

Secure, reliable, simple and efficient HyTalk communication platform

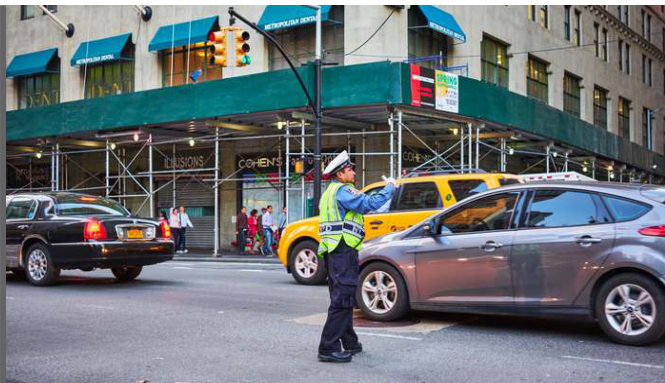
- Top three business features: Trunking PTT, full duplex audio & video, IM message
- Top three performance characteristics: Low latency, high concurrency, anti packet loss
- Top three system advantages: Easy to deploy, easy to integrate, easy to scale



The Birth of HyTalk

With the rapid development of mobile Internet, public network coverage has become increasingly extensive, technology is increasingly advancing, and pure voice intercom is beginning to fail to meet the communication needs of contemporary private network users. Meanwhile, image, video, data and other service needs are gradually increasing. User of private network communication industry is facing many challenges: High construction cost, short coverage distance, limited system capacity of the network, difficulty in applying for the frequency points, and communication supported only via vocal messages cannot sustain big data applications.

In this context, in response to the users’ needs, Hytera creates a new generation of efficient instant POC (Push-to-talk over Cellular) communication platform - HyTalk. In a wide coverage of 3G/4G/WLAN network, user can interconnect anywhere with public network signal. The HyTalk platform can provide PTT voice communication, full-duplex audio and video communication, IM message communication; it can dispatch its services through a variety of devices such as computer, mobile phone, law enforcement recorder, and public network intercom, in order to meet the customer needs for voice, video and messaging by operating in different locations and working environments.



HyTalk Communication VS Trunking Intercom

	Cluster Intercom	Hytalk
Communication security	Communication encryption	Communication encryption
Connection speed	<500ms	<1s
Call priority	Support	Support
Reliability	High	High
Support concurrency	Low	High
Network construction cost	High	Low
Deployment difficulty	High	Low
Communication range	Small	Large
Maintenance cost	High	Low
Bandwidth capability	Small	Large
Rich media service	Weak	Strong

Highlights of HyTalk

Secure

- Encrypted**
The communication data between the terminal and the server is encrypted through the AES128 link, and the key is transmitted by RSA asymmetric encryption, to ensure the security of communication data.
- Authentication**
The HyTalk system supports MAC address authentication for the dispatching desk account and administrator account. After the authentication function is enabled, the account can only log into the authenticated computer to avoid the risk of core account theft.
- Control**
Even if the terminal is lost in some cases, the dispatching desk and management platform can quickly disable the account to ensure information security.

Simple

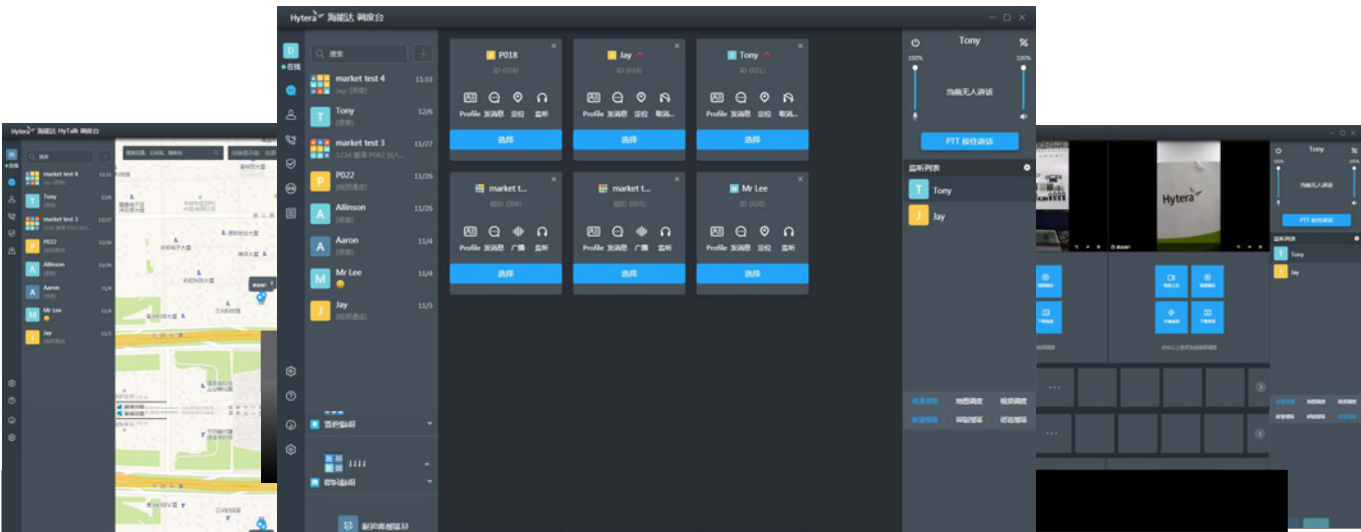
- One-click intercom**
Trunking PTT, press-to-talk. Support single calls and group calls to meet urgent and fast communication needs.
- Full duplex audio & video**
Full duplex audio & video private/group chat, to meet the need for detailed and stable communication.
- IM message**
Support text, image, location, files and other message formats, in order to meet multimedia communication needs.
- Call priority**
Support call priority. Special services such as SOS have the highest priority, in order to ensure important information is transmitted first.

Reliable

- Highly available**
Connecting local high availability with micro service architecture, the system is highly stable. When a single service fails, other services can take over the business to ensure the smooth operation of the business.
- Offsite disaster recovery**
Offsite deployment servers to back up service data. When the local server is destroyed, the service data can be restored by the offsite server.
- Large capacity, high concurrency**
Support millions of users. Support horizontal and vertical expansion. A single group supports up to 2000 members.







Efficient

- Wide coverage, high-quality call**
The service is based on 3G, 4G, LTE, and WLAN with extensive coverage and meets the nationwide intercom needs. The call connection rate is high and delay is low. High-quality call , 50% anti packet loss for voice, 30% anti packet loss for video. Support H.264 and H.265 video transmission.
- A variety of dispatching features**
Combining voice, video, and map dispatching, it can remotely instruct the terminal to implement functions such as monitoring, positioning, broadcasting, video pull-up and push-down, and remote stun/kill.
- Flexible deployment**
Support private network/public network deployment. Support physical server and cloud server.



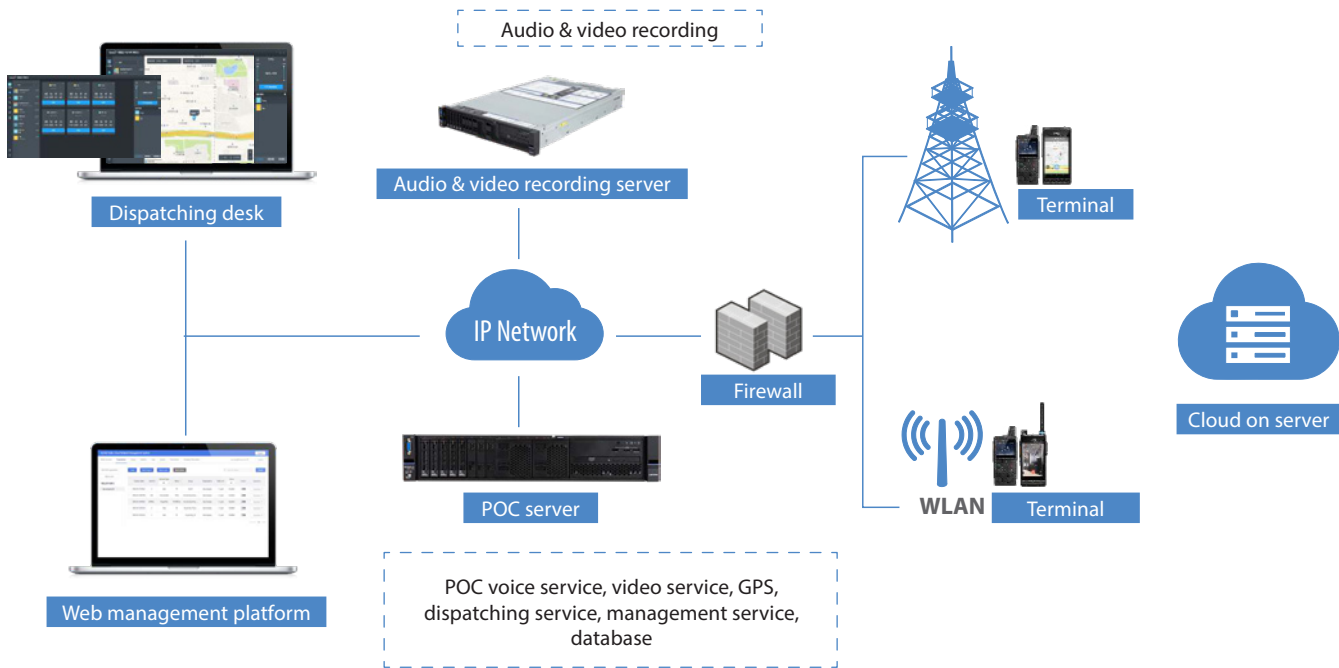
Flexible business model

Customers can flexibly choose the most suitable business model based on their needs.

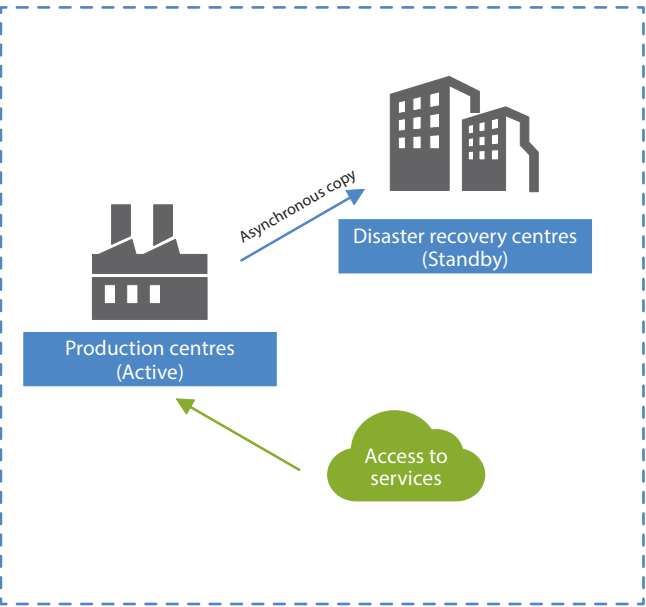
Business model	 Ownership	 Environment	 Operation & maintenance	 Network	 Connection	 Value
Direct customer	All resources are property of the organization	Flexibly built, as needed	Self-Service Operations	Public/private network	Interconnectivity for all users within the system	High-level information security
Carrier	All resources are property of the carrier	Flexibly built, as needed	Operations run by carrier	Public network	\	High investment value
Renting customer	\	\	\	Public network	Interconnectivity for all users within the renting organization	High price/performance ratio, no network construction cost, easy to use




HyTalk platform infographics

The overall HyTalk architecture is as follows. It requires less logistics and supports cloud-based deployment.







HyTalkserver



-  **Highly available**
With a cluster of 3 servers, whenever any of the 3 servers fails, system services will not be interrupted, as long as the online and concurrent services of the entire system do not consume more than the current system resources (min reduction of 1/3).
-  **Load balancing**
Reasonably distributes services to various servers evenly to prevent overload on a single server. In addition, the load balancing design also provides much convenience for subsequent server expansion.
-  **Disaster Recovery**
Disaster recovery centres built offsite for data backup. Asynchronous data backup is made possible between production centres and disaster recovery centres.

List of functions

-  **PTT trunking communication:**
 - Single call
 - Preset group calls
 - Dynamic group calls
 - Emergency calls
 - Full duplex calls
 - Priority control
 - Group member presence
 - SMS
-  **Video service:**
 - MMS
 - Group Video Calls
 - Video pull-up
 - Video push-down
 - Video upload
 - Video forwarding
-  **Dispatching service**
 - Temp group
 - Voice dispatching
 - Video dispatching
 - Remote monitoring
 - GPS real-time positioning
 - GPS track playback
-  **Operation & management**
 - Carrier management
 - Distributor management
 - Company management
 - Group management
 - User management
 - PO management
 - Data statistics
 - Log management
 - Audio & video recording

Terminals description



PNC370

Public network intercom

- 2G/3G/4G/WLAN support
- 146x55.5x24mm
- 185g (including standard battery)
- >18h (3100mAh)
- Rated speaker power 1W
- IP55/MIL-STD-810 G
- Operating temperature -20°C – 60°C
- 2.0 color screen
- Bluetooth 4.1
- GPS/Beidou/Glonass

PNC370 features voice intercom service with clear and loud voice. It can offer trunking voice and meet the widest range of intercom needs of customers. Meanwhile, it supports multiple positioning to enable visual dispatching service, helping customers to efficiently complete management and dispatching operations.



PNC380

Public network intercom

- 2G/3G/4G/WLAN support
- 145.1x60x 26.1 mm
- 208g (including standard battery)
- >24h (4000mAh)
- 5MP rear camera
- IP67/MIL-STD-810 G
- 5MP rear camera
- Full numeric keyboard
- 1.2mdrop-proof
- GPS/AGPS/Beidou/Glonass

PNC380 has powerful intercom and public network trunking dispatching function, full numeric keyboard design, for fast and convenient operations. Equipped with 5MP rear camera, it can record real-time dynamics in the field, and help command center to command and dispatch efficiently.



DSJ-HYTH7A1

4G law enforcement recorder

- 2G/3G/4G/WLAN support
- 114.5x61x25.5 mm
- 218g (including standard battery)
- H.265 video compression and dual-stream tech
- 216-degree rotation lens
- Night vision (5m identifiable, 10m visible)
- Continuous video recording >9h
- 2 x 1.5W speakers
- Dual mic for noise reduction
- IP68/MIL-STD-810 G
- 2m drop-proof
- GPS/Beidou/Glonass

DSJ-HYTH7A1 is a 4G law enforcement recorder built by Hytera, which uses H.265 high-efficient video coding and dual-stream technology, low bandwidth and high compression. It offers full-network POC intercom. Together with HyTalk platform, it provides fast HD video backhaul, public network intercom, remote audio and video recording, etc.



PNC550

Smart Public Network Intercom

- 2G/3G/4G/WLAN support
- 156.5x76x14 mm
- 250g (including standard battery)
- 4000mAh high-capacity battery
- 8MP front camera, 13MP rear camera
- 5.0' HD touch screen
- Independent PTT key, emergency alarm key
- Dual mic for noise reduction
- IP68/MIL-STD-810 G
- Support H.264, H.265 video
- GPS/AGPS/Beidou/Glonass

PNC550 is a smart PoC intercom with large-screen, which combines 4G smart phone with public network intercom, and it is compatible with third-party Apps. It meets the diversified business needs of users across industries. Software can be adapted to meet customer need for personalization.



PDC550

Public network smart intercom

- 2G/3G/4G/WLAN support
- 155x75x21.5 mm
- 375g (including battery, antenna, back clip)
- 5.0' HD touch screen
- Independent PTT key, emergency alarm key
- Dual mic for noise reduction
- Rated power of speaker 1W(max 2.5W)
- IP68/MIL-STD-810 G
- 1.2 m drop-proof
- GPS/AGPS/Beidou/Glonass
- DMR DMO/RMO Compatible

PDC550 is a 4G + DMR smart terminal with large-screen, which enables interoperability of multiple communication modes such as narrow/broad bandwidth, public/private communication. It removes the restriction on communication distance through public network intercom, and addresses the problem of dead ends and blind spots in public network signal through private network pass-through and transfer functions, providing seamless communication for users! The terminal also supports applications of massive multimedia data services, such as WLAN, Bluetooth, GPS, camera, video, NFC, etc.

HyTalk usage scenario

Extensive Law Enforcement



Public Utilities



Industry and Commerce





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