

trinamiX Imaging System for industrial use



The system enhances a regular 2D IR image using proprietary beam profile analysis to capture

- 3D depth information
- Material classification

Depth image (3D)

Z-resolution (max. distance, std. dev. at 350 mm)	up to 1 m, 1.0 mm
X,Y-resolution	up to 270 x 180 points
Field of view	55° x 38.2°

Material classification

Material	Human skin (prototype)
X,Y-resolution	Same as depth image
Field of view	Same as depth image

2D image

X,Y-resolution	1440 x 1080
Field of view	70° x 56°

Camera

Sensor type/Shutter type	Sony IMX273LQR CMOS/global shutter
Frame rate depth sensing	up to 50 Hz
Lens focal length	3.5 mm
Lens aperture	1.8
Filter type (Outdoor)	NIR Bandpass 95% transmission at 850 nm +/-30 nm

Laser projector

Wavelength	850 nm
Battery consumption (1 h usage)	60 mAh

Flood illumination

Centroid wavelength	850 nm
Radiant intensity	900 mW/sr
Spectral bandwidth at 50 % intensity	30 nm

Software-core

Platforms	Android, Windows, Linux (in development)
CPU and GPU support	OpenCL 1.2, OpenGL 4.3, OpenGL ES3.1, Vulkan 1.0
SDK	Workbench + API (C++, python, C#), client-server architecture
Interfaces	trinamiX SDK, Profinet compatible (for industrial use)

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