

33-43dBm 800MHz Band-5 Band Selective Power Repeater 3G/4G/5G Digital ICS Technology



Model No: IHPR-85-43W95 for 43dBm
IHPR-85-40W90 for 40dBm
IPR-85-37W85 for 37dBm
IPR-85-33W80 for 33dBm

Features:

- Supporting 5G, LTE, and WCDMA using an advanced algorithm with up to +43dBm Downlink composite power
- Complies with the 3GPP ETSI standards
- Advanced Digital ICS technology - function to prevent self-oscillation, enhance gain and coverage range and reduce isolation requirement for the selectable band
- Real-time cancellation of an interference signal (fading & feedback signal)
- Comprehensive GUI, extremely easy to use and install
- Compact Size - waterproof IP-65 enclosure suitable for outdoor & indoor deployments, supporting a wide range of temperature -20 to +55 °C
- Metal cavity filter technology allows wider receive and transmits separation, better gain flatness, higher stability, and lower noise figure
- Intelligent design with built-in ALC function provides auto amplitude fixing and noise reduction to the LTE or WCDMA BTS.
- Remote Monitoring & Alarm (NMS) via 4G modem, WIFI functionality

Introduction

The EMTS Telecom Services Band-5 ICS (High) Power Repeaters (IHPR) provide an excellent solution to the problem of poor signal coverage for coverage extension and outdoor or in-building applications. The IPR/IHPR utilized Digital ICS technology (Interference Cancellation System), The RF Repeater that can automatically detect and cancel the interference signal caused by oscillation of RF feedback between the Donor and Services Antennas in real-time by adopting DSP (Digital Signal Processing) technology. It restores full operational capability against multi-path fading cellular signals and feedback signals by oneself and all types of waveforms from friendly and intentional interference sources. Easy installation, lightweight design, and friendly GUI make the EMTS IPR a cost-effective and practical solution for extending signal coverage. The EMTS, High Power Repeater series, supports all frequencies, including WCDMA & LTE & 5G, selected by a digital mechanism.

EMTS Telecom Services offers a comprehensive portfolio of enhanced coverage solutions for the Wireless Networks, Based on advanced technologies. EMTS has proven, that 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.



Electrical Specification

		Uplink	Downlink
Frequency Range		824-849MHz	869-894 MHz
Bandwidth (selectable band)		2 tunable Sub-bands 0.2-25MHz utilized advanced DSP technology	
Gain	For 43dBm downlink Power	90dB±3dB	95dB±3dB
	For 40dBm downlink Power	90dB±3dB	90dB±3dB
	For 37dBm downlink Power	85dB±3dB	85dB±3dB
	For 33dBm downlink Power	80dB±3dB	80dB±3dB
Frequency Error		≤±0.5ppm	
MGC (Manual Gain Control)		1 to 31dB @ step of 1dB	
AGC (Automatic Gain Control)		1 to 31dB @ step of 1dB	
Composite Output RF Power	For 43dBm downlink Power	27dBm +/-2 dB	43dBm +/-2 dB
	For 40dBm downlink Power	27dBm +/-2 dB	40dBm +/-2 dB
	For 37dBm downlink Power	24dBm +/-2 dB	37dBm +/-2 dB
	For 33dBm downlink Power	24dBm +/-2 dB	33dBm +/-2 dB
Noise Figure		≤5dB	
Group Delay		≤4.5us	
Interference Signal Cancellation Capacity (Direct Feedback and Static Multi-path Feedback)		≥30dB (Antenna Isolation +15dB)	
Interference Signal Detecting Range (Direct & Multi-path Feedback)		≤ 7 μs	
Passband Ripple (in Band)		≤ 3 dB	
Frequency Stability		≤ 0.01 ppm	
Error Vector Magnitude (EVM)		≤ 4.5% (meets 5G NR requirements)	
ACRR (Adjacent Channel Rejection Ratio)		P ≥ 31 dBm (Offset 5MHz): ≥ 33dB	
		P ≥ 31 dBm (Offset 10MHz): ≥ 33dB	
Spurious emission		≤-36dBm/30KHz@9KHz-1GHz	
		≤-30dBm/30KHz@1GHz-12.75GHz	
VSWR		≤1.5:1 The repeater included a VSWR protection system	
Power Supply		220 VAC / 45-55 Hz	
Gain	For 43dBm downlink Power	210 watts	
	For 40dBm downlink Power	160 watts	
	For 37dBm downlink Power	120 watts	
	For 33dBm downlink Power	80 watts	
Input & Output Impedance		50 Ohm	

About EMTS Telecom Services Ltd.:

EMTS 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



Mechanical & Environmental Specifications

Dimensions	For 43, 40 & 37dBm types - 460x370x 180mm For 33dBm type - 420x280x 150
Weight	For 43, 40 & 37dBm types - ≤20kg For 33dBm type - ≤15kg
Mounting Kit	Included Wall / Pall
Grounding kit	Included
Operating temperature	-20° to +50°C
Standard against dust and water	IP65
Relative humidity	≤95%
RF connectors	N-Type (optional) 7/16 DIN Female
Operation Configuration	LED Display for status and alarm, PC RJ45Port, Local WIF functionality for easy setting and alarming
Remote Monitoring and Alarm	NMS via internal 3G/4G modem, Supports SMS/SNMP real-time status and alarm reporting Remote configuration
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
MTBF (Mean time between failures)	≥ 100000 hours



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