Tone Spread
Solutions for Wireless Signal

5GNR TDD-3500 MHz
Wide Band RF Repeater (MIMO 4x4 ,33dBm)
Model: TS53A33A

The RF Repeater (RFR) is designed to provide a more cost-effective solution than adding a new Base Transceiver Station (BTS/gNB) to improve signal coverage and communication quality in triple system. And its easy installation and maintenance can help carrier get fast return.

The repeater is working as a relay between the BTS/gNB and mobiles. It receives the low-power signal from BTS/gNB via the Donor Antenna, linearly amplifies the signal and then retransmits it via the Coverage Antenna to the weak/blind coverage area. And the mobile signal is also amplified and retransmitted to the BTS/gNB via the opposite direction.

Features

- **Aluminum-alloy casing with IP65 protection for high resistance to dust, water and corrosion**
- **Supporting 4x4MIMO**
- **Low interference to BTS/gNB by adopting linear amplifier with high gain and low noise**
- **Built-in 5G Dynamic TDD Sync Detection Module, automatic completion of 5G wireless network cell search and wireless signaling processing**
- **RJ45 port provides a link to a notebook for local supervision or IP Based NMS(Network Management System) that can remotely supervise repeater’ s working status and download operational parameters to the repeater Via Ethernet or LAN**

Applications

To expand signal coverage or fill signal blind area where signal is weak or unavailable.

Outdoor: Airports, tourism regions, golf courses, tunnels, factories, mining districts, villages, …

Indoor: Hotels, exhibition centers, basements, shopping malls, offices, parking lots, …

Application Diagram

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Technical Specifications

Items		Specifications		
System		5GNR TDD-3500 With 4x4 MIMO		
Frequency Range	Uplink/Rx		4x3300~3570MHz	
	Downlink/Tx		4x3300~3570MHz	
Working Bandwidth		4x270MHz		
Output Power	Uplink/Rx		24±2dBm	
	Downlink/Tx		33±2dBm	
Maximum Gain		Uplink/Rx: 75±3dB, Downlink/Tx: 80±3dB		
Gain Adjustment Range		0~31dB @ Step of 1dB		
VSWR		≤ 1.8		
ALC(Auto Level Control)		≥20dB (≤2dB,When The Maximum Output Power of Repeater is Reached, Increase Input Power by 1~20dbm, Output Variation ≤2dB)		
Noise Figure		≤ 8dB		
Spurious Emission		9kHz~1GHz: ≤ -36dBm,1GHz~12.75GHz: : ≤ -30dBm		
EVM		≤ 4.5%		
System Delay		≤ 5μs		
I/O Impedance		50 Ω		
RF Connector		N-Type(**BTS Ports:** 4xFemale,**MS Ports:**4xFemale)		
Operation Temperature Range		-25°C ~ + 55°C		
Relative Humidity Range		≤ 95%(Non Condensing)		
Power Supply		AC110~220V, 50/60Hz ,≤280W		
Application		Indoor and Outdoor (IP65)		
Dimensions		500mm×440mm×187mm		
Weight		≤ 35kg		
Local Control		Web Browser GUI Local Via RJ-45 Interface or Wi-Fi Hotspot		
NMS Mode		4G Wireless Modem (4G) or RJ45 Interface		
NMS Function		Real-time Alarm for Door Status, Temperature, Power Supply, VSWR, etc; Remote Control Such as Turn On/Off, Increasing/Decreasing Output Power etc; Real-time Status for Output/Input Power, UL/DL Gain, All Status of Repeater etc….,		
LED Indicator		Power, Running, Alarm		

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