

Edge AI GPU System

PE4000G (Preliminary)

Rugged GPU Computing Edge AI System supporting Intel® 12th Gen Core™ CPU and up to 200W GPU Card



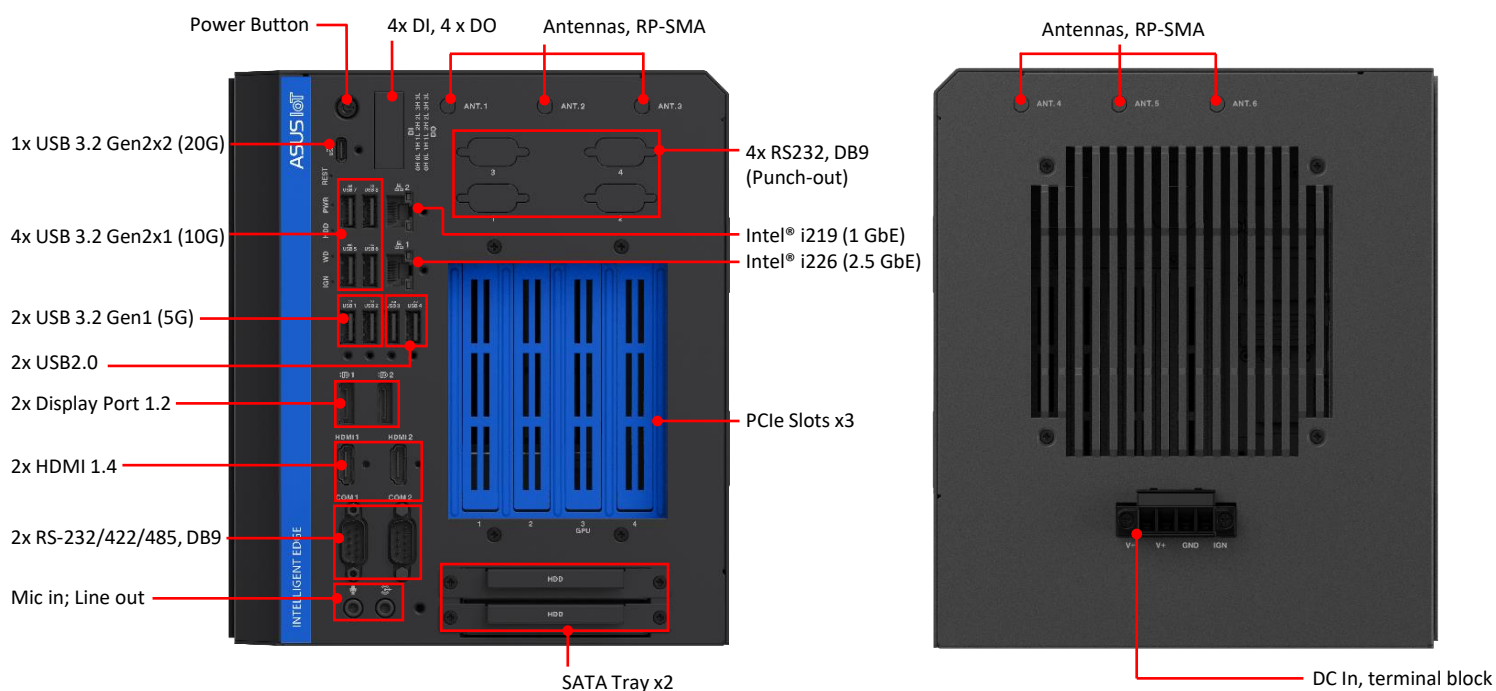
Features

- Intel® 13th/ 12th-Gen Core™ CPU (Alder Lake-S, R680E chipset)
- Support NVIDIA® GPU card up to 200W
- Two hot-swappable 2.5" SSD
- 8~48V wide-range DC-in w/ built-in Ignition power control
- Comply with MIL-STD 810H

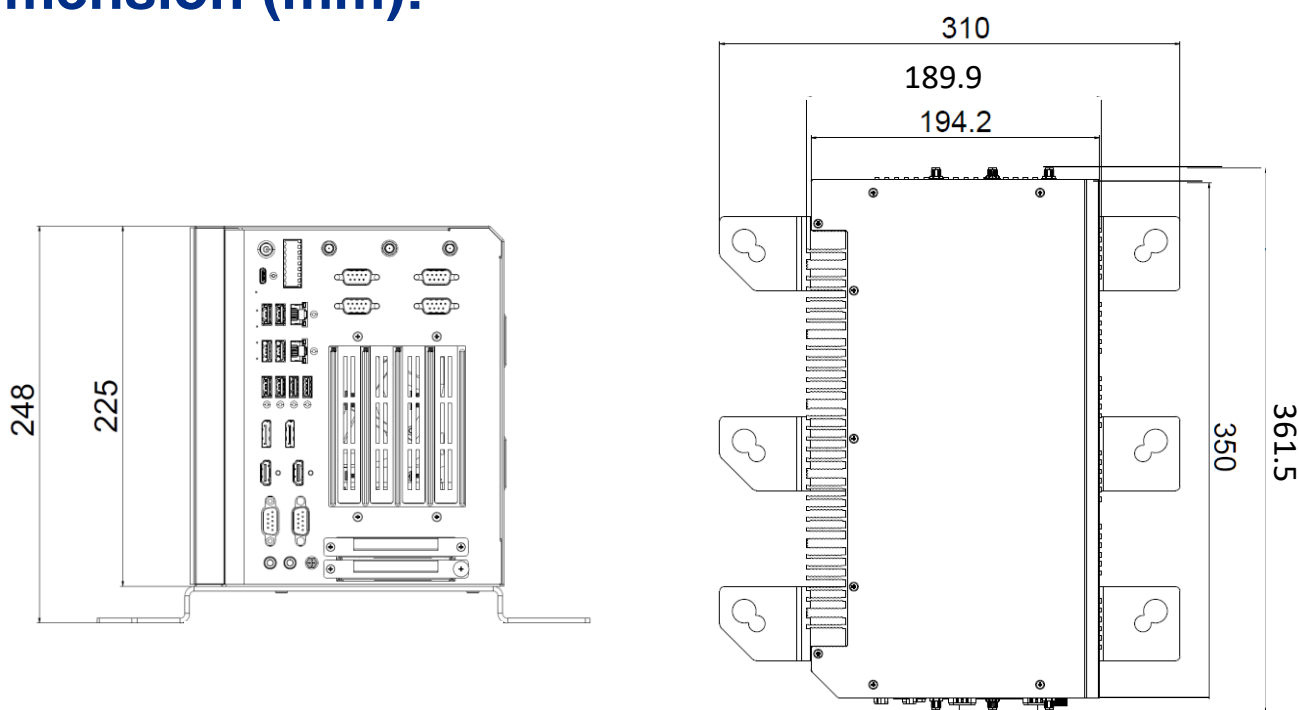
Specifications

System	CPU	Intel® Core® i9-12900E	Intel® Core® i9-12900TE	Intel® Core® i7-12700E	Intel® Core® i7-12700TE	Intel® Core® i5-12500E	Intel® Core® i5-12500TE	Intel® Core® i3-12100E	Intel® Core® i3-12100TE	
	TDP	65W	35W	65W	35W	65W	35W	65W	35W	
	# of Cores	16	16	12	12	6	6	4	4	
	P Core Base Freq.	2.3 GHz	1.1 GHz	2.1 GHz	1.4 GHz	2.9 GHz	1.9 GHz	3.2 GHz	2.1 GHz	
	Max Turbo Freq.	5.0 GHz	4.8 GHz	4.8 GHz	4.7 GHz	4.5 GHz	4.3 GHz	4.2 GHz	4.0 GHz	
	Chipset	R680E								
	Memory	2 x SO-DIMM, DDR5 up to 4800MHz MHz, ECC/ non ECC, max. 64GB								
External Interfaces	Display	2x HDMI 1.4, supports up to 4096 x 2160 @ 30 Hz 2x DP 1.2, supports up to 4096 x 2160 @ 60 Hz, DP++								
	Ethernet	1x Intel® i219-LM (1 GbE), support PXE boot, RJ45, wake on Lan 1x Intel® i226-IT (2.5 GbE), support PXE boot, RJ45, wake on Lan								
	AMT	Supports Intel vPro/ AMT								
	USB	1x USB 3.2 Gen2x2 (20G), type C 4x USB 3.2 Gen2x1 (10G), type A						2x USB 3.2 Gen1 (5G), type A 2x USB2.0, type A		
	Audio	Mic in; Line out								
	COM	2x COM: RS-232/422/485, DB9 4x COM: RS-232, DB9 --- Punch-out port (optional)								
	DIO	4x DI, 4 x DO support isolation (optional)								
	LED	LED Indicators x 4 (by on-board SMD shows PWR/ storage (HDD)/ watch dog timer(WDT)/ ignition(IGN)								
	Antenna	4x cellular; 2x wifi								
	expansion	PCIe	4 x PCIe slot (2 configuration: 1 x PCIe16 + 2 x PCIe4 or 2 x PCIe8 + 2 x PCIe4, auto-detect)							
Mini PCIe		1 x Mini PCIe socket (support mSATA or cellular module) support single nano SIM								
M.2 M Key		1 x M.2 2280 M-key socket (support NVMe PCIe4)								
M.2 E Key		1 x M.2 2230 E-key socket (support CNVi, Wi-Fi/BT module)								
M.2 B Key		1 x 3042/3052 (support M.2 5G/ 4G module/ UDR GPS module) support dual nano SIM								
Wireless	2.5" SATA	2 x 2.5" slots (hot-swappable, supports SATA 3.0, 7~7.5mm)								
	Wifi	WiFi5, WiFi 6/6E (2 SMA)								
Power	Cellular	4G LTE, 5G NR (with GPS antenna)								
	System Power	1x4 pin pluggable terminal block for 8-48V DC input								
	Power related button	Power button Reset button Header for remote power button								
	Power Supply	330W, 480W (wide-temp)								
Mechanical	TYPE	ATX/AT/Ignition								
	Mounting	Damping bracket mounting kit								
	GPU holder	Card holder								
	Dimension	225mm(H) *198mm(W) *350mm(D)								
	Weight	8kg								
Environment	Operating Temp.	* -20~60°C with 35W CPU (or CPU configured as 35W TDP), and all module operating (industrial parts) * -20~55°C with 65W CPU, and all module operating (industrial parts) * 0~40° with all module operating (commercial parts)								
	Storage Temp.	-40~85°C								
	Relative Humidity	10 to 95% (non-condensing)								
	EMC	CE, FCC VCCI, BSMI								
	Safety	CB, BSMI								
	Vibration	Operating: MIL-STD 810H Method 514.8, Category 4 (Truck transportation over US highways) & 5-500 Hz								
Security	Shock	Operating: MIL-STD 810H Method 516.8, Procedure I, Table 516.6-II; 40 G								
	Green	GA (RoHS)								
	TPM	HW WDT Enable (WDT_EN)								
Others	Watch dog timer	Windows 10 IoT Enterprise, Linux(UBUNTU)								
	OS	Intel RPL-S P2P reserve								

Appearance:



Dimension (mm):



Ordering Information:

CPU	Chipset	SO-DIMM	2.5" SATA	COM	4x COM	DIO	OP Temperature
i9-12900E	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i9-12900TE	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i7-12700E	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i7-12700TE	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i5-12500E	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i5-12500TE	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i3-12100E	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°
i3-12100TE	R680E	2	2	2	Optional	Optional	-20~60/ 0~40°

Packing List:

Description	Qty
Anti shock & vibration damper	4
Desktop mount bracket	2
Power terminal block	1

Optional Accessories:

Description	Qty
DIO terminal block	1