

**DEPARTMENT OF ELECTRICAL COMMUNICATION ENGINEERING
INDIAN INSTITUTE OF SCIENCE (IISc), BENGALURU, INDIA**

**Global Tender Notification for Vector Signal Generator
(Last Date for Submission: Jan 31, 2025)**

Tender Notification Ref No:

Date: 10.01.2025

This is a Request for Quote (RFQ) for supply including installation, commissioning, and training at site for "Vector Signal Generator" at the Department of Electrical Communication Engineering, Indian Institute of Science, Bengaluru. The tender should be submitted in two separate sealed envelopes: one containing the technical bid and the other containing the commercial bid, both of which should reach the address below, duly signed on or before 31st January, 2025 on or before 1700 hrs. The bids should be addressed to:

The Chair

Department of Electrical Communication Engineering
Indian Institute of Science, Bengaluru Karnataka 560012, India.
Attn: Prof. Gaurab Banerjee

Please direct all questions to Prof. Gaurab Banerjee **by email** at: banerjee@iisc.ac.in

Visits in person or phone calls by the vendor(s), unless specifically requested by the committee, are strongly discouraged. A pre-bid meeting will be conducted ONLINE to answer technical questions. The scope of the supply includes Installation, Commissioning and Training at site for the "Vector Signal Generator".

Tender Summary

1	Tender number	
2	Tender Date	10.01.2025
3	Item Description	Vector Signal Generator
4	Tender Type	Two Bid System: (a) Technical Bid (Part A) (b) Commercial Bid (Part B)
5	Place of Tender submission	Department Office, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore - 560012
6	Last date & Time for submission of tender	31 th Jan 2025 @ 5.00 P.M

General Terms and Conditions:

1. The bid should be submitted in two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
2. In the commercial bid, the price should be inclusive of all discounts.
3. The lead time for the delivery and installation of the items should not be more than 6 weeks from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
4. All the quotations must be valid for at least 90 days at the time of submission.
5. List of customers and references: It is preferable for the Bidder should have supplied similar equipment in Centrally Funded Technical Institutes (IITs, IISC, IISER, NIT). Please provide the details and contact information.
6. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
7. Items in addition to those listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the end of the compliance table.
8. Vendors are encouraged to highlight the advantage of their product over comparable products from the competitors.
9. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
10. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.
11. **A pre-bid meeting to answer technical questions will be conducted in ONLINE mode on January 16, 2025.** Please email banerjee@iisc.ac.in if you would like to attend the meeting and the details will be shared with you.

The tender documents can be submitted to the following address:

The Chair
Department of Electrical Communication Engineering,
Indian Institute of Science,
Bengaluru, Karnataka 560012, India

Attn: Prof. Gaurab Banerjee

Technical requirements

1. The technical proposal should contain a compliance table with 4 columns in addition to the ones in the technical requirements table that has been included below. The compliance table should include all the items and in the same order. In addition, you should include a soft copy in MS Word “.doc” format. Please do not submit files in “.docx” formats. The first column should describe your compliance in a “Yes” or “No” response. If “No” the second column should state the extent of deviation. The “third” column should state the reasons for the deviation if any. The fourth column can be used to compare your solution with that of your competitors or provide details as requested in the technical requirements table below.
2. Items in addition to those listed in the technical table that you would like to bring to the attention of the committee can be listed at the end of the compliance table. Vendors are encouraged to highlight the advantages of their solution over comparable solutions from their competitors.

Desired Technical Specifications

	Description	Specifications
1.	Major Application	Measurements/Characterization of 5G/6G hardware
2.	Frequency	100 kHz to 40+ GHz (specify frequency extension options).
3.	Output Power.	Ranges from -130 dBm to +25 dBm
4.	Phase Noise	-140 dBc/Hz (at 10 kHz offset) or better
5.	Modulation Capability	I/Q with QPSK/16-QAM or better (specify), CW/FMCW, Pulse Modulation, FSK, MSK, PSK.
6.	Additional Requirements	1) A listing of 5G/6G signal analysis capabilities needed. 2) Specify capabilities to support JCAS or other 6G features.
7.	Optional Technical Specifications	Please specify any advanced 5G/6G compatible features.
8.	Country of Origin	Please specify
9.	Customer base	Large customer base worldwide and in India. Similar solutions and support should have been provided to other customers.
10.	Warranty & AMC	As per norms.
11.	Payment Terms	The payment terms should be specified in the commercial proposal and is subject to negotiation.
12.	Support	Please provide details of the number of trained personnel in India, who can provide support in the same time zone +/- 3 HRS. The OEM/Supplier should have trained service engineers stationed in India for any on- site service requirement, details to be provided in the offer. OEM/supplier should have requisite stock of necessary spare parts in India.
13.	References	Please provide references, from India and/or abroad.
14.	Shipping	The cost of shipping up to IISc Bangalore should be included.
15.	Installation and Training	Vendor to specify if necessary.

TERMS AND CONDITIONS

1. Supplier Credibility:

- a. Any OEM or authorized distributor across the globe are eligible to submit the bids.
- b. The Bidder/Vendor Must have supplied minimum 3 similar orders to reputed Government Organizations in INDIA in the past 3 years. Copies of Purchase Orders to be enclosed along with the Technical Bid as proof.
- c. Supplier should compulsorily indicate details of facilities / expertise/ qualification of support staff in India. Factory trained engineer/s should be available in India for complete product support
- d. Please enclose user list in INDIA.
- e. Minimum 3 Reference letters of similar system supplied in INDIA need to be submitted for further consideration.

2. Publications:

- a. As our Research Work is of critical nature, Vendors need to enclose reference publications/application note on the usage of "Vector Signal Generator for 5G/6G applications" to show expertise of the product being offered.

3. Institute reserves the right for final selection of items.

4. Only the Original Equipment Manufacturer or their authorized representatives across the globe shall participate in the bid.

5. The order will be placed only on the bidder who participated in the bid.

6. Vendors may quote for any other items/accessories separately as "Optional Items".

7. Cancellation of Tender: Notwithstanding anything specified in this tender document, the purchase committee, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject 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 to the tender terms.

8. Warranty: 1 Year

9. Annual Maintenance Contract: AMC is not required

10. Delivery, Installation and Training: The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and

inspection, the date of taking over of 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 for technical training to the local facility technologists and users.

11. Payment Terms: The payments to non domestic vendors will be through a Letter of Credit and milestone of the payment will be determined after the mutual discussions with the successful bidder. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided. Foreign OEM can quote in USD/EURO etc. and Indian distributor shall quote in INR.
12. Statutory Variation: Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.
13. Disputes and Jurisdiction: Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

For queries or clarifications, please contact Prof. Gaurab Banerjee **only by email** at banerjee@iisc.ac.in. **No phone calls or office visits please.**

Annexure-I

Note: Compliance Certificate must be enclosed with the Technical bid. Non-submission of Compliance Certificate will lead to disqualification of the bidder.

Desired Technical Specifications

	Description	Specifications
16.	Major Application	Measurements/Characterization of 5G/6G hardware
17.	Frequency	100 kHz to 40+ GHz (specify frequency extension options).
18.	Output Power.	Ranges from -130 dBm to +25 dBm
19.	Phase Noise	-140 dBc/Hz (at 10 kHz offset) or better
20.	Modulation Capability	I/Q with QPSK/16-QAM or better (specify), CW/FMCW, Pulse Modulation, FSK, MSK, PSK.
21.	Additional Requirements	3) A listing of 5G/6G signal analysis capabilities needed. 4) Specify capabilities to support JCAS or other 6G features.
22.	Optional Technical Specifications	Please specify any advanced 5G/6G compatible features.
23.	Country of Origin	Please specify
24.	Customer base	Large customer base worldwide and in India. Similar solutions and support should have been provided to other customers.
25.	Warranty & AMC	As per norms.
26.	Payment Terms	The payment terms should be specified in the commercial proposal and is subject to negotiation.
27.	Support	Please provide details of the number of trained personnel in India, who can provide support in the same time zone +/- 3 HRS. The OEM/Supplier should have trained service engineers stationed in India for any on- site service requirement, details to be provided in the offer. OEM/supplier should have requisite stock of necessary spare parts in India.
28.	References	Please provide references, from India and/or abroad.
29.	Shipping	The cost of shipping up to IISc Bangalore should be included.
30.	Installation and Training	Vendor to specify if necessary.

Annexure-1:

Details of the Bidder

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

Details of the Bidder

Sl. 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.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name
Designation, Seal

Date:

Annexure-2:

Declaration regarding experience

To,
The Chair,
Electrical Communication Engineering Department
Indian Institute of Science Bangalore – 560012, India
Attn: Prof. Gaurab Banerjee

Ref: Tender No:
XXXXXXXXXX Dated:
XXXXXX

Supply and installation of Vector Signal Generator at the Electrical
Communication Engineering Department, IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions contained in the
above referred tender. I hereby declare that my company / firm has
----- years of experience in
supplying and installing Vector Signal Generator.

(Signature of the
Bidder)
Printed Name
Designation, Seal
Date:

Annexure-3:

Declaration regarding track record

To,
The Chair,
Electrical Communication Engineering Department
Indian Institute of Science Bangalore – 560012, India
Attn: Prof. Gaurab Banerjee

Ref: Tender No:
XXXXXXX Dated:
XXXXXX

Supply and installation of Vector Signal Generator at the Electrical
Communication Engineering Department, IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm 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
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(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully
(Signature of the Bidder)

Name
Designation,
Seal

Date:

Annexure – 4:

Declaration for acceptance of terms and conditions

To,
The Chair,
Electrical Communication Engineering Department
Indian Institute of Science Bangalore – 560012, India
Attn: Prof. Gaurab Banerjee

Ref: Tender No:
XXXXXX Dated:
XXXX

Supply and installation of Vector Signal Generator at the Electrical
Communication Engineering Department, IISc Bangalore.

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Name

Designation, Seal

Date:

Annexure – 5:

Details of items quoted:

- 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. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided 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 2 years beyond warranty				
7.	Cost of Insurance and Airfreight				
8.	CIP/CIF IISc, Bengaluru				

Addressed to
The Chair,
Electrical Communication Engineering Department
Indian Institute of Science Bangalore – 560012, India
Attn: Prof. Gaurab Banerjee

Any additional items

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

Section 7 – Checklist

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

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

1. 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 items quoted
2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

2. Sealed Envelop “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 on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.