

GRM 200

rugged iDirect satellite modem

GRM 200 is a low-cost outdoor iDirect iQ 200 satellite modem, offering high-performance and security in a lightweight, rugged design, ideally suited to fixed and mobile applications in challenging conditions

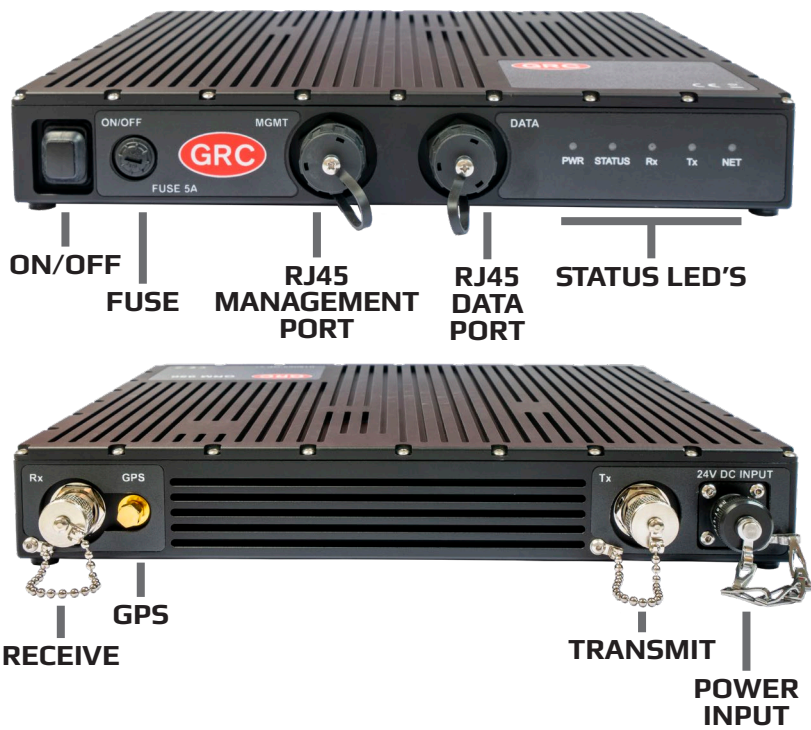


KEY FEATURES

- iDirect Evolution and Velocity compatible
- Operational on all major satellite networks
- Designed for outdoor use
- Ruggedised IP67 design
- CE marked
- Terminal agnostic
- Lightweight and low power requirements
- Suitable for both fixed and mobile applications



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



GRM 200 is a low-cost, ruggedised, outdoor iDirect IQ 200 satellite modem suited to tough environments.

Developed in conjunction with leading satellite hardware and airtime providers, GRM (GRC Rugged Modem) have been tested into iDirect hubs across multiple satellite service provider networks. Supporting both fixed location and mobile applications, they have been extensively trialled on a diverse range of terminals from comms-on-the-move (COTM), to man portable and large static dishes.

Compatible with Evolution and iDirect Velocity networks, 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, including the GRM 950, 700, 200 and 200 Mini.

TECHNICAL SPECIFICATIONS

Mechanical / Environmental	
Size	5 x 30 x 27 cm (Height x Width x Depth)
Weight	3.3 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		
Network Topology	DVB-S2* and DVB-S2X* with Adaptive TDMA Returns (Time Division Multiple Access)		
	Downstream	Downstream	Upstream
	DVB-S2X*/ACM	DVB-S2*/ACM	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, 75Ω
	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 L2oS), 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



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