SPECIFICATION

GENERAL

Model	• SPL-1500/SPL-620/SPL-370/SPL-180
Series	• AcuteLas
Type	• pulsed precise scan technology

TECHNICAL

Scan Range	• 0.6-1500m/0.6-620m/0.6-370m/0.6-180m
Scan FOV	• 360° (H) x 300° (V)
Scan Rate	• 2,000,000 pts/sec
Relative Accuracy*	• 1.2mm @10m; 2mm @25m
Angular Accuracy	• 0.001° (H/V)
Scan Speed	• 80 Hz max.
Step Size	• 0.018° (20,480 pts 3D-pixel on 360° H./V.)
Fieldwork Control	• onboard touch screen or tablet remote via WLAN
Fieldwork Reference	• approx.16 sec (scan only, fastest); 41 sec (scan + image, fastest)

ONBOARD SENSORS

Laser Scanner Sensor	• Class-1 eye-safe (in accordance with IEC 60825-1:2014)
Laser Wavelength	• 1550 nm, invisible
Laser Divergence Angle	• 0.5 mrad
Initial Beam Diameter	• 3.6 mm
HDR Camera	• inbuilt 2 nos. forward side and upward 45°
Imaging Resolution	• 24.6 MP (12.3 MP x2) in total for one capture
Color Resolution	• 8 directions, 45° each, 196.8 MP (12.3 MP x8x2) in total for one round
Dual-axis Compensator	• compensating range ±15°
Height Sensor	• to calculate the relative heights by inbuilt barometer and record in scan files
Temperature Sensor	• to record the internal temperature of device realtime and keep it working within the right range
Compass	• to record the northing direction while scanning
GNSS	• integrated GPS (L1) & Beidou (B1)

PHYSICAL

Dimension	• 247x107x202 mm
Weight	• 4.85 kg (without battery); 5.3 kg (with battery)
Color	• purple grey, solid uncoated
LED Screen	• 5-inch HDR color touch display, 720x1280 dpi
Tripod Mount	• lightweight elevating camera tripod, 3-section, quick release
Inverse Mounting	• yes, downward up to 0.505 m by elevating tripod

ELECTRICAL

Power Supply	• detachable battery unit (inside battery compartment) or external power supply
Power Consumption	• 40 W while scanning, typical
Battery Unit	• rechargeable Li-ion battery, 28.8V, 3400mAh, 98Wh
Battery Endurance	• approx. 4 to 4.5 hours per unit

ENVIRONMENTAL

Working Temperature	• -20℃ to +60℃
Storage Temperature	• -35℃ to +70℃
Humidity Resistance	• non-condensing
Ingress Protection	• IP64 rating

INTERFACING

USB	• 3.0, inside battery compartment
WLAN	• 802.11 b/g/n on board
External Power Supply	• 18-24V DC, at bottom ring of the device

DATA MANAGEMENT

Storage	• USB 3.0 flash drive, 256 GB (upgradeable)

SOFTWARE

Remote control	• AcuteLas Remote
Pre-process	• AcuteLas Studio
SDK Option	• negotiable, based on project demand

Note*: the accuracy performance here came from the good conditions based on factory standards while the actual performance might vary due to different environments (lighting, textures), reflectivity, weather (temperature, humidity), etc. And all specifications are subject to change without any prior notice.

CONFIGURATION

No.	Item	Description	Quantity
		standard configuration	
①	3D Laser Scanner Unit	model: SPL-500	1
②	Lens Protective Cover		1
③	USB Flash Drive	USB 3.1, 256 GB	1
④	Rechargeable Battery	28.8 V, 3400 mAh, 97.92 Wh	2
⑤	Battery Charger		1
⑥	Charger Adapter		1
⑦	Carrying Case		1
⑧	Lightweight Tripod	packed with a soft bag	1
⑨	Software Dongle Key	for post-processing AcuteLas Studio	1
		optional accessories	
⑩	scanner sphere	6 nos. as one set, packed in a separate case ready to place in front and behind both	6
⑪	Backpack		1
⑫	RTK Connector		1

SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.
Add: South Geo-information Industrial Park, No.39 Si Cheng Rd, Guangzhou, China
Tel: +86-20-23380888 Fax: +86-20-23380800
E-mail: mail@southsurvey.com export@southsurvey.com
http://www.southinstrument.com

SOUTH
Target your success

AcuteLas Series

SPL-1500/SPL-620/SPL-370/SPL-180

Pulse. Portable. Accurate. Efficient

(V. 202410)

FEATURES

inbuilt GNSS module
GPS L1 + Beidou B1 tracking

scan FOV
horizontal 360°, vertical 300°

amazing point rate
up to 2,000,000 pts/sec

long measuring range
up to 1500 m

angular accuracy
horizontal 0.001°, vertical 0.001°

inbuilt camera
2 lens, 24.6 MP in total

multi-target detection
higher point density, suited to complex scenes

automatic leveling
easy and efficient setup

dual-axis compensator
range ±15°; accuracy ±0.008°

data storage
USB flash drive 256 GB

Wi-Fi access
tablet, smartphone or laptop

data communication
flash drive & USB 3.2 interfaces

battery endurance
4 hours, hand-carry by airplane

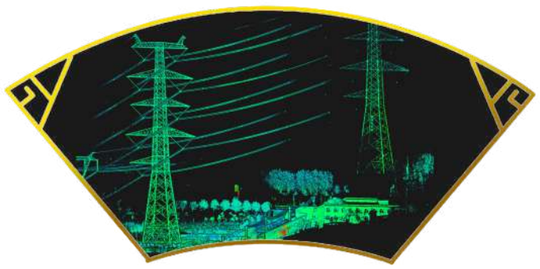
compact and lightweight
6kg only, goes with portable tripod

APPLICATIONS

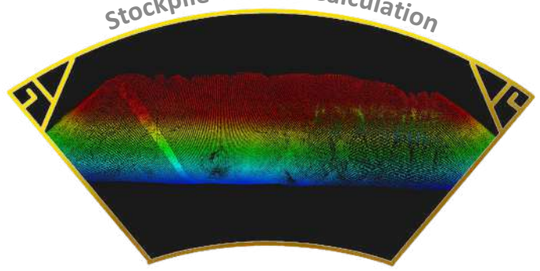
Archeology

Building Elevational Surveying

Utilities

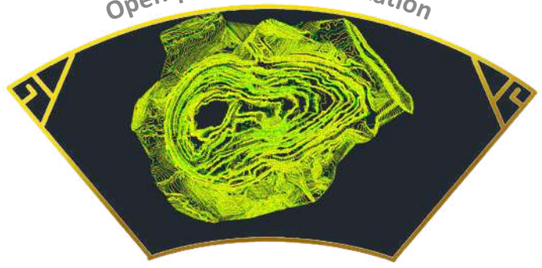


Stockpile Volume Calculation



BIM Modeling

Open-pit Mining Digitization



SOFTWARE

SYSTEM REQUIREMENTS

Operating System	Windows 10 IoT Enterprise or higher
Processor	Intel® 13th Gen Core™ i7 processor or better
RAM	32 GB or better
Storage	SSD 1 TB or better

- Data integration: Import&Export formats to support SOUTH and other formats (XYZ, E57, PCD, LAS, PLY, etc.)
- Automatic and manual registration, refinement, and reporting
- Geo-referencing: convert to local coordinate system by importing survey control files
- Automatic and manual classification
- Data interaction (2D, 3D and setup view)
- 3D calculation (distance, area, and volume)