ZeeCam®

3D Digital Microscope Camera

FAST • PRECISE • AFFORDABLE

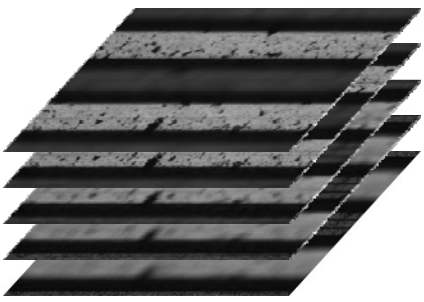
3D CAMERA FOR MICROSCOPY

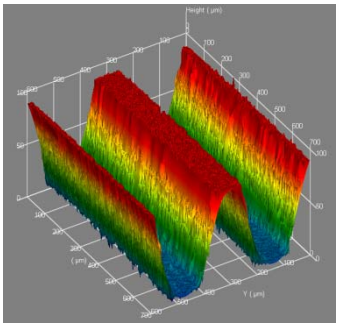
- 3D Surface Analysis
- Form & Roughness Measurement
- Automatic Depth Composition
- Z Depth Measurement

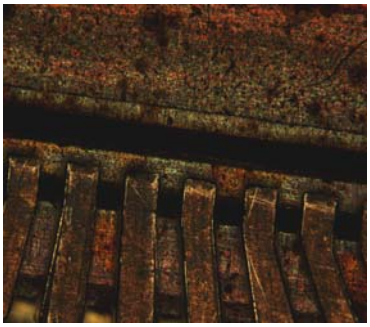
Compatible With Compound Microscopes & Stereo-Microscopes

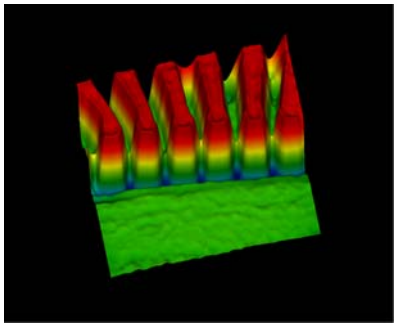
Industrial Quality Control & Material Microscopy

Metal Paint Electronics Coatings Ceramic Polymers Semiconductor Materials Gemology Museum Forensics









PhaseView Patented Technology

PhaseView®
THE SIMPLEST WAY TO 3D

ZeeCam®

MICROSCOPE 3D ADD-ON

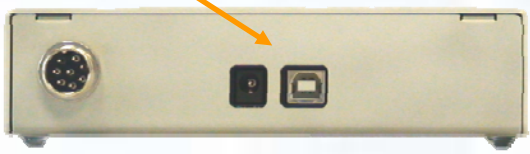
3 Camera resolution available 1 – 2 and 5MP

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

Compatible with any microscope equipped with video port

Single USB connection to PC

No bulky controllers and cumbersome accessories



Use Video Port To Add 3D Imaging Capabilties

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

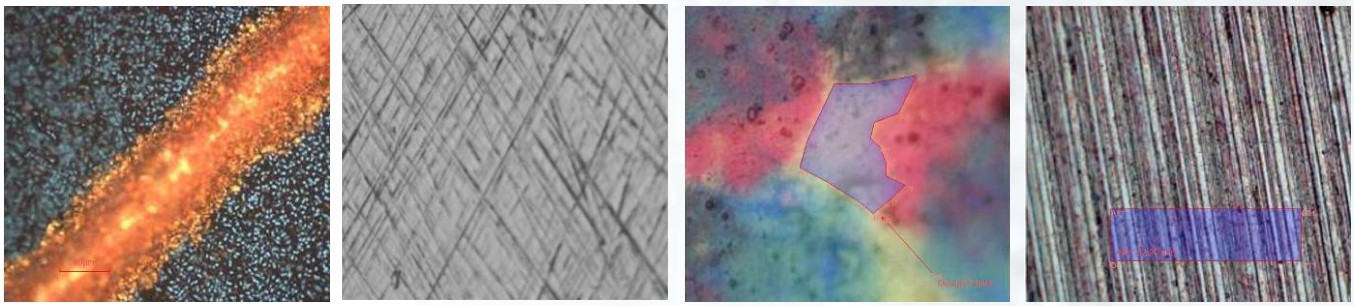
No motorization : maintenance free
No microscope adaptation required
Do not alter standard camera use

ZeeCam on Upright Microscope

ZeeCam on Stereo Microscope

High Resolution Digital Microscope Camera

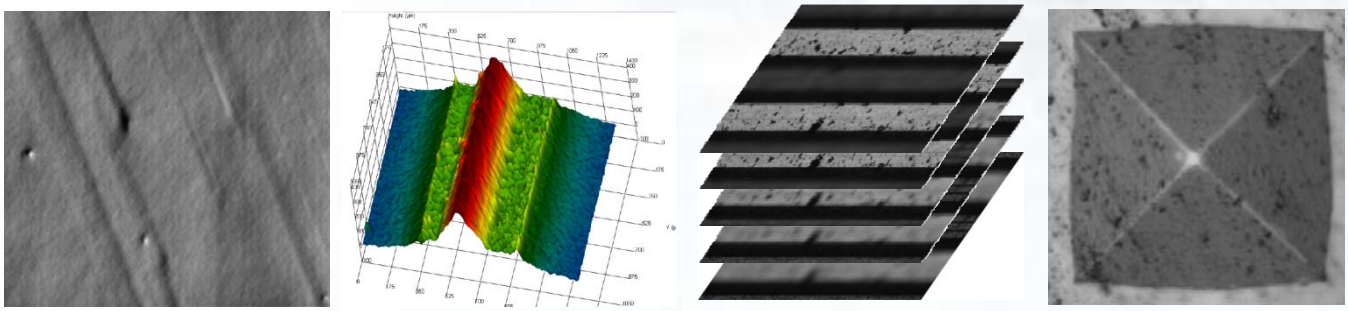
Megapixel CCD • 2D Measurements • Graphics Overlay • Report



ZeeCam provides sharp & crisp digital images in real time, featuring all necessary tools for digital image documentation in high resolution.

Multiple Imaging Capabilities

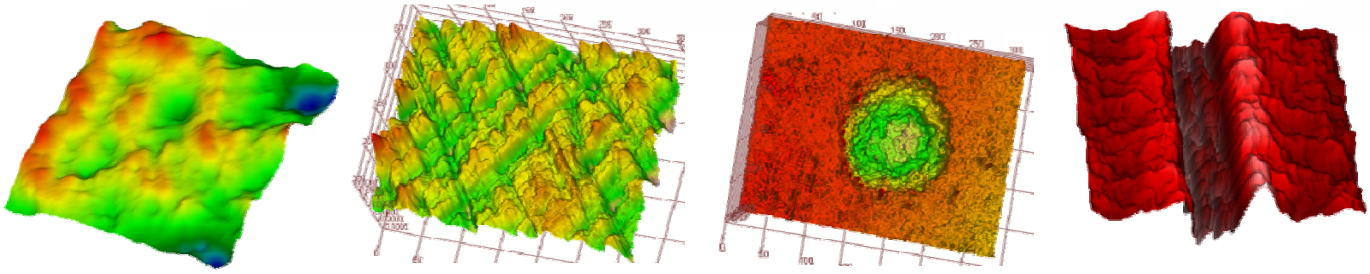
AutoFocus • Depth Measurement • Z-Stacking • Extended Depth of Field • 3D Reconstruction



Thanks to its integrated ZeeScan module, the 3D camera performs all critical tasks in material microscopy while using a standard upright or inverted microscope.

3D Surface Metrology

Surface Shape • Roughness • Waviness • Step Height



ZeeCam is the quickest and easiest way for precise surface topography measurements compared to complex, bulky and expensive systems.

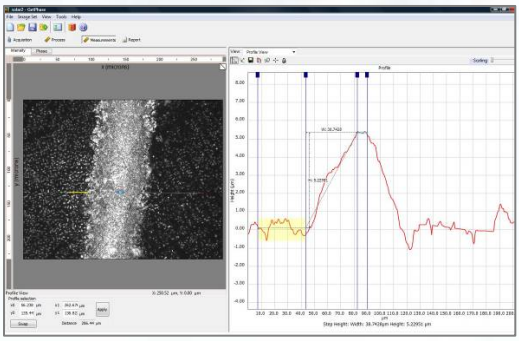
Software

- 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. An optional API / SDK includes ZeeScan acquisition controls, routines for Z-stack, 3D reconstruction, EDF, DIC, Phase, and 3D surface analysis.

• **Acquisition & Processing**	• **2D/3D Display & Analysis**	• **Image Data Export & Report**
- 2D / 3D Acquisition Wizard	- BF, DF, Ph, DIC, 3D views	- Project Archiving
- Auto Focus & Exposure	- Text & Graphics overlay	- 3D Data in Excel Format
- Region-of-Interest	- 2D / 3D measurements	- 3D Data for 3rd Party Software
- Navigator	- Image fusion (EDF)	- Report Editor
- Stitching	- Roughness ISO standards	- HTML Compatible Presentation
- Macro Recording	- Step Height Measurements	

Powerful Imaging Tool

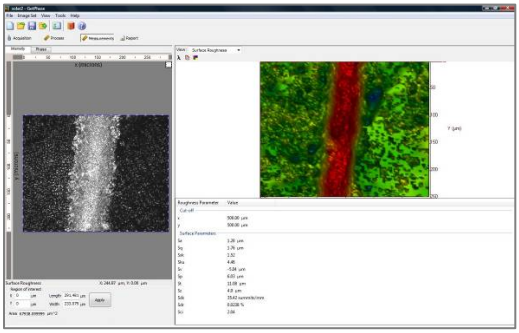
Z-stacking of high resolution images can be automatically achieved providing image fusion image (Extended depth of Fiel image, Z depth measurement or 3D reconstruction. In addition, GetPhase provides 2D measurements and image documentation tools.



- ***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***

Smart Hardware Architecture

No internal or external motorization, no additional accessories for the microscope are required, ZeeCam 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.

Model	**ZeeCam 100**	**ZeeCam 150**	**ZeeCam 200**
Camera	½"CMOS 1280 x 1024 5.2µm square pixels 30fps@full resolution	1/1.8"CCD 1616 x 1216 4.40 square pixels 12fps@full resolution	½"CCD 2560 x 1920 2.20 square pixels 6fps@full resolution
Microscope interface	video Port – C-mount, recommended 1x c-mount coupler		
Dimensions & weight ZeeCam Head Control unit	 155(H) 80(W) 56(D) mm 375 g 40(H) 158(W) 150(D) mm 150g		
Power supply	110/220V AC		
PC interface	USB 2.0		

3D Measurement Performance

Z range and resolution are objective and c-mount coupler magnification dependant. The table here under gives typical performance for standard objective magnification with 1X coupler. For any other magnification and /or c-mount coupler configuration, the following formulas can be applied: Z Range = 16mm / (G_Obj * G_adapt)² Z Resolution = Objective Depth Of Field /4

G_Obg = Objective magnification G_adapt = c-mount coupler magnification

Objective Mag / NA	Z Range (µm)	Z Resolution (µm)
5X / 0.10	640	0.32
10X / 0.25	160	0.08
20X / 0.45	40	0.02
50X / 0.8	6.4	0.003

Z accuracy: 1%

Z Repeatability: 0.35%

Max slope: 90°

XY Spatial resolution determined by camera resolution and objective magnification

Roughness Measurement

12 analysis parameters are provided in total, including the frequently-used Ra (Sa), Rq (Sq), Rz (Sz), parameters. Parameters conform to ISO 4287, 25178 DIN 4768

Measuring range: Ra, Rq: 0.01-500µm Measuring accuracy: ≤±10% Repeatability: ≤6%

PhaseView® THE SIMPLEST WAY TO 3D

2 Impasse de la Noisette - Bat B3, 91370 Verrières Le Buisson, France
+33 9 54 03 05 43 • contact@phaseview.com • www.phaseview.com