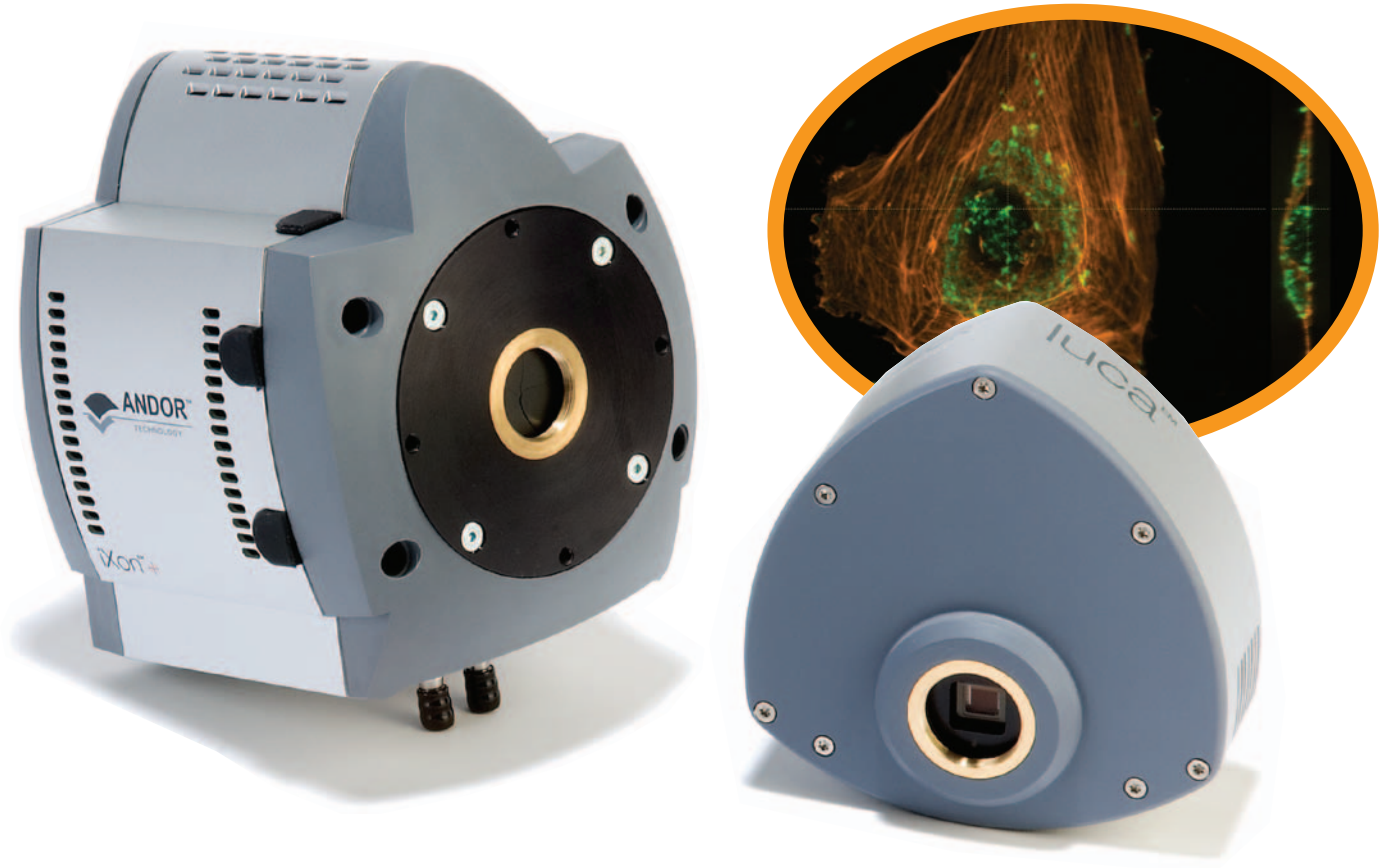
low light Imaging

Introducing Andor's iCam technology...



Industry-leading acquisition performance for live-cell microscopy

iCam encompasses a set of unique innovations that empower the Andor EMCCD cameras to operate with complete acquisition efficiency through Andor iQ multi-dimensional microscopy suite and other 3rd party imaging software packages.

iCam Speed Comparison	
Camera	Frame Rate (fps)
iXon^{EM}+ 897 with iCam	23
Other EMCCD	12

Free-run imaging sequence involving dual channel acquisition protocol using rapid toggle between 1 ms and 2 ms for each channel. Both cameras have the same 512 x 512 pixels sensor. Vertical shift speed set to 0.9 µs for iXon (variable), fixed 2.0 µs for the other camera.

ISO 14001:2004 FM 91062 ISO 9001:2000 FM 40523 INVESTOR IN PEOPLE

ANDOR™ TECHNOLOGY

discover new ways of seeing™

EMCCD cameras in a heightened state of readiness...

Andor's iCam technology is a combined firmware and software innovation, a highly efficient and performance-optimized solution which is integrated across Andor EMCCD imaging cameras and Andor's iQ and SDK software platforms. iCam offers next-generation EMCCD performance during your tightly synchronized and complex multi-dimensional microscopy experiments. Using state of the art bi-directional communication between camera and PC, iCam really kicks in for multi-channel acquisitions during which different exposure times are rapidly toggled between channels, whether software triggered or hardware (externally) triggered, with absolute minimal overheads.

Andor iQ multi-dimensional software is optimised for control of EMCCD cameras for a range of bio-imaging applications. The introduction of iCam enables iQ users to gain immediate access to all of its advanced performance accelerating data acquisitiin across multi-dimensional applications.

iCam delivers:

- **Enhanced software triggering during acquisition** - highly efficient upload of acquisition parameters from software to camera with minimized overheads.
- **Ring Mode** - ultimate in exposure switching during multi-channel protocols. Software pre-load up to 16 acquisition channels onto the camera.
- **Enhanced external trigger mode** - optimized speed performance across all of Andor's comprehensive external trigger options.
- **Asynchronous frame transfer mode (AFTM)** - enhanced speed and synchronization in overlapped/frame transfer acquisition mode.
- **Andor iQ** - proven market-leading performance in **iQ** multi-dimensional live cell microscopy software
- **Bi-directional communication** - between PC and camera
- **Further enhanced baseline stability** - takes Andor's market-leading quantitative EMCCD stability to a whole new level!
- **3rd party software compatibility** - most popular imaging suites take advantage of iCam.
- **Turn-key technology** - implemented in all new imaging EMCCDs from Andor*.

Enhanced data exchange between camera and PC

iCam allows for faster frame rates in software by using dedicated timing patterns that shorten unnecessary overhead times. These time lags prevent other EMCCD cameras on the market from achieving fast frame rate during complex experimental protocols.

Furthermore, iCam's 'Ring Mode' offers the capacity to use up to 16 different timing patterns uploaded into the camera head, thus external triggers can result in virtually instantaneous switching between channels, facilitating unparalleled synchronization with other peripheral equipment such as filter wheel, laser-AOTF or z-stage.

** Many older Andor iXon EMCCD cameras are field upgradeable to incorporate iCam technology. Contact Andor product support to enquire.*

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August 2007