



INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR KHARAGPUR – 721302

SUB:PROCUREMENT OF ACCESSORIES

Tender Notice No. **IIT/EE/OTG/SM/ACC/2018-19/02** Date: **24.10.2018**

Indian Institute of Technology Kharagpur, an Institute of National Importance, invites sealed quotations from reputed Original Equipment Manufacturers (OEMs) or their Authorized representatives & General Suppliers for the supply of **Accessories** for the Department of Electrical Engineering.

Interested vendors are requested to send their sealed bids under a **two cover system** as per requirement mentioned in tender document, along with the Technical Specifications & Compliance Certificate (as mentioned in **Annexure – I**) of the tender document.

Details are also mentioned in the Institute website **www.iitkgp.ac.in** [link: **Tenders**].

The proposal has to be sent in a sealed packet, containing two separate sealed envelopes (**Technical Bid** and **Price Bid**) duly superscripted with Reference Number (**Tender Notice No. IIT/EE/OTG/SM/ACC/2018-19/02** Date: **24.10.2018**) to the office of Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, Indian Institute of Technology, Kharagpur, P.O. Kharagpur Technology, PIN: 721302 **on or before 14.11.2018 at 3.00 pm.**

The **technical bids will be opened on 14.11.2018 at 4.00 pm** in the **Office of Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur** in the presence of the vendors/ or their authorized representatives. Price bids will be opened (to be notified separately) only of those firms, who will be found technically qualified/short listed, after evaluation of their technical bids.

Prof. Siddhartha Mukhopadhyay
PI, CNE_OTG, IIT Kharagpur

Encl: Annexure – I & II

Copy to:

- 1. Institute website**
- 2. Jt. Registrar (Stores & Purchase)**
- 3. CPP Portal**
- 4. Chairman, Purchase Committee**
- 5. Notice Board**

Procurement of Accessories

It will consist of the accessories as per the specifications given in **Annexure I**.

TERMS AND CONDITIONS

1. Technical bid should contain all relevant technical details; printed technical leaflet of models quoted and other details, which may be necessary to ensure that the offer is complete in all respects, e.g., technical specifications, etc.
2. Technical bid should also contain a Compliance Certificate duly signed by the bidder.
3. PRICE may be quoted either in INR or in foreign currency. Where tenderer intends to quote in Indian Rupees (INR), the price should be quoted "FOR IIT Kharagpur" basis. The price should be all inclusive including GST. The unit price without tax and the tax breakups should be shown separately for each item (if applicable). Prices for software components, if any, must be shown as separate line items.
4. IIT Kharagpur is registered under DSIR, Govt. of India. GST rate for scientific goods is 5% as per the Notification No. 47/2017 - Integrated Tax (Rate) dated 14th November, 2017. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder. Where tenderer intends to quote in foreign currency FCA/FOB source port price by Air/Sea to be quoted. In case of comparison between FOR IIT Kharagpur (quoted in INR) and FOB/FCA price (quoted in foreign currency) 20% will be added on FOB/FCA price after conversion to INR.
5. IIT Kharagpur is eligible for exemption for payment of Customs Duties in terms of Government of India Notification No.51/96-Customs dated 23.07.96. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder.
6. Item wise L1Bidder will be decided based on the price of the item mentioned in the specification.
7. Payment Terms: 90% Payment shall be made after successful installation of the Accessories duly certified by PI, CNE_OTG. Balance 10% may be released against submission of Performance Bank Guarantee to the tune of 10% of the total purchase order value. The Performance Bank Guarantee shall be issued from any Commercial Bank, which must remain valid for a period sixty days beyond the expiry of the Warranty Period. Bid security will be refunded back on submission of performance Security. On behalf of the Principal, Indian Agent must be able to provide Performance Bank Guarantee.
8. Warranty: OEM warranty, at least 12 months from the date of successful installation of the accessories.
9. Delivery Period: The accessories should be supplied within 8 weeks from the date of receipt of the Purchase Order.
10. Liquidated Damage: In the event of failure to deliver the stores beyond the specified date, liquidated damages @ 1% per month or part thereof in respect of the value of stores will be deducted, subject to a maximum of 5%; alternately the order will be cancelled and the undelivered stores purchased from elsewhere at the risk and expense of the vendor.
11. Earnest Money Deposit (EMD): An amount of 4,000.00 (Rupees four thousand) only (Refundable) in the form of Demand Draft drawn in favour of "Indian Institute of Technology Kharagpur", payable at Kharagpur or Bank Guarantee as per format at Annexure-II is to be

submitted. E.M.D. should be enclosed separately in an envelope and stapled with the Technical Bid document superscribed with the tender no. The validity of the EMD should be 6 (six) months from the date of issue. Any bid without EMD will summarily be rejected. No interest is payable on EMD. EMD will be refunded to the unsuccessful bidder after finalization of the tender process. No interest is payable on Security Deposit. Security Deposit shall be forfeited if the selected vendor fails to execute the contract after receiving the same.

[NOTE: IIT Kharagpur will give exemption for submission of tender fee and EMD who are registered with MSME or Central Purchase Organization or startups as recognized by DIPP as per revised rule 170 of GFR-2017 only. However proper and valid document in this regard must be submitted by the bidders in support of their claim.]

12. Bid Submission: Technical Bid and Price Bid should be submitted in two separate sealed envelopes quoting reference number on the top of the envelope. Technical bid should have a copy of the price bid with costs blanked out. Tender Fee and EMD should be enclosed with the Technical Bid documents, in separate sealed envelopes, stapled with the packet containing Technical Bid documents.
13. Acceptance of Tender: The authority of IIT, Kharagpur reserves the right to accept/reject any or the entire tender bids received without assigning any reason thereof.
14. Conditional offer will not be accepted.
15. Period of Validity: Bids shall remain valid for acceptance for a period of 120 days from the date of opening of the price bid. The benefit of downward prices (revision on account of budget/financial policy, tax revision, etc.) should be given to IIT Kharagpur by the selected OEM/vendor.
16. Past performance of the vendors will be judged at the time of Technical Evaluation.
17. The Institute does not bind itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Technical Evaluation Committee of the Institute.
18. Bidders should enclose the following documents:
 - i. Earnest Money Deposit (EMD).
 - ii. Certificate of Registration/Trade License.
 - iii. PAN number and GST registration number.
 - iv. IT returns for the last three years.
 - v. Copy of product literature technical leaflet, wherever applicable for which the prices have been quoted should invariably be enclosed.
 - vi. Signed copy of the tender document, with company seal, agreeing to the terms & conditions and declaration.
19. **All tenders are to be submitted or handed over to the office of Prof. Siddhartha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur.** The bids (technical and price bids) once submitted shall be the property of the Institute and shall not be returned to the vendor in future.
20. **The person/officer signing** the tender/bid documents should be delegated with an appropriate authority.
21. **Opening of Price Bids:** The Price Bid(s) of only those vendor(s) who are found technically qualified will be opened and the same will be opened before the technically qualified vendor(s). **The date for opening of price bids will be notified separately.**

22. Bidder or his/her authorized representative (with proper authorization letter for opening of technical bids and also for opening of price bids) may choose to be present at the time of opening of Technical Bids/Price Bids.
23. The addendum/corrigendum if any shall be published on Institute's Website and on CPP Portal.
24. The Institute at its discretion may change the quantity at any time before placing the order.
25. Copy of mandatory test reports, national testing/reliability and endurance test reports etc., certified or conducted at the manufacturing site, granted by the bureaus/quality control departments/national testing laboratories, as appropriate, should be enclosed.
26. Deviation from Specifications: It is in the interest of the tenderer to study the specifications in the tender schedule thoroughly before quoting so that, if the tenderer makes any deviations, the same are prominently brought out in the body of the tender. If you need to add any optional items to your system in order to meet our specifications, you are requested to quote for the total including the option required to suit our requirements. Otherwise, your tender will not be considered at all.
27. Guarantee: The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications.
28. Jurisdiction: All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued i.e. Jurisdiction of KOLKATA HIGH COURT. Acceptance to this effect is also necessary at the time of opening of Technical Bid.
29. Agency Commission, if any will be paid to the Indian agents in Rupees on receipt of the accessories and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances.
30. **Tenderer(s), who are Indian Agents of OEMs:**
 - (a) Bidders should enclose / furnish the following documents / details:
 - Port of shipment and Country of origin is to be provided for each item.
 - Purchase order to be placed on: Should be mentioned in the quotation with full address.
 - Complete address and tele links for contact persons of principals and Indian agent offices dealing with this purchase.
 - Name and full address of the OEM's Banker and their swift code.
 - (b) Should furnish a clear declaration as follows: We declare that I am/we are Accredited Agents of the suppliers aboard. DGS&D enlistment certificate needs to be attached (applicable only for the Indian Agents)
31. **Important**
 - (a) Bid submitted with false information will not only be rejected but also the OEM/vendor will be debarred from participation in future tendering process.
 - (b) The OEMs/Vendors need to submit a certificate that they are not currently debarred or blacklisted in IIT Kharagpur for any supplies, products or services, or at present in any national organization or educational institute/university.
 - (c) In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.
 - (d) For any query pertaining to this bid document, correspondence be addressed to:

Prof. Siddhartha Mukhopadhyay,
Department of Electrical Engineering
Indian Institute of Technology, Kharagpur721302
siddhartha.mukhopadhyay@gmail.com / patrashamit@yahoo.com

- (e) In case the due date for submitting tender **happens to be a holiday, the same will be accepted on the next working day**. The timings will however remain unchanged.
Please Note that the Institute remains closed during Saturdays & Sundays.

Annexure I

Sl.	Item	Specification	Qty
1	PYNQ Development Board (PYNQ-Z2)	Device Zynq Z7020 Memory 512MB DDR3 ADAU1761 codec with HP + Mic, Line in 1x Raspberry Pi header	1
2	ASUS Tinker Board	Rockchip Quad-Core RK3288 processor 2GB Dual Channel DDR3 ARM® Mali™-T764 GPU RTL GB LAN, 802.11 b/g/n, Bluetooth V4.0 + EDR RTL ALC4040 CODEC 4 x USB 2.0 1 x 40-pin header, 1 x 2-pin contact pin, 1 x 15-pin MIPI DSI, 1 x 15-pin MIPI CSI 5V/2.5A Power Supply Adapter (compatible with Tinker)	1
3	Mini USB Camera Board	Full HD 1080P USB camera Autofocus Image sensor Up to 5MP, up to 30 FPS, Minimum resolution 1920x1080 UVC protocol Minimum 3m USB cable (USB 2.0 or USB 3.0) Minimum illumination 0.01 Lux Certification CE, FCC No Fisheye vision Board size maximum 45mm x 45mm	4
4	Mini USB Stereo Camera Board	Dual lens setup, Full HD 1080P imaging USB 2.0 or USB 3.0 connectivity with about 5 m length cable High frame rate 1920 X 1080, 30fps No Fisheye vision	2
5	Mini USB Night Vision Camera Board	1.3MP 30 FPS, Minimum resolution 1280x960 Support IR Cut and IR board for IR night vision Work on low illumination, No Fisheye Board size maximum 45mm x 45mm	4
6	Serial Peripheral Interface enabled Camera Board	Lens 8MP 1080P, 30 FPS Minimum resolution 1640x1232 CMOS sensor, No Fisheye vision Ribbon cable attached	4
7	IP Camera	Mini size design, 1.3MP camera Minimum resolution: 1280x720 Electronic zoom function IEEE 802.11a/b/g/n Network port and 2.4 GHz/5 GHz Wifi enabled With IR Illuminator	4
8	Short Range Radar Sensor	Operating Frequency: 76–77 GHz Detection Range: Minimum 1–25 m Accuracy: 0.2m or better Field of view: About 60 degrees at full range Update Rate: About 60-70ms	2
9	Fixed Lidar	Operating Voltage: 5V Frequency: 100Hz Working Range: 0.3m-12m (minimum) I2C/UART communication FOV: 4°(4 degrees), Accuracy: 2% or better	2

10	Ultrasonic Sensor	Operating voltage: 5V Minimum working Range: 2-450 cm Measurement angle: 15 degree Modulation at 40 kHz Communication: Positive TTL / Serial RoHS Compliant	20
11	Ultrasonic Sensor	Operating voltage : 12V Minimum working range: 50-500 cm 42 kHz ultrasonic sensor Resolution 2mm or better Analog current output of 4-20mA Sampling rate: 5Hz or more RoHS compliant Real-time automatic calibration (voltage, humidity, and ambient noise) Weather resistant (IP65 or better)	2
12	USB Modem	USB connectivity Communication : LTE /DC-HSPA+/ HSPA+/ HSPA/ UMTS/ EDGE/ GPRS/ GSM Data Speed: FDD LTE Cat4: 150/50 Mbps @20 M BW HSPA+ 42/5.76, 21/5.76 Mbps HSPA: 14/5.76, 7.2/5.76 Mbps Must work on Indian Cellular band	2
13	Inertial Sensor	9 Degrees of Freedom IMU sensor ITG-3200 - triple-axis digital-output gyroscope ADXL345 - 13-bit resolution, $\pm 16g$, triple-axis accelerometer HMC5883L - triple-axis, digital magnetometer Serial communication through on-board ATmega328	2
14	Inertial Sensor	IMU sensor system with 1) 3-axis 16-bit MEMS accelerometer LIS331DLH 2) 3-axis 16-bit MEMS gyroscope L3G4200D 3) 3-axis 10-bit Magnetometer HMC5883L Pitch -90deg to +90deg Roll -180deg to 180deg Yaw (absolute heading) 0deg at magnetic north -180deg to 180deg Automatic tilt compensation for absolute heading (digital compass) UART communication	2
15	GPS Sensor	UART/I2C communication with antenna Input 5V Configurable from 4800 Baud to 115200 Baud rates 162 dBm tracking sensitivity Support SBAS	2

ANNEXURE – II

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

Whereas(hereinafter called the "tenderer") has submitted their offer dated for the supply of (hereinafter called the "tender") against the purchaser's tender Notice No.

KNOW ALL MEN by these presents that WE of having our registered office at are bound unto (hereinafter called the "Purchaser") in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this Day of 20

THE CONDITIONS OF THIS OBLIGATION ARE

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
 - (a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - (b) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)

Name and designation of the officer

Seal, name & address of the Bank and address of the Branch