

## Edge AI GPU System

# PE4000G

Rugged GPU Computing Edge AI System supporting Intel® 13th/ 12th-Gen Core™ CPU and up to 200W GPU Card

## Features

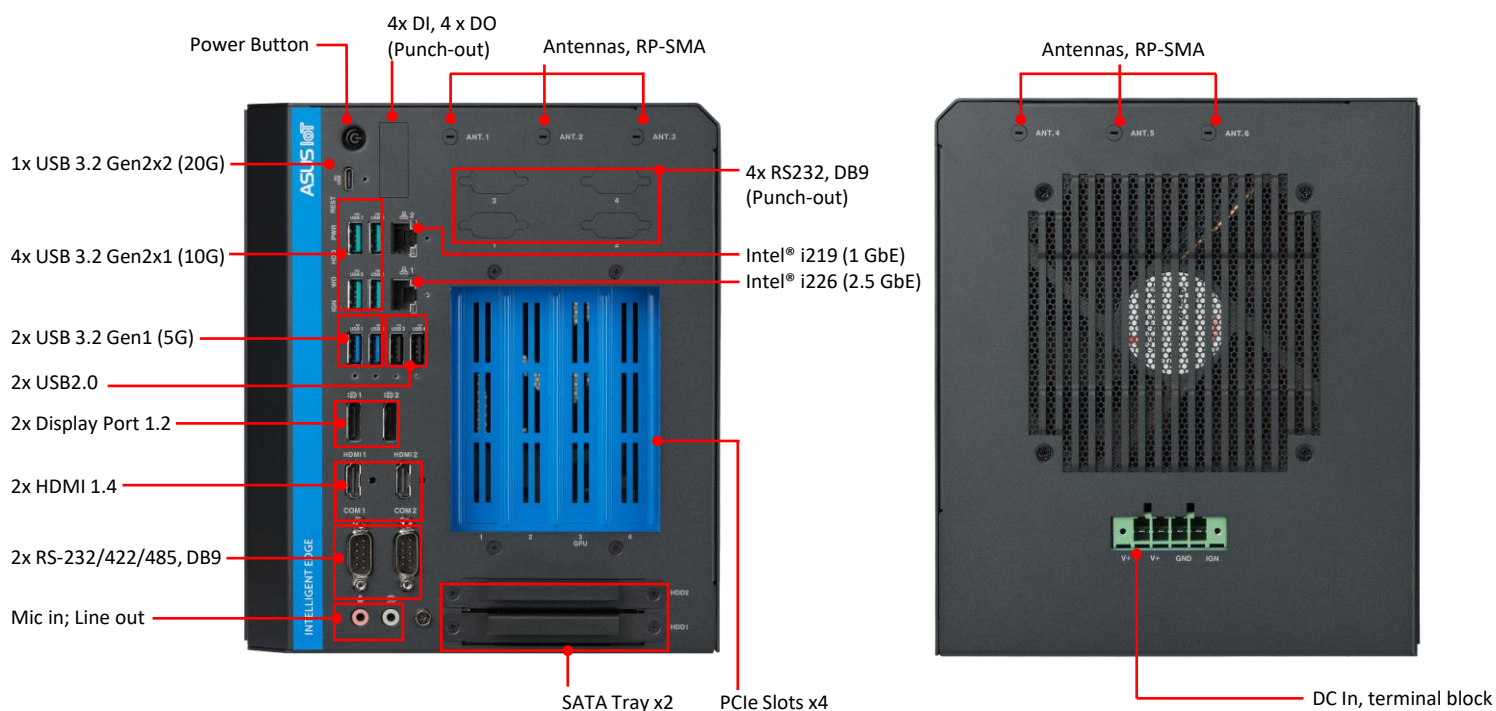
- Intel® 13th/ 12th-Gen Core™ CPU (Alder Lake-S, R680E chipset)
- Support NVIDIA® GPU card up to 200W
- Two hot-swappable 2.5" SSD
- 8~48V wide-range DC-in w/ built-in Ignition power control
- Comply with MIL-STD 810H



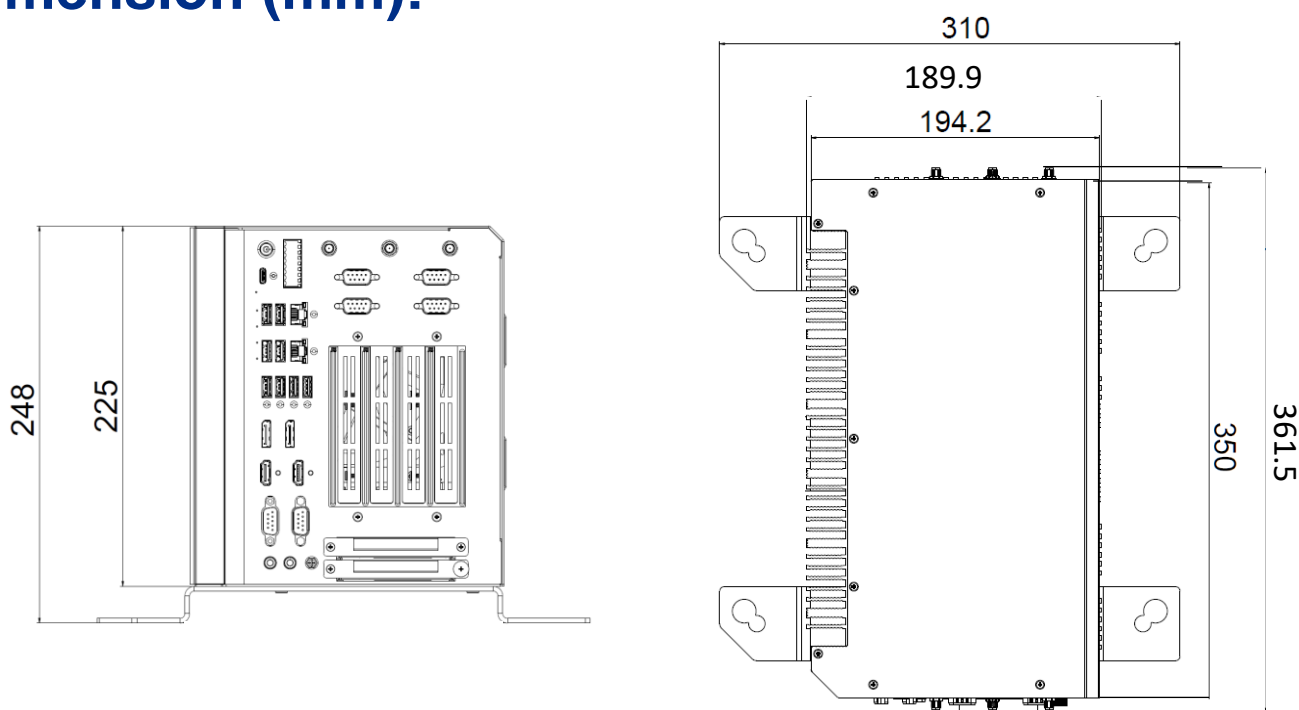
## Specifications

<b>System</b>	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								
<b>External Interfaces</b>	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								
	<b>expansion</b>	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								
<b>Wireless</b>	2.5" SATA	2 x 2.5" slots (hot-swappable, supports SATA 3.0, 7~7.5mm)								
	Wifi	WiFi5, WiFi 6/6E								
<b>Power</b>	Cellular	4G LTE, 5G NR								
	System Power	1 x 4 pin pluggable terminal block for 8-48V DC input								
	Power related button	Power button Reset pinhole Header for remote power button								
	Power Supply	330W, 480W (Optional)								
<b>Mechanical</b>	Type	ATX/AT/Ignition								
	Mounting	Damping bracket mounting kit								
	GPU holder	Card holder (optional)								
	Dimension	225 (H) mm *198 (W) mm *350 (D) mm								
	Weight	8.2 kg								
<b>Environment</b>	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, 5-500 Hz, Table 514.8C-I; 5-500 Hz, 3 Grms, 3 Axes								
	Shock	Operating: MIL-STD-810H, Method 516.8, Procedures I, Table 516.8-IV (40G/11ms)								
<b>Security</b>	Green	GA (RoHS)								
	TPM	On-board Infineon TPM								
<b>Others</b>	Watch dog timer	HW WDT Enable (WDT_EN)								
	OS	Windows 10 IoT Enterprise, Linux(UBUNTU)								

# Appearance:



# Dimension (mm):



## Ordering Information:

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

## Packing List:

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

## Optional Accessories:

Description	Qty
DIO terminal block	1
GPU card holder set	1