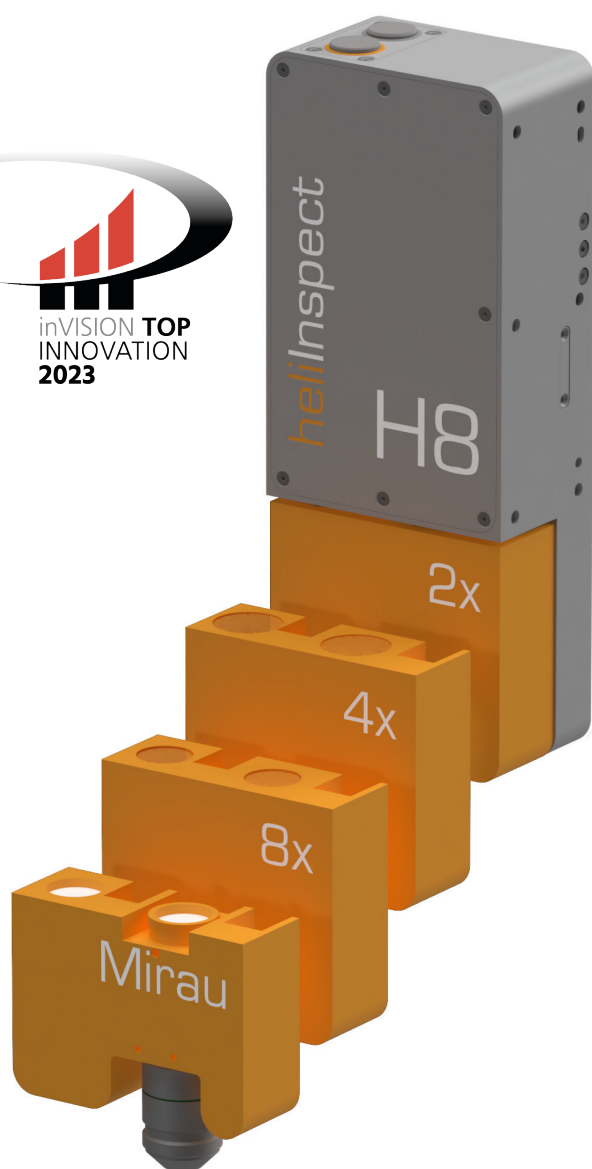


H8 / H8M

3D Inline-Metrology


heliotis

advancing 3D metrology



Industrial WLI

For applications where conventional sensors reach their limits, the **helInspect™** H8 and H8M excel with true sub-micrometer height resolution. The unmatched performance of these industry grade White-Light-Interferometers are based on Heliotis next generation 3D-pixel sensor **heliSens™** S4 and S4M.

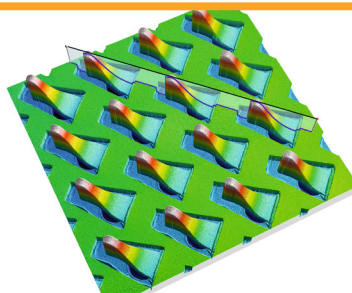
Measurement capability extended

- 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

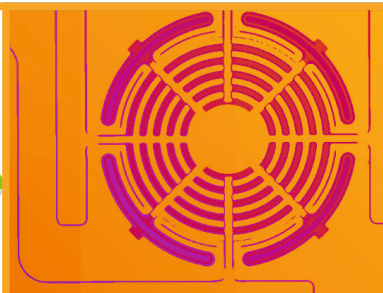
Integration as easy as a 2D camera

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

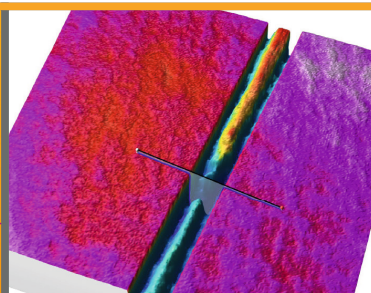
H8MDS0004



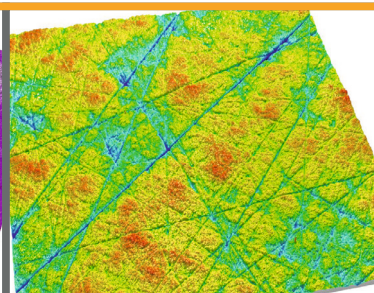
Planarity



Geometry



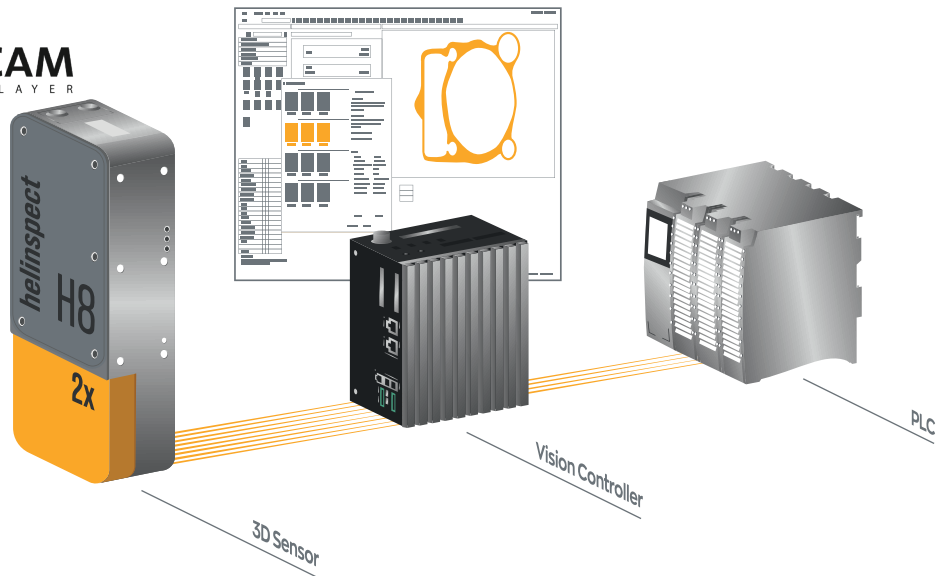
Defect



Nanometer

Specifications for H8 / H8M

GEN*i*CAM
TRANSPORT LAYER



heliInspect™ H8-M	Key Features
Measurement principle	White-Light Interferometer (industrial grade WLI)
Sensor	Heliotis lock-in imager heliSens™ S4/S4M, 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, $\lambda_c = 630 \text{ nm}$
Scanner	Linear motor, precision guides, stroke = 40 mm, standard resolution = 20 nm, ultra resolution = 1 nm
Interfaces	Gen <i>i</i> Cam / GigE, GPIO, power (24V)
Software	heliSDK™ for C++, C#, Halcon, Matrox, LabVIEW, 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
Lateral resolution [μm]	H8	12	6	3	2.4	1.2	0.48	0.24[*]
	H8M	6	3	1.5	1.2	0.6	0.24[*]	0.12[*]
Working distance [mm]	Michelson	43.0	42.9	12.8				
	Mitutoyo Mirau				8.0	6.0	3.6	2.0
	Nikon Mirau				7.4	4.7	3.4	2.0
	Leica Mirau				3.6	3.6	2.5	n. a.
Numerical aperture		0.1	0.14	0.2	0.3	0.4	0.5	0.7

[*] pixel resolution



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