

AreaScan3D

3D Area Sensor



AreaScan3D is a 3D area sensor based on digital fringe projection. The sensor supplies ready-calculated 3D data records for industrial image processing. The data is output directly as a 3D point cloud, gray-scale coded area map, or 2D image.

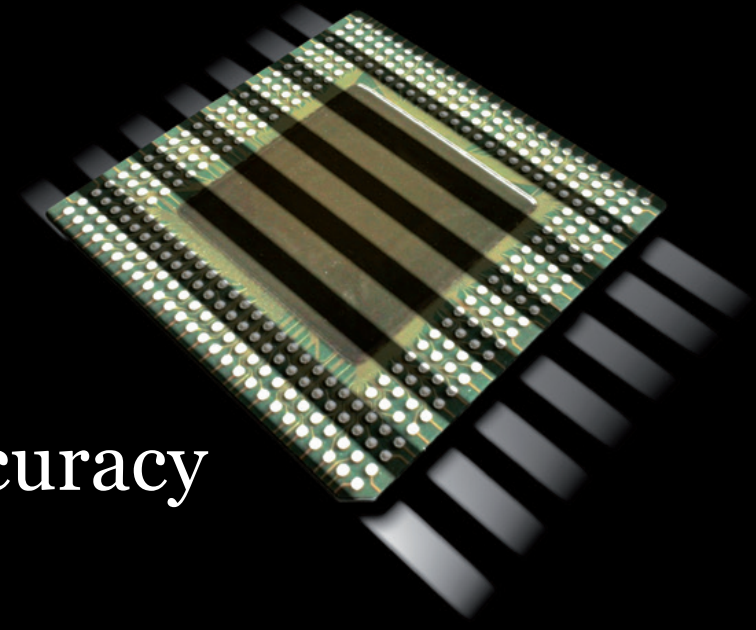
- Metric calibration
- Data output formats: 3D point cloud, gray-scale coded area map, or 2D image
- Addressed via GenICam™ transport layer (GenTL)

- Interfaces to Common Vision Blox and HALCON
- Aluminum housing with IP65 rating
- M12 connectors according to IEC 61076-2-101
- 24 V operation
- 100 Mbit Ethernet interface
- Hardware and software trigger
- OEM solutions available



⚡ AreaScan3D outputs data directly as a 2D image, gray-scale coded area map, or 3D point cloud.

Guaranteed Measuring Accuracy



Robust, Accurate, and Fast 3D Data Acquisition!

AreaScan3D is based on the robust, accurate, and fast method of digital phase-measuring fringe projection. Fringe projection, image recording, and generation of the point cloud are performed in an integrated manner based on an intelligent camera from VRmagic. Acquisition and calculation of the 3D point cloud are performed directly within the sensor. The DLP Pico™ projector from Texas Instruments and the camera are synchronized with a frequency of 60 Hz. Measuring accuracy of AreaScan3D is guaranteed in the sub micrometer to millimeter range, depending on the measuring volume. The material color does not have any influence on measuring accuracy.

Suitable for Industrial Environments

The AreaScan3D sensor can be integrated in industrial installations via the Industrial Ethernet interface. The lightweight sensor features a robust metal housing with IP65 protection, screw-type standard industrial connectors, a 24 V connection, as well as hardware and software triggers.

Easy Integration

Integration of AreaScan3D with existing customer or standard software is easy through standardized interfaces to GenTL. A viewer demo based on GenTL including sources is available.

Technical Data

	AreaScan3D 01-018	AreaScan3D 01-120
Measuring Volume [mm]	18 x 13 x 5	120 x 75 x 50
Number of Measuring Points	748 x 480	748 x 480
Micro Mirrors	480 x 320	480 x 320
Point Density [µm]	24	160
Height Resolution [µm]	> 4	> 20
Working Distance [mm] (from lower case edge)	255 ± 1	285 ± 5
Min. Working Distance [mm]	252.5 ± 1	260 ± 5
Max. Working Distance [mm]	257.5 ± 1	310 ± 5
Min. Projection Time [s] (time the object has to stand still)	< 0.5	< 0.5
3D Data Calculation Period [s]	< 2	< 2
Housing Size [mm]	138 x 55 x 171	138 x 55 x 171
Weight [kg]	1	1
Interfaces 3 x M12 circular connectors	10/100 Mbit Ethernet on 4-pin connector, power supply and RS232 on 5-pin connector, trigger/ strobe on 8-pin connector	

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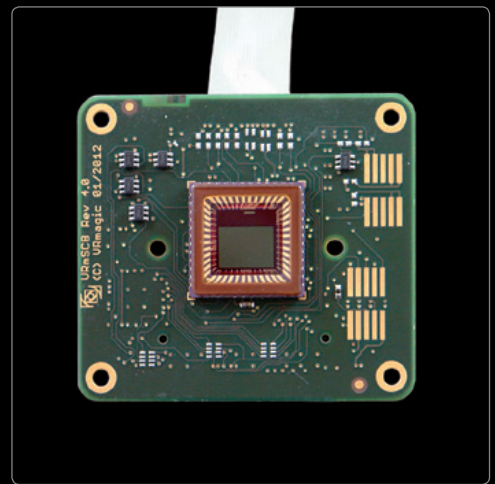
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VRmagic cameras are compatible with:



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