INVITATION LETTER

Package Code: TEQIP-III/2019/ntst/103 **Current Date: 10.06.2019**

Package Name: NITS/TEQIP-III/ECE/05_R **Method: Shopping Goods**

Sub: INVITATION LETTER FOR NITS/TEQIP-III/ECE/05_R

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure-I:

S. No.	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)	EMD
1	Equipment for IoT Laboratory	As per Annexure -I	NIT Sikkim	YES	YES

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP] - Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. **Qualification Criteria**:

   The bidder/supplier should have:

   3.1. **The bid should be accompanied with an EMD (Earnest Money Deposit) of Rs.1,20,000/- (Rupees One Lakh Twenty Thousand Only) in favour of The Director NIT Sikkim in the form of Demand Draft (DD) drawn on any commercial bank payable at Ravangla/Gangtok**.

   3.2. A minimum of 3 years experience of supplying similar items.

   3.3. An average turnover of Rs.50 Lakh in the last three years. Audited annual accounts for the last three financial year should be enclosed with the bid

   3.4. Not been blacklisted by any Govt. Institution/Organization.

4. **Quotation:**

   4.1. The contract shall be for the full quantity as described above.

   4.2. The vendors are required to quote rates for all the items given in the tender in the prescribed "**Format for Quotation Submission",** otherwise the bid shall be summarily rejected.

4.3. Corrections, if any, shall be made by crossing out, initialling, dating and re-writing.

4.4. All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

4.5. Applicable taxes shall be quoted separately for all items. **The Institute has DSIR certificate (applicable GST would be 5%).**

4.6. The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

4.7. The Prices should be quoted in Indian Rupees only.

4.8. The vendor should submit trade licence/certificate of Registration (as applicable), GST registration number with type of registration and photocopy of the certificate, the PAN of proprietor/firm/company with photocopy of the PAN card. Please attach a certificate that the quoted price is not more than that of any govt. organization/Intuition in India. This has to be mention in the offer letter clearly.

5. Each bidder shall submit only one quotation.

6. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.

7. The quotation should include the following information:

7.1. Authorization certificate from the OEM/Principal assuring full guarantee and warrantee obligations during the liability period, for the goods offered.

7.2. The list of clients (IITs, NITs/Central Universities and other reputed Institution) duly supported by copies of purchase order.

7.3. Details of service/supports centres located in India.

8. **Evaluation of Quotations**: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which:

8.1. are properly signed; and

8.2. Confirm to the terms and conditions, and specifications.

9. The Quotations would be evaluated for all items together.

10. **Award of Contract:** The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

10.1. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.

10.2. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

11. **Performance Bank Guarantee:** Performance Security has to be submitted by the successful bidder. A Bank guarantee issued by a Nationalized Bank in India towards PBG for an amount equal to 5% of total order value of purchase order and valid till the period of beyond the 2 months of completion of warrantee period should be

submitted in favour of "**The Director NIT Sikkim"**. In case, the vendor fails to provide satisfactory service, the PBG is liable to be forfeited.

12. Payment shall be made in Indian Rupees as follows:

    Satisfactory Delivery & Installation - 70% of Total Cost
    Satisfactory Acceptance - 30% of Total Cost

13. Liquidated Damages will be applied as per the below:

    Liquidated Damages Per Day Min %: 0
    Liquidated Damages Max %: 10

14. All supplied items are under warranty of **24 Months** from the date of successful acceptance of items and AMC/Others are **NA.**

15. You are required to submit your bid/offer latest by **17:30** hours on **24th June 2019.**

16. Detailed specifications of the items are at **Annexure-I**.

17. Training Clause (if any) **YES**

18. Testing/Installation Clause (if any) **YES**

19. Performance Security shall be applicable**: 5%**

20. **The quantity of the items/equipments can be increased or decreased.**

21. Information brochures/ Product catalogue with actual specification and images must be accompanied with the quotation clearly indicating the model quoted for. If the supply is found to be different or not as per specification/quality the whole bid will be consider as rejected and the EMD shall be forfeited. The NIT Sikkim shall not be responsible for any cost incurred in delivery or return of rejected goods/equipments.

22. Sealed quotation to be submitted/ delivered at the address mentioned below:

    The Nodal Office (Procurement),
    TEQIP-III,
    National Institute of Technology Sikkim,
    Barfung Block, Ravangla, South Sikkim
    Pin Code-737139.

23. We look forward to receiving your quotation and thank you for your interest in this project.

Dr. Achintesh N. Biswas
Nodal Officer (Procurement)

ANNEXURE-I

Sr. No.	Item	Specifications	Quantity
1	**IoT Mote**	Highly integrated System on Chip with ARM Cortex M3 microcontroller based Low Power and Medium range RF communication module compliant to IEEE802.15.4 supporting a maximum transmitting power of +7 dBm. It should also support application development platforms like Contiki OS, Zigbee and custom stacks. Specs of SoC should be as below: – Up to 32-MHz Clock Speed – Up to 32KB of RAM (16KB With Retention in All Power Modes) – Two timers (16/32 bit) – 512KB of In-System Programmable Flash – Supports On-Chip Over-the-Air Upgrade (OTA) – Battery Monitor and Temperature Sensor – 12-Bit ADC With 2 Channels and Configurable Resolution – USB 2.0 Full-Speed Device (12 Mbps) – Four Universal Serial Communication Interfaces (USCIs)- SPI, UART, I2C **External Flash Memory:** – 8Mb Flash memory, Up to 75 MHz clock frequency – SPI Interface , Write Protection, Deep Power Down Mode **RF subsystem:** – ISM Band RF Transceiver with RF frequency range 2394-2507 MHz (2.4 GHz) – IEEE 802.15.4 compliant DSSS baseband modem with 250 kbps data rate – Low Power (RX -97dBm @ 20 mA, TX 0 dBm @ 24 mA) – Ultra-low power down mode (<1.3μA) – Good receiver sensitivity (-100 dBm), Adjacent channel rejection: 44 dB and Alternate channel rejection: 52 dB **Security sub system:** – Future Proof AES-128/256, SHA2 Hardware Encryption Engine – Optional–ECC-128/256, RSA Hardware Acceleration Engine for Secure Key Exchange **Expansion headers for connecting Ubi-Sense, Ubi-DAC and external sensors. Intelligent power system with rechargeable lithium polymer battery and solar energy harvesting**	**25**

2	**Wi-Fi Mote**	Based on Wi-Fi Certified wireless MCU with built-in Wi-Fi protocol stack targeted for Internet of Things (IoT), maximum RF transmitting power is up to +18dBm. Specs of MCU should be as below: **High-performance ARM Cortex-M4 MCU with** – Wi-Fi Network Processor with 802.11 b/g/n Radio, Baseband, MAC, Wi-Fi driver – Power-Management Subsystems with integrated DC-DC converters – RAM of 256KB – External Serial Flash Boot loader – 2 General-Purpose Timers with 16-bit PWM mode – 2 Channel 12-bit ADCs – Clock sources with 40MHz and 32.768kHz – Four Universal Serial Communication Interfaces (USCIs)- SPI, UART, I2C – Provides an application throughput of maximum 16Mbps – Supports Station, Access Point, and Wi-Fi Direct modes **External Flash Memory** – 8Mb Flash memory, Up to 75 MHz clock frequency – SPI Interface , Write Protection, Deep Power Down Mode **Wi-Fi network processor subsystem** – Dedicated ARM MCU completely offload the host MCU – Robust 802.11 b/g/n radio, baseband, and MAC – Powerful crypto engine for a fast, secure WLAN and Internet Connections with 256-bit encryption. – Supports WPA2 personal & enterprise security and WPS 2.0. – Embedded IPv4 TCP/IP stack **Security sub system** – Hardware Crypto Engine for Advanced Fast Security including AES, DES, and3DES, SHA2 and MD5, CRC and Checksum **Expansion headers for connecting UbiSense and any other external sensors** **Intelligent power system with rechargeable lithium polymer battery**	25

3	**BLE Mote**	SOC based device for Bluetooth Low Energy based applications. This mote should be compliant to the Bluetooth 4.0 standards with Low Energy Profile support. Highly integrated System on Chip with ARM Cortex M0 microcontroller with below specs: **256 kB embedded flash program memory, 32 kB RAM** **Real Timer Counter (RTC)** **Watchdog Timer (WDT)** – 1x32 bit Timer & 2x16 bit timers with counter mode **8/9/10 bit ADC with 8 configurable channels** **Low power comparator** **Supports various Serial Communication Interfaces like SPI, UART, I2C** **CPU independent Programmable Peripheral Interconnect (PPI)** **External Flash Memory** – 8Mb Flash memory, Up to 75 MHz clock frequency – SPI Interface , Write Protection, Deep Power Down Mode **RF subsystem** – 2.4 GHz (2.400 to 2.4835 GHz) ISM Band RF Transceiver compliant to Bluetooth 4.0 LE standards – 250 kbps, 1 Mbps, 2 Mbps supported data rates – GFSK Modulation – Programmable Transmit power of +4 dBm to -20 dBm (in 4 dB steps) – High Receiver Sensitivity (-93dBm in BLE) – Low Power (Peak Rx -93dBm @ 13 mA, Peak Tx 0dBm @ 10.5 mA) – Ultra-low power multiple down modes **Security sub system** – AES Hardware Encryption Engine (AES Electronic Codebook Mode Encryption, AES CCM Mode Encryption) – Accelerated Address Resolver – Random Number Generator **Expansion headers for connecting Ubi-Sense, Ubi-DAC and External Sensors** **Intelligent power system with rechargeable lithium polymer battery**	25

4	**Sensor Mote**	**Sensor board having the following listed sensors:** 1. Temperature & Relative Humidity 2. Light Intensity 3. Barometric Pressure 4. Proximity Sensing 5. Buzzer **Interfaced with microcontroller via 12C Bus** **Contains additional I2C connector for connecting external I2c compliant sensors to the communications modules**	50
5	**Wireless IP Network Gateway for ZigBee (Multiprotocol Gateway)**	Low power, microprocessor based embedded platform for interfacing various communication interfaces. Communicates with the End Point Nodes through IEEE-802.15.4 RF interface and functions as the Data Terminal Unit and network controller with the below specs: **Processor** – ARM Cortex-A9 application Processor(Single/dual/quad) – CPU clock speed up to 1GHz – 2D and 3D graphics co-processors **Power Management** – Advanced power management system with module wise power control – Flexible power input with dynamic source switching – Integrated Li-Ion battery management with solar energy harvesting capability – Dynamic Voltage and Frequency Scaling **Memory** – 1 GB/2 GB DDR3 SDRAM – 4GB/8GB onboard eMMC flash memory – External Micro-SD card support (up to 32GB) – 4Mbytes Serial Flash **Connectivity** – Onboard Gigabit Ethernet (RJ45) ports – Two USB 2.0 host type A ports – One USB-OTG Port – One High speed CAN (DB-9) port – Supports various Serial Communication protocols like SPI, I2C, UART **Display** – Onboard 7” LCD with capacitive touch panel – High Definition Video Output through HDMI Port **Camera** – Supports CMOS Camera (Optional 5MP Raspberry Pi camera)	5

		– Supports various USB based web cameras **Audio** – High quality Stereo audio codec – Mobile phone compatible 3.5mm audio port for Audio In/Out **Wireless Connectivity** – High Range IEEE802.15.4 (ZigBee/6LoWPAN) Transceiver (upto 22dBm Txpower) – Dual Mode Bluetooth4.0 Connectivity (with BLE profile) – IEEE802.11b/g/n compliant WLAN (Wi-Fi) Modem – 3G Cellular Network Connectivity (GSM/GPRS/EDGE/HSPA+) – GPS/NGSS Positioning system **Onboard Sensors** – Temperature and Relative Humidity Sensor – Digital Ambient Light Sensor – 3-Axis Digital Accelerometer **Debug Interface** – JTAG connector (20-pin) for Main Processor – SWD connector for BLE SoC **OS Support** – Linux – Android – Windows* **Application** – Gateway device between the WPAN and IP network – Coordinator device for the WPAN networks – Indoor/Outdoor deployment of Internet of Things solutions – Single board computer – Unified control and monitoring console for various wireless networks	
6	Debugger	J-TAG Emulator for ARM core MSL 1 ROHS Compliant	**6**

- Warranty period of all the above mentioned items is 24 months or more.
- For software related items, licence is 24 months or more.
- All quoted price should be inclusive of all taxes, delivery, installation, and training at NIT Sikkim

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: .....

To,

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Sl.No.	Description of goods\ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. .....

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ..... (Amount in figures) (Rupees ..... amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ..... months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: .....

Address: .....

Contact No.: .....