

Hytera Integrated DMR Tier III and Hytalk Pro PoC Solution Enhances Daily Operation Capabilities of Istanbul Financial Center



Introduction

Istanbul Financial Center supported Turkey's modern and innovative face with the technological solutions and systems that Hytera brought to users in the field of communication. Hytera provided DMR Tier III (DS-6211) trunked two-way radio system with 30 set DS-9300 distributed antenna system indoor coverage whole buildings basement levels and its HyTalk Pro PoC solution along with Broadband radio (LTE) handheld terminals. The integrated comms solution supports mission critical voice services and a wide range of broadband services such as video and data, as well as indoor coverage. This has greatly enhanced the effectiveness of the Istanbul Financial Center operational capabilities.

The Background

The Istanbul Financial Center is included 1.3 million m² of office space, a 100,000 m² shopping mall, a congress center (with the capacity to hold up to 2,100 people), a 30,000 m² 5-star hotel, a car park (with capacity for 26,000 vehicles), all created within a 'smart city' model.

Customer Name

Istanbul Financial Center

Project Time

2022 to present

Project Location

Istanbul, Turkey

Industry

Public Safety

Products/Solutions

- DMR Tier III System
- DMR DS6211 Base Station
- DS-9300 and DAS System
- PNC360s Hand Portable Radios
- Hytalk Pro PoC Platform
- MUC Dispatcher, MRPS

Istanbul Financial Center is not only one of the iconic symbols of Turkey but also the heart of the government economy and finance. Therefore, IFC management handled the issue meticulously. To cope with these challenges, the Istanbul Financial Center Administration was needed a reliable communication system to be able to manage and coordinate an effective response to any situation for public security..

The Challenge

The biggest challenge facing the Istanbul Financial Center has a large venue and a large property scale. Daily operations need to effectively coordinate many areas, which requires the establishment of a communication network. Reliable communication is a big challenge. Further more, the radio system also lacked adequate security features such as end-to-end encryption services.

One of the biggest disadvantages of the Istanbul Financial Center has many different types of activity areas indoor coverage such as shopping mall areas, gallery areas, car parking areas, investors offices etc., these places need to coordinate communication. Due to differences in environments, it should be communication solution need to be provide in there seamless. In order to coordinate and orderly management, so as to truly realize the unified management of the Istanbul Financial Center. At the begining time, the Istanbul Financial Center do not have any serve a private communications network.

In addition, the radio system only supported voice services and limited data such as short messaging. It was not able to track the location of radio users via GPS services, for example, as this kind of functionality is only found in modern digital radio systems.

For these and other reasons, the Istanbul Financial Center wants a digital communication solution they could use in daily operations. They want a solution that will allow broadband and narrowband communication at the same tim such as take photos, videos, make video calls, and which supported live broadcasting to and from the control room for greater situational awareness.

The Istanbul Financial Center needed to deploy modern technology communications system, which can deliver indoor and outdoor radio coverage, provide value-added services, and work independently on its own resilient infrastructure in public security.



The Solution

Fully understanding what the customer demands, Hytera installed and commissioned DMR digital trunking communications with Hytalk Pro Poc system for IFC. Besides DMR digital trunking base stations, DAS system with DS-9300 repeaters has been established in all underground technical areas, gallery areas, parking areas and stakeholder areas. In this way, it provides radio coverage without leaving any blind points.

DMR digital trunking communication system is a professional wireless communication system with shared channel by multi-user and multi-sector and can dynamically manage and use these channels. The system is mainly used for command and dispatching communication besides Hytalk Pro Poc system and its superiority greatly lies on rapid response, easy to use and multi-level dispatching in a wide range of wireless communication.

Hytera established a digital trunking system with 4 carriers 8 channels by utilizing TDMA dual time-slot technology for Istanbul Financial Center. The Istanbul Financial Center is serving mobile switching offices (MSOs), each capable of controlling DS-6211 Digital Mobile Radio (DMR) Tier III trunking base station, which is complemented by a Hytera HyTalk Pro push-to-talk over cellular (PoC) solution. The DMR trunking system comprises 30pcs DS-9300 fiber optical bi-directional amplifier repeaters system and distributed antenna system with 70 digital portable poc terminals were deployed in the system.

The most important part of this solution is that the broadband Hytera HyTalk Pro and the narrowband DMR Tier III system work together as a single system. HyTalk Pro is a PTT solution, which can be deployed on existing private/-public LTE and Wi-Fi networks. HyTalk Pro helps users to protect their investment in the DMR Tier III solution by interworking with it, extending coverage beyond the DMR network and supporting broadband applications such as video.

The Istanbul Financial Center also installed a Hytera SmartOne multimedia unified communication (MUC) dispatch platform, multimedia recording and playback system (MRPS) and network management system (NMS) to support rich multimedia services and applications.

One of the biggest aim that the solution is to strengthen the infrastructure of multimode terminals provide and with capable features in the next phase.



The Benefits

Nationwide Coverage

The Hytalk Pro digital network platform can be deployed on private/public LTE networks including national public mobile phone networks. This massively extends coverage beyond Istanbul to include the whole of Turkey.

Products

- DMR Tier III System
- DMR DS6211 Base Station
- DS-9300 and DAS System
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Indoor Coverage

Thanks to DS-9300 fibre optic repeaters with distributed antenna system, basement galleries and parking areas have been covered by Hytera. Thus, a reliable radio communication has been provided without blind areas in basement indoor areas.

Unified Communications

The Hytera DMR Tier III two-way radio system and HyTalk Pro 2G/3G/4G and Wi-Fi platform are converged into a single communications system. This has helped to ensure a much stronger technological compatibility, which has enhanced the ability of the Istanbul Financial Center administration to handle their daily duties.

Enhanced Operational Effectiveness

The unified communications solution helps users better coordinate their activities, so they can respond more effectively to major security problems, as they can easily switch between DMR, LTE and Wi-Fi networks.

Smooth Migration

Hytera was able to solve the radio migration problem by supplying providing indoor and outdoor coverage. Thus, officers can easily provide two-way open communication indoors or outdoors. It can provide both mission critical voice services over DMR and broadband services such as video, and data over 4G LTE commercial mobile phone networks.

Rich Applications

The MUC supports interconnection and unified voice and video dispatch across multiple voice communication systems and terminals. The MRPS collects and stores all kinds of data, including audio, videos, messages, and radios' online/offline information across the dispatch work.

The DMR and HyTalk Pro solution provided by Hytera provides the all-channel network the customer required, as well as supporting a much increased range of services, including dispatch, voice-video recordings, interconnection with, and unified management of, other networks and technologies.



Hytera Communications Corporation Limited

Stock Code: 002583.SZ

Address: Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, P.R.C.

Tel: +86-755-2697 2999 Fax: +86-755-8613 7139 Post: 518057
<http://www.hytera.com> marketing@hytera.com