

MVP-6100-MXM Serie

Processor-Based Expandable GPU Workstation Platforms with 9th Gen Intel® Xeon®/Core™ i7/i5/i3® processors

Features

- 9th Gen Intel® Xeon®/Core™ i7/i5/i3 LGA processor
- Dual SODIMMs sockets for up to 32GB DDR4 non-ECC/ECC
- Abundant I/O:
 - Up to 4x additional DP 1.4 from MXM
 - 2x DP++, DVI, VGA, 3x GbE, 3x COM, TPM2.0
 - 2x USB 3.1 Gen 2, 1x USB 3.1 Gen 1, 3x USB 2.0
- Rich storage options: up to 4x 2.5" SATA, M.2 2280
- Front accessible I/O and adaptive Function Module 2.0 options
- Flexible functionality expansion:
 - Expansion slots for standard PCIe and PCI card
 - 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 Ubuntu 18.04 LTS

Optional Accessories

- **Factory Installed 2.5" SSD/HDD/M.2 Storage**
- **Optional 2x 2.5" SATA Kit**
Includes cables and bracket
- **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: 91-95263-0010)

Ordering Information

| Model | CPU | Expansion Slots |
|---------------------------|------------------------|------------------|
| MVP-612X-MXM-1E/M4G/[GPU] | Intel® Xeon® E-2278GE | 1 PCIe x4 |
| MVP-612A-MXM-1E/M4G/[GPU] | Intel® Core™ i7-9700E | 1 PCIe x4 |
| MVP-6121-MXM-1E/M4G/[GPU] | Intel® Core™ i7-9700TE | 1 PCIe x4 |
| MVP-6122-MXM-1E/M4G/[GPU] | Intel® Core™ i5-9500TE | 1 PCIe x4 |
| MVP-6123-MXM-1E/M4G/[GPU] | Intel® Core™ i3-9100TE | 1 PCIe x4 |
| MVP-614X-MXM-2E/M4G/[GPU] | Intel® Xeon® E-2278GE | 2 PCIe x4, 1 PCI |
| MVP-614A-MXM-2E/M4G/[GPU] | Intel® Core™ i7-9700E | 2 PCIe x4, 1 PCI |
| MVP-6141-MXM-2E/M4G/[GPU] | Intel® Core™ i7-9700TE | 2 PCIe x4, 1 PCI |
| MVP-6142-MXM-2E/M4G/[GPU] | Intel® Core™ i5-9500TE | 2 PCIe x4, 1 PCI |
| MVP-6143-MXM-2E/M4G/[GPU] | Intel® Core™ i3-9100TE | 2 PCIe x4, 1 PCI |

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 |
| EGX-MXM-P3000 | NVIDIA® Quadro® Embedded P3000 | 75W | 1280 | GDDR5 6GB |
| EGX-MXM-P5000 | NVIDIA® Quadro® Embedded P5000 | 100W | 2048 | GDDR5 16GB |

MVP-6100-MXM Serie

Specifications

| Model Name | MVP-610X-MXM | MVP-610A-MXM | MVP-6101-MXM | MVP-6102-MXM | MVP-6103-MXM |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|------------------------|------------------------|
| System Core | | | | | |
| Processor | Intel® Xeon® E-2278GE | Intel® Core™ i7-9700E | Intel® Core™ i7-9700TE | Intel® Core™ i5-9500TE | Intel® Core™ i3-9100TE |
| TDP | 80 W | 65 W | 35 W | 35 W | 35 W |
| # of Cores | 8 | 8 | 8 | 6 | 4 |
| Base Frequency | 3.3 GHz | 2.6 GHz | 1.8 GHz | 2.2 GHz | 2.2 GHz |
| Max Turbo Frequency | 4.7 GHz | 4.4 GHz | 3.8 GHz | 3.6 GHz | 3.2 GHz |
| Chipset | Intel® C246 | | | | |
| Memory | 4GB DDR4 non-ECC 2400 MHz, dual SODIMMs, up to 32GB (Optional: 8, 16, 32GB ECC, only for Intel® Xeon®/Core™ i3) | | | | |
| I/O Interface | | | | | |
| Graphics | 3 independent displays: 2x DP++ 1.2/ 1x DVI-D/VGA Extra 4x DP 1.4 powered by MXM P1000/P2000 or 3x DP 1.4 powered by MXM P3000/P5000 | | | | |
| Ethernet | 3x Intel® GbE(2x i211AT, 1x i219) w/iAMT/vPro support | | | | |
| Serial Ports | COM1/2: RS-232/422/485, COM3: RS-232 | | | | |
| USB | 2x USB 3.1 Gen 2, 1x USB 3.1 Gen 1, 3x USB 2.0, 1x internal USB2.0 dongle | | | | |
| i²C | 2 (3.3V/5V) | | | | |
| TPM | TPM 2.0 | | | | |
| M.2 | 1x socket 2, key B+M or B, 2280/3042 (USB3.1 + SATA III + PCIe x2) | | | | |
| Mini PCIe | 1x Full size (USB 2.0, PCIe) | | | | |
| USIM | 2 | | | | |
| Expansion Slots | MVP-6120-MXM: 1 PCIe x4 MVP-6140-MXM: 2 PCIe x4, 1 PCI | | | | |
| Storage Device | | | | | |
| 2.5" SATA | 2 (extra 2 by optional kit), support RAID 0/1/5/10 | | | | |
| Mechanical | | | | | |
| Dimensions | MVP-6120-MXM: 165 (W) x 240 (D) x 210 (H) mm (6.5" x 9.45" x 8.27") MVP-6140-MXM: 206 (W) x 240 (D) x 210 (H) mm (8.11" x 9.45" x 8.27") | | | | |
| Cooling | System/MXM: Active fan cooling | | | | |
| Weight | MVP-6120-MXM: 6.0 kg (13.2 lbs) MVP-6140-MXM: 6.4 kg (14.0 lbs) | | | | |
| Mounting | Wall mount | | | | |
| Power Supply | | | | | |
| DC Input | 12 to 24V | | | | |
| AC Input | 220W or 280W AC/DC adapter (optional) | | | | |
| Environmental | | | | | |
| Operating Temperature | Standard: (w/ air flow) | | | | |
| | 0°C to 40°C (35°C for P5000) | 0°C to 50°C | | | |
| | Extended: (w/ air flow & ind. storage) | | | | |
| | -20°C to 40°C (35°C for P5000) | -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: 2 Grms, 5-500 Hz, 3 axes (w/ 2.5" SSD/CFast) Operating: 0.3 Grms, 5-500 Hz, 3 axes (w/ HDD) | | | | |
| 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 | | | | |