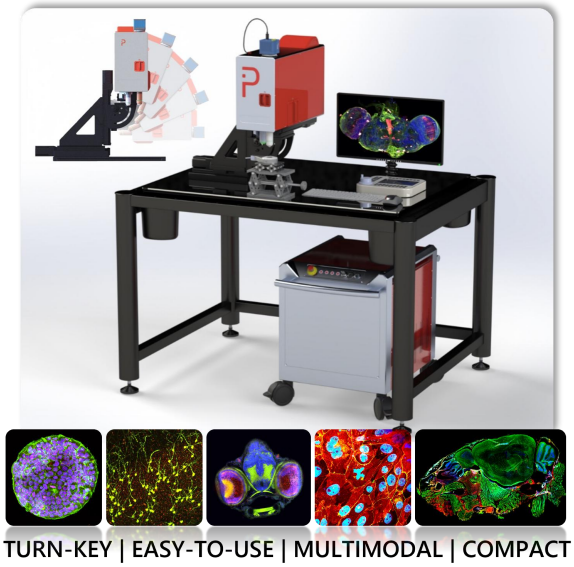
Multi-photon microscopes

MPX-series

Product Introduction:TURN-KEY, FLEXIBLE, MULTIMODAL, COMPACT

Free moving 360-frontend (scanhead)
Built-in femtosecond fiber laser, built-in PMTs (up to 4 channels), piezo objective scanner optional, motorized 3-position turret (e.g. Nikon 16x CFILWD, 0.8 NA, 3.0 WD or Olympus 20x XLUMPLFLN20XW, 1.0 NA, 2.0 WD)
Translation:
3 - 5 axis stages allow scanhead rotation and translation in 3D
Controller:
Stand-alone controller with handles and wheels, air cooled, high performance PC, high resolution display, software, mouse and keyboard included,
non-detachable umbilical between controller and scanhead (2 m)



MPX is the world's first turnkey, compact, and fully integrated next-generation multiphoton microscope!

Prospective's MPX combines different imaging techniques in one easy-to-use and portable device: non-linear MP (two-photon, SHG & THG) and wide field epi-fluorescence and fluorescence lifetime imaging to maximize informational content, ranging from single cells up to living animals in upright and inverted configuration. Confocal resolution and a high penetration depth makes it an easy-to-use 3D microscope, even for label-free markers such as collagen in tissue.

The entire microscope consists of a small air-cooled controller unit with integrated PC and a compact imaging scan head, both connected through a flexible umbilical cord. Key features are the fully integrated high-power wavelength tuneable femtosecond fiber laser engine, resonant-galvo-galvo scanning, up to 4 highly sensitive PMTs, high performance wide-field imaging and a motorized objective turret. All integrated into the free moving scan head, which is lightweight, rugged, and allows the ultimate imaging flexibility in any sort of environment.

YOUR TEAM, YOUR LAB, YOUR SAMPLES

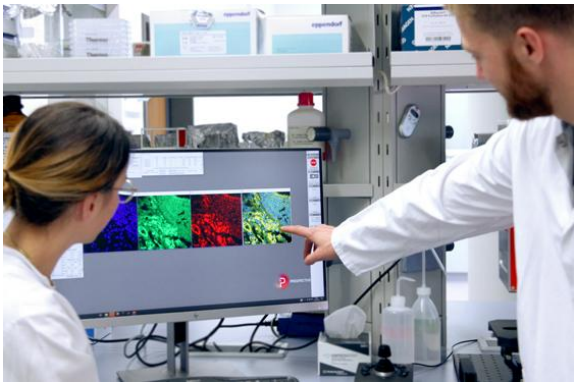
We understand it is sometimes essential to work in a well-known environment with staff already instructed on your working routine. This is why we offer the unique option to book one of our well-equipped demo devices. You can easily integrate high-quality multi-photon microscopy in your working process which will support you to get your research done faster – with your team, your lab, your samples.

SUSTAINED PERFORMANCE 24/7

Our innovative design, compact, rugged and robust, is engineered for easy transportation and setups in almost any indoor working space with sustained 24/7 performance. Temperature fluctuations between 18°C and 28°C do not influence the system and enable the user to get high quality sample images, minimizing concerns including the working environment or misalignment over time.

MULTIMODALITY AT ITS BEST

Our MPX-series combines widefield fluorescence, two-photon fluorescence, higher harmonics and brightfield imaging in one device (depending on the ordered options). No changing or significantly modifying the microscope to operate different modalities, no repositioning of the sample. Once the sample is placed, the imaging process can begin, modalities and resolution can be changed in an instant. You would like to change from micro level to macro level and back again? No problem for our MPX-series. Our device offers multimodality at its best!



EASY-TO-USE IN ALMOST ANY INDOOR WORKING ENVIRONMENT

Working with a multimodal microscope should not be limited to working in a well-equipped working space such as a laboratory with water cooling system and air conditioning. The MPX-series gives every user the unique possibility to choose the working environment independently and according to their own needs. The system can easily be moved and thus also be shared between different teams and their offices. The compact construction allows setup and operation almost anywhere, even in your office at home.

MODULAR CONCEPT

The MPX-series multi-photon multimodal imaging platform is based on a modular concept. There are three standard models, each can be upgraded with various options and accessories to completely maximize the utility of the design. This concept enables a multi-photon microscope tailored to every specific need and budget. With only a few steps the free-moving scanhead can be converted to up-right, inverted, oblique angle or horizontal scanning directions. This high configurability allows the instrument to be easily adaptable and expands diagnostic capabilities.

EXTENDED SERVICES

The service concept of Prospective Instruments proves to be as unique as the device itself. There are options to have a live demonstration in your work environment or to book a well-equipped unit for a trial period. Test the device with your team and samples in your environment. Either will prove the novelty of the MPX-series design, extremely compact and easy-to-transport.

Product Features:

- Ready to go out of the box
- Plug & Play
- Multimodality at its best
- No optical table
- Energy efficient
- Easy to transport
- Always aligned
- No water cooling
- Free-moving scanhead

Product Applications:

There is no need for a technician to screw things together at the customer site. Our microscopes ship fully assembled and ready to use right out of the box.

Our microscopes are easy to setup and easy to use. They are designed fundamentally to be used by anyone in any location.

Experience the convenience and power of multimodal imaging in a flexible, upgradable, modular package.

There is no need for an optical table. Our microscopes are designed to be used anywhere, by anyone

No excessive heat and quiet operation that helps save energy and reduces the cost of system maintenance.

Our system is easy to transport, making it the ideal system for a flexible working space and sharing it with other groups.

The lasers and optics are permanently aligned and ready to use so you can spend less time getting things set up and running. More time for imaging.

Our air cooled system is not only energy efficient but also ready within a few minutes (short laser warm up time) and can be set up in almost any indoor working space.

With our unique free-moving scan head, users can image samples of varying size from every angle.

Three models to maximize the utility:

MPX-1040:Multimodal microscope with one integrated fixed wavelength femtosecond laser. Fixed wavelength at 1040 nm.

MPX-Dual: Multimodal microscope with integrated fixed dual wavelength femtosecond laser. Fixed wavelength at 1040 nm, fixed wavelength in the range of 750 to 1150 nm.

MPX-Tune*:Multimodal microscope with integrated fixed and tunable wavelength femtosecond laser. Fixed wavelength at 1040 nm, tunable wavelength in the range of 750 to 1150 nm.

	MPX-1040	MPX-Dual	MPX-Tune*
First wavelength:1040nm	√	√	√
Second wavelength:750-1300nm(fixed in range)	×	√	×
Second wavelengh:750-1130nm(tunable in range)	×	×	√
Resonant-galvo-galvo scanning module	Optional	Optional	Optional
Widefield fluoresceence modality	Optional	Optional	Optional
Brightfield Epi-modality	Optional	Optional	Optional