



SMARTSCOPE ZIP Advance



Fast, Accurate Metrology System

	Travel	mm
ZIP Advance 250	X axis	250
	Y axis	150
	Z axis	150
Extended X (Option)	X axis	300

High-Contrast Images and Full Video Field Size

SmartScope ZIP® Advance 250 from OGP® is a high resolution, high accuracy video measuring system designed for critical applications requiring high speed performance. It offers sharp, high-contrast images and full video field size, even with the TTL (through-the-lens) laser option. With its bright LED illuminators, SmartScope ZIP Advance is perfect for verifying critical dimensions.

- Optics.** SmartScope ZIP Advance 250 provides twice the FOV range of a standard ZIP system when using the same front replacement lens. The LinearCentric™ high-speed zoom system can change between any two zoom positions in one second, and is proven reliable in 24x7 production use.
- Illumination.** The 6-ring, 8-sector Vu-Light™ low incidence LED oblique ring light is ideally matched to the optical system to provide outstanding directional surface illumination. The internal LED surface illuminator is unparalleled for brightness and contrast, producing the sharpest image fidelity available.
- Positioning.** DC servo motor drives provide accurate positioning control and high speed operation while the heavy duty all metal construction provides stability for accurate, repeatable metrology.
- Metrology Software.** MeasureMind® 3D MultiSensor software provides full 3D capability with full sensor integration.
- Multisensor Capability.** ZIP Advance systems are multisensor-capable. They are available with contact and non-contact probes that deploy and retract under program control for fully automatic operation. An available switchable TTL laser can be scanned to provide high resolution surface contour measurements.



■ Standard ■ Optional

<ul style="list-style-type: none"> ■ Stage travel (XYZ): 250 x 150 x 150 mm ■ Extended X axis: 300 mm ■ Measuring unit dimensions (approx LWH): 79 x 83 x 81 cm ■ Measuring unit dimensions, extended X axis (approx LWH): 79 x 95 x 81 cm ■ Crated dimensions (approx LWH), weight: 114 x 112 x 158 cm, 280 kg ■ Crated dimensions, extended X axis (approx LWH), weight: 114 x 120 x 158 cm, 300 kg ■ XYZ scale resolution: 0.05 µm ■ X axis scales: Dual ■ Motor drives: DC servo ■ Interactive stage control: 4 axis (X,Y,Z, zoom) with ergonomic, multi-function handheld controller ■ Stage velocity: X,Y 150 mm/sec max; Z 25 mm/sec max ■ Worktable: Hardened worktable with fixture holes, removable stage glass, and 25 kg load capacity
<ul style="list-style-type: none"> ■ Zoom lens: LinearCentric™ 12:1, high-speed, auto-calibrating, motorized ■ Optical back tube adapter: 1.0x ■ Front receiving lens: 2.0x (working distance 38 mm) ■ Illumination: High performance LED profile light (green), TTL surface light (white), low incidence oblique Vu-Light™ LED ring light (white) ■ Adjustable 32 mm diameter fiber optic ring light (75 w lamp), used in lieu of Vu-Light ■ Camera: High resolution black and white digital metrology camera ■ Image processing: 256 gray level processing with 10:1 sub-pixel resolution ■ Multisensor options: Touch probe and change rack, DRS™ laser, TTL laser, Rainbow Probe™ scanning white light sensor, Feather Probe™, laser pointer (not available with TTL laser) (contact OGP for possible combinations of sensors)
<ul style="list-style-type: none"> ■ Power requirements: 115/230 vac (± 5%), 50/60 Hz, 1 φ, 700 W ■ Rated environment: Temperature between 18 and 22° C, stable to ±1° C; 30-80% humidity; vibration <0.001g below 15 Hz ■ Operating environment, safe operation: 15-30° C
<ul style="list-style-type: none"> ■ Computer: Minimum configuration Quad Core processor @ 2.5 GHz, 4.0 GB RAM, 160 GB hard drive, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100/1000 LAN ■ Operating system: Microsoft® Windows™ ■ Computer accessory package: 24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied) ■ Metrology software: MeasureMind® 3D MultiSensor ■ MeasureMind 3D offline ■ Software: MeasureFit® Plus, SmartReport® powered by QC-Calc, SmartFeature®, QC-Calc™, TrueMap™, SmartCAD® 3D, SmartFit® 3D, SmartProfile®, SmartScript®, I++ DME, SmartTree™
<p>Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.</p> <ul style="list-style-type: none"> ■ XY area accuracy: $E_2 = (1.0 + 6L/1000) \mu\text{m}^{1,2,3,4,5 \text{ or } 6 \text{ or } 7}$ ■ Z linear accuracy: $E_1 = (2.5 + 5L/1000) \mu\text{m}^{1,2,7 \text{ or } 8 \text{ or } 9}$ ■ Z linear accuracy: $E_1 = (2.0 + 5L/1000) \mu\text{m}^{1,2,7 \text{ or } 8 \text{ or } 9}$ (with optional TTL laser) ■ Z linear accuracy: $E_1 = (1.4 + 5L/1000) \mu\text{m}^{1,2,7 \text{ or } 8 \text{ or } 9}$ (with optional DRS-300 or -500 laser, or TP-20 or -200 touch probe)
<ul style="list-style-type: none"> ■ Warranty: One year ■ Accessories: Calibration artifacts, rotary indexer

1) Maximum rate of temperature change: 1° C/hour. 2) Maximum vertical temperature gradient: 1° C/meter.
 3) With evenly distributed load up to 5 kg. Depending on load and distribution, accuracy at maximum rated load may be less than standard accuracy.
 4) Measured in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface.
 5) Artifact: QVI 25 intersection grid reticle. 6) Artifact: QVI linear linescale reticle. 7) Artifact: Laser interferometer. 8) Artifact: QVI step gage. 9) Artifact: QVI master gage blocks.



Multisensor Measurements for Manufacturing Professionals

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