ECX 3000 PEG

13th/12th Gen Intel® Core™ i9/i7/i5/i3 Processor (Raptor Lake/Alder Lake)
Flexible AI Inference Workstation

Robotic Control

- Workstation-grade Platform : 13th/12th Gen Intel® Core™ i9/i7/i5/i3 Processor (Raptor Lake-S/Alder Lake-S) running with Intel® R680E PCH supports max 65W TDP CPU
- Supports outstanding AI computing productivity by NVIDIA®/AMD graphics card, up to 200W power budget
- USB 3.2 Gen 2x2 offers a max speed of 20Gbps data transfer
- DC 12V to 50V wide range power input, Software Ignition Control
- 4 Independent 2.5G LAN with IEEE 802.3at PoE+
- 5G/WiFi/BT/4G/LTE/GPRS/UMTS, Supports Intel® vPro, TCC, Time-Sensitive Networking (TSN), and TPM 2.0
- Storage : Max. 4 front-access 2.5" SSD Tray, M.2 Key M

Smart Manufacturing

In-vehicle Computing

intel partner Gold IoT Solutions

200W | SS 20 Type-C | TSN | PoE | 12V~50V | SW

Vecow

Specifications

System

Processor	- 24-core 13th Gen Intel® Core™ i9/i7/i5/i3 Processor (Raptor Lake-S) - 16-core 12th Gen Intel® Core™ i9/i7/i5/i3 Processor (Alder Lake-S)
Chipset	Intel® R680E Chipset
BIOS	AMI
SIO	IT8786E
Memory	2 DDR5 4800MHz SO-DIMM, up to 64GB
OS	Windows 10, Linux

I/O Interface

Serial	4 COM RS-232/422/485
USB	- 6 USB 3.2 Gen 2, USB Type A Connector - 1 USB 3.2 Gen 2x2, USB Type-C Connector supports max 20Gbps data transfer (15W, 5V/3A)
Isolated DIO	ECX-3800/3600/3400/3200 PEG : 32 Isolated DIO (16 DI, 16 DO) ECX-3100 PEG : 16 GPIO
LED	Power, HDD, PoE, WLAN
SIM Card	3 External Nano SIM Card Socket
RTC Battery	1 Front-access RTC Battery

Expansion

Mini PCIe	1 Mini PCIe sockets for PCIe/USB/SIM Card
PCIe	Up to 4 PCIe Slots
M.2	- 1 M.2 Key B Socket (3042/2280, PCIe/USB 3, default/USB 2) - 1 M.2 Key B Socket (3052/2280, PCIe/USB 3, default/USB 2) - 1 M.2 Key E Socket (2230, PCIe/USB)

Graphics

Graphics Processor	Intel® UHD Graphics 770/730 driven by Intel® Xe Architecture
Interface	- 1 DVI-I : Up to 1920 x 1080 @60Hz - 1 HDMI : Up to 1920 ×1080 @60Hz - 2 DisplayPort : Up to 7680 x 4320 @60Hz/5120 x 2880 @60Hz - By requested Graphics Card

Storage

SATA	ECX-3800/3600/3400 PEG : 4 SATA III (6Gbps) support software RAID 0, 1, 5, 10 ECX-3200/3100 PEG : 2 SATA III (6Gbps) support software RAID 0, 1
M.2	1 M.2 Key M Socket (2280, PCIe x4)
Storage Device	ECX-3800/3600/3400 PEG : 4 Front-access 2.5"SSD/HDD Tray ECX-3200/3100 PEG : 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
LAN 2	Intel® I210 GigE LAN

PoE (ECX-3800/3600/3400/3200 PEG)

LAN 3 to LAN 6	2.5GigE IEEE 802.3at (25.5W/48V) PoE+ by Intel® I226, RJ45 Connector ECX-3200MX PEG : X-Coded M12 Connector

Power

Power Input	DC 12V to 50V Power Input
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16-mode Software Ignition Control
Remote Switch	3-pin Terminal Block

Others

TPM	Infineon SLB9670 supports TPM 2.0, SPI 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	ECX-3800 PEG : 260mm x 240mm x 142mm (10.24"x9.45"x5.59") ECX-3600 PEG : 260mm x 240mm x 120mm (10.24"x9.45"x4.72") ECX-3400 PEG : 260mm x 240mm x 104mm (10.24"x9.45"x4.09") ECX-3200/3100 PEG : 260mm x 240mm x 79mm (10.24"x9.45"x3.11")
Weight	ECX-3800 PEG : 7.5 kg (16.53 lb) ECX-3600 PEG : 6.5 kg (14.33 lb) ECX-3400 PEG : 5.5 kg (12.13 lb) ECX-3200/3100 PEG : 4.5 kg (9.92 lb)
Mounting	- Wallmount by mounting bracket - VESA Mount (Optional), Rackmount (Optional)

Environment

Operating Temp.	-20°C to 45°C (-4°F to 113°F), with System Fan
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @45°C
Shock/Vibration	Operating, MIL-STD-810G, Procedure I
EMC	CE, FCC, EN50155, EN50121-3-2

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Order Information

Model	PCIe x16	PCIe x8	PCIe x4	GigE LAN	2.5G PoE+	SSD Tray	USB 3.2	20G USB Type-C	Isolated DIO
ECX-3800 PEG	-	2	2	2	4	4	6	1	32
ECX-3600 PEG	-	2	1		4	4			32
ECX-3400 PEG	1	-	1		4	4			32
ECX-3200MX PEG	1	-	-		4 M12	2			32
ECX-3200 PEG	1	-	-		4	2			32
ECX-3100 PEG	1	-	-		-	2			16 GPIO

*Fan sink modules for ECX-3200 Series are optional. Please contact our sales team if needed.

CPU List

Series	CPU	Cores	GHz	TDP (W)	CPU	Cores	GHz	TDP (W)	ECC
Intel® Core™	i9-13900E	24	5.2	65	i9-12900E	16	5	65	Y
	i9-13900TE	24	5	35	i9-12900TE	16	4.8	35	
	i7-13700E	16	5.1	65	i7-12700E	12	4.8	65	
	i7-13700TE	16	4.8	35	i7-12700TE	12	4.7	35	
	i5-13500E	14	4.6	65	i5-12500E	6	4.5	65	
	i5-13500TE	14	4.5	35	i5-12500TE	6	4.3	35	
	i3-13100E	4	4.4	65	i3-12100E	4	4.2	65	
	i3-13100TE	4	4.1	35	i3-12100TE	4	4	35	

Optional Software

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

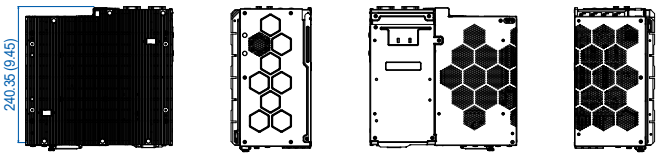
Accessories

DDR5 32G	Certified DDR5 32GB 4800MHz RAM
DDR5 16G	Certified DDR5 16GB 4800MHz RAM
DDR5 8G	Certified DDR5 8GB 4800MHz RAM
PWA-160WB-WT	160W, 24V, 85V AC to 264V AC Power Adapter 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 (7.62mm pitch)
PWA-280WB-WT	280W, 24V, 85V AC to 264V AC Power Adapter 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 (7.62mm pitch)
PWS-480W-WT	480W, 24V, 90V AC to 305V AC Power Supply, Wide-Temp, IP65
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
Rackmount	Rockmount Kit
DIN Rail	DIN Rail and VESA Mounting Kit
VESA Mount	VESA Mounting Kit
M.2 Storage Module	M.2 Key M Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

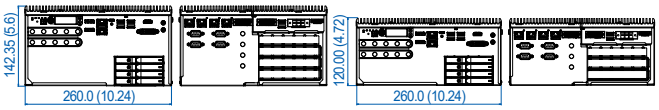
Dimensions & Drawing

Unit : mm (inch)

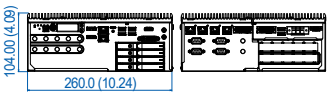
ECX-3800 PEG



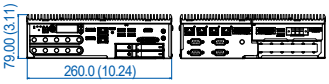
ECX-3600 PEG



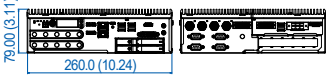
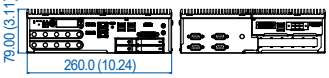
ECX-3400 PEG



ECX-3200 PEG



ECX-3200MX PEG



ECX-3100 PEG