

# MM02-10 Series

Intel® Q470E Chipset, support LGA1200 10<sup>th</sup> Gen. CPU (Max 95W), DDR4 up to 128GB, 6\* SATAIII support RAID, 2\* M.2 M-key, 1\* M.2 E-key, 4\* USB3.2 (Gen.2), 2\* GbE, 2\* 2.5GbE

## Features

1. Intel® LGA1200 Socket supports 10<sup>th</sup> Gen. Core Processor (Max 95W)
2. Intel® Q470E Chipset
3. 4\* DDR4 2933/2666/2400MHz up to 128GB
4. 1\* Intel® i219-LM GbE, 1\* Intel® i210-AT GbE, 2\* i225LM 2.5GbE
5. 6\* SATAIII (6Gb/s) support RAID 0/1/5/10 & 2\* M.2 (M-key), 1\* M.2 (E-key) supports CNVi, 1\* PCIe x16, 1\* PCIe x8, 1\* PCIe x4, 1\* PCIe x1
6. 2\* HDMI Output
7. 2\* RS232/422/485, 4\* RS232
8. 4\* USB 3.2 (Gen.2), 2\*USB3.2 (Gen.1), 4\* USB 2.0
9. ATX Power Input
10. Support TPM2.0 (MM02-12 only)
11. Micro ATX Form Factor (244 \* 244 mm)



## Overview

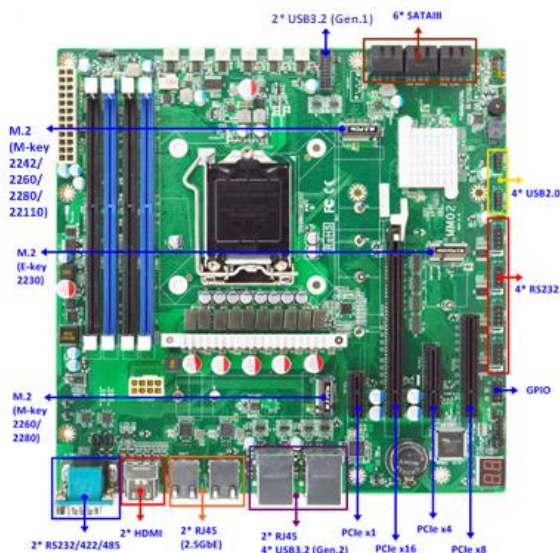
The JETWAY MM02-10 Series adopts the Intel® LGA 1200 socket processor. MM02-10 Series equipped with four DDR4 long DIMM slot, one M.2 (M-key, 2260/2280), one M.2 (M-key, 2242/2260/2280/22110 support NVMe) and six SATAIII support RAID 0/1/5/10 for multiple storage choices. In additional, MM02-10 Series provide one M.2 E-key (2230, PCIe x1/USB2.0 interface) support CNVi, one PCIe x1, one PCIe x4, one PCIe x8, and one PCIe x16 for multiple expansion.

MM02-10 Series also has four USB 3.2 (Gen.2), two, USB 3.2 (Gen.1), four USB 2.0, two RS232/422/485, and four RS232 port which can connect different peripherals to meet their needs. MM02-10 Series also support two HDMI dual displays. All the designs of MM02-10 Series provide rich features which can be used for factory automation and industrial PCs.

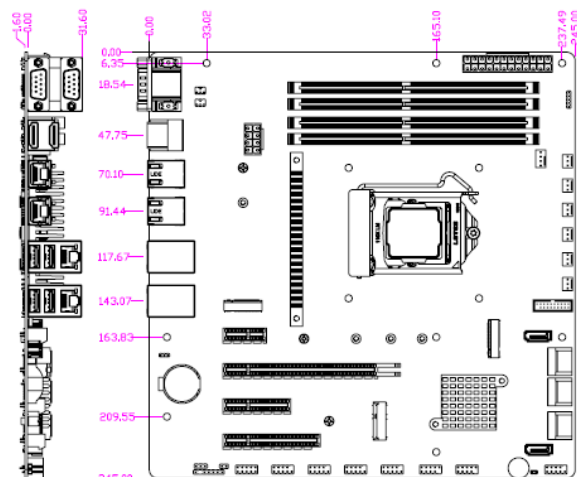
## Application

Automation / Industrial PCs

## I/O Diagram



## Mechanical Drawings (Unit=mm)



## Specifications

<b>Model</b> <ul style="list-style-type: none"><li>• MM02-10</li><li>• MM02-12 (TPM2.0)</li></ul>	<b>Form Factor</b> <p>Micro ATX (244 x 244mm)</p>
<b>Processor System</b> <ul style="list-style-type: none"><li>• Intel® LGA 1200 Socket support 10<sup>th</sup> Gen. Core processor (Max. 95W)</li><li>• Intel® Q470E Chipset</li><li>• AMI 128Mb Flash ROM BIOS</li></ul>	<b>Memory</b> <p>4* DDR4 2933/2666/2400MHz long DIMM up to 128GB</p>
<b>Storage</b> <ul style="list-style-type: none"><li>• 6* SATAIII (6 Gb/s) support RAID 0/1/5/10</li><li>• 1* M.2 M-key (2242/2260/2280/22110, PCIe x4 interface) support NVMe</li><li>• 1* M.2 M-key (2260/2280, PCIe x2 interface)</li></ul>	<b>Expansion</b> <ul style="list-style-type: none"><li>• 1* M.2 E-key (2230, PCIe/USB2.0 interface) support CNVi</li><li>• 1* PCIe x16</li><li>• 1* PCIe x8 (share with PCIe x16)</li><li>• 1* PCIe x4</li><li>• 1* PCIe x1</li></ul>
<b>Ethernet</b> <ul style="list-style-type: none"><li>• 1* Intel® i219-LM GbE</li><li>• 1* Intel® i210-AT GbE</li><li>• 2* Intel® i225-LM 2.5GbE</li></ul>	<b>Graphics</b> <ul style="list-style-type: none"><li>• Intel® HD Graphics, shared memory</li><li>• 2* HDMI 1.4 (Max Resolution: 4096x2160@30Hz)</li><li>• Support Dual Displays</li></ul>
<b>Audio</b> <p>NA</p>	<b>Watchdog Timer</b> <ul style="list-style-type: none"><li>• From Super I/O to drag RESETCON#</li><li>• 256 segments (10sec ~ 255min)</li></ul>
<b>Internal I/O</b> <ul style="list-style-type: none"><li>• 2* USB 3.2 (Gen.1)</li><li>• 4* USB 2.0</li><li>• 6* SATAIII</li><li>• 4* RS232</li><li>• 1* Chassis intrusion</li><li>• 1* GPIO (8-bit)</li><li>• 1* SMBUS / I2C</li><li>• 1* AT mode</li><li>• 1* TPM2.0 (MM02-12 only)</li></ul>	<b>External I/O</b> <ul style="list-style-type: none"><li>• 2* HDMI 1.4 (Max Resolution: 4096x2160@30Hz)</li><li>• 2* RJ45 GbE</li><li>• 2* RJ45 2.5GbE</li><li>• 4* USB 3.2 (Gen.2)</li><li>• 2* RS232/422/485</li></ul>
<b>Power</b> <p>ATX PWR (8 + 24 pin)</p> <ul style="list-style-type: none"><li>- AT: Directly PWR on as Power input ready</li><li>- ATX: Press Button to PWR on after Power input ready</li></ul>	<b>Compliance</b> <p>CE, FCC, RoHS, REACH</p>
<b>Temperature</b> <ul style="list-style-type: none"><li>• Operating Temperature: 0 ~ 60° C</li><li>• Storage Temperature: -20 ~ 85° C</li><li>• Humidity: 10% ~ 90% RH @40°C (non-condensing)</li></ul>	<b>OS Support</b> <p>Windows 10, Windows 11, Linux</p>
<b>Warranty</b> <p>2 Years limited warranty</p>	

\* Specifications subject to change without notice, not responsible for typographical errors. Does not include HDD or OS.

## Standard Accessories

Part Number	Description
-----	MM02-10 Series M/B
F04-MB-082-F	MM02 I/O shield
G01-COM9-30A-2F	2* COM cable
G01-SATA3-BL-1F	2* SATAIII cable