



Rugged Substation Automation Computer RSAPC

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for the automation of substations

Rugged Substation Automation Computer RSAPC



IEC 61850-3 certified Rugged Substation Automation Computer Fanless 19 inch 3U rackmount industrial computer -40 to +75 °C operating temperature range with integrated heating Intel Xeon CPU with four cores/eight threads (Kaby Lake, 7. Generation) TPM 2.0 module





Virtualization

Powerful system enables the reduction of hardware in the substation through the use of virtualization.



Fanless system

Advanced passive cooling system provides fanless operation even under full load and in harsh environments.



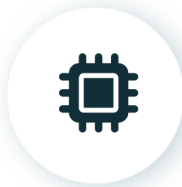
Operating temperature

Wide operating temperature range for trouble-free operation in harsh environments.



3U Rack Mount

19 inch 3U rack mount



CPU Intel Xeon

Intel Xeon CPU with four cores/eight threads



IEC 61850 and IEEE 1613

Rugged system specially made for power substations.



Azure Edge Managed



Azure Certified Device

Technical Details

General data

Typ	19 inch Fanless Rackmount IPC
Series	Rugged Substation Automation PC
Supported Operating Systems	Windows Server 2016 / Windows Server 2016 Datacenter / Windows Server 2019 / Windows 10 Professional / Windows 10 IoT Enterprise 2016 LTSC / Windows 10 IoT Enterprise 2019 LTSC / Linux Ubuntu

CPU

CPU	Intel® Xeon® Processor E3-1505L v6
Generation	Kaby Lake, 7. Generation
Available till	2032
Frequency / Frequency max	2.2 GHz / 3.0 GHz
Cores / Threads	4 Cores / 8 Threads
L2 cache	8 MB
Passmark CPU Performance	~7800

Memory / RAM

Socket type	2x SO-DIMM 1.2 V
Storage type	DDR4 ECC (2133 MHz)
Capacity	max. 64 GB

Chipset

Chipset	Intel CM238 Chipset
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Storage

mSATA Socket	1x Full Size Socket (max. 512 GB)
Internal Drive Bay	2x 2.5 inch SATA HDD/SSD Hot Swappable Bay
SATA Controller	Intel CM238 SATA Controller provides standard AHCI and Intel RST RAID modes
Interface for Bays	SATA II 3.0 Gb/s
RAID	RAID Level 0, 1

Graphics

Graphic chip (GPU)	Intel® HD P630 Graphics Controller
Direct X Level	Level 12
OpenGL	4.4
Displays	DVI-D (max. 1920 x 1200 @ 60 Hz) / DisplayPort 1.2 (max. 4096 x 2304 @ 60 Hz)

Interfaces & Features

USB	5x USB 3.0 (4x rear, 1x front with key lock) + 1x internal USB 3.0 onboard Type A
PCIe Expansion	1x PCIe x16 slot, full length, full height / 3x PCIe x4 slot, full length, full height
Serial Ports	2x RS-232/422/485 (DB9 with isolation)
Ethernet	4x RJ45 10/100/1000 Mbps copper ports, Intel® Ethernet-Controller I210-IT

Real-Time Clock/Calendar	3V 230mA PANASONIC CR2032L-JP-W-1A
BIOS	AMI UEFI
Trusted Platform Module	Infineon SLB9665XT2.0 TPM2.0

Power supply

Power supply	2x slots for power supply unit modules
Fuse Ratings	AC 5 A / 25 V, DC T15 A / 400 V 5 HP
Terminal Connections	Current rating: 16 A, 300 V AC / Insulation withstands volt: 2000 V AC min / Insulation resistance: > 2000 M Ω 500 V DC / Operation temperature: -40°C to +105°C / Wire strip length: 4 mm to 5 mm / Wire range: 12 to 24 AWG / Screw torque: 0.8 Nm (7 in-lb)

Physical characteristics

Housing colour	Pantone® Gray 446
Dimensions (W x H x D)	438 x 129 x 292 mm
Ingress protection	IP20
Weight	8500 g
Mounting	19 Inch Rack

Environmental

Operating temperature range	-40 - +75 °C
Storage temperature range	-40 - +85 °C
Humidity	5 % to 95 % @ 40 °C
Insulation Class	Class 1

Approvals

CE (EU)	Yes
RoHS	Yes
REACH	Yes
FCC	Yes
UL/cUL	Yes
IEC 61850-3	Yes
IEEE 1613	Yes
CB	Yes
Azure Certified Device	Yes
Edge managed (Azure)	Yes
AWS IoT Greengrass	Yes



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