## GENERAL SOLUTIONS

Hytera offers a wide range of solutions to enrich functionality for the HR106X series repeater. Dispatching system, a back-to-back solution for cross-band communication. Additionally the open API of HR106X can also be provided for third party development to realize customization requirements.

Flexible Interconnection

The HR106X series repeater is designed as an intelligent communication platform. It is flexible in its ability to connect with a variety of systems to provide seamless communication. Hytera can provide inter-system Communication connections to SIP Phones and Dispatching systems.
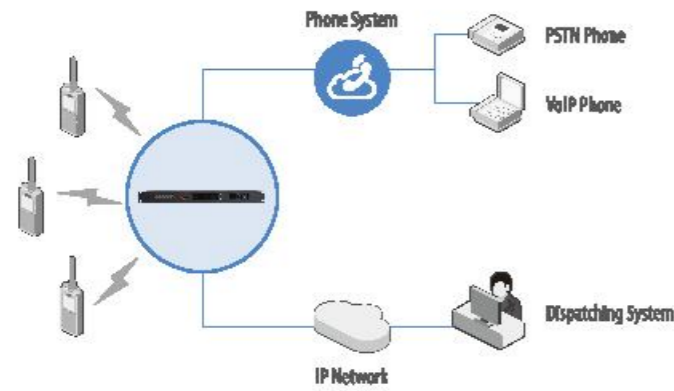
Wireless Link Communication

The wireless link communication is applicable for forests, highway, and other areas where the wired network is difficult to be deployed. With the help of Hytera mobile radios MD785i or HM785 it is possible to establish wireless connections between two systems when there is no IP link.
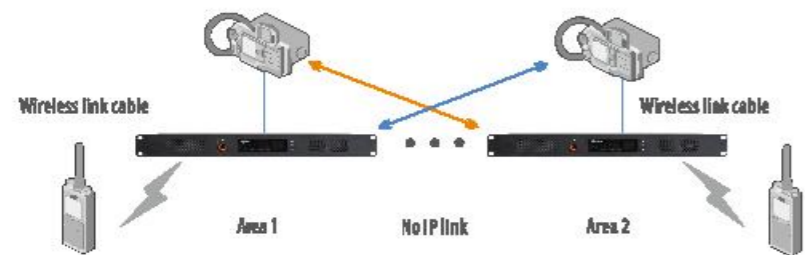
ACCESSORIES

Standard

AC Power Cable
PWC03

Optional

External Duplexer

Back-to-Back Cable
PC49

Backup Cable
POA147

Programming Cable
PC37

SPECIFICATIONS

General

General	
Frequency Range	UHF: 400-470MHz VHF: 136-174MHz
Channel Capacity	64
Channel Spacing	12.5kHz/ 20KHz/ 25KHz
Operating Voltage	DC: 13.6V±15% AC: 100-240V
Current Consumption(DC)	Standby:≤0.9A Transmitting:≤12A
Current Consumption(AC)	Standby:≤0.35A Transmitting:≤1.2A
Frequency Stability	≤±0.5ppm
Antenna Impedance	50Ω
Duty Cycle	100%
Dimensions(HxWxD)	44x483x366 mm
Weight	5.8kg
Networking	Conventional Mode *Digital Trunking Lite; *Simulcast

*marked features are coming soon.

Receiver

Receiver			
Sensitivity	Analog	0.16μV(12dB SINAD) 0.16μV(Typical)(12dB SINAD)	
	Digital	0.2μV/BER5% 0.16μV(Typical)/BER5%	
Selectivity	TIA-603	65dB@12.5kHz / 75dB@20/25kHz	
	ETSI	60dB@12.5kHz / 70dB@20/25kHz	
Inter-Modulation	TIA-603	75dB@12.5/20/25kHz	
	ETSI	70dB@12.5/20/25kHz	
Spurious Response Rejection	TIA-603	80dB@12.5/20/25kHz	
	ETSI	80dB@12.5/20/25kHz	
Blocking	90dB		
Hum and Noise	40dB@12.5kHz; 43dB@20kHz, 45dB@25kHz		
Conducted Spurious Emission	≤1GHz	≤ -57dBm	
	>1GHz	≤ -47dBm	

Transmitter

Transmitter			
RF Power Output	5-50W(adjustable)		
FM Modulation	11K0F3E @12.5kHz 14K0F3E @ 20kHz; 16K0F3E @ 25kHz		
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data and Voice: 7K60FXW		
Conducted/ Radiated Emission	Operating	≤1 GHz	-36dBm
		>1 GHz	-30dBm
	Standby	≤1 GHz	-57dBm
		>1 GHz	-47dBm
Modulation Limiting	±2.5kHz @ 12.5kHz;±4.0kHz @ 20kHz ±5.0kHz @ 25kHz		
FM Hum & Noise	40dB @ 12.5kHz; 43dB @ 20kHz 45dB @ 25kHz		
Adjacent Channel Power	60dB @ 12.5kHz; 70dB @ 20/25kHz		
Audio Response	+1~ -3dB		
Audio Distortion	≤3%		
Digital Vocoder Type	AMBE+2™		
Digital Protocol	ETSI-TS102 361-1,-2,-3		

Environmental Specifications

Environmental Specifications	
Operating Temperature	-30℃~+60℃
Storage Temperature	-40℃~+85℃

All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

EMPOWER YOUR OPERATION
HR106X
NEXT GENERATION DIGITAL REPEATER

DMR

www.hytera.com

EMPOWER YOUR OPERATION

Nowadays, different kinds of challenges come to us, whether in public safety, public utilities or commercial industry, we all have a lot of pressure to handle our day to day tasks. For better safety and efficiency throughout your organization, instant communication is one of the most important requirements. To ensure that your voice and data communication can reach everyone and everywhere, Hytera provides the HR106X series repeater, which represents the next generation digital repeater, to meet your demands for communication coverage and delivering reliable and high-performance radio network services.

Audio/Programming Port
Channel Display
Operation Status Indicator

TX Antenna Connector
Accessory Connector
Ethernet Port×2*
DC Power Inlet
USB Port*
AC Power Inlet
RX Antenna Connector
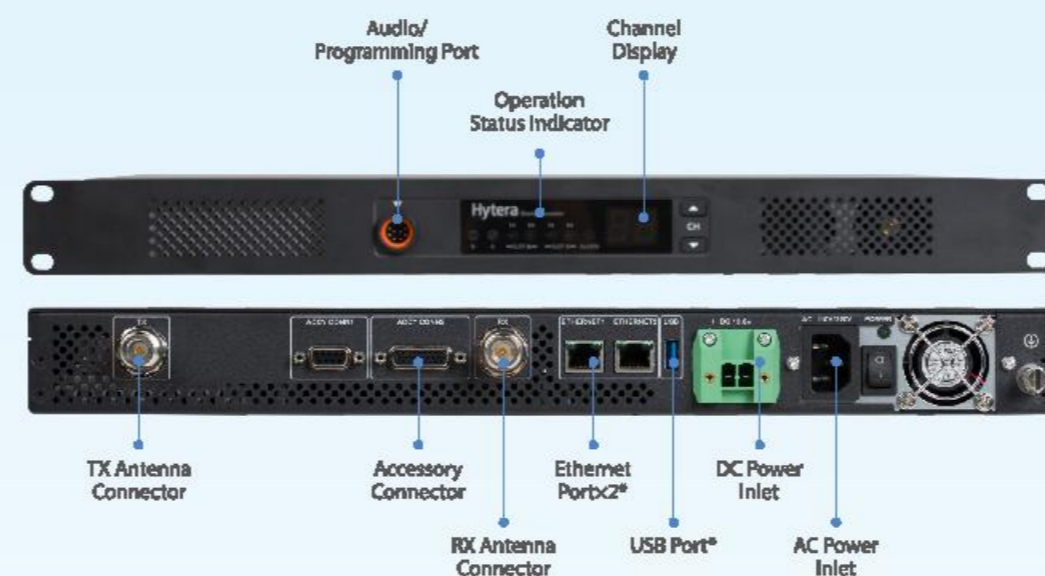
Connectivity to more applications

* Two Ethernet ports and USB port supported in Enhanced version only.

SMOOTH MIGRATION WITH YOUR BUSINESS GROWING

Your communication needs are always growing together with the business expansion. As your business expands your communication needs grow too. As the organisation becomes larger with more employees you will need to upgrade your communication system to increase capacity and ensure continued working efficiency.

The HR106X series repeaters can be compatible with most Hytera system types: Analog and Digital Conventional modes, XPT, Conventional Simulcast and DMR Tier 3 DS-6211. Whether you want to migrate from analog to digital, or switch to a large capacity trunking system, the HR106X series repeaters can be unlocked by firmware upgrade and a chargeable license. Simple, Smooth, and Cost-effective.

GENERAL HIGHLIGHTS

Economical 1U Structure
The 1U height of the HR106X series makes it compact, thus reducing space requirements for installation.

AC/DC Auto Switch
The HR106X series supports both AC and DC input and AC/DC auto switching.

Wide Coverage
The communication range of HR106X series is extended with enhanced Rx sensitivity. And the Ethernet port enables access to IP networks, which provides the capability for the HR106X to connect everyone and everywhere.

Analog & Digital Auto Switch
The HR106X series can support mixed channel mode to detect the receiving signal, then automatically switch between analog and digital mode. This offers an easy way to migrate to digital from analog.

ENHANCED VERSION HIGHLIGHTS

The HR106X series repeater offers standard version and an enhanced version. Both versions support all the general features, while the Enhanced version adopts a built-in co-processor board to enable more advanced features. This offers more options for users to choose according to their actual needs.

*The standard version can be easily upgraded to enhanced version with an add-on co-processor module board.
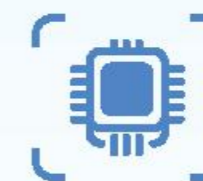
Outstanding Performance
The enhanced version of HR106X adopts an add-on quad-core 1.6GHz co-processor and 2G RAM for fast processing speed, which can process the services faster and integrate more applications.

High Integration
The enhanced version of HR106X is integrated with router and SIP gateway features. Less devices and simplified management. It offers a cost-effective solution for your network construction.

Convenient Management
In the enhanced version a web-based back end platform has been designed to simplify repeater management. Configuration, upgrade and real-time diagnosis can all be completed through a web browser, which is ideal for remote management.

High Security
The enhanced version of HR106X also adopts SNMP3.0 technology to enhance communication security. All your data is fully protected during the communication.