



TechLab 2000  
R & D Company



# Krypton

Professional encrypting mobile phone



## SECURE COMMUNICATION

Krypton is an encrypting mobile phone destined to users expecting the highest security level for calls and data transfers. This is the first in the world solution featuring extremely fast secure calls setup time with excellent voice quality. Elliptic curve cryptography implementation for key agreement and strong authentication scheme using digital signature give unparalleled levels of security. Krypton supports Public Key Infrastructure generated by TeaCup – Key Management System. The encrypting functionality is completely independent of the telecommunication provider. It works with standard as well as pre-paid SIMs and in roaming mode.

Krypton is designed to operate in standard GSM network offering encrypted and authenticated or plain calls, encrypted and plain SMS messages. All the data stored in the device is encrypted, and thanks to advanced protections the phone is strongly tamper and replacement proof.

Public Key Infrastructure allows effective remote and secure administration. CRLs are updated automatically due to LDAP server organized by TeaCup.

The device is optimized for security. Encrypted call is established in 1.5s without authentication and 6s with authentication procedure. Compressed voice stream is additionally protected against disturbance thanks to sophisticated error correction techniques.

Krypton features nice voice quality using AMR voice coder. The voice delay is the shortest possible, less than 0.5s. This together with advanced echo cancellation procedures provides encrypted calls comfortable in all situations.

The solution implements built-in cryptography with user friendly, instant graphical interface working in intuitive manner. The user need not to be an expert. All encrypting functionality is easy accessible to Administrator – the person who is responsible to set up optimal configuration. This can be done using GUI or WWW browser locally or remotely.

Krypton gives you not only security for voice but also for data connections. Virtual Private Network based on IKEv2 standard enables effective tele-working and secure data access.

In spite of its cryptographic and security capabilities the device features extended operation time. Standby time, up to 300 hours allows you to forget the charger while calls time up to 6 hours makes you free to connect people.

Krypton is a member of a worldwide unique SYLAN system family of encrypting phones. These are devices working interoperably on different kinds of landline and mobile interfaces.

## IMPORTANT

EXTREME CRYPTOGRAPHY

PUBLIC KEY INFRASTRUCTURE

STRONG AUTHENTICATION

VOICE QUALITY

DATA SECURITY

LONG STANDBY TIME

LONG CALLS TIME

RELIABILITY

## MEMBERS OF SYLAN SYSTEM

PSTN: PLATINUM, GOLD

ISDN: TITANIUM, DIAMOND, FAXA

GSM: KRYPTON, XAOS GAMMA

Phone	
GSM network	GSM 850/900/1800/1900
Battery	Li-Ion, 1000mAh
Standby time	Up to 300 h
Calls time (encrypted or plain)	Up to 6 h
Internal memory	8 MB
Weight with battery	120 g
Dimensions	117 x 25 x 51 mm
Display	TFT 176x220 pixels, 262 000 colours
Battery charging	Supplied charger or USB

Encryption	
Encryption algorithm	AES256
Key exchange	Elliptic Diffie-Hellman scheme, curves: NIST P-224 (ansix9p224r1), NIST P-256 (ansix9p256r1), NIST P-384 (ansix9p384r1) or NIST P-521 (ansix9p521r1).
Key exchange time (without authentication)	1.5 s assuming low bit error rate.
Key exchange and authentication time	6.0 s assuming low bit error rate.
Authentication scheme	Protocol based on digital signature PKCS #1 v1.5.
Voice transmission delay	450 ms
SMS keys	Derived from last encrypting key for particular pair (sender-receiver).
Data confidentiality	Encrypted file system. The key is unique for each device.
Data protection	Internal software, Contacts, SMS messages, connection logs.
PKI data	Device stores: CA autocertificate and user's certificate.

Data transfer	
GPRS	Class 10
EDGE	Class 10
Connection to PC	USB 2.0 FullSpeed

Configuration	
Local access	GUI or WWW browser or supplied Audit.exe application
Remote access	WWW browser
Access protections	PIN or strong authentication



SMS and Contacts	
SMS	Plain and encrypted.
Contacts entries	Up to 5,000
Fields	Forename, surname, company, 4 numbers, address, function, email, www.
Ordering	Surname, forename, company.
Searching	Filtering by entered phrase or group name.
Groups	Up to 30

User interface	
Rings	True tone.
Loudspeaking mode	Only plain connections.
Portable hands free	Wired, standard supply.
Vibrator	Configured (on/off).
Clock	Real time clock presented on the screen. Accuracy error up to 30 seconds a month.
Screen profiles	5 editable profiles accessible under on/off switch.