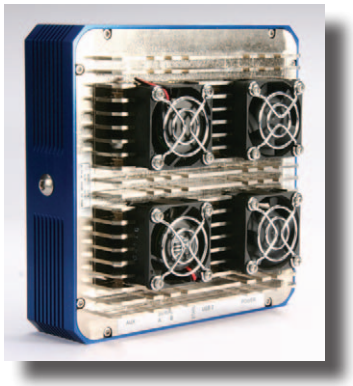
High Performance Cooled CCD Camera System
ALTA U32

The Alta U32 has a 3-megapixel Kodak Blue Plus full frame sensor with very high quantum efficiency and high dynamic range when compared to interline CCDs. Low noise and small pixels are ideal for fluorescnece microscopy and OEM applications.

Imaging Area of CCD

- 2184 x 1472, 6.8 x 6.8 micron pixels
- 7 MHz 12-bit and 1 MHz 16-bit digitization
- 32 Mbyte camera memory
- USB 2.0 interface: no plug in cards or external controllers
- Programmable, intelligent cooling to 50°C below ambient
- Binning up to 8 Horizontal x 1472 Vertical
- Subarray readout and fast sequencing modes
- Precision time delayed integration (TDI) and kinetics mode readout
- Programmable fan speed for low / zero vibration
- Two serial port outputs for control of peripheral devices
- General purpose programmable I/O port
- External triggering and strobe controls
- ActiveX drivers and MaxIm DL/CCD software included with every system
- Field upgradeable firmware
- Fused silica windows
- Runs from single 12V supply with input voltage monitor
- Compact enclosure
- Programmable status indicators

- Life Science OEMs
- Fluorescence microscopy



CCD SPECIFICATIONS

CCD	Kodak KAF-3200ME
Array Size (pixels)	2184 x 1472
Pixel Size	6.8 x 6.8 microns
Imaging Area	14.8 x 10.0 mm (148.7 mm^2)
Imaging Diagonal	17.9 mm
Video Imager Size	1.1”
Linear Full Well (typical)	55K electrons
Dynamic Range	77 dB
QE at 400 nm	53%
Peak QE (610 nm)	86%
Anti-blooming	none

For complete CCD specifications, including cosmetic grading, see data sheet from manufacturer.

AIS Apogee IMAGING SYSTEMS

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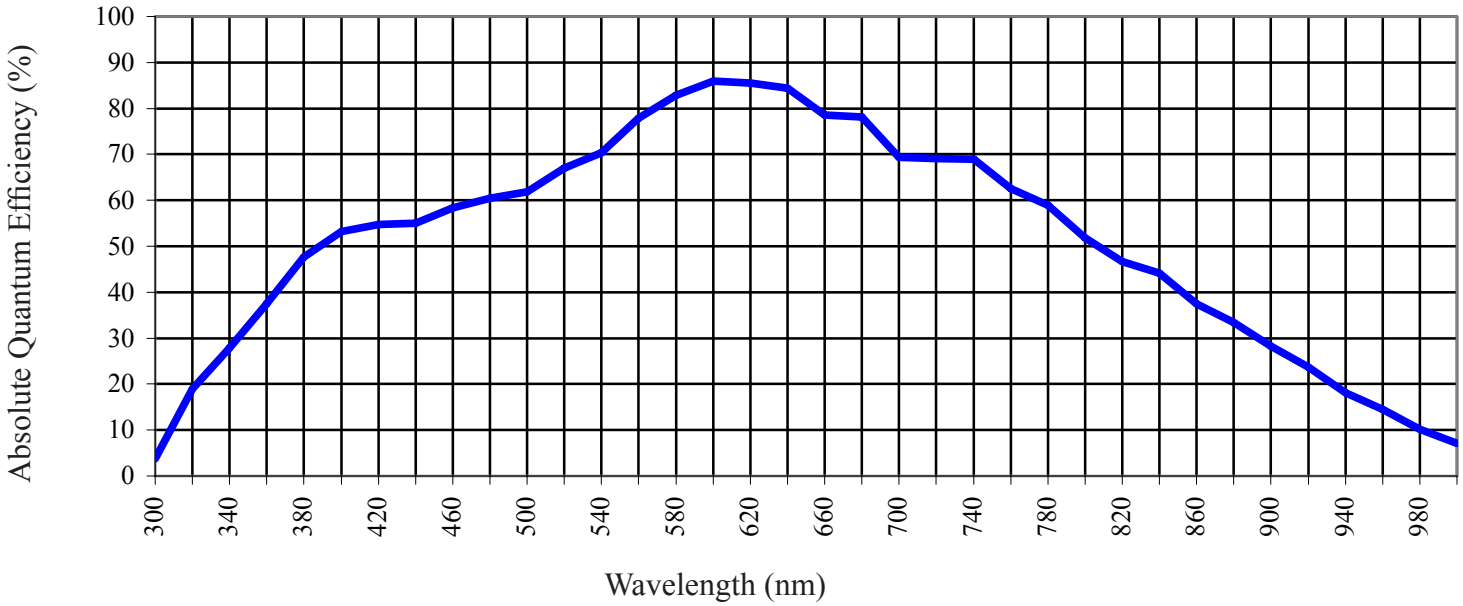
ALTA U32
Camera System Performance

PC Interface	USB 2.0
Max. Cable Length	5 meters between hubs; 5 hubs maximum (max. total of 30m)
Digital Resolution	16 bits at 1 MHz and 12 bits at 7 MHz
System Noise (typical)	8 e^- RMS at 1 MHz and 2 counts at 7 MHz
Pixel Binning	1x1 to 8 x 1472 on-chip
Exposure Time	30 milliseconds to 183 minutes (2.56 microsecond increments)
Image Sequencing	1 to 65535 image sequences under software control
Frame Sizes	Full frame, subframe, focus mode
Cooling (typical)	Thermoelectric cooler with forced air. Maximum cooling 50°C below ambient temperature
Dark Current (typical)	0.05 e^-/pixel/sec (-25°C)
Temperature Stability	± 0.1°C
Camera Head Size	D1. Low profile: D5. Aluminum, hard blue anodized. 6" x 6" x 2.1" (15 x 15 x 6.25 cm) Weight: 3.1 lb. (1.4 kg)
Mounting	3.5" bolt circle. C-mount (1" 32 tpi thread). Optional Nikon F-mount or Canon FD mount.
Back Focal Distance	Standard: 0.69" (1.75 cm). Low profile: 0.460" (1.17 cm). [optical]
Operating Environment	-22° to 27°C. Relative humidity: 10 to 90% non-condensing.
Cable Length	Standard: 15 ft (4.5m)
Power	40W maximum power with shutter open and cooling maximum. AC/DC "brick" supply with int'l AC input plug (100-240V, 50-60 Hz). Alternate 12V input from user's source.
Shutter	Standard: Vincent 25mm. Low profile: no shutter.
Remote Triggering	LVTTL input allows exposure to start within 25 microseconds of rising edge of trigger

CCD SENSITIVITY



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