



# Indian Institute of Science Bangalore

Prof. Hardik J. Pandya  
Associate Professor  
Department of Electronic Systems Engineering  
Indian Institute of Science Bangalore  
560012, Bangalore, Karnataka, India

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## Global Tender Notification for the Procurement of Electrophysiology System for Brain Stimulation and Recording

**GTE Approval Number: No.F.4/1/2021-PPD dt: 06.01.2022 (Relaxation)**

**Publishing Date: 25/09/2024**

**Reference Number: DESE/LU/HJP/05/GTE/2024-25**

**Request for Quote from Original Equipment Manufacturer (OEM) or their authorized distributor for Electrophysiology System for Brain Stimulation and Recording**

**Indian Institute of Science,  
Bangalore (Last Date:16.10.2024)**

Dear Sir/Madam,

Kindly send your best price quotation for the following item with various accessories on CIP, Bangalore basis to the undersigned. Your quotation should indicate the delivery terms, delivery schedule, payment terms, etc.

Your quote should also include the mode of payment and should reach the undersigned, duly signed on or before **16/10/2024 (10:00 am (IST))**.

The quote must include all details of the technical specifications of the item along with the commercial terms and conditions, the bill of materials, the printed technical brochure, and any other supporting document. Vendors will be required to submit a technical proposal and a commercial proposal in two separate sealed envelopes. Please enclose a compliance certificate, printed on your letterhead, along with the quote. The commercial Bid must be in CIP Bangalore, and the quotation should address to:

To  
Dr. Hardik Jeetendra Pandya  
Associate Professor, DESE  
C/O  
The Chairperson  
Department of Electronic Systems  
Engineering Indian Institute of Science,  
Bangalore – 560 012

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E-mail : [hjpandya@iisc.ac.in](mailto:hjpandya@iisc.ac.in) (for tender related queries)  
Phone : +91-80-2293-3084  
Lab Web : <https://labs.dese.iisc.ac.in/beeslab/>  
Institute Web : [http:// www.iisc.ac.in/](http://www.iisc.ac.in/)



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## I. Technical Specifications of Different Parts of the Electrophysiology System for Brain Stimulation and Recording

The specifications have to be demonstrated during system installation and acceptance.

### Stimulation/ Recording controller specifications

Sr. No.	Parameter	Specifications
1	Acquisition sampling rate	Up to 30,000 samples/second
2	Number of channels	Up to 128
3	Stimulation pulse type	Biphasic pulses or Triphasic pulses
4	Biphasic pulse resolution	50 $\mu$ s
5	Impedance measurement type	<i>in situ</i>
6	Maximum number of head stages supported	4
7	Number of analog input ports	2
8	Number of analog output ports	1
9	Number of digital input and output ports	Two each
10	Option to expand I/O port	Yes
11	Number of Stimulation/ Recording controllers required	1

### Individual headstage specifications

Sr. No.	Parameter	Specifications
1	Number of electrodes that can be interfaced	32
2	Size	24 mm x 15 mm
3	Mass of the headstage	Less than 2.5 gm
4	Reference and Ground type	Common to all the electrodes
5	Compliance voltage range	$\pm 7$ V
6	Bandwidth reconfiguration	Need to be provided in software GUI
7	Bandwidth range	0.1 Hz to 20 kHz
8	The amplitude range of the current pulses	20 nA to 2 mA
9	End connector type	Omnetics
10	Number of headstages required	2

E-mail : [hjpandya@iisc.ac.in](mailto:hjpandya@iisc.ac.in) (for tender related queries)  
Phone : +91-80-2293-3084  
Lab Web : <https://labs.dese.iisc.ac.in/beeslab/>  
Institute Web : <http://www.iisc.ac.in/>



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560012, Bangalore, Karnataka, India

## SPI Cable specifications

Sr. No.	Parameter	Specifications
1	Connector type	32 Omnetics PZN-16 polarized nano
2	Connector size	5.7 mm x 4.3 mm x 2.0 mm
3	Colour	Red
4	Cable diameter	3.4 mm
5	Cable mass	Less than 8 g/meter
6	Outer jacket material	0.013" thermoplastic elastomer (TPE)
7	Cable length	3 ft and 6 ft
8	Number of cables required	3 ft – Qty: 2
9	Number of cables required	6 ft – Qty: 4

## Other Necessities

- It should include a written guide (tutorial) and a demonstration of operating the system.
- The setup should include all the hardware and software modules necessary for the system setup.
- All installation tools should be included.
- Packing freight and Installation costs should be included.

## II. Additional Items (Must be added to compliance certificate as well):

1. Support: Please provide details of the support supplied within the warranty period
2. Shipping: The quote must be in FOR-IISc Bangalore.
3. Installation: Please list a set of acceptance tests for on-site (vendor) inspection and after installation at IISc Bangalore.
4. Other Options: Necessary spare parts should be quoted as an option.
5. Please include any other options that can be added in the future.
6. Training: Please state if training is required to operate this instrument, and if yes, please highlight the extent of training provided as part of this purchase and for how many days.

All of the above-mentioned technical specifications are highly desired. However, lower technical specifications may be considered if the specifications mentioned above are found to be unsuitable in financial terms. Considering its technical preferences and financial constraints, the Institute reserves the right to go for lower specifications. Vendors are encouraged to highlight the advantages of their product over comparable products from the competitors.



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Prof. Hardik J. Pandya  
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Department of Electronic Systems Engineering  
Indian Institute of Science Bangalore  
560012, Bangalore, Karnataka, India

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## **PI Terms and conditions (should be included in compliance certificate):**

1. Training in operating the procured setup and required literature support should be provided without additional cost.
2. In principle, on-site installation should be free of cost. The amount of time/day committed by the engineer during installation must be clearly stated.
3. Software upgrades, if any, must be free of cost for the next five years.
4. The vendor must ensure no bugs or glitches with the integration. In case of glitches or bugs at the time of installation, a vendor must fix the issues within three days of the start date.
5. In case of hardware/software issues or support, the vendor should be able to provide the required solution within three days.
6. All equipment must be well-calibrated before and after installation.
7. An additional quote for an annual maintenance contract should be included for the next five years.
8. The vendor should have a good track record of delivering such equipment at universities/research institutions (please furnish the details).
9. Please list customers who have procured your equipment in the last five years.
10. The vendor should be able to repair and maintain the equipment once it is installed in India. The vendor must make no travel claims for servicing during the warranty/guarantee period.
11. The system must be delivered within six weeks after the PO.
12. The payment terms on all systems will be specified in the commercial proposal and are subject to negotiation.
13. The validity period of the quotation should be 90 days at least.
14. Please provide details of the number of trained personnel in India who can service the machine.
15. Highlight the system/computer requirement to integrate the setup, if any, other than specified in the specifications above.
16. See other Terms & Conditions, guidelines, eligibility criteria, etc., in an enclosed document on the following pages.

Sincerely,

Dr. Hardik J. Pandya  
Associate Professor  
Department of Electronic Systems Engineering  
Indian Institute of Science  
Bangalore, Karnataka 560012, India  
E-mail: [hjpandya@iisc.ac.in](mailto:hjpandya@iisc.ac.in) (for tender-related queries)

# Enclosures / Annexures

## Annexure 1 – Terms and Conditions:

### A) Submission of Tender:

1. All documentation in the tender should be in English.
2. Tenders should be submitted in two envelopes (two bid systems).
  - a. Technical Bid (Part-A) – The technical Bid consists of all technical details and a checklist for conformance to technical specifications.

The technical proposal should contain a technical compliance table with five columns.

    - i. The first column must list the technical requirements in the order given in the technical requirement below.
    - ii. The second column should provide specifications of the instrument/product 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 the response of previous columns, provide additional details, compare your solution with your competitors, or provide details as requested in the technical requirements table below.
  - b. Commercial Bid (Part-B) – Indicate item-wise price for the items mentioned in the technical Bid, as per the format of quotation provided in the tender and other commercial terms and conditions.
3. The technical and price bids should be placed in separate sealed covers, superscripting the tender no. and the due date on both envelopes. These sealed covers should be placed in a bigger cover, sealed, and duly superscripted with the Tender No, Tender Description, & Due Date.
4. The SEALED COVER superscripting tender number / due date & should reach the **Chairperson's Office, Department of Electronic Systems Engineering, Indian Institute of Science, Bangalore – 560012, India**, on or before the due date mentioned in the tender notice. If the due date is a holiday, the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
5. All queries will be addressed to the person identified in "Section 1 – Bid Schedule" of the tender notice.
8. If the price is not quoted in the Commercial Bid as per the format provided in the tender document, the Bid is liable to be rejected.
9. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of the contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
10. Incomplete bids will be summarily rejected.

### B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject the lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.

c. To reject the tender, offer not confirming the tender terms.

C) Validity of the Offer:

The offer shall be valid 90 Days from the commercial Bid's opening date.

D) Evaluation of Offer:

1. The technical Bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria stated in Section 2 of this Document shall only be considered for Commercial Bid (Part B) opening. Further, Agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and/or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.
4. The award of the contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
  - a. Non-submission of complete offers.
  - b. Receipt of bids after the due date and time or by e-mail/fax (unless specified otherwise).
  - c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER had accepted the clauses as of the tender, and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. The lowest Bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, pre-processing and post-processing, optional items, recommended spares, warranty, and annual maintenance contract.

E) Prerequisites:

The bidder will provide the equipment's prerequisite installation requirements and the technical Bid.

F) Warranty:

The complete system is to be under a minimum warranty period of 2-3 years (year-wise breakup value should be shown in the commercial Bid), including free supply of consumables, spare parts, and data analysis software from the date of functional installation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be extended.

G) Annual Maintenance Contract:

An annual maintenance contract for at least two years post-warranty, if the warranty is for one year, should be provided upon completion of the warranty period. The AMC costs will not be considered towards classifying the domestic nature (class 1 or class 2) of the vendor (see eligibility criteria in section 2). AMC for one year is sought for a warranty of 2 years, and AMC will be optional for a 3-year warranty.

#### H) Purchase Order:

1. The order will be placed on the bidder whose Bid is accepted by IISc based on the terms & conditions mentioned in the tender document.
2. The quantity of the items in the tender is only indicative. IISc, Bangalore reserves the right to increase/decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

#### I) Delivery, Installation and Training:

The bidder shall provide the lead time for delivery and installation and make the system functional at IISc, Bangalore, from the date of receipt of the purchase order. The system should be delivered, installed, and functional within 90 days of receipt of the purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over the entire system by the IISc, Bangalore, shall be taken as the start of the warranty period. No partial shipment is allowed. The bidder should also arrange technical training for the local facility technologists and users.

#### J) Payment Terms:

We prefer a net of 30 days.

#### K) General:

1. All amendments, time extensions, clarifications, etc., within the period of submission of the tender will be communicated electronically. No extension of the Bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information necessary to establish capabilities to complete the envisaged work successfully. It is, however, advised not to furnish superfluous information.
3. Any information furnished by the bidder found to need to be corrected immediately or later would render the bidder liable to be debarred from tendering/taking up work in IISc, Bangalore.

## Annexure-1

### Bidder Details

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

SI No.	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact Person- Name and Designation	
7.	Telephone No	
8.	E-mail ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name  
Designation, Seal

Date:



## **Annexure-2**

### **Experience Declaration**

To  
Dr. Hardik J. Pandya  
Associate Professor, DESE  
C/O  
The Chairperson  
Department of Electronic Systems  
Engineering Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No:  
DESE/LU/HJP/05/GTE/2024-25  
Dated: 25.09.2024

Supply of an Electrophysiology System for Brain Stimulation and Recording at DESE, IISc, Bangalore.

Dear Professor,

I have read the Terms & Conditions in the tender referred to above. I hereby declare that my company/firm has ---- years of experience in supplying and installing -----

(Signature of the Bidder)

Printed Name

Designation, Seal

Date:

### **Annexure-3**

## **Track Record Declaration**

To  
Dr. Hardik J. Pandya  
Associate Professor, DESE  
C/O  
The Chairperson  
Department of Electronic Systems  
Engineering Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No:  
DESE/LU/HJP/05/GTE/2024-25  
Dated: 25.09.2024

Supply of an Electrophysiology System for Brain Stimulation and Recording at DESE, IISc, Bangalore.

Dear Professor,

I have read the Terms & Conditions contained in the tender referred to above. I hereby declare that my company/ firm is not currently debarred/blacklisted by any Government/Semi-Government organizations/institutions in India or abroad. I certify that I am a competent officer in my company/ firm to make this declaration.

Or

I declare the following

Sl.No	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted/debarred by Government / Semi-Government/Organizations /Institutions	Reason	Since when and for how long

(Note: In case the company/firm was blacklisted previously, please provide the details regarding the period for which the company/firm was blacklisted and the reason/s for the same).

Sincerely,

(Signature of the Bidder)

Name

Designation, Seal

Date:

## **Annexure – 4**

### **Declaration for Acceptance of Terms and Conditions**

To  
Dr. Hardik J. Pandya  
Associate Professor, DESE  
C/O  
The Chairperson  
Department of Electronic Systems  
Engineering Indian Institute of Science  
Bangalore – 560012, India

Ref: Tender No:  
DESE/LU/HJP/05/GTE/2024-25  
Dated: 25.09.2024

Supply of an Electrophysiology System for Brain Stimulation and Recording at DESE, IISc, Bangalore.

Dear Professor,

I have read the Terms & Conditions mentioned in the tender document referred to above. I declare that all the provisions of this tender document are acceptable to my company. I certify that I am an authorized signatory of my company and, therefore, am competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name  
Designation, Seal

Date:

## **Annexure – 5**

### **Details of the Quoted Items**

- a. Company Name
- b. Product Name
- c. Part/Catalogue number
- d. Product Description/main features
- e. Detailed technical specifications
- f. Remarks

#### **Instructions to bidders:**

- 1. Bidders should provide detailed technical specifications of the quoted product/s.
- 2. The bidder should attach product brochures along with a technical bid.
- 3. Bidders should clearly indicate compliance or non-compliance with the technical specifications in the tender document.

## Section 6 – Commercial Bid

The Commercial Bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

S. No	Description	Cat. Number	Quantity	Unit Price	Sub total
1	Essential items noted in the technical specification				
1.a	...(details of essential items)				
1.b	...				
2	Optional items noted in the technical specification				
2.a	... (details of essential items)				
2.b	...				
3	Accessories for operation and installation				
4	All Consumables, spares and software to be supplied locally				
5	Warranty (3 years)				
6	AMC 3 years beyond warranty				
7	Cost of Insurance and Airfreight				
8	CIP/CIF IISc, Bengaluru				

Any additional items

S.No	Description	Cat.	Number Quantity	Unit Price	Sub total

Addressed to

Dr. Hardik J. Pandya  
Associate Professor, DESE  
C/O  
The Chairperson  
Department of Electronic Systems Engineering  
Indian Institute of Science  
Bangalore – 560012, India

## Section 7 – Checklist

(This should be enclosed with technical Bid- Part A)

The following items must be checked before the Bid is submitted:

### A. Sealed Envelope "A": Technical Bid

1. Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:
  - a. Annexure 1: Bidders details
  - b. Annexure 2: Declaration regarding experience
  - c. Annexure 3: Declaration regarding clean track record
  - d. Annexure 4: Declaration for acceptance of terms and conditions
  - e. Annexure 5: Details of the quoted items
2. A copy of this tender document is duly signed and sealed by the authorized signatory on every page.

### B. Sealed Envelope "B": Commercial Bid

#### Section 6: **Commercial Bid**

Your quotation must be submitted in two envelopes: **Technical Bid (Envelope A) and Commercial Bid (Envelope B)**. **Super scribing must be on both** envelopes with Tender No. and due date. Both the sealed covers need to be kept a bigger cover, which should also be sealed and duly super scribed with tender No., Tender description & Due Date.

Thank you,  
Dr. Hardik J. Pandya  
Associate Professor  
Department of Electronic Systems Engineering,  
Indian Institute of Science, Bangalore, India 560012  
E-mail: [hjpandya@iisc.ac.in](mailto:hjpandya@iisc.ac.in)