

# EVS-2000 Series



Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake)  
Fanless AI Computing System with  
Compact NVIDIA® or AMD MXM Graphics

- LGA 1200 Socket Type 10-Core 10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake-S) with Intel® W480E Chipset
- Dual 260-pin SO-DIMM support up to 64GB DDR4 Memory
- Compact NVIDIA® Quadro®/GeForce® MXM graphics card delivers leading AI computing productivity by advanced NVIDIA® CUDA® cores
- Fanless, -25°C to 55°C Operation Temperature
- Nano SIM Sockets for 5G/WiFi 6/4G/3G/LTE/GPRS/UMTS
- Expansion : 1 PCI/PCIe, 1 M.2 Key B, 1 M.2 Key E, 1 Mini PCIe, optional SUMIT A, B
- Storage : 2 2.5" SSD Tray, 1 Micro SD Card, 1 M.2 Key M, 1 M.2 Key B
- 9V to 50V wide range DC Power Input with 80V Surge Protection
- Supports Configurable Software Ignition Power Control and TPM 2.0
- Optional VHub One-Stop AIoT Solution Service supports OpenVINO based AI accelerator and advanced Edge AI applications

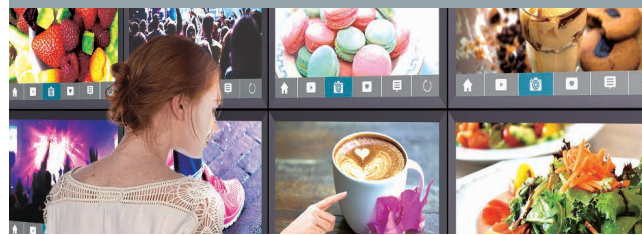
## Facial Recognition



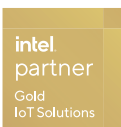
## Factory Automation



## Smart Retail



## Machine Vision



# Specifications

## System

Processor	LGA 1200 Socket supports 10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake-S)
Chipset	Intel® W480E
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2933MHz Memory, up to 64GB (ECC/Non-ECC)
OS	Windows 10, Linux

## I/O Interface

Serial	3 COM RS-232/422/485 (ESD 8kV)
USB	6 USB 3.2 (External)
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD
SIM Card	2 External Nano SIM Card Socket
SD Card	1 External Micro SD Card Socket

## Expansion

Mini PCIe	1 Mini PCIe Socket for PCIe/USB/SIM Card/mSATA
PCI/PCIe	1 PCI/PCIe x4 Slot
M.2	- 1 M.2 Key B Socket (3042/3052, PCIe x2/USB3(Default)/USB2) - 1 M.2 Key B Socket (2280, PCIe x2/USB3(Default)/USB2) - 1 M.2 Key E Socket (2230, PCIe/USB)
SUMIT A, B	2 SUMIT Slot (Optional)

## Graphics

Graphics Processor	Intel® UHD Graphics 630 Independent MXM Graphics : By request
Interface	Up to 7 independent displays : - 1 VGA : Up to 1920 x 1200 @60Hz - 1 DVI-D : Up to 1920 x 1200 @60Hz - 2 DisplayPort : Up to 4096 x 2304 @60Hz - 4 DisplayPort : Up to 7680 x 4320 @60Hz (By requested MXM)

## Storage

SATA	2 SATA III (6Gbps) support S/W RAID 0, 1
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)
M.2	1 M.2 Key M socket (2280, PCIe x4)
Storage Device	- 1 Micro SD Card Socket, Push-in/Push-out Ejector - 2 Front-access 2.5" SSD/HDD Tray

## Audio

Audio Codec	Realtek ALC888S-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

## Ethernet

LAN 1	Intel® I219LM GigE LAN supports iAMT 14.0
LAN 2	Intel® I210 GigE LAN

## Power

Power Input	9V to 50V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16-mode Software Ignition Control
Remote Switch	3-pin Terminal Block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power

## Others

TPM	Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Mgmt.	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

## Mechanical

Dimensions	<b>EVS-2000 Series :</b> 280.0mm x 215.0mm x 79.1mm (11.02" x 8.46" x 3.11") <b>EVS-2000F Series :</b> 280.0mm x 215.0mm x 86.5mm (11.02" x 8.46" x 3.41")
Weight	<b>EVS-2000 Series :</b> 4.9 kg (10.80 lbs) <b>EVS-2000F Series :</b> 5 kg (11.02 lbs)
Mounting	- Wallmount by mounting bracket - DIN Rail Mount (Optional) - 2U Rackmount (Optional)

## Environment

Operating Temp.	<b>35W TDP CPU :</b> -25°C to 55°C (-13°F to 131°F) <b>65W TDP CPU :</b> -25°C to 45°C (-13°F to 113°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @55°C
Shock	- IEC 60068-2-27 - SSD : 50G @wallmount, Half-sine, 11ms
Vibration	- IEC 60068-2-64 - SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

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# Order Information

Model	Graphics MXM TDP	GigE LAN	USB 3.2	PCIe x4	PCI	System Fan	Operating Temp.
EVS-2010	50W	2	6	1	-	N/A	-25°C to 55°C with 35W CPU
EVS-2001				-	1	N/A	
EVS-2010F	80W to 150W			1	-	Y	-25°C to 45°C with 65W CPU
EVS-2001F				-	1	Y	

## CPU List

Series	CPU	GHz	TDP (W)	ECC RAM
Intel® Core™	i9-10900E	4.7	65	N/A
	i7-10700E	4.5	65	N/A
	i5-10500E	4.2	65	N/A
	i3-10100E	3.8	65	Y
	i9-10900TE	4.5	35	N/A
	i7-10700TE	4.4	35	N/A
	i5-10500TE	3.7	35	N/A
	i3-10100TE	3.6	35	Y
Intel® Xeon®	W-1290TE	4.5	35	Y
	W-1270TE	4.4	35	Y
	W-1250TE	3.8	35	Y

## Optional MXM Module

Supports 50W to 150W TDP MXM 3.1 Type A/B Form Factor MXM Module

\*Please discuss with your regional Vecow Sales contact to find out ideal MXM module for your application.

## Optional Software

VHub AI Developer	AI Development Kit
VHub ROS	AMR Development Kit
VHub EtherCAT	I/O Control Platform

## Accessories

DDR4 32G	Certified DDR4 32GB 3200MHz RAM
DDR4 16G	Certified DDR4 16GB 3200MHz RAM
DDR4 8G	Certified DDR4 8GB 3200MHz RAM
DDR4 4G	Certified DDR4 4GB 3200MHz RAM
PWA-160WB-WT	160W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C
PWA-180WB	180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
PWA-280WB-WT	280W, 24V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C
PWA-330WB	330W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
PWS-480W-WT	480W, 24V, 90V AC to 305V AC Power Supply, Wide-Temp, IP65
VESA Mount	VESA Mounting Kit
DIN-RAIL	DIN Rail and VESA Mounting Kit
Rack Mount	2U Rackmount Kit
TMK2-20P-100	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
TMK2-20P-500	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
TMB-TMBK-20P	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
M.2 Storage Module	M.2 Key M/Key B PCIe Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

# Dimensions & Drawing

Unit : mm (inch)

EVS-2000



EVS-2000F

