

ECTOCRYPT BLUE™

High grade, high speed IP crypto



ECTOCRYPT BLUE™ is a High Assurance Internet Protocol Encryptor (HAIZE) compliant to the HAIZE Interoperability Specification (HAIZE IS) Version 3. The first TOP SECRET UK Eyes Only HAIZE IS v3 compliant device in the United Kingdom. ECTOCRYPT BLUE™ has been designed for high performance and transparent operation, eliminating the impact that existing cryptographic devices have on networks.

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Background

ECTOCRYP BLUE™ is a v3.0.1 High Assurance Internet Protocol Encryptor (HAIZE) that provides information assurance services for IPv4 and IPv6 compliant networks. ECTOCRYP BLUE™ is one of a new generation of network encryptors designed to provide user data confidentiality, traffic protection and integrity at the IP layer. In addition, they provide peer-to-peer authentication, data integrity and access control mechanisms. Being HAIZE v3.0.1 compliant, ECTOCRYP BLUE™ meets the CSIA Mandate (JSP602: 1032) for data exchange between networks.

Traditionally, networks are either air-gapped from other networks or interconnected using expensive leased lines protected with link encryption technology. However, the advent of new HAIZE devices, such as ECTOCRYP BLUE™, provides an assured means of interconnecting RED networks across cheaper BLACK networks – even the Internet.

To achieve this, HAIZE compliant devices on the boundary of the RED networks automatically establish single or multiple security associations with other HAIZE devices enabling the secure exchange of encrypted user data across a BLACK Network. In addition, the performance of ECTOCRYP BLUE™ makes the secure transactions between the devices transparent to the end user as they do not impact on the Network Quality of Service unlike traditional encryption.

Development

This new generation of HAIZE encryptor, properly supports QoS signalling (useful for VoIP) and wireline speeds whatever the packet size. Capacity and efficiency is greatly improved through the use of true 1 Gbps interfaces. Multi-casting enables demanding applications such as multiple large scale IP-based video-conferences to be carried out with greater efficiency. The routing protocols supported by ECTOCRYP BLUE™ ease the traditional problems of using IP layer encryption technologies; it also fully supports IPv4 and IPv6 so that migration issues are addressed when upgrading systems.

Technical Specifications

Protocol Support

HAIZE IS 3.0.1 compliant including granular selectors, management extension, generic discovery, legacy discovery and reachability. (*PT RIP extension – planned subject to customer demand)

Cryptography Support

- Full compliance to Suite A, Suite B and legacy modes of operation
- UK EYES modes of operation where requested.
- Other (e.g. NATO/Releasable) Cryptographic suites available on request

Capacity

- True 1Gbps duplex data throughput
- In excess of 20,000 simultaneous security associations
- Greater than 50 concurrent security associations established per second (dependant on network conditions)
- In excess of 1 second queue memory
- Support for up to 7 cryptographically separated domains to exist on one black bearer (future)
- In-built routing functionality on request (OSPF/BGP)
- Intelligent QoS aware queuing (future)

Physical Interfaces

- 100-BASE-T management interface (RJ45) front and rear.
- 1000-BASE-SX optical traffic interfaces (LC connectors) – 2 each for RED and BLACK interfaces

Upgradeability

- Full infield re-programmability, from protocol handling to cryptographic algorithm suites

Certification Features

- Undergoing CAPS evaluation to High Grade (TS) UK EYES
- Tempest AMSG 720B
- CE Marking
- Compliance tested to the full HAIZE 3.0.1

Physical Specifications

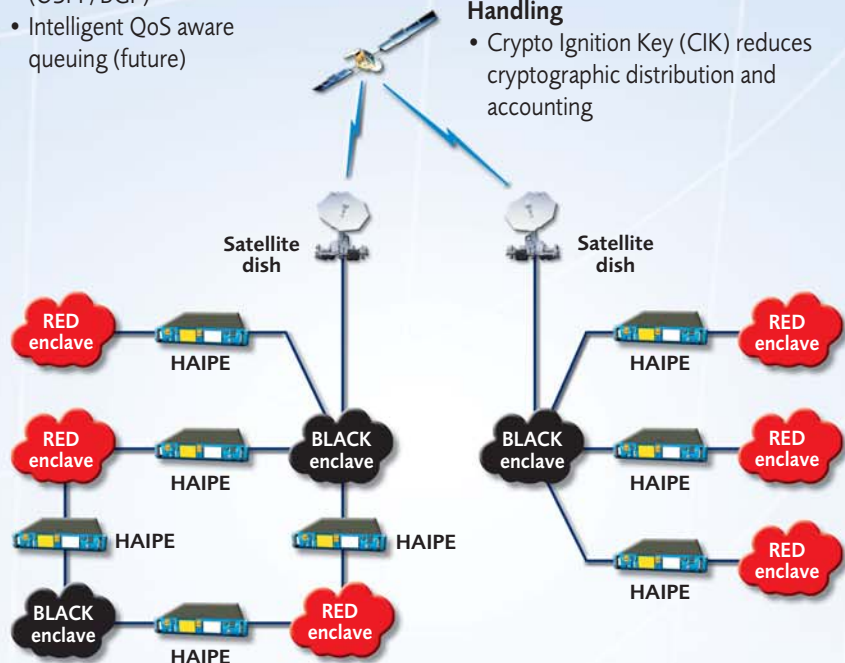
- 2 U 19" rack mountable
- Weight less than 20 kilos
- Operating temperature 0 – 35 C
- Storage temperature -20 – 60 C
- AC input 85 to 264v (47 to 63Hz)

Interoperability

- Fully interoperable with all tested HAIZE compliant equipment (Supporting version 1.3.5 and later)

Handling

- Crypto Ignition Key (CIK) reduces cryptographic distribution and accounting



ECTOCRYP™
Transparent Cryptography



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