R10micro 3D Microscopy Camera

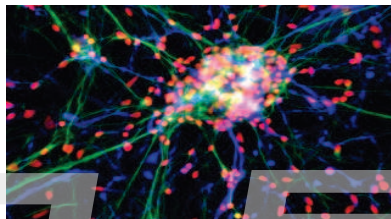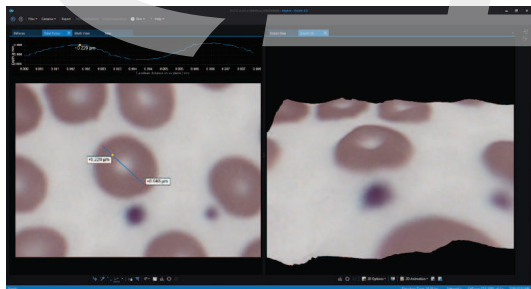**3D reconstruction and extended depth-of-field based on only one snapshot and a single-lens monocular camera**

- calibration-free monocular camera
- robust & space-saving setup
- down to micron resolution
- extended depth-of-field by software re-focus
- captures fast moving objects by a single shot
- no special structured illumination required
- mono, color and NIR cameras available

illustration may differ

3D
Light Field Monocular Microscopy

R10micro Specifications

Lateral resolution	max 2.5 MP (25% of original image sensor resolution)
Extended depth-of-field	max 6x of standard camera without Raytrix technology 3x of standard Light Field 1.0 cameras
Max frame rate	28 FPS (USB 3.0)
FoV and DoF example setups (X,Y,Z depth)	10x magnification: 0.86mm x 0.6mm x 0.3mm 20x magnification: 0.43mm x 0.3mm x 0.075mm 60x magnification: on request
Light field image sensor	10 Megarays Mono/Color, CMOS, BSI
3D depth resolution	Approx 200 discrete depth layers (only with RxLive 4.0 or higher)
Fixed aperture	F/26 (Note: *we offer full customized micro lens array optics meeting your needs*)
Interface	USB 3.0, external hardware trigger
Lens mount	C-mount
Software support	MVTec Halcon plugin interface, SDK/API programming interface for Microsoft Windows, supports HMD such as the Oculus Rift
Hardware requirements	NVIDIA 1080 Ti (Pascal) or higher
Software requirements	Microsoft Windows 10 Pro (64bit), CUDA
Applications	Light Field R&D, machine vision, plant research, animal research, visual quality inspection, scientific imaging, surface inspection, life science, cancer research, neuro science …

*** US-Pat.-No.: 2012/0050562-A1, CHIP-Award 2012: „Innovation of the year"**

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