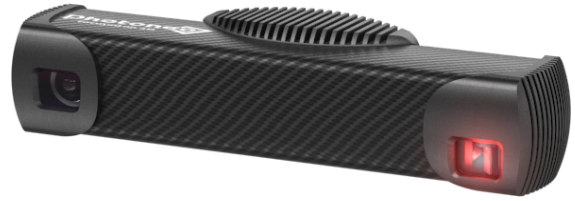


PhoXi 3D Scanner S

Quick Start Guide



Scope of Delivery

- PhoXi 3D Scanner S
- Desktop PoE injector (input: 90 ~ 264 output: VAC, 33.6 W, 56 V PoE, IEEE802.3at)
- M12-X (m) RJ45 (m) ethernet cable

Operation of the Scanner

The scanner is operated by the PhoXi Control application. PhoXi Control allows the user to control the scanner either manually through a graphical user interface or programmatically through the provided API.

All PhoXi Control resources can be found on the following link:

www.photoneo.com/3d-scanning-software/

Read the complete PhoXi 3D Scanner Manual for more details:

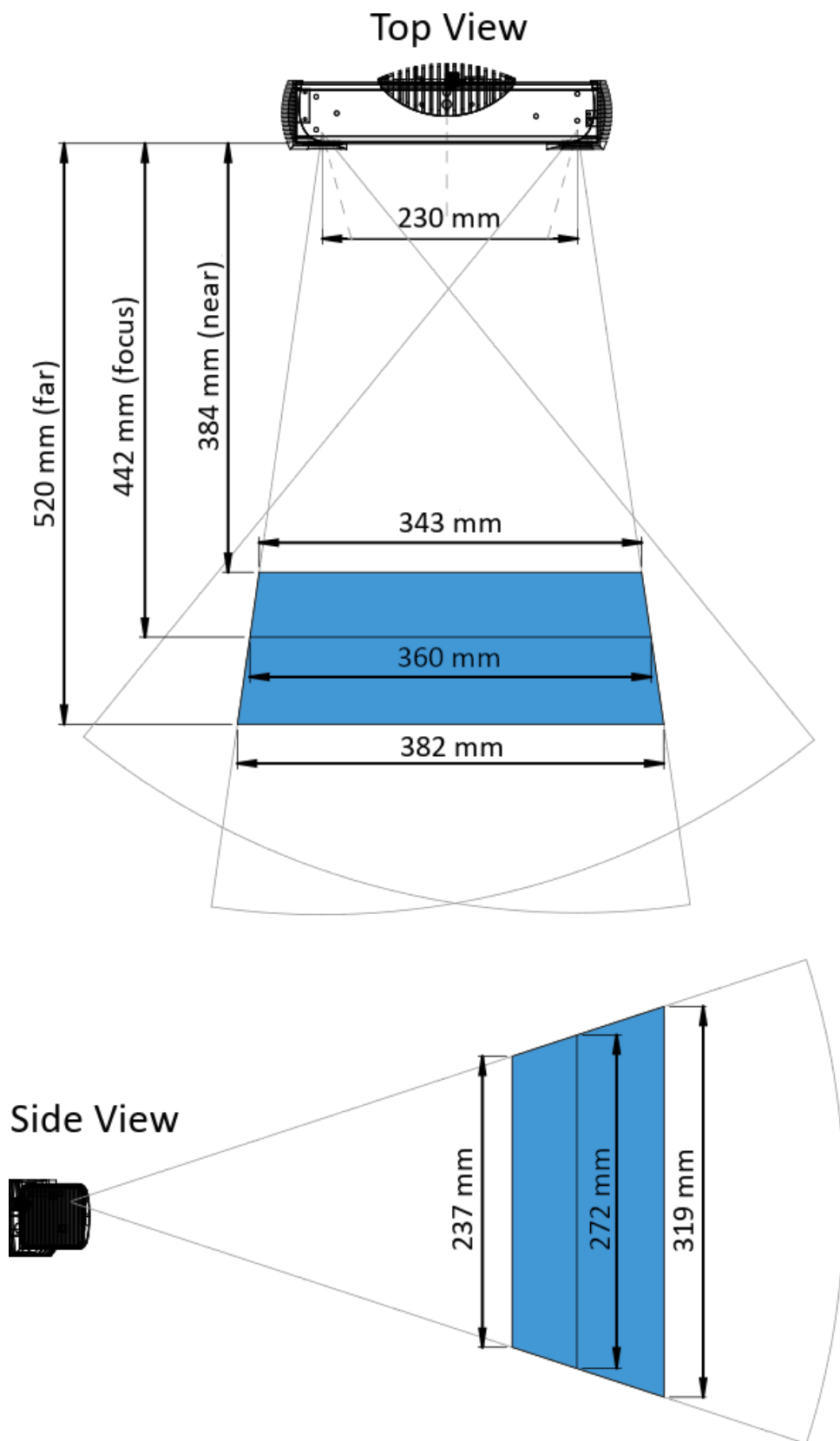
www.photoneo.com/kb/scanner

Scanning Parameters - Model S

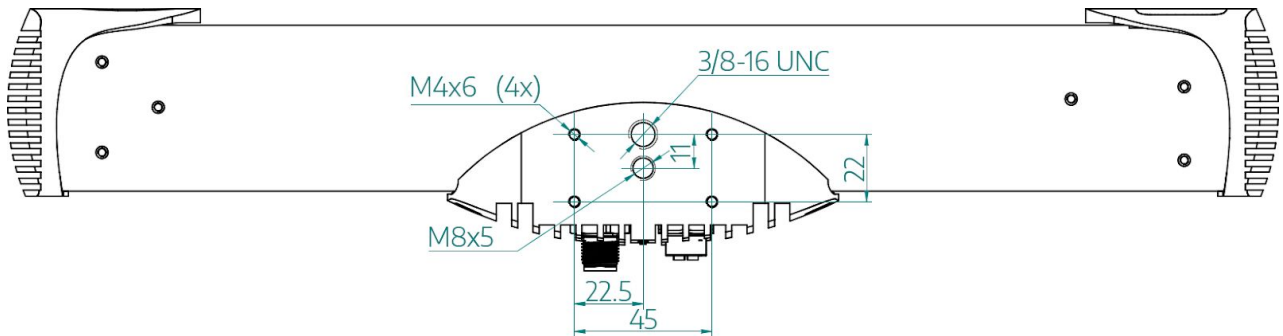
Parameter	Value
Resolution	Up to 3.2 Million 3D points
Scanning range	384 - 520 mm
Optimal scanning distance (sweet spot)	442 mm
Scanning area (at sweet spot)	360 x 272 mm
Point to point distance (at sweet spot)	0.174 mm
Calibration accuracy (1 σ)	0.050 mm
Temporal noise (1 σ)	0.050 mm
Scanning time	250 - 2250 ms
Dimensions	77 x 68 x 296 mm
Baseline	230 mm
Weight	900 g
3D point throughput	16 Million points per second

These parameters are valid at 22 °C - 25 °C, at focus distance for white objects with 80 % albedo.

Scanning Volume - Model S



Mounting the Scanner



Mounting options:

- Use 4x M4 screws with a metal mounting plate of suitable size - preferred mounting method for heat dissipation.
- Use a M8 screw.
- Use a 3/8 - 16 UNC screw with a tripod.

⚠ WARNING

Hot surface warning

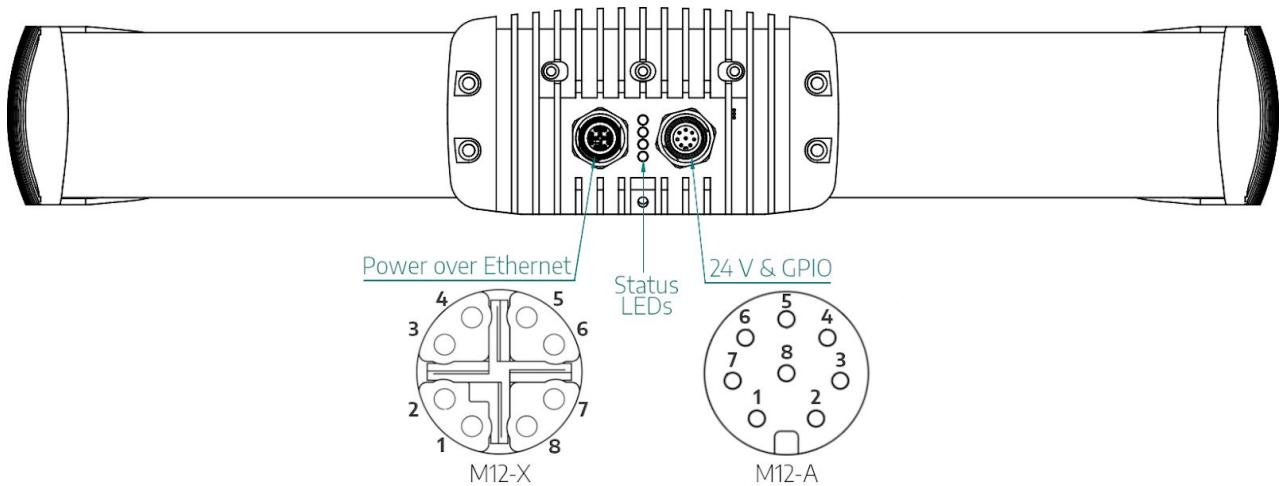
The surface of the processing unit becomes hot to touch when the device is in use. Mount the device on a metal mounting plate that will act as a thermal bridge to dissipate the heat or use the carbon body to manipulate the device.

Installation site restrictions:

- Ensure that mounting construction is rigid enough to avoid vibrations during scanning.
- Allow clearance of 25 mm for natural convection cooling.
- Operating temperature of the scanner is 0 °C to 45 °C.
 - Operating temperature for optimal scanning performance is 22 °C to 25 °C.
- Separate the scanner from high-voltage devices and devices generating high electrical noise.

The complete environment conditions for installation can be found in the full user manual at www.photoneo.com/kb/scanner

Connecting to the Scanner



Power over ethernet

- Recommended powering option
- 1 Gbps ethernet cable to the PoE injector IN port
- M12-X ethernet cable to the PoE injector OUT port

24 V & GPIO

- Desktop & DIN rail adapters supported

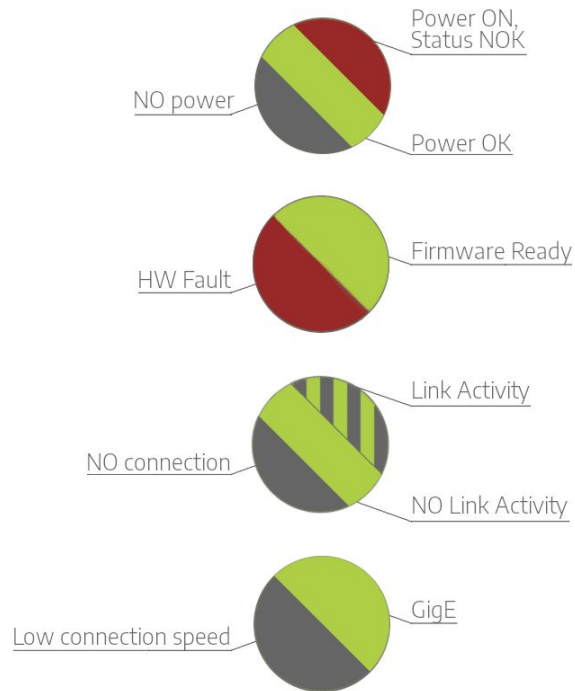
M12 A Coded - 24 V & GPIO Pinout

Pin	Cable Color	Pinout	Function
1	White	DC_IN	+ 24 V
2	Brown	OPTO_IN2_GND	*laser interlock ground
3	Green	GND	ground
4	Yellow	OPTO_IN1	-
5	Grey	OPTO_IN1_GND	-
6	Pink	OPTO_OUT	-
7	Blue	OPTO_OUT_GND	-
8	Red	OPTO_IN2	*laser interlock signal

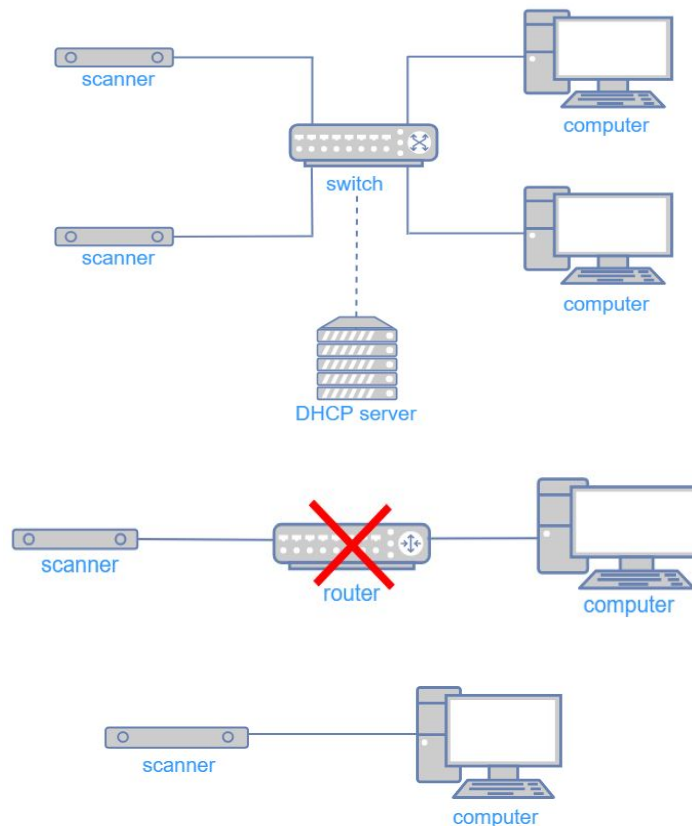
* laser interlock requires special firmware package

Status LEDs

The LEDs indicate the following states of the scanner:



Supported Network Topologies



Powering Requirements

Connector	M12 X coded	M12 A coded
PoE Standard	IEEE802.3at	-
Operating voltage U_e DC	min. 55 V	24 V (20 - 30 V)
Residual ripple maximum (% of U_e)	0.5 %	2 %
Rated operating current I_e (I_{max})	0.36 A (0.6 A)	1 A (2 A)
Minimum power	33 W	60 W
Shielding	Fully Shielded RJ45	-
Transfer data rate	1 Gbit	-
Maximum recommended cable length	20 m	20 m*

* for cable length over 10 m please ensure operating voltage at minimum 28 V

Powering Accessories for Custom Cablings

PhoXi 3D Scanners offer several options to connect the device. See the [PhoXi 3D Scanner User Manual](#) for more information.

Photoneo offers a selection of:

- Cables in different configurations of lengths and materials,
- Adapters (desktop, DIN),
- Old PhoXi 3D Scanner cabling compatibility accessories

Please contact your sales representative for inquiries about the available options.

Warranty

Warranty conditions are stated in General Term and Conditions on Photoneo website:

www.photoneo.com/kb/terms-conditions

Safety

PhoXi 3D Scanner Model S is a **laser class 3R** device. Class 3R lasers are considered safe when handled carefully.

Laser class 3R label



⚠ WARNING

Do not deliberately look into the laser beam. This may cause injury to the retina.

Laser protective eyewear is normally not necessary.



RoHS

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