

GSM-R 900 MHz 40dBm Channel Selective High Power Repeater

Model No: DCSHPR-GR-900-40W90



Features:

- Supports GSM-R with 40 dBm downlink composite power
- Lightweight, compact size, and High Performance, Digital Channel Selective
- Comply with Railway Telecommunications (RT); ER-GSM frequencies; Part 1: ER-GSM additional radio aspects, ETSI TS 102 281 V3.0.0 (2016-02)
- Cost-effective alternative to exclusive BTS solution
- User-friendly GUI & plug-and-play installation, up to 4 programable channels of 200KHz to amplify the selected channels only, Isolation detection function.
- Low power consumption, Linear power amplification to effectively suppress inter-modulation and spurious emission
- Smart Automatic Level Control - Ensures output level is adjustable continuously

Description

The EMTS Telecom Services Ltd. High Power channel -selective Repeater (DCSHPR) is designed to provide a cost-effective solution, rather than adding a new Base Transceiver Station (BTS), to improve signal coverage and communication quality in the GSM-R system. Its easy installation and maintenance help carriers get a fast return on investment (ROI). The repeater works as a relay between the BTS and mobiles. It receives the low-power signal from BTS via the Donor Antenna, linearly amplifies it, and then retransmits it via the Service Antenna to the weak/blind coverage area. The EMTS Telecom Services Ltd. Power-Repeaters provide an excellent solution to the problem of poor signal coverage. The Repeaters amplify the signals from mobile phones and base stations and can be used in dead areas where service is poor. GSM-R systems are used extensively for railway communication both in Europe and Asia. Our GSM-R repeaters are deployed to provide coverage within trains, tunnels, and other confined spaces. Our GSM-R products are easily configured either locally or remotely via a remote or a local; the products are supplied in weatherproof IP65 cases. This combination of repeaters dramatically reduces the number of BTS and, then, the total cost of deployment for a better Quality of Service. The benefits are double: better QoS and better total cost.



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 Specifications		Uplink	Downlink
Frequency Range		876 MHz to 880 MHz	921 MHz to 925 MHz
Channel Selective		4 programable channels of 200KHz across the GSM-R band	
Gain		≥ 90 dB	≥ 95 dB
Manual Gain Control (MGC)		31 dB in the step of 1 dB	
Auto Gain Control		≥ 20 dB	
In-band ripple		+/- 1 dB.	
Max. Input Power Without Damage		0 dBm	
Composite Output Power		27±1dBm	40±1dBm
Out of Band Rejection	± 400 KHz	≥ 60 dBc	
	± 600 KHz	≥ 70dBc	
Intermodulation Product			
Spurious Emission	9 KHz~1 GHz	≤ -36 dBm	
	1 GHz~12.75 GHz	≤ -30 dBm	
Noise Figure		< 3 dB	
VSWR		1.5:1	
Group Delay		< 5 μS	
Power Supply		-48 v DC	
Environmental specification			
Environmental Conditions		IP65	
Humidity		≤95%(no dew)	
Operating Temperature		-25 to 55 °C	
Mechanical specification			
RF Connector		N-Female	
Dimensions (W x H x D)		428 x 328 x 220 mm	
Weight		≤ 25 kg	
Monitoring specification			
Local Control		USB port for the local setting Real-time alarm for door status, temperature, power supply, LNA, VSWR, self-oscillation, etc.;	
NMS Monitoring Function (Optional)		Remote control, such as turning on/off, increasing/decreasing output power, setting channel frequency etc Real-time status for output/input power, UL/DL gain, all status of the repeater, etc.;	
Compliance			
Complies with	Safety	EN 62368-1, EN 50385	
	EMC	EN 301 489-1, EN 301 489-50, EN 50121-4	
	Radio	EN 303 609	



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 extends RF radio coverage to rural areas, office buildings, subways, tunnels and shadowed areas. The EMTS coverage solution supports all major mobile technologies and wireless networks' standards.

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