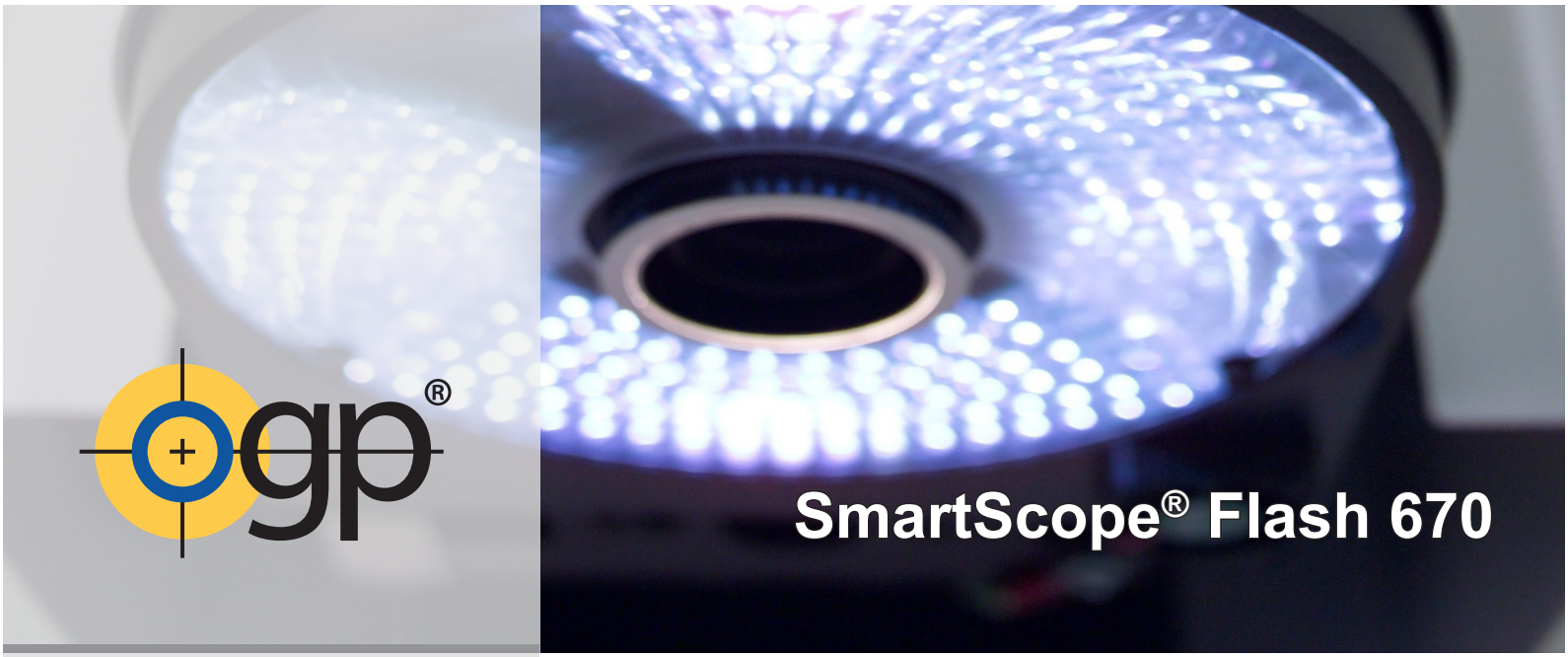


SmartScope® Flash 670

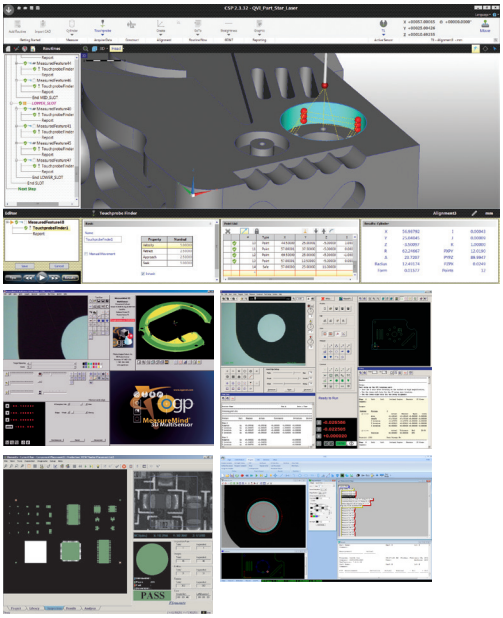
Extra-Large Measurement Capacity Multisensor Dimensional Measuring System

- *Stationary part* – Optics mounted on a moving bridge, so part remains stationary for easy access
- *Precision optics* – High quality Zoom 12 AccuCentric® zoom lens autocalibrates with every magnification change
- *Exclusive illumination to measure the most challenging parts* – Substage, TTL, and SmartRing™ light illuminate parts from all angles
- *Multisensor versatility* – Optional touch probe, laser, and micro-probe sensors

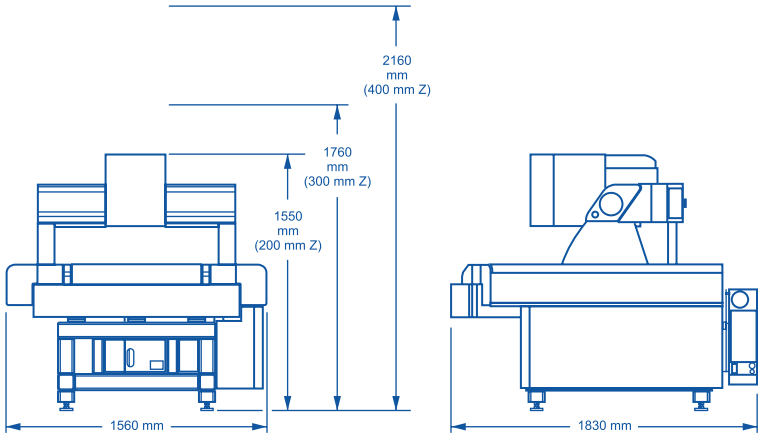
Axis	Travel (mm)
X axis	650
Y axis	660
Z axis	200
Extended Z (opt)	300
Extended Z (opt)	400

Shown with optional 400 mm extended Z axis

SmartScope® Flash 670



Choose the QVI metrology software best suited to your manufacturing setting — 3D CAD-based ZONE3®, MeasureMind® 3D, Measure-X®, VMS™ or Elements®.



Machine Weight: 1800 Kg
Crated Weight: 2259 Kg

	Standard	Optional
XYZ travel	650 x 660 x 200 mm	Extended Z axis, 300 or 400 mm
XYZ scale resolution	0.5 µm, with dual Y-axis scales standard	0.1 µm
Drive system	DC servo with 4-axis control (X,Y,Z,zoom); with multifunction handheld controller and dual Y-axis drives	
Worktable	Nickel plated steel, with fixture holes, removable stage glass, 130 kg recommended max payload	
Optics	Zoom 12 AccuCentric® auto-calibrating zoom with up to 25 calibrated positions	0.5x, 0.75x, 1.5x, and 2.0x lens attachments; 2.5x and 5.0x laser lenses (for use with or without optional TTL laser), LED grid projector; TTL laser pointer (not available with TTL laser sensor)
FOV size (std optical configuration)	Measured diagonally, 10.1 mm (low mag) to 1.1 mm (high mag)	
Illumination	LED substage (monochromatic), LED coaxial TTL surface, 8 sector/8 ring SmartRing™ LED (white)	• Flexible SmartRing light for long working distance optical configurations (in lieu of standard SmartRing light) • 8 sector/6 ring Vu-Light™ LED ring light, standard working distance (70 mm), or low incidence working distance (36 mm) (in lieu of standard SmartRing light) • Red or green SmartRing light (in lieu of standard white SmartRing light)
Camera	High resolution color metrology camera	
Image processing	256 level grayscale processing with 10:1 subpixel resolution	
Sensor options (contact OGP for possible combinations of sensors)		Touch probe and change rack (touch probe not available with optional Vu-Light), SP25 scanning probe, on-axis TTL laser, off-axis DRS™ laser, Feather Probe™, Rainbow Probe™ scanning white light sensor
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)
Software	**QVI Portal, including:** • Portal Navigator • Independent Calibration Engine (ICE) • Multimedia Content Viewer • SmartLink™	**Metrology software:** ZONE3® or ZONE3 Pro, MeasureMind® 3D MultiSensor, Measure-X®, VMS™, Elements® **Productivity software:** MeasureFit® Plus, SmartFit® 3D, SmartProfile® **Offline software:** ZONE3, MeasureMind 3D MultiSensor, Measure-X, VMS
Power requirements	115/230 vac, 50/60 Hz, 1 phase, 850 W	
Rated environment	Temperature 18-22° C, stable to ±1° C; 30-80% humidity; vibration <0.001g below 15 Hz	
Operating environment, safe operation	15-30° C	
XYZ volumetric accuracy[1]		E_3 = (3.5 + 8L/1000) µm[3,4] (requires QVI 3D metrology software[1])
XY area accuracy[1]	E_2 = (2.0 + 5L/1000) µm[2,3]	
Z linear accuracy[1]	E_1 = (3.0 + 8L/1000) µm[3]	E_1 = (2.0 + 8L/1000) µm[3] (with optional 2.0x replacement lens and grid projector, TTL laser, or TP20 or TP200 touch probe)

[1]Where L = measuring length in mm. Applies to thermally stable system in rated environment. Maximum rate of temperature change: 1° C/hour. Maximum vertical temperature gradient: 1° C/meter. All optical accuracy specifications at maximum zoom lens setting. Volumetric accuracy performance requires use of QVI 3D metrology software, such as MeasureMind 3D or ZONE3.
[2]Measured in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface.
[3]E_1 Z axis linear, E_2 XY area, and E_3 XYZ volumetric accuracy standards are described in QVI Publication Number 790762. [4]On-site verification optional.

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