



APCO P25 DIGITAL RADIO  
COMMUNICATIONS NETWORK  
#PublicSafetyCommunication



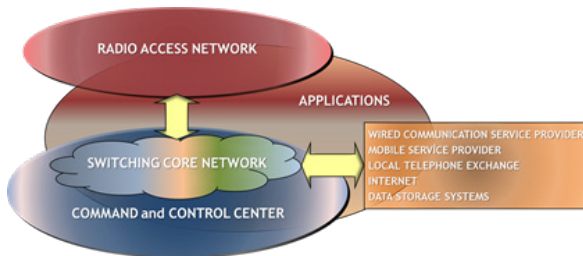
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## APCO P25 DIGITAL RADIO COMMUNICATIONS NETWORK

BiGA APCO is a turnkey digital radio communications network solution that complies with the air interface APCO P25 (Association of Public Safety Communications Officials Project 25) Standard, offering reliable, flexible, and diverse application opportunities.

BiGA APCO is an indispensable infrastructure for critical operations of public safety and emergency response organizations.

Integrating voice and data communications in its infrastructure, BiGA APCO consists of three subsystems called Radio Access Network, Switching Core Network, and Command and Control Center.



The Radio Access Network is the structure that determines how wireless units access the system and converts over-the-air transmissions into in-system signaling. The Switching Core Network is the structure where signaling within the system is routed and distributed to target addresses. The Switching Core Network acts as a bridge between the Radio Access Network and the Command and Control Center, and also provides the system's interface with the outside world. BiGA APCO can be integrated with data networks, telephone networks, or other radio communication networks through the Switching Core Network. Thus, inter-system communication is ensured. In the Command Control Center, the general supervision of the system, user, and communication management operations are carried out.

It is possible to perform various value-added applications (querying, messaging, call reception, location tracking, etc.) that concern all subsystems and are not seen as a subsystem in BiGA APCO.

### General Features

#### Operating Modes

- System Mode: Trunking or Conventional
- Fallback Mode
- Local Mode
- Digital Direct Mode

#### IP Network Access

- Radio Link
- Fiber Optic
- Satellite
- GSM / 4G / 5G
- Copper Cabling

### Sustainability

- 24/7 Operation
- Backup
- Disaster Recovery
- Storage

### Coverage

- Regional / Provincial / National Basis
- Long Distance / Intercontinental
- Campus / Critical Facility / Building
- Indoor / Outdoor Area
- Mobile Platform Solutions
- Simulcast / Multicast

### Software-Based Architecture

- No Site – Channel - User Limit
- Modular
- Flexible
- Scalable

### Security

- Software / Hardware Encryption
- Over-the-Air Key Distribution
- Access Control / Authentication

### Administrative Capabilities

- Console Radio
- Alarm and Fault Tracking
- System Management
- Key Distribution System
- Remote Update

### User Benefits

- Competitive Features
- Data Applications
- Integrated Solutions
- Easy to Use
- Customer Customizable

### Technical Features

Access Technique	: FDMA
Channel Spacing	: 12.5 kHz
Modulation	: C4FM
Voice Codec	: IMBE
Frequency Band	: 136-174 MHz (VHF) or 380-470 MHz (UHF)
Duplex Spacing	: 500 kHz (VHF) or 5 MHz (UHF)
Data Transfer Rate	: RF Bit Rate on Air: 9.6 kbps Unprotected Data Rate: 7.2 kbps Protected Data Rate: 4.8 kbps