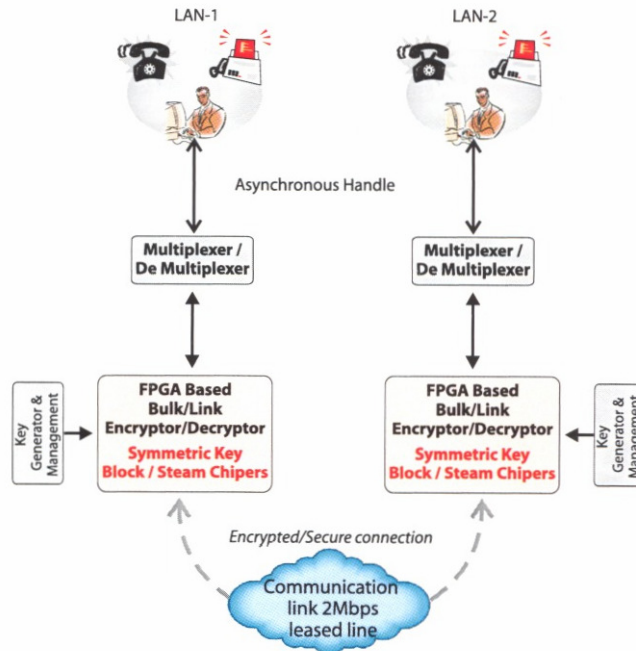


BULK ENCRYPTOR (FPGA based appliance)



Innovative Technology for Mission Critical Networks

In today's world, government/defense organizations and also enterprises have become heavily dependent between their networked offices spread widely across the various geographical locations, on their uninterrupted operation to sustain day-to-day business and are essentially required to secure the confidentiality of their data/voice/fax communications.

Various organizations — large & small, private & public, also banks & financial institutions — realizing the sensitivity of their information and that it must be protected at all times and from all possible dangers from theft, corruption and loss, particularly during the network/VSAT/Satellite based communication transit.

Key Features

Security for mission – critical networks

- Full Duplex encryption/decryption appliance
- El/Ti Leased Line, VSAT Links
- Simultaneous use of Data, Fax and Voice
- Symmetric Block/Stream Ciphers burned on FPGA based Crypto-engine
- Key-generation algorithm:
 - Very large key diversity ($>10^{30}$)
 - Key management and distribution - CF based cards
 - Maintenance free operation including automatic key change without link interruption.
- Suite of Crypto algorithms on same FPGA
- Provision for custom algorithm porting

Bulk Encryptor Unit 2.0 for Leased Line

The BEU-LL-2.0 Digital Link Bulk Encryptor is a FPGA based bulk encryptor appliance designed for high-density secure Voice, FAX and Data communication over point-to-point leased lines in independent mode that requires strategic level security and high reliability.

The BEU-LL-2.0 appliance is fabricated around a Crypto Engine developed on a XILINX Virtex-II FPGA. AES Algorithm (Rijndael - 128, 196 & 256 bit) is the de-facto crypto-standard, but can be replaced by

Two-fish, Serpent or in Stream ciphers cadre - AES (OFB Mode), SNOW2.0 or EDON80. In special cases, the algorithm can be customized according to crypto knowledgeable user community.

The product works on Wired (E1/T1) and VSAT/Satellite based communications - up to 2Mbps.

The BEU-LL-2.0 devices encrypt the data bit-by-bit, using the key stream output of a highly sophisticated, nonlinear, pseudo-random key generator. The non-error-propagating encryption algorithm and burst synchronization techniques used by the BEU-LL-2.0 are compatible with all VSAT and satellite data communications, up to 2.048 Mbps. In full duplex mode, Key Variables can be loaded via an electronic key injector, or can be automatically downloaded.

The BEU-LL-2.0 is an emission-hardened unit designed to operate in a fail-safe communications network environment. The unit is operator transparent, with user-friendly features to reduce the probability of operator error.

Tamper and probe resistant design, as well as lock protected access control, ensure operational integrity.

Technical features

Data Transfer Rates:

- Efficiently tested on E1 / T1 connections

Encryption Algorithms:

- AES (128, 192 & 256 bit), Two-fish, Serpent, SNOW2.0, EDON80

Key Management:

- Signed Diffie-Hellman key agreement protocol

- SHA-2 Hash Algorithm
- Hardware random number generation
- Automatic time triggered key change without interruption of connections

Device Management:

- Integrated Element Management application
- Management using 9-pin D serial port

Physical Interfaces Flexibility:

- Ethernet — 10/100 Mbps modules
- Bulk encryption transparent to line protocols

Secure Auditing:

- Physical Security -Tamper evident chassis

Power:

- Standard external power supply
- Auto-sensing II 0-240V AC/50-60Kz

Environmental:

Operating temperature:

- 5° C to 40° C (40° F to 100° F)

Storage temperature:

- -10° C to 60° C (15° F to 140° F)

Physical Specifications:

- Height : 50mm
- Width : 160mm
- Depth : 250mm
- Weight : 950grams net



Potential users

- Government Organizations
- Defense / Military Services
- Financial Institutions
- intra-Banking Networks



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