

EVS

2000 LIQ



10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake)
Fanless Liquid Cooling AI Computing Workstation



^ V2X, Traffic Vision



- Workstation-grade Platform : 10-Core 10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (Comet Lake-S) running with Intel® W480E Chipset
- Compact NVIDIA® Quadro®/GeForce® MXM graphics card delivers leading AI computing productivity by advanced NVIDIA® CUDA® cores
- Innovative Liquid Cooling Solution serves 5°C to 55°C fanless operating temperature supporting up to 110W TDP MXM Graphics
- Multiple 5GWiFi 6/4G/3G/LTE/GPRS/UMTS, 1 PCI/PCIe, optional SUMIT A, B
- DC 9V to 50V Power Input, 80V Surge Protection, Software Ignition Control, TPM 2.0
- Optional VHub One-Stop AIoT Solution Service supports OpenVINO based AI accelerator and advanced Edge AI applications

v Rolling Stock



^ In-vehicle Computing

intel
partner
Gold
IoT Solutions



VHub

Vecow

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 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 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 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	280.0mm x 215.0mm x 92.6mm (11.02" x 8.46" x 3.65")
Weight	5 kg (11.02 lbs)
Mounting	- Wallmount by mounting bracket - DIN Rail Mount (Optional) - 2U Rackmount (Optional)

Environment

Operating Temp.	5°C to 55°C (41°F to 131°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

Order Information

Model	Graphics MXM TDP	GigE LAN	USB 3.2	PCIe x4	PCI
EVS-2010-LIQ	50W to 115W	2	6	1	-
EVS-2001-LIQ				-	1

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

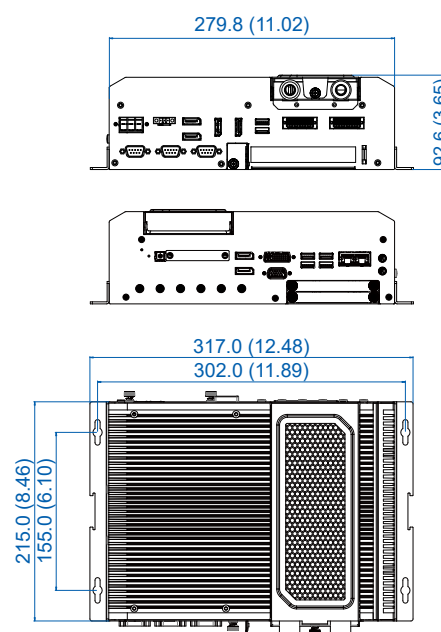
VHub AI Developer	AI Development Kit
VHub ROS	AMR Development Kit
VHub EtherCAT	I/O Control Platform

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)



* All product information may subject to change without prior notice.

* The rights of all brand names, product names and trademarks belong to their respective owners.

Copyright © 2022 Vecow Co., Ltd. All rights reserved.