

MVP-5100 Series

Value Family 9th Generation Intel® Core™ i7/i5/i3 & 8th Gen Celeron® Processor-Based Embedded Fanless Computer

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-510A/M8G | Intel® Core™ i7-9700E | H310 |
| MVP-510A/M16G | 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 i225 + 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, random, 5-500 Hz, 3 axes (w/ SSD/CFast) | | | | |
| | Operating: 0.5 Grms, random, 5-500 Hz, 3 axes (w/ HDD) | | | | |
| Shock | Operating: 100 G, 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 | | | | |