MotionCam-3D S

Quick Start Guide

Scope of Delivery

- MotionCam-3D S
- 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.

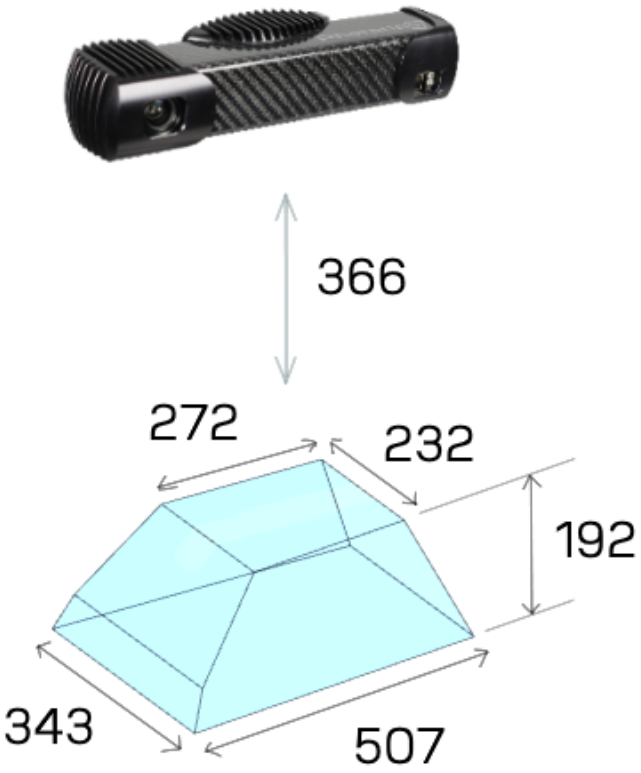
All PhoXi Control resources can be found on the following link:
www.photoneo.com/3d-scanning-software/

Read the complete MotionCam-3D Manual for more details:
www.photoneo.com/kb/motioncam-3d

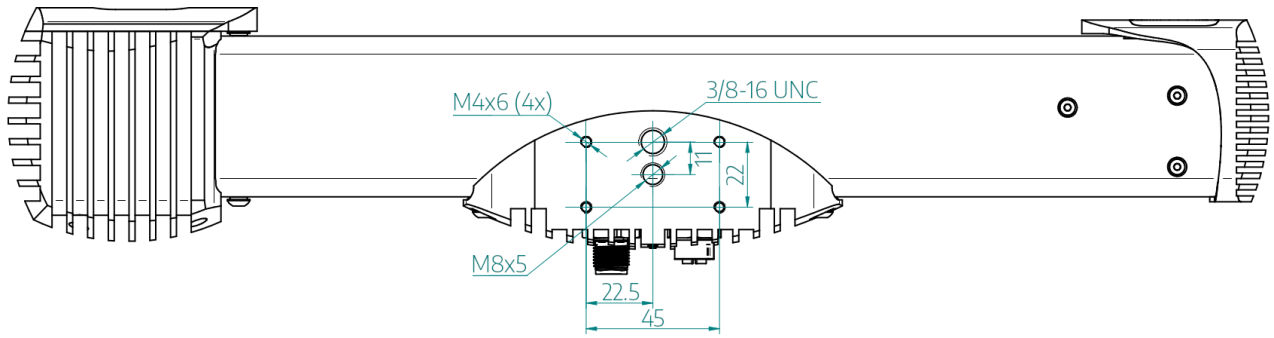
Datasheet

General parameters	
Depth map resolution (scanner mode)	1600 x 1200
Depth map resolution (camera 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 307 mm
Baseline	230 mm
Weight	1300 g
Scanning range and performance	
Scanning range	366 - 558 mm
Depth range	192 mm
Scanning area	272 x 232 mm @ z = 366 mm 507 x 343 mm @ z = 558 mm
Camera mode	
Point size (@ z = 442 mm)	0.370 mm
Accuracy	0.300 mm
Temporal noise	0.100 mm
Scanner mode	
Point size (@ z = 442 mm)	0.250 mm
Accuracy	0.150 mm
Temporal noise	0.050 mm

Scanning Volume - Model S



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.

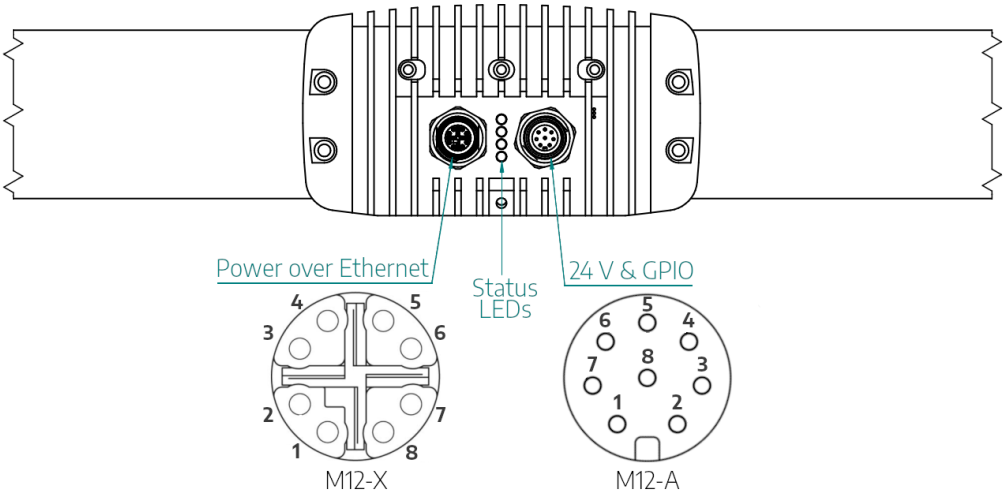
> ⚠ **WARNING**
>
> **Hot surface warning**
>
> The surface of the processing unit may become hot to touch when the device is in use. Mount the device on a metal mounting plate that will act as a thermal bridge to dissipate the heat or use the carbon body to manipulate the device.

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

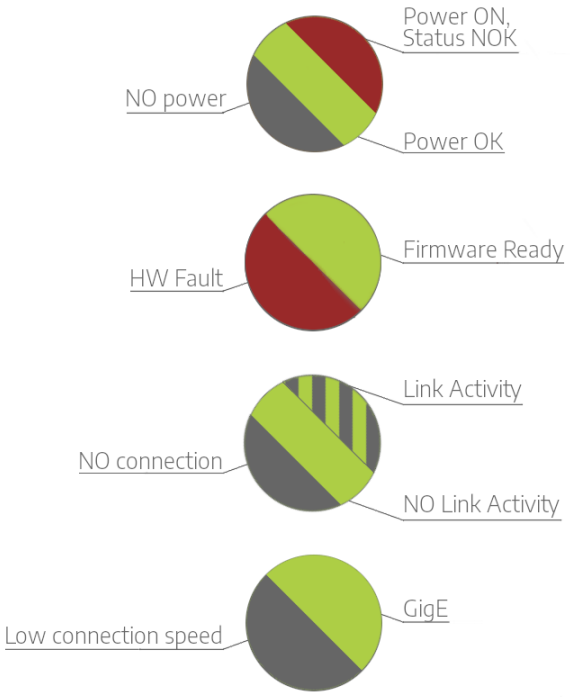
M12 A Coded - 24 V & GPIO Pinout

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)

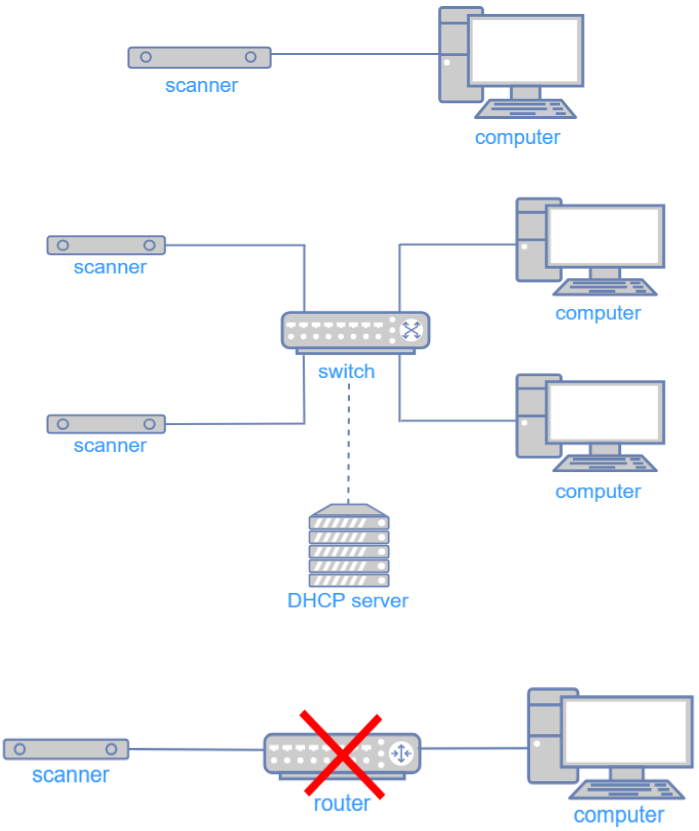
* laser interlock requires special firmware package

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