accutrak group

Digital Production Monitoring for Mining

Solutions Overview

Capabilities, features and benefits across the suite

If you can measure it, you can manage it.

www.accutrak.group
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Surface | Underground | On-Road
Eight distinct solutions, deployable separately or together

THE SUITE

Accutrak Group Solutions

Fit-for-purpose monitoring across the full ore-handling chain

Accutrak Group delivers a portfolio of mining production monitoring solutions. Each solution is purpose-built for a specific stage of the ore-handling chain - from deep-level underground operations to open pits and the public roads in between - and is deployable as a standalone system. Where two or more solutions are deployed at the same operation, the data can be consolidated into a single view if required.

01

Trucktrak

UNDERGROUND LOAD & HAUL

TMM fleet visibility and production

02

Minegaze

OPEN-PIT & SURFACE LOAD & HAUL

Surface fleet productivity and ore flow

03

Roadgaze

ROAD HAULAGE & SECURITY

On-road monitoring for high-value loads

04

Smartrail

LOCOMOTIVES & HOPPERS

Tracking and weighing of rail tramming

05

Conveyor Belt Scales

IN-MOTION WEIGHING

Sub-10-second tonnage with full diagnostics

06

Payloads

TONNAGE SOLUTIONS

Weighbridges, onboard weighing, scanning

07

Accuchip

TRACKING INFRASTRUCTURE

RFID + RTLS for material cars, machines, personnel

08

Unified Platform

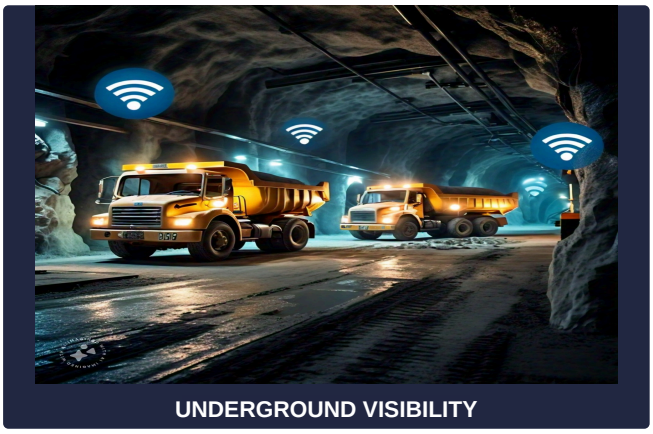
CONSOLIDATED ORE FLOW

Hardware → edge → server → application

SOLUTION 01

Trucktrak

Real-time production and fleet performance for trackless mobile machinery underground



UNDERGROUND VISIBILITY

PRODUCTION REPORTS

Trucktrak eliminates operational blind spots underground by delivering real-time insight into every LHD and dump truck on site - where it is, what it's producing, and how it's performing, every minute of every shift. From live fleet visibility to production reports, Trucktrak converts raw machine data into clear, actionable intelligence.

Key Features

- Rugged in-cabin Trucktrak Data Device (TDD) with onboard processing
- Reliable underground GPS and mesh network connectivity
- OEM-agnostic: any LHD or dump truck make or model
- Onboard event validation independent of server connectivity
- Continuous monitoring of loading, hauling and tipping
- Integration with mine planning data for in-shift compliance

Key Benefits

- Identify inefficiencies and eliminate fleet bottlenecks
- In-shift control - act while there is still time to act
- Move from periodic survey to continuous live actuals
- Drive short-interval control and dispatch optimisation
- Visibility across tunnelling, room & pillar and portal mining
- Close the gap between plan and actual production

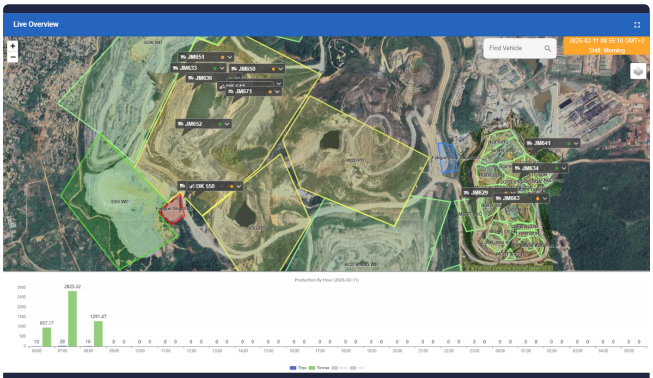
TYPICAL APPLICATIONS

Deep-level gold and PGM mines, room & pillar coal, portal mining and tunnelling - any underground operation running trackless mobile equipment.

SOLUTION 02

Minegaze

Open-pit and surface fleet production monitoring with live ore-flow telemetry



LIVE FLEET LOCATIONS

ORE-FLOW VISIBILITY

Minegaze eliminates operational blind spots by delivering real-time insight into every vehicle on site - where it is, what it's producing, and how it's performing, every minute of every shift. Each vehicle carries an in-cabin Minegaze Data Device (MDD) with vehicle-to-vehicle mesh networking that ensures reliable connectivity even in pits without continuous coverage.

Key Features

- Rugged Minegaze Data Device (MDD) with onboard processing
- GSM, GPS and vehicle-to-vehicle mesh network connectivity
- Automatic intelligent data handoff in poor coverage areas
- Live locations, loader productivity and trip cycle analytics
- Continuous monitoring of loading, hauling and tipping
- Push notifications and exception alerts in-shift

Key Benefits

- Real-time visibility of every vehicle on site
- Identify inefficiencies and eliminate bottlenecks
- In-shift compliance and short-interval control
- Reliable data delivery without extra Wi-Fi infrastructure
- Plan-vs-actual visibility at every level of operation
- Fleet utilisation insights across the whole open-pit

TYPICAL APPLICATIONS

Open-pit and surface mining operations across all commodities - haul truck fleets, loader fleets and ancillary equipment with full ore-flow telemetry.

SOLUTION 03

Roadgaze

On-road fleet monitoring and security alerts for high-value mineral haulage

LIVE ROUTE TRACKING

- ✓ GPS positioning allows you to know **where the trucks are**.
- ✓ Geofences allow you to know if a truck **drives off the approved route**.
- ✓ Tipping sensors allow you to know if a truck **tips outside of an approved area**.
- ✓ GPS positioning allows you to know if a truck **stood still longer than the acceptable duration** on the route.

TRIP MONITORING

Roadgaze eliminates blind spots on public road haulage by delivering real-time insight into every truck on the road - where it is, how many trips it has completed, and how it is performing. When trucks carry high-value ore on public roads, every deviation matters: Roadgaze monitors every trip and triggers instant push notifications the moment a security event occurs.

Key Features

- Rugged Roadgaze Data Device (RDD) - OEM-agnostic install
- Edge computing with local data caching during outages
- Live truck location, route and trip status tracking
- Real-time security event alerts (route, stop, deviation)
- Per-trip load-and-tip cycle records
- Automatic cloud sync the moment connectivity returns

Key Benefits

- Reduce in-transit security incidents on high-value ore
- Operations visibility across every truck, every shift
- Identify where time and tonnes are being lost
- Reliable trip records even in poor coverage corridors
- Faster response to security events as they happen
- Tighten productivity in road haulage operations

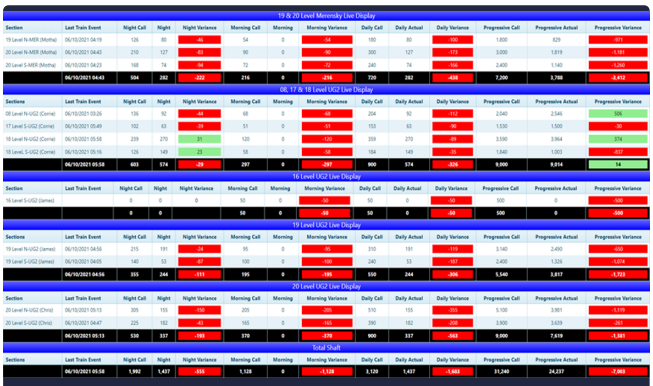
TYPICAL APPLICATIONS

Road haulage of gold, copper concentrate and other high-value ores between mining operations and processing or rail-loading facilities.

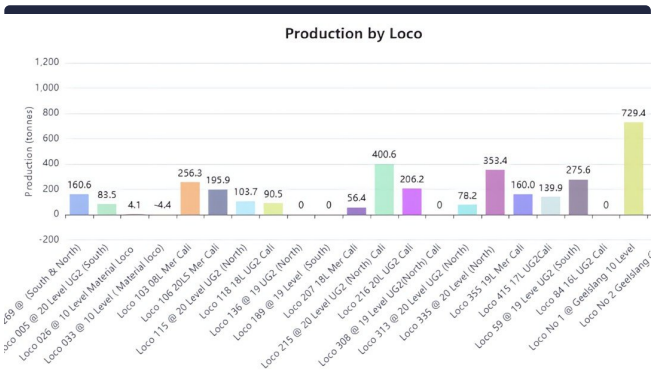
SOLUTION 04

Smartrail

Tracking and in-motion weighing of locomotives and hoppers - underground or surface



LIVE DISPLAY



PRODUCTION BY LOCOMOTIVE

Smartrail brings continuous, automated production data to rail tramming operations. RFID tags on locomotives, hoppers, ore chute boxes and tips, paired with reader stations and an in-motion bi-directional weighbridge, deliver throughput and compliance data live - without the periodic survey wait.

Key Features

- Smartrail Data Device (SDD) at reader stations
- RFID tagging of locos, hoppers, chute boxes and tips
- Bi-directional in-motion weighbridge (full + empty)
- Continuous identification of load and tip locations
- Production dashboards with live throughput visibility
- Braked-vs-unbraked cost analytics

Key Benefits

- Live actuals replace periodic post-shift surveys
- Accurate per-trip payloads accounting for carry-back
- Eliminate waste from overtipping and miscounted hoppers
- Compliance reporting against the rail plan
- Throughput insight by level, loco, hopper or tip
- Better short-term scheduling backed by real data

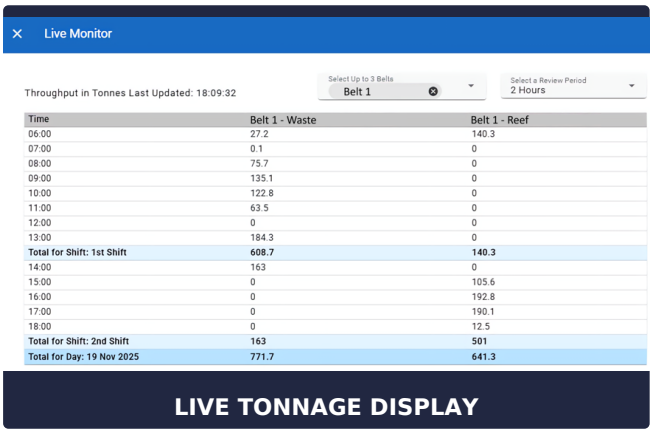
TYPICAL APPLICATIONS

Underground deep-level mines tramming raw material via rail, surface rail networks at tip points, and any rail-bound bulk material movement.

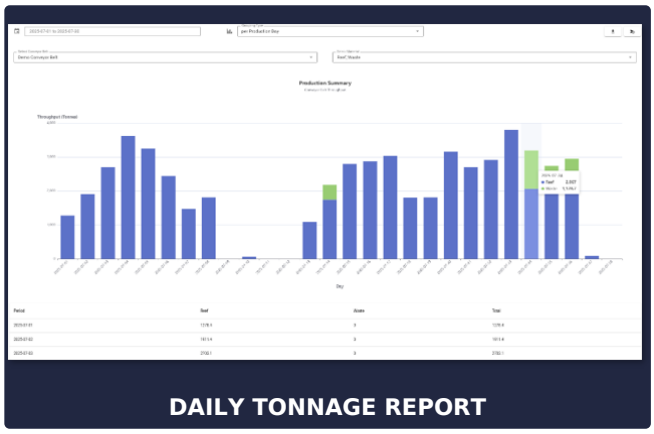
SOLUTION 05

Conveyor Belt Scales

Live in-motion weighing with sub-10-second updates and proactive maintenance



LIVE TONNAGE DISPLAY



DAILY TONNAGE REPORT

Conveyor Belt Scales convert raw conveyor data into clear, actionable intelligence - live tonnage, precision hardware and proactive diagnostics. Every weighing event is visible on the operations platform within 10 seconds, with multi-idler accuracy and continuous cross-platform validation built in.

Key Features

- Multi-idler floating design for stable load distribution
- Robust in-line idler frame for harsh environments
- Discrete load cells with continuous validation
- Dual-platform verification with auto deviation detection
- Belt profiling for proactive maintenance
- Real-time outputs (kg/s, kg/m, m/s, total kg)

Key Benefits

- Sub-10-second tonnage visibility - no waiting
- Reliable accuracy across the most demanding plants
- Proactive intervention before failures hit production
- Automated reef vs waste classification
- SCADA integration where required
- Reduced maintenance burden in harsh conditions

TYPICAL APPLICATIONS

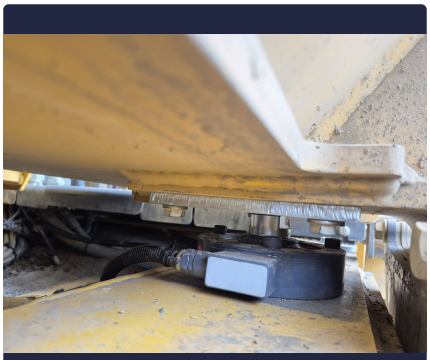
Underground and surface conveyors carrying ROM ore, reef/waste streams and bulk material flows feeding stockpiles or processing plants.

SOLUTION 06

Payloads

Tonnage solutions - weighbridges, onboard weighing and volumetric scanning

IN-MOTION WEIGHBRIDGE



ONBOARD WEIGHING

VOLUMETRIC SCANNER

Payloads brings the right tonnage solution for your operation: in-motion weighbridges, onboard truck weighing and volumetric laser scanning - all integrating seamlessly with the wider Accutrak production monitoring stack. Customisable per site and engineered for accuracy across full and empty events.

Key Features

- In-motion weighbridges with full + empty event capture
- Direction-aware weighing with carry-back compensation
- Onboard weighing systems for trucks and TMMs
- Volumetric laser scanning where weighbridges aren't viable
- Sub-10-second event-to-screen data delivery
- Linked tonnages tied to unique trip IDs

Key Benefits

- Delivered mass calculated accurately on every trip
- One source of truth for plan-vs-actual reconciliation
- Site-specific scoping - pad, approach, classification
- Source-and-destination weighing where required
- Open data via API and server-level access
- No tonnage gap between fleet system and metallurgy

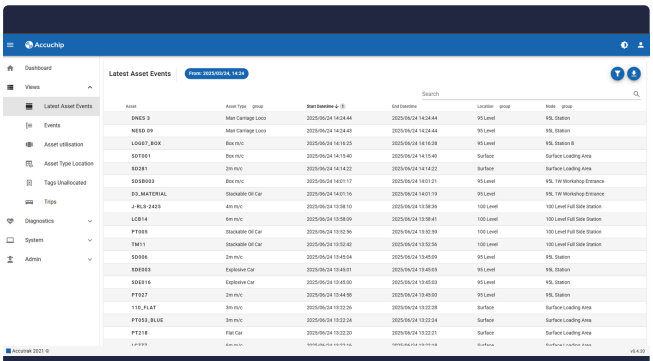
TYPICAL APPLICATIONS

Pit exits in open-pit operations, ore pass tips and shaft landings underground, source/destination installations for road haulage, and processing plant entry points.

SOLUTION 07

Accuchip

Tracking infrastructure - zone-based RFID, RTLS, or both



ZONE-BASED TRACKING

REAL-TIME LOCATION SYSTEM

Accuchip is an underground tracking platform fed by either zone-based passive RFID infrastructure or a high-resolution RTLS network - or a combination of both. The application layer adapts to the use case: material car tracking, mobile machine monitoring or personnel tracking, each with its own reporting, alerting and compliance tools.

Key Features

- Passive RFID readers at fixed checkpoints
- RTLS via PoE anchors with up to 2 km cable runs
- Active and BLE tag support for assets and personnel
- Automatic timestamps on every zone entry/exit
- Real-time count of cars, machines and people by zone
- Unified application layer across all use cases

Key Benefits

- One platform - choose the infrastructure that fits
- Always know how long assets have been underground
- Better fleet distribution across production zones
- Personnel safety and compliance visibility
- Maintenance and security check-out tracking
- Foundation for digitising surface and shaft management

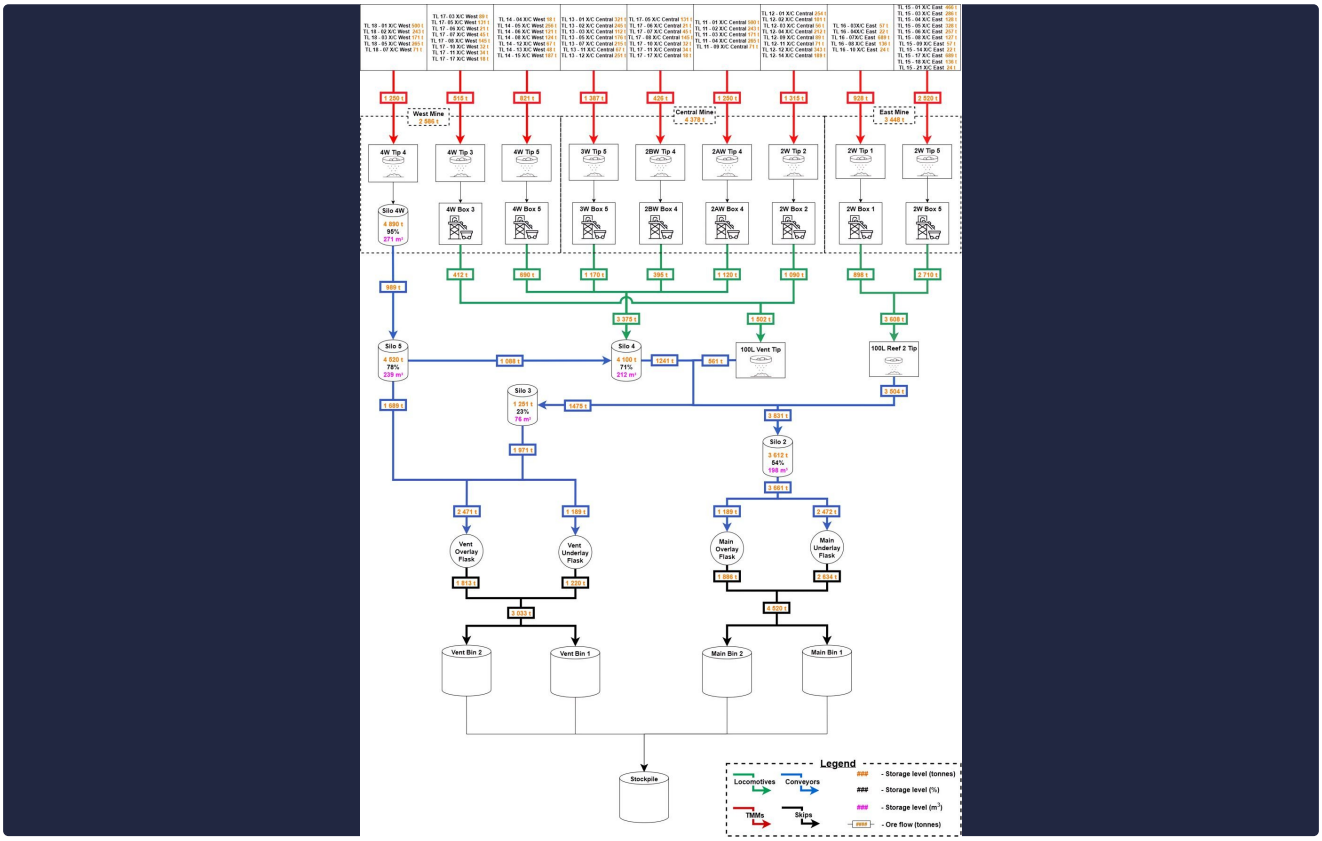
TYPICAL APPLICATIONS

Material car tracking on deep-level gold mines, mobile machine monitoring across underground fleets, and personnel tracking for safety and compliance.

SOLUTION 08

Unified Platform

The architecture that ties hardware, edge, server and application layers together



A single platform connecting every ore-handling system across your operation. Purpose-built OEM data devices deliver onboard event validation; the server layer is hosted by Accutrak or deployed on-premises; all production data feeds a single consolidated repository for real-time dashboards and historical reporting at any aggregation level.

Key Features

- Hardware layer: SDD, TDD, MDD and weighing electronics
- Edge layer: onboard validation and mesh networking
- Server layer: managed cloud or on-premises deployment
- Repository layer: one structured data store for all systems
- Application layer: dashboards, reports, alerts and APIs
- Open architecture with full data access

Key Benefits

- Cross-system ore-flow visibility from one platform
- Reconciliation in real time, not weeks later
- Consistency across views, reports and integrations
- Choose your hosting model - cloud or on-premises
- Drill-down utilisation insights across the operation
- Integrate easily with your existing analytics stack

TYPICAL APPLICATIONS

Any client deploying two or more Accutrak systems and needing a consolidated view, with the option for on-premises hosting where data governance demands it.

OPERATIONAL LAYER

Insights, Control and Support

Live in-shift intelligence - not post-shift reporting

The Accutrak platform delivers a single, live production view across your entire instrumented operation. Whether you are monitoring Smartrail underground, Trucktrak TMMs, Minegaze surface fleet, or Conveyor Belt Scales - all data feeds unified dashboards that update in near-real time throughout the shift. Supervisors, production engineers and management get the information they need while there is still time to act.

In-Shift Production Dashboards

Live production view across every system. Plan-vs-actual, live tonnage totals, fleet utilisation and productivity metrics from the moment the shift starts.

Push Notifications

Operationally relevant events - tipping exceptions, security alerts, threshold breaches - pushed instantly to the right people, on the right device, the moment they happen.

Aggregated Reports

Self-service access to structured production reports across any aggregation level - by shift, day, week, month, level, fleet, asset or operator. Schedule it once, get it forever.

After-Sales Support

Dedicated field teams for installation, maintenance and calibration. A site manager is typically assigned to each client, supported by hardware and IT teams that respond promptly when issues arise.

Capabilities at a Glance

Surface Mining	Open-pit fleet, payload, conveyor and weighbridge monitoring
Underground Mining	TMM, locomotive, material-car and personnel tracking
On-Road Haulage	Live visibility and security monitoring for high-value payloads
Production Reporting	In-shift dashboards, scheduled reports and exception alerts
Hardware Engineering	OEM-agnostic, purpose-built electronics for harsh environments
Software & Integration	Open architecture with API and server-level data access

WHY ACCUTRAK

What Our Solutions Have in Common

Engineering principles shared across the suite

01 Mining-Specific Engineering

Every solution is built for mining environments - dust, vibration, intermittent connectivity, deep-level operations and harsh outdoor conditions.

02 OEM-Agnostic Hardware

Our data devices install on any equipment make or model without modification. Purpose-built electronics, designed and built in-house.

03 Onboard Event Validation

Sensor fusion at the edge means events are validated locally - no dependency on server connectivity at the moment of measurement.

04 In-Shift, Not Post-Shift

Every solution is engineered for in-shift control. Dashboards, alerts and notifications fire while there is still time to act.

05 Open Data Architecture

Server and API access are standard. Custom dashboards and reports are part of our offering. We integrate with your stack actively.

06 Local Service, Group Capability

A site manager is typically assigned to your operation, backed by hardware and IT teams across the group's member companies.

Ready for a closer look?

Talk to the group about a deployment, demo or quote. We'll match the right solution to your operation.

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