GSMK CryptoPhone IP 19

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Trustworthy Voice Encryption

The CryptoPhone IP 19 comes with full source code available for independent review. Finally, you can perform an independent assessment to ensure that you can rely on strong encryption without any backdoors in the communications device that you entrust your security to. The GSMK CryptoPhone IP 19 enables you to put the
trust where it belongs – in a trustworthy, open and scientific verification process.

GSMK CryptoPhone technology is based on well-researched algorithms for both encryption and voice processing. It features the strongest encryption available combined with key lengths that provide peace of mind today and in the future.

TECHNICAL SPECIFICATIONS

Telephone IP Network Interface

- ✅ Gigabit Ethernet IEEE 802.3 10/100/1000 BaseT with RJ45 plug
- ✅ Compatible with Inmarsat BGAN satellite terminals
- ✅ Optional IEEE 802.11b/g/n wireless LAN support

Voice Encryption

- ✅ Secure voice over IP communication on any IP network
- ✅ Strongest and most secure algorithms available today – AES256 and Twofish
- ✅ 4096 bit Diffie-Hellman key exchange with SHA256 hash function
- ✅ Readout-hash based key authentication
- ✅ 256 bit effective key length
- ✅ Encryption key is destroyed as soon as the call ends

Device Protection

- ✅ Encrypted storage system for contacts protects confidential data against unauthorized access
- ✅ Hardened Linux operating system with securityoptimized components and communication stacks protects device against outside attacks

GSMK CryptoPhones are the only secure phones on the market with full source code available for independent security assessments. They contain no »proprietary« or »secret« encryption, no backdoors, no key-escrow, no centralized or operator-owned key generation, and require no key registration.

Interoperability

✓ Fully compatible with all GSMK CryptoPhone IP mobile, satellite and fixed-line encryption products

✓ IP PBX integration with virtual extensions

Operational Features

✓ LED call indication

✓ Programmable secure phonebook

✓ Redial function

✓ Ringer and handset volume control

✓ Mute function

✓ DND (do not disturb) mode

Dimensions & Weight

✓ 230 x 200 x 30 mm / 9.1 x 7.9 x 1.2 in.,

✓ 690g / 1.5lbs without footstand (920g / 2.1lbs with footstand)

✓ black or light gray color scheme

Display

4.3-inch sunlight-readable touch-sensitive TFT LCD screen with LED backlight @ 480 x 272, 16.7mn colors

Connectivity

✓ RJ-4P4C headset connector

✓ Optional 2x USB Type A connectors for special communications equipment

Power

IEEE 802.3ad, Class 1 Power over Ethernet or AC power 100 to 240 VAC, 50-60 Hz, 7 watts maximum operating power

EMI/EMC & Safety Approvals

✓ FCC Part 15 Subpart B Class B, CE
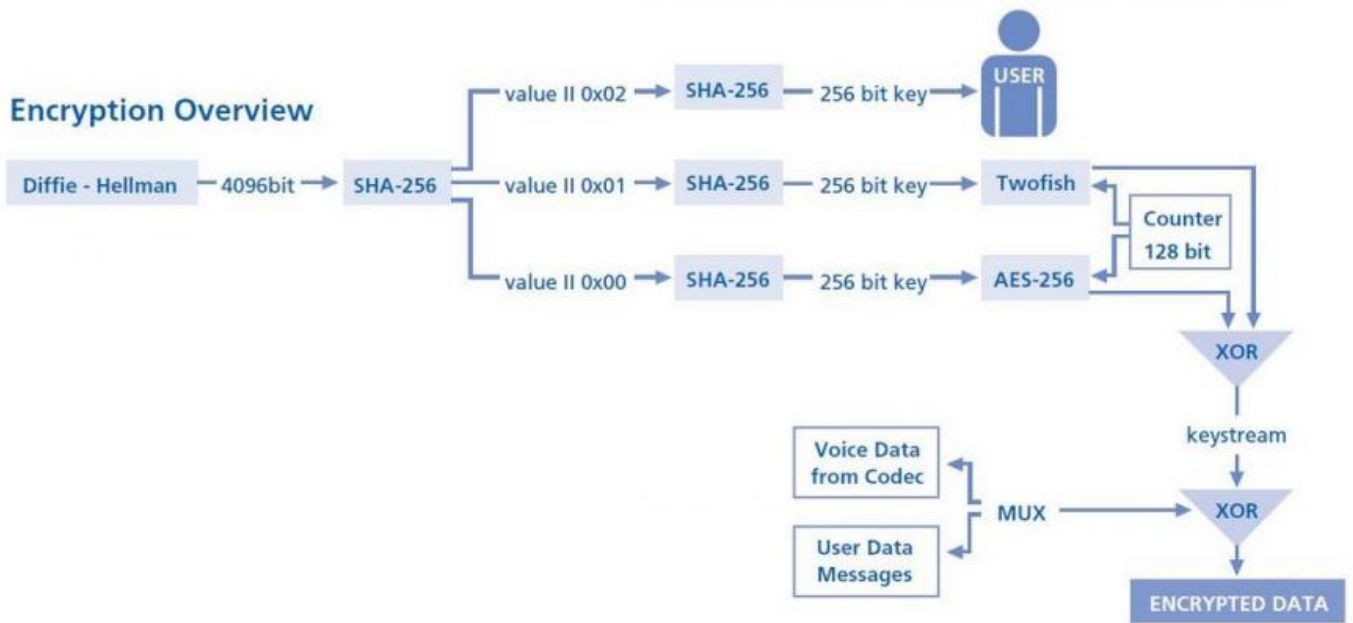
✓ IEC60950-1:2001

Standard Accessories

✓ 100-240V AC power adapter

✓ Full cable set

Optional Accessories

✓ 100-240V AC uninterruptible power supply

✓ Solar panel power pack

✓ Headset with background noise suppression

Encryption Overview

```
Diffie - Hellman  →4096bit→  SHA-256  ┌→ value II 0x02 →  SHA-256  → 256 bit key →  USER
                                      │
                                      ├→ value II 0x01 →  SHA-256  → 256 bit key →  Twofish
                                      │                                             Counter
                                      └→ value II 0x00 →  SHA-256  → 256 bit key →  AES-256   128 bit
```

XOR

keystream

Voice Data from Codec

User Data Messages

MUX → XOR

ENCRYPTED DATA

GSMK - CryptoPhone IP 19 - Secure IP Desktop Phone