

# SMP SC-2200

Powerful. Reliable. Scalable.



Powerful. Reliable. Scalable. The SMP™ SC-2200 computer is designed for mission-critical applications in harsh environments. Eaton relies on the same expertise and high industry standards used to develop our successful SMP Gateway product line to offer a fan-less substation platform with hot-swappable dual power supplies and no moving parts.

The SMP SC-2200 is based on the fifth generation Intel® Xeon® multicore processor and supports up to 32 GB of error correcting code (ECC) memory to optimize virtual applications. Solid-state drives (SSD) with flexible RAID configurations enable fast data access and improve data integrity. The SMP SC-2200 provides two USB 3.0 interfaces for quick data transfer.

The modular architecture of the SMP SC-2200 makes it a highly scalable platform suitable for your various requirements. Using various expansion modules, the SMP SC-2200 is field-upgradable and can be easily adapted to your applications, delivering high performance.



*Powering Business Worldwide*

## Major features and benefits

Get the benefits of the extremely powerful platform. The SMP SC-2200 uses the Intel® Xeon technology, ensuring years of availability to maximize device life cycle.

The dual hot-swappable power supplies, located at the front of the device for easy access, make the SMP SC-2200 one of the most reliable rugged platform in the industry.

Whether you are looking to store large amounts of data or ensure data integrity, the SMP SC-2200 increases system availability and reliability through flexible SSD storage and RAID technology. It supports USB 3.0, ensuring fast data transfer to external storage.

The innovative design of the SMP SC-2200 leverages decades of Eaton's experience in automation and substation applications. The SMP SC-2200 operates in a wide temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ ) and complies with industry standards such as IEC 61850-3 and IEEE 1613.

### SMP SC-2200 basic platform features

- Intel® Xeon E3-1505L v5 Quad Core
- Up to 32 GB DDR4 RAM with ECC support
- Two built-in SSD Slim SATA bays supporting up to 256 GB each
- Dual hot-swappable ac/dc power supplies
- One high-definition DVI-I display interface
- IRIG-B input and output (demodulated)
- Two programmable output relays
- Two 10/100/1000BASE-T Ethernet ports
- One serial port (RS-232)
- Two front-facing USB 3.0 ports
- Two rear-facing USB 2.0 ports

## Configuration features (optional)

The SMP SC-2200 is built on the Intel® Xeon E3-1505L Quad Core CPU, allowing you to run high-performance virtual applications. The optional Intel® i3-6100 is the best-suited processor for your new generation of IoT and industrial control applications.

Extend graphic performance using additional high-definition DVI port and manage your asset remotely with the Out of Band Management feature provided by the optional PC module I/O card.

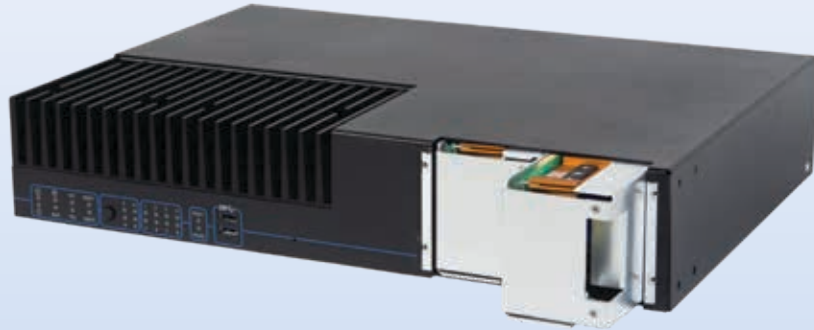
The SMP SC-2200 hot swappable redundant power supplies enable 100% system availability. Flexible expansion modules extend the storage capabilities up to 2.5 TB and enhance your data integrity using various RAID configurations. Advanced Ethernet expansion modules implement PRP/HSR/PTP technology, allowing your platform to integrate to redundant network architectures.

The SMP SC-2200 is highly scalable to allow you to select the best configuration for your custom applications, ensuring high performance.

### SMP SC-2200 platform options

- Intel® i3-6100E Dual Core 2.7 GHz CPU for IoT and industrial automation applications
- Flexible range of RAM and internal storage
- Up to 2.5 TB in data storage through our fully qualified industrial SSD drive offer (SLC, iMLC and MLC)
- Microsoft Windows® 10 or Microsoft Windows® Server 2012 R2 operating systems
- Ethernet expansion modules
- Hardware ready Advanced Ethernet expansion modules (PRP/HSR/PTP) and serial communication module
- PC expansion module for computer inputs and outputs
- PCIe x4 lane adaptor expansion module

It is possible for the SMP SC-2200 to use five (5) independent display screens simultaneously by adding a dedicated PCIe card in the PCIe adaptor expansion module and a DVI splitter.

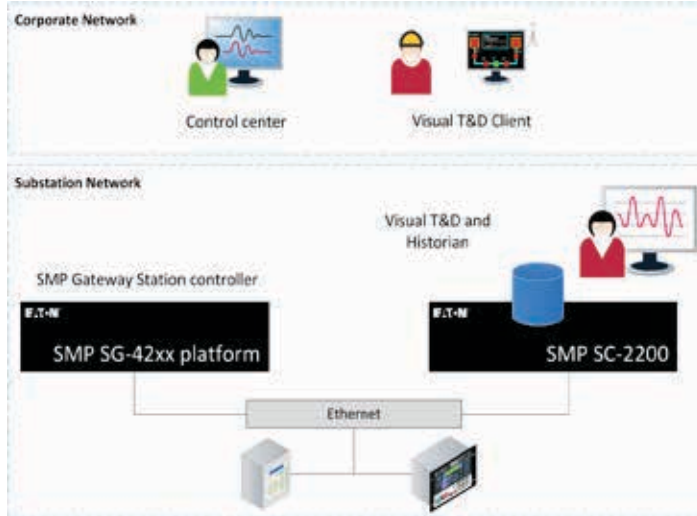


# Application examples

## HMI application and historian

Monitor your substation/plant operations and performances and control your Intelligent Electronic Devices using Eaton's Visual T&D software (or other HMI software).

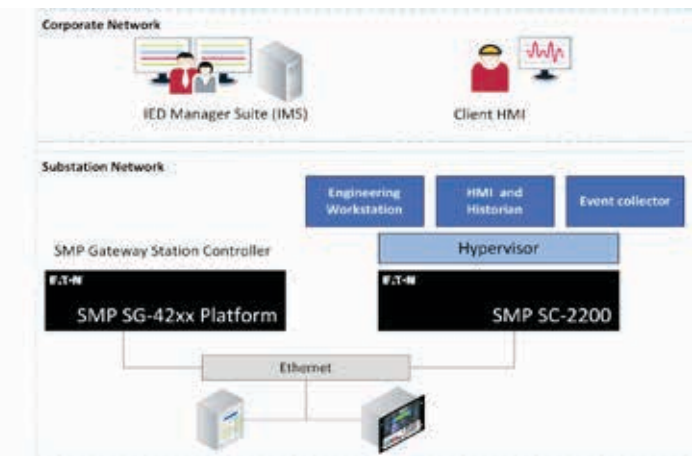
Store your data historian in large size and reliable SSD drives. Communicate with separate network segments using different Ethernet interfaces supported by the SMP SC-2200 and locally visualize your data in two, three, four or five separate high-definition screens.



## Virtualization and high-performance infrastructure application

Use the SMP SC-2200 server configuration to get the benefits from Intel® Xeon Technology with 32 GB ECC RAM support and host your virtual infrastructure on the SMP SC-2200, which is compatible with Hyper-V® et VMware®.

- Segregate your functional and maintenance operations using various operating systems
- Keep your HMI running while you perform maintenance operations on the other operating systems
- Manage the configuration of your SMP SC-2200 and secure your connection to your Engineering Workstation from corporate network using IED Manager Suite; Eaton's Cybersecurity Solution for NERC-CIP



## Specifications

Item	Basic	Option
<b>General specifications</b>		
CPU	Intel® Xeon E3-1505L quad core 2.0 GHz base, 2.8 GHz Turbo Number of threads: 8 Cache: 8 MB L2 Smart Cache	Intel® i3-6100E dual core 2.7 GHz Number of threads: 4 Cache: 3 MB L2 Smart Cache
Dimensions in inches (mm)	Rack unit: 2U (18 lb maximum) 3.3 H x 19 W x 12.875 L (84 H x 482 W x 327 L)	
Operating temperature (see operating temperature in catalog for details)	With Xeon E3-1505L CPU -40 °C to +85 °C (-40 °F to +185 °F)	With i3-6100E CPU: -40 °C to +85 °C (-40 °F to +185 °F)
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)	
Degree of protection provided by enclosure	IEC 60529: IP30	
Power supply (accessible from the front panel)	Dual power supplies Rated supply voltage (ac): 100, 110, 115, 120, 230, 240 Vac Rated supply voltage (dc): 110, 125, 220, 250 Vdc Input voltage range: 88-264 Vac / 85-300 Vdc Frequency range: 50/60 Hz Inrush current: 38.9 A at 120 Vac (t=1.5 ms) 78.3 A at 240 Vac (t=1.5 ms) 28.6 A at 125 Vdc (t=1.5 ms) Power consumption: 35 W to 105 W	
Memory	16 GB DDR4 ECC SODIMM 2400 MHz	8, 16 or 32 GB DDR4 ECC SODIMM 2400 MHz
Basic storage	One built-in SSD Slim SATA bay supporting up to 256 GB	32, 64, 128 or 256 GB SSD SLC Slim SATA 60, 120 or 240 GB SSD iMLC Slim SATA RAID Firmware level 0, 1 and 10
Expansion internal storage	One built-in SSD Slim SATA bay supporting up to 256 GB	32, 64, 128 or 256 GB SSD SLC Slim SATA 60, 120 or 240 GB SSD iMLC Slim SATA RAID Firmware level 0, 1 and 10
Video display DVI/VGA port	DVI-I connector (digital + VGA) Resolution 1920 x 1200 at 60 Hz Intel Gen9 HD Graphics Engine	Additional DVI-D port with PC module and the addition of a PCIe card in the adaptor module and a DVI splitter. (see Expansion module section)
Time synchronization demodulated IRIG-B	Input via terminal block Isolated, rear panel 2 V high-level detection, Vin max up to 12 Vdc, Opto-isolated IEEE 1344, Differential mode TVS protection Output via terminal block	

## Specifications (continued)

Item	Basic	Option
Output relays (Form C)	Normally open and normally closed contacts available for system applications Protected by MOV Managed by software drivers	
Internal temperature sensor	High-temperature alarm	
Substation-grade compliance	IEC 61850-3ed2.0 IEEE 1613:2009/AMD2011 IEEE 1613.1:2013 IEC 60255-1:2009	
Satellite-synchronized clock (GNSS) option	GNSS (GPS & GLONASS) input <sup>A</sup>	Internal receiver module for GNSS (GPS & GLONASS)
Operating system	Factory installed: Microsoft® Windows 10 64 bits—Enterprise Edition Microsoft® Windows Server 2012 R2 64 bits—Standard Edition	Other supported Operating Systems: Microsoft® Windows 7 VMware® ESXi® 6.x Call Eaton for information for the following OS: Microsoft® Windows 8/8.1 Microsoft® Windows Server 2008 R2 Linux®
Trusted platform module	Integrated TPM 1.2	
<b>Communication ports</b>		
Ethernet ports	Two 10/100/1000BASE-T RJ45 connectors	See Expansion modules section
Serial port	One RS-232 serial port DB9 connector Data rate up to 115200 bps	
USB ports	Two USB 3.0 (front panel) Two USB 2.0 (rear panel) Type A connectors	
<b>Expansion modules</b>		
Ethernet modules		Metallic Ethernet ports (up to 2 x 4 ports) 10/100/1000BASE-T, RJ45 connectors Fiber optic Ethernet ports (up to 2 x 4 ports) 100BASE-FX, ST connectors 100BASE-FX, LC connectors
Advanced Ethernet modules (PRP/HSR/PTP) <sup>A</sup>		Metallic Ethernet ports (up to 2 x 4 ports) 100/1000BASE-T, RJ45 connectors Fiber optic Ethernet ports (up to 2 x 4 ports) 100BASE-FX, ST connectors 100BASE-FX, LC connectors
External storage module		Four 2.5-inch drive bays for SSD or industrial HDD disks Hot-swappable support RAID Firmware level 0, 1, 5 and 10 RAID Hardware level 0, 1 and 10
PCIe adaptor module		One PCIe x 4 lanes adaptor module. The SMP SC-2200 can support up to 5 independent screens with the use of a dedicated PCIe card for two screens and a DVI splitter.
PC module (computer I/Os)		Two USB 2.0 ports Type A connector One DVI-D connector Digital only Resolution 1920 x 1200 at 60 Hz One Ethernet port 10/100/1000BASE-T with OOB support (Xeon CPU) One line input One microphone input One line/headphone output Three lines use analog 3.5 mm jacks

<sup>A</sup> Hardware ready, contact Eaton for information.

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