

# High Performance Cooled CCD Camera System

## ALTA U260



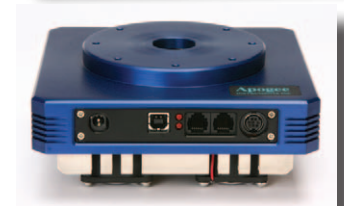
The Alta U260 has a Kodak Blue Plus full frame sensor with high quantum efficiency. This CCD has two output amplifiers: one for low noise and a second for exceptionally high full well capacity. Please specify which amplifier is desired when placing an order.

Imaging Area of CCD



- Astronomy
- Life Science OEMs
- Luminance testing

- 512 x 512, 20 x 20 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 50°C below ambient
- Binning up to 8 Horizontal x 512 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



## CCD SPECIFICATIONS

|                            |  |
|----------------------------|--|
| CCD                        | Kodak KAF-0261E  |
| Array Size (pixels)        | 512 x 512  |
| Pixel Size                 | 20 x 20 microns  |
| Imaging Area               | 10.2 x 10.2 mm (104.9 mm <sup>2</sup> )                                |
| Imaging Diagonal           | 14.5 mm  |
| Video Imager Size          | 0.9"   |
| Linear Full Well (typical) | Low noise output: 200K electrons<br>High Dynamic Range: 500K electrons |
| Dynamic Range              | 83 dB  |
| QE at 400 nm               | 29%  |
| Peak QE (590 nm)           | 65%  |
| Anti-blooming              | None   |

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



151 N. Sunrise Ste 902  
Roseville CA 95661 USA  
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www.ccd.com

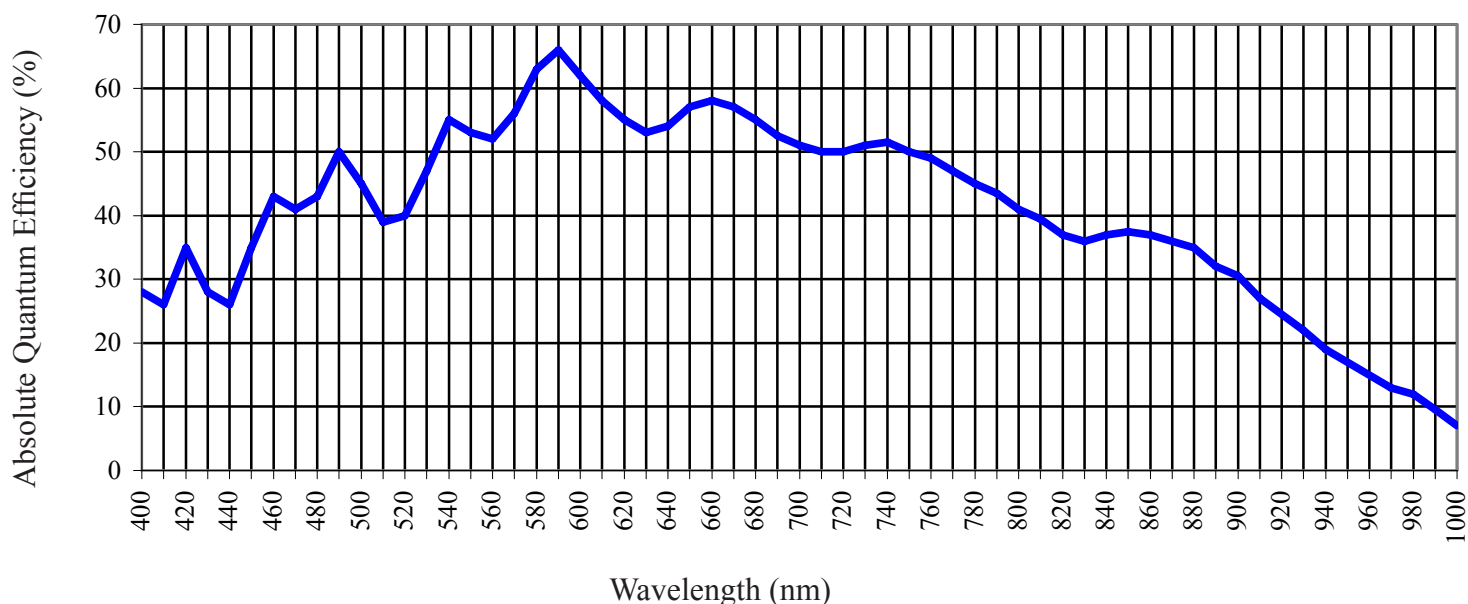


# ALTA U260

## 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) | 15 e <sup>-</sup> RMS at 1 MHz and 2 counts at 5 MHz   |
| Pixel Binning          | 1x1 to 8 x 512 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) | 1 e <sup>-</sup> /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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