

INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

Ground Floor, Block "A", Vishwakarma Government Engineering College Campus
Visat-Gandhinagar Highway, Chandkheda, Ahmedabad-382424. Tel/Fax No. +91 79 2397 2583

Date: 24th August, 2012

Tender No.: IITGN/EE/EQP/2012-13/0188

Last date: 14th September, 2012 on/before 05:00 PM

SUB: Invitation of sealed tender for Supply of "Real Time Physiological Signal Sensing Device" as per specifications shown in the Annexure - I.

Dear Sir,

Indian Institute of Technology Gandhinagar invites sealed tender for **Supply of "Real Time Physiological Signal Sensing Device" as per specifications shown in the Annexure - I** on the following terms & conditions:

1. If the supplier/firm is manufacturer/authorized dealer/sole distributor of any item, the Certificate to this effect should be attached.
2. The tender documents are to be in two parts as **Technical Offer and as Financial offer:**
 - a.) The Technical offer should include the detailed specifications of main equipment/item and its accessories. All items should be numbered as numbered for each instrument in the **Annexure-I**.
 - b.) The financial offer should include the cost of main equipment/item and its accessories numbered as in (a). If there is any separate cost for installation etc. that should be quoted separately. The total cost should be quoted in words as well as figures (typed or printed). Amendment should be avoided. Amendments, if any, should be duly initialed, failing which the offers are liable to be rejected.
 - c.) The two parts of the offer should be placed in separate sealed envelopes clearly marked **"Technical Offer" & "Financial Offer"**. These two envelopes along with envelope for EMD and Tender Fee marked **"Tender Fee & EMD"** (total three envelopes) must be enclosed in one bigger envelope duly sealed and super scribed with tender number, name of the instrument/item and tender due date must be forwarded to the undersigned so as to reach him on or before the due date.

Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

3. Fax and Email quotation are not acceptable.

4. Quotations should be valid for **120 days** from the tender due date. The quotation should clearly indicate the period of delivery, warranty terms etc. A minimum of 3 year warranty is required from the date of commissioning.

5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. The Suppliers should submit copies of suitable documents in support of their reputation, credentials and past performance.
6. The quotations should be given for the items in the same order as in the tender document.
7. Imported supplies should be delivered by air and quoted for CIP Ahmedabad.
8. The quantity shown against each item is approximate and may vary as per demand of the Institute at the time of placing order.
9. In case of payment through Letter of Credit (LC), ninety percent of the payment will be released after completion of the supply. The balance 10% of the payment will be released after satisfactory installation of the equipment.
10. IIT Gandhinagar is exempt from payment of Excise Duty and is eligible for concessional rate of Custom Duty. Necessary certificate will be issued on demand. IIT Gandhinagar will make necessary arrangements for the clearance of imported goods at the Airport. Hence, the price should not include these charges.
11. In the event of any dispute or difference(s) between the vendee IIT Gandhinagar and the vendor(s) arising out of non-supply of material or supplies not found according to the specifications or any other cause whatsoever relating to the supply or purchase order before or after the supply has been executed, shall be referred to the concerned authority of IIT Gandhinagar who may decide the matter himself or may appoint arbitrator(s) under the arbitration and conciliation Act 1996. The decision of the arbitrator shall be final and binding on both the parties.
12. The place of arbitration and the language to be used in arbitral proceedings shall be decided by the arbitrator.
13. All disputes shall be subject to Gandhinagar Jurisdiction only.
14. I.I.T. Gandhinagar has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.
15. The Tender/Bid will be open on **17.09.2012 at 03:00 PM.**
 - a.) The suppliers or their authorized representative may also be present during the opening of the Technical offer, if they desire so, at their own expenses.
 - b) Only those financial offers will be opened whose technical offers are found suitable by the expert committee appointed for the concerned instrument..
 - c) No separate information shall be given to individual bidders. In incomparable situation, the committee may negotiate price with the qualified bidder quoting the lowest price before awarding the offer.

16. In case the supplier requires any elucidation regarding the tender documents, they are requested to contact to the Assistant Registrar (M.M.) through e-mail, purchase@iitgn.ac.in on or before **4:00 PM, 14.09.2012**.

17. A demand draft of **Rs. 1000/- (Rupees One Thousand Only)** towards non-refundable tender fee and a demand draft of **Rs. 23,100/- (Rupees Twenty Three Thousand One Hundred Only)** at the rate of 2% of the tender value towards refundable EMD from a Nationalized bank in favour of "IIT Gandhinagar" payable at Ahmedabad placed in a separate envelope marked "**Tender Fee & EMD**" should accompany tender bid documents. Both the demand drafts should be valid for 180 days. Without the Tender Fee and EMD the bid will not be considered.

The EMD of the successful bidder will be returned to them without any interest after completing the successful installation. The earnest money of unsuccessful bidders will be returned to them without any interest within thirty (30) working days after awarding the offer.

18. All tender documents should have to be forwarded through speed post or registered post, courier to the following address so as to reach the following address on/before **05:00PM, 14.09.2012**.

Assistant Registrar (M.M.)

Indian Institute of Technology Gandhinagar,
Vishwakarma Government Engineering College Campus,
Ground Floor, Block "A",
Visat-Gandhinagar Highway, Chandkheda
Ahmedabad 382424
Tele/ Fax No. +91 79 2397 2583

Other Terms & Conditions:

1. Pre – Qualification Criteria:

a. Bidders should be the manufacturer / authorized dealer. Letter of Authorization from Manufacturer on the same and specific to the tender should be enclosed.

b. An undertaking from the original Manufacturer is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.

2. Performance Guarantee Bond:

a. Performance Guarantee Bond is mandatory.

b. Successful supplier/ firm should submit performance guarantee as prescribed and to be received in the office of Assistant Registrar, Materials Management Division before the date of commencement of supply or 30 days from the date of acceptance of the purchase order, whichever is earlier. The performance guarantee bond to be furnished in the form of Bank Guarantee as per given proforma of the tender documents, for an amount covering 10% of the value of quantity of material on landed cost basis.

c. The Performance Guarantee should be established in favour of “IIT Gandhinagar” through any Nationalized Bank Situated at Ahmedabad/Gandhinagar with a clause to enforce the same on their local branch at Ahmedabad.

d. Validity of the performance guarantee bond shall be for a period of three years from the date of issue of installation & commissioning.

3. **Delivery:** The Equipment should be delivered and installed within the period as specified in the purchase order and be ready for use within one week of delivery unless otherwise prescribed.

4. **Penalty:** If the suppliers fails to deliver and place any or all the Equipment or perform the service by the specified date, penalty at the rate of 1% per week of the total order value subject to the maximum of 10% of total order value will be deducted.

5. **Installation & Warranty Declaration:** Suppliers must give the comprehensive onsite warranty as required from the date of successful installation of Equipment against any manufacturing defects. In the installation report the model number of instrument and all spares parts numbers should be in the line of purchase order. And suppliers must be written in the warranty declaration that “everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specification and shall be complete enough to carry out the experiments, as specified in the tender document.”

Any deviation in the material and the specifications from the accepted terms may liable to be rejected and the suppliers need to supply all the goods in the specified form to the satisfaction/specifications specified in the Purchase Order and demonstrate at their own cost.

Sd/-

Assistant Registrar (M.M)

PARTICULARS TO BE FILLED BY THE SUPPLIER

1. Name of the Supplier:
2. Complete Address of the Supplier:
3. Availability for demonstration of instruments at IIT Gandhinagar: Yes / No [Please √]
4. Cost of the Tender enclosed: Yes/No [Please √] If yes,
 - a.) Name of the Bank_____
 - b.) Amount (In Rs)_____
 - c.) Demand Draft No. _____
5. Earnest Money Deposit enclosed: Yes / No [Please √] if Yes,
 - a.) Name of the Bank_____
 - b.) Amount (In Rs) _____
 - c.) Demand Draft No. _____
 - d.) Last Validity date of the enclosed DD _____
6. Communication details of the concerned contact person to whom all references shall be made regarding this tender enquiry. [NOTE: Any changes after submission of Tender documents kindly update IIT Gandhinagar]
 - a.) Full Name :
 - b.) Complete Postal Address:
 - c.) Telephone No.:
 - d.) Fax No.:
 - e.) Mobile No.:
 - f.) E-mail:
 - g.) Website Address:

PARTICULARS FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of Two Hundred)
(TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS
(WHETHER SITUATED AT AHMEDABAD OR OUTSTATION) WITH A CLAUSE TO
ENFORCE THE SAME ON THEIR LOCAL BRANCH AT AHMEDABAD. BONDS
ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.)

To,

The Asst. Registrar (MM),
Indian Institute of Technology Gandhinagar
VGEC Campus, Chandkheda,
Ahmedabad – 382424

LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology Gandhinagar (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of AND WHEREAS the said tender document requires the supplier/firm (seller) whose tender is accepted for the supply of instrument / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of **“Indian Institute of Technology Gandhinagar”** in the form of Bank Guarantee for Rs [10% (ten percent) of the purchase value] which will be valid for three years from the date of installation & commissioning, the said Performance Guarantee Bond is to be submitted within 30 (Thirty) days from the date of Acceptance of the Purchase Order.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said supplier/firm (seller) failing to abide by any of the conditions referred to in tender document / purchase order / performance of the instrument / machinery, etc. this Bank shall pay to Indian Institute of Technology Gandhinagar on demand and without protest or demur Rs (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology Gandhinagar (Buyer) as to whether the said supplier/firm (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the supplier/firm (Seller) and/ or Indian Institute of Technology Gandhinagar (Buyer).

Notwithstanding anything contained herein:

a. Our liability under this Bank Guarantee shall not exceed Rs.
(Indian Rupees only).

a. This Bank Guarantee shall be valid up to(date) and

c. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Gandhinagar serve upon us a written claim or demand on or before (date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at

.....
.....
.....

(Address of local branch).

Yours truly,

Signature and seal of the guarantor:

Name of the Bank:

Complete Postal Address:

Date:

Annexure-I

- **Name of the Equipment/Item:** Real-Time Physiological Signal Sensing Device
- **Required Quantity:** 01 Unit.
- **Technical Specifications for Semiconductor Device Analyzer Unit**

The Real-time Physiological Signal Sensing Device will be primarily used for wireless data acquisition of physiological signals of an individual participating in tasks involving human-computer interaction or human-robot interaction. The wireless feature of the device would allow participants freedom of movement during physiological signal data collection, an important ingredient in studies involving children with autism. The physiological sensing device should have the following specifications:

Specifications:

1. The Real-time physiological sensing device should consist of a wireless transmitter that is worn by a participant, thereby amplifying and sending the physiological data to a centralized receiver module. The hardware should also support virtual reality modeling platform software such as Vizard, and data analysis software platform such as Matlab.
2. It should have Electrocardiogram (ECG) monitoring system with typical specification
 - a. Transmitter High Pass Filter – 0.05 Hz
 - b. Transmitter Low Pass Filter – 150 Hz.
 - c. Transmitter gain - 250
 - d. Receiver Low Pass Filter – 500 Hz.
3. It should have Electromyogram (EMG) monitoring systems with typical specification
 - a. Transmitter High Pass Filter – 5 Hz
 - b. Transmitter Low Pass Filter – 500 Hz.
 - c. Transmitter gain - 250
 - d. Receiver Low Pass Filter – 500 Hz.
 - e. Applicable to Muscles – Corrugator Supercilli, Zygomaticus, Upper Trapezius.
4. It should have PulsePlethysmogram (PPG) monitoring system with typical specification
 - a. Transmitter High Pass Filter – DC
 - b. Transmitter Low Pass Filter – 10 Hz.
 - c. Transmitter gain - 1
 - d. Receiver Low Pass Filter – 500 Hz.
5. It should have ElectrodermalActivity (EDA) monitoring system with typical specification
 - a. Transmitter High Pass Filter – DC
 - b. Transmitter Low Pass Filter – 10 Hz.
 - c. Transmitter gain - 1

- d. Receiver Low Pass Filter – 500 Hz.
6. It should have Skin Temperature (SKT) monitoring system with typical specification
 - a. Transmitter High Pass Filter – DC
 - b. Transmitter Low Pass Filter – 10 Hz.
 - c. Transmitter gain - 1
 - d. Receiver Low Pass Filter – 500 Hz.
 7. It should have a transmission range of ~ 10 meters, line of sight.
 8. It should have a full transmitter charge typically lasting for ~72 hours of wireless operation.
 9. It should have the facility of manual adjustment of hardware settings for high quality data.
 10. Sensor – Silver-Silver Chloride (Ag-AgCl) electrodes with adhesive gel
 - (a) Sensor for EMG signals (Cheek muscles) specifications:
 Circular contact area diameter: 1 cm
 Chloride%: 4% solid gel
 Backing: 2.5 cm square
 Latex-free: YES
 Hypoallergenic: YES
 - (b) Sensor for EMG signals (Eye brow muscles) specifications:
 38 mm diameter
 1 cm diameter circular contact area
 Mounted on 1.5 mm thick foam with strong adhesive
 Chloride %: 10%
 - (c) General Purpose Sensor specifications:
 Circular contact area diameter: 1 cm
 Backing diameter: 35 mm
 Chloride %: 7%
 - (d) Sensor for Electrodermal activity
 Circular contact area: 1 cm diameter
 Chloride %: 0.5%
 Size: 2.5 cm x 4.5 cm
 Type: Ag-AgCl
 Snap: Stainless Steel
 Backing: Foam
 - (e) Sensor for Pulse Plethysmogram

Emitter/Detector Wavelength :	890 nm (nominal maximum) ambient visible light filter
Optical Low Pass Filter Cutoff Wavelength :	800-1,000 nm (70% spectral response)
Nominal Output :	20 mV (peak-peak)

Power :	10 mA drive current
Sterilizable :	Yes
Dimensions (L x W x H) :	16 mm x 17 mm x 8 mm
Transducer Weight :	4.5 grams

(f) Sensor for Skin Temperature

Nominal Resistance :	2252 ohms at 25°C
Maximum Operating Temperature :	60°C
Accuracy and Interchangeability :	0.2°C
Sterilizable :	YES
Response Time :	1.1 sec (attached to skin)

11. The instrument should analog and digital I/O lines, Ethernet connectivity.

Special Note:

If the vendor is interested to provide proprietary items then necessary proof(s) should be provided with the technical bid.

Accessories:

1. The vendor should quote other relevant/optional accessories required for proper functioning of the physiological Signal Sensing Device.

Terms and conditions:

1. Warranty:

The complete instrument and accessories excluding consumables should be under warranty for a period of minimum three years from the date of installation. Extended warranty is preferable. In case of breakdown during the warranty period, a competent service engineer of the supplier should make as many visits as are necessary to rectify the problem and replace the faulty parts. But it should be repaired within 48 hours from the date and time of complaint lodged by the user. The supplier should provide all spares required for making the instrument operational. All the warranty replacement part should be dispatch on DDP (free domicile) at site. IIT will return defective parts after replacement.

AMC: Please also mention the financial involvement for two years on site Annual Maintenance after completion of Warranty period.

2. Reinstallation:

IIT Gandhinagar is presently situated in its temporary campus (VGEC campus, Chandkheda, Ahmedabad). Near future we will move to our permanent campus in Gandhinagar. Vendor

should take the responsibility of moving the instrument from present location and reinstalling the same in our permanent campus as and when it is required.

3. Maintenances:

The representative of the vendor should be easily accessible and available on demand of reporting within 24 hours of any problem in the instrument. Three compulsory visits per year for maintenance must be included for the initial 3 years after installation.

4. Training and demonstration:

Vendor should provide us training on operation and application at IIT Gandhinagar after Installation at their own cost.

5. Spares:

The supplier of the instrument must confirm in writing that the spares for the entire instrument will be available for a period of at least ten years after the installation of the instrument.

6. Manual:

One set of operating manual and service manual (in English) should be provided with the instrument.

7. Demonstration and standards:

Appropriate test gratings must be provided for calibration in all ranges and appropriate Specifications for optimum performance should be clearly mentioned. Specifications quoted should be demonstrable on site at the time of installation. Standard specimens for all modes must be supplied.

Quote must have a compliance report on all the above points.