Air Coupling Dual-Band Fiber Optic Repeater

1800-2100 MHz **Fiber Link-206**

JIETONG DIGITAL
GET CONNECTED

LTE1800+LTE2100

The Air Coupling 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/Repeater signal via Air Coupling to the 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.

Key features

- Tx/Rx control and alarm messages can be transmitted via one fiber optic cable.
- One MU can support up to 6 RUs to maximize utilization of fiber optic cable (A star topology is supported between MU and RUs).
- UBS/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 (Option).

Advantages

- ☑ Multi_standards/Multi_operators
- ☑ Support antenna isolation detection (Option)
- ☑ Smart function to set the proper gain automatically (Option)
- ☑ LCD real-time display to show the instant power and gain for each link (Option)

 Website http://www.jtd.com.tw

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Specifications

Technical characteristics

Items			Specifications	
			Uplink	Downlink
Frequency Range (MHz)	LTE1800 Band		1710 ~ 1785	1805 ~ 1880
	LTE2100 Band		1920 ~ 1980	2110 ~ 2170
Max. Output Power (dBm) (Max. Gain, Center Frequency)			27±2	37±2
Max. Gain (dB) (Center Frequency) @Optical Loss=0			100±3	100±3
ATT Adjustable Range/Step (dB)			0 ~ 30/1	0 ~ 30/1
ATT Adjustable Error (dB)			≤ |±1.5|	≤ |±1.5|
ALC Range (dB)			0 ~ 20	0 ~ 20
ALC Accuracy (dB)			≤ |±2.0|	≤ |±2.0|
Frequency Error (ppm)			≤± 0.05	≤± 0.05
Ripple In Band (dB)at 25℃			≤±5.0@EBW	≤±5.0@EBW
EVM (%)RMS@ LTE20M-PAR8.0			≤8.0	≤8.0
Spurious Emission (dBm) at out of band offset ±2.5MHz		9kHz~150kHz	≤ -36/1KHz	≤ -36/1KHz
		150kHz~30MHz	≤ -36/10KHz	≤ -36/10KHz
		30MHz~1GHz	≤ -36@100KHz	≤ -36@100KHz
		1GHz~12.75GHz	≤ -5@1MHz	≤ -5@1MHz
Time Delay (us)			≤ 5.0	≤ 5.0
VSWR(Power up, Min Gain, Pin=-30dBm)			≤ 1.8	≤ 1.8
Noise Figure (dB) (Max. Gain)			≤ 7.0	≤ 7.0
Optical Specifications	Optical Connector	MU	FC/APC*6；	
		RU	FC/APC*1；	
	Optical Wavelength (nm)	MU	TX：1550 / RX：1310； Single Mode；	
		RU	TX：1310 / RX：1550； Single Mode；	
	Optical Output Power (dBm)	MU	-2±3	
		RU	4.5±3	
	Fiber optic path attenuation range(dB)		0 ~ 7	
Radio Connector		MU	N(f)*1	
		RU	N(f)*1	

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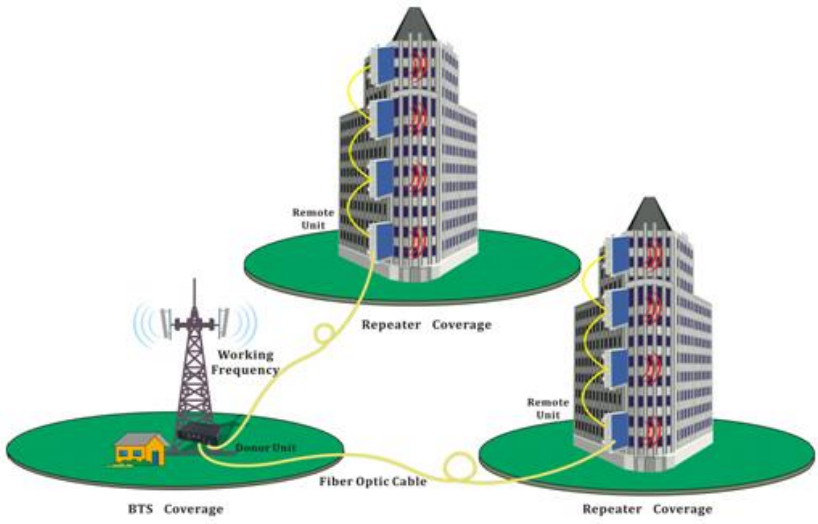
Impedance (Ω)		50
Power Supply	MU	AC110-220V
	RU	AC110-220V
power connectors	MU	US Standard (one round, two flat)
	RU	US Standard (one round, two flat)
Power Consumption (W)	MU	≤100
	RU	≤200
Dimension (mm)	MU	355*295*156.5
	RU	450*315*181
Environmental Class	MU	IP55(Outdoor)
	RU	IP55(Outdoor)
Operating Temperature (℃)	MU	-25 ~ +55
	RU	-25 ~ +55
Humidity (%)	MU	0~95
	RU	0~95
Control Function	MU	RJ45*1 Remote and local monitoring through built-in switches
	RU	Local with RJ45

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, …



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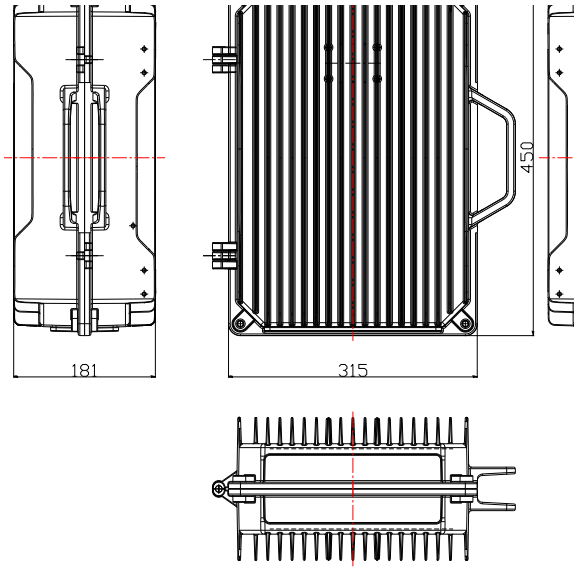
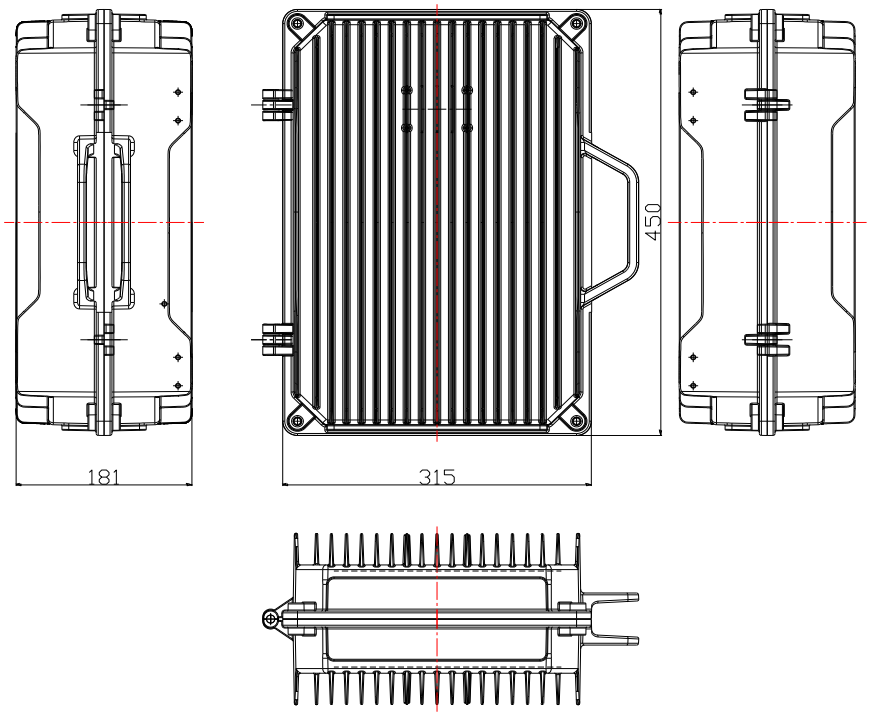
Outline Dimension:

MU:



RU:



x

Picture:

MU:

RU:

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