



Fluorescence Lifetime Imaging Module

- Modular upgrade for existing microscopes
- Time-gated FLIM approach
- Lifetime discrimination <100ps

[Description](#)
[Technical Description](#)
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Product Description

Based on FLIM systems developed by Paul French's team at [Imperial College London](#) using gated optical image intensifier technology from Kentech Instrument Ltd, this high speed time-gated fluorescence lifetime imaging module can be applied to FLIM microscopy, high content analysis and optical FLIM tomography.

The Cairn FLIM module is based on the latest generation gated optical image intensifier from Kentech Instruments Ltd and can be used with the open source software shared by Paul French's team. If you wish to write your own FLIM software, we can provide a DLL for MicroManager or LabView.

FLIM adds the ability to discriminate signals from fluorescent probes that have overlapping emission profiles that cannot be separated using their spectral intensity alone, to quantify FRET measurements (including signals from genetically expressed FRET biosensors) and to quantify cellular and tissue autofluorescence signals. With time-gated frame acquisition rates previously demonstrated up to 10Hz (depending on sample brightness, Grant et al, Opt. Exp.,2007), this time-gated FLIM approach can discriminate lifetime differences significantly less than 100ps and reach spatial resolutions > 20 line pairs/mm (Sparks et al, Rev. Sci. Instrum., 2017)

Time-gated FLIM can be realised by adding our FLIM module to existing microscopes with appropriate ultrafast excitation source facilities or can be provided as part of a complete standalone FLIM microscope. If you are interested in adding this modality to your capabilities, please [contact us](#) for further information.

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ABOUT US

Cairn Research is an independent scientific instruments manufacturer based in Kent, England. We design and build an extensive range of equipment for optical and electrophysiological measurements. In addition to supplying our standard product range to a worldwide customer base we have extensive experience in providing integrated solutions for demanding experimental needs.