



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008, ODISHA**

**Advertised Tender Enquiry**

**Department: Electronics & Communication**

**Tender Notice No: NITR/PW/EC/2018/47**

**Date: 29/08/2018**

Through

**Important Dates**

**CPP Portal**

**(E-procurement)**

<b>Event</b>	<b>Date</b>	<b>Time</b>
Pre-bid Conference	<b>NA</b>	<b>NA</b>
Last Date of submission of Bid	<b>19/09/2018</b>	<b>11:00 AM</b>
Date of Opening of Technical Bid	<b>20/09/2018</b>	<b>11:00 AM</b>

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any clarification:

**Attention: - : Prof. D.P.Acharya  
ELECTRONICS & COMMUNICATION DEPT.  
NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA – 769 008, ODISHA  
Phone: - 0661- 2462463  
Mobile no- +91 9438484151  
Email: [dpacharya@nitrkl.ac.in](mailto:dpacharya@nitrkl.ac.in)**

Yours sincerely,

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Name: Prof. D.P.Acharya  
Professor-In Charge: IOT Laboratory

**Encl:**

- 1. Schedule of requirement, specifications, dates etc.**
- 2. Bid document containing detail terms and conditions.**

## 1. Schedule of requirements

Sl.No	Description of Goods/Service	Quantity
1.	Purchase of experiment board and testing- measurement equipment for IOT Lab.(As per the specification mentioned in <b>Annexure I</b> )	

## 2. Specifications and allied Technical Details: As per Annexure-I

### 3. Format of Quotation (tick appropriate box)

It is a two-part bid with separate techno-commercial and price bids.

4. The Bid should be submitted through e-procurement: <https://eprocure.gov.in/eprocure/app>

5. Quotations should be valid for a period of **90 days** from the closing date of the bid.

### 6. Some important dates:

i.	<b>Pre- bid Conference:</b>	Date: <b>NA</b>	Date: <b>NA</b>
ii.	Last date of submission of Bid:	Date: <b>19/09/2018</b>	Time: <b>11:00 AM</b>
iii.	Date of Opening of technical Bid:	Date: <b>20/09/2018</b>	Time: <b>11:00 AM</b>

7. **Warranty** of **01**years must be provided.

8. **GST:** GST should be charge according to applicable rates (if applicable).

9. **Bid Security: Not Applicable**

10. **Performance Security: Not Applicable**

11. Tender Cost: Tender Cost (Non- refundable) in the shape of Demand Draft for **INR 500/- (Rupees Five hundred only)** in favor of **Director, NIT Rourkela Payable at Rourkela** from any Scheduled Commercial Bank except Co-operative and Gramin bank. Tender Cost should reach physically through speed post/ register post/courier, containing in an envelope & superscripted with subject, tender reference number addressing to **Registrar, NIT Rourkela- 769008, Odisha; Attention: HOD(EC) on or before 20/09/2018 at 11:00 AM**

12. Please go through the enclosed "bid document" carefully for other bidding instruction

13. Please send your quotations through <https://eprocure.gov.in/eprocure/app>

14. For Technical Details you may contact to

**Prof. D.P.Acharya**  
**Department of Electronics & Communication.**  
**National Institute of Technology, Rourkela – 769 008**  
**Phone:- 0661- 2462463, Mobile no- +91 9438484151**  
**Email: [dpacharya@nitrkl.ac.in](mailto:dpacharya@nitrkl.ac.in)**

**NB: Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable).**



**BID DOCUMENT**

**1. Instructions to the bidders:**

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769008, Orissa, from the intending bidders for supply of the goods/stores/ equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in **BOQ** in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the enquiry.
- 1.5 The bids should be uploaded in <https://eprocure.gov.in/eprocure/app> Please follow the guidelines of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 7 days before the deadline for receipt of bids.
- 1.7 Bids received after the deadline of receipt indicated in para 1.4 above, shall not be taken in to consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered non-responsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages is acceptable.

**2. Terms and Conditions of the bid:**

- 2.1 The rates quoted should preferably be net, inclusive of packing, forwarding, freight, Insurance and all other incidental charges excluding taxes. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight etc., when quotes separately are reimbursable at actual. If external agencies are employed, their receipts must be enclosed with the invoice.
- 2.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

**It may be noted that the Institute is exempt from paying Excise Duty vide Government Notification No. 10/97 dated 01.03.1997 [Registration No.: TU/V/RG-CD (227)/2011, dated 10.10.2011]. GST may be charged at applicable rates.**

- 2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be installed within **30 days** from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 2.4 The bid should remain valid for a period of **90 days** from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6 The goods offered should strictly conform to the specification and technical details mentioned in Annexure – I.
- 2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT, Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10 The successful bidder may be required to execute a contract, where applicable.
- 2.11 The bidder has to furnish up to date GST and Income Tax Clearance Certificate along with the bid.
- 2.12 Payment (100 percent) will be made by Account Payee Cheque /Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, and after successful installation and demonstration where ever applicable, whichever is later/latest.
- 2.13 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT Rourkela shall be final.
- 2.14 The bid document/resultant contract will be interpreted under Indian Laws.

**Technical Specification & Quantity**

(Purchase of experiment board and testing – measurement equipment for IOT Lab)

Sl. No.	Description of Goods/Service	Quantity																		
1.	Raspberry Pi 3 Model B - Complete Kit (RPi 3, Case, Adapter, NOOBS card, HDMI Cable, LAN Cable) (16GB NOOBS, Clear).	05																		
2.	STM32F4DISCOVERY ST STM32 STM32F4 STM32F407 MCU Discovery Evaluation Development Board kit embedded ST-LINK V2 debugger XYG	02																		
3.	Intel Edison with Mini Breakout Board Kit EDI1BB.AL.K	05																		
4.	MediaTekLinkIt ONE and Grove IoT Starter Kit Powered by AWS 11 Items	05																		
5.	Beagleboard (Beaglebone Rev C) Starter Kit--includes Clear Case--Power Supply--Micro USB Cable	05																		
6.	BeagleBone Green and Grove IoT Starter Kit Powered by AWS	05																		
7.	Arduino Zero (Arduino M0)	10																		
8.	REES52 Arduino compatible IOT Internet of Things Kit with Arduino UNO R3&Ethernet Shield.	05																		
9.	MediaTekLinkIt ONE and Grove IoT Starter Kit	05																		
10.	Intel® Edison and Grove IoT Starter Kit Powered by AWS	05																		
11.	GPS Receiver Module original with GPS antenna <ul style="list-style-type: none"> <li>• SKG13BL GPS receiver module with antenna</li> <li>• Power supply: 7V to 9V DC, 500mA. Recommended</li> <li>• output: NMEA Protocol</li> <li>• Serial UART and TTL output with 9600 Baud Rate.</li> </ul>	05																		
12.	XBee Pro S2C with UFL (Digi-USA) with antenna OUTDOOR/RF LINE-OF-SIGHT RANGE- 2 Miles (1600 meter) Transmit power- 63 mW (+18 dBm) Receiver sensitivity-101 dBm	10																		
13.	Nova PM Sensor SDS011 High Precision Laser PM2.5 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Item</th> <th>Parameter</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Measuring output</td> <td>PM2.5,PM10</td> </tr> <tr> <td>2</td> <td>Range</td> <td>0.0-999.9 ug/m3</td> </tr> <tr> <td>3</td> <td>Power supply voltage</td> <td>5V</td> </tr> <tr> <td>4</td> <td>Maximum working current</td> <td>100mA</td> </tr> <tr> <td>5</td> <td>Sleep current</td> <td>2 mA</td> </tr> </tbody> </table>	No.	Item	Parameter	1	Measuring output	PM2.5,PM10	2	Range	0.0-999.9 ug/m3	3	Power supply voltage	5V	4	Maximum working current	100mA	5	Sleep current	2 mA	02
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4	Maximum working current	100mA																		
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	6	Operating temperature range	-20-50°C		
	7	Response time	1s		
	8	Serial data output frequency	1 time/s		
	9	Particle diameter resolution	Less than 0.3um		
	10	Relative error	10%		
	11	Product size	71x70x23mm		
14.	MQ7 Carbon Monoxide Gas Sensor Module Concentrations measurement- 10 to 10,000 PPM				03
15.	MQ135 Air Quality Hazardous Gas Sensor Detector Module <ul style="list-style-type: none"> <li>• Working voltage: DC 5V</li> <li>• Working Current: 150mA</li> <li>• DOUT: TTL output</li> <li>• AOUT: Analog output</li> <li>• Preheat time: Over 20s</li> <li>• Dimension: 32mm x 22m x 27 mm (HIGH 27mm)</li> </ul>				02
16.	Arduino XBee Shield Original				03
17.	XBee Explorer Dongle With FT232RL Chip from FTDI				02
18.	SR401P Metal Gear Digital Servo 5kg.cm				03
19.	HC-06 Bluetooth Module with Base				02
20.	Lithium Polymer 3 Cell, 11.1V, 3300mAh, 20C discharge Battery				02
21.	ESP8266 ESP-01 Remote Serial Port WIFI Wireless Module				03
22.	2pcs/lot 868MHz, 100mW sx1276 chip long range 4Km RF Wireless LoRa Module LoRa1276, version 1				10
23.	REES52 FT232RL USB TO TTL 5V 3.3V Download Cable To Serial Adapter Module for Arduino				02
24.	Tracking Shield - GSM/GPRS/GPS (SIM900)				02
25.	NodeMCU v2 - Lua Based ESP8266 Development Kit				03
26.	Generic KG072 Micro SD Storage Board, Micro SD TF Card Memory Shield Module SPI, Micro SD Adapter- Arduino, ARM and Other MCU				02
27.	D-Link DIR-615 Wireless-N300 Router (Black)				02
28.	DS3231 AT24C32 IIC Precision RTC Real Time Clock Memory Module For Arduino, ARM and Other MCU				03

29.	LM2596 DC-DC BUCK CONVERTER STEP-DOWN POWER MODULE MD0102	10
30.	L298 Stepper Motor Driver Board Module For Arduino Smart Car Robot For Arduino/Raspberry-Pi/Robotics	02
31.	NEMA17 STEPPER MOTOR 3KGCM WITH PULLEY	03
32.	High quality Breadboards	10
33.	Seedstudio Grove Starter Kit for mbed	05

**Specification and Accessories for Sr. No. 8, 4, 10, & 33.**

**SR. No 8. REES52 Arduino compatible IOT Internet of Things Kit with Arduino UNO R3&Ethernet Shield:-**

Package includes:

- 1) Arduino Uno R3(Original Italian Made) -1 PC
- 2) W5100 Ethernet Shield -1 PC
- 3) ESP 8266 WIFI Module -1 PC
- 4) Temperature Sensor (LM 35) -1 PC
- 5) Light Sensor (LDRS) -2 PCS
- 6) Bread Board 400 pins -1 PC
- 7) Jumper Wires M-M -20 PCS
- 8) Relay 5V - 1 PC
- 9) Trim Pot 10K -1 PC
- 10) Diode IN4007 -5 PCS
- 11) Resistor 220ohm,10k ohms - Each 10 PCS
- 12) LEDS (RED,GREEN,YELLOW) -Each 5 PCS
- 13) Network RJ 45 -1 PC
- 14) USB Cable(Type A-B) - 1 PC
- 15) Battery Holder - 1 PC
- 16) Breadboard Power Supply - 1 PC
- 17) NRF 24LO1 Module - 1 PC
- 18) RGB - 1 PC
- 19) HC SR-04 Ultrasonic Sensor - 1 PC
- 20) PIR Sensor - 1 PC
- 21) IR Sensor - 1 PC
- 22) Battery Snaps - 1 PC
- 23) Swithes - 5 PCS

**Sr. No. 4: MediaTekLinkIt ONE and Grove IoT Starter Kit Powered by AWS 11 Items:-**

. The kit contains: -

- MediaTekLinkIt ONE development board-MediaTekLinkIt ONE x1 Base Shield x1 Grove – 3-Axis Digital Accelerometer( 16g) x1
- Grove - Light Sensor x1 Grove LED Bar v2.0 x1
- Grove - Moisture Sensor x1
- Grove - Touch Sensor x1
- Grove - Temperature Sensor x1
- Grove - OLED Display 1.12" x1
- Grove-Loudness Sensor x1 Micro USB Cable - 48cm x1

