

## SmartScope® Quest 300

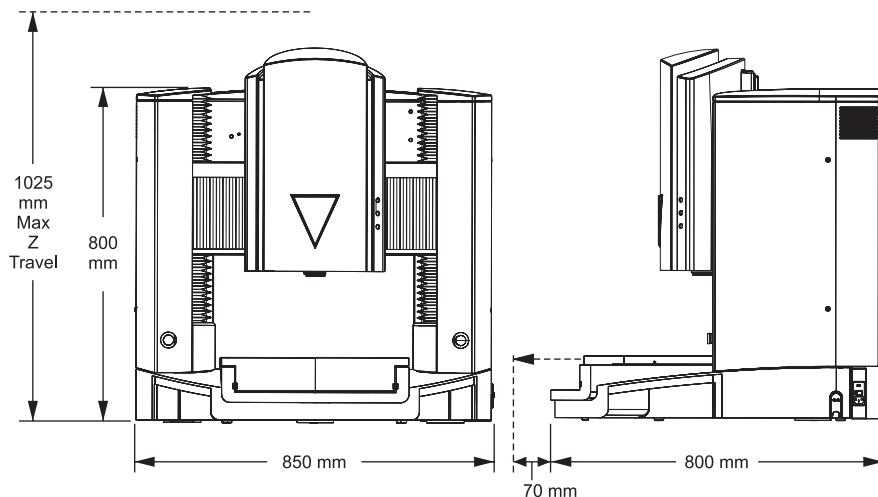
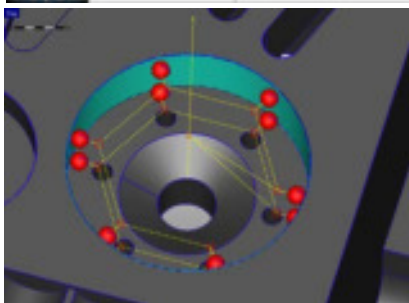
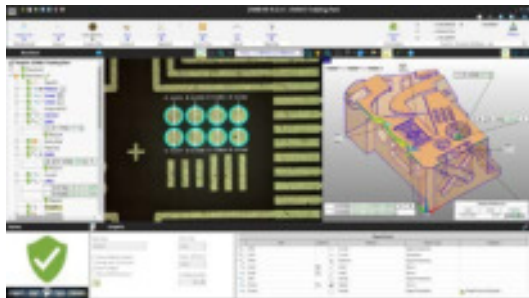
- **Accurate video metrology** – TeleStar® telecentric 10:1 zoom optics for the highest level of optical performance
- **Multisensor versatility** – Optional touch probe, on-axis TeleStar TTL interferometric laser, micro-probes, and SP25 continuous contact scanning probe
- **State-of-the-art software**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

### High Performance Large Volume Dimensional Measuring System that Fits on a Benchtop

Axis	Travel (mm)
X axis	300
Y axis	300
Z axis	250



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System Weight: 160 kg  
Shipping Weight: 220 kg

	Standard	Optional
<b>XYZ Travel</b>	300 x 300 x 250 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); air bearing Z axis; with multifunction handheld controller	
<b>Worktable</b>	Hardcoat anodized, with fixture holes, removable stage glass, 30 kg recommended max payload	
<b>Rotary Axis</b>		Miniature Servo Rotary (MSR), MicroTheta Rotary (MTR)
<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> 0.5x, 2.0x, 4.0x <b>Laser Lenses:</b> 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)	13.1 mm x 9.8 mm (0.5x lens), to 0.20 mm x 0.15 mm (4.0x lens)
<b>Working Distance</b>	65 mm	Up to 127 mm (0.5x lens)
<b>Illumination</b>	LED numerical aperture matching substage monochromatic 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™ <b>Non-Contact:</b> Patented† on-axis TeleStar Plus Interferometric TTL laser
<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>	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 600 W	
<b>Compressed Air Requirements</b>	120 liters / min @ 3.0 - 5.0 bar	Air dryer kit
<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>	$E_3 = (3.0 + 5L/1000) \mu\text{m}$	
<b>XY Area Accuracy</b>	$E_2 = (1.5 + 5L/1000) \mu\text{m}$	
<b>Z Linear Accuracy</b>	$E_1 = (2.5 + 5L/1000) \mu\text{m}$	$E_1 = (2.0 + 5L/1000) \mu\text{m}$ (requires optional TeleStar Plus TTL laser, or touch probe)

\*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. Accuracy specifications are verified with the imaging sensor unless otherwise specified. Standard optical specifications apply at the maximum optical magnification of the standard configuration. 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 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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