

TwinCam

Dual camera image splitter

With custom designed optics, the Cairn TwinCam offers superior image quality on large sCMOS size camera sensors. The TwinCam allows light to be distributed into two unrestricted images on the basis of wavelength, polarisation state or focal depth. A single, rapidly interchangeable Cairn cube has fine mechanical x-y adjustment for pixel overlay or deliberate image offset.

The TwinCam input also has a variable rectangular aperture enabling the use of cropped sensor mode on both detectors. We have recently improved the camera fixing with enhanced rigidity for larger cameras and a simplified focus and orientation control. We have also added pupil plane focus adjustment to allow simple optimisation with spinning disk ports and to allow precise positioning of optical components in the pupil plane.

Applications

- Förster Resonance Energy Transfer
- Simultaneous use of two dyes or genetic markers
- Ratiometric imaging
- Polarisation studies
- Simultaneous transmitted light and fluorescence
- Simultaneous multi Z depth imaging

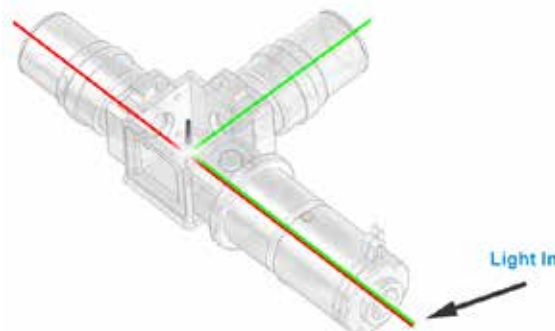
Key Features

- Easy alignment and focussing
- Improved camera clamps for enhanced rigidity and simplified focus
- Rapidly interchangeable cubes
- Polarisation rotator and beamsplitter options
- Magnification/demagnification on request
- Pupil plane focus adjustment
- Compact design with C-mount input and output ports as standard (F and T mount on request)
- Support for sensors up to 31.9mm diagonal
- 425nm to 875nm AR coatings on all optical surfaces
- 40mm diameter proprietary optics
- Emission filter dimensions – 25mm diameter
- Recommended dichroic dimensions – 26x38x2mm($\lambda/2$ flatness)

Top Advantages

- Engineered for super-resolution quality.
- Interchangeable filter/dichroic holders
- Magnetic cube mount for enhanced registration
- Simple and precise controls
- Utilises full camera resolution
- 2 cameras on 1 microscope port

The TwinCam light path



Add-on 1



Filter wheels coupled to each output

Add-on 2



Different path lengths for multi-Z imaging

Add-on 3



Dual filter wheels coupled to transmitted output

