



COMPACT DMR REPEATER

HR65X

EMPOWER YOUR OPERATION

Flexible Deployment

Easy Networking

Power Backup

Analog-digital Compatibility

Convenient Management



Hytera HR65X is the new generation compact DMR repeater designed to expand the communication range of your radios. With high performance and high reliability, the HR65X ensures consistent, reliable, seamless voice and data communications your team need most. It is a top pick for hotels, office buildings, supermarkets, industrial parks, and more.

Compact and lightweight, the HR65X can be flexibly mounted to the wall or carried on the back by tailored accessories, uncompromising with on-site installation conditions. The rugged structure makes the HR65X stand up to harsh environments. HR65X allows the communication connection anywhere you need.

Two versions are supported:

- 1, High power 25 W version with an attached fan
- 2, Low power 10 W without fan.







## Flexible Deployment

The innovative structure design gives the HR65X an unprecedented outlook and lightweight performance. With the compact body and the built-in duplexer, the HR65X considers space conservation properly. The tailored matching installation accessories achieve very flexible installation on the sites with very limited conditions. You can realize the site construction as long as there is a wall or a limited piece of the plane. For the scenario of indoor coverage, HR65X super slim size minimize site requirement, and the trustworthy voice and data communication offers unlimited connections on each floor which are the keys to achieving your business success.



## High Reliability

Designed to operate on an AC power source or an optional battery, the HR65X can keep running in the event of a power outage. When it connects to the AC power supply, the battery works as a backup. In case of an outage, the 12.5Ah battery is ready to power the HR65X for up to nine hours of backup time. This power backup solution reduces the capital investment and maintenance manpower investment for adding UPS power equipment. HR65X gives you durable communication with a time extension.







## IP Multi-site Connect

From the single site DMR conventional system for low-rise buildings to IP Multi-site system for high-rise buildings, the HR65X delivers a powerful and stable signal to every corner of your workplace. It can also interconnect with other model repeaters from Hytera, building a tailored network to meet your variable requirements.



## Smooth Transition

The HR65X can operate in analog mode, DMR mode, or dynamic mixed digital/analog mode, which automatically switches between analog and digital based on the call it receives. The HR65X can ensure that your original analog radio continues to be connected to the new DMR network and protect your legacy system investment to the greatest extent. This repeater is the ideal solution for you to migrate smoothly from analog to digital with minimal disruption and investment.



## Convenient Management

Thanks to the Extended Network Management System (XNMS), you can remotely monitor the operation status and alarms of the HR65X in real time, or update configuration in minutes. This dramatically reduces the time and resources to maintain repeaters dispersed in different places.





## Ultra-lightweight Design

The HR65X weighs only about 2 kg. It is equipped with a dedicated antenna and a light backpack. When you work outside, the lightweight design makes the HR65X effortless to carry on the back. It can be turned on and used with one key operation after arriving at the site. The ultra-light and compact design can also be used with drones to achieve a wider range of signal coverage. It is an ideal solution for you to use in mobile search and rescue scenarios.



## High Reliability

The HR65X is built to outperform in harsh environments. It conforms to MIL-STD-810H standards for ruggedness and is IP67 rated for dust and water intrusion. An exceptionally robust design ensures HR65X performance is stable and excellent.



## Long Battery Life

It can be equipped with a 12.5Ah large-capacity battery for use in outdoor scenarios, which can provide up to 9 hours of power supply under the RF power output of 10 W. Even if it is used at 50% duty cycle at 25 W full power, it can still guarantee 4 hours of uninterrupted work protection, providing you with a lasting uninterrupted communication guarantee.



# SPECIFICATIONS

General		
Frequency Range	400-470MHz	
Channel Capacity	1024	
Channel Spacing	12.5kHz/ 20kHz/ 25kHz	
Operating Voltage	DC: 14.4V±15%	
Current	Standby: ≤0.35A	
Consumption(DC)	Transmitting: 10W≤3A; 25W≤6A	
Battery	12.5Ah	
Battery Life (50-50 Duty Cycle)	High power 25 W version: 4hrs Low power 10 W version: 9hrs	
Frequency Stability	≤±0.5ppm	
Antenna Impedance	50Ω	
Duty Cycle	100%	
Dimensions (H x W x D)	High power 25W version: 201mm x 211mm x 80.6mm(with Fan) Low power 10W version: 201mm x 211mm x 65.8mm	
Weight	High power 25W Version: 2.0kg Low power 10W Version: 1.9kg	
Networking	Single-site repeater Mode, IP Multi-site Mode	
Receiver		
Sensitivity	Analog	0.18μV(12dB SINAD) 0.16μV(typical)(12dB SINAD)
	Digital	0.18μV/BER5%
Adjacent Channel 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
Rated Audio Distortion		≤3%
Audio Response		+1~-3dB
Conducted Spurious Emission	Operating	≤1GHz
	Standby	>1GHz
		≤-57dBm
		≤-47dBm
Transmitter		
Output Power	High power 25W version	1-25W (Continuous adjustable)
	Low power 10W version	1-10W (Continuous adjustable)
FM Modulation		11K0F3E@12.5kHz
		14K0F3E@20KHz
		16K0F3E@25kHz
4FSK Digital Modulation	12.5kHz(only data) :	7K60FXD
	12.5kHz(both data and voice) :	7K60FXW
Conducted/Radiated Emission	Operating:	-36dBm≤1GHz,-30dBm>1GHz
	Standby:	-57dBm≤1GHz,-47dBm>1GHz
Modulation Limiting		±2.5kHz@12.5kHz
		±4.0kHz@20kHz
		±5kHz@25kHz
FM Hum & Noise		40dB @ 12.5kHz; 43dB @ 20kHz; 45dB @ 25kHz
Adjacent Channel Power		60dB@12.5/20kHz 70dB@25kHz
Audio Response		+1~-3dB
Audio Distortion		≤3%
Digital Vocoder Type		AMBE+2™
Environment Performance		
Operating Temperature		-30°C~+60°C
Storage Temperature		-40°C~ +85°C
Humidity		Per MIL-STD-810H
ESD		IEC 61000-4-2(Level 4)
		±8kV (contact) ; ±15kV (air)
Dust and Water Intrusion	25W: IP54	High power 25 W version: IP54
	10W: IP67	Low power 10 W version: IP67
Positioning		
Positioning System		GPS, GPS+BDS
Horizontal Position Accuracy		<5m
TTFF Cold Start (Time to First Fix)		<1min
TTFF Hot Start (Time to First Fix)		<1sec

# ACCESSORIES



● Power Cord



● Battery\*



● Antenna UHF-M



● Wall-mount kit



● Power adapter



● Manpack\*



● Palm



● Built-in duplexer



● Programming cable



● External duplexer cable



● Wall Mount Bracket Kit

- Standard
- Optional

\* :Expected to be released in December 2022



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