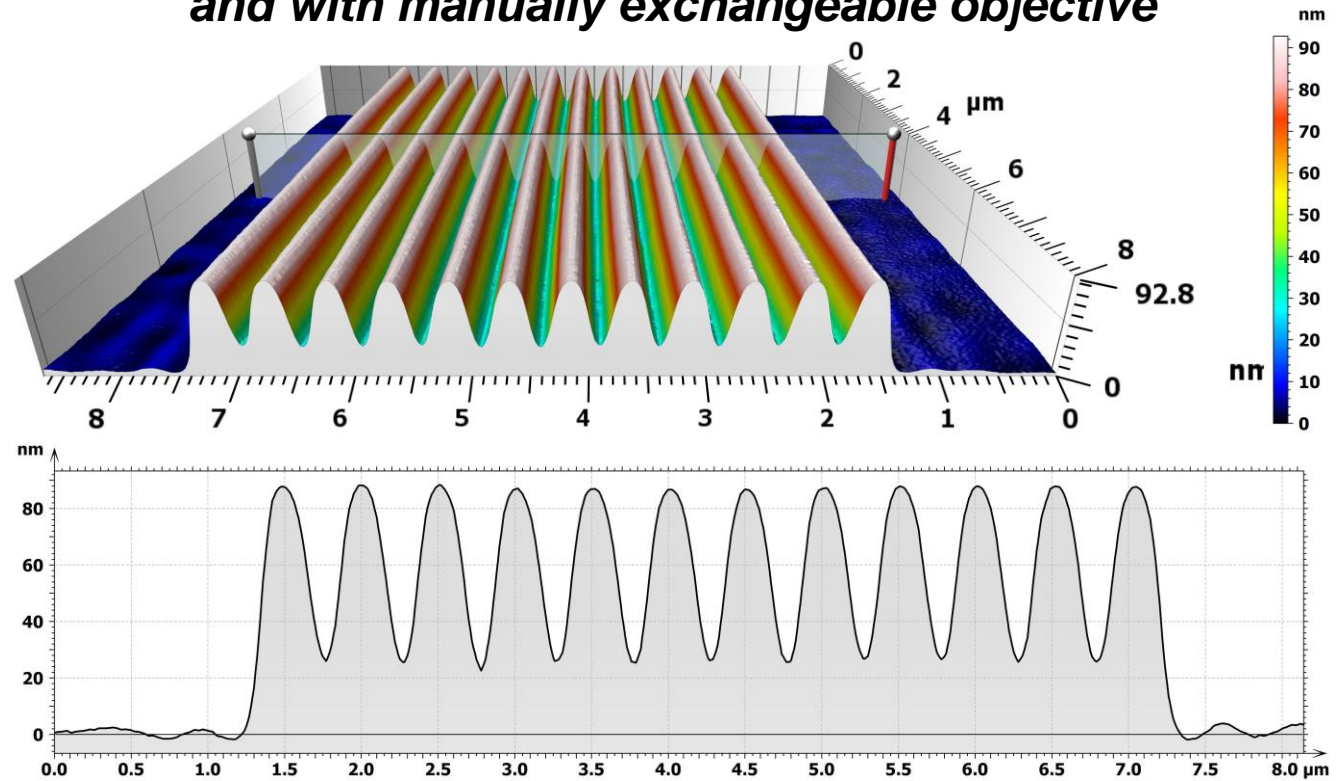
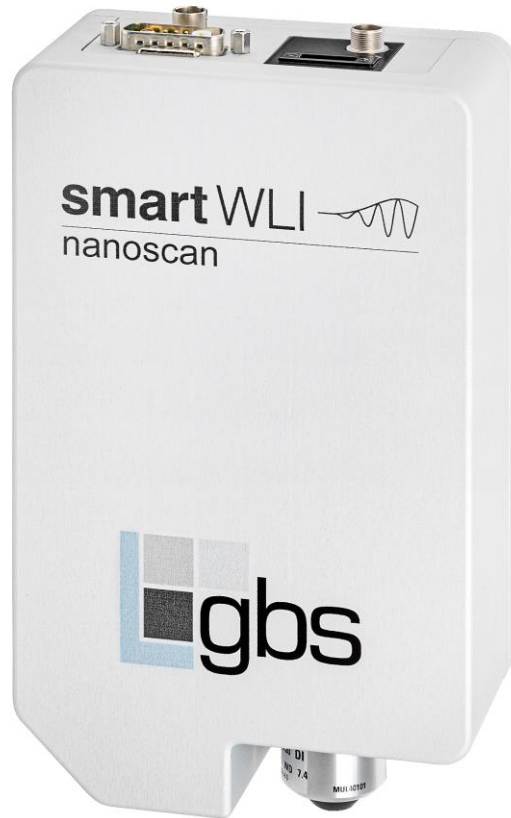
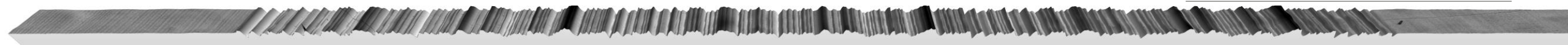


**3D sensor with highest resolution  
and with manually exchangeable objective**



**optimized for nano structures and functional  
micro structure with higher aspect ratio**





## components

industrial 19" rack with 6 height units including housing

### PC

- Windows10
- measuring software smartVIS3D
- evaluation software MountainsMap®
- 3 height units

### scanning device controller

- Piezo positioning system (capacitive)
- interferometric calibrated
- closed loop control for positioning
- 3 height units

LED light controller

XY positioning system controller (optional)

	5 MP high resolution camera
measuring points	2456 x 2054
scanning speed full resolution	77 Hz
scanning speed ROI	up to 2 kHz

objective / magnification	2.5x	5x	10x	20x	50x	100x	115x*
working distance / mm	10.3	9.3	7.4	4.7	3.4	2	0.7
numerical aperture	0.075	0.13	0.3	0.4	0.55	0.7	0.8
measuring field / mm <sup>2</sup>	3.4 x 2.8	1.7 x 1.4	0.85 x 0.71	0.43 x 0.36	0.17 x 0.14	0.09 x 0.07	0.075 x 0.06
point spacing / μm	1.4	0.7	0.35	0.175	0.07	0.035	0.03

\*Olympus 100x WLI Objektiv – die deklarierte Vergrößerung ist in Bezug zum 100x Nikon Objektiv berechnet

# stand and XY positioning table specification



stand	
max. / coarse positioning range (manual Z positioning)	70 mm
fine positioning range (manual Z positioning)	1.9 mm
Tilting angle (levelling device)	$\pm 3^\circ$

positioning tables					
positioning area	movement	load capacity	resolution	orthogonality	encoder
73 x 55 mm <sup>2</sup>	manual	1 kg	-	-	-
75 x 50 mm <sup>2</sup>	motorized	1 kg	0.01 $\mu\text{m}$	<10arcsec	optional
100 x 100 mm <sup>2</sup>	motorized	2 kg	0.01 $\mu\text{m}$	<10arcsec	optional
150 x 150 mm <sup>2</sup>	motorized	3 kg	0.01 $\mu\text{m}$	<10arcsec	optional
200 x 200 mm <sup>2</sup>	motorized	3 kg	0.01 $\mu\text{m}$	<10arcsec	optional
300 x 300 mm <sup>2</sup>	motorized	5 kg	0.01 $\mu\text{m}$	<5arcsec	optional

smartWLI nanoscan	
measurement technique	white-light interferometry
measurement software	smartVIS3D
evaluation software	MountainsMap® with optional GBS add-on modules
scanning device	Piezo positioning system
scan range	up to 100 µm
scanning speed / full resolution	5 µm/s
max. scanning speed	approx. 200 µm/s
digitalization	up to 0.01 µm
topography reproducibility*	< 0.03 nm
1-σ reproducibility 0.4 µm step height	< 1 nm
1-σ reproducibility 12 µm step height	< 3 nm
sensor weight	approx. 2 kg
relative humidity, non-condensing	up to 80%
operation temperature	10 °C to 35 °C
power supply	100 to 240 VAC, 50/60 Hz

\* $\text{Sq}/\sqrt{2}$  – profile difference of 2 scans, EPSI, single scan, without profile averaging, laboratory conditions, 1 million points after 3x3 denoising filter

