



**Department of Aerospace Engineering
Indian Institute of Science
Bengaluru 560012**



Reference number: IISc/AE/Tender/2023/Local/MWIRcamera

Date: 04th September 2023

Domestic Tender Notification for Procurement of a MWIR camera

(Last date for submission of bids: 26th September 2023)

This is a Request for Quote (RFQ) from domestic (India-based) manufacturers for procurement of an MWIR (mid-wave infrared) camera at the Department of Aerospace Engineering, Indian Institute of Science (IISc), Bengaluru. With respect to this tender, the rules laid out by the Government of India in 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 will be followed. As per the stated order, the government has defined a “Class-I local supplier” as “a supplier or service provider whose goods, services, or work offered for procurement, has local content equal to or more than 50%”. A “Class-II local supplier” is “a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%”. Only Class-I and Class-II local suppliers are eligible to participate in this open domestic tender. Any “non-local supplier” *i.e.* “a supplier or service provider whose goods, services, or works offered for procurement, has local content less than 20%” is ineligible to participate in this tender. 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 4 PM on 26th September 2023.

The bids should be addressed to:

The Chairman
Department of Aerospace Engineering
Indian Institute of Science
Bengaluru 560012
(Attention: Dr. Duvvuri Subrahmanyam)

1	Section 1	Bid Schedule	As specified by IISc
2	Section 2	Eligibility Criteria	As specified by IISc
3	Section 3	Terms and Conditions	As specified by IISc
4	Section 4	Specifications	Technical specifications
5	Section 5	Technical Bid	Annexure 1: Bidder details
			Annexure 2: Declaration regarding experience of bidder
			Annexure 3: Declaration regarding track record of bidder
			Annexure 4: Declaration of acceptance of Terms and conditions
			Annexure 5: Details of item quoted
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6	Section 6	Commercial bid	Quotation with Price, Technical specifications of the Equipment

Section 1: Bid Schedule

1.	Tender name	Domestic Tender Notification for Procurement of a MWIR camera
2.	Reference no. and date	IISc/AE/Tender/2023/Local/MWIRcamera Date: 04 th September 2023
3.	Instrument	MWIR (mid-wave infrared) Camera with accessories
4.	Quantity	1 (one)
5.	Tender type	i) Technical bid (Part A) ii) Commercial bid (Part B)
6.	Place of bid submission	The Chairman Department of Aerospace Engineering Indian Institute of Science Bengaluru 560012
7.	Last date and time for bid submission	26 th September 2023, 4:00 PM
8.	Clarifications to be directed to	Dr. Duvvuri Subrahmanyam Department of Aerospace Engineering Indian Institute of Science Bengaluru 560012 Ph: +91-80-2293-2753 email: subrahmanyam@iisc.ac.in

Section 2: Eligibility Criteria

Prequalification criteria:

1. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
2. The quotations should be on FOR IISc Bengaluru basis in INR only.
3. The Bidder's firm should have continued existence for a minimum of 3 years (include Company Registration Certificate with bid as proof).
4. The Bidder should belong to either Class-1 or Class-2 supplier, distinguished by their "local content", as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter. Further, a formal declaration to this effect has to be given as per Annexure 6 along with details of the local value addition.
 - 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%.
5. Bidders offering imported products will fall under the category of non-local suppliers. Such bidders cannot claim themselves as Class-1 local suppliers or Class-2 local suppliers by claiming that services like transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC *etc* as local value addition.
6. Purchase preference as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to Class-1 suppliers.
7. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR 2017 for such cases.
8. The bidder should sign and submit the declaration of Acceptance of Terms and Conditions as per Annexure 4.
9. 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: Technical Specifications

The MWIR camera (Qty = 1) offered by the bidder should meet the following technical specifications and include the listed accessory items:

S. No.	Parameter	
1.	Detector Type	Indium Antimonide (InSb)
2.	Spectral Range	3 μm to 5 μm (sensitivity to wavelengths larger than 5 μm is acceptable)
3.	Detector Pitch (Pixel size)	In the range 10 μm to 20 μm
4.	FPA Resolution	640 (or more) pixels \times 512 (or more) pixels
5.	Frame Rate at full resolution	100 Hz or more
6.	Noise-Equivalent Temperature Difference (NETD)	≤ 20 mK at 300 K
7.	Dynamic Range	14-bit or higher
8.	Temperature Calibration	0 $^{\circ}\text{C}$ to 350 $^{\circ}\text{C}$
9.	Temperature accuracy	Within ± 2 $^{\circ}\text{C}$ for temperatures less than 100 $^{\circ}\text{C}$ Within ± 2 % of reading for temperatures greater than 100 $^{\circ}\text{C}$
10.	Calibration	The calibration provided by the OEM should be NIST traceable. Further, the camera should allow for calibration by the user if needed.
11.	Integration time	≤ 10 μs for temperatures above 150 $^{\circ}\text{C}$ (open slot, no filters/apertures) ≤ 130 μs for temperatures below 150 $^{\circ}\text{C}$ (open slot, no filters/apertures)
12.	Real-time data output	Pixel-wise Radiance ($\text{W}\cdot\text{m}^{-2}\cdot\text{sr}^{-1}$) and radiometric temperature ($^{\circ}\text{C}$).
13.	Non-Uniformity Correction (NUC)	Camera should have permanent NUC (There should not be any need to perform NUC for every measurement or testing).
14.	Readout Modes	IWR (Integrate While Read) or ITR (Integrate Then Read)
15.	Command and Control	GigE or Camera Link
16.	Radiometric Data Streaming	GigE or Camera Link
17.	Shock and vibration	Certification should be provided for maximum operable shock and vibration levels.
18.	Allowable ambient temperature range for operation	Range: 5 $^{\circ}\text{C}$ (or lower) to 45 $^{\circ}\text{C}$ (or higher)
19.	Quality System Standard	ISO 9001:2015 or better

20.	IP rating	The camera should be IP67 rated.
21.	Software Licenses	It should be possible to install camera software on at least 20 different PC/Laptop for operation and data processing/post-processing. If a licence is needed for software use, at least 20 licenses need to be provided without any subscription fee whatsoever.
22.	Calibration and Repair facility in India	The OEM should have an established calibration and repair facility within India. Details of the same should be clearly furnished in the bid documents.
Required Accessories		
1.	Lens (Qty = 1)	Transmission band should be matched to the detector. Focal length: 25 mm to 30 mm. Aperture: f/3 or lower (<i>i.e.</i> larger aperture opening). Average transmission: $\geq 95\%$ Distortion: $\leq 3\%$
2.	Tripod (Qty = 1)	Heavy-duty tripod suitable for holding/carrying the camera and firmly aligning/positioning the same for use.
3.	Transport case (Qty = 1)	Rugged.
Warranty		
1.	Comprehensive warranty	24 months of comprehensive warranty that covers the MWIR camera and all accessories.

Section 4: Terms and Conditions

1. All documentation in the bids should be in English.
2. The complete bid should be submitted in two envelopes (**Two bid system**):
 - a) Technical Bid (Part A) – A technical bid consisting of all technical details and checklist for conformance to technical specifications. The proposal should contain a compliance table which includes all the items of the technical specifications in the same order and format. In addition, the table should contain two additional columns: the first column should describe product specifications and the next column should indicate compliance in with a “Yes” or “No” response.
 - b) Commercial Bid (Part B) – Indicate item-wise price for the items mentioned in the technical bid, as per the format of quotation provided in tender, including all commercial terms and conditions.
3. The technical bid and price bid should each be placed in separate sealed covers, superscribing on both the envelopes the tender name and the due date. Both these sealed covers are to be placed in a larger cover which should also be sealed and duly superscribed with the tender name and description along with the due date.
4. The larger SEALED COVER should reach the office of the Chairman, Department of Aerospace Engineering, Indian Institute of Science, Bengaluru 560012, India, on or before the due date mentioned in the tender notice. In case the due date happens to be a holiday, the tender will be accepted and opened on the next working day. If the bid cover is not sealed, it will be rejected.
5. The bid cover letter should clearly state the vendor’s local supplier classification, *i.e.* Class-I or Class-II. Failing this the bid will be automatically rejected. This letter should be supported by a supporting document from the original equipment manufacturer (OEM).
6. 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.
7. The lead time for the delivery of the equipment should be clearly mentioned in the technical and commercial bids and **should NOT exceed six months** from the date of issue of Purchase Order by IISc.
8. If any export license(s) is/are required for the supply of the MWIR camera and accessories to IISc, the same should be obtained by the vendor **within two months** from the date of issue of Purchase Order by IISc. After the license(s) are obtained, copies of the same should also be provided to IISc by the vendor. IISc reserves the right to cancel the Purchase Order if the vendor fails to obtain any required export license(s) within the two months period.
9. The vendor must provide a compliance statement in a tabular form concerning each technical specification in the tender document duly supported by the manufacturer’s literature and published papers. Any other claims will not be accepted and may lead to rejection of the bid.
10. Wherever requested, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed technically non-compliant.
11. The Institute (IISc) reserves the right to verify the accuracy and seek clarification of submitted specifications after opening the technical bids. Based on such clarification, if specifications are found to be unsuitable, the IISc Technical Committee reserves the right to disqualify vendors. Any discrepancy between the promised and verified specifications will be deemed as technical non-compliance.
12. The Technical Bid should also contain warranty details and terms. Further, any periodic maintenance requirements for regular operation of the product should be specified in detail, along with the extent of coverage under warranty for such maintenance activity.
13. The bidder should clearly state in the technical bid any prerequisite installation requirements for the product. The vendor is responsible for the installation of the system at the Institute (IISc), along with the training of end-users.
14. The price listed in the Commercial Bid should be inclusive of all discounts. The price quotation should include the cost of installation and training of potential users (if any).
15. The quotations should be on FOR IISc Bengaluru basis in INR including applicable GST.
16. Any statutory increase in the taxes subsequent to the 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. 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 the bidding process.

17. The vendor should have an office with qualified technical service personnel based in India and should clearly assure a response time of less than five business days in the Commercial Bid.
18. The vendor must submit a full list of all Indian customers (only Government of India organizations) where similar systems have been installed. References from this list can be used to disqualify vendors with a poor track record of service, build quality, system performance, or poor availability of spares. Additionally, IISc shall have the absolute right to take the opinion of other Departments/Institutes for their opinion/experience about the vendor's services/sales. Based on such inputs, IISc reserves the right to reject bids from vendors with poor track record.
19. The vendor should include at least two testimonials from existing users (within India) of a similar camera system indicating the performance of the camera and maintenance satisfaction.
20. As part of the Technical Bid, the vendor should include copies of three different Purchase Orders (POs) from three previous sales within India of similar IR cameras. **NOTE:** all the price information (or monetary value) in the PO copies should be masked (hidden).
21. Notwithstanding anything specified in this tender document, IISc Bengaluru, in its sole discretion, unconditionally and without having to assign any reason, reserves the following rights:
 - a) To accept OR reject the lowest tender or any other tender or all the tenders.
 - b) To accept any tender in full or in part.
 - c) To reject the tender where the offer does not confirm to the tender terms.
22. IISc Bengaluru reserves the right to relax any or all the above conditions without assigning any reason.

Annexure 1:

Details of the Bidder

(The bidder must provide the following mandatory information on the company letterhead and attach supporting documents wherever indicated)

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

(Signature of the Bidder)

Name:

Date:

Designation:

Seal

Annexure 2:

Declaration of experience

(The bidder must provide the following experience declaration on the company letterhead)

To:

The Chairman
Department of Aerospace Engineering
Indian Institute of Science (IISc)
Bengaluru 560012

Reference:

Subject: supply and installation of MWIR camera

I have 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 and installing MWIR cameras. My company personnel are trained and have the expertise to provide post-sale services and routine maintenance. All the necessary support will be provided on the product that we bid for, as per requests from IISc.

(Signature of the Bidder)

Name:

Date:

Designation:

Seal

Annexure 3:

Declaration of track record

(The bidder must provide the following track record declaration on the company letterhead)

To:
The Chairman
Department of Aerospace Engineering
Indian Institute of Science (IISc)
Bengaluru 560012

Reference:

Subject: supply and installation of MWIR camera

I have 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 am a competent officer in my company/firm to make this declaration.

OR

I declare the following:

Sr. No.	Country in which the company is debarred/blacklisted or has pending legal disputes	Blacklisted/debarred by Government/Semi Government Organizations or Institutions/having pending legal disputes	Reason	Time Period

(Note: In case the company/firm was blacklisted previously, please provide details regarding the period for which the company/firm was blacklisted and the reason/s for the same.)

(Signature of the Bidder)

Name:

Date:

Designation:

Seal

Annexure 4:

Declaration of acceptance of terms and conditions

(The bidder must provide the following acceptance of T&C on the company letterhead)

To:

The Chairman

Department of Aerospace Engineering

Indian Institute of Science (IISc)

Bengaluru 560012

Reference:

Subject: supply and installation of MWIR camera

I have carefully gone through the Terms & Conditions contained 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 am an authorized signatory of my company and am, therefore, competent to make this declaration.

(Signature of the Bidder)

Name:

Date:

Designation:

Seal

Annexure 5:

Details of items quoted

- a. Company Name:
- b. Product Name:
- c. Part/catalogue/model number:
- d. Product description and/or main features:
- e. Detailed technical specifications:
- f. Remarks, if any:

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. Bidder should include a covering letter clearly stating whether they are a Class-I or Class-II local supplier. The letter should be supported by a supporting document from the original equipment manufacturer (OEM).
4. Bidder should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.

Annexure 6:

Declaration as Class-I/II local supplier along with details of local value addition

(The bidder must provide the following declaration on the company letterhead. The bidder should provide clear details of the local value addition in percentage terms of the total bid value, and explain how the bid satisfies Class-I or Class-II supplier conditions. The bidder should NOT disclose any price information.)

To:
The Chairman
Department of Aerospace Engineering
Indian Institute of Science (IISc)
Bengaluru 560012

Reference:

Subject: supply and installation of MWIR camera

With reference to the above cited tender, we hereby declare that [insert company name here] is a Class-1/Class-2 local supplier (choose either Class-1 or Class-2) in accordance and manner as specified in Order No. P45021/2/2017-PP (BE-II) dated 04th June 2020 and OM No. P-45021/102/2019-BE-II-Part(1) (E-50310) dated 04th March 2021 issued by DIPP, Ministry of Commerce and Industries, Government of India. I further certify that I am an authorized signatory of my company and am, therefore, competent to make this declaration.

The local value addition to the MWIR camera and accessories done by our Company are detailed here:

.....
.....
.....

(Use extra sheets if needed. All pages of Annexure 6 should contain the company seal along with an authorized signature and date.)

(Signature of the Bidder)

Name:
Date:
Designation:

Seal

Section 5: Commercial Bid

The commercial bid (on FOR IISc Bengaluru basis) should be furnished on the company letterhead with all requirements of the tender with supporting documents as mentioned.

Items requested in the mandatory specification section:

S. No.	Description	Catalogue or model number	Quantity	Unit Price	Sub total
1.	Essential items and accessories noted in the technical specification				
2	... (details of essential Items and accessories)				
3.	Warranty (24 months)				

Section 6: Checklist

The following items must be checked before the bid is submitted.

1. Sealed Envelope “A”: Technical Bid

Technical bid (signed by an authorized signatory and sealed) with the below documents:

- a. Annexure 1: Bidders details
- b. Annexure 2: Declaration of experience
- c. Annexure 3: Declaration of track record
- d. Annexure 4: Declaration of acceptance of terms and conditions
- e. Annexure 5: Details of item quoted.
- f. Annexure 6: Declaration as Class-I/II local supplier along with details of local value addition
- g. All other supporting documentation as per Section 4 (Terms and Conditions)

2. Sealed Envelope “B”: Commercial Bid

Your quotation must be submitted in two separate sealed envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B). Superscribe on both the envelopes of tender name and due date. These envelopes should be put in a larger envelope which should also be sealed and duly superscribed with tender name and due date.