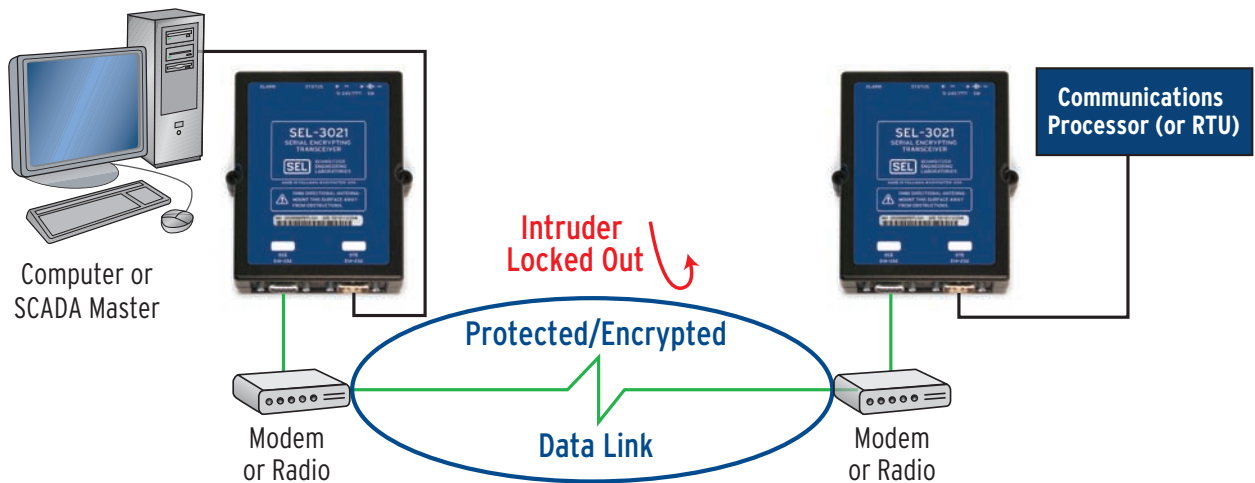




Protect Serial Data Links Against Intrusion



*Easily protect SCADA, metering,
monitoring, and control links.*

**Now With
Message Authentication
Protocol (MAP)**



Features and Benefits

■ Strong Encryption and Authentication

Select one of four HMAC SHA authentication and/or AES encryption algorithms to match system requirements, with 115,200 bps data throughput.

■ Nonintrusive Administrative Interface

Set and monitor communications through a nonintrusive, secure wireless Ethernet or wired USB 2.0 link and PC software.

■ Satisfy NERC/ERO CIP Perimeter Security and Logging Requirements

Comply with U.S. government cryptographic-based security system certification requirements, and log up to 1,024 volatile and 512 nonvolatile Sequential Events Recorder logs.

■ Supports SCADA Applications

Supports point-to-point, multidrop, and mixed-mode system topologies. Rigorously tested with DNP3, Modbus®, and other byte-oriented SCADA protocols.

Making Electric Power Safer, More Reliable, and More Economical®

SEL-3021-2 Serial Encrypting Transceiver

Security Protocols

Cipher Suite	Encryption	Authentication
Suite 1	CTR 128-bit AES	HMAC SHA-256
Suite 2	CTR 128-bit AES	HMAC SHA-1
Suite 3	None	HMAC SHA-256
Suite 4	None	HMAC SHA-1

Users can select one of four security protocols shown in the SEL-3021 setup menu.

General Specifications

Encryption

Advanced Encryption Standard (AES) and NIST-approved Federal Information Processing Standard (FIPS 197) with 128-bit keys

Data Ports

Connectors DB-9 Male (DTE)
DB-9 Female (DCE)

Interface EIA-232 for unencrypted data

- Data rate: 300 to 115200 bps
- Mixed mode, point to point, and multidrop
- DNP3
- Modbus RTU
- Other protocols

Interface EIA-232 for encrypted data

Configuration Port*

Wi-Fi/802.11b

Protocol IEEE 802.11b
Modulation DSSS
Frequency Band 2.4 GHz
Encryption 128-bit WEP and 128-bit AES
Authentication HMAC SHA-1 128-bit key

USB

USB 2.0-compliant management port
Encryption 128-bit AES
Authentication HMAC SHA-1 128-bit key

*Depending on management port option ordered.

Power

5-24 Vdc <5 W
External ac and dc supplies optional
AC power adapter (#230-0600)
DC power adapter (SEL-9321)

Substation- and Plant-Grade Equipment

Designed, built, and tested with the same practices, processes, and standards that are used for SEL protective relays, communications processors, and other products

Certifications

ISO Device designed and manufactured using ISO 9001 certified quality program

Listings CE Mark
CTUVUS listed to UL 61010-1
CAN/CSA C22.2 No. 1010-1-03
EN 61010-1
C-Tick

FCC 15.247

IC ICES-003, RSS-210



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