

AreaScan3D



3D Area Sensor Based on Fringe Projection

Data Output: 3D Point Cloud, Range Map, or 2D Image

Metric Calibration

GenTL

IP65 Rating

Out of the Box 3D Area Sensor



AreaScan3D is a 3D area sensor based on digital fringe projection that 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.

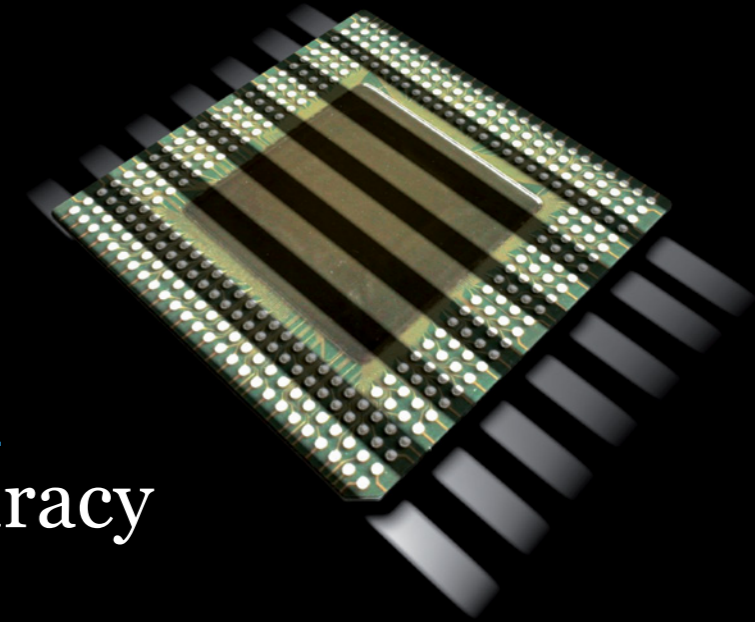
Highlights

- Metric calibration
- Data output: 3D point cloud, gray-scale coded area map, or 2D image
- Addressed via GenICam™ transport layer
- 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
- Hard- and Softwaretriggerer
- 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 submillimeter 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 light-weight 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 based on GenTL. A viewer demo based on GenTL including sources is available.

AreaScan3D is compatible with:



Technical Data

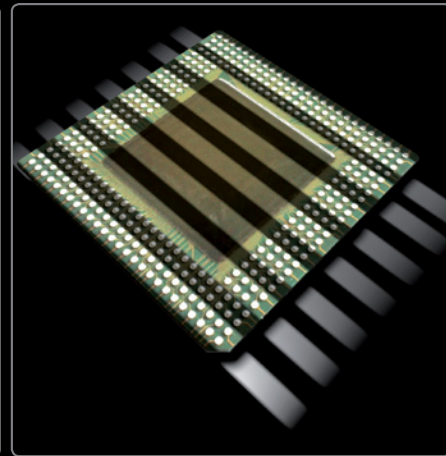
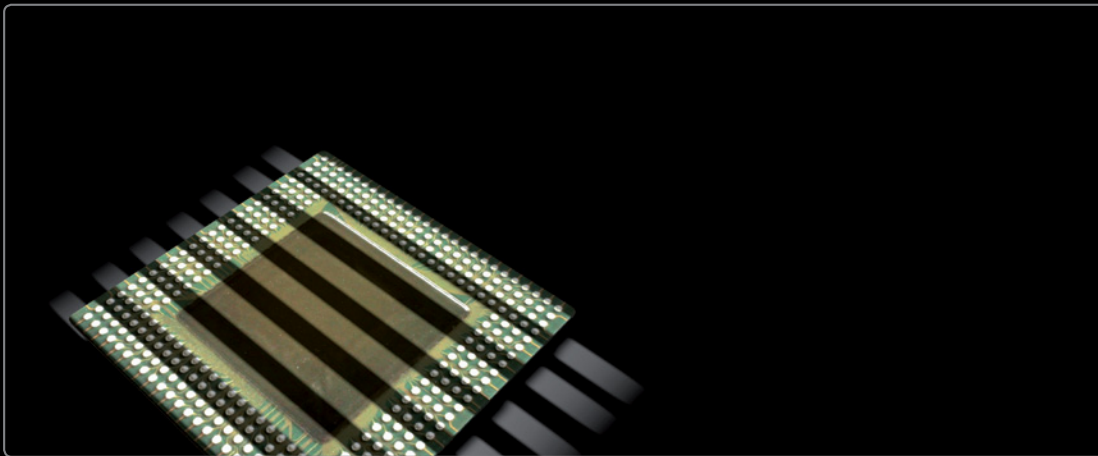
	AreaScan3D 01-018	AreaScan3D 01-120	AreaScan3D 01-600 ^③
Measuring Volume [mm]	18 x 13 x 5	120 x 75 x 50	600 x 450 x 300
Measuring Points	748 x 480	748 x 480	748 x 480
Micro Mirrors	480 x 320	480 x 320	480 x 320
Point Density [µm]	24	160	900
Height Resolution [µm]	> 4	> 20	> 65
Working Distance [mm] ^①	255 ± 1	285 ± 5	1300
Min. Working Distance [mm] ^①	252.5 ± 1	260 ± 5	1150
Max. Working Distance [mm] ^①	257.5 ± 1	310 ± 5	1450
Min. Projection Time [s] ^②	< 0.5	< 0.5	< 0.5
3D Data Calculation Period [s]	< 2 s	< 2 s	< 2 s
Housing Size [mm]	138 x 55 x 171	138 x 55 x 171	138 x 55 x 171
Weight [kg]	1	1	1

^① From lower case edge

^② Time the object has to stand still

^③ Available soon

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