heliInspect™ H8

SWISS PRECISION IN THREE DIMENSIONS

3D Inspection

heliotis
advancing 3D metrology

Industrial WLI

The new heliInspect™ H8 is the latest addition to Heliotis series of unrivaled optical in-line sensors. At its core, this industry grade White-Light-Interferometer utilizes Heliotis next generation 3D-pixel sensor heliSens™ S4.

Measurement capability extended

- Height measurements with true sub-micrometer accuracy
- Unprecedented measurement speed
- Higher resolution in x, y at given FOV
- Highest intra-scene dynamic range
- Large set of optical magnifications

Integration as easy as a 2D camera

- Standard Gen<i>CAM interface
- On-camera services for standard tasks
- No need for an external scanner
- Multiple mounting options
- Interchangeable interferometer modules

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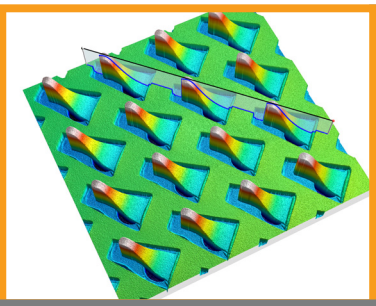
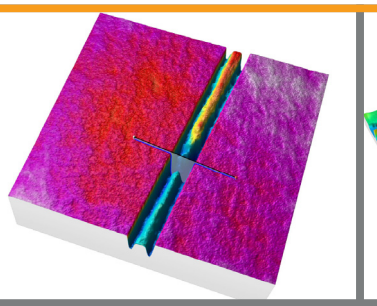
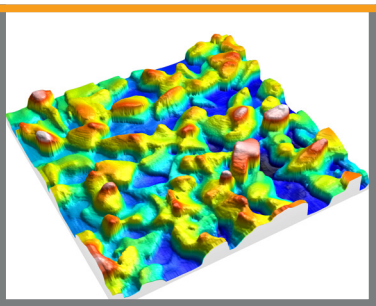

Planarity


Geometry


Defect


Roughness

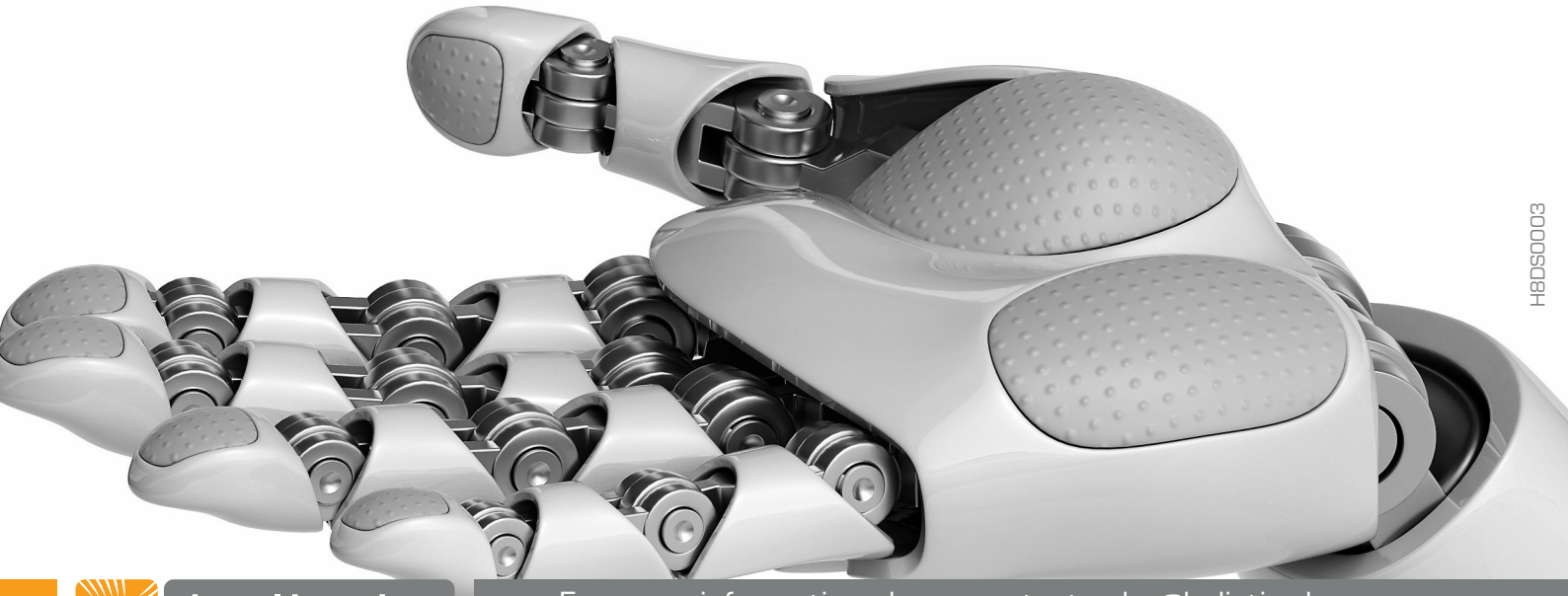
heliInspect™ H8

Specifications

heliInspect™ H8	Key Features
Measurement principle	White-Light Interferometer (industrial grade WLI)
Sensor	Heliotis lock-in imager heliSens™ S4 with in-pixel signal processing
Camera board	FPGA based high-speed board, SOC, Linux OS, high-level interface through embedded heliService™
Light source	High-power LED, λ_c = 630 nm
Scanner	Linear motor, precision guides, stroke = 40 mm, standard resolution = 20 nm, ultra resolution = 1 nm
Interfaces	Gen<i>Cam / GigE, GIO, power (24V)
Software	heliSDK™ with examples for Halcon, LabVIEW, C++, Python

heliOptics™ WLI8	2 x	4 x	8 x	10 x	20 x	50 x	100 x
Field of view [mm²]	6.5 x 6.1	3.3 x 3.1	1.6 x 1.5	1.3 x 1.2	0.65 x 0. 61	0. 26 x 0.25	0.13 x 0.12
Optical resolution [µm]	12	6	3	2.4	1.2	0.48	0.24(*)
Working distance [mm]	43.0	42.9	12.8				
Nikon Mirau				7.4	4.7	3.4	2.0
Leica Mirau				3.6	3.6	2.5	n. a.
Numerical aperture	0.1	0.15	0.25	0.3	0.4	0.5	0.7

(*) pixel resolution



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