

NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR

SILCHAR - 788 010 (ASSAM)

No: NITS/PS-414/ECE/STIS Proj/B.Basu/16

Date : 10.08.2016



NOTICE INVITING TENDER

FOR SUPPLY AND INSTALLATION OF EQUIPMENTS FOR ECE DEPARTMENT

LAST DATE & TIME OF SUBMISSION

: 09.09.2016 up-to 02.00PM

DATE & TIME OF OPENING

: 09.09.2016 at 03.30PM



राष्ट्रीय प्रौद्योगिकी संस्थान सिलचर

सिलचर, कछार, असम - 788 010

टेलीफोन नं (निदेशक): (03842) 224879

फैक्स: (03842) 224797

NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR

SILCHAR, CACHAR, ASSAM – 788 010

Tel.No. (Director) : (03842) 224879

FAX: (03842) 224797

NOTICE INVITING TENDER

No: NITS/PS-414/ECE/STIS Proj/B.Basu/16

Date : 10.08.2016

Sealed tenders are invited in two parts (Technical & Financial) bid for the following work in National Institute of Technology Silchar, Silchar, Assam – 788 010

NAME OF THE WORK	: Supply and Installation of Equipment for ECE Department
TENDER NO.	: No: NITS/PS-414/ECE/STIS Proj/B.Basu/16
PERIOD OF DELIVERY	: 1 (one) months from the date of issue of Supply Order
EARNEST MONEY	: 5,000.00
COST OF TENDER	: INR 500.00

DATE OF SUBMISSION AND OPENNING OF TENDER

Last date for submission of sealed tender at NIT Silchar, Cachar, Assam – 10	: 09.09.2016 up-to 02.00PM
Date of opening of Tender	: 09.09.2016 at 03.30PM
Venue of opening of Tender	: Office of the HOD, ECE Dept, NIT Silchar

In case, firm has downloaded the tender documents from the Institute website i.e. www.nits.ac.in, they must ensure that requisite tender fee/ cost of INR 500.00 is enclosed in the form of Account Payee Demand Draft from any commercial bank in favour of "Director, NIT Silchar" payable at SBI NIT Silchar Branch with their tender, failing which the tender will be treated as incomplete and will be ignored

The sealed tender may be sent either by registered post or by hand to Purchase Section, National Institute of Technology Silchar, Cachar, Assam – 788 010 between 0900 hours to 1730 hours on any working day till the due date and time. This tender document can also be downloaded from the web site www.nits.ac.in. The technical bid and financial bid may be kept in envelope superscribing "Bid for supply and installation of equipment for ECE Department.

Sd/-

REGISTRAR

PART A : TECHNO – COMMERCIAL BID

1. Wireless Sensor Node with Battery (4 nos)

- Microcontroller ATmega1281
- Clock Frequency: 14.7456 MHz
- SRAM: 8KB
- EEPROM: 4KB
- FLASH: 128KB
- SD Card slot : Yes
- Operating Temperature Range: [-10°C, +65°C]
- Clock: RTC (32KHz)
- Rechargeable battery 3.7V, 6,600mAh with suitable power adaptor
- Recharge options via solar panel/power adaptor/USB
- Onboard accelerometer and temperature sensor
- Over the air programming (OTAP)
- Onboard radio specs
 - a. Support for DigiMesh
 - b. Operating frequency 2,405 – 2,465GHz
 - c. Tx power : 100mW
 - d. Sensitivity : -100dBm
 - e. Channels : 12
 - f. 5dBi antenna

Inputs/Outputs:

1. Sensor inputs

Electrical specifications

1. Battery voltage: 3.3 V - 4.2V
2. USB charging: 5 V - 100mA
3. Solar panel charging: 6 - 12 V - 280mA

Sensors on the board:

1. Temperature (+/-): -40°C , +85°C. Accuracy: 0.25°C
2. Accelerometer: $\pm 2g/\pm 4g/\pm 8g$

Power Consumption:

1. ON: 15mA
2. Sleep: 55 μ A
3. Deep Sleep: 55 μ A
4. Hibernate: 0.07 μ A

2. Signal conditioning board compatible with DigiMesh Sensor Node (4 nos)

Suitable sensor signal conditioning board should be provided to connect agricultural sensors such as Temperature, Humidity, Luminosity LDR, Anemometer + wind vane + pluviometer, Temperature + humidity (Sensirion), Soil moisture (1.5 m) / (4.5 m) / (8 m), Leaf wetness

3. USB Gateway with IDE (1 no)

- a. Suitable Gateway compatible with (USB interface) above mentioned Sensor Node
- b. With built in COM port viewer
- c. APIs for all sensors
- d. API for provided wireless connectivity
- e. Should capable of compile and dump the code in to Sensor Node

4. Temperature Sensor Unit (4 nos)

- a. Measurement range: -50 ~ 300°C
- b. Accuracy: DIN EN 60751
- c. Resistance (0°C): 1000Ω
- d. Diameter: less than 10 mm
- e. Length: less than 50 mm
- f. Cable: 2m

5. Humidity Sensor Unit (4 nos)

- a. Measurement range: 0 ~ 100%RH
- b. Output signal: 0.8 ~ 3.9V (25°C)
- c. Accuracy: <±4%RH (a 25°C, range 30 ~ 80%), <±6%RH (range 0 ~ 100)
- d. Typical consumption: 0.38mA
- e. Maximum consumption: 0.5mA
- f. Power supply: 5VDC ±5%
- g. Operation temperature: -40 ~ +85°C
- h. Storage temperature: -55 ~ +125°C
- i. Response time: <15 seconds

6. Luminosity LDR Sensor Unit (4 nos)

- a. Resistance in darkness: 20MΩ
- b. Resistance in light (10lux): 5 ~ 20kΩ
- c. Spectral range: 400 ~ 700nm
- d. Operating Temperature: -30°C ~ +75°C

7. Soil Moisture Sensor Unit (4 nos)

- a. Measurement range: 0 ~ 200cb
- b. Frequency Range: 50 ~ 10000Hz approximately
- c. Diameter: less than 25 mm
- d. Length: less than 80 mm
- e. Terminals: AWG 20

8. Leaf wetness Sensor Unit (4 nos)

- a. Resistance Range: 5kΩ ~ >2MΩ
- b. Output Voltage Range: 1V ~ 3.3V
- c. Length: less than 4 cm
- d. Width: less than 2 cm

PRE QUALIFYING CRITERIA:

1. EMD in the form of Pay Order or Demand Draft in favour of Director, NIT Silchar payable at SBI, NIT Silchar Branch must be submitted in a separate envelope. **Tender not accompanied with EMD/ EMD submitted in any forms other than PO & DD will not be accepted.**
2. The bidding agency should have all necessary certificates, viz. VAT registration certificate, PAN for Income Tax, Authorized Dealership/Distributorship/OEM certificate, etc. The photocopies of all the certificates should be attached with the tender. The firm/agency should not have been debarred and / or blacklisted by any govt. dept./organization.
3. All detailed specifications with make & model no. of the items accompanied by proper leaflets should be clearly mentioned and attached with the offer. **In case of proprietary or patented item, necessary certificates in support of the same should be attached.** The bidder must submit the Compliance Statement and Deviation Statement of technical specification. **In case of imported item, the bidder (if Indian Agent) must furnish Authorization Letter in the Letter Head of the Principal manufacturer.**
4. **The rate quoted must be both in words and figures and F.O.R. / Destination National Institute of Technology Silchar inclusive of packing, forwarding etc. Octroi, surcharge, insurance and any other charges.** Educational discount, if any should be indicated clearly. **Tenderer(s) may note that the Government of India exempts this Institute from paying custom duty/excise duty on selected items.** Necessary documents will be furnished if required on demand by the Tenderer(s). **Rate quoted for any other destination shall not be accepted.**
5. Complete tender in all respects duly signed & stamped on each and every page by the authorized signatory of the bidder as a token of acceptance of all the terms and conditions of tender.
6. The bidder's average annual financial turnover during the last three financial years ending 31st March 2016 should be at least 5.50 lakhs. Certified copy of duly audited Balance Sheet and profits & loss Account statement for the FY 2013-14, 2014-15 & 2015-16 must be submitted.
7. The bidder should have experience in successfully completion of similar works. Copies of Pos/award letters along with the proof of satisfactory completion/performance in support of experience for the works executed by the bidders must be submitted. NIT Silchar reserves the right to cross check the documents from the issuing department.
8. Bidder must submit acknowledgement of IT return of last three financial years i.e. FY . 2013-14 & 2014-15 & 2015-16.
9. The Bidder must submit the copy of the PAN card.
10. Bidder should have the service tax registration no. if the services come under the net of Service Tax. Copy of the same must be submitted, if applicable.
11. In case of Partnership, copy of registration with Registrar of Firms to be submitted and incase of company certificate of incorporation is to be submitted.
12. In case of Firm/Companies the tender documents must be signed by a authorized signatory or a person holding a valid power of attorney and a copy of such power of attorney should be attached with the technical offer.
13. The Bidder must Submit a declaration (enclosed at Annexure –F1), that no case is pending with the police/ court against the proprietor/ firm/ partner or the company (Agency). As well as the bidder has not been suspended / blacklisted by any organization.
14. No deviation certificate as per Annexure –F2 (enclosed) must be signed and stamped.
15. Bidder must submit the technical details in the enclosed format (Annexure-F3).
16. Bidder must submit the bidder's details in the enclosed format (Annexure-F4).
17. Bidder must submit the check list enclosed at annexure-F5 after duly filled and signed.
18. Price bids of only those bidders, whose bids are found technically acceptable, will be opened. The opening date for price bid will be informed to the technically qualified bidders separately by phone, post or e-mail.

GENERAL CONDITIONS:

1. Tenders received late /in open condition/without EMD & Cost of Tender/ not meeting the tender Condition / incomplete in any respect will be rejected.
2. **The firm may quote for selected items (single / multiple).**
3. The rate should be indicated both in words and figures. All entries in the Tenders must be written clearly typewritten. Over-writing should be avoided. Corrections, if any, should be attested with signature by the bidder.
4. **Validity of rates will be 6 months from the date of opening of tender (Technical Bid)**
5. Prices quoted by the bidder should be inclusive of all taxes, freight, carrying charges, loading & unloading charges etc. but, excluding Service Tax (If any). However, the Service Tax will be paid by NIT Silchar on actual after submitting documentary proof only.
6. Work will be awarded on over all lowest bidder. However NIT Silchar reserves the right to cancel/ reject any tender without assigning any reason whatsoever.
7. The rate will be quoted in figure as well as in words. Both the value i.e. figures & words must be same. In case of discrepancy in rates between figure & words, the rates written in words will be considered
8. NIT Silchar reserves the right to reject all or any of the tenders and accept any tender(s) irrespective of its / their being the lowest / highest
9. If any information/documents submitted by the firm are found false/fake at any stage, the tender will be cancelled and earnest money deposited shall be forfeited.
10. Equipment / items has to supplied and installed (if required) within the given time period.
11. **Liquidated damage for delay in supply and installation of equipment** : Supply and Installation should be completed within 1 (one) month from the date of issue of Purchase Order. Extension of time may be granted by NIT Silchar where delay is not attributable to the firm. In case the supply and installed (if required) is not completed within the schedule date, a penalty of ½% per week subject to maximum of 5% of the bill value will be deducted as Liquidated damage.
12. The payment of final bill will be made only after obtaining certificate of satisfactory completion of the work. No claim will be entertained after signing the final bill. However, Amendment in payment policy may be considered, if required.
13. All payment will be subject to deduction of taxes at source as per applicable rules.
14. Bidders are advised to study carefully the tender documents and the conditions before quoting their bid. All the pages of the tender document should be signed by the bidders as a token of acceptance.
15. No party shall be permitted to tender for work in NIT Silchar in which any of their near relatives is an employee connected with the award and execution of the contract. They shall also intimate the names of persons who are working with them in any capacity or subsequently employed by them and who are near relatives of any employee of the NIT Silchar. Any violation of this condition which comes to the Notice of the NIT Silchar after the contract is awarded will entitle the NIT Silchar to treat the contractors as having committed a breach of contract and to exercise all the rights and remedies available to the NIT Silchar on account thereof.
16. **EARNEST MONEY DEPOSIT (EMD)** : The EMD in the form of Pay order or Demand Draft in favour of “*Director NIT Silchar*”, payable at State Bank of India, NIT Silchar Branch will only be acceptable. Tenders not accompanied with EMD/ EMD submitted in any forms other than PO & DD will not be accepted. Earnest Money Deposit shall be returned shortly to all un-successful bidders after award of work The EMD does not carry any interest. The tender not accompanied with EMD will be rejected. The Earnest Money is liable for forfeiture in the event of:
 - a) The tenderer revokes his tender within the validity period or increase his earlier quoted rates

- b) The tenderer does not commence the work within the period as per LOI/ Contract
17. The firm shall not be entitled to any interest with respect to the EMD or any money which may be due to him from NIT Silchar to make progress or other payments.

Sd/-
REGISTRAR
NIT SILCHAR

DECLARATION

I / We hereby declare that no case is pending with the police/ court against the proprietor/ firm/ partner or the company (Agency). Also I /We have not been suspended / blacklisted by any PSU / Government Department / Financial Institution / Court.

(Signature & seal of the contractor)

Place:

Date:

NO DEVIATION CERTIFICATE

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions of this tender and we do not have any deviation to this tender enquiry. We hereby undertake and confirm that we have understood the scope of work properly and shall be carried out as mentioned in this tender enquiry.

(Signature & seal of the contractor)

Place:

Date:

TECHNICAL BID**ANNUAL TRUN OVER (IN INR)**

2015 – 16	2014 – 15	2013 – 14

EXPERIENCE

No. of Works	Value	Customer Name

SIMILAR WORKS

Work done	No. of Works	Value	Customer Name

PAN CARD NO. :

SERVICE TAX NO. :

INCOME TAX RETURN

2015 – 16	2014 – 15	2013 – 14

EMD DETAILS

CHEQUE / DD / PAY ORDER No.	Date	Amount

WORK IN HAND AND VALUE (NAME OF THE CUSTOMER ALSO TO BE GIVEN)

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Note: Copies of all documents to be attached**(Signature & seal of the contractor)**

Place:

Date:

BIDDERS DETAILS

Name of the Contractor /Party/ Firm	:	<input type="text"/>
Name of Authorized Representative	:	<input type="text"/>
Phone Nos.	:	<input type="text"/>
Mobile Nos.	:	<input type="text"/>
Fax No.	:	<input type="text"/>
E-Mail Address	:	<input type="text"/>
Web Site Address (If Any)	:	<input type="text"/>

(Signature & seal of the contractor)

Place:

Date:

CHECK-LIST (TECHNICAL BID)**SUMMARY OF COMPLIANCE TO REQUIREMENT OF TENDER**

S. No	Description of Requirement	Yes / No / NA	Page No.
1.	EMD @ 5% of total bid value in the form of Pay order or Demand Draft in favour of “Director, NIT Silchar” in a separate envelope		
2.	Details of work experience, satisfactory work performance certificates		
3.	Copies of the audited Balance sheet and Profit & Loss account statement of last three financial years i.e. 2013-14, 2014-15 & 2015-16 duly certified by CA		
4.	Acknowledgement of I-T return of last three financial years i.e.2013-14, 2014-15 & 2015-16		
5.	Copy of the PAN card.		
6.	Copy of Service Tax registration certificate		
7.	In case of Partnership, copy of registration with Registrar of Firms		
8.	In case of company certificate of incorporation		
9.	In case of Firm/Companies a copy of power of attorney		
10.	Declaration enclosed at Annexure – F1		
11.	No deviation certificate enclosed at Annexure – F2		
12.	Technical details as per Annexure-F3		
13.	Bidder’s detail as per Annexure- F4		
14.	All the pages of tender document have been signed		
15.	Sealed envelope of price bid submitted.		

(Signature & seal of the contractor)

Place:

Date:

PART B : PRICE BID

NAME OF THE WORK	: Supply and Installation of Equipment for ECE Department
TENDER NO.	: NITS/PS-414/ECE/STIS Proj/B.Basu/16, dtd. 10.08.2016, LOS : 09.09.16

S. No	Name of Equipment with Specification & Qty.	Amount (INR)
1	<p>1. Wireless Sensor Node with Battery (4 nos)</p> <ul style="list-style-type: none"> • Microcontroller ATmega1281 • Clock Frequency: 14.7456 MHz • SRAM: 8KB • EEPROM: 4KB • FLASH: 128KB • SD Card slot : Yes • Operating Temperature Range: [-10°C, +65°C] • Clock: RTC (32KHz) • Rechargeable battery 3.7V, 6,600mAh with suitable power adaptor • Recharge options via solar panel/power adaptor/USB • Onboard accelerometer and temperature sensor • Over the air programming (OTAP) • Onboard radio specs <ul style="list-style-type: none"> a. Support for DigiMesh b. Operating frequency 2,405 – 2,465GHz c. Tx power : 100mW d. Sensitivity : -100dBm e. Channels : 12 f. 5dBi antenna <p>Inputs/Outputs:</p> <ul style="list-style-type: none"> 2. Sensor inputs <p>Electrical specifications</p> <ul style="list-style-type: none"> 4. Battery voltage: 3.3 V - 4.2V 5. USB charging: 5 V - 100mA 6. Solar panel charging: 6 - 12 V - 280mA <p>Sensors on the board:</p> <ul style="list-style-type: none"> 3. Temperature (+/-): -40°C , +85°C. Accuracy: 0.25°C 4. Accelerometer: ±2g/±4g/±8g <p>Power Consumption:</p> <ul style="list-style-type: none"> 5. ON: 15mA 6. Sleep: 55µA 7. Deep Sleep: 55µA 8. Hibernate: 0.07µA 	

S. No	Name of Equipment with Specification & Qty.	Amount (INR)
	<p>2. Signal conditioning board compatible with DigiMesh Sensor Node (4 nos) Suitable sensor signal conditioning board should be provided to connect agricultural sensors such as Temperature, Humidity, Luminosity LDR, Anemometer + wind vane + pluviometer, Temperature + humidity (Sensirion), Soil moisture (1.5 m) / (4.5 m) / (8 m), Leaf wetness</p> <p>3. USB Gateway with IDE (1 no) Node a. Suitable Gateway compatible with (USB interface) above mentioned Sensor b. With built in COM port viewer c. APIs for all sensors d. API for provided wireless connectivity e. Should capable of compile and dump the code in to Sensor Node</p> <p>4. Temperature Sensor Unit (4 nos) a. Measurement range: -50 ~ 300°C b. Accuracy: DIN EN 60751 c. Resistance (0°C): 1000Ω d. Diameter: less than 10 mm e. Length: less than 50 mm f. Cable: 2m</p> <p>5. Humidity Sensor Unit (4 nos) a. Measurement range: 0 ~ 100%RH b. Output signal: 0.8 ~ 3.9V (25°C) c. Accuracy: <±4%RH (a 25°C, range 30 ~ 80%), <±6%RH (range 0 ~ 100) d. Typical consumption: 0.38mA e. Maximum consumption: 0.5mA f. Power supply: 5VDC ±5% g. Operation temperature: -40 ~ +85°C h. Storage temperature: -55 ~ +125°C i. Response time: <15 seconds</p> <p>6. Luminosity LDR Sensor Unit (4 nos) a. Resistance in darkness: 20MΩ b. Resistance in light (10lux): 5 ~ 20kΩ c. Spectral range: 400 ~ 700nm d. Operating Temperature: -30°C ~ +75°C</p> <p>7. Soil Moisture Sensor Unit (4 nos) a. Measurement range: 0 ~ 200cb b. Frequency Range: 50 ~ 10000Hz approximately c. Diameter: less than 25 mm d. Length: less than 80 mm e. Terminals: AWG 20</p>	

S. No	Name of Equipment with Specification & Qty.	Amount (INR)
	8. Leaf wetness Sensor Unit (4 nos) a. Resistance Range: 5kΩ ~ >2MΩ b. Output Voltage Range: 1V ~ 3.3V c. Length: less than 4 cm d. Width: less than 2 cm	
TOTAL AMOUNT		
TAX (if any)		
Other Charges (if any)		
(AMOUNT IN WORDS)		

I/ we have gone through all the Special & General Conditions and the contractor's obligations enclosed with this tender document and agree to abide by these.

Note: In case of discrepancy in rates between figure & words the higher will be taken for evaluation of bid and lower value will be taken for award of work.

(Signature & seal of the contractor)

Place:

Date: