

# 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-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 |

## Specifications

| Model Name            | MVP-510A   | MVP-5101               | MVP-5102               | MVP-5103               | MVP-5104               |
|-----------------------|--|------------------------|------------------------|------------------------|------------------------|
| <b>System Core</b>    |  |                        |                        |                        |                        |
| 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<br>(Optional: 4/8/16/32GB ECC, only for Intel® Core™ i3/Celeron w/ C246) |                        |                        |                        |                        |
| <b>I/O Interface</b>  |  |                        |                        |                        |                        |
| 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<br>(Support Intel® AMT/vPro™ w/ C246)  |                        |                        |                        |                        |
| Serial Ports          | COM1/2: RS-232/422/485, COM3/4: RS-232<br>(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<br>(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 <sup>2</sup> C      | 2 (3.3V/5V)  |                        |                        |                        |                        |
| TPM                   | TPM2.0   |                        |                        |                        |                        |
| <b>Storage Device</b> |  |                        |                        |                        |                        |
| 2.5" SATA             | 2x internal (RAID 0/1 support w/ C246)   |                        |                        |                        |                        |
| CFast                 | 1 Type II  |                        |                        |                        |                        |
| <b>Mechanical</b>     |  |                        |                        |                        |                        |
| 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   |                        |                        |                        |                        |
| <b>Power Supply</b>   |  |                        |                        |                        |                        |
| DC Input              | 12-24V (± 10% tolerance)   |                        |                        |                        |                        |
| AC Input              | Optional: 160W AC/DC adapter   |                        |                        |                        |                        |
| <b>Environmental</b>  |  |                        |                        |                        |                        |
| 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  |                        |                        |                        |                        |