



INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

GT ROAD, KALYANPUR, KANPUR – 208016

UTTAR PRADESH, INDIA

TENDER REFERENCE NO.: IITK/CSE/2024-2025/14

BID SUBMISSION END DATE- 03-07-2024

TENDER DOCUMENTS

For

“Purchase of Radiometric Thermal Camera (Quantity – 01)”

Tender document

**Department of Computer Science and Engineering
Indian Institute of Technology Kanpur
Kanpur (UP) 208016 India**

Date of Publishing	24-06-2024 (17.00 hrs)
Bid Submission Start Date	24-06-2024 (17.00 hrs)
Last Date and time of uploading of Bids	03-07-2024 (16.00 hrs)
Last Date and time of submitting , EMD at IIT Kanpur (if any)	NA
Date and time of opening of Technical Bids	04-07-2024 (16:00 hrs)
Date and time of opening of Financial Bids	Will be separately notified for Technically shortlisted/qualified bidders

Interested parties may view and download the tender document containing the detailed terms & conditions from the website <https://www.iitk.ac.in/new/tenders-notice>

Enquiry date: **24-06-2024**

Enquiry No: **IITK/CSE/2024-2025/14**

IIT, Kanpur reserves the right to accept or reject any or all the tenders without assigning any Reasons thereof.

Quotations are invited for Purchase of Radiometric Thermal Camera (Quantity – 01).

The detailed technical specification is described below:

Technical Specification for Radiometric Thermal Camera (Quantity – 01)

General	<p>The Radiometric Thermal Imager for Drones (sUAS) with 9mm Lens, 640 x 512, 9 Hz gives drone operators and certified thermographers the power to gather accurate, non-contact temperature measurements from an aerial perspective. Every still image it saves contains accurate, calibrated temperature data embedded in every pixel, adding even more value to your sUAS operations and services than ever. Still delivering the same industry-leading thermal imaging quality, interfaces, and capability, it adds fully radiometric data-gathering to sUAS applications as diverse as building and roof inspections, power grid inspections, infrastructure analysis, precision agriculture, and public safety.</p> <ul style="list-style-type: none">• Accurate real-time, non-contact temperature measurement of vital structures and equipment• Saves Radiometric JPEGs with temperature data embedded in every pixels• Compatible with tools for full post-flight analysis• Record real-time thermal videos in MOV format• Save still images as Radiometric JPEG, or 14-bit TIFF formats
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- MAVLink integration
- Adjust camera functions with PWM inputs from controller
- Configure camera recording and control settings with app
- Simple power-in/analog video-out interface over 10-pin mini-USB connector
- Image setting optimized for airborne operations

***Note: No handheld device required.**

Thermal Imager	Uncooled VOx Microbolometer	
Sensor Resolution	640 x 512	
Lens Options (FOV for full-Sensor Digital Output)	9 mm; 69° x 56° 13 mm; 45° x 37° 19 mm; 32° x 26°	6.8 mm; 45° x 35° 9 mm; 35° x 27° 13 mm; 25° x 19°
Lens Options (FOV for NTSC Analog Output)	9 mm; 62° x 49° 13 mm; 45° x 35° 19 mm; 32° x 24°	6.8 mm; 44° x 33° 9 mm; 34° x 26° 13 mm; 24° x 18°
Spectral Band	7.5 – 13.5 µm	
Full Frame Rates	30 Hz (NTSC); 25 Hz(PAL)	
Exportable Frame Rates	7.5 Hz (NTSC); 8.3 Hz(PAL)	
Measurement Accuracy	+/-5°C or 5% of reading	
Physical Attributes		
Size	2.26" x 1.75"(including lens)	
Weight	3.25 – 4 oz (Configuration Dependant)	
Precision Mounting Holes	Two M2x0.4 on each of twosides & bottom One ¼ -20 threaded hole on top	
Image Processing & Display Controls		
Image Optimization for sUAS	Yes	
Scene Presets & Image Processing?	Yes – Adjustable in App	
Invertible Image?	Yes – Adjustable in App	
Color Palettes	Yes – Adjustable in App and via PWM	
Zoom	Yes – Adjustable in App and via PWM	
Interfacing		
Input Voltage	4.8-6.0 VDC	
Power Dissipation (Peak)	2.1 W (3.9 W)	
Environmental		
Operating Temperature Range	-20°C to +50°C	
Non-Operating Temperature Range	-55°C to +95°C	
Operational Altitude	+40,000 feet	
Optional Power/HDMI Video Module Accessory		
Input Power Range	5 VDC - 28 VDC	
Reverse Polarity Protection?	Yes	
Analog Vedio Output?	Yes	
HDMI Output	1280x720 @ 50hz, 60hz	

Specifications

Technical
Specification

CONNECTIONS & COMMUNICATIONS

- Analog Video Output

Yes

ELECTRICAL	
• Input Voltage	4.8 - 6.0 VDC
• Power Dissipation [peak]	2.1 W (3.9 W)
ENVIRONMENTAL & APPROVALS	
• Non-Operating Temperature Range	-55°C to +95°C
• Operating Temperature Range	-20°C to +50°C
• Operational Altitude	+40,000 feet
EXPORT DESIGNATIONS	
• ECCN Code	6A003.b.4.b (Fast Video, 60Hz) 6A993.A (Slow Video, 9Hz)
IMAGING & OPTICAL	
• Color Palettes	Yes – Adjustable in App and via PWM
• Frame Rate	7.5 Hz (NTSC); 8.3 Hz (PAL)
• HDMI Output	1280x720 @ 50hz, 60hz
• Image Optimization	Yes
• Invertable Image	Yes – Adjustable in App
• IR Camera Resolution	640 x 512
• Lens	19 mm; 32° x 26°
• Lens Options [FOV for NTSC Analog Output]	19 mm; 32° x 24°
• Scene Presets & Image Processing	Yes – Adjustable in App
• Spectral Band	7.5 - 13.5 μm
• Thermal Imager	Uncooled VOx Microbolometer
MECHANICAL	
• Precision Mounting Holes	Two M2x0.4 on each of two sides & bottom One 1/4-20 threaded hole on top
• Size	2.26" x 1.75" (including lens)
• Weight	3.25 - 4 oz (Configuration Dependant)
• Zoom	Yes – Adjustable in App and via PWM
OPTIONAL POWER & HDMI VIDEO MODULE	
• Input Power Range	5 VDC – 28 VDC
• Reverse Polarity Protection	Yes

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| Key Features | <ul style="list-style-type: none"> • Sensor resolution: 640 x 512 • Lens options: 9mm; 69° x 56° • Lens options (FOV for NTSC analog output): 9mm; 62° x 49° • Full frame rates: 7.5 Hz (NTSC); 8.3 Hz (PAL) • Spectral band: 7.5 um to 13.5 um • Thermal imager: Uncooled VOx Microbolometer • Measurement accuracy: +/-5°C or 5% of reading • Image settings optimized for airborne operations • Simple power-in/analog video-out interface over 10-pin mini-USB connector • Accurate real-time, non-contact temperature measurement of vital structures and equipment • Record thermal images to an on-board micro-sd card • Record real-time thermal videos in MOV format • Save still images as Radiometric JPEG, or 14-bit TIFF formats • Saves Radiometric JPEGs with temperature data embedded in every pixels • Radiometric thermal imaging for sUAS • MAVLink integration • Adjust camera functions with PWM inputs from controllers, including color palettes and zoom • Compatible with tools for full post-flight analysis and report generation • Configure camera recording and control settings with mobile app |
|--------------|--|

	<ul style="list-style-type: none"> • Field-upgradeable
Warranty	As per the OEM standard product warranty

Terms and Conditions

1. Quotation must be valid for 120 days.
2. All quotations must contain complete technical details of the product
3. All prices are to be FOR IIT Kanpur.
4. The vendor must provide official email address for communication and should notify that clearly in the quotation description, just referring to letterhead will not be accepted as sufficient proof of official email of communication.
5. Delivery period must be within 4 weeks from purchase order date.
6. Our standard payment terms and conditions is 100% after installation, inspection and approval.
7. The Penalty @1% per week or part thereof subject to max 10% of the delivery price will be deducted from the balance payment, if supply is not completed within aforesaid delivery period.
8. Preference will be given to only those vendors who have Service/ Repairing centre stationed at Kanpur (Single point of contact in Kanpur for any service related issues)
9. No Call Locking will be entertained (in/out stationed). If at all it is required, then it will be performed by local Maintenance Engineer.
10. Testing of the product onsite is mandatory
11. In no case, the suppliers shall be provided with remote access of the servers/machines.
12. It is mandatory to quote for optional items; else the quotation may be rejected.
13. Reporting time should not be more than 2 hours
14. Resolving time should not be more than 2 days
15. At any time prior to the deadline for submission of bid, the Institute may, for any reason, at its own initiative, modify the bid document by amendments. Such amendments shall be uploaded on the website through corrigendum and shall form an integral part of bid document. The relevant clauses of the bid document shall be treated as amended accordingly. It shall be the sole responsibility of the prospective bidders to check the website from time to time for any amendment in the tender document. In case of failure to get the amendments, if any, the Institute shall not be responsible for it.
16. Vendor is expected to submit only one best bid per tender specifications.
17. **Only original equipment manufacturer /Authorized channel partners/Authorized system integrators having letter of support from OEM are eligible to bid.
18. A higher warranty may be given preference.
19. IIT Kanpur reserves the right for accepting and rejecting any quotation without assigning any reason thereof. Also, IIT Kanpur has the right to accept the whole or any part of the tender or portion of the quantity offered or reject it in full without assigning

any reason. Any discrepancy or dispute will only be settled in Kanpur Courts /Local Administration only.

20. Vendors are requested to quote only in Indian currency (Rupees). If the vendor wants to quote in an alternate currency, the vendor should seek an explicit permission from the department before sending the bid.
21. If all or any of the components of the equipment is/are to be imported, the vendor holds its full responsibility for its delivery at IIT Kanpur and that too in the stipulated time period. If for any reason the vendor does not want to deliver to IIT Kanpur, the vendor needs to seek an explicit permission from the department, before sending the bid.
22. Maximum educational discount should be offered wherever applicable.
23. Every communication must be received at IIT Kanpur within 2 business days from the date stamped on the letter if posted via conventional postal email.
24. Any communication letter if posted via conventional postal mail must also be sent on following email purchase@cse.iitk.ac.in and email of the PI (Project Investigator).
25. If taxes & duties are not quoted separately by the bidder, the final figure/price will deem to be inclusive of taxes & duties.
26. The basic Price/rate, GST, Packing & Forwarding charges and Freight charges must be mentioned separately & specifically. The offer quoted inclusive of Taxes, Packing & Forwarding charges and freight charges will summarily be rejected. The same is essential keeping in view the applicability of GST. The impact (%age) of GST on item, /items will be admissible as applicable on the basic rate being statutory levy only during currency of Purchase Order/Contract against party's request along with necessary documents in support of their claim/amendments.
27. **Two-bid system:**
 1. Sealed quotations are invited Technical bid & financial bid from reputed, eligible & resourceful bidders for supply, installation of Server, etc. complete in all respect. The sealed envelopes with the quotes should be super scribed mentioning whether it is a technical or financial bid.
 2. If the financial Bid is included in the Technical Bid, then the quotation will be rejected.

1. Note: Document Required

- i. Certificate of GST and Bank details.
- ii. Work experience.
- iii. Our Technical Sheet duly signed and stamped by the firm.
- iv. Specifications/brochures & tender acceptance letter on Appendix 1-3.

Scanned copy of No Deviation Certificate (This certificate is to state that there shall be No Deviation in your bid as compared to what we have asked for in our tender document both technically and otherwise. This is to be written on your letter head and signed stamped as well).

- v. Past Performance (if any)
- vi. Experience Criteria
- vii. Bidder Turnover

Quotations should be in the name of: -

Dr. Amitangshu Pal

Department of Computer Science
Indian Institute of Technology Kanpur
Kanpur 208 016, India

Mailing Address:

Nagendra Yadav

Contact- [0512-259-6344](tel:0512-259-6344)

**RM-510, Rajeev Motwani Building
Department of Computer Science & Engineering
Indian Institute of Technology Kanpur
Kanpur 208 016, India**

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date: _____

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

_____ as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Certificate for Tender
(To be given on Company Letter Head)

Date: _____

To,

Sub: Certificate of compliance as per Rule 144 (xi) GFR's 2017

Tender Reference No: _____

Name of Tender / Work: -

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Yours Faithfully,
(Signature of the Bidder, with Official Seal)

Declaration for Local Content

**(To be given on Company Letter Head - For tender value below Rs.10 Crores)
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value
above Rs.10 Crores)**

Date: _____

To,
The Director,
Indian Institute of Technology Kanpur,
GT Road, Kalyanpur, Kanpur -208016

Sub: Declaration of Local content

Tender Reference No: _____

Name of Tender / Work: -

1. Country of Origin of Goods being offered: _____
2. We hereby declare that items offered has ____% local content.

“*Local Content*” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

“**False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.*”

**Yours Faithfully,
(Signature of the Bidder, with Official Seal)**