



GATR e850 iDirect MODEM

The GATR e850 is a compact and rugged broadband modem based on iDirect Evolution® technology. The GATR e850 delivers its capabilities to users in the field.

- ▶ Waterproof enclosure (method 506.5, procedure 1)
- ▶ Two LAN ports for flexible network configuration
- ▶ -20C to +55C operating temperature range
- ▶ Switchable DC power (24V, 6A max) on IFL for low-powered BUCs
- ▶ GPS receiver allows for relocation without modifying options file
- ▶ 10 MHz reference for LNB and BUC
- ▶ DC injected on IFL to power the LNB (18V, 0.65A Max)
- ▶ Front panel LED display shows receive signal strength and network status



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GATR e850 iDirect Modem Specifications

Configuration			
Network Topology	Star	Downstream	Upstream
Modulation		DVB-S2/ACM or (INFINITI TDM)	D- TDMA or (SCPC Return*)
		QPSK, 8PSK, 16APSK (BPSK, QPSK, 8PSK)	BPSK, QPSK, 8PSK (BPSK, QPSK, 8PSK)
	FEC	LDPC, 0.25- 0.9 (TPC, 0.495-0.879)	TPC**, 0.431-0.793, 2D 16S, 1/2-6/7 (2D 16 State 1/2-6/7)
Max Rates	Symbol	45 Msps (15 Msps)	7.5 Msps (15 Msps)
	Info	150 Mbps ¹ (21 Mbps ²)	12.8 Mbps ⁴ (24 Mbps ⁵)
	Line Card IP Data	149 Mbps ¹ (20 Mbps ²)	11.1 Mbps ⁴ (20 Mbps ⁵)
	Remote IP Data	38.5 Mbps ¹ (17 Mbps ³)	11.1 Mbps ⁴ (20 Mbps ⁵)
<p>Notes: ¹ 16APSK 8/9 FEC; ² QPSK, .897 FEC; ³ QPSK, 0.793 FEC; ⁴ QPSK 6/7 FEC; ⁵ QPSK 4/5 FEC Maximum downstream and upstream data rates cannot be achieved simultaneously. Maximum rates are achieved with optimal configuration. *SCPC Return can only be operated when using DVB-S2/ACM **TPC not supported for use with DVB-S2 outbound in iDX 3.0 and above</p>			
Spread Spectrum	Spreading Factor	(TDM: 2,4, and 8)	1,2,4,8, and 16 (SCPC R: 2,4, and 8)
	Max Chip Rate	(TDM: 15 Mcps)	7.5 Mcps (SCPC Return: 15 Mcps)
Interfaces			
SatCom	Tx Out	N-Type 950-2000 MHz; Power: -35 to +5dBm	
	Rx In	N-Type 950-2000 MHz; Max Composite: -5dBm	
	Rx Out	N-Type 950-2000 MHz	
Data and M&C	LAN	2-RJ45 ethernet ports supporting 10/100 Mbps	
	Console	RJ45 Serial console port	
	Auxiliary Interfaces	Serial GPS Interface or Antenna Control Signaling	
Protocols Supported	TCP, UDP, ICMP, IGMP, RIP v2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP, and GRE		
Security	AES Link Encryption (256-bit), TRANSEC (INFINITI and 52 modes), FIPS 140-2 Level 2 Compliant***, x.509 digital certificates authentication, Automatic Key Management		
Traffic Engineering	Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting		
Other Features	Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication, Antenna Control Interface (OpenAMIP)		
Mechanical/ Environmental			
Size	15.75 in x 7.75 in. x 2.5in. (305 in. ³)		
Weight	7.5 Pounds		
Operating Temperature	-20C to +55C		
Altitude	< 10,000 ft (operational), < 30,000 ft (non-operational)		
Relative Humidity	0% to 95% non-condensing		
Input Voltage	24V +/- 1.2V		

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