

# GRM 200 MINI

rugged iDirect satellite modem

Combining the high-performance iQ series features with our rugged outdoor chassis, the Mini version of our GRM 200 satellite modem offers users a portable fully featured modem at a reduced size and weight

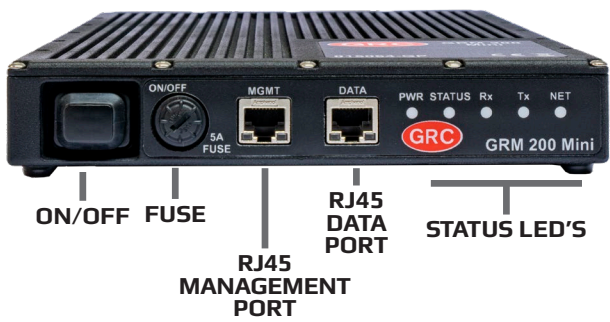


## KEY FEATURES

- Designed for outdoor use
- IP67 rated
- CE Marked
- Lightweight and low power requirements
- Suitable for both fixed and mobile applications
- Security features with 256-bit AES link encryption
- Increased data rates and adaptive TDMA return channel



SECURE SOLUTIONS FOR SATELLITE, LTE, RF, IP NETWORKS AND CLOUD SERVICES



GRM 200 mini is a low-cost, rugged, outdoor iDirect IQ 200 satellite modem for use in challenging environments.



GRM 200 and GRM 200 Mini

Compatible with Evolution and iDirect Velocity networks (static use only on Velocity), IP67 rated and CE Marked, GRM modems are designed to meet defence and commercial requirements, while still delivering a cost-effective modem, that's flexible enough to operate on a diverse range of terminals and networks, yet intuitive enough for end users with minimal training.



The GRM family of rugged iDirect Modems

## TECHNICAL SPECIFICATIONS

### Mechanical / Environmental

Size	3.5 x 18 x 24.5 cm (Height x Width x Depth)		
Weight	2.1 kg		
IP Rating	IP67		
Operating Temperature	-40° to +60°C (-40° to +140°F)		
Altitude	Operational up to 4,572m (15,000 ft)		
Humidity	95% non-condensing humidity		
Input Voltage	12-24VDC		
Power Consumption	< 20W		
Certifications	CE Certified, WGS Certified, built to meet FCC, UL, EU and Canadian standards, RoHS compliant, meets MIL-STD 810G		

### Network Configuration (Evolution only and software dependent)

Compatibility	Evolution and iDirect Velocity compatible (static use only on Velocity).		
Network Topology	DVB-S2* and DVB-S2X* with Adaptive TDMA Returns (Time Division Multiple Access)		
	<b>Downstream</b> DVB-S2X*/ACM	<b>DVB-S2*/ACM</b>	<b>Upstream</b> A-TDMA
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK	QPSK, 8PSK, 16APSK, 32APSK,	BPSK, QPSK, 8PSK, 16QAM*
Symbol Rates	5 to 100 Msps	1 to 45 Msps	128 ksps to 15 Msps*

### Interfaces

SATCOM Interfaces	Tx: L-band/F-Type, 950-2400 MHz, 75Ω
	Rx: L-band/F-Type, 950-2150MHz, 75 Ω
	RF Power Transmit: Pmax of +0 dBm to Pmin of -35 dBm
	RF Power Receive: Max composite wide band receive level:
	a) -5 dBm for symbol rates ≤ 45 Msps
	b) 10 dB above wanted signal power level for symbol rates > 45 Msps
	Minimum Receive Level: -115+10*log (Fsym(sps)) single carrier
	Available BUC Power (IFL) +24V, 2.0A** max available @ connector Tx Out 13,
	Available LNB Power (IFL) 18, 21V @ 0.5A**, 22kHz tone @ connector Rx in
Data Interfaces	LAN: Dual 10/100/1000 Mbps Ethernet GPS input
Protocols Supported	TCP, UDP, ICMP, DHCP, NAT/PAT, DNS, ROHCv2, RIPv2, IGMPv2, IGMPv3, ICMP, IPv4 (IPv6 over L2o5), L3
Traffic Engineering	QoS, CIR (Static and Dynamic)
Additional Features	Inbound throughput, 256-bit AES Encryption*, OpenAMIP*

\* Feature is release and platform dependent  
\*\* Combined Tx and Rx power not to exceed 50W

Information subject to change without notice.



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