

IntelLAS™ HD - Mobile LiDAR System

- 700,000 points per second
- Laser accuracy ± 1 cm
- Laser range 100 m
- Integrated GNSS, IMU, FOG
- Operates at highway speeds
- Absolute accuracy 2 to 5 cm
- Achieves NZTA Z16 specifications



The IntelLAS™ (Integrated LiDAR Acquisition System) mobile mapping system represents the very latest in dynamic geospatial data collection technology. Delivering up to 700,000 data points per second, the system provides a comprehensive, accurate representation of a surveyed area at highway speeds.

BENEFITS

The IntelLAS™ system offers significant benefits and business advantages over conventional techniques, including:

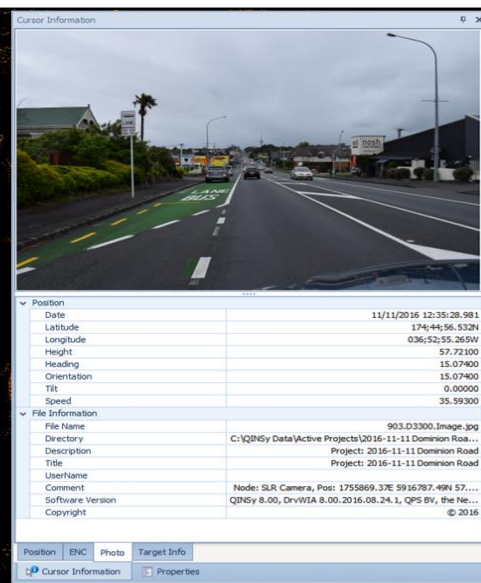
- Improved operational efficiency
- Significantly improved field staff and public safety
- Superior data quality and quantity
- Significant cost savings
- New business development opportunities

The IntelLAS™ system eliminates the requirement for traffic management. The system can also be operated in adverse weather both day and night.

KEY APPLICATION – Roads & Highways

The IntelLAS™ system's ability to operate at highway speeds makes the system ideally suited to support Road & Highway infrastructure applications, including:

- **Project planning**
 - Topo mapping, roadway analysis, and general measurements
- **Project development**
 - Feature extraction, baseline data, 3D design, alternatives and clash detection
- **Asset management**
 - Modelling, inspection and inventory mapping
- **Construction**
 - As-built/repair documentation, post-construction quality control and quantities
- **Maintenance**
 - Drainage/flooding, vegetation management, bridge inspections and power line clearance
- **Operations**
 - Clearance surveys, land use/zoning, Building and Bridge Information Modelling (BIM/BrIM)



IntelAS™ Specifications

| LiDAR SENSOR | |
|--|--|
| 32 laser/detector pairs | 905 nm Class-1 Eye Safe |
| Horizontal Field of View (Degrees) | +10.67° to -30.67° |
| Vertical Field of View (Degrees) | 360° |
| Range (Meters) | 1m to typically 80m - 100m |
| Frame Rate | 10 Hz Default (user selectable, 5-20Hz) |
| Accuracy | <2 cm (one sigma at 25 m) |
| Output | Up to 700,000 points/second (user selectable) |
| GNSS RECEIVER | |
| Simultaneous Tracking Channels | 240 |
| GPS Signals / GLONASS Signals | L1, L2, L2C, L5 /L1,L2 |
| Single Point Accuracy (Meters) | 1.20m |
| SBAS Accuracy (Meters) | 0.60m |
| Satellite DGPS Accuracy (Meters) | 0.40m |
| VBS Accuracy (Meters) | 0.60m |
| XP / HP Accuracy (Meters) | 0.15m / 0.10 |
| RTK / VRS Accuracy (Meters) | 0.01m + 1ppm |
| COMBINED GNSS IMU SYSTEM ACCURACY | |
| GYRO Type | Fiber Optic Gyro (FOG) |
| Accelerometers | MEMS |
| Pitch Accuracy (Degrees) | 0.015° |
| Roll Accuracy (Degrees) | 0.015° |
| Heading Accuracy (Degrees) – Stand Alone System | 0.050° |
| Heading Accuracy (Degrees) – External Antenna (1 m Baseline) | 0.030° |
| Heading Accuracy (Degrees) – External Antenna (2 m Baseline) | 0.020° |
| DATA OUTPUTS | |
| Communications Protocols | Ethernet TCP, Ethernet UDP, RS232, USB |
| Laser Data Output | Ethernet UDP – 700,000 Points Per Second |
| GNSS and IMU Data Output | Ethernet TCP – 100Hz |
| Timing Signals | GNSS 1 PPS and GPRMC (Programmable) |
| DATA INPUTS | |
| Command & Control | Ethernet (1 Gbyte) UDP, TCP |
| Programming | RS232, USB |
| RTK or VRS Correction Signals (RTCMv3 / CMR+) | RS232 |
| POWER | |
| Input Voltage | 9 – 32 Volts DC |
| Power Consumption | 30 Watts |
| PHYSICAL | |
| Dimensions (L x W x H) | 600 mm x 200 mm x 190mm |
| Weight | 12.0 kg (26.5 lbs.) |
| Environmental Protection | IP 65 |
| Shock | 500 m/sec ² amplitude, 11 msec duration |
| Vibration | 5 Hz to 2000 Hz, 3G RMS |
| Operating / Storage temperature | -10° to +60° C / - 40° to +105° C |

For more specific information or to arrange a system demonstration, please call **+64 4 905 8045** or e-mail us at **info@ilinks.co.nz**

