

CM105E
VOICE/DATA CRYPTO DEVICE





CM105E

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DESCRIPTION

CM105E is a digital crypto device that can be configured for data or voice applications, using narrowband or wideband radio channels (HF or V/UHF).

CM105E has the following main features:

Narrowband applications

- **Voice configuration:** the device can be connected to a headphone: the incoming analogue signal is converted into a digital signal by a 2400 bps LPC10 Vocoder, and it is then transmitted to the radio channel

with analogue modulation, after having been encrypted.

- **Data configuration:** 300, 600, 1200, 2400 bps synchronous transmission and MIL-STD-188-114 unbalanced electrical interface. Encrypted data is transmitted to the baseband radio channel after analogue modulation.

Wideband applications

- **Voice configuration:** the device can be connected to a headphone: the incoming analogue signal is converted into a digital signal by a

8, 12 or 16 kbps CVSDM 2400 bps modulation, and it is then transmitted to the radio channel in baseband or two-phase band, after having been encrypted.

- **Data configuration:** synchronous transmission up to 16 kbps and MIL-STD-188-114 unbalanced electrical interface. Encrypted data is transmitted to the radio channel in baseband or two-phase band. The operator can select the operating level and the variable key; it is also possible to delete all keys rapidly.

MAIN FEATURES

- Data and voice security
- NATO approved algorithm
- Anti tampering functionality
- Local or remote control
- Built-in diagnostics (BITE)
- Environmental/EMC/ TEMPEST according to military standards.



CM105E
voice/data crypto device

General Features

CM105E voice encryption

- Applications: data and voice secure communications on HF/VHF/UHF radio channels.

Narrowband mode (HF)

- Analogue interface (in clear and in secure): 0 dBm \pm 3 dB
- Data interface (in secure): V.10. Selectable Baud Rate: 300, 600, 1200, 2400 bps in synchronous mode
- Voice encryption: 2400 bps LPC10
- Analogue modem: STANAG 4197 Modem
- Approved algorithm: NATO and National
- Interoperability: NATO approved crypto devices.

Wideband mode (VHF/UHF)

- Analogue interface (in clear): 0 dBm \pm 3 dB
- Data interface: V.10
- Synchronous mode: 8, 12 or 16 kbps baseband or two-phase encryption in secure
- 8,12,16 kbps CVSDM voice encryption
- NATO approved algorithm
- Interoperability: NATO approved KY58-Vinson crypto devices.

Other features

Management

- Auto-diagnostics:
 - Power-on self-test
 - On-line BITE
- Local control: keypad/display use on the front panel

- Remote control channel-speed: 19200 bps.

Generator

- Battery voltage: 28VDC nom.
- Power requirement: 25W.

Physical data:

- Dimensions: 123 x 146 x 140 mm (H x L x D)
- Weight: Max. 5 kg.

Environmental data

- In compliance with MIL-STD-810D
- Operating temperature: -40°C to +55°C
- Humidity: 95% (non-condensing).

EMI/EMC

According to MIL-STD-461/2.

Tempest

According to AMSG 720B.

Key Management System KS105

System elements associated with the CM105 crypto device:

- Personal computer (COTS / MOTS)
- Tape puncher (optional)
- Software application packets to generate, distribute and manage the keys.



CP 105 control panel

Ancillary devices: CP105E

CP105E acts as a remote Control Panel for the SecureVoice CM105E crypto devices (up to a maximum of

eight) and it can be installed in aeroplane cockpits; it allows the operator to manage, control and monitoring functions of the CM105E family.

FG101



FG101 is a portable device used to store a maximum of 8 keys in compliance with the EUROCOM D/1 Crypto Supplement, or a maximum of 4 encrypted keys.

It is endowed with a battery that allows the storage of the keys for up to one year.

- Line interface in compliance with the EUROCOM D/1 Crypto Supplement
- Internal supply battery type: BA1372/U 6.75V-BA5372/U 6V.

Physical data

- Dimensions: 75 x 150 x 45 mm

(H x L x D)

- Weight: 0.6 kg.

TR101



TR101 is a portable punched tape reader for the transfer of the keys on tape in compliance with the EUROCOM D/1 Crypto Supplement.

It is endowed with an internal battery that has a duration of one year.

- Line interface in compliance with the EUROCOM D/1 Crypto Supplement
- Internal supply battery type: BA1372/U 6.75V-BA5372/U 6V.

Physical data

- Dimensions: 60 x 150 x 45 mm (H x L x D)
- Weight: 0.7 kg.



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