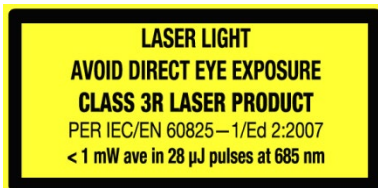


Surphaser® 100HSX SR and IR

Scanner Type	Phase Shift, Hemispherical Scanner with 360° x 270° field of view
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SYSTEM SPECIFICATIONS

Distance Measurement Method:	Phase-shift
Laser Wavelength	685 nm
Laser Type	CW
Laser Class: (IEC EN60825-1:2007)	Class 3R
Scan Rate (points/second)	208,000 – 800,000
Internal Coordinate Representation Unit (mm)	0.001
Angular position data	
Internal Vertical Angular Representation Unit	1 arc sec
Internal Horizontal Angular Representation Unit	1 arc sec
Scan density control: software selectable	
Min. Vertical Point Density (points/degree)	24
Min. Horizontal Point Density (points/degree)	10
Max Vertical Point Density (points/degree)	90
Max Horizontal Point Density (points/degree)	90
Full Volume Scan Time (minutes, at 7200x7200 density)	4.5
Field-of-view (per scan, software selectable)	
Horizontal (maximum)	360°
Vertical (maximum)	270°
Physical dimensions and weight	
Weight (kg)	11
Dimensions 381mm L x 219mm H x 120mm W	



STANDARD ACCESSORIES, MODEL 100HSX

- Shipping case
- Surphaser USB 2.0 cable
- AC Adapter 110/240 AC, 14-24V DC, 3.5A
- Surphaser DC power cable
- Tripod adapter
- Built-in scan controller, allows scanner control, operation, and data collection without a laptop
- Wi-Fi connectivity
- 2 Li-Ion 14V, 98Wh batteries, each provides 1.5 to 2 hours of operation
- 2 battery chargers
- 1 year Warranty and Basic Support contract

OPTIONAL ACCESSORIES

- SMR-compatible targets and target case
- Tilt Sensor, dual axis
- Scanner carrying case, size approved for most airlines' cabin requirements, please check with airline for up-to-date regulations
- Tripod
- Optional panoramic camera system, includes automatic color data mapping and dynamic exposure adjustment
- Extended Warranty contract, includes one free annual maintenance and calibration service

HOST COMPUTER REQUIREMENTS

Optional for Model with Built-In Controller, minimum configuration

- Processor: 2.4 GHz or greater
- System memory RAM 16GB or greater, 32GB recommended for processing
- OS: Windows 11
- USB 2.0 port or fully compliant USB 3.0 port

ENVIRONMENTAL

- Calibrated operating temperature: 5°C to 45 °C, non-condensing humidity

POWER SUPPLY

- 14-24V DC, 90W

Surphaser® 100HSX SR and IR System Performance

Configuration	SR HQ	IR HQ ⁴	IR HS ⁴
Recommended Work Range (m)	1-7	1-35	1-50
Ambiguity Range (m)	90	90	90
Angular Uncertainty ^{1,3} (arc sec)	15	15	15
Range Noise ^{1,2} , mm; 90% reflectivity	0.024@4m	0.07@10m	0.16@10m
Range Noise ^{1,2} , mm; 10% reflectivity	0.088@4m	0.41@10m	0.3@10m
Range Uncertainty ³ , mm	<0.3@3m	<0.35@5m	<0.7@15m

¹ All noise and uncertainty figures are for 1 sigma level

² Range noise -- local (short term) range variation, Lambertian surface

³ Evaluated with contrast target best fit at data rate of 208,000 points per sec

⁴ IR HQ and IR HS are software selectable options based on the same hardware model 100HSX IR. System parameters may be changed without notice; parameters are rated independently