Specifications of 1800&2100&2600&3800MHz Quad-Band Fiber Optical Repeater(Cable Access)_MU

Model: SP-MO08-53 P/N: 5.02.04.0020

The Fiber Optic Repeater 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 direct coupler closed to BTS, 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.

Features

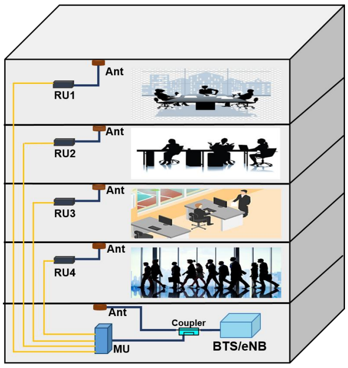
- Tx/Rx control and alarm messages can be transmitted via one fiber optic cable
- One MU can support up to 4 RUs to maximize utilization of fiber optic cable(A star topology is supported between MU and RU)
- Built-in 5G Dynamic TDD Sync Detection Module, automatic completion of 5G wireless network cell search and wireless signaling processing
- Stable and improved signal transmission quality
- USB 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

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



Technical Specifications

Items		Specifications			
		MU			
System		DCS/LTE1800	UMTS/LTE2100	5GNR n41 TDD-2600	5GNR n78 TDD-3800
Frequency Range	**Uplink**	1710~1785MHz	1920~1980MHz	2500~2600MHz	3700~3900MHz
	Downlink	1805~1880MHz	2110~2170MHz	2500~2600MHz	3700~3900MHz
Bandwidth		75MHz	60MHz	100MHz	200MHz
Maximum Input Power (Non-Destructive)		5 dBm			
Transmission Distance		≤ 10km			
Maximum UL RF Output Power		-10±2dBm per Band			
Gain of MU		0±3dB per Band			
Manual Adjustable Attenuation		0~10dB/Step 1dB			
VSWR		≤ 2.2			
Noise Figure@1RU Connection		≤ 6dB			
Spurious Emission		9kHz~1GHz: ≤ -36dBm 1GHz~12.75GHz: ≤ -30dBm			
System Delay		≤ 5μSec			
I/O Impedance		50Ω			
RF Connector		4*N-Female(One Port per Band)			
Optic Connector		4*FC/APC			
Fiber Optical Type		Single Mode			
Optical Output Power		-3±3dBm@1550nm			
Optical Receiver Sensitivity		≥-12dBm			
Temperature Range		Operation: -25°C ~ + 55°C			
Relative Humidity Range		≤ 85%			
Power Supply		AC220V,50/60Hz			
Application		Indoor(IP30)			
Dimensions		485*350*90mm			
Weight		≤ 7kg			
Mounting		Rack Mounting			
Local Control		Via USB Interface and WiFi Hotspot			
NMS Mode		Cloud NMS via 4G Wireless Modem			

Frequency: n41(2500~2600MHz)
Duplex mode is TDD
DL:Slots: 7

UL Slots: 2

SSF DL Symbols:6

SSF UL Symbols:4

frame structure for uplink & downlink slot configuration of TDD 5GNR is : (TDD_ULDL_PATTERN_01 : DDDSUUDDDD ; SCS : 30Khz)

Tdd-UL-DL-Configurationcommon
Frequency: n79(3700~3900MHz)
referencesubcarrierspacing: 30kHz
pattern1
dl-UL-TransmissionPeriodicity:5ms
nrofDownlinkslots:7
nrofDownlinkSymbols:6
nrofUplinkslots:2
nrofUplinkSymbols:4