

 <p>IIT PALAKKAD</p>	<p>भारतीय प्रौद्योगिकी संस्थान पालक्काड  <b>Indian Institute of Technology Palakkad</b>  अहलिआ एकीकृत कैम्पस, कोज़िपारा  Ahalia Integrated Campus, Kozhipara  पालक्काड- 678557  Palakkad – 678 557</p>	<p>दूरभाषसंख्या/ Phone no:  04923 – 226300/590/586</p> <p>ईमेल/ Email :  purchase@iitpkd.ac.in</p>
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Ref No: IITPKD/CIE/TKSU/121/2017

Date: 15.02.2018

Due Date of the tender: 05.03.2018 @ 3 PM

**TENDER FOR INVITING QUOTATIONS**

Dear Sirs,

On Behalf of Indian Institute of Technology Palakkad quotations are invited for “**Supply, Installation and Commissioning of Real Time Modular Portable and Rugged Data Acquisition System**” confirming to the specification in the Annexure.

1. **Preparation of Bids:** - The tenders should be submitted **under two-bid system** (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in technical bid. Financial Bid should indicate item – wise prices for the items mentioned in the technical bid. The technical and the financial bids should be put in separate cover and sealed. Both sealed covers should be put into a bigger cover.
2. The Quotations duly sealed and superscribed on the envelope **with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. Fax and Email quotation are not acceptable.**
3. The price should be quoted per unit and packing and delivery charges should be indicated separately. The offer/bids should be exclusive of Taxes and Duties, which will be paid by the purchaser as applicable. However the percentage and of taxes and duties as on date should be clearly indicated.
4. The Quotations should be valid for **sixty days** from the due date and the period of delivery required should also be clearly indicated.
5. **Local Firms:** Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
6. Outside Palakkad: Quotations should be for **F.O.R. at IIT Palakkad**. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
7. Goods shall not be supplied without an official supply order.

8. **Custom Duty:** Custom Duty which will be paid at a concessional rate against duty exemption certificate.
9. **Concessional GST@ 5% will be paid extra as per GOI Notification No. 47/2017, Dated 14.11.2017**
10. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later. No advance payment will be made. The Tenderer have to furnish the bank details along with tender like Account No, Account Name, IFSC Code, Bank address etc.
11. **Submission of Bids:** Quotation should be sent to the following address "The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557, Kerala", Phone No: 04923 226 586/590, Email: [purchase@iitpkd.ac.in](mailto:purchase@iitpkd.ac.in).
12. **Delivery Period:** The quotation should indicate clearly when delivery and installation to be made.
13. **Delay in Supply or Liquidate damages:** If the supplier fails to deliver the stores within the time specified in the purchase order, the purchaser will recover from the supplier as liquidated damages a sum of one- half of one percent (0.5%) of the P.O value of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed five percent (5%) of the P.O price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.
14. **Late offer:** The quotation received after due date will not be considered. Please ensure that your offer is sent well in advance to reach the Institute by the due date.
15. **Loading and unloading charges will be borne by the supplier.**
16. **Warranty:** Warranty Clause should be indicated clearly.
17. **Acceptance and Rejection:** IIT Palakkad 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.

Yours faithfully,



Registrar, IIT Palakkad

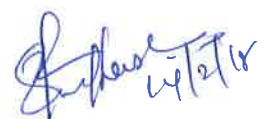
Encl: Specifications



## QUALIFICATION REQUIREMENT

### 1. Bidder qualifications

- a) The bidder should be either an Original Equipment Manufacturer (OEM) of the equipment or should be an authorized dealer/distributor (provide documentary proof) of an OEM. If the bidder is a dealer/distributor, the bidder should provide a copy of valid LETTER OF AUTHORIZATION from the Original Equipment Manufacturer for Dealership.
- b) The bidder should be a company registered under the Companies Act, 1956/2013 OR a Limited Liability Partnership /a registered partnership firm OR a sole-proprietorship entity. Appropriate Registration incorporation certificate must be submitted.
- c) The bidder must supply the tendered equipment completely. The bidder may supply compatible components from different OEMs. However, the maximum number of OEMs should not exceed 2. It is the sole responsibility of the bidder to install and demonstrate the performance of all the components together.
- d) The bidder must have a registered office in Kerala/Karnataka/Tamil Nadu/Telangana/Andhra Pradesh/Maharashtra. Certificate of registration for the offices to be provided.
- e) The bidder must preferably have a service center in Kerala/Karnataka/Tamil Nadu/Telangana/Andhra Pradesh. Certificate of registration for the centers to be provided. For service centers located in any other location, in case of service and repairs, the bidder has to bear all the cost for the same. Details about scope of service activities provided by the service centers must be provided.
- f) The bidder must be in existence in the business of DAQ for a minimum period of 5 years. Documentary evidences of experience must be provided.
- g) The bidder should have implemented orders of DAQ worth exceeding INR 3 lakhs /equivalent foreign currency during previous three years. Copies of the most recent purchase orders and certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished.
- h) The bidder should have documentary evidence of having supplied at least 2 orders of DAQ to IIT, NIT, IISc, IISER, DRDO or CSIR in the last three years. The bidder must provide a certificate of satisfactory performance of the supplied equipment from the institute to which they have recently supplied. Contact details of the faculty-in-charge of the installed setup must also be provided.
- i) **The bidder must provide detailed specification of each equipment/item. Model numbers, data sheets and brochures must be included for each quoted equipment/accessories/item. Specifications corresponding to quoted model number must be available publicly via OEM's website for scrutiny. If not, bid can be disqualified on technical grounds.**



- j) It should be ensured that the bids must be strictly as per IIT Palakkad's specifications mentioned in Annexure II. At the same time, it must be kept in mind that merely copying IIT Palakkad's specifications in the quotation shall not make the parties eligible for consideration of the quotation. Compliance statement of technical specification (Annexure I) and OEM Brochure have to be attached along with the Technical bid. Vendor has to fill the compliance sheet and mention the page number or reference number in OEM brochure for each component in the compliance sheet. Unfilled / partially filled sheets lead to disqualification.
- k) Service and warranty from the OEM for a minimum period of three years for the equipment must be provided.

## **2. Delivery schedule**

All the tendered equipment should be supplied within 12 weeks of order and installation, testing and commissioning should be done in another 2 weeks, in consultation with IIT Palakkad. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

## **3. Installation and commissioning**

The vendor should take full responsibility for the supply, installation, testing and commissioning of the equipment. Installation and commissioning should be carried out at IIT Palakkad by trained and experienced service engineers. The installation, testing and commissioning should be completed within 2 weeks from the date of delivery. The performance of the system should be demonstrated to the satisfaction of the faculty/staff of IIT Palakkad. Two sets of operation and maintenance manuals along with all necessary drawings should also be supplied along with the equipment. The vendor should arrange for operational and maintenance demonstration of the tendered equipment for the faculty/staff of IIT Palakkad. The presenter should be technically sound, and be able to answer/demonstrate all queries that the faculty/staff of IIT Palakkad may have. He /she should be thoroughly familiar with the equipment and its various components and should be a permanent employee of the company with a minimum of 3 years' experience in demonstrating such equipment. All costs related to the demonstration shall be borne by the vendor.

## **4. Transport**

The vendor is responsible for all cost related to freight and transport of the equipment to IIT Palakkad's facility. The custom duty will be paid at concessional rate against duty exemption certificate.

## **5. Payment**

The complete payment will be done after commissioning and satisfactory performance of the equipment.



## ANNEXURE I: COMPLIANCE STATEMENT OF SPECIFICATIONS

### *Instructions for filling the Compliance Statement of Specification*

1. The vendor should prepare, sign and submit the Compliance Statement of Specification in the given format along with the technical bid.
2. Ensure that the component number and heading in the Technical Specifications is clearly mentioned in the document. If there are any deviations from the specifications mentioned by IIT Palakkad, the vendor should clearly indicate the deviations and give reasons for the deviation with proper justification.
3. Technical leaflet/literature/catalogue or any relevant document for all the components should be provided to IIT Palakkad. The information provided in the compliance statement without supporting documents will not be considered for the evaluation of the technical bid.
4. If the supporting documents are not available for any information provided in the compliance sheet, it will be treated as non-compliance and may lead to the disqualification of the technical bid.
5. The vendor should clearly respond to every requirement given in the technical specification. Lack of clarity will be considered as lack of information and may subsequently lead to disqualification of the technical bid.
6. Every component should have manufacturer's logo/name engraved/pasted on it. Photograph to be provided as proof.

Item	Name of Equipment	List of Components	IIT Palakkad's technical specification of components as given in Annexure II	Quantity	Specifications of components quoted by the vendor	Vendor's specification complies with IIT Palakkad's technical specification? (YES/NO)	Deviation, if any, to be indicated in unambiguous terms	Page no. of relevant specification for the quoted component in the technical manual/leaflet
1	Real Time Modular Portable And Rugged Data Acquisition System	A. Embedded Real-time Controller B. Analog Input Module C. Bridge Analog Input Module D. Software						

*[Signature]*  
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## ANNEXURE II: TECHNICAL SPECIFICATIONS

Item No	Name of Equipment	List of Required Components	Quantity
1	Real Time Modular Portable and Rugged Data Acquisition System	A. Embedded Real-Time Controller	1
		B. Analog Input Module	1
		C. Bridge Analog Input Module	3
		D. Software ( <i>quote separately</i> )	

**Specification:**

A Standalone Compact Data Acquisition and Control Systems for control and monitoring of sensors such as load cells, strain gauges, LVDTs, earth pressure cells, pore pressure transducers, accelerometers, string potentiometers, etc., used in Geotechnical Engineering field. The system should integrate data processing, signal conditioning and connectivity in a small, rugged form factor with modular sensor-specific input/output modules. System should also have inbuilt reconfigurable FPGA, 2 Gigabit Ethernet port, 3 Serial Ports, 1 USB device port.

**A. Embedded Real-time Controller:** A modular, high-performance embedded controller with the ability to interact with collected information and providing real time control with reconfigurable FPGAs. It should also have serial ports to connect input or display devices.

1. Number of Slots: 8 or more for I/O modules
2. In Built Processor:  $\geq 600$  MHz CPU, 1 GB or greater nonvolatile storage, a minimum 512 MB DDR3 memory
3. Reconfigurable Xilinx FPGA:
4. Operating temperature: a minimum range of  $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
5. Serial ports: RS 232 - 2 nos. (minimum); RS 485 - 1 (minimum)
6. Power supply inputs in the minimum range of 10 vdc to 30 vdc
7. All the required cables and battery should be provided
8. Shock and vibration: Should be capable of handling an operational shock of 50 g or greater, random vibration in the range of at least 15 Hz - 450 Hz and random operating frequency of 5 g.

**B. Analog Input Module:** A 16-bit (minimum) multi-channel input module which acquires analog signal with sufficient isolation channels and comprehensive diagnostic capabilities, with the following minimum specifications:

1. 16 differential channels, 100 kS/s per channel sample rate.
2.  $\pm 10$  V measurement range, 16-bit resolution
3. 250 Vrms channel-earth, CAT II (screw terminal), or 60 VDC channel-earth, CAT I (D-SUB) isolation
4. 36-position spring-terminal or 37-pin D-SUB connectors should be available
5. A minimum of  $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  operating temp. range
6. 5 g vibration, 50 g shock

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**C. Bridge Analog Input Module:** A 24-bit (minimum) multi-channel module to measure at least four bridge-based sensors simultaneously with zero inter-channel phase delay. It should have sufficient jacks to provide direct connectivity to load cells. The module should have the following minimum specifications:

1. 4 channels, 50 kS/s per channel simultaneous analog input
2.  $\pm 25$  mV/V input range, 24-bit resolution
3. Programmable half- and full-bridge completion with up to 10 V internal excitation
4. 60 VDC, Category I bank isolation
5. RJ50 or D-SUB connectivity options
6. A minimum of  $-30^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  operating temp. range
7. 5 g vibration, 50 g shock

**D. Software:** All required software for running the whole setup must be quoted separately.

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