L3HARRIS®
FAST. FORWARD.

MPM-2000
NETWORK CENTRIC WAVEFORM (NCW) SATCOM IP MODEM

Connect, Collaborate, Communicate — Anytime, Anywhere


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MPM-2000 is the sole mesh networking, on-the-move (OTM), protected SATCOM modem in use today. This advanced router enables secure, resilient communications across all echelons and multiple formations (Infantry, Armor, Stryker, MAGTF) for multi-domain operations (MDO). The MPM-2000's modular design allows OpenAMIP integration with nearly any wide band SATCOM antenna to enable Joint All Domain Command and Control (JADC2).

PRODUCT DESCRIPTION

L3Harris brings Full-Mesh, SATCOM On-The-Move (SOTM) networking to tactical ground, air and sea platforms with the ruggedized MPM-2000 Network Centric Waveform (NCW) IP Modem. It provides the capabilities of the ARSTRAT WGS-certified RMPM-1000 NCW modem in a lightweight and compact form factor. The MPM-2000 modem hosts the NCW, the standard wideband SATCOM waveform for both tactical military and commercial operations.

Whether for C4I, mission command, disaster relief or oil exploration, the rugged MPM-2000 modem delivers integrated voice, video and data to remote mobile users.

Designed to be easily integrated into a variety of tactical platforms, the MPM-2000 modem has been built to meet MIL-SPEC requirements for flawless operation under rugged operational conditions.

The MPM-2000 modem automatically joins an NCW network and requires no operator intervention to maintain connectivity even during changing link conditions. The modem enables full use of the advanced capabilities of the Wideband Global SATCOM (WGS) multi-beam, multi-band satellite.

Low Size, Weight and Power NCW Modem

KEY FEATURES

CAPABILITIES

- Compatible with RMPM-1000 NCW Modem
- Operates over any commercial or military transponded satellite (C-, X-, Ku-, or Ka-band)
- 1.2 GHz back-to-back burst tuning bandwidth – can use full capabilities of advanced wideband satellites
- Optimized for tactical platforms
  - Sealed chassis
  - Meets shock, vibration, temperature and waterproof environmental requirements
  - Interfaces are VICTORY standard specification compliant
- Multiple independent channels – 1 Tx/2 Rx
  - Provides maximum flexibility and throughput
- FIPS 140-2 Level 2 compliant
- WGS Satellite Operation Approved

SMALL SIZE

- Occupies less than half the space of FBCB2 V5 to achieve reduced platform integration costs
- DC power supply eliminates AC/DC power inverter

LOW POWER

- Consumes less than 52 W; no fans required
- Power amplifier control extends platform battery life

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SPECIFICATIONS

MF-TDMA NETWORK CENTRIC WAVEFORM	
Modulation formats	BPSK, OQPSK, & 8-PSK
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)	1 Transmit / 2 Receive (Rapidly tunable over 1.2 GHz)
Transmission security	AES-256 CBC TRANSEC (user data and control)
Control	SNMPv2/v3 L3Harris Linkabit HCI Software included
ENVIRONMENTAL	
Conduction cooled and environmentally sealed	
Operating temperature	-38 ˚C to +60 ˚C
Storage temperature	-40 ˚C to +80 ˚C
Operating altitude	10,000 ft. (3,048 m)
Non-operating altitude	40,000 ft. (12,192 m)
Vibration/Shock/ Immersion	MIL-STD-810G
EMI	MIL-STD-461F
MECHANICAL/ELECTRICAL	
Size	13.5 in. L x 8 in. W x 3 in. H (34.29 cm L x 20.32 cm W x 7.62 cm H)
Weight	12.5 lb. (5.67 kg)
Input power	28 VDC (MIL-STD-1275)
Power consumption	42 W to 52 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 RJ45 Ethernet Port
Data port	10/100/1000 RJ45 Ethernet Port

FEATURES

ENABLES NCW NETWORK CAPABILITIES

> Supports full-mesh, hub-spoke and hybrid 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)

> 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

> Stores preset mission configurations for simplified field operations and rapid start-up

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

> Implements open standard Network Centric Waveform (NCW) – MIL-STD-188-EEE and NATO STANAG 4707 (in ratification)

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– uplink and downlink can be in different bands and beams

> 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 running under adverse conditions

> Simultaneous support for spread and non-spread users

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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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