

MEC-LAN-2001-SFP

M.2 2280 (B+M key) 1-port 1GbE SFP
Ethernet board ($-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$)

Product Datasheet



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Revision History

Date	Revision	Description
2024.12.09	1.0	First Released

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1. Product Overview

1.1 Introduction

MEC-LAN-2001-SFP is a single 1GbE LAN module designed for embedded PC. It follows the M.2 standard which is compliant with PCI Express x 1 classification and M.2 form factor. MEC-LAN-2001-SFP is ideal for use in small PCs, industrial computers, single-board computers, digital multimedia devices, and other equipment with M.2 interface slots.

MEC-LAN-2001-SFP has a single SFP (Small Form-factor Pluggable) Ethernet port, supporting 1000Mbps Ethernet speeds, and complies with IEEE 802.3x and IEEE 802.3z flow control standards. With these features, MEC-LAN-2001-SFP ensures reliable, high-speed network connections for a wide range of applications.

MEC-LAN-2001-SFP uses Intel I210 Gigabit Ethernet Controller, with high performance, efficiency and stability, offering a cost-effective solution for expanding your system's Gigabit Ethernet connectivity.

MEC-LAN-2001-SFP is designed with flexibilities for many different application and accessories (daughter board, bracket, connection cable) are included in the standard package.

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
- Standard SFP modules supporting data rates of up to 1Gbps
- IEEE 802.3 for 1000Base-SX/1000Base-LX 、 IEEE 802.3ap for 1000Base-KX 、 PICMG 3.1 for 1000Base-BX
- IEEE 802.3x and IEEE 802.3z flow control
- Support Wake-on-LAN and Hot-Swap function
- Allowing for long-distance communication and easy upgrades
- Modular Design, flexibility and scalability
- Support multiple SFP ports, both single-mode or multi-mode

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:



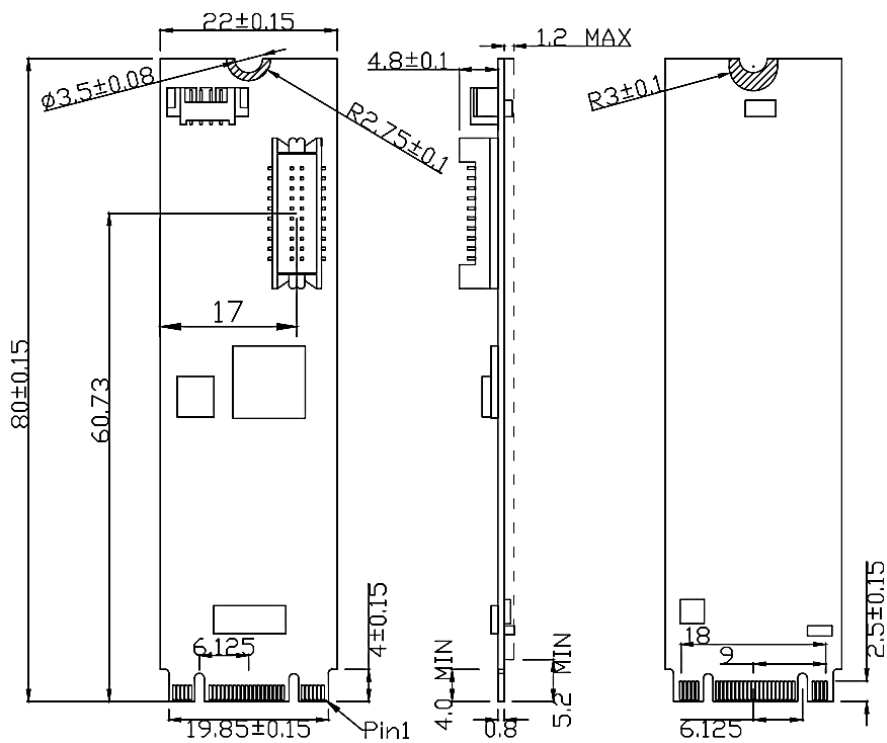
1. Standard PCI/PCIe Bracket
2. Low Profile PCI/PCIe Bracket
3. Internal Mounting inside of PC system from any position and angle.
4. Customizing Front/Rear Plate of PC system according to dimension of MEC daughterboard.

2. Product Specifications

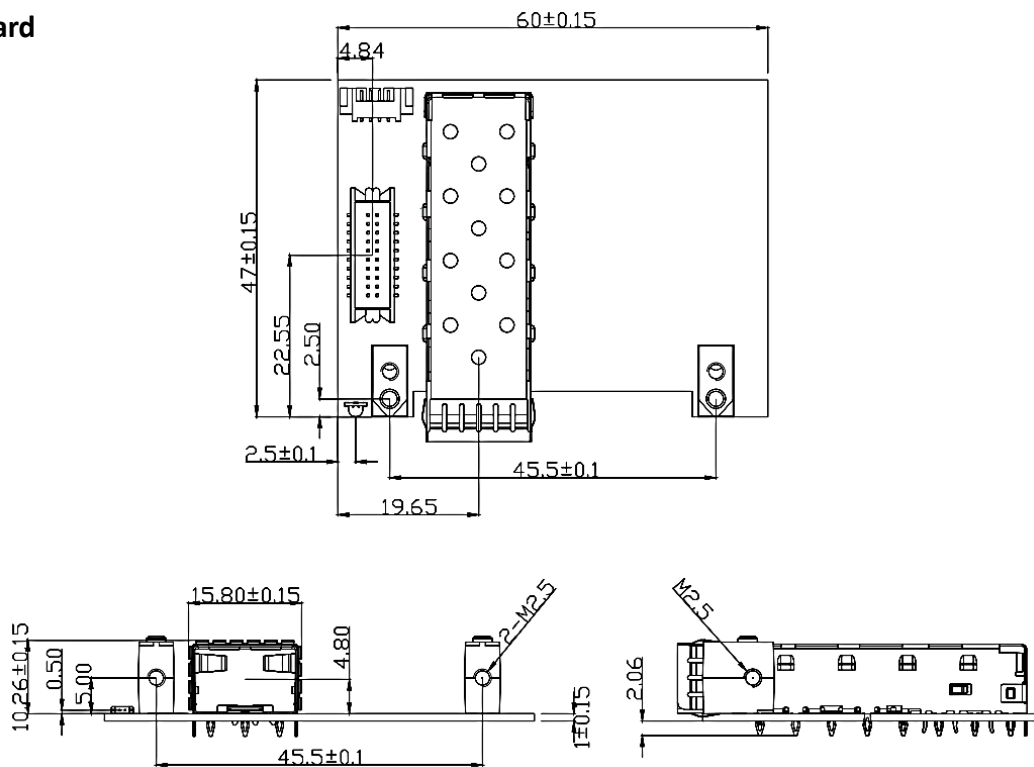
General	
PCI-Express Revision	PCI-Express Base Specification Rev. 2.0
PCI-Express Electromechanical Revision	PCI-Express M.2 Electromechanical Rev. 1.1
Hardware	
Controller	Intel I210-IS x1
Bus	Single-Lane (x1) PCI-Express with throughput up to 5.0/2.5GT/s
Interface (Connector)	
Ethernet 1000Mbps SerDes	1 (SFP)

Technology	
Standards	IEEE 802.3 for 1000Base-SX/1000Base-LX IEEE 802.3ap for 1000Base-KX PICMG 3.1 for 1000Base-BX
Flow Control	IEEE 802.3x and d IEEE 802.3z flow control
Wake On LAN	YES
Driver Support	
Operating Systems	Win 7, Win 8, Win 10, Win 11
Power Requirement	
Power Consumption	150mA@3.3V
Dimensions	
Width x Length (mm)	22.00 x 80.00
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

3.1 Main Board



3.2 Daughter Board



4. Package Checklist

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

