



NATIONAL INSTITUTE OF TECHNOLOGY

ROURKELA-769008 (ODISHA)

An Institute of National Importance under Ministry of HRD, GOI

NOTICE INVITING TENDER

Tender Notification No: NITR/PW/EC/2018/47

Dated: 29/08/2018

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement for **Setting up of Internet of Things (IOT) Lab** at NIT Rourkela.

Last date of Submission of Bid : 19/09/2018 at 11:00 AM

Opening date of Technical Bid : 20/09/2018 at 11:00 AM

For Details: http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx

Contact: Prof. D.P.Acharya (ECE Dept); Ph. No: 0661-2462463; Email: dpacharya@nitrkl.ac.in

Bidding through: <https://eprocure.gov.in/eprocure/app>

**sd/-
REGISTRAR**



NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA-769008, ODISHA

(TENDER NOTICE NO: NITR/PW/EC/2018/47

dated: 29/08/2018)

(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">• SKG13BL GPS receiver module with antenna• Power supply: 7V to 9V DC, 500mA. Recommended• output: NMEA Protocol• Serial UART and TTL output with 9600 Baud Rate.	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.	<p data-bbox="310 65 954 92">Nova PM Sensor SDS011 High Precision Laser PM2.5</p> <table border="1" data-bbox="310 132 1110 1640"> <thead> <tr> <th data-bbox="310 132 433 212">No.</th> <th data-bbox="433 132 604 212">Item</th> <th data-bbox="604 132 1110 212">Parameter</th> </tr> </thead> <tbody> <tr> <td data-bbox="310 212 433 333">1</td> <td data-bbox="433 212 604 333">Measuring output</td> <td data-bbox="604 212 1110 333">PM2.5,PM10</td> </tr> <tr> <td data-bbox="310 333 433 417">2</td> <td data-bbox="433 333 604 417">Range</td> <td data-bbox="604 333 1110 417">0.0-999.9 ug/m3</td> </tr> <tr> <td data-bbox="310 417 433 579">3</td> <td data-bbox="433 417 604 579">Power supply voltage</td> <td data-bbox="604 417 1110 579">5V</td> </tr> <tr> <td data-bbox="310 579 433 741">4</td> <td data-bbox="433 579 604 741">Maximum working current</td> <td data-bbox="604 579 1110 741">100mA</td> </tr> <tr> <td data-bbox="310 741 433 825">5</td> <td data-bbox="433 741 604 825">Sleep current</td> <td data-bbox="604 741 1110 825">2 mA</td> </tr> <tr> <td data-bbox="310 825 433 987">6</td> <td data-bbox="433 825 604 987">Operating temperature range</td> <td data-bbox="604 825 1110 987">-20-50°C</td> </tr> <tr> <td data-bbox="310 987 433 1108">7</td> <td data-bbox="433 987 604 1108">Response time</td> <td data-bbox="604 987 1110 1108">1s</td> </tr> <tr> <td data-bbox="310 1108 433 1270">8</td> <td data-bbox="433 1108 604 1270">Serial data output frequency</td> <td data-bbox="604 1108 1110 1270">1 time/s</td> </tr> <tr> <td data-bbox="310 1270 433 1432">9</td> <td data-bbox="433 1270 604 1432">Particle diameter resolution</td> <td data-bbox="604 1270 1110 1432">Less than 0.3um</td> </tr> <tr> <td data-bbox="310 1432 433 1554">10</td> <td data-bbox="433 1432 604 1554">Relative error</td> <td data-bbox="604 1432 1110 1554">10%</td> </tr> <tr> <td data-bbox="310 1554 433 1640">11</td> <td data-bbox="433 1554 604 1640">Product size</td> <td data-bbox="604 1554 1110 1640">71x70x23mm</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	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	02
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14.	<p data-bbox="310 1713 833 1740">MQ7 Carbon Monoxide Gas Sensor Module</p> <p data-bbox="310 1787 899 1814">Concentrations measurement- 10 to 10,000 PPM</p>	03																																				
15.	<p data-bbox="310 1854 915 1881">MQ135 Air Quality Hazardous Gas Sensor Detector Module</p> <ul data-bbox="310 1927 675 2003" style="list-style-type: none"> <li data-bbox="310 1927 675 1955">• Working voltage: DC 5V <li data-bbox="310 1969 675 1997">• Working Current: 150mA 	02																																				

	<ul style="list-style-type: none"> • DOUT: TTL output • AOUT: Analog output • Preheat time: Over 20s • Dimension: 32mm x 22m x 27 mm (HIGH 27mm) 	
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

Quantity required : as mentioned above (All information provided in technical specification with name of board and testing – measurement equipment)

Delivery : Within **30 days** from the date of purchase order

Last Date of submission of Bid : **19/09/2018** at **11:00 AM**

Date of opening of Technical and Financial bid : **20/09/2018** at **11:00 AM**

1. The firm should not have been black listed at any time.
2. The submission of following bids by the tenderer should be through <https://eprocure.gov.in/eprocure/app>
Please follow the guidelines as per the portal.

PURCHASE OF Experiment Board and Testing – Measurement Equipment For IOT Lab

(Tender Notice No: NITR/PW/EC/2018/47, dated 29/08/2018) Due on 19/08/2018 at 11:00 AM

3. Liquidated damage clause will be charged for any delay in supply of goods.
4. The validity of the tender shall be 90 days from the date of opening of the bids.
5. Detailed advertisement including all tender documents is also available in our website at http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx
6. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

**(REGISTRAR)
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-247202**

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

Sr. No. 10: Intel® Edison and Grove IoT Starter Kit Powered by AWS:-

- Intel® Edison for Arduino x1
- Base Shield x1
- Grove – Temperature&Humidity Sensor (High-Accuracy & Mini) x1
- Grove - Moisture Sensor x1
- Grove - Light Sensor x1

- Grove - UV Sensor x1
- Grove - PIR Motion Sensor x1
- Grove - Encoder x1
- Grove - Button x1
- Grove - LCD RGB Backlight x1
- Grove - Relay x1
- Grove - Servo x1
- Grove - Buzzer x1
- USB Cable; 480mm-Black x1
- USB Wall Power Supply x1

Sr. No. 33: Sreedstudio Grove Starter Kit for mbed: -

- 1 x Grove - Button
- 1 x Grove - Buzzer
- 1 x Grove - Rotary Angle Sensor
- 1 x Grove - Temperature Sensor
- 1 x Grove - Light Sensor
- 1 x Grove - Infrared Emitter
- 1 x Grove - Infrared Receiver
- 1 x Grove - Chainable RGB LED
- 1 x Grove - 3-Axis Digital Accelerometer
- 1 x Grove - 4 Digit Display
- 1 x Base Shield
- 1 x Infrared remote control
- 5 x Grove Cable (24mm)
- 5 x Jumper Wire

Others

- Warranty: 1 years' standard warranty from the date of delivery.
- Scanned copy of technical brochure and website reference of the same must be included in the bid.