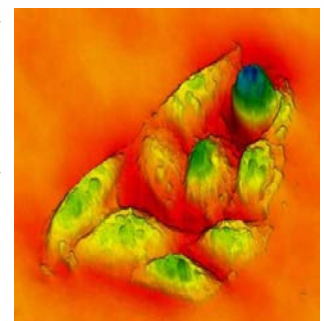
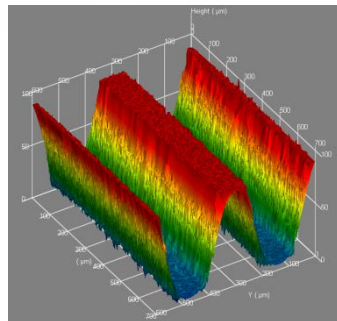
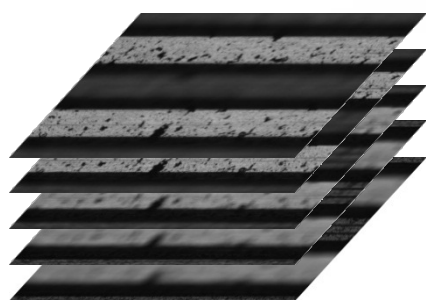


FAST • PRECISE • AFFORDABLE
3D ADD-ON FOR MICROSCOPY

- Fast Z-stacking
- 3D Microscopy
- Extended Depth of Field
- Autofocus
- Z Depth Measurement
- 3D Surface Analysis



Compatible With Transmitted & Reflected Compound Microscopes
Compatible With Stereo-Microscopes
Life Sciences & Material Microscopy





*Fast Z scanning,
Flexible Z range & Nanopositioning
Robust & reliable optical device*

*Compatible with any
C-mount camera*

*Single USB connection to PC
No bulky controllers and
cumbersome accessories*

*Compatible with any
microscope equipped with
video port*

Use Video Port To Add 3D Imaging Capabilities

*No objective or stage movement
Sample space kept totally free
No sample perturbation & vibrations*

*No motorization : maintenance free
No microscope adaptation required
Do not alter standard camera use*



***ZeeScan on upright microscope
with a Jenoptik Progres camera***



***ZeeScan on stereo microscope
with a Micrometrics camera***



***ZeeScan on upright microscope
with a fluorescence camera***

Smart Hardware Architecture

No internal or external motorization, no additional accessories for the microscope are required, ZeeScan is connected to your PC using a single USB2 connection. Accurate calibration is achieved using an automated procedure and stored in an internal memory to prevent any losses.

Camera compatibility	Format 2/3" or Less, C-mount
Microscope Interface	Video Port – Recommended 1X C-mount adapter
PC Interface	USB 2.0
Power Supply	110 / 220 AC
Physical Dimensions (mm)	ZeeScan Head: 110(H) 80(W) 56(D) Control Unit: 40(H) 158(W) 150(D)
Weight	ZeeScan Head: 325 g Control Unit: 150 g

Z Axis Range & Resolution

Z range and resolution are objective and c-mount coupler magnification dependant. The table here under gives typical performance for standard objective magnification with a 0.537X coupler. For any other magnification and /or c-mount coupler configuration, the formulas here under help to determine the resulting Z range and resolution.

$$Z \text{ Range} = 23\text{mm} / (G_{\text{Obj}} * G_{\text{adapt}})^2$$

$$Z \text{ Resolution} = Z \text{ Range} / 2000$$

$$G_{\text{Obj}} = \text{Objective magnification} \quad G_{\text{adapt}} = \text{c-mount coupler magnification}$$

Objective Mag / NA	Z Range (µm)	Z Resolution (µm)
5X / 0.10	3190	1.59
10X / 0.25	797	0.4
20X / 0.45	200	0.1
50X / 0.8	32	0.016
100X / 0.9	8	0.004

Intrinsic ZeeScan optical assembly performance without using image processing algorithm

Software

- GetPhase® GUI software (included) is compatible with Windows 8, 7, XP & Vista. GetPhase® provides comprehensive tools from automatic acquisition to 2D / 3D image analysis, documentation and reports. Including Z -stacking, Z height measurement, Image fusion (Extended Depth of Field), 3D reconstruction and measurements, multiple display modes: DIC, Phase, brightfield, darkfield , surface and profile roughness, step height measurements.
- API / SDK (optional) for controlling ZeeScan acquisition, routines for Z-stack, 3D reconstruction, EDF, DIC, Phase, and 3D surface analysis.

• Acquisition & Processing

- 2D / 3D Acquisition Wizard
- Auto Focus & Exposure
- Region-of-Interest
- Navigator
- Stitching
- Macro Recording

• 2D/3D Display & Analysis

- BF, DF, Ph, DIC, 3D views
- Text & Graphics overlay
- 2D / 3D measurements
- Image fusion (EDF)
- Roughness ISO standards
- Step Height Measurements

• Image Data Export & Report

- Project Archiving
- 3D Data in Excel Format
- 3D Data for 3rd Party Software
- Report Editor
- HTML Compatible Presentation

3D Roughness Measurement

Objective Mag : NA	Max slope (degree)	Z Range (µm)	Z Resolution (µm)
5X / 0.10	5.8	74	0.74
10X / 0.25	14.3	12	0.12
20X / 0.45	25.8	4	0.04
50X / 0.8	45.8	1	0.01
100X / 0.9	51.6	1	0.01

For others magnifications:
 Z Range = Objective Depth Of Field
 Z Resolution = Z Range / 100

Performance table with typical objective magnification using GetPhase image processing algorithm

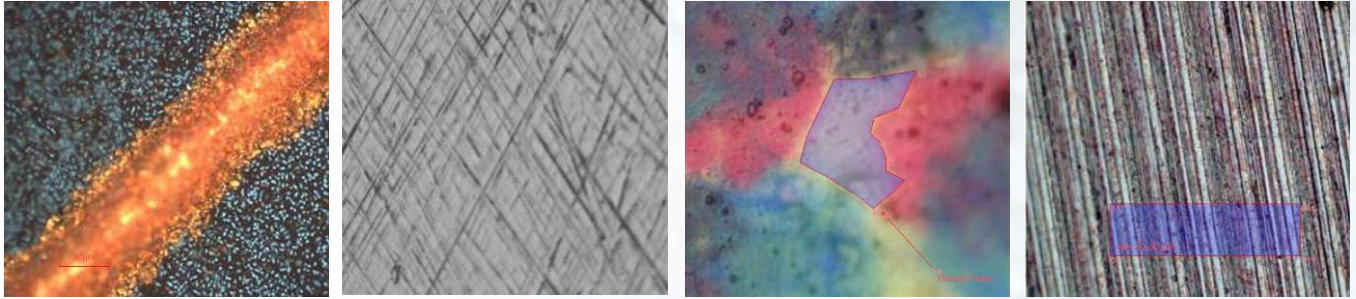
3D Shape Measurement

Objective Mag : NA	Z Range (µm)	Z Resolution (µm)
5X / 0.10	3190	18.5
10X / 0.25	797	3
20X / 0.45	200	1
50X / 0.8	32	0.25
100X / 0.9	8	0.25

For others magnifications:
 Z Range = 23mm / (Obj.Mag * 0.537)²
 Z Resolution= Objective Depth Of Field / 4

Performance table with typical objective magnification using GetPhase image processing algorithm

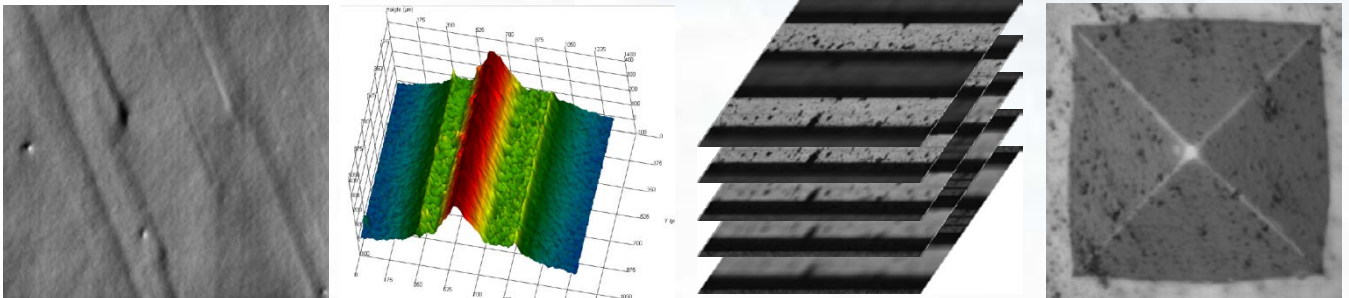
High Resolution Digital Imaging



Any c-mount cameras can be used with ZeeScan, with no alteration for the regular use of the camera. The ZeeScan optical assembly provides sharp & crisp digital for digital image documentation in high resolution.

Multiple Imaging Capabilities

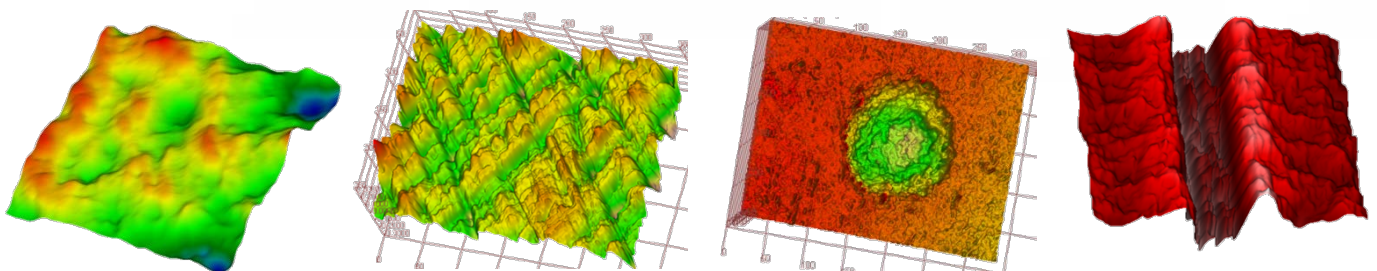
AutoFocus • Depth Measurement • Z-Stacking • Extended Depth of Field • 3D Reconstruction



ZeeScan performs all 3D critical tasks in material microscopy while using a standard upright or inverted microscope.

3D Surface Metrology

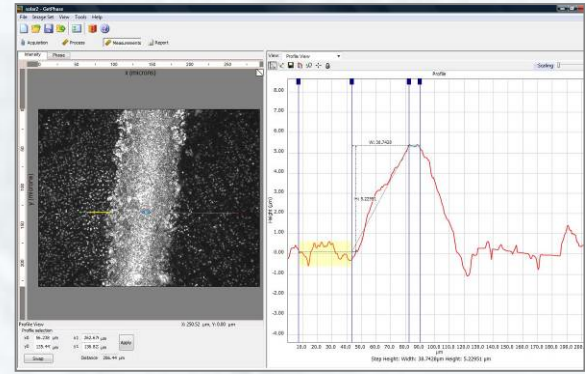
Surface Shape • Roughness • Waviness • Step Height



ZeeScan is the quickest and easiest way for precise surface topography measurements versus complex, bulky and expensive systems.

Powerful Imaging Tool

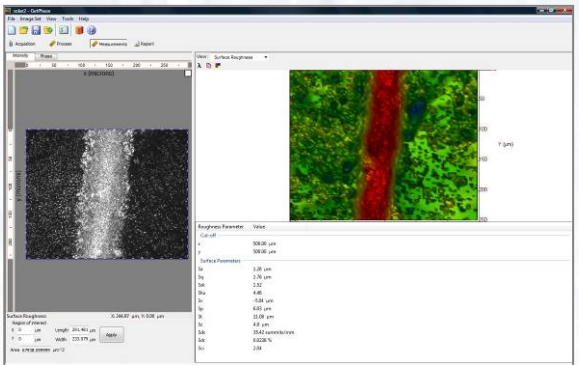
Z-stacking of high resolution images can be automatically achieved providing image fusion image (Extended depth of field image, Z depth measurement or 3D reconstruction. In addition, GetPhase provides 2D measurements and image documentation tools.



- **Reveals finest structure details without specialized optics**
- **On click Image documentation with multiple views**
- **Automatic image fusion (Extended Depth of Field)**
- **2D measurements & report**

Fast & Accurate 3D Surface Metrology

ZeeScan with GetPhase performs 3D acquisition and analysis in a remarkable fast and easy way. Non contact optical surface profiling is highly repeatable.

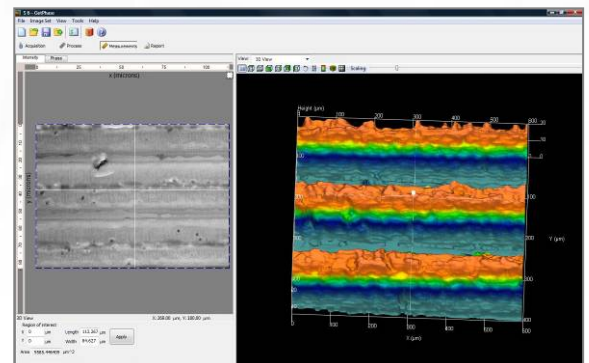


- **3D surface analysis in micrometer and nanometer range**
- **Measurement capabilities from smooth to rough surfaces**
- **ISO Roughness and step heights measurements**
- **High throughput thanks to fast acquisition & processing time**

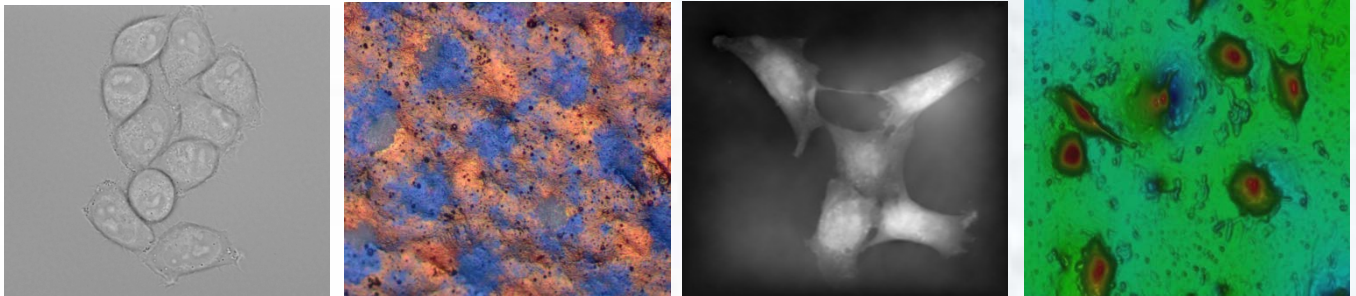
Advanced Digital Imaging for Material Sciences

ZeeScan with GetPhase software is the ideal imaging tool for R&D labs , quality control laboratories and shop floor:

- **Metal, Paint & Coatings, Ceramic, Polymers**
- **Semiconductor Materials**
- **Gemology, Museum**
- **Forensics**



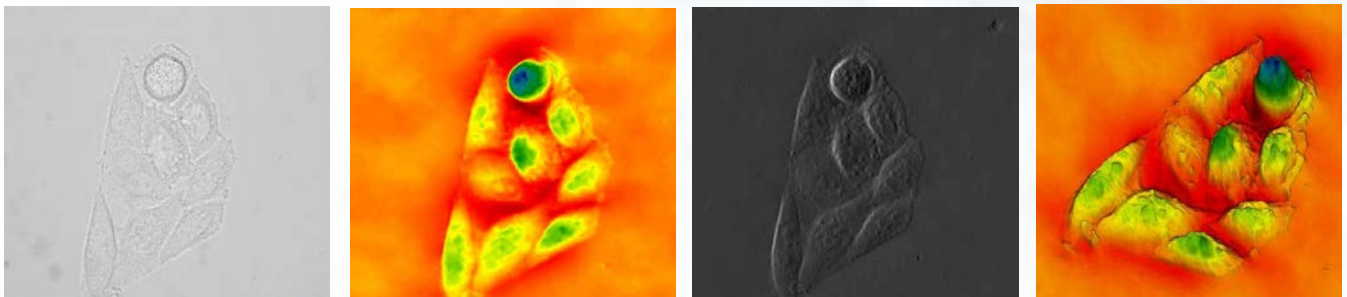
High Resolution Digital Microscope Camera



ZeeScan provides sharp & crisp digital images in bright field and fluorescence mode, featuring Z-stacking, auto-focus, and all necessary tools for digital imaging documentation.

Multiple Observation Modes Using Bright Field Objectives

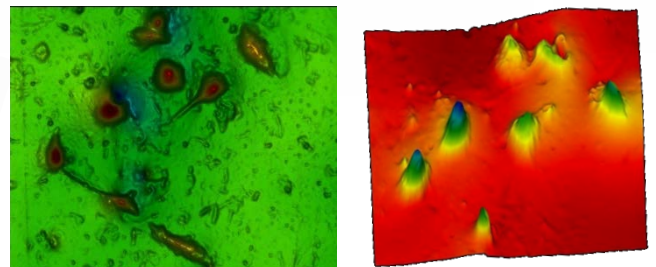
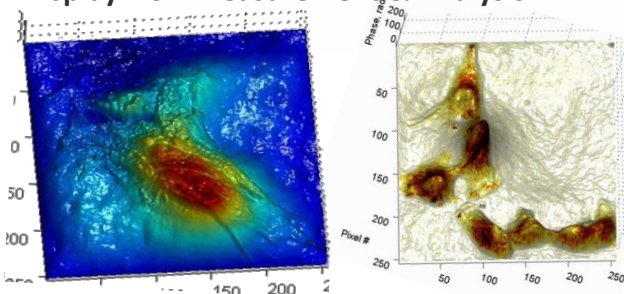
Phase Contrast • DarkField • Differential Interference Contrast • Extended Depth of Field



ZeeScan performs extended observation modes without specialized optics; DF, Ph, & DIC are readily available without optics changes and new adjustments.

3D Qualitative & Quantitative Microscopy

3D Display • 3D Measurement & Analysis

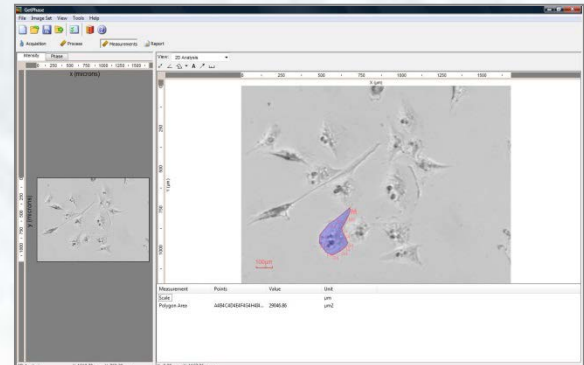


ZeeScan is the quickest and easiest way to produce 3D images compared to complex, bulky and expensive systems.

Digital Phase Contrast Imaging

Simultaneous high resolution BF, DF, Ph, DIC, and 3D images can be acquired with conventional bright field objectives using digital phase contrast technique.

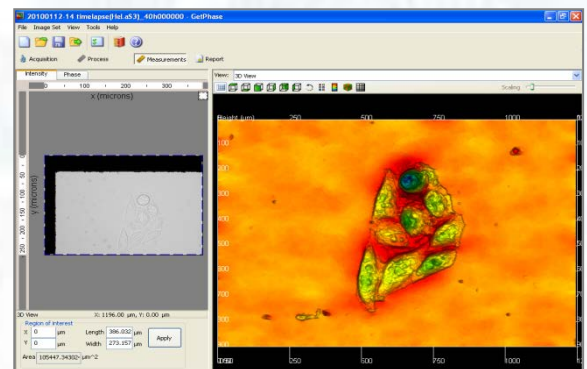
- **Phase Contrast without halos or gradients to ease segmentation**
- **Cells can remain in their growth medium: flasks, Petri dishes, multi-well plates**
- **No specialized optics for free space manipulation**
- **Reveals contrast changes even with very low absorption samples, no contrast agents required**



Fast & Accurate 3D Acquisition

Working within or beyond objective depth of field, ZeeScan with GetPhase performs 3D acquisition in remarkable fast and easy way whatever your sample preparation.

- **Z-stack and Extended Depth of Field**
- **3D quantitative data for post processing**
- **Monitoring of 3D morphological changes**



Advanced Digital Imaging for Life Sciences

ZeeScan with GetPhase software is giving device fulfill the needs of the life sciences research and pharmaceutical industries for a wide application scope:

- **Cell pathology & toxicology**
- **Drugs testing**
- **Cell dynamics**
- **Forensic sciences**

