S&C SpeedNet™ Cell Edge Gateway

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High-speed cellular connectivity for automation devices.
Secure, IP-based gateway enables monitoring and control applications requiring higher data rates.

Distribution Automation networks using rapid self-healing are designed to require low-latency, reliable communications. Many utilities leverage these networks for secondary uses such as SCADA and monitoring applications. The abundance of data available from devices on the grid enables effective analytics. However, backhauling large volumes of data over your distribution automation network could compromise self-healing during an outage.

Data-intensive applications are better managed by an alternative network. Cellular networks already in your service area provide a cost-effective communication mechanism for SCADA applications and monitoring of grid devices, without overburdening their distribution automation field area network.

The SpeedNet Cell Edge Gateway provides a flexible way for automation devices to securely leverage a cellular network.

Connectivity for SCADA and IntelliTeam® FMS Feeder Management System

Utilities without a private wireless network can use the SpeedNet Cell Edge Gateway as their primary network for SCADA and/or IntelliTeam FMS connectivity.

Connectivity for monitoring and control

When used in conjunction with a private field area network, the SpeedNet Cell Edge Gateway allows the IntelliTeam FMS Feeder Management System and other applications such as IntelliLink® Setup Software to use a secure, high-speed cellular path.

Extend connectivity to remote devices

The SpeedNet Cell Edge Gateway also provides flexibility to expand connectivity to remote devices outside the coverage area of existing utility field area networks. By adding communication to devices, you enable monitoring and control functions. The SpeedNet Cell Edge Gateway can be deployed in many unique cases to provide connectivity where there was none.

Key Features

- Cellular 4G LTE connectivity

  4G with fallback to 3G
- Robust security

  A portfolio of granular multi-dimensional security features for network connectivity, users, devices, and applications, including a rich cryptology and a suite of encryption algorithms
- Support for IP devices

  Two Ethernet ports, providing connectivity for IP devices
- Advanced networking

  VLAN, VPNs, and tunneling to enable connecting to existing grid applications

Certifications

Certifications by the Federal Communications Commission (FCC) for use in the U.S. and by Industry Canada (IC) for use in Canada (The SpeedNet Cell Edge Gateway can operate on the AT&T and Verizon cellular networks in the U.S. and the Rogers network in Canada.)

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S&C SpeedNet Cell Edge Gateway Specifications

Interfaces	
Cellular WAN	LTE, WCDMA, GSM/GPRS/EDGE North America certified carriers – AT&T, Verizon, and Rogers Diversity SMA connectors
Ethernet	2 x RJ45
Serial	1 x RS-232/RS-485 Sub-D 9-pin, TCP/UDP terminal server

Industrial Certification	
Cellular	PTCRB
Emissions	FCC Part 15 and IC
Environmental and testing for communications networking devices in electric power substations	IEEE 1613
Hazardous locations	ANSI/ISA-12.12.01-2015, CAN/CSA C22.2 NO.213-15
Ordinary locations	UL 60950-1, 2nd edition, 2014-10-14

Networking	
Ethernet	IEEE 802.3, VLAN
Networking protocols	TCP, UDP, ARP, DHCP, ICMP, DNS, HTTPS, Serial TCP server, TCP client, UDP Unicast and Multicast, DHCP Client/Server
Routing and failover	IP pass-through NAT, NAPT with IP port forwarding Ethernet bridging
Security	VPN: IPSec with IKEv2, NAT Traversal; SSL/TLS; OpenVPN; PPTP, L2TP cryptology; ECC and AES encryption: ECC and AES up to 256-bit, NAT, Source NAT (masquerading), Static NAT, port-forwarding, digitally signed software

Power/Physical	
Input voltage	9 to 60 Vdc, 4-pin microfit 3.0 connector
Power consumption	Idle 900 mW, Typical 2 W, Max 5 W
Environmental	Operating temperature: -40°C to +75°C (-40°F to 167°F) Humidity: 90% RH @ 60°C (140°F) Shock & vibration: MIL-STD-810F Method 516.5 & 514.5
Dimensions	7.59 in. (193 mm) x 3.34 in. (85 mm) x 1.66 in. (42 mm)
Weight	1.22 lbs. (553 grams)