

Flash Scanner FS4-RTM

Rapid, label-free histological analysis

The Flash Scanner FS4-R is a state-of-the-art microscope that harnesses higher harmonic generation (HHG) to deliver rapid, label-free imaging of excised tissue, revealing intricate details at the cellular and subcellular levels.

Whether examining the spatial architecture of cells in the tumor microenvironment, studying the effects of drugs on cellular behavior, or gaining insights into tissue development without invasive labeling, the Flash Scanner FS4-R reveals cellular and histological hallmarks with unmatched speed and precision, marking a significant advancement in tissue analysis.



Subcellular resolution

Reveal key cellular and histological hallmarks using four distinct imaging modalities.



Label-free imaging

Visualize tissues without the use of labels or dyes, preserving samples for further analysis.



3D tissue visualization

Generate 3D images using automatic optical sectioning - no sample slicing required.



Quick turnaround

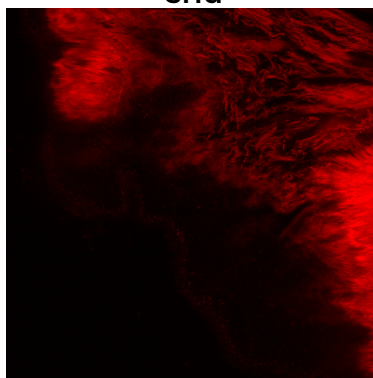
Minimize specimen preparation time and evaluate your samples in just minutes.



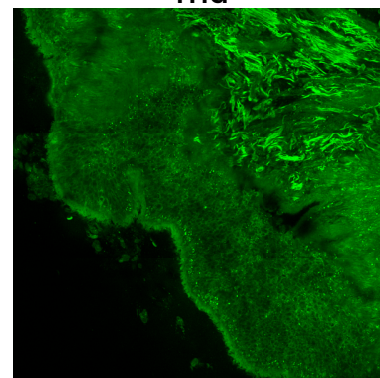
Publication-ready images

Capture vibrant, high-quality images that effectively convey the story behind your data.

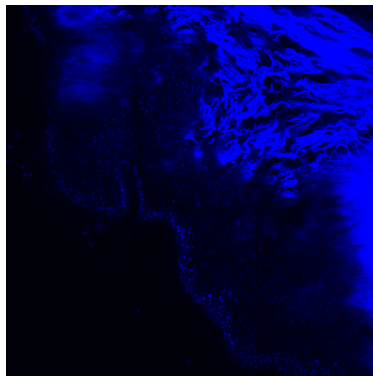
SHG



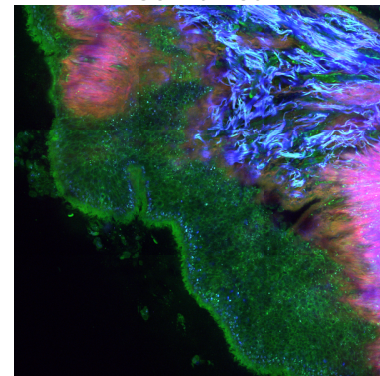
THG



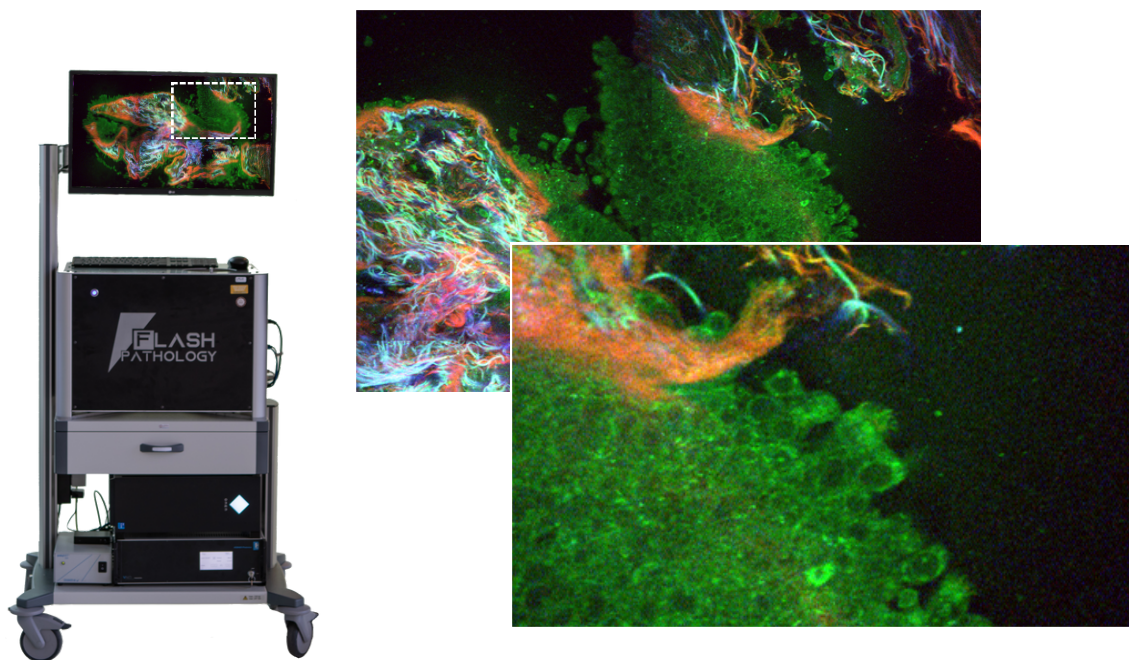
2PEF



Combined



Higher harmonic generation (HHG) microscopy. The Flash Scanner FS4-R simultaneously acquires second harmonic generation (SHG), third harmonic generation (THG), two-photon (2PEF) and three-photon (3PEF) excited autofluorescence signals to provide complementary information about a tissue sample.



Lung tissue in interstitial lung disease (ILD). The Flash Scanner FS4-R (on the left) is a compact, portable microscope that utilizes SHG imaging to capture non-centrosymmetric molecules, such as collagen fibers (red), while the THG modality visualizes epithelial cells (green). Elastin, an endogenous fluorophore, emits a signal detected by the 2PEF channel (blue). The magnified images reveal a thickened basement membrane and epithelium, which are characteristic features of certain ILDs.

Technical specifications	The Flash Scanner FS4-R
Optical resolution	0.4 μm (horizontal), < 3 μm (vertical)
Imaging modalities	Second harmonic generation (SHG), third harmonic generation (THG), 2-photon (2PEF) and 3-photon (3PEF) excited autofluorescence. Optional modality: confocal imaging
Field of view (single image)	400 μm $\times$ 400 μm
Max. mapped field	D = 20 mm (limited by the size of the sample dish)
Scanning speed	2 Mpixels/sec
Imaging modes	Inspection mode (1 pixel/ μm) and high-quality mode (5 pixels/ μm)
Imaging wavelength	1070 nm
Operating temperature and electrical requirements	18°C to 30°C; 110 - 230 VAC, 50 - 60 Hz

For research use only.

Contact us: info@flashpathology.com

Office location: De Boelelaan 1085, 1081 HV, Amsterdam, The Netherlands

For pricing and ordering: sales@flashpathology.com



Learn more at flashpathology.com