



Alta[®] U2

High Performance Cooled CCD Camera System



The Alta U2 has a Kodak Blue Plus full frame sensor with very high quantum efficiency. Low noise and large field-of-view are ideal for OEMs, biological sciences, spectroscopy and astronomy.

- 1536 x 1024 array, 9 x 9 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 50C below ambient
- Binning up to 10 Horizontal x 1024 Vertical
- Subarray readout and fast sequencing modes
- Precision time delayed integration 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
- Self-test capability with data simulators
- Fused silica windows
- Runs from single 12V supply with input voltage monitor
- Compact enclosure
- Programmable status indicators

Imaging area
(actual size)



- Spectroscopy
- Star Tracking
- Medical Imaging

CCD Specifications

CCD	Kodak KAF-1602E, 1603E, 1603ME
Array Size (pixels)	1536 x 1024
Pixel size	9 x 9 microns
Imaging area	13.82 x 9.22 mm (127.4 mm ²)
Imaging diagonal	16.61 mm
Linear Full Well (typ.)	100,000 e ⁻
Dynamic Range	76 dB

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

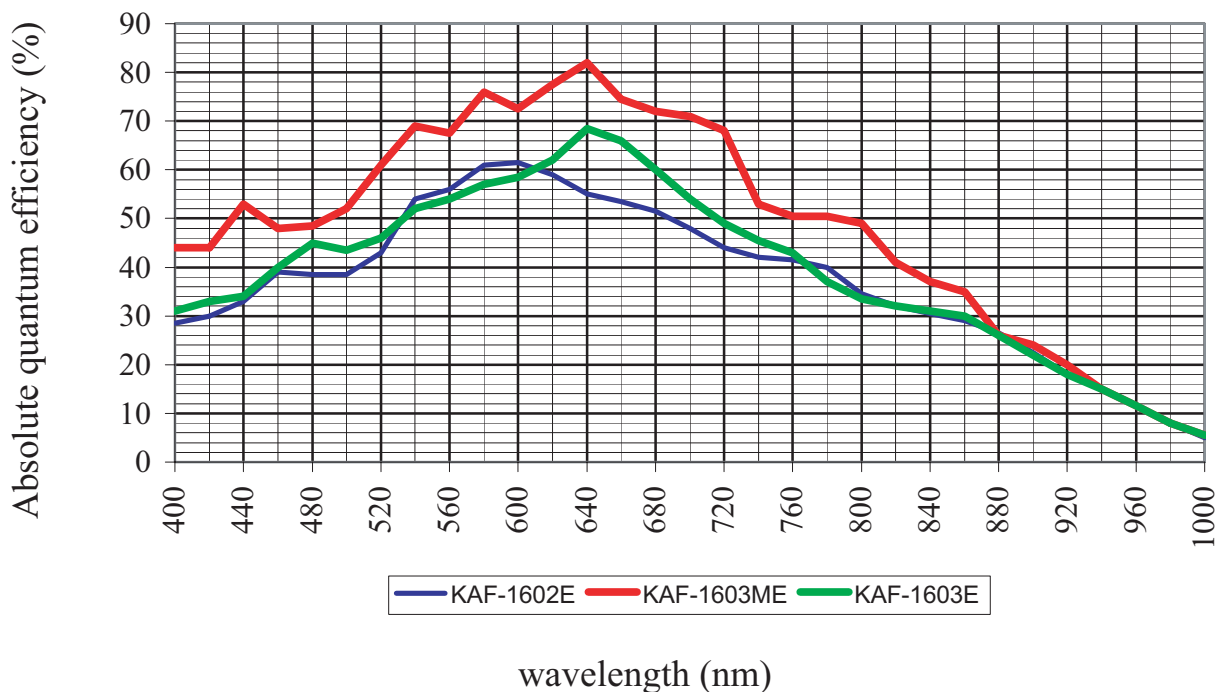


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PC Interface	USB 2.0
Max. cable length	5 meters between hubs; 5 hubs maximum (max. total of 30m)
Digital resolution	12 bits at 10 MHz and 16 bits at 1 MHz
System Noise (typ.)	15 e ⁻ RMS at 1 MHz; <2 counts at 5 MHz
Pixel Binning	1x1 to 10 x 1024 on-chip
Exposure Time	10 milliseconds to 183 minutes (2.56 microsecond increments)
Image Sequencing	1-65535 image sequences under software control
Frame Sizes	Full frame, subframe, focus mode
Cooling	Thermoelectric cooler with forced air. Maximum cooling 50° C below ambient temperature
Temperature Stability	±0.1° C
Dark Current (typ.)	0.1 e ⁻ /pixel/sec (-30° C)
Camera Head	Standard: D1; Low profile: D5. Aluminum, hard blue and black 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 or Canon lens mount.
Back focal distance	Standard: 0.69" (1.75 cm). Low profile: 0.46" (1.22 cm) [optical]
Operating Environment	Temperature: -22° to 27° C. Relative humidity: 10 to 90% noncondensing
Cable length	Standard: 15 ft.
Power	40W maximum power with shutter open and cooling maximum. Power supplied by AC/DC "brick" supply with international AC input plug. Alternate 12V input for user's source.
Shutter	Standard: Vincent 25mm. Low profile: no shutter.
Remote Triggering	LVTTL input to camera allows exposure start within 25 microseconds of rising edge of trigger

CCD Sensitivity



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