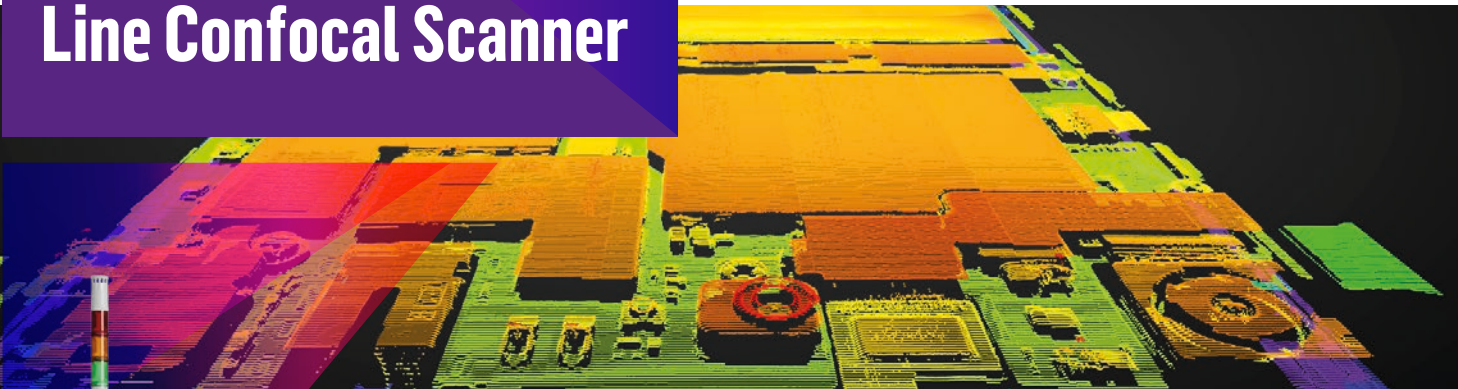


# Line Confocal Scanner



## Next Generation 3D Imaging for the Most Demanding Industrial Applications

**New LCI Imaging Technology for tasks that lasers and CMMs do not perform well on**

- Sloped, angled, curved, rounded, convex and concave surfaces
- Glossy, glassy, reflective and mirrorlike surfaces
- Transparent, semitransparent and opaque surfaces
- High contrast (light/dark or glossy/matte) surfaces
- Delicate, elastic and soft surfaces

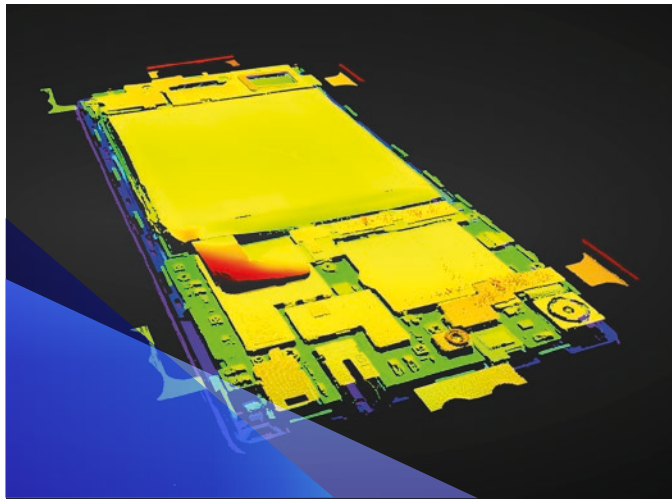
**Measure, analyze and inspect at sub-micron resolution**

- High precision 3D dimensions
- Assembly tolerances
- Clearances, gaps and offsets
- Flatness
- Surface appearance/characteristics, Look & Feel
- Roughness and burr
- Thickness of transparent/semitransparent parts

**Application examples**

- Research & development
- Process optimization
- Defect detection and quality control
- Reverse engineering

# Line Confocal Scanner



## Operation

FocalSpec 3D Scanner can be used as a stand-alone measuring instrument or as an integrated component of production/assembly processes functioning as an at-line quality inspection station.

Once the system is started up, the product specific "recipe" is selected from the database. The product(s) to be scanned are placed, either manually or automatically, in an inlet that is mounted on the scanner's high-resolution XYZ stage. The scan is initiated and the stage is automatically moved under the system's internal optical LCI sensor following an optimized path. After the scan is completed, the results are displayed on the scanner's touchscreen monitor and saved in the database. The ultra-high resolution point cloud resulting from the scan offers practically unlimited analysis options.

The measurement time depends on the size of the scanned area, selected Y stage motion resolution and the system's sensor model.

## Technical specifications

Dimensions h,w,d (mm)	1653, 745, 800
Scan area x,y,z (mm)	400, 200, 100
Repeatability	x,y 2.5µm z 0.5µm
Powering	230/110 VAC
Connectivity	Ethernet LAN RJ45
Computer	PC (os Win7, 64 bit)
Display	Touch Screen
CCM co-ordinate and flatness measurements, 3D point cloud export, MATLAB compatibility	

Line Confocal Sensor	LCI 400	LCI 1200	LCI 1600	MCP 100	
Optical profile length	4.50	11.26	16.40	5.50	mm
Pixel size X	2.2	5.5	8.0	4.0	µm
Pixel size Y	10	25	36	25	µm
Z-resolution	0.10	0.55	0.98	1.00	µm
Stand-off distance	5.50	16.16	59.00	12.0	mm
Z-range	1.00	2.80	5.50	5.50	mm
Measurement Speed @ full z-range	300	500	500	10 000	Hz
Max Measurement Speed	300	2500*	2500*	10 000	Hz
Number of points/profile	2048	2048	2048	2	
Wavelength	VIS	VIS	VIS	IR	
Max slope of objects	15.0	20.0	13.5	15.0	deg
Dimensions	258*258*79	645*214*130	431*358*113	262x127x38	mm
Weight	5.2	24	20	1.4	kg

\* With limited z-range

Specifications subject to change without notice.

# FOCALSPEC

FocalSpec Ltd  
FINLAND  
+358 10 231 2810

FocalSpec, Inc.  
USA  
+1 (770) 713 0837

info@focalspec.com  
www.focalspec.com