DATA/VOICE CRYPTO DEVICE REMOTE CONTROL UNIT CP117E

The CM117E is a multiprotocol digital voice/data crypto device for airborne, naval and land tactical applications. It operates in narrowband or wideband modes, interconnected to radio vectors (HF or V/UHF) or wired lines. For voice applications, signal coming from a headset/handset or from on-board communication system is digitalized by a VOCODER, encrypted and transferred to transmission channel. Analogue voice plain text Tx/Rx is possible when this mode is selected or when device is switched off.

NARROWBAND APPLICATIONS

Voice mode
2400bps LPC10 or MELP VOCODER; ciphertext is modulated by internal MODEM and transferred to an analogue interface.

Data mode
Synchronous data traffic at 300, 600, 1200, 2400bps (red side unbalanced electrical interface in accordance with MIL-STD-188-114). Ciphertext is modulated by internal MODEM and transferred to an analogue interface.

Non-redundant synchronization
Shortened synchronization for NB traffic over line-of-sight channels; 2400bps voice or 2400bps data traffic; ciphertext is modulated by internal MODEM and transferred to an analogue interface.

WIDEBAND APPLICATIONS

At black side a digital interface is used (unbalanced electrical interface in accordance with MIL-STD-188-114). Line coding can be selected among baseband, diphase or conditioned diphase.

Voice mode
8, 12 or 16kbps CVSDM VOCODER; ciphertext is transferred to the digital interface.

Data mode
Synchronous data traffic at 8, 12 or 16kbps (red side unbalanced electrical interface in accordance with MIL-STD-188-114). Ciphertext is transferred to the digital interface.

CM117E

Analogue Data mode
Red data consist in analogue tones (FSK) that are CVSDM encoded, encrypted and transferred to the digital interface.

EXTERNAL MODEM APPLICATIONS

External Modem mode
2400bps voice or synchronous data traffic from 75bps to 16Kbps; ciphertext is transferred to an external MODEM through a digital interface.

MAIN FEATURES

- Data and voice encryption
- AES 256 family algorithm with customer unique personalization, replaceable with customers national algorithm
- Security: CIK, anti-tampering functionality
- Local or remote control by CP117E
- Built-in diagnostics (BIT)
- Environmental/EMI/EMC according to military standards
- Guard channel to ensure reception of emergency incoming voice alert.

FEATURES

GENERAL	
Data and voice secure communications on NB and WB transmission channels	
Over-the-air rekeying functions	
Remotely controllable by CP117E RCU	
NARROWBAND MODE	
VOCODER: 2400bps (LPC10 or MELP)	
Synchronous data traffic: 300, 600, 1200, 2400bps	
Internal MODEM (standard or non-redundant synchronization)	
WIDEBAND MODE	
VOCODER: CVSDM 8-12-16Kbps	
Synchronous data traffic: 8, 12 or 16kbps	
ANALOGUE DATA MODE	
Digital black interface line coding: baseband, diphase or conditioned diphase	
MORE MODES	
External modem mode	Encrypted signal is sent to a digital interface voice mode, for 2400bps, 8-12-16Kbps encoded voice data mode, for synchronous data traffic from 75bps to 16Kbps
SECURITY	
High-grade AES 256 family algorithm, unique for the customer possibility to replace standard algorithm with customers national algorithm equipment enabling by CIK	
Number of storable key variables:	60
Anti-tampering functions	
TEMPEST tested	
MANAGEMENT	
Auto-diagnostics	Power-on self-test
	On-line BIT
Local control:	Keypad/display use on the front panel
Remote control Unit CP117E (RS485 bus)	

ELECTRICAL FEATURES	
Supply voltage	28VDC nominal
Power requirement	25W
PHYSICAL DATA	
Dimensions	120.5 x 126.8 x 120mm
	(H x W x D)
Weight	<3kg
Color	Matte black
ENVIRONMENTAL DATA	
In compliance with MIL-STD-810F	
Operating temperature	-40°C to +55°C
Max short term operating temperature	
+71°C	
Humidity	Up to 93% ±5%
EMI/EMC	
According to MIL-STD-461E	

ANCILLARIES

CP117E remote control unit
CP117E acts as a remote control panel for up to a maximum of 8 CM117E crypto devices. This simplifies installations, since crypto devices can be installed in the bay, saving place on the console.

It allows the operator to manage, control and monitor the single crypto device, or to address all of them at the same time, especially for emergency commands. The operational use of the on-board secure radio channels is facilitated by the “PROGRAMS”, pre-loaded settings for all the controlled crypto devices, easily recallable at mission time by dedicated switch.

FG103
FG103 is a portable device used to store a maximum of 8 red keys or a maximum of 4 encrypted keys, and to transfer them to crypto device. It is equipped with a battery that allows storage of the keys for up to one year.

Line interface in compliance with EUROCOM D/1 crypto supplement	
Transfer protocol	DS102
Internal battery	BA1372/U 6.75V -BA5372/U 6V
Dimensions	75 x 150 x 45mm (H x L x D)
Weight	0.6kg

TR103
TR103 is a portable punched tape reader for the transfer of the keys on tape. It is endowed with an internal battery that has duration of one year.

Line interface in compliance with EUROCOM D/1 crypto supplement	
Transfer protocol	DS102
Internal battery	BA1372/U 6.75V -BA5372/U 6V
Dimensions	75 x 150 x 45mm (H x L x D)
Weight	0.6kg

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