ATLAS
SPACE OPERATIONS®
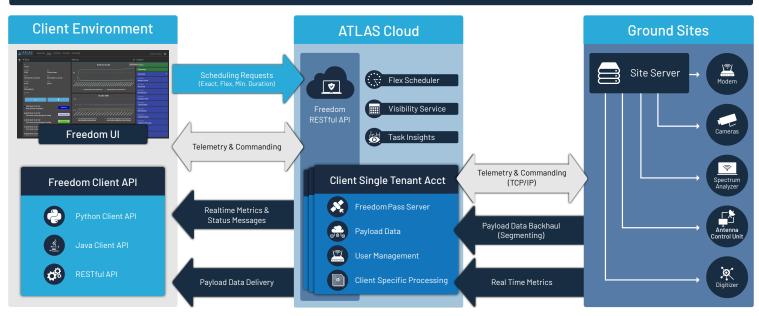*Connecting Humanity Through Space™*

FREEDOM™
HOW IT WORKS

Single IP Access
AES-256 Encryption

Multi-factor Authentication
Tokenized Connection Initiation

IP Whitelisting
Time-Based Restrictions

Client Environment

Freedom UI

Freedom Client API
- Python Client API
- Java Client API
- RESTful API

Scheduling Requests
(Exact, Flex, Min. Duration)

Telemetry & Commanding

Realtime Metrics &
Status Messages

Payload Data Delivery

ATLAS Cloud

Freedom
RESTful API

- Flex Scheduler
- Visibility Service
- Task Insights

Client Single Tenant Acct
- Freedom Pass Server
- Payload Data
- User Management
- Client Specific Processing

Telemetry & Commanding
(TCP/IP)

Payload Data Backhaul
(Segmenting)

Real Time Metrics

Ground Sites

Site Server

- Modem
- Cameras
- Spectrum Analyzer
- Antenna Control Unit
- Digitizer

TECHNOLOGY

Freedom is a SaaS system accessed via an API (Java, Python, REST) supporting your TT&C data format, regardless of baseband, through a single entry point in the cloud. Customers receive 100+ metrics every 2 seconds to monitor the state of the service. Your data... simplified.

SECURITY

ATLAS Freedom is NIST 800-171 compliant by a Certified Third-Party Assessment Organization. Freedom leverages industry leading standards: multi-factor authentication, AES-256-Encryption, IP whitelisting, time-based restrictions, and access through a single IP entry point.

ONBOARDING

ATLAS has developed and refined a 5-phased approach to onboarding customers. Phase 1 begins API integration and progresses in phase 5 to full bench testing with our small form factor transportable ground station. Each phase reduces risk culminating in the first communication with your spacecraft.

ATLAS SPACE OPERATIONS®

GROUND SEGMENT VALUE CHAIN

The ground segment value chain has many components that roll up into one comprehensive managed service provided by ATLAS Space Operations via our Freedom Software Platform™. **ONE SERVICE FOR ALL YOUR NEEDS.**

ANTENNA
Procurement, building, integration, and maintenance of antenna and componentry for managing RF signals (Switches, LNB, Amplifiers).

BASEBAND
Procurement, integration, and maintenance of baseband hardware such as Modems, FEPs, and data recorders.

NETWORK OPERATIONS
24/7 Network Operations. Immediate on call support for monitoring and resolving all hardware and software issues at scale.

CLOUD INTEGRATION
Direct integration with cloud provides access to your entire ground network via a single, cloud-based entry point.

LICENSING
Global expertise on spacecraft frequency licensing.

BACKHAUL
Highly configurable payload data backhaul pipeline from ground site to cloud to customer. Options for intermediate data storage or never-at-rest.

ONE API
One API for all access (including streaming data, header formats, cloud modems, etc.) allows for rapid expansion to new and existing sites.

SECURITY
NIST 800-171 accreditation. Multi-factor authentication. Tokenized connection initiation. IP Whitelisting. Time-based restrictive access. AES-256-Encryption.

ORCHESTRATION
Configuration and coordination of ground hardware using software. Outage-resilient synchronization orchestrated from the cloud.

SCHEDULING
Scheduling / Deconfliction of assets on a federated network using data science and Machine Learning algorithms.

DATA COLLECTION
Data retention policies per customer (streaming, temporary storage, or long term archiving).

DATA DELIVERY
Automatic data file delivery and / or real-time streaming of downlink and uplink data.

ANALYTICS
Data analytics of more than 1 billion metrics collected to support Machine Learning/AI analysis.

USER INTERFACE
Web based UI for quick, easy access without complex programming interfaces. Get started without the cost of machine to machine integration.