

43dBm 900-1800-2100MHz Triple Band High Power Digital Repeater



Model No.: DHPR-91821-43W90

Features:

- Supports WCDMA/ LTE & 5G standards with digital filtering technology.
- 43dBm downlink composite power with an advanced DSP architecture, using multi-digital filters per band.
- Very low Up-Link noise – an excellent solution to extend BTS coverage range for Outdoor or In-Building deployment.
- Tunable bandwidth with up to 4 digital filters per band to support multi-technology usage with 43dBm composite power per band.
- Meets ETSI standards; Fully comply with TS 25.106, TS 36,106, TS 138.106
- Linear power amplifiers effectively suppress inter-modulation and spurious
- Smart Automatic Level Control (ALC) ensures a stable output level.
- Support EMTS NMS SW tool for remote control and alarms

Introduction

EMTS Telecom Services Ltd. introduces the Triple Band Digital High-Power Repeater (DHPR), a robust solution addressing inadequate signal coverage for both indoor and outdoor applications. The DHPR is meticulously engineered to bolster signal strength across three essential bands: 900MHz, 1800MHz, and 2100MHz. This advanced repeater significantly amplifies signals originating from mobile phones and base stations, making it an ideal choice for areas with poor service or dead zones. Notably, it offers a cost-effective alternative to installing a new Base Transceiver Station (BTS) for enhancing signal coverage within a triple-band system. This enhancement subsequently elevates the overall cellular network coverage in regions grappling with weak signal reception. Ease of installation and straightforward maintenance make it an attractive proposition for carriers seeking swift returns on their investments. The DHPR connects to an external donor antenna through a coaxial cable. The donor antenna efficiently transmits signals from mobile devices and receives signals from the BTS. Service antennas strategically placed in areas with signal deficiencies or on towers capture signals from mobile phones within these zones. These signals are then relayed to the repeater, which, in turn, transmits them to the donor antenna for final transmission to the base station. This seamless process ensures a significant improvement in signal coverage and quality.



EMTS Telecom Services Ltd. offers a comprehensive portfolio of enhanced coverage solutions for the 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 the Wireless Networks.

Technical Specifications:

		WCDMA / LTE / 5G NR 2100MHz		
Frequency Range (MHz)	Uplink	880 to 915	1710 to 1785	1920 to 1980
	Downlink	925 to 960	1805 to 1880	2110 to 2170
Max Output Power		Uplink: 30±2 dBm		Downlink:43±2 dBm
Bandwidth		Up to 4 sub-bands, each 0.2-30 MHz		
Max Gain		95±3 dB		
Gain Adjustment Range		0 to 30 dB at step of 1 dB (Adjustable for each sub-band)		
Automatic Level Control		≥25 dB		
Pass Band Ripple		+/- 1 dB ptp		
Frequency Stability		≤ ±0.01 ppm		
Third-order Inter-Modulation		≤ -45 dBc		
Spurious emission		≤-36 dBm/9 kHz-1 GHz		
		≤ -30 dBm/1 GHz-12.75 GHz		
ACRR		P≥31dBm (offset 5MHz): ≥33dB, P≥31dBm (offset 10MHz): ≥33dB		
Error Vector Magnitude (EVM)		≤ 8.5%		≤ 3.5% (Typical)
Peak Code Domain Error (PCDE)		≤ -35dB		
Noise Figure		≤ 6 dB		
VSWR		≤1.5		
System Delay		≤ 5µs		
Maximum Input Power		-10dBm		
Environmental & Mechanical				
Operating Temperature range		-40 °C to + 55 °C		
Humidity		0 %- 95 %		
Ingression Protection Class		IP 65		
MTBF		≥ 80000 hours		
RF connector		4.3-10 Female x 2 / 50 Ω		
Power Supply		110-240 V AC / 350 Watts		
Dimensions		500 x 440 x 187 mm		
Weight		≤25 kg		



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.

All rights reserved **Note: All specifications subject to change without notice.**

Compliance 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 138.106
Monitoring Capabilities	
Remote Control Module	USB for local / optional 3G/LTE modem for remote connectivity
NMS Monitoring Function	Real-time alarm: for door status, temperature, power supply, VSWR, etc Remote control: on/off, increasing/decreasing output power, etc Status for: output/input power, UL/DL gain, etc



EMTS Telecom Services Ltd. offers a comprehensive portfolio of enhanced coverage solutions for the 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 the Wireless Networks.