

# **Request for Quote (RFQ) for the procurement of High-Speed Camera from Domestic (India-based) Manufacturers**

## **Tender Summary**

This is a Request for Quote (RFQ) from domestic (India-based) manufacturers only from the Indian Institute of Science (IISc), Bengaluru, for the supply of a “High-Speed Camera” to the Department of Mechanical Engineering, IISc, Bengaluru.

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## Section 1 - Bid Schedule

1	Tender Number	ME/RFQ/OTE/SM/2023/01
2	Tender Date	24th February 2023
3	Item description	High-Speed Camera
4	Quantity	One
5	Tender type	Two-bid system: i. Technical Bid (Part A) ii. Commercial Bid (Part B)
6	Place of tender submission	The Chairperson Attn: Dr. Shubhadeep Mandal Department of Mechanical Engineering Indian Institute of Science Bengaluru, Karnataka 560012, India
7	Last Date and Time for submission of tender	17th March 2023 & 5:00 PM (Indian Standard Time)
8	For further clarification	Dr. Shubhadeep Mandal Department of Mechanical Engineering Indian Institute of Science Bengaluru, Karnataka 560012, India Email: <a href="mailto:smandal@iisc.ac.in">smandal@iisc.ac.in</a>

## Section 2 - Eligibility Criteria

Prequalification criteria:

1. Quote should come only from **Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor**.
2. The Bidder's firm should have existence for a minimum of 5 years. The bidder should enclose company registration certificate.
3. The Bidder should belong to either **class 1** or **class 2** supplier distinguished by their "local content" as defined by recent edits to GFR (Order No. P45021/2/2017-pp-BE-II issued by the Public Procurement Section, Department or Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 4th June 2020). **They should mention clearly which class they belong to in the cover letter**. They should also give the details of the location(s) at which the local value addition is made.
  - a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%
  - b. Class 2 supplier: Goods and services should have local content of equal to or more than 20% and less than 50%.
  - c. Non-local supplier: Goods and services have a local content equal to or less than 20%.
4. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to class 1 supplier.
5. MSME can seek exemption to some qualification criteria. IISc follows GFR2017 for such details.
6. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per Annexure 4.
7. The Bidder must not be blacklisted/banned/suspended or have a record of any service related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.

## Section 3 - Terms and Conditions

### A. Submission of Tender

1. All documentations in the tender should be in English.
2. Tender should be submitted in two envelopes (two bid system).
  - i. **Technical Bid (Part A)** – Technical bid consisting of all technical details and check list for conformance to technical specifications. The technical bid **must not contain** any price information. The technical proposal should contain a technical compliance table or **compliance certificate** with 5 columns. The first column must list the technical requirements, in the order that they are given in the technical requirement below. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent. The fourth column should state the reasons/explanations/context for deviations, if any. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details, compare your solution with that of your competitors or provide details as requested in the technical requirements table below. **Tender documents without technical compliance documents will not be considered.**
  - ii. **Commercial Bid (Part B)** – Indicating item wise price for the items mentioned in the technical bid, as per the format of quotation provided in tender, and other commercial terms and conditions. In the commercial bid, the price should be inclusive of all discounts.
3. The technical bid and commercial bid should each be placed in separate sealed covers, superscribing on both the envelopes with the Tender No. and Due Date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscribed with the Tender No, Tender Description & Due Date.
4. The SEALED COVER superscribing with the Tender No., Tender Description & Due Date should reach **The Chairperson, Attn: Dr. Shubhadeep Mandal, Department of Mechanical Engineering, Indian Institute of Science, Bengaluru, Karnataka 560012, India** on or before due date mentioned in the tender notice. In case due date happens to be holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
5. All queries are to be addressed to the person identified in “Section 1 - Bid Schedule” of the tender notice.
6. The quotations should be on **FOR-IISc Bengaluru basis in INR only**.
7. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).
8. If price is not quoted in Commercial Bid as per the format provided in tender document the bid is liable to be rejected.

9. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
10. Incomplete bids will be summarily rejected.

## **B. Cancellation of Tender**

Notwithstanding anything specified in this tender document, IISc Bengaluru, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

1. To accept OR reject lowest tender or any other tender or all the tenders.
2. To accept any tender in full or in part.
3. To reject the tender, offer not confirming to the tender terms.

## **C. Validity of the Offer**

The offer shall be **valid 90 Days** from the date of opening of the commercial bid.

## **D. Evaluation of Offer**

1. The Technical Bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bengaluru, and decision in this regard shall be binding on the bidders.
4. The award of contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
  - i. Non-submission of complete offers
  - ii. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).
  - iii. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bengaluru shall construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. Lowest bid will be calculated based on the total price of all items tendered as essential items (except optional items) along with accessories selected for installation,

operation, pre-processing and post-processing, recommended spares, warranty, and annual maintenance contract.

### **E. Pre-requisites**

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid.

### **F. Warranty**

The complete system is to be under warranty period of minimum 2 years (year wise breakup value should be shown in the commercial bid) including free supply of consumables, spare parts and data analysis software from the date of functional installation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bengaluru. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

### **G. Annual Maintenance Contract**

An annual maintenance contract for a period of at least 1 year post warranty should be provided on completion of warranty period. The AMC costs will not be considered towards classifying the domestic nature (class 1 or class 2) of the vendor.

### **H. Purchase Order**

1. The order will be placed on the bidder whose bid is accepted by IISc Bengaluru based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in tender is only indicative. IISc, Bengaluru reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc, Bengaluru reserves the right to cancel or amend the contract.
4. After the award of the purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order

### **I. Delivery, Installation and Training**

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bengaluru from the date of receipt of purchase order. The system should be delivered, installed and made functional **within 60 days** from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bengaluru. After successful installation and inspection, the date of taking over of entire system by the IISc, Bengaluru shall be taken as the start of the warranty period. No partial shipment is allowed. The bidder should also arrange for technical training to the local facility technologists and users.

### **J. Payment Terms**

100% payments (except annual maintenance charges (AMC)) will be released after complete delivery and satisfactory installation subject to TDS as per rules. AMC cost (if ordered), after completion of warranty period) will be released on half-yearly basis at the end of each six months subject to satisfactory services. The AMC will be comprehensive. Price basis must be on FOR-IISc Bengaluru basis only. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.

### **K. Statutory Variation**

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bengaluru subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bengaluru.

### **L. Disputes and Jurisdiction**

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bengaluru, India.

### **M. General**

All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.

1. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.
2. The bidder may visit the installation site before submission of tender, with prior intimation via email.
3. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bengaluru.

## Section 4 - Technical Specifications

High-speed camera with the below-mentioned technical and user specifications

### A. Essential Items

S/N	Parameter	Specification
1	Full Resolution	1 MP or higher
2	Sensor Type	CMOS, Monochrome
3	Pixel Size	10 $\mu$ m x 10 $\mu$ m or higher
4	Frame Rate	$\geq 2,000$ fps at full resolution $\geq 4,000$ fps at 1024 x 512 pixels $\geq 10,000$ fps at 640 x 240 pixels
5	High Speed Internal RAM	32GB or higher
6	Shutter Speed	5 $\mu$ s or lower
7	Dynamic Range	12-bit (Monochrome) or higher
8	Region of Interest	Selectable in steps of 128 x 8 pixels
9	Quantum Efficiency	More than 60% at 630nm
10	Input / Output Control	Input: Trigger (TTL/Switch), sync, ready, event, IRIG Output: trigger, sync, ready, rec, exposure
11	Trigger Modes	Start, end, center, manual and random
12	Light Sensitivity (monochrome)	ISO 12232 Ssat sensitivity greater than or equal to 10,000
13	Trigger Options	Trigger from camera control software and external trigger using BNCs
14	Interface	Ethernet/USB/HDMI
15	Lens Mount	F-mount and C-mount adapters to be provided
16	Control Software	<p>The camera control software should display the record parameters like frame rate, resolution, record duration, trigger mode, shutter speed etc. before recording.</p> <p>The camera control software should be capable to let the user review/ crop recorded video before saving.</p> <p>The camera control software should have basic image processing tools like brightness, contrast, and gamma.</p> <p>The camera control software should assist the user in focusing of image.</p> <p>The user should be able to correct lens distortion effects.</p> <p>SDK availability for LabVIEW/MATLAB.</p>
17	Operating Temperature	0 – 40 °C or better



18	Compatibility	Should be compatible with long distance microscopic, F and C mount zoom lenses from standard manufacturers and DSLR camera lenses.
19	Weight	≤ 2 kg
20	Power Supply	100 - 240V, 50 to 60Hz AC
21	Accessories	All necessary Power and Communication Cables should be included
22	Packing and Storage	Fitted transit case for the camera and accessories
23	Warranty	2 years from the date of Installation/ Commissioning
24	AMC	1 year of AMC for post warrantee / guarantee period

## **B. Optional Items**

1. Professional Medium weight tripod suitable for the camera
2. Professional 3-way head (up to 7 kg load capacity)
3. Padded bag for medium weight tripod
4. Manual trigger switch
5. Additional 1 year warranty

## **C. Installation, Training, Warranty and AMC**

1. Installation and Training: Installation of the high-speed camera, and subsequent demonstration by connecting it with existing upright microscope should be provided free of cost at the user site.
2. Warranty: The equipment under the scope of supply along with accessories shall have warranty against all types of defects for at least a period of **2 years** from the date of successful installation of the equipment. Any defects in the equipment and the spares found in the warranty period shall be rectified/ replaced by the supplier at no extra cost.
3. AMC: Minimum 1 year of AMC for post warrantee / guarantee period

All of the above-mentioned technical specifications are highly desired. However, lower technical specifications may be considered if the above-mentioned specifications are found to be unsuitable in financial terms. The Institute reserves the right to go for lower specifications taking into consideration its technical preferences and financial constraints.

## **D. Other requirements specific to this purchase**

1. Vendors may provide the itemized cost for any suggested accessories/add-ons separately as “Additional Items” that may enhance the usability, capability, accuracy, or reliability of the system.
2. The vendor must have more than 5 years of history of manufacturing above stated equipment and selling it to industries and universities all around the world. Please provide list of customers who have procured your equipment in last 5 years. The vendor must also have a distributor in India who should be well trained to operated and maintain this equipment.

3. The vendor should have a good track record of delivering the above stated equipment at universities/research institutions, preferably in centrally Funded Technical Institutes (IITs, IISc, IISERs, NITs) in India. Please provide the details and contact information.
4. The vendor must include references (End User Certificates) from 5 previous installations of the above stated equipment, preferably in India. Please provide names and contact addresses of the referees, so that the committee may contact them independently. Details of such systems with model numbers and users should be provided. The reference letters can be used to disqualify vendors with a poor track record of service, build quality, system performance, or poor availability of spares.
5. The vendor should have qualified technical service personnel for the equipment based in southern region of India (preferably in Bengaluru). Please furnish the details.
6. Authorisation letter from OEM manufacturer should be included.
7. All guaranteed specifications will have to be demonstrated, upon request during active installation. Failure to demonstrate any promised specifications will be deemed to be technically non-compliant.
8. The payment terms will be specified in the commercial proposal and is subject to negotiation.
9. The vendors quoting should be ideally registered with IISc, and the quote should ideally carry the vendor registration number in the technical proposal. Details of the vendor registration can be sought by sending an email to [office.me@iisc.ac.in](mailto:office.me@iisc.ac.in)
10. Upon submission of the Bid please inform by email to [smandal@iisc.ac.in](mailto:smandal@iisc.ac.in) with a copy to [chair.me@iisc.ac.in](mailto:chair.me@iisc.ac.in)

## **Section 5 - Technical Bid**

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

**The Chairperson**

**Attn: Dr. Shubhadeep Mandal**

**Department of Mechanical Engineering**

**Indian Institute of Science**

**Bengaluru, Karnataka 560012, India**

## Annexure 1 - Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

### Details of the Bidder

S/N	Items	Details
1	Name of the Bidder	
2	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3	Registration No/ Trade License (attach attested copy)	
4	Registered Office Address	
5	Address for communication	
6	Contact person (Name and Designation)	
7	Telephone No	
8	Email ID	
9	Website	
10	PAN No. (attach copy)	
11	GST No. (attach copy)	

Signature of the Bidder

Name

Designation, Seal

Date:

## **Annexure 2 - Declaration regarding experience**

To,

The Chairperson,  
Department of Mechanical Engineering  
Indian Institute of Science,  
Bengaluru, Karnataka 560012, India

Ref: Tender No. XXXX

Dated: XXXX

Supply of “High-Speed Camera” to the Department of Mechanical Engineering, Indian Institute of Science, Bengaluru

Sir/Madam,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has ----- years of experience in supplying “High-Speed Camera”.

Yours faithfully

(Signature of the Bidder)

Name, Designation & Seal

Date:

### Annexure 3 - Declaration regarding track record

To,

The Chairperson,  
Department of Mechanical Engineering  
Indian Institute of Science,  
Bengaluru, Karnataka 560012, India

Ref: Tender No. XXXX

Dated: XXXX

Supply of “High-Speed Camera” to the Department of Mechanical Engineering, Indian Institute of Science, Bengaluru

Sir/Madam,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

S/N	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long
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(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully

(Signature of the Bidder)

Name, Designation & Seal

Date:

## **Annexure 4 - Declaration for acceptance of terms and conditions**

To,

The Chairperson,  
Department of Mechanical Engineering  
Indian Institute of Science,  
Bengaluru, Karnataka 560012, India

Ref: Tender No. XXXX

Dated: XXXX

Supply of “High-Speed Camera” to the Department of Mechanical Engineering, Indian Institute of Science, Bengaluru

Sir/Madam,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

We hereby declare that ----- is a class 1 or class 2 local supplier in accordance and manner as specified in Order No. P45021/2/2017-PP (BE-II) dated: 04th June 2020 and OM No. P45021/102/2019-BE-II-Part (1) (E-50310) dated 04.03.2021 issued by DIPP, Ministry of Commerce and Industries, GoI.

Yours faithfully

(Signature of the Bidder)

Name, Designation & Seal

Date:

## **Annexure 5 - Details of Items Quoted**

### **Details of items quoted**

1. Company Name
2. Product Name
3. Part / Catalogue Number
4. Product description / main features
5. Detailed technical specifications
6. Remarks

### **Instructions to bidders**

1. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. **Compliance Certificate:** Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.



## Section 6 - Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Essential items

S/N	Description	Cat. Number	Quantity	Unit Price	Sub total
1	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
3	Accessories for operation and installation				
4	All Consumables, spares and software to be supplied locally				
5	Warranty (2 years)				
6	AMC 2 years beyond warranty				
7	CIP/CIF IISc, Bengaluru				

Optional items and any additional items

S/N	Description	Cat. Number	Quantity	Unit Price	Sub total

Addressed to

**The Chairperson**  
**Attn: Dr. Shubhadeep Mandal**  
**Department of Mechanical Engineering**  
**Indian Institute of Science**  
**Bengaluru, Karnataka 560012, India**

## **Section 7 - Checklist**

(This should be enclosed with technical bid - Part A)

The following items must be checked before the Bid is submitted:

1. Sealed Envelope “A”: Technical Bid

Section 5 - Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:

- a. Annexure 1 - Bidders details
- b. Annexure 2 - Declaration regarding experience
- c. Annexure 3 - Declaration regarding clean track record
- d. Annexure 4 - Declaration for acceptance of terms and conditions
- e. Annexure 5 - Details of items quoted
- f. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

2. Sealed Envelope “B”: Commercial Bid

Section 6 - Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) superscribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly superscribed with Tender No., Tender Description and Due Date.