

## Four Band (700+900+1800+2100) Fiber Optic Repeater (5W)

*Model: FIBER LINK 404*

The 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: Donor Unit and Remote Unit.

The Donor unit captures the BTS signal via direct coupler closed to BTS, then converts it into optic signal and transmits the amplified signal to the Remote Unit via fiber optic cable. The Remote unit 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

- Aluminum-alloy casing with IP65 protection has high resistance to dust, water and corroding
- Tx/Rx control and alarm messages can be transmitted via one fiber optic cable
- Stable and improved signal transmission quality
- One Master Unit can support up to 4 Remote Units to maximize utilization of fiber optic cable
- USB / RJ45 port provides a link to a notebook for local supervision or to the built-in wireless modem to communicate with the NMS (Network Management System) that can remotely supervise repeater's working status and download operational parameters to the repeater

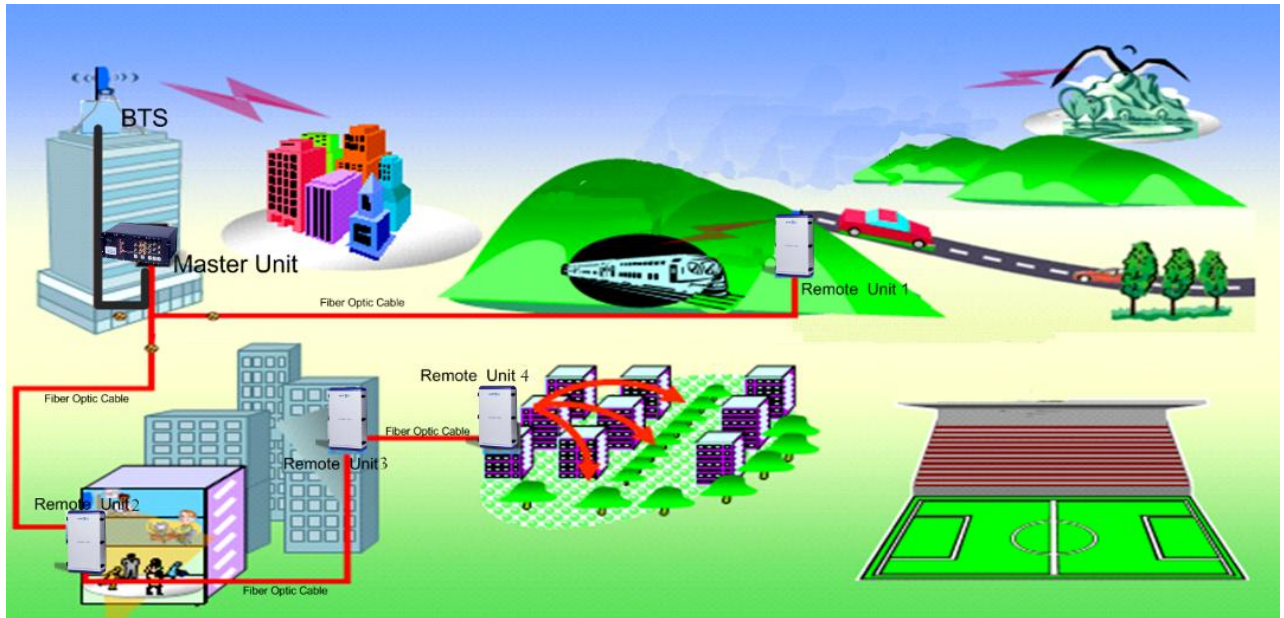
### Applications

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

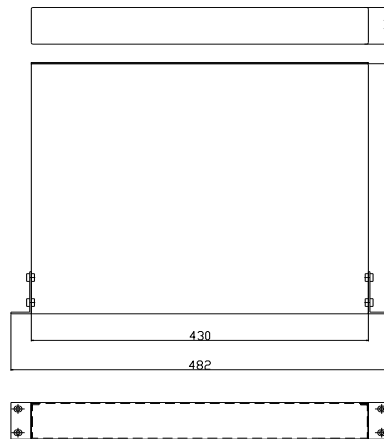
Items		Specifications	
		Uplink	Downlink
Frequency Range (MHz)	LTE FDD700 Band	703 ~ 748	758 ~ 803
	LTE FDD900 Band	890 ~ 915	935 ~ 960
	LTE FDD1800 Band	1710 ~ 1785	1805 ~ 1880
	LTE FDD2100 Band	1920 ~ 1980	2110 ~ 2170
Max. Output Power (dBm) (Max. Gain, Center Frequency )		-10±2	37±2
Max. Gain (dB) ( Center Frequency ) @Optical Loss=0dB		55±3	55±3
ATT Adjustable Range (dB)		0 ~ 30	0 ~ 30
ATT Adjustable Step (dB)		1	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	LTE FDD700 Band	≤ 8.0	≤ 8.0

25°C	LTE FDD900 Band		≤ 7.0	≤ 7.0
	LTE FDD1800 Band		≤ 8.0	≤ 8.0
	LTE FDD2100 Band		≤ 7.0	≤ 7.0
EVM(%)			≤ 6	≤ 6
Spurious Emission (dBm) at out of band offset ±10MHz	9kHz~150kHz		≤ -36/1KHz	≤ -36/1KHz
	150kHz~30MHz		≤ -36/10KHz	≤ -36/10KHz
	30MHz~1GHz		≤ -10@100KHz	≤ -10@100KHz
	1GHz~12.75GHz		≤ -5@1MHz	≤ -5@1MHz
Time Delay (us)			≤ 5	≤ 5
VSWR(Power up, Min Gain, Pin=-30dBm)	LTE FDD700 Band		≤ 1.8	≤ 1.8
	LTE FDD900 Band		≤ 1.8	≤ 1.8
	LTE FDD1800 Band		≤ 1.8	≤ 1.8
	LTE FDD2100 Band		≤ 1.8	≤ 1.8
Noise Figure (dB) (Max. Gain)			≤ 8.0	/
Optical Specifications	Optical Connector	MU	FC/APC*4;	
		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)*4;		
	RU	N(f)*1;		
Impedance (Ω)			50	
Power Supply	MU	DC-48V or AC110/220V		
	RU	AC110/220V		
Power Consumption (W)	MU	≤ 50		
	RU	≤ 300		
Dimension (mm)	MU	430*400*44		

	RU	489*409*186.5
Environmental Class	MU	IP20 (Indoor)
	RU	IP55 (Outdoor)
Operating Temperature (°C)	MU	-5 ~ +45
	RU	-25 ~ +55
Humidity (%)	MU	0~80
	RU	0~95
Control Function	MU	Local with RJ45; Remote with Wireless (4G Modem);
	RU	Local with RJ45;
Device cooling ways	Cooling with fan-RU	

**Outline Dimension:**

**MU:**



**RU:**

