

PE1000S

Ultra-Compact & Rugged Fanless DIN-Rail Gateway with Intel® Atom® x6000 Series or Celeron® J6412 Processor and Featuring 2.5 GbE & PoE+



Features

- Intel® Atom® x6000 Series or Celeron® J6412 processor with DDR4 up to 32 GB
- Ultra compact design supports din-rail mount
- Rich I/O with up to 4 x 2.5 GbE, 6 x USB, 6 x COM
- Wide voltage range: 9 to 36V
- Wide operating temperature range: -25° C to 70° C

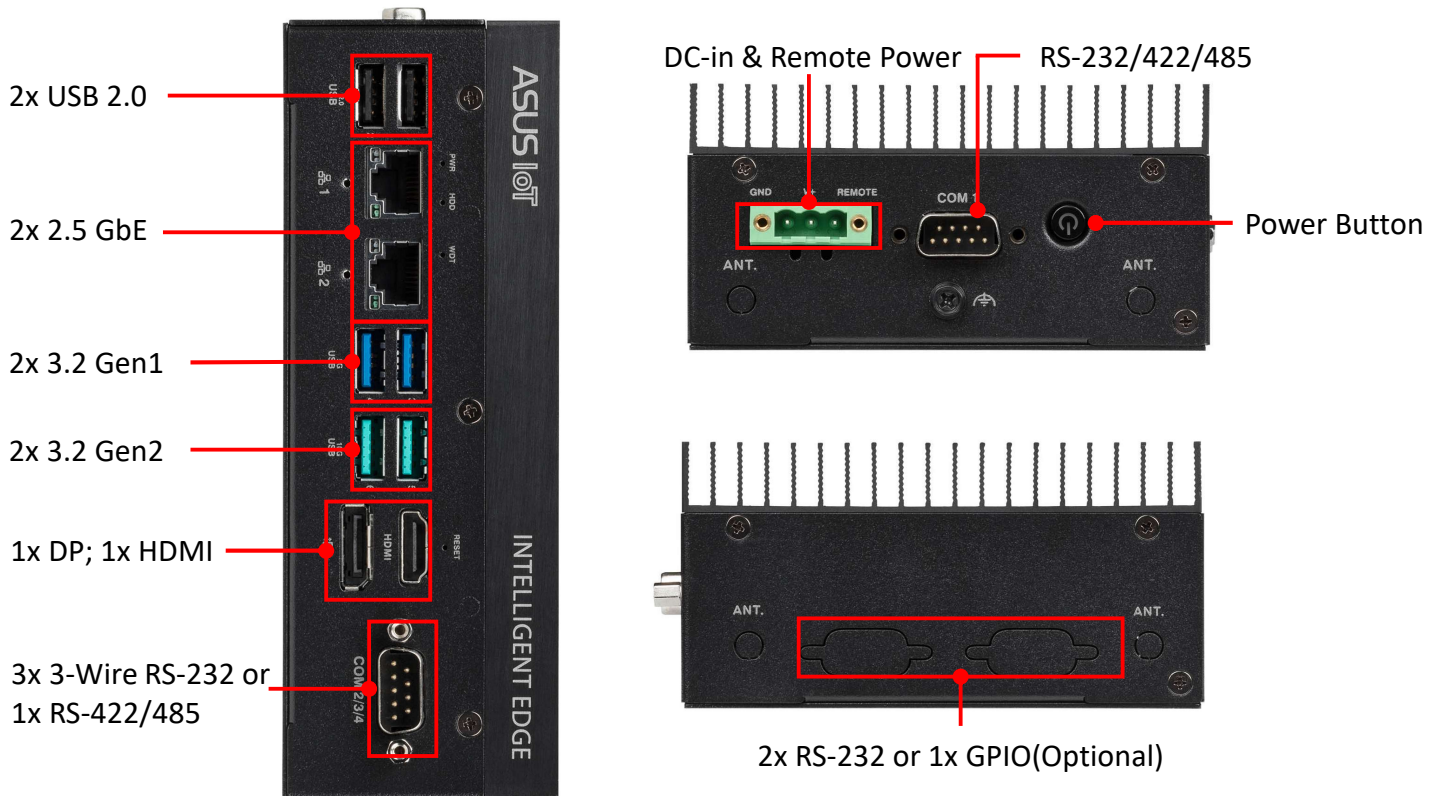
Specifications

System	CPU	Intel® Atom® x6425E	Intel® Atom® x6413E	Intel® Celeron® J6412
	TDP	12W	9W	10W
	# of Cores	4	4	4
	Base Freq.	2.0GHz	1.5GHz	2.0GHz
	Max Turbo Freq.	3.0GHz	3.0GHz	2.6GHz
	Memory	1 x SO-DIMM, DDR4 supports up to 3200 MHz, max 32 GB		
I/O Interfaces	Display	1 x HDMI 1.4b, supports up to 4096 x 2160 @ 30 Hz 1 x DP 1.2a, supports up to 4096 x 2160 @ 60 Hz		
	Ethernet	2 x 2.5 GbE, RJ45 (Intel® i226-IT) 2 x 2.5 GbE, RJ45 (Intel® i226-IT, PoE SKU supports IEEE 802.3at, PSE)		
	USB	2 x USB 3.2 Gen 2 (10Gbps) 2 x USB 3.2 Gen 1 (5Gbps) 2 x USB 2.0		
	COM	1 x RS-232/422/485 3 x 3-wire RS-232 or 1 x RS-422/485 2 x RS-232 (optional, cannot coexist with GPIO)		
	GPIO	1 x 8-bit GPIO (optional, female type, cannot coexist with 2 x RS-232)		
Storage	2.5" SATA	1 x 2.5" HDD/SSD (cannot coexist with PoE SKU)		
	M.2 M Key	1 x M.2 2280 M key socket (PCIe x2/ SATA)		
Expansion Slot	M.2 E Key	1 x M.2 2230 E key socket (PCIe x1/ USB2.0)		
	M.2 B Key	1 x M.2 3042/3052 B key socket with nano-SIM slot (USB 3.2 Gen1/ USB 2.0)		
Power	Power input	9 to 36 V DC-in, 3-pin terminal block (GND, V+, Remote)		
Mechanical	Mounting	Din Rail		
	Dimensions	56 x 110.2 x 160mm 63 x 110.2 x 160mm (PoE SKU)		
	Weight	1.017kg 1.265kg (PoE SKU)		
Environment	Operating Temp.	-25° C to 70° C ^{1,2} -25° C to 60° C ^{1,2} (PoE SKU)		
	Storage Temp.	-40° C to 85° C		
	Relative Humidity	10 to 95% (non-condensing)		
	EMC	CE, FCC, BSMI		
	Safety	CE-LVD, CB, BSMI, CCC		
	Vibration	Operating: MIL-STD 810H Method 514.8, Category 4 & 5Grms, 5-500 Hz, 3 Axes		
	Shock	Operating: MIL-STD 810H Method 516.8, Procedure I, Table 516.6-II; 40 G 11ms		
Green	GA (RoHS)			
Security	TPM	On-board TPM v2.0 powered by Nuvoton NCPT 750		
Others	Watchdog timer	Supported		
	OS	Windows® 10 IoT Enterprise (64-bit) / Linux by Project support		
	Software compatibility	AWS IoT Greengrass		

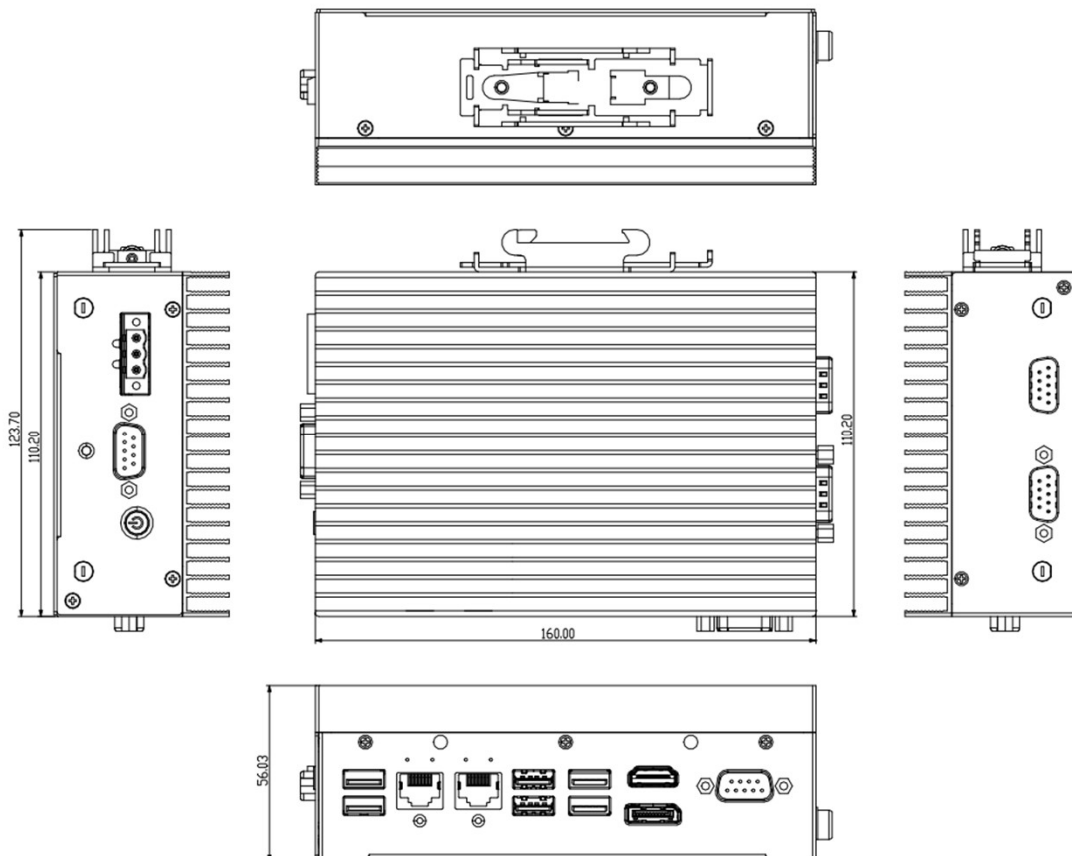
1. For wide temperature demand, the industrial memory & storage are required.

2. No thermal throttling occur with 100% CPU loading via PassMark BurnInTest; Ambient with air flow.

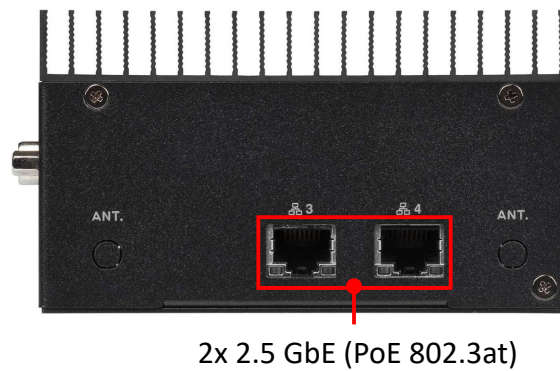
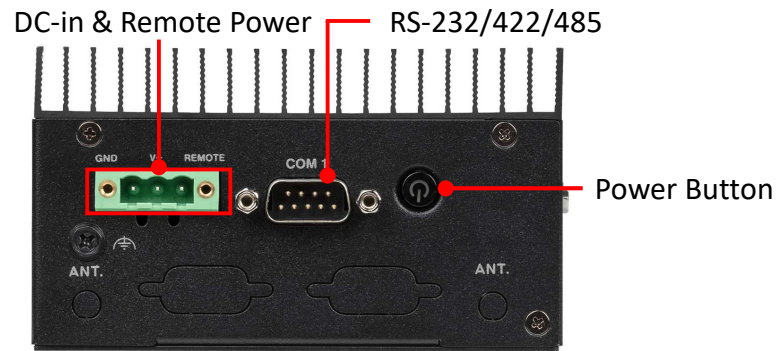
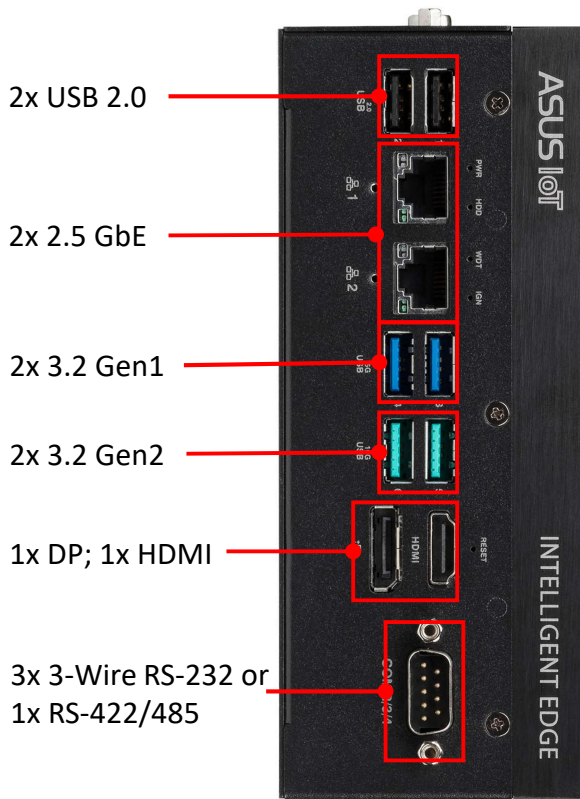
Appearance:



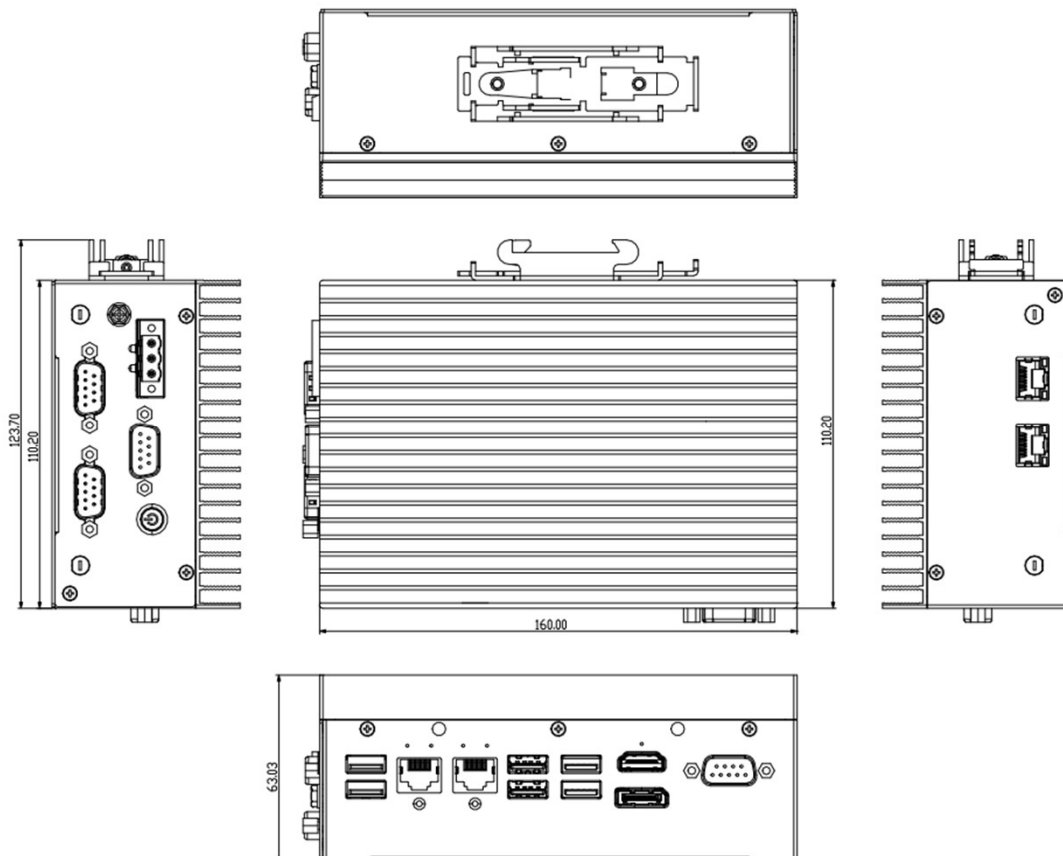
Dimension (mm):



Appearance-PoE:



Dimension-PoE (mm):



Ordering Information:

SKU	CPU	SO-DIMM	LAN	PoE+	2.5" SATA	COM	GPIO	Ignition Power	OP Temp.
Standard SKU	x6425E	1	2	-	1	6 ^{1,2}	1 ²	-	-25~70°C/0~40°C
	x6413E	1	2	-	1	6 ^{1,2}	1 ²	-	-25~70°C/0~40°C
	J6412	1	2	-	1	6 ^{1,2}	1 ²	-	-25~70°C/0~40°C
PoE SKU	x6425E	1	2	2	-	4 ¹	-	Support ³	-25~60°C/0~40°C
	x6413E	1	2	2	-	4 ¹	-	Support ³	-25~60°C/0~40°C
	J6412	1	2	2	-	4 ¹	-	Support ³	-25~60°C/0~40°C

* Please check with your importer or integrator for system level certification.

1. COM1 supports RS-232/422/485, COM 2/3/4 psupport 3 x 3-wire RS-232 or 1 x RS-422/485.

2. Supports additional 2 x RS-232 or 1 x GPIO ports for option, but it cannot coexist with each other.

3. Please refer to the instruction of UMN to adjust BIOS setup to enable Ignition power control function.

Packing List:

Description	Qty
Power terminal block	1
1-to-3 COM port cable	1
Din rail clip	1
Din rail screw pack	1
SSD screw pack	1

Optional Accessories:

Item	Description
ADAPTER	
	Power adapter, 160W 20V, input voltage 100 to 264VAC, output voltage 20VDC with 8A DC load, -25 to 60°C operating temperature
POWER CORD	
	Power cord with United States (US) plug
	Power cord with Europe (EU) plug
	Power cord with China (CN) plug
	Power cord with Australia (AU) plug
	Power cord with United Kingdom (UK) plug
	Power cord with Korea (KR) plug
	Power cord with Taiwan (TW) plug