

Mining / Haul Truck Volumetric Scanner

Maximising Profits & Payloads

Accurate. Reliable. Real-time.

The TVS LiDAR system delivers accurate, real-time volumetric measurements for haul trucks in the toughest conditions.

-  Non-contact volumetric measurement
-  Real-time data & 3D point cloud
-  High accuracy in harsh environments
-  No stopping required
Scan in-motion
-  Improve load optimisation & revenue accuracy



ADANI, Indonesia

Product Overview

TVS LiDAR Scanner



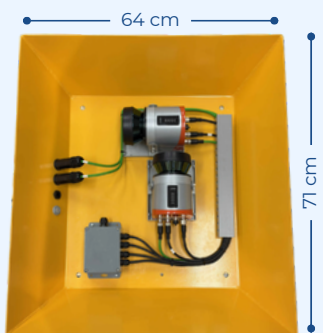
-  High accuracy volumetric data
-  270° wide field of view
-  Real-time processing
-  Rugged industrial design (IP67)
-  3D point cloud output
-  Seamless system integration

LiDAR Scan Head Enclosure



LiDAR Enclosure

64 cm (W) x 71 cm (H) x 19 cm (D)



Electrical Cabinet



Electrical Cabinet (Front)

32 cm (W) x 40 cm (H) x 16 cm (D)



Electrical Cabinet (Bottom View)

32 cm (W) x 13 cm (H) x 16 cm (D)

Measure Every Load. Optimise Every Trip.

Western Australia



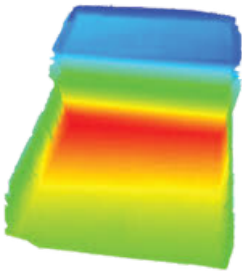
TRAKBLAZE TVS uses advanced LiDAR technology to capture the true volume of material in-motion. Get accurate results without stopping your trucks.

- ✓ No stopping required
- ✓ Improve payload optimisation
- ✓ Reduce over / under loading
- ✓ Increase billing accuracy
- ✓ Enhance site safety
- ✓ Reduce fuel & tyre wear

How it works

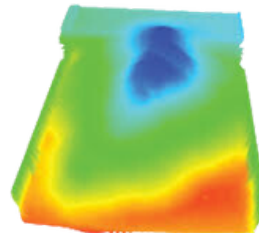
1 Empty Reference Scan

Capture the empty truck body profile



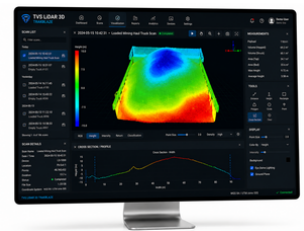
2 Loaded Scan

Capture the loaded material in-motion



3 Volume Calculation

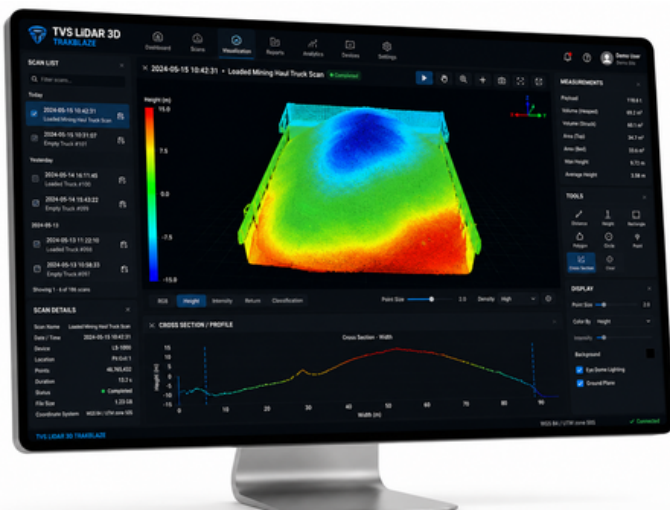
Capture Software calculations exact material volume



Turn Data Into Actionable Insights

TVS provides real-time volumetric results and high resolution 3D point clouds for complete material visibility.

-  Real-time volume calculation
-  High density 3D point cloud
-  Web-base dashboard & reporting
-  API integration with fleet & mine systems
-  Data login & analytics





The **TVS Volumetric Scanner** can be fully integrated with the TRAKBLAZE **FORCE 1 WIM (Weigh-In-Motion) Truck Axle Weigher System** and the **FORCE 2 & 4 Mining Truck Scales** to create a complete automated payload verification and material accountability solution for mining and haul-truck operations.

By combining real-time volumetric scanning with dynamic axle-weighting technology, operators gain a significantly more accurate understanding of the true material value being transported.

Combined Volume + Weight Intelligence

TVS LiDAR Volumetric Scanner

Measures:

- Material volume
- 3D load profile
- Load distribution
- Overfill / underfill conditions

FORCE 1 WIM Truck Axle Weigher

Measures:

- Total gross vehicle weight
- Individual axle weights
- Payload distribution
- Vehicle compliance data

Accurate Material Value for Wet Loads

Mining materials often contain moisture, resulting in inflated payload weights that do not represent the true material value. By combining Volumetric measurement (m^3) from TVS & Dynamic axle weight data from FORCE 1 WIM Operators can better determine:



Actual material density



True payable product value



Improved production reporting accuracy



Moisture impact on payloads



Real dry material estimation

Complete Automated Mining Load Management Solution

The integrated TVS + FORCE 1 platform provides:

- ✓ Real-time volumetric measurement
- ✓ Dynamic axle weighing
- ✓ Automated vehicle identification
- ✓ Driver guidance systems
- ✓ Smart traffic management
- ✓ Payload compliance monitoring
- ✓ Material accountability reporting
- ✓ Fleet productivity optimisation



Ghana, Africa

Optional Smart Site Automation Modules

The TVS system can be expanded into a fully automated smart mining checkpoint with a range of optional integrations.



RFID Tag Reader
Integration



ANPR / License Plate Recognition Cameras



Remote LED Display
Boards



Traffic Light & Stop / Go Systems



Automatic Boom Gate
Integration



SMS Weigh Data Notifications

TVS LiDAR System Specification

Measurement Accuracy	±1% Achievable Accuracy
Reliability	>99% Successful Scans Achievable
Max Vehicle Speed	15km/h
Operating Temperature	-5 to +45°C
Measurement Range	Up to 20m
Power Supply	24VDC

TVS LiDAR Sensor Specification

Laser Class	1, Eye safe (IEC 60825-1)
Emission Frequency	144KHz
Sanning Frequency	25/50/100Hz (Site Selectable)
Aperture Angle	270°
Angular Resolution	-0.0625/0.125/0.25°
Power Consumption	Typical <15W/ Heating < 55W
Operating Temperature	-55 to +70°C
Humidity	0-95%
Sensor IP Rating	IP67

Note: Technical specifications subject to change without notice. Images are for illustration purposes only.

Global Sales & Service Agents