

Surphaser® 25HSX Specification

GENERAL

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

Distance measurement Method:	Phase-shift
Laser Wavelength	685 nm (red)
Laser Type	CW
Laser Power	15mW
Laser Class: (IEC EN60825-1:2007)	Class 3R
Scan Rate (points/second)	216,000 to 1,200,000
Distance Resolution (mm)	0.001
Angular position data	
Vertical Angular Resolution	1 arc sec
Horizontal Angular Resolution	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
Scan Time (min, 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	425mm L x 164mm W x 241mm H

ENVIRONMENTAL

Calibrated Operating Temperature: 5°C to 45 °C, non-condensing humidity

POWER SUPPLY

- 19-24V DC, 40W (65W peak)

STANDARD ACCESSORIES

- Shipping container
- USB 2.0 cable
- AC Adapter 110/240 AC, 19-24V DC, 3.5A

OPTIONAL ACCESSORIES

- Notebook PC
- Tablet PC
- Li Ion 19V, 66Wh, 0.7lb Battery (provides 1.5 to 2 hours of continuous operation) with AC charger.
- Scanner carrying case (size approved for most domestic airlines cabin luggage requirements)
- Tripod
- Tripod Quick Release Adapter
- Tripod attachment for Tablet PC or battery

HOST COMPUTER REQUIREMENTS

Minimum Configuration:

- Processor: 1.8 GHz or greater Pentium –compatible;
- System memory RAM 1GB or greater, 2GB recommended
- OS: Windows XP or Windows Vista, 32-bit and 64-bit editions
- USB 2.0 port



Surphaser® 25HSX Configuration Options

Configuration	SR	IR_X	MR_X	ER_XQ ⁴	ER_XS ⁴
Ambiguity Range	46	46	46	70	140
Recommended Work Range (m)	0.2-5	0.4-19	1-30	1.5-50	1-70
Range Noise ^{1,2} , mm	0.07@2m	0.12@3m	0.25@5m	0.35@8m	0.8@8m
Range Uncertainty ³ , mm	< 0.3 @3m	< 0.5 @5m	< 0.7@15m	< 1 @15m	<1 @15m

¹All Noise and uncertainty figures are for 1 sigma level

²Range Noise -- local (short term) range variation, 1 sigma, 90% Lambertian surface

³Evaluated with contrast target best fit

⁴ER_XQ and ER_XS are software selectable based on the same hardware model

System Parameters may be changed without notice; parameters are rated independently