

EVS-2000 SERIES

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



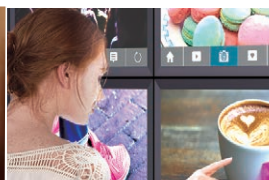
- LGA 1200 Socket Type 10-Core 10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake-S) with Intel® W480E Chipset
- Dual 260-pin SO-DIMM support up to 64GB DDR4 Memory
- Compact NVIDIA® Quadro®/GeForce® MXM graphics card delivers leading AI computing productivity by advanced NVIDIA® CUDA® cores
- Fanless, -40°C to 60°C Operation Temperature
- 6 USB 3.2 connections support up to 10Gbps data transfer
- Nano SIM Sockets for 5G/WiFi/4G/3G/LTE/GPRS/UMTS
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- 2 front-access 2.5" SSD/HDD Tray
- 1 PCI/PCIe Slot, 3 COM RS-232/422/485
- Expansion : 1 M.2 Key B, 1 M.2 Key E, 1 Mini PCIe, optional SUMIT A, 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



Machine Vision



Facial Recognition



Smart Retail



Factory Automation



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) - 1 M.2 Key E Socket (2230)
SUMIT A, B	2 SUMIT Slot (Optional)

Graphics

Graphics Processor	Intel® UHD Graphics 630 Independent MXM Graphics : By request
Interface	Up to 8 Display Interfaces : - 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 3840 @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 B Socket (2280) - 1 M.2 Key M socket (2280)
Storage Device	- 1 Micro SD Card Socket, Push-in/Push-out Ejector - 2 Front-access 2.5" SSD/HDD Tray

Audio

Audio Codec	Realtek ALC892, 5.1 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 (External)
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	Optional 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	EVS-2000 Series : 280.0mm x 215.0mm x 79.1mm (11.02" x 8.46" x 3.11") EVS-2000F Series : 280.0mm x 215.0mm x 86.3mm (11.02" x 8.46" x 3.40")
Weight	EVS-2000 Series : 4.9 kg (10.80 lbs) EVS-2000F Series : 5 kg (11.02 lbs)
Mounting	- Wallmount by mounting bracket - DIN Rail Mount (Optional) - 2U Rackmount (Optional)

Environment

Operating Temp.	-40°C to 60°C (-40°F to 140°F; it may vary by product configuration)
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

Order Information

Model	CPU TDP	Graphics MXM TDP	GigE LAN	USB 3.2	PCIe x4	PCI	System Fan
EVS-2010	35W to 85W	≤ 60W 60W to 150W	2	6	1	-	N/A
EVS-2001					-	1	N/A
EVS-2010F					1	-	Y
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 Rugged Science 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

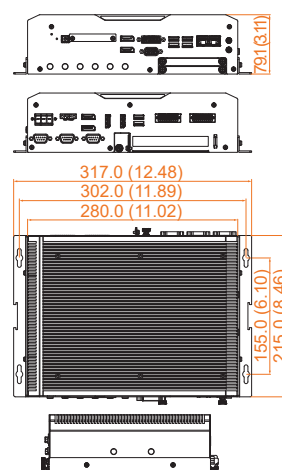
Accessories

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-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
PWS-360W	360W, 28.8V, 90 to 132V AC/180 to 264V AC (selected by switch) Power Supply
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

