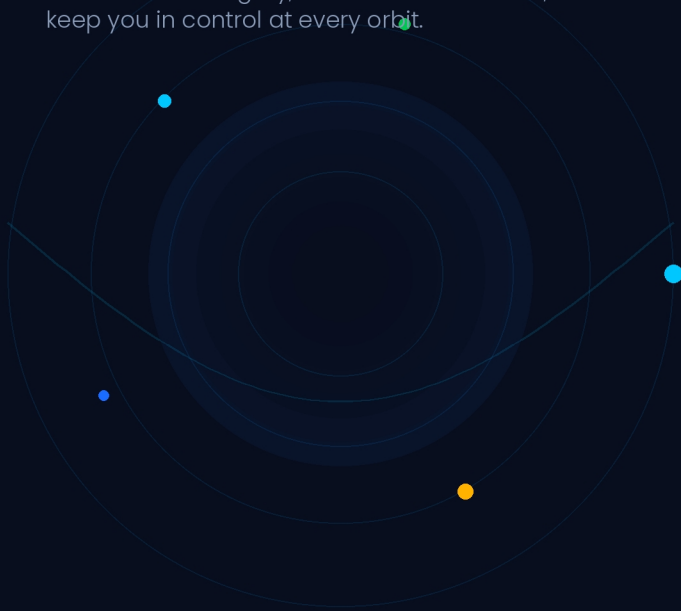


Your Mission Moves Fast. Your Ground Should Too.

Hydra is Pantherion's sovereign space operations platform — unifying ground, edge, and cloud to deliver mission agility, reduce cost-to-serve, and keep you in control at every orbit.



Months → Weeks Faster time-to-first-mission	60% Lower cost-to-serve
Up to 50% Reduction in ops staffing overhead	Up to 70% Lower integration cost per mission
Zero Third-party data access	99.9% Platform availability SLA

— THE CHALLENGE

Space Operations Are the Bottleneck.

Satellite manufacturing has industrialised. Launch has commoditised. But the ground segment — the infrastructure that turns a satellite into a functioning mission — has not kept pace. Procurement cycles run to years. Integration projects require armies of specialists. Operational procedures are written from scratch for each new mission. Ground segment costs routinely outpace the spacecraft itself — absorbing more than half of total programme spend in operations alone. The tools available to most operators today were designed for a different era: one satellite, one agency, one proprietary stack. Pantherion was built to change that equation.

Years Typical ground segment procurement cycle	>50% Of programme spend absorbed by ground operations	From scratch Integration repeated for every new mission or vendor	Months To clear ATO or accreditation on legacy platforms
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— THREE CORE PILLARS

Scale. Efficiency. Resilience.

01

Integrate and Scale Without Compromise

From first mission to full constellation

Start small — Hydra scales with you along every axis at once, without re-platforming at any stage.

- › Lifecycle: same platform from feasibility study to live operations — artefacts carry forward at every transition
- › Mission growth: integration cost drops with every additional satellite, payload, or ground station
- › Operations centre: scale both capability (functions: monitoring, scheduling, navigation, data processing) and capacity (throughput, network, performance, availability) independently as demands grow
- › Federation: grow to multi-agency — share ground coverage and tip-and-cue only what each partner explicitly authorises

USE CASE

A new operator stands up their first ground segment in weeks. Three years later, they operate a constellation across two agencies — on the same platform, without a rebuild.

02

Cut Cost-to-Serve. Accelerate Time-to-Mission.

Do more with less, at every stage

Manual workflows and one-off integrations absorb resources that should be focused on the mission. Hydra automates the routine and makes change safe at every operational stage.

- › Time-to-mission from months to weeks through open standards and a shared integration ecosystem
- › Script procedures once — runs regardless of cloud provider, hardware, or protocol underneath
- › Session scheduling, node monitoring, and pipeline health run continuously without operator intervention
- › Every configuration versioned and traceable — ATO re-accreditation becomes a structured report, not a manual audit

USE CASE

A defence operator facing ATO renewal produces the evidence report automatically — versioned configuration and audit logs are already there.

03

Sovereign, Secure, Contested-Env Ready.

Sovereign by architecture. Secure by design.

Security and sovereignty are properties of the architecture, not features bolted on. Export control and IP protection are defaults, not exceptions managed manually.

- › Confidentiality domains and data residency rules enforced at the platform level — zero third-party data access by architecture
- › Accreditation evidence — supply chain attestation, audit trails, security posture — is a natural output of daily operations
- › Multi-region failover, graceful degradation, and multi-station redundancy for contested environments
- › Federated bus enforces exactly what each partner has authorised to share — no open data flows by default

USE CASE

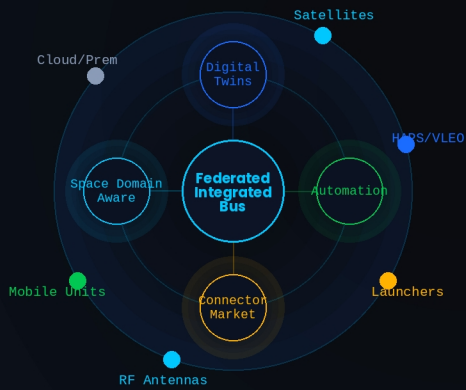
A wide-swath radar cues a partner's HR optical asset on detection. Each side shares only the cue — sovereign boundaries enforced automatically.

— MISSION LIFECYCLE

One Platform. Every Stage. From first concept to federated operations.



Mission Capabilities from Recognised, Certified Partners.



For Operators

Access certified mission capabilities — M&C, scheduling, data processing — without proprietary lock-in or hidden data exposure. Best-in-class, plug-and-play.

For Technology Partners

Reach defence and commercial customers through a conflict-free channel with transparent revenue share and clear certification paths. No channel conflict by design.

For System Integrators

Deploy and operate Hydra under your own brand with full white-label support and channel protections that eliminate reseller conflict.

Available Today — and What's Coming.

● Available now ● In simulation ● Coming soon

INTEGRATION & DEV TOOLS

APIs Low Code SDKs Sandbox Operators CLI
Integration Studio Pilot Kits Ref. Architectures MLOps
Connector Marketplace

SATELLITE & MISSION SERVICES (VIA PARTNERS)

Monitoring & Control Maneuver Schedule Automation
Data Processing Planning Request Product Catalogue
Remote Buffer Mgmt Weather Forecast Ancillary Data
SSA/SWE

CORE RUNTIME

Service Execution Engine Info Layer Message Abstraction
Runtime Adapter System Gateway Access Control
Interaction Patterns QoS

TECHNOLOGY & INFRASTRUCTURE

HTTP/HTTPS TCP/IP AWS Docker CCSDS MOIS CSTS/CSA
SLS/SIS/AMS AMQP/SOIS Azure Kubernetes NVIDIA

FRONTEND & OPS APPS

Console Workstation Centre App

BUSINESS ENABLERS & TRAINING

Tutorials Certifications Ticketing Marketplace Demos
Wargaming

PLATFORM SERVICES

Time Directory Event Archive Configuration
Activity Tracking Replay Control Login
Operator Interaction

INFORMATION MODEL

Common Object Model Domain Dictionary Domains Agencies
Missions Centres Stations Displays Operations
Workflows/Procedures Digital Twins Simulations Sessions
Federation Tenants Ontologies Mission Profiles

CCSDS MOIS

Mission Ops Interface Standards

Open Standards

No proprietary lock-in

Zero Lock-in

Portable by architecture

Built for Every Space Operator.

DEFENCE & INTEL

Sovereign, accredited deployments for classified and regulated missions. Air-gap and on-prem options available.

CIVIL & GOV AGENCIES

National space programmes building sovereign ground capability, from first mission to full operational status.

COMMERCIAL OPERATORS

Start-ups and established operators scaling constellations without infrastructure overhead or lock-in.

GSN PROVIDERS

Ground station network operators offering managed services and Ground Segment-as-a-Service to multiple missions.

SYSTEM INTEGRATORS

Primes and SIs deploying and operating Hydra for end customers, under white-label or direct engagement models.

Four Ways to Engage with Hydra.

FLAGSHIP

Pilot

Prove it, keep it.

Fixed-fee, scoped to a real operational moment — LEOP shadow-run, anomaly drill, migration validation, or regulatory filing. Fee credited toward Year 1 if converted within 6 months.

PAAS SUBSCRIPTION

Subscribe

Free through Enterprise.

Tiered cloud subscription plus usage billing, from evaluation sandbox to constellation-scale. Month-to-month at Basic, annual+ at Professional and Enterprise.

LICENSE

Self-Host

Your infrastructure, our software.

Term or perpetual license to self-host Hydra, including in secure or regulated environments. Software and maintenance only — no ops, usage, or hardware costs.

OEM

Embed

Embed it, brand it.

IP license to embed Hydra inside your own product under your own brand. Bounded integration engagement, not open-ended co-development.



Ready to Operate at the Speed of Your Mission?

Whether you're standing up your first ground segment, scaling a constellation, or building a sovereign space programme — Hydra has a path for you.

Get in touch

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linkedin.com/company/pantherion-space
contact@pantherion.space



Scan to visit pantherion.space