



MF10- 3.5" SBC with Tiger Lake SoC Processor and Long Lifecycle

With an 11th Generation Intel® Tiger Lake Core i5-1145G7E SoC Processor and Intel® Iris Graphics, this small board really delivers and is ideal for Factory Automation, POS, and Security. The MF10 has two LAN, seven USB and allows for wide voltage (+12V - 24V). This board's expected lifecycle is through Q3'2035.

SPECIFICATIONS

CPU	Intel® Core i5-1145G7E
Memory Type	260-pin DDR4 3200MHz SO-DIMM
Memory Slots	2
Maximum Memory Supported	64GB
Integrated Graphics	Intel® Iris® Xe Graphics
Video	1 x HDMI
LAN Ports	1 x Intel I225-V PCIe 2.5GbE, 1 x Intel I219-LM PHY Gigabit LAN (iAMT 12.0)
Serial ATA (SATA)	1 x SATA III
GPIO Interface	1 x 8-bit GPIO Header
TPM	Intel fTPM 2.0 (PTT) Trusted Computing Firmware Onboard NUVOTON TPM v2.0 available for special order
Extended Interface	1 x M.2 M-Key (2242/2280, PCIe 4.0 x4 NVMe & SATA), 1 M.2 E-Key (2230, USB and PCIe CNVi WiFi), 1 M.2 B-Key (3042/3052, USB and PCIe for SIM)
Rear I/O	1 x 3.5mm Line-out & MIC-in Audio Combo Jack, 1 x RJ45 LAN (10/100/1000/2500), 1 x RJ45 LAN (10/100/1000), 3 x USB 3.2 Gen 2 (10 Gb/s), 1 x USB 2.0, 2 x HDMI 2.0b (4096 * 2160 @ 60Hz, 4K HDR), 2 x USB 3.2 Gen 2 Type-C for DP 1.4 (4096 * 2304 @ 60Hz), 1 x +12V – 24V 2.5mm Diameter DC Power Jack, 1 x Nano SIM Socket 1 x 6-pin PS2 Keyboard Mouse Header, 1 x 4-pin SMBUS Header, 1 x 4-pin Fan Header,

Internal I/O

1 x AT/ATX Mode Jumper, 1 x 4-pin SATA Power Output (Male), 1 x 2-pin +12V – 24V Alternate Power-In, 1 x SATA3 6Gb/s Connector, 1 x Serial Header (RS232), 1 x USB Pin Headers for 2 additional USB 2.0 Ports, 1 x 40-pin eDP (4096 * 2304 @ 60Hz), 1 x 8-bit GPIO Header, 1 x 4-pin 3W Amplifier Header,

Power Requirement

*See Ordering Options Tab for Information

Operating Temperature

0 ~ 60-° C (32-° F ~ 140-° F)

Storage Temperature

-20 ~ 85 °C (-4 ~ 185 °F)

Relative Humidity

10 ~ 90% (non-condensing)

OS Software Supported

Windows 10 64-bit, Windows 10 IoT Enterprise 64-bit, Windows 11 64-bit, Windows 11 IoT Enterprise 64-bit, CentOS 8.2_2004, RedHat 8.2, Fedora 33.1.2, OpenSUSE 15.2, Ubuntu 20.04.1

Global P/N / SKU

3308939

Ordering Options/Notes

3308939A: MF10-20 without onboard TPM 3308939B: MF10-22 with onboard TPM Cables included: SATA Power Cable, COM Cable, SATA Data Cable ***External Power Supply** – the board can be powered with a +12 - 24V external power supply through a DC connector on the back panel. The rear +12 - 24V DC jack accepts plugs with an inner diameter (ID) of 2.5 mm and an outer diameter (OD) of 5.5 mm, where the inner contact is +12 - 24V and the shell is GND. A minimum of 90 Watts power adapter is recommended. **Internal Power Supply** – the board can alternatively be powered via the internal +12 - 24V 2-pin power connector, where pin 1 is +12 - 24V and pin 2 is GND. The internal 2-pin power connector accepts a JST VHR-2N or TE 1-1123722-2 plug from the power supply. Caution: There is no isolation circuitry between the external +12 - 24V DC jack and the internal 2-pin power connector. It is the system integrator's responsibility to ensure no more than one power supply unit is or can be attached to the board at any time and to ensure the external +12 - 24V DC jack is covered if the internal 2-pin power connector is to be used.