az IEEE 801.1Q (VLAN) IEEE 802.1ad (Double VLAN) IEEE 1588 IEEE 802.1AS IEEE 802.1Qbg Support for Data Center Bridging (DCB);(802.1Qaz, 802.1Qbb, 802.1p)
Flow Control	IEEE 802.3x and IEEE 802.3z flow control
Isolated 10GbE LAN port	Single
Driver Support	
Operating Systems	Win 10, Win 11 Windows Server 2016,2019,2022,2025 Linux: RHEL 9.6 or later, SLES 12 SP5 or later, Ubuntu 22.04 or later, FreeBSD 13.3 or later, Linux Real Time Kernel 5.x and 4.x,Linux, v2.4 kernel or higher

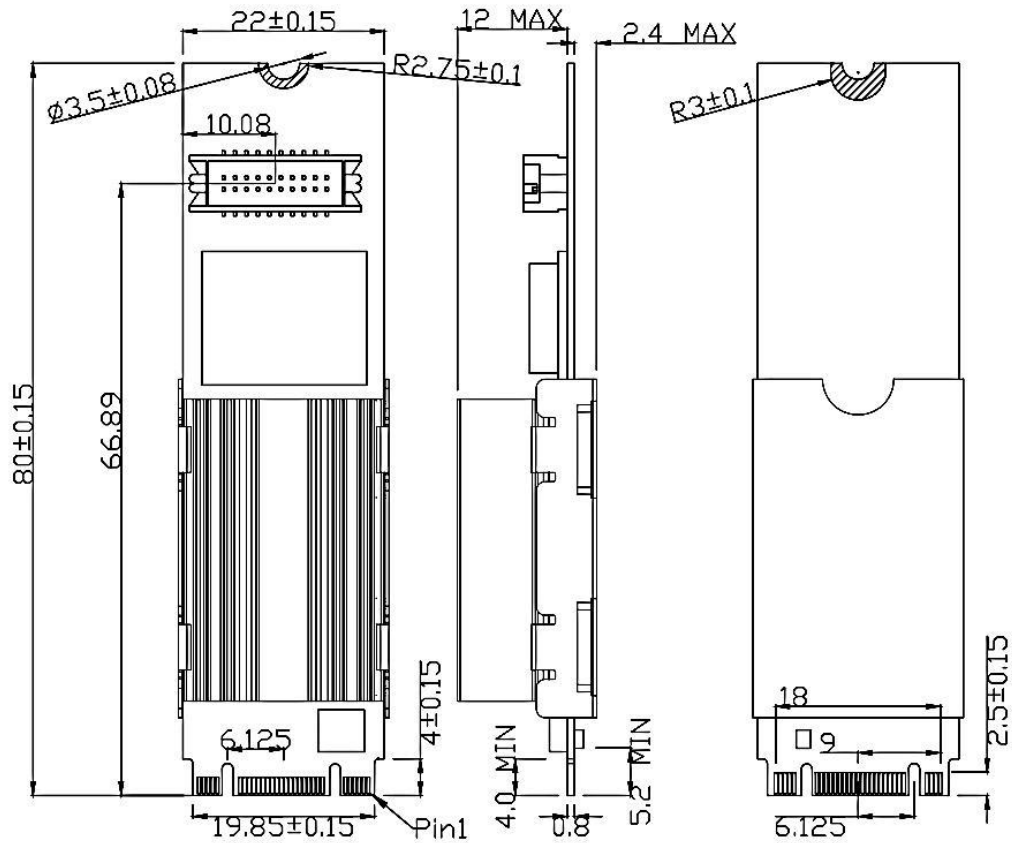


Power Requirement	
Power Consumption	900mA@3.3V
Dimensions	
Width x Length (mm)	22.00 x 80.00
Environmental Limits	
Operating Temperature	0 ~ 70°C
Storage Temperature	-40 ~ 125°C
Humidity (non-condensing)	5% ~ 95%
Regulatory Approvals	
EMC	CE, FCC, UKCA
EMI	EN 55032, EN61000-3-2, EN61000-3-3, FCC Part 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

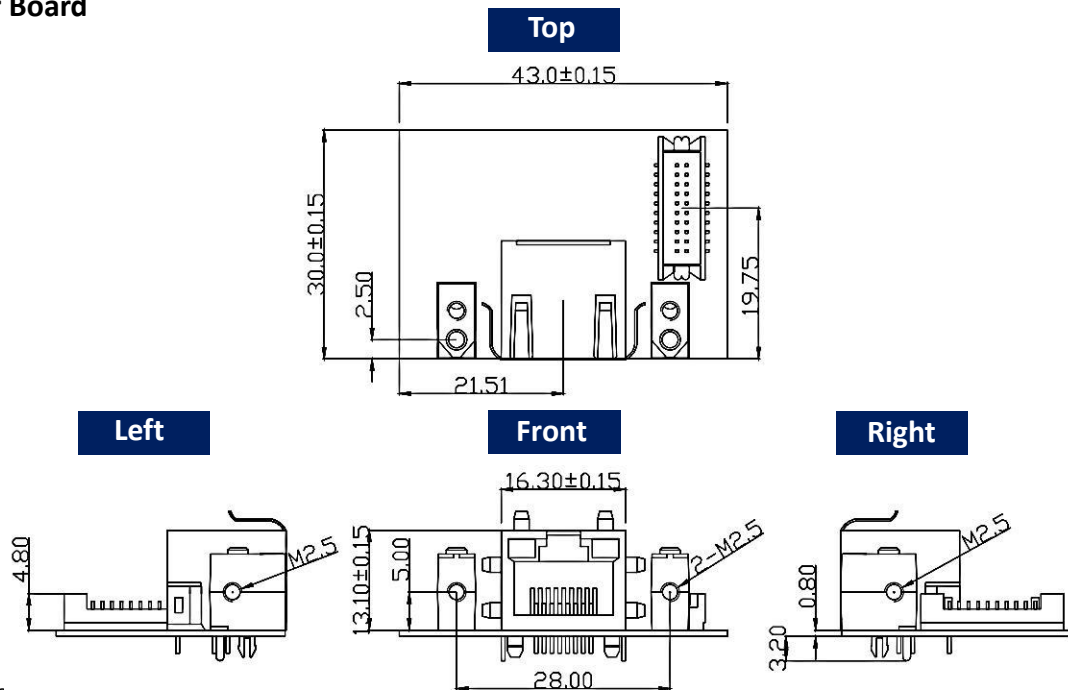


3. Dimensions

3.1 Main Board



3.2 Daughter Board





4. Package Checklist

- M.2 2280 Card(with Heatsink) x 1
- Daughter Board x1
- Bracket x 1
- M2.5 Screw x 2
- 20Pin Internal Cable (30cm) x 1
- Quick Installation Guide (Printed) x 1

