

# EIS-S230

## Edge Cloud Solution with Scalable Data Service Platform

NEW



### Features

- Integrated hardware plus software for back-end data service and light private cloud
- Pre-configured system: Intel Xeon, Ubuntu OS with 32GB RAM/ 512GB mSATA SSD
- Open and Standard structure: kubernetes Built-in, Multiple DB Connections, On-demand Microservices
- Integrated IoT Software: Private Cloud Deployment, Platform Management, Application Integration
- Application integration: DeviceOn/iEdge, Grafana, Prometheus, Kubeapps, Kubernetes Dashboard
- Sustainable Management: Condition Monitor, Load Balance, Self-Healing
- DeviceOn/iEdge inside for IoT Device Operation Management



### Introduction

For accelerating IoT application landing, Advantech provide Edge cloud solution EIS-S230 for our customer to build a stable and reliable back-end data service or light private cloud. EIS-S230 is a all-in-one solution for user. It built in Intel Xeon CPU to offer extreme computing power for data service. Moreover, EIS-S230 is integrated Kubernetes to support micro-service, and build-in complete back-end software components, includes RabbitMQ for IoT Hub, mongoDB and PostgreSQL for database, Grafana for data visualization and Prometheus for Back-end management. EIS-S230 also provide dynamically scale out function, user can extend the resources if necessary. It help customer create IoT applications more easily and flexibly. Speed up the time to market.

### Software Stack

#### Platform Management

##### Database Management



- A powerful, open source object-relational database system.
- mongoDB is a document database, which means it stores data in JSON-like documents.

##### Backend Management



- Deployment, scaling, and management of containerized applications.
- Ceph stores data as objects within logical storage pools. The algorithm enables the Ceph Storage Cluster to scale, rebalance, and recover dynamically.

##### Message Broker



- Lightweight and easy to deploy on premises and in the cloud. It supports multiple messaging protocols

#### Operation Management

##### DeviceOn/iEdge



##### Device Management

- Automatic device registration
- One-key to dashboard
- Device security



##### Monitoring & Control

- Real-time operations
- Power on/off
- Remote control



##### Update Management

- Batch provisioning
- Firmware updates
- Software updates

#### Applications Development

##### Data Visualization



- Grafana allows you to query, visualize, alert on and understand your metrics.
- Prometheus is an open-source software application used for event monitoring and alerting.

##### Applications Management



- Web-based UI for deploying and managing applications in Kubernetes clusters.
- Stateless, highly scalable server side application that stores and lets you distribute Docker images.
- A Chart Repository server written in Go. It provides an API for uploading charts.

##### Machine Learning



- Making deployments of machine learning (ML) workflows on Kubernetes Device Management

## Server Function List

Manage & Monitor	Comprehensive management & monitoring Web console
High Availability	Supports highly available deployment
Scalability	Horizontal/Vertical scaling via clustering with server architecture and kubernetes' features
Lightweight and Easy to Deploy	Microservices architecture to deploy and run applications easily
Role-Based Access Control	Fine-grained authorization and authentication
Load Balancing	Balancing workload and network traffic
Health Check & Self-Heal	Check health status of services and heal them in need

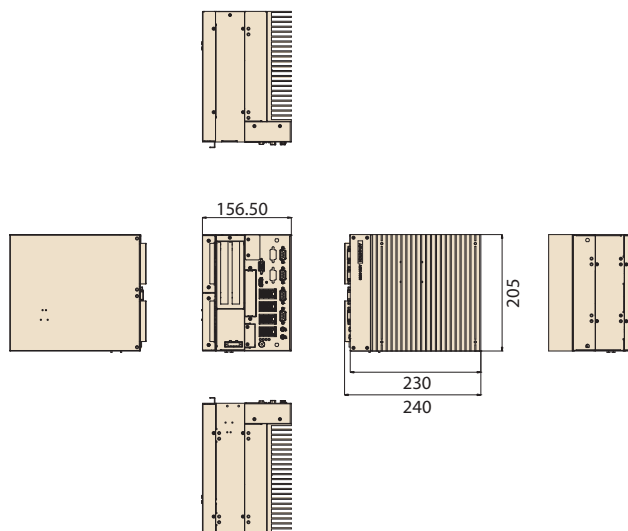
\*\*Support depends on device type, OS and account permission.

## System Specifications

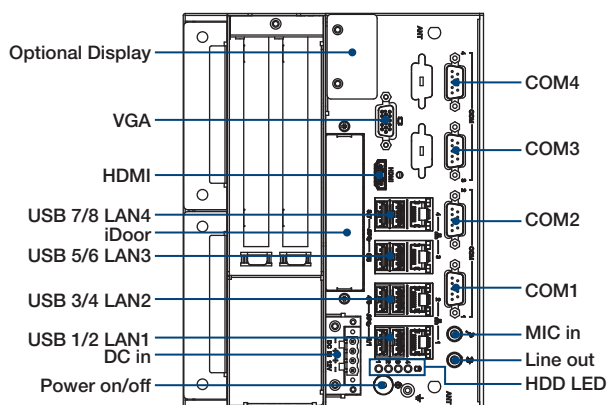
Model Name	EIS-S230				
Processor System	CPU	E3-1235L V5	i7-7700/i7-6700	i5-7500/i5-6500	i3-7101E
	Frequency	2.0GHz	3.6GHz/3.4GHz	3.4GHz/3.2GHz	3.9GHz
	L3 Cache	8MB	8MB	6MB	3MB
	TDP	25W	65W	65W	54W
	Chipset	C236			
	BIOS	AMI EFI 128Mbit			
Memory	Technology	DDR4 2133 MHz			
	Max. Capacity	32 GB			
	Socket	2 x 260-pin SO-DIMM			
Graphics	Chipset	Intel® HD Graphics 630			
	Graphic Engine	Direct x 12, OpenGL 4.4 HW Encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8. HW Decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/MMV9, JPEG/MJPEG, VP8 and VP9			
	VGA	1920x1200@ 60Hz			
	HDMI	1 HDMI port, HDMI 2.0 for HD video playback, 3840x2160@30Hz			
	Optional 3rd Display module	DVI-D / DP / HDMI Display Port			
	Triple Display	VGA+HDMI + 3rd display module			
Ethernet	LAN1	10/100/1000 Mbps Intel I219-LM GbE, support Wake On Lan			
	LAN2, 3, 4	10/100/1000 Mbps Intel I210 GbE, support Wake On Lan			
Audio	Interface	Realtek ALC888S, High Definition Audio, Line-out, Mic-in			
Others	Watch dog Timer	255-level timer interval, setup by software			
	TPM	TPM 2.0			
I/O Interface	Serial Port	4 x RS-232/422/485 port with auto flow control; COM 1 support 5V/12V power supply (by jumper)			
	USB	8 x USB 3.0 ports			
	P/S2	1 Port support by cable and bracket (Optional)			
	Optional I/O	16bit DIO or 2 x RS-232 ports			
Expansions	Mini PCIe	2 x Full-size Mini PCIe (2 x support mSATA, 1 x support SIM holder)			
	M.2	1 x E key for WiFi			
	i Door	1 set (Optional)			
	Add-on Card Slot	Maximum card size 110mm (H) x 180mm (L) Suggest maximum power consumption 10W for each slot 2 Slots PCIe8 (Default) 2 Slots PCI (Support by project) 1 Slots PCIe16 (Support by project)			
Storage	HDD	2 x 2.5" SATAIII HDD Bay with Max Height 15mm (support Intel SW RAID (Up to 4 x 2.5" SATAIII HDD bays by optional 2"AMK-A0028E)			
	mSATA	2 x mSATA socket (Share with Mini PCIe)			
Software Support	Microsoft Windows	Windows 10 (Windows 7 for 6th Gen CPU only)			
	Linux	Ubuntu (Others By Project Support)			
Power Requirements	Power Type	AT/ATX			
	Power Input Voltage	9-36V			
	Power Adapter	AC to DC, 150W (Optional)			
Power Consumption (CPU/Memory Only)	Typical	25.68W			
	Max.	88.92W			
Mechanical	Construction	Aluminum housing			
	Mounting	Desk mounting			
	Dimensions (W x H x D)	156.5 x 205 x 230 mm (6.16" x 8.07" x 9.06")			
	Weight	5.87Kg			
Environment	Operating Temperature	25W/35W/65W(only 6th Gen) Processor with extended temp peripherals: -20 ~ 60 °C with 0.7m/s air flow Under 73W processor with HDD: 0 ~ 40 °C with 0.7m/s air flow			
	Storage Temperature	-40 ~ 85 °C			
	Relative Humidity	95% @ 40 °C (non-condensing)			
	Vibration During Operation	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.			
	Shock During Operation	With SSD: 30 G, IEC 60068-2-27, half sine, 11 ms duration			
	EMC	CE/FCC Class B, CCC, BSMI			
	Safety	CB, UL, CCC, BSMI			

## Dimensions

Unit: mm



## Front Panel External I/O Mechanical Layout/Drawing



## Ordering Information

Part Number	CPU	Memory	Storage	OS	Display	GbE	USB 3.0	Serial	Audio	Power Input	Expansion	Operating Temperature*
EIS-S230-U20S501	Intel® Xeon® E3-1275 V6	32GB	512GB SSD	Ubuntu	1 x VGA 1 x HDMI	4	8	4	LINE out	9-36V	2 x PCIE	0 - 40 °C
EIS-S230-0000001	Optional	Optional	Optional	Optional	1 x VGA 1 x HDMI	4	8	4	LINE out	9-36V	2 x PCIE	-20 - 60 °C

\* If industrial grade memory and SSD selected.

## Packing List

Item	Description
1	EIS-S230-U20S501
2	Data Service Server software packages
3	AC to DC power adapter, DC 24V 220W
4	Accessory Package

## Optional Items

Part Number	Description
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
1700000237	Power cable 3-pin 183cm, PSE type
1700019146	3-pin power cord (CCC)
96ND1TB-ST-SG5KA	Seagate ST1000VT001 1TB HDD
SQF-S25V4-1T-SBC	SQF 2.5" SSD 1TB SSD

\* MUST select two pieces of HDD/SSD as data storage.