



# Smart 3D Vision

# Unbeatable advantages

## ▶ Every detail in a fraction of a second

Best in class resolution/speed ratio: PhoXi<sup>®</sup> Scanner provides **3.2 million 3D points** in every scan. The scans are provided four times per second.

## ▶ Always-in-focus

Laser projection guarantees a long depth of field. Projection is focused from 1 m up to 3 m.  
**No linear axes needed.**

## ▶ Power of GPU

The embedded NVIDIA<sup>®</sup> Jetson<sup>™</sup> platform

## ▶ High-end Construction

Thanks to lightweight carbon fiber body it is possible to mount the scanner on a robotic arm, where every gram counts. Total weight of the device is approximately 1 kg.

## ▶ Ready for processing

PhoXi<sup>®</sup> Scanner provides per pixel normal vectors.

We are supporting:



### Specification

### PhoXi<sup>®</sup> XS

### PhoXi<sup>®</sup> S

General description

Very small objects like PCB parts can be scanned with a great precision.

**PhoXi "S"** is perfect for thin objects like cables.

Scanning volume:

130 x 100 x 60

330 x 245 x 300

Absolute accuracy

≤ 25 μm

≤ 50 μm

Z noise

≤ 20 μm

≤ 50 μm

Typical data acquisition time

200 ms

200 ms

## PhoXi® Control Software

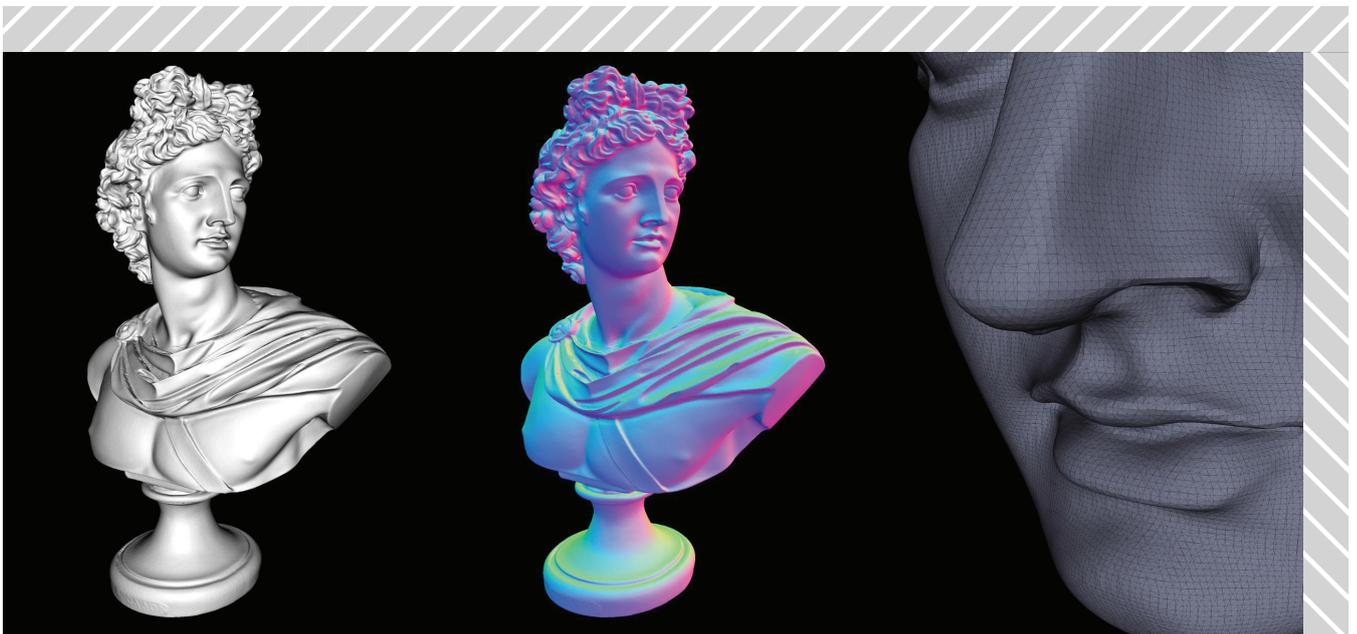
- ▶ Connection
  - Gigabit ethernet
  - Network Discovery with Plug and Play functionality
- ▶ Settings & Configuration
  - Intuitive device settings & output selection
  - Ambient light rejection
- ▶ 3D Point Cloud Viewer
- ▶ Software Trigger and Freerun operation modes
- ▶ Available on **Windows, Ubuntu Linux and Mac OS X**

## API

- ▶ Interfaces
  - C++ / C#
  - OpenCV, Halcon, PCL and ROS support
- ▶ Examples that clarifies API features

## Output

- ▶ Integrated GPU calculates: Point Cloud, Normals, Depth Map, Texture and per pixel Confidence
- ▶ Resolution: (2064 x 1536) or (1032 x 768)



### PhoXi® M

**PhoXi "M"** is designed for football-sized objects.

690 x 515 x 600

≤ 100 μm

≤ 100 μm

400 ms

### PhoXi® L

Palletizing and de-palletizing is a common application for **PhoXi "L"**.

1300 x 975 x 1200

≤ 200 μm

≤ 190 μm

400 ms

### PhoXi® XL

**PhoXi "XL"** is great for scanning big objects.

2400 x 1800 x 2200

≤ 500 μm

≤ 350 μm

800 ms

# About Photoneo®

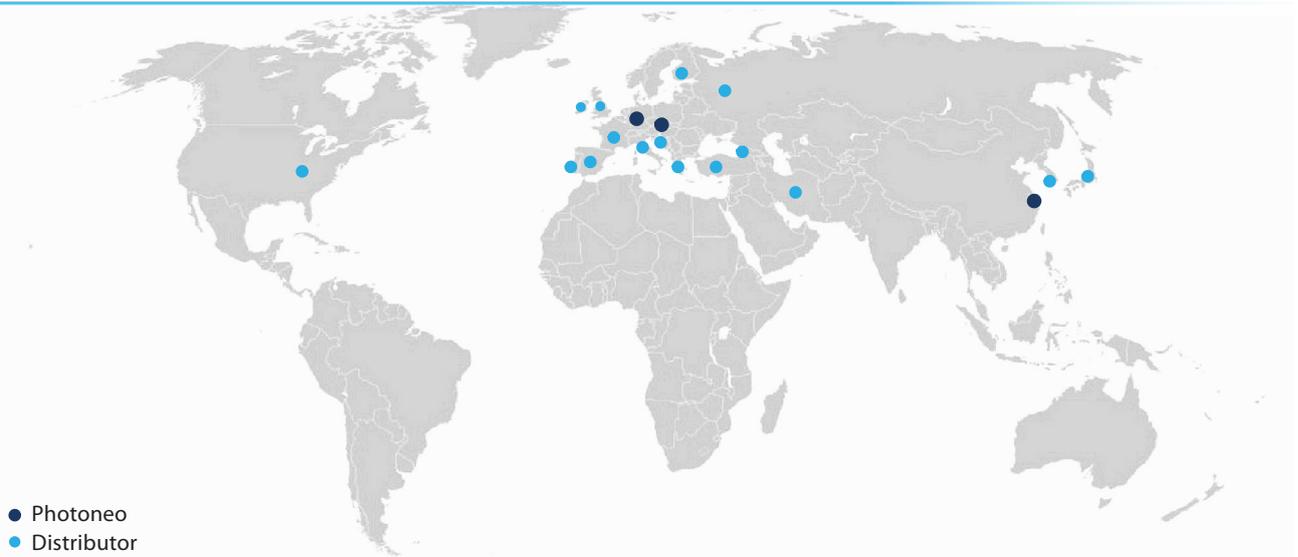
Our vision is to give robots human-like eyes, perception & intelligence.

We don't want to deliver just "another" machine vision system, we are going to change the whole definition of machine vision by introducing new hardware and software solutions in the upcoming years.

Our mission is to:

1. Introduce state of the art 3D scanners (static scene) and 3D cameras (dynamic scene) to the market and support their users with game changing SDKs and APIs.
2. Change traditional 2D machine vision approach in industrial environment and bring unique devices with novel functionality to the market. With our new devices manufacturers will be able to build more flexible production lines and robot integrators will get powerful tool for new applications.

Partners network



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