

High Speed Camera Specification

Sensor type: Monochrome, CMOS

Resolution: 1024*1024

Pixel Size (microns): 20 μ m x 20 μ m

Spectral range: 400 to 900 nm

Quantum Efficiency: not less than 45% around 600nm

Frame rate (fps): at least 6,000fps @ full resolution 1024*1024 pixels & 800,000fps 128 x 16 pixels)

Global Electronic Shutter: 1ms to 1 μ s independent of frame rate

Dynamic Range (ADC): 12-bit monochrome

Internal Recording Memory: 16GB

Class Leading Light Sensitivity: ISO 12232 Ssat Standard, ISO 64,000 monochrome

Memory Partitions: Up to 128 memory segments

Trigger Inputs: Selectable +/- TTL 5V and switch closure

Trigger Delay: Programmable on selected input / output triggers: 100ns resolution

External Sync: +/- TTL 5Vp-p Variable frequency sync

Camera Control Interface: High-speed Gigabit Ethernet

Operating temperature: up to 50° C ambient temperature

Weight: Not more than 4kg

Low Light Mode: Operation at low frame rate with separately adjustable shutter time to allow easy camera set-up and focus in ambient lighting

IRIG Phase Lock: Multiple cameras to be synchronized together with other instrumentation equipment

Mount Type: F mount (in case of C/CS mount, F mount adapter should be included)

Internal Time Delay Generator: Should allow programmable delays to be set on input and output triggers; 100ns resolution.

Software: Capable of controlling the camera parameters such as resolution, trigger delay, exposure time, live viewing the region of interest, data transfer from camera to computer, basic image operation

Event Markers: Up to ten user-entered event markers to define specific events within the recorded image sequence

Download While Recording: Should allow image data captured in one memory partition to be downloaded while at the same time recording into another partition

Image Data Display: Frame rate, shutter speed, trigger mode, date/time, status, real time / IRIG time, frame count, resolution

Saved Image Formats: BMP, TIFF, JPEG, PNG, RAW, MRAW, AVI, MOV

Supported OS: Microsoft Windows operating system including: 8.1, 10

Camera should have the removable solid state drive option (should support 1TB)

Camera should be able to remotely switch off cooling fans to eliminate vibration

The camera should be compatible for control through the LabView software (drivers should be included)

Transit case: Required and it should be compatible with the camera

OPTIONAL:

1. Please Quote For 1 Year And 2 Year Extended Warranty
2. Quote for AMC beyond warranty.
3. Tripod and mounting head

Terms and conditions

1. Warranty service must be provided onsite at IIT, Madras for duration of warranty period.
2. Vendors should provide continuous technical support and maintenance of equipment during warranty period.
3. Vendors must have sufficient experience in supplying equipment to reputed organisations for research purpose. Experience of the end users will also be used as a criterion for the selection of bids that meet technical requirements.
4. List of reputed end users (atleast 6) to whom supplies made should be furnished.
5. Vendors must provide detailed documentation for the equipment.
6. Vendors must provide training to our technical staff for using the equipment, free of cost.