GNSS DISPLACEMENT MONITOR

# grillo slide

A solar-powered GNSS system that measures millimetre-scale ground movement on slopes, tailings dams, and infrastructure. Deployed as a pair at minimum — one base on stable ground and one rover on the moving mass — for geotechnical teams, mining and utility operators, transport authorities, and research groups monitoring landslides where there is no power and marginal coverage.

| PRECISION | ARCHITECTURE | DUTY CYCLE | BACKHAUL | ENCLOSURE |
|---|---|---|---|---|
| RTK, mm-level | 1 base + n rovers | Sleep / wake | LTE · Wi-Fi | IP68 polycarbonate |

## what makes it different

01 / COST PER POINT

### One base, many rovers

Slide ships as base and rover units: a minimum deployment is two devices. One base then corrects every rover joined to its 2.4 GHz mesh, so a dozen measurement points does not mean a dozen survey systems.

02 / OFF-GRID ENDURANCE

### Duty-cycled for solar sites

Rovers sleep between scheduled fixes and wake to observe, solve, and report. Measurement cadence is set remotely, trading interval against power budget through overcast weeks.

03 / DEPLOY IN A MORNING

### No trenching, no cabinet

The unit holds its own 18650 cells and mounts on a post or rock anchor. Site work is a small solar panel and two SMA connections — GNSS antenna and mesh radio. No logger enclosure, no mains.

04 / CLOUD-NATIVE

### Displacement, not raw files

Positions arrive as displacement time series with velocity trends and threshold alerts in the Slide dashboard, with API access and export into your own systems.

FIELD PILOT

### Oregon State University

Landslide monitoring at rural sites, where the nearest power and fixed network are far from the slope being watched — the conditions Slide is built for.

### Pairs with seismic monitoring

Sites often run Slide for slow deformation and Grillo Pulse for ground shaking, capturing both the creep and the trigger. Each product has its own dashboard today.

### Familiar operations model

Over-the-air configuration, remote health reporting, and cloud or on-premise ingestion follow the same approach across Grillo hardware.

# grillo slide — specifications



## GNSS MEASUREMENT

| | |
|---|---|
| Method | RTK carrier-phase, base and rover |
| Precision | Millimetre-level horizontal |
| Constellations | Multi-constellation GNSS |
| Output | Displacement time series, E/N/U |
| Alerting | Threshold and velocity triggers |
| Timing | GNSS-disciplined |

## NETWORK ARCHITECTURE

| | |
|---|---|
| Minimum system | 2 devices — 1 base + 1 rover |
| Topology | One base, many rovers |
| Base ⇔ rover link | 2.4 GHz mesh radio |
| Base role | Corrections and cellular backhaul |
| Siting | Base on stable ground off the slope |
| Scaling | Add rovers to the mesh, no new base |

## POWER AND DUTY CYCLE

| | |
|---|---|
| Battery | Integrated 18650 cell holder |
| Charging | External small solar panel |
| Operation | Scheduled sleep / wake cycle |
| Cadence | Set over the air per site |
| Sleep draw | Low-power standby between fixes |
| Health telemetry | Battery, charge state, signal, uptime |

## CONNECTIVITY AND DATA

| | |
|---|---|
| Primary link | LTE cellular, global bands |
| On-site link | 2.4 GHz mesh, base to rovers |
| Ingestion | Slide cloud service or on-premise |
| Access | Slide dashboard, API, data export |
| Management | Over-the-air configuration |

## PHYSICAL

| | |
|---|---|
| Enclosure | IP68 weatherproof polycarbonate |
| Connectors | 2 × SMA — GNSS antenna, mesh radio |
| Mounting | Post or rock anchor |
| Temperature | −20 °C to +60 °C |

## talk to sales about your site

Send us the slope, the access constraints, and the reporting interval you need. We will scope base placement, rover count, mesh range, and the data path into your systems.

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