Digital CCD Camera Offers Two Scan Speeds

Hamamatsu Photonics has launched the new ORCA-R2 “Rapid Readout” digital CCD camera. Building on the success of the established, market-leading ORCA AG and based on the same exclusive ER-150 progressive scan interline 1344 x 1024 pixel CCD, the new ORCA-R2 is designed to maintain Hamamatsu’s competitive edge for demanding, non-EM CCD applications in the visible to NIR.
The ORCA-R2 has two scan speeds, a normal scan speed of 14 MHz and a rapid scan speed of 28 MHz, that deliver full resolution 1.37 M pixel images at 8.5 frames/second and 16.2 frames/second respectively. With binning, the ORCA-R2 has a maximum frame rate of 64.3 frames/second. Data output is via Firewire IEEE 1394b.

The ER-150 CCD is enclosed in a hermetic vacuum-sealed head; the same as the previous ORCA-AG, but air-cooling has been improved to -35°C and the ORCA-R2 also comes with water-cooling connections as standard, for operation at -40°C for applications where low-level signals mean a tighter control of thermal noise is required.

Digitisation can be carried out in either 12 or 16 bit A-D converters, and image enhancement is possible using analogue gain and offset controls.

All this improved ORCA-R2 performance has been squeezed into the familiar ORCA-AG camera head size, including an extended range of programmable trigger signal (edge, level, start, synchronous, cyclic) output options.

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