

ECU-579

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

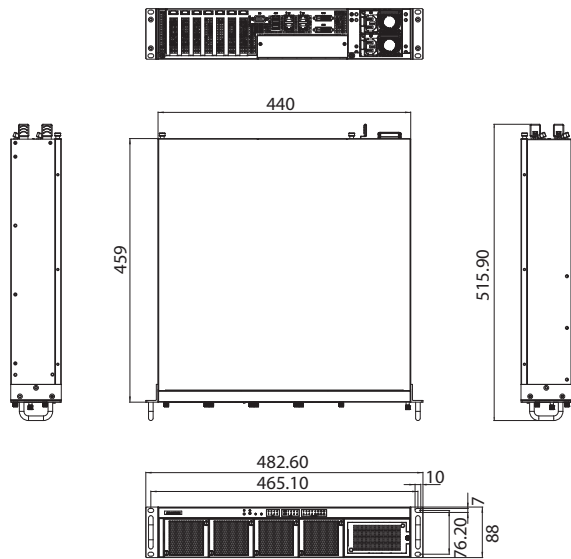
Specifications

| | CPU | Xeon® Gold 6238T | Xeon® Gold 5218T | Xeon® Silver 4209T |
|---------------------|--------------------------|--|------------------|--------------------|
| Computer system* | Processor Base Frequency | 1.90 GHz | 2.10 GHz | 2.20 GHz |
| | Cache | 30.25 MB | 22 MB | 11 MB |
| | Core Number | 22 | 16 | 8 |
| | TDP | 125W | 105W | 75W |
| | Chipset | Intel® C621 chipset | | |
| | Cooling | 4 x hot-swappable high speed fans | | |
| | Memory* | Technology | DDR4 | |
| Capacity | | Up to 768 GB, 64GB Per Slot With 2nd Generation Intel® Xeon® Scalable Processors | | |
| DIMM Slot | | 12 x 2400/2666/2933MHz DDR4 ECC RDIMM/LRDIMM | | |
| Ethernet | Controller | 4 x Intel® I210 | | |
| | Speed | 10/100/1000 Base-T, 2,500V isolation. Supports BMC, IPMI 2.0 (LAN1), SNMP remote management | | |
| | Connector | 4 x RJ-45 | | |
| Storage* | 2.5" SSD | 4 x 2.5" hot-swappable SATA SSDs, up to 9.5mm height. Supports Intel® RST RAID 0,1,5,10 | | |
| | M.2 SSD | 1 x M.2 M Key slot. Supports M Key, B+M Key M.2 2242/2260/2280 SSD, NVMe PCIe Gen. 3 x4 or SATA Interface | | |
| I/O | External USB | 3 x USB 3.2 Gen1 Type-A (rear) | | |
| | Internal USB | 1 x USB 2.0 Type-A, 1 x USB 2.0 Pin Header, 1 x USB 3.0 Pin Header | | |
| | Display | 2 x DVI-D up to 2K @ 60Hz, 1 x VGA | | |
| Expansion Interface | Proprietary PCI/PCIe | 1 | | |
| | PCIe | 2 x standard PCIe x16 slots Gen. 3 low profile 1 x standard PCIe x8 slot Gen. 3 low profile 1 x standard PCIe x4 slot Gen. 3 low profile 1 x Mini PCIe slot (PCIe x1 Gen. 1 + USB 2.0) | | |
| | Optional Module | RJ45 Port, SFP Port, Isolated Serial Port, Isolated Digital I/O, HSR/PRP, PCIe, Mini-PCIe, PCI-104, IRIG-B | | |
| Software | Operating System | Windows11, Windows10, Windows Server 2022, Linux (Ubuntu Server 22.04) | | |
| Power | Input Voltage | 2 x hot-swappable redundant power supply, 800W ECU-579-SSDB: 100 ~ 240 V _{AC} , 100 ~ 240 V _{DC} ECU-579-SSDCU: 48 V _{DC} ECU-579-SSDDU: 100 ~ 240 V _{AC} /100 ~ 240 V _{DC} , 48 V _{DC} | | |
| Environment | Operating Temperature | -20 to 60°C (Depends on CPU model and configuration) | | |
| | Storage Temperature | -40 to 85°C | | |
| | Relative Humidity | Operating, 95% RH @ 40°C, non-condensing Non-operating, 95% RH @ 60°C, non-condensing | | |
| Mechanical | Dimensions (W x H x D) | 440 x 88 x 460 mm (17.3" x 3.5" x 18.1") | | |
| | Mounting | 2U Rackmount | | |
| | Weight | 10.0 kg (22.04lbs) | | |
| | Ingress Protection | IP20 | | |
| Certification | EMC | CE, FCC, IEEE 1613 | | |
| | Safety | CB, UL, CCC | | |
| | Type approval | IEC 61850-3 | | |
| | Shock Protection | IEC 60068-2-27: 10G half sine, 11 ms with SSD | | |
| | Vibration Protection | IEC 60068-2-64: Random 1 Oct./min, 1hr/axis with SSD | | |
| Other | Trusted Platform Module | TPM 2.0 (Option) | | |
| | Watchdog Timer | Programmable 256 levels time interval, from 1 to 255 seconds for each tier | | |

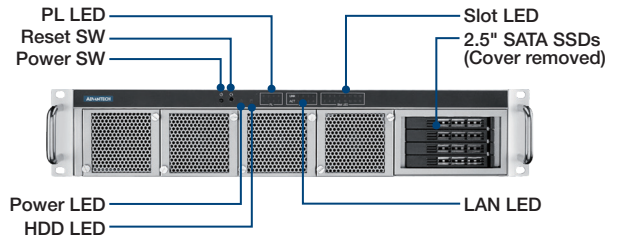
*To be assembled in the Advantech CTOS center.

Dimensions

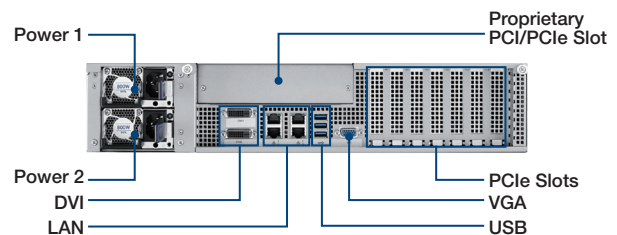
Unit: mm



Front View



Rear View



Ordering Information

| Part Number | Description | 100 ~ 240 V _{AC} | 100 ~ 240 V _{DC} | 48 V _{DC} | COO |
|---------------|--|---------------------------|---------------------------|--------------------|--------|
| ECU-579-SSDB | Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 100-240AC/DC redundant power | V | V | X | China |
| ECU-579-SSDBU | Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 100-240AC/DC redundant power | V | V | X | Taiwan |
| ECU-579-SSDCU | Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 48DC redundant power | X | X | V | Taiwan |
| ECU-579-SSDDU | Intel® Xeon Processor Scalable Family, 4 x LAN, 4 x PCIe/LP with 100-240AC/DC and 48DC redundant power | V | V | V | Taiwan |

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) |

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 |
| ECU-P1524SPE-AE | 2 x SFP 100Mbps HSR/PRP Card w/ PCIe slot |
| ECU-P1522LPE-A | 2-port SFP HSR/PRP card with Low profile.PCIE |
| XECU-AUDIGY-FX1570 | Audio board Audigy FX1570 |
| 96VG-SM768LX1-30T | GPU card, 1G DDR3 Gen2 PCIe x1 HDMI x2 +VGA LP Fanless |

ECU-P Card Options

| Part Number | Description |
|-----------------|---|
| ECU-P1524PE-AE | 2-port SFP 100Mbps Base-FX Ethernet Card with HSR/PRP |
| ECU-P1524PE-GAE | 2-port SFP Gigabit Base-X Ethernet Card with HSR/PRP |
| ECU-P1624D-B | 4-port Isolated RS-232/422/485 with IRIG B |
| ECU-P1628D | 8-port Isolated RS-232/422/485 |
| ECU-P1618D | 8-port Non-isolated RS-232/422/485 |

Optional Accessories

| Part Number | Description |
|--------------------|--|
| XEU500-ZRH-2800K2* | CRPS Module A/D 100-240V 800W 80+ Platinum 6K |
| 98R35790001 | Fan kits for ECU-579 |
| ECU-KIT-57901 | TPM 2.0 Module by LPC |
| 1700035703-01 | External Power cable for ECU-579 48V |
| 96NIC-1G2P-PE-IN3 | INTEL NIC 10/100/1000M PCIe x4 2pt. RJ-45 Server |

*Compliant with IEC 61850-3 EMC standard.

RAID Set

| Part Number | Description |
|--------------------|--|
| 96RC-SAS-4P-PE-AD6 | Adaptec 3101E-4i SAS PCIe x8. Supports RAID 0,1,10. |
| 96RC-SAS-8P-PE-AD6 | Adaptec 2100-8i HBA W/RAID 8P 12GB/S. Supports RAID 0,1,10 |
| 96RC-SAS-4P-PE-AD7 | ADAPTEC 3101-4i 4pt 12Gb/s SAS PCIe x8. Supports RAID 0,1,5,6,10 |
| ECU-KIT-57903 | Expansion RAID cable for ECU-579 series. |