

Acuity[®]

+



Automation
Technology



C6 Series 3D Sensors



COMPACT

Sensors

Product Overview

3D Compact Sensor C6 CS X-FOV 7-53 mm

- ✓ Profile resolution up to 2048 points / profile
- ✓ Profile speed up to 200 kHz
- ✓ Wide range of models with X-FOV 7 - 53 mm
- ✓ Nominal working distance: 31 - 90 mm
- ✓ Resolution X: 5 - 26 μm
- ✓ Resolution Z: 0.2 - 1.2 μm
- ✓ Z-Range 5 - 46 mm
- ✓ Linearity Z: ± 0.01 % of Z-Range
- ✓ Repeatability Z: 0.1 - 0.5 μm



3D Compact Sensor C6 CS X-FOV 29-160 mm

- ✓ Profile resolution up to 2048 points / profile
- ✓ Profile speed up to 200 kHz
- ✓ Wide range of models with X-FOV 29 - 160 mm
- ✓ Nominal working distance: 106 - 197 mm
- ✓ Resolution X: 19 - 78 μm
- ✓ Resolution Z: 0.8 - 5.9 μm
- ✓ Z-Range 40 - 80 mm
- ✓ Linearity Z: ± 0.01 % of Z-Range
- ✓ Repeatability Z: 0.4 - 6.6 μm



3D Compact Sensor C6 CS X-FOV 82-145 mm

- ✓ Profile resolution up to 4096 points / profile
- ✓ Profile speed up to 25 kHz
- ✓ Wide range of models with X-FOV 82 and 145 mm
- ✓ Nominal working distance: 172 mm
- ✓ Resolution X: 20 - 35 μm
- ✓ Resolution Z: 0.5 - 0.9 μm
- ✓ Z-Range 15 mm
- ✓ Linearity Z: ± 0.01 % of Z-Range
- ✓ Repeatability Z: 0.4 - 0.7 μm



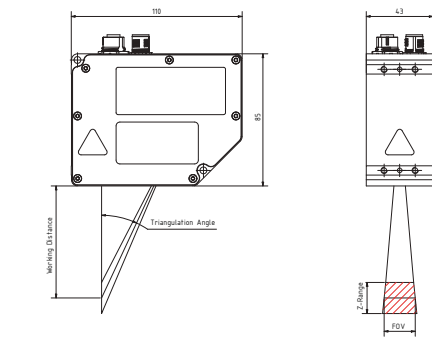
3D Compact Sensor C6 CS X-FOV 182-1290 mm

- ✓ Profile resolution up to 4096 points / profile
- ✓ Profile speed up to 200 kHz
- ✓ Wide range of models with X-FOV 182 - 1290 mm
- ✓ Nominal working distance: 400 - 944 mm
- ✓ Resolution X: 44 - 586 μm
- ✓ Resolution Z: 1.4 - 35.3 μm
- ✓ Z-Range 250 - 1090 mm
- ✓ Linearity Z: ± 0.01 % of Z-Range
- ✓ Repeatability Z: 2.1 - 10.0 μm



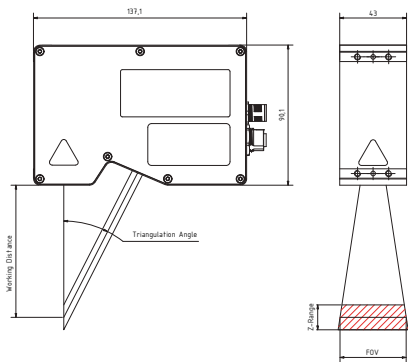
Specifications

X-FOV 7-53 mm									
Model Name	Nominal X-FOV (mm)	Z-Range (mm)	Nominal Working Distance (mm)	Resolution X (µm)	Resolution Z (µm)	Points per Profile	Profile Speed (kHz)	Laser Wave-length (nm)	Laser Safety Class
C6-1280CS35-7	7	5,2	31	5	0,2	1280	200	405, 450	2M, 3R, 3B
C6-1280CS35-12	12	8	31	10	0,2	1280	200	405, 450	2M, 3R, 3B
C6-1280CS25-20	20	20	72	16	0,5	1280	200	405, 450	2M, 3R, 3B
C6-1280CS21-40	40	46	90	31	1,2	1280	200	405	2M, 3R, 3B
C6-2040CS21-53	53	46	90	26	1	2048	25	405	2M, 3R, 3B



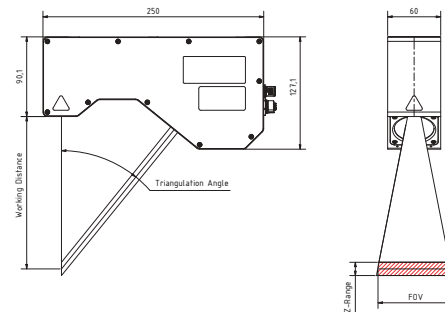
X-FOV 7-53 mm

X-FOV 29-160 mm									
Model Name	Nominal X-FOV (mm)	Z-Range (mm)	Nominal Working Distance (mm)	Resolution X (µm)	Resolution Z (µm)	Points per Profile	Profile Speed (kHz)	Laser Wave-length (nm)	Laser Safety Class
C6-1280CS23-29	29	40	106	23	0,8	1280	200	405, 660	2M, 3R, 3B
C6-2040CS23-38	38	30	106	19	0,7	2048	25	405, 660	2M, 3R, 3B
C6-1280CS23-47	47	40	106	37	1,4	1280	200	405, 660	2M, 3R, 3B
C6-2040CS23-63	63	40	106	31	1,2	2048	25	405, 660	2M, 3R, 3B
C6-1280CS23-75	75	40	106	59	2,3	1280	200	405, 660	2M, 3R, 3B
C6-1280CS14-76	76	80	197	59	3,5	1280	200	405, 660	2M, 3R, 3B
C6-2040CS14-100	100	120	197	49	2,9	2048	25	405, 660	2M, 3R, 3B
C6-2040CS23-100	100	60	106	49	1,9	2048	25	405, 660	2M, 3R, 3B
C6-1280CS14-120	120	120	197	94	5,9	1280	200	405, 660	2M, 3R, 3B
C6-2040CS14-160	160	80	197	78	4,9	2048	25	405, 660	2M, 3R, 3B



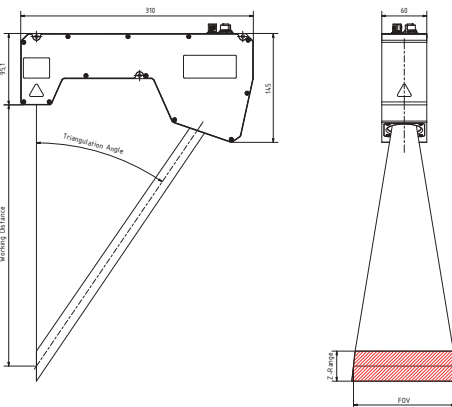
X-FOV 29-160 mm

X-FOV 82-145 mm									
Model Name	Nominal X-FOV (mm)	Z-Range (mm)	Nominal Working Distance (mm)	Resolution X (µm)	Resolution Z (µm)	Points per Profile	Profile Speed (kHz)	Laser Wave-length (nm)	Laser Safety Class
C6-4090CS39-82	82	15	172	20	0,5	4096	20	405, 660	2M, 3R, 3B
C6-4090CS39-145	145	15	172	35	0,9	4096	20	405, 660	2M, 3R, 3B



X-FOV 82-145 mm

X-FOV 182-1290 mm									
Model Name	Nominal X-FOV (mm)	Z-Range (mm)	Nominal Working Distance (mm)	Resolution X (µm)	Resolution Z (µm)	Points per Profile	Profile Speed (kHz)	Laser Wave-length (nm)	Laser Safety Class
C6-4090CS30-182	182	150	400	44	1,4	4096	25	405, 660	2M, 3R, 3B
C6-1280CS30-248	248	200	400	194	6,1	1280	200	405, 660	2M, 3R, 3B
C6-4090CS30-288	288	250	400	70	2,2	4096	25	405, 660	2M, 3R, 3B
C6-2040CS30-330	330	200	400	161	5,0	2048	25	405, 660	2M, 3R, 3B
C6-2040CS18-1060	1060	800	744	518	26,2	2048	25	405, 660	2M, 3R, 3B
C6-2040CS15-1290	1290	1090	920	630	38,0	2048	25	405, 660	2M, 3R, 3B



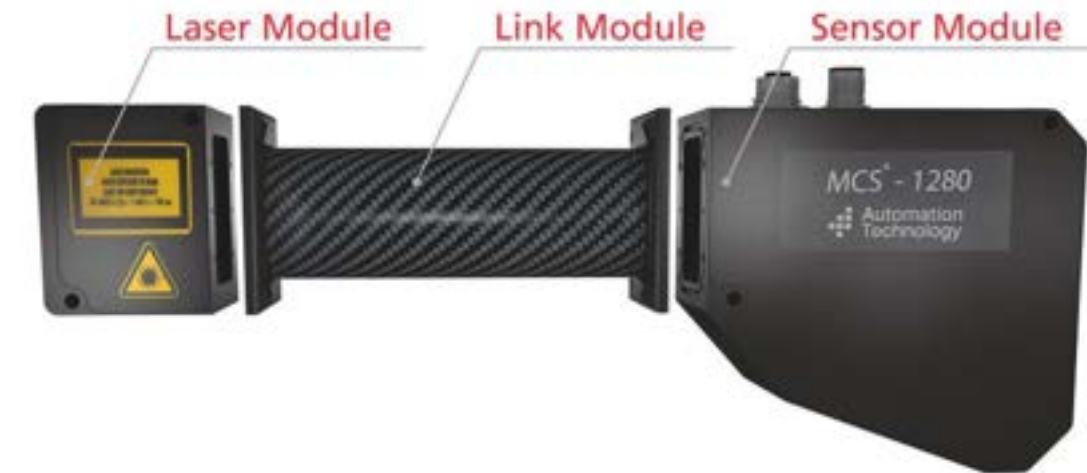
X-FOV 182-1290 mm

Specs for sensor models based on 3070 detector coming soon...

MODULAR

Compact Sensors

Product Overview



Factory assembled and calibrated 3D laser triangulation sensors consisting of:

- ✓ Sensor module
- ✓ Laser module
- ✓ Link module

Configurable according to application requirements:

- ✓ X-FOV
- ✓ Working distance
- ✓ Triangulation angle
- ✓ Number of points per profile
- ✓ Laser wavelength
- ✓ Laser safety class

3D Modular Compact Sensors MCS

- ✓ Number of points per profile: 1280, 2048, 3072 and 4096
- ✓ X-FOV: 70 – 1600 mm
- ✓ Triangulation angle: 15°, 20°, 25°, 30°, 40° and 45°
- ✓ Resolution X: up to 17 μm
- ✓ Resolution Z: up to 1 μm
- ✓ Profile speed: up to 200 kHz



INTEGRATE

cxSupport Package

EASILY

The cxSupportPackage consists of a variety of tools that can be used to acquire 3D images, configure the 3D camera and provide 3D data in the form of range maps or point clouds, among other things.



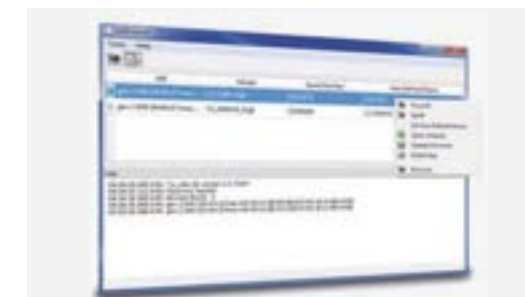
cxCamLib

- ✓ SDK for image acquisition and camera configuration



cx3DLib

- ✓ SDK for intrinsic and extrinsic calibration
- ✓ 3D point cloud and ZMap generation



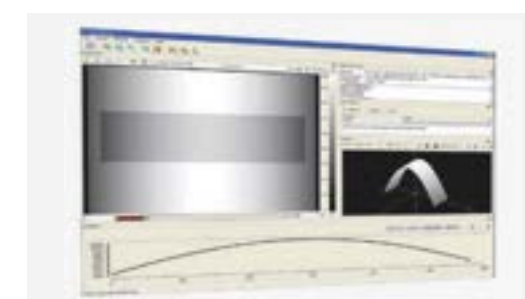
cxDiscover

- ✓ GigE Vision device discovery tool
- ✓ Network settings configuration



cxShow3D

- ✓ Sample tool with GUI for 3D point cloud visualization and ZMap generation

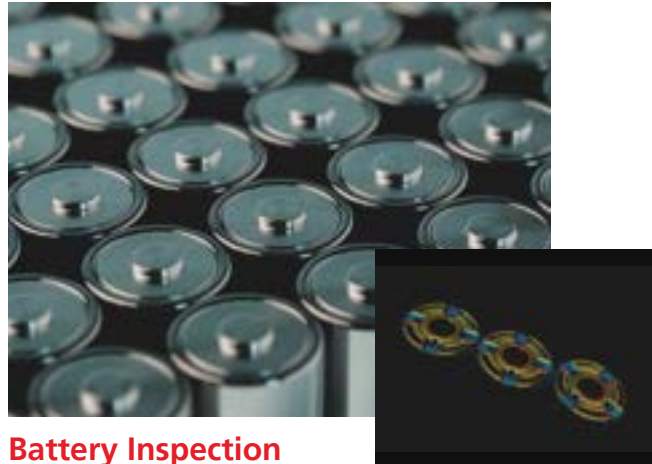


cxExplorer

- ✓ Software for 3D image acquisition, device configuration and data analysis

APPLICATION VARIETY

Suitable for All Industries



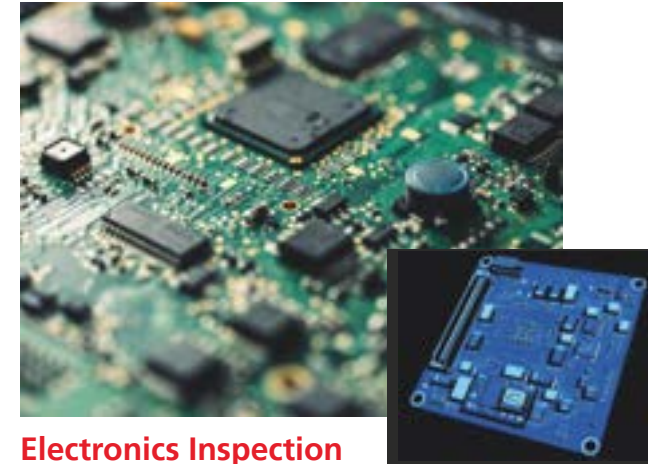
Battery Inspection

- ✓ Inspection of the inner foil structure of the battery during assembly
- ✓ Inspection of the electrical contact surface of the battery



Logistics and Packaging

- ✓ Sealing inspection
- ✓ Package quality inspection



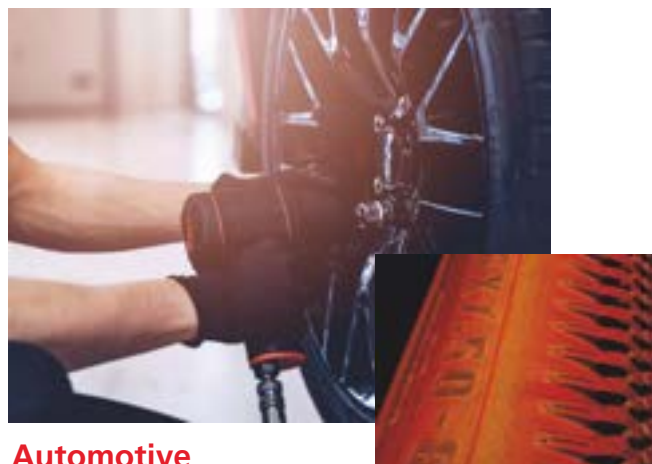
Electronics Inspection

- ✓ PCB Automated Optical Inspection (AOI)
- ✓ Solder Paste Inspection (SPI)



Food and Beverages

- ✓ Inline food packaging inspection
- ✓ Food branding, decoration, counting and volume measurement



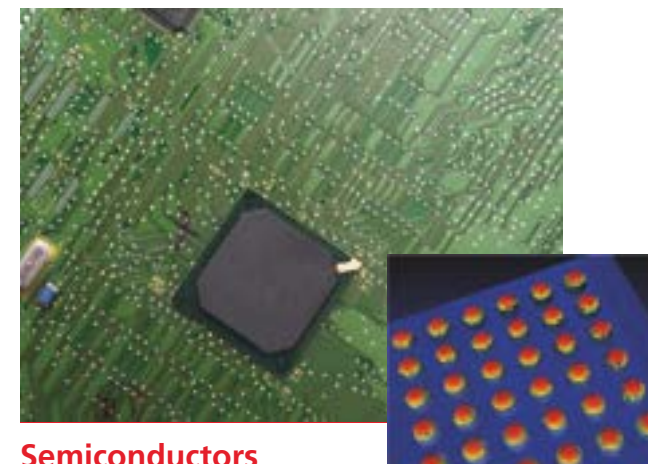
Automotive

- ✓ Tire inspection
- ✓ Electric vehicle motor assembly inspection



Wood and Lumber

- ✓ Sawmill production optimization
- ✓ Wood furniture quality inspection



Semiconductors

- ✓ Inspection of electronic components (BGA, QFP)
- ✓ Silicon wafer inspection



Metrology

- ✓ Inspection of dimensional properties and geometrical features
- ✓ Comparison to the CAD model



Learn more about our products:
www.acuitylaser.com



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