RAPID3D™ TECHNOLOGY SOLUTIONS

TECHNICAL SPECIFICATIONS

SURPHASER MODEL 210

- High scanning speed combined with high accuracy and scan data quality
- Ultra-low noise – sub-millimeter accuracy for all models
- Light and portable
- Easy to set up and move, fits into a carry-on size case
- Unsurpassed data quality and accuracy
- Automatic target extraction and target-based scan registration

SURPHASER MODEL 210		
Configuration (software selectable, available on all Surphaser 210 units)	210 HS[4] 208,000 pps	210 HP[4] 832,000 pps
Recommended Work Range (m)	0.4 - 70m	0.4 - 70m
Ambiguity Range (m)	180	180
Angular Uncertainty[1,3], arc sec	25	25
Range Noise[1,2], mm, 90% reflectivity	0.12@0.4m-30m	0.25@0.4m-30m
Range Noise[1,2], mm, 10% reflectivity	0.18@0.4m-30m	0.35@1.0m-15m
Range Uncertainty[3], mm	<0.9@15m	<0.9@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	[4] 210_HS and 210_HP are software selectable options, all three are available on all Surphaser 210 units System parameters may be changed without notice; parameters are rated independently	

STANDARD ACCESSORIES, MODEL 210:

1. Built-in scan controller, allows direct scanner control and data collection without a laptop
2. Wi-Fi connectivity
3. Two 5MPix built-in cameras; software for automatic color data mapping is included
4. Tilt sensor, dual axis
5. Shipping container
6. Surphaser USB 2.0 cable
7. AC Adapter 110/240 AC, 14-24V DC, 3.5A
8. Surphaser DC power cable
9. Tripod Adapter
10. Two Li-Ion 14V, 49Wh batteries, each provides 1 to 1.5 hours of operation
11. 2-bay charger
12. 1 year Limited Warranty and Basic Support contract

TECHNICAL SPECIFICATIONS

SURPHASER MODEL 210

SYSTEM SPECIFICATIONS	
Scanner Type - Phase Shift, Hemispherical Scanner with 360° x 270° field of view	
Distance Measurement Method:	Phase Shift
Laser Wavelength	1550 nm
Laser Type	CW
Laser Class: (IEC EN60825-1:2007)	Class 1
Scan Rate, software selectable(points/second)	208,000 - 832,000
Internal Coordinate Representation Unit (mm)	0.001 mm
Angular position data	
Beam diameter at Aperture	3 mm
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)	12 ppd
Min. Horizontal Point Density (points/degree)	2 lpd
Max Vertical Point Density (points/degree)	360 ppd
Max Horizontal Point Density (points/degree)	78 lpd
360° Scan Time, HP mode (832,000 pps at 7200x7200 density)	1.2 minutes
360o Scan Time, HQ, HS modes (208,000 pps at 7200x7200 density)	4.5 minutes
Field-of-view (per scan, software selectable)	
Horizontal (maximum)	360
Vertical (maximum)	270
Physical dimensions and weight	
Weight (kg)	5.8
Dimensions	278mm L x 200mm H x 118mm W

OPTIONAL ACCESSORIES

- SMR-compatible B&W targets and target case
- External hot-swappable extended battery
- WiFi connectivity
- Tripod
- Extended Warranty contract

HOST COMPUTER REQUIREMENTS

Optional for Model with Built-In Controller, minimum configuration

- Processor: 1.8 GHz or greater Pentium–compatible;
- System memory RAM 2GB or greater, 4GB recommended
- OS: Windows 7, 8 or 10; 32-bit or 64-bit editions
- USB 2.0 port

ENVIRONMENTAL

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

POWER REQUIREMENT

- 14-24V DC, 40W