



Voice Encryption and Three-Factor Authentication Device vVE&3FA

Product Description

Vlatacom VE3FA - voice encryption and three factor authentication is a compact device designed for voice encryption in any VoIP, public, mobile, or land line voice communication system. Prior to establish secure channel both calling parties authentication process is performed according to principles what the user has (i.e. a smart card), something that the user knows (i.e. a PIN), and something that the user is (i.e. fingerprint or voice recognition). Protected communication can be established over any voice communication channel that provides sufficient call quality. The system does not require any additional components such as VoIP servers or dedicated packet or circuit-switched data channels. The device is strictly personalized with strong user authentication what minimizes possibilities of misuse.

Key Features

- Encryption method: AES256 or custom algorithm digitized voice encryption
- Enables use of high quality individual and/or group cryptographic keys
- Encrypted authentication channel for both calling parties authentication
- Connection to the master device via analogue audio (MIC/EAR) or Bluetooth. Host device recognize vVE3FA as hands-free device
- Authentication of both call parties prior to establishment of the encrypted channel
- Multi factor user authentication authentication:
 - a. USB key or optionally contact less smart card (ISO/IEC 14443)
 - b. Special type of PIN
 - c. Biometric verification fingerprint scanner or voice recognition (optional)
- Device authentication by secure access module - SAM ISO/IEC 7816
- Operation even on bad quality audio channels with trade off between interactivity and security level for bad quality audio channels
- Tamper proof protection of both encryption keys and system software
- Vlatacom National Crypto Center - NCC Solution compatible for digital identity management of both device and user and cryptographic key management



Market

The use of CODECs for voice compression in communication systems such as GSM, UMTS, CDMA, or VoIP prevents the use of conventional voice-band modems for data transfer. The vVE3FA device solves this issue while also establishing an end-to-end digital encrypted channel by using digital modulation schemes that simulate speech in both the time and frequency domains. This feature, along with strong multi factor authentication, makes vVE3FA suitable for use in government institutions, law enforcement, diplomatic consulates, military, and corporate communications.

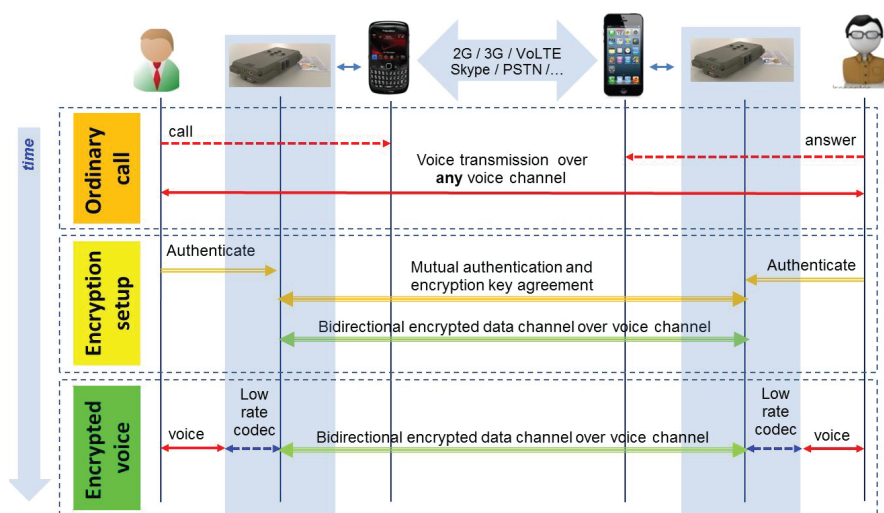
Application

Simple use case:

- Make ordinary voice call of any kind like: 2G, 3G, VoIP, Skype, PSTN by using vVE3FA as a hands free device
- Agree with calling party to go on encryption mode by ordinary voice communication
- Perform multifactor user authentication to vVE3FA
- Automatic authentication of remote side and key agreement
- Usage of encrypted speech

Benefits

- Device authentication prevents misuse
- Authentication of both call parties prior to establishing the encrypted channel
- Device operation is independent of the master device operating system
- Encrypted voice transmission independent of master device and communication technology
- No additional infrastructure required
- Compact device size enables device shape customization



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