

# ECU-579

## IEC-61850-3 Certified Power Automation Server Based on Intel® Xeon® Processor Scalable Family

NEW



### Features

- 2U rackmount server with wide operating temperature
- Supports 2nd Gen. Intel® Xeon® Scalable Processors
- 12 x DIMM sockets supporting up to 768GB DDR4 SDRAM
- Up to 2 x hot-swappable PSUs and 4 x hot-swappable fans for redundancy
- Up to 4 x 2.5" hot-swappable HDD/SSD, 1 x M.2 2280 SATA/PCIe SSD
- Up to 2 x PCIe x16 Gen3 slots, PCIe x8 Gen3 slots, PCIe x4 Gen3 slots
- IPMI 2.0-compliant management with reliability and security enhancements
- Optional TPM 2.0 module

### Introduction

The ECU-579 is a TUV IEC 61850-3 and IEEE 1613 certified power automation server, which can provide high reliability and stability for centralized substation protection and control system in HV/MV substations. Designed around the new Intel® Xeon® Processor Scalable Family, the ECU-579 support high performance and long system lifecycles required by the industry. Hot-swappable PSUs make the ECU-579 a platform of choice for applications requiring zero downtime. Hot-swappable fans provide the ability to withstand single fan failures.

### Specifications

#### General

- **Certification** CE, FCC, IEC-61850-3, IEEE-1613, CB/UL
- **Power Requirements** Redundant Power Supply, 800W  
ECU-579-SSDA: 100-240V<sub>AC</sub>  
ECU-579-SSDB: 100-240V<sub>AC</sub>, 100-240V<sub>DC</sub>
- **Dimensions (W x D x H)** 440 x 460 x 88 mm
- **Enclosure** SECC and aluminum
- **Weight** 10.0 kg
- **Mounting** 2U rackmount
- **Cooling** 4 x hot swap high speed fans

#### System Hardware

- **CPU\*** Compatible with Intel® Xeon® Processor Scalable Family
- **Chipset** Intel® C621 chipset
- **Memory\*** Up to 12 x 2400/2666MHz DDR4 ECC Standard ECC RDIMM/LRDIMM  
Max capacity per channel: 64GB  
Max total capacity per system: 768GB
- **Storage\*** 4 x 2.5" hot-swappable SATA HDD/SSD (Intel® RST RAID 0,1,5,10)  
1 x M.2 2280 SATA/PCIe NVMe SSD
- **Display** 1 x VGA, 2 x DVI-D (Resolution: 2K/60p)
- **Watchdog Timer** Programmable, with 256 time intervals, from 1 to 255 seconds for each tier
- **System Management** IPMI Aspeed AST2500 BMC

\*To be assembled in the Advantech CTOS center.

#### Communication Interface

- **LAN** 4 x 10/100/1000 Base-T RJ-45 ports (Support teaming function, PXE)
- **USB** 3 x USB3.0
- **Expansion** 2 x standard PCIe x16 Slot Gen3 low profile  
1 x standard PCIe x8 Slot Gen3 low profile  
1 x standard PCIe x4 Slot Gen3 low profile  
1 x Mini PCIe  
1 x PCIe + PCI interface for ECUP card extension

#### Environment

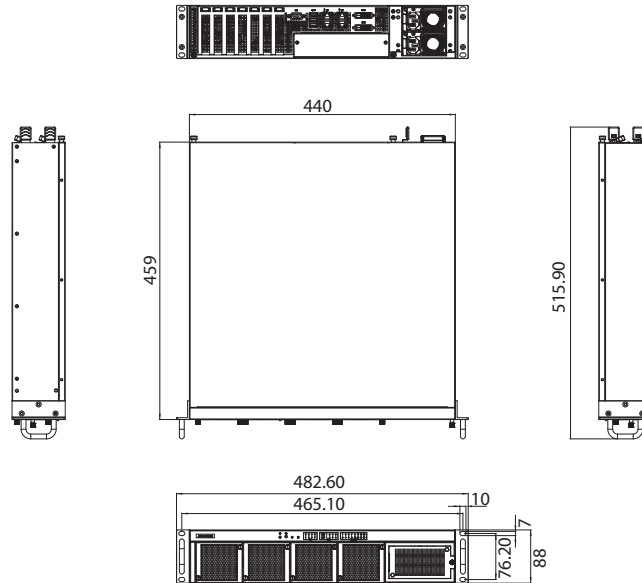
- **Operating Temperature** -20 ~ up to 60 °C (Depends on CPU model and configuration)
- **Non-Operating Temperature** -40 ~ 85 °C
- **Operating Humidity** 5 ~ 95% RH (non-condensing)
- **Storage Humidity** 5 ~ 95% RH (non-condensing)

### Ordering Information

- **ECU-579-SSDA** Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 100-240AC redundant power
- **ECU-579-SSDB** Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 100-240AC/DC redundant power

## Dimensions

Unit: mm



## CPU Compatibility List

The below CPU part numbers passed a compatible test:

Part Number	Description
96MPXECA-1.9-30M36	Intel® Xeon® Gold 6238T Processor (22 Cores, 125W)
96MPXECA-2.1-22M36	Intel® Xeon® Gold 5218T Processor (16 Cores, 105W)
96MPXECA-2.2-11M36	Intel® Xeon® Silver 4209T Processor (8 Cores, 75W)

## RAM Compatibility List

Part Number	Size	Speed*	Type	ECC	Temperature***
SQR-RD4N64G3K2SRMB	64 GB	3200	DDR4	Y	0-85°C
96D4-32G3200ER-MI	32 GB	3200	DDR4	Y	0-85°C
SQR-RD4N32G3K2SRB	32 GB	3200	DDR4	Y	0-85°C
SQR-RD4N16G3K2SZCB	16 GB	2400**	DDR4	Y	0-85°C

\*Actual speed depends on the spec. of CPU.

\*\*Need to set as 2400 MHz via BIOS for better compatibility.

\*\*\*ECU-579 has passed 500 times on/off test under -25°C environment.

## Advantech PCIe/LP Card Options

Part Number	Description
PCIE-1220PS-00A1E	2-ports 10G fiber NIC (SFP+) with Intel® X710
PCIE-1130PS-00A1E	4-ports 1G fiber NIC (RJ-45) with Intel® I350
PCIE-1131PS-00A1E	4-ports 1G fiber NIC (SFP) with Intel® I350
PCIE-2230NP-00A1E	4-ports 10G fiber NIC (SFP+) with Intel® XL710
PCIE-2231NP-00A1E	4-ports 10G fiber NIC (RJ-45) with Intel® XL710

## Optional Accessories

Part Number	Description
XECU-FSP800-20FN	CRPS Module A/D 100-240V <sub>AC</sub> , 800W
98R35790001	Fan kits for ECU-579
XEU500-ZRH-2800K2*	CRPS Module A/D 100-240V 800W 80+ Platinum 6K
PCA-TPM-00B1E	TPM 2.0 Module by LPC
96RC-SAS-4P-PE-AD6**	ADAPTEC 3101E-4i SAS 4Port 12GB/S PCIe x8
1700034612-01	M cable Mini SAS HD 36P/SATA 22Px4+1x4P-5.08x4 7
96NIC-1G2P-PE-IN3	INTEL NIC 10/100/1000M PCIe x4 2pt. RJ-45 Server

\*Compliant with IEC 61850-3 EMC standard.

\*\*Required to order with 1700034612-01 x1