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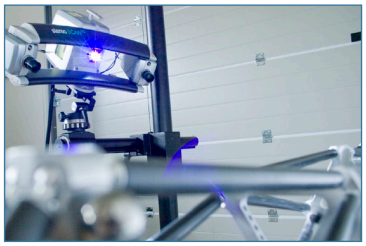
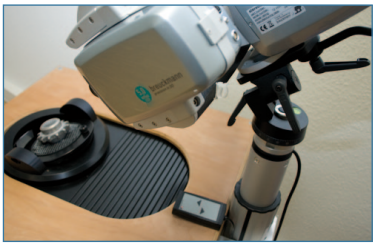
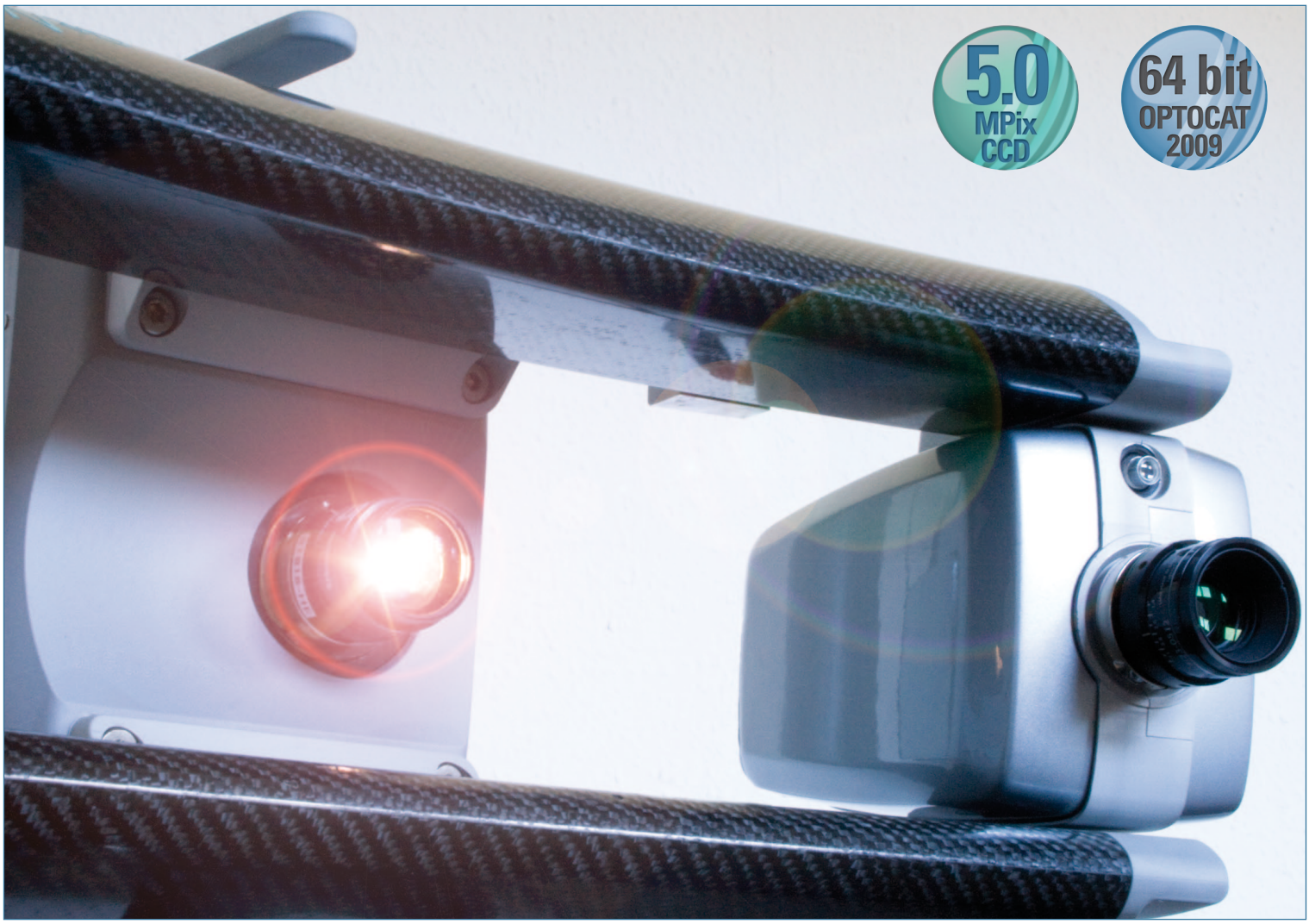
precision in 3D

stereo*SCAN* 3D-HE

THE MEASURING SYSTEM FOR HIGHEST DEMANDS





Maximum Accuracy and Flexibility

Prompted by the need to meet the increasing requirements of our customers as well as the growing variation of application areas, we have developed the new **stereo*SCAN* 3D - HE system**.

Certified according to the VDI / VDE 2634 guideline, the fully integrated combination of our patented **MPT projection unit** with two high resolution digital cameras positioned asymmetrically at either side of the projector delivers maximum performance with regard to precision and flexibility.

Precision
Two digital **CCD** cameras, each featuring **5.0 million pixels,** guarantee the highest level of resolution and accuracy. The carbon fibre base structure ensures optimum mechanical and thermal stability of the sensor. An intelligent data management software implemented on the basis of strict quality criteria, provides the highest degree of data reliability. Owing to the fast data acquisition time of approx. 1 second, the implication of interfering external influences is reduced to a minimum. The calibration of the system can be completed within a matter of minutes at a high degree of accuracy.

Flexibility
Given the asymmetrical camera set-up, three different **triangulation** angles of **10°, 20° and 30°** are implemented within one system, enabling the user to access even those areas which are otherwise difficult or impossible to capture. Conveniently exchangeable lenses ensure a fast switching between different measurement areas. The camera modules are easily mounted in various positions on the sensor base. Given this high level of flexibility, even smallest measurement areas can be reached without the need to change the sensor base.

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TECHNICAL SPECIFICATION

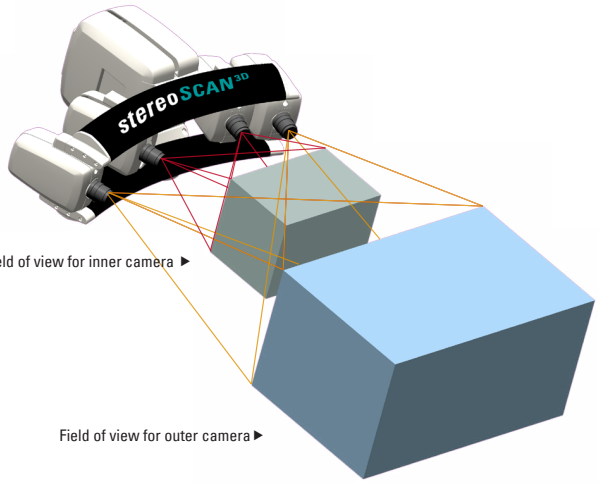
Image Processing	
Host computer	Dell Highend Workstation (system configuration on request)
Image data interface	IEEE 1394b (FireWire®)
Operating system	Microsoft Windows XP Professional (optional x64 Bit Edition)
Measurement software	OPTOCAT for Windows (optional OPTOCAT x64 Bit Edition) 3D-Alignment supports all essential navigation strategies (with and without index marks) 3D post processing to generate polygonal meshes
Data interface	ASCII, BRE, STL, PLY, VRML

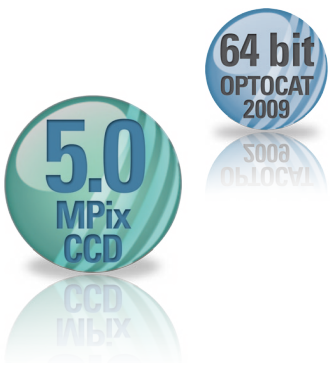
Sensor	
Principle of operation	Miniaturized Projection Technique
Light source	Halogen Reflector Lamp / Discharge Reflector Lamp
Sensor weight	< 6 kg
Imaging	2 high resolution CCD digital cameras, b/w or colour
Digitization	2448 x 2048 pixels per camera
Operating distance	380 mm inner camera position 880 mm outer camera position
Acquisition time	< 1 s

EXTENDED MEASUREMENT RANGES: 60 mm to 950 mm

Given its particular configuration, the **stereo*SCAN*³ᴰ - HE** system offers a very large range of fields of view (FOVs), covering 6 standard measuring fields from **60 mm** up to **950 mm.** The FOVs are conveniently and quickly adjusted by exchanging the objectives and positioning the camera modules to the appropriate positions on the sensor base. In addition, this highly flexible and convenient arrangement, further facilitated by a simple calibration procedure as well as the use of laser pointers, allows for very small measuring fields without the necessity to change the sensor base.

Detailed information about the various combination options for all fields of view can be provided upon request.





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