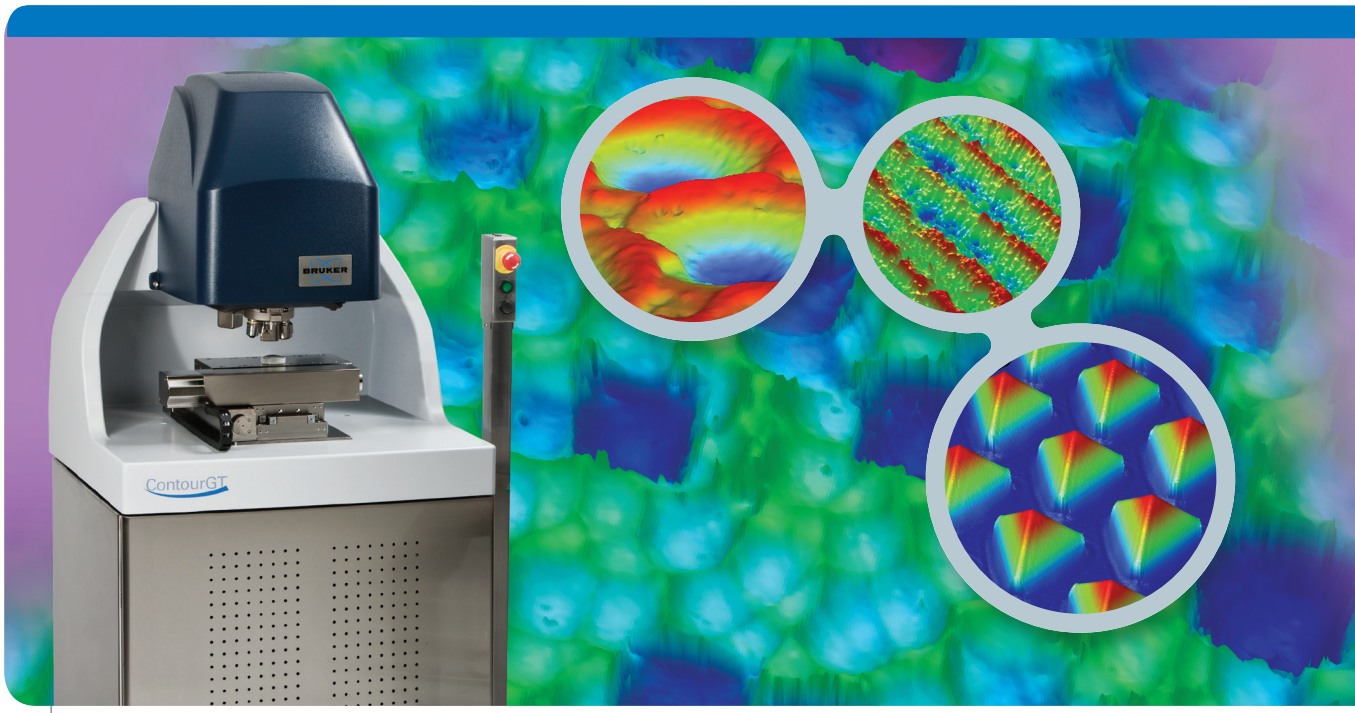


ContourGT-X 3D Optical Microscope

● Automated, Gage-Capable Metrology for R&D and Production

The fully automated, large-sample ContourGT-X 3D Optical Microscope combines unmatched measurement capabilities with highest vertical resolution over the industry's largest field of view. Designed from the ground up for the most demanding R&D, quality assurance, and process quality control needs, this flagship of the ContourGT® product line offers the ultimate gage-capable 3D optical microscopy solution. Only the ContourGT-X incorporates Bruker's patented tip/tilt head a patented self-calibrating laser reference, integrated pattern recognition, and a host of other proprietary interferometry innovations. No other metrology system provides the non-contact accuracy, throughput, and operator convenience for such a vast range of production metrology and imaging applications.

Benchmark for Accuracy and Robustness

- Unique metrology sensor design with patented dual-LED light source
- Self-calibrating, metrology optimizing laser reference
- Integral vibration-isolation floor-mount cabinet

Fastest, Easiest Nanometer-Scale Measurements

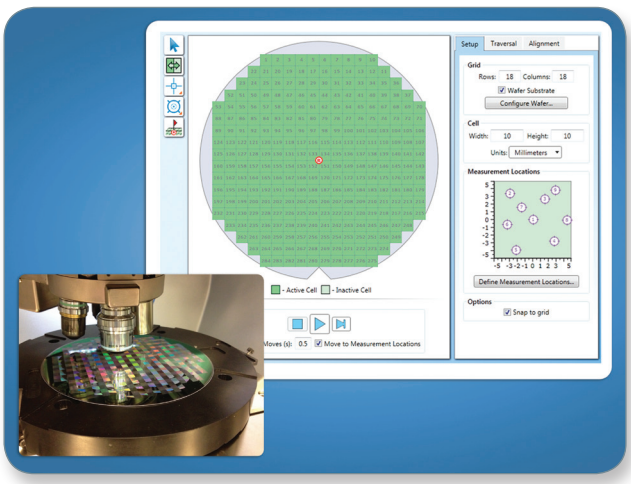
- Fully automated measurement capabilities (focus, intensity, tip/tilt head, staging, FOV)
- Nanometer-scale resolution on high-contour surfaces

Most Powerful Measurement and Analysis

- Streamlined, customizable production interface
- Real-time automated measurement optimization
- Extensive library of filters and customizable analysis options

Robust, Production Gage

In addition to the unmatched measurement and imaging capabilities of Bruker-exclusive interferometry technology, the ContourGT-X is equipped with a proprietary internal laser reference and custom-designed industrial cabinet for maximum stability and robustness. The system's automation-ready configuration includes everything necessary for rapid optimization for almost any production environment, from an air table stabilizer kit for enhanced X, Y, Z wafer placement accuracy to optimization of PDU, EMO and vacuum systems for integration and modified vacuum chucks for autoloader end-effector compatibility.



Automated routine being performed on a wafer. Fully customizable advanced production interface provides exceptional operator and automation ease of use.

Streamlined Operator Interface

The ContourGT-X features the industry's most functional and streamlined graphical user interface for production operators, providing tools to customize process workflow, automate mapping, and load measurement recipes. enabling rapid in-line analysis capabilities and manufacturing reliability. Vision64™ software provides intuitive access to an extensive library of pre-programmed filters and analyses for LED, solar cell, thick films, semiconductor, ophthalmic, medical device, precision machining, MEMS, and tribology applications.

World's only self-calibrating, fully automated solution for production line metrology.

Specifications

Max. Scan Range	Up to 10mm
Vertical Resolution	0.05nm (motor); 0.01nm (PZT)
RMS Repeatability	0.01nm (motor); 0.004nm (PZT)
Lateral Resolution	0.38µm min (Sparrow criterion); 0.13µm (with AcuityXR™); 0.01µm (with NanoLens™)
Step Height Accuracy	<0.75%*
Step Height Repeatability	<0.1% 1 sigma repeatability
Max. Scan	114µm / sec (with standard camera)
Sample Reflectivity	0.05%-100%
Max. Sample Slope	Up to 40° (shiny surfaces); Up to 87° (rough surfaces)
Sample Height	Up to 100mm
Sample Weight	Up to 23kg (50lbs)
XY Sample Stage	200mm (8in.) automated (standard); 300mm (12in.) automated (optional); 0.5µm encoders
Z Focusing	100mm (4in.) automated
Tip/Tilt Function	±6° automated, computer-controlled tip/tilt head
Optical Metrology Module	Patented dual-LED illumination; Single-objective adapter; Optional automated or manual turret
Objectives	Parfocal: 2.5x, 5x, 10x, 20x, 50x, 115x LWD: 1x, 1.5x, 2x, 5x,10x TTM: 2x, 5x, 10x, 20x Bright field: 2.5x, 5x, 10x, 50x
Available Zoom Lenses	0.55, 0.75x, 1x 1.5x, 2x auto-sensing modules
Camera	Standard monochrome: 640x480; High-resolution monochrome (option): 1392x1040 Color (option): 640x480
Software System	Vision64 Analysis Software on Windows 7 64 bit OS
Software Packages	Production Interface; AcuityXR; Annual Analysis; High Speed AF; Optical Analyses; Advanced Image Processing; Thick Film; Matlab SDK; TCP/IP Remote Control
XY Automation	Automated stitching, scatter, and grid automation
Calibration	Via traceable step standards; Optional auto and continuous internal laser signal
System Footprint	852mm (W) x 793mm (D) x 1608mm (H)
Weight	493kg (1084lbs)
Warranty	12 months

* Absolute accuracy for step heights 8µm and greater.

Cover images

Foreground: ContourGT-X 3D Optical Microscope.
Background: 3D characterization of silicon wafer surface.
Insets: 3D profile of anilox print cylinder surface (top), surface analysis of brake rotor (middle), topography of features on a patterned sapphire substrate wafer.

Bruker Nano Surfaces Division

Tucson, AZ • USA
Phone +1.520.741.1044/800.366.9956
productinfo@bruker-nano.com

www.bruker.com