SMP 4/DP automation platform

A versatile automation platform for a Smarter Grid

Eaton's SMP™4/DP automation platform is a powerful and rugged platform, providing utilities with secure and reliable data acquisition and management. Its versatile and compact shape makes the SMP 4/DP an ideal tool for both inside and outside the substation fence automation and integration applications. Installed directly in protective relay enclosures or in the switchyard, this SMP Gateway provides essential communication and data concentration features. It has also been designed to operate over a broad temperature range, which is critical to utilities who serve extreme temperature environments.

The SMP 4/DP is robust, but extremely flexible—providing utilities with the advanced features required to build intelligent solutions that meet NIST Smart Grid road map and security guidelines.

The SMP 4/DP bridges the gap between substations and automation systems:

- Extracts and concentrates data from any device, regardless of protocol
- Sends data to SCADA, control centers and any other centralized management applications
- Automates data processing and device control
- Provides secure remote access to any device
- Manage alarms and visualize substation single-line diagrams from a web interface
- Future-proof your Smart Grid—facilitates upgrades for security, protocol or other improvements

Flexibility

- Ideal for retrofit and upgrade projects. The SMP 4/DP is designed for Greenfield or Brownfield. It integrates existing / legacy RTUs, IEDs, PLCs, and multiple control centers
- Suitable for both pole-top or pad-mounted distribution automation applications
- Universal port (RS-232/485) enables connection to any serial device
- Data filtering allows for efficient bandwidth management over legacy low-speed networks
- Two Ethernet ports support flexible network architectures for security and IEC 61850
- Fully compatible with IED Manager Suite (IMS) for secure remote event, transparent connection (passthrough) and configuration management
- Use with an SMP distributed I/O platform to achieve comprehensive real-time control solutions

Reliability

- Supports IRIG-B input for accurate time-stamping of data
- Includes user-friendly configuration tools for simplified commissioning
- Creates a homogenous system with a single point of access for all substation data
- Enhances the performance of your infrastructure with a 600 MHz processor

Security

- Comprehensive security features for simplified NERC CIP compliance
- Shares all the security features of the SMP Gateway family, including user authentication, complex passwords, security event logging and monitoring, TLS encryption, X.509, malware protection and built-in firewall
- DNP3 Master and Slave Secure Authentication V2 and V5 support

Powering Business Worldwide

Robustness

- Meets all IEC and IEEE® requirements for substation-grade equipment
- Advanced architecture saves rack space
- Conformal coating option available for extremely harsh environments
- Intelligence and scalability
- Extend the capabilities of legacy devices with the built-in Logic Processor and the optional SoftPLC
- Extract non-operational data for planning, maintenance, engineering and fault analysis
- Over 100 protocols available—including IEC 61850 and IEEE C37.118

Expertise

- Eaton has decades of experience in substation gateway automation platform design
- Thousands of installed systems worldwide
- SMP 4/DP is rugged, reliable and tailored for our customers' needs and expectations
- Protect data flows with the built-in firewall and secure maintenance connection (TLS, formerly known as Secure Sockets Layer or SSL)
- Provide single TLS encrypted access port to the enterprise level with IED Manager Suite

General features
Data concentration
Protocol translation
NERC CIP-compliant electronic perimeter
Built-in web server
Automation functions
Passthrough connections
Dial-up connection
IEC 61131 compatible SoftPLC
Microsoft® Windows®-based configuration and maintenance tools
Built-in self-diagnostics
Real-time clock with battery backup
Built-in watchdog timer
Power supply monitoring
Flexible licensing
SMP Gateway HMI feature (includes remote display of diagrams and substation alarms through web browser)

Protocols
DNP3, IEC 61850, IEC 60870-5-101/103/104, SEL Fast Meter, IEEE Std C37.118 standard, GE, Modbus, OPC DA, OPC UA, ABB, L&G, Cooper, most electrical industry proprietary protocols

Processor
Texas Instruments OMAP3503CUSA, 600 MHz

Communications
Serial: 1 universal (RS-232/485) 3 RS-232 1 USB console
Ethernet: 2 10/100BASE-TX
Modem: Optional 56 kbps V.92 V.54

Memory
Flash: 1 Gbits (128 Mb) NAND Flash
RAM (LPDDR) 128 Mb Low Power DDR (LPDDR)

Standards compliance
Protective relay standards: [1] IEEE Std C37.90E- 2005 IEC 60255
EMI immunity type tests and specifications: IEC-61850-3 IEEE-1613
Telephone terminal equipment: TIA-968-A CS-03
Unit test list available upon request

[1] With some exceptions.

Security features
Built-in firewall
Built-in malware protection
Modem connection management
Remote access management
User account management: • Strong passwords • User accounts and user groups • Detailed group permissions
Security event logging and monitoring
Account lockout
Retrievable access logs for auditing
All system components digitally signed
Continuous file monitoring for system integrity
DNP3 secure authentication V2 and V5
Achilles certification
Nessus compliance

Connectivity
Up to 32 device connections
Up to 8 control center connections
Up to 10,000 data points
DNP3 secure authentication V2 and V5

Time synchronization
Input: Demodulated IRIG-B

Warranty
5-year limited warranty

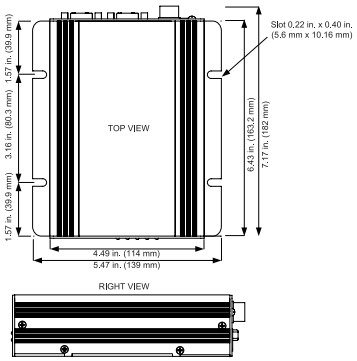
Environmental
Operating (at CPU 100% usage): (DC) –40 °C to +70 °C (–40 °F to +158 °F) (AC) –40 °C to + 55 °C (–40 °F to +131 °F)
Storage: –40 °C to + 85 °C (–40 °F to +185 °F)
Humidity: 5 to 95%, noncondensing
Low pressure (operation and storage altitude): Up to 4572 m (15,000 ft) [2]

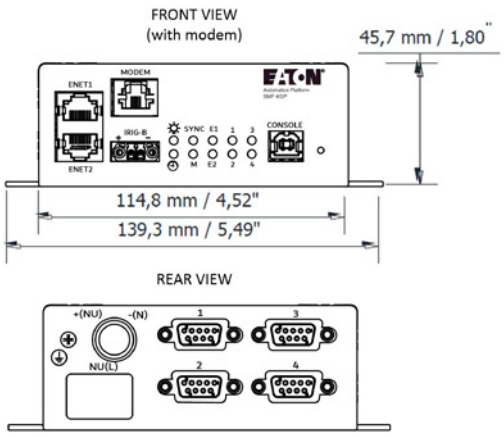
[2] MIL-STD-810G Method 500.5 Procedure I and II.

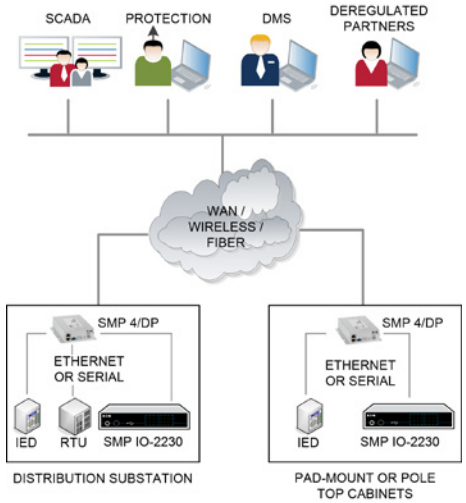
Electrical
Power supply options: 10–36 Vdc 19–75 Vdc 85–264 Vac / 110–370 Vdc
5 W consumption
Lifetime built-in battery

.

Dimensions
1.81 in H × 4.49 in W × 6.43 in L 46 mm H x 114 mm W x 163.2 mm L
With brackets: 1.81 in H × 5.47 in W × 7.17 in L 46 mm H x 139 mm W x 182 mm L
1 lb / 454 g







For Eaton's product information, call **1-877-834-0009**
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