

## E1 Link Encryptor



### Advanced Wide Area Network Encryption

- Secure E1 Voice Circuits
- Secure E1 Data Networks
- Secure E1 Video Codecs
- Protocol Transparent

## Secure Sensitive Voice, Video and Data Communications

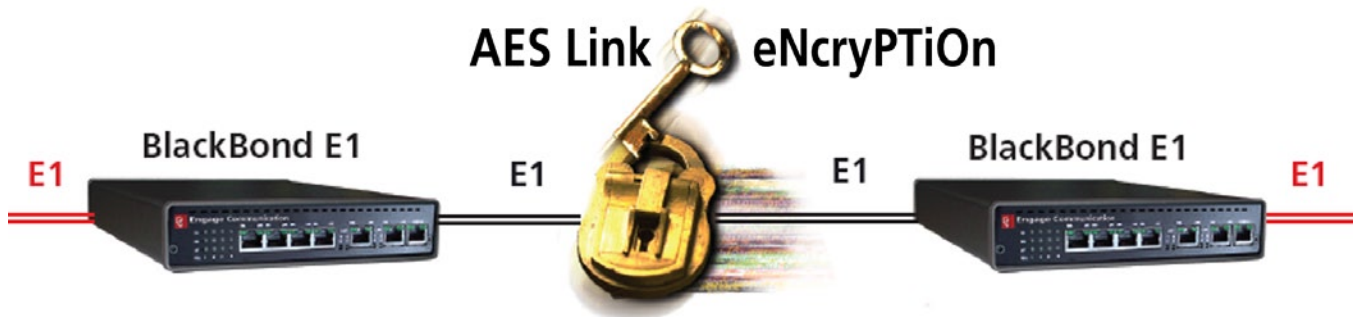
The Engage **Black•Bond E1** Link Encryptor utilizes the **Advanced Encryption Standard** to secure sensitive information transmitted over point to point or dial-up E1 communication links for:

- *Department of Defense*
- *National, State and Local Governments*
- *Public Safety Networks*
- *Homeland Security*
- *Multi-Site Commercial Enterprises*

The **Black•Bond E1** interface has over a decade of proven interoperability with the full range of E1 communication equipment including:

- *Cellular Base Stations*
- *WAN Bridges and Routers*
- *PBX Trunks*
- *Video Codecs*
- *Voice and Data Multiplexers*

## AES Link eNcryPTiOn



## BlackBond Standard Features

### Encryption Method

The Advanced Encryption Standard (AES) is utilized by the BlackBond to protect electronic data. The AES algorithm is a symmetric block cipher that encrypts and decrypts information.

AES is a FIPS approved symmetric encryption algorithm that may be used by U.S. Government organizations (and others) to protect sensitive information.

### Key Management

Automated key management configurations ensure timely key transitions and eliminate the operational and maintenance costs of managing an encrypted network with manual key distribution.

### Management

An IP Ethernet interface, with SNMP, enables ease of management, configuration, and upgradeability.

## BlackBond Optional Features

### E1 Protection Switch OPTION -TPS

The E1 Link Protector provides an automatic backup for E1 circuits with a second E1. The switch over criteria is configured.

### E1 Link Protector OPTION -LPT

The E1 Link Protector provides an automatic backup for E1 circuits with E1 Over IP connecting via Wireless Ethernet, Gigabit Ethernet, IP Satellite Services, xDSL,...

## Technical Specifications

### Encryption Algorithm:

- AES 256-bit
- Fully Automatic key management

### E1/Fractional E1 Specifications:

- 1 RED and 1 BLACK E1
- Integrated CSU Connects to Telco E1 or crossover to DS1
- Framing - CRC4, FAS • Coding - HDB3 or AMI
- Supports DS0 assignments from 1 to 31
- Not Contiguous Configuration x-y,z Supported

### LAN Network Interface:

- Two 10/100BaseT Full/Half Ethernet
- Auto negotiation or Configured Speed and Duplex

### LAN Network Protocols Supported:

- IP, TCP, UDP, ICMP
- Telnet

### TFTP Online Upgrade Capable (FLASH ROMs)

- BlackBond is fully operational during upgrade

### Dimensions:

- Dimensions: 9" (L) x 7.3" (W) x 1.50" (H)



### E1 Link Encryptor Secure

- Voice Circuits
- Data Networks
- Video Transmissions

### Environmental:

- 0° to 132° F (-10° to 50°C ) operating temperature
- Up to 90% operating humidity (non-condensing)
- Optional Extended Temperature Range available

### Regulatory:

- CE • Safety -IEC60950 • EMC - CFR 47 Part 15 Sub Part B:2002, EN55022:1994+A1&A2, EN55024, ICES-003 1997, CISPR 22 Level A
- Telecom Part 68

### Management:

- Telnet support with Edit and Paste Template Files
- Console Port for Out of Band Management
- SNMP support (MIB I, MIB II) with configured traps
- Remote config., monitoring, & reset
- Telco Diagnostics: Local Loop, Remote Loop

### Power:

- 10-30 VDC, 1.0A. • Screw Locking Connector
- Universal Adapter 100/240 VAC 50/60 Hz
- Optional -48V 0.25 Amp • Hot Standby

## How To Order - BlackBond E1

Part No.	Description	Notes
007-2048-02	BlackBond E1	Base Model with 1 RED and 1 BLACK E1 Port
Base Options		Specify as suffix
-TPS	E1 Protection Switch Option	Automatic E1 Circuit Backup w 2nd E1 WAN
-LPT	Link Protector Option	Automatic E1 Circuit Backup with E1OverIP
Power Options		Specify as suffix - Combine 2 for Hot Standby
-DCMOD	Power Module 12/26 VDC/AC ADAPTER	Ships with Universal Adapter 100/240 50/60
-WIREDC	Power Supply Module 12/26 VDC Screw Term	
-N48VDC	Power Supply Module Negative 48 Volt DC	Isolated Negative 48 Volt Power
Rack Mount Option		Specify as suffix
-RACKMNT	19/23" Wide Rack Mount Brackets	Enclosure Nut Serts Installed