

MF20 Series

Intel® Elkhart Lake J6412 CPU, DDR4 up to 16GB, 2* HDMI2.0b, 1* M.2 (M-key), 1* M.2 (E-key), 1* M.2 (B-key) W/SIM card slot, 32GB eMMC (optional), 2* 2.5GbE, 12~24V DC-in

Features

1. Intel® Elkhart Lake SoC Processor
2. 1* DDR4 3200MHz SO-DIMM up to 16GB
3. 2* Intel i225V 2.5GbE
4. 2* HDMI 2.0b, 1* eDP (co-layout LVDS), 1* LVDS w/Inverter
5. 6* COM, 3* USB3.1 (Gen.2), 7* USB2.0
6. 1* M.2 E-key 2230, 1*M.2 B-key 3042 W/SIM card slot
7. 1* M.2 M-key 2242/2280, 1* SATAIII (6Gb/s)
8. Support 12~24V DC-in



intel. FC CE RoHS COMPLIANT

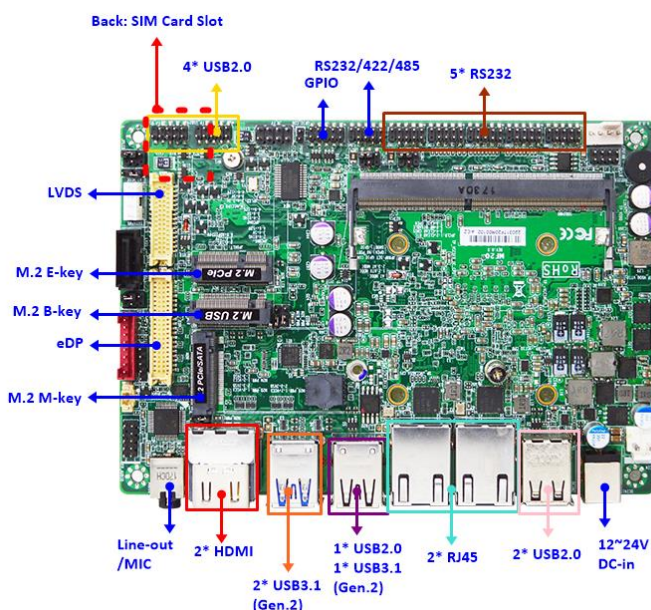
Overview

The JETWAY MF20 Series is 3.5" form factor board adopts the Intel® Elkhart Lake J6412 SoC Processor. The board supports one SO-DIMM DDR4 3200MHz memory, up to 16GB. Featuring the integrated Intel® 2.5 Gigabit Ethernet controller, the MF20 Series offers two 10/100/1000/2500 Base-TX Ethernet device for network transmission. One SATAIII (6Gb/s) interface, one M.2 M-key and 32GB onboard eMMC (optional) offer storage devices. Three USB3.1 Gen.2 ports, seven USB2.0 ports and six COM ports provide versatile expansion. The M.2 B-key 3042 can support 3G/4G/LTE card. The MF20 Series offers two HDMI2.0b ports and one LVDS (co-layout eDP) with triple independent displays. Because of the above features, MF20 Series is suitable for Panel PC, IOT Solution, Edge computing applications.

Application

Panel PC / IOT Solution / Edge computing

I/O Diagram



Mechanical Drawings (Unit=mm)



Specifications

Model <ul style="list-style-type: none">MF20-00 (J6412 CPU_10W)MF20-02 (J6412 CPU_10W, TPM2.0)MF20-03 (J6412 CPU_10W, 32GB eMMC)MF20-07 (J6412 CPU_10W, 32GB eMMC, TPM2.0)	Form Factor <p>3.5" (5.8-in * 4.0-in, 148 * 102mm)</p>
Processor System <ul style="list-style-type: none">Intel® Elkhart Lake J6412 SoC Processor (TDP 10W)AMI Flash ROM BIOS	Memory <p>1* DDR4 3200MHz SO-DIMM up to 16GB</p>
Storage <ul style="list-style-type: none">1* SATAIII (6 Gb/s)1* M.2 M-key (2242/2280) PCIe Gen.3 x2/SATA interface, support NVME32GB eMMC on board (MF20-03 & MF20-07)	Expansion <ul style="list-style-type: none">1* M.2 E-key (2230) support USB2.0/PCIe Gen.3 x1 interface1* M.2 B-key (3042) support USB3.1/USB2.0 interface W/SIM card slot
Ethernet <p>2* Intel® i225V 2.5GbE</p>	Graphics <ul style="list-style-type: none">Intel® HD Graphics, shared memory1* eDP (Max Resolution: 4096x2160@60Hz)1* LVDS (Max Resolution: 1920x1080@60Hz)2* HDMI 2.0b (Max Resolution: 4096x2160@60Hz)Support Triple Displays
Audio <p>2 Channel HD audio: Realtek ALC888S</p>	Watchdog Timer <ul style="list-style-type: none">From Super I/O to drag RESETCON#256 segments (10sec ~ 255min)
Internal I/O <ul style="list-style-type: none">4* USB2.01* eDP (co-layout LVDS)1* LVDS w/Inverter5* RS2321* RS232/422/4851* SATAIII1 * 32GB eMMC (MF20-03/MF20-07) (If use Win 10 OS, we recommend the eMMC is use for OS boot up purpose.)1* SIM card slot (along with M.2 B-key)1* GPIO (8 bit)1* CPU FAN1* Audio Header1* SMBUS1* AT mode1* TPM2.0 onboard (MF20-02/MF20-07)	External I/O <ul style="list-style-type: none">3* USB3.1 (Gen.2)3* USB2.02* HDMI2* RJ451* Line-out/MIC combo jack12~24V DC-in jack
Power <p>12V~24V DC-in PWR</p> <ul style="list-style-type: none">- AT: Directly PWR on as Power input ready- ATX: Press Button to PWR on after Power input ready	Compliance <p>CE, FCC, LVD, RoHS, REACH</p>
Temperature <ul style="list-style-type: none">Operating Temperature: 0 ~ 60° CStorage Temperature: -40 ~ 85° CHumidity: 10% ~ 90% RH @40°C (non-condensing)	OS Support <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>
Warranty <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
MF20 Series	MF20 Series M/B
G01-COM-H2M22-1F	COM Cable