



COMPACT DMR REPEATER

HR65X

EMPOWER YOUR OPERATION

Flexible Deployment

Analog-digital Compatibility

Easy Networking

Convenient Management

Power Backup



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.





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.





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.





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	UHF:400-470MHz; VHF:136-174MHz		
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 Weight	About 1.3kg		
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 verison: 201mm x 211mm x 80.6mm(with Fan) Low power 10W verison: 201mm x 211mm x 65.8mm		
Weight(without battery)	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 ETSI	65dB@12.5kHz/75dB@20/25kHz 60dB@12.5kHz/70dB@20/25kHz	
Inter-modulation	TIA-603 ETSI	75dB@12.5/20/25kHz 70dB@12.5/20/25kHz	
Spurious Response Rejection	TIA-603 ETSI	80dB@12.5/20/25kHz 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 Standby	≤1GHz >1GHz	≤-57dBm ≤-47dBm
Transmitter			
Output Power	High power 25W version	1-25W (Continuous adjustable)	
	Low power 10W version	1-10W (Continuous adjustable)	
FM Dodulation	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		
Dodulation 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 ~+60		
Storage Temperature	-40 ~ +85		
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+BD5		
Horizontal Position Accuracy	<5m		
TTFF Cold Start (Time to First Fix)	<1min		
TTFF Hot Start (Time to First Fix)	<1sec		



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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