

P25net Channel Controller



The P25CC provides an economical means to upgrade existing analog base stations to APCO P25 functionality. This conversion is accomplished through a sophisticated manipulation of the baseband audio, leaving existing RF infrastructure in place.

Benefits

- Converts legacy analog channels to P25 digital signaling without changing base stations.
- Combines P25 base station controller, RFSS Network Controller (RNC) and Network Location Register (NLR) functions.
- Provides full trunked and conventional RFSS operations
- Offers all mandatory P25 call types.
- A much lower cost approach than installing new P25 digital base stations.
- Conversion of multiple-channel systems can be phased in as time and funding allows.

P25CC Overview

The P25CC converts legacy analog channels to P25 digital channels - at an affordable cost, and without replacing existing base stations. Each P25CC is capable of controlling up to four base stations.

If a larger number of channels are operating at a single site, multiple P25CC units can be networked together to manage them.

The P25CC is designed for easy expansion, and a multiple channel analog system conversion can be phased-in a channel at a time. One P25CC unit with a single channel board is required for the first channel, and additional boards are installed in the P25CC chassis thereafter until the four-channel limit is reached.

P25CC Technical Overview

The baseband audio of each existing analog radio channel is processed by Etherstack's

P25 Base Station Protocol Stack software to decipher the digital data of the received audio signal from mobile and handheld units while conversely transmitting a digital P25 signal to them.

These receive and transmit baseband audio signals are manipulated via specialized digital signal processing functions and analog hardware circuitry. This conditioning ensures the compatibility of the signals with the existing analog radios.

The P25CC's radio interfaces are used to communicate with and control the associated base station (change frequencies, receive RSSI information, etc.). The P25CC can operate in the following modes:

- Single Site Conventional
- Multiple Site Conventional
- Single Site Trunking
- Multiple Site Trunking

The Etherstack P25 stack software provides an IP-based interface to communicate with applications running on remote systems.

Conventional

- P25 FDMA Common Air Interface
- All Conventional Voice Call Types (unit to unit, unit to group, system call)
- Emergency Calls
- All PPCO Supplementary Services (call alert, short messages, status update, status query, emergency alarm, radio unit monitor)
- All Conventional APCO P25 System Status Procedures (RFSS Status Broadcast, Network Status Broadcast, Adjacent Site Broadcast, and System Service Broadcast)
- Network Access Control/NID
- Confirmed & Unconfirmed Data
- Local Site Management Interface Support
- Site Alarm Reporting

Trunked Single Site

- All Conventional Version Features
- Trunked Control Channel
- All Trunked Voice Call Types (unit to unit, unit to group, announcement group call, broadcast call, system call)
- All Data Call Types (unit to unit, unit to group)
- Radio Detach (Forced Deregistration)
- All Systems Status Procedures (including protection parameter broadcast and secondary control channel broadcast)
- RNE Calls
- Roaming Support

Trunked Multiple Site

- All Features of the Previous Two Versions
- Wide Area Trunked Call Support (Unit, Group, PSTN, FNE, etc)
- Wide Area Roaming Support
- Interconnect to Core Switching Network (wide area call control)
- Remote Manage Functions (subscribers, site alarms, site configuration)

Specifications

Size:	19"W x 13.5D x 1.75H (1U high, 19" rack mount)
Power:	+12VDC or 100 to 240VAC @ .83A, 50/60Hz
Interface :	Ethernet, Radio Interface Ports
Front Panel:	RX, TX, ISP Activity LEDs

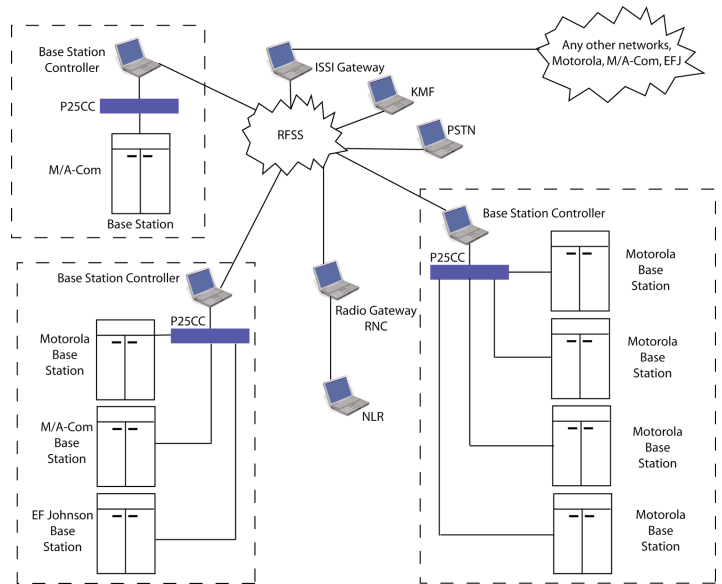


Photo caption: P25 System Diagram



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Etherstack powered.

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