

Specification

LiDAR SYSTEM		
Model	SZT-V100	SZT-V200
Laser Channels	16 channels	32 channels
Laser Measurement Range	100 m	200 m
Field of View (Vertical)	+15.0° to -15.0° (30°)	+15.0° to -25.0° (40°)
Angle Resolution	2.0°	0.33°
Field of View (Horizontal)	360°	
Angular Resolution (Horizontal/Azimuth)	0.1° to 0.4°	
Max. Means Rate (Single Return Mode)	~300,000 points/s	~600,000 points/s
Max. Means Rate (Dual Return Mode)	~600,000 points/s	~1200,000 points/s
Accuracy	Relative Accuracy: 5 cm; Absolute Accuracy: 10 cm	
Recommended scanning height AGL	10-80 m	10-120 m
Net Weight	1.5 kg (w/o camera)	1.6 kg (w/o camera)
Dimensions	116.5*112*123 mm	132*112*123 mm
Input Voltage	11-18 V DC	
Power Consumption	20 W	22 W
Data Storage	256 GB SSD	
Part I: Laser Scanner		
Type	Velodyne VLP-16	Velodyne VLP-32C
Wavelength	903 nm	
Laser Product Classification	Class 1 Eye-safe-per IEC 60825-1:2007 & 2014	
Range Accuracy	up to ±3 cm (typical)	
Rotation Rate	5 Hz ~ 20 Hz	
Environment Protection	IP67	
Temperature	operating: -10°C~60°C; storage: -40°C~80°C	
Part II: POS System		
Type	Inertial Labs INS-D-OEM	
Gyroscopes Bias in-run Stability	1 deg/hr (RMS, Allan Variance)	
Gyroscopes Measurement Range	±450 deg/sec	
Accelerometers Measurement Range	±8 g	
Post Processing Roll/Pitch Accuracy	0.006 deg RMS	
Post Processing Heading Accuracy	0.03 deg RMS	
Post Processing Position H/V Accuracy	0.005/0.01 meters, RMS	
Post Processing Velocity H/V Accuracy	0.02/0.01 meters/sec, RMS	
Data Sampling Rate	IMU: 200 Hz, GNSS positions: 5 Hz	
Part III: Imaging Sensor		
UAV-based: DSLR camera Sony ILCE-a6000, 24.3 MP, RGB		
SUV-based: Spherical 360° camera FLIR Ladybug5+, 30 MP		