Ground Control
A CLS Group Company

# Connected Renewables & Utilities, Anywhere

**From meter cabinets and pump stations to substation yards and remote wind/solar assets, Ground Control keeps your operations connected, visible, and under control.**

We blend low power cellular with private and public satellite networks, wrap it in rugged, utility-grade hardware, and orchestrate everything through Cloudloop.

The result is simple: your data gets where it needs to go - and your teams can act on it - no matter how remote the site, how harsh the weather, or how tight the cabinet.

## Here's how we can help you

**monitor & measure, control & automate, connect & modernize, protect & support people, and manage & optimize,** across every site you operate.

# Keep Critical Infrastructure Visible, Controllable, and Safe, Everywhere You Operate.

## Monitor & measure

- Smart metering over cellular with i-Cell (Cat 1 bis + 2G fallback)
- Remote sensors and environmental logging with RockBLOCK RTU (Cellular, Iridium SBD or regional NTN NB-IoT)
- Message-based telemetry and location from dispersed assets with RockBLOCK Pro

## Control & automate

- Private, deterministic satellite networks for SCADA with TSAT
- Cabinet gateways for IP/serial devices via RockREMOTE Rugged & Mini (Iridium Certus 100; Rugged adds LTE and hosted apps)

## Connect & modernize

- PSTN replacement and secure IP backhaul for serial equipment with i-Comm Secure
- Mixed bearer designs (satellite, cellular, IP) to keep sites online in all conditions

## Protect & support people

- Lone worker tracking, two way messaging, and SOS with RockSTAR + Cloudloop Tracking
- Geofences, alerts, and history replay for duty of care and storm response

## Manage & optimize

- Cloudloop Subscription Manager for real time airtime control and cost visibility
- Cloudloop Data to normalize, route, and store telemetry (REST, webhooks, MQTT, cloud connectors)
- Cloudloop Device Manager for remote actions, config, and firmware, without site visits

From substations and pump/lift stations to wind/solar sites and mobile field teams, **we keep your operations connected and under control.**

Monitor & measure

# I-Cell

## Secure Cat-1 bis cellular for meters and legacy assets. Four install-ready variants for fast, tidy rollouts.

i-Cell adds dependable 4G Cat-1 bis connectivity, with 2G fallback, to meters and serial devices, packaged for utility-grade deployments. Every model supports low power operation and remote configuration, so assets stay online and up to date without site visits.

Choose the interface that matches your estate: 1140-bis clips neatly beneath Elster A1140/A1120 covers; EDMI connects via a short RJ45 lead and can show signal strength on the meter; CEWE plugs straight into Prometer 100 and is PSU-powered; and D-Sub-bis offers a true RS-232 D-type for broad compatibility and flexible power. All four share compact housings designed to fit under meter terminal covers.

Ideal for: **Smart metering at substations and industrial loads, AMR/AMI brownfield upgrades, Serial RTUs/PLCs at plants and remote cabinets, Generation metering at wind and solar sites.**

### 4G Cat-1 bis with 2G fallback

Reliable primary LTE with a legacy path to keep data flowing in fringe or mixed-coverage areas.

### Ultra low power modes (PSM/eDRX)

Scheduled sleep/wake dramatically reduces consumption for meter powered or battery-backed sites.

### Remote configuration and updates

Commission, monitor, and update devices via browser/app to cut field callouts.

### Meter-specific options

Elster 1140/A1120 clip-in; EDMI direct (normal meter mode, CSQ on meter); CEWE Prometer 100 via 500 mm RJ45; D-Sub-bis with true RS-232.

### Powering that fits the cabinet

Meter-powered on Elster/EDMI variants; PSU power for CEWE; 5–24 V DC or interface power on D-Sub-bis.

### Compact hardware & antenna flexibility

Under cover mounting with internal/external antenna choices and diversity for tougher sites.

**One i-Cell family, four fit for purpose interfaces, giving Utilities and Renewables a fast, low power, remotely managed path from legacy or offline meters to resilient cellular.**

Connect & modernize

# i-Comm Secure

## Encrypted serial-to-IP bridge for PSTN replacement and secure IP backhaul.


i-Comm Secure provides a hardened, encrypted path from serial devices to IP networks, acting as a transparent connection manager that preserves your existing SCADA/telemetry workflows.

It's ideal for sites where PSTN is being withdrawn and cellular is unavailable or undesirable, creating a secure network tunnel over local infrastructure. Setup is light touch and fast: commission locally or remotely via browser/app, then monitor and update in the field without site visits. With intelligent addressing and routing, assets present a consistent IP port for straightforward integration, no matter the local network conditions.

Ideal for: **Substation RTUs and legacy serial PLCs where PSTN is sunsetting, Water/wastewater plants leveraging existing site Wi-Fi/LAN, Generation sites (solar/wind) with restricted cellular policies, Retail/remote cabinets with serial sensors or meters on local IP**

**Secure serial-to-IP bridge**
Creates an encrypted tunnel while keeping your existing SCADA protocols and tooling intact.

**Modern security stack**
TLS 1.2 with AES encryption helps protect data in transit end-to-end.

**Transparent networking**
IPv4/IPv6 with TCP/UDP delivers interoperability and a consistent IP port view to upstream systems.

**Wi-Fi and LAN options**
Connect directly over Wi-Fi or add a secure LAN bridge for wired installations.

**Remote management**
Configure, monitor, and upgrade via browser/app with full fleet oversight through iPAM.

**Flexible power & compact design**
Interface powered or external PSU; small, lightweight enclosure installs cleanly in most cabinets.

**i-Comm Secure is a secure, drop-in PSTN replacement that bridges serial devices to IP. Simple to deploy, easy to manage, and built for critical utility environments.**

# RockBLOCK RTU

## Ultra low power micro-data logger with cellular, Iridium SBD, or NTN NB-IoT connectivity, built for remote sensors in harsh, off-grid sites.

RockBLOCK RTU captures readings from field sensors and forwards them to the cloud using using cellular where available, and satellite where necessary (your choice of Iridium Short Burst Data or NTN NB-IoT). Commission quickly, mount anywhere the enclosure fits, and pick the link that best matches your power budget, payload size, and reporting cadence.

*Coverage note: SBD works globally wherever the antenna has a clear view of the sky. NTN NB-IoT needs line-of-sight and must be within the current NTN service footprint (select regions only).*

Housed in a rugged IP68 enclosure, RTU provides two dry-contact inputs, a configurable 0–10 V / 4–20 mA analog channel, and both BLE and Cloudloop-based configuration, running from 8–32 V DC and sipping as little as ~380 mW at hourly SBD reporting intervals. NTN NB-IoT is now entering field testing, targeting even lower power for periodic bulk uploads.

Ideal for: **Water level, reservoir and CSO/event monitoring, Pump/lift station status, run-hours and alarms, Soil moisture and environmental baselining at remote sites, Cabinet-level industrial telemetry where power and space are tight, Logger integrations (e.g., Campbell Scientific) for scheduled uploads.**

### Choose your satellite link
Iridium SBD for near-instant messages, or NTN NB-IoT for low-power, scheduled bulk uploads (field testing Q1 2026).

### Ultra-low power
Operates from 8–32 V DC and can draw ~380 mW at hourly SBD reports - ideal for battery / solar sites.

### Rugged IP68 build
Dust and waterproof enclosure designed for long life deployments in harsh environments.

### Flexible sensor I/O
2× dry-contact inputs, 1× 0–10 V / 4–20 mA analog channel, plus open-drain output for simple control.

### Simple setup & management
Configure via Bluetooth LE or Cloudloop and visualize data, thresholds, and alerts end to end.

### Built for remote workflows
Buffering and threshold triggered transmissions minimize airtime while maintaining visibility.

**RockBLOCK RTU is a compact, IP68 micro-logger that moves critical sensor data from hard to reach sites using your choice of Iridium SBD or NTN NB-IoT, delivering dependable insight at minimal power and cost.**

# RockBLOCK Pro

## Reliable, low power satellite messaging that keeps distributed utility assets talking.


RockBLOCK Pro is a plug-and-play satellite IoT gateway that sends message-based data using Iridium Messaging Transport (IMT), with payloads up to 100 kB and typical end-to-cloud latency under 10 seconds. It's ideal when you need reliable, efficient uplink/downlink from anywhere with a view of the sky.

Engineered for the field, Pro pairs an IP66 enclosure with wide range DC input and exceptionally low power draw: <200 mW idle; <75 mW sleep. It features on-board processing that handles queuing, retries, and network housekeeping. Integration stays simple via RS-232/RS-485, configurable I/O, built-in GNSS, and tight Cloudloop data routing.

Ideal for: **Remote sensor / gateway telemetry from substations, pump/lift stations, reservoirs, and cabinets, Location and movement data for mobile equipment, Vehicle or asset health reporting (status, alarms, usage) from dispersed fleets and work sites.**

**IMT messaging up to 100 kB**
Send/receive compact to large payloads - aggregated sensors, images, even audio clips - without running IP stacks.

**Fast, predictable delivery**
Typical end-to-cloud latency is under 10 seconds for responsive control and alerting.

**Ultra-low power design**
Draws <200 mW when idle and <75 mW in sleep, suitable for battery/solar sites.

**Ruggedized for the field**
IP66 enclosure, wide operating temperature, and approved Iridium/GNSS antenna options.

**Simple integration**
RS-232/RS-485 serial, configurable analog/digital I/O, BLE for setup, and support for legacy 9603 AT commands.

**Built-in GNSS + Cloudloop**
Concurrent GNSS for positioning and seamless routing to AWS/Azure/GCP, webhooks, MQTT, email via Cloudloop Data.

**RockBLOCK Pro is a compact, IP66, message-based satellite gateway that keeps utility sensors, assets, and vehicles connected cost effectively, with big messages, low power, and straightforward integration.**

# TSAT Private Satellite (SCADASat)

## Client-owned, closed satellite networks for SCADA and telemetry, independent of public infrastructure.



TSAT creates a private satellite network that you own and operate, delivering deterministic, always-on connectivity for remote SCADA and telemetry. A compact hub at your control center and low power remotes in the field form a closed system that's isolated from the public internet for superior security and resilience.

Built for utilities, TSAT supports both legacy serial and modern IP devices, so you can connect RTUs, PLCs, meters, and sensors without re-architecting your control environment. Star and mesh topologies, quality of service (QoS) controls, and tight polling schedules enable reliable command and control, even where terrestrial networks are unavailable or unreliable.

Ideal for: **Substation and recloser control in rural or fire-prone regions, Water/wastewater lift stations, reservoirs, and valve/pump automation, Pipeline and cathodic protection monitoring across long distances, Renewable generation SCADA (wind/solar) and battery energy storage sites.**

**Private, closed network**
A dedicated hub and remotes create an internet-isolated system for critical operations.

**Designed for SCADA**
Deterministic scheduling and QoS preserve polling cadence and command latency for control systems.

**Serial and IP support**
Connect legacy RS-232/RS-485 devices alongside modern Ethernet-based RTUs and PLCs.

**Flexible topologies**
Star and mesh options let you optimize for coverage, resilience, and traffic patterns.

**Strong security**
Encrypted links, VLAN segmentation, and role-based access help safeguard sensitive telemetry.

**Rapid, scalable deployment**
Add sites quickly and scale from a handful to thousands of remotes without dependence on local terrestrial networks.

**TSAT is a purpose-built private satellite platform that keeps utility SCADA and telemetry online, secure, and deterministic, wherever your assets are.**

# RockREMOTE Rugged & RockREMOTE Mini


## Iridium Certus 100 telemetry terminals. Choose compact Mini for tight, low power installs or Rugged for dual-mode satellite + LTE.

RockREMOTE terminals move your SCADA and IoT data from anywhere using Iridium Certus 100. Both models support efficient IP and message-based workflows (IMT up to 100 kB), rugged environmental protection, and straightforward integration for remote control cabinets, RTUs/PLCs, and field sensors.

Pick the form factor that fits the job: RockREMOTE Mini is an IP66, low power unit with Ethernet/serial/GPIO and PoE/10–30 V options for compact, solar-friendly installs; RockREMOTE Rugged adds IP67 hardening, LTE fallback alongside Certus 100, and more headroom for hosted applications in fixed or mobile environments.

Ideal for: **Substation / recloser telemetry and remote PLC access, Water / wastewater pump, lift station, and reservoir monitoring, Solar / wind site backhaul and environmental sensing, Mobile or temporary works - trailers, maintenance fleets, and remote depots**

**Two fit for purpose hardware options**
Mini for compact, low power IP66 installs; Rugged for IP67 hardening, LTE + satellite, hosted applications, and MQTT-ready control.

**Certus 100 + IMT efficiency**
Move data via IP or Iridium Messaging Transport (up to 100 kB per message) for predictable costs and battery friendly duty cycles.

**Flexible I/O for industrial assets**
Ethernet plus RS-232/RS-485 and GPIO simplify connectivity to meters, RTUs and PLCs.

**Power options that fit the cabinet**
PoE or 10–30 V DC on Mini for solar / remote panels; standard DC on Rugged.

**Dual mode resilience (Rugged)**
Satellite first, with LTE Cat-4/Cat-1 for least-cost routing when cellular is available.

**Edge / hosted apps (Rugged)**
Run applications at the terminal to preprocess data and reduce airtime.

Rugged

Mini

**One platform, two enclosures: Mini for compact, ultra efficient satellite telemetry; Rugged for the same Certus 100 reach with LTE resilience and application hosting. Either way, your data keeps flowing from wherever your assets live.**

# RockSTAR Handheld Tracker & Messenger


## 12 month battery life, one press SOS, and glove-friendly durability for utility field teams.

RockSTAR keeps lone workers and field crews visible and connected with two way messaging, automated tracking, and an SOS button that shares your location with nominated contacts. It operates far beyond cellular coverage, so supervisors can coordinate teams and respond quickly when conditions change.

Designed for harsh environments, RockSTAR pairs an IP67, MIL-STD-810 tested enclosure with a high visibility OLED screen and large, glove operable buttons. Typical battery life ranges from ~12 months (1 report/day) to ~3 weeks (every 15 minutes), so you can match duty cycle to the mission without constant charging.

Ideal for: **Lone-worker safety for site inspectors and field engineers, Storm response and damage assessment teams operating beyond cellular networks, Vegetation management / line patrols, Remote operations at substations, reservoirs, pipelines and wind/solar sites.**

### Exceptional battery life

~12 months at 1 position per day; ~3 months at hourly; ~3 weeks at 15-minute intervals - choose the profile that fits the task.

### Dedicated SOS with location

One press emergency alert sends your position to nominated contacts for rapid coordination.

### Rugged & weatherproof

IP67/MIL-STD-style durability with a bright OLED and large, glove operable buttons for real field conditions.

### Two way messaging & tracking

Global Iridium SBD connectivity for short messages and scheduled position reports beyond cellular.

### Cloudloop Tracking (built-in)

Map-based view of current and historical positions; distance travelled views for individuals or groups; speed monitoring and simple event tracking (e.g., signal loss).

### Flexible integration

Use Cloudloop out of the box or consume data via APIs; for complex operational requirements, ask about our specialist partners.

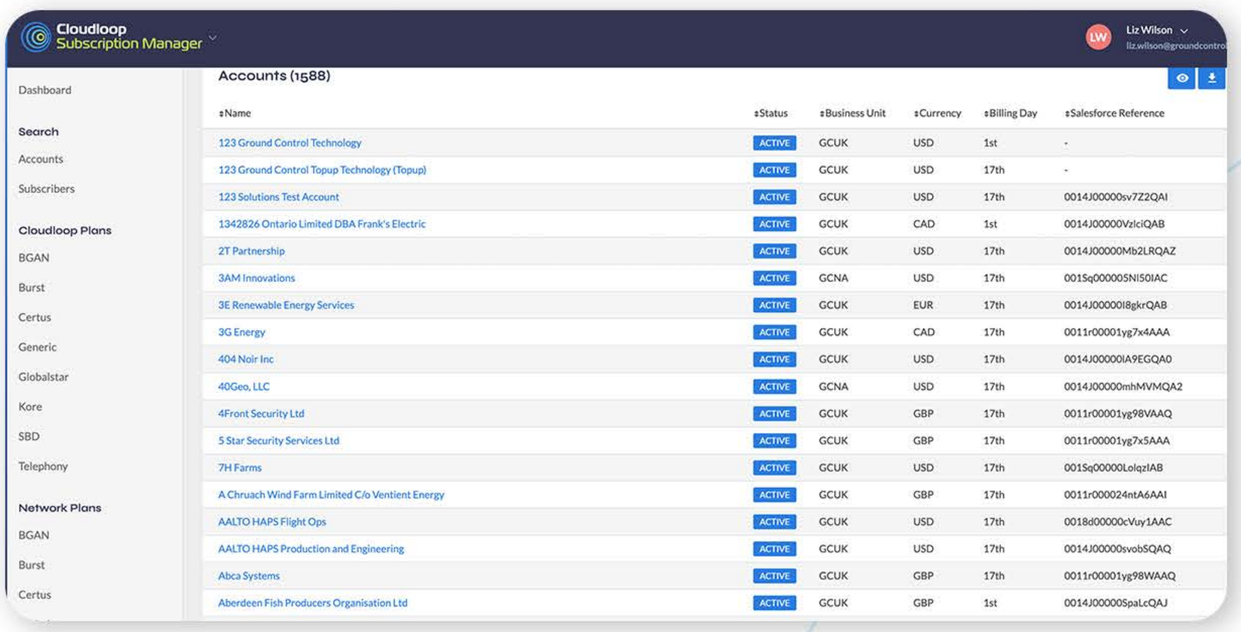
**RockSTAR is a tough, long life handheld that gives utility teams dependable tracking, two way messaging and a clear SOS path; purpose-built for real work in hard places.**

# Coordination And Control
## Powered By Cloudloop

**Cloudloop is Ground Control's satellite IoT platform for managing devices, airtime, and data in one place: API first, real time, and built for remote, mission critical operations.**

Use it to configure routes, automate workflows, and keep costs predictable across mixed satellite fleets.

## Cloudloop
### Subscription Manager




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

Activate, suspend, or terminate SIMs/plans across satellite networks

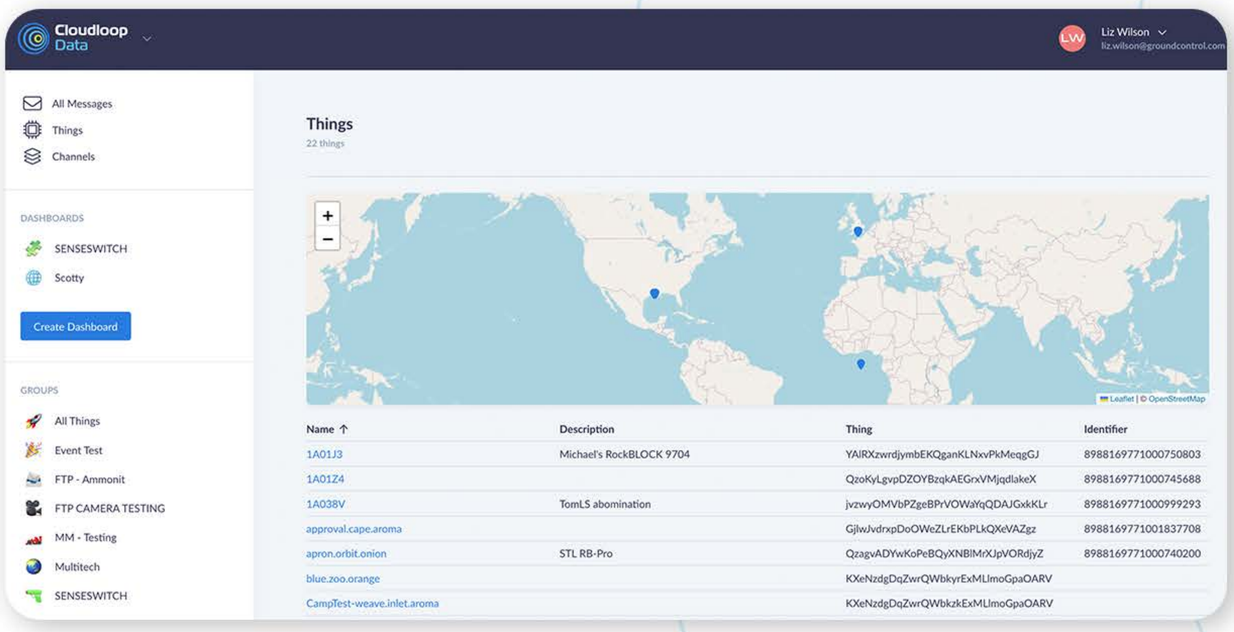
Set usage alerts; review invoices; pool allowances (where supported)

Align billing with your org structure (accounts, cost centers, tags)

Track spend by site, region, or project to support chargeback/forecasting

All actions are available via UI or API, enabling integration with finance and operations.

## Cloudloop
### Data




### Secure, reliable delivery of field data from device to destination.

Ingest message-based payloads (e.g., SBD, IMT) from mixed device fleets

Decode and normalize into a unified schema for downstream systems

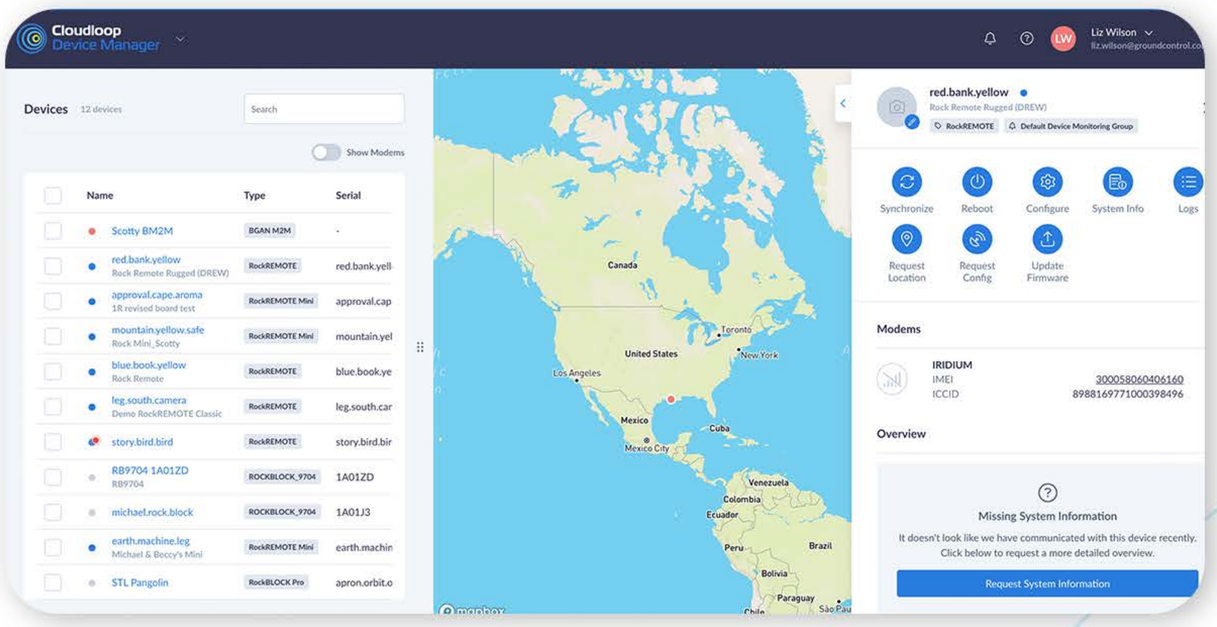
Route via REST/webhooks/MQTT or to AWS/Azure/GCP services

Store and forward with searchable history for troubleshooting and audits

Configure routes once, then let Cloudloop move telemetry where you need it, consistently and securely.

# Coordination And Control
## Powered By Cloudloop

# Cloudloop
## Device Manager




**Manage deployed hardware securely, without site visits.**

Monitor signal, status, sessions, and message health across devices

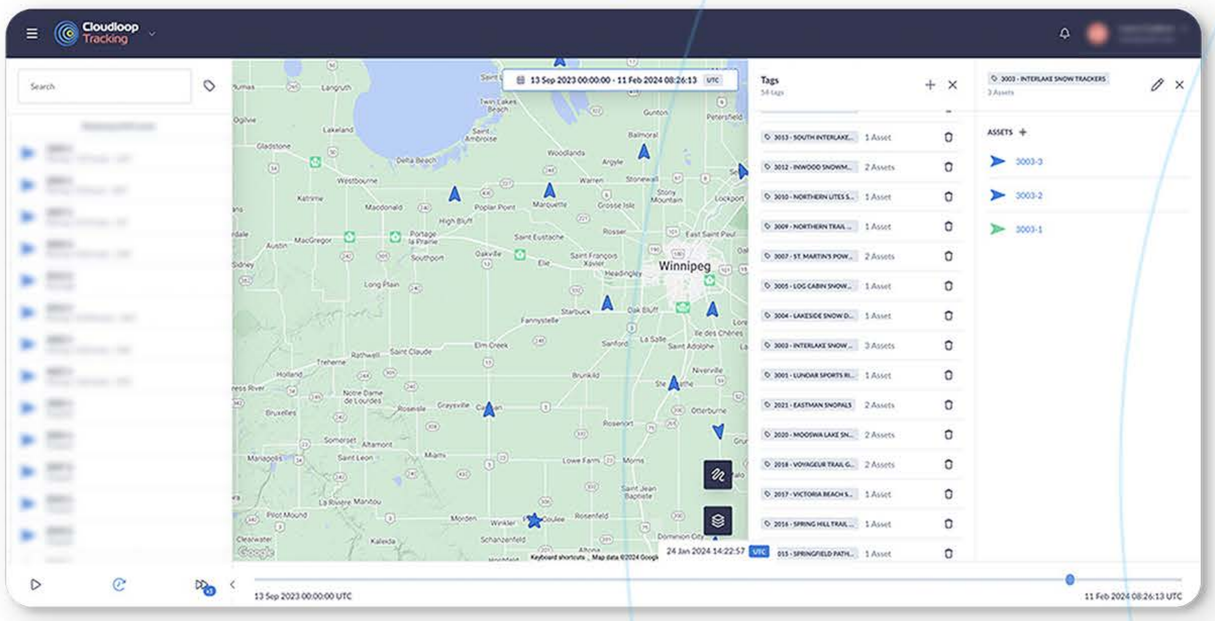
Apply remote actions (reboot, connect/disconnect, send AT/SMS commands)

Schedule configuration changes and perform firmware updates at scale

Create alerts for offline devices, unusual traffic, or policy breaches

From cabinet gateways to handhelds, keep your field estate compliant and up to date.

# Cloudloop
## Tracking




**Maintain visibility of field teams, vehicles, and mobile assets.**

Map-based view of current and historical positions with breadcrumb trails

Geofences and instant notifications for SOS and key events

Distance and speed views for individuals or groups

Simple event tracking (e.g., signal loss) and easy export for reports

Use Cloudloop out of the box, or integrate via APIs to fit your operational picture.

# Why Work With Ground Control

**We're a proven partner to Utilities & Renewables, both directly and through the supply chain.**


**Coverage that fits the job:** LEO, GEO, and cellular, mixed for resilience, cost, and performance.

**Engineered solutions:** Our own specialist devices plus best in class third party tech, integrated end to end.

**Cloudloop control:** API-first platform for subscriptions, devices, data, and tracking, managed in one place.

**Proven expertise:** 20+ years in satellite communications, with UK & US engineering and hands-on support.

**Flexible engagement:** Work with us directly, or through your supply chain - we fit your delivery model.

# Why Us

Field proven devices and networks that perform in harsh, remote environments

Transparent costs, simple operations, and responsive support

A single partner from hardware to airtime to data, delivering end to end accountability

**Where reliability matters most, we combine resilient connectivity, purpose-built hardware, and Cloudloop control to deliver outcomes, not just links.**

Ground Control

**hello@groundcontrol.com**
**www.groundcontrol.com**

UK +44(0) 1452 751940
US +1.805.783.4600