

Hytera Assists Inner Mongolia to Deploy DMR

Bayannur Realizes Digital Upgrade in Public Security System

User
Bayannur Public Security Department, China

Market segment
Public Security

Project Time
2011

Products
Hytera DMR Trunking Pro
PD78X Portable Radio
MD78X Mobile Radio



Background >>

The total area of Bayannur Prefecture, Inner Mongolia Autonomous Region, China, is 640,000 square kilometers, with jurisdiction over four banners (a county level division in the Chinese administrative hierarchy), two counties and one district with a total population of 1.76 million of more than 20 nationalities, such as Meng, Han, Hui, Man and Daur.

With more and more requirements in Bayannur's wireless communication, the analog trunking system cannot meet the growing data application demand anymore, and the upgrade to digital is an irresistible trend. The Bayannur Public Security Department decided to upgrade police analog trunking system to a digital trunking system, in order to strengthen the dispatching functions and improve the safety, reliability and anti-disturbance capacity of the police communication.

Customer Requirement >>

To better response in their daily work, the Bayannur Police would like to have a communications network covers the whole Prefecture, realizing efficient communication and dispatching among the Municipal Public Security Department, subordinate police bureaus and local police stations, and also facilitating the communication and dispatching for each police units.

Hytera Solution >>

Based on the analysis of the Bayannur Police's requirements, Hytera offered the following solution:

1. Build a DMR digital trunking core network in the Municipal Public Security Bureau of Bayannur;
2. Set up the digital base stations in 8 subordinate police bureaus, including Bayannur, Urat Front Banner and other 6 districts;
3. Build a DMR police digital trunking system by integrating the new digital base stations with the digital trunking core network via IP link; meanwhile, correspondingly shut down or adjust the analog channels.

DS-6210 Trunking Base Station



PD78X

MD78X





Solution Highlight

The DMR DS-6210 trunking base station offered is compliant with ETSI DMR open standard, and can be compatible with the existing analog trunking system of Bayannur to realize smooth analog-to-digital migration.

Digital voice, strong anti-disturbance capacity and better quality
Hytera DMR Tier III trunking terminals adopt advanced digital voice coding and channel coding technology, which can better suppress noise and interference, especially at the edge of coverage, achieving better audio quality compared with analog technology .

Better spectrum efficiency
DMR technology adopts TDMA two time-slot technology which divides the 12.5kHz bandwidth into two 6.25 kHz time slots to support 2 simultaneous communication channels, greatly enhancing spectrum efficiency and system capacity.

Large coverage networking
The DMR transmitter adopts the large-cell coverage technology of large cell and the technical advantages are as follows: the coverage area of the large cell base station is wider and can meet the signal coverage of a city with less base stations, which makes the infrastructure and networking cost lower; less base station networking can also reduce the operation and maintenance cost; and smaller quantity of the base stations can decrease the complexity of the network and improve its operation reliability.

Digital technology to guarantee the communication confidentiality
The scan monitoring of frequency on the analog channels can receive recognizable voice signals; while the monitoring on the digital channel, only the carrier reception can be displayed, but no voice output, if the signaling or ID codes (which can be up to 16776415) are unmatched.

Project Result

The upgrade, expansion and renewal of the police digital trunking system for the Bayannur lasted 45 days. Multiple base stations have been set up with up to 1000 new added digital handsets, and the total analog/ digital handsets were increased to 1800 sets. The police trunking network has migrated to digital smoothly and realized compatibility with the previous analog system.

The trunking system was first put into use to ensure the communication to strengthen the security work during the visit of Mr. Bateer, the Chairman of the Inner Mongolia on November 6th 2011. The entire network system presented stable and reliable operation; functions such as voice call, SMS receive & transmission, and analog-digital work mode transition worked properly; the confidentiality of the communication was reinforced and the voice was clear. The communications with the new digital trunking network is proven to be reliable, rapid ,accurate and confidential.

Voice from Customer

"The establishment and operation of the 350M police digital trunking system of the municipal public security of Bayannur is meaningful. As the first prefecture-level Public Security Department which has established digital police communications network, it greatly ensures the efficient and accurate command and dispatching for the police units of our prefecture. This also sets a good example on the informatization of emergency command and dispatching for the nationwide public security organizations."



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