



# Agile Milcoms

An ACS Company

## ACS-e850MPR Rugged Modem

powered by iDirect e850MP



ACS-e850MPR Modem



iDirect e850MP Powered Modem Module

### Rugged and Reliable

The Agile Communication Systems (ACS-e850MPR), rugged modem utilizes an e850 iDirect core modem module. The unit is intended for outdoor applications in the most demanding of environments including vehicular or mobile/man-pack operation. The modem is optimized to achieve high-performance and quick response time for professional, enterprise and government applications in an economical COTS terminal. iDirect Star and ISPC network topologies are supported.

The ACS rugged design allows the modem to handle adverse conditions from -30°C to 60°C at 95% humidity.

The ACS-e850MPR offers powerful connectivity directly to the LAN/WAN environment or directly to a host computer. A truly professional solution, it is an out-of-the-box, ready-to-go, cost-effective broadband solution for military and government use providing excellent Comms-on-the-Move (COTM) and Comms On-The-Quick-Halt (COTQH) or fixed base communications.

### High Security and Superior QoS

Compliant with the highest military security requirements, features embedded AES encryption and TRANSEC with advanced FIPS 140-2 certification (pending), X.509 digital certificate encryption and automatic over the air key exchange.

Flexible QoS and prioritization capabilities enable network operators to prioritize traffic and applications over their networks; with Group QoS they can segregate bandwidth by groups of remotes, multiple sub-networks, and multiple mission-critical applications.

### Key Features

- Rugged compact modem intended for outdoor use
- Carrier data rates up to 138 Mbps outbound, 8.6 Mbps inbound
- 2D 16 State inbound coding
- TRANSEC security with AES 256 bit encryption
- QoS and traffic prioritization options
- Supports WGS IF ranges: 950 – 2000 MHz

### Related Products

- ACS 12MSQD-XK Super Quick Deploy Antenna System
- ACS 14SQD-XK Super Quick Deploy Antenna System
- MST-60m-XK 60 cm Man-pack Antenna System
- MST-100 Man-pack Terminal (KU-Band only)
- MST-100M Motorized Man-pack Terminal (KU-Band only)



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### Configuration

<b>Network Topology</b>	Star and iSCPC *			
<b>Modulation</b>		<u>Downstream (TDM)</u> BPSK, QPSK, 8PSK	<u>Downstream (DVB-S2/ACM)</u> QPSK, 8PSK, 16APSK	<u>Upstream (TDMA)</u> BPSK, QPSK, 8PSK
<b>FEC</b>		Turbo, 0.495–0.879	LDPC, 0.25-0.9	Turbo, 0.431-0.793 2D 16-State*, ½-6/7
<b>Maximum Rates</b>	Symbol	15 Msps	45 Msps	7.5 Msps
	Info	21 Mbps <sup>1</sup>	150 Mbps <sup>2</sup>	11.8 Mbps <sup>3</sup>
	Carrier IP Data Remote	20 Mbps <sup>1</sup>	138 Mbps <sup>2</sup>	10.8 Mbps <sup>3</sup>
	IP Data	17 Mbps <sup>1</sup>	32 Mbps <sup>2</sup>	8.6 Mbps <sup>3</sup>
<b>Notes:</b>		<sup>1</sup> QPSK, .897 FEC	<sup>2</sup> 16APSK 8/9 FEC	<sup>3</sup> QPSK .793 FEC, unlimited NMS
	Maximum downstream and upstream data rates cannot be achieved simultaneously Maximum rates are achieved under optimal conditions and with unlimited NMS			
<b>Spread Spectrum</b>	Spreading Factor	2, 4 and 8		1, 2, 4, 8, and 16
	Max Chip Rate	15 Mcps		7.5 Mcps

### Interfaces

<b>SatCom Interfaces</b>	TX Out: Type-F, 950–2000 MHz, +5dBm/-35dBm RX In: Type-F, 950–2000 MHz, -5dBm (max) composite/ -130+10*log(Fsym)dBm (min) single carrier Type-F, 950–2000 MHz Software controllable 10 MHz reference on TX Out and RX In ports
<b>Data Interfaces</b>	LAN: Single 10/100 Mbps Ethernet Console: RS-232 Console connection RS-232: GPS input and Antenna Control Signaling 10 MHz: External reference clock*
<b>Protocols Supported</b>	TCP, UDP, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP, and GRE
<b>Security</b>	AES Link Encryption (256-bit), TRANSEC with FIPS 140-2 certification (pending), x.509 digital certificates authentication, Automatic Key Management
<b>Traffic Engineering</b>	Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting
<b>Other Features</b>	Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication, ACM on Return Channel*

### Mechanical / Environmental

<b>Size</b>	9.75" (24.8 cm) H x 13.5" (34.3 cm) L x 1.95" (5 cm) W
<b>Weight</b>	8 lbs (3.6 kg)
<b>Operating Temperature</b>	-30°C to +60°C (-22°F to +140°F) at Sea Level
<b>Altitude</b>	Operational: Up to 10,000 feet (3,048 m); Storage: up to 30,000 feet (9,144 m)
<b>Relative Humidity</b>	95 % non condensing
<b>Input Voltage</b>	+24V

\*Subject to Software Release

\* All specifications subject to change without notice.



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