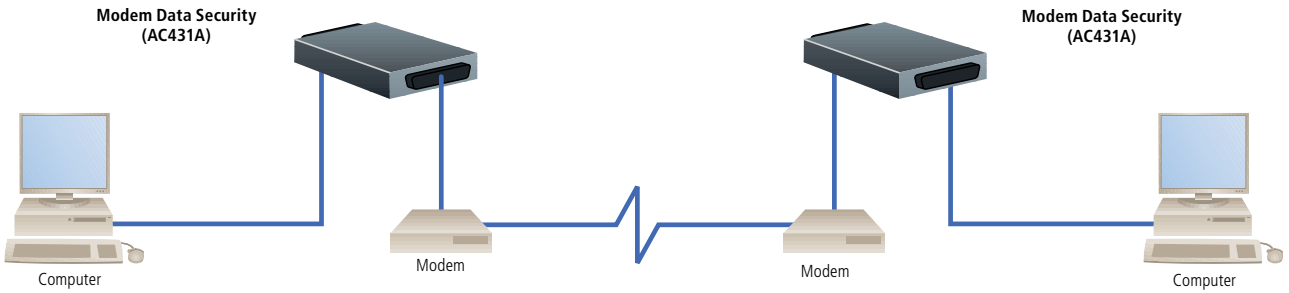
Modem Data Security

Protect your network from unauthorized access.

FEATURES

- Locks out unauthorized users.
- Issues an authentication process that ensures user authorization before starting a peer-to-peer or client/server session.
- Uses real-time DES encryption.
- Encrypts your RS-232 data.
- Maintains dialup capability.
- Installs between the modem and host.
- Use in pairs.
- To program, simply plug two units together.

The Modem Data Security installs between a computer's serial port and a modem.



OVERVIEW

Prevent unauthorized users from accessing your system without your consent or from automatically recording information about your computer settings. The Modem Data Security eliminates unwelcome monitoring by manipulating all handshakes and data exchanges with multiple algorithms and encrypting them to keep any node-specific information from being monitored and decoded.

What's more, you can protect your computer, network, host, or server without compromising simple dialup capabilities. The Modem Data Security installs between the computer and the modem to intercept and authenticate incoming call access attempts before connecting to the protected device.

Simply program the Modem Data Security to establish which nodes will be allowed access. To program, plug two units together. A multilevel handshake occurs, and each data security unit stores information about the other. The unit can authorize secure connections without transmitting any compromising information.

In a typical dialup application, you have one computer and modem connected to the Modem Data Security at one end of the link. At the other end of the link, you have a second computer and modem connected to another Modem Data Security unit.

Once the pair of Modem Data Security units establishes an authorized communication session, each unit generates a unique DES base-key and cipher vector and encrypts all transmitted data in real time.

Supports full duplex serial communications.

Data is encrypted by one Modem Data Security unit and decrypted by the other Modem Data Security unit at the other end of the line. Either unit can encrypt and decrypt data at the same time. The Modem Data Security units also adapt automatically to the connected modem's baud rate from 300 to 38,400 bps. The Modem Data Security unit also recognizes standard computer modem control commands, then transfers them unencrypted. Plus, it monitors hardware flow control (RTS and CTS) between DTE and DCE.

Rear view showing HD15 and power connectors.

TECH SPECS

Authorization Programming — Single connection of two Modem Data Security units, internal handshakes and automatic proprietary authorization protocol exchange. One-Way or Two-Way authorization determines which can initiate session connection.
Authorized Connections — After modems connect, Modem Data Security units establish authorized identification based on previously stored table information. If unauthorized, modems receive hang-up commands.
Session Setup Time — Less than 1 second
Real Time Encryption Speed — >1 Mbps
Data Encryption Method — DES, plus multiple levels of algorithms, record masking, and cipher-block chaining
Key Generation — Automatic, based on numerous coefficients and internal factors unique to each pair. Key generation occurs independently within each Modem Data Security and is never transmitted. Weak keys are automatically detected and re-generated.
Active Pins During Modem Session — 1–8, 20, 22, both Active and Defeat modes
Cable — 24-inch RS-232, two 25-pin (DB25) connectors, one male and one female; straight-through wiring, shielded
Security Switch, Programming — Switch Position as of disconnect:
Both Active: Two-Way Authorization;
One Active, one Defeat: Defeat Modem Data Security can initiate a session to other (Active) Modem Data Security;
Both Defeat: Authorizations between those two Modem Data Security units are removed
Security Switch, Session — Active: Unit in full operation;
Defeat: Unit in standby, simple passthrough of all data and RTS/CTS
Modem Control Commands Passed — All "AT" modem commands are passed without encryption. Request To Send (RTS) and Clear To Send (CTS) are passed between DTE (computer) and DCE (modem).
Serial Speed — 300 bps to 38,400 bps, automatic detect
System Throughput Speed — The benefit, if any, of data compression performed by modems is reduced when using encryption; Computer-to-modem serial speeds of 38,400 bps, or even 19,200 bps, should enable V.32 bis modems to operate at maximum speed (14,400 bps)
Authorized Address Storage Capacity — Maximum of 500 valid Modem Data Security IDs
Microprocessor — 16-bit, RISC, on-board ROM and RAM, DUARTs, anti-tamper firmware
Memory — Additional SRAM, backed up by lithium battery when external power is not present
Tamper Resistance — Auto-zero up firmware, polyurethane potting, total encryption of all external signals and handshakes
MTBF — 720,000 hours of continuous operation
Connectors — (1) DB25 male, (1) DB25 female
Indicators — (3) LEDs: (1) Power, (1) Status, (1) Encryption
Operating Temperature — 32 to 122°F (0 to 50°C)
Power — Internal: Lithium battery, 5-year, active only when external power is removed;
External: Transformer, output 9 VDC, 300 mA
Size — 1.8"H x 2.8"W x 4.9"D (4.6 x 7.1 x 12.4 cm)
Weight — 11 oz. (311.8 g)

What's included

- ✦ Modem Data Security
- ✦ 1-foot (0.3-m) DB25 male/male serial cable
- ✦ Power transformer
- ✦ A user's manual

Item	Code
Modem Data Security	**AC431A**