

MVP-5100-MXM Series

Value Family 9th Gen Intel® Core™ i7/i5/i3® Processor-Based
 Embedded GPU/AI Platforms

Features

- 9th Gen Intel® Core™ i7/i5/i3 LGA processor
- Dual SODIMMs sockets for up to 32GB DDR4
- Abundant I/O:
 - Up to 4x additional DP 1.4 from MXM
 - 2x DP++, DVI, VGA, 3x GbE, 3x COM, TPM2.0
 - 3x USB 3.1 Gen 1, 3x USB 2.0
- Rich storage options: 2x 2.5" SATA, M.2 2280
- Front accessible I/O and adaptive Function Module 2.0 options
- Embedded slots for Mini PCIe, M.2 3042, 2x USIM
- World leading embedded GP/GPU computing options built-in



Software Support

- Windows 10 IoT Enterprise CBB/LTSB 64-bit
- Linux Ubuntu18.04 LTS

Optional Accessories

- **Factory Installed 2.5" SSD/HDD/M.2 Storage**
- **Wireless Mini PCIe/M.2 Module**
 Wi-Fi/ BT/ 3G/ 4G LTE/ LoRa wireless kit (w/ antenna)
- **AC/DC Adapter**
 220W (P/N: 31-62149-0000)
 280W (P/N: 31-62162-1010-A0)

Ordering Information

| Model | CPU | Memory |
|------------------------|------------------------|------------------|
| MVP-510A-MXM/M4G/[GPU] | Intel® Core™ i7-9700E | 4GB non-ECC DDR4 |
| MVP-5101-MXM/M4G/[GPU] | Intel® Core™ i7-9700TE | 4GB non-ECC DDR4 |
| MVP-5102-MXM/M4G/[GPU] | Intel® Core™ i5-9500TE | 4GB non-ECC DDR4 |
| MVP-5103-MXM/M4G/[GPU] | Intel® Core™ i3-9100TE | 4GB non-ECC DDR4 |

GPU Options

| Model | GPU | Power | CUDA® Cores | Graphics Memory |
|---------------|--------------------------------|-------|-------------|-----------------|
| EGX-MXM-P1000 | NVIDIA® Quadro® Embedded P1000 | 47W | 512 | GDDR5 4GB |
| EGX-MXM-P2000 | NVIDIA® Quadro® Embedded P2000 | 58W | 768 | GDDR5 4GB |

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Specifications

| Model Name | MVP-510A-MXM | MVP-5101-MXM | MVP-5102-MXM | MVP-5103-MXM |
|---------------------------|---|------------------------|------------------------|------------------------|
| System Core | | | | |
| Processor | Intel® Core™ i7-9700E | Intel® Core™ i7-9700TE | Intel® Core™ i5-9500TE | Intel® Core™ i3-9100TE |
| TDP | 65 W | 35 W | 35 W | 35 W |
| # of Cores | 8 | 8 | 6 | 4 |
| Base Frequency | 2.6 GHz | 1.8 GHz | 2.2 GHz | 2.2 GHz |
| Max Turbo Frequency | 4.4 GHz | 3.8 GHz | 3.6 GHz | 3.2 GHz |
| Chipset | Intel® H310 (Optional: C246) | | | |
| Memory | 4GB DDR4 non-ECC 2400 MHz, dual SODIMMs, up to 32GB (Optional: 8/16/32GB ECC, only for Intel Core i3 w/ C246) | | | |
| I/O Interface | | | | |
| Graphics | Dual independent displays: 2x DP++ 1.2/ 1x DVI-D/VGA (3 independent ones w/ C246) Extra 4x DP 1.4 powered by MXM P1000/P2000 | | | |
| Ethernet | 3x Intel® GbE: i219 + 2x i211AT (support Intel AMT/vPro w/ C246) | | | |
| Serial Ports | COM1/2: RS-232/422/485, COM3: RS-232 | | | |
| USB | 3x USB 3.1 Gen 1, 3x USB 2.0, 1x internal USB2.0 dongle (2x USB 3.1 up to Gen 2 w/ C246) | | | |
| M.2 | 1x socket 2, key B+M or B, 2280/3042 (USB3.1 + SATA III + PCIe1. Up to PCIe2 w/ C246) | | | |
| Mini PCIe | 1x Full size (USB 2.0, PCIe) | | | |
| USIM | 2 | | | |
| I ² C | 2 (3.3V/5V) | | | |
| TPM | TPM 2.0 | | | |
| Storage Device | | | | |
| 2.5" SATA | 2x internal (support RAID 0/1 w/ C246) | | | |
| Mechanical | | | | |
| Dimensions | 125 (W) x 240 (D) x 210 (H) mm (4.92" x 9.45" x 8.27") | | | |
| Cooling | Fanless passive cooling | | | |
| Weight | 6.5 kg (14.4 lbs) | | | |
| Mounting | Wall mount | | | |
| Power Supply | | | | |
| DC Input | 12 to 24V | | | |
| AC Input | Optional 220W or 280W AC/DC adapter | | | |
| Environmental | | | | |
| Operating* Temperature | Standard: w/ air flow 0.6 m/s | | | |
| | 0°C to 45°C | 0°C to 50°C | | |
| | Extended: w/ air flow 0.6 m/s & Ind. storage | | | |
| | -20°C to 45°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: 3 Grms, random, 5-500 Hz, 3 axes (w/ 2.5" SSD/CFast)) | | | |
| Shock | Operating: 50 G, half sine 11ms duration (w/ 2.5" SSD) | | | |
| ESD | Contact 4kV, Air 8kV | | | |
| EMC | EN61000-6-4/-2, CE, FCC Class A | | | |
| Safety | UL/cUL, CB | | | |

*: MXM module's performance depends on ambient temperature, software and devices