

# MVP-5100-MXM Series

Fanless embedded GPU / AI platform with Intel® Core™ 9th Gen. i7/i5/i3 CPUs

## Features

- Intel® Core™ i7/i5/i3 9th Gen. CPUs
- DDR4 2,133 SDRAM SODIMM, up to 32GB
- Intel® H310 chipset (optional: C246)
- NVIDIA® Quadro® Embedded P series
- 2x 2.5" SATA drive bays and M.2 2280 socket



## MVP-5100-MXM Series: High processing power and rugged design

The MVP-5100-MXM series fanless embedded computing platforms, which include the 9th generation Intel® Core™ processor, are optimized for edge computing applications. The MVP-5100-MXM series combines high-performance computing, scalable function and I / O improvements and reliability in industrial quality on a compact fanless platform and offers reliable long-term operation for performance-critical applications in industrial automation, logistics, transport and the smart city sector. The Embedded PC series consists of a classically robust design. The MVP-5100-MXM series supports DDR4 memory and thus also more computing and graphics performance with an Intel® HD Graphics 530.

## High performance for industrial applications

The embedded systems combine outstanding performance with extensive connectivity while being easy to use. The robust housing enables use under difficult conditions. With the use of a processor Intel® Core™ i3, i5 or i7 of the ninth generation or a Celeron LGA processor the high performance with minimum power consumption is in the foreground with the embedded computer. Together with unique image and video processing and efficient remote monitoring, the MVP-5100-MXM series meets the requirements for use in critical applications with the highest standards of reliability. Proven areas of application in the industrial environment can be found, among other things, in machine vision, motion sensors and system monitoring.

## Flexible connectivity options and extremely resistant

In each version, the MVP-5100-MXM series offers two independently functioning DisplayPorts, including VGA and DVI-D connection, and is therefore also ideally suited for digital signage scenarios, for example. Up to 32GB DDR4 RAM and optionally two SATA III HDD or SSD hard drives can be installed. Temperature fluctuations from 0 to +50° C as well as accelerations and vibration (up to 100 Grms with SSD) survive the industrial computers without any problems. The series can be operated with power supplies in a voltage range of 12-24V and thus offers flexibility for various application scenarios. Three USB 3.1 ports and three USB 2.0 ports on the front and six COM ports also offer plenty of connection options for additional devices.

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)

GPU Options				
Model	GPU	Power	CUDA® Cores	Graphics Memory
EGX-MXM-PI000	NVIDIA® Quadro® Embedded PI000	47W	512	GDDR5 4GB
EGX-MXM-P2000	NVIDIA® Quadro® Embedded P2000	58W	768	GDDR5 4GB

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Specifications	MVP-510A-MXM	MVP-5101-MXM	MVP-5102-MXM	MVP-5103-MXM
<b>SYSTEM</b>				
CPU	Intel® Core™ i7-9700E, 65W 8-cores up to 4.4GHz	Intel® Core™ i7-9700E, 35W 8-cores up to 3.8GHz	Intel® Core™ i5-9500TE, 35W 6-cores up to 3.6GHz	Intel® Core™ i3-9100TE, 35W 4-cores up to 3.2GHz
Chipset	Intel® H310 (Optional: C246)			
RAM	4GB DDR4 non-ECC 2400 MHz, dual SODIMMs, up to 32GB (optional: 8/16/32GB ECC, only for Intel® Core™ i3 with C246)			
Storage	2x 2.5" SATA III for HDD/SSD (supports RAID 0/1 with C246) 1x CFast socket (type II)			
AMT	Supports Intel® AMT / vPro with C246			
TPM	TPM 2.0			
Expansion	1x Mini PCIe full size (USB 2.0, PCIe) 1x M.2 socket 2, key B+M or B, 2280/3042 (USB3.1 + SATA III + PCIe x1. Up to PCIe x2 with C246) 2x USIM slots			
Operating System	Windows 10 IoT Enterprise CBB/LTSB 64-bit Linux Ubuntu 18.04 LTS			
<b>INTERFACE</b>				
Ethernet	3x Intel® GbE: i219 + 2x i225			
USB	3 x USB 2.0 ports 3 x USB 3.1 ports 1x USB 2.0 Port (internal) 2x USB 3.1 up to Gen 2 with optional C246 chipset			
COM	COM 1/2: 2x RS-232/422/485 COM 3: 1x RS-232			
Video	1x VGA 1x DVI-D 2x Display Port			
Audio	1x Mic-in and 1x Line-out			
<b>ENVIRONMENTAL</b>				
Cooling	Fanless			
Power Supply	DC input: 12 ~ 24V AC input: 220W or 280W AC/DC adapter (optional)			
Operating Temperature	Standard with airflow 0.6 m/s: 0° ~ 45°C Extended with airflow 0.6 m/s + ind. storage: -20° ~ 45°C	Standard with airflow 0.6 m/s: 0° ~ 50°C Extended with airflow 0.6 m/s + ind. storage: -20° ~ 60°C		
Storage Temperature	-40° ~ 85°C			
Vibration / Shock Resistance	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)			
Humidity	~95% @ 40°C (non-condensing)			
Dimensions	125 (W) x 240 (D) x 210 (H) mm			
Weight	6.5 kg			
Mounting	Wallmount			
Certifications	EMC: EN61000-6-4/-2, CE, FCC Class A ESD: Contact 4kV, Air 8kV Safety: UL/cUL, CB			