

Workstation

Automated System operations are controlled through a computer with the following typical configuration:

- COMET Computer Workstation and Software with Extended Dynamic Range Imaging Capability
- Tower Configuration Computer with 19"LCD Color Monitor, 1 GB RAM, 250GB Hard Drive, DVD/CD/RW Recorder, Optical Mouse
- Computer comes with 3 Year Parts & Labor Limited Warranty, (Computer must be returned to Loats Associates, Inc. for warranty service),
- Microsoft Windows XP Professional operating system software
- Microsoft Office 2003 Small Business version applications software
- Comet Assay Analysis System Software with Extended Dynamic Range Image Acquisition Control and Processing Capability, Software security block and user manual.

Optional: COMET Camera.

The Computer controllable QICAM Cooled Scientific/Instrument Grade digital Camera features

- a zero-defect 1/2" 1392 X 1040 pixel progressive scan CCD
- with (4.65 X 4.65µm) microlensed imaging cells for enhanced image light collection and dynamic range,
- housed in a lightweight (865g) camera head, for easy mounting on a microscope;
- the camera head has an integral Peltier thermo-electric cooler providing -25 degrees Celsius cooling from ambient for reduction of thermal dark current noise generation during extended exposures (66dB signal to noise ratio);
- the camera head is cable linked directly to the host computer through an IEEE 1394 (FireWire) interface for power and programmatic control of on-chip integration and other camera functions;
- the camera provides 12bit digital output, programmable gain and offset control, and real time transfer of image data to display RAM.

When operated in conjunction with the Extended Dynamic Range Image Acquisition software, the camera enables collection of wide dynamic range images in a 16 bit per pixel monochrome format. Camera includes 1 year limited warranty.

Optional: High Performance Camera

The High Performance Enhanced Quantum Efficiency Digital Camera features

- a zero-defect 2/3" 1392 X 1040 pixel progressive scan CCD sensor
- with (6.45 X 6.45µm) microlensed imaging cells for enhanced image light collection and dynamic range,
- housed in a lightweight 920g) camera body.
- The camera body has an integral Peltier thermo-electric cooler providing -25° C cooling from ambient for reduction of thermal dark current noise generation during extended exposures (0.15e-/pix/s).
- The camera supports 2 X 2, 3 X 3 and 4 X 4 pixel binning modes and flexible exposure control from 10µs to 17.9min.
- Individual imaging cells have a linear full well potential of 18,000e- and higher with binning.
- High speed, low noise electronics provide linear digital data with just 8e- read noise.
- The camera is linked directly to the host computer through an IEEE 1394 (FireWire) cable for power and programmatic control of on-chip integration and other camera functions.
- The camera provides 12bit digital output, programmable exposure, gain and offset control, and real time transfer of image data to display RAM.
- Camera includes 1 year limited warranty.

When operated in conjunction with the LAI Extended Dynamic Range Image Acquisition software, the camera enables collection of wide dynamic range images in a 16 bit per pixel monochrome format.

Optional: Microscope

The camera is mounted on an **Olympus BX51 Infinity Corrected Epifluorescent Microscope**, specifically configured for automated Comet Analysis. The microscope features:

- Rigid Ergonomically designed Y-shaped Microscope Frame, with five position Rotatable Nosepiece, and Lamphouse for bright field illumination, Trinocular Observation Tube, 2-10x Eyepieces,
- Abbe Condenser with a 1.1 numeric aperture providing coverage over the 4X to 100x objective range,
- 10x and 20x Plan Achromat Objectives,
- Universal Reflected Light Illuminator Module,
- Mercury Lamphouse, and Mercury Power Supply Source, Wide Band emission UV, Blue and Green excitation Mirror Cubes,
- C-Mount Camera Mounting Adapter,
- User manuals.