

20dBm LTE 700-1800MHz Dual-Band Digital Mini Repeater High Performances - High Selectivity



Model No: MR-718-20W85 for ICS type PR-718-20W85-I

Features:

- Designed to extend in-building coverage of 4G at band 28 & band 3
- Comply with ETSI and 3GPP Standards with 20dBm composite output power
- Fully transparent to the 4G network
- Friendly GUI or direct WIFI connectivity for a plug-and-play installation
- Advanced Isolation Measurement Oscillation Preventing (IMOP) algorithm prevents self-oscillation due to poor isolation
- ICS Option enables 25dB improvement with isolation requirements
- Low EVM by utilizing advanced Ultra-High Linear power and spurious emission with extremely low power consumption
- Smart Automatic Level Control (ALC) ensures output level is stable and adjustable.
- Simple installation with external AC/DC power supply
- Optional 4G modem for Remote Management and control using EMTS NMS

Introduction

The EMTS Telecom Services Digital RF Mini Repeater boosts LTE coverage for Band 3 (1800 MHz) and Band 28 (700 MHz) in private and public LTE networks. Designed for large indoor and outdoor sites — industrial campuses, utility facilities, transport corridors, and rural broadband — this dual-band repeater ensures stable, high-quality signal distribution. Advanced DSP independently filters, amplifies, and regenerates uplink and downlink signals while minimizing adjacent-band interference for optimal spectral efficiency and link performance.

Housed in a rugged enclosure, onboard microcontrollers continuously monitor gain, temperature, voltage, and faults. Management and remote supervision are available via USB, Wi-Fi app, or optional integrated modem, with full integration into the EMTS Network Management System (NMS) for real-time configuration and alarms. A compliant IMOP algorithm prevents oscillation caused by poor isolation between donor and service antennas, and an optional ICS mechanism enables operation with isolation as low as Gain – 10 dB.



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.

Technical Specifications:

Electrical Specifications

		B28 (700)	B3 (1800)
Frequency Range	Uplink	703~748MHz	1710~1785MHz
	Downlink	758~803MHz	1805~1880MHz
Bandwidth per Sub-band		0.2-10MHz (adjustable)	0.2-30 MHz (adjustable)
Gain	Uplink	85±3 dB	85±3 dB
	Downlink	85±3 dB	85±3dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±3.5 dB (peak-to-peak)	
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	17±2 dBm	
	Downlink	20±2 dBm	
Spurious Emission	9KHz-1GHz	≤ -36dBm	
	1GHz-12.75GHz	≤ -30dBm	
ACRR	±10/20MHz	≤ -36dBc/30KHz	
	±20/40MHz	≤ -40dBc/30KHz	
EVM		≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	
Noise Figure		≤ 6 dB	
VSWR		≤ 2:1	
System Delay		≤ 6 μs	
Interference Cancellation (Optional)		≥25 dB	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 5 V/ 5 A	
Power Consumption		≤ 50 W	

Mechanical Specifications

Dimensions	318*218*68mm
Weight	≤ 7 kgs
Environmental Specifications	
IP Rating	IP40 (indoor)
Operating Temperature	-20 °C to 50 °C

About EMTS Telecom Services Ltd.

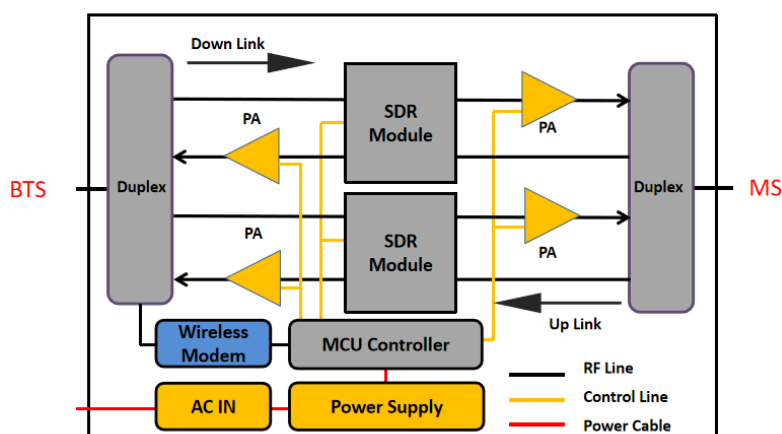
EMTS is a leading supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF Environments and complex settings. The company specializes in extending RF radio coverage to rural areas, office buildings, subways.

All rights reserved - Specifications are subject to change without notice.



Local and Remote-Control Specifications		
	Indications	Power Supply, Running, Alarm
NMS	Local	Via USB
	Remote	Via Cloud-based NMS via 4G Modem (optional)
Comply with Standards		
Safety	EN 62368-1 General, EN 50385 General	
EMC	EN 301 489-1, EN 301 489-50	
Radio	ETSI EN 303 609 & ETSI EN 301 908-11 3GPP TS 36.143 & 3GPP TS 36.106	
CE	Compliant with relevant EU directives	

Block Diagram:



Schematic diagram of the repeater structure

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.

All rights reserved - Specifications are subject to change without notice.

