**COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous)**

 **NAAC ‘A’**

 ***(A Constituent College of Biju Patnaik University of Technology, Odisha)***

**Techno Campus, P.O.- Mahalaxmi Vihar, Bhubaneswar-751029, Odisha, India**

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**INVITATION FOR EXPRESSION OF INTEREST**

**No. CET/TEQIP-III/EOI/ 1229 , Dated 23/11/2019**

College of Engineering & Technology (CET) invites Expression of Interest (EoI) in sealed envelope from OEMs/Authorized Dealers for supplying different Equipment/Goods under TEQIP-III. The EoI Document containing the details of Technical Specifications and submission format for each individual equipment/Goods can be downloaded from the website [www.cet.edu.in](http://www.cet.edu.in) in the link <http://cet.edu.in/eoi.php> . Applicants meeting the criteria may be invited for submission of Quotation in the prescribed format of TEQIP-III for further processing of the proposal. The authority reserves the right to cancel this invitation for EoI and/or invite a fresh EoI with or without amendments and without assigning any reason thereof. Information provided at this stage is indicative and CET reserves the right to amend/add further details in the EoI.

 **Sd-**

**PRINCIPAL**

**Format for Submission of Expression of Interest (EOI)**

# Brief about Expression of Interest

|  |  |
| --- | --- |
| Name of the Equipment/ Item | **Internet of Things (IOT) Lab. Module 2**  |
| Location of the Supply | College of Engineering & Technology (CET)Techno-Campus, Ghatikia, Bhubaneswar-751029 |
| Name of Authority | Principal |
| Eligible firms | The firm should be the OEM/Authorized Dealers of the OEM having experience in supply and maintenance of the same item earlier.  |
| Date of Submission of EOI | **Last date is 10.12.2019** |
| Department | Central Facility of the College  |
| Contact person | Dr T. K. Patra and Dr P.K.Ray |
| Phone Number of Contact person | 9438020131 and 6370317936 |
| Email | tkpatra@cet.edu.in and  |
| Address for submission of EoI | The PrincipalCollege of Engineering & Technology (CET)Techno-campus, Ghatikia, P.O. Mahalaxmi Vihar Bhubaneswar-751029 |
| Selection Process | Stage1: Expression of Interest (EOI);Stage 2: Quotation proposal submission in TEQIP-III format  |
| * **The EoI will be submitted by Speed Post/Registered Post/ Courier only**
* The sealed envelope containing the EoI should be super scribed with “**Expression of Interest (EoI) for supply of ………………..in Department of…………………..”**
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**Technical Specification:**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Item  | Specification | Purpose |
| 1 | Automatic & IntelligentWeather Monitoring System | Air Temperature Operating Range : 0°-100°C Resolution : 1°CRelative Humidity Operating Range : 5% to 95%RH Resolution : 1%Solar Radiation sensor Output : 0-2VDC Range : 0 to 2000W/m2 Spectral Response : 400 to 1100 nm Atmospheric Pressure Sensor Detection Range : 15- 115kPa Response time : 5 Sec. Air Quality Sensor (PM2.5) Detection Range : 10 - 500 ppm Response time : 5 Sec. Wind Speed Sensor Speed : 0 to 20m/S Resolution : 1m/SUV Index Sensor Response wavelength : 200nm-370nm Response time : 5 secondsWireless Transmission : GPRS Based Cloud Services : 1 Year | Weather Monitoring Applications |
| 2 | IoT compatible SOLAR based Electric Vehicle with Battery Set up | Operating Voltage : 220VAC, 12V , 5V Battery Used : lithium ion phosphate battery, lithium ion battery, nickel cadmium battery, alkaline battery, nickel hydrogen battery Voltmeter : 5nos Ammeter : 4nos Thermometer : 1no Electrical Loads/Indicators with switches : 21W, 5W, 12V and 5V bulbs Charging and Discharging Switches : 4nos. (each) AC and DC Charger : 1no Detection terminals : 20nos Approx Dimensions ( in mm) : L550 X W440 X H220Solar panel of 500Wp with supporting battery. | SOLAR based Electric Vehicle |
| 3 | Conductive Ink Technology based PCB Machine | Precision: 20micron or better,Minimum track width: 100 micron or less, Reflow plate for SMD soldering: Inbuilt, circuit design in flexible material, flexible ink for flexible surface, auto level on any surface, easy to use GUI | To develop customized IoT System |
| 4 | Online cloud (Three Years) |  1 vCore(s) Fair Share 25 GB NVMe SSD RAID1 2 GB DDR4 ECC RAM 1 Gbps Burst Unmetered Bandwidth 1 IPv4 + 1 IPv6 Enterprise Level Anti DDOS Protection Private Networking Virtualizor VM Controls One Dedicated IPPhp. Perl, python supportedIncluding Domain NameFull Virtual Control of PCInstall and reinstall OS from control panel.Operating System :Ubuntu, CentOS, Debian (atleast two from above) | For cloud storage and services  |
| 5 | TINADesign Suit with PCB design10 user site licence | Analog, Digital, MCU, RF, Symbolic simulation, Spice, IBIS, HDL and S-parameter models, VHDL, Verilog, Verilog-A & AMS, SystemC Monte-Carlo, Worst Case & Stress Analysis, Interactive simulation and animation Virtual Instruments, PCB Design with 3D view | To analyze and develop IoT products |
| 6 | Raspberry pi 4 GB and Arduino Uno with accessories (Raspberry pi /Arduinooriginal grade) | Raspberry pi 4GB; wireless keyboard; wireless mouse; casing; Arduino Uno | To develop IoT products |
| 7 | Pi camera 5MP (Raspberry Pi camera original grade) | Available with Sony company in appropriate specification | To develop IoT products |
| 8 | PH Sensor;Figaro TGS2600 - Air Contaminants Sensor;DHT11;Hall Sensor based flow rate (Industrial grade) | **Model no.TGS 2600****Sensing element type D1****Standard packages TO-5 Metal can. Target gases –Air contaminants****Typical detection range 1—10 ppm of H2.****1. DHT series numeric humiture sensor.2.Humidity measuring range: 20%~90%RH(0~50degree (temperature compensation).3.Temperature measuring range: 0~+50degree.4.Humidity measurement accuracy: ±5.0%RH.5.Temperature measurement accuracy: ±2.0degree.6.response time: <5s.** | Sensors To develop IoT products |
| 9 | Various Sensors (Industrial grade) | **Pressure Sensor****Displacement Sensors**• LVDT • Potentiometric Sensor• Capacitive displacement sensor **Force Sensors**• Load Cell • Strain Gauge • Piezoelectric Sensor**Environment Sensors**• Gas Sensor• Alcohol Sensor• Humidity Sensor• Fire Sensor • Smoke Detector **Switches**• Limit Switch• Magnetic Reed Switch • Thumbwheel Switch **Proximity Sensors**• Capacitive proximity Sensor • Inductive proximity Sensor • Optical proximity Sensor • Magnetic proximity Sensor **Speed Sensor**• Slotted opto Sensor + Tachogenerator **Biomedical Sensors**• Galvanic skin response (GSR) • Phonocardiograph • Electrocordiograph • Heart rate Sensor **Other Sensors**• PIR Sensor • Hall effect Sensor • Color Sensor • Level Sensor • Sound Sensor• Optocoupler Sensor • Touch Sensor **• Types of temperature Sensors** • J type thermocouple• K type thermocoupleN type thermocouple• IC AD590**• Vibration Sensor** **• Current Sensor****• Flow Sensor** **• Accelerometer Sensor****• Relay** PIR Sensor Pressure Sensor LVDT Load Cell  | Sensors to develop IoT products |
| 10 | Wireless connectivity and RFID reader (Industrial grade) | RFID card reader; RFID cards;GSM module; Zigbee module;GPS Module; | Wireless setup to develop IoT products |

**APPLICANT’S EXPRESSION OF INTEREST**

To,

The Principal,

College of Engineering and Technology

Techno-Campus, Ghatikia

Bhubaneswar-751029

Odisha

Sub: **Submission of Expression of Interest for supply of ………….. with the given Technical specification under TEQIP-III**

Dear sir

In response to the Invitation for Expressions of Interest (EOI) published on \_\_\_\_\_\_\_\_ for the above purpose, we would like to express interest to carry out the above proposed task. As instructed, we agree to supply the equipment /item with the following Technical specification:

**Technical specifications**

 **Organizational Details** :

1. Name of the Organization
2. Complete postal address with pin code:
3. GST No.
4. Telephone No.
5. Fax Number
6. Mail Id:
7. Name of representative:
8. Representative Mobile Number :
9. Representative E mail Id:

**Experience in related fields:** Attach the purchase order if supplied any other Institute.

**Additional information (if any):**

**Declaration**: We hereby confirm that we are interested in supplying the above equipment/item as per the given Technical specification to CET, Bhubaneswar under TEQIP III and we certify that our organization has not been black listed during last three financial years. All the information provided herewith is genuine and accurate.

Sincerely Yours,

Signature of the applicant

[Full name of applicant]

Stamp........................

Date:

**Note: This is to be furnished on the letter head of the organization and signed in every page.**