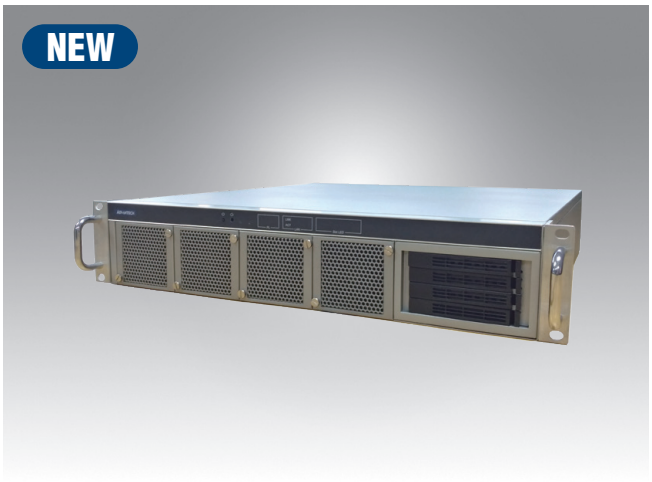
ECU-579

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



Features

- 2U rackmount server with an wide operating temperature
- Intel® Xeon® Processor Scalable Family
- Scalable CPU 24/20/14/8 Core
- 12 x DIMM sockets support up to 768GB DDR4 SDRAM
- Up to 2 x hot-swappable PSU and 4 x hot-swappable Fan for redundancy
- Up to 4 x 2.5" hot-swappable HDD/SSD, 1 x M.2 2280 SATA 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
- Support TPM 2.0 by optional TPM 2.0 module

Introduction

The ECU-579 is 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 Substation. Architected around the new Intel® Xeon® Processor Scalable Family, the ECU-579 support high performance and long system lifecycles required by the industry. Hot-swappable PSU make the ECU-579 a platform of choice for applications requiring zero downtime. Hot-swappable Fan provides the ability to withstand single fan failures.

Specifications

General

- **Certification** CE, FCC, IEC-61850-3, IEEE-1613
- **Power Requirements** 2 x Redundant Power Supply, 800W
  Power1: 100-240V_{AC}, 200-240V_{DC}
  Power2: 100-240V_{AC}, 200-240V_{DC}
- **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 fan

System Hardware

- **CPU** Compatible with Intel® Xeon® Processor Scalable Family (To be assemlem in Advantech CTOS center)
- **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" hotswap SATA HDD (RAID0/1/5/10)
  1 x M.2 2280 SATA SSD
- **Display** 1 x VGA, 2 x DVI-D (Resolution: 2K/60p)
- **Watchdog Timer** Programmable 256 levels time interval, from 1 to 255 seconds for each tier
- **System Management** IPMI Aspeed AST2500 BMC

Communication Interface

- **LAN** 4 x 10/100/1000 Base-T RJ45 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)

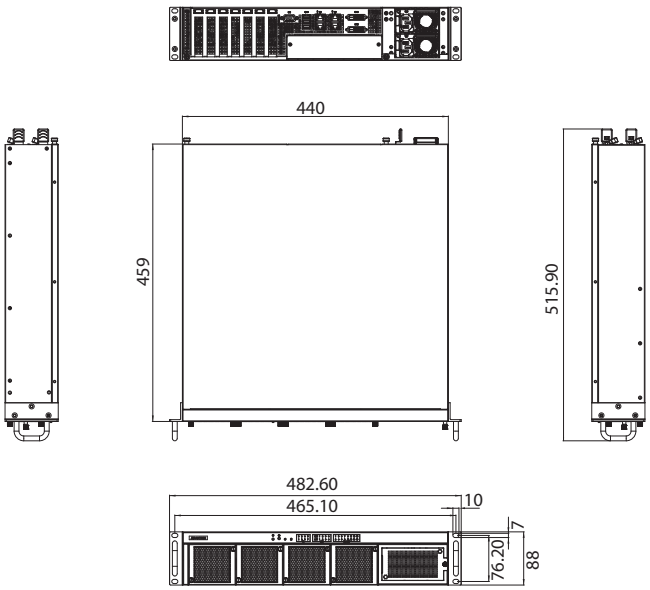
Ordering Information

- **ECU-579-SSDA** Power automation sever base on Intel Xeon processor scalable family with redundant power
- **ECU-579-SSNA** Power automation sever base on Intel Xeon processor scalable family without redundant power

All product specifications are subject to change without notice.

Dimensions

Unit: mm



CPU Compatibility list

Below CPU PN passed compatible test:

PN	Description
96MPXE-2.1-33M36	Intel® Xeon® Gold 8160T Processor (24Core, 150W)
96MPXE-2.0-27M36A	Intel® Xeon® Gold 6138T Processor (20Core, 125W)
96MPXE-2.2-19M36	Intel® Xeon® Gold 5120T Processor (14Core, 105W)
96MPXE-1.9-19M36	Intel® Xeon® Gold 5119T Processor (14Core, 85W)
96MPXE-2.0-11M36	Intel® Xeon® Silver 4109T Processor (8Core, 70W)

RAM Compatibility list

PN	Size	Speed	Type	ECC	2DPC Speed
AQD- D4U8GR24-HE	8 G	2400	DDR4	Y	2400
SQR- RD4N8G2K4S ZBBB	8 G	2400	DDR4	Y	2400
AQD- D4U16R24-HE	16 G	2400	DDR4	Y	2400
SQR-RD4N32G2K6SRCB	32 G	2400	DDR4	Y	2400
AQD- D4U8GR26-SE	8 G	2666	DDR4	Y	2400
AQD- D4U8GR26-HE	8 G	2666	DDR4	Y	2400
XECU-D4U4GR26-SGTR	8 G	2666	DDR4	Y	2400
XECU- D4U4GR26- SGTR	4 G	2666	DDR4	Y	2400

Advantech PCIE/LP card options

Part Number	Description
PCIE-1130PS-00A1E	Quad Port Copper Gigabit Ethernet PCI Express Server Adapter with Intel® I350 (Advantech Form Factor)
PCIE-2230NP-00A1E	4-ports 10G fiber NIC (SFP+) w Intel XL710
PCIE-2220NP-00A1E	2-ports 10G fiber NIC (SFP+) w Intel 82599ES
PCIE-2130NP-00A1E	4-ports 1G fiber NIC (SFP) w Intel I350-AM4

Note: System temperature rating depends on the card temperature rating.

Optional Accessories

Part Number	Description
XECU-FSP800-20FN	CRPS Module A/D 1100-240V_{AC}, 200-240V_{DC} 800W
96PSRM-D800WCRP*	CRPS MODULE D/D -36~-72V 800W W/PFC 80+ Platinum
1700020717-01	A Cable 1*3P-5.0/G-TEM*3 300CM For 48VDC power module (necessary when using 48V DC module)
98R35790000	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

*: Compliant with IEC 61850-3 standard