



National Institute of Technology, Durgapur

Department of Computer Applications
M.G, Avenue, Durgapur, WB- 713209.

BID REFERENCE: NITD/CA/RIG/SS/2016/Re/1

Date - 02-09-2016

To

Dear Sir,

SUB : Procurement of “Home Automation Devices/Peripherals” under the RIG of “**Dr. Sujoy Saha, Assistant Professor, Department of Computer Applications**” (Approval No. NITD/Regis/OR/FC/33/2016/dated 22nd Feb,2016)as specified in **Annexure-II**.

You are invited to submit your most competitive quotation for the listed items as per **Annexure–II**. Price bid form as per **Annexure-I** must be filled with complete numerical values.

1. Bid Price (Annexure-I)

- The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
- All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price **F.O.R. NIT Durgapur**.
- The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- The bid price must be quoted in **Indian Rupees**.

2. Each bidder shall submit only one quotation for each item.

3. The bid submitted by the bidder must comprise the following:

- Detailed technical specifications, conforming to the given specifications (vide Annexure – I), and literature /drawings /manuals of the Items/services to be supplied
- Warranty period
- Valid sales-tax / VAT clearance certificate
- Price bid as per Annexure-I

4. Validity of Quotation

- Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.

5. Evaluation of Quotations

- The Purchaser will evaluate and compare the quotations based on all of the items and determined to be substantially responsive i.e.
 - which are properly signed and
 - Conform to the terms and conditions, and specifications.
 - Quoted all items.

6. Award of contract

- The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive, technologically acceptable and who has offered the lowest evaluated quotation price.

- b. 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.
 - c. 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.
7. Delivery shall be made at **Department of Computer Applications, NIT, Durgapur.**
8. Payment shall be made immediately within 30 days after satisfactory installation, commissioning and acceptance of the Item.
9. Comprehensive onsite warranty shall be applicable to the supplied Items (wherever applicable) for a period of minimum **12 months** from the date of installation.
10. The Institute is **exempted from payment of custom and excise duty** on items mentioned below:
- 1. Scientific and technical instruments, apparatus, equipment (including computers)
 - 2. Accessories, spare parts and consumables thereof
 - 3. Computer software, CD-ROM, recorded magnetic tapes, microfilms, and microchips.
11. **Liquidated Damage** will be applicable at the rate of 0.5% per week. The purchaser has the right to cancel the purchase order when LD accumulates to 10%.
12. Settlement of any dispute will be made under the jurisdiction of Durgapur Court.
13. You are requested to provide your offer latest by **03.00 PM on September 20, 2016. Bid opening will be on the same day at 4:00 PM.**
14. The bid document must be signed and sealed and enclosed with the bid as a token of acceptance of all terms and conditions in the bid document by the bidder.
15. The items must be delivered within **60 days** from the date of placement of purchase order at the respective department.
16. All other terms and conditions of GFR 2005 of the Government of India will be application.

I look forward to receiving your quotations and thank you for your interest in this project.

The bid must be addressed to:

(Dr. Sujoy Saha)
Department of Computer Applications
NIT, Durgapur -713209, W.B.

Annexure – I

PRICE BID

1	2	3	4		5	6	7	8
Sl. No	Name of the Item	Quantity & Unit	Price for each unit		Unit Price (a)+(b)	Sales tax/ VAT & other taxes payable [admiss ible only on col. 4(a)]	Total Unit Price (5)+(6)	Total Unit Price (in words)
			Ex-factor/ ex-warehouse/ ex-showroom/ off the shelf (a)	Incidental Services (b)				

Annexure – II
(Home Automation)

SI No.	Device Name	Specification	Total No
1	Microcontroller	Operating Voltage: 3.3V, Recommended Input Voltage: 7-12V, Min-Max Input Voltage: 6-20V, Digital I/O Pins: 54 (of which 12 provide PWM output), Analog Input Pins: 12, Analog Outputs Pins: 2, Total DC Output Current on all I/O lines: 130 mA, DC Current for 3.3V Pin: 800 mA, DC Current for 5V Pin: 800 mA, Flash Memory: 512 KB all available for the user applications, SRAM: 96 KB (two banks: 64KB and 32KB), Clock Speed: 84 MHz.	6
2	Microcomputer	CPU: 4x ARM Cortex-A53, 1.2GHz or higher GPU: Broadcom VideoCore IV RAM: 1GB LPDDR2 (900 MHz) or higher Networking: 10/100 Ethernet, 2.4GHz 802.11n wireless Bluetooth: Bluetooth 4.1 Classic, Bluetooth Low Energy Storage: microSD GPIO: 40-pin header, populated Ports: HDMI, 3.5mm analogue audio-video jack, 4x USB 2.0, Ethernet, Camera Serial Interface (CSI), Display Serial Interface (DSI)	2
3	SD Card	SD Card: 8GB or Higher	10
4	SD Card Shield	SD Card Shield compatible with Microcontroller	7
5	RTC	compatible with Microcontroller and Microcomputer	8
6	Heat Sync	Compatible with Microcomputer	4
7	Multi-meter, Soldering Iron, Screwdriver Set	Multimeter, Soldering Iron, Screwdriver Set	1
8	Accessories (Wires, Bread Boards, Device packaging etc.)	Wires, Bread Boards, Device packaging	5
9	Ultrasonic Sensor Type 1	Power supply :5V DC, Quiescent current : <2mA, Effectual angle: <15°, Ranging distance : 2cm – 500 cm, Resolution : 0.3 cm or higher	10
10	Ultrasonic Sensor Type 2	Power: +3.3V~+5.0V Current: <20mA Working temperature: -10 ~ +70 C Detecting range: 5cm-500cm (2-196 in) Resolution: 1cm (0.39 in) Interface: RS232 (TTL), PWM Size: 22mm (0.87 in) x 51 mm (2 in) Weight: 25g	5
11	Ultrasonic Sensor Type 3	Resolution of 1 cm 10Hz reading rate 42kHz Ultrasonic sensor measures distance to objects RoHS Compliant Read from all 3 sensor outputs: Analog Voltage, RS232 Serial, Pulse Width Virtually no dead zone, objects closer than 20 cm range as 20 cm Operates from 3.3-5.5V Low 3.4mA average current requirement Small, light weight module Designed for easy integration into your project or product Operational Temperature from 0°C to +65°C (32°F to +149°F) Real-time automatic calibration (voltage, humidity, ambient noise) Firmware filtering for better noise tolerance and clutter rejection 200,000+ Hours Mean Time Between Failure Narrowest beam of the XL-MaxSonar-EZ products Highest noise tolerance of the XL-MaxSonar-EZ products Great for large target applications Maximum range of 765 cm (300 inches)	3

		Hardware gain of 250 Short range, narrow detection zone for small targets	
12	Thermal Sensor	Power supply voltage : 4.5 to 5.5 VDC Storage temperature range : -10 to 60°C (with no icing or condensation) Operating temperature range : 0 to 50°C (with no icing or condensation) Storage humidity range : 85% max. (with no icing or condensation) Operating humidity range : 20% to 85% (with no icing or condensation) Object temperature detection range *2 : 5 to 50°C Reference temperature detection range *2 : 5 to 45°C Temperature resolution (NETD) : 0.14°C	3
13	Lidar with Servo Meter	Range: 0-40m Laser Emitter Accuracy: +/- 0.025m Power: 5V DC Current Consumption: <100mA continuous operation Acquisition Time: < 0.02 sec Rep Rate: 1-500Hz Interface: I2C or PWM	1
14	Battery	5v, 1Ah or Higher	4
15	Display Screen	Seven Segment LED display	1
16	Keyboard, Mouse, cables	Keyboard, Mouse, cables	1
17	Transmitter And Receiver in different Frequency Bandwidth with Accessories	SX1276 LoRa® based module with SPI interface Packet radio with ready-to-go Arduino libraries Uses the license-free ISM bands (ITU "Europe" @ 433MHz and ITU "Americas" @ 900MHz) +5 to +20 dBm up to 100 mW Power Output Capability (power output selectable in software) ~300uA during full sleep, ~120mA peak during +20dBm transmit, ~40mA during active radio listening. Simple wire antenna or spot for uFL connector Range : 2km (can be upto 20km with tweaks)	2
18	LiFi Transreceiver with accessories	Voltage: 3.3-5V Distance: 10m	2