

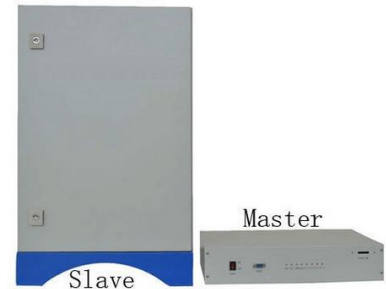
**Product Name**

**VHF 20W BTS Coupled Fiber Optical Repeaters (BDA)**

**VHF FiberLink-104**

**Product Features**

- ◆ High linearity PA; High system gain
- ◆ Intelligent ALC technology
- ◆ Full duplex and high isolation from uplink to downlink
- ◆ Automatic Operation convenient operation
- ◆ Integrated technique with reliable performance



**Technical & Mechanical Specifications**

**1.Master Unit Technical Specification**

Items	Testing Condition	Technical Specification		Memo
		Downlink	Uplink	
<b>RF Specifications</b>				
Frequency Range	Working in-band	138-174MHz		
Max Bandwidth	Working in-band	4MHz		
Max RF Input level	Working in-band	+5dBm	-	
Min RF Input level	Working in-band	-70dBm	-	
Max RF input without damage	Working in-band	10dBm	-	
VSWR	Working in-band	≤1.5		
Connector		N-Female		
<b>Optical Specifications</b>				
Optical Output Power		-3dBm±2dB	-	
Optical Max Input power			+4dBm	
Optical Min Input power			+0dBm	
Optical Input damage level			+10dBm	
Optical length		DL: 1310nm, UL: 1550nm		
Optical Loss		≤10dB /Includes the loss of the optical splitter		
Optical Connector		FC/APC X 1(WDM, one core)		
Nos Of Optical Ports		2/4/6/8		
ROUs drive Capacity		2/4/6/8		Customized
<b>Power Supply and Mechanical Specifications</b>				
Power Supply		AC110/220V±60V,45~60Hz		
Dimension		435mm*312mm*90mm		
Weight		8kg		
Max. Power Consumption		50W		
Operating Temperature		-5~+45℃		
Operating Humidity		≤85%		
Environmental Class		IP20		
RF Connector		N-Female, 50ohm		
MTBF		≥50000 hours		
Monitor Interface		Local Monitor: Remote Monitor: RS232 UMTS modem		Option
Alarm Type		No Power, Over Temperature, RU Failed		

**2.Remote Unit Technical Specification**

Items	Testing Condition	Technical Specification		Memo
		Downlink	Uplink	
<b>RF Specifications</b>				

Frequency Range	Working in-band	138-174MHz	
Max Bandwidth	Working in-band	4MHz	
Output Power (Max.)	Working in-band	40±2dBm	-
Max Input without damage	Working in-band	--	+10dBm
Max Input RF level	Working in-band	--	-25dBm
Min Input RF level	Working in-band	--	-107dBm
Noise Figure	Working in-band	--	≤5dB
Gain Adjustable Range/Step	Working in-band	≥25dB/1dB	
Gain Adjustable Error	Working in-band	Gain adjustable range is 0~20dB, error≤1dB; ≥21dB, error≤1.5dB	
Ripple	Working in-band	≤3dB in bandwidth	
IMD3		≤-45dBc	
ALC	Working in-band	When adding ≤10dB at max. Output level, output variation ≤±2dB, When adding >10dB, output variation ≤±2dB or be off.	
VSWR	Working in-band	≤1.5	
Time Delay	Working in-band	≤1.0μs	
Spurious Emission		Complies with ETSI TS 101 789-1	
<b>Optical Specifications</b>			
Optical Output Power		0~3dBm	
Optical length		DL: 1310nm, UL: 1550nm	
Optical Loss		≤10dB /Includes the loss of the optical splitter	
Optical Connector		FC/APC X 1(WDM, one core)	
Optical Max input power		+4dBm	
Optical Min input power		+0dBm	
Optical input power without damage		+10dBm	
<b>Power Supply and Mechanical Specifications</b>			
Power Supply		AC220V±60V,45~55Hz	
Dimension		590mm*370mm*220mm	
Weight		30kg	
Max. Power Consumption		250W	
Operating Temperature		-25~+55℃	
Operating Humidity		≤95%	
Environmental Class		IP55	
RF Connector		N-Female, 50ohm	
MTBF		≥50000 hours	
Monitor Interface		Local Monitor: Remote Monitor: RS232	
Alarm Type		No Power, PA Failure, VSWR, Over Power, Over Temperature	

### 3.MOU+ROU Whole System Technical Specification

Items	Testing Condition	Technical Specification		Memo
		uplink	downlink	
Frequency Range	Working in-band	138-174MHz		
Max Bandwidth	Working in-band	4MHz		
Output Power(dBm)	Working in-band	0±2	40±2	Customized
ALC ( dB )	Input add 10dB	△Po≤±2		
Max Gain	Working in-band	55±3dB	55±3dB	with 0dB optic path loss
Gain Adjustable Range(dB)	Working in-band	≥30		
Gain Adjustable Linear	10dB	±1.0		

( dB )	20dB	$\pm 1.0$	
	30dB	$\pm 1.5$	
Ripple in Band(dB)	Effective Bandwidth	$\leq 3$	
Max.input level	Continue 1min	-10 dBm	
Transmission Delay(us)	Working in-band	$\leq 5$	
Noise Figure ( dB )	Working in-band	$\leq 5$ ( Max.gain )	
IMD(dBc)	Working in-band	$\leq 45$	
Intermodulation Attenuation	9kHz~1GHz	$\leq 36\text{dBm}/100\text{kHz}$	
	1GHz~12.75GHz	$\leq 30\text{dBm}/1\text{MHz}$	
Port VSWR	BS Port	$\leq 1.5$	
	MS Port	$\leq 1.5$	