etherstack
wireless innovation

LTE25 ™ Softswitch
Push-to-talk P25 over LTE

Unified public safety communications for **LTE** and **APCO P25.**

Bridge your LTE handsets and P25 terminals seamlessly in one integrated network.

Features

- Mission critical high availability solution
- Bridges P25 & LTE networks
- Replicates all P25 services inside LTE environment
- Uses native P25 application on LTE Android Client
- Supports end-to-end encryption between LTE & P25
- No transcoding in the network, improving quality
- Fast call setup times between P25 & LTE devices
- Geographically diverse Disaster Recovery Node

Etherstack's LTE25 Softswitch is a Push-To-Talk (PTT) over cellular 4G solution that provides public safety grade features and services within a 4G LTE network environment such as group calls, priority and emergency calls.

At the same time, Etherstack's LTE25 solution can bridge to existing APCO P25 networks via the industry standard ISSI interface, allowing for the first time native APCO P25 calls to be made seamlessly between LTE handsets on the LTE network and traditional P25 handhelds and mobiles.

By using open standards such as the ISSI & CSSI, Etherstack lets you reuse your existing narrowband radio assets and integrate them fully with new LTE networks and handsets. We call it "P25 over LTE".

Etherstack's LTE25 Softswitch is a High Availability solution that also is available with a geographically isolated Disaster Recovery (DR) Node – which allows backup Network Operations Centre (NOC) to take over control of the LTE & P25 network in the event that the primary NOC is no longer in service.

All of APCO P25's features such as call types, AVL solutions, OTAR and data services are fully available within the LTE25 network solution.

Technical Specifications

Services

- Seamless AVL/GPS solution between P25 & LTE
- Integrated "Blue Force Tracking" application
- Encrypted P25 data and GPS information in LTE
- P25 group calls and emergency/priority in LTE
- Multi profile capability
- Integrated subscriber management for P25 & LTE
- Secure LTE25 text messaging
- Unified KMF for OTAR of P25 & LTE users

Available Network Elements

- LTE25 Softswitch and Network Location Register with High Availability
- LTE25 Data Service Node (SGSN/GGSN)
- LTE25 Location Service Center (LSC)
- LTE25 Key Management System
- LTE25 PSTN/PABX Gateway
- LTE25 Desktop Local Operations Console

Security Services

- AES & DES encryption support
- Encrypted AVL location data and secure texting
- Over-The-Air-Rekeying (OTAR)
- Remote Stun/Unstun capability of LTE & P25 devices
- Unified P25 & LTE secure group calls

Available Interfaces

- TIA TR.8 ISSI for P25 network intersystem connect
- TIA TR.8 CSSI for connection of third party Consoles
- TIA TR.8 CSSI for connection of third party Digital Voice Recorders
- SNMP v2 for Network Management Systems
- 2W DTMP, ISDN PRI & Cisco IP CallManager interconnect
- LSC GPS data interface
- Legacy LMR network interconnect via Cisco IPICS
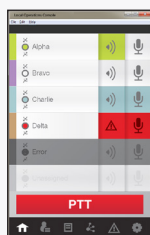
LTE25 Product Family

LTE25 Android Client

Etherstack's LTE25 Android Client application runs on COTS Android LTE platforms. The application is based on Etherstack's APCO P25 mobile station protocol stack solution that is licensed by many P25 equipment manufacturers globally.

Uniquely, Etherstack's solution also includes the native P25 vocoder on the Android client which provides the following three core benefits in this true "P25 over LTE" solution:

a) native vocoder avoids transcoding in the network, improving quality
b) eliminates transcoding latency delay, and
c) allows end-to-end encryption between traditional P25 handsets

Additionally, by using P25 application and supplementary services within the LTE client application, unified P25 and LTE groups call types are possible as well as common subscriber management functions (stun/unstun, ambient listening, OTAR) and unified location services ("blue force" tracking).

Etherstack's secure application solution decouples the choice of LTE handset, allowing the end user to choose a COTS LTE handset or a specialised LTE handset as meets their needs.

LTE25 Blue Force Tracking

- Integrated P25 & LTE GPS Solution
- Windows based desktop solution integrated with Google Earth application
- Displays location of LTE & P25 subscribers in real time
- One click calling to individuals or groups of users
- Vehicle speed and status information
- Monitor multiple talkgroups simultaneously