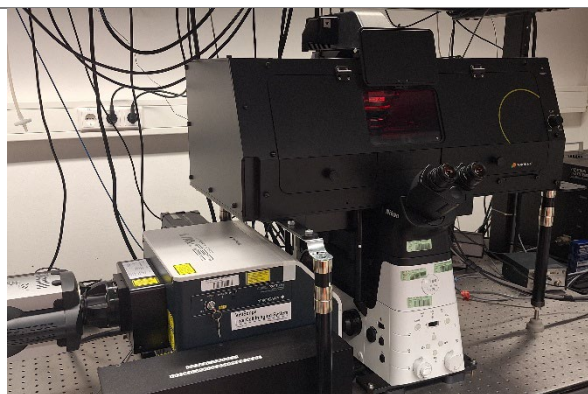


Technical Specifications

Live Spinning Disk



Inverse spinning disk microscope for fast imaging, preferably for long-term live applications. Nikon stand with a Yokogawa W1 Spinning Disk Unit Equipped with laser lines for blue, green, orange and red dyes. All lasers are available for photomanipulation (FRAP, photoactivation etc.). Hard- and software autofocus, multi-positioning and full environmental control (temperature/CO₂). Selectable cameras: EM-CCD for sensitive, low-photon budget imaging, or a sCMOS camera for fast imaging at high resolution.

(Last updated: January 2026)

Stand

Nikon T/2-E, inverse, motorized, double-deck, with hardware autofocus (Nikon Perfect Focus System)

Objectives

- CFI Plan Apo λ 20x/0.75, working distance (WD) 1.00 mm
- CFI Plan Apo λ 40x/0.95, WD 0.25-0.16 mm
- CFI Plan Apo λ 60x/1.42 Oil, WD 0.15 mm
- CFI Plan Apo VC 60xC/1.20 W, WD 0.28-0.31 mm
- CFI Plan Apo λ 100x/1.45 Oil, WD 0.13 mm
- CFI Plan Fluor 100x/1.30 Oil Iris, WD 0.16 mm

Lasers

Visitron VS-LMS laser combiner (single port), Gattaca iLAS pulse FRAP scanner, 3-channel external port switcher for imaging or photomanipulation, respectively

- 405 nm laser diode (140 mW)
- 488 nm laser diode (150 mW)
- 561 nm solid state laser (200 mW), AOTF-controlled (VS-AOM100)
- 640 nm laser diode (200 mW)

Widefield Illumination

Lumencor Spectra III (hybrid solid state LED) with 8 excitation bands

Filters

Pos.	Spectra III	Reflector Turret	Emission Filter Wheel 1 EM-CCD	Emission Filter Wheel 2 sCMOS
1	DAPI 375/30	FRAP Polychroic ^a	DAPI 455/50	DAPI 455/50
2	CFP 440/20	Triple LED-DA/FI/TX-A ^b	GFP 525/36	GFP 525/36
3	GFP 475/28	DIC Analyzer	mCherry 605/70	mCherry 605/70
4	YFP 510/25		mCherry LP570	Quad (Chroma) ^c
5	Cy3 555/28		Cy5 705/72	empty
6	RFP 575/25		DIC Analyzer	DIC Analyzer
7	Cy5 637/12		CFP 470/24	
8	IR 748/12		YFP 535/30	
9			empty	
10			Quad (Semrock) ^d	

^aChroma ZT405/488/561/640rpc 60%T 40%R

^bSemrock FF01-378/474/575-25, FF409/493/596-Di02, FF01-432/523/702

^cChroma ZET405/488/561/640m-TRF

^dSemrock FF01-440/521/607/700

Cameras

- EM-CCD: back-illuminated Andor iXon Life 888, 1024 x 1024 pixel, 13 µm pixel size, 16-bit, 26 fps (full frame), QE >95%
- sCMOS: back-illuminated Teledyne Prime BSI, 2048 x 2048 pixel, 6.5 µm pixel size, 16-bit, 43 fps (full frame), QE >95%

XYZ-Stage

- ASI PZ-2150 scanning stage (xy travel range 120 x 110 mm), Z-Piezo top plate (closed-loop, travel range 150 µm, 2.2 nm resolution)
- Inserts for all kinds of slides, multi-well plates and 35 mm dishes

Software

- VisiView 7.0 (Visitron Systems) running on Windows 10 (64 bit)

Environmental Control

- Tokai Hit Thermo Box (TI2TB), Pecon 2000-2 CO₂ controller with humidifier bottle