L3HARRIS®
FAST. FORWARD.

RUGGEDIZED MPM-1000 IP MODEM

Connect, Collaborate, Communicate — Anytime, Anywhere

The RMPM-1000 meets the networking needs of mobile and dispersed users including first responders, Non-Government Organizations (NGO) and business enterprise personnel.

PRODUCT DESCRIPTION

L3Harris continues to meet the demand for Network Centric Satellite IP communications by providing the most powerful and advanced MPM system to date. The Ruggedized MPM-1000 (RMPM) Modem hosts the Network Centric Waveform (NCW), the standard wideband SATCOM waveform for both tactical military and commercial operations.

The RMPM-1000 NCW Modem provides a fully automated network requiring no operator intervention to maintain connectivity, even during changing data link conditions. It enables full use of the advanced capabilities of the Wideband Global SATCOM (WGS) multi-beam, multi-band satellite.

Highly Dependable Mobile Communications

KEY BENEFITS

> Wide range of data rates, modulation schemes and FEC code rates

> Aggregate data rate — 26 Mbps Tx/52 Mbps Rx

> Multiple independent channels – 2 Tx/4 Rx, provides maximum flexibility and throughput

> Low-latency/jitter Voice-over-IP (VoIP)

> Fine resolution, automated link power and data-rate control maintains connectivity in rapidly changing environments and seamlessly accommodates different terminal types and sizes

> Operates over any commercial or military transponded satellite (C-, X-, Ku- or Ka-band)

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SPECIFICATIONS

MF-TDMA NETWORK CENTRIC WAVEFORM	
Data Rate	32 Kbps to 13 Mbps (per channel) 26 Mbps Tx/52 Mbps Rx (aggregate)
FEC Coding	Turbo SCCC and LDPC
FEC Block Sizes	Turbo: 1280 bits LDPC: 640, 1280, 2560 and 5120 bits
Modulation Formats	BPSK: Rate 1/2 (Turbo and LDPC) OQPSK: Rate 1/2, 2/3 and 3/4 (Turbo) Rate 1/2, 2/3, 8/11 and 4/5 (LDPC) 8 PSK: Rate 2/3 (Turbo and LDPC)
Direct Sequence Spreading Gain	0 to 12 dB (spread factors 1, 2, 4, 6, 8, 12, 16; up to 8.192 Mcps)
Number of Independent Carriers (MF-TDMA Operation)	2 Transmit/4 Receive (Rapidly tunable over 1.2 GHz)
Transmission Security	FIPS 140-2 Level 2 Certified AES-256 CBC TRANSEC (user data and control)
Control	SNMP V3/L3 Linkabit HCI

ENVIRONMENTAL	
Conduction Cooled and Environmentally Sealed	
Operating Temperature	-6 ˚C to +50 ˚C
Storage Temperature	-40 ˚C to +71 ˚C
Vibration/Shock	MIL-STD-810
EMI	MIL-STD-461

MECHANICAL/ELECTRICAL	
Size	1U 19 in. rack-mountable chassis 18.5 in. L x 19 in. W x 1.75 in. H (46.99 cm L x 48.26 cm W x 4.445 cm H)
Weight	19 lb. (excluding mounting hardware) (8.618 kg)
Input Power	90-132 and 180-264 VAC, 47 to 63 Hz
Power Consumption	< 170 W
Frequency Reference	Internal or external (5 or 10 MHz)
Intermediate Frequency (with 10 MHz Reference)	Tx (950 to 2150 MHz, threaded TNC) Rx (950 to 2150 MHz, threaded TNC)

BASEBAND INTERFACES	
Monitor and Control	10/100/1000 Ethernet (NCW and FDMA control) RS-485 (FDMA control)
NCW Data Port	10/100/1000 Ethernet
FDMA Data Port	MIL-STD-188-114/RS-422/RS-423

MIL-STD-188-165A (FDMA) COMPATIBLE	
Type A	BPSK: 64 kbps to 6000 kbps QPSK/OQPSK: 64 kbps to 8472 kbps

FEATURES

ENABLES NCW NETWORK CAPABILITIES
> Supports full-mesh, star, hub-spoke and hybrid network topologies
> Hub-assist mode maintains communications when conditions prevent peer-to-peer links
> Dynamic multicast: bandwidth-efficient handling of multicast and broadcast packets

EXCELLENT SUPPORT FOR ON-THE-MOVE (OTM) OPERATIONS
> Rapid acquisition/reacquisition of network connection after blockage
> Supports Doppler, Doppler-rate and Doppler acceleration requirements for high-speed OTM performance
> Link-layer assured delivery (ARQ)

OPERATIONAL FLEXIBILITY
> Supports loading of mission configurations for simplified field operations and rapid start-up
> Any RMPM can take over as hub/network controller — no special hardware needed
> RMPM stacking capability provides increased throughput for a hub or high-traffic controller
> Implements Network Centric Waveform (NCW)

WGS-COMPLIANT – LEVERAGES CAPABILITIES OF ADVANCED WIDEBAND SATELLITES
> 1.2 GHz agile tuned front-end allows back-to-back bursts scheduled across wideband transponders/beams
> Multi-beam operation with cross-banded allocations — network terminals may reside in different beams and bands
> Multi-beam fan-in/fan-out capabilities — supports multicast and broadcast information streams

EFFICIENT USE OF SATELLITE RESOURCES
> Floating carriers — no need to fix carrier frequency or pre-plan bandwidth allocation
> Automatic handover of control keeps network operational under adverse conditions
> Simultaneous support for spread and non-spread users

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

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