

Main Technical Parameters

Signaling Standard	ETSI DMR/PDT
Frequency Range	350-400MHz, 400-470MHz, 136-174MHz
Working Mode	TMO/RMO
Channel Space	12.5KHz/Two Time-Slot
Modulation	4FSK
Connecting Time (Single BS)	<240ms
Connecting Time (Multiple BS)	<700ms
Maximum Carriers of Single BS	≤32carriers
Maximum BSs of Single MSO	≤62BSs
Networking Interface	E1/IP
Access Interface	10/100M Auto-adaptable Ethernet Interface
Working Voltage	220V A C



DMR/PDT Trunking System



VT-3

- ★ Complied with ETSI DMR Tier III /PDT Standard
- ★ Flexible Networking (single site, city wide, nation wide)
- ★ Large Capacity and Big Regional Coverage
- ★ IP Architecture
- ★ Modular Design



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Technical Features

- Adopt dual time slot TDMA technology and spectrum utilization is four times of MPT1327 system.
- Big regional coverage.
- Seamless hand-over and keep continuous communications when trans-regional.
- Support GPS, BeiDou and Glonass positioning.
- More safety with encryption.
- Digitalized voice and enhancing the anti-jamming ability, which ensuring the good voice quality.

System Composition

VT-3 system is composed of Base Station (BS), Mobile Switching Center (MSC), Dispatching (DIP), Network Management (NMC), Access Gateway (AG), etc.



System Introduction

Beijing Vigor has committed to provide Chinese Police wireless trunking communication solution for more than 20 years. Vigor is the Key Member of PDT Association and one of five sponsors for drafting PDT standard; and Vigor is also the only participator and maker for both MPT1327 and PDT standard in PMR field in China.

In 2012, Beijing Vigor pushes out bran-new EXCERA and innovated DMR Trunking System VT-3 in overseas market.

VT-3 system is provided with good voice quality, high spectrum efficiency, security encryption, flexible and reliable networking, convenient interoperation and supporting the smooth migration from MPT1327 to DMR Trunking. VT-3 System is applicable for Police, Firefighting, Military, Airport, Railway, Forest, Transportation, Utilities and so on.

System Advantage

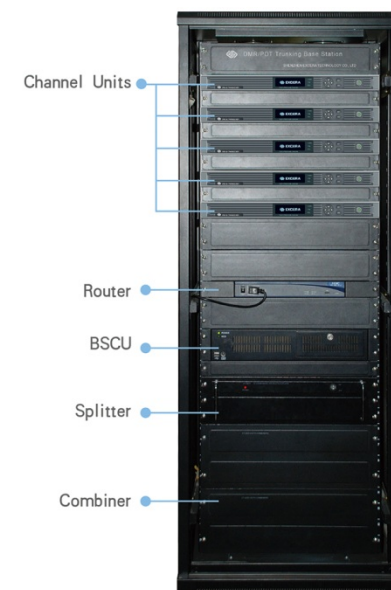
- Completely IP Design and support remote maintenance, RADAC and remote software upgrade.
- Adopt distributed and flattening design; the base station adopts unique design of transceiver hot backup, which makes sure the system can be hierarchical graceful degradation.
- The transceiver is designed independently with the features of multiple working modes, high reliability, high integration, color display, etc.
- Compatible with digital and analog mode and smooth migration.
- Optional functions (such as call forwarding, IP/E1 link hot backup) can be customized according to different requirement.



1. Base Station (BS)

Features:

- Adopt TDMA technology, improving spectrum utilization greatly
- Adopt IP SoftSwitch Technology
- Big regional coverage
- Digital and analog dual modes, supporting digital and analog radio to access the network at the same time.
- Seamless hand-over and automatic roaming when trans-regional.
- Good voice quality with completely digital voice processing.
- Redundancy backup of the key equipment and modules.
- Support remote support remote maintenance, RADAC and remote software upgrade.



DMR Trunking BS

2.Mobile Switching Center (MSC)



PDT Switching Center

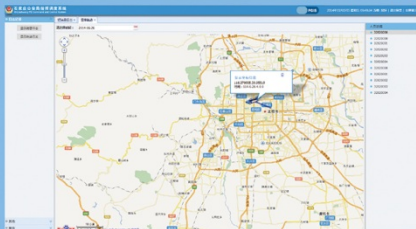
Features :

- Adopt flattening design with coordinate structure among MSCs, which facilitates system planning and construction.
- Adopt software modular design, allowing different users to do the different configuration flexibly.
- Adopt multiple redundancy hot backup of database , ensuring the system data safe and complete.
- Provide multiple Access Gateway such as PSTN/PABX gateway, GPS Server gateway, MPT system gateway.
- Real-time operating monitoring, remote maintenance and configuration management.

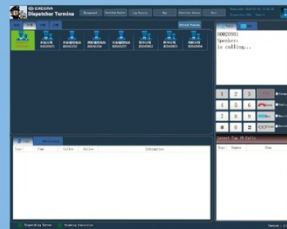


KVM Display

3.Dispatching (LDS)

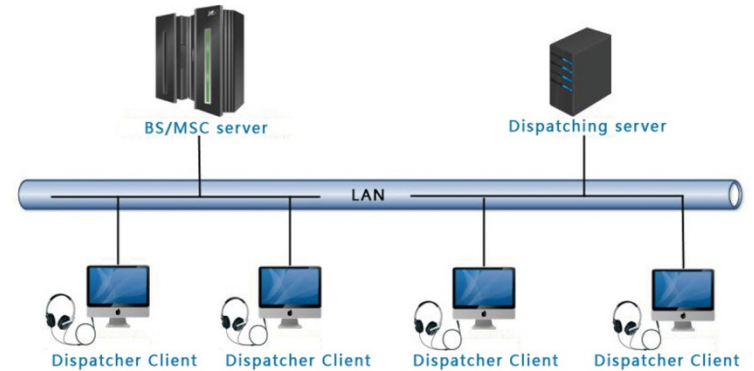


Visual Dispatching Interface



Dispatcher Interface

Dispatching System Structure Chart



Main Services

- Voice Dispatching
- Short Data Message Management
- Visual Dispatching (AVL)
- Track Playback
- Discreet and ambience Listening
- Override and Interrupt
- Dispatching Plan Management
- Log management
- Dispatching System Configuration

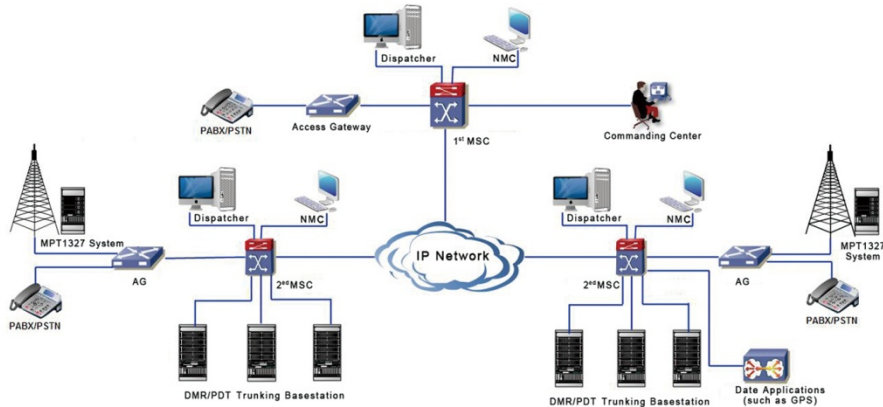
4.Network Management (NMC)



Management Terminal can be connected to MSC or BSC. The administrator can log into NMC at any access point within DMR/PDT network. NMC can save automatically the management and maintenance operation of every administrator.

Network Structure

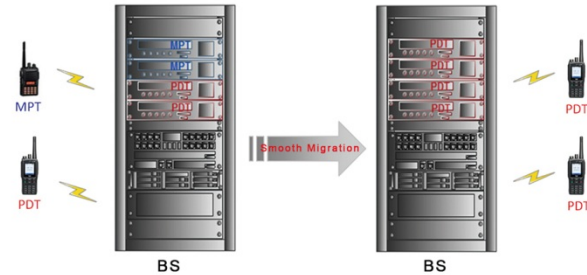
Network Topology Graph



DMR/PDT Trunking Services

- **Basic Services**
Individual Call, Group Call, Dispatcher Call, Telephone Call, MPT Call, All Call, Broadcast, Call, Status Call, Emergency Call, Alarm Call, Call Limit, Short Message, GPS Positioning, Handover
- **Supplementary Services**
Group Call Late Entry, Kill/Stun/Revive, Call Duration Limitation, Dynamic Group Number Assignment, Include Call, Group Call Merging, Call Forwarding, Queue and Automatic Callback, Forced to Conventional Mode, Ambience Listening, Discreet Listening, Idle Subscriber Indication, Packet Data Service
- **Network Management Services**
Real-time to Modify the System Parameters, Real-time to modify the system status, Alarm Message Display, Control Channel Management, Call Accounting Statistic and Inquiry, Managing Log Inquiry, Remote Maintenance Upgrade
- **Networking Services**
Inter-network Individual Call, Inter-network Group Call, Subscriber Roaming Management, Subscriber Information Synchronization, Network Status Display, Inter-network Kill/Stun/Revive

Smooth Migration



Smooth Migration from Analog to Digital

- For the built MPT analog trunking system, the transceiver should be upgraded to digital trunking mode.
- For the newly-built MPT analog trunking system, the digital transceiver should be used for the system and system working mode can be configured via software.
- For the inter-communicating with existed MPT analog trunking system, the gateway (wired or wireless) should be used for the interoperation.

Terminals

- Portable Radio EP8100 and Mobile Radio EM8100
- Complied with ETSI DMR Tier III /PDT Standard
- Seamless Integration between System and Terminals with High Efficient
- Support Customization of System and Terminals

Highlights

1. Large size HD LCD Display
2. IP67 and MIL-STD-810 Standards Compliance
3. Multiple Working Modes with MPT Analog Trunking Mode, DMR TierIII /PDT Trunking Mode
4. Analog Conventional Mode and Digital Conventional Mode
5. Full-Duplex Calling (optional)
6. Built-in GPS/Beidou/Glonass Module (optional)
7. Built-in Advanced Noise Suppression Module (optional)
8. Built-in Bluetooth Module (optional)

