



INDIAN INSTITUTE OF TECHNOLOGY, KANPUR
GT ROAD, KALYANPUR, KANPUR – 208016
UTTAR PRADESH, INDIA

TENDER REFERENCE NO.: IITK/CSE/2024-2025/30

BID SUBMISSION END DATE- 04-10-2024

TENDER DOCUMENTS

For

**“Purchase of MMWCAS-DSP-EVM kit mmWave cascade imaging radar DSP
evaluation module (Quantity-01 Set)”**

Tender document

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

Date of Publishing	25-09-2024 (17.00 hrs)
Bid Submission Start Date	25-09-2024 (17.00 hrs)
Last Date and time of uploading of Bids	04-10-2024 (16.00 hrs)
Date and time of opening of Technical Bids	07-10-2024 (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:**25-09-2024**

Enquiry No: **IITK/CSE/2024-2025/30**

Quotations are invited for the purchase of MMWCAS-DSP-EVM kit mmWave cascade imaging radar DSP evaluation module (Quantity-01 Set).

The detailed technical specification is described below.:

TECHNICAL SPECIFICATION - MMWCAS-DSP-EVM kit mmWave cascade imaging radar DSP evaluation module

1 Introduction

The MMWCAS-DSP-EVM is an evaluation platform utilizing the TDA2x high performance, multimedia application processor based on enhance OMAP architecture implemented with 28-nm technology.

The MMWCAS-DSP-EVM provides a processing foundation for a cascaded imaging radar system. Cascade radar devices can support front, long-range(LRR) beam-forming applications as well as corner and side-cascade radar and sensor fusion platforms. The EVM supports SSD storage for longer term capture scenarios and 1 Gigabit Ethernet connectivity for control and offloading captured data. The MMWCAS-DSP-EVM may also be referred to as DSP Board.

The EVM interfaces with a companion Cascade Radar EVM ([MMWCAS-RF-EVM](#)). The MMWCAS-RF-EVM is a 4-device, cascaded, array of AWR1243P mmWave devices. This document references the MMWCAS-RF-EVM and Radar Board as the same items. Both boards together provide a full Radar system evaluation.

1.1 Key Features

The key features of the MMWCAS-DSP-EVM are:

- TDA2SX ADAS SoC (23 mm x 23 mm)
- Four Lattice Crosslink Automotive Grade FPGAs
- 2GByte of DDR3L device
- PCIe 2.0 m.2 connector(m-keyed)
- MicroSD™ Card interface
- JTAG interface through FTDI FT2232HL Chip
- USB interface to provide UART, and I2C interfaces through the onboard FTDI device. This is used for mmWave Studio.
- User LEDs, 3 push-button switches, and 1x6DIP switches for user BOOT configurations
- 1Gb/s RGMII Ethernet interface with RJ45 jack
- Video- one HDMI Out
- Two HiRose 120-pin Automotive Rated Board-to-Board connectors
- 12-V DC input (Wall supply not included in kit)
- Optimized Power Management IC (PMIC) Solution
- Dimension (L x W): 160 mm x 136 mm
- Expansion connector to support AWR Cascade Radar EVM

1.2 **Kit Contents**

The following items are included with the MMWCAS-DSP-EVM kit. Unbox the board and identify various components and connectors.

- MMWCAS-DSP-EVM Board
- 512GB NVMe PCIE m.2 2280 SSD(assembled on EVM)
- 16GB microSD Card
- Ethernet cable
- Power Cable assembly
- USBA to miniB Cable
- Mounting standoffs and screws

1.3 **Thermal Compliance**

There is elevated heat on the processor/heatsink; use caution at elevated ambient temperature. Although the processor/heatsink is not a burn hazard, caution should be used when handling the EVM due to increased heat in the area of the heatsink.



Figure 1. Caution Hot Surface Warning located on EVM

2 **Hardware Specifications**

2.1 **Functional Block Diagram**

The functional block diagram of the MMWCAS-DSP-EVM is shown in [Figure 2](#).

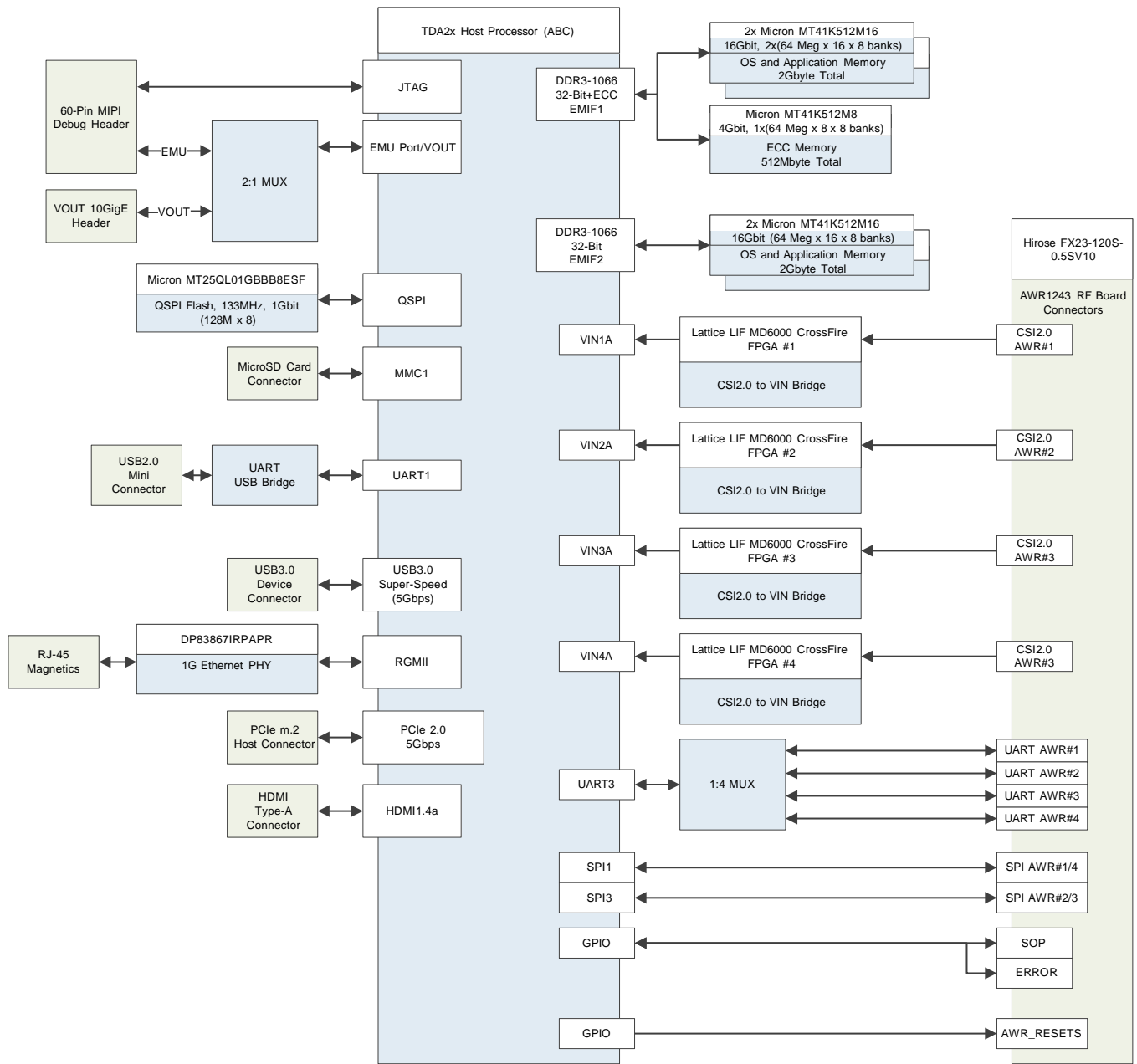


Figure 2. MMWCAS-DSP-EVM Functional Block Diagram

2.2 Board Dimensions & Description

The MMWCAS-DSP-EVM dimensions are 160 mm x 136 mm. It is a 22-layer board fabricated with epoxy fiberglass (UL94V-0 Certified). Figure 3 and Figure 4 show the top and bottom layers with key components identified.

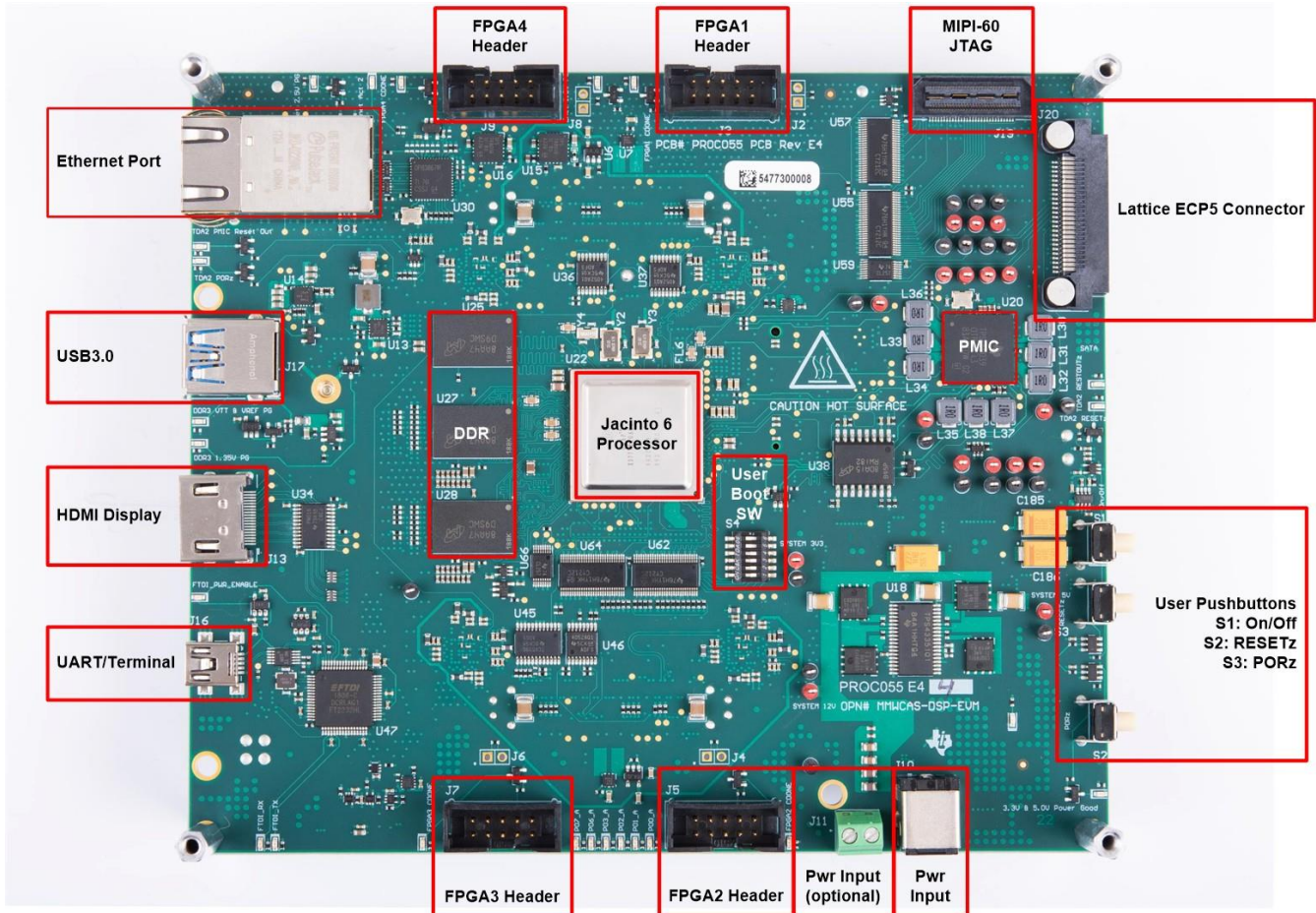


Figure 3. MMWCAS-DSP-EVM - Front

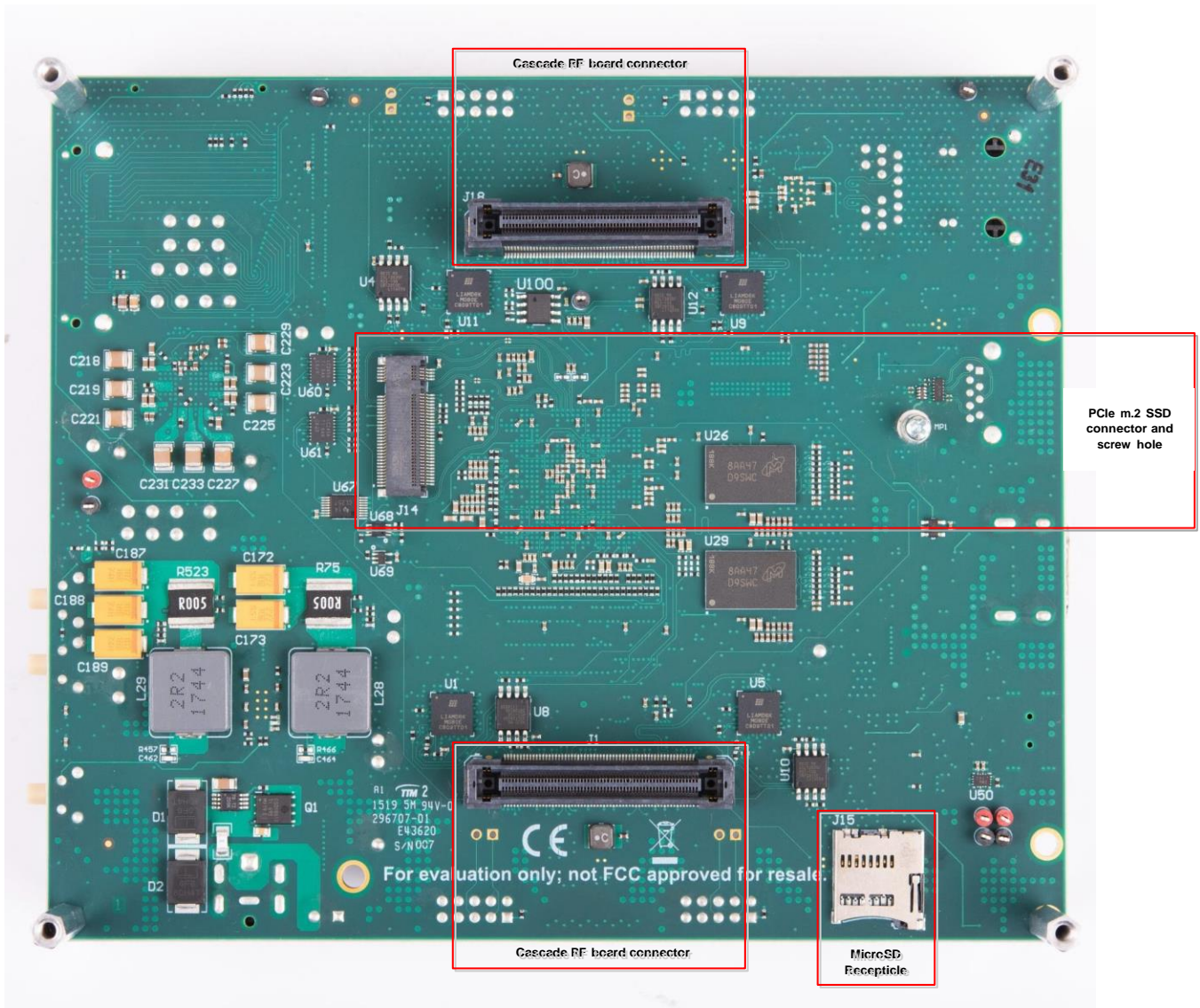


Figure 4. MMWCAS-DSP-EVM – Back

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 center 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. The Institute 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.
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)/Head.
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
- vi. Experience Criteria
- vii. Bidder Turnover

2. For any queries kindly Contact: [0512-259-6344](tel:0512-259-6344) or Email: purchase@cse.iitk.ac.in

Quotations should be in the name of: -

Dr. Amitangshu Pal

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

Mailing Address:

Nagendra Yadav
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)

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)**

