

30dBm 900-1800-2100MHz ICS Tri-Band Digital Power Repeater

Model No: DPR-91821-30W95



Features:

- Triple Band Digital Repeater supporting 900,1800, 2100MHz bands
- Advanced Digital Filtering Technology with up to 25MHz tuning range per band
- Fully comply with ETSI & 3GPP with 30dBm total composite power and 95dB gain
- Extremely low NF with an excellent EVM reduces the uplink noise to the base station
- IMOP Support (Isolation Measurement and Oscillation Protection), Smart mode to auto-adjust gain according to the isolation and signal level received by the donor site
- Optional ICS mechanism for improving isolation by 25dB
- Supports WCDMA & LTE (optional: 5G) in the same repeater
- Linear power amplification effectively suppresses inter-modulation and spurious emissions, minimizes uplink interference (optional: uplink shutdown)
- Easy installation using a ruggedized mechanical enclosure, LED indication, Local control via keyboard, USB or WIFI
- Optional control and alarm via 4G modem using EMTS NMS
- Advanced mechanism ensures 30dBm total power in any mode (single, dual, or triple band)

Introduction

The EMTS Telecom Services Ltd. Tri-Band 900/1800/2100MHz Digital Power Repeaters (DPR) provide an excellent solution to poor signal coverage and are used for coverage extension and building applications. The DPR is designed to support signal coverage for 900/1800/2100MHz bands with up to 5000 sqm. covered area, supporting both LTE and WCDMA technologies. The power repeater has an intelligent algorithm to minimize uplink interference; simultaneously, the isolation detection function allows users to be alerted when the distance between the donor and service antenna is insufficient. The easy-to-install feature highlights the DPR as an excellent signal enhancement solution, improving the LTE/WCDMA coverage and capacity and 5G networks dead areas where service is poor. The EMTS Digital Power Repeater also enhances the mobile network's capacity and data coverage in areas with limited signal strengths. It provides an affordable solution for indoor signal coverage problems due to signal fading and attenuation caused by architectural obstacles. Its easy installation and maintenance can help carriers get a fast return on investment. Setting the sub-bands using advanced digital technology is done via EMTS Mobile App or direct connection via USB cable. The EMTS Telecom Services DPR is based on the latest technology using advanced RF and digital modules that reduce power consumption and increase reliability and MTBF. The DPR can be connected to EMTS NMS via an LTE modem for remote monitoring and control & utilizing advanced IMOP algorithm for preventing oscillations.

EMTS Telecom Services Ltd. offers a comprehensive portfolio of enhanced coverage solutions for Wireless Networks, Based on advanced technologies. **EMTS-proven** indoor and outdoor solutions solve a wide range of network challenges, including interference and oscillation problems, challenging coverage holes, rapid response deployment, and inadequate in-building coverage. Regardless of the technology or frequency, **EMTS** can provide customized coverage solutions that address any combination of unique and complex network needs for Wireless Networks.



Technical Specifications:

Electrical Performance				
System		GSM/LTE1800	UMTS/LTE/5G NR2100	GSM/WCDMA/LTE
Frequency Range	Uplink	1710~1785MHz	1920~1980MHz	880-915MHz
	Downlink	1805~1880MHz	2110~2170MHz	925-960MHz
No. of Carriers		1/2/4 Carriers, the Bandwidth of the Corresponding Carriers is 20/10/5MHz	1/2/4 Carriers, the Bandwidth of the Corresponding Carriers is 20/10/5MHz	1/2/4 Carriers, the Bandwidth of the Corresponding Carriers is 20/10/5MHz
Maximum Output Power	Uplink	24±2dBm	24±2dBm	24±2dBm
	Downlink	30±2dBm	30±2dBm	30±2dBm
Gain		95±3dB		
Gain Adjustment Range		0~31dB @Step of 1dB		
AGC/ALC		≥20dB		
Intelligent Algorithm to Prevent UL Interference		Support		
Interference Cancellation Range		≥ 25dB (Isolation+10dB)		
In-Band Ripple (Typical)		≤±3dB		
Maximum Input Power		-10dBm		
Spurious Emission		9kHz~1GHz: ≤ -36dBm		
		1GHz~12.75GHz: ≤ -30dBm		
Frequency Error		≤ 0.05ppm		
EVM(RMS)		≤ 8%	≤ 8% Optional ≤ 4.5% (5G)	≤ 8%
RF Channel Switch		Supports ON/OFF Settings through Software		
VSWR		≤ 1.5		
Noise Figure		≤ 7dB		
Group Delay		≤ 5μs		
I/O Impedance		50 Ω		
Isolation Detection		Manual Isolation Check Between Service and Donor antennas		



About EMTS Telecom Services Ltd.:

EMTS Telecom Services is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. The company specializes in extending RF radio coverage to rural areas, office buildings, subways, tunnels, and shadowed areas. The EMTS coverage solution supports all major mobile technologies and standards of wireless Networks.

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Mechanical Performance	
RF Connector	2xN-Female
Power Consumption	≤ 300W
Power Supply Type	Input AC220V,50/60Hz
Dimensions	500*440*187mm
Weight	≤35kg
Mounting	Wall or Pole Mounting
Environmental Performance	
Operating Temperature	-20 ~ +50 °C
Application	Indoor and Outdoor (IP65)
Relative Humidity Range	≤95%(non-Condensing)
Control and Indications	
LED Indicator	Power Supply, Alarm, Running
Local Control	Via USB Interface of WIFI
NMS Mode	Cloud NMS via 4G Wireless Modem
Complied Standards	
Conformance Standard	Safety: EN 60950 EMC: ETSI 301 489-50, ETSI 301 489-1, Radio: ETSI 301 908-11, ETSI 301 908-15
3GPP standards	TS 25.106, TS 36,106, TS 38.104
CE	Comply with CE standard

Ordering options

Type	Model No.
Standard	DPR-91821-30W95
Standard with ICS capability	IDPR-91821-30W95



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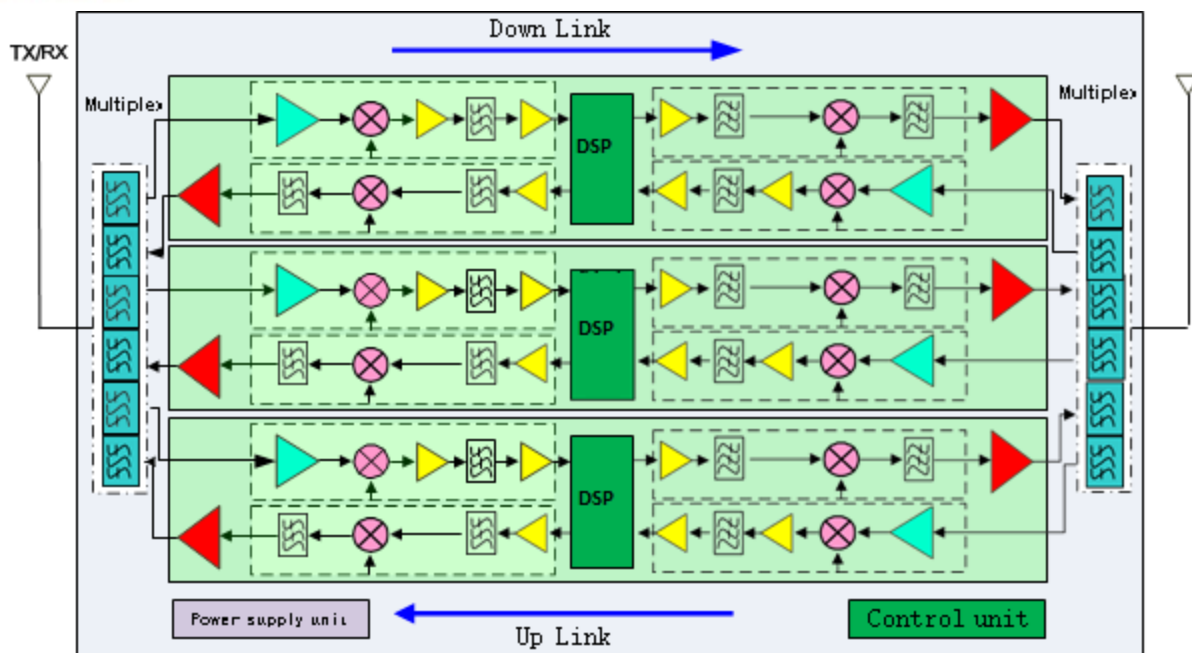


Figure 1 - schematic diagram of Repeater structure

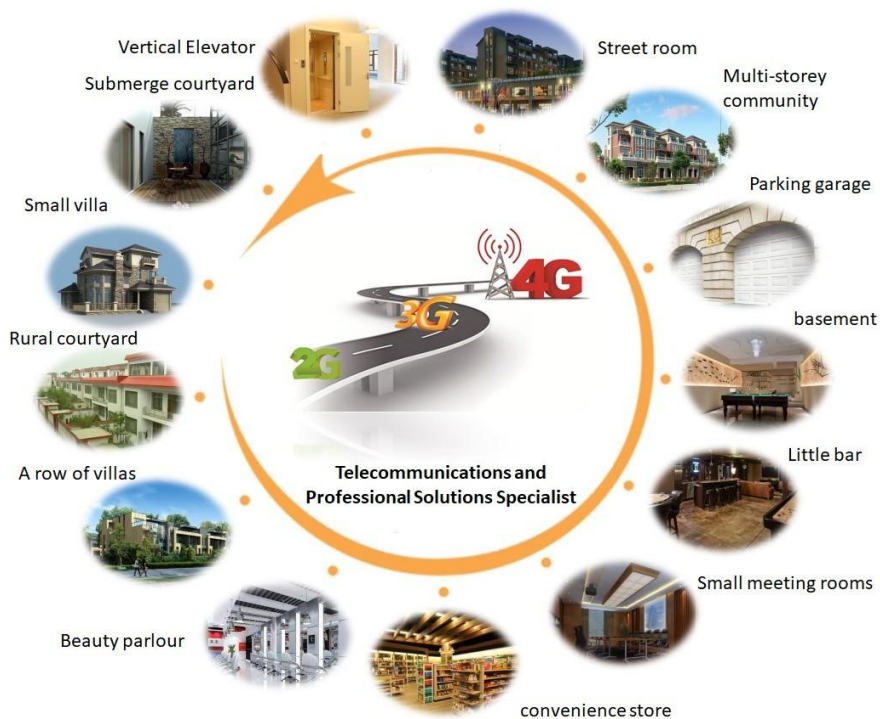


Figure 2 - schematic diagram of system application scenario



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