

OASIS: ORBITAL ARCHITECTURE FOR SATELLITE INTELLIGENCE SUPERCOMPUTING

VISION NOTE

An oasis for human deeds around the cathedral of artificial intelligence, rising in the deadly desert of outer space.

THE PROBLEM

The modern orbital infrastructure is physically constrained in its ability to deliver on the very promise it was built for. Earth observation satellites — whether optical, SAR, or scientific — gather ever more data, yet **lack the capacity to process or transmit it fast enough** to respond meaningfully to pressing challenges on Earth.

These are **not merely technological limits**. They are **physical bottlenecks**: the restricted downlink windows, the limited data capacity of RF bands, the delays in routing raw data to Earth, and the disjointed nature of orbital assets. These constraints:

- Slow economic and technological growth
- Increase vulnerability to geopolitical risks
- Hamper our global response to natural, technological, and political threats

OUR RESPONSE

We must overcome these limits **not by working harder on Earth, but by shifting the center of gravity into space**.

OASIS is a space-based, AI-driven computing infrastructure — an orbital supercomputing architecture that collects, routes, processes, and distributes satellite data **in orbit**, before it even reaches the ground.

By processing data where it is gathered, OASIS enables **faster, smarter, and more scalable access** to critical insights — when and where they are needed most.

THE CORE IDEA

OASIS is a constellation of modular satellites built on widely available, proven technologies:

- **Data Collection:** Ingesting satellite telemetry and sensor data via RF uplinks (X-band, Ka-band, S-band)
- **Routing and Processing:** Using advanced industrial-grade AI chips (optimized for energy efficiency and orbit conditions)
- **Interconnects:** Optical mesh networking via laser links for high-throughput satellite-to-satellite communication

- **Uplink Scheduling:** Coordinated from Earth-based control centers, enabling time-slot allocation and monetization of compute resources

In essence, OASIS is **an orbital cloud**, capable of serving thousands of satellites — and the industries, institutions, and governments that depend on them.

WHY NOW

The world's space economy has reached a point where **data flow, not launch capacity, is the new bottleneck**.

Every month, more Earth observation satellites are launched. Each promises “real-time insights” — yet most can't deliver, because the data gets stuck in orbit. Only a system like OASIS, which addresses the **root physical constraints**, can unlock the full potential of satellite data at scale.

What's more, similar concepts are already in development — but largely **within military contexts**. OASIS offers a **civilian, transparent, and commercially viable alternative** with the potential to stabilize rather than escalate geopolitical tensions.

And in the long term, this architecture is a stepping stone toward a truly intelligent planet: a global neural network, spaceborne and Earth-aware, capable of planetary-scale reasoning and response.

STRATEGIC VALUE

OASIS is designed for all who rely on spaceborne data and intelligence:

- **Earth Observation providers** (e.g., ICEYE, BlackSky, Satellogic, Planet, World View)
- **Logistics and maritime operators** needing rapid weather, ocean, and traffic insights
- **Power and infrastructure networks** monitoring climate and environmental changes
- **Government agencies** tasked with wildfire control, earthquake forecasting, and disaster response
- **Scientific missions and telescopes** requiring fast in-orbit analysis
- **Defense and security services** demanding real-time, autonomous orbital processing

By accelerating thinking where the data lives, OASIS helps the world **stay ahead of the trouble running toward it**.

CALL TO ACTION

We are now seeking partners, sponsors, and visionary institutions to join us in making OASIS a reality.

Whether you're a government agency, a satellite operator, a computing company, or a scientific institute — if you believe that **faster space intelligence** can change the game for Earth and humanity, we invite you to engage with us.

We are preparing a full-scale simulation and early prototypes as our first step. With your support — technical, financial, or strategic — we'll bring the first OASIS **from vision to vacuum**.