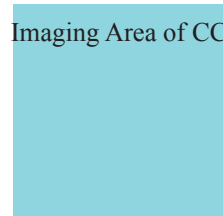


High Performance Cooled CCD Camera System ALTA U10



The Alta U10 uses a very large format 4-megapixel full-frame front-illuminated sensor, ideal for applications requiring a large field of view with higher dynamic range.

Imaging Area of CCD



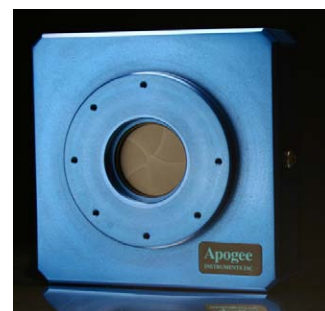
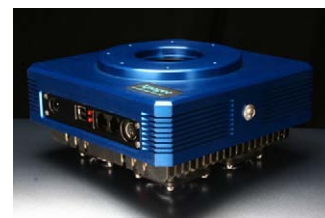
- 2048 x 2048 array, 14 x 14 micron pixels
- 5 MHz 12-bit and 1 MHz 16-bit digitization
- 32Mbyte camera memory
- USB 2.0 interface: no plug in cards or external controllers
- Programmable, intelligent cooling to 45°C below ambient
- Binning up to 8 Horizontal x 2048 Vertical
- Subarray readout and fast 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

- Astronomy
- Radiology
- Optical testing
- Non-destructive testing

CCD SPECIFICATIONS

CCD	Atmel THX7899
Array Size (pixels)	2048 x 2048
Pixel Size	14 x 14 microns
Imaging Area	28.7 x 28.7 mm (822 mm ²)
Imaging Diagonal	40.5 mm
Video Imager Size	2.53"
Linear Full Well (typical)	270K electrons
Dynamic Range	>80 dB
QE at 400 nm	0.5%
Peak QE (720 nm)	38%
Anti-blooming	none

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



151 N. Sunrise Ste 902
Roseville CA 95661 USA
tel 916 218 7450
fax 916 218 7451
www.ccd.com

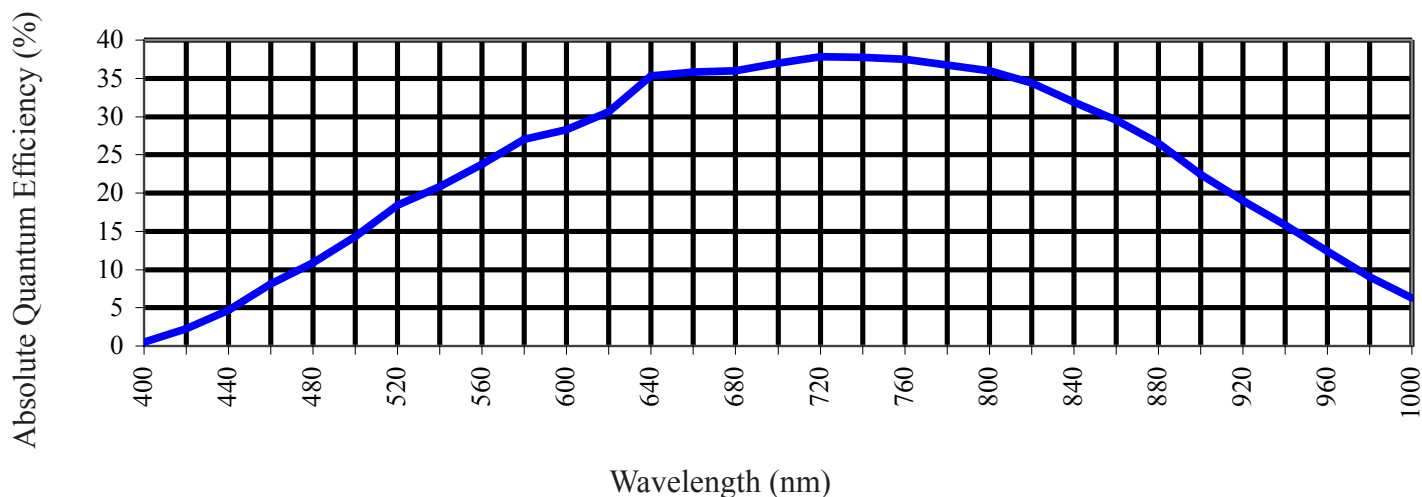


ALTA U10

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 5 MHz
System Noise (typical)	12 e ⁻ RMS at 1 MHz and 2 counts at 5 MHz
Pixel Binning	1x1 to 8 x 2048 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 45°C below ambient temperature
Dark Current (typical)	1 e ⁻ /pixel/sec (-25°C)
Temperature Stability	± 0.1°C
Camera Head Size	D2. Low profile: D6. Aluminum, hard blue anodized. 6" x 6" x 2.5" (15 x 15 x 6.35 cm) Weight: 3.1 lb. (1.4 kg)
Mounting	3.5" bolt circle. 2" 24 tpi thread. Optional Nikon F-mount or Canon FD mount.
Back Focal Distance	Standard: 1.025" (2.60cm). 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: Melles Griot 43mm. Low profile: no shutter.
Remote Triggering	LVTTL input allows exposure to start within 25 microseconds of rising edge of trigger

CCD SENSITIVITY



151 N. Sunrise Ste 902
Roseville CA 95661 USA
tel 916 218 7450
fax 916 218 7451
www.ccd.com