

The background of the slide features a military vehicle, possibly an Abrams tank, in a desert environment. Three large satellite communication antennas are mounted on the vehicle, pointing towards the sky. Overlaid on the sky are several dashed lines representing satellite orbits. The overall color scheme is a warm, golden-brown hue.

ALL.SPACE

HYDRA MULTI-LINK MULTI-ORBIT SATCOM TERMINALS

ENABLING THE DIGITAL
BACKBONE OF THE
MODERN BATTLESPACE



EXECUTIVE BRIEFING

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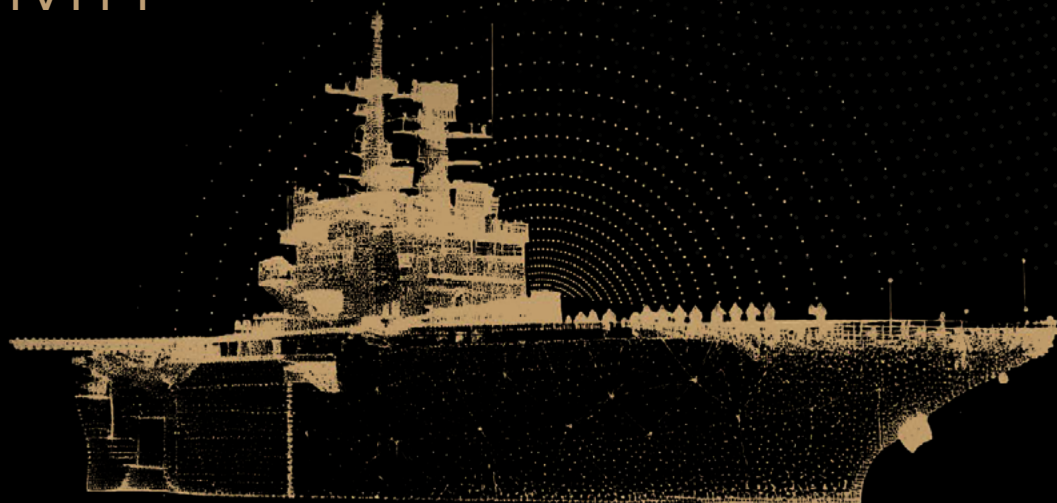
THE PROBLEM

Disconnected Domains Stove-piped Networks Vulnerable Links

Modern military operations, whether led by the UK, NATO allies, Five Eyes nations, the U.S. DoD, or Indo-Pacific and Middle Eastern partners, depend on resilient communications; real-time data, global reach, and continuous connectivity. However, within the defense ecosystem, forces face a battlefield defined by fragmented SATCOM systems:

- Relying on a single orbit increases vulnerability to jamming and denial
- Multiple terminals expand SWaP-C and complicate mobility
- Disparate systems hinder interoperability and C2 synchronization

GLOBAL MISSIONS
DEMAND MORE THAN
JUST CONNECTIVITY
THEY REQUIRE
MULTI-ORBIT
RESILIENCE



THE SOLUTION

One Device All Networks No Compromise

ALL.SPACE Hydra terminals unify satellite communications across GEO, HEO, MEO, LEO, and future orbits. With true multi-link, multi-orbit capability, Hydra enables mission agility for joint and coalition forces.

MISSION-CRITICAL BENEFITS:

- Simultaneous multi-network connectivity
- Instant beam agility with electronic steering
- Seamless failover and load balancing
- Compact, rugged systems for ground expeditionary and maritime forces

TRUSTED BY GLOBAL
DEFENSE PARTNERS,
FROM NATO
COMMAND NODES
TO INDO-PACIFIC
NAVAL FLEETS

ALL.SPACE

CORE CAPABILITIES

Hydra Terminal Capabilities

Multi-Orbit Connectivity:
GEO, MEO, HEO, LEO

Multiple Tx & Rx Independent Links:
Parallel, redundant, and task-separated links

Digital Beamforming Technology at Ka-band:
Superior vector-based monopulse tracking in moving and dynamic environments

Network Agnostic:
Connects to any satellite constellation, in any orbit

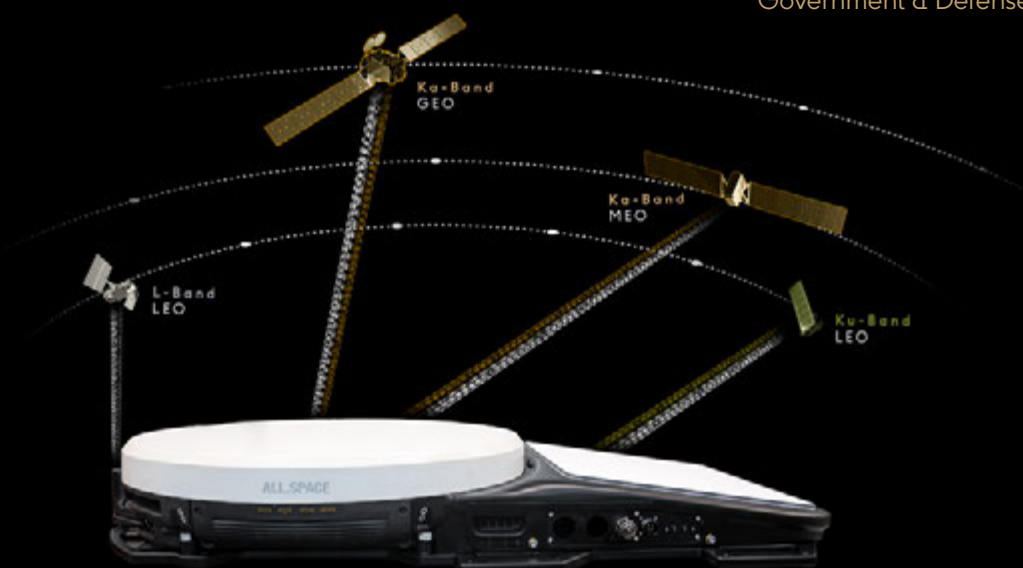
Platform Agnostic:
Suitable for armored, naval, and dismounted use

MIL-STD Engineering:
Designed for cross-theater deployments and multinational interoperability

Compact SWaP:
Supports rapid mobility and flexible mission planning

Hydra 4

Quad-link Multi-band Terminal for Government & Defense



Unique Antenna Technology

FIELD TESTED & PROVEN

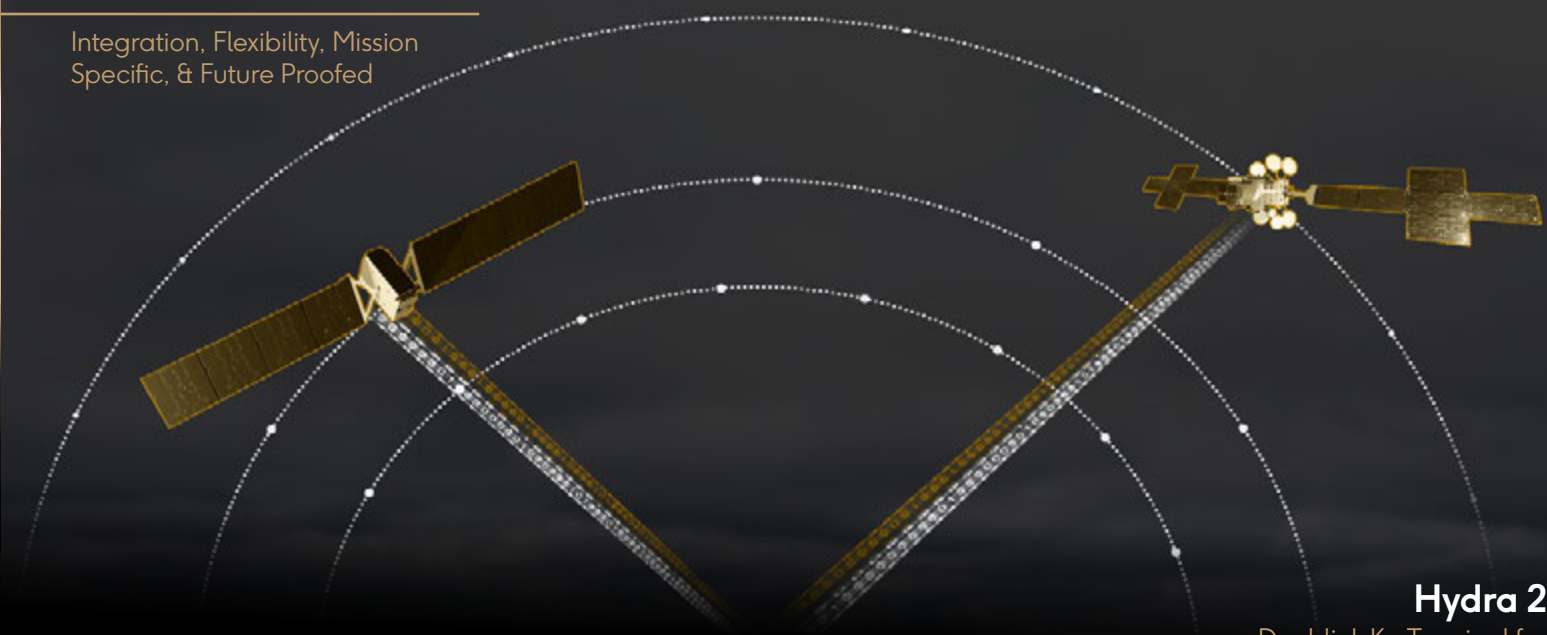
RF Digital Beamforming using Patented Lens Technology

Traditional phased array antennas are vulnerable to jamming from any direction, but ALL.SPACE's RF lens technology isolates interference by directing signals based on their origin, making its system over >20dB more resilient to jamming.

Energy-efficient, jamming resistant (natural filtering), durable, and passive digital beamforming

A Full Comms Platform

Integration, Flexibility, Mission Specific, & Future Proofed



Hydra 2

Dual-link Ka Terminal for Government & Defense



Why Hydra Stands Out in Global Defense Networks

True Multi-Link Architecture
Full capacity simultaneous independent links (not fast-switching single link)

ALL.SPACE Operating System
Smart link management with policy-based routing

Network and Provider Agnostic
Can connect to SES mPOWER, Viasat GX, SpaceX Starlink; and will connect to WGS, Eutelsat's OneWeb, Amazon Kuiper, Telesat Lightspeed

Dual Use Capable
Meets both commercial certification and military operational standards



USE CASE SCENARIOS

Operational Scenario Examples Across the Globe:

UK Expeditionary HQs

Leverage persistent GEO, MEO, and LEO connectivity to sustain high-tempo coordination and resilient communications in dynamic environments

NATO Maritime Operations

Maintain mission assurance at sea with seamless connectivity across orbital transitions, ensuring resilient command-and-control for maritime forces

U.S. Army & SOF Teams

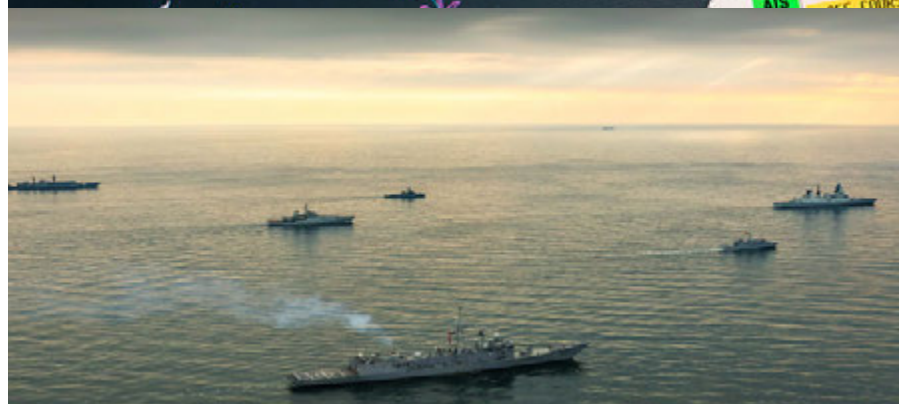
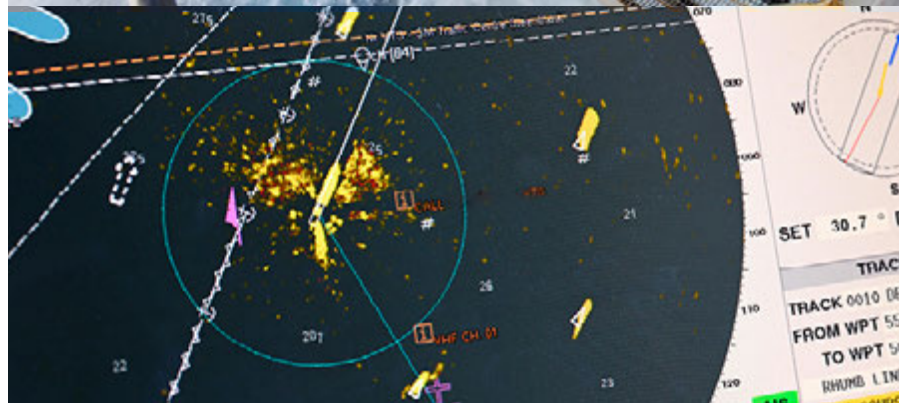
Deploy low-profile, resilient terminals that enable rapid maneuver and mobile command-and-control, even in contested or austere domains

Pacific Partner Navies

Bridge critical C2 links across vast island chains and maritime boundaries, delivering secure, uninterrupted coalition coordination

Middle Eastern Allies

Rely on assured, encrypted bandwidth to safeguard national defense operations and guarantee mission continuity



THEATRE WIDE COMMUNICATIONS

Strategic Advantages of Multi-link Battlefield Data

End-to-End from Command Post to Tactical Edge

Whether halted or on the move, rapid to deploy and quicker to relocate, delivering connectivity wherever operations demand

Full Utilization of Purchased or Leased Satellite Capacity

Operate parallel services on multiple links, maximizing ROI on leased or owned satellite bandwidth and increasing total data throughput

Resilience Without Compromise

Multiple links provide always-on redundancy across different networks, which is essential for contested or denied operational environments

Operational Flexibility for Mission- Critical Separation

Support simultaneous C2 and ISR data streams or route coalition and sovereign traffic independently using policy-based control

Enabling Multi-Orbit, Multi-Service Strategy

Hydra offers high-throughput LEO, HEO, MEO and GEO connectivity simultaneously, ideal for hybrid and 5G NTN integration



TECHNICAL SPECIFICATIONS

SCAN FOR FULL DATASHEETS



Hydra 2

(As of July 2025; 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 with platform motion
	Polarization ELECTRONIC	LHCP and RHCP
	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 (@ P1dB)	50 dBW
	Tx Max IBW	125 MHz
RECEIVE PERFORMANCE	Receive Range	17.7 GHz to 21.2 GHz
	Max G/T PER LINK	12 dB/K
	Rx Max IBW	125 MHz
INTERFACE	Input Power	Internal : 100-240VAC, 50/60Hz, or 28VDC nominal, 1500W Max
	Power Consumption (TYPICAL)**	1 Link: 700 W / 2 Links: 1000 W
	Modem Options	External Modems / Intergrated Modem Modules
	Network	Ethernet
ENVIRONMENT & COMPLIANCE	Operating Temperature	-40°C to +55°C (ambient)
	Storage Temperature	-55°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

Edge Compute:
On-board computing enables real-time analysis and autonomous decision-making at the edge, reducing latency, improving responsiveness, and minimizing bandwidth usage

Multi-Purpose Bays:
Select the capabilities you need from integrated modems, high-performance edge compute, cellular connectivity, supporting 5G and MANET radio, intelligent routing and our full range of value-added software services

Integrated Modems:
Modem agnostic with integrated, software-defined or external modem options



HYDRA FAMILY OF TERMINALS ROADMAP

Generation 1

Available Now

Hydra 2

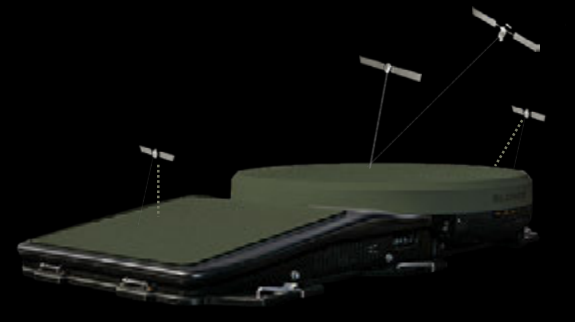
Dual Ka-band
(MEO + GEO)

Tx/Rx Performance:
125 MHz Instantaneous
Bandwidth per Ka-band link



Hydra 4

Hydra 2 Capability
+ STARLINK (Ku)
+ IRIIDIUM (L)



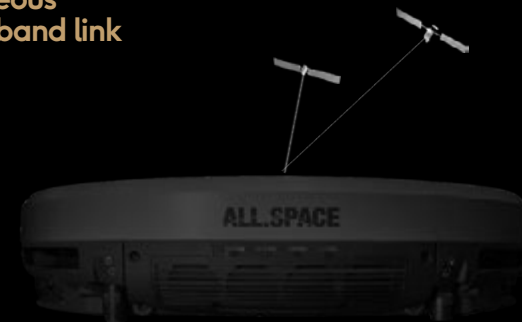
Generation 2

Available 2026

Hydra MAX 2

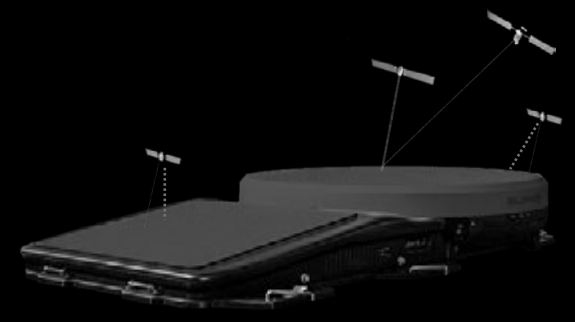
Dual Ka-band
(LEO + HEO + MEO + GEO)

Tx/Rx Performance:
500 MHz Instantaneous
Bandwidth per Ka-band link



Hydra MAX 4

Hydra MAX 2 Capability
+ STARLINK (Ku)
+ IRIIDIUM (L)



Generation 3

Available 2027

Hydra KuKa

Ka + Ku
(LEO + HEO + MEO + GEO)

Tx/Rx Performance:
500 MHz Instantaneous
Bandwidth per Ka-band link &
per Ku-band link

2 Simultaneous links,
Each software selectable
Ku and/or Ka



NETWORK INTEROPERABILITY

Tested Across
All Terrains

Make Before Break

Resiliency on the Move

Low Probability of
Detection/Interception

Interoperability Across
Domains

Integration with Soldier
Systems (DSA)

Integration with
Vehicle Systems

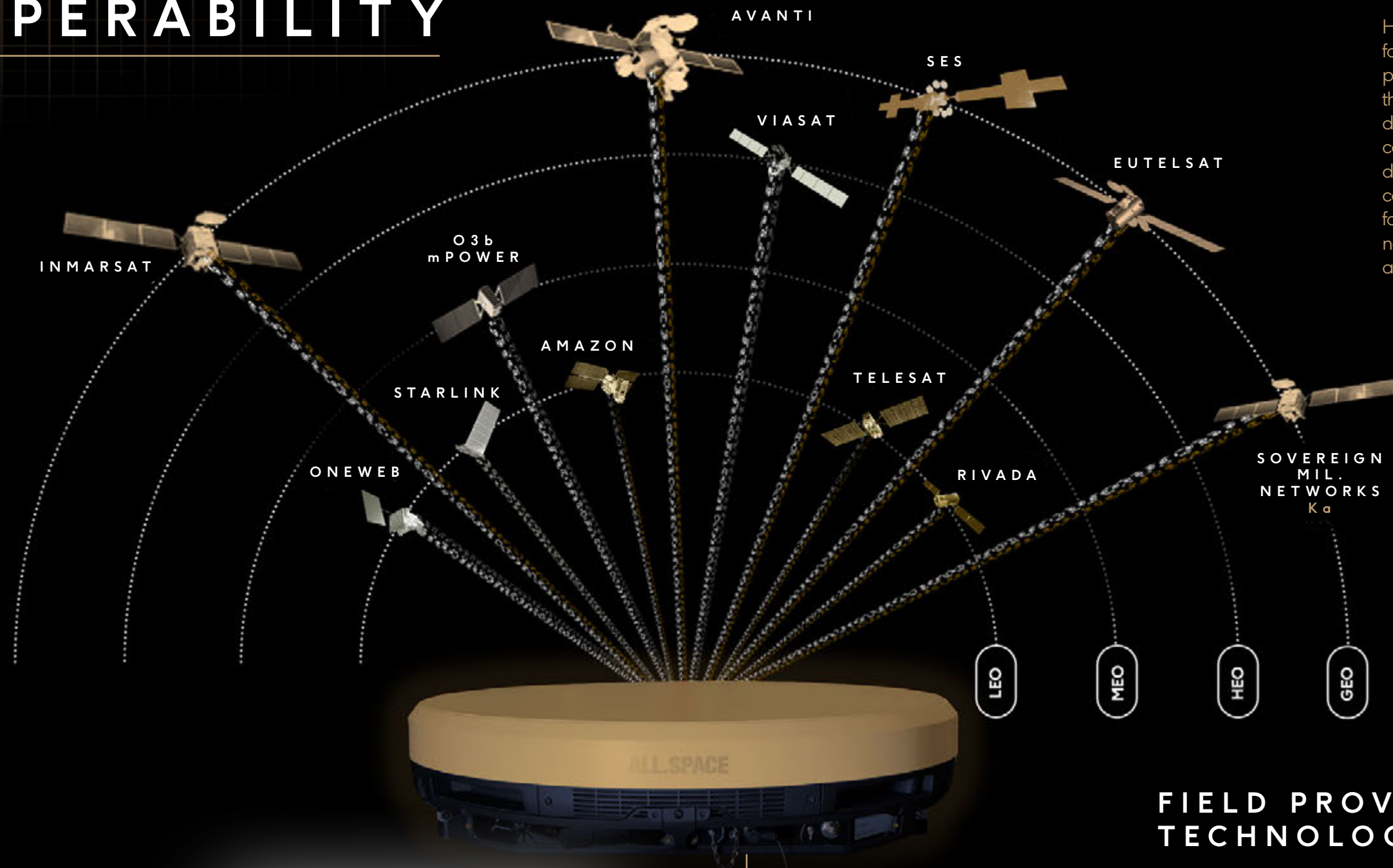
MIL-STD Ruggedized

On-Board Edge
Compute

RF Sense and Detect

Alternate PNT
(Signal of Opportunity)

An Intuitive Graphical
User Interface Designed
For Effortless Operation



Built for Resilient, Mobile Operations

Hydra's architecture is designed for reliable defense-grade performance in mobile and high-threat environments. Its lens-based design reduces power use, removes complex active parts, and provides directional accuracy without moving components. This makes it suitable for ground vehicles and ships that need steady, resilient connectivity across multiple SATCOM networks

FIELD PROVEN TECHNOLOGY

Hydra KuKa

Availability 2027

Hydra KuKa will support interoperability with satellite operators operating in the Ka and Ku bands across all orbits



SWaP BENEFITS

FORCE-MULTIPLYING EFFICIENCY

Terminals Consolidated

Consolidates multiple SATCOM antennas into a single platform, streamlining operations while reducing footprint

Reduced Redundancy

Minimizes the need for redundant cabling, mounts, and training, reducing complexity and costs

Coalition Compatible

Seamlessly integrates with existing coalition logistics frameworks, enhancing interoperability

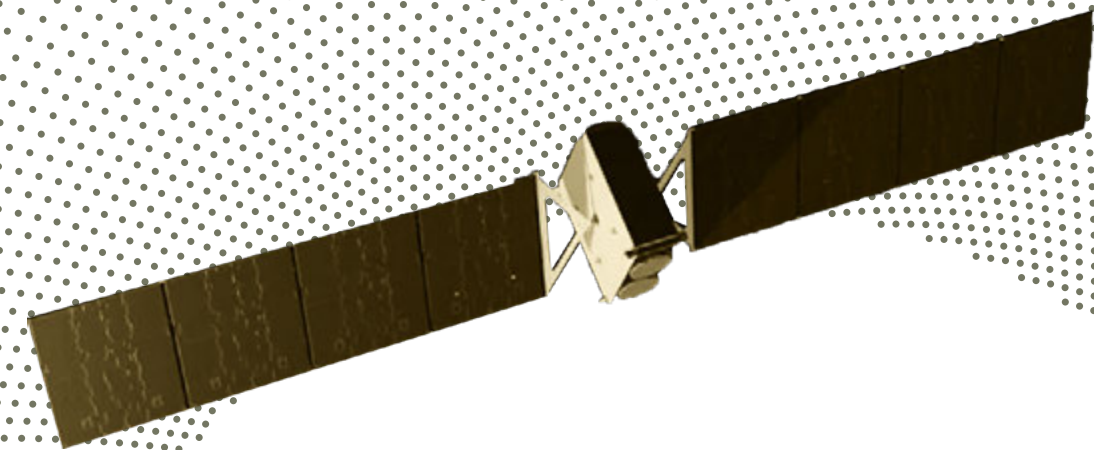
Enhanced Distribution

Enables powerful distributed communications with a significantly smaller system footprint

LEGACY SATCOM



ALL.SPACE: THE CONSOLIDATED CAPABILITY

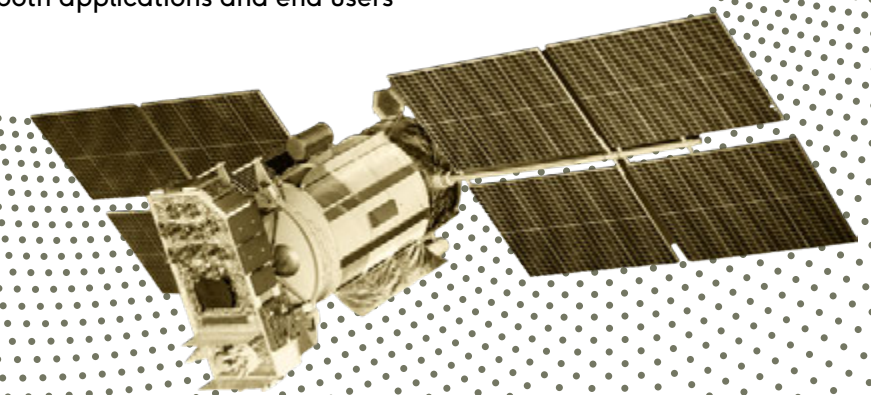


Make-Before-Break Handovers on LEO, HEO & MEO Networks

Dual beams allows Hydra to establish a new satellite link before disconnecting the current one, ensuring uninterrupted service in fast-moving orbital environments. This critical capability guarantees seamless communication and data flow, even as satellites move rapidly across the sky

Break-Before-Make Handovers Across Satellites

When operating with a single link for handovers (while the other beam remains assigned to a different satellite or mission), our terminal delivers ultra-fast break-before-make transitions between satellites. These handovers complete within just a few milliseconds, with minimal, and in some cases zero packet loss, making them virtually undetectable to both applications and end users



MULTI-DOMAIN INTEROPERABILITY

FIELD VALIDATION

U.S. DoD trials
across Europe
and CONUS



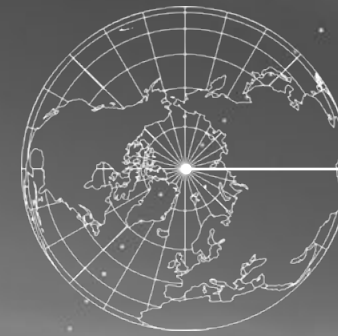
UK MoD
early adopter
programs



NATO
Interoperability
Demos
(GEO + LEO or
MEO coordination)



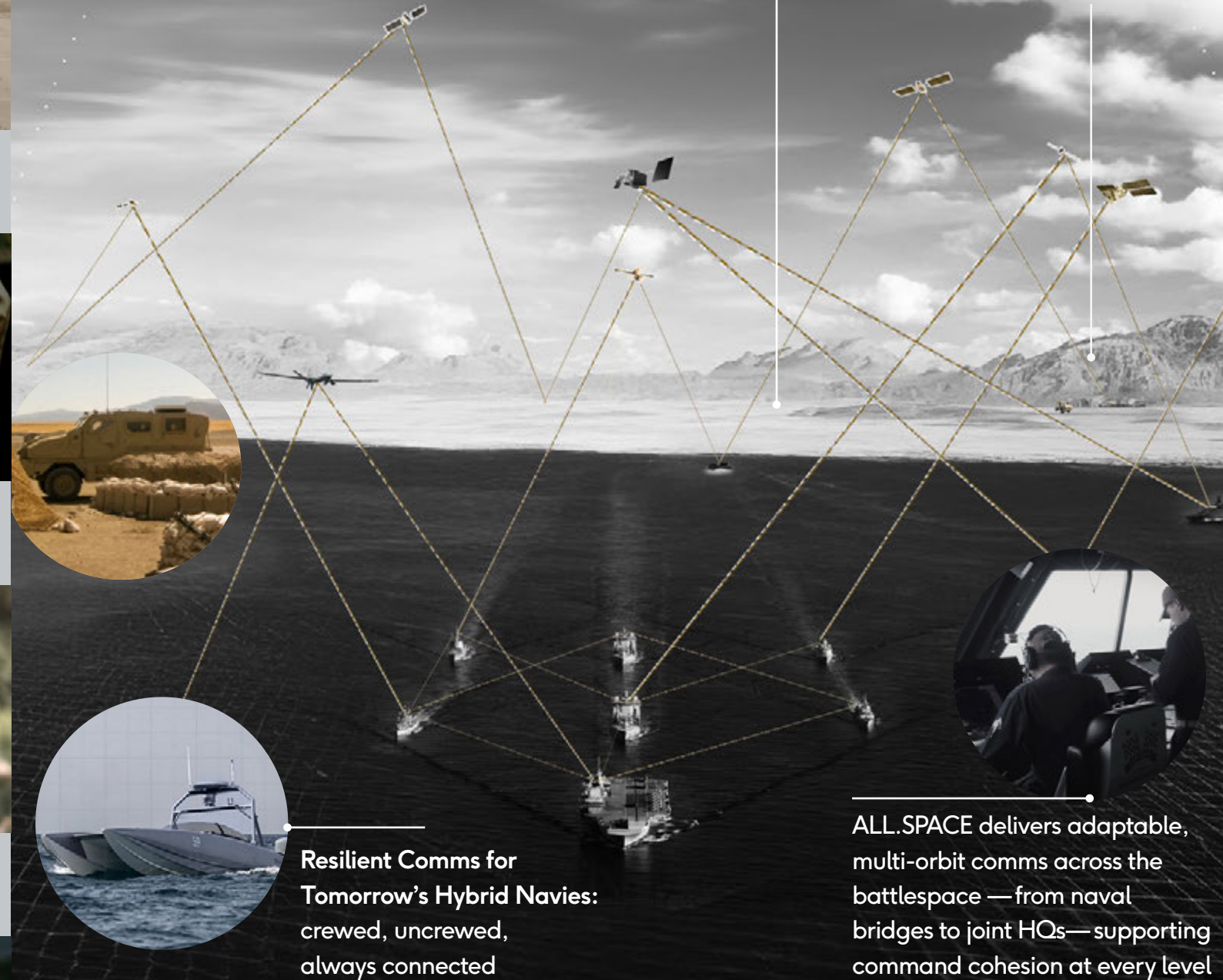
ESA-funded R&D:
5G NTN integration
and testing



High North &
Arctic Readiness:
Secure polar
communications are
a strategic imperative



On-the-move
SATCOM: Mobile
platforms for fluid
battlespaces



Resilient Comms for
Tomorrow's Hybrid Navies:
crewed, uncrewed,
always connected

ALL.SPACE delivers adaptable,
multi-orbit comms across the
battlespace — from naval
bridges to joint HQs—supporting
command cohesion at every level

MULTI-DOMAIN COMMUNICATIONS

BUILT BY OPERATORS

VETERAN-LED INNOVATION

Developed with input from ex-military engineers, SATCOM operators, and ISR planners

Reflects firsthand knowledge of the challenges across defense theaters

Veterans serve across ALL.SPACE in R&D, program delivery, support and sales



EMPLOYER RECOGNITION SCHEME

BRONZE AWARD

Proudly supporting those who serve.

One Terminal Global Connectivity Coalition Ready



Simplify deployments

Ensure resilience

Win the information battle

Join the UK, NATO, US, and allied forces in adopting ALL.SPACE Hydra Terminals for next-generation operations

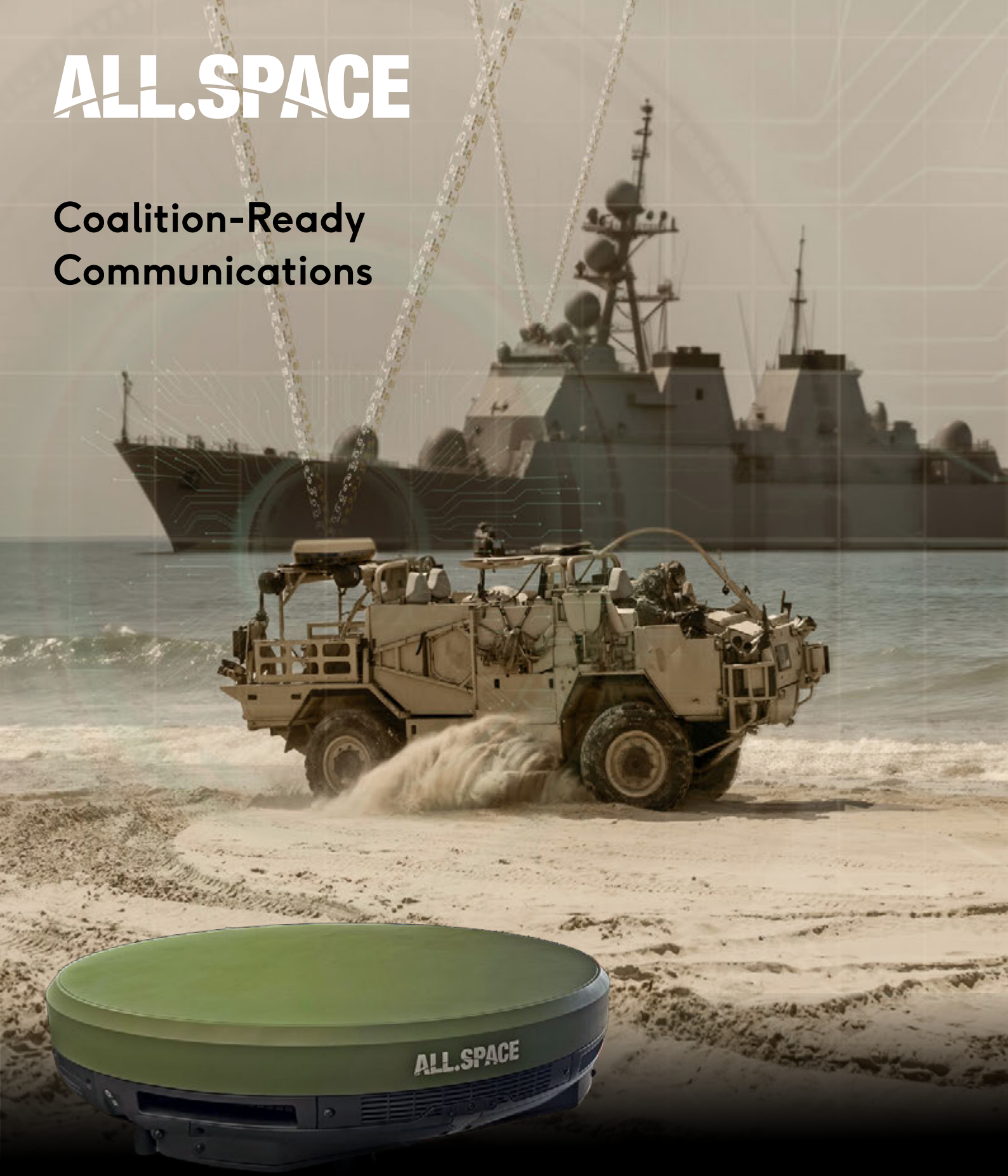
**SCHEDULE A
PRIVATE BRIEFING**

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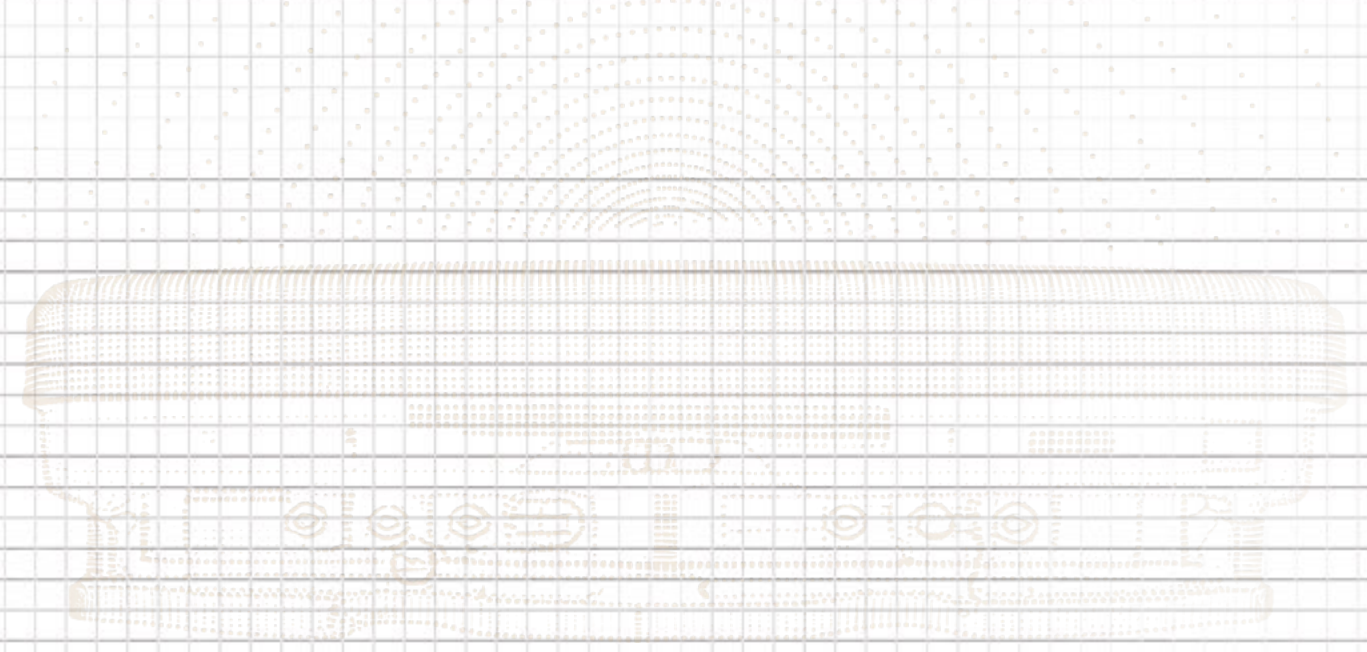
Coalition-Ready
Communications



ALL.SPACE Hydra enables coalition-ready communications with unmatched flexibility, resilience, and efficiency, all within a compact, easy-to-operate field-tested platform



NOTES



Making the difference
in the moments that matter

ALL.SPACE was founded in 2013 with a vision to provide the solution to the challenges of multi-orbit communications

As the providers of the most advanced platforms for total communications convergence, ALL.SPACE is shaping the very future of defense operations with the world's first fully capable multi-link terminal, which connects seamlessly and simultaneously to all satellite networks

Having successfully delivered several development programmes with the European Space Agency, UK Space Agency, UK MOD and the US DOD, ALL.SPACE embodies the future of secure and resilient satellite communications

**One Device
All Networks
No Compromise**

