

Satellite Pathways — Technical Overview

How SatSentinel uses satellite networks to move critical events from remote sites to the right people.

WHY A SATELLITE PATHWAY

GSM and fibre coverage stops well short of many farms, mines, corridors and remote facilities, and can fail exactly when an incident occurs. SatSentinel treats satellite as the primary transport for critical events, so safety, alarm and incident workflows continue to function beyond terrestrial coverage.

SUPPORTED NETWORKS

- Iridium
- Thuraya
- Other approved networks, confirmed per deployment
- Future LEO pathways on the roadmap

TRANSPORT DESIGN

- Event-based transmission rather than continuous streaming.
- Payload optimisation and message compression to control satellite data usage and cost.
- Scheduled updates and threshold-based reporting for routine telemetry.
- Store-and-forward buffering where the device supports it, so events are delivered when a link returns.
- Delivery-latency reporting per device and per event, surfaced in the platform.

WHAT THIS MEANS OPERATIONALLY

Delivery is near-real-time and event-driven. Actual latency depends on the satellite network, the device, the site environment and the configured reporting profile — not on a fixed guarantee. Reporting intervals, escalation timing and buffering behaviour are configured per deployment so operating cost and responsiveness are balanced for each use case.

CHOOSING A PATHWAY

- Where do the people, vehicles or assets operate, and for how long at a time?
- How urgent is each event class — distress, alarm, crash or routine telemetry?
- What reporting frequency does the operation genuinely need?
- What device form factor suits the user: handheld, vehicle-mounted or fixed site hardware?
- What data budget is acceptable per device per month?

Network availability, device compatibility and coverage for a specific operating area are confirmed with Fluxcon during scoping.