



Product Brochure

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DMR Tier 3 Trunking

DMR Tier 2 Easy Trunk

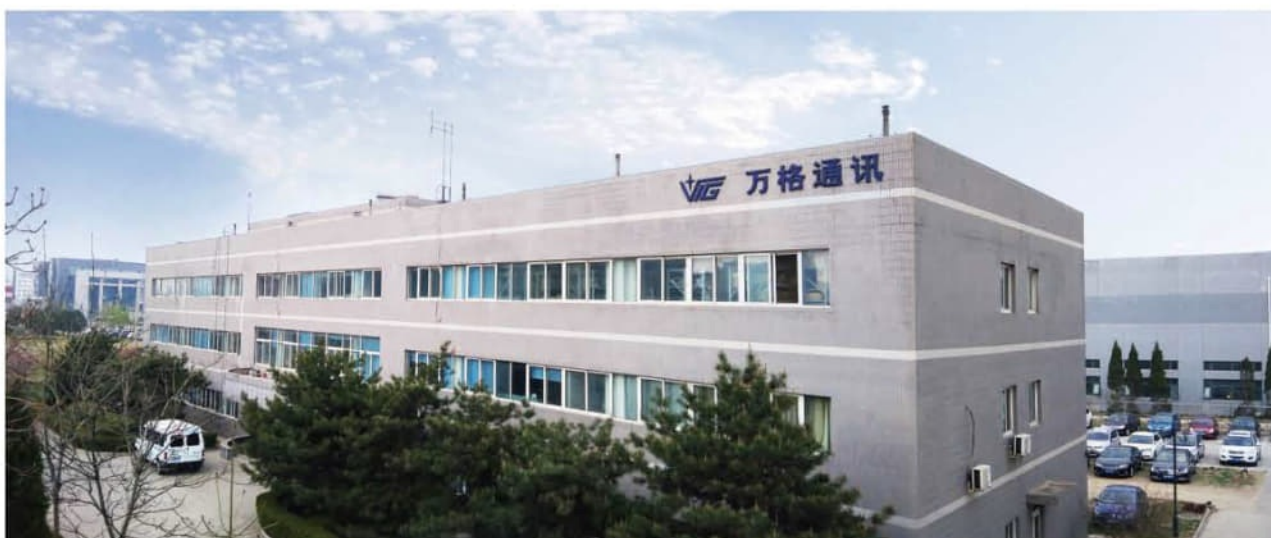
DMR Tier 2 IP connection



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Company introduction

Excera is a world leading solution provider of professional mobile radio communications. It offers complete and customized communication solutions to government, police, public security, utility, transportation, enterprise and businesses. Excera's mother company Vigor, founded in 1993, is the earliest manufacturer and supplier of wireless trunking system equipment and solution for Chinese police. Vigor is the key member of PDT Association and one of five sponsors for drafting PDT standard, and Excera is also PDT Association member. And Excera is category 1 member of DMR Association. Excera is a key player in the PMR (Professional Mobile Radio) communication industry with a large customer base in more than 120 countries and regions across the world.

Organization

Vision

To provide the excellent radio and application solution for global customer in professional wireless communication field.

Mission

Leading the changes in professional wireless communication industry with quality and innovation.

Department	Employees	Percent
R&D	97	31.7%
Manufacturer	105	34.3%
Purchasing Dept.	14	4.6%
After-sales Service Dept.	44	14.4%
Sales Dept.	27	8.8%
Administration & Finance Dept.	19	6.2%
TOTAL	306	100%

Data of 2018

R&D strength

- 26 years' experiences in wireless communication industry.
- Various patents and technical innovations in PMR field.
- Certified by government as a big-sized high-tech enterprise in China.
- Full set of testing instruments and equipment.



Strict quality control

- All of the products are qualified by FCC, CE, RoHS, CNAS, CEPREI, American Military standards.
- Certificated by ISO9001 and ISO14001 quality control system.
- Compliant with 6-Sigma, QCC quality management system.



Products portfolio

DMR portable radios



EP8100

Size:125*54*35mm
Weight: 320g
136-174MHz, 400-470MHz,
350-400MHz, 450-520MHz



EP8000

Size:125*54*35mm
Weight: 320g
136-174MHz, 400-470MHz,
350-400MHz, 450-520MHz

Highlights

- The first full-duplex DMR radio in the world.
- 2.0" HD transfective TFT LCD display (EP8100).
- IP67 and MIL-STD-810 standard compliance.
- DMR TierII conventional and DMR Tier III trunking.
- High capacity battery design: 2400mAh / 3400mAh(optional).
- Built-in noise reduction.
- Built-in Bluetooth 4.0.
- Built-in Real Time Clock.
- Excera Easy Trunk.
- SFR (single frequency repeater).
- Rich API support.

Main Functions

DMR Conventional

Radio Function

- › Direct/Repeat Mode
- › Scan
- › Bluetooth 4.0
- › RMO Pseudo Trunk
- › TDMA Direct Mode
- › Multi-site Roaming
- › Easy Trunk
- › Vibration
- › VOX
- › Time&Date Display

Voice Service

- › Group Call
- › Private Call
- › All Call
- › Emergency Call
- › Broadcast Call
- › Phone call
- › One Touch Call

Data Service

- › Text Messaging
- › Status Messaging
- › Clone

Supplementary Service

- › Call Alert
- › Radio Check
- › Remote Monitor
- › Radio Enable/Disable /Kill

Location Service(optional)

- › GPS
- › Beidou
- › GLONASS

Safety Function

- › DMRA Encryption(ARC4, DES&AES)
- › Transmit Interrupt
- › Lone Worker
- › Man Down

Analog Conventional Signaling

- › CTCSS&CDCSS
- › 2-Tone
- › 5-Tone

DMR Tier III and MPT Trunking (Software Licensed)

Standard Accessories



Pictures above are for reference only and may vary from actual products.

DMR portable radios



EP5000

Size: 115*54*28mm
Weight: 278g
136-174MHz, 400-470MHz
350-400MHz



EP5500

Size: 115*54*30mm
Weight: 300g
136-174MHz, 400-470MHz
350-400MHz



EP5800

Size: 115*54*30mm
Weight: 300g
136-174MHz, 400-470MHz
350-400MHz

Highlights

- Ultra-high cost-effective.
- Utilize TI OMAP Processor, Not RDA low tier IC.
- Fast charge, 85% of battery capacity finished within one hour.
- IP67 and MIL-STD 810 C/D/E/F/G.
- Built-in GPS, bluetooth and mandown.
- DMR Multi-site IP connection.
- DMRA ARC4/DES/AES encryption.
- Single frequency repeater support.
- DMR Tier III & MPT1327 support capability.
- Battery:2000mAh, 2400mAh(optional).

Main Functions

DMR Conventional

Radio Function

- › Direct/Repeat Mode
- › Scan
- › Bluetooth 4.0
- › RMO Pseudo Trunk
- › TDMA Direct Mode
- › Multi-site Roaming
- › Easy Trunk
- › Vibration
- › VOX
- › Time&Date Display

Voice Service

- › Group Call
- › Private Call
- › All Call
- › Emergency Call
- › Broadcast Call
- › Phone call
- › One Touch Call

Data Service

- › Text Messaging
- › Status Messaging
- › Clone

Supplementary Service

- › Call Alert
- › Radio Check
- › Remote Monitor
- › Radio Enable/Disable /Kill

Location Service(optional)

- › GPS
- › Beidou
- › GLONASS

Safety Function

- › DMRA Encryption(ARC4, DES&AES)
- › Transmit Interrupt
- › Lone Worker
- › Man Down

Analog Conventional Signaling

- › CTCSS&CDCSS
- › 2-Tone
- › 5-Tone

DMR Tier III and MPT Trunking (support capability)

Standard Accessories



Pictures above are for reference only and may vary from actual products.

DMR portable radios



EP4000

Size:115*54*30mm
Weight: 280g
136-174MHz, 400-470MHz
350-400MHz



EP4800

Size:115*54*30mm
Weight: 280g
136-174MHz, 400-470MHz
350-400MHz

Highlights

- Compact Size Design.
- Utilise TI OMAP Processor, Not RDA low tier IC.
- Fully Compliant with CE and FCC Certification.
- Built-in GPS,Bluetooth and Mandown (optional) .

- DMRA ARC4/DES/AES Encryption (optional) .
- Ultra High Cost Effective.
- Dual Mode (DMR&Analog).
- DMR Multi-Site IP Connection (optional) .

Main Functions

DMR Conventional

Radio Function

- › Direct/Repeat Mode
- › Scan
- › Bluetooth 4.0
- › RMO Pseudo Trunk
- › TDMA Direct Mode
- › Multi-site Roaming
- › VOX

Voice Service

- › Group Call
- › Private Call
- › All Call
- › Emergency Call
- › Broadcast Call
- › Phone call
- › One Touch Call

Data Service

- › Text Messaging
- › Status Messaging
- › Clone

Supplementary Service

- › Call Alert
- › Radio Check
- › Remote Monitor
- › Radio Enable/Disable /Kill

Location Service(optional)

- › GPS
- › Beidou
- › GLONASS

Safety Function

- › DMRA Encryption(ARC4, DES&AES)
- › Transmit Interrupt
- › Lone Worker
- › Man Down

Analog Conventional Signaling

- › CTCSS&CDCSS
- › 2-Tone
- › 5-Tone

Standard Accessories



Battery



Charger



Power Adapter



Antenna



Belt Clip



Hang Rope



User Manual

DMR mobile radio



EM8100

136-174MHz, 400-470MHz,
350-400MHz, 450-520MHz



Highlights

- Full Duplex communications.
- 2.8" HD TFT LCD Display.
- IP54 and MIL-STD-810 standard compliance.
- DMR Tier II conventional and DMR Tier III trunking.
- Remote control head support.
- Built-in noise reduction.
- Built-in bluetooth 4.0.
- Built-in real time clock.
- Excera Easy Trunk.
- SFR(single frequency repeater).
- Rich API support.



Main Functions

DMR Conventional

Radio Function

- › Direct/Repeat Mode
- › Scan
- › Bluetooth 4.0
- › RMO Pseudo Trunk
- › TDMA Direct Mode
- › Ignition
- › Multi-site Roaming
- › Easy Trunk
- › VOX
- › Time&Date Display

Voice Service

- › Group Call
- › Private Call
- › All Call
- › Emergency Call
- › Broadcast Call
- › Phone call
- › One Touch Call
- › Public Address Call

Data Service

- › Text Messaging
- › Status Messaging
- › Clone

Supplementary Service

- › Call Alert
- › Radio Check
- › Remote Monitor
- › Radio Enable/Disable /Kill

Location Service (optional)

- › GPS
- › Beidou
- › GLONASS

Safety Function

- › DMRA Encryption(ARC4, DES&AES)
- › Transmit Interrupt
- › Lone Worker

Analog Conventional Signaling

- › CTCSS&CDCSS
- › 2-Tone
- › 5-Tone

DMR Tier III and MPT Trunking (Software Licensed)

Standard Accessories



Palm Microphone



Mounting Bracket Kits



Power Cord



User Manual

Pictures above are for reference only and may vary from actual products.

DMR repeater



ER9000

136-174MHz, 400-470MHz

Highlights

- Unique 100% duty cycle at 50W high power output in 1U cabinet.
- 100,000 hours MTBF performance based on military modular design with high reliability.
- Auto switch between AC&DC power supply.
- Mixed mode multi-site IP connect to support digital and analog repeater.
- Excera Easy Trunk support.
- SIP phone support.
- Remote diagnosis maintenance and SW upgrade.
- DMRA AIS application successful solution.
- DMR Tier III trunking capability.



DMRA AIS Application Solutions and Partners.



<http://www.nowatel.com/>



<http://www.safemobile.com>



<http://www.awcs.com>



<http://omnitronicsworld.com>

Accessories

				
Duplexer EDU001/ EDU002/ EDU003	AC Power Cable EPWCDZ01	Power Cord EPWCAZ01	Programming Cable EPC03	Fuse EACC001

Excera retains right to change the products design and specification without prior notice. Parts supply for the market is different, please contact the local dealer. Promotional photos are for reference only. All products as per the material subjects.

General Description



Excera mixed analog & digital DMR conventional system provides with one set of audio and data integrated digital solution to help users to integrate, deploy, dispatch and manage resources efficiently and optimize the operation and its management system.

Mixed analog & digital DMR conventional system

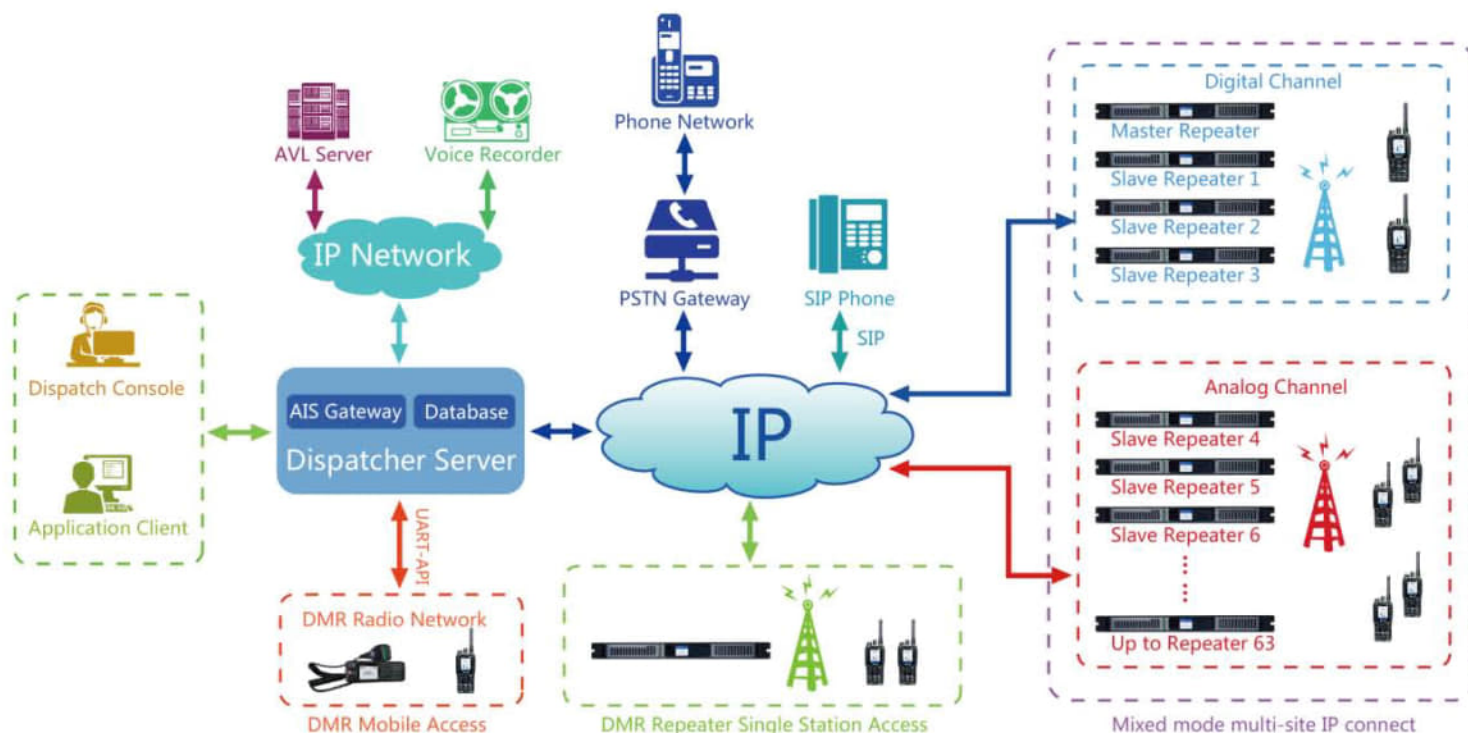
Highlights

- Up to 64 repeaters
- Mixed analog & digital channels
- PCMA & PCMU & AMBE audio formats
- Dispatch console with AIS protocol
- Whole network Voice recording on SIP protocol
- Customized features as requested



Functions Introduction

System Configuration



Mixed analog & digital DMR conventional system

System Services

Mixed analog & digital DMR conventional system supports services as below:

- › PCMA & PCMU & AMBE Audio Format
- › Digital ALL call
- › Digital Group call
- › Digital Individual call
- › Analog Call
- › Remote Monitor & Ambience Listen Call
- › Emergency CALL & Priority CALL & Encrypt CALL
- › Short Data Service
- › Status Message
- › GPS Data Service
- › Supplementary User Data (Radio check & Radio Disable & Radio Enable & Call Alert)
- › Channel Switch
- › Username, Password
- › All radio voice traffic recording
- › GPS Data Pull Down
- › SIP Phone & PSTN Phone

Easy Trunk



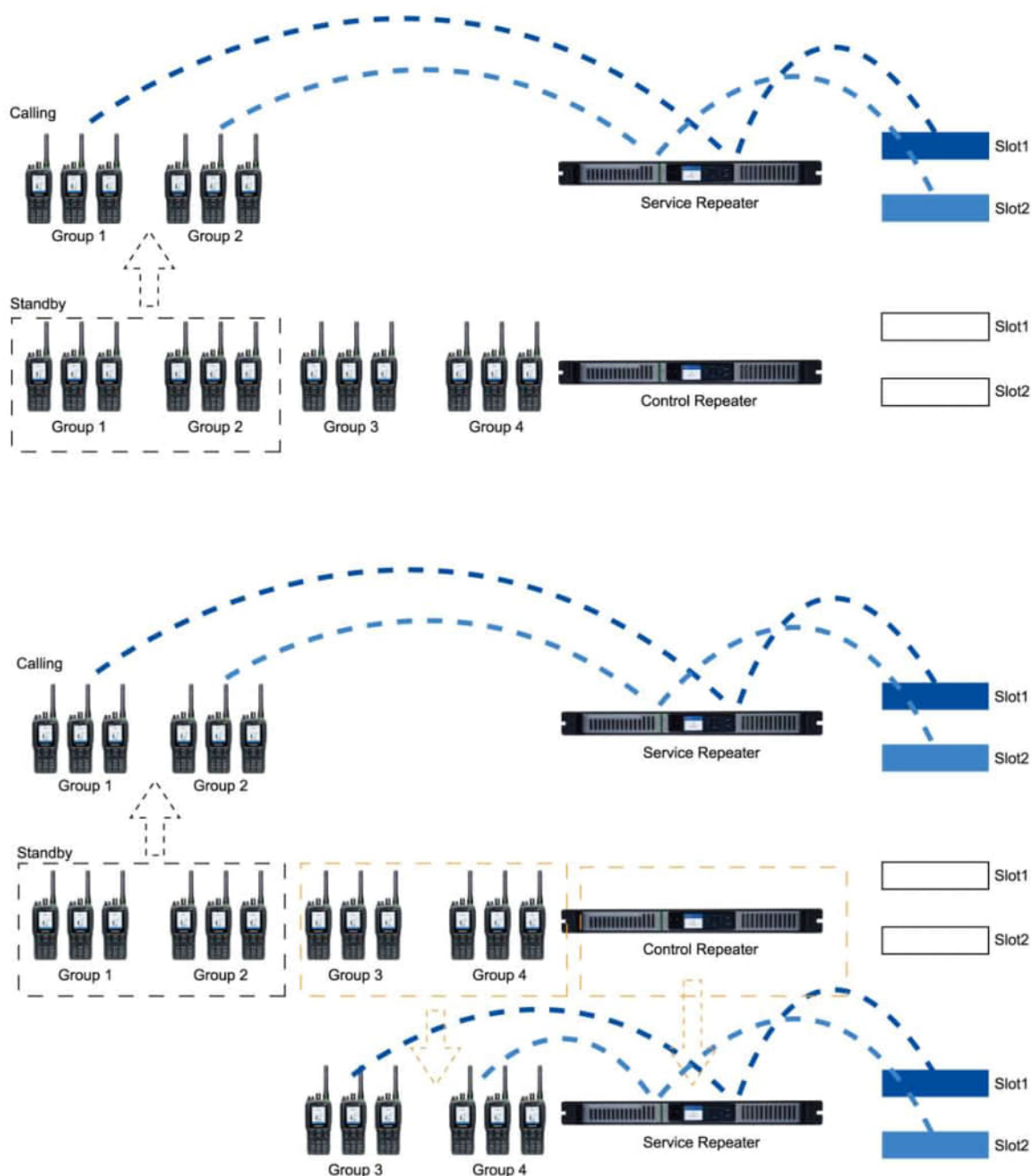
Better Channel Utilization
Fast Deployment & Easy Configuration
Channel Capacity
Emergency Alarm

Highlights

- Improve your communications efficiency and save your frequency recourse.
- An efficient and cost-effective way to expand your communication system.
- Large Capacity and Easy Migration of Infrastructure.
- Each single site Easy Trunk System supports up to 8 carriers and 16 calls simultaneously.
- Dedicated control channel designed to broadcast messages among radios for little carrier interference.
- P2P and Forward Dual IP Technology Designed ensures reliable communications in multi-sites Easy Trunk System.
- Easy Trunk uses the open DMRA AIS application interface to support rich applications.
- Fault Tolerance Designed. If a repeater is down, the remaining repeaters of the Easy Trunk System will continue to operate as trunking. If the switch is down, the radio will scan all the repeaters within the system for service it wants.

Overview

EXCERA Easy Trunk is a cost-effective digital trunking system that delivers up to 16 times the capacity of an analog conventional mobile radio system; a more cost-effective solution that allows customers to increase the capacity. All channel resources can be shared by multiple users so that the frequency utilization is improved greatly. The system can easily migrate from Tier II DMR by applying a software upgrade license to the ER9000 repeaters and connecting them via a layer-2 switch.



DMR Tier III Trunking Solution

Highlights

- Complied with ETSI DMR Tier III Standard.
- Flexible Networking.
- Large Capacity and Big Regional Coverage.
- IP Architecture.
- Modular Design.



System Overview

EXCERA Tier III Trunking System, developed on ETSI DMR open standards, is an IP-based and soft switching-adopted digital trunking system infrastructure designed to provide interconnection for base stations across various geographic areas. Automatic roaming is available for radio units (MSs) in the network coverage. The Mobile Switching Center (MSC) in the system has its backup and each base station can operate in single site mode with less capacity when the MSC is down. MSs in the system can communicate with PSTN/PABX and SIP phones and MSs in the MPT trunking system and DMR conventional system. The Network Management System (NMS) supports SNMP and adopts (Browser/Server) B/S structure. This system provides AIS interface for further development, such as dispatching application.

System Advantages

- Completely IP Design and support remote maintenance, RADC and remote software upgrade.
- Adopt distributed and flattening design; the base station adopts unique design of transceiver hot backup, which ensures 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.

One MSC supports more than 100 base stations.

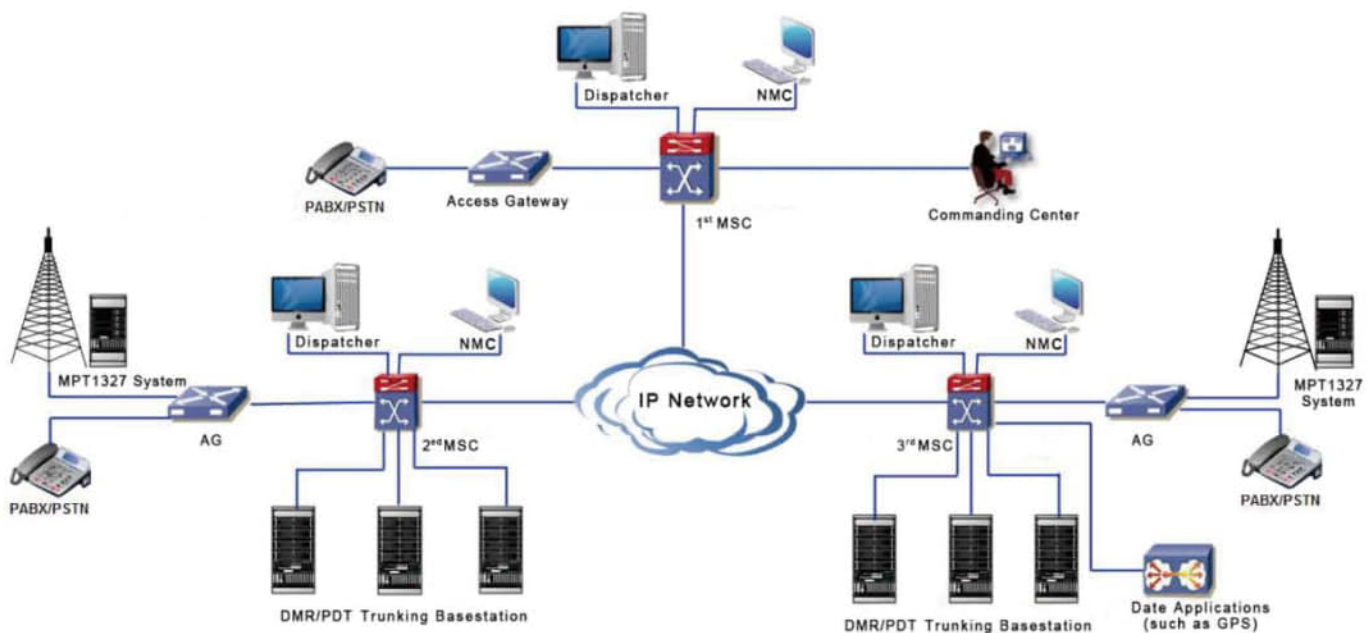
A single base station supports up to 16 carriers.

- **Core Network Components**

MSC, System Data Center (SDC), Network Management Center (NMC), Line Dispatching Server (LDS), Media Server (MDS), Recording/Query System (RQS), Data Application Server (DATAS), router and switch

- **Base Station Components**

Channel unit (CHU), divider unit (DIU), combiner unit (COU), router and switch



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 positioning.
- More safety with encryption.
- Digitalized voice and enhancing the anti-jamming ability, which ensuring the good voice quality.