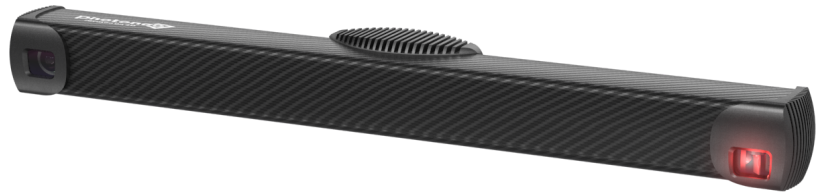


PhoXi 3D Scanner L

Quick Start Guide



Scope of Delivery

- PhoXi 3D Scanner L
- Desktop PoE injector (input: 90 ~ 264 VAC, output: 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:

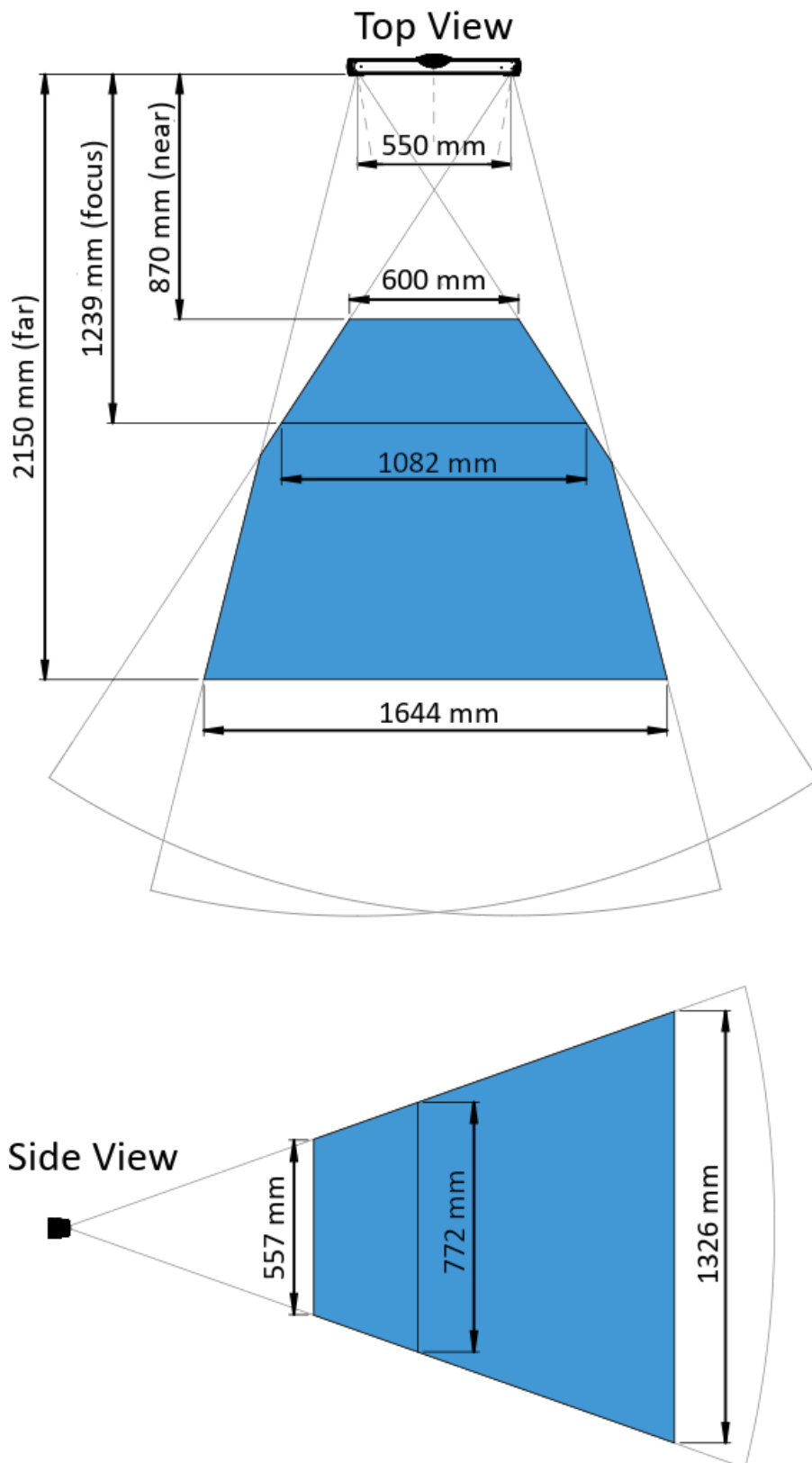
www.photoneo.com/kb/scanner

Scanning Parameters - Model L

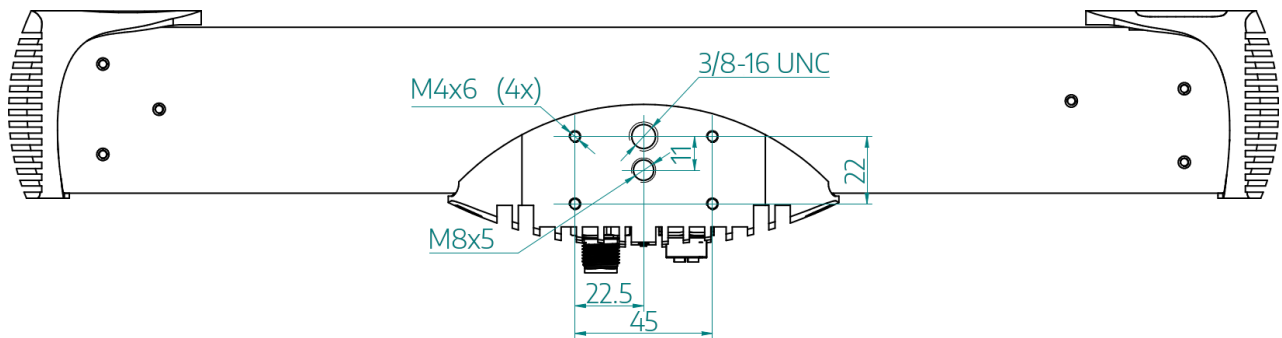
| Parameter | Value |
|---|------------------------------|
| Resolution | Up to 3.2 Million 3D points |
| Scanning range | 870 - 2150 mm |
| Optimal scanning distance (sweet spot) | 1239 mm |
| Scanning area (at sweet spot) | 1082 x 772 mm |
| Point to point distance (at sweet spot) | 0.524 mm |
| Calibration accuracy (1 σ) | 0.200 mm |
| Temporal noise (1 σ) | 0.190 mm |
| Scanning time | 250 - 2750 ms |
| Dimensions | 77 x 68 x 616 mm |
| Baseline | 550 mm |
| Weight | 1100 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 L



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.

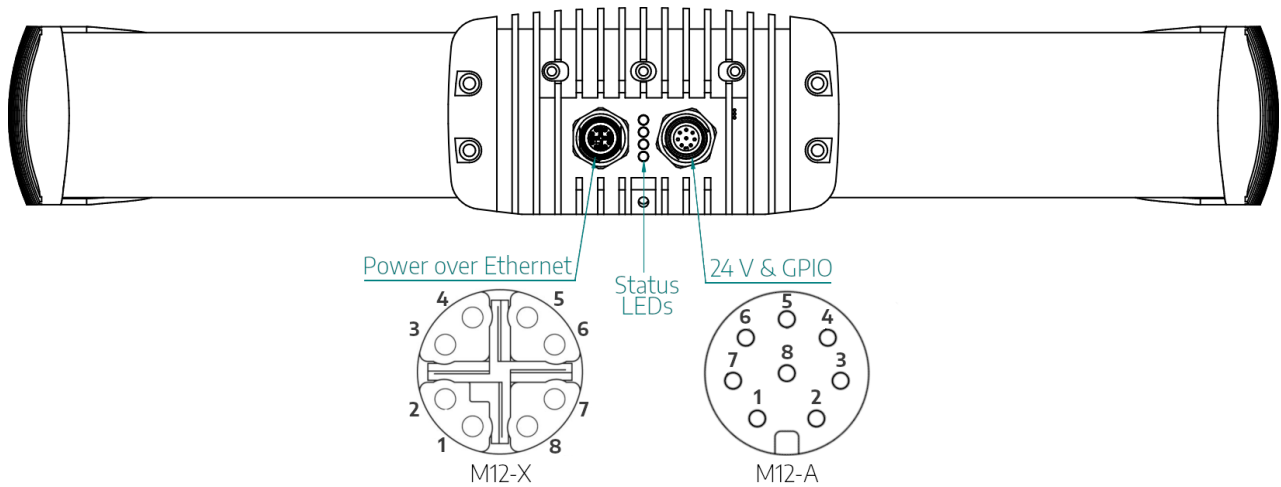
Installation site restrictions:

- 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

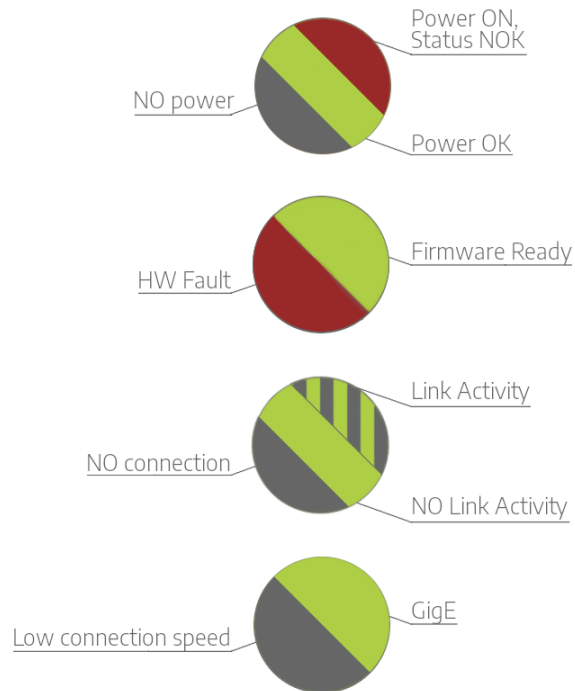
M12 A Coded - 24 V & GPIO Pinout

| 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 (5 - 24 V) |

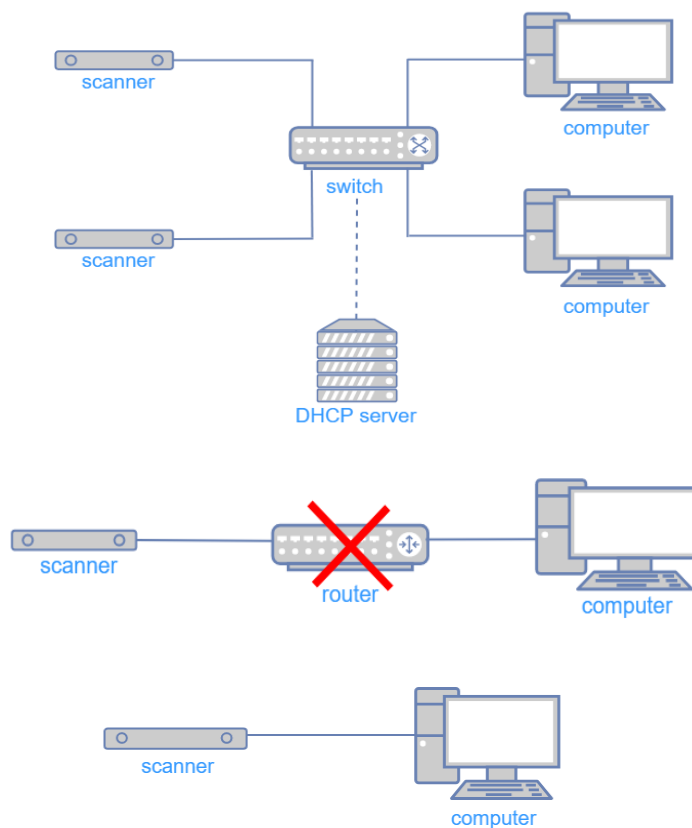
* laser interlock requires special firmware package

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 | 10 m* |

* for cable length over 10 m use 36 V DC adapter (60 W)

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 XL is a **laser class 3R** device or a **laser class 2** device. Class 3R lasers are considered safe when handled carefully. Class 2 lasers are considered safe for normal operation. See the label on the back of the device to determine its laser class.

Laser class 3R label



Laser class 2 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