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goSCOUT3D

Portable 3D sensor

Scanning large complex objects by hand

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Applications

- Quality control for ingoing and outgoing processes
- Architecture
- Cultural heritage
- Augmented and virtual reality

Measuring principle

- Acquisition of high-resolution 2D color images in motion
- Recording of trajectories by simultaneous position determination and mapping (SLAM) using inertial measurement unit data and stereo image analysis
- Accelerated photogrammetric 3D reconstruction by using trajectories

Features

- Markerless acquisition of large, complex objects (several m³) in 2D and 3D
- Simultaneous acquisition of 3D surface shape and high-quality color textures
- Automatic pipeline from image capture to 3D model
- Integrated operator guidance with live image preview and touch interface via embedded system
- Automatic motion monitoring with feedback to operator to increase image acquisition quality

System parameters

- Field of view for 2D imaging: 1m²
- Scanning speed: up to 6 m²/min
- 2D image resolution: 4480 x 4496 pixels
- Spatial resolution: < 0.25 mm
- Human-Machine-Interface (HMI): 5.5" touch screen
- Maximum recording time: 90 min
- Sensor head weight: 1.3 kg
- Power supply: battery operation
- Powerful ring light (25 W)
- File export: *.obj, *.fbx, *.3ds, *.ply, *.u3d

Simple capturing of a motorcycle with portable 3D sensor.

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