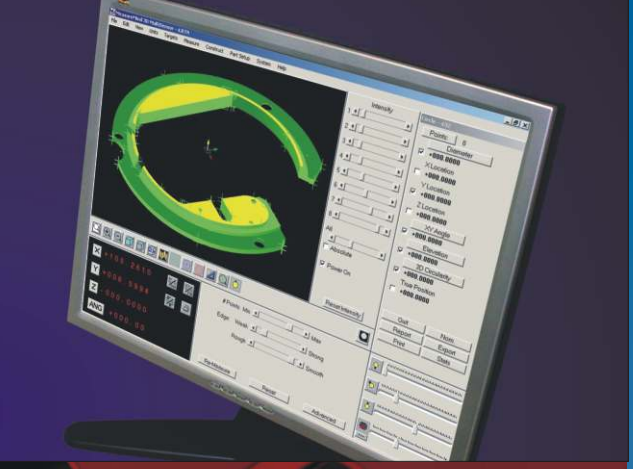

SMARTSCOPE VANTAGE

High Accuracy Multisensor Metrology System

	Travel	mm
Vantage 450	X axis Y axis Z axis	450 450 250
Extended Y (option)	Y axis	610
Extended Z (option)	Z axis	300

SmartScope® Vantage™ 450 is a high accuracy video measurement system with integrated multisensor capabilities. Its innovative TeleStar® optics, patented illuminators, and field-proven edge detection algorithms make Vantage excel at video measurement at the tightest tolerances.

Vantage TeleStar zoom optics are diffraction limited, color corrected, and fully telecentric for superior imaging, significantly advancing the level of video metrology.

SmartScope Vantage 450 does more than video measurement. It is designed from the ground up as a multisensor system. Popular and powerful MeasureMind® 3D MultiSensor metrology software controls the video and any of the combinations of optional unique TeleStar interferometric TTL laser, touch probe, and micro-probes, incorporating all data for complete part measurement. All measurement data are calibrated to the same reference — even when the part is mounted on an optional compound rotary indexer. Count on Vantage to do the entire job.

SmartScope Vantage 450 features include:

- Continuously variable 10:1 zoom lens with high-resolution camera, stable bridge design, and 0.1 µm scales (0.05 µm optional) for high accuracy.
- Popular and powerful OGP® MeasureMind 3D MultiSensor metrology software, featuring a flexible 3D datum environment with datum axis or datum plane creation in full 3D space.
- Exclusive OGP programmable illumination technologies for most imaging situations. Substage profile light with a moving array of green LEDs to synchronize illumination to zoom lens motion, coaxial TTL surface light, and our patented LED SmartRing™ light are all standard on SmartScope Vantage.

Premium metrology performance for large parts

Technical Specifications

■ Standard □ Optional

■	**Stage travel (XYZ):** 450 x 450 x 250 mm
□	**Extended Y axis:** 610 mm (contact OGP for unit weight/crate size)
□	**Extended Z axis:** 300 mm (contact OGP for unit weight/crate size)
■	**Measuring unit dimensions (approx LWH), weight:** 165 x 100 x 190 cm, 1300 kg
□	**Shipping crate dimensions (approx LWH), crated weight:** 195 x 120 x 210 cm, 1500 kg
■	**XYZ scale resolution:** 0.1 µm
□	0.05 µm
■	**Interactive stage control:** 4 axis (X,Y,Z,zoom) with ergonomic, multifunction hand controller
■	**Motor drives:** DC servo (X,Y,Z,zoom)
□	Liquid-cooled linear (X,Y), DC servo (Z,zoom)
■	**Maximum stage speed:** 200 mm/sec (XY); 75 mm/sec (Z)
□	**Maximum stage speed/acceleration, with optional linear motor:** 400 mm/sec (XY speed); 75 mm/sec (Z speed); 750 mm/sec^2 (XYZ acceleration)
■	**Worktable:** Hardcoat anodized with fixture holes and removable stage glass, 75 kg load capacity
■	**Zoom lens:** Patented[†] 10:1 AccuCentric® TeleStar® auto-calibrating, telecentric, motorized, mag range 0.8x - 8x, 10 position
■	**Replacement lens, optical:** 1.0x
□	**Replacement lenses, optical:** 0.5x/120 mm WD, 2.0x/32 mm WD, 4.0x/20 mm WD (grayscale camera only)
□	**Replacement lenses, optical/laser:** 0.45x/200 mm WD (grayscale camera only), 0.5x/120 mm WD, 2.0x, 4.0x (grayscale camera only)
■	**Camera/Illumination:** *Camera/* high resolution grayscale with 752 x 582 pixel array; *Illumination/* monochromatic, patented[††] LED moving array substage (green), LED coaxial TTL surface (green), patented[†††] 8 sector/6 ring SmartRing™ LED (green)
□	**Camera/Illumination:** *Camera/* high resolution color CCD with 768 x 494 pixel array (in lieu of grayscale camera); *Illumination/* substage backlight (collimated, green), coaxial TTL fiber optic surface, 8 sector/6 ring SmartRing LED (white)
■	**Image processing:** 256 level grayscale processing with up to 50:1 sub-pixel resolution
■	**Optical accessories:** LED grid projector, laser pointer (not available with TTL laser)
□	**Multisensor options:** Touch probe and change rack, SP25 scanning probe, TeleStar TTL laser, Feather Probe™, Rainbow Probe™ scanning white light sensor, PH10 motorized probe head (contact OGP for possible combinations of sensors)
■	**Power requirements:** 115/230 vac, 50/60 Hz, 1 ϕ, 1200 W
■	**Rated environment:** Temperature between 18 and 22° C, stable to ± 1° C; 30-80% humidity (non-condensing); vibration <0.001g below 15 Hz
■	**Operating environment:** 15-30° C
■	**Metrology software:** OGP MeasureMind® 3D MultiSensor
■	**Computer:** Minimum configuration Dual Core processor @ 1.8 GHz, 1.0 GB RAM, 80 GB hard drive, 1.44 MB floppy, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN
□	**Computer accessories:** Single or dual 22" flat panel LCD monitor(s), keyboard, three button mouse (or user supplied)
■	**Operating system:** Microsoft® Windows™ XP Professional
□	**Software:** MeasureFit® Plus, SmartReport® powered by QC-Calc™, SmartFit® 3D, MeasureMenu™, Scan-X®, SmartScript®, SmartTree™, SmartProfile™
	Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.
□	**XYZ volumetric accuracy:** E_3=(2.0 + 5L/1000) µm* (with optional TeleStar TTL laser or TP-200 touch probe)
■	**XY area accuracy:** E_2=(1.5 + 4L/1000) µm**
■	**Z linear accuracy:** E_1=(2.5 + 5L/1000) µm***
□	**Z linear accuracy:** E_1=(1.8 + 5L/1000) µm*** (with optional 2x or 4x replacement lens and grid projector)
□	**Z linear accuracy:** E_1=(1.5 + 5L/1000) µm*** (with optional DRS-300 or -500 laser; TP-20 or -200 touch probe; or TeleStar TTL laser)
■	**Warranty:** One year
□	**Accessories:** Fixtures and calibration artifacts, single and compound rotaries

[†]Patent Numbers: 5,389,774 (AccuCentric); 6,292,306 (TeleStar) [††]Patent Number 6,161,940 [†††]Patent Number 5,690,417

*XYZ volumetric artifact: QVI dual linear grid reticle.

**With evenly distributed 5 kg load. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy. XY axis artifact: QVI 25 intersection grid reticle at standard measuring plane. The standard measuring plane is defined as a plane that is 25 mm above the worktable.

***Z axis artifact: QVI step gage or master gage blocks.

Multisensor Measurements for Manufacturing Professionals

ogp®
Optical Gaging Products Inc.
A Quality Vision International Company

World Headquarters and Technology Center: 850 Hudson Avenue • Rochester, NY 14621 USA • Tel 585.544.0400 • Fax 585.544.8092
OGP Shanghai Co, Ltd: 17 Lane 593 • East Jin An Rd • Pu Dong New District • Shanghai, China 201204 • Tel 86.21.5045.8383/8989 • Fax 86.21.6845.8800
OGP Messtechnik GmbH: Nassaustr. 11 • 65719 Hofheim-Wallau, Germany • Tel 49.6122.9968.0 • Fax 49.6122.9968.20
Optical Gaging (S) Pte Ltd: 21 Tannery Road, 347733 Singapore • Tel 65.67.41.8880 • Fax 65.68.46.8998
Internet: www.ogpnet.com • intl-sales@ogpnet.com