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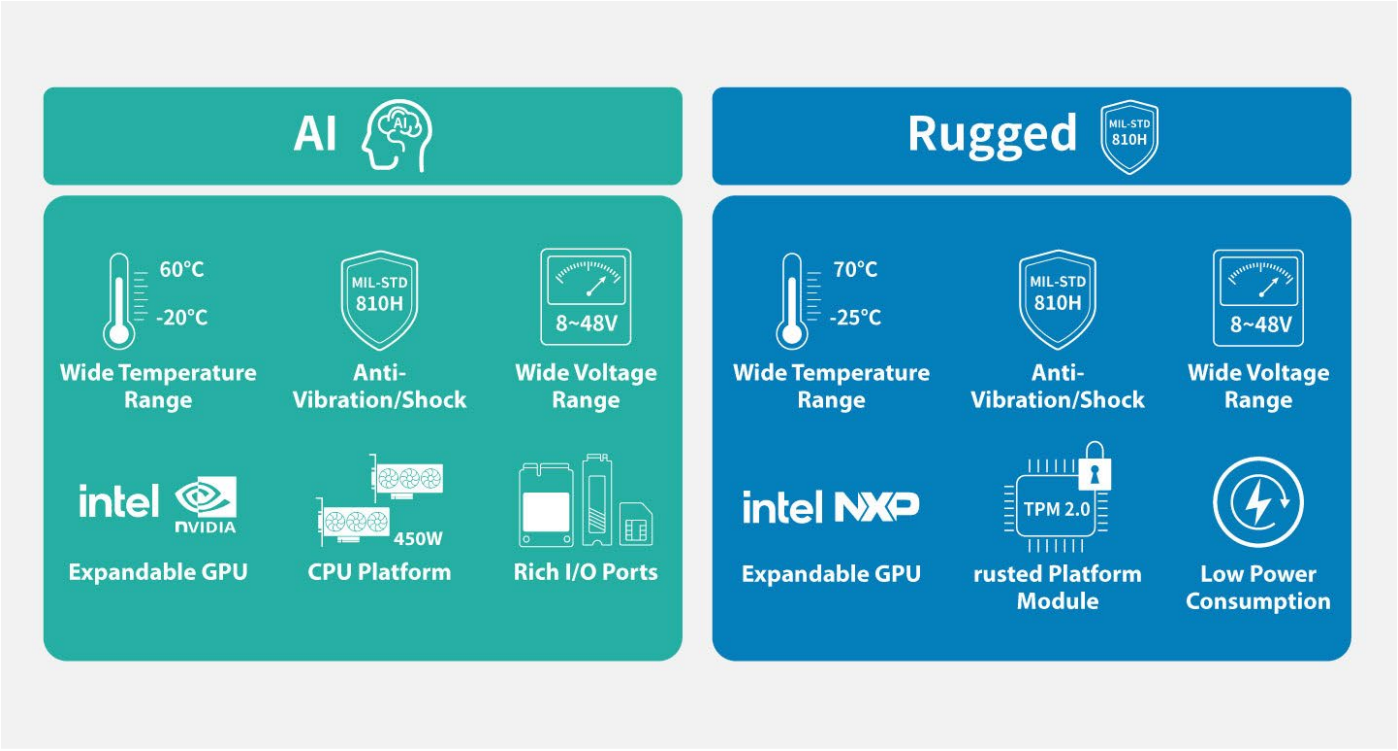
The ASUS Rugged & AI Series Industrial Computers feature a high-efficiency edge computing system with a design focused on "wide temperature, wide voltage, and anti-vibration" capabilities. These systems can be customized with processors, GPUs, and rugged protection levels to meet different environmental and application requirements.

The robust design allows the system to operate within a temperature range of -25°C to 70°C and a voltage range of 8V to 48V, ensuring reliable performance in extreme environmental conditions, such as high and low temperatures or voltage fluctuations. Some models also feature MIL-STD-810H military-grade vibration protection, making them suitable for various demanding applications, including military, industrial, and commercial sectors, and capable of withstanding tough environments.

Key Features of Two Series at a Glance



Wide Operating Temperature Range, Unaffected by Harsh Weather Conditions

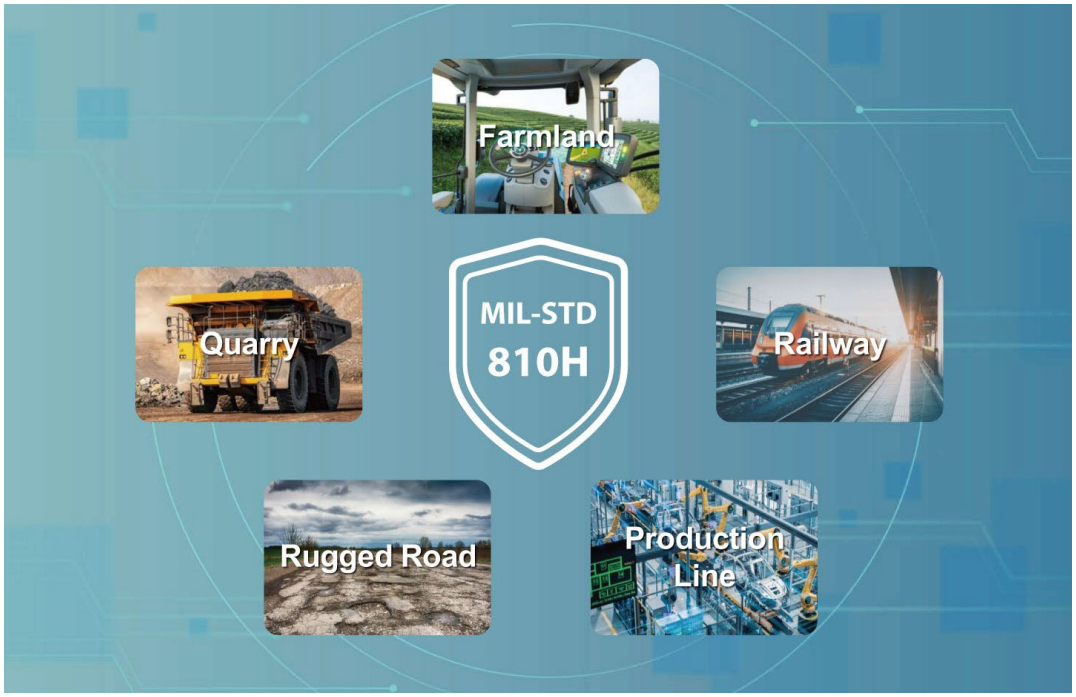
The system is suitable for global climates and can operate within a temperature range of -25˚C to 70˚C, ensuring that system performance remains stable and unaffected by extreme heat or cold.

Wide Voltage Range Design to Prevent Damage from Power Surges

It can operate within a voltage range of DC 8V to 48V, preventing damage caused by voltage surges, making it suitable for a wide range of environments.

Military-Grade Vibration and Shock Resistance: Prevents component damage by withstanding vibrations and impacts.

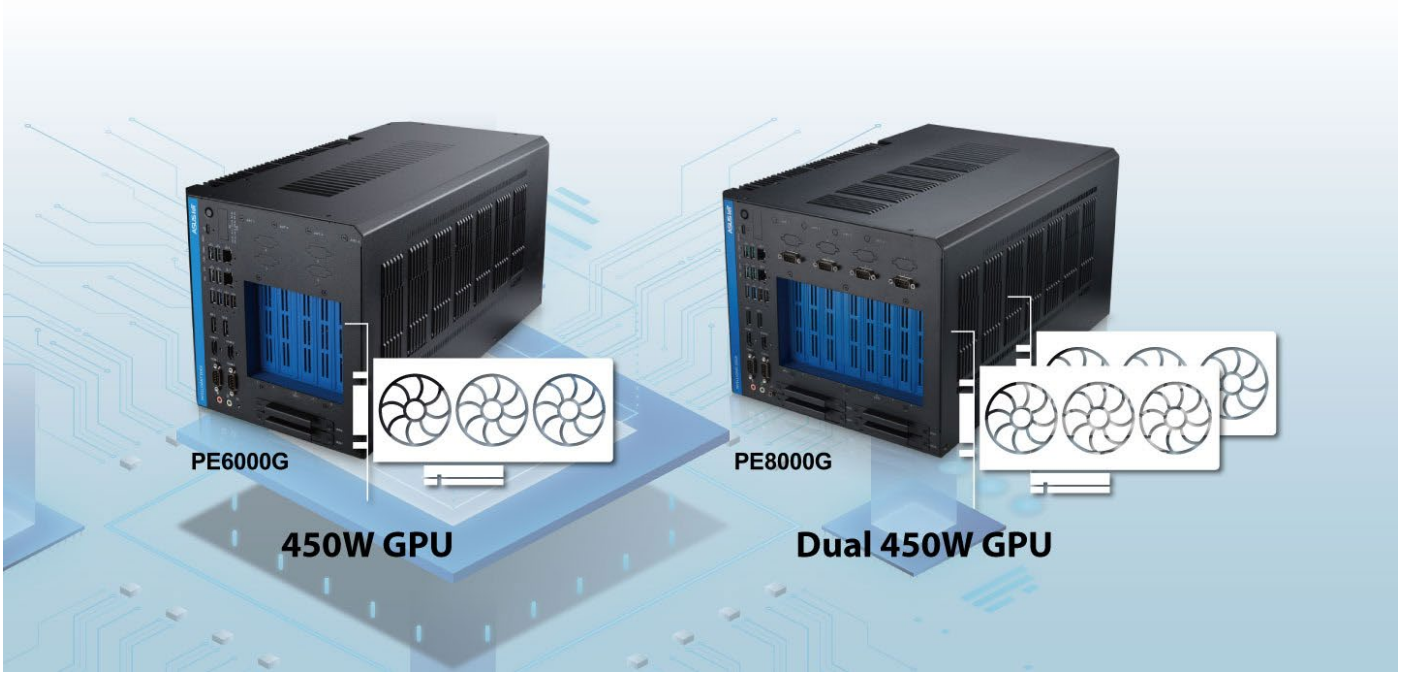
Compliant with MIL-STD-810H vibration resistance certification, capable of withstanding vibrations up to 5 Grms. Designed to endure shocks and prevent internal component damage, making it suitable for operation on uneven roads or in high-vibration environments.



Expandable GPU: Supports up to dual 450W GPUs for enhanced graphics processing power.

The AI Series System is a powerful AI computer that supports GPU expansion, capable of connecting up to two 450W GPUs simultaneously, accelerating inference computations and delivering exceptional computational performance.

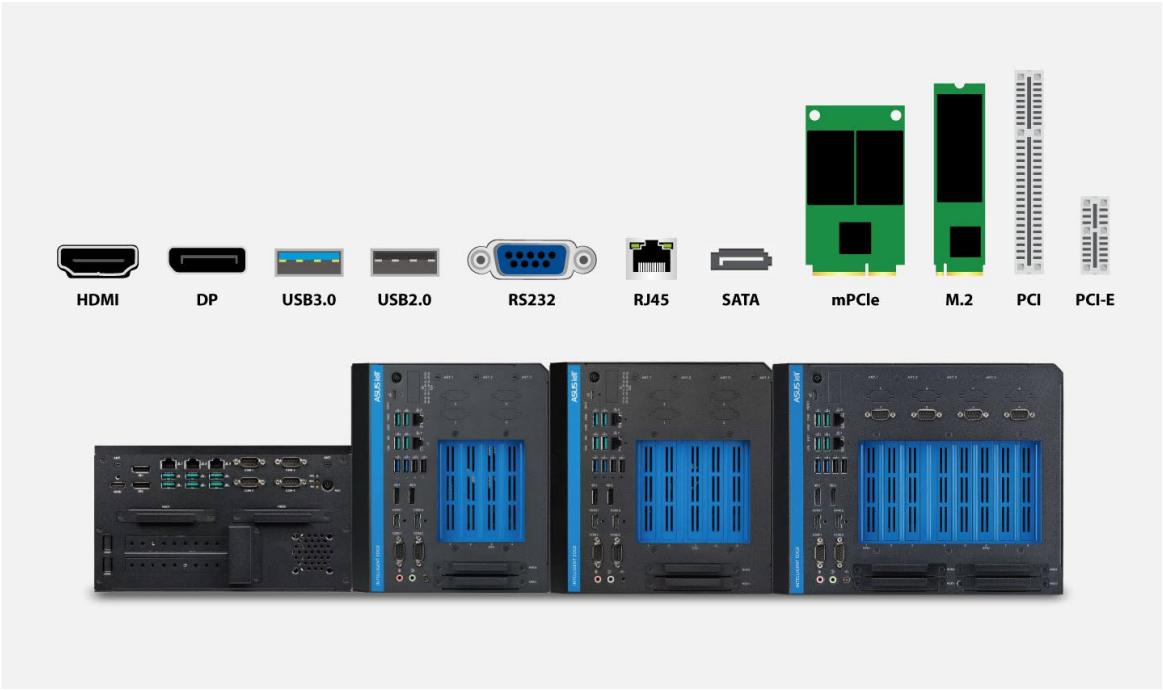
Note: The GPU is applicable to the AI Series System.



Rich I/O Ports to Meet Diverse Expansion Needs

The AI series high-edge computing systems feature a variety of I/O ports, such as HDMI, DP video connectors, USB, RS232, RJ45, and other data transmission interfaces. These systems are designed to meet diverse application needs and can be expanded or upgraded in the future based on specific requirements and different operating environments.

※ Applicable to AI series systems.



TPM 2.0 Encrypted Data Security

For applications with high security demands, such as AI edge computing, IoT, and industrial automation, a variety of security features are provided, including key management, data encryption, identity authentication, tamper resistance, and remote verification. These features effectively safeguard system and data security.

Diverse Application Scenarios

The ASUS Rugged & AI series high-performance edge computing systems are designed for robust durability, making them ideal for applications in harsh environments requiring wide temperature tolerance, wide voltage range, and vibration resistance. These include fields such as aviation, maritime navigation, oil and mineral extraction, construction, autonomous driving, mobile healthcare, smart surveillance, and data inference. The entire product line is

tailored to meet the demands of such applications.

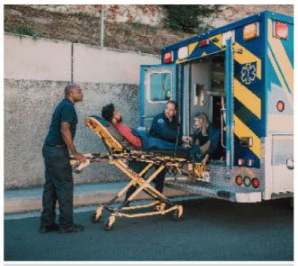

Aviation


Maritime Shipping


Oil Mining


Construction and Building


Autonomous Driving

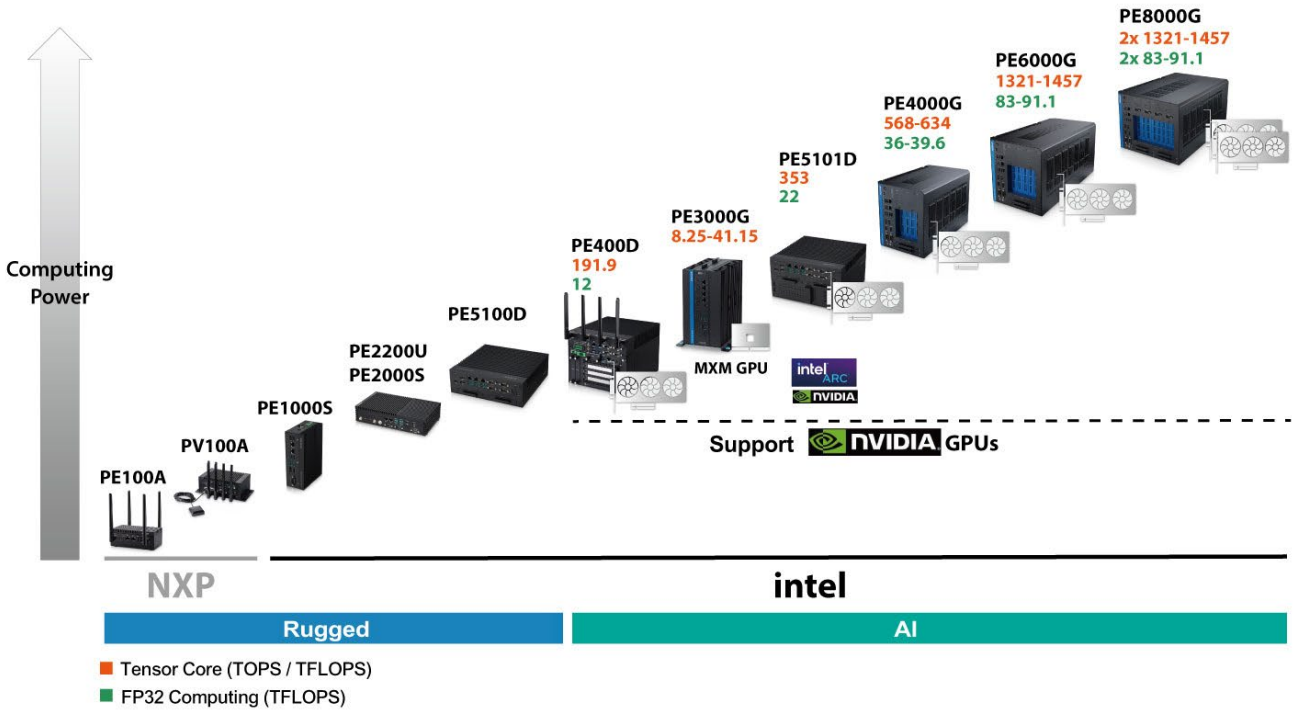

Mobile Healthcare


Smart Surveillance

Data Inference

Computing Power Across the Entire Product Line

Choose the system architecture and computing power according to your requirements.



Select an Edge Computing System

Rugged

Model	PE100A	PV100A	PE1000S	PE2000S	PE2200U	PE5100D
Operating Temperature	-20~60˚C	-25~70˚C	-25~70˚C	-20~60˚C	-20~60˚C	-25~70˚C
Wide Voltage	DC 12V~24V	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 8V~48V
Shock & Vibration	Vibration: 0.21 Grms, sine, 5-500 Hz Shock: 50 Grms, half sine, 11ms	MIL-STD 810H	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes
CPU	NXP i.MX8M Cortex® A53	NXP i.MX8M Cortex® A53	intel Atom® X6000E系列 Celeron J6412	intel Atom® X7000E系列 Processor N 系列	intel Core™ Ultra 5 / Ultra 7	intel Core™ i3 / i5 / i7 / i9
GPU	×	×	×	×	×	×
I/O Ports – USB / M.2 mPCIe...	○	○	○	○	○	○
I/O Ports – SATA	–	–	○	○	○	○
I/O Ports – PCI / PCIe	–	–	–	–	–	–
TPM Encryption	○ (V2.0)	–	○ (V2.0)	○ (V2.0)	○ (TPM-SPI-A)	○ (V2.0)
Low Power Consumption	○	○	○	○	○	○

AI

Model	PE400D	PE3000G	PE5101D	PE4000G	PE6000G	PE8000G
Operating Temperature	-20~60˚C	-20~60˚C	-20~60˚C	-20~60˚C	-20~60˚C	-20~60˚C
Wide Voltage	DC 9V~36V	DC 8V~48V	DC 8V~48V	DC 8V~48V	DC 8V~48V	DC 8V~48V
Shock & Vibration	Vibration: 0.21 Grms, sine, 5-500 Hz Shock: 50 Grms, half sine, 11ms	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes	MIL-STD 810H Vibration during operation: 5-500 Hz, 5 Grms, 3 Axes
CPU	intel Core™ i3 / i5 / i7 / i9 10 th Gen Xeon ® W	intel Core™ i3 / i5 / i7	intel Core™ i3 / i5 / i7 / i9	intel Core™ i3 / i5 / i7 / i9	intel Core™ i3 / i5 / i7 / i9	intel Core™ i3 / i5 / i7 / i9
GPU	○	○ (MXM GPU)	○ (200W)	○ (200W)	○ (450W)	○ (450W x 2)
I/O Ports – USB / M.2 mPCIe...	○	○	○	○	○	○
I/O Ports – SATA	○	○	○	○	○	○
I/O Ports – PCI / PCIe	–	–	○	○	○	○
TPM Encryption	○ (V2.0)	○ (V2.0)	○ (V2.0)	○	○	○
Low Power Consumption	×	×	×	×	×	×