



Institute of Infrastructure, Technology, Research And Management

(An Autonomous University Established by Government of Gujarat)

IITRAM Campus, Near Khokhra Circle,

Maninagar (East), Ahmedabad – 380026, Gujarat.

Contact No.: 079-67775430

E-mail: rndoffice@iitram.ac.in

Website: www.iitram.ac.in

Tender No.: 2024/27

Date: 13.09.2024

NOTICE INVITING TENDER

Important Information:

Name of Item(s)	Procurement of Equipment for Sensors and Signal Processing Laboratory
Date of Issue of Tender	13.09.2024
Tender Fee	Rs.1770/- (Including 18% GST) (Non-Refundable)
Earnest Money Deposit(EMD)	Rs. 27,000/- (Refundable)
Last date and time for online bid/offer submission	14.10.2024 till 06.00 pm
Last date and time for bid/offer physical document submission	15.10.2024 till 05:00 pm
Date & Time for opening of technical bid/offer	16.10.2024 at 12:00 pm
Date & Time for opening of financial bid/offer	To be informed later through email <i>(Will be informed only technically qualified bidders)</i>
Tender Inviting Authority and Address	The Registrar Institute of Infrastructure, Technology, Research And Management Near Khokhara Circle, Maninagar (East), Ahmedabad – 380026, Gujarat, India. Phone: - 079-67775430 e-Mail: rndoffice@iitram.ac.in

Institute of Infrastructure, Technology, Research And Management

NOTICE INVITING TENDER

Subject: Inviting bids through e-Tender format for Procurement of Equipment for Sensors and Signal Processing Laboratory

Institute of Infrastructure, Technology, Research And Management (IITRAM), Ahmedabad invites bids for “Procurement of Equipment for Sensors and Signal Processing Laboratory” under “Two bid system in e-Tender format”. Interested parties/bidders who wish to participate in this e-Tender may obtain/download the tender documents from IITRAM website i.e. www.iitram.ac.in or from (n)Procure portal i.e., <https://educationtender.nprocure.com/>. After submission of online bid on (n)Procure portal, the bidder(s) have to submit the technical bid/offer documents through RPAD, Speed Post or in Person till the last date and time prescribed for submission. Tender sent by other means will not be accepted in any case. Hardcopy of Technical Bid Documents, Tender Fee, EMD and other essential documents should be submitted on or before **15.10.2024 till 05:00 PM** in the office of the IITRAM Room No. G2, Near Khokhara Circle, Maninagar (East), Ahmedabad-380026, Gujarat. Financial bid is to be submitted in electronic form only on (n)Procure portal i.e., <https://educationtender.nprocure.com/>.

1. Eligibility Criteria:

- 1.1 The bidder should have valid PAN Card. Copy of PAN Card to be submitted.
- 1.2 The bidder should have valid GST Registration. Copy of GST Registration to be submitted.
- 1.3 The bidder has to submit (Photocopies) last three years Income Tax Returns.
- 1.4 The bidder has to submit (Photocopies) the Firm Registration Certificate.
- 1.5 The bidder has to submit the Undertaking by Original Equipment Manufacturer (OEM) on OEM's letterhead (in original) as per **Annexure-VI**.
- 1.6 Tender Fee of **Rs.1770/- (Rupees One Thousand Seven Hundred and Seventy Only)** and Earnest Money Deposit (EMD) of **Rs. 27,000/- (Rupees Twenty-Seven Thousand Only)**.

2. General Terms and Conditions:

- 2.1 The quoted price shall include taxes (if any), other levy payable, all freight, packing & forwarding, transportation, loading & unloading, custom duty, excise duty & other duties, other charges (if any) to supply the item(s)/goods at our site.
- 2.2 The rates quoted also shall include training, installation, commissioning, erection and demonstration of item(s)/goods at our site.
- 2.3 The items for which quotation have been submitted must be in accordance with the specifications given in **Annexure-I**.
- 2.4 The rates quoted by the firm shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 2.5 The offer shall be valid up to 90 (ninety) days from the date of opening of Technical bid/offer.
- 2.6 The tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the scheduled tender are not fully filled in. Particular attention must be paid to delivery date and also to the particulars referred to in the condition of the contract.
- 2.7 Financial bids will be opened in online format of technically qualified bidders only.
- 2.8 Tender not complying with the above conditions are liable to be rejected at the sole discretion of IITRAM without any further reference/ communication.
- 2.9 This tender is not transferable.
- 2.10 IITRAM reserves its right to choose, accept or reject any or all requests/deviations/offers, in full or part and also reserve the right at any stage to reduce or increase the quantity and split the order.

- 2.11 The bidder has to submit duly signed & stamped photocopy of following documents:
- PAN Card of the firm
 - GST Registration Certificate
 - Last three years Income Tax Return (ITR) of their firm
 - Valid Firm Registration Certificate
 - Undertaking by Original Equipment Manufacturer (OEM) on OEM's letterhead (in original) as per Annexure-VI
 - Warranty certificate from Original Equipment Manufacturer (OEM) on OEM's letter head (in original)
 - All relevant Annexure(s)
- 2.12 **Performance Security:** The successful bidder shall be required to deposit Performance Security in form of (i) Account Payee Demand Draft (ii) Fixed Deposit Receipt from a Nationalized bank (iii) Bank Guarantee from a Nationalized bank, at the rate of **5%** of the total cost of contract, for the duration of warranty period plus additional two months, in favor of **"Institute of Infrastructure, Technology, Research And Management"** from the date of installation of ordered item(s)/goods. No payment shall be released without performance security.
- 2.13 This Performance Security will be returned (without any interest) within 30 working days after satisfactorily completion of warranty period.
- 2.14 The successful bidder shall have to enter into the Agreement (Contract Form) in the prescribed Performa provided by IITRAM. (on Rs.300 Stamp Paper). The said agreement should be submitted by the respective bidder within 30 (thirty) days after the receipt of the contract/purchase order.
- 2.15 **Inspection:** Pre-dispatch inspection at Bidders site or inspection after the delivery of goods, as the case may be.
- 2.16 **Inspection Charges** @0.5% within Gujarat State and Inspection Charges @1% for outside Gujarat State of the total order value, if required, should be borne by the bidder.
- 2.17 All or any Claim(s), dispute(s) or difference(s) arising out of or in with connection with this agreement shall be subject to the jurisdiction of the Courts at Ahmedabad only.
- 2.18 If any civil work is required to be done for installation and commissioning of the ordered item(s)/goods, then the supplier shall arrange the essential drawing. For this, prior permission of IITRAM's authority is required. The cost of such work is to be borne by the supplier.
- 2.19 Any loss or damage caused to the article in transit/installation/testing is to be made up by the firm free of cost within period of 30 days.
- 2.20 Standard toolkit required for the item(s)/goods to be supplied.
- 2.21 If the firm is blacklisted by Central Government or State Government or any other Government body, then the submitted tender will be rejected. It is essential for firm to submit **Annexure- V** duly filled, signed, sealed & stamped manner in hardcopy, failing which the tender will be summarily rejected.
- 2.22 The bidder should give a declaration as per **Annexure- VII** that none of his / her near relative, as defined below, is working / employed in IITRAM. In case of proprietorship firm declaration will be given by the proprietor, for partnership firm declaration will be given by all the partners and in case of limited company by all the Directors of the company excluding Government of India / Financial institution nominees and independent non-Official part time Directors appointed by Govt. of India or the Governor of the state and full time Directors of PSUs both state and central. Due to any breach of these conditions by the bidder, it will result in the rejection of the bidder's tender and forfeiture of the bidder's EMD at any stage whenever it is noticed. IITRAM will not pay any damage as well as will debarred the concerned bidder for further participation.
- The near relative for this purpose are defined as: -
 - (i) Member of Hindu Undivided family.
 - (ii) They are husband and wife.
 - (iii) The one is related to the other in the manner as father, mother, son(s) & son's wife (daughter in law), daughter(s), daughter's husband (son in law) & brother(s) & brother's wife, sister(s) & sister's husband (brother in law).
- 2.23 If there happens to be a holiday on any date indicated in this tender notice, the transaction shall be performed on the next working day.
- 2.24 In case the tender is cancelled, the tender fee will not be refunded to the concerned bidder.

- 2.25 The tender/bid (i.e. technical bid/offer) will be opened on **16.10.2024, 12:00 pm** at IITRAM Ahmedabad Premises. No separate information shall be given to individual bidders.
- The bidders or their authorized representative may remain present during the opening of the Technical bid, if they desire so, at their own expenses. The required technical specifications for the cited item(s)/goods is mentioned in Annexure-I.
 - Only those financial bids will be opened whose technical offers/bids are found suitable by the expert panel/committee appointed for the concerned item(s)/goods. The respective dates for opening of financial bid shall be informed to the technically qualified bidder(s) through email only.
 - In incomparable situation, the committee may negotiate price with the technically and financially qualified bidder before awarding the offer.
 - The tender committee reserves its right to select or reject any or all of the item(s) mentioned above without assigning any reasons.
- 2.26 If the bidder fails to meet any of the above eligibility criteria/ fails to submit the adequate testimonials in support of the above mentioned requirement will be disqualified.
- 2.27 Any effort by a bidder to influence IITRAM's tender evaluation, tender comparison or contract/order award decisions may result in the rejection of the bidder's tender and forfeiture of the bidder's EMD.
- 2.28 After opening of bids, information relating to the examination, clarification, evaluation and comparisons of bids and recommendations concerning the award of contract shall not be disclosed to bidders or other persons not officially concerned with such process.
- 2.29 In the event of any dispute or difference(s) between the vendee (IITRAM Ahmedabad) and the bidder(s) arising out of non-supply of material or supplies not found according to the specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to the concerned authority of IITRAM Ahmedabad who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act 1996. The decision of the arbitrator shall be final and binding on both the parties.
- 2.30 No firm shall withdraw their rates after the Tender is opened. If a firm does so, their tender related deposit/s shall be forfeited and such firm shall be considered ineligible for work/contract in future.

3. Submission of bid:

- 3.1 The Tender documents can be downloaded from Institute's website i.e., www.iitram.ac.in or (N)Procure portal i.e., <https://educationtender.nprocure.com/>. The bidder(s) are required to submit the Tender Acceptance Letter (**Annexure - IV**) endorsed by seal and signature as acceptance of terms and conditions of this tender. Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.
- 3.2 The fully filled in and complete in all respect tender must be submitted with Tender Fee and EMD through Electronic Transfer / Demand Draft. Bank/DD details are as follows:

For Electronic Transfer, Bank Account details are as follows:

Account Name: Institute of Infrastructure, Technology, Research And Management
Account No.: 923010019592531
Bank Name: AXIS BANK LTD
IFSC Code: UTIB0002645
Branch Name: Hatkeshwar Ahm GJ, Ahmedabad – 380026.

Note: Kindly submit Electronic Transfer advise with UTR details along with bid document.

OR

Demand Draft in favor of the "INSTITUTE OF INFRASTRUCTURE, TECHNOLOGY, RESEARCH AND MANAGEMENT" payable at Ahmedabad. Please mention Tender number and name of the firm on back side of DD.

- 3.3 Bidders registered with Micro and Small Enterprises (MSEs) and having valid MSE Certificate will be considered for relaxation of EMD. In view of the above, if the bidder will claim for EMD exemptions, the bidder should meet all the criteria for Micro and Small Enterprises. The bidder must submit the supporting document i.e. MSME registration certificate issued by competent government bodies (i.e. issued by Government of Gujarat & Government of India only) to become eligible for the EMD

exemptions. The registration certificate (MSE) of the bidder must cover the items tendered to get EMD exemptions.

- 3.4 The EMD is refundable (without any interest) within 30 (thirty) working days after successful award of Purchase Order:
- EMD of unsuccessful bidder(s) will be returned within 30 (thirty) working days from the date of award of offer/contract.
 - EMD of successful bidder(s) will be returned within 30 (thirty) working days after submission of a Performance Security.
 - The EMD shall be forfeited:
 - If bidder(s) withdraws their bid during the period of bid validity specified in this tender notice; and/or
 - In case of a successful Bidder fails, (i) To sign the contract agreement and (ii) To furnish a performance security.
- 3.5 The firm has to submit the Tender in two parts viz., (a) Technical bid/offer in *envelop No. (1)* and (b) Tender Fee & EMD in *envelope No. (2)*; both these envelopes should be sealed and put together in a *main covering envelope*, super scribed with – Please Don't Open, Bid for "*Tender for Procurement of Equipment for Sensors and Signal Processing Laboratory*" with due date, Tender Number and complete address along with contact number and email id.
- 3.6 **The bidder has to specify the make, model, and detailed technical specifications of the quoted/offered item and attach a separate compliance sheet if any deviation compares to the technical specifications mentioned in Annexure-I. Mere copying of the expected technical details into the product details will not be entertained and may even lead to disqualification of the bidder.**
- 3.7 **The bidder must produce the brochure, model and the make of the product being offered.**
- 3.8 It is essential for firm to submit **ANNEXURE(s), Tender documents and other essential documents** as mentioned in this tender notice **with duly filled, signed, sealed & stamped manner in hardcopy**, failing which that bidder's/firm's tender will be summarily rejected.
- 3.9 The "**Financial Bid**" to be filled as per **ANNEXURE – 'II'** and **should be submitted online only at (n)Procure Portal** as 'Financial Bid'. Rates quoted 'ONLINE' will only be considered.

4. Evaluation of Quotations:

The tender evaluation committee of the IITRAM will evaluate and compare the received quotations/bids to determine the substantially responsive tender i.e. (i) tender is complete (ii) properly signed (iii) confirm the terms/conditions and specifications. Further, the financial evaluation will be done only for the substantially responsive tender based on the following parameter(s):

- Total price quoted (ONLINE) at (n)Procure portal

5. Award of Contract:

- 5.1 IITRAM will award the contract to the firm who has offered lowest price.
- 5.2 Notwithstanding the above, IITRAM reserves the right to accept or reject any quotation and to cancel the bidding process and reject all quotations at any time prior to the award of contract without giving any reason.
- 5.3 The firm whose bid is accepted will be notified of the award of contract by the IITRAM prior to expiration of the bid validity period. The terms of the accepted offer shall be incorporated in the Purchase Order.

6. Delivery Period & Penalty:

- 6.1 **Delivery Period:** The item(s)/goods are to be delivered within a maximum time limit of 90 days from the issue date of Purchase Order. However, in case of imported item(s)/goods can be delivered within a maximum time limit of 120 days from the issue date of Purchase Order.
- 6.2 After the receipt of ordered item(s)/goods in acceptable condition at IITRAM, Ahmedabad bidder has to install item(s)/goods within 30 (thirty) days.

- 6.3 **Penalty:** Penalty of 1% per week of order value will be charged after duration specified above individually. Further, 06 weeks or above delay from above mention days may lead to cancellation of order at the discretion of the university and forfeiting the Performance Security or EMD or Maximum penalty shall be applicable @10%.

7. Warranty:

- 7.1 Minimum One (01) year complete warranty from the date of complete installation, commissioning and erection of all item(s)/goods at our site. During the warranty period i.e. 01 (one) year, the services should have to provide by the supplier onsite.
- 7.2 Warranty certificate should be provided from Original Equipment Manufacturer (OEM) on OEM's letter head.

8. Terms of Payment:

- 8.1 **Payment:** 100% payment shall be released within 30 (thirty) working days on satisfactory receipt, installation, testing and commissioning of the ordered item(s)/goods at our site, submission of clear Tax-Invoice(s) and supporting documents.
- 8.2 Advance payment will not be made under any circumstances.
- 8.3 Recoveries as per the Institute's norms shall be made while making payment (if any) without prior intimation to the supplier.

9. Address for the submission of bid/offer documents:

The Registrar
Institute of Infrastructure, Technology, Research And Management
Room No. G2,
Near Khokhara Circle, Maninagar (East),
Ahmedabad- 380026, Gujarat, INDIA.
Email: rndoffice@iitram.ac.in

Registrar

(Schedule of Quantity)

Name of Item: Procurement of Equipment for Sensors and Signal Processing Laboratory under Centre for Advanced Defense Technology

Sr. No.	Name of Item/Equipment	Qty.
1	<p>DSP Floating Point Starter Kits</p> <ul style="list-style-type: none"> • All in One DSP Kit – TMS320C6748 with XDS100_V2 JTAG emulator • TMS320C6748 – Fixed/ Floating Point Digital Signal Processor • DSP with up to 456 MHz performance. • On board 14 Pin (2x7 Pin) JTAG emulation connector • Boot mode selection switch • On board 256 MB Flash memory; On board 128 MB DDR2 RAM memory • On board DB9 connector for UART-1 interface • On board 3 pin header for UART-2 interface • On board USB TYPE B Connector for UART-2 interface for Debug Console • LED indication for USB connection for Debug Console • On board Reset Switch with LED indication • On board USB Type A Connector for USB host interface • On board micro USB Type A Connector for USB OTG interface • On board RJ45 connector for 10/100 Ethernet interface • On board I2C based Temperature sensor & RTC interface • On board SPI based micro SD card interface, Provision for SATA connector • On board Power-On LED indication and 4 User LED at GPIO Pin as GPIO Test point • On board 5 user push buttons for various applications • Boot mode selection switch • On board Video in port available • On board VGA out connector • Provision for composite video out connector • On board Graphics LCD interface connector which can be used for GPIO pins also and compatible with All in one GPIO Kit • On board audio jack and speaker (Mic in) interface • On board audio codec for speaker out • Provision for CMOS sensor connector to interface CMOS camera • On board Temperature sensor with interrupt out facility • On board jumper selection to switch various video out options • On board LED to indicate power surge & to indicate high voltage input up to 27.5V • On board excessive voltage protection circuit with LED indication for high voltage input up to 27.5V • Input Voltage Protection Circuit - High voltage input voltage protection facility for providing prevention of damage to audio codec of DSP kit up to 40V Peak to peak voltage from function generator input on power on and power off conditions as well maintaining signal properties in desired voltage and frequency range. • Various test points for various signals • On board jumper to switch UART2 between USB connector and 3 pin connector • XDS100_V2 JTAG Emulator • A properly documented workbook featuring installation procedures, project creation steps, compilation steps for each project. The workbook should contain programs on basic DSP like signal generation, audio processing, implementation of filters like FIR, IIR, etc. Image processing examples like Edge detection, thresholding using Image clipping, Video processing examples like video loopback, Face detection, text display on video, etc. 	04
2	<p>DSP Fixed Point Starter Kit</p> <ul style="list-style-type: none"> • Basic DSP Kit - TMS320C5515 with XDS100_V2 JTAG Emulator • TMS320C5515 – Fixed Point Digital Signal Processor, • DSP with up to 60, 75, 100, 120 MHz Clock Rate., • On board 14 Pin (2x7 Pin) JTAG emulation connector* • On board 32MB Flash Memory (3V 70ns Parallel NOR Flash Memory)* • 320K Bytes Zero-Wait State On-Chip RAM, Composed of: • 64K Bytes of Dual-Access RAM (DARAM), 8 Blocks of 4K x 16-Bit • 256K Bytes of Single-Access RAM (SARAM), 32 Blocks of 4K x 16-Bit 	02

	<ul style="list-style-type: none"> • 128K Bytes of Zero Wait-State On-Chip ROM (4 Blocks of 16K x 16-Bit) • On board 3 pin header for UART interface* • On board USB TYPE B Connector for UART interface for Debug Console* • On board Reset Switch with LED indication* • On board Mini USB Type AB Connector for USB device interface • On board SPI based micro SD card interface • On board 6 pin relimate connector for SPI communication* • On board 4 pin relimate connector for I2C communication* • On board 20 Pin GPIO connector* • on board 3.3V Power-On LED indication* • On board XF LED indication, On board 4 User LED at GPIO Pin as GPIO Test point, • On board ADC based 2 user push buttons for various applications* • On board 10 bit 4 channels Successive Approximation ADC input facility* • On board 2 audio jack for input and 2 audio jack for output <ul style="list-style-type: none"> ○ On board audio jack for Headphone out* ○ On board audio jack for Stereo out, ○ On board audio jack for Stereo In1, ○ On board audio jack for Stereo In2* • On board LED to indicate power surge* • On board LED to indicate high voltage input* • On board LED to indicate power surge & to indicate high voltage input up to 27.5V • On board excessive voltage protection circuit with LED indication for high voltage input up to 27.5V • LED indication for USB connection for Debug Console* • Various test points for various signals, • On board jumper selection to switch UART RXD between USB connector and 3 pin connector • Input Voltage Protection Circuit - High voltage input voltage protection facility for providing prevention of damage to audio codec of DSP kit up to 40V Peak to peak voltage from function generator input on power on and power off conditions as well maintaining signal properties in desired voltage and frequency range. • A properly documented workbook featuring installation procedures, project creation steps, compilation steps for each project. The workbook should contain programs on basic DSP like signal generation, audio processing, implementation of filters like FIR, IIR, etc. • Size: 99mm x 57.42mm • Input Voltage - 5V DC using 5V Adaptor* 	
3	<p>Graphics Card 24GB</p> <ul style="list-style-type: none"> • TUF-RTX4090-O24G-GAMING • Cooling System: Triple Fan • Cuda Core:16384 • Boost Clock Speed: 2.595 GHz • GPU Memory Size: 24 GB • Memory Storage Capacity: 24 GB • Hardware Interface: PCI Express x8 • Graphics RAM Type: GDDR6 • Graphics Card Interface: PCI-E • Wattage: 850 Watts 	01
4	<p>Graphics Card 16 GB</p> <p>Possible Company / Make: Quadro RTX 5000</p> <ul style="list-style-type: none"> • CUDA Parallel-Processing Cores: 3,072 • NVIDIA Tensor Cores: 384 • NVIDIA RT Cores: 48 • GPU Memory: 16 GB GDDR6 • RTX-OPS: 62T • Rays Cast: 8 Giga Rays/Sec • FP32 Performance: 11.2 TFLOPS • Max Power Consumption: 265 W • Graphics Bus: PCI Express 3.0 x 16 • Form Factor: 4.4" (H) x 10.5" (L) Dual Slot 	02

	<ul style="list-style-type: none"> • VR Ready: Yes • MULTI-GPU SC 	
5	Graphics Card 8 GB – DUAL-RTX4060TI - 8GB <ul style="list-style-type: none"> • DUAL-RTX4060TI- 8GB • Cooling System: Dual Fan • Cuda Core: 4352 • Boost Clock Speed: 2.595 GHz • GPU Memory Size: 8 GB • Graphics RAM Type: GDDR6 • Graphics Card Ram Size: 8 GB • Graphics Card Interface: PCI-Express x16 • Wattage: 550 Watt 	02
6	AI Kit for Robotics Possible Company / Make: Jakson / edutech <ul style="list-style-type: none"> • SparkFun JetBot AI Kit v3.0 Powered by Jetson Nano • V3 includes a new image with the Nvidia Jetpack Version 4.3 • SparkFun Qwiic ecosystem for I2C communication • Ecosystem can be expanded using 4x Qwiic connectors on GPIO header • Example Code for: Basic Motion, Teleoperation, Collision avoidance, & Object Following • Compact form factor to optimize existing neural net from NVIDIA • 136° FOV camera for machine vision • Pre-flashed microSD card 	02
7	IOT Development board <ol style="list-style-type: none"> 1) Arduino MKR IoT Bundl <ul style="list-style-type: none"> • UPC: 813747020152 • The Arduino IoT kit is a great way to get started with the Internet of Things. • The Arduino kit includes the components you need to make 5 IoT projects following the step-by-step online tutorials on the Arduino Project Hub online platform. • This Arduino kit is based around the MKR1000—a powerful board that combines the functionality of the Zero and the Wi-Fi Shield. • Arduino enables Makers to add connectivity to their designs with minimal prior networking experience. 	03
	<ol style="list-style-type: none"> 2) ARDUINO MKR WAN 1300 <ul style="list-style-type: none"> • Based on SAMD21 and a Murata CMWX1ZZABZ Lo-Ra module • Powered using two 1.5V AA or AAA batteries or external 5V • Arduino software (IDE) for code development and programming • No of bits:32 • Silicon Core Number: SAMD21, CMWX1ZZABZ • Kit Contents: Dev Board MKR WAN 1300 • Core Sub-Architecture: Cortex-M0+ • Core Architecture: ARM 	03
	<ol style="list-style-type: none"> 3) Development Board, Arduino MKR WiFi with headers Low power WiFi with Cryptochip for SHA-256 encrypted secure communication <ul style="list-style-type: none"> • Supports the Arduino Software IDE for development and programming • Integrated Li-Po charging circuit allows the shield to run on battery or external power whilst charging the battery • 32-bit ARM Cortex-M0+ • 48MHz Clock speed • Digital I/O pins: 22 • Analogue I/O pins: 7/1 • Interfaces: I2C, I2S, SPI, UART • Operating voltage: 3.3V 	03

	<p>4) BeagleBone Black Cape, LCD, 7", Capacitive Touchscreen with Cover Lens Bezel</p> <ul style="list-style-type: none"> • Capacitive touch Gen4 LCD CAPE module with cover lens bezels (CLB) and 7" primary TFT display. • This module features a capacitive touch screen controlled by a Focaltech capacitive touch controller which interfaces the display and Beagle Bone Black (BBB) via I2C protocol. • The Beagle Bone Black (BBB) connects directly to an adaptor CAPE using a 30-way FFC ribbon cable. The LCD CAPE requires power and display signals which are provided from the BBB directly via the adapter and FFC ribbon cables. • 4DCAPE is not compatible with the Beagle Bone White and can only be used with Beagle Bone Black • 800 x 480 resolution • EEPROM CAPE ID selection via DIP switch • Offers significant improvement over the analogue interface of previous 4DCAPE models 	03
	<p>5) ARM Cortex-5 General Purpose dev. Board with Debugger</p> <p>Features:</p> <ul style="list-style-type: none"> • Core: ARM@32-bit Cortex®-M4 CPU with FPU, Adaptive real-time accelerator (ART Accelerator™) allowing 0-wait state execution from Flash memory, frequency up to 168 MHz, memory protection unit, 210 DMIPS/1.25 DMIPS/MHz (Dhrystone 2.1), and DSP instructions • Memories • Up to 1 Mbyte of Flash memory • Up to 192+4 Kbytes of SRAM including 64-Kbyte of CCM (core coupled memory) data RAM • 1.8 V to 3.6 V application supply and I/Os • POR, PDR, PVD and BO • 4-to-26 MHz crystal oscillator • Internal 16 MHz factory-trimmed RC (1% accuracy) • 32 kHz oscillator for RTC with calibration • Internal 32 kHz RC with calibration • 3×12-bit, 2.4 MSPS A/D converters: up to 24 channels and 7.2 MSPS in triple interleaved mode • 2×12-bit D/A converters 	03
	<p>6) Pixy 2 CMUcam5 Smart Vision Sensor</p> <p>Specifications:</p> <ul style="list-style-type: none"> • Image sensor: Aptina MT9M114, 1296×976 resolution with integrated image flow processor • Processor: NXP LPC4330, 204 MHz, dual core • Lens field-of-view: 60 degrees horizontal, 40 degrees vertical • Power consumption: 140 mA typical • Power input: USB input (5V) or unregulated input (6V to 10V) • RAM: 264K bytes • Flash: 2M bytes • Available data outputs: UART serial, SPI, I2C, USB, digital, analog 	03
8	<p>Intel Atom IOT board</p> <p>Possible Company Make: Intel / Seeed</p> <p>Pentium N4200, Celeron N3350 and ATOM E3940, with only 4W of Scenario Design Power, and a powerful and flexible Intel® FPGA Altera MAX 10 onboard. With comprehensive I/O , such as 3 x USB 3.0, 2 x USB 2.0, 2 x Gigabit LAN, 1 x HDMI, 1 x DP, eDP, mini PCI-e/mini card SATA, M.2 2230, SATA 3.0, 2 x CSI, and 40-pin GP-bus, UP Squared serves as an ideal IoT platform to connect with sensors and cloud.</p>	05

FINANCIAL BID

(Format for Submission of Financial Details)

(Data Sheet to be submitted ONLY Online at (n)Procure Portal)

Sr. No.	Name of Items	Qty.	Per Unit Rate (Without GST)	Total Amount	GST Slab Rate (In %)	Total Amount Including GST (INR)
A	B	C	D	E = (C*D)	F	G = (E*F/100) + E
1	DSP Floating Point Starter Kits	4	100	400	18%	472
2	DSP fixed point statater kits with code composer studio (CCS)	2	100	200	18%	236
3	Graphics Card 24 GB (as per Annexure-I)	1				
4	Graphics Card 16 GB (as per Annexure-I)	2				
5	Graphics Card 8 GB (as per Annexure-I)	2				
6	AI Kit for Robotics (as per Annexure-I)	2				
7	IOT Development board:					
	1) Arduino MKR IoT Bundl	03				
	2) ARDUINO MKR WAN 1300	03				
	3) Development Board, Arduino MKR WiFi with headers	03				
	4) BeagleBone Black Cape, LCD, 7", Capacitive Touchscreen with Cover Lens Bezel	03				
	5) ARM Cortex-5 General Purpose dev. Board with Debugger	03				
	6) Pixy 2 CMUcam5 Smart Vision Sensor	03				
8	Intel Atom IOT board (as per Annexure-I)	05				
Gross Amount						708

This table of financial bid is stated for reference purpose only and please do not disclose any price here at the time of submission of this document.

Declaration:

I/We hereby declare and affirm that I/We have read and understood the terms and conditions of the contract as stipulated in this tender notice.

Signature of Bidder with Seal

Date: _____

Place: _____

Name of Item(s): Procurement of Equipment for Sensors and Signal Processing Laboratory

FORMAT FOR SUBMISSION OF BIDDER'S INFORMATION

1	Registered Name of the Bidder:	
2	Registered Office Address: Contact Number Fax Number E-Mail	
3	Correspondence Address: Contact Number Fax Number E-Mail	
4	Details of the authorized person: (Name, Designation, Address) Contact Number Fax Number E-Mail	
5	Bidder Registration Type - <ul style="list-style-type: none">• Proprietary Firm• Partnership Firm (if yes, give partnership deed)• Company or LLP• Government/ Public Sector Undertaking• Member of a group of companies (if yes, give name, address & details of group companies)• Subsidiary of a large corporation (if yes, give the name & address of the parent organization) If the company is subsidiary, state what involvement will the parent company have in the project.	
6	Permanent Account Number (PAN):	
7	Goods & Service Tax Number (GST):	
8	<u>Particulars of Bank Account</u> Name of the Bank: Name of the Branch: Branch Code: Address & Contact Details: IFSC Code: Type of Bank Account: Bank Account No.:	

Signature of Bidder with Seal

Date: _____

Place: _____

TENDER ACCEPTANCE LETTER

To,
The Registrar
Institute of Infrastructure, Technology, Research And Management
Near Khokhra Circle, Maninagar (East),
Ahmedabad – 380026, Gujarat.

Subject: Acceptance of Terms & Conditions of the Tender

Tender Reference No:

Name of Tender / Work: **Procurement of Equipment for Sensors and Signal Processing Laboratory**

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned “Tender/Work” from the web site(s) namely: _____
2. I/We hereby certify that I/we have read the entire terms and conditions of the tender documents (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 / organizations too have also been taken into consideration, while submitting this acceptance letter.
4. I/We hereby declare that I/We have carefully studied the conditions of contract, specifications and other tender documents of this work and 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 by any Govt. Department/Public sector undertaking/Govt. Autonomous organizations.
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/ organization shall without giving any notice or reason therefore can summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full EMD/SD absolutely.

Yours faithfully,

(Signature of Bidder with Seal)

Date: _____

Place: _____

Name of Item(s): **Procurement of Equipment for Sensors and Signal Processing Laboratory**

UNDERTAKING

I, _____ hereby declare that Firm / Company / Agency / Organization / Partnership firm / Proprietary firm titled as _____ has not been blacklisted or banned or debarred at any stage from inception till this date by any of the NITs / IITs / IIITs / Central Universities / IISERs / CSIR Labs Central and State Government body / PSUs / Autonomous Institute or any Other Government Organization. In case of the any fraudulency, the Firm / Company / Agency / Organization / Partnership firm / Proprietary firm is fully aware that the tender / contract will be rejected / cancelled by IITRAM and EMD / Performance Security or any deposited amount shall be forfeited.

In addition to above, IITRAM will not be responsible to pay the bills for any completed / partially completed / supplied work.

Signature of Bidder with Seal

Date: _____

Place: _____

UNDERTAKING BY ORIGINAL EQUIPMENT MANUFACTURER (OEM)

To,
The Registrar
Institute of Infrastructure, Technology, Research And Management
Near Khokhra Circle, Maninagar (East),
Ahmedabad – 380026, Gujarat.

Subject: Undertaking by Original Equipment Manufacturer (OEM)

Tender Reference No:

Name of Tender / Work: **Procurement of Equipment for Sensors and Signal Processing Laboratory**

Sir,

We, M/s. _____ (*Name of the OEM*) having registered office at _____ (*address of the OEM*) by virtue of being original equipment manufacturer for _____ (*Name of the product/s*), hereby authorize M/s. _____ (*Name of the bidder*) having their office at _____ (*Address of bidder*) to submit quote, supply, install and provide after sales support for our range of products quoted by them to meet the above mentioned tender requirements.

M/s. _____ (*Name of the OEM*) within the scope of requirement as per the tender mentioned above undertake to provide technical & other support towards fulfilling the requirements of installation, commissioning, benchmarking, acceptance criteria and product warranty services of the tendered item(s)/goods to be supplied and installed at IITRAM.

We will support M/s. _____ (*Name of the bidder*) on regular basis with all related issues, technology and product updates and extends comprehensive support during the entire warranty period.

The undersigned is authorized to issue such authorization on behalf of M/s. _____ (*Name of the OEM*).

For M/s. _____ (*Name of the OEM*)

Signature & Company Seal

Name :

Designation :

Email :

Mobile No. :

DECLARATION REGARDING NEAR RELATIVES

I, _____, authorized signatory of M/s. _____ hereby declare that none of our near relative(s) as defined in the tender documents is / are working / employed in IITRAM. In case at any stage, it is found that the information given by us is false / incorrect; IITRAM shall have the absolute right to take any action as deemed fit without any prior intimation to us.

Near Relative for this purpose are defined as:-

- (i) Member of Hindu Undivided family.
- (ii) They are husband and wife.
- (iii) The one is related to the other in the manner as father, mother, son(s) & son's wife (daughter in law), daughter(s), daughter's husband (son in law) & brother(s) & brother's wife, sister(s) & sister's husband (brother in law)

Signature of Bidder with Seal

To be signed by:-

- (a) Signature of Proprietor in case of Proprietorship Firm

.....

- (b) Signature of all partners in case of Partnership Firm

i.

ii.

iii.

- (c) Signature of all Directors of Company in case of Ltd. or Pvt. Ltd. Company

i.

ii.

iii.