

## SLS-1

Mobile Laser Scanner



- **Compact and light weight**
- **Fully integrated high precision LiDAR, GNSS and IMU**
- **Industry leading 30MP 360° Spherical Camera**
- **Full integration of cloud and image in industry standard export formats**
- **Simple to operate with no calibration required.**

The Satlab SLS-1 Mobile Scanner is light weight and compact enough to be mobilised by a single operator and provides high-density point cloud and colour image overlay. Combining high definition LiDAR, Military spec IMU, Professional GNSS positioning and 360° imaging the SLS-1 captures accurate high resolution mobile data.

The single head high precision LiDAR can capture up to 500,000 points per second and is orientated to cover a corridor of up to 650m either side of centre. The spherical high definition camera has 6 sensors covering 360° field of view using 6 sensors of 5MP each giving total resolution of 30MP.

All data collected by each of the sensors is time stamped by an internal clock then using the included SW suite is combined to produce an accurate geo referenced point cloud with digital image overlay which can then be exported to third party extraction software for further analysis.

# SLS-1 Mobile Laser Scanner

## Technical Specifications



### General

|                   |                                   |
|-------------------|-----------------------------------|
| Type              | : Integrated mobile laser scanner |
| Temperature Range | : -10°C - +45°C                   |
| Vehicle Speed     | : 30-60 Km/h                      |



### Sensor Technical Specifications

|                                 |                                |
|---------------------------------|--------------------------------|
| Distance Measurement Mode Pulse | : 1545nm                       |
| Laser Classification            | : Class 1 (Safe for human eye) |
| Laser Pulse Repetition Rate     | : 500kHz                       |
| Minimum Measurement Range       | : 1.5m                         |
| Maximum Measurement Range       | : 650m                         |
| Range Measurement Accuracy      | : 4mm(@192m, $\rho = 60\%$ )   |
| Repeatability Precision         | : 6mm(@192m, $\rho = 60\%$ )   |
| Maximum Scan Speed              | : 200Hz                        |
| Angle Measurement Resolution    | : 0.0088°                      |
| Field of View                   | : 360°                         |
| Data Transmission Interface     | : Giga Ethernet                |
| External Time Synchronization   | : PPS,GPRMC                    |
| Operation Voltage               | : 24V DC                       |
| Power Consumption               | : <100W                        |
| Main Dimension                  | : 304mm×191mm×169mm            |
| Weight                          | : Approx. 6.1Kg                |
| Operation Temperature           | : -20~+55°C                    |
| Storage Temperature             | : -40~+65°C                    |



### Positioning Accuracy

|               |   |
|---------------|---|
| Type          | : "Tactical Grade" Inertial System with tightly coupled GNSS integration Accuracy |
| GNSS Sensor   | : NovAtel OEM 617   |
| GNSS Accuracy | : 5mm+1ppm RMS  |
| IMU Sensor    | : KVH 1750  |
| IMU Accuracy  | : Roll: 0.005 (Deg. RMS), Pitch: 0.005 (Deg. RMS), Heading 0.017 (Deg. RMS)       |



### RGB Camera

|               |                               |
|---------------|-------------------------------|
| Type          | : Industrial Spherical Camera |
| Sensor        | : Ladybug 5                   |
| Resolution    | : 6 x 5MP (30MP)              |
| Field of View | : 90% of Full Sphere          |



### Distance

Distance Measurement Indicator (DMI): Available