

# Rugged Edge AI GPU System

## PE3000G

Rugged fanless edge AI computer supporting NVIDIA® or Intel® MXM GPU and 12<sup>th</sup> Gen Intel® Core™ processor

### Features

- Support NVIDIA® Ampere/Turing™ or Intel® Arc™ A-series MXM GPU, for varied edge AI computing
- 12<sup>th</sup> Gen Intel® Core™ (Alder Lake-P, H) 45W CPU, up to 64GB DDR5 4800 SDRAM
- Patented system architecture and thermal design to ensure -20°C to 60°C fanless operation\*
- 3x 2.5 GbE and 1x GbE ports with optional PoE+ support
- 1x M.2 M key (NVMe), 1x M.2 B key (4G/ 5G NR), 1x M.2 E key (WiFi 6)
- 8-48V wide range DC input with built-in Ignition power control
- MIL-STD-810H and withstand 5 Grms vibration

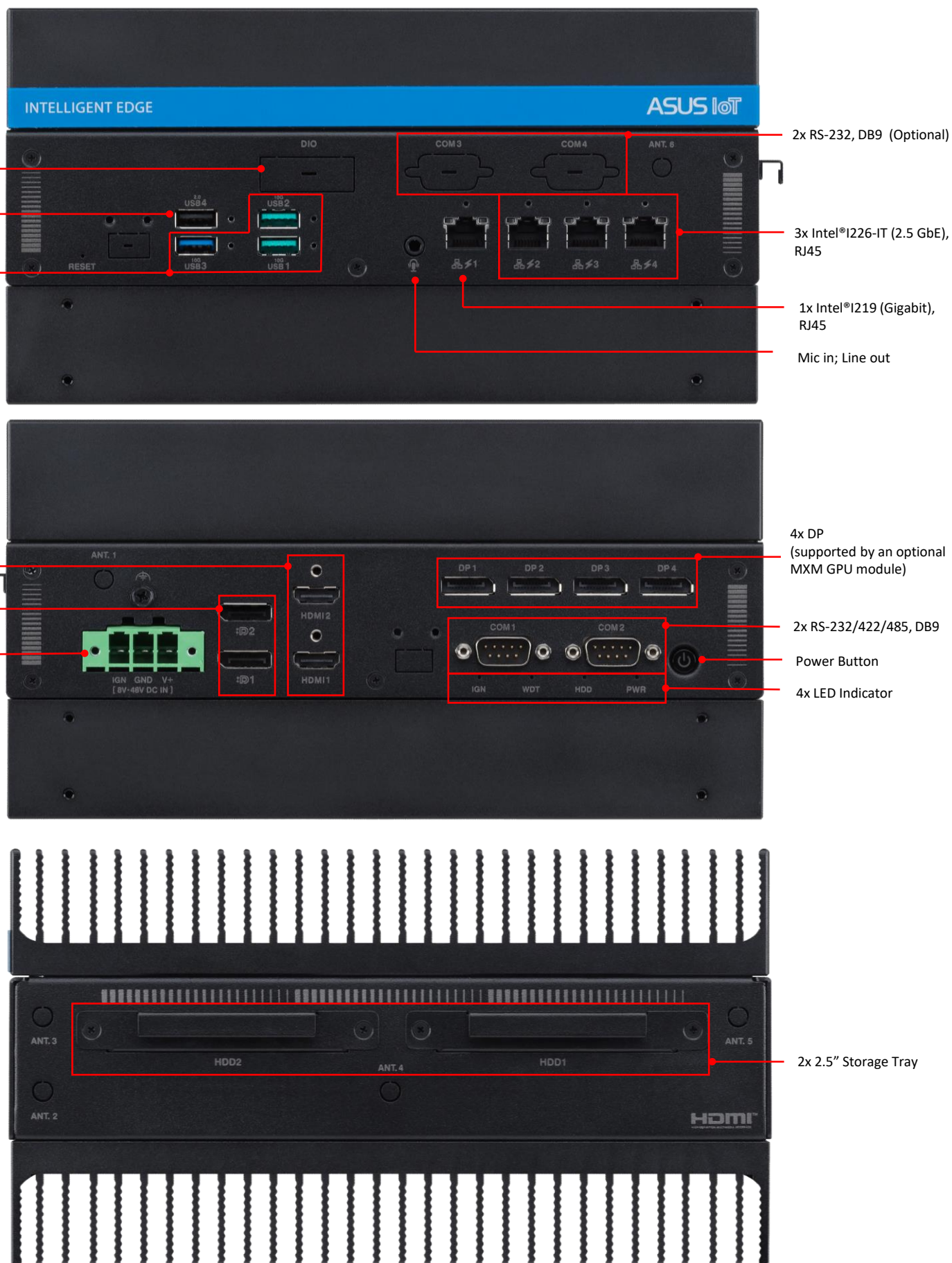


\*R.O.C Patent No. M638395

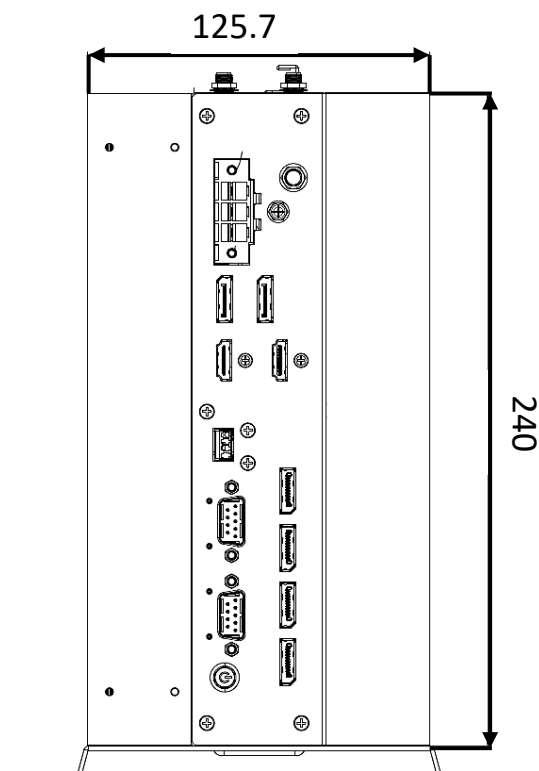
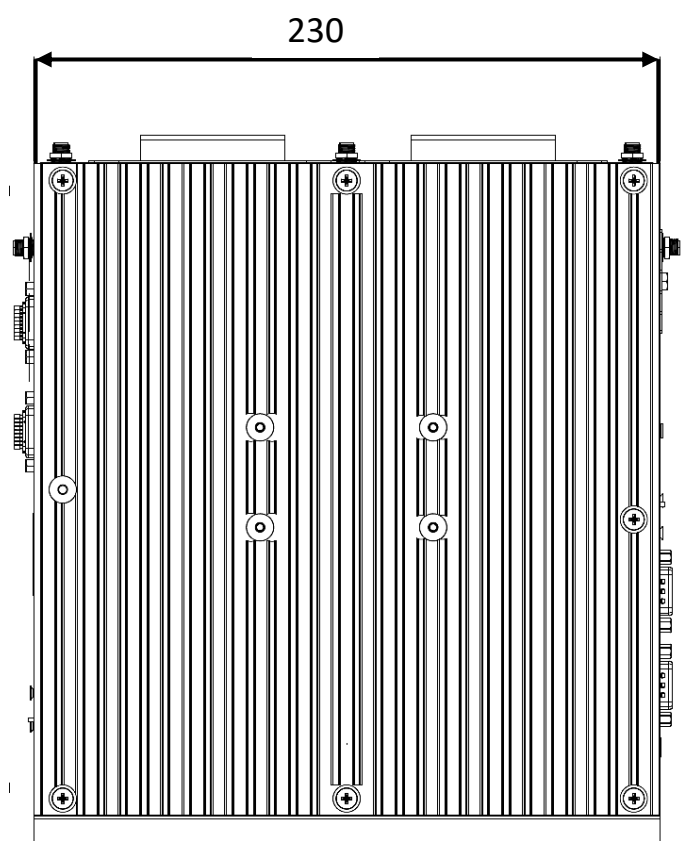
### Specifications

System	CPU	Intel® Core® i7-12800HE	Intel® Core® i5-12600HE	Intel® Core® i3-12300HE
	TDP		45W	45W
# of Cores		14	12	8
P Core Base Freq.		2.4	2.5	1.9
Max Turbo Freq.		4.6	4.5	4.3
Graphics		Integrated Intel® Iris® Xe Graphics (i7/i5) Integrated Intel® UHD Graphics (i3)		
Memory		2x SO-DIMM, up to 64GB DDR5 SDRAM (two SODIMM slots)		
AMT		Supports Intel® vPro / AMT		
TPM		Supports dTPM 2.0		
I/O Interface	Display	2x HDMI 1.4, supports up to 4096 x 2304 @ 30Hz 2x DP ++, supports up to 4096 x 2304 @ 60Hz 4x DP*, supports 4K @ 60Hz (based on MXM GPU Spec.) * The four DP ports are only functional when supported by an optional MXM GPU module		
	Ethernet	1x Intel® I219-LM (1 GbE), RJ45 with screw-lock 3x Intel® I226-IT (2.5 GbE), RJ45 with screw-lock The four ethernet ports* support IEEE 802.3at PoE+ PSE; 100W total power budget (4 ports) * Optional for w/o PoE+ SKU		
	USB	3x USB 3.2 Gen2 x1 (10 Gbps), type A with screw-lock 1x USB 2.0, type A with screw-lock		
	Audio	Mic-in and Line-out		
	DIO	4x DI, 4x DO support isolation, 2 x 8 terminal block (optional)		
	COM	2x COM: RS-232/422/485, DB9 2x COM: RS-232, DB9 (internal COM3/ COM4)* 2 ports for CAN Bus module (COM3/ COM4)* *Optional and either one		
LED Indicator	LED	LED Indicators x4 (by on-board SMD shows PWR/ storage/ watch dog/ ignition)		
Storage Interface	2.5" SATA	2x hot-swappable SATA port for 2.5" HDD/ SSD installation, supporting RAID 0/ 1		
	M.2 NVMe	1x M.2 2280 M key NVMe socket (PCIe Gen4 x4) for NVMe SSD		
Expansion	Mini PCIe	1x Mini PCIe socket, full size, support cellular module		
	M.2 E Key	1x M.2 2230 E-key for selected WiFi module (WiFi5/ WiFi6)		
	M.2 B Key	1x M.2 3042/3052 B-Key with SIM slot support 5G/ 4G module		
	MXM	PCIe x8 slot@Gen4		
Power	System Power	1x 3 pin pluggable terminal block for 8-48V DC input 1x Power button; 1x Reset power button Built-in ignition power control, header for remote power button		
	Power Supply	330W(Optional) /480W (Optional)		
Mechanical	Mounting	Desktop Mount / Wall Mount		
	Dimension	240 x 230 x 125.7 mm		
	Weight	8.2 kg		
Environment	Operating Temp.	-20°C~60°C (w/ 60W MXM, 45W CPU)		
	Storage Temp.	-40°C~85°C		
	Relative Humidity	10 to 95% (non-condensing)		
	EMC	CE/FCC Class A and Class B*, according to EN 55032 & EN 55035, BSMI * Class B: AC mode for PoE+ or non-PoE+ SKU; DC mode for non-PoE+ SKU with 18-20V DC input		
	Safety	CB, CE-LVD, BSMI		
	Vibration	Operating: MIL-STD 810H Method 514.8, Category 4 (Truck transportation over US highways) & 5Grms, 5-500 Hz, 3 Axes		
	Shock	Operating: MIL-STD 810H Method 516.8, Procedure I, Table 516.6-II; 20 G		
Others	Green	GA (RoHS)		
	Watch dog timer	HW WDT Enable (WDT_EN)		
	OS	Windows 10 IoT Enterprise		

# Appearance:



## Dimension (mm):



## Packing List:

PN	Description	Qty
13AE0100L05011	Anti shock & vibration damper for Desktop mount bracket	1 (Total 8 pcs)
13AE0100M04011	Desktop mount bracket	1
13AE0100M05011	Wall mount bracket	2
12031-00020400	Power terminal block	1
13MS0190AM1501	Screw for MXM module – 1	1 (Total 2 pcs)
13050-B2805020	Screw for MXM module – 2	2 (Total 4 pcs)
13020-07080000	Screw for Desktop mount bracket/ Wall mount bracket/ 2.5" SATA Tray	5 (Total 20 pcs)

## Optional Accessories:

Description	Qty
DIO terminal block	1
PWR cable with terminal block	1

## Ordering Information:

SKU	DRAM	2.5" STAT	PoE+	Serial Port	USB	mPCIe	M.2 E-key	M.2 M-key	M.2 B-key	MXM	DIO
Intel® Core® i7-12800HE, i5-12600HE, i3-12300HE	2	2	4 <sup>1</sup>	4 <sup>2</sup>	4	1*	1*	1*	1*	1 <sup>3</sup>	1 <sup>4</sup>

1. Default onboard PoE+ function; optional for w/o PoE+ function sku.
2. COM3/COM4 is optional and could support CANbus module.
3. Optional for MXM GPU module
4. Optional for DIO

\* For the Wi-Fi/ LTE/5G NR module, please check with your importer or integrator for system-level certification.

- The part number might vary for different regulations and package. Please consult the local sales representative for the exact 90PN.