



INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
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Ref: ASE/11-12/113/ARDB/HSNM

12 December, 2014

Tender No: ASE/HSNM/020/2014

Due Date: 05.01.2015, 3:30pm

N.E. Nagaraj  
Special Officer (Project Purchase)  
IC&SR, I.I.T. Madras

Dear Sir,

On behalf of the Indian Institute of Technology Madras, offers are invited for the supply of various Scientific Instruments "Infrared Thermal (IR) imaging Camera with resolution : 640 X 512 (option A) & 320 X 256 (option B)" conforming to the specifications given in Annexure.

**Instructions to the Bidder**

- (i) **Preparation of Bids:** - The tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid.
- (ii) **Delivery of the tender:** - The tender shall be sent to the below-mentioned addresses either by post or by courier so as to reach our office before the due date and time specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the "Special Officer, Project Purchase" IC & SR Building 2<sup>nd</sup> floor, I.I.T. Madras, Chennai - 600 036.
- (iii) **Opening of the tender:** - The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. The bidders will be invited for opening of Technical bids. In respect of opening of financial bid, those bidders who are technically qualified only will be called for.

- (iv) **Prices:** - The price should be quoted in nett per unit (after breakup) and must include all packing and delivery charges to Various Institutions. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of tax & duties should be clearly indicated.
- The price should be quoted without custom duty and excise duty, since I.I.T. Madras is exempt from payment of excise duty, and the custom duty will be paid at concessional rate against duty exemption certificate.
- In case of import supply, the price should be quoted on FOB and CIF basis indicating the mode of shipment.
- (v) **Agency Commission:** - Agency commission, if any, will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in the case of 'Nil' commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent. The foreign Principal should indicate about the percentage of payment and it should be included in the originally quoted basic price, if any.
- (vi) **Terms of Delivery:** - The item should be supplied to our Various Institutions as per Purchase Order. In case of import supply, the item should be delivered at the cost of the supplier to our Institution. The Installation/Commissioning should be completed as specified in our important conditions.
- (vii) IIT Madras reserves the full right to accept / reject any tender at stage without assigning any reason.

Yours sincerely,



**N.E. Nagaraj**  
**Special Officer (Project Purchase)**  
**IC&SR, I.I.T. Madras.**

एन.ई. नागराज  
N.E. NAGARAJ  
विशेषाधिकारी (परियोजना क्रय)  
SPECIAL OFFICER (PROJECT PURCHASE)  
आईसी एवं एसआर केन्द्र / Centre for IC & SR  
आईआईटी मद्रास / I.I.T. MADRAS- 600 036

## SCHEDULE

### Important Conditions of the tender

1. The due date for the submission of the tender is **05.01.2015, 3:30pm.**
2. The offers / bids should be submitted in two bids systems (i.e.) Technical bid and Financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms etc. The Technical bid and Financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Limited Tender / Open Tender for supply of " \_\_\_\_\_ " should be written on the left side of the Outer bigger cover.
3. **EMD:** - EMD should be at 2% (Two percent) of the tender value quoted by the company. The EMD should be included in the Financial bid which will not be opened for Technical evaluation. Enclosing the EMD in the Technical bid will automatically disqualify the tenderer. EMD should be in the form of DD in favour of "The Registrar, Indian Institute of Technology Madras" and payable at Chennai. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker's pay orders will not be accepted. No interest will be paid for the EMD and the EMD (Bid Security) will be refunded to the Successful bidder on receipt of Performance Security
4. **Performance Security:-** The Successful bidder should submit Performance Security of an amount of 5% of the value of the contract. The Performance Security may be furnished in the form of an Account Payee DD, FD Receipt from the commercial bank, Bank Guarantee from commercial bank will be an acceptable.

**Only after submission of Performance Security, P.O will be released / L.C will be opened.**

**Performance Security in the form of Bank Guarantee:-** In case the successful bidder wishes to submit Performance Security in the form of Bank Guarantee, the Bank Guarantee should be routed through the Beneficiary Bank to the end used bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.

The Bank Guarantee should remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including the warranty obligations.



5. If an Indian agent is involved, the following documents must be enclosed:  
Foreign principal's proforma invoice indicating the commission payable to the Indian Agent and nature of after-sales service to be rendered by the Indian Agent.
  - ✓ Copy of the agency agreement with the foreign principal and the precise relationship between them and their mutual interest in the business.
  - ✓ The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.
6. The offer/bids should be sent only for a machine that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted.
7. Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid.
8. Documentary proof for the claimed position and reputation accuracies must be obtained from the principals and submitted along with the relevant pages of the standards.
9. Compliance or Confirmation report with reference to the specifications and other terms & conditions should also be obtained from the principal.
10. **Validity:** Validity of Quotation not less than 90 days.
11. **Delivery Schedule:-** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.
12. **Risk Purchase Clause:-** In the event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from other sources on the total risk of the supplier under risk purchase clause.
13. **Payment:-** No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation is agreed to wherever the installation is involved. In case of import supplies the payment will be made only through Letter of Credit and 90% payment will be released against delivery and 10% after installation wherever the installation is being done.

14. **Advance Payment:-** No advance payment is generally admissible. In case of specific percentage of advance payment is required, the Foreign Vendor has to submit a Bank Guarantee equal to the amount of advance payment and it should be routed through the Beneficiary Bank to the end user Bank. Otherwise, the Indian Agent of the foreign vendor has to submit a Bank Guarantee through a Nationalized Bank of India.
15. **On-site Installation:-** The equipment or machinery has to be installed or commissioned by the successful bidder within 15 to 20 days from the date of receipt of the item at Institution of IIT Madras.
16. **Warranty/Guarantee:-** The offer should clearly specify the warranty or guarantee period for the machinery/equipment. Any extended warranty offered for the same has to be mentioned separately.
17. **Late offer:-** The offers received after the due date and time will not be considered. The Institute shall not be responsible for the late receipt of Tender on account of Postal or any other delay.
18. **Acceptance and Rejection:-** I.I.T. Madras 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.
19. **Do not quote the optional items or additional items unless otherwise mentioned in the Tender documents / Specifications.**
20. **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 Chennai in Tamil Nadu.
21. **Acknowledgement:-** It is hereby acknowledged that the tenderer has gone through all the conditions mentioned above and agrees to abide by them.
22. All Amendments, time extension, clarifications etc., will be uploaded on the website only and will not be published in newspapers. Bidders should regularly visit the above website to keep themselves updated. No extension in the bid due date/ time shall be considered on account of delay in receipt of any document by mail.

**SIGNATURE OF TENDERER  
ALONG WITH SEAL OF THE  
COMPANY WITH DATE.**

**Specifications of the Infrared Thermal Camera:**

	<b>Parameter</b>	<b>Requirement</b>
1	Sensor Type	Liquid Cooled, InSb (Indium Antimonide) or MCT (Mercury Cadmium Telluride)
2	Pixel Resolution \$\$	640x512 and 320x256
3	Detector Pitch	20 micron or better
4	Sensitivity	20 mK @ 25 deg C or better
5	Accuracy	`+/-1 deg C or better
6	Image capturing frequency	100 Hz at full window/ maximum resolution or better
7	Output data	Raw ASCII & stress field by analyzing the images
8	Minimum focus distance	100mm
9	Lens	Variable focal length or multiple lens
10	Field of view	6 deg x 5 deg, 9 deg x 7 deg, 12.5 deg x 9.5 deg
11	Lens identification and calibration	Automatic
12	Object temperature range	0 deg C to 80 deg C
13	Spatial resolution at minimum focus distance	30 $\mu$ m or better
14	Operating temperature range	10 deg C to 50 deg C
15	Operating humidity range	75% to 95% RH at the above operating temperature range
16	Operating temperature & relative humidity correction	Automatic
17	F-number	Preferably variable
18	Communication	USB, Ethernet: TCP/IP, GigE vision & GenICam compliant
19	Triggering Options	Both digital and analog

**\$\$: Vendors are expected to quote for two separate cameras having the two maximum Pixel Resolutions as separate options. Only one of the 2 options will be selected.**

Further, the imaging system should have the following capabilities:

- Lock-in capability
- Stamping the analog signal used for the lock-in on the acquired images
- Sub windowing
- Snapshot Integrate while Read mode
- Interface software (image/IR signature capture and stress analysis)
- *LabView, MATLAB* Compatibility
- Tripod mounting
- Continuous operation for 3-5 days

**Additional Requirements:**

1. Vendors should provide continuous technical support and maintenance of equipment.
2. Vendors have to provide warranty for a minimum of one year. Approximate cost of annual system support/ maintenance contract once the warranty period is over has to be mentioned for a period covering 5 years from the date of purchase. Payment for the AMC payment will be made only at the end of warranty period on yearly basis.
3. Vendors must have sufficient experience in supplying equipment in reputed organizations for research purpose. They must provide references of end users whom we can contact for their experience with the equipment. Experience of the end users will also be used as a criterion for the selection of bids that meet technical requirements.
4. Vendors must provide detailed documentation, continuous technical and maintenance support of equipment.
5. Vendors will be called to visit and give presentation/demonstration on the equipment after opening the technical bid. They need to provide the approximate date for this presentation in the bid. The time period for this presentation would be 14 days from the date of opening of the bid.
6. Vendors must provide training to our technical staff for using the equipment.
7. All the expenses for installation, training and post sales technical support will be borne by the vendor.