

ECX-4000

Intel® Core™ Ultra 200S Series Processor (Arrow Lake)
High Performance Fanless AI Computing System



Features

- Intel® Core™ Ultra 200S Series processor (Arrow Lake) running with Intel® W880 PCH, supporting up to 24 cores
- Intel® Integrated NPU and X^e LPG Graphics Architecture, delivering up to 36 TOPS and 2X graphics performance
- 2 DDR5 6400MHz Memory supports up to 96GB, optional with ECC
- 2 10G SFP+, 5 2.5GigE LAN with 4 PoE+, 1 GigE LAN
- 6 USB 3.2 Gen 2, 16 Isolated DIO, 4 COM RS-232/422/485
- Expansion : 2 M.2 Key B and 1 Key E for wireless; optional SUMIT A, B
- DC 9V to 50V Redundant Power Input, Software Ignition Control
- Supports Intel® vPro, TSN, TCC, and TPM 2.0
- Optional VHub AIoT Solution Service supports OpenVINO™ Toolkit for Edge AI applications



Specifications

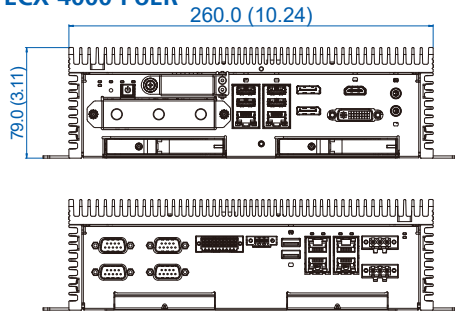
System	
Processor	Intel® Core™ Ultra 200S Series Processors, 65W/35W, max 24-core (Arrow Lake-S)
Chipset	Intel® W880 Chipset
BIOS	AMI
SIO	IT8786E
Memory	2 DDR5 6400MHz CSODIMM, up to 96GB (ECC/Non-ECC)
OS	Windows 11, Windows 10, Linux
I/O Interface	
Serial	4 COM RS-232/422/485
USB	6 USB 3.2 Gen 2
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO (Optional)
LED	Power, HDD, PoE, Wireless
SIM Card	2 External SIM Card Socket
Integrated AI Processor	
NPU	Intel® AI Boost dedicated Low Power AI Engine
GPU	Intel® X ^e LPG Graphics architecture, up to 4X ^e Graphics Engines
Interface	<ul style="list-style-type: none"> 2 DisplayPort : Up to 7680 x 4320@60Hz 1 HDMI 2.0 : Up to 3840 x 2160 @60Hz 1 DVI-I : Up to 1920 x 1080 @60Hz
Expansion	
M.2	<ul style="list-style-type: none"> 2 M.2 Key B Socket (3042/3052/2280, PCIe x2/USB 3, default/SATA) 1 M.2 Key E Socket (2230, PCIe x2/USB2)
SUMIT	2 SUMIT Slot (Optional)
Storage	
SATA	2 SATA III (6Gbps) support software RAID 0, 1 (Storage devices please refer to Order Information)
M.2	<ul style="list-style-type: none"> 1 M.2 Key M Socket (2280, PCIe x4) 2 Front-access M.2 Socket (2280, PCIe x4, Optional)
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® I226IT 2.5GigE LAN supports TSN

PoE	
LAN 3 to LAN 6	Intel® I226IT 2.5GigE IEEE 802.3at (25.5W/48V) PoE+
2.5G Ethernet (ECX-4025R/4025)	
LAN 7 to LAN 9	Intel® I225 2.5GigE LAN
10G SFP+ (ECX-4071R/4071)	
LAN 7 to LAN 8	Intel® X710-BM2 supports IEEE 802.3 10GBASE-T SFP+
Power	
Power Input 1	DC 9V to 50V, Redundant Power Input
Power Input 2	DC 9V to 50V, Redundant 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 SLB9672 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	260mm x 175mm x 79mm (10.24" x 6.89" x 3.11")
Weight	3.8 kg (8.38 lb)
Mounting	Wallmount by mounting bracket <ul style="list-style-type: none"> DIN Rail Mount (Optional) 2U Rackmount (Optional)
Environment	
Operating Temperature (with airflow)	35W TDP CPU : -40°C to 75°C (-40°F to 167°F), Fanless 65W TDP CPU : -40°C to 55°C (-40°F to 131°F), Fanless ECX-4025 Series : -40°C to 70°C (-40°F to 158°F), Fanless ECX-4071 Series : -40°C to 55°C (-40°F to 131°F), Fanless
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @75°C
Shock	<ul style="list-style-type: none"> IEC 60068-2-27 SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	<ul style="list-style-type: none"> IEC 60068-2-64 SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, ICES, EN50155, EN50121-3-2

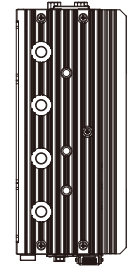
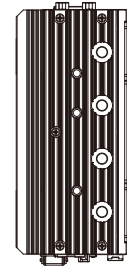
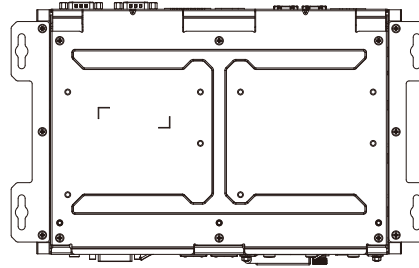
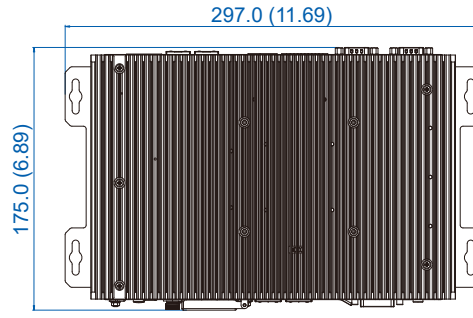
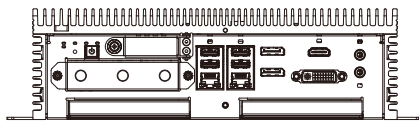
Dimensions

Unit : mm/ inch

ECX-4000-PoER



ECX-4000-PoE



Order Information

Model Name	Ethernet				SSD Tray	USB 3.2Gen 2	Iso. DIO (GPIO)
	10G SFP+	2.5G LAN	2.5G PoE+	1G LAN			
ECX-4025R	-	8	4	1	2	6	16
ECX-4025	-	8	4		16		
ECX-4000-PoER	-	5	4		2		16
ECX-4000-PoE	-	5	4		-		16
ECX-4000-6R	-	5	-		2		(16)
ECX-4000-6G	-	5	-		-		(16)
ECX-4000-2R	-	1	-		2		(16)
ECX-4000-2G	-	1	-		-		(16)
ECX-4071R	2	5	4		2		16
ECX-4071	2	5	4		-		16

* Fan sink modules for ECX-4000 Series are optional. Please contact our sales team if needed.

Accessories

DDR5 48G	Certified DDR5 48GB RAM
DDR5 32G	Certified DDR5 32GB RAM
DDR5 16G	Certified DDR5 16GB RAM
DDR5 8G	Certified DDR5 8GB RAM
PWA-120W1	120W, 24V, AC 90V-264V Power Adapter
PWA-160W-WT	160W, 24V, AC 85V-264V Power Adaptor, Wide Temperature -30°C to +70°C
PWA-180W	180W, 24V, AC 90V-132V/180V-264V Power Adapter
PWA-280W-WT	280W, 24V, AC 85V-264V Power Adaptor, Wide Temperature -30°C to +70°C *Recommended when enable turbo mode (35W CPU)
PWA-330W	330W, 24V, AC 90V-264V Power Adapter *Recommended when enable turbo mode (65W CPU)
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 Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

Optional Software

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

CPU List

Processor Brand	CPU P/N	Cores	GHz*	TDP (W)
Intel® Core™ Ultra	9 285	24	2.5	65
	7 265	20	2.4	65
	5 245	14	3.5	65
	9 285T	24	1.4	35
	7 265T	20	1.5	35
	5 245T	14	2.2	35

*GHz : Processor P-core base frequency