



## Multilink Bulk Encryption HC-7550

**Ever closer networks are being forged between the tactical and strategic levels of command. The bandwidth requirements for C4I2 systems (Command, Control, Communication, Computer, Information and Interoperability) are increasing accordingly. Broadband multi-channel data transmission plays a more and more significant role in this context. At the same time, the threat from electronic warfare is on the rise. In matters of information security, no distinction can any longer be made between the tactical and the strategic level. The Multilink Bulk Encryption System designed for the EUROCOM port delivers this kind of complete protection by encrypting up to 5 independent data channels with a capacity of up to 2 Mbps a piece.**

This bulk encryption unit guarantees a high degree of connection security in tactical communication and resistance against electronic warfare with up to 5 duplex EUROCOM D/1 channels. Its excellent synchronisation capability allows it to be used in terrestrial and in directional beam applications even when transmission quality is greatly reduced. The bandwidth is up to 2 Mbps. Multiplexing allows secure data, phone, fax and messaging communication in any desired combination.

The device consists of a base unit with five slide-in units for separate cipher units. It meets the highest military standards as regards raw ambient conditions, mechanical stability and EMC protection and can be put to stationary or mobile use. With the simple and secure user interface, the device is also extremely suitable for use on the front.

The comprehensive security architecture provides for encryption in a tamper-proof security module with secret symmetrical algorithms. Key change is automatic

and synchronous and proceeds without interruption while the unit is operating. Security management can be done on-line and offline and can be supported by the computer-based SNMC-7005 Security and Network Management Centre. This latter centre also allows the management of devices involving different operating modes and applications.

### Key Features

- Broadband multi-channel encryption unit for maximum information security in tactical use
- Encryption of up to five independent EUROCOM full duplex channels with up to 2 Mbps
- Seamless unassailable security thanks to encryption in hardware security module (tamper-proof) based on secret symmetrical algorithms
- Can be integrated easily into the network environment without impairing the performance and quality of transmission
- Excellent synchronisation capability allows it to deliver encrypted connections even when channel quality is greatly reduced
- Extremely sturdy construction for maximum availability in the toughest front conditions
- Key change is automatic and programmable, no interruption in operations
- Computer-supported Network and Security Management Centre for the management of any number of devices which can be run in different operating modes

## General Data

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### Housing

- Heavy-duty, sealed and water-proof die-cast aluminium 19 inch chassis

### Equipment

- 1 control unit in the housing and up to 5 cipher modules

### Keyboard

- Rubber keypad with 3 x 5 buttons

### Display

- 4 lines x 20 characters LCD with back-light

### Interfaces

- EUROCOM D/1 A and B
- Data rates 256/512/1024/2048 kbps
- ITU G.732

### Synchronisation

- Synch loss detection time (5 ms) plus synch burst:
  - at 2048 kbps: 0.4 ms
  - at 256 kbps: 3.2 ms

### Connectors

- Built-in test equipment (BITE)
- Data LOCAL (PT14-19)
- Data LINK (PT14-19)
- Alarm (PT8-3)
- Chipcard Reader (PT10-5)
- Remote (PT14-19)
- DC Power (PT12-3)
- Ground/Earth (Screw with butterfly nut)

### Power supply

- DC input 24 Vdc nominal (19...32 Vdc)

### Dimensions

- 482 x 132 x 330 mm W/H/D (19 inch subrack)
- 53 x 132 x 270 mm W/H/D (cipher module)
- 160 x 132 x 270 mm W/H/D (control module)

### Weight

- Approx. 10 kg (depending on number of modules)

### Reliability

- MTBF according to MIL-HDBK-217F N2: GF/25°C: 33'000 hrs

### Quality system

- ISO 9001:2000

### Conformity

- CE (European conformity)

### Safety

- EN 60950-1

### EMC

- EN 55022 class B / EN 55024
- Tests according to MIL-STD 461E

## Environmental Data

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( MIL-STD-810F )

- Operating temperature: -40°...+55° C
- Storage temperature: -55°... +70° C
- Temperature shock: 40° C/+70° C
- Humidity: max. 95% RH at 60° C
- Leakage: watertight up to 1m
- Shock: 20 g, 11 ms
- Vibration: Random vibration according MIL-STD 810D, Method 514.4, Procedure I Category 8 (Table 514.4 All/5 Hz...500 Hz, 2.21 G RMS)
- Test duration: 2 hours per axis
- Drop: 76 cm

## Cryptographic Data

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### Algorithm

- HCA-480, customer-specific cipher algorithm
- Customer managed profiling of algorithm by CMP with variety > 10<sup>506</sup>
- Sophisticated mutual key agreement scheme based on HCA-480 for generation of short-term communication keys (CK)
- Built-in high-quality true random generator

### Keys

- 3 x 8 customer-defined master communication keys (MCK, for CK generation) stored in tamper-proof security module
- 1 fallback key for quick installation and link
- Master communication keys and communication keys with variety > 10<sup>38</sup>

### Key management

- Manual key input via keyboard and display
- Cloning of key and configuration data by smart card
- Offline by Security Management Centre and smart card
- Online by SNMC-7005 Security Management Centre

## Accessories

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- SNMC-7005 Security and Network Management Centre
- Chipcard Reader