Mission Ready Satellite IoT Solutions for
Military & Defense

Trusted Satellite Connectivity.
Proven Tactical Advantage.

At Ground Control, we provide secure, field-tested satellite IoT and tracking technologies that help military, government, and defense organizations maintain full operational awareness in any environment.

Whether you're operating at the tactical edge, managing BVLOS drone missions, or maintaining connectivity in GPS or network-denied regions, Ground Control delivers reliable, resilient, and secure communications when and where it matters most.

Gain the Advantage with Multiple Satellite IoT Applications

Satellite IoT solutions empower defense forces with real-time tracking, assured positioning, secure messaging, and remote sensor integration, no matter how remote or hostile the environment. Working with trusted satellite network operators including Iridium and Viasat, Ground Control's family of military-grade devices ensures operational continuity, enhances decision making, and delivers tactical superiority across the entire battlespace.

Upgrade your military operations with satellite connectivity and empower your units with:

- Personnel tracking in covert, high risk, or humanitarian missions

- Drone telemetry and control for ISR, logistics, and activity coordination

- Vehicle tracking and fleet logistics in remote or hostile environments

- Situational awareness for border security, peacekeeping, or disaster relief

- Real time command and telemetry for special operations

- A-PNT capability to maintain mission continuity if GPS is jammed

Across all operational environments

Aircraft

Unmanned Vehicles

Squad Members

Naval Vessels

RockBLOCK APNT

Vehicle Mounted Assured PNT for Convoy, Maritime, and Mobile Command Operations

RockBLOCK APNT delivers A-PNT capabilities for vehicles, maritime platforms, and mobile command units operating in GNSS contested environments. Designed for integration into tactical mobility platforms, it ensures uninterrupted situational awareness, two way message payloads of up to 100 KB, and timing synchronization in the face of GPS jamming or spoofing.

Built utilizing the global Iridium PNT service, RockBLOCK APNT delivers secure, low latency position and status reporting across operational theaters, keeping convoys connected and commanders informed, even in disconnected or hostile zones.

Ideal for: **Armored vehicles, navy boats, humanitarian convoys, mobile headquarters.**

Cryptographic Satellite Communications
Secure and resilient Iridium PNT service ensures communication continuity in denied, disrupted, or degraded environments.

Vehicle Based Assured PNT
Provides persistent and tamper resistant navigation and timing for onboard systems when GNSS signals are unreliable or compromised.
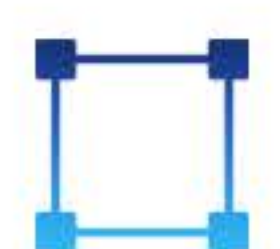
Real-Time Convoy Tracking
Reports position, speed, heading, and timing, ideal for convoy control, mobile HQs, and maritime operations.

Hard Mounted Integration
IP66 rated and vibration tested, RockBLOCK PNT is designed for permanent installation on armored vehicles, tactical trucks, boats, and shelters.

Geo Zone Alerts & Monitoring
Supports complex geofencing and automated alerts for boundary breaches, route deviations, or loss of contact.

RockBLOCK APNT is the ideal solution for modern military mobility tracking and communication. Combining hardened satellite connectivity with trusted APNT to secure every mission, vehicle, and operator in the operational environment.

RockREMOTE Rugged

Resilient Connectivity and Compute Power

RockREMOTE Rugged provides a hardened, hybrid communication gateway with Iridium Certus 100 satellite and 4G LTE connectivity, enabling reliable data, telemetry, and video backhaul from anywhere on the planet.

With its IP67-rated enclosure, support for custom applications, and seamless integration into existing tactical networks, RockREMOTE Rugged is ideally suited to remote surveillance, unattended ground systems, and autonomous ISR platforms. Whether used for video monitoring, remote command execution, or system health reporting, it delivers operational confidence.

Ideal for: Field surveillance, command posts, autonomous vehicles, border security.

Ruggedized for Harsh Environments
Built into a sealed IP67 enclosure, RockREMOTE Rugged is dustproof, waterproof, and vibration resistant, enabling reliable deployment in desert, arctic, jungle, or maritime conditions without requiring additional protection.

Hybrid Connectivity
Satellite + LTE: Combines Iridium Certus 100 with 4G LTE (Cat 4) connectivity, giving operators the ability to route data cost effectively over cellular where available, while maintaining guaranteed satellite fallback in disconnected or contested environments.

Edge Processing with Docker & Python Support
Run custom Docker containers or Python scripts directly on the device, enabling data filtering, protocol translation, logic execution, or onboard analytics. Ideal for reducing bandwidth or operating autonomously when disconnected from command centers.

Remote Video Surveillance Capable
Supports low bandwidth video streaming via optimized protocols, making it possible to transmit footage from unattended remote cameras over satellite. Particularly suited to border security, critical infrastructure protection, and covert observation posts.

Secure Networking with Firewall, VPN & NAT
Includes a fully configurable Linux-based firewall, support for VPN tunneling (IPsec, GRE, etc.), and network address translation, allowing for secure, encrypted links into tactical networks and command systems.

Multi-Interface Integration for Tactical Systems
Provides Ethernet, serial, USB, and digital I/O for connecting to sensors, PTZ cameras, telemetry units, and control systems. A built-in GNSS receiver supports accurate location tracking, and optional Wi-Fi offers local access for field teams.

RockREMOTE Rugged delivers mission-critical, secure, and resilient connectivity and processing power, built to withstand the harshest environments and keep your defense operations connected and in control.
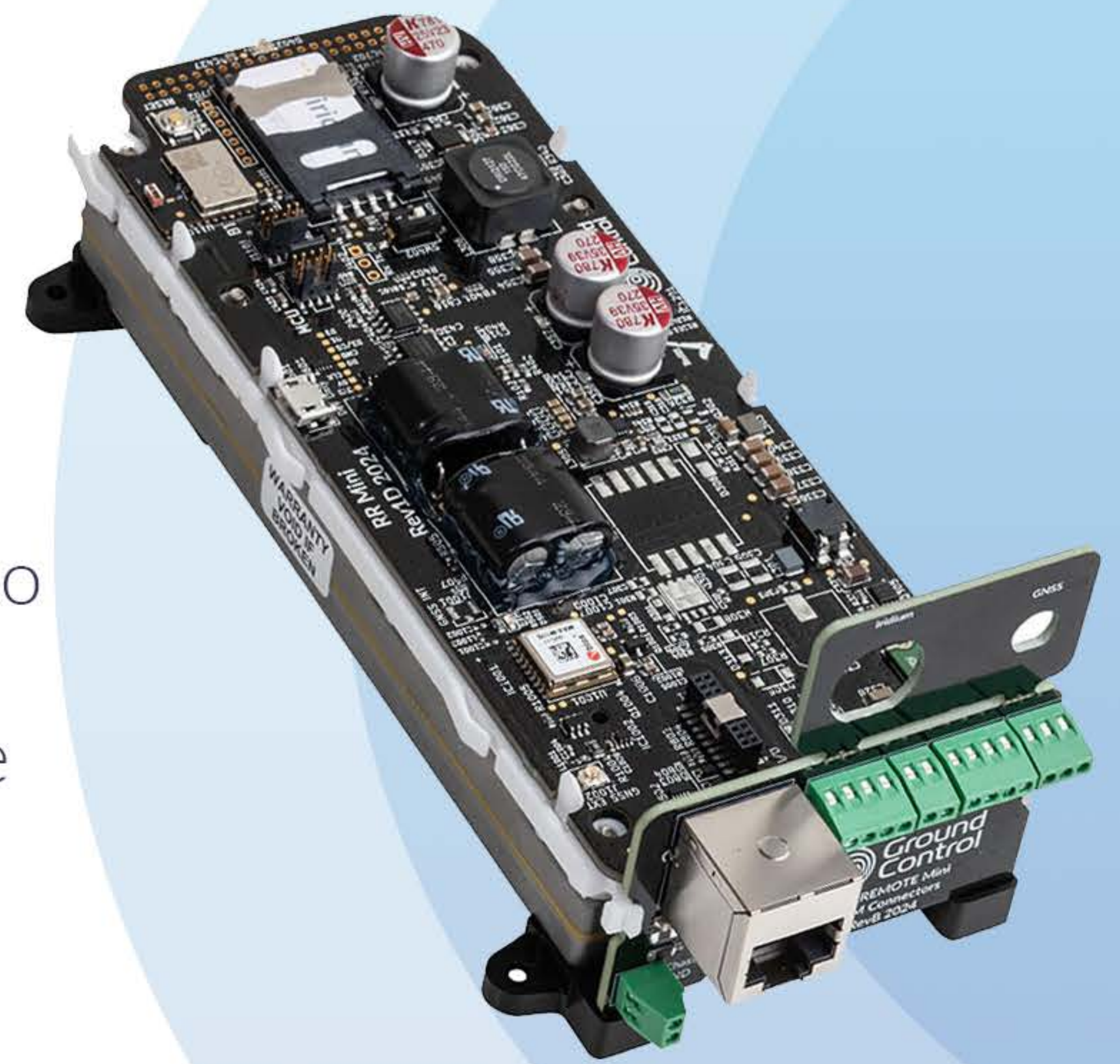
RockREMOTE Mini OEM

Secure Satellite Communications for UAVs, Field Sensors, and Tactical Surveillance

RockREMOTE Mini OEM brings global Iridium satellite connectivity to unmanned systems, field deployed sensors, and remote surveillance platforms. Designed for installation within your enclosure, this device ensures real-time tracking, data transmission, and command/control continuity.

RockREMOTE Mini OEM is compact and lightweight, ideal for integration into ISR drones, tactical UAVs, or embedded sensor networks.

Ideal for: Tactical drones, remote sensors, portable systems, UAV payloads.

BVLOS Satellite Connectivity
Provides global Beyond Visual Line of Sight (BVLOS) command and telemetry for UAVs, UGVs, and field-deployed sensors using Iridium Certus 100. Suitable for remote and infrastructure limited areas.

Encrypted Communications
Supports encrypted communications through VPN tunneling (e.g., IPsec), and secure routing via Cloudloop or third party platforms.

Compact OEM Design
With a board-only design measuring just 103 x 59 x 20 mm, and weighing ~160g, RockREMOTE Mini OEM is ideal for SWaP-constrained platforms such as tactical UAVs, unattended sensors, or man-portable systems.

Flexible Interfaces for Tactical System Integration
Features serial, Ethernet, and GPIO connectivity, making it easy to integrate with UAV autopilots, UGV control systems, ISR payloads, or other field deployed sensors. The built-in GNSS receiver provides reliable positioning for situational awareness.

Remote Monitoring and Management via Cloudloop
Integrates with Cloudloop, enabling secure remote monitoring, SIM/device management, and data access, supporting distributed deployments without local infrastructure.

From remote UAV control to field sensor integration, **RockREMOTE Mini OEM** delivers compact, secure, and flexible satellite connectivity built for the demands of modern defense operations, wherever the mission goes.

RockSTAR

Reliable, Global Two Way Satellite Tracking and Messaging in the Palm of Your Hand
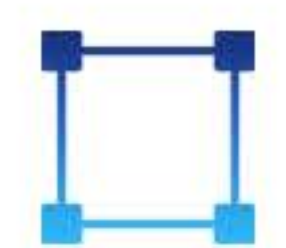
RockSTAR is a trusted handheld solution for military personnel who need reliable, real-time tracking and two way messaging anywhere on Earth. Designed for ease of use and maximum endurance, it transmits positions, status updates, and short messages via the Iridium satellite network, with no dependence on cellular coverage.

Its exceptional battery life, rugged construction, and compact form factor make it ideal for dismounted troops, special forces, and remote deployments. Whether used for personnel accountability, patrol tracking, or emergency response, RockSTAR keeps command informed and operators connected.

Global Two-Way Satellite Messaging
Enables short, secure two way messaging over the Iridium network, independent of local infrastructure; perfect for remote deployments or denied areas.

Live Position Tracking & Geofencing
Transmits GPS positions at configurable intervals and supports location-based alerts, ideal for patrol monitoring, blue force tracking, or area based triggers.

Exceptional Battery Life
Offers up to 12 months of operation on a single charge in low frequency tracking mode, ensuring long term use in the field without recharge logistics.

Emergency Alerting
Dedicated physical alert button instantly notifies command of emergencies, including last known location and optional custom message.

Rugged, Field-Proven Design
Built to withstand shock, dust, water, and extreme temperatures, RockSTAR is ready for the demands of expeditionary and tactical operations.

Simple, Secure Configuration
Fully configurable via USB or Bluetooth with optional PIN protection. Easily integrated into secure workflows via Cloudloop for monitoring and management.

RockSTAR provides reliable, long duration tracking and two way satellite messaging for personnel operating in remote or hostile environments, offering commanders visibility, accountability, and peace of mind without relying on local infrastructure.

RockSTAR Burst

Silent, Secure Burst Messaging for Low Visibility Operations

RockSTAR Burst is a compact, rugged device designed for covert teams and special operations where minimizing RF exposure is critical. It transmits short, scheduled bursts of location and message data over the Iridium satellite network, reducing detectability while maintaining communication with command.

Its extended internal battery life and zero RF activity between bursts make it well suited to missions requiring discretion and long-range movement.

Ideal for: **Special forces, remote patrols, covert teams.**

Silent burst transmission
Sends data in short, timed bursts to reduce RF signature and limit exposure.

Global Iridium connectivity
Delivers location and messaging anywhere on Earth, including polar regions.

Accurate location tracking
Transmits GPS coordinates, speed, and heading from the field to command.

Extended battery life
Operates for 25+ hours on a single charge during active use.

Zero RF footprint between transmissions
No continuous beacon or signal when idle.

Portable and field ready
Lightweight, rugged build for easy carry and deployment.

RockSTAR Burst gives operational teams a discreet, reliable way to share position and mission critical information without continuous transmission, supporting safer movement in sensitive environments.

Vehicle Mounted Satellite Internet

In addition to our Rock-series devices, Ground Control partners with Kymeta and OneWeb to deliver end to end mobile satellite broadband solutions:

- Kymeta Peregrine (for maritime) & Hawk (for land) terminals for high throughput, low latency connectivity on the move

- OneWeb LEO services for resilient global coverage, optimized for data intensive operations

- Competitive airtime packages tailored to defense requirements, with flexible term lengths and priority network access

These partnerships ensure your teams have both mission critical tracking and the broadband bandwidth needed for real time video, large file transfers, and IP-based communications, anywhere in the world.

Coordination And Control
Powered By Cloudloop

In addition to military grade satellite-enabled devices, equip your defense operations with Cloudloop - Ground Control's secure, globally scalable IoT platform designed for secure data transfer, asset tracking and management.

Cloudloop provides military grade management and data infrastructure for Rock devices, usable entirely via APIs to support secure, automated command and control.

Cloudloop
Subscription Manager

Control airtime and costs across your entire device estate, in real time.

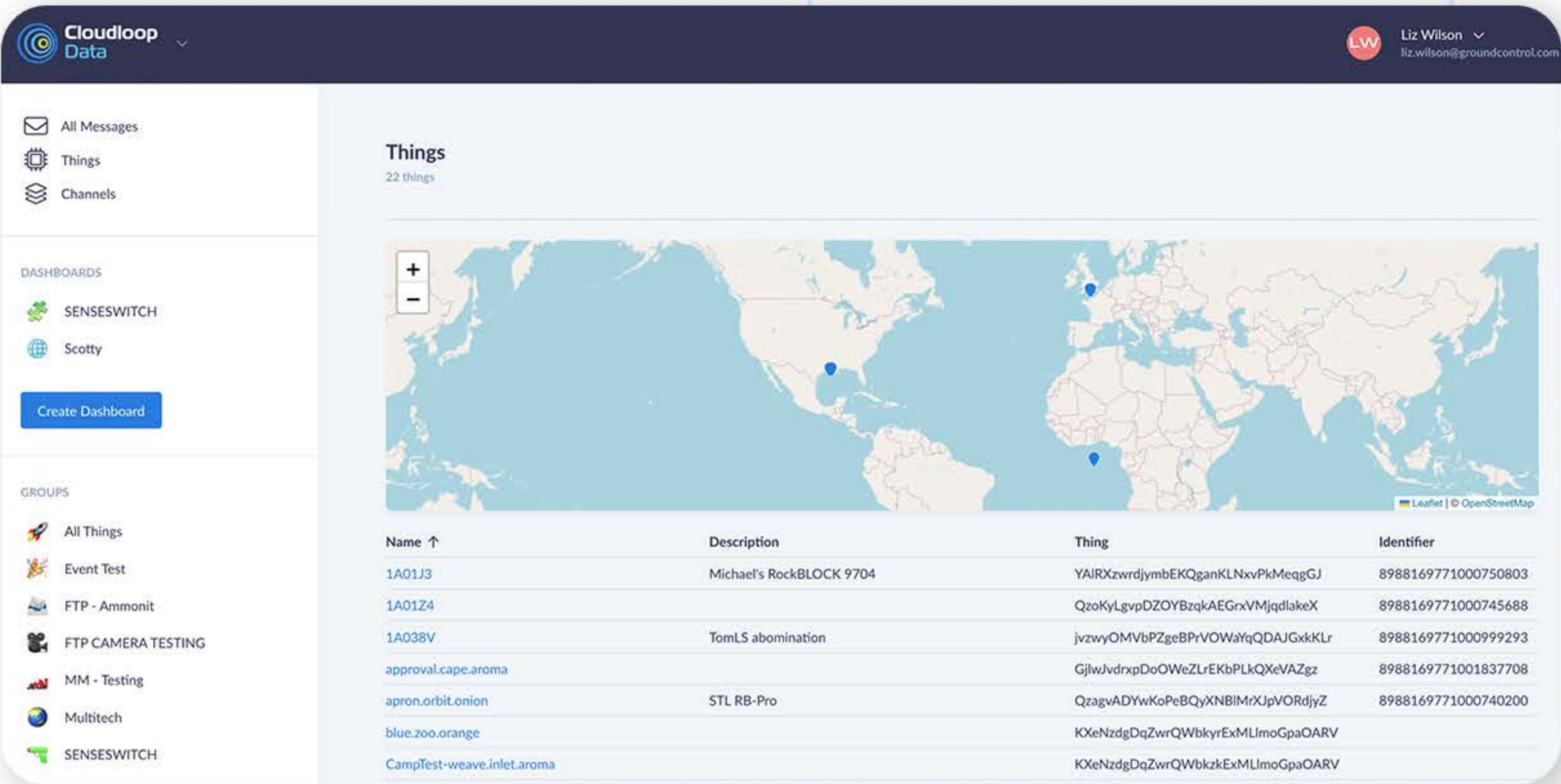Activate, suspend, or terminate SIMs remotely across satellite and cellular networks

Monitor data usage and transmission frequency to align with mission needs

Assign naming conventions, cost codes, or unit designations for easy tracking

APIs allow full subscription control from military billing or logistics platforms

Cloudloop
Data

Secure, reliable delivery of field data from device to HQ.

View raw and decoded messages sent via Iridium Messaging Transport or Short Burst Data

Integrate with secure systems via REST API, webhook, or MQTT
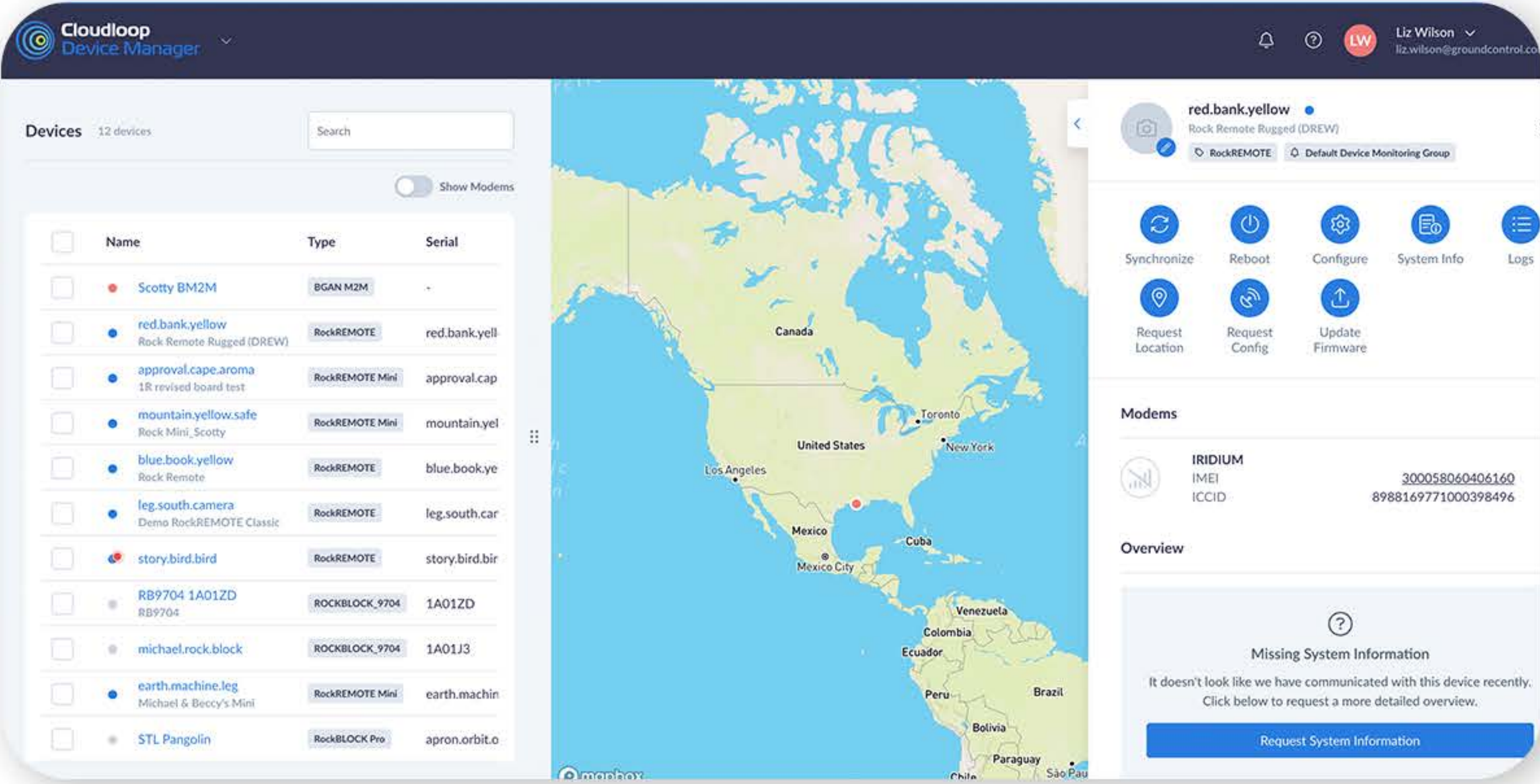
Access timestamps, delivery status, and searchable message history

Route or store data based on device ID and application logic

Coordination And Control
Powered By Cloudloop

Cloudloop
Device Manager

Manage deployed hardware securely, from field sensors to vehicle comms units.
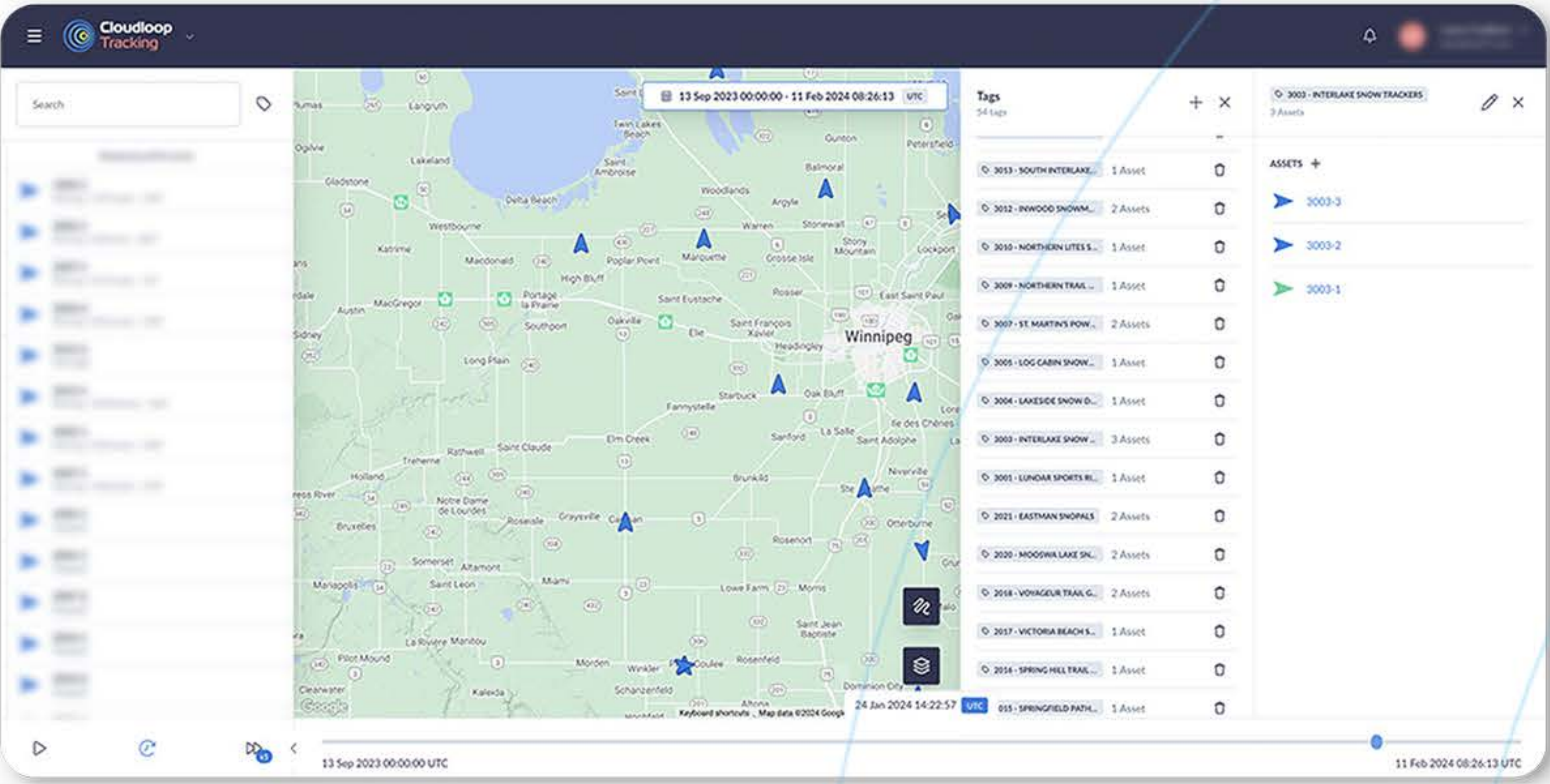
Remotely monitor and manage RockREMOTE devices in the field

View signal strength, transmission logs, and device status

Schedule reboots or configuration changes without physical access

Full API access for automated monitoring and remote diagnostics

Cloudloop
Tracking

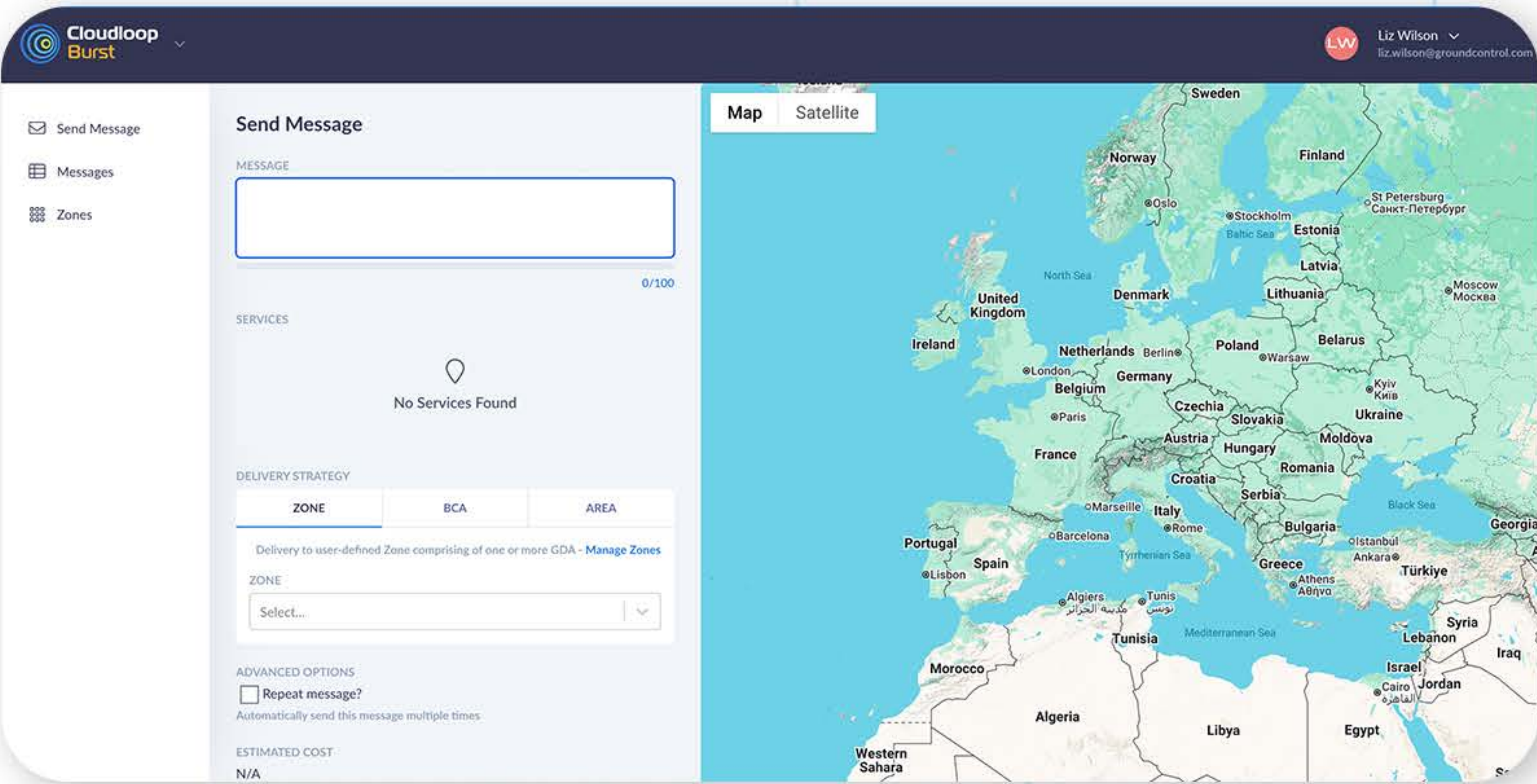**Maintain full visibility of personnel, vehicles and unmanned assets.**

View live and historical tracking for RockSTAR, RockREMOTE, and RockBLOCK devices

Set up geofences, movement alerts, and mission-specific tracking zones

Integrate seamlessly into command systems via API for operational picture overlays

Access secure map views, breadcrumbs, and audit trails to support decision making

Cloudloop
Burst (For RockSTAR Burst only)

Covert, one way paging and location reporting, with full operational control from a secure browser interface or API.

Send brief messages and mission instructions to RockSTAR Burst devices

Queue, prioritize, and time-delay messages for stealth or synchronization

View delivery confirmations and device position (if enabled)

Fully API accessible for integration with command & control systems

Partner With Us To Improve Mission Success

For over 20 years, we've partnered with defense forces, government agencies, and security contractors to deliver resilient, secure, and interoperable communications, even where GPS and cellular connectivity fails.

Operating at the intersection of tactical mobility, IoT, and global connectivity, our solutions are trusted by militaries, NGOs, and peacekeeping forces across the globe for situational awareness, asset tracking, and operational continuity in the most remote and hostile locations.

Our key credentials for your military organization:

Proven Defense Partner
Over two decades supporting NATO aligned militaries, national security agencies, and humanitarian deployments worldwide.

Global Coverage
Achieve reliable, truly global connectivity via the Iridium satellite network with no black spots - ideal for remote or contested regions.

Flexible Integration
Utilize modular hardware and open APIs for seamless integration with your C2, GIS, fleet, and battlefield management systems.

Military-Grade Security
Be assured with secure two way communications, audit trails, and military grade device design for the ultimate robustness in the field.

Remote Asset Management
Gain full visibility and control over deployed assets via Cloudloop. Monitor devices in real time, manage usage and receive alerts all from a secure, centralized interface.

Devices Built for Tactical Precision
Get equipped with communication solutions when GPS and GNSS navigation is denied and maintain mission course.

Join Forces with a Proven Technology Partner

Whether you're modernizing your command infrastructure, supporting reconnaissance and surveillance, or deploying forces in denied areas, Ground Control delivers dependable connectivity and control for mission critical operations.

Connect with us today to discuss procurement, integration, or deployment support.

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