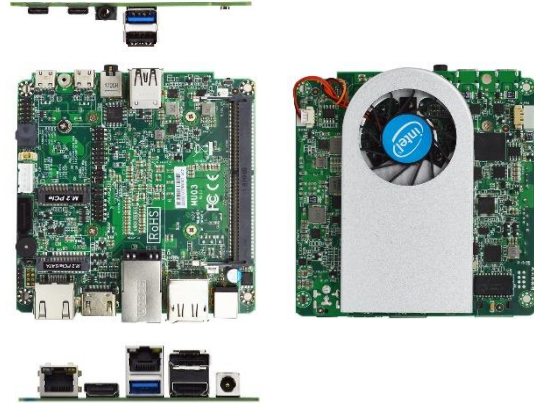


# MU03 Series

Intel® Elkhart Lake Processor Motherboard with 64GB onboard eMMC, support 3 Independent Display outputs (2\* HDMI, 1\* DP)

## Features

1. Intel® Elkhart Lake SoC Processor
2. 1\* DDR4 3200MHz SO-DIMM up to 32GB
3. 2\* HDMI, 1\* DP
4. 2\* Intel i225V 2.5GbE
5. 1\* COM, 2\* USB3.1 (Gen.2), 3\* USB2.0, 2\* USB Type-C
6. 1\* M.2 (M-key, 2260/2280), 1\* M.2 (E-key, 2230), 1\* SATAIII (6Gb/s)
7. Onboard 64GB eMMC option (MU03-04/MU03-08)
8. 12V DC-in



intel. FC CE RoHS COMPLIANT

## Overview

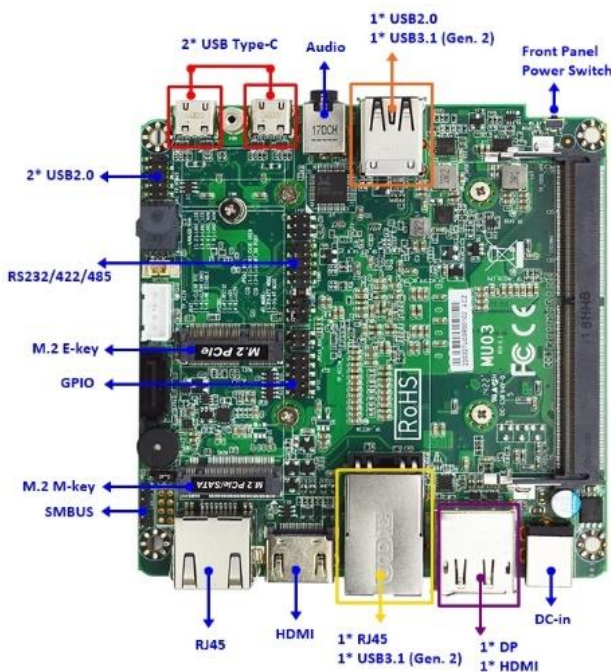
The JETWAY MU03 Series adopts the Intel® Elkhart Lake J6412 SoC processor. The board has one DDR4 3200MHz SODIMM up to 32GB memory. MU03 Series equipped with 2\* HDMI and 1\* DP for IoT applications. MU03 Series support TPM feature to secure customers' data.

In addition, it offers 2\* USB Type-C, 2\* USB3.1 (Gen.2) & 3\* USB2.0 ports which can connect different peripherals, e.g. camera and sensor. It is flexible expansion via M.2 E-key and one RS232/422/485 port. For storage selection, MU03 Series provides 64GB eMMC onboard option, an internal M.2 M-key slot and SATAIII connector. In addition, MU03 Series board size is 101\*101mm and is a SubCompact, powerful and energy efficient NUC form factor board with reliable performance.

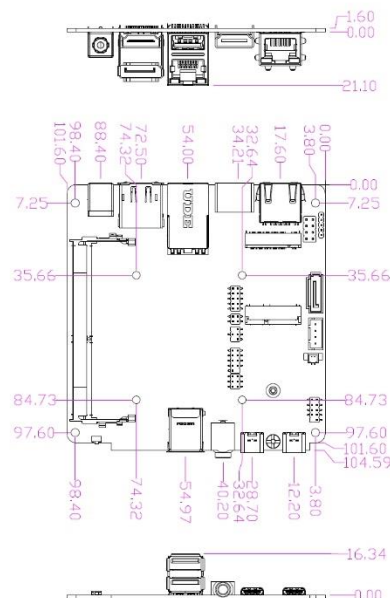
## Application

Digital Signage / Cloud Applications / IoT / Industrial Automation

## I/O Diagram



## Mechanical Drawings (Unit=mm)



## Specifications

<b>Model</b> <ul style="list-style-type: none"><li>• MU03-00 (J6412)</li><li>• MU03-04 (J6412, 64GB eMMC)</li><li>• MU03-08 (J6412, 64GB eMMC, TPM2.0)</li></ul>	<b>Form Factor</b> <p>NUC (101 * 101mm)</p>
<b>Processor System</b> <ul style="list-style-type: none"><li>• Intel® Elkhart Lake J6412 SoC Processor</li><li>• AMI Flash ROM BIOS</li></ul>	<b>Memory</b> <p>1* DDR4 3200MHz SO-DIMM up to 32GB</p>
<b>Storage</b> <ul style="list-style-type: none"><li>• 1* SATAIII (6 Gb/s)</li><li>• 1* M.2 M-key (2260/2280, PCIe Gen.3 x2/SATA interface) support NVME</li><li>• 64GB eMMC onboard option (MU03-03/MU03-07)</li></ul>	<b>Expansion</b> <p>1* M.2 E-key (2230, PCIe Gen.3 x1/USB2.0 interface)</p>
<b>Ethernet</b> <p>2* Intel i225V 2.5GbE</p>	<b>Graphics</b> <ul style="list-style-type: none"><li>• Intel® HD Graphics, shared memory</li><li>• 1* DP1.4 (Max Resolution: 4096x2160@60Hz)</li><li>• 2* HDMI 2.0b (Max Resolution: 4096x2160@60Hz)</li><li>• Support Triple Displays</li></ul>
<b>Audio</b> <p>Dual channel HD audio: Realtek ALC888S</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>• 1* M.2 M-key (2260/2280)</li><li>• 1* M.2 E-key (2230)</li><li>• 2* USB2.0</li><li>• 1* SATAIII</li><li>• 1* COM (RS232/422/485)</li><li>• 1* 64GB eMMC option (If use Win 10 OS, we recommend the eMMC is use for OS boot up purpose.)</li><li>• 1* Chassis intrusion</li><li>• 1* GPIO</li><li>• 1* SMBUS</li><li>• 1* AT mode</li></ul>	<b>External I/O</b> <p><b>Front:</b></p> <ul style="list-style-type: none"><li>• 1* USB3.1 (Gen.2)</li><li>• 1* USB2.0</li><li>• 2* USB Type-C</li><li>• 1* Line-out/MIC combo</li><li>• Front Panel Power Switch</li></ul> <p><b>Rear:</b></p> <ul style="list-style-type: none"><li>• 1* USB3.1 (Gen.2)</li><li>• 2* HDMI</li><li>• 1* DP</li><li>• 2* RJ45</li><li>• 12V DC-in</li></ul>
<b>Power</b> <p>12V DC-in PWR</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, LVD, 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>UEFI Win10 64-bit, Win 10 IoT Enterprise 64-bit LTSC 2019, CentOS (Version 9), Debian (Version 11.3), Fedora-LXDE (Version 36-1.5), Fedora Workstation (Version 36-1.5), Fedora Server (Version 36-1.5), Open SUSE (Version 15.4), Ubuntu Standard / LTS (Version 22.04), Ubuntu Server (Version 22.04), pfSense (Version 2.6.0), TrueNAS (FreeNAS) (Version 13.0), RedHat Enterprise (Version 9.0), OPNSense (Version 22.1.2)</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
MU03 Series	MU03 Series M/B