

SYSTEM	
ZYGO P/N	6311-0100-01 NV 9000 w/ isolation 6311-0100-11 NV 9000 w/o isolation
Measurement Technique	3D coherence scanning interferometry, SureScan™ technology, and phase shifting interferometry
Scanner	Precision Piezo drive with Closed loop capacitance gauge control and crash protection
Objectives	1.0X – 100X magnification; Standard and long working distance; See the Nexview & NewView 9000 Series Objective Chart for more details
Objective Mounting Options	<ul style="list-style-type: none"> • Single objective dovetail • Manual Encoded 4-position turret • Motorized 4-position turret
Optical zoom	Motorized 3-position encoded zoom turret with 1.0X zoom tube included • 0.5X, 0.75X, 1.5X, 2.0X optional
Field of View	Objective and zoom selectable from 0.04 x 0.04mm to 17.49 x 17.49mm, Integrated field stitching for larger areas
Illuminator	White light LED with manual field stop, aperture stop and spectral filters
Measurement Array	Selectable 1600 x 1200, 1000 x 1000, 1000 x 600, 1000 x 200
Part Viewing	Integrated view window in Mx software
Focus	Motorized manual or auto focus with through-the-lens focus aid
Z-Drive (Focus) Stage	100 mm range with 0.1 µm resolution
Part Stage	Manual stage travel range: • XY: 100 mm; Tilt: ±3° Motorized stage travel range: • XY: 150 mm; Tilt: ±3° Encoded XYZ options available
System Controller	i7 class PC with 1080P display
Software	ZYGO Mx software v7.2.0 or later with Microsoft Windows 10 (64-bit) OS

PHYSICAL	
Dimensions (HWD)	75 x 64 x 56 cm (main unit, benchtop configuration) 151 x 73 x 61 cm (on stand, max. height, doors closed) Optional Workstation: 83 x 73 x 61 cm (drawer closed)
Weight	NewView System: 91 kg NewView System & Stand: 229 kg

UTILITY REQUIREMENTS	
Input Voltage	100 to 240 VAC, 50/60 Hz
Compressed Air for Table	4.1 to 5.5 bar (60 to 80 psi); dry and filtered; 6 mm OD hose input, ¼ in. adapter included

PERFORMANCE	
Vertical Scan Range	150 µm with precision Piezo drive; 20 mm with z-stage extended scan
Surface Topography Repeatability ⁽¹⁾	0.08 nm
Repeatability of RMS ⁽²⁾	0.008 nm
Optical Lateral Resolution ⁽³⁾	0.34 µm (100X objective)
Spatial Sampling	0.04 µm (100X objective 2X zoom)
Maximum Data Scan Speed ⁽⁴⁾	53 µm/sec @ 1600 x 1200 69 µm/sec @ 1000 x 1000 107 µm/sec @ 1000 x 600 171 µm/sec @ 1000 x 200
Step Height Repeatability ⁽⁵⁾	0.1%
Step Height Accuracy ⁽⁶⁾	0.3%

TEST PART CHARACTERISTICS	
Material	Opaque, transparent, coated, uncoated, specular, rough
Maximum Sample Height	89mm; increase by using head and or gantry risers
Maximum Surface Slope	55° – smooth part @ 100X 85° – scattering surface
Sample Reflectivity	0.05% - 100%
Max. Sample Mass	3.5 kg

ENVIRONMENTAL REQUIREMENTS	
Temperature	15 to 30°C with rate of change <1.0°C per 15 min
Humidity	5 to 95% relative, noncondensing
Vibration Isolation	Included and required for vibration in the range of 1 Hz to 120 Hz
Vibration Criterion	VC-C or better
Acoustic Criterion	NC30 or better

FOOTNOTES

- Performance specifications under laboratory conditions using standard specimens, according to ISO 25178-601, 25178-604 and 5436-1.*
- Surface Topography Repeatability for SmartPSI mode, 1-sec acquisition, full FOV with 3x3 median filter, in a lab environment.*
 - Repeatability of the RMS surface roughness parameter Sq, under the same conditions as for (1). Note that the repeatability of the Sq is sometimes referred to informally as "vertical resolution."*
 - Lateral Resolution=Sparrow criterion, objective dependent.*
 - Data scan speed depends on the measurement array and data acquisition mode.*
 - 1-σ Step height repeatability verified using 1.8 µm and 24 µm ZYGO certified step height standards.*
 - Instrument contribution to uncertainty for step height measurements when using the piezo drive.*

Specifications subject to change without prior notice.