

ALL.SPACE

DELIVERING
NETWORK
RESILIENCE WITH
INTELLIGENCE

Hydra 2

Dual-link Ka Terminal for
Government & Defense



**Sense, analyze and react to real-time conditions with the
most resilient multi-link multi-orbit mobility terminal**

Hydra 2 is a next-generation, software-defined service mobility platform engineered for the most demanding defense SATCOM operations. As the most resilient tactical terminal available, it delivers true multi-link, multi-orbit capability—seamlessly maintaining wideband connectivity across two satellites in GEO and/or MEO orbits simultaneously.

Built to MIL-STD ruggedization, Hydra 2 ensures communications-on-the-move with a solid-state, no-moving-parts architecture for maximum reliability. Designed for warfighters and mission-critical systems, it delivers superior connectivity in contested environments, rough terrain, and heavy seas with electronic beam steering and industry-leading scan performance.

KEY FEATURES

- ✓ **Simultaneous Two Full Performance Links**
Multiply your throughput and connectivity options for total mission assurance
- ✓ **Multi-orbit Connectivity**
Operation in concurrent GEO and MEO orbits for unrivalled flexibility and resiliency
- ✓ **Full Ka-band Frequency Range**
Supports both commercial and military Ka-band applications as standard
- ✓ **Integrated Modem and Edge Compute Module**
Field swappable multi-purpose bays for optional configurations tailored to each mission
- ✓ **Value-Added Services**
Alternative-PNT, Interference and Blockage Detection capabilities pave the way for battlefield superiority
- ✓ **Inherently Resistant to Jamming**
Resilient to unintentional or intentional interference due to lens-array beamforming
- ✓ **Solid-State, Class Leading Performance Over Scan**
All-electronic, multi-link terminal to allow always-on connectivity in the harshest mobility environments



Hydra 2

TECHNICAL SPECIFICATIONS

(As of February 2025; Subject to Change)



PHYSICAL	Dimensions	86 cm DIAMETER x 18 cm HEIGHT / 33.85 in. D x 7.08 in. H
	Weight without /with bays*	67 kg / 75kg (147.71lb/165.34lb)
SYSTEM	Qty Full Duplex Links	2
	Frequency Band	Ka
	Scan Range	Az: 360° , El: 20° to 90°
	Pointing Accuracy	< 0.1 with platform motion
	Polarization ELECTRONIC	Dual Arbitrary Circular
	Xpol Discrimination (boresight/ scan)	25 dB / > 20 dB
TRANSMIT PERFORMANCE	Tracking	Off-Road and Naval COTM
	Transmit Range	27.5 GHz to 31.0 GHz
	Max EIRP PER LINK	50 dBW
	Tx Max IBW	125 MHz
	Receive Range	17.7 GHz to 21.2 GHz
	Max G/T PER LINK	12 dB/K
RECEIVE PERFORMANCE	Rx Max IBW	125 MHz
	Input Power	Internal : 100-240VAC, 50/60Hz, 1500W Max
	Power Consumption (TYPICAL)**	1 Link: 700 W / 2 Links: 1000 W
INTERFACE	Modem Options	External: L-band Modems / Internal: Modem Modules
	Network	Ethernet
ENVIRONMENT & COMPLIANCE	Operating Temperature	-40°C to +55°C (ambient)
	Storage Temperature	-40°C to +70°C (ambient)
	Environmental/Certifications (In Progress)	Designed to MIL-STD-810H, FCC, CE, RoHS, MIL-STD-461G

* 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 Power Supply Unit
- Web Based GUI
- Standard Cable & Accessories Kit
- Standard Pallet Transport Box

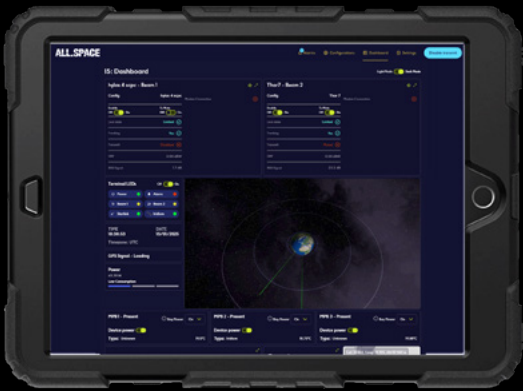
ADDITIONAL OPTIONS

- 3 x Swappable Multi-Purpose Bays for Integrating a mix of Modems, Edge Compute Module, Cellular Gateway, Switch Router
- RF over Fiber Modules
- Embedded WiFi
- MIL Color Radomes
- DC Power Supply Unit
- Rugged & Metal Transport Cases
- Mounting Kits (vessel fixed and motion)

TERMINAL CERTIFICATIONS

(In Process)

Hydra 2 is certified on SES's Ka-band GEO and O3b mPOWER Ka-band constellation, and will be certified on Viasat Global Xpress, and Ka-band GEO HTS.



INTUITIVE GUI



MULTI-PURPOSE BAY



For more information, contact: sales@all.space | WWW.ALL.SPACE

