

# 3COMM+

## PROFESSIONAL MULTI-PROTOCOL DIGITAL TRUNKING REPEATER

### TX-R50D



Built-in Trunking  
Controller(Optional)



Outstanding  
Heat Dissipation



Intelligent IP  
Controller(Optional)



Multiple Protocols:  
DMR/NXDN



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## TX-R50D

Multi-protocol Digital Trunking Repeater

TX-R50D 2U series Professional DMR Repeater is more than just a communication device. It's a robust solution designed to meet the diverse needs of industries such as public safety, transportation, utilities, and more.

Its versatility and advanced features make it the perfect choice for organizations seeking dependable and high-performance communication solutions.

### Specification

Receiver		Transmitter	
Channel Spacing	6.25KHz / 12.5KHz / 25KHz	Output Power	5~50W
Sensitivity Analog	0.3μV(12dB SINAD) 0.22μV(typ.) (12dB SINAD) 0.4μV(20dB SINAD)	Channel Spacing	6.25KHz / 12.5KHz / 25KHz
Sensitivity Digital	0.28μV(3%BER@12.5kHz) 0.3μV (3%BER@6.25kHz)	Emission Spurious	-36dBm(≤1 GHz) -30dBm(>1 GHz)
Channel Selective	62dB @6.25kHz 70dB @12.5kHz 75dB @25kHz	FM Modulation	16K0F3E @25kHz 11K0F3E @12.5kHz
Intermodulation Block	70dB	4FSK Digital Modulation	Only Data 7K60FXD @12.5kHz Voice & Data 7K60FXW@12.5kHz Only Data 4K00F1D@6.25kHz Voice & Data 4K00F1W @6.25kHz
Spurious response suppression	95dB	Audio Distortion	≤3%
Audio Output power (<5%)	2.0W / 8Ω	Audio Response	+1 ~ -3dB
Conducted emission spurious	<-57dBm	FM Hum & Noise	40dB @12.5KHz 45dB @25KHz
		Digital FSK Error	<1.5%
		Adjacent channel Power	≤-60dB @12.5KHz ≤-70dB @25KHz
		Adjacent Channel Transient Power	≤-50dB @12.5KHz ≤-60dB @25KHz

General	
Frequency Range	UHF1: 400-470 MHz; UHF2: 450-520 MHz; UHF3: 350-400 MHz; VHF: 136-174 MHz
Channel Capacity	500
Zone Capacity	32(MAX.32channels each zone)
Dimensions(LxWxH)	420×483×132.5mm
Weight	15Kg
Input power (AC)	110V/220V
Input voltage(DC)	13.6V±15%
Current (Standby)	<800mA
Current(Transmit)	<11A
Current(Receive)	<1900mA
Frequency stability	±0.5ppm
Antenna Impedance	50Ω
Vocoder Type	AMBE+2
RF Connect display	Tx (N) , Rx (N) Nixie tube
Trunking Controller	
CPU	Freescale i.mx6Q 4Core
RAM	1G DDR3
ROM	8G
SD Connector	Micro SD, Max 128G
Display Interface	24bit_RGB
USB Connector	Mini USB2.0 (OTG)
Network Interface	10/100/1000 Mbps Ethernet
Supported system types	DMR Trunking System ; DMR Conventional IP Interconnection System Conventional Digital / Analog System