

**Global Tender Notification for the High-Speed, High Dynamic Range,  
High Spatial Resolution, Scientific grade Infrared Camera -1 No.**

(Last Date for Submission: November 24, 2022)

**GTE Approval No.: IISc-GTE-2022-228**

This is a **Request for Quote (RFQ)** for the **High-Speed, High Dynamic Range, High Spatial Resolution, Scientific grade Infrared Camera - 1 No** for the Interdisciplinary Centre for Energy Research at the Indian Institute of Science (IISc), Bangalore. The tender should be submitted in two separate sealed envelopes: one containing the **technical bid** and the other containing the **commercial bid**, both of which should reach us, duly signed on or before **24<sup>th</sup> November 2022 on or before 1700 hrs.** The bids should be addressed to:

The Chair,  
Interdisciplinary Centre for Energy Research  
Indian Institute of Science  
Bangalore 560012, India.  
Kind attention: Prof. Pramod Kumar  
Email: [pramod@iisc.ac.in](mailto:pramod@iisc.ac.in)

Direct all questions concerning the acquisition to **Prof. Pramod Kumar** at:  
[pramod@iisc.ac.in](mailto:pramod@iisc.ac.in)

**General Terms and Conditions:**

1. The bid should be submitted in two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
2. The technical bid must contain a point-by-point technical compliance document. The technical proposal should contain a compliance table that should describe your compliance with a "√" in comply or Non-comply column as response against each of the items in the table listed in this RFQ. If "√" in the "No-Comply" column should state the extent of deviation in the column mentioned "Deviation". The last column should state the reason for the deviation, if any. The last column can be used to compare your product with that of your competitors or provide details as requested in the technical requirement table below.
3. In the commercial bid, the price should be inclusive of all discounts.
4. The lead time for the delivery of the items should not be more than 16 weeks from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
5. All the quotations must be valid for at least 90 days at the time of submission.
6. List of customers and references: It is preferable for the Bidder should have supplied similar equipment in centrally Funded Technical Institutes (IITs, IISc, IISER, NIT). Please provide the details and contact information.
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 should be provided.
8. Items in addition to that listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the

end of the compliance table.

9. Vendors are encouraged to highlight the advantage of their product over comparable product from the competitors.
10. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
11. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
12. Warranty terms and additional warranty options is a must for all the components. Please specify the service plan like whether the local distributor will address the issue or the parent company.
13. Terms and conditions for the annual maintenance contract beyond the warranty period should be mentioned.
14. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
15. Please quote the price of each optional line item, separately.

1) **Technical requirements:** Please note that the requirements and options listed below are only guidelines. It does not disbar bids that do not meet the criteria listed. Vendors are requested to quote for the **High-Speed, High Dynamic Range, High Spatial Resolution, Scientific grade Infrared Camera** that meet the criteria to the best extent possible and list deviations. Deviations are NOT an automatic reason for disqualification.

**Quantity: 1 No.**

Sl. No.	Technical Specification	Value / Range
1.1	Sensor type	Cooled InSb
1.2	Sensor's Full Resolution	1.2 MP or higher
1.3	Acquisition rate at full resolution	100 Hz or higher
1.4	Maximum frame rate at minimum resolution	1 kHz or higher
1.5	Acceptable frame size (pixels)	1024 x 1024 pixels or 1280 x 800 pixels or better
1.6	Memory	16 GB or higher
1.7	Record Time	Minimum 3 seconds at maximum frame rate, and resolution
1.8	Pixel Pitch	15 $\mu$ m or lower
1.9	Bit Depth	16-bit or higher
1.10	Data Transfer Rate	10 Gb/s on RJ45 port
1.11	Data Acquisition Hardware Support	National Instruments M- and X-Series DAQ modules
1.12	Software Support (SDK)	NI-LabView, MATLAB, C++
1.13	Trigger Control	Programmable trigger location (pre/post trigger recording), Image-Based Auto-Trigger from software, or hardware trigger using BNC/TTL/Switch), sync, ready, event, exposure rate to be controllable by h/w trigger

1.14	Signal Control	Trigger, sync, ready, rec, exposure, timecode using BNCs, programmable I/O ports for F-sync, strobe, event, trigger output, ready
1.15	Acceptable Interface	Ethernet/USB/HDMI
1.16	Lens Mount	Bayonet with F/C mount adapters
1.17	Spectral Range	1.5-5.4 $\mu\text{m}$
1.18	Camera Lens	50 mm
1.19	Exposure/Integration Time	0.5 $\mu\text{s}$ or lesser
1.20	NETD (Noise Equivalent Temperature Difference)	atleast 30 mK or lesser
1.21	Packing and Storage	Hard Carry case
1.22	Operating Temperature	0-50 $^{\circ}\text{C}$
1.23	Power Supply	100 - 240 VAC (All necessary Power adapters and Communication Cables should be included)
1.24	Warranty	1 Year Standard from the date of Installation/Commissioning

**Other requirements:**

1.	Camera Lens: 200mm (Spectral Range: 1.5 $\mu\text{m}$ – 5.4 $\mu\text{m}$ )
2.	Tripod Stand (should be capable of withstanding 3.5 kgs camera)
3.	Additional Warranty for 2 years
4.	Option for External storage/data transfer should be provided with capacity of 2TB-onboard HD/SSD storage

**2) Mandatory non-technical requirements:**

- a) The bidders must enclose a client list, contact details, relevant brochures and Compliance Certificate as per Annexure I provided with the tender.
- b) The bidders should be well established firm preferably leaders in the application stated above and must have a proven track record.
- c) Authorization from the OEM/ Principals as a separate Annexure II
- d) The order should be completed within 16 weeks from the date of release of the Purchase Order.

## Annexure-I

**Note:** Compliance Certificate must be enclosed with the Technical bid. Non submission of Compliance Certificate will lead to disqualification of the bidder.

No.	Description	Value / Range	Comply	Non-comply	Deviation	Remarks
1.1	Sensor type	Cooled InSb				
1.2	Sensor's Full Resolution	1.2 MP or higher				
1.3	Acquisition rate at full resolution	100 Hz or higher				
1.4	Maximum frame rate at minimum resolution	1 kHz or higher				
1.5	Acceptable frame size (pixels)	1024 x 1024 pixels or 1280 x 800 pixels or better				
1.6	Memory	16 GB or higher				
1.7	Record Time	Minimum 3 seconds at maximum frame rate, and resolution				
1.8	Pixel Pitch	15 $\mu\text{m}$ or lower				
1.9	Bit Depth	16-bit or higher				
1.10	Data Transfer Rate	10 Gb/s on RJ45 port				
1.11	Data Acquisition Hardware Support	National Instruments M- and X-Series DAQ modules				
1.12	Software Support (SDK)	NI-LabView, MATLAB, C++				
1.13	Trigger Control	Programmable trigger location (pre/post trigger recording), Image-Based Auto-Trigger from software, or hardware trigger using BNC/TTL/Switch), sync, ready, event, exposure rate to be controllable by h/w trigger				

1.14	Signal Control	Trigger, sync, ready, rec, exposure, timecode using BNCs, programmable I/O ports for F-sync, strobe, event, trigger output, ready				
1.15	Acceptable Interface	Ethernet/USB/HDMI				
1.16	Lens Mount	Bayonet with F/C mount adapters				
1.17	Spectral Range	1.5-5.4 $\mu\text{m}$				
1.18	Camera Lens	50 mm				
1.19	Exposure/ Integration Time	0.5 $\mu\text{s}$ or lesser				
1.20	NETD (Noise Equivalent Temperature Difference)	atleast 30 mK or lesser				
1.21	Packing and Storage	Hard Carry case				
1.22	Operating Temperature	0-50 $^{\circ}\text{C}$				
1.23	Power Supply	100 - 240 VAC (All necessary Power adapters and Communication Cables should be included)				
1.24	Warranty	1 year Standard from the date of Installation/Commissioning				

## Annexure-II

### **MANUFACTURERS' AUTHORIZATION FORM**

*[The bidder shall require the manufacturer to fill in this form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by the person with the proper authority to sign documents that are binding on the Manufacturer.]*

Date: [insert date (as day, month and year) of Bid Submission] Tender No.: [insert number from Invitation for Bids]

To: **The Chair, Interdisciplinary centre for Energy Research, IISc, Bangalore-560012**

#### WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert full address of Manufacture's factories], do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer] Name: [insert complete name(s) of authorized representative(s) of the Manufacturer] Title: [insert title]

Duly authorized to sign this authorization on behalf of: [insert complete name of Bidder]

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