

# Camera Focus

## Digital Microscopy Camera

ACCU-SCOPE's second generation 319CU digital microscopy camera builds on and improves upon the architecture of its predecessor by offering faster frame rates for USB 2.0 microscopy cameras. The 319CU camera delivers 12 frames per second at full resolution (2048 × 1536), which is twice the rate offered on prior models without any compromise in image quality as the noise level has been reduced by 90% with the introduction of a new heat dissipation and circuit design. With 32MB of onboard memory, the 319CU holds a significant amount of data generated by the image sensor and then transfers captured images to the computer via USB 2.0 bulk transfers. This design promotes frame integrity, faster data rates and allows for multiple simultaneous camera connections. The 319 CU is designed for use in brightfield microscopy applications. **ACCU-SCOPE, Inc.**, 631 864-1000, [www.accu-scope.com](http://www.accu-scope.com)



## CCD Microscope Cameras

Jenoptik Optical Systems Division offers two USB camera types to its ProgRes CCD microscope camera range: ProgRes SpeedXTcore 3 and ProgRes SpeedXTcore 5. These products are the first to feature the company's SpeedXT core technology. The live image speed of 17 fps (SpeedXTcore 3) and 13 fps (SpeedXTcore core 5) at the maximum possible resolution of 2080 × 1542 pixel (SpeedXTcore 3) and 2580 × 1944 pixel (SpeedXTcore 5) is one advantage of the ProgRes SpeedXT core 3 and 5 cameras.

When maximum resolution is not required, even higher frame rates of 30 resp. 45 fps are possible. Users benefit from the optimized workflow: thanks to the 2-3 fold enhancement of the live image speed in combination with the high resolution, specimens can be focused and positioned more easily and quickly. Exposure times up to 180 s ensure optimum captured images, also under low-light conditions. The maximum possible color depth is 36 bit. **JENOPTIK AG**, +49 3641 65-1000, [www.jenoptik.com/progres](http://www.jenoptik.com/progres)

## 128 × 128 EMCCD Camera

Photometrics' Evolve 128 EMCCD camera provides researchers with an enhanced imaging tool that includes onboard camera intelligence features such as QuantView and Background Event Reduction Technology. These features provide researchers reduced noise with precise, accurate, and highly quantitative measurement.

The Evolve's Quant-View technology provides a repeatable methodology to gather and interpret live imaging data by reading out pixel values in photoelectrons—a standardized unit of measurement. The Evolve 128's standardized data, in conjunction with its high frame-rates, sub-electron read noise, and stability provide superior performance. The Evolve 128 is available with eXcelon Technology, a back-illuminated CCD and EMCCD detector technology which was developed jointly by e2V, Princeton Instruments and Photometrics. eXcelon sensor technology gives a significant increase in the broadband quantum efficiency in the blue wavelengths while reducing fringe effects (etaloning) in the near Infra-Red wavelengths. **Photometrics**, 800-874-9789, [www.photometrics.com](http://www.photometrics.com)



## EMCCD Camera

QImaging offers the Rolera EM-C2 EMCCD microscopy camera. Engineered for high-sensitivity and high-speed performance in low-light imaging applications, the Rolera EM-C2 camera aids researchers in applications such as spinning-disc confocal imaging, Total Internal Reflection Fluorescence (TIRF) microscopy, ratiometric ion imaging, and Fluorescence Recovery After Photobleaching (FRAP). Fast frame rates are enabled by the camera's 40 MHz pixel clock rate. Up to 34.2 full-resolution (one megapixel) frames per second can be read out and transferred over an optimized 800 Mb/s implementation of the IEEE 1394b FireWire protocol. The Rolera EM-C2 delivers very low noise and high-sensitivity (~65% peak quantum efficiency) across a broad spectrum common to fluorescence experiments. Peltier cooling to -50° C minimizes dark current for longer exposures. **QImaging**, 604-530-5800, [www.qimaging.com](http://www.qimaging.com)

