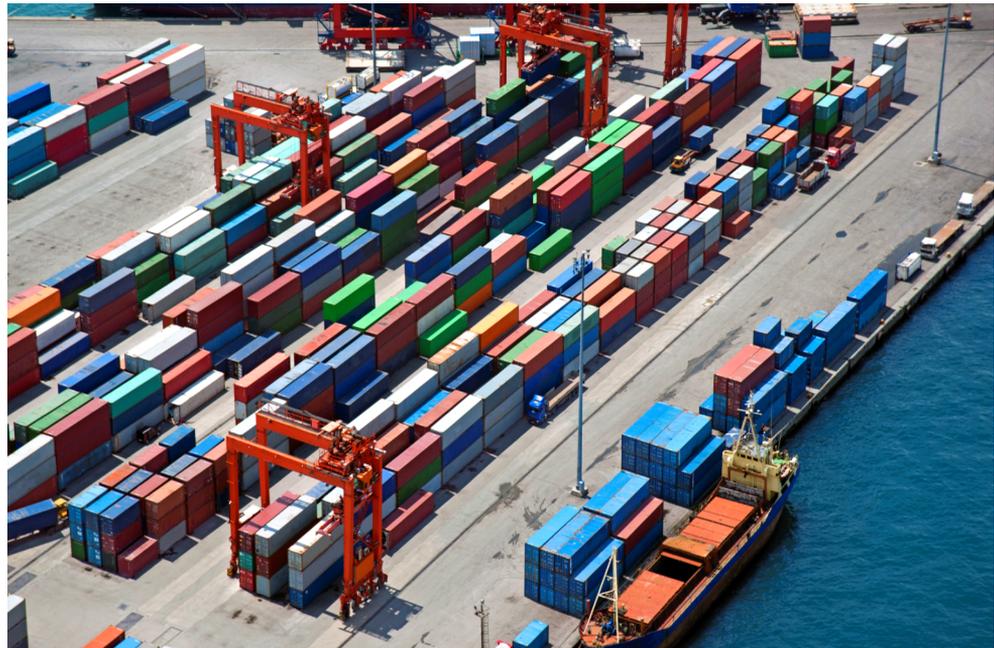# Nansha Port, China

Hytera Offers 24-hour DMR Communication Solution to Chinese Port

User
Nansha Port, China

Market segment
Port

Project time
2015

Products
Hytera DMR Trunking Pro
DS-6210 Base Station
MD78X Mobile Radio
PD78X Portable Radio
PD70X Portable Radio

DS-6210 Trunking Base Station

MD78X   PD78X   PD70X

Industry Background

In the private network communications in port industry, the conventional and analog trunking technologies are applied in a much wider range than the digital trunking technology. However, the former two technologies have the following shortages:

· Conventional radios have simple mechanism and can only support voice calls.

· With limited technology, analog devices have low voice quality and the calls are easily interfered, causing incorrect information during communications.

· Compared with trunking systems, conventional systems have simple dispatch. And to select a channel, the user needs to rotate the radio knob, which will easily cause misoperation.

· Conventional systems fail to form the dispatch network of a group or even a company. They cannot ensure the direct connection between each dispatcher and the production field, adverse to effective transfer of the information and dispatch.

Customer Requirements

Our customer is Nansha International Container Terminal (herein after referred to as "NICT"). It is a municipal and provincial key project. NICT plans to have a designed capacity of 4 million TEUs per year, equipped with six 100,000-ton berths. It has the following requirements:

1. Design and establish a portable radio system solution for the port.
2. Assist NICT to apply for digital radio repeater frequency to Guangzhou Radio Regulatory Commission.
3. Build 400 MHz digital trunking transceiver system.
4. Supply, tune and assemble the 400 MHz digital trunking portable and mobile radios.

Hytera Solutions ▶▶

After analyzing the customer requirements, we offer the following solutions:

1. Build a DMR trunking base station (with 4-frequency carrier+ 1 redundancy). The base station supplies a specified control channel and seven channels for voice call and data services. Thus, with the base station, the user can call and dispatch through the digital radio any NICT individual staff or the whole crew who are within the coverage of the base station signal. And the base station can support seven voice calls at the same time, ensuring smooth interconnections in departments.

2. Cover the entire port area and office buildings with the trunking signals. Lower the transmission power based on the satisfied communication quality, so as to avoid external radio interference and comply with the regulations of China Radio Management.

3. The system supports voice calls such as group call, individual call, etc. And each radio is set with a unique individual call number. As the port will have the increase of the radios in the future, the system is designed capable of supporting more portable and mobile radios.

Solution Advantages ▶▶

The applied trunking system consists of Hytera products, including the base station, dispatch system, network management system, portable and mobile radios.

The dispatch system is IP-based. Thus, besides supporting basic features such as group call, individual call and message, the system can also provide more features such as multi-party call, visual dispatch, multiple paths of voice monitoring, override, interrupt, recording, radio status monitoring, etc.

The network management system is also an important part of the digital trunking system. The system is used to manage and monitor the entire trunking system and provide operation maintenance function, so as to realize the allocation and monitoring of software and hardware resources in the trunking system, and generate status reports for convenient troubleshooting. Besides, the system supports user management, performance statistic and security management, etc.

The digital trunking system has the following advantages:
· It can provide safe and accurate voice communications and data transfer services of high quality.
· It can help the departments to better handle emergency during operation. With abundant capacity, the system can promptly dispatch staff from different departments at the same time to complete specific tasks together.
· It can provide uninterrupted and effective communications, which comply with port communications guarantee ordinances. Moreover, the system supports redundancy feature, satisfying high standard of the reliability and stability in the port industry.