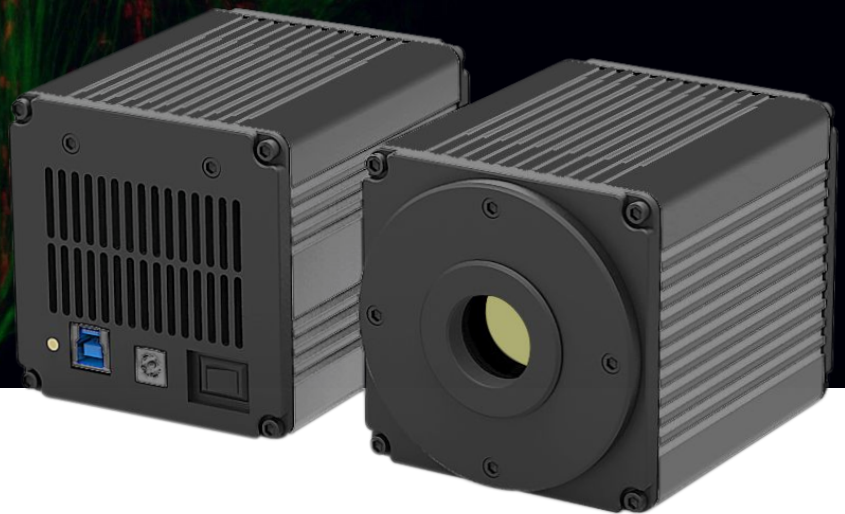# An Extraordinary Microscopy Camera

20MP Cooled Camera, the FL-20

20 megapixels, capturing high-definition detailed images in one shot

Thermoelectric cooling noise reduction technology

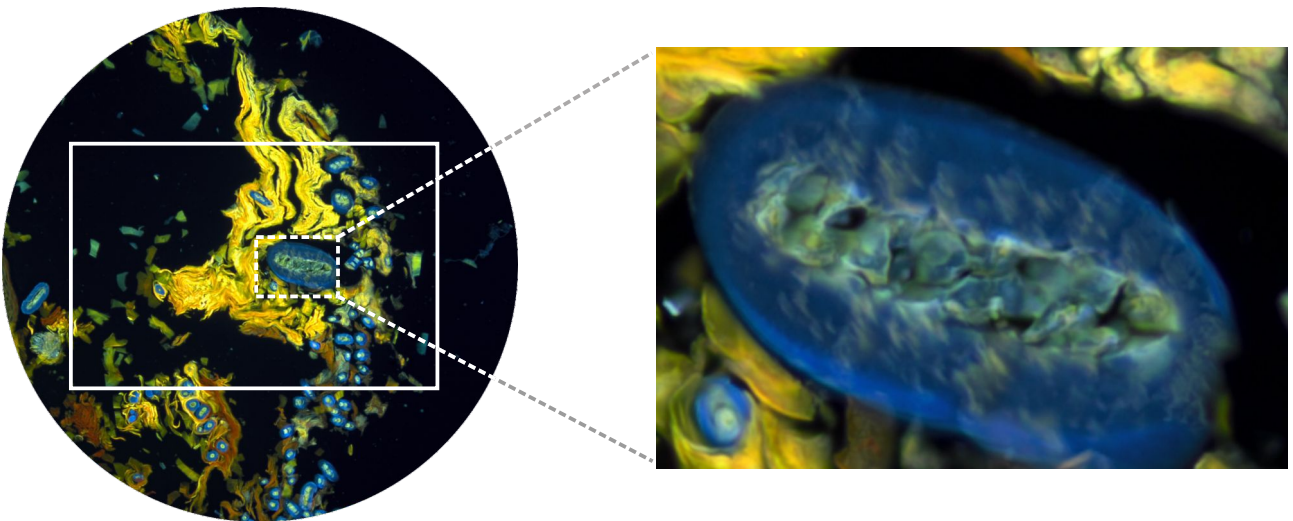Advanced real-time image stitching and real-time EDF
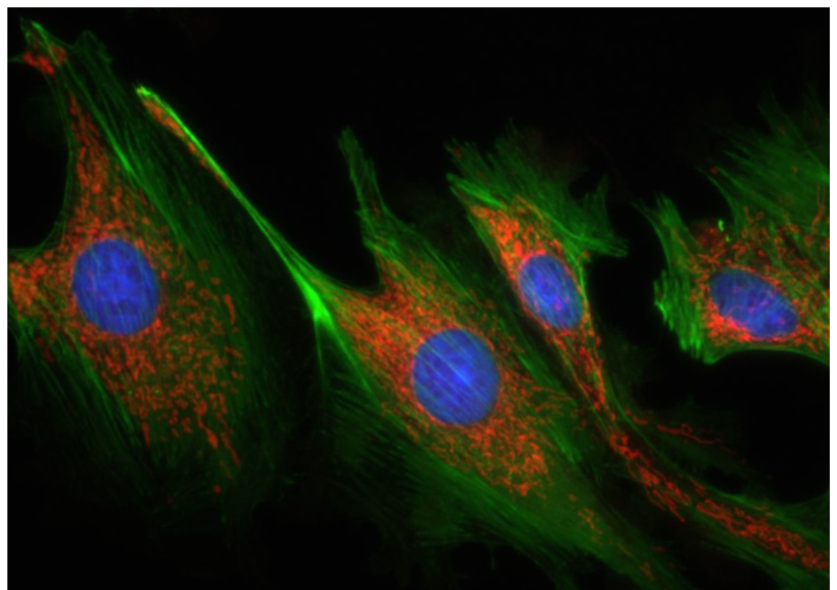
TUCSEN

ISO9001 CE RoHS

www.tucsen.com

20 megapixels, capturing high-definition detailed images in one shot

The FL 20's 1-inch sensor image can cover the most uniform central area of the image plane, with a resolution of up to 20 megapixels, you can capture the high-definition details of your samples in one shot.

Thermoelectric cooling noise reduction technology to meet more professional color fluorescence imaging needs
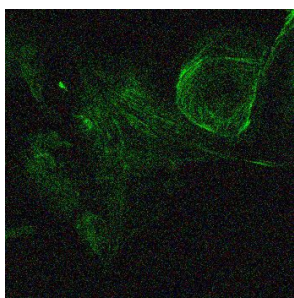
As with the top-level sCMOS camera technology from Tucsen, the FL-20 cooled camera operates at -15 °C and can ensure long-term reliable operation, significantly reducing the hot pixels caused by the accumulation of dark current, and obtaining a purer fluorescent background image. More than twice the sensitivity of a CCD, to meet the needs of professional fluorescence imaging.
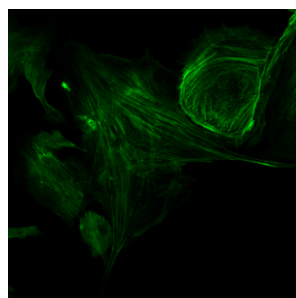
Real-time intelligent image processing, focused on improving image quality

Without sacrificing speed and image information, the FL-20 offers a variety of real-time intelligent image processing capabilities that allow you to view and capture flawless sample images in real time with the push of a button.

○ **Real-time 3D noise reduction, effectively eliminating random background noise**
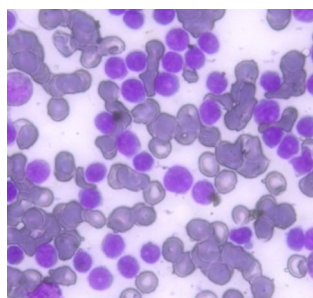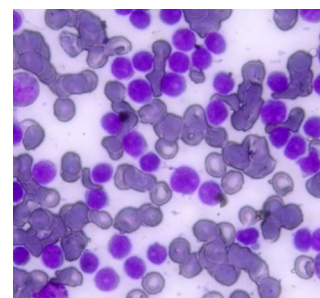

Before   After

○ **Real-time sharpening, enhanced detail, and more transparent**

Before   After

> 50 frames per second high speed video

With a guaranteed field of view, the FL 20 offers a variety of high-speed imaging modes that can be adjusted for fast positioning for an efficient image capture experience.

Resolution	FL-20	CCD
20MP	15fps	<1fps
5MP	53fps	4fps

Revolutionary PC Computing Imaging Software Mosaic V2.1

Unique from the cumbersome process of traditional technology to obtain images after processing, the Mosaic V2.1 provides real-time image stitching and real-time depth of field fusion. This can automatically complete the image while the operator moves the stage - productivity at its best.

Camera Specifications

Product Model	FL-20
Color/Monochrome	Color
Sensor Model	Sony
Quantum Efficiency	84%@535nm
Resolution	5472(H)x3648(V)
Pixel Size	2.40µmx2.40µm
Sensor Size	1inch
Shutter type	Rolling
Readout noise	<1.0e-
Cooling	Forced air(Ambient at +25℃):-15 ℃
Frame Rate	14fps @5472x3648, 53fps @2736x1824 67fps @1824x1216
Binning	2x2, 3x3, 4x4
Exposure mode	Auto/Manual
Exposure Time	3us~60min
Picture Format	JPG/PNG/TIFF/DICOM
Data Interface	USB3.0
Bit Depth	16bit/8bit
Camera Size	85mmx85mmx109mm
Power Supply	12V
Camera Weight	990g
PC Software	Mosaic V2
Operating System	Windows(32bit/64bit)，MAC
Operating Environment	Temperature: 0-40℃ Humidity: 10%-85%

Software Functions

· **Real-time depth of field fusion**	· **Real-time image stitching**
· **Real-time 3D noise reduction**	· **Real-time sharpening**

- Modular function configuration
- Intelligent 12-bit ISP color reproduction
- Real-time fluorescence image synthesis and editing
- HDR image synthesis
- Micro-imaging-based intelligent automatic exposure
- Intelligent flat field correction based on dynamic calculation
- Smart measurement workflow
- Implements multiple iterations of workflow execution
- Supports single shot, delayed camera
- Automatic video and delay video generation
- Output format selection
- User parameter group save and load
- Dynamic\static measurement
- Layered measurement
- Customize measuring gauges, layers, precision
- Customize image naming, style, save location
- Implements drawing: points, lines, rectangles, polygons, circles, arcs, angles
- Data export as TXT or Excel
- Report generation and printing

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