

SmartScope® Flash™ 670

**SmartScope Flash 670** – Features a moving bridge design where the part remains stationary. A solid granite base and moving bridge provide a highly rigid structure for accurate positioning and repeatability. Flash 670 offers:

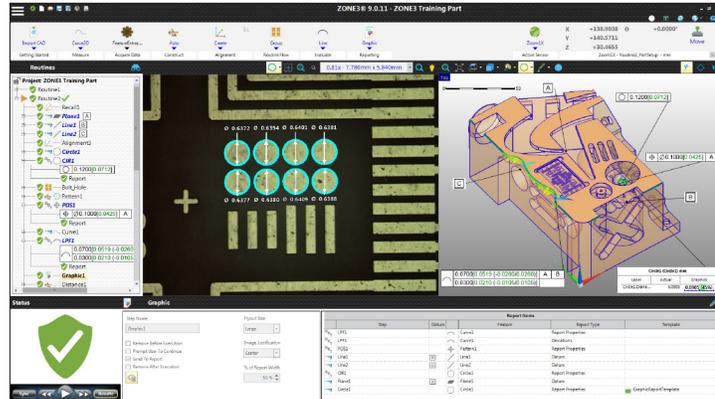
- **Precision Optics** – High quality AccuCentric® zoom lens automatically compensates magnification for each zoom position.
- **Flexible Illumination** – Standard profile light, coaxial surface light, and SmartRing™ light illuminate parts from all angles.
- **Multisensor Versatility** – Optional touch probe, scanning probe, laser, micro-probe sensors, and rotary indexers.

## Extra-Large Capacity 3D Multisensor Dimensional Measuring System

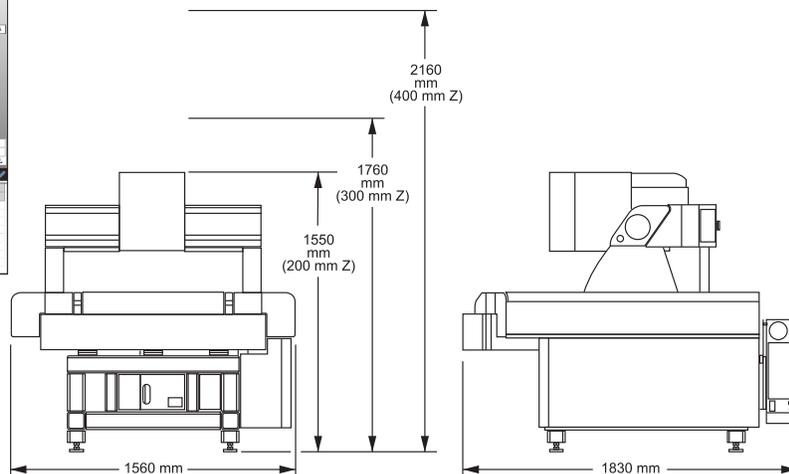


Shown with extended Z axis.

# SmartScope® Flash™ 670



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



System Weight: 1800 kg  
Shipping Weight: 2260 kg

	Standard	Optional
<b>XYZ Travel</b>	650 x 660 x 200 mm	Extended Z axis, 300 or 400 mm
<b>XYZ Scale Resolution</b>	0.1 µm, including dual Y-axis scales	
<b>Drive System</b>	DC servo with 4-axis control (X, Y, Z zoom); with multifunction handheld controller	
<b>Worktable</b>	Nickel plated steel, with fixture holes, removable stage glass, 130 kg recommended max payload	
<b>Rotary Axis</b>		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™), Heavy Duty Rotary (HDR), High Precision Rotary (HPR™), Dual Rotary (requires optional 300 or 400 mm Z axis)
<b>Optics*</b>	AccuCentric® auto-compensating zoom, motorized; 1.0x lens	<b>Focus Grid Projector:</b> LED Source <b>Laser Adapter:</b> Allows for field retrofit of TTL Laser. Includes Laser Pointer <b>Replacement Lenses:</b> 2.5x, 5.0x <b>Laser Lenses:</b> 2.0x (Included with TTL Laser), 5.0x <b>Lens Attachments for 1.0x Lens:</b> 0.5x, 0.75x, 1.5x, 2.0x
<b>Illumination</b>	Substage LED profile, coaxial LED surface, SmartRing LED ring light (white)	Red, Green, or Blue SmartRing; Flexible SmartRing for 0.5x lens attachment
<b>Metrology Camera</b>	Color metrology camera	Monochrome metrology camera
<b>Field of View**</b>	8.0 mm x 6.0 mm (low zoom) to 0.90 mm x 0.68 mm (high zoom)	14.6 mm x 10.9 mm (1.0x lens, 0.5x attachment) to 0.19mm x 0.14 mm (5.0x lens)
<b>Working Distance</b>	64 mm	Up to 97 mm (1.0x lens, 0.5x attachment)
<b>Sensor Options***</b>		<b>Tactile:</b> TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™ <b>Non-Contact:</b> Through-the-Lens (TTL) Laser, DRS™ Laser, Rainbow Probe™
<b>Software</b>	<ul style="list-style-type: none"> <li>• ZONE3 Express or Measure-X metrology software</li> <li>• QVI® Portal</li> </ul>	<b>Metrology software:</b> ZONE3 Prime, ZONE3 Pro <b>Productivity software:</b> MeasureFit® Plus, SmartFit® 3D, OGP® EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) <b>Offline software:</b> ZONE3, Measure-X
<b>System Controller</b>	Windows® based, with up-to-date processor and onboard networking/communication ports	
<b>Controller Options</b>	Ergonomic sit/stand operator workstation	24" flat panel, or dual 24" flat panel LCD monitors; keyboard, 3-button mouse (or user supplied)
<b>Power Requirements</b>	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 800 W	
<b>Safe Operating Environment</b>	15-30 °C, non-condensing	
<b>Rated Environment</b>	Temperature 18-22 °C, stable to ± 1 °C, max rate of change 1 °C / hour, max vertical gradient of 1 °C / meter; 30-80% humidity; vibration <0.001g below 15 Hz	
<b>XYZ Volumetric Accuracy</b>		$E_3 = (3.5 + 8L/1000) \mu\text{m}$ (requires ZONE3)
<b>XY Area Accuracy</b>	$E_2 = (2.0 + 5L/1000) \mu\text{m}$	
<b>Z Linear Accuracy</b>	$E_1 = (3.0 + 8L/1000) \mu\text{m}$	$E_1 = (2.0 + 8L/1000) \mu\text{m}$ (requires optional TTL Laser, DRS Laser, or Touch Probe)

Accuracy is evaluated with a QVI verification procedure where "L" is measured length in millimeters. Specifications apply within the rated environment. Standard optical specifications apply at the maximum optical magnification of the standard configuration. XY Accuracy applies with an evenly distributed load up to 10 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 payload may be less than standard.

\*Lenses and lens attachments can be manually interchanged to change magnification and working distance. \*\*FOV sizes with optional monochrome camera are 15% smaller in Measure-X. \*\*\*SP25, Feather Probe, and Rainbow Probe only supported in ZONE3.



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