



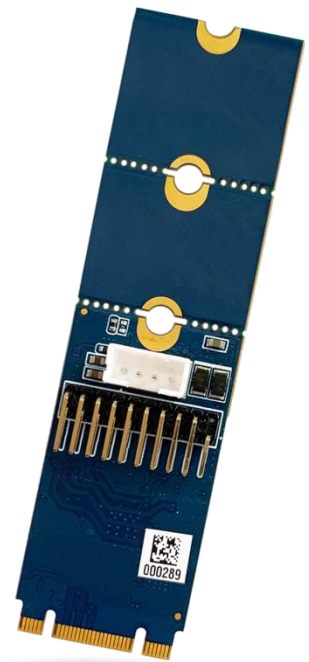
CERVOZ

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# MEC-USB-2002

M.2 2242/2260/2280 (B+M key) 2 port  
USB3.2 board

*Product Datasheet*



Date: 2024.09.19

Revision: 1.3

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## Revision History

| Date       | Revision | Description                               |
|------------|----------|---|
| 2024.07.22 | 1.2      | New datasheet format and add Type-C cable |
| 2024.09.19 | 1.3      | Add "USB Power"                           |



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## 1. Product Overview

### 1.1 Introduction

MEC-USB-2002 is a USB 3.2 Gen1x1 card for embedded PC. The card follows the M.2 standard which is compliant with PCI Express x 1 classification and M.2 form factor. This board fits in any host computer that has M.2 slots.

MEC-USB-2002 supports data transfer rate of 1.5/12/480/5000 Mbps when connected to USB 3.2 compliant peripherals. It also supports Hot-Swap and Plug-n-Play functions, enabling devices to be connected or disconnected seamlessly while the bus is active.

MEC-USB-2002 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

- Single-Lane (x1) PCI-Express with throughput up to 5.0/2.5GT/s
- Fully compliant with PCI-Express Base Specification Rev.2.0
- Two USB 3.2 Gen1x1 Super-Speed ports
- 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

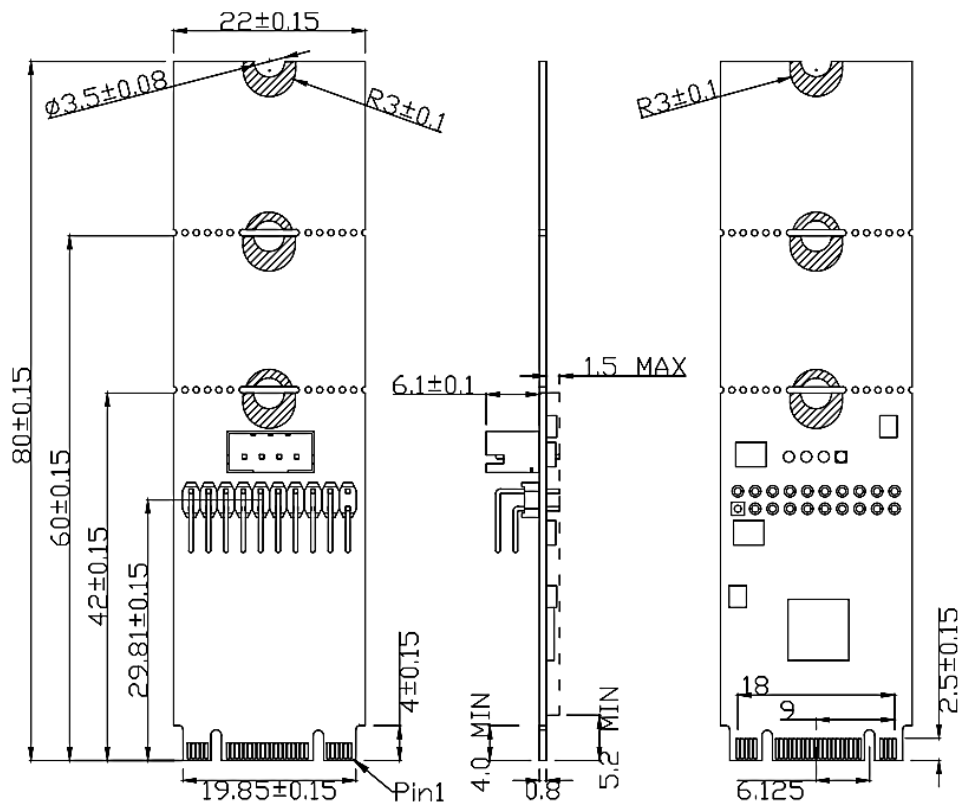
| General                                |   |
|--|---|
| PCI-Express Revision                   | PCI-Express Base Specification Rev. 2.0   |
| PCI-Express Electromechanical Revision | PCI-Express M.2 Electromechanical Rev. 1.1  |
| Hardware                               |   |
| Controller                             | Renesas (NEC) $\mu$ PD720202K8-701-BAA-A  |
| Bus                                    | Single-Lane (x1) 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.<br>Low Speed (1.5Mbps), Full Speed (12Mbps),<br>High Speed (480Mbps), Super Speed (5Gpbs) |
| Driver Support                         |   |
| Operating Systems                      | Win 7, Win 8, Win 10  |
| Power Requirement                      |   |
| Power Consumption                      | 198mA@3.3V  |
| USB Power(Per Port)                    | 5V@1000mA   |
| Dimensions                             |   |
| Width x Length (mm)                    | 22.00 x 42.00<br>22.00 x 60.00<br>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 |
| <b>Reliability</b> |  |
| Warranty           | 3 years  |
| MTBF               | >20,161,919  |

### 3. Ordering Information

| Model Name    | Description   |
|---------------|---|
| MEC-USB-2002  | M.2 2242/2260/2280 2 port USB 3.2 board                   |
| MEC-USB-2002C | M.2 2242/2260/2280 2 port USB 3.2 board with Type-C cable |

### 4. Dimensions



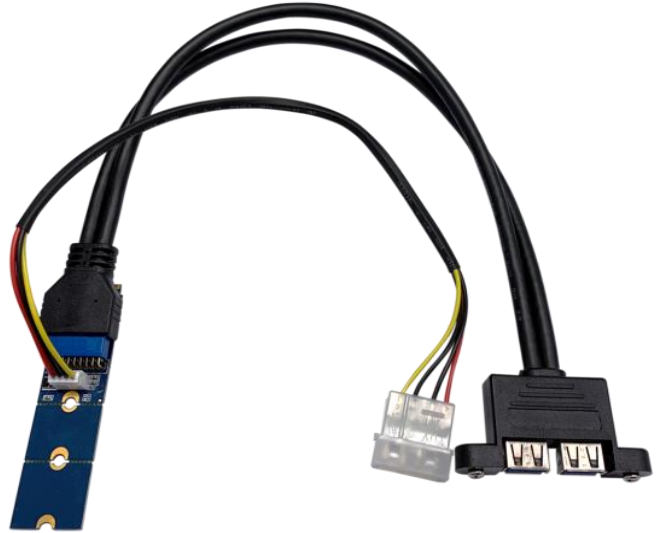
## 5. Package Checklist

### 5.1 MEC-USB-2002

- M.2 3-in-1 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-2002C

- M.2 3-in-1 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

