The telephone is probably the most often tapped means of communication in the world. When you talk with someone on the phone, the confidentiality of the information you communicate is not guaranteed. You can consistently eliminate this information risk by using End-to-End Encryption (i.e. from phone set to phone set). The PSTN Encryption HC-2203 from Crypto AG is the world’s simplest and most reliable high-security solution for this purpose.

Key features

- Digital desktop end-to-end cipher unit for your high-security worldwide telephone communications in PSTN networks with transition capability to GSM networks
- Practically no degradation of audio quality and speaker identification
- Robust protection of voice and data communication even in networks with reduced or special transmission quality (e.g. SatCom)
- Simple installation by merely connecting the unit between your phone set and phone socket
- Simple operation; encryption at the press of a button
- Encryption is performed in a tamper-proof hardware module with secret algorithms profiled by your security manager
- Supports other security elements such as emergency clear and blacklist factory reset
- Finely scalable key distribution concept (online/offline) for convenient security management regardless of network size
- Compatible with Secure GSM HC-24x3
General data

Voice quality aspects
- Good speaker recognition
- Immune to background noise
- Supports various bitrates
- Independent of language
- Quality not affected by male or female voice

Operation modes
Voice:
- Plain (bypassed)
- Encrypted voice full duplex (2400...9600 bps)
Data:
- Transparent data channel 2400...19200 bps with RTS/CTS

User interface
Keyboard:
- 4 x 3 numeric/ alphanumeric keys
- 1 plain/ Crypto control key
- 2 cursor and 2 softkeys
Display:
- Backlit LCD 4 lines x 20 characters
- 3 status LED

Transmission principle
- Line modems: V.34, V.32bis, V.22bis
- Modem speeds: 2400...19200 bps
- Synchronisation time: 15 sec typ.

Types of networks
- Classical PSTN
- Leased line
- Military tactical area network (conditional)
- Satellite network (2 hops)
  Provided channel is a transparent.

Voice
- Connectors: RJ-11
- Line impedance:
  - Complex: 200 ohm + 820 ohm/115nF
  - Real: 600 ohm
- Bandwidth:
  - 390...3200 Hz (nominal)
  - 500...2400 Hz (minimal)
- Transmit level: -9...-21 dBm
- Receive level range: 0...-46 dBm

Phone interface
- Connectors: RJ-11
- Line impedance: 600 ohm

Data interface
- Configuration: RS-232, DCE, 25 S
- Speed: 2400...57'600 bps
- Mode: asynchron 8N1

Auxiliary interface
- Software update

Safety
- EN 60950

Power supply
- 10...36 V dc

Power consumption
- Max. 15 VA

Reliability
- MTBF: 100,000 hrs
- MTTR < 1,5 hrs

Dimensions
- 220 x 215 x 70 mm L/W/H

Weight
- 1.98 kg
  (incl. batteries, without AC power supply)

Test
- Permanent built-in selftest
- Security monitor

Cryptographic data

Algorithm
- HCA-480, customer-specific cipher algorithm
- Customer managed profiling of algorithm by CMP with variety > 10\textsuperscript{256}

Key calculation method
- Symmetric direct, derived
- Asymmetric

Key variety
- Communication key (CK) variety: 2\textsuperscript{128}
- Key stream period: > 10\textsuperscript{28} years

Key memory
- 999 communication keys

Access protection
- Tamper-proof security module
- Password protection

Management
- Online downline loading of communication keys, blacklist and security parameters from Key Handling Centre KHC-2000
- Cloning with smart card
- Manual key management via keyboard

Clear functions
- User clear for communication keys
- Emergency clear
  (powered by internal battery)
- Remote clear via blacklist
- Factory reset

Environmental data

- Operating temperature: -10 °C...+50 °C
- Storage temperature: -25 °C...+70 °C
- Humidity: 95 % (RH) at +50 °C
- Vibration: 1 g effective, 10...500 Hz (random)
- Shock: 15g, 6 ms

Approvals
- Marking: CE (European conformity)
- Safety: EN 60950
- Telecommunications: CTR 21 incl. all advisory notes

Accessories/options
- AC power supply: 90...264 Vac
- Data cables: data transfer cable (optional)