![Hytera logo]

Hytera DS-6211
DMR Trunking Lite

- Open Standard
- Smooth Migration
- Flexible Networking
- Rich Functions

DMR
DIGITAL MOBILE RADIO ASSOCIATION

Hytera DMR Trunking Lite

Hytera DS-6211 DMR Trunking Lite is a digital trunking system. It is based on ETSI open standard DMR Tier 3. The focus is on transportation, energy resource, public utilities, public safety, etc. With advanced design, Hytera DMR Trunking Lite is provided with special features such as smooth migration, flexible networking and rich functionalities.

Flexible Networking

① IP based architecture.

② Different gateways are provided to interconnect with other system, such as PSTN , MPT, Tetra, FM, DMR conventional, etc.

Non-centralized Network
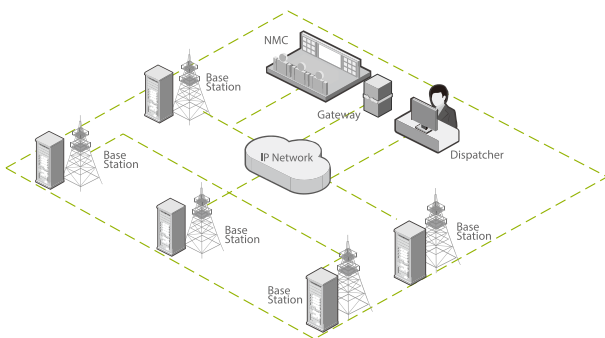
- Non-centralized network operating independently in trunking mode without MSO. This structure can support 1 up to 5 base stations or 20 carriers.

- NMC (Network Management Client) and dispatcher connect to the BS through IP backbone.

Centralized Network
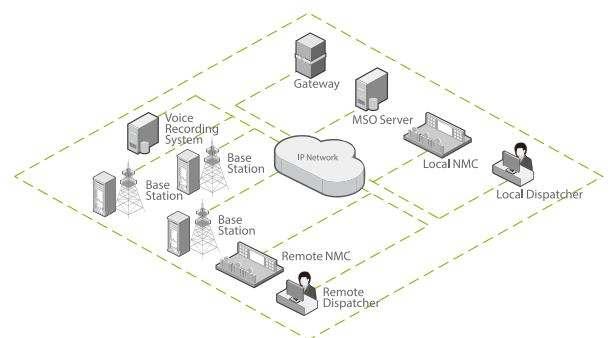
- Full redundant design of all critical components.

- It is suitable for any scale of network, from small network to national network.

Rich Functionalities

① Voice services, data services, priority, late entry, call queue, recording, PSTN call, ESN check, authentication, E2EE, kill, GPS, emergency alarm, etc.

② Providing AIS and API for further development.

Optional Advanced Features

- Full-duplex call
- Ambient listening
- Reserved group call
- OTAP
- ESN check
- Multiple frequency bands within same system
- GPS enhanced group
- Authentication/stun/kill
- Super group call
- Scangroup

* Optional features are subject to change without notice due to continuous development.

Smooth Migration

DMR Trunking Lite transceiver(RD98XS) supports smooth migration from conventional to trunking mode. Multi-mode transceiver provides customers different choices for continual investment.

Multiple dialling scheme available for smooth migration:

DMR dial scheme, MPT1343 dial scheme and CPS-P3 dial scheme.

- DMR conventional mode
- DMR simulcast mode
- Analog simulcast mode
- DMR trunking mode
- MPT mode
- Analog conventional mode

Security Guaranteed Network

① ESN Check and authentication can be used to ensure that only the legal radio can access to the network.

② High level end-to-end encryption is available to protect the privacy of radio communication.

③ Stun/kill/revive feature can be used to guarantee the radio terminals are working under control.

High Reliability

① Modularized design and multilevel fault-tolerant capability for enhanced reliability and efficiency.

② MSO supports both local and geography redundancy mechanism.

③ Redundancy capability for key modules such as base station control unit, trunking main control channel and power supply unit, etc.

DS-6211
Mobile Switch Office (MSO)

MSO is the switch and control center of the DMR Trunking Lite system. It also provides interfaces for different applications and interconnections with other systems.

① Power Distribution Unit
② Media Translation Unit
③ E1 Bridge
④ Firewall
⑤ PSTN\PABX Gateway
⑥ Core Router
⑦ MSO Server

MSO

DS-6211
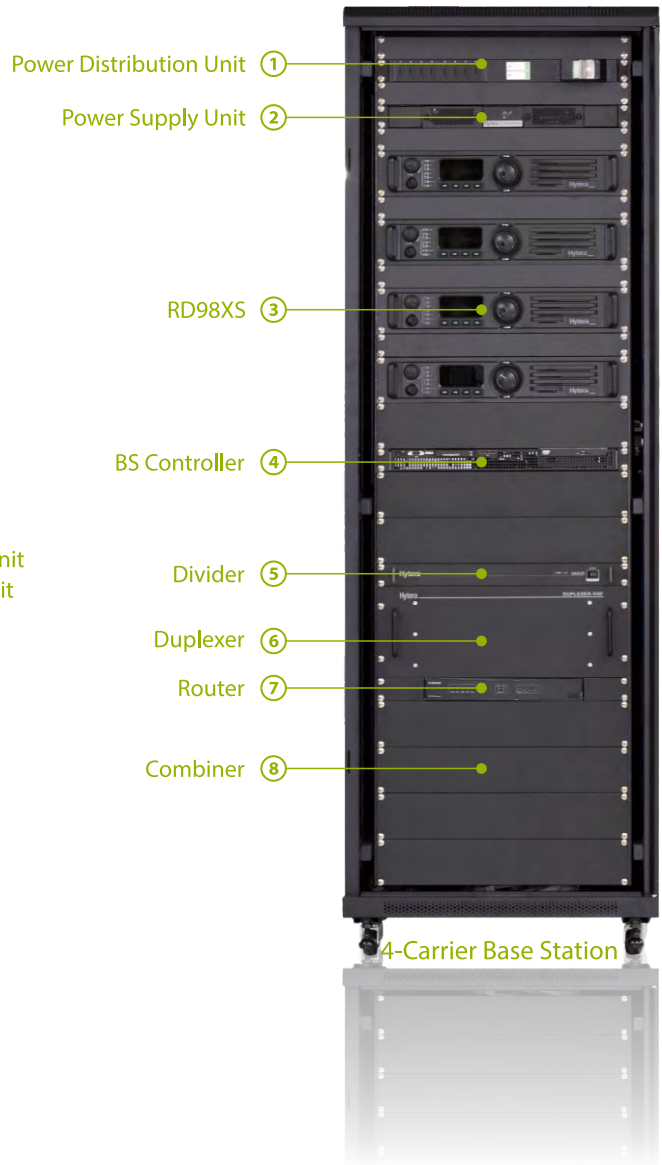## Base Station(BS)

Compact Design

High level integration for 330-470 MHz base station with 2-carrier RFDS.

MPT-DMR Hybrid mode

The base station can work in DMR trunking mode and MPT mode at the same time.

Trunking Simulcast

The base station can work in trunking simulcast mode. All base stations can use the same frequency in the network.


Power Distribution Unit ①
Power Supply Unit ②
RD98XS ③
BS Controller ④
Divider ⑤
Duplexer ⑥
Router ⑦
Combiner ⑧

4-Carrier Base Station

Network Management System

Network Management System (NMS) is composed of the server and network management client (NMC). It supports management, monitoring, operation and maintenance functions for the DMR Trunking Lite system.

① **Powerful management capabilities**

Topology management, configuration management, fault management, security management and performance statistics.

② SNMP is used to facilitate integration into different NMS.

③ Multi-user operation supported with C/S structure

④ Easy maintenance with remote upgrade, OTAP, IP link detection, system health monitoring, etc.
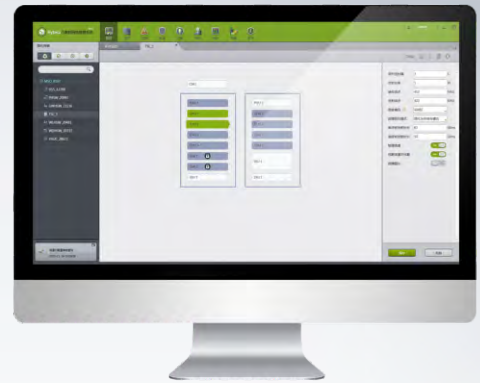
Dispatching System

Dispatch Workstation(DWS) is designed for efficient communications,remote management, dispatching and deployment by professional users.

① Redundancy design ensures reliability.

② Multi-touch technology and user-friendly UI greatly facilitate operation.

③ Enhanced multiple calls ensures efficient command & dispatching in emergencies.

④ All IP structure allows high flexibility and scalability in deployment.

⑤ High mobility with panel operation is applicable to tablets
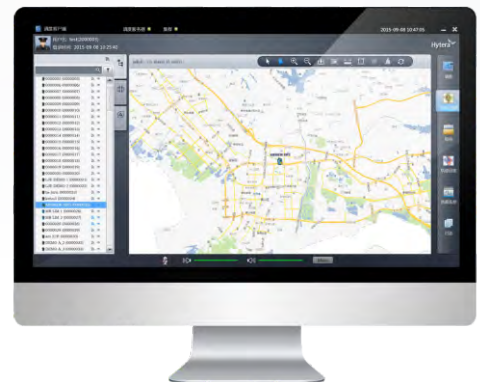
Digital Voice Recording System

Digital Voice Recording System (DVRS) can record the voice calls and text messages across the complete network without any loss. These can be retained for future use such as post-incident analysis.

① IP-based digital network-wide voice/message recording.

② Free access with B/S architecture.

③ Statistics analysis for voice and SMS recording data.

④ Online play and download.

⑤ Flexible configuration based on subscriber, Base station and MSO.

PD68X

PD78X

PD79X Ex

PD98X

X1e

X1p

MD65X

MD78X

DMR Trunking Terminals ▶▶

Highlights

- The most complete DMR trunking terminal portfolio. Portable radio PD70X, PD78X, PD98X, X1e and X1p, mobile radio MD78X, intrinsically-safe radio PD79X Ex.

- The smallest full power DMR trunking portable terminal in the world-X1e & X1p.
  The world's first full duplex DMR Trunking mobile radio, MD78X.

- Four-mode DMR Trunking terminal, supporting analog conventional mode, DMR conventional mode, MPT Trunking mode and DMR Trunking mode.

- All the terminals support software upgrade from conventional mode to trunking mode.

- All the portable terminals support at least IP67, all the terminal radios supports GPS and MIL-STD-810C/D/E/F/G.

X=0, 2, 5,6 or 8, model number varies geographically. For details, please contact our regional sales representatives.

Application Industries

Transportation

Highway, Public bus, Taxi, Airport, Port, etc.
Characteristics: Medium network, large number of users, special applications, information system interconnection.

Energy Resources

Petrochemical industry, Mine, Smelter, Electric Power, etc.
Characteristics: Multi-site, large number of users, explosion-proof, high degree of protection.

Commercial Industry

Hotel, Property, Supermarket, Construction site, Park, etc.
Characteristics: Single Site, medium user number, special application.

Public Utilities

Education, Forestry, Water Conservancy, etc.
Characteristics: Multi-site, small user number, data transfer, telemetry.

Learn more about Hytera DMR Trunking Lite and more products, please visit www.hytera.com or contact our local dealers and sales representatives.

System Specifications

Item	Non-centralized MSO	Centralized MSO
Max. Base Station Capacity (pcs)	5	50
Max. Carrier Capacity per Base Station	8	8
Network Capacity (carrier)	20	200
LDS Capacity (pcs)	5	20
NMC Capacity (pcs)	5	20
PSTN/PABX Interconnect (way per gateway)	120(4*E1)/30(1*E1)	
Group Call Set-up Duration (ms)	<300 (within a single MSO)	

BS Specification	
Frequency Range	U1: 400-470MHz; U2: 450-520MHz; U3: 350-400MHz; U5: 806-941MHz; VHF: 136-174MHz
Carrier Capacity	Up to 8 carrier
Max. Power Consumption	2-carrier: ≤600W 4-carrier: ≤1200W 8-carrier: ≤2400W
Operating Temperature	-15°C to + 35°C
Extreme Operating Temperature	-30°C to + 60°C
Storage Temperature	-40°C to + 85°C
Dimensions (H×W×D)	2-carrier: 675×600 ×600 mm (13U) 4-carrier: 1,750×600×600 mm (37U)

Receiver	
Static Sensitivity	-118dBm@BER5%
Blocking	≥84 dB@±1 M/2 M/5 M/10 MHz
Co-channel Rejection	-12dB to 0dB
Adjacent Channel Rejection	≥60dB@12.5KHz
Intermodulation Response Rejection	≥70dB
Spurious Emission	9.00KHz to 1.00GHz,≤-57dBm@100KHz 1.00GHz to 12.75GHz,≤-47dBm@1MHz

Transmitter	
TX Power	≤50W (VHF, UHF1, UHF2, UHF3) / ≤35W(UHF5)
Adjust power range	5-50W
Available Bandwidth	≤8.5kHz@99% TX power
Modulation Accuracy	≤5%
Frequency Offset	≤±200Hz
Intermodulation Attenuation	≤-70dB
Adjacent Channel Power Rejection	Normal: ≥60 dB@12.5 kHz
	Extreme: ≥50 dB@12.5 kHz
Spurious Emission	9.00 KHz to 1.00 GHz: <-36 dBm@sending, <-57 dBm@standby 1.00 GHz to 4.00 GHz: <-30 dBm@sending, <-47 dBm@standby

System Reliability	
Mean Time between Failures (MTBF)	100,000 hours
Mean Time to Repair (MTTR)	30 minutes

* All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.