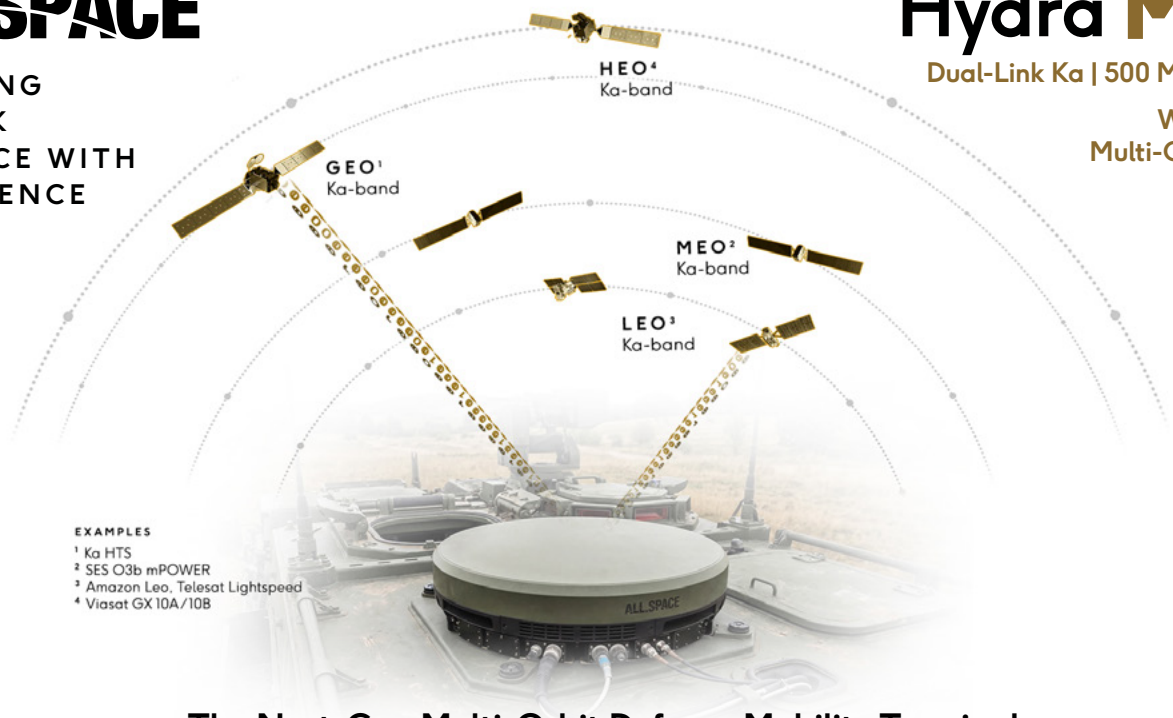
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DELIVERING NETWORK RESILIENCE WITH INTELLIGENCE

Hydra MAX 2

Dual-Link Ka | 500 MHz IBW per Link

Wideband Power. Multi-Orbit Superiority.



The Next-Gen Multi-Orbit Defense Mobility Terminal

Hydra MAX 2 is a software-defined, network-independent multi-orbit terminal purpose-built for defense users, delivering 500 MHz of instantaneous bandwidth per link and 1 GHz aggregate across the full Ka-band spectrum from a single compact 86 cm aperture. Its open, modem- and network-agnostic architecture is designed to support multi-orbit, multi-operator connectivity, including emerging high-throughput LEO constellations such as Amazon Leo and Telesat Lightspeed. It is orchestration-ready for software-defined traffic management across links. Sovereign-modem support enables full Protected Tactical Waveform (PTW) operation. All-electronic with no moving parts, it equips land and maritime forces with assured connectivity to sustain command and control and decision superiority in contested environments.



KEY FEATURES

True Simultaneous Multi-Link
Two full-performance, full-duplex links operate simultaneously over separate connections, delivering 1 GHz of aggregate throughput with uncompromising mission assurance.

Multi-Orbit Connectivity
Concurrent access across LEO, MEO, GEO, and HEO provides exceptional flexibility, resilience, and operational freedom across all orbital layers.

Inherently Resistant to Jamming
Advanced lens-array digital beamforming passively suppresses both intentional and unintentional interference through natural spatial filtering, with no moving parts and no added complexity.

Network- and Vendor-Agnostic Open Architecture
A truly open architecture, engineered to be network-independent and modem-agnostic, with digital interfaces, including optional DIFI-over-fiber, enabling seamless integration with third-party and sovereign systems.

Intelligent Link Management
Software-defined and orchestration-ready, it intelligently directs traffic across available links and reroutes around congestion or degradation to maintain network performance.

Integrated Modems and Edge Compute
Field-swappable modem and edge-compute bays deliver processing power to the tactical edge, reducing latency, easing backhaul demand, and sustaining operations in contested environments.

Class-Leading Performance On-The-Move
Its all-electronic, solid-state architecture maintains peak performance across the full scan range, while vector-based monopulse tracking enables always-on connectivity in the most demanding mobility scenarios.

Hydra MAX 2

TECHNICAL SPECIFICATIONS

(As of July 2026; Subject to Change)



PHYSICAL	Dimensions	86 cm DIAMETER x 18 cm HEIGHT / 33.85 in. D x 7.08 in. H
	Weight (standard model)*	77 kg (170 lb)
SYSTEM	Qty Full Duplex Links	2
	Frequency Band	Mil. Ka and Comm. Ka
	Scan Range	Az: 360° , El: 20° to 90°
	Pointing Accuracy	< 0.1 degrees with platform motion
	Polarization ELECTRONIC	LHCP and RHCP
	Xpol Discrimination (boresight / scan)	Tx: 25 dB / > 20 dB; Rx: 20 dB / > 20 dB
	Tracking	Off-Road and Naval COTM
TRANSMIT PERFORMANCE	Transmit Range	27.5 GHz to 31.0 GHz
	Max EIRP PER LINK (@ P1dB)	50 dBW
	Tx Max IBW	500 MHz
RECEIVE PERFORMANCE	Receive Range	17.7 GHz to 21.2 GHz
	Max G/T PER LINK	12 dB/K
	Rx Max IBW	500 MHz
INTERFACE	Input Power	Internal : 100-240VAC, 50/60Hz, or 18V-33V DC (28DC nominal), 1800W Max
	Power Consumption (TYPICAL) at 100% Duty Cycle**	1 Link: 900 W / 2 Links: 1500 W
	Modem Connector	Rx/Tx N-Type Connectors (L-Band) Optional: Optical Connector (DIFI-over-Fiber)
	Modem Options	External Modems / Integrated Modem Modules
	Network	Ethernet
ENVIRONMENT & COMPLIANCE	Operating Temperature	-46°C to +55°C (ambient, excluding solar loading)
	Storage Temperature	-51°C to +71°C (ambient)
	Environmental / Certifications	designed to MIL-STD-810H, FCC, CE, RoHS & REACH, MIL-STD-461G, MIL-STD-1399-300B, MIL-STD-1275F

* Final weight depends on terminal configuration

** Power consumption per terminal depends on operating mode and duty cycle

TERMINAL OPTIONS

for optional configurations to each and every mission

STANDARD MODEL INCLUDES

- 2 x External Modem Pass-Through Bays
- AC or DC Power Supply Unit
- Web Based GUI
- Standard Cable & Accessories Kit
- Standard Pallet Transport Box

ADDITIONAL OPTIONS

- 3 x Swappable Multi-Purpose Bays for Integrating a mix of Modems and Edge Compute Module
- Rugged and Metal Transport Cases
- Mounting Kits (vessel fixed and motion)
- MIL Color Radomes



INTUITIVE GUI



MULTI-PURPOSE BAY

SUPPORTED MODEMS (EXAMPLES)

iDirect 950mp / 450mp, Comtech 5650 A/B, Gilat, Viasat LSDR. Additional modems supported via external pass-through and integrated bays; subject to interoperability validation.

TERMINAL CERTIFICATIONS (IN PROCESS)

Hydra MAX 2 is certified on SES's Ka-band GEO and O3b mPOWER Ka-band MEO constellation, Viasat Global Xpress (GX Category 4), and will be on additional Ka-band GEO HTS, and Ka-band LEO networks like Amazon Leo and Telesat Lightspeed.

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