



## SmartScope® Quest 800

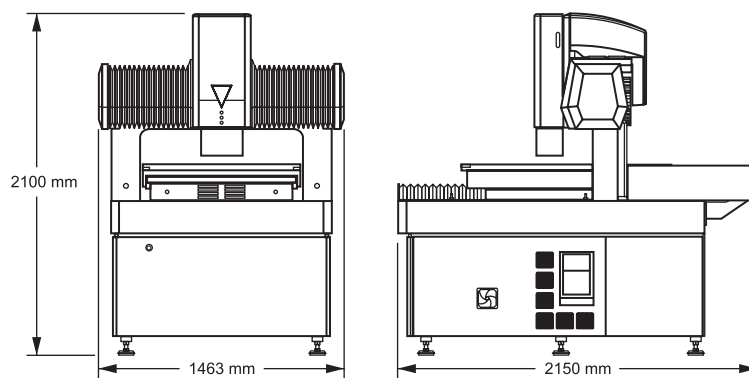
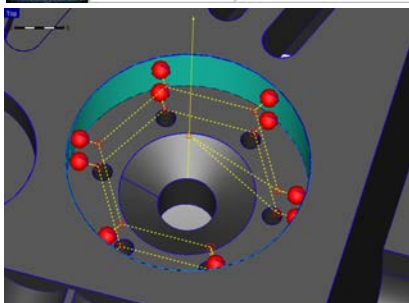
- **Accurate video metrology** – TeleStar® telecentric 10:1 zoom optics for the highest level of optical performance
- **Multisensor versatility** – Optional touch probe, off-axis DRS™ laser, on-axis TeleStar TTL interferometric laser, micro-probes, SP25 continuous contact scanning probe, and PH10 motorized probe head
- **State-of-the-art software** – Powerful ZONE3® metrology software, and other productivity and offline software applications, to suit your requirements

### Large Volume Multisensor Dimensional Measuring System

Axis	Travel (mm)
X axis	790
Y axis	815
Z axis	300
Extended Z (opt)	400



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System Weight: 2575 kg  
Shipping Weight: 2675 kg

	Standard	Optional
<b>XYZ Travel</b>	790 mm x 815 mm x 300 mm	Extended Z axis, 400 mm
<b>XYZ Scale Resolution</b>	0.1 µm	0.05 µm
<b>Drive System</b>	DC servo with 4-axis control (X,Y,Z, zoom) with multifunction handheld controller	XY liquid cooled linear motor drives
<b>Worktable</b>	Hardcoat anodized, with fixture holes, removable stage glass, 75 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 400 mm Z axis)
<b>Optics*</b>	10:1 AccuCentric® TeleStar® auto-compensating, telecentric zoom, motorized; mag range 0.8x-8x, with up to 10 calibrated positions; 1.0x replacement lens	<b>Focus Grid Projector:</b> LED source <b>Laser Pointer:</b> Not available with optional TTL laser <b>Replacement Lenses:</b> 0.45x, 0.5x, 2.0x, 4.0x <b>Laser Lenses:</b> 0.45x, 0.5x, 2.0x, 4.0x
<b>FOV Range (in ZONE3)**</b>	8.1 mm x 6.1 mm (low zoom) to 0.81 mm x 0.61 mm (high zoom)	14.6 mm x 11.0 mm (0.45x lens), to 0.20 mm x 0.15 mm (4.0x lens)
<b>Working Distance</b>	65 mm	Up to 200 mm (0.45x lens)
<b>Illumination</b>	Patented† servo-driven high performance monochromatic substage profile, LED coaxial TTL surface, 8 sector / 6 ring SmartRing™ LED	
<b>Camera</b>	High resolution, black & white digital metrology camera	
<b>Image Processing</b>	256 level grayscale processing with 10:1 subpixel resolution	
<b>Sensor Options***</b>		<b>Tactile:</b> TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™, PH10 motorized probe head <b>Non-Contact:</b> Patented†† on-axis TeleStar Plus Interferometric TTL laser, DRS Laser, Rainbow Probe™
<b>Controller</b>	Windows® based, with up-to-date processor and on board networking/communication ports	
<b>Controller Accessory Package</b>	24" flat panel LCD monitor, keyboard, 3-button mouse	24" flat panel LCD monitor for dual monitor display
<b>Software</b>	<ul style="list-style-type: none"> <li>Choice of ZONE3 Express or MeasureMind 3D metrology software</li> <li>QVI Portal</li> </ul>	<b>Metrology software:</b> ZONE3 Prime, ZONE3 Pro <b>Productivity software:</b> MeasureFit® Plus, SmartFit® 3D, SmartProfile®, EVOLVE SPC <b>Offline software:</b> ZONE3, MeasureMind 3D
<b>Power Requirements</b>	100 - 200 VAC or 200 - 240 VAC, 50/60 Hz, 1 phase, 1380 W	
<b>Operating Environment, Safe Operation</b>	15-30 °C	
<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>	$E_3 = (2.8 + 5L/1000) \mu\text{m}$	$E_3 = (2.4 + 7L/1000) \mu\text{m}$ (requires optional high-performance package and 0.05 µm scale resolution)
<b>XY Area Accuracy</b>	$E_2 = (2.0 + 5L/1000) \mu\text{m}$	$E_2 = (1.4 + 6L/1000) \mu\text{m}$ (requires optional high-performance package and 0.05 µm scale resolution)
<b>Z Linear Accuracy</b>	$E_1 = (2.5 + 5L/1000) \mu\text{m}$	$E_1 = (1.5 + 5L/1000) \mu\text{m}$ (requires optional TeleStar Plus TTL laser, DRS laser, or touch probe)

\*Patent Number 6,488,398 †Patent Number 7,791,731

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. On-site verification of volumetric accuracy is optional.

\*\*Lenses and lens attachments can be manually interchanged to change magnification and working distance. \*\*FOV sizes are 20% smaller in MeasureMind 3D. \*\*\*SP25 only supported in ZONE3.



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