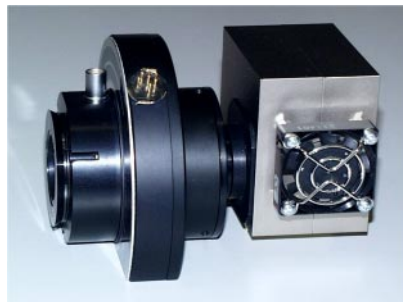
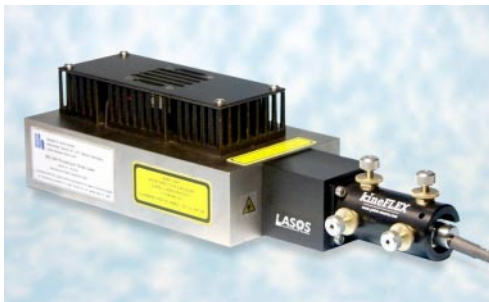
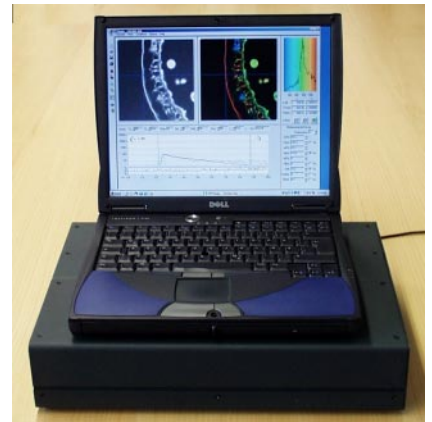


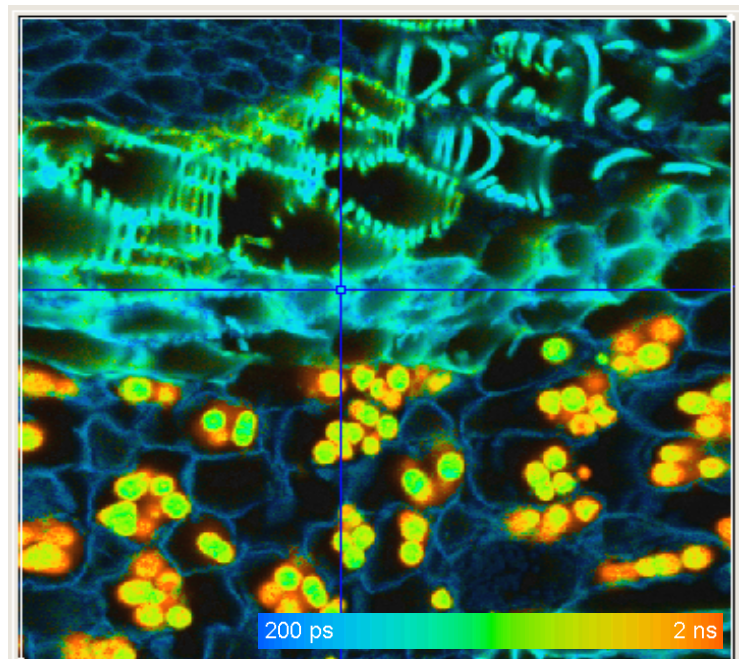
FLIM Upgrade Kits for Confocal Microscopes

Fluorescence lifetime imaging with ps resolution
Excitation by picosecond diode laser
Confocal detection
Simultaneous detection in several wavelength intervals
Multi-dimensional TCSPC technique
Excellent time-resolution and sensitivity
Zoom and image rotation functions of microscope applicable
Works at any scan rate

Separation of fluorophores by lifetime
Autofluorescence
FRET experiments
Imaging of pH, ion concentrations, or oxygen concentration



The systems are based on a picosecond diode laser of 405 nm or 473 nm wavelength with high-efficiency single-mode fibre coupling, a single-, dual-, or multi-wavelength detector module, and BH's proprietary multi-dimensional TCSPC technique. The pulsed laser light is fed into the microscope via a standard single-mode optical fibre. A high speed detector assembly is attached to a suitable optical output of the scan head. Both directly coupled and fibre-coupled versions are available. A large variety of detector modules is available for single-wavelength, dual-wavelength, or multispectral detection in 16 wavelength channels. The signals of all detector channels are recorded simultaneously by multi-dimensional TCSPC, resulting in excellent efficiency and time resolution. Typical applications are multi-spectral autofluorescence imaging of tissue, pH imaging in tissue, combined FLIM and SHG imaging, and investigation of protein interaction by FRET.



The laser is a joint product of BH and LASOS

TCSPC technique covered by patents DE 43 39 784 and DE 43 39 787



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Tel. +44 1316648122
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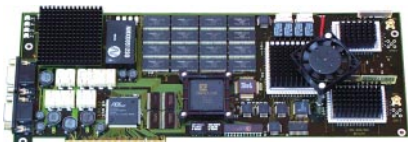
US Representative:
Boston Electronics Corp
91 Boylston Street, Brookline,
Massachusetts 02445 USA
Tel: (800) 347 5445 or (617) 566 3821
Fax: (617) 731 0935
tcspc@boselec.com, www.boselec.com

FLIM Upgrade Kits for Confocal Microscopes

Computer Options

TCSPC cards, to be placed in any Pentium computer

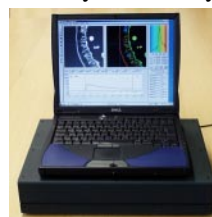
Laptop-based systems, fully installed



SPC-830 TCSPC module



DCC-100 detector controller



Detector Options



PMC-100 / M-SHUT
Cooled PMT
IRF width 150 to 180 ps
For lifetimes down to 100 ps
PMC-0: 340 to 650 nm
PMC-1: 340 to 820 nm



H7422-40 / M-SHUT
Cooled GaAsP PMT
IRF width 300 to 350 ps
For lifetimes down to 200 ps
340 to 690 nm, ultra-high sensitivity



R3809U / M-SHUT
Multichannel plate PMT
IRF width < 30 ps
For lifetimes down to 50 ps
R3809U-52: 340 to 650 nm
R3809U-50: 340 to 820 nm



R3809U / M-SHUT-DUAL
Two multichannel plate PMTs
Simultaneous detection
in two wavelength intervals
R3809U-52: 340 to 650 nm
R3809U-50: 340 to 820 nm



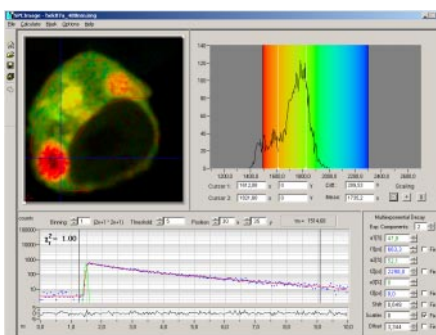
PML-16 / MW-FLIM
Spectrograph and 16 channel multi-anode PMT
Simultaneous detection in 16 wavelength channels
For lifetimes down to 100 ps
PML-16-0: 340 to 650 nm
PML-16-1: 340 to 820 nm

Other combinations: Please call bh

Directly Supported Microscopes

Manufacturer / Type	Remarks
Zeiss LSM 510	Fibre out required
Zeiss LSM 510 META	Fibre out required
Leica SP2	Complete FLIM systems available from Leica
Olympus FV1000	Fibre out or directly coupled detectors
Biorad Radiance	Fibre out required
Jenlab Tau-Map	Available from Jenlab
Other Microscopes	please call bh

FLIM Data Analysis



SPCImage Data Analysis
Single and multi exponential decay analysis
Lifetime in pixels displayed as colour
Lifetime distribution
FRET intensity by double-exponential analysis of donor decay function

For more information please download or call for

SPC-134 through SPC-830 TCSPC modules, Manual and TCSPC compendium
Upgrading TCSPC laser scanning microscopes with the SPC-730 and SPC-830 TCSPC imaging modules
W. Becker, A. Bergmann, Lifetime imaging techniques for optical microscopy
W. Becker, A. Bergmann, Detector assemblies for picosecond microscopy
DCC-100 manual
SPCImage manual
SPC-830, DCC-100, PMC-100, MW-FLIM, Simple-Tau data sheets

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