

**Call for quotations:** PI. Ref. No. SKB/15-16/CAM/Sept

**Due Date:** 08/10/2016, 5 pm

**Specifications for microscopy-camera system:**

**A. General description:**

- i. The camera should be mountable on Nikon Ti system. Any adapter needed must be quoted.
- ii. It should be demonstrated that the camera integrates with Micromanager™. Verifiable data/records must be provided along with the quote to exhibit the above.
- iii. Vendor must furnish a verifiable list of at least 1 unit of the quoted camera sold to Indian institutes/firms, with contact details of a knowledgeable person.
- iv. CPU specifications needed for best-operation must accompany the quote, along with vendor-price (to be quoted as an optional).

**B. System details:**

1. Monochrome, EMCCD. Back-illuminated.
2. 16  $\mu\text{m}$ /16  $\mu\text{m}$  pixel size or higher with Peltier cooling. 30 fps or more at full resolution.
3. Sensor temperature should be minimum -20 deg. C. after stabilization, at 25 deg. ambient temp.
4. QE of 85% or better @ 600 nm.
5. Dark noise 1 e/p/s or better at lowest sensor temperature.
6. Full-well capacity: 15000 e<sup>-</sup> or better, with on-chip integration
7. Camera must have IR barrier upto 700 nm.
8. ROI: adjustable.
9. Binning option: Frame rate: 30 fps or better at full resolution; 2 by 2, and 4 by 4 binning options necessary.
10. Imaging at 14 bit or 16 bit @ 10 MHz or better. Dynamic Range: >2200 : 1 (>668 dB) at < 80 e<sup>-</sup> readout noise;
11. Control signals: TTL output for controlling of external shutters. Trigger In, Expose Out, End-of-Frame, Shutter Out.
12. Camera-control through Micromanager™
13. Data-interface should preferably have USB3 interface for low-speed imaging.
14. On-site training for at least 1 full days, at a mutually agreed date/time must be offered.

C. General Terms and Conditions:

1. The Quotations duly sealed (2-bid system, Technical and Financial) and super-scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach on or before **8/10/2016, 5 pm**.
2. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
3. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
4. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expense.
5. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
6. Goods should be supplied carriage paid and insured, CIF Chennai.
7. Goods shall not be supplied without an official supply order.
8. Payment : Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.

Address for sending quotations:

Dr. Saumendra K. Bajpai,  
Applied Mechanics Department,  
MSB 227 A,  
IIT Madras, Chennai - 36  
Ph: 044-22574072

Regards

Dr. Saumendra K Bajpai