etherstack

APCO 25 Phase I and II Protocol Stack

Building a P25 radio? Etherstack's off-the-shelf APCO 25 Mobile and Base Station protocol stacks provide the fastest, lowest risk and most cost effective path to market.

➡ Modular ANSI C / C++ Source Code

➡ All P25 Trunking and Conventional Features including SNDCP

➡ P25 Phase I and II / Analog FM / 6.25kHz

➡ Secure: AES/DES Encryption, OTAR and KFD

➡ Full Software: Application, Database and Layers 1-3

➡ Full Service: Specification, Integration and Warranty

➡ Advanced Test and Configuration Tools

➡ Interoperable with Equipment from All Major Manufacturers

For Next-Generation Communications Next-Generation Technology

The Protocol Stack Product

Our protocol software is constructed as a set of layered components (Layers 1, 2, 3 and Application) for a cleaner, more adaptable architecture. These components can be supplied individually or together, and can be split across multiple processors if necessary.

A full source code license includes complete specification, design, interface and test documentation; PC-based radio configuration tools; our pioneering automated test system and hundreds of test scripts. We also emphasize pre-delivery and post-delivery support to ensure the delivered solution meets your requirements as you go to market.

We consider ourselves an extension of your engineering team. You have full visibility of our engineering products and processes.

While you concentrate on platform, package and service differentiation in an ever more complex market, we take care of the standards-based software.

The Importance of Software Reuse

Protocol software represents a key investment. It is important you can reuse it on future platforms and in derivative products to save money, reduce risk, speed time-to-market and respond quickly to changing market requirements.

Code reuse is our priority. We specialize in highly modular operating-system agnostic software that can be ported to a wide range of embedded platforms.

In conjunction with this we have developed a pioneering test system to ensure our code can be maintained. This allows automated testing of the stack (or a single stack module or group of modules) in the development environment, after integration, during field trials and as new features are introduced over time.

Finally the details count in code maintenance: it is our job to pay close attention to documentation, test script generation, source control and full support via code updates as standards and features evolve.

Wide Area All-IP Core Network

Etherstack's APCO 25 air interface protocol stacks can be used with Etherstack's wide area All-IP Core Network, a next-generation SIP/RTP soft-switch purpose built for PTT communications.

This boasts advanced features such as PSTN, Packet Data, Over-The-Air and Over-The-Network Rekeying (OTAR/OTAN) Key Management, End-to-End Encryption and legacy Analog FM. It also supports the APCO 25 ISSI and CSSI – so P25 gateways, consoles, digital voice recorders and other network equipment can be used as-is with it.

P25 Specialists

Etherstack licenses APCO 25 technology to radio manufacturers around the world and now offers all of the software required to build an advanced P25 network, from the handheld radio to the system edge. We are active in TIA APCO 25 standardization efforts and systematically update our fielded products in accordance with this.

As a result, our protocol software forms a benchmark for APCO 25 interoperability.

Features

- P25 Conventional and Trunking
- All P25 Features Including AES/DES Encryption, OTAR, Packet Data (SNDCP and SCEP)
- Analog FM (CTCSS and DCS)
- Phase II Option
- 6.25kHz Spectral Efficiency Option
- Designed for Optimization on Embedded Hardware
- Available Off-the-Shelf
- Modular ANSI C / C++ Source Code
- Full Software: Application, Database and Layers 1-3
- Full Service and Support: Specification, Integration and Warranty
- Advanced Test and Configuration Tools
- Interoperable with Equipment from All Major Manufacturers

Working With Etherstack

Etherstack engineers specialise in radio communications software.

With fourteen years experience and an international client base, Etherstack combines wireless protocol software design with all-IP soft switching expertise derived across professional mobile radio, military and cellular communications.

We work closely with our customers to achieve technical excellence, successful delivery at fixed price, ongoing support and software that can be reused.

Other Products

- APCO 25 All-IP Core Network
- APCO 25 CSSI and ISSI Interoperability Software
- APCO 25 Off-Air-Monitor and Test Systems
- Nexus APCO 25 Hardware Reference Designs
- DMR / dPMR Protocol Stacks (Handheld / Base Station)