EMTS
Telecom Services
TURNING TECHNOLOGY INTO SOLUTIONS

# GSM-R 900MHz
# High Selectivity
# Band Selective Power Repeater

## Model No: PR-GR-900-30W80

## Features

- **Supports GSM-R with 30 dBm downlink composite power**
- **Light weight, compact Size and high Performance**
- **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**
- **Isolation detection function**
- **Low power consumption, Linear power amplification to effectively suppress inter-modulation and spurious emission**
- **Smart Automatic Level Control - Ensures output level adjustable continuously**

## Introduction

The EMTS Telecom Services Ltd. Power-Repeaters provides 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 produces are easily configured either locally or remotely via a remote or a local , the products supplied in a 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.

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# Electrical Specification

| Items | | Uplink | Downlink |
|---|---|---|---|
| Frequency Band | | Type A: 873–880 MHz<br>Type B: 885–889 MHz | Type A: 918–925 MHz<br>Type B: 930–934 MHz |
| Gain | | 80 ± 2dB | 80 ± 2dB |
| Bandwidth | | Tunable BW 0.2-7 MHz | |
| Manual Gain Control | | 31dB in step of 1dB | |
| Automatic Gain Control | | ＞20dB | |
| Ripple in Band | | ± 1.5 dB typ. For full band | |
| Max. Input Power Without Damage | | -10 dBm | |
| Composite Output Power | | 24 dBm | 30 dBm |
| Intermodulation Products | 9KHz~1GHz | ≦ -36 dBm | ≦ -36 dBm |
| | 1GHz~12.75GHz | ≦ -30 dBm | ≦ -30 dBm |
| Spurious Emission | 9KHz~1GHz | ≦ -36 dBm | ≦ -36 dBm |
| | 1GHz~12.75GHz | ≦ -30 dBm | ≦ -30 dBm |
| Frequency Stability | | ≤0.05 ppm | |
| Noise Figure @ max. gain | | ≤5 dB | |
| VSWR | | 1.5:1 | |
| Time Delay | | 6 μs maximum | |
| Power Supply | | 220 v ac | |
| Power Consumption | | 90 w | |
| Impedance | | 50 ohm | |
| Remote & Control | | Via GSM /GPRS mode | |

# Mechanical Specification

| | |
|---|---|
| RF Connector | N-Female |
| Switch | Power Switch Manual Gain Control Switch |
| Dimensions (D x W xH ) | 351 X 460 X146mm |
| Weight | 17kg |
| Environment Conditions | IP65 |
| Humidity | < 95% |
| Operating Temperature | -20 – 50 º C |

**About EMTS Telecom Services Ltd.:**

EMTS telecom Services Ltd. 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.