

ECX-2200/2100PEG

Workstation-grade Intel® Xeon®/Core™ i9/i7/i5/i3 (Comet Lake) AI Computing System with NVIDIA® Tesla®/Quadro®/GeForce® Graphics



- Workstation-grade Platform :
 - 10-core 10th Gen Intel® Xeon®/Core™ i9/i7/i5/i3 Processor (CML-S) with Intel® W480E chipset, up to 95W TDP CPU
- Supports up to 250W NVIDIA® or AMD Graphics card
- 12V to 50V wide range DC Power Input, 80V Surge Protection
- Supports Configurable Software Ignition Control and TPM 2.0
- Optional VHub One-Stop AIoT Solution Service supports OpenVINO based AI accelerator and advanced Edge AI applications



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Specifications

System

Processor	10th Gen Intel® 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	4 COM RS-232/422/485 (ESD 8kV)
USB	- 6 USB 3.2 (External) - 1 USB 2.0 (Internal)
Isolated DIO	ECX-2200 PEG Series : 32 Isolated DIO : 16 DI, 16DO ECX-2100 PEG Series : 16 GPIO
LED	Power, HDD, PoE, Wireless
SIM Card	3 External Nano SIM Card Socket

Expansion

Mini PCIe	2 Mini PCIe sockets for PCIe/USB/SIM Card/Optional mSATA
PCIe	1 PCIe x16 Slot
M.2	- 1 M.2 Key B Socket (3042/3052) - 1 M.2 Key E Socket (2230)

Graphics

Graphics Processor	- Intel® UHD Graphics 630 - Independent Graphics : By request
Interface	Up to 7 independent displays : - 1 VGA, 1 DVI-D : Up to 1920 x 1080 @60Hz - 2 DisplayPort : Up to 4096 x 2304 @60Hz - By requested graphic card

Storage

SATA	2 SATA III (6Gbps) support S/W RAID 0, 1
mSATA	2 SATA III (Mini PCIe Type, 6Gbps)
M.2	1 M.2 Key M Socket (2280, PCIe x4)
Storage Device	- 1 Micro SD Card, 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

PoE (ECX-2200)

LAN 3 to LAN 6	GigE IEEE 802.3at (25.5W/48W) PoE* by Intel® I350
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Power

Power Input	12V 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
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	260mm x 240mm x 79mm (10.24" x 9.45" x 3.11")
Weight	4.5 kg (9.92 lb)
Mounting	- Wallmount by mounting bracket - Optional: DIN Rail Mount, 2U

Environment

Operating Temp.	35W & 65W TDP CPU : -20°C to 45°C (-4°F to 113°F), Fanless 80W & 95W TDP CPU : -20°C to 45°C (-4°F to 113°F), with Fan Sink
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @45°C - IEC 61373 : 2010
Shock/Vibration	- Railway Applications : Rolling Stock Equipment, Shock and Vibration Tests
EMC	CE, FCC, EN50155, EN50121-3-2

Order Information

Model	GigE LAN	PoE*	SSD Tray	PCIe x16	PCIe x4	USB 3.2	COM	Nano SIM	Isolated DIO	GPIO	Sys. Fan	**Fan Sink
ECX-2200-PEG	6	4							32	-		-
ECX-2200F-PEG	6	4	2	1	1	6	4	3	32	-	Y	Y
ECX-2100-PEG	2	-							-	16		-
ECX-2100F-PEG	2	-							-	16		Y

** Fan Sinks are required for high TDP CPU systems (80W, 95W)

CPU List

Series	CPU	GHz	TDP (W)	CPU	GHz	TDP (W)	ECC RAM
Intel® Xeon®	W-1290E	4.8	95	W-1290TE	4.5	35	Y
	W-1270E	4.8	80	W-1270TE	4.4	35	Y
	W-1250E	4.7	80	W-1250TE	3.8	35	Y
Intel® Core™	i9-10900E	4.7	65	i9-10900TE	4.5	35	N/A
	i7-10700E	4.5	65	i7-10700TE	4.4	35	N/A
	i5-10500E	4.2	65	i5-10500TE	3.7	35	N/A
	i3-10100E	3.8	65	i3-10100TE	3.6	35	Y

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 Adapter 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 Adapter with 3-pin Terminal Block (7.62mm pitch), Wide Temperature -30°C to +70°C
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
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)

