



Press Release

October 6, 2006: For Immediate Release

First EMCCD Camera with 16-Bit Quantitative Stability

Tucson, AZ — Photometrics® (www.photomet.com) is proud to announce the new QuantEM™, the most exciting breakthrough in bio-imaging instrumentation since the introduction of the world's first electron-multiplying CCD (EMCCD) camera for microscopy, the Photometrics Cascade®. The new QuantEM:512SC is the only camera to offer EM gain with *true quantitative stability* across 16 bits. The Photometrics QuantEM:512SC lets life science researchers conduct accurate ratiometric analysis in time-course experiments, acquire reproducible data during long-term studies, and capture streaming data for multidimensional time-lapse investigations — all with single-molecule sensitivity.

The new camera utilizes patent-pending ACE™ (Advanced Clocking Enhancement) technology and an intelligent FPGA design to achieve voltage-clock timing resolution over 12x more precise than other EMCCD cameras, unsurpassed bias stability, extremely accurate 16-bit measurements, self-calibrating gain linearization to 1000x with a linear gain slider, and the lowest generation rate of dark background events.

A patent-pending PAR™ (Photometrics Active Regulation) feedback system, enabled by the camera's intelligent FPGA design, continually controls EM gain to an unprecedented level and ensures there is no deviation from the detection device's accurate, quantitative, factory-set parameters.

The new imaging platform features a back-illuminated, frame-transfer EMCCD for >90% peak quantum efficiency and high-speed operation. Owing to the QuantEM:512SC camera's exceptional sensitivity, very short exposure times are possible, thereby permitting more rapid data acquisition and allowing greater temporal resolution in experiments. An industry-leading Turbo 1394™ (FireWire) interface facilitates quick, easy camera connectivity.

Applications such as intracellular calcium or pH ratio imaging, fluorescence recovery after photobleaching (FRAP), total internal reflection fluorescence (TIRF), fluorescence resonance energy transfer (FRET), and widefield confocal microscopy benefit greatly from the impressive set of capabilities offered by the new QuantEM:512SC.

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About Photometrics®

Founded in 1978, Photometrics is the world's premier designer and manufacturer of high-performance EMCCD and CCD cameras for the life sciences. Tens of thousands of biological researchers rely on state-of-the-art Photometrics imaging instrumentation, such as our popular Cascade® and CoolSNAP™ cameras, to meet their most demanding sensitivity, speed, and resolution requirements. We also offer knowledgeable application support, a global service network, extensive R&D capabilities, and OEM-friendly programs.

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