

## 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 environment
-  No stopping required  
Scan in-motion
-  Improve load optimisation & revenue accuracy



ADANI, Indonesia

### Product Overview TVS LiDAR Scanner

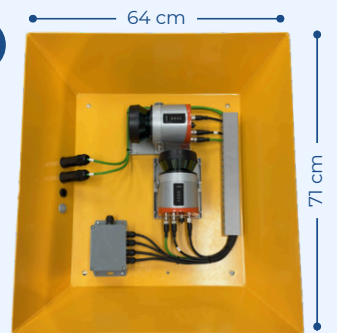


-  High accuracy volumetric data
-  270° wide field of view
-  Real-time processing
-  Rugged industrial design (IP67)
-  3D point cloud output
-  Seamless system integration

#### 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 16cm (D)



**Electrical Cabinet (Bottom View)**  
32 cm (W) x 13 cm (H) x 16cm (D)

# Measure Every Load. Optimise Every Trip.

WA, Australia

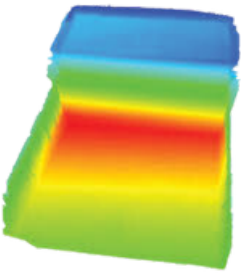


TRAKBLAZE TVS uses advanced LiDAR technology to capture the true volume of material in-motion. Get accurate results without stopping your trucks.

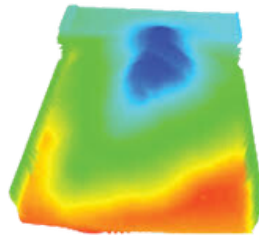
- ✓ No stopping required
- ✓ Improve payload optimisation
- ✓ Reduce over / under loading
- ✓ Increase billing accuracy
- ✓ Enhance site safety
- ✓ Reduce fuel & tyre wear

## How it works

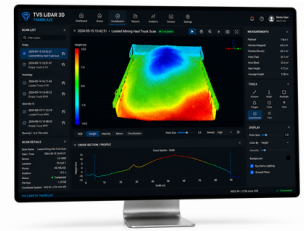
**1 Empty Reference Scan**  
Capture the empty truck body profile



**2 Loaded Scan**  
Capture the loaded material in-motion








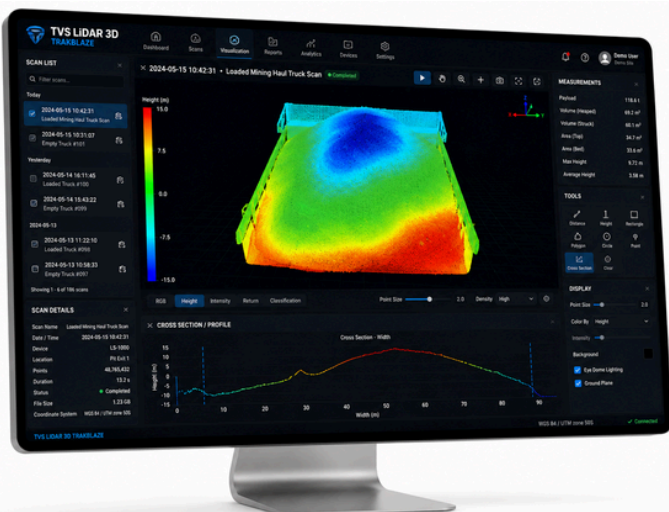
**3 Volume Calculation**  
Capture Software calculations exact material volume



## 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** 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 weighing technology, operators gain a far 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<sup>3</sup>) 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



## 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 Technical Specifications

Laser class	1, eye safe (IEC 60825-1)
Laser source	905nm
Emission frequency	144KHz
Operating range	1.5-15m @2%, 0.5-30m @10%, 0.5-80m @90%
Scanning frequency	25/50/100Hz
Aperture angle	270°
Angular resolution	0.0625/0.125/0.25°
Systematic error	±30mm
Power consumption	typical ≤15W; heating ≤55W
Operating voltage	2A @ DC24V Lidar side
Interface type	Power: 5-pin <run, heating>; net: 4-pin ; IO1: 8-pin <YK, sync>; IO2: 8-pin <YK>
Interface classification	Power, net, remote telematics, (Dry contact), RS232/RS232, sync
Interface quantity	Power: 1; net: 1 ; YK: 2; sync 1; RS232/RS\$85: 1 (optional)
Environment parameters	Operating temperature: -55°C ~ +70°C; operating humidity 0%~95%
Dimensions	Back out: 130mm x 102mm x 157mm; Dowb out: 108mm x 102mm x 180mm
Light intensity rating	80000lux
Enclosure rating	IP67

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

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