



TCE 621/B TCE 621/C

Cryptel®-IP High Capacity Encryption Devices

TCE 621/B and TCE 621/C are the high capacity encryption units in the Cryptel®-IP family. TCE 621/B offers 10 and 100 Mbit/s Ethernet interfaces while TCE 621/C offers additional Gigabit interface.

Both TCE 621/B and TCE 621/C are available in three variants dependent on encryption algorithm:

- **NICE**

NATO NICE algorithm.

- **AES**

Public AES algorithm with possibility for customer specific vector.

- **Dual**

Equipped with both AES and NICE algorithms.

Selection of algorithm at initial configuration of equipment.



Main Features

- Supports both IPv4 and IPv6
- Centralized management
- Electronic and manual key distribution
- Transparent to network service
- Secure multicast
- Hot standby
- NAT support (UDP encapsulation)
- Software loadable

TCE 621/B and TCE 621/C



The TCE 621 crypto equipment securely interconnects single end systems or LANs over unsecure networks (typical Internet) forming secure VPN (Virtual Private Network), or provide end-to-end protection of the communication between single hosts over standard commercial networks.

The TCE 621 protects the communication by adding end-to-end security services to the IP protocol. All security services are provided according to IPsec ESP (Encapsulation Security Payload) protocol as specified by IETF.

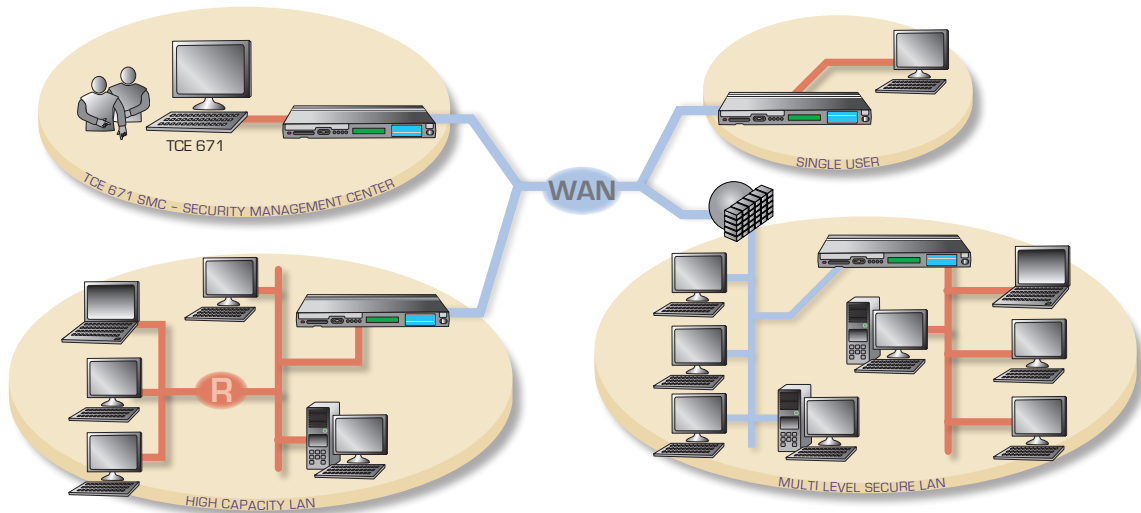
The TCE 621 authenticates the source IP addresses of communication end systems. The access control service may be used to prohibit communication between end systems and subnets.

Configuration through front panel, or by use of a dedicated software application. No day-to-day handling is necessary during operation.

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.

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. The TCE 621 may also be operated in manual mode without need for of TCE 671 SMC or if connection to TCE 671 SMC fails.

Due to the very low latency time introduced by TCE 621, it is well suited for protection of real-time traffic, e.g. VoIP and video conference.



Technical data

Security Characteristics

Security level

- NICE variant: NATO Cosmic Top Secret
- AES: variant: 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 AMSG 720 B

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 (TCE 621/C) on RJ-45 connector
- Optical 100 Mbits and Gigabit (TCE 621/C) 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
- DS-102; KOI-18
- V.24/V.10 (RS-232C); PC
- Smart card (ISO/IEC 7816)

Physical Characteristics

Temperature

- Operating: 0 to + 40 °C
- Storage: - 20 to + 70 °C

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 (TCE 621/C) and 100 Mbit/s (TCE 621/B)
- 200 000 packets/s
- Latency time : < 5 μs
- Up to 15 000 simultaneous 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

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