



# MF05 Series

11<sup>th</sup> Gen. Intel® Tiger Lake-UP3 SoC Processors, support up to 4\* independent 4K HDR Displays or 1\* 8K SDR Displays, M.2 PCIe 4.0 x4 supports NVME, 4\* COM, 4\* USB3.2(Gen2), 1\* 2.5GbE, 1\* GbE

1. Intel® Tiger Lake-UP3 SoC Processor (TDP 12~28W)
2. 2\* DDR4-3200MHz SO-DIMM up to 64GB
3. 1\* Intel i219-LM 1.0GbE, 1\* Intel i225-LM 2.5GbE
4. 2\* HDMI, 2\* DisplayPort, 1\* eDP, 1 \* 24-bits LVDS
5. 4\* COM (COM1/COM2 support RS232/422/485), 4\* USB3.2 (Gen.2), 4\* USB2.0
6. 1\* M.2 M-key 2242/2280, PCIe 4.0 x4 interface support NVME
7. 1\* M.2 E-key 2230, USB2.0/PCIe x1 interface support CNVi
8. 1\* SATAIII (6Gb/s)
9. MF05-22: Onboard TPM 2.0 (option)



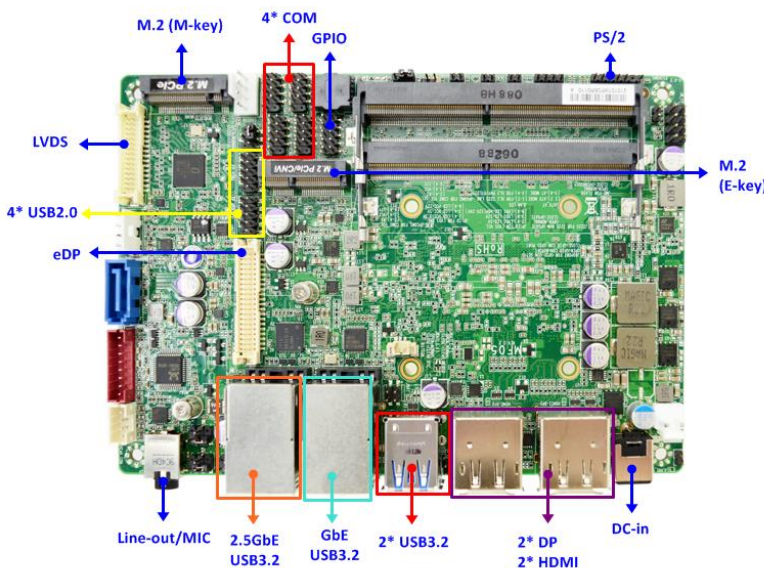
## Overview

The JETWAY MF05 Series is a 3.5" 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-LM 2.5GbE controllers, the MF05 Series offers one gigabit and one 2.5 gigabit ethernet. The MF05 is Jetway's first Intel board to support the latest PCI Express 4.0 interface on the M.2 PCIe 4.0 x4 slot for NVME solid state drive. The MF05 is also Jetway's first Intel board to support up to four independent 4K HDR displays or one 8K SDR displays. In addition, the MF05 has internal LVDS or eDP ports for customers integrating LCD panels. The JETWAY MF05 Series is suitable for Digital Signage, Industrial PCs, Edge Computing, Factory Automation, AI and IOT Solution applications. The MF05 includes a flat aluminum heatsink for thermal dissipation allowing for easy integration into fanless systems.

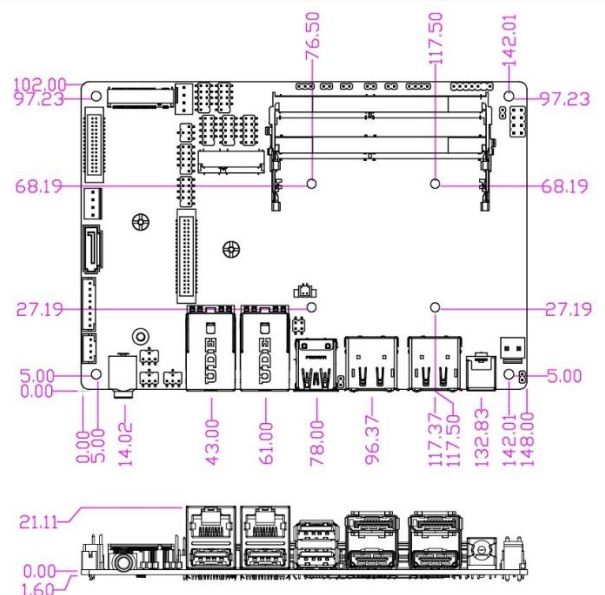
## Application

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

## I/O Diagram



## Mechanical Drawings (Unit = mm)



## Specifications

<b>Model</b>	<b>Form Factor</b>
<ul style="list-style-type: none"><li>MF05-20 (i5-1145G7E Default)</li><li>MF05-22 (i5-1145G7E, TPM2.0)</li><li>MF05-90 (i5-1135G7)</li><li>MF05-92 (i5-1135G7, TPM2.0)</li></ul>	3.5" (5.8-in * 4.0-in, 148 * 102mm)
<b>Processor System</b>	<b>Expansion Slot</b>
<ul style="list-style-type: none"><li>Intel® Tiger Lake i5-1145G7E SoC Processor (TDP 12~28W) (Default)</li><li>Intel® Tiger Lake i5-1135G7 SoC Processor (TDP 12~28W)</li><li>AMI Flash ROM BIOS</li></ul>	M.2 E-key (2230) USB2.0/PCIex1 interface support CNVi
<b>Memory</b>	<b>Graphics</b>
2* DDR4-3200 Dual Channel SO-DIMM up to 64GB total	<ul style="list-style-type: none"><li>Intel® HD Graphics, shared memory</li><li>1* eDP (Max Resolution: 4096x2304@60Hz)</li><li>1* LVDS (Max Resolution: 1920x1200@60Hz)</li><li>2* HDMI 2.0b (Max Resolution: 4096x2160@60Hz)</li><li>2* DP1.4 (Max Resolution: 4096x2304@60Hz)</li><li>Support Four independent 4K HDR Displays or one 8K SDR Displays (DP)</li></ul>
<b>Ethernet</b>	<b>Audio</b>
<ul style="list-style-type: none"><li>1* Intel i219-LM 1.0GbE</li><li>1* Intel i225-LM 2.5GbE</li></ul>	<ul style="list-style-type: none"><li>HD audio: Realtek ALC888S-VD2</li><li>3W AMP speaker</li></ul>
<b>Storage</b>	<b>Rear I/O</b>
<ul style="list-style-type: none"><li>1* SATAIII</li><li>M.2 M-key 2242/2280, PCIe 4.0 x4 interface, support NVME</li></ul>	<ul style="list-style-type: none"><li>4* USB3.2(Gen. 2)</li><li>2* DP</li><li>2* HDMI</li><li>2* RJ45</li><li>Line-out/MIC Combo</li><li>DC-in (12-24V)</li></ul>
<b>Internal Connector</b>	<b>Watchdog Timer</b>
<ul style="list-style-type: none"><li>4* USB 2.0</li><li>1* PS/2</li><li>1* LVDS / Inverter</li><li>1* eDP</li><li>4* COM (2* RS232/422/485, 2* RS232)</li><li>1* SATAIII</li><li>1* GPIO (8 bit)</li><li>1* Chassis intrusion</li><li>1* Speaker header (4pin)</li><li>1* SMBUS</li><li>1* AT/ATX mode jumper</li><li>Optional onboard TPM2.0 (MF05-22)</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>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 - 90W adaptor is Recommended	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></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
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