Hytera

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Hytera

HyTalk MC Solution

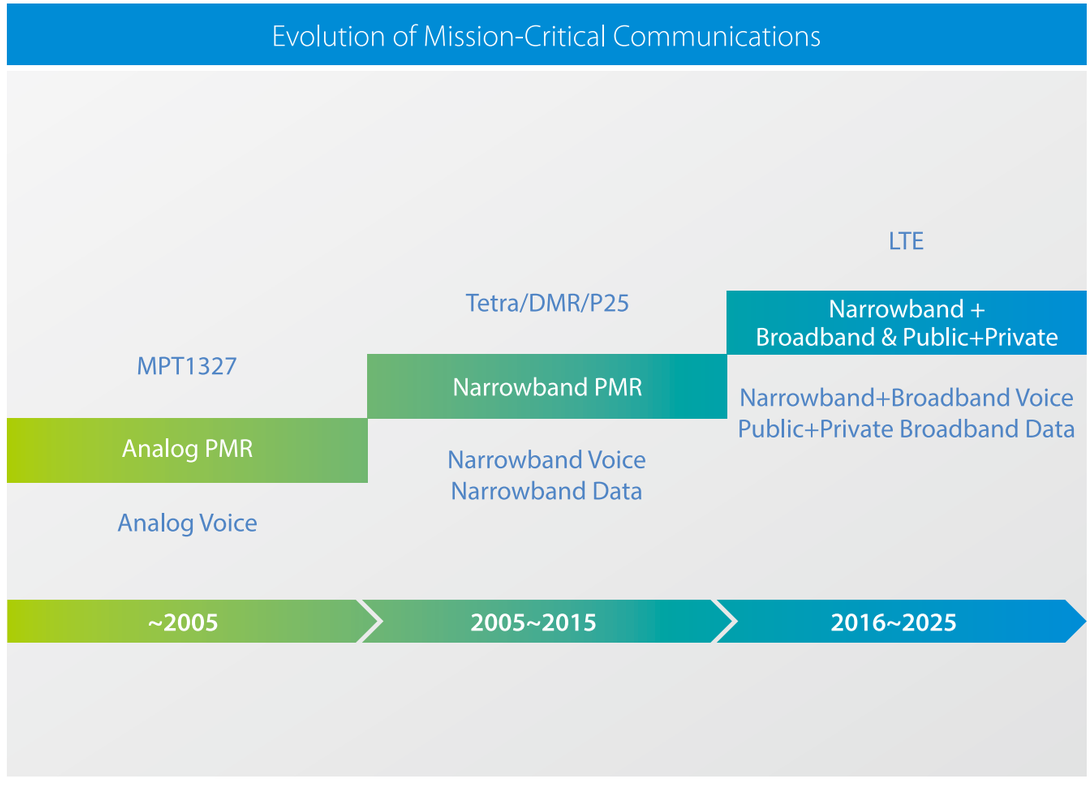
Based on 3GPP standards, HyTalk MC (Mission Critical) is a new generation of mission critical solution designed to deliver stable and reliable voice and video communication, high-speed data transmission and multimedia dispatching services for users from various industries.

Evolution of Mission-Critical Communications

With the development of business, mission critical users requires more services than just voice. Video communication, high speed data transmission and multimedia dispatching are becoming more and more prevalent.

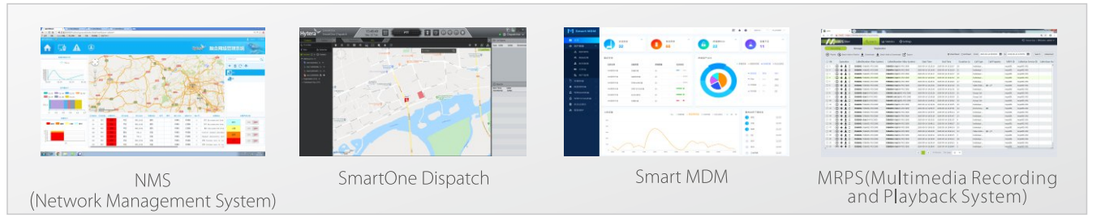
In R13/R14/R15, 3GPP defines MCPPT, MCVIDEO and MCDATA for implementing mission-critical services on LTE. Taking into account the actual needs of customers, frequency resources and investment costs, Hytera's 3GPP-based HyTalk MC solution is your best choice thanks to its deployability over both public and private LTE networks.

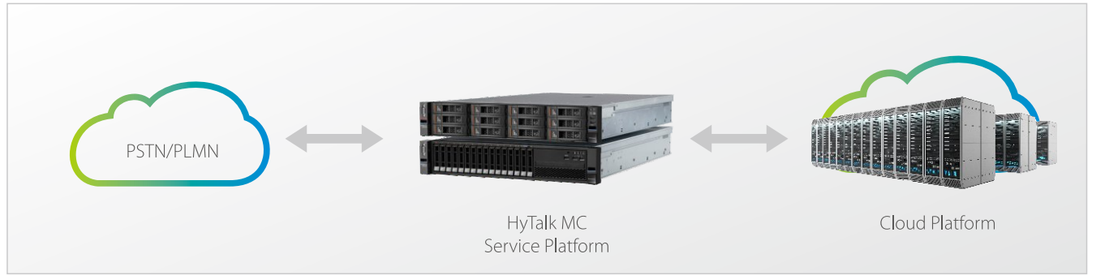
- Narrowband Radio ⟶ Multi-Mode Advanced Radio
- Narrowband System ⟶ Narrowband+Broadband Convergent System
- Voice & SMS ⟶ Voice & Video & Multi-media
- Smooth upgrade and evolution to protect your investments

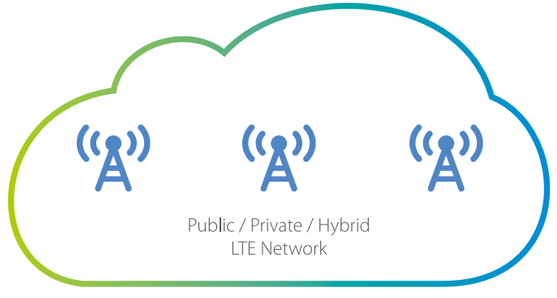


HyTalk MC Solution

Hytera provides end-to-end HyTalk MC solution, which consists of multiple sub-systems, including HyTalk MC the 3GPP standardmission critical system, rich & visual dispatching system, multimedia recording & playback system, Smart Mobile Device Management,NMS, and various mission critical terminals.







Feature List

Calling

- Half-duplex private voice call
- Full-duplex private voice call
- Full-duplex private video call
- Group voice call
- Group video call
- Emergency private call
- Emergency group call
- Group call merging
- APP Broadcast Call
- Call Waiting/Hold
- Communication waiting/transfer

Data

- Unicast SMS
- Multicast SMS
- Store and Forward
- File distribution
- Emergency alarm
- GIS service
- Terminal location subscription

Dispatching

- Broadcasting call
- Ambience listening
- Dispatch monitoring
- Video pull/push
- Stun/Revive/Kill
- Recording
- One-click video upload
- Dispatcher pre-emption
- DGNA

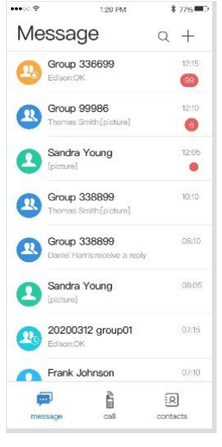
Supplementary

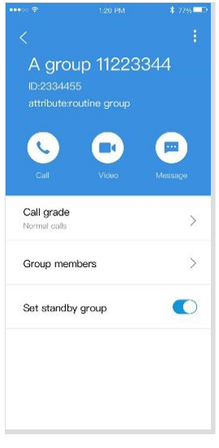
- Service/User/Group Priority
- Contact blocklist
- Interworking with Tetra
- Interworking with PSTN
- Area Group
- Organization pushdown to Clients
- APP Online Status Display
- Automatic audio broadcast
- Function Alias
- Dual APN
- SIM card bind

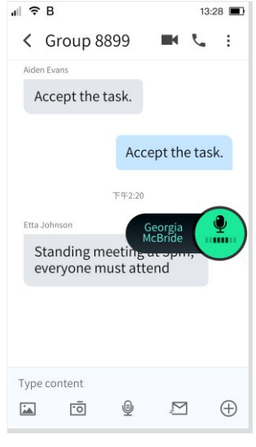
O&M

- APP OTA upgrade
- System manually/automatically scale up/down
- Visualized maintenance
- Bulk Subscriber & Group Management
- Multi-tenant:isolated configuration/data/domain
- Different role, different authorization
- Call statistics
- Northbound & Southbound Interface

User Interface







Highlights

Standard Compliance 3GPP

MCPTT

Private call, group call and more defined in 3GPP

MCVIDEO

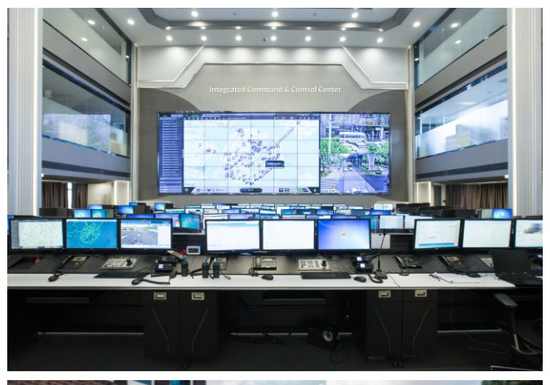
Video private call, video group call and more defined in 3GPP

MCDATA

SDS, multimedia messages and more defined in 3GPP

PLUGTESTS™ INTEROP EVENTS

Inter-operatibility tests with 12 vendors including Airbus, Polaris, Athonet, Sigtech, Softil, Streamwide, Siemens etc. Hytera passed about 200 test items related to MCPTT/MCDATA/MCVIDEO



Highlights

Security

Authentication

Adopts SHA256-based encrypted authentication, and MCS service access authorization.

APP Control

Provides APP installation and access control.

E2E Encryption

Supports AES 256 for improved system security and communication privacy.

User key encryption

User key is stored in cipher text and unable to be modified unless being reset.

TLS encryption

Supports TLS encryption to ensure the security of signal, SMS, etc.

Dual APN

Mission critical traffic running on dedicated APN is separated from other traffic running on default APN.

Reliability

Micro-service Architecture

The introduction of the micro-service architecture realizes the independence and collaboration between various services. The resulting advantages are efficient load balancing, scaling up or down capacity without disrupting business. In addition, the upgrade and downtime of a single microservice only affect the microservice itself, but not the entire system business.

Load Sharing/Geographic Redundancy

Local cluster deployment ensures the system load sharing and high availability; Geographic redundancy can ensure that the standby server automatically takes over when the main server fails, so as to ensure the continuous operation of the system.

Operation

Multi-tenant

System supports multi-tenant mode, ensuring the independence of data between different tenants, using domain names to distinguish between tenants. Tenants can be independently configured for own related services.

Superior User Experience

QoS

Defined QCIs guarantee MC services has the highest priority to seize resources

Service Concurrency

Concurrent voice, data and video service enabled without interruption to each other.

eMBMS

Increases efficiency and saves radio resources.

PTT Association

Associates both software & physical PTT button that follows user habit.

Unified Dispatch

Provides unified dispatch across various networks.

Seamless Integration

Seamless integration under 3GPP definition

Priority

Offers versatile session priority settings, including user priority, group priority, service priority, etc..

APP online upgrade

Automatically get upgrade notification and achieve smooth upgradation.

APP Organization Structure

APP supports to view the current organization structure of the user.

Industry Application

With its diversified services, HyTalk MC solution is ideal for multiple mission-critical fields, including public safety, transportation, and airport.

Public Safety

Utilities

Habor

Energy

Railway

Airport

Specifications

Taking care of various capacity requirements for different scenarios, HyTalk MC can be deployed on rack servers or on cloud platform.Support for expanding system capacity by adding rack servers.

Universal server

Cloud Platform

Specification			
Number of servers	1	3	12
Maximum number of active users	10,000	20,000	100,000
Maximum number of Group	5,000	10,000	50,000
Maximum number of concurrent voice calls	4,000	8,000	40,000
Maximum number of concurrent video calls(480P)	500	1,000	5,000
Maximum number of group members	3,000	3,000 Customizable	3,000 (Customizable)
Maximum number of stored SMS	50,000	100,000	500,000

Note: The scale and some indicators are customizable, please contact us for more details.

Terminals

Hytera offers series of terminals that are designed based on scenarios, including multi-mode radios, broadband radios, body worn cameras, mobile radios, etc.. All of which in common are ruggedized and operable with wet & gloved hands, moreover, there are PTT and SOS button for users to initiate service instantly.

PDM680

Rugged MCS Radio PDM680

PDM680 is Hytera's first MCS radio compliant with 3GPP standard, offering a range of services including MCVoice, MCVideo, and MCData. It is operable over both public and private networks to ensure seamless and uninterrupted mission critical communication anywhere, anytime. Equipped with diverse expansion interfaces and optional accessories, PDM 680 Radio meets various needs of users in different sectors.

- 145.7x60x29.1mm
- 328g
- HD Cameras, rear 16MP, front 8MP
- Standard 2400mAh (Optional 4000mAh)
- Android 10
- 4GB RAM+64GB ROM(Expandable to 256GB with Micro SD card)
- 3GPP LTE R12
- AI-based noise cancellation
- BT V5.0 BDR/EDR/BLE
- Ingress Protection Rating: Ip68
- 1.5 meters drop-proof
- MIL-STD-810H
- IEC 61000-4-2(Level 4)
- GPS/BDS/GLONASS/Galileo/QZSS/A-GPS/NLP

PTC680

Multi-mode Advanced Radio PTC680/PDC680

Combining a full Tetra/DMR radio, a mission critical radio and a smartphone into a single device without compromise on features. It has all the features as a general Tetra radio, as well as mission critical service (voice & video & data). The android based OS allows user to run multiple application simultaneously.

- 140x60x29.1mm, 325g (including standard battery)
- IP68, MIL-STD-810G, 2m drop resistance
- 13MP rear camera
- Full TETRA/DMR trunking
- Smart MDM
- GPS/BDS/GLONASS/Galileo/QZSS

PTC760/PDC760

Multi-mode Advanced Radio PTC760/PDC760

Combining a full Tetra/DMR radio, a mission critical radio and a large-screen smartphone into a single device without compromise on features. It has all the features as a general Tetra radio, as well as mission critical service (voice & video & data). The android based OS with 4-inch touch screen allows user to run multiple application simultaneously.

- 139.5x68x25.3mm, 325g
- Full DMR/TETRA trunking
- IP67/MIL-STD-810 G
- Vehicle installation
- GPS, GPS/BDS, GPS/GLONASS
- Smart MDM

Smart Radio PDC550

PDC550 is a smart Radio which enables the collaboration of dual communication modes including broadband and narrowband networks as well as public and private networks in various scenarios.

- Positioning: GPS/AGPS/GLONASS/Galileo/BDS
- Ingress protection rating: IP68
- Dimensions: 155x 75x 21.5mm
- Weight: 375g (with battery, antenna and back clip)
- Main Display: 5.0-inch HD touch screen,1280x720 resolution
- Speaker Rated power:1W, Max:2.5W

PNC550

Smart MC Radio PNC550

PNC550 is a commercial terminal with 5-inch screen. It integrates smartphone and professional walkie-talkie functions, meets the diverse requirements of users.

- Positioning : GPS/BDS/GLONASS/Galileo/Network
- Ingress Protection Rating : Ip68
- Working temperature : - 20 ^{0}C - 60 ^{0}C
- Dimensions : 156.5 x 76 x 14 mm,
- Weight : 250g

VM780

4G Body Worn Camera VM780

VM780 support H.265 high-efficiency video coding and dual-stream technology, low bandwidth, high compression.

- Positioning: GPS/BDS/GLONASS/AGPS
- Ingress Protection Rating: IP68
- Working temperature: - 30 °C- 60 °C
- Dimension: 114.5 x 61 x 25.5 mm
- Display screen: 2.8 inch color touch screen, 240*320
- Weight < 195g

PNC380

PNC380

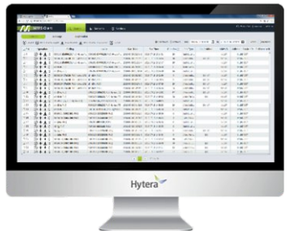
PNC380 combines the instant communication and multimedia applications into a single device. Over the 2G, 3G, 4G, and WLAN networks, the device delivers rich multimedia data services, including 4G video transmission, location sharing, and instant messaging.

- Positioning: GPS/GLONASS/BDS/AGPS
- Battery: 4000 mAh
- Camera:5MP rear camera (PNC380 Pro)
- Speaker: 32 mm, circular, rated power: 1 W
- Dimensions :145.1x 60 X 26.1mm
- Weight: 208g (with battery and antenna)
- Ingress protection rating: IP67

Applications

SmartOne Dispatching

- Interconnect to Multiple types of networks: PMR, PTToC, PSTN, CCTV,etc.
- Multi-vodec of voice & video supported
- Unified dispatch across different networks
- Visualized Dispatching on multi layers: GIS, multi-video streams



MRPS (Multimedia Recording and Playback System)

- Massive voice, video and SMS recording
- B/S architecture with advanced search, playback and analysis functions
- Flexible centralized or distributed deployment
- Multi-level deployment supported
- 500 calls and 50 videos recorded simultaneously

NMS (Network Management System)

- Efficient & comprehensive subscriber/group management
- Visualized troubleshooting
- AI-based exception precaution
- Open API for rich third-party applications

Smart MDM

- Management of both narrowband and broadband terminals
- Batch operation through OTA, including: key management, permission control, programming, and upgrade of firmware and APP push
- Various means to ensure safety
- Terminal Monitoring (GPS tracking, Bettery Health, etc.)
- Hierarchical organization and RBAC
- B/S based management

Innovate for a Safer World

Respond & Achieve

Hytera Communications Corporation Limited is a global private listed company headquartered in Shenzhen, China. Founded in 1993, it is a leading global provider of innovative Professional Mobile Radio (PMR) communications solutions that improve organizational efficiency and make the world safer.

Hytera provides a full portfolio of leading PMR and Integrated Command & Control solutions to increase customers' situational awareness, collaboration and response rate in the complex environments they work in, from daily command and control to emergency response and disaster relief.

Working with over 4,000 dealers and partners, Hytera is proudly serving customers in over 120 countries and regions around the world, including governmental organizations, public security institutions, and customers from transportation, utilities, and other commercial sectors. In order to turn leading technologies into solutions that our customers can count on to solve their real time problems, Hytera makes great efforts in integrating PMR communications solutions with managerial and operational excellence.

In Hytera, around 40% of our employees are engaged in engineering, research and development, and product design. There are 10 R&D centers globally, collaborating to keep Hytera at the forefront of communications technologies.

Hytera is committed to providing reliable products with high quality. Hytera Smart Factory in Shenzhen incorporates intelligent warehousing and logistics systems. As an important part of the global supply chain, our manufacturing center in Zaragoza, Spain focuses on the customization to the needs of our European and American customers.

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