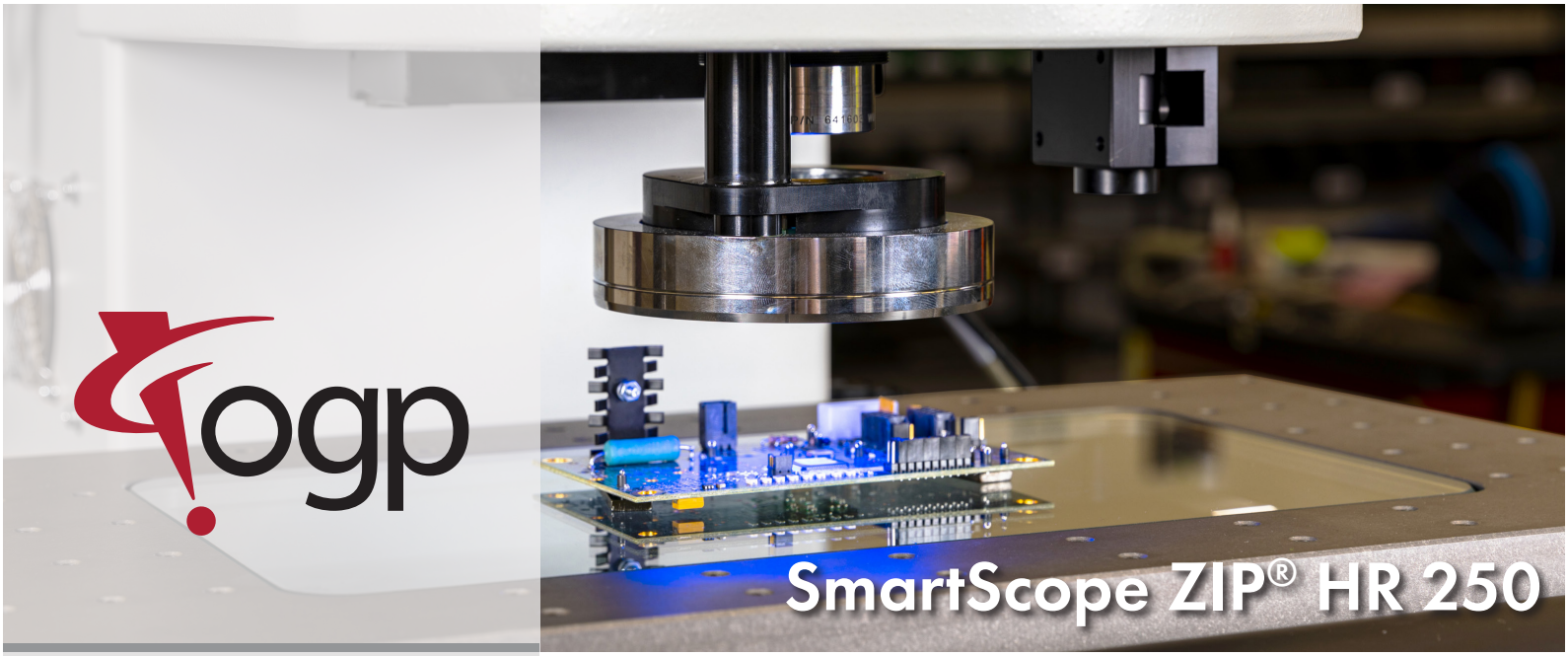
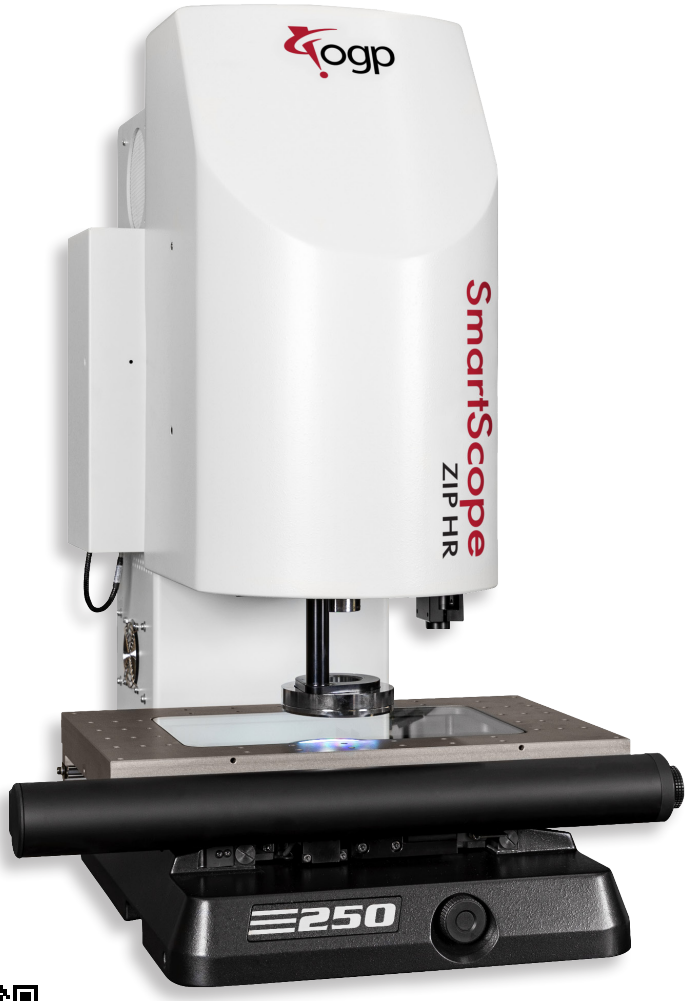


SmartScope ZIP HR 250 benchtop multisensor measurement systems offer versatile optics – a wide field objective lens, digital / optical zoom, and 5-megapixel monochrome digital camera provide a distortion-free image at low zoom, with high resolution at high zoom.

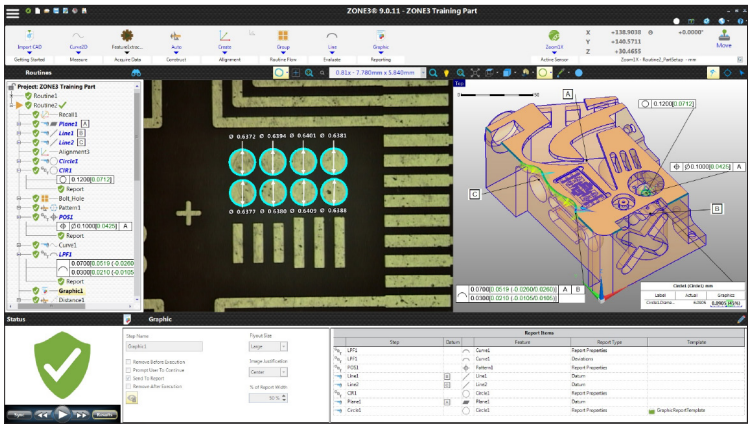
- **Flexible Illumination –** All LED coaxial, backlight, and Programmable Ring Light (PRL) that can automatically change the angle of incidence.
- **Accurate Video Metrology –** AccuCentric® motorized zoom lens automatically compensates magnification for each zoom position.
- **Multisensor Versatility –** Optional touch probes and lasers are available to handle a wide variety of parts and applications.

Advanced Performance Multisensor Measurement System

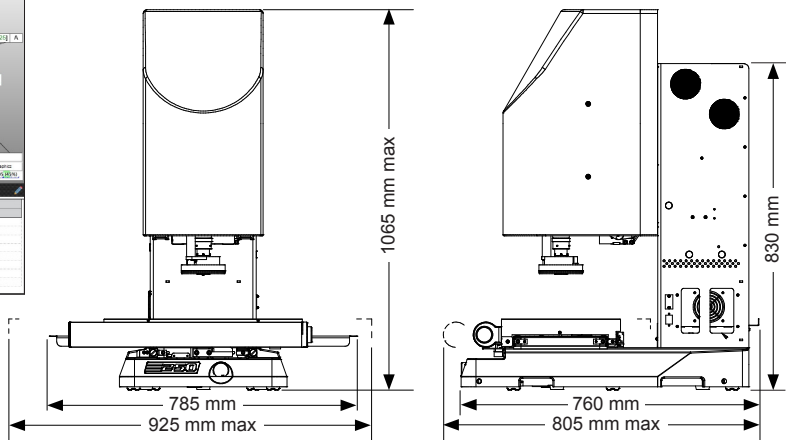


Shown with the Programmable Ring Light (PRL) deployed and optional TeleStar Probe.

SmartScope ZIP® HR 250



ZONE3® Metrology Software represents a totally new way of working with multisensor measurement systems, providing faster, easier, and more productive measurements.



System Weight: 165 kg
Shipped Weight: 275 kg

	Standard	Optional
XYZ Travel	300 x 150 x 200 mm	
XYZ Scale Resolution	0.1 µm	0.05 µm, including dual X scales
Drive System	DC servo with 5 motorized motions (X, Y, Z, zoom, PRL) and multifunction handheld controller	XY precision ball screw drive
Worktable	Hardcoat anodized, with fixture holes, removable stage glass, 25 kg recommended max payload	
Rotary Axis		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™)
Optics	AccuCentric® auto-compensating motorized optical zoom; digital zoom; 1x and 2x interchangeable objective lenses	**Focus Grid Projector:** LED source **Laser Adapter:** Allows for field retrofit of TTL Laser. Includes Laser Pointer **Replacement Lens:** 5x
Illumination	Substage LED profile (green), coaxial LED surface (green), PRL with motorized angle of incidence adjustment (green)	Multicolor (R/G/B) PRL with motorized angle of incidence adjustment, SmartRing™ LED ring light in lieu of PRL, Tungsten Fiber-Optic ring light mounted below SmartRing light (for use with 2x and 5x lens only)
Camera	5MP black and white digital metrology camera	
FOV Range (Optical Zoom)	1x: 12.1 x 10.1 mm to 2.2 x 1.8 mm 2x: 4.7 x 3.9 mm to 0.9 x 0.7 mm	5x: 0.9 x 0.7 mm to 0.43 x 0.35 mm
Max Digital Zoom	1x: 0.20 mm x 0.16 mm 2x: 0.08 mm x 0.06 mm	5x: 0.04 mm x 0.03 mm
Working Distance (with PRL Retracted)	1x: 55 mm 2x: 38 mm	1x: 90 mm (with SmartRing Light in lieu of PRL) 5x: 19 mm
Sensor Options		**Tactile:** TP20 or TP200 Touch Probe, SP25 Scanning Probe **Non-Contact:** Through-The-Lens (TTL) Laser (for use with 2x and 5x lens only), Fixed P-25 TeleStar® Probe (70 mm working distance)
Software	• ZONE3 Express • QVI® Portal	**Metrology software:** ZONE3 Prime, ZONE3 Pro **Productivity software:** SmartFit® 3D, OGP® EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) **Offline software:** ZONE3 Offline
Controller	Windows® based, with up-to-date processor and on board networking/communication ports	
Controller Accessory Package		24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied)
Power Requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 900 W	
Safe Operating Environment	15-30 °C, non-condensing	
Rated Environment	Temperature 18-22 °C, stable to ± 1 °C, max rate of change 0.5 °C / hour, max vertical gradient of 1 °C / meter; humidity 30-80%; vibration <0.001g below 15 Hz	
XY Area Accuracy	E_2 = (1.8 + 6L/1000) µm	E_2 = (1.25 + 6L/1000) µm (requires optional 0.05 µm, dual X scales)
Z Linear Accuracy	E_1 = (2.5 + 5L/1000) µm	E_1 = (2.0 + 5L/1000) µm (requires optional TTL Laser) E_1 = (1.4 + 5L/1000) µm (requires optional Touch or TeleStar Probe)

Accuracy is evaluated with a QVI verification procedure where "L" is an arbitrary measuring length in millimeters. Accuracy standards are described in QVI Publication Number 790762. Specifications apply in the rated environment. Optical specifications apply at the maximum optical magnification. XY Accuracy applies with an evenly distributed load up to 5 kg in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface. Depending on load distribution, accuracy at maximum rated load may be less than standard.

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