



Introducing the DeltaVision™ OMX SR

The next evolution of Super-resolution
imaging solutions

Imagination at work.



DeltaVision OMX SR

- The DeltaVision OMX SR is a compact imaging system that is specifically optimized to incorporate the power of SIM super resolution technology into a stable platform.
- Reliably delivers physiologically relevant data from images that cannot be obtained with standard or confocal microscopes.
- Proven SIM technology enhances existing live-cell imaging techniques and enables biologists to quickly advance their research while retaining the sample preparation methods, ease of use, and flexibility of conventional microscopy.



DeltaVision OMX SR

- Compact single enclosure system
- SIM only or Ring-TIRF only configurations available
- 2D/3D SIM light pattern generator (New Blaze module)
- 48 x 24 mm stage travel stage
- Improved camera mounting and alignment system
- Compact Laser illumination system
- New multifunction environmental control system





Key Features

	Feature	Objective
Cameras	pco.edge sCMOS	Perfect combination of speed and sensitivity
Objective lenses	60x 1.42 NA for SIM/WF 60x 1.45 NA for TIRF	Required by CMOS camera configuration for SIM
Lasers	405, 488, 568, 642.	4 laser, auto-aligning, single fiber module
Acquisition modes	SIM - Sequential WF - Simultaneous or sequential TIRF - Simultaneous or sequential	Retaining key DeltaVision OMX platform capability
Super-resolution modes	2D-SIM 2D TIRF SIM 3D-SIM Localization Microscopy	More flexible SR imaging options



Key Features

Feature	Feature	Objective
Widefield illumination	Utilizes laser module for illumination	Illumination through SIM or TIRF light path depending on configuration
Imaging Speed	2D-SIM ~20 fps (~200 fr) 2D-SIM TIRF ~20 fps (~200 fr) 3D-SIM ~1 um/sec (~180 fps)	Approx 2-3 fold improvement over earlier designs
Enclosure size	Single system enclosure	34 W x 39 D x 62 H inch. (864 W x 991 D x 1575 H mm) Smaller than average confocal microscope air table
Extended travel stage	48 x 24 mm travel	Developing easier focus and scan workflow
TIRF Illumination	Exclusive Ring-TIRF system	Option now to sell TIRF only configuration
Environmental Controller	3 gas mixing, humidity and temperature control	Software controlled Integrated into main system

DeltaVision OMX Configurations Compared

Configuration	DeltaVision OMX	DeltaVision OMX SR
Cameras supported	Up to 4 sCMOS or EMCCD	Up to 4 sCMOS
Standard Lasers	405, 445, 488, 514, 568, 642	405, 488, 568, 642
Illumination Modes	WF – SSI illumination SIM – Laser illumination Ring TIRF – Laser Illumination	WF – Laser illumination SIM – Laser illumination Ring TIRF – Laser Illumination
SIM Module	Standard	Optional
TIRF Module	Optional	Optional
Widefield Imaging speed	sCMOS Cameras >400 fps. EMCCD Cameras 50 fps (512 x 512)	sCMOS Cameras >400 fps.
3D-SIM Imaging Speed	CMOS 1 um stack ~1 sec EMCCD 1 um stack ~5 sec (15 images per slice, 120 per um)	1 um stack ~1 sec (15 images per slice, 120 per um)
2D-SIM	3 beam 2D-SIM CMOS ~12 2D-SIM sections per sec EMCCD ~3 2D-SIM sections per sec (15 images per section)	2 Beam 2D-SIM ~20 rfps 2 Beam 2D-SIM TIRF ~20rfps (9 images per slice)

General System Features and Hardware





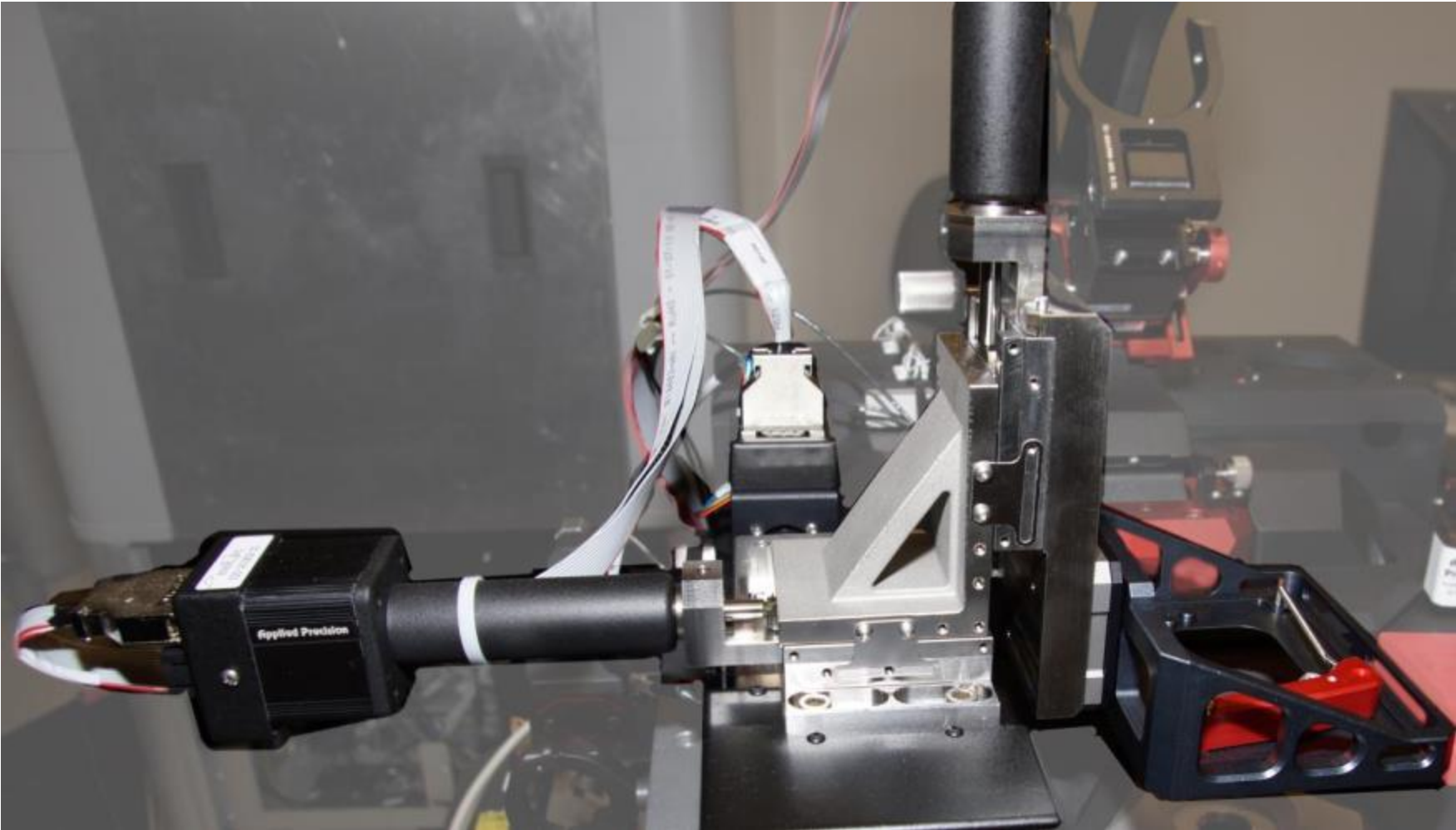
Scaled representation



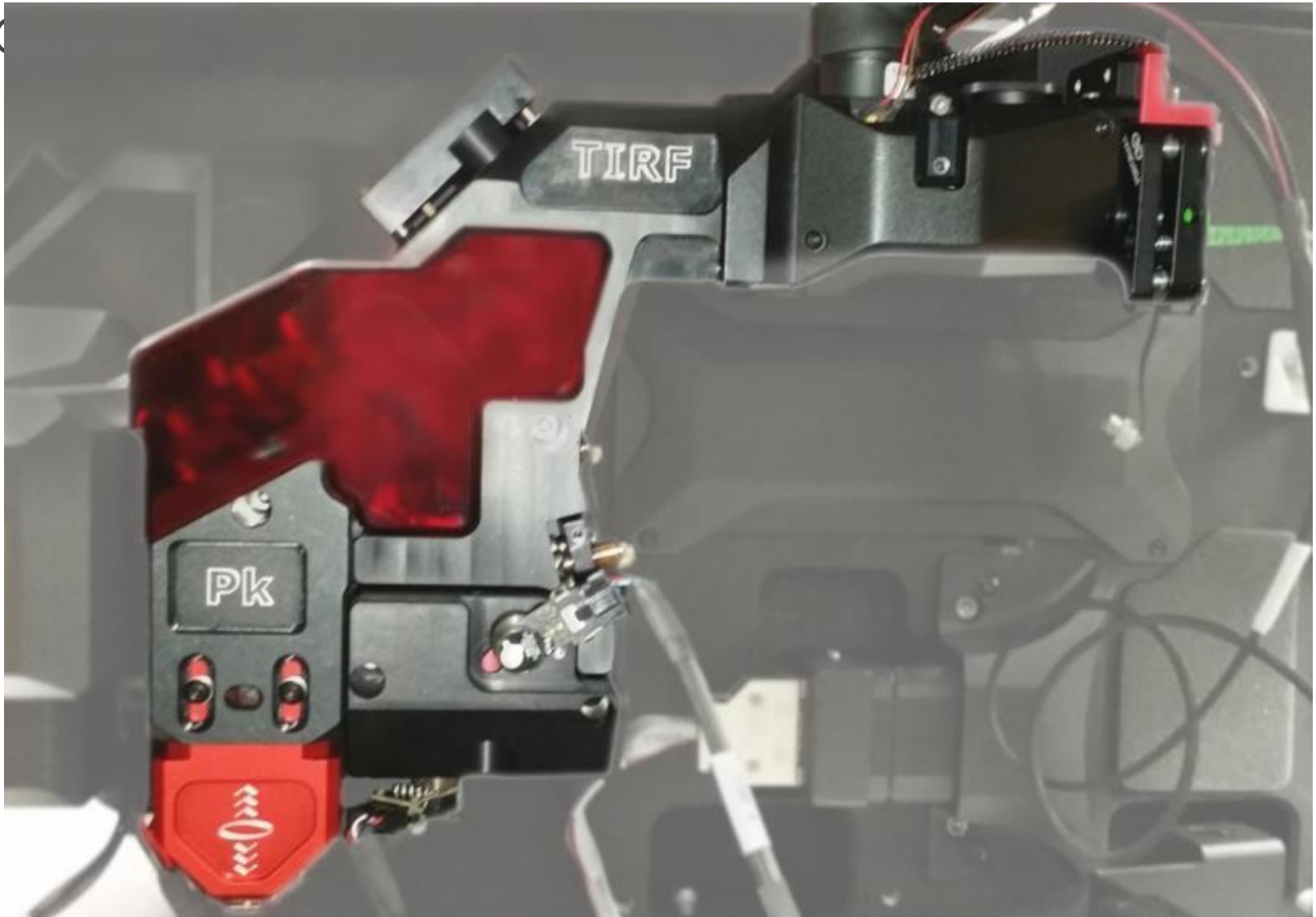
New Blaze Module



New Stage



Updated TIRF/PK Module (shown with DLM op



New Electronics Rack and Joystick



New!
Joystick



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