

GSM-R Band Selective 43dBm High-Power Repeater

Model No: PR-GR-900-43W95



Features:

- Comply with Railway Telecommunications (RT); ER-GSM frequencies; Part 1: ER-GSM additional radio aspects, ETSI TS 102 281 V3.0.0 (2016-02) and EIRENE standards
- 43dBm downlink output power, provides significant indoor or outdoor signal coverage
- Cost-effective alternative to exclusive BTS solution
- User friendly GUI & plug and play installation
- Isolation detection function
- Low power consumption with sleeping mode (saving power)
- Linear power amplification to effectively suppress inter-modulation and spurious emission
- Could NMS (Network Monitoring System) via 4G Wireless Modem
- Smart Automatic Level Control ensures output level is stable and adjustable continuously
- IP65 enclosure for indoor or outdoor installation

Introduction

The EMTS Telecom Services Ltd. GSM-R Band Selective High-Power Repeater provides an affordable solution to solve the indoor or outdoor signal coverage problems in the GSM-R systems due to signal fading and attenuation caused by architecture obstacles. 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 permits to reduce dramatically 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. 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 Service Antenna to the weak/blind coverage area.



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:

1. Electrical Specification			
		Uplink	Downlink
Frequency Range		873-880 MHz	918-925 MHz
Bandwidth		7 MHz *other frequency bands are available upon request	
Gain		95±3dB	
Auto Gain Control (AGC)		≥30 dB	
Auto Gain Setup Range (Inside)		31dB/1dB step	
Gain Flatness		≤3dB(P-P)	
Output Power		27±2dBm	43±2dBm
Third-order Inter-Modulation		≤ -36dBm	
		≤ -30dBm	
Spurious Emission	9KHz~1GHz	≤ -36dBm	
	1GHz~12.75GHz	≤ -30dBm	
Noise Figure		≤ 6dB	
VSWR		≤2:1	
Group Delay		≤ 5μs	
Power Consumption		≤ 150W	
Power		110/220 vac Optional +24 or -48 vdc	
Local Control		Via USB Interface and Wi-Fi Hotspot	
NMS Mode		Could NMS (Network Monitoring System) via 4G Wireless Modem Connectivity using Web-GUI NMS	
2. Mechanical specification			
Dimensions		490*410*190 mm	
Weight		≤25kg	
I/O Connector/ Impedance		N-female / (Nominal)50Ω	
3. Environmental specification			
IP Rating		IP65	
Operating Temperature		-30°C to 55°C	

About EMTS Telecom Services Ltd.:

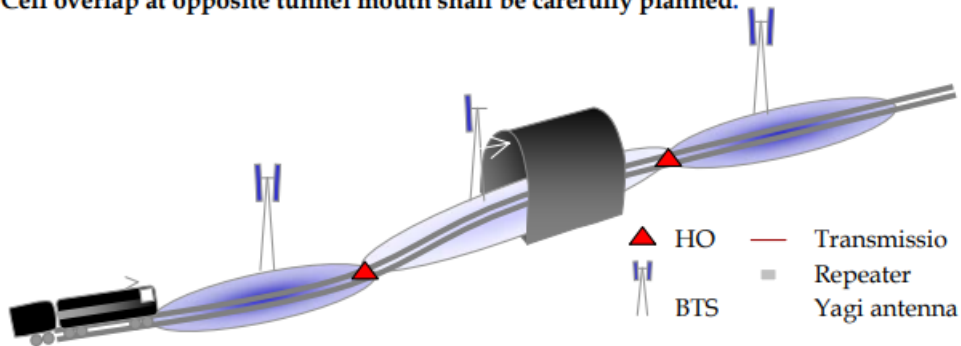
EMTS is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. The company specializes in extending RF radio coverage to rural areas, office buildings, subways, tunnels, and shadowed areas. The EMTS coverage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

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Comply with Standards	
Standard	TR 102 627 - V1.1.1 ETSI TS 102 281 V3.0.0 (2016-02) EIRENE
CE	Comply

- **Short tunnels are the most frequent case.**
- **Coverage is ensured with a Yagi antenna shooting to the tunnel entrance.**
- **Max tunnel length for this solution depends on tunnel section, straightness, wall nature and train blocking effect.**
- **Low CAPEX, easy installation & maintenance (no tunnel access).**
- **Cell overlap at opposite tunnel mouth shall be carefully planned.**



Examples of typical uses for Tunnel or Outdoor Coverage extension



Examples of typical uses for Tunnel or Outdoor Coverage Extension



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