

MVP-5100 Series

Processor-Based Embedded Fanless System with Intel® Core™ i7/i5/i3 9th Gen & Celeron® 8th Gen

Features

- 9th Gen Intel® Core™ i7/i5/i3 & 8th Gen Celeron® LGA processor
- Dual SODIMMs for up to 32GB DDR4 non-ECC/ ECC memory
- Rich I/O: 2x DP++/ DVI/ VGA/ 3x GbE/ 4x COM/ 8-ch DI/ 8-ch DO/ TPM2.0
- 2x USB3.1 Gen2 + 1x USB3.1 Gen1 + 3x USB2.0
- Rich storage: 2x 2.5" SATA, CFast, M.2 2280
- Embedded Expansion: Mini PCIe/ M.2 3042/ 2x USIM
- Front accessible I/O and adaptive Function Module v.2 option



Software Support

- Win10 IoT Enterprise CBB 64bit
- Linux Ubuntu 18.04

Optional Accessories

- **Factory Installed 2.5" SATA SSD/HDD/M.2/CFast**
- **Wireless Module**
Wi-Fi/ BT/ 3G/ 4G LTE/ LoRa wireless kit (w/ antenna)
- **AC/DC Adapter**
160W (P/N: 31-62120-0010)

Ordering Information

Model	CPU	PCH
MVP-510A/M4G	Intel® Core™ i7-9700E	H310
MVP-5101/M4G	Intel® Core™ i7-9700TE	H310
MVP-5102/M4G	Intel® Core™ i5-9500TE	H310
MVP-5103/M4G	Intel® Core™ i3-9100TE	H310
MVP-5104/M4G	Intel® Celeron® G4900T	H310

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Specifications

Model Name	MVP-510A	MVP-5101	MVP-5102	MVP-5103	MVP-5104
System Core					
Processor	Intel® Core™ i7-9700E	Intel® Core™ i7-9700TE	Intel® Core™ i5-9500TE	Intel® Core™ i3-9100TE	Intel® Celeron® G4900T
TDP	65W	35W	35W	35W	35W
# of Cores	8	8	6	4	2
Base Freq.	2.6 GHz	1.8 GHz	2.2 GHz	2.2 GHz	2.9 GHz
Max Turbo Freq.	4.4 GHz	3.8 GHz	3.6 GHz	3.2 GHz	-
Chipset	H310 (Optional: C246)				
Memory	4GB DDR4 non-ECC 2400 MHz, dual SODIMMs, up to 32GB (Optional: 4/8/16/32GB ECC, only for Intel® Core™ i3/Celeron w/ C246)				
I/O Interface					
Display	2x DP++ 1.2, DVI-D, VGA (dual independent displays w/ H310, 3 independent displays w/ C246)				
Ethernet	3x Intel® GbE: 2x i211AT + i219 (Support Intel® AMT/vPro™ w/ C246)				
Serial Ports	COM1/2: RS-232/422/485, COM3/4: RS-232 (Optional COM5/6: RS-232, shared w/ DI/O)				
DI/O	8-CH DI and 8-CH DO				
USB	3x USB 3.1 Gen 1 + 3x USB 2.0, 1x internal USB 2.0 dongle (2x USB 3.1 up to Gen 2 w/ C246)				
Audio	Line-out, Mic-in (Optional: speaker-out)				
Mini PCIe	1x Full size (USB2.0 + PCIe)				
M.2	1x socket 2, key B+M or B, 2280/3042 (USB3.1 + SATA III + PCIe1. Up to PCIe2 w/ C246)				
USIM	2				
i ² C	2 (3.3V/5V)				
TPM	TPM2.0				
Storage Device					
2.5" SATA	2x internal (RAID 0/1 support w/ C246)				
CFast	1 Type II				
Mechanical					
Dimensions	210 (W) x 240 (D) x 86 (H) mm (8.27" x 9.45" x 3.39")				
Weight	4.1 kg (9.0 lbs)				
Mounting	Wall mount				
Power Supply					
DC Input	12-24V (± 10% tolerance)				
AC Input	Optional: 160W AC/DC adapter				
Environmental					
Operating Temperature	Standard: 0°C to 50°C, w/ air flow 0.6 m/s				
	Extended: (w/ air flow 0.6 m/s & Ind. storage)				
	-20°C to 50°C	-20°C to 60°C			
Storage Temperature	-40°C to 85°C (-40°F to 185°F) (excl. storage)				
Humidity	~95% @ 40°C (non-condensing)				
Vibration	Operating: 5 Grms, 5-500 Hz, 3 axes (w/ SSD/CFast)				
	Operating: 0.5 Grms, 5-500 Hz, 3 axes (w/ HDD)				
Shock	Operating: 100 Grms, half sine 11ms duration (w/ SSD/CFast)				
ESD	Contact +/-4KV, Air +/-8KV				
EMC	EN61000-6-4/-2, CE & FCC Class A				
Safety	UL/cUL, CB, CCC				