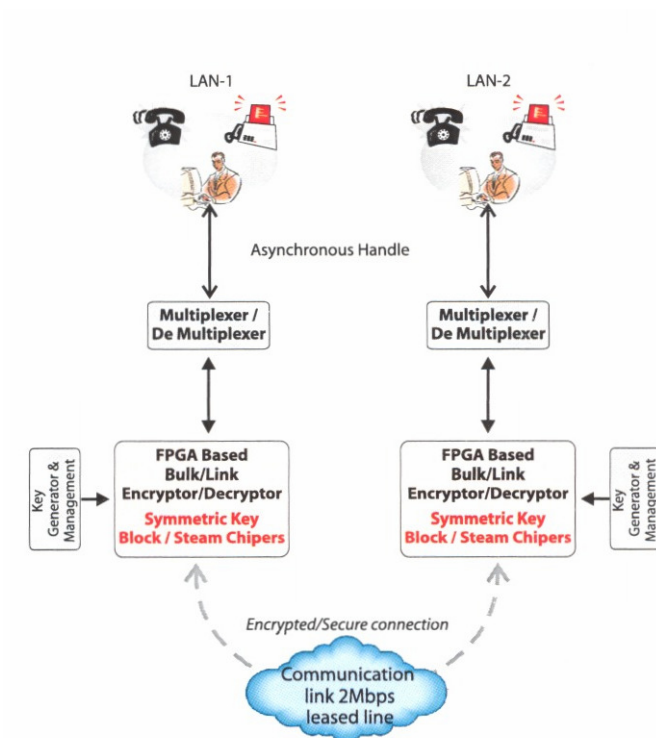


SECURE INTRA-BANKING NETWORK ENCRYPTOR

(FPGA based appliance)



Innovative Technology for Mission Critical intra-Banking Networks

In today's world, public/private sector banks and other financial institutions have become heavily dependent on & between their networked offices, spread widely across the various geographical locations. They are most essentially required to secure the confidentiality of their data/voice/fax communications for their uninterrupted operations to sustain day-to-day retail & corporate banking services.

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

Key Features

Security for mission-critical intra-banks networking

- Full Duplex encryption/decryption appliance
- E1/T1 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.
 - Key management and distribution — CF based cards.
 - Maintenance free operation including automatic key change without link interruption.
- Suite of Crypto algorithms on same FPGA

Intra-Banking Network Encryptor 2.0

The IBNE2.0 Digital Link Network Encryptor is a FPGA based bulk encryption 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 between Banks with high reliability.

The IBNE2.0 is configured with - 2 * Data (Ethernet) Ports, 1 Phone line and 1 Fax line.

The IBNE2.0 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 IBNE2.0 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 IBNE2.0 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 IBNE2.0 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 110-240V AC/50-60Hz

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 Institutions

- Intra-Banks Networking
- Various Financial Institutions
- Insurance Companies
- Government Organizations
- Defense / Military Services



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