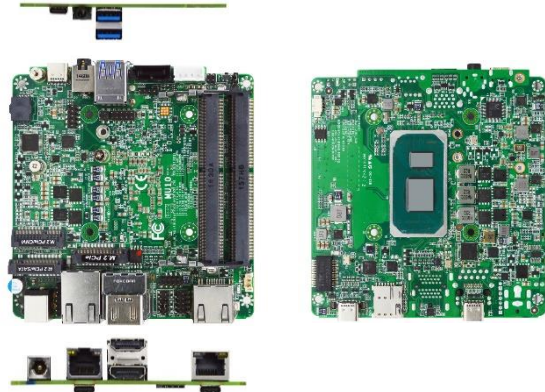


## MU10 Series

**11<sup>th</sup> Gen. Intel® Tiger Lake-UP3 SoC Processors, support up to 4\* independent 4K HDR Displays, M.2 PCIe 4.0 x4 supports NVMe, 1\* RS232, 5\* USB3.2 (Gen. 2), 1\* 2.5GbE, 1\* GbE**

1. Intel® Tiger Lake-UP3 SoC Processor (TDP 15W)
2. 2\* DDR4 3200MHz SO-DIMM up to 64GB
3. 1\* Intel i219-LM GbE, 1\* Intel i225-V 2.5GbE
4. 2\* HDMI, 2\* DP1.4 (from Type-C)
5. 1\* RS232, 3\* USB3.2 (Gen.2) support USB only, 2\* USB2.0
6. 1\* M.2 M-key 2242/2280 (PCIe4.0 x4/SATAIII interface) support NVMe, 1\* SATAIII
7. 1\* M.2 E-key 2230 (USB2.0/PCIe x1 interface) support CNVi
8. 1\* M.2 B-key 3042/3052 (USB3.1/USB2.0/PCIe 4.0x1 interface)



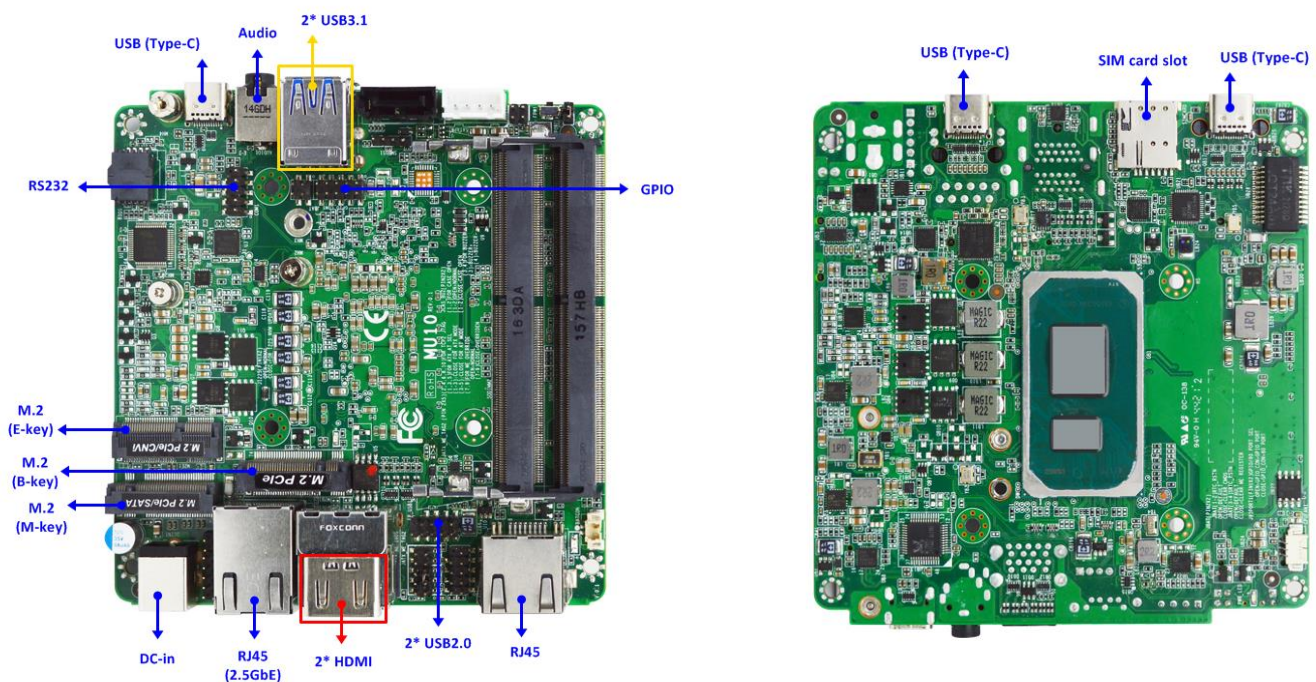
### Overview

The JETWAY MU10 Series is a NUC form factor motherboard based on the Intel® 11<sup>th</sup> Gen. Intel Tiger Lake-UP3 SoC Processors. The board supports two SO-DIMM DDR4 memory up to 64GB. Having dual integrated Intel® i219-LM GbE & i225-V 2.5GbE controllers, the MU10 Series offers one gigabit and one 2.5 gigabit ethernet. The MU10 supports the latest PCI Express 4.0 interface on the M.2 slot for NVME solid state drive. The MU10 has two HDMI2.0b, two DP1.4 (from Type-C) to support up to four independent 4K HDR displays. The JETWAY MU10 Series is suitable for Digital Signage, Industrial PCs, Edge Computing, Factory Automation, AI and IOT Solution applications.

### Application

Digital Signage / Industrial PCs / Edge Computing / AI Inference / Retail Solution

### I/O Diagram



## Specifications

<b>Model</b>	<b>Form Factor</b>
<ul style="list-style-type: none"><li>MU10-00 (6305E)</li><li>MU10-02 (6305E, TPM2.0)</li><li>MU10-10 (i3-1115G4E)</li><li>MU10-12 (i3-1115G4E, TPM2.0)</li><li>MU10-20 (i5-1145G7E)</li><li>MU10-22 (i5-1145G7E, TPM2.0)</li><li>MU10-90 (i5-1135G7)</li><li>MU10-92 (i5-1135G7, TPM2.0)</li></ul>	NUC (101 * 101mm)
<b>Processor System</b>	<b>Expansion Slot</b>
<ul style="list-style-type: none"><li>Intel® Tiger Lake-U SoC Processor (TDP 15W)</li><li>AMI Flash ROM BIOS</li></ul>	<ul style="list-style-type: none"><li>M.2 E-key 2230 (USB2.0/PCIex1 interface) support CNVi</li><li>M.2 B-key 3042/3052 (USB3.1/USB2.0/PCIex1 interface)</li></ul>
<b>Memory</b>	<b>Graphics</b>
<ul style="list-style-type: none"><li>2* DDR4-3200 Dual Channel SO-DIMM up to 64GB</li></ul>	<ul style="list-style-type: none"><li>Intel® HD Graphics, shared memory</li><li>2* HDMI 2.0b (Max Resolution: 4096x2160@60Hz)</li><li>2* DP1.4 (Max Resolution: 4096x2304@60Hz) from Type-C</li><li>Support Four independent 4K HDR Displays</li></ul>
<b>Ethernet</b>	<b>Audio</b>
<ul style="list-style-type: none"><li>1* Intel i219-LM GbE</li><li>1* Intel i225-V 2.5GbE</li></ul>	<ul style="list-style-type: none"><li>HD audio: Realtek ALC888S-VD2</li></ul>
<b>Storage</b>	<b>Watchdog Timer</b>
<ul style="list-style-type: none"><li>1* SATAIII (6Gb/s)</li><li>M.2 M-key 2242/2280 (PCIe4.0 x4/SATAIII interface) support NVMe</li></ul>	<ul style="list-style-type: none"><li>From Super I/O to drag RESETCON#</li><li>256 segments (10sec ~ 255min)</li></ul>
<b>Internal Connector</b>	<b>External I/O</b>
<ul style="list-style-type: none"><li>2* USB 2.0</li><li>1* RS232</li><li>1* SATAIII</li><li>1* GPIO (8 bit)</li><li>1* Chassis intrusion</li><li>1* SMBUS</li><li>1* AT/ATX mode jumper</li><li>Onboard TPM2.0 (option)</li></ul>	<ul style="list-style-type: none"><li>2* Front USB3.2 (Gen. 2) Type-A</li><li>1* Front USB3.2 (Gen.2) Type-C support USB only</li><li>1* Front Audio jack (Line out/MIC combo)</li><li>2* Rear USB3.2 (Gen.2) Type-C support DP1.4 display output</li><li>2* Rear HDMI</li><li>2* Rear RJ45</li><li>1* Rear SIM card slot</li><li>DC-in (12-24V)</li></ul>
<b>Power</b>	<b>Compliance</b>
DC-in 12-24V - AT: Directly PWR on as Power input ready - ATX: Press Button to PWR on after Power input ready <b>-90W adaptor is Recommended</b>	CE, FCC, LVD, RoHS, REACH
<b>Temperature</b>	<b>Warranty</b>
<ul style="list-style-type: none"><li>Operating: 0°C ~ 60°C</li><li>Storage: -20°C ~ 85°C</li><li>Humidity: 10% ~ 90% RH @40°C (non-condensing)</li></ul>	2 Years Limited Warranty

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

## Accessories

Parts Number	Description	Parts Number	Description
-----	MU10 Series M/B		

## CPU Performance Comparison

### i5 Series Pre-generation

Models		MZ910-B0		NF835				MU10-20				
Condition	Core Name	Comet Lake-U		Comet Lake-U				Tiger Lake-UP3				
	CPU	i5-10210U		i5-10210U				i5-1145G7E				
	Base ~Max Turbo/1core/all cores	1.6G-4.2G/4C/8T		1.6G-4.2G/4C/8T				2.1~4.2G / 3.8G				
	Memory	2666		2666				3200				
	SSD	NVMe		NVMe				NVMe				
	Full DIMM	D4_8G		D4_8G				D4_16G				
	Turbo boost	DIS	ENB	DIS	ENB	DIS	ENB	DIS	ENB	DIS	ENB	
	TDP	15	28	15	15	28	28	15	15	28	28	
	Performance	3DMARK	Timespy	437	454	410	370	484	477	1362	1290	1454
Graphics			384	394	359	324	426	415	1232	1164	1312	1312
CPU			2097	3335	2112	1985	2147	3146	3389	3374	3781	4605
3DMark 11 P		Default	P1903	P2070	P1779	P1702	P2138	P2125	P5677	P5407	P6059	P6187
		Graphics	1733	1833	1605	1525	1940	1877	5524	5290	5888	5893
		Physics	4652	7841	4714	5382	4955	7494	8358	8086	8528	10509
		Combined	1478	1719	1498	1587	1504	1527	4460	4063	4982	4983
CINEBENCH_R20		CPU-Single Core	164	217	357	167	376	357	850	1339	850	1332
		CPU	818	548	934	830	1008	1017	3799	3799	4263	4981
PCMARK10		Score	2485	2761	3762	2499	3970	3821	3681	4603	3749	4714

## Mechanical Drawings (Unit = mm)