



Indian Institute of Science (IISc)
Bangalore – 560012
(www.iisc.ac.in)

NOTICE INVITING TENDER

under the two-cover bid format

for

Supply of Electromagnetic and Power Side-channel analysis Test Bench for Microcontroller, FPGA, and ASIC security evaluation to DESE, IISc Bangalore

Tender No: DESE/LU/DD/12/2024-25

Date:10/12/2024

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I. Introduction

Established in 1909, Indian Institute of Science (IISc), having its main campus at Bangalore (Karnataka, India), is India's leading institution of advanced education and research in the sciences and in engineering. It is a Deemed-to-be-University under Section 3 of the UGC Act, 1956 under Ministry of Human Resource Development (MHRD), GoI. Govt. of India has declared IISc as an Institution of Eminence (IOE). From its beginnings, IISc has laid equal emphasis on fundamental investigations and the solution of practical problems in such a setting.

Quotations should come only from **Indian Original Equipment Manufacturers** (OEMs) or authorized Indian distributors. The quotations should be on FOR-IISc Bangalore basis in INR only.

Detailed technical specifications are mentioned in the subsequent sections.

The bids must be submitted in two-cover bid format.

Schedule of Events

Tender Publishing Date	10 th December 2024
Pre-Bid clarification end date (by email) (An online Pre-bid clarification meeting may be held if required) Email ID: rajارشiroy@iisc.ac.in , office.es@iisc.ac.in	20 th December 2024
Deadline for submission of bids (before 5.00 PM)	31 st December 2024
The bids should be sent to	Dr. Debayan Das Department of Electronic Systems and Engineering Indian Institute of Science CV Raman Road Bengaluru – 560012 Mention the following reference on the cover: Supply of Electromagnetic and Power Side-channel analysis Test Bench for Microcontroller, FPGA, and ASIC security evaluation to DESE Ref: DESE/LU/DD/12/2024-25
Opening of technical bids	6 th January 2025
Listing of technically qualified bidders	To be declared later

II. Technical Specification

Electromagnetic and Power Side-channel analysis Test Bench for Microcontroller, FPGA, and ASIC security evaluation to DESE

Bids are invited for the following equipment.

1. Real-Time Oscilloscope, ≥ 4 GHz, ≥ 16 GSa/s, ≥ 4 Channels
2. High-precision Electromagnetic Probe to pick up ≥ 4.5 GHz signal
3. Precision XYZ stage
4. Analysis Workstation with monitor – 1TB SSD, 32GB RAM
5. Hardware Crypto Training Development board based on ARM core capable of running at >150 MHz clock
6. Glitch Pattern Generator with glitch width generation of ≤ 5 ns, support for JTAG, SPI, I2C protocols
7. Active Current Probe capable of picking current variation of ≥ 2 GHz
8. Signal Processing Software with perpetual license

The quote should include the on-site installation and in-person demo/training.

Instructions to bidders

Part A

- A. The Bidder should belong to either class 1 or class 2 supplier distinguished by their “local content” as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
 - a. Class 1 supplier: Goods and services should have local content of equal to or more than 50%.
 - b. Class 2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
- B. Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to Class-1 supplier.
- C. MSME can seek exemption to some qualification criteria. IISc follows GFR2017 for such details.
- D. Separate detailed justification needs to be given to substantiate the qualification as Class 1 and Class 2 suppliers and the intender reserves the right to cross-check the factual validity of the same and one if some foreign parts or equipment is being put forward then please submit the “*bill of material*” details for the same for evaluation.

Part B

1. Two-cover format

The quotations should be submitted by reputed domestic vendors in a **two-cover format** comprising a technical part and a commercial part. The envelopes should be sealed and marked clearly as “**Envelope No. 1 – Technical Bid**” and “**Envelope No. 2 – Commercial Bid.**” The two sealed envelopes must be put in a bigger cover, which should also be sealed and contain the tender number and due date. The bigger cover should be super-scribed with “**Electromagnetic and Power Side-channel analysis Test Bench for Microcontroller, FPGA, and ASIC security evaluation to DESE. DESE/LU/DD/12/2024-25.**” All covers should bear the **name, complete postal address, and contact (mobile/landline) number of the bidder.** Bids must be submitted in hard copy only. Bids sent by **email will not be accepted.**

2. Technical bid

A) The technical bid should contain:

- (i) the name, complete postal address, GSTIN, PAN, and contact details viz. email ID / Contact (mobile/landline) number of the bidder.
- (ii) the unpriced bill of material with quantities of each line item
- (iii) a datasheet for the product/model suggested. Any deviations from the required specifications must be mentioned explicitly.

B) The technical proposal should be submitted in a technical compliance table with 5 columns.

- (i) The first column must list the technical requirements, in the order that they are given in the technical requirement below.
- (ii) The second column should provide specifications of the workstation against the requirement (please provide quantitative responses wherever possible).
- (iii) The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.
- (iv) The fourth column should state the reasons/explanations/context for deviations, if any.
- (v) The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns.

The technical bid should not contain any price information. Non-compliance will lead to a rejection of the bid at the discretion of the technical evaluation committee.

3. Commercial bid

The commercial bid must include the price of the item in Indian currency, indicating installation and commissioning, warranty and maintenance charges, applicable taxes, GST, and total. The prices must be given for each line item separately. **Bundling of prices is not acceptable and may lead to disqualification of the bid.** Installation and commissioning charges, if any, must be quoted as a separate line item - these will be paid only after successful supply, installation, and acceptance.

4. Warranty terms

- Warranty services for the system supplied by the successful bidder should be valid for a period of three years from the date of successful installation and acceptance of the equipment.
- During the warranty period, the bidder shall be fully responsible for the manufacturers' warranty in respect of proper design, quality, and workmanship of all the systems supplied.
- During the warranty period, preventive maintenance and repairs of equipment supplied by the bidder are the responsibilities of the bidder. The bidder shall attend to all the hardware problems on site and also replace the defective parts at no extra cost to the purchaser.

5. Evaluation of bids

The technical bid will be evaluated first. Technical bids not meeting the specifications and tender requirements will be disqualified. The commercial bids of technically qualified bidders will be opened

subsequently. The date and time of opening the commercial bid of Technically qualified bidders will be intimated later. The lowest bid will be identified as the successful bid. In computing the commercial offer, the cost of the equipment, will be identified as the successful bid. In computing the commercial offer, the cost of the equipment, software (if any), installation and commissioning charges, and warranty charges will be included. The actual quantity for which the order will be placed may be slightly more or may be less than the one indicated in this tender depending on the commercial terms of the successful bidder and funds at our disposal.

6. Additional guidelines

- If multiple systems can fulfil the requirements, vendors can submit multiple bids.
- The equipment must be supplied within **four weeks** after receiving a firm purchase order from IISc and the installation must be completed within a week after supply.
- A copy of the masked commercial bid (without indicating price) must be given in the technical offer. If price is indicated in the technical bid, then such bid will be declared technically disqualified.
- Delayed or incomplete tenders are liable to be rejected.
- The Technical and Commercial bids should be duly signed (on all pages) by an authorized representative of the bidder.
- In the commercial bid, provide the cost of the complete workstation/server.
- Offer must be in Rupees (INR) offer. The GST at concessional rate should be shown separately in the BOQ. **IISc is eligible for 5% GST under concessional certificate, as it is registered with DSIR.**
- Offer should be valid for at least 45 days from the actual date of technical bid opening.
- IISc will place the purchase order only on the successful bidder.
- 100% payment will be released after complete delivery and satisfactory installation. Payment will be subject to deduction of TDS as per rules/laws.
- Vendors are encouraged to highlight the advantages of their system over comparable system from the competitors.
- If multiple systems can fulfil the requirements, vendors can submit multiple bids.

Part C

Terms and Conditions

- The decision of purchase committee will be final.
- The vendor is responsible for the installation of the system at the IISc campus.
- **The RFQ must include references of 5 previous installations in Bangalore, preferably in IISc/JNCASR/TIFR/ICTS/NCBS.** Please provide the names and contact addresses of the referees, so that the committee can contact them independently. The reference letters can be used to disqualify vendors with poor track record.

- Clarify if periodic (preventive) maintenance be done by a trained on-site engineer or requires a specialist from the OEM. The vendor should have qualified technical service personnel for the equipment based in India and must assure a response time of <2 business days after receiving a service request.
- The lead-time for the delivery of the workstation should not be more than 1 month from the date of receipt of our purchase order.
- The indenter reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason.
- Wherever requested in this specifications sheet, data must be supplied along with technical compliance documents. Technical bids without supporting data will be deemed as technically non-compliant.
- All guaranteed specifications will have to be demonstrated, upon request, in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance.
- Technical evaluation by the institute may include demonstration to verify functionalities and capabilities of the workstation quoted. Any discrepancy between the promised specifications and demonstrated specifications will be deemed as technical non-compliance. If need arises, the vendor must be ready to physically visit IISc for a techno commercial discussion.
- The **validity of commercial quotation should be at least 90 days** from the last date for the submission of tender documents.
- 100% payments will be released after completion of delivery and satisfactory installation subject to TDS as per rules. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.

III. Guidelines for Bid Submission

Quotations should come only from Indian Original Equipment Manufacturers (OEMs) or authorized Indian distributors. The quotations should be on FOR-IISc Bangalore basis in INR only.

The submission consists of two parts, viz. a Technical Bid and a Commercial/ Price Bid.

The **Technical Bid** should be an *indexed and page-numbered* document containing:

- Duly filled-in and sealed & signed technical bid.
- Commercial bid compliance (without quoted price).
- Supporting technical materials for the items.
- Supporting documents listed.

- A signed document that the Bidder agrees to the Service Terms, Commercial Terms, and Payment Terms set forth in this tender.

The **Commercial/ Price Bid** should contain:

- The price with per quantity and total prices for every line item. Prices must be quoted on FOR-IISc Bangalore basis in INR.

Note:

1. Prices of items in this tender's Commercial Bid must **NOT** be mentioned in the Technical Bid.
2. The line items in the Commercial (Price) Bid must be quoted in INR.
3. The commercial bid must be valid for at least 180 days from the actual date of opening of the technical bid.
4. A tender not complying with any of the above conditions is liable to be rejected. Incomplete proposals are liable to be rejected.
5. IISc reserves the right to modify the technical specifications or the required quantities or schedule of event at any time.
6. IISc reserves the right to accept or reject any proposal, in full or in part, without assigning any reason.