



## RD98XS SERIES Digital Super Repeater

- Reliable Communication Coverage
- High-powered Performance
- Digital-analog Auto Switch
- Smooth Migration & Upgrading
- Addable Applications



## RD98XS SERIES Digital Super Repeater

Today more than ever, we are facing many challenges and opportunities, no matter in public safety, public utilities or commercial industry. To help your organization stand out from competition, the instant communication improving working efficiency is always the key. Besides the two-way radios, Hytera provides RD98XS series repeaters to suit your needs for communication coverage, delivering reliable and high-performance services.



### HIGHLIGHTS



#### Flexible Hardware Options

RD98XS series include 2 hardware options for different coverage needs, RD98XS with 50W transmit power output and RD98XS\_100W with high-power amplifier. Both can provide reliable and outstanding performance.



#### Analog Digital Auto Switch

RD98XS series repeaters can support mixed channel mode to detect receiving signal, then automatically switch between analog mode and digital mode. Offers an easy way to migrate to digital from analog.



#### IP Multi-site Connection

Multiple RD98XS series repeaters can be simply connected together by an IP network, both in analog and digital modes, providing a cost-effective solution for the users to deploy a large coverage communication network across multiple places.



#### Addable Applications

Hytera offers multifarious applications to enrich functionality for RD98XS series repeaters. SmartDispatch or SmartOne for dispatching, OTAP for remote programming terminals. Besides, open API can be provided for third party development.



#### High-efficiency Technology

Based on TDMA digital technology, one RD98XS series repeater can provide 2 voice channels simultaneously, double the capacity without extra frequency and facility, and simply help the users improve the efficiency.



#### Smart Network Management

Hytera delivers XNMS as the professional network management platform for RD98XS series repeaters. The XNMS can remotely monitor services, configure parameters, and export statistics report for network diagnosis.



#### SIP Phone Interconnection

Based on SIP protocol standard, the RD98XS series repeaters can be connected with IPPBX to realize the real-time communications between the two-way radios and telephones, such as PSTN phones, VoIP phones and mobile phones.

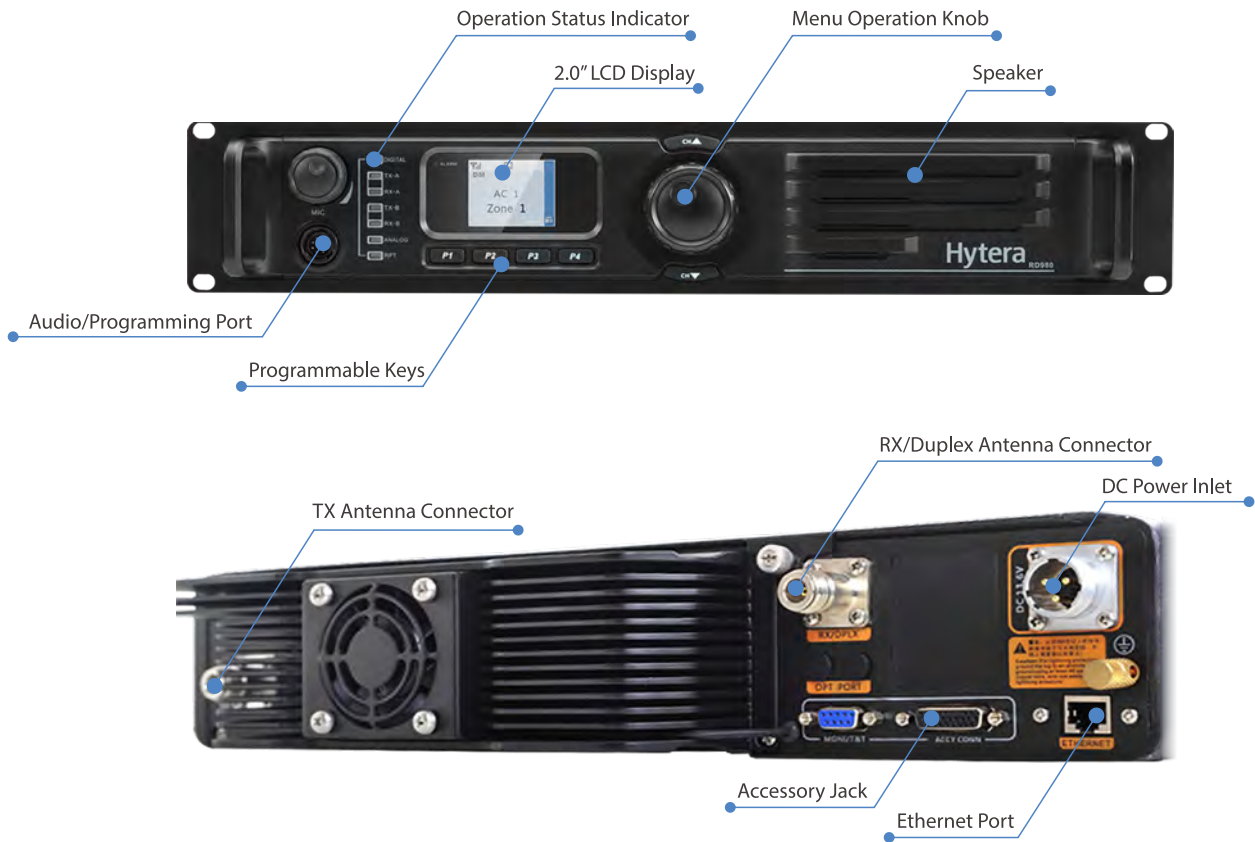


#### Back To Back Solution

RD98XS series repeaters can realize cross-band and cross-system communication in DMR Tier 2 through Hytera Back to Back Solution. When connected to Hytera mobile radios, RD98XS series repeaters can also provide wireless connection between two systems when there is no IP link.

# RD98XS 100W High Power Repeater

The RD98XS 100W is designed to maximum ensure your coverage needs, whether your workplace is inside the crowded cities or outside in the wilds, no matter it is a single building or multiple places across regions. The RD98XS 100W can help eliminate signal blind areas and enlarge the communication range, continuously providing you with reliable voice and data communication coverage. What's more, its compact structural design offers an easy way for installation.



## RD98XS 100W HIGHLIGHTS



### Wide Coverage

With 100W transmit power output, RD98XS\_100W can dramatically enlarge your communication range, provide a huge area coverage while reducing your network investment. And the Ethernet port enables the access of IP network, which provides the capability for RD98XS\_100W to connect everyone everywhere.



### Compact Design

Though integrated with the built-in high power amplifier, RD98XS\_100W still remains the compact 2U height structural design, which is very easy and flexible to install in different cabinets, and reduces numerous concerns for installation.



### User Friendly

Thanks to the high-resolution display, programmable buttons and clear LED indicators, the RD98X series repeater is extremely easy to use, whether during ongoing operations, or during maintenance tasks.



### High Cooling Capacity

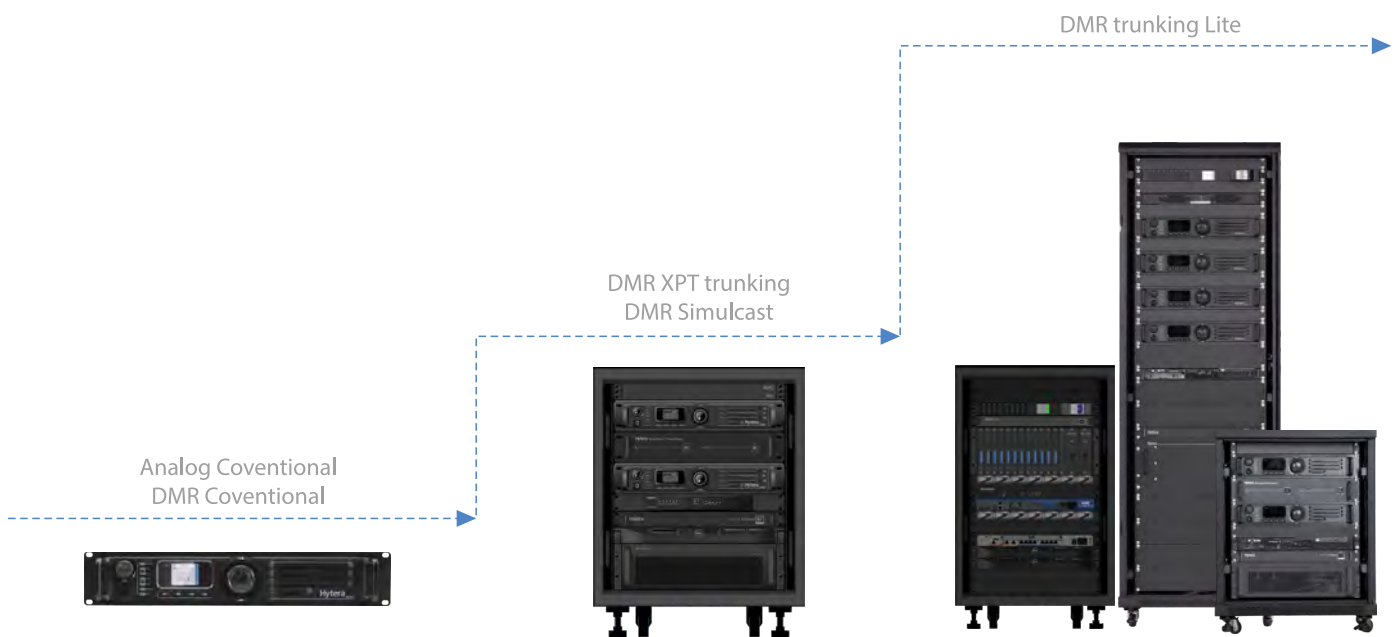
The power amplifier can dissipate most generated heat with extraordinary efficiency. In addition, the integrated fan system ensures stable and powerful operation.

# SMOOTH MIGRATION WITH YOUR BUSINESS GROWING

Your communication needs are always growing together with the business expansion. As the organization becomes larger and larger with more and more employees, you are looking forward to upgrading for your communication system, increasing capacity, and deploying more sites to ensure your working efficiency.

The RD98X series repeaters can be compatible with most Hytera system types: Analog Conventional Mode(Single and IP Multi-site Connection), DMR Conventional Mode, Hytera Extended Pseudo Trunking, DMR Simulcast System, DMR Trunking Lite. Whether you want to migrate from analog to digital, or switch to a large capacity trunking system, the RD98XS series repeaters can be unlocked with a chargeable license. Simple, Smooth, and Cost-effective.

## Simple, Smooth, and Cost-effective



### Simple, Cost-effective, and Scalable

The XPT is a hugely cost-efficient, and easily expandable mobile radio solution from Hytera. Based on proven repeater technology, XPT can be developed as a distributed trunked radio system with increased capacity, and without controller node and dedicated control channel for demanding users.



### Wide Area Communications














The Hytera DS-6310 Simulcast system is based on the open DMR Tier II standard. It broadcasts the same signal across multiple overlapping sites on the same frequency, simultaneously, which makes it possible to inexpensively expand large-area radio coverage with just one frequency pair.



### Sophisticated Communication Management

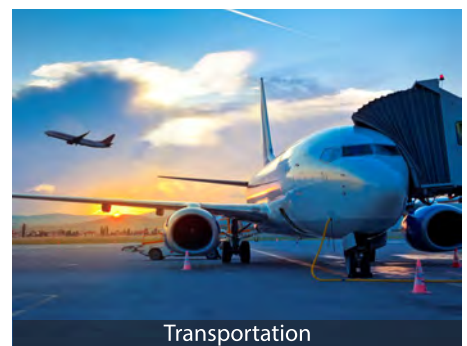
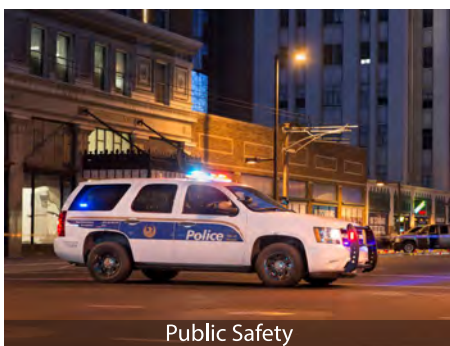
Based on the DMR Tier III standard, a Hytera Trunking Lite(DS-6211) system can tackle high radio traffic, maximizing available capacity across dynamic user groups and challenging single or multi-site geographies, and delivering expansive feature set to ensure your current and future communications requirements.

# RD98XS SERIES ACCESSORIES

STANDARD ACCESSORIES				
	Power Cord			
OPTIONAL ACCESSORIES				
	Palm Microphone	Desktop Microphone	Bracket for PS22002(L) (2U)(black)	Bracket for PS22002(L) (2U)(grey)
				
	10pin programming cable (USB)	Db26 data cable (USB)	Omni-directional Antenna	Palm Microphone (IP67)
				
	Back to Back Data Cable	Duplexer	Power Supply for RD98XS 100W PS21001	Power Supply for RD98XS(50W) PS22002(L)

Pictures above are for reference only and may vary from actual products.

## APPLICATIONS



# SPECIFICATIONS

General	Frequency Range	RD98XS:UHF1: 400-470MHz; UHF2: 450-520MHz; UHF3: 350-400MHz; UHF5: 806-941MHz; VHF1: 136-174MHz; RD98XS 100W: UHF1: 400-470MHz VHF: 136-174MHz;	
	Channel Capacity	1024	
	Channel Spacing	12.5kHz/20kHz/25kHz	
	Operating Voltage	RD98XS: 13.6V±15% RD98XS 100W: 28 V dc	
	Current Drain	Standby	<1.0A
		Transmit	RD98XS: <11A RD98XS 100W: ≤12.5A
	Frequency Stability	± 0.5ppm	
	Antenna Impedance	50Ω	
	Duty Cycle	100%	
	Dimensions(H×W×D)	88×483×366 mm	
	Weight	8.5Kg	
	LCD Display	220 x 176 pixels, 262000 colors, 2.0 inch, 4 rows	

Receiver	Sensitivity	Analog	0.28μV (12dB SINAD); 0.22μV (Typical)(12dB SINAD); 0.4μV (20dB SINAD)
		Digital	0.3μV/BER5%
	Adjacent Channel Selectivity	TIA-603	65dB @ 12.5kHz; 70dB @ 20/25kHz
		ETSI	65dB @ 12.5kHz; 70dB @ 20/25kHz
	Intermodulation	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
	Hum and Noise		40dB @ 12.5kHz 43dB @ 20kHz 45dB@25kHz
	Rated Audio Power Output		0.5W
	Rated Audio Distortion		≤3%
	Audio Response		+1 ~ -3dB
	Conducted Spurious Emission		<-57dBm

Transmitter	RF Power Output	RD98XS: UHF1/UHF2/UHF3: 5-50W(adjustable) UHF5(851-870MHz): 5-35W(adjustable) UHF5(935-941MHz): 5-30W(adjustable) VHF1: 5-50W(adjustable) RD98XS 100W: 5-100W (adjustable)
	FM Modulation	11K0F3E @ 12.5kHz; 14K0F3E @ 20kHz; 16K0F3E @ 25kHz
	4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD; 12.5kHz Data & Voice: 7K60FXW
	Conducted/ Radiated Emission	-36dBm <1GHz; -30dBm >1GHz
	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™, SELP
	Digital Protocol	ETSI-TS102 361-1,-2,-3

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

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

Notes: RD98XS, MD78X(G), PD78X(G), PD70X(G): X=0, 2, 5, 6 or 8, model number varies geographically. For details, please contact our regional sales representatives.



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