MEC-USB-2012

M.2 2280 (B+M key) 2 port USB3.2 board

Product Datasheet

Date: 2024.09.19

Revision: 1.2

File: Cervoz_Modular_Expansion_Card_M.2_2280_B_M_USB_Datasheet_Rev1.2

Revision History

Date	Revision	Description
2024.07.22	1.1	New datasheet format and add Type-C cable
2024.09.19	1.2	Add “USB Power”

Table of Contents

1. Product Overview……4

1.1 Introduction……4

1.2 Feature……4

2. Product Specifications……5

3. Ordering Information……6

4. Dimensions……6

5. Package Checklist……7

1. Product Overview

1.1 Introduction

MEC-USB-2012 is a USB 3.2 Gen1x1 card for embedded PC. The card follows the M.2 standard which is compliant with PCI Express x 2 classification and M.2 form factor. This board fits in any host computer that has M.2 slots.

MEC-USB-2012 provides data transfer rate of 1.5/12/480/5000 Mbps while connecting to USB 3.2 compliant peripherals. MEC-USB-2012 supports two USB devices run at 5Gbps at the same time. Hot-Swap and Plug-n-Play functions which allow devices to be plugged in or removed while bus as active.

MEC-USB-2012 is designed with flexibilities for many different applications. The accessories (bracket, connection and power input cable) are included in the standard package.

1.2 Feature

- Dual-Lane (x2) PCI-Express with throughput up to 5.0/2.5GT/s
- Fully compliant with PCI-Express Base Specification Rev.2.0
- Support individual two USB devices running 5Gbps at full speed
- Support simultaneous operation of multiple USB 1.1, USB 2.0, and USB 3.2 GEN1x1 devices
- USB data transfer rate of 1.5/12/480/5000 Mbps
- Universal Serial Bus 3.2 specification Revision 1.0 compliant
- Support Hot-Swap function

2. Product Specifications

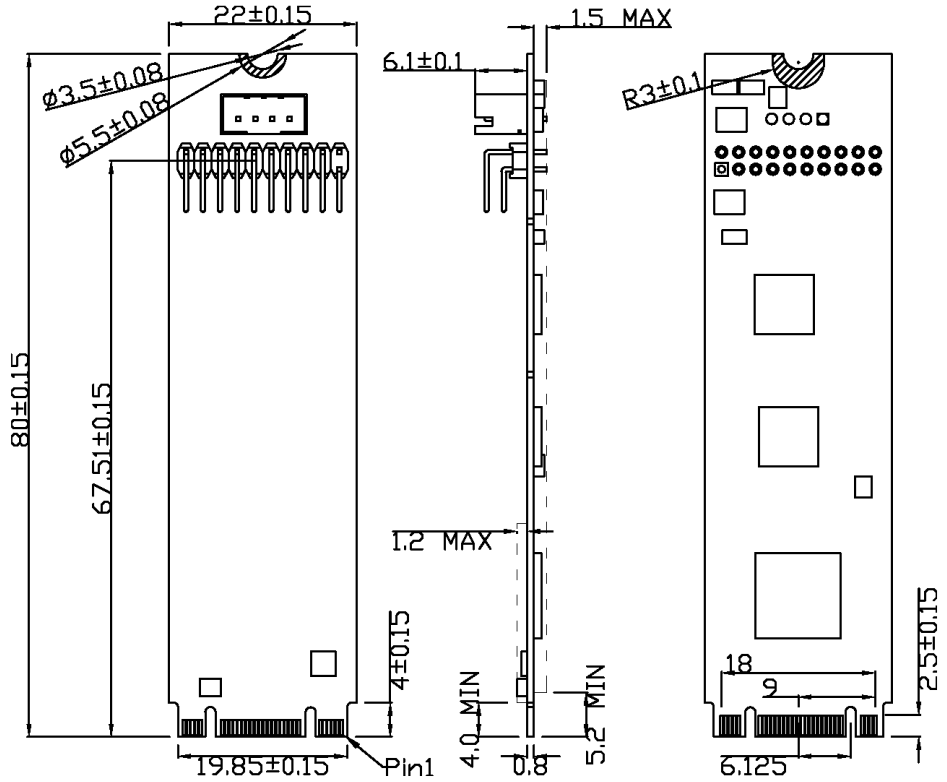
General	
PCI-Express Revision	PCI-Express Base Specification Rev. 2.0
PCI-Express Electromechanical Revision	PCI-Express M.2 Electromechanical Rev. 1.1
Hardware	
Controller	Renesas (NEC) µPD720202K8-701-BAA-A x2
Bus	Dual-Lane (x2) PCI-Express with throughput up to 5.0/2.5GT/s
Interface (Connector)	
USB 3.2	2 (USB)
Performance	
Data Transfer Rate	Data Transfer rate of 1.5 / 12 / 480 / 5000 Mbps. Low Speed (1.5Mbps), Full Speed (12Mbps), High Speed (480Mbps), Super Speed (5Gpbs)
Driver Support	
Operating Systems	Win 7, Win 8, Win 10
Power Requirement	
Power Consumption	809mA@3.3V
USB Power(Per Port)	5V@1000mA
Dimensions	
Width x Length (mm)	22.00 x 80.00
Environmental Limits	
Operating Temperature	0 ~ 70°C
Storage Temperature	-40 ~ 95°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-USB-2012	M.2 2280 2 port USB 3.2 board
MEC-USB-2012C	M.2 2280 2 port USB 3.2 board with Type-C cable

4. Dimensions



5. Package Checklist

5.1 MEC-USB-2012

- M.2 2280 Card x 1
- Bracket x 1
- 20Pin Internal Type-A Cable (25cm) x 1
- 4Pin Power Input Cable (30cm) x 1

  External power in *Needed when total power consumption exceed 5W

- Quick Installation Guide (Printed) x 1

5.2 MEC-USB-2012C

- M.2 2280 Card x 1
- Bracket x 1
- 20Pin Internal Type-C Cable (30cm) x 1
- 4Pin Power Input Cable (30cm) x 1

  External power in *Needed when total power consumption exceed 5W

- Quick Installation Guide (Printed) x 1