

NATIONAL INSTITUTE OF TECHNOLOGY

TIRUCHIRAPPALLI – 15

Department of **Computer Applications**

Web : www.nitt.edu

Phone : 0431 - 250**3731**



TENDER DOCUMENT

Tender Notification No.: NITT/F.No.010/CAP.EXP.35/2017-18/CA

Dated: 08.02.2018

Name of the component : Boards and Software Kit for IoT Analytics lab

Quantity required : 1

EMD Amount : Rs. 5600/-

Cost of the Tender Document : Rs.150/-

Delivery : **Within 8 weeks**

Last Date of submission of Tender : **up to 20.02.2018, 3.00 pm**

Address for submission of Tender : The Director,
National Institute of Technology- Tiruchirappalli,
Tiruchirappalli – 620015, Tamilnadu, India
Kind ATTN to: Dr. B. Janet
Dept. of Computer Applications
Phone: 9442648096
Email: janet@nitt.edu

Date of opening of technical bid : **20.02.2018 at 3.30 pm**



**NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 15**

DEPARTMENT OF COMPUTER APPLICATIONS

Tender Notification No.: NITT/F.No.010/CAP.EXP.35/2017-18/CA

Dated: 08.02.2018

NOTICE INVITING TENDER

The National Institute of Technology, Tiruchirappalli (NITT) is an autonomous body under MHRD, GOI, imparting Technical Education and engaged in Research Activities. It is proposed to procure the following component for the Departmental academic/research activities.

Sealed bids under **two bid system** are invited for the following component subject to the following terms and conditions, from the reputed manufacturers or their authorized dealers so as to reach this office on or before scheduled date and time. The technical cover will be opened on the same day in the presence of bidders or their authorized agents who may choose to be present.

Name of the component	: Boards and Software Kit for IoT Analytics lab
Quantity required	: 1
EMD	: Rs. 5600/-
Cost of the Tender Document	: Rs. 150/-
Time for completion of supply after placing purchase order	: within 8 weeks
Last Date of submission of Tender	: 20.02.2018 up to 3.00pm

Address for submission of Tender : The Director,
National Institute of Technology- Tiruchirappalli,
Tiruchirappalli – 620015, Tamilnadu, India
Kind ATTN to: Dr.B. Janet,
Dept. of Computer Applications
Phone: 9442648096
Email: janet@nitt.edu

Place, Date and time of opening of bid :

Date: 20.02.2018

Time: 3.30 pm

Venue: stores

Note : The Institute shall not be responsible for any postal delay about non-receipt / non delivery of the bids or due to wrong addressee.

INSTRUCTIONS TO BIDDERS

BIDDER'S COPY

- This document set contains the following:
 - Terms and conditions of the Tender
 - Details of the Firm offering this Quote
 - Technical Compliance Form
 - Quotation form (Price Bid)
 - Currency Form (quoted on behalf of the foreign suppliers)
 - NIT-T's check list copy
- The bidder's copy is for your future records. Please fill in and return only NIT-T's copy.
- The bidder should give details of their technical soundness and provide list of customers of previous supply of similar items to Universities, Institutes or Government Departments/Undertakings/public sectors with contact details. The details of the agency/profile should be furnished along with the copy of all related documents.
- Read through the terms and conditions given and affix your signature and seal if you find them acceptable. Any deviations may be recorded. Read carefully list of specifications that we have enclosed.
- Fill in the questionnaire regarding the Firm.
- The downloaded documents '**Technical Compliance Form**' and '**Quotation Form (Price Bid)**' should be **TYPE WRITTEN USING CAPITAL LETTERS ONLY**. At the time of filling the "**Quotation Form (Price Bid)**" make sure that you have not missed anything. Specify the model number & specification for each item. The form should be filled item-wise. Do not leave blank fields. If you are not quoting for a specific item, you should specify "**NOT QUOTING**".
- Do not use** ambiguous terms like "**yes**", "**complied**" or "**available**". Specifically mention the matching specification of the product offered by you. Make sure that you have affixed your signature with date and seal on all the documents.
- Please send the tenders in a sealed envelope superscribed as "**QUOTATIONS AGAINST TENDER NOTIFICATION NO: NITT/F.No.010/CAP.EXP.35/2017-18/CA Item No.:1 : "Boards and Software Kits for IoT Analytics lab "**" so as to reach "The Director, National Institute of Technology, Tiruchirappalli - 620 015, India" on or before **20.02.2018 upto 3.00 PM along with a Softcopy of the Technical Compliance form (along with cover-2) and Quotation Forms (along with cover-3) in MS-Excel file format in a CD/DVD or USB drive.**
- For any further clarifications, contact by E-Mail: janet@nitt.edu or by written request to "The Registrar, National Institute of Technology, Tiruchirappalli - 620 015, India"

Last Date for receipt of tender at NIT-T : 20.02.2018 up to 3.00 P.M.

Opening Date for technical bid : 20.02.2018 at 3.30 P.M.

CHECKLIST TO BE FILLED IN BY BIDDER

List of documents to be enclosed	Completed & Signed
1. Terms and Conditions form	YES / NO
2. Details of the Firm offering this Quote	YES / NO
3. NIT-T's Quotation form (Technical & Price Bid)	YES / NO
4. Currency Form(quoted on behalf of the foreign suppliers)	YES / NO
5. Other technical specifications & pamphlets	YES / NO

Note: 1.

"Cover" should contain the following:

- Form of "**Acceptance of Terms and Conditions**".
- Form of "**Firm details**"
- Pamphlets, if any (in a separate sealed cover)
- Quotation Form (Technical, Price Bid and Currency Form)

Please retain this page with you for your future reference.

SECTION : 1 – TWO BID TENDER

Cover 1: EMD and Tender cost

(should be superscribed as 'EMD and tender cost cover' duly indicating the Tender reference No. and the due date of opening)

Earnest Money Deposit (EMD) and tender cost are to be submitted by way of Demand Draft/FDR drawn on any Nationalized bank in India in favor of "The Director, NIT, Trichy" payable at Trichy. The bids submitted without EMD or tender cost will be treated as non-responsive and will be rejected. EMD shall bear no interest.

Cover 2: Technical Bid

(should be superscribed as 'Technical Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Technical pamphlets
- b. Detailed technical specification
- c. Copy of license certificate for manufacture/supply of the item*
- d. Income Tax PAN number & TIN number/GST. *
- e. Last three years balance sheet approved by the CA and the IT return. *
- f. Warranty period offered for the tendered item to be specified. If the warranty period is not conforming with the schedule of requirements given in section 3 of the Tender document, the bid is liable to be treated as non-responsive and will be rejected.
- g. Duly filled up technical questionnaire, if any
- h. Duly filled up deviation schedules to technical specifications, if any
- i. Copy of supply orders completed during the last three years

* Appropriately pertaining to the country of origin.

Cover 3: Price Bid

(should be superscribed as 'Price Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Price bid as per the format in Section-4 of the tender document
- b. Break-up price as per the format in Annexure-A

Note:

- a. If the prices are revealed in cover 1 or in cover 2, the offer will be summarily rejected.
- b. Each Cover shall be sent in a double sealed cover. The inner covers (Cover 1, Cover 2 and Cover 3) should be sealed individually with the Sellers's distinctive seal and superscribed with the tender reference No. and due date of opening. All inner covers shall be placed in a common outer cover which shall also be sealed with seller's distinctive seal and superscribed with the tender reference No. and due date of opening.
- c. Mention "Kind Attention: **Dr. B. Janet** and submit at the address given in the Notice Inviting Tender.
- d. Cover 1 & 2 will be opened on the scheduled date and time mentioned in the tender enquiry.
- e. Cover 3 of the technically and commercially suitable offers alone will be opened on a date which will be intimated to the qualified bidders.

SECTION : 2 – TERMS AND CONDITIONS FORM

IMPORTANT: READ THE FOLLOWING TERMS AND CONDITIONS AND SIGN THE ACCEPTANCE CLAUSE FOLLOWING IT

1. The offers should be addressed to “The Director, National Institute of Technology, Tiruchirappalli 620015, India” and should be sent in a sealed envelope superscribed **BID AGAINST TENDER NOTIFICATION No.: NITT/F.No.010/CAP.EXP.35/2017-18/CA** ” so as to reach us **on or before 20.02.2018 up to 3.00 pm.**
2. Each offer should be sent in a sealed cover with the tender documents. Tenders received through email or FAX will not be considered. **Softcopy of the Technical Compliance form and Quotation Forms should be submitted along with the tender in MS-Excel file format in a CD/DVD or USB drive. However, if there is any dispute between Hard copy and Soft copy, Hard copy will be taken.**
3. The tenders will be opened on **20.02.2018 at 3.30 pm** in the presence of the vendors present with authorization letter from the respective companies / firms. Suppliers intending to attend the tender opening should intimate us in advance.
4. Full technical specifications and pamphlets should be sent along with the tenders. **Offers without proper technical specifications will be rejected.**
5. The rate quoted should be on unit basis excluding Taxes. Taxes and other charges should be quoted separately, considering exemptions if any.
6. All offers should indicate unit price (excluding taxes and duties applicable), Taxes and other charges should be mentioned separately, if any. Additional charges for packing, forwarding, freight, insurance etc., if any, should be clearly mentioned. Clearance at Customs will be arranged by us.
7. NIT-T is paying concessional Customs & Excise duty under Government of India Notification No.51/96for Central Customs and 10/97 for Central Excise Duty vide Certificate No.TU/V/RG-CDE(183)/2011 dt.10.10.11. Currently the purchaser is paying 5% Basic Customs Duty, 2% Educational Cess on Basic Customs Duty, 1% Higher Education Cess on Educational Cess, and 4% Import Additional Duty. **This institute is exempted from payment of service tax as per Sl.no. 9 of Government notification No25/2012-ST dated 20th june, 2012.**The Institute is not authorized to issue C and D forms of Sales tax certificate.
8. In case the offered items are to be imported, the rates should be quoted in foreign currency on C.I.F. Chennai Airport basis, and it should include the Freight up to Chennai airport and the insurance cover should be up to National Institute of Technology, Tiruchirappalli. NIT-T shall pay Customs duty if any.
9. If the price quoted is in foreign currency and if the order value is more than US\$10,000 and requested by the bidder then 100% payment will be made through **Letter of Credit (LC) at sight on acceptance. The bank charges outside India should be borne by the Supplier / Beneficiary. Part shipment not allowed.**
10. If the price quoted is in Indian Rupees, then 100% payment will be made only after installation and commissioning. **No advance payment will be made.**
11. No revision of the price bid will be allowed once the price bids are opened. In case of foreign currency, the agency should mention the % of currency fluctuations they can bear.
12. No increase in price will be allowed after our firm orders are placed.
13. **Payment of excise duty and GST (on ultimate products)** as applicable on the closing date of tender will be to the supplier’s / contractor’s account. Any statutory variation (both plus and minus) in the rate of GST after closing date of tender/revised price bid but before the expiry of the contractual delivery / completion period will be to the account of the office.

The bidder(s) should indicate, in their bid, the amount with exact rate of the GST on ultimate finished product, as applicable at tendering stage, separately in the bid. In case the above information subsequently proves wrong, incorrect or misleading (a) this Institute will have no liability to reimburse the excess in the difference in rates of the item under which the duty/tax assessed finally (b) this Institute will have the right to recover the difference in case the rate of duty / tax finally assessed is on the lower side. Any increase in GST during extended period of the contract / supply order will be to supplier's / contractor's account where such extension in delivery of the materials/completion of the project was on the request of supplier / contractor. However, any decrease in GST during extended period of the contract / supply order, will be to the account of this Institute.

14. **This institute is exempted from payment of service tax as per Sl.no. 9 of Government notification No25/2012-ST dated 20th june, 2012. The tenderer should verify the excise duty exemption certificates of this institution and service tax rules before submission of the Bid. It will be assumed on the submission of bid that excise duty exemption will be provided and no other conditions after the issue of purchase order will be accepted. No service tax will be paid by this institute.**
15. The warranty period should be clearly mentioned. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned.
16. Quote should come from authorized dealer or distributor or reseller for each of the product quoted. An authorization letter should accompany your quote for each product quoted; otherwise it may lead to rejection.
17. The delivery period and other terms should be clearly mentioned.
18. **Eligibility:** Quotation from registered firms/company's / manufacturer under TNGST/CST / other statutory bodies alone will be considered. Any Manufacturer / Supplier / Dealer who has been declared ineligible by World Bank/Government of India shall not be eligible to participate in this bid. Any fraudulent practices including concealing of facts at the time of submission of bid and there after shall lead to disqualification. List of beneficiaries especially from Educational Institutions / R & D Institutions should also be enclosed with the quotations.
19. For those instruments Cost exceeding Rs. 5,00,000/- the company should have (i) Three similar works, each of value not less than 40% of the estimated cost put to tender, or (ii) Two similar works, each of value not less than 50% of the estimated cost, or (iii) One similar work of value not less than 80% of the estimated cost, all amounts rounded off to a convenient full figure, in the last 7 years ending on the last day of the month previous to the one in which the tenders are invited.
20. Complete user, technical and service documentation and spare parts catalogue are to be provided along with the supply of the item.
21. The vendors are informed that they should not call us over phone or contact us in person. All clarifications can be obtained through E-Mail/FAX/Post. Vendors shall not make attempts to establish unsolicited and un-authorized contact with us after the opening of the offers and prior to the notification of the award. Any attempt by any vendor to bring to bear extraneous pressures on us shall be sufficient reason to disqualify the vendor.
22. Delay / loss in postal transit or due to other reasons will not be NIT-T's responsibility.
23. We are not responsible for accidental opening of the covers that are not properly superscribed and sealed before the time scheduled for opening.
24. The tender should be made only on the FORM which is available in our website, otherwise it shall lead to rejection. The FORM should be duly filled up (preferably **TYPE WRITTEN IN CAPITAL LETTERS**) and should clearly mention the features offered by the bidder against each specification.
25. Authorized signatory should sign on all the pages. Bids without authorized signatures or seal of the firm will be rejected.
26. The manufacturers of the quoted make of the product must be of National / International repute and having ISO /BIS certificate.
27. **Liquidated damages:** If the bidder/supplier, after accepting the Purchase Order, fails to deliver any or all of the Goods within the period specified in the Order, NIT-T shall, without prejudice to its other remedies under the Rules of Purchase, proceed to cancel the order or

agree to accept a delayed delivery on the condition of payment of liquidated damages by the bidder / supplier a sum equivalent to 0.50% of the total cost as indicated in the Purchase Order (which will be deemed as agreed price) for each week or part thereof of delay until actual delivery or performance is completed and such penal charges shall be limited to a maximum of 5% of the total cost. Once the maximum is reached NIT-T may proceed on its own to consider the termination / cancellation of the order.

28. **The vendors are informed that they should sign a stamp paper agreement with us, for Warranty, AMC, etc. before placing the final purchase order as per our terms & conditions and 5% -10% of purchase order value in the form of bank guarantee towards performance security. The bank guarantee will be returned to the supplier after the successful completion of supply, installation, and the warranty period.**
29. Failure to comply with all the terms and conditions mentioned herein would result in the tender being summarily rejected.
30. Vendors are informed that once the companies are shortlisted based on the technical specification, only then the price bids of the firms that meet NIT-T's Technical specification / requirements would be compared.
31. The order will be based on the actual requirement at the time of ordering, optional items may also be ordered based on the actual requirements at the time of ordering. Not quoting for this may result in disqualification.
32. NIT-T reserves the right to modify or alter the specifications after short listing of tenderers.
33. NIT-T reserves the right to change the order quantity or split the orders among multiple vendors without assigning any reason(s) whatsoever.
34. NIT-T reserves the right to reject any or all the tenders without assigning any reasons whatsoever.
35. NIT-T reserves the right to purchase decreased number of quantity of the item to be purchased.
36. NIT-T reserves the right to issue PO based on item wise L1 and right to split up the PO.
37. The agencies should submit their rate as per the format given in Section 4 of the Notice Inviting Tender in this cover. All the pages of the bid should be signed affixing the seal. All corrections and overwriting should be initialed.
38. The tender will be acceptable only from the manufacturers or its authorized supplier.
39. The bid shall be in the format of price schedule given in Section 4. The contract form as per format given in section 5 shall be submitted. Incomplete or conditional tender will be rejected.
40. Details of quantity and the specifications are mentioned in Section 3 appended to this Notice Inviting Tender.
41. The item to be used is strictly according to the specification and subject to test by the Institute/concerned authorities. It must be delivered and installed in good working condition.
42. The Contractor/Supplier shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work/supply in full but he did not derive in consequence of the foreclosure of the whole or part of the works.
43. In case of dispute, the matter will be subject to Tiruchirappalli, Tamil Nadu Jurisdiction only.

Release of EMD: The EMD will be released after receipt of performance security from successful bidder.

Validity of bids: The rate quote should be valid for a minimum of 120 days. No claim for escalation of rate will be considered after opening the Tender.

Imports: In case, goods are to be imported, the Indian agent should furnish authorization certificate by the principles abroad for submission of the bid in response to this Notice Inviting Tender.

Clarification of Tender Document: A prospective bidder requiring any clarification of the Tender document may communicate to the contact person given in this notice inviting tender.

Amendment of tender document: At any time prior to the last date of receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the Tender document by an amendment.

The Institute may at its own discretion extend the last date for the receipt of bids.

The bids shall be written in English language and any information printed in other language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.

The Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids without assigning any reasons therefor. The decision of the Institute Purchase Committee is final in all matters of tender and purchase.

The bidder should give the following declaration while submitting the Tender.

ACCEPTANCE

We accept the above terms and conditions and shall comply with them strictly.

NAME OF THE VENDOR:

ADDRESS :

Signature and seal

“DETAILS OF THE FIRM OFFERING THIS QUOTE”
(Write or print or type in block letters)

Name of the firm:

2. Date of incorporation:

Nature of the company (tick one): Government / Public / Private Company / Partnership / Proprietorship

Specify the number of years in this line of activity by the Company: ::

Quantity of sales in the last three years for the “.....” (same model that you have quoted):

2014-2015	2015-2016	2016-2017

Turnover in the last three years (Lakh Indian Rupees):

2014-2015	2015-2016	2016-2017

Provide the postal address, telephone & fax numbers, and email address of the nearest service center.

Number of service engineers in the above location trained on the product quoted along with their educational qualification, certification and designation (applicable only for instruments):

Assured response time for service calls in hours:

Delivery period from the date an official purchase order placed (in weeks):

Enclose the list of customers to whom you have supplied “.....” during the last 3 years ending 30/12/2017 with full postal address and name of the contact person with phone, FAX numbers, and E-Mail id. Certificate regarding satisfactory performance of the “.....” from the minimum three end users should be furnished.

Are you the authorized dealer or distributor or reseller for the products quoted?

Have you supplied “.....” to National Institute of Technology, Tiruchirappalli in the last 3 years? If yes, specify the quantity supplied in the last 3 years and last PO reference:

Was there any elapse or delay in supplying the goods ordered or any service related issue during the warranty period for the products ordered by NIT-T with your firm? If yes, provide details.

On Manufacturer’s Side to whom NITT have to contact in case of delayed in supply and other issues committed by the authorized dealer / distributor / reseller :

Contact Person Name	:	
Address	:	
E-mail ID	:	Telephone / Cell Phone :

DECLARATION

I/we have not tampered/modified the tender forms in any manner. In case, if the same is found to be tampered/modified, I/we understand that my/our tender will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited and I/we am/are liable to be banned from doing business with NIT, Trichy and /or prosecuted.

Signature of the Bidder :

Name and Designation :

Business Address :

.....

.....

Place :

Date :

Seal of the Bidder's Firm

SECTION : 3 – SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS**Specification for Boards and Software Kit for IoT Analytics lab**

Name of the Component to be procured : Boards and Software Kit for IoT Analytics lab

S. No.	Name of the device	Quantity
1.	Board 1	2
2.	Board 2	5
3.	Board 3	5
4.	Board 4	1
5.	Board 5	5
6.	Board 6	5
7.	Board 7	2
8.	Wireless Infra-Red IR 8 Channel Remote Control Relay Board module	2
9.	Smart Home IoT Development Kit	2
10.	Smart Agricultural Kit	2
11.	Universal GPIO kit	5
12.	cables	5
13.	Bread board	10
14.	Power adapter	5
15.	Power supply	5
16.	Jumper wires (10cm & 20cm) and terminal strips	3set each
17.	Buzzer	5
18.	Resisters	50
19.	LCD display	5
20.	Transformer 230V AC to DC (12-0-12) Volt 500 mA	2
21.	Generic SIM900 GPRS/GSM Development Extension Board Shield Quad-Band Kit	5
22.	HDMI to VGA cable	5

Specifications :

1. Board 1

- N3350 /N4200 (up to 2.5 GHz) / E3940 (up to 1.8GHz)
- Graphics Intel® Gen 9 HD,
- supporting 4K Codec
- Decode and Encode for HEVC4, H.264, VP8
- Video & Audio HDMI 1.4b x1 4K @ 30 hz + DP 1.2 4K @ 60 hz
- I2S audio port
- Camera interface MIPI-CSI2 2-lane (2MP) + MIPI-CSI2 4-lane (8MP)
- Display interface eDP Power 5V DC-in @ 4A-6A
- Operating humidity 0% ~ 90%
- relative humidity, non-condensing
- Operating Temperature 32-140°F / 0~60°C
- Connectivity: wifi, 3G, LoRA, etc.
- Memory 2GB (single channel) LPDDR4 4GB/8GB (dual channel)
- LPDDR4 Storage Capacity 32 GB / 64 GB / 128 GB
- eMMC USB 3x UB3.0 (Type A) + 1x USB 3.0 OTG (Micro B) 2x USB2.0+2 X UART (Tx/Rx)
- debug port (pin header) Ethernet 2x Gb Ethernet (full speed, Realtek 8111G)
- RJ-45
- 40 pin General Purpose bus + 4-channel 12-bit A/D converter (500 ksps to 1 Msps), 60 pin EXHAT 1xmini-PCIe (full-size, auto switch to m-SATA) M.2 2230, SATA3
- Compatible Operating system Microsoft Windows 10 (full), Windows IOT Core, Linux (ubinux, Ubuntu, Yocto), Android Marshmallow
- Dimensions 3.37" x 3.54" / 85.60 mm x 90 mm

2. Board 2

- Intel x5-Z8350 QuadCore 1.44Ghz (1.92GHz) 64 bit 2W CPU
- Processor: TI AM5728 2x1.5-GHz Cortex-A15
- 2GB DDR3 RAM
- 4GB 8-bit eMMC on-board flash storage
- 2D/3D graphics and video accelerators (GPUs)
- 2x 700MHz C66 digital signal processors (DSPs)
- 2x ARM Cortex-M4 microcontrollers (MCUs)
- 4x 32-bit programmable real-time units (PRUs)
- 2x Gigabit Ethernet
- 3x SuperSpeed USB 3.0 host
- HighSpeed USB 2.0 client

- eSATA (500mA)
- Full-size HDMI video output
- microSD card slot
- Stereo audio in and out
- 4x60-pin headers with PCIe, LCD, mSATA and much more...

3. Board 3

- Speed -1 Ghz
- Core-3 core embedded : Cortex®-A9, -M4, i.MX6
- Ethernet- 10/100 Mbps
- Memory- 1GB
- Graphics- GC420 integrated 2D/3D graphics Accelerator
- Mass storage interface- MicroSD/SDIO, SPI
- USB- USB 2.0 type A , USB Micro AB OTG
- Audio- HDMI audio transmitter, S/PIDF, I2S
- Video inputs- Analog Camera(NTSC+PAL), 8bit digital camera interface
- Video outputs- HDMI, LVDS interface + touch(I2S signals)
- Analog input- >=6 pin
- GPIO-32 extended (A9 dedicated) + 22 (M4 dedicated)
- Networking- Ethernet 10/100 mbps, Wi-Fi 802.11 b/g/n, Bluetooth 4.0
- Digital I/O-8x PWM Signals, 3x I2C, 1x SPI, 6x Multiplexable Signals, 3x UART, 2x CAN BUS
- Integrated sensors- 3- Axis Accelerometer, magnetometer, Digital Gyroscope, 1x sensor snap-in I2C connector
- Power Supply- 1x DC Micro USB(5V), 1x DC power jack (6-15v), 1x RTC battery Connector
- Operating Systems - Android 6.0.1, Linux Ubuntu 2 (14.04 LTS)

4. Board 4

e-textile prototyping wearable kit

- Microcontroller with peripherals supporting conductive thread
- USB cable
- Onboard Pad Light sensor
- Onboard Pad Buzzer
- Onboard Pad Button Board
- Onboard four pairs of colored Pad LED
- Onboard Pad Slide Switch

- LiPo battery
- Needle set
- Two conductive thread bobbins

5. Board 5: ESP 32

- Based on Goldmont architecture with 14 nm process technology
- 2–4 CPU cores
- Up to 2.5 GHz CPU HFM frequency
- 1.8–2.5 CPU single-core burst frequency
- 2 MB cache size
- 6W–12W thermal design power
- Memory - 8 GB of LPDDR4
- >=Six USB 3.0 ports and four PCIe* ports

6. Board 6

- CPU: Xtensa dual-core (or single-core) 32-bit LX6 microprocessor, operating at 160 or 240 MHz and performing at up to 600 DMIPS
- Wi-Fi: 802.11 b/g/n, Bluetooth: v4.2 BR/EDR and BLE
- 12-bit SAR ADC up to 18 channels, 2 × 8-bit DACs, 10 × touch sensors (capacitive sensing GPIOs), Temperature sensor, 4 × SPI, 2 × I²S interfaces, 2 × I²C interfaces
- 3 × UART, SD/SDIO/CE-ATA/MMC/eMMC host controller, SDIO/SPI slave controller
- Ethernet MAC interface with dedicated DMA and IEEE 1588 Precision Time Protocol support, CAN bus 2.0
- Infrared remote controller (TX/RX, up to 8 channels)
- Motor PWM
- LED PWM (up to 16 channels)
- Hall effect sensor
- Ultra low power analog pre-amplifier
- IEEE 802.11 standard security features all supported, including WPA, WPA/WPA2 and WAPI, Secure boot, Flash encryption, 1024-bit OTP, up to 768-bit for customers
- Cryptographic hardware acceleration: AES, SHA-2, RSA, elliptic curve cryptography (ECC), random number generator (RNG)
- Internal low-dropout regulator
- Individual power domain for RTC
- 5uA deep sleep current
- Wake up from GPIO interrupt, timer, ADC measurements, capacitive touch sensor interrupt

7. Board 7

- Microcontroller – ESP 328
- Operating Voltage (logic level)- 5V
- Input Voltage - 7V - 12V
- Digital I/O Pins- 14 (of which 6 provide PWM output)

- Analog Input Pins- 8
- DC Current per I/O Pin - 40 mA
- Flash Memory - 32 KB of which 2 KB used by bootloader
- SRAM - 2 KB
- EEPROM - 1 KB
- Clock Speed - 16 MHz
- Hardware Serial - 0 (RX) and 1 (TX). Used to receive (RX) and transmit (TX) TTL serial data.
- PWM- 3, 5, 6, 9, 10, and 11. 8-bit PWM output.
- Hardware SPI10 (SS), 11 (MOSI), 12 (MISO), 13 (SCK)I2CA4 (SDA) and A5 (SCL). Support
- I2C (TWI) communication using the Wire library

8. Wireless InfraRed IR 8 Channel Remote Control Relay Board module Home Automation

- IR 8channel relay board with remote kit
- 8 Switch control ON/OFF IR remote
- Wireless Remote control of Lights and Fan at home or office
- Security and burglar alarm systems and Control of motors and system in Robotics
- Garage Car door controllers

9. Smart Home IoT Development Kit

- IoT Development Kit with complete [device - cloud - app] infrastructure
- Compatible Base Board + Wi-Fi module + Sensor Shield + Cloud access
- MQTT, CoAP*, HTTP protocols supported
- Rule Engine to automate your tasks + NoSQL DB to store data
- Opensource community support +API's + Libraries

10. Smart Agricultural Kit

- High quality microcontroller development board
- The DIP40 locking device, easy to remove the microcontroller for reuse.
- RTC DS1307 with battery connector
- All IO's are connected by brug strip for easy connection.
- High quality PCB Grade with FPT Certified.
- Terminal strip
- USB Mini Cable
- Push Button
- Relay
- Wi-Fi Module
- Bluetooth Module
- GSM/GPRS Module
- LDR Light Sensor Module
- DC Pump Water Priming Pump Spray DC 12V Mini Water Pump + 1 M Pipe

11.Universal GPIO Board Kit:

The Universal GPIO board kit consists of

- On board 8 Led's
- On board Temperature sensor
- On board 4 Push button
- On board Light sensor
- On board Buzzer
- On board 7 segment LED
- On board nRF wireless connectivity
- On board Wifi connectivity
- On board L293D motor driver
- Compatible power adopter

12.Cables :

- USB-Serial-Cable-F

13.Bread board:

- 400 POINT SOLDERLESS BREADBOARD

14.Power supply:

- The full voltage input (90 ~ 264 vac)
- Low ripple and low noise
- Output overload short circuit protection function
- High efficiency and power density
- Product design to meet the EMC and safety testing requirements
- Low power consumption, green environmental protection, no-load loss < 0.1 W1
- 100% load test
- Meet the requirements of UL, CE

15.Power Adapters:

- input voltage 230V AC
- output voltage 5V DC
- output current 2 Amps

16.Jumper Wires:

- male to male (10 cm & 20 cm long)
- female to female (10 cm & 20 cm long)
- male to female (10 cm & 20 cm long)

17. Buzzer

- Active buzzer
- Voltage: 5v
- Battery: 9v

18. Resistors

19. LCD display

- 20x4 Line LCD Display with Yellow backlight
- SIZE : 20x4 (4 Rows and 20 Characters Per Row)
- Can display 4-lines X 20-characters o Operate with 5V DC
- Wide viewing angle and high contrast
- Free Interface code
- 7 general I/O pins to interface with LCD screen.

20. Transformer 230V AC to DC (12-0-12) Volt 500 mA

- Voltage: 2 x 12V
- Current: 500mA
- 1 X 12-0-12 V 500mA Transformer
- STEP DOWN TRANSFORMER (12-0-12 500mA)
- INPUT POWER - 220 VOLT AC

21. Generic SIM900 GPRS/GSM Development Extension Board Shield Quad-Band Kit

- The GPRS Shield provide to communicate using the GSM cell phone network.
- The shield should allow to achieve SMS, MMS, GPRS and Audio via UART by sending AT commands (GSM 07.07 ,07.05 and SIMCOM enhanced AT Commands).
- 12 GPIOs, 2 PWMs and an ADC of the SIM900 module(They are all 2V8 logic) present onboard.
- Quad-Band 850 / 900/ 1800 / 1900 MHz - would work on GSM networks in all countries across the world.
- GPRS multi-slot class 10/8, GPRS mobile station class B, Compliant to GSM phase 2/2+
- Class 4 (2 W @ 850 / 900 MHz)/Class 1 (1 W @ 1800 / 1900MHz) Control via AT commands - Standard Commands: GSM 07.07 & 07.05
- Short Message Service (ASCII or raw hexadecimal).
- Embedded TCP/UDP stack - allows you to upload data to a web server.
- RTC supported. Selectable serial port.
- Speaker and Headphone jacks
- Low power consumption - 1.5mA(sleep mode)
- Temperature Range - -40°C to +85 °C
- Size: approx. 75mm*55mm*10mm

22. HDMI to VGA adapter

- Input: HDMI Male
- Output: VGA Female; A VGA cable (sold separately) is required
- Supported Resolutions:
480i/480p/576i/576p/800x600/720i/720p/1280x1024/1600x1200/1080i/1

Quantity :1

Any other details/requirements:

Warranty period required(years) :1 year

Delivery schedule expected after release of purchase order (in weeks): within 8 weeks

EMD (in Rupees) : Rs. 5600/-

Performance Security to be given by the successful bidder after release of purchase order (in Rupees) : 5 % of the total order cost

SECTION : 4 – PRICE SCHEDULE

To be used by the bidder for submission of the price bid

1. Component Name:
2. Specifications (confirming to Section 3 of Tender document-enclose additional sheets if necessary):
3. Currency and Unit cost (excluding Taxes):
4. Quantity:
5. Item cost (Sl.No.3 * Sl.No.4) (in Indian Rupee):
6. Taxes and other charges:
 - (i) Specify the type of taxes and duties in percentages and also in figures
 - (ii) Specify other charges in figures
7. Total cost (Inclusive of all taxes) :
8. Warranty period (confirming to the Section 3 of Tender document. This should be mentioned in Technical bid also in order to get qualified for price bid):
9. Delivery Schedule (confirming to the Section 3 of Tender document):
10. Name and address of the firm for placing purchase order:
11. Name and address of Indian authorized agent (in case of imports only):

Signature of the Bidder :

Name and Designation :

Business Address :

Place :

Date : **Seal of the Bidder's Firm**

(Note: All column should be filled. No column should be left blank. If any column is not filled-in properly or left empty then the bid will be rejected.)

SECTION : 5 – CONTRACT FORM

To be provided by the bidder in their business letter head

[Name of the Supplier's Firm] hereby abide to deliver theby the delivery schedule mentioned in the Section 3 of the Tender document for supply of the items if the purchase order is awarded.

The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.

Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NIT, Trichy during this period.

Signature of the Bidder :

Name and Designation :

Business Address :

Place :

Date :

Seal of the Bidder's Firm

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPALLI

Annexure-A

MODEL PRICE BID FORMAT FOR INDIAN BIDDERS

Tender No. & Date:

Bidder's Offer No. & Date:

S. No.	Description of item	Unit (SET /No)	QTY	Rate /Qty in Rs. (excluding of all taxes)	GST			Total Value in Rs. (inclusive of all taxes)
					SGST %	CGST %	IGST %	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Supply portion (The price indicated shall be exclusive of all accessories, spares etc. as given in the scope of supply)							
2	Other accessories /spares etc as given in scope of supply (Individual item-wise break-up price shall be attached as an annexure to this price bid format.)							
3	Installation & Commissioning (extra, if any)							
4	Packing & Forwarding charges (extra, if any)							
5	FOR Dispatching station value in Rs.							
6	Freight & Transit insurance charges, extra, if any							
7	Total all inclusive price delivered, installed and commissioned at NITT							
8	Value of Annual Maintenance Contract							
9	Net cost to be paid by NITT							

Signature & Seal of Vendor

Note: The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "Not Applicable". If this format is not used or any column is left blank, then the bid will be rejected.