

Air Interface Fiber Optic Repeater



3500 MHz TDD

Fiber Link-104 (Remote unit)

Tone Spread
Solutions for Wireless Signal

5G NR (TDD-3500)

The Air Interface Fiber Optic Repeater (FOR) is designed to solve problems of weak mobile signal in the place that is far away from the Base Transceiver Station (BTS) and has fiber optic cable network underground.

The system consists of two parts: Master Unit (MU) and Remote Unit (RU). The MU captures the BTS signal via air interface, then converts it into optic signal and transmits the amplified signal to the RU via fiber optic cable. The RU will reconvert the optic signal into RF signal and provide the signal to the areas where network coverage is inadequate. And the mobile signal is also amplified and retransmitted to the BTS via the opposite direction.

Key features

- Aluminum-alloy casing with IP65 protection has high resistance to dust, water and corrosion.
- Tx/Rx control and alarm messages can be transmitted via one fiber optic cable.
- Stable and improved signal transmission quality.
- Built-in 5G Dynamic TDD Sync Detection Module, automatic completion of 5G wireless network cell search and wireless signaling processing.
- One MU can support up to 8 RUs to maximize utilization of fiber optic cable (A star topology is supported between MU and RUs).
- USB/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.

Advantages

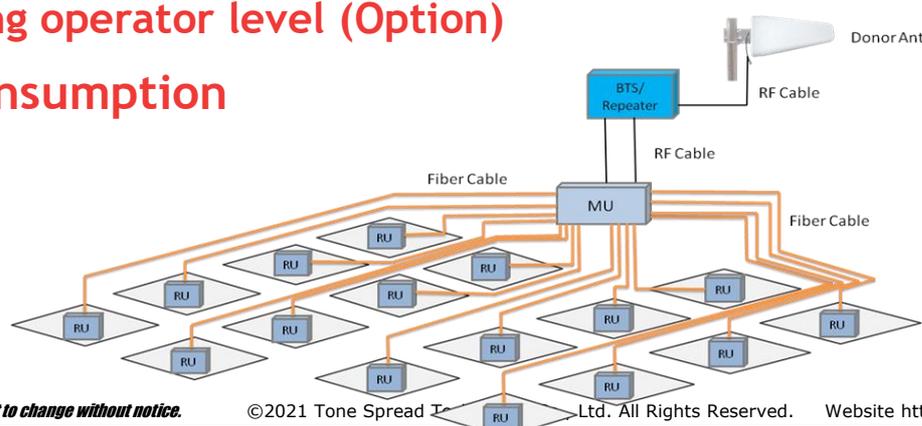
☑ **Multi_standards/Multi_operators**

☑ **Remote control**

☑ **Digital features:**

Balancing operator level (Option)

☑ **Low consumption**



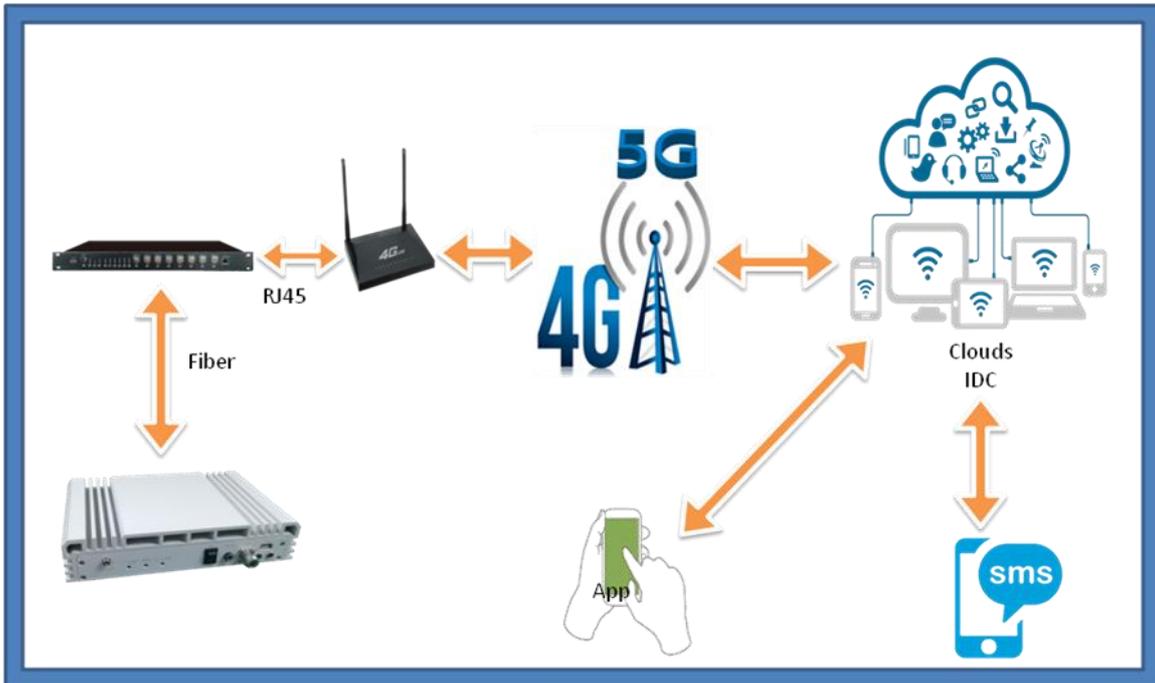
Specifications

Technical characteristics

Item	Specifications	
System	5G NR TDD-3500	
Working Frequency	Uplink (MHz)	3300~3570
	Downlink (MHz)	3300~3570
Working Bandwidth	270MHz	
Frequency Stability(+/-0.01ppm)	≤0.01ppm	
Gain Flatness	≤±3dB for All Band	
AGC/ALC Range	≥20dB	
Maximum Gain(Cable Access)	30±3dB	
Maximum RF Output Power	15±2dBm(DL)	
Group (System) Delay	≤1.5us	
Noise Figure@Max. Gain (UL)	≤6dB	
Optical Output Power	0±3dBm@1310nm	
Fiber Type/Number	Single mode	
Optical Receiver Sensitivity	≥ -12dBm	
Optical Connector Type	1xFC/APC	
RF Connector Type	1xN-Female	
I/O Impedance	50Ω	
Ingress Protection	IP30	
Operating Temperature	-10°C~50°C	
Relative Humidity	≤95%	
Dimensions	188x265x68mm(TBD)	
Weight	≤9Kg	
Power Supply	AC100V ~240V, 50/60Hz <30W	
Local Control	Via USB Interface	
Remote Mode	Through MU via Fiber Optical Cable	
Mounting Type	Wall Mounting	

※The configuration of the 5G NR TDD synchronous slots for all operators must be the same.

Network Management System (NMS)



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, ...

