ASUS IoT

AI at the Edge : Intelligent Computing Without Limits

ASUS IoT Embedded Edge Systems

Powered by Intel® Core™ Ultra Processors (Series 1)

Reliable Quality

Superior Performance

Long-term Supply

Global Warranty

Worry-free After-sales

Accelerating IoT Technology in Smart Manufacturing

ASUS embedded edge systems combine GPU computing with AIoT potential, enabling real-time AI inference at the edge, transforming industries. Featuring robust, fanless, and vibration-proof designs, they support wide temperature ranges and low power consumption, excelling in demanding edge AI applications such as factory automation, machine vision, intelligent video analytics, and autonomous vehicles. ASUS IoT ensures stability and reliability in the most challenging scenarios, driving innovation and efficiency in the new era of industrial AI.

EBS-I300 Single-Side Rich Interfaces

- Compact size, single-side interface, easy to install within devices
- Rich interfaces: 8 x USB, 6 x COM, 2 x LAN
- Military-grade standard, certified by MIL-STD-810H

EBS-S500W Intel® Core™ Ultra Platform

- Core Ultra AI dedicated system: AI computing power up to 36 TOPS
- Supports wide temperature/voltage: -20-60°C/9-36V
- Supports the latest high-speed DDR5 5600 memory

PE5101D Rugged Edge Platform

- Hot-swappable SSD trays and RAID mode
- Wide 8-48V DC-in voltage design, built-in ignition power control
- Supports wide temperature: -20-70°C

PE8000G High-Performance AI Computing Platform

- Supports up to two 450W GPUs, meeting high-performance computing needs
- Compatible with Intel® 14th/13th/12th Gen Core™ processors, power range 35-65W
- Military-grade standard, certified by MIL-STD-810H

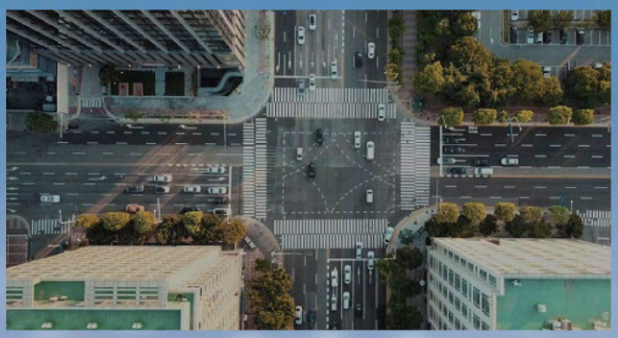
Specifications

		EBS-I300	EBS-S500W	PE5101D	PE8000G
Case	Dimension	200 x 188 x 70mm	186 x 135 x 80mm	242 x 241.4 x 137mm	225 x 288 x 443mm
System	Processor	Intel® Celeron™ Quad-Core J6412 SoC	Intel® Core™ Ultra 7 processor 165U Intel® Core™ Ultra 5 processor 135U	Intel® 14th/13th/12th Gen Core™ CPU (TDP 35W)	Intel® 14th/13th/12th Gen Core™ CPU (TDP 65W/35W)
	Chipset	-	-	R680E	R680E
	Graphics	Intel® UHD Graphics	Intel® Arc Graphics	Intel® UHD Graphics 770	Intel® UHD Graphics 770
	Memory	2 x DDR4 SO-DIMM supports up to 32GB	2 x DDR5 SO-DIMM, supports up to 64GB	2 x SO-DIMM, max 64GB ECC/ non-ECC DDR5 SDRAM	2 x SO-DIMM, max 64GB ECC/ non-ECC DDR5 SDRAM
I/O Interface	Ethernet	2 x Realtek RTL8111H (1 GbE)	1 x Intel® i219-LM (1 GbE) 1 x Intel® i226-IT (2.5 GbE)	3 x Intel® i226-IT (2.5 GbE)	1 x Intel® i219-LM (1 GbE) 1 x Intel® i226-IT (2.5 GbE)
	Display Port	1 x HDMI 2.0, up to 4K x 2K @ 60 Hz 1 x DP++. up to 4096 x 2304 @ 60 Hz 1 x VGA	1 x HDMI 2.0, up to 4K x 2K @ 60 Hz 1 x DP1.4a, up to 5120 x 3200 @ 60 Hz	1 x HDMI 2 x DP	2 x HDMI 2 x DP
	Serial Port	1 x RS232/422/485 5 x RS232	4 x RS232/422/485	2 x COM: RS-232/422/485 4 x COM: RS-232	2 x COM: RS-232/422/485 4 x COM: RS-232 (optional)
	USB 2.0	4 x USB 2.0	2 x USB 2.0	2 x USB 2.0, type A	2 x USB2.0, type A
	USB 3.2/3.1	4 x USB 3.2	4 x USB 3.2 1 x USB-C (USB3.2, DP 1.4 Alt. Mode)	6 x USB 3.2 Gen 2 (10Gbps) 2 x USB 3.2 Gen 1 (5Gbps)	1 x USB 3.2 Gen2x2 (20G), type C 4 x USB 3.2 Gen2x1 (10G) ,type A 2 x USB 3.2 Gen1 (5G), type A
	Audio	Mic in, Line out	Mic in, Line out	Mic in, Line out	Mic in, Line out
	Digital I/O	-	-	4 x DI, 4 x DO support isolation (optional)	4 x DI, 4 x DO support isolation (optional)
Storage Interface	SATA HDD	2 x 2.5" SSD	1 x 2.5" SSD	2 x hot-swappable 2.5" HDD/SSD	4 x hot-swappable 2.5" HDD/SSD
	mSATA	-	-	-	1 (mux with mPCIe)
	M.2 (M-key)	1 (NVMe)	1 (NVMe)	1 (NVMe)	1
Expansion	mPCIe	-	-	1	1 (mux with mSATA)
	M.2	1 x M.2 E-key	1 x M.2 E-key, 1 x M.2 B-key	1 x M.2 E-key, 1 x M.2 B-key	1 x M.2 E-key, 1 x M.2 B-key
	SIM	-	1	2	3
	PCI/ PCIe	1 (PCIe x 4 slot, x 2 speed)	-	1 x PCIe x16 + 1 x PCIe x4	7x PCIe
Power Supply	DC Input	12V	9V-36V	8-48V DC	8-48V DC
	Ignition Control	-	-	Integrated	Integrated
Environmental	Operating Temp.	0~40℃	-20~60℃	-20~70℃	-20~60℃ with 35W CPU -20~55℃ with 65W CPU
	Shock & Vibration	MIL-STD-810H	-	MIL-STD-810H , and 5-500 Hz 3+ Grms	MIL-STD-810H
Certification		CE, FCC, CE-LVD, CCC	CE, FCC, CB, BSMI, VCCI CE-LVD	CE, FCC, UKCA BSMI, CB, CCC	CE, FCC, CB, BSMI, VCCI UKCA, RCM

ASUS IoT

Smart Transportation and Smart City Solutions

With the acceleration of urbanization, smart transportation and smart cities have become key development directions for enhancing traffic efficiency, safety, and intelligent management. Through the application of high-performance embedded industrial computers and AI technology, real-time data processing, precise monitoring,and intelligent decision-making can be achieved and optimizing urban operation efficiency.



Solution Features

- Diverse end-to-edge AI platform products, flexible choices
- Low latency, high bandwidth computing and data processing capabilities
- MIL-STD-810H certified, suitable for harsh outdoor environments

Customer Benefits

- Scalable and flexible infrastructure to quickly meet on-site needs
- Remote maintenance of equipment, improving efficiency and reducing labor and time costs
- Real-time data transmission for rapid decision-making

Intelligent Medical Equipment Solutions

Medical equipment is widely used in various professional fields of healthcare, including medical imaging, laboratory diagnostics, surgery, rehabilitation, and patient monitoring. These applications require real-time monitoring and rapid diagnosis, increasing the demand for computing speed in compact intelligent computers.

Solution Features

- Custom ASUS graphics cards, meeting customers' long-term supply requirements
- Fanless design for hygienic control and silent operation
- Diverse I/O interfaces for medical equipment expansion options

Customer Benefits

- Simplified workflows and integrated systems improve operational efficiency and clinical performance
- Enhanced performance and stability of medical equipment
- Assisting hospitals in creating a patient-centered medical environment

Robotics and Smart Manufacturing Solutions

Modern manufacturing demands high speed, high precision, and intelligence. By utilizing high-performance processors, AI acceleration, low-latency communication, and high-reliability design, stable operation, improved production efficiency, and product quality can be ensured.

Solution Features

- Equipped with the latest CPUs, providing higher memory bandwidth and lower latency, enhancing overall productivity
- Compact design to meet space constraints of equipment
- Rich I/O interfaces, facilitating on-site deployment

Customer Benefits

- Improved operational capacity, achieving faster and more efficient production results
- Enhanced automation, reducing dependence on manual labor and increasing production line flexibility
- Edge computing and predictive maintenance, reducing equipment maintenance costs

Top Three Reasons to Choose ASUS IoT

Innovative Technology and Flexible Design

Exclusive Technical Support with Global Warranty

Strong Partnerships with World-Class Partners

About ASUS IoT

ASUS IoT is a sub-brand of ASUS dedicated to the creation of incredible solutions in the fields of AI and IoT. Our mission is to become a trusted provider of embedded systems and a partner in the AIoT solutions ecosystem. ASUS IoT strives to deliver best - in - class products and services across diverse vertical markets – providing convenient and efficient environments for people everywhere.

ASUS IoT

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