

MotionCam-3D M

Quick Start Guide



Scope of Delivery

- MotionCam-3D M
- 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 MotionCam-3D

The motioncam 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 MotionCam-3D Manual for more details:

www.photoneo.com/kb/motioncam-3d

Datasheet

General parameters

| | |
|-------------------------------------|---|
| Depth map resolution (static mode) | 1600 x 1200 |
| Depth map resolution (dynamic mode) | 1120 x 800 |
| Maximum FPS | 20 fps |
| Maximum object / camera speed | 40 m/s |
| 3D points throughput | 15 million points per second |
| GPU | NVIDIA Pascal™ Architecture GPU with 256 CUDA cores |
| Dimensions | 80 x 68 x 427 mm |
| Baseline | 350 mm |
| Weight | 1400 g |

Scanning range and performance

| | |
|----------------|--|
| Scanning range | 497 - 939 mm |
| Depth range | 442 mm |
| Scanning area | 331 x 324 mm @ z = 497 mm 862 x 567 mm @ z = 939 mm |

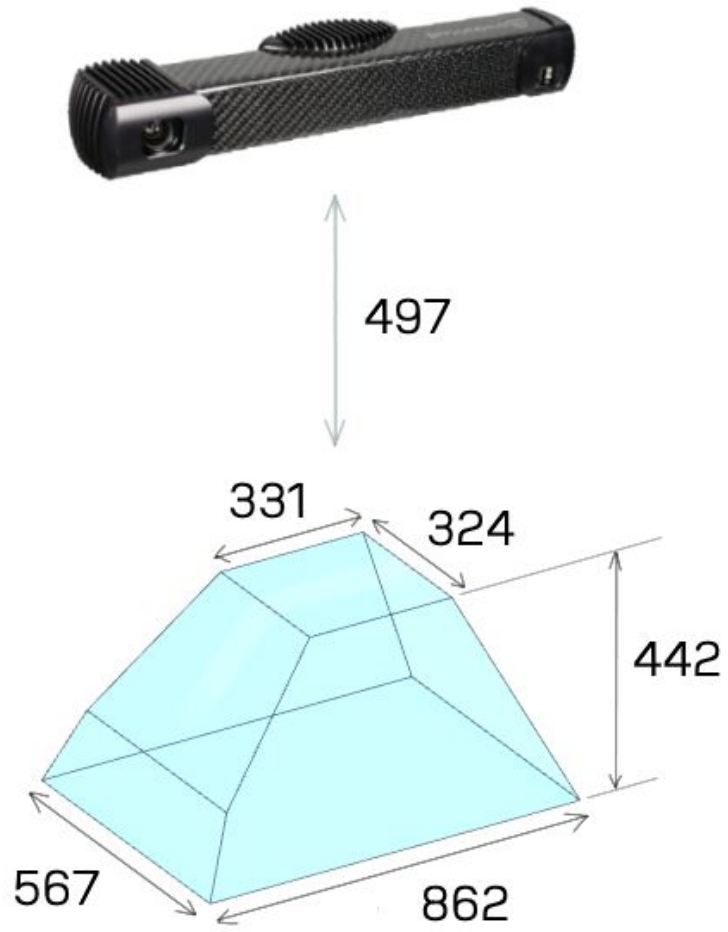
Camera mode

| | |
|---------------------------|----------|
| Point size (@ z = 650 mm) | 0.550 mm |
| Accuracy | 0.500 mm |
| Temporal noise | 0.100 mm |

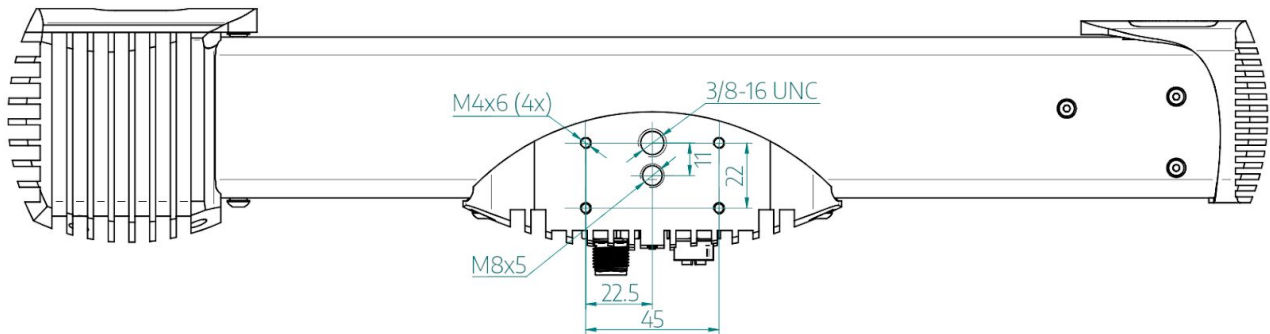
Scanner mode

| | |
|---------------------------|----------|
| Point size (@ z = 650 mm) | 0.370 mm |
| Accuracy | 0.250 mm |
| Temporal noise | 0.050 mm |

Scanning Volume - Model M



Mounting the MotionCam-3D



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

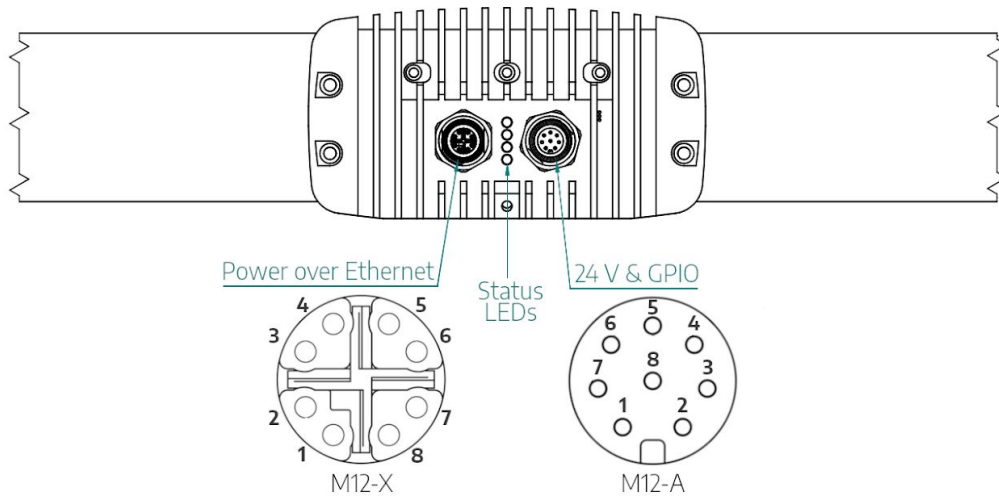
The surface of the processing unit may become hot to touch when the device is in use. Mount the device on a metal mounting plate that will act as a thermal bridge to dissipate the heat or use the carbon body to manipulate the device.

Installation site restrictions:

- 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 motioncam 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/motioncam-3d

Connecting to the MotionCam-3D



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

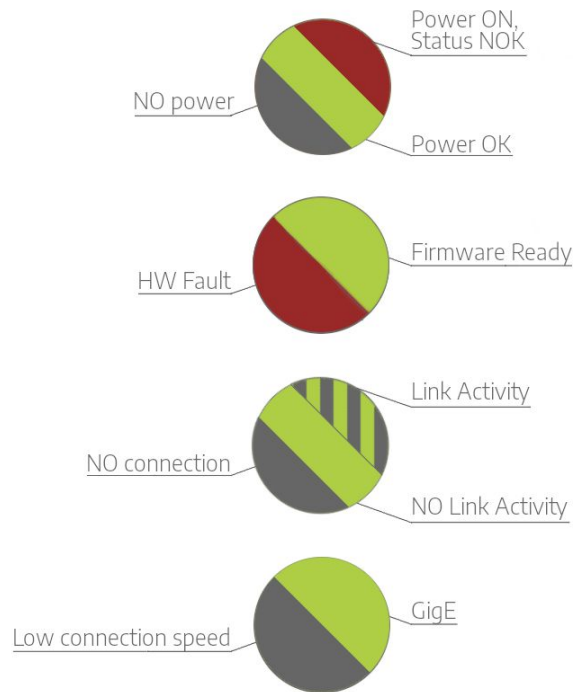
M12 A Coded - 24 V & GPIO Pinout

| 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 | hardware trigger input signal (5 - 24 V) |
| 5 | Grey | OPTO_IN1_GND | hardware trigger input ground |
| 6 | Pink | OPTO_OUT | hardware trigger output signal (5 - 24 V) |
| 7 | Blue | OPTO_OUT_GND | hardware trigger output ground |
| 8 | Red | OPTO_IN2 | *laser interlock signal (5 - 24 V) |

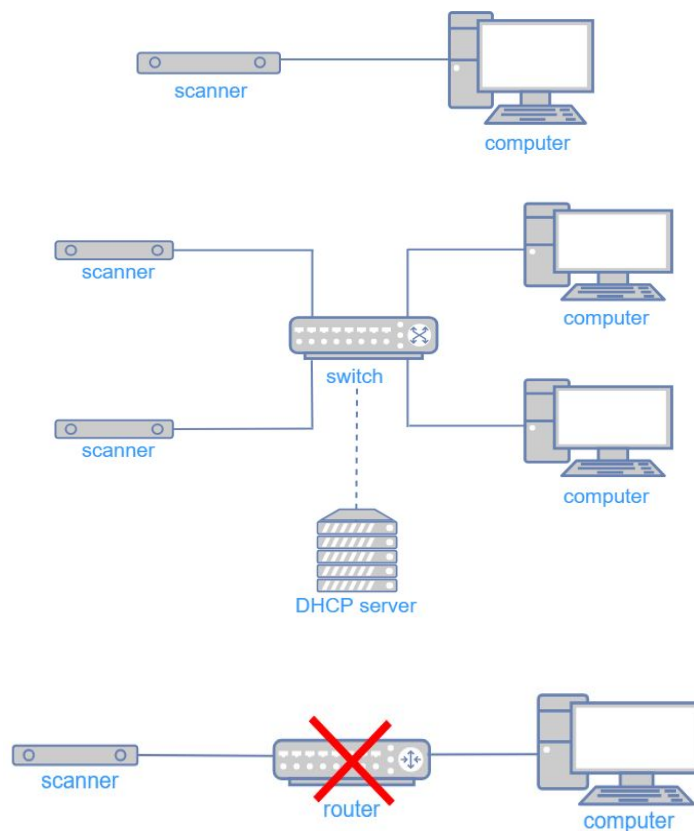
* laser interlock requires special firmware package

Status LEDs

The LEDs indicate the following states of the motioncam:



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

MotionCam-3Ds offer several options to connect the device. See the [MotionCam-3D User Manual](#) for more information.

Photoneo offers a selection of:

- Cables in different configurations of lengths and materials,
- Adapters (desktop, DIN),
- Old MotionCam-3D 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

MotionCam-3D Model L 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

Contact Us



Headquarters

Photoneo s.r.o.
Plynarenska 1
82109 Bratislava
Slovakia

Web

www.photoneo.com

Support

support@photoneo.com

Business Inquiries

sales@photoneo.com