

Rizhao Port, China

Hytera Offers 24-hour DMR Communication Solution to Chinese Port

User

Rizhao Port, China

Market segment

Port

Project time

2015

Products

Hytera DMR Trunking Pro
DS-6210 Base Station
MD78X Mobile Radio
PD78X Portable Radio



Customer Background >>

Rizhao Port is one of China's key developing coastal ports, the East bridgehead of the new Eurasian Continental Bridge, as well as an important pivot in the Belt and Road Initiatives. Its throughput capacity ranks 8th among the country's coastal ports and 11th in the world. Currently, Rizhao Port is using 150 MHz analog conventional radio system. The customer hopes to realize a smooth migration from analog radios to digital ones, so as to satisfy Rizhao Port's production dispatch of 140 groups and the requirement for 4,000 radios.

Customer Requirements >>

Cover the Shijiu Port and Lanshan Port districts of Rizhao Port with digital trunking signals.

The base station shall satisfy production and dispatch needs of Rizhao Port, and realize the automatic roaming feature of digital radios. During the same time, realize a smooth migration from analog radios to digital ones.

The digital radio communication and dispatch system shall satisfy the radio communication demands in all the production services. And the system shall have over 95% signal coverage, with the communication radius of over 5 km.

The call rejection rate shall be lower than 5%, the call setup time no more than 90ms, and the inter-base-station call setup time no more than 360ms. The dispatch shall be convenient and fast for high efficiency.



DS-6210 Trunking Base Station

MD78X

PD78X





Solution ➤

Since the port districts are large with many users and busy call traffic, multiple base stations are needed for large coverage. Thus, our solution is to build two base stations with 32 carriers in the system, so there will be totally 62 traffic channels and two control channels to satisfy the requirements.

The IP-based system can provide flexible networking and APIs for different application needs.

Solution Advantages ➤

The digital radio communication and dispatch system can satisfy production and dispatch communication needs in the port districts, and realize the automatic roaming feature of digital radios. During the same time, it can realize the smooth migration from analog radios to digital ones.

The voice traffic channels of the base stations can be designed with the same quantity and scale, and can be adjusted on actual requirements.

Network-wide dynamic recording system is adopted to record all the user calls within the digital trunking system at the same time. Each recorded file can be saved for three months.

The solution has the following advantages:

- High availability of spectrum.
- Standard trunking mode with control channels.
- Supports advanced features such as authentication, priority call, late entry, end-to-end encryption, multi-group call, roaming, kill/revive, etc. It is cost-effective.
- Based on the large-area coverage, it substantially reduces the cost of system construction and maintenance.
- Highly reliable design: the system combines distribution and concentration deployments in its architecture, supporting various fallback modes, base station controller backup, main control channel backup and power backup.
- IP-based architecture is adopted for flexible and convenient networking.
- Modularization design is adopted on the hardware and software of the system, so the customers can choose their needed modules for actual system management demands.



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