⊳ TCE 621 Black

IP-encryption device with simplified handling rules

TCE 621 Black is a member in the Cryptel®-IP family, specially designed to allow simplified rules for handling and control. Targeted to protect communications between NATO and NNN/IO up to NATO Secret/ Mission Secret. TCE 621 Black is interoperable with other members in the Cryptel®-IP family.

Applications

- Federated operations including non NATO nations (NNN)
- Widespread governmental use
- Operations with high risk of equipment losses

Main Features

- Gigabit Ethernet
- Ipv4 and IPv6
- Transpoarent to network services
- AES implementation approved for NATO SECRET traffic
- Interoperable with other Cryptel-IP AES versions
- Secure multicast
- Hot standby
- NAT support
- Non-CCI device

TCE 621 Black

The TCE 621 Black is designed for use at locations where standard CCI handling rules cannot be achieved, e.g. when used by a non-NATO nation, international organization (NNN/IO). The equipment provides encryption of traffic with classification up to the level of Secret.
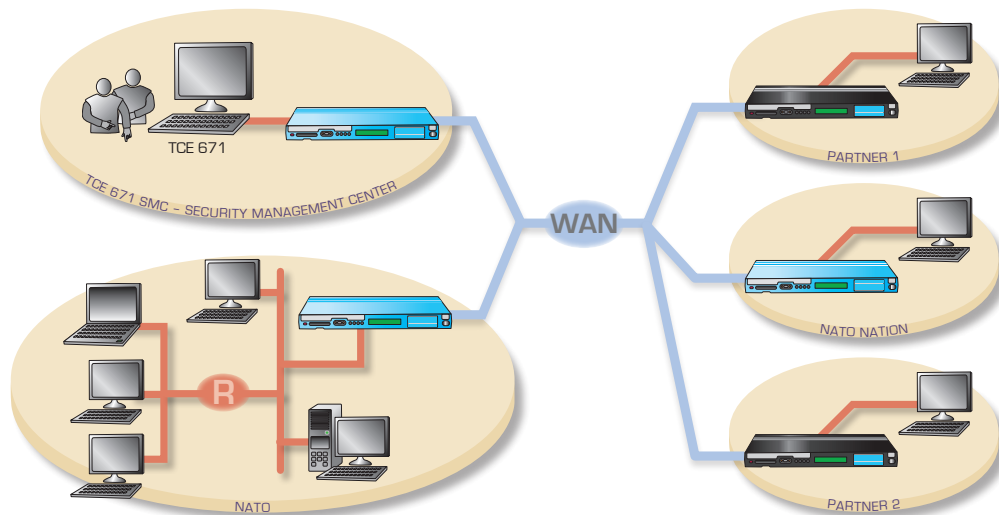
The TCE 621 Black integrates fully with a network secured by TCE 621 AES encryption devices, and can therefore be managed from the same TCE 671 Security Management Centre.

The TCE 621 Black will only accept encrypted keys generated and distributed from an approved offline key generation facility. A part of the equipment is the Crypto Ignition Key (CIK) in a Smart-card format. With the CIK removed, the TCE 621 is declassified. In addition, an emergency erasure feature and a tampering protection mechanism are included.

Configuration is done through the front panel, or by use of a dedicated software application. No day-to-day handling is necessary during operation. Due to the very low latency time introduced by TCE 621, it is well suited for protection of all kinds of user traffic, ranging from office applications and web-browsing to time critical real-time traffic, e.g. VoIP and video conference.

As in other Cryptel®-IP networks the TCE 671 SMC (Security Management Center) is used for automatic key generation, key distribution and remote management of all IP crypto devices.

The TCE 671 SMC functions include key management, access control management, security monitoring and configuration management. For increased availability several SMCs in the network can be configured in a master/slave configuration with automatic data replication.

Technical data

Security Characteristics

Security level
- Type B (AES) algorithm
- Approved for NATO Secret

Security Protocol
- IETF RFC 2406 – ESP

Security Management
- Manual
- Electronic via TCE 671 SMC

Software loadable
- Remotely from TCE 671 SMC
- Locally from front panel

Tempest
- According to SDIP 27 level A

Operational Security
- Removable Crypto Ignition Key
- Operator password (2 levels)
- Tampering protection
- Emergency erase switch

Interfaces

BLACK Network Interfaces
- IPv4 (RFC 791)
- IPv6 (RFC 2460)
- 10/100 and Gigabit on RJ-45 connector
- Optical 100 Mbits and Gigabit on MT-RJ or LC Multi Mode Fibre connectors

Red Local Interface
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Fill Device Interfaces
- DS-101 (RS-485); AN/CYZ-10 DTD
- V.24/V.10 (RS-232C);PC
- Smart card (ISO/IEC 7816)

Physical Characteristics

Temperature
- Operating: 0 to + 40 ºC
- Storage: - 20 to + 70 ºC

Power Consumption
- Max 25 W
- Nominally 20 W

Power feeding
- 110 & 230 V AC
- 47-63 Hz
- Automatic adaptation

Installation
- 19 " rack mounting

Dimensions
- Width: 440 mm
- Height: 44 mm (1 U)
- Depth: 250 mm

Weight
- 4,1 Kg

EMC
- 89/336/EEC
- EN 55022 class B

Reliability
- MTTF > 100 000 h (calculated , Mil HDBK 217 F)

Environment
- IEC 68-2
- DEF-STAN 07-55

Performance
- Full duplex data rate: 600 Mbit/s
- 200 000 packets/s
- Latency time : < 5 μ s
- Up to 15 000 simultanous Security Associations (SA)
- No SA establishment time

Other support functions
- QoS enabled
- NAT enabled (UDP encapsulation)
- Secure multicast
- Receive only mode
- Configurable Network management interface

Support components
- Configuration Tool application
- Software Loader application
- Cables
- Media Converters
- Mounting brackets