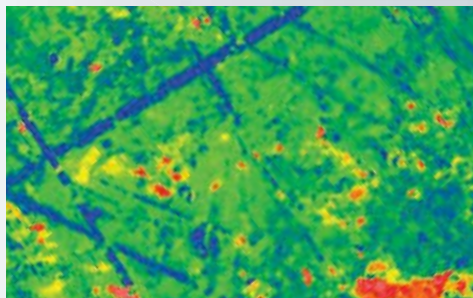
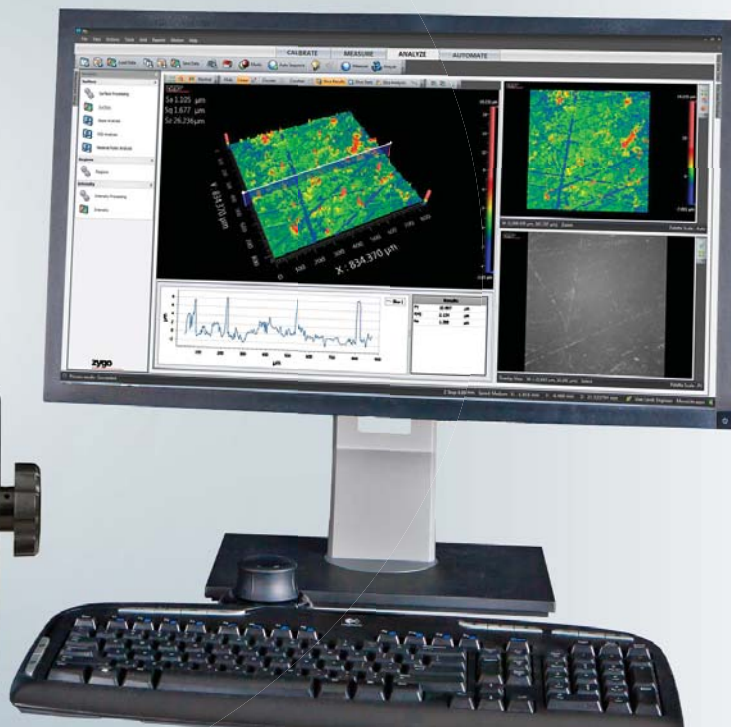


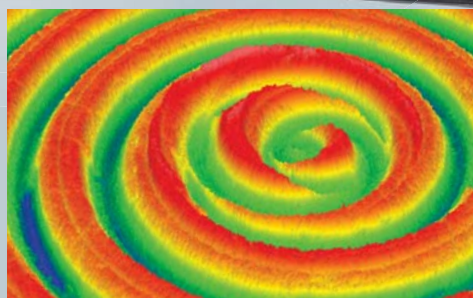
zygo®

zegage™

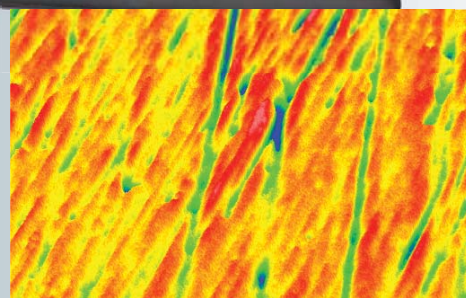
and ZeGage™ Plus
Production Surface Profilers



ground metal surface



fuel pump plate



polished prosthetic knee

Robust 3D Optical Surface Metrology

AMETEK®
ULTRA PRECISION TECHNOLOGIES

ZeGage™ and ZeGage™ Plus product highlights



Powerful non-contact optical profilers for precise and robust 3D form and roughness measurements in the lab and on the factory floor.

ISO 25178 compliant texture results ensure confidence in your metrology.

Area-based measurement is insensitive to part lay.

Non-contact technology prevents part damage.

Optical gage requires no consumables.

Vibration resistant, for metrology and process control on the production floor.

Two configurations provide the right level of precision at the right price.

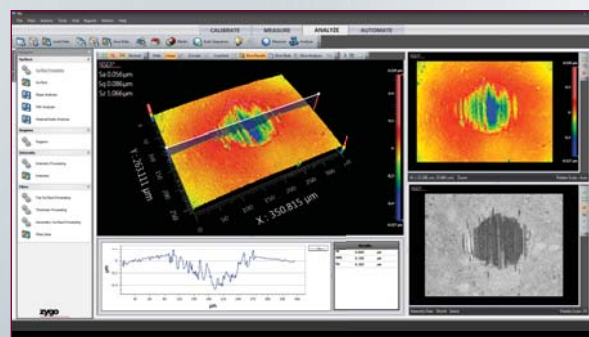
Fast, dependable industrial metrology in a compact, cost-effective package

The ZeGage™ and ZeGage™ Plus profilers are Coherence Scanning Interferometers (CSI) that provide 3D optical surface profiling for the measurement of precision surfaces. Unlike other optical surface profilers, these systems maintain high resolution

at all of their magnification options. They are not affected by the environment they operate in. You can take them out of the QA lab, place them directly beside your production equipment, and get precise 3D surface metrology.

Interactive Analysis

The ZeGage™ profilers with Mx™ software provide area and slice based interactive plots and quantitative results of measurements, like this wear scar on a ball bearing.



ADVANCED DESIGN

Illumination and imaging are completely controlled through the software

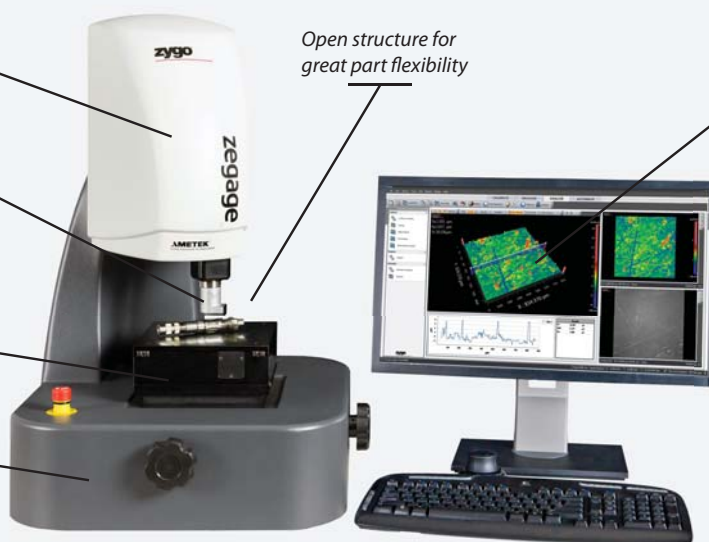
Available with single optical zoom or automated 4-position objective turret for maximum versatility

Motorized or manual XY stage options

Stable system with SureScan™ technology requires no vibration isolation

Open structure for great part flexibility

Mx™ software—simple to use, easy to learn. All the powerful analysis of an industry standard.



A metrology system with intuitive software

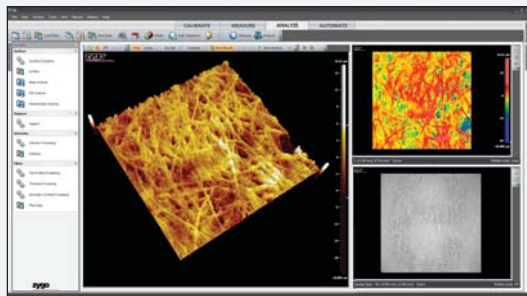
The standard in metrology software: Mx™ control and analysis

Mx software is ZYGO's proven platform for instrument control and data analysis. Using a simple workflow based concept, users easily navigate the metrology experience from setup through analysis and reporting.

Interactive and detailed plots show full 2D or 3D data; profile slices, material ratio, slope analysis, and PSD views. With built-in SPC, pass/fail indication, data reporting and run charts, production quality analysis is simple.

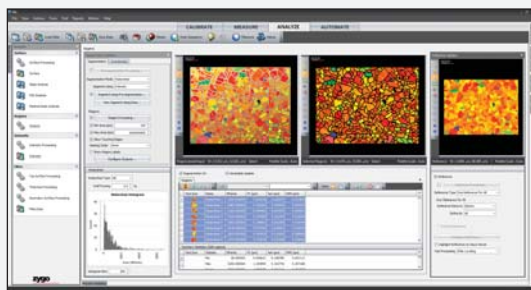
Mx software on ZeGage is cross platform and backwards compatible with all your ZYGO tools.

ADVANCED ANALYSIS



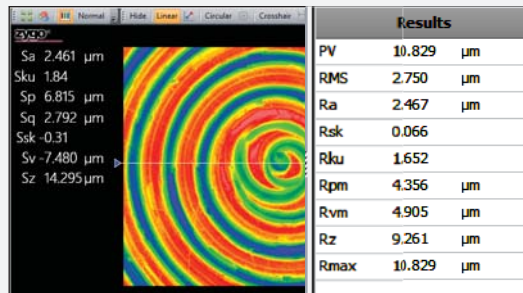
Powerful Visualization

Detailed three dimensional imaging of this banknote surface shows individual fibers and texture in a rotatable and zoomable model which enables easy investigation and characterization.



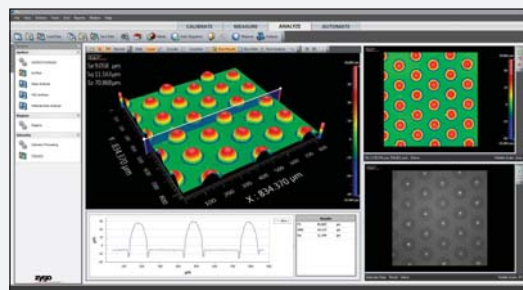
Automated region analysis

Separate discrete regions by height, intensity, masking, and more, to perform analysis of multi-regional surfaces like this granular surface in which each grain has been separated. Each region can be individually analyzed in the region tool and summary stats are instantly computed.



Quantitative Results

Surface results compliant with ISO 25178 and profile slice results are computed instantly for each measurement and can be tracked in real time with run charts and automatic logging features.



Interactive tools

Live updating plots enable quick analysis of surfaces such as this semiconductor packaging bump array.

ZeGage™ optical profiler advantages

Versatility

- Measures a wide variety of surface materials and parameters, including 2D and 3D profiling of surface texture, form, step-height and more.
- Included Mx software provides comprehensive tools for surface data visualization, analysis and reporting.
- Optional motorized part stage enables fully automated measurement sequences and field stitching for high resolution inspection of large areas.

Powerful Performance

- Proprietary SureScan™ technology makes the ZeGage profiler resistant to vibration; no vibration isolation platforms or enclosures necessary.
- Quantitative surface metrology with nanometer-level precision on the standard ZeGage profiler and sub-nanometer precision on the ZeGage Plus profiler provides superior gage capability.
- Correlation to 2D and 3D standards, and compliance to ISO 25178 surface roughness parameters.

zegage™ and ZeGage™ Plus

System Options

Options

- Manual or auto; with or without extended head position

Objectives

- 1.0X – 50X magnification; standard and long working distance (See Nexview™/NewView™/ZeGage Objective Chart for more details)

Objective Mounting Options

- Direct objective thread (standard)
- Single objective dovetail (option)
- Manual or motorized 4 objective turret

Software

- ZYGO Mx™ software running under Microsoft Windows® 7 (64 bit)

Physical Characteristics

Dimensions (H x W x D)

- 156 x 127 x 76 cm (ZeGage on workstation)
- 82 x 53 x 53 cm (ZeGage)
- 74 x 127 x 76 cm (Workstation)

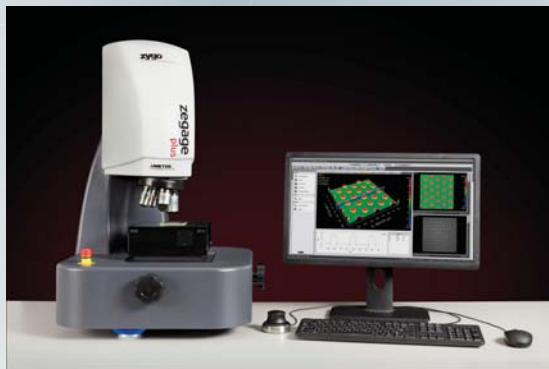
System Weight

- ZeGage: 54 kg
- Workstation: 37 kg

Utility Requirements

- 100 to 240 VAC, 50/60 Hz

Higher resolution and faster measurements with ZeGage™ Plus profiler



The ZeGage™ Plus is an expansion version of the ZeGage profiler. It provides improved precision and a faster top measurement speed. It also increases the range of measurable surfaces and features. ZeGage Plus retains the ease of use, vibration robustness, and small footprint of the standard ZeGage.

With ZeGage Plus, measurements with sub-nanometer precision are possible. With

the tool's higher precision, measurement of optical surfaces, and polished metallic components such as orthopedic implants, and superfinished surfaces are all just as easy to characterize as the rougher surfaces measured by the standard ZeGage profiler.

For high speed form measurements, the ZeGage Plus system scans up to 2X as fast as the standard system, providing faster time to data and increased throughput for production metrology. The chart below highlights the common and distinct features of the two platforms.

Comparison of Benefits/Features

Benefit/Feature	ZeGage™	ZeGage™ Plus
Surface Topography Repeatability	≤3.5 nm	≤0.15 nm
Repeatability of RMS	0.1 nm	0.01 nm
Maximum Data Scan Speed	35 μm/sec	73 μm/sec
Illuminator	Integrated Long life white light LED with computer controlled light level	
Scanner	Long range Z scan	
Measurement Technique	Non-contact 3D Coherence Scanning Interferometry (CSI)	
Stage Control	USB Puck	
Safety	Integrated Emergency Motion Stop	



ZYGO CORPORATION

21 Laurel Brook Road
Middlefield, Connecticut 06455
Voice: 860 347-8506
www.zygo.com • inquire@zygo.com



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