

Digital LTE1800/2100 Dual Band Selective RF Repeater

Model: DMN1821-VF4-70-20SEMA1

The RF Repeater (RFR) is designed to provide a more cost-effective solution than adding a new Base Transceiver Station (BTS) to improve signal coverage and communication quality in LTE1800/2100 system. And its easy installation and maintenance can help carrier get fast return.

The repeater is working as a relay between the BTS and mobiles. It receives the low-power signal from BTS via the Donor Antenna, linearly amplifies the signal and then retransmits it via the Coverage Antenna to the weak/blind coverage area. 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
- Low interference to BTS by adopting linear amplifier with high gain and low noise
- Adopting filter with highly selectivity and low insertion loss eliminates interference between uplink and downlink
- USB 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

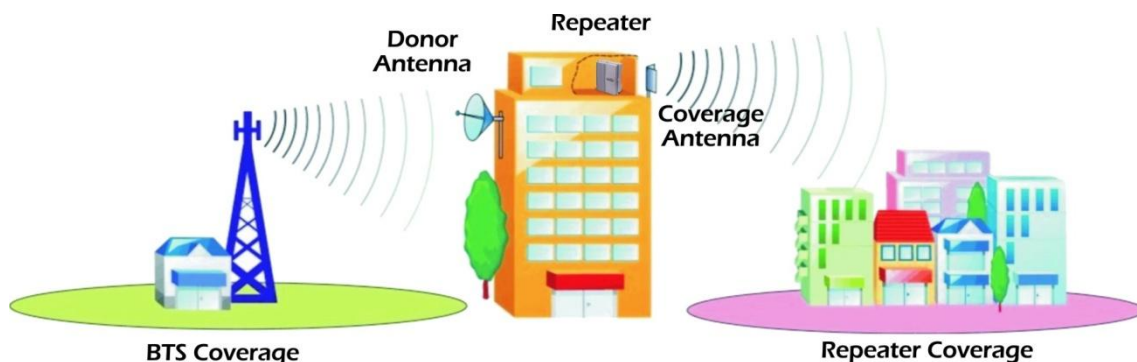
Applications

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

MODEL		DMN1821-VF4-70-20SEMA1	
Items		Specifications	
		Downlink	Uplink
Frequency Range (MHz)	LTE1800	1805-1880	1710-1785
	LTE2100	2110-2170	1920-1980
Operating Bandwidth (MHz) Band tunable	LTE1800	5/10/15/20(EBW:4.5/9/13.5/18)	
	LTE2100	5/10/15/20(EBW:4.5/9/13.5/18)	
Sub-band number		2	
Max. Output Power (dBm)		23±2	13±2
Max. Gain (dB)		90±3	90±3
ATT Adjustable Range/ Step (dB)		0 ~ 30/1	
Ripple In Band (dB)at 25°C		≤±5@EBW	
ALC Range (dB)		0 ~ 20	
ALC Accuracy (dB)		≤ ±2.0	
AGC Range (dB)		≤30	
ACLR (dBc)		≤-36	
Noise Figure (dB) (Max. Gain)		≤7.0	
Total Processing Delay (us)		≤5.0	
Input VSWR (Power up, Min Gain, Pin=-30dBm)		≤2.0	
Frequency Error (ppm)		≤0.05	
EVM (Error vector margin)(%)RMS		≤8.0	
Out of Band Emission @offset ±2.5MHz	9KHz~150KHz	≤ -36 @ 1KHz	
	150KHz~30MHz	≤ -36 @ 10KHz	
	30MHz~1GHz	≤ -36 @ 100KHz	
	1GHz~12.75GHz	≤ -30 @ 1MHz	
Out of Band Gain at 25°C (dB)	0.2MHz ≤ f_offset < 1MHz	≤ 60	
	1MHz ≤ f_offset < 10MHz	≤ 45	



Tone Spread
Solutions for Wireless Signal

	$10.0\text{MHz} \cong f_{\text{offset}}$	≤ 35
Impedance (Ω)		50
Radio Connector		N(f)
Power Supply		AC220V, 45-55Hz
Housing class		IP30
Weight (Kg)		≤ 5
Dimension (mm)		310*241*69(Note1)
Operating Temperature ($^{\circ}\text{C}$)		0 ~ +45
Power Consumption(W)		≤ 80
Humidity (%)		≤ 85
Control Function	Sub band on/off	Each sub-band/Channel can be switched on/off individually by
	Status monitoring (Alarm & signal level)	in/output power (UL/DL) , temperature, Switch ,Frequency, Etc.
	LED Indicator	Power Indicator ,Alarm Indicator, DL output power Indicator
	Local control	USB2.0

Outline Dimension:

