



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

शिक्षा मंत्रालय, भारत सरकार द्वारा स्थापित  
सैक्टर 81, नॉलेज सिटी, प. ओ. मनोली, एस. ए. एस. नगर, मोहाली, पंजाब 140306  
**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI**  
(Established by Ministry of Education, Govt. of India)  
Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab  
PAN No. - AAAAI1781K GSTIN – 03AAAAI1781K2ZS

• Phone : +91-172- 2240121 • Fax : +91-172-2240124 • <http://www.iisermohali.ac.in> • Email: [stores@iisermohali.ac.in](mailto:stores@iisermohali.ac.in)

CPPP/Institute Website

IISERM (1484)21/22-Pur

Dated: 6<sup>th</sup> August 2021

## **NOTICE INVITING E-TENDER**

Online tenders are invited on behalf of the Director, IISER Mohali in **TWO BID SYSTEM** for the **Supply and Installation of Microwave Signal generators with phase coherence (3 units or 3 channels)** as per technical specification and details given below and BOQ list from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website [www.iisermohali.ac.in](http://www.iisermohali.ac.in).

-Sd-  
Assistant Registrar (P&S)

**NOTE: This is a domestic Tender according to the DPIIT Order dated 15/07/2017 and subsequent amendments to the order for Public Procurement Preference & PROVISION FOR LOCAL SUPPLIERS TOWARDS PREFERENCE TO MAKE IN INDIA. The bidder required to declare on the letter head the percentage of Local content for the quoted instrument and submit with the Technical Bid. Bidder should also give details of the location(s) at which the local value addition is made.**



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## **E-TENDER NOTICE**

Tender Ref.- IISERM(1484)21/22-Pur	Dated : 6 <sup>th</sup> August 2021
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### **Critical Date Sections**

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	6 <sup>th</sup> August 2021	6:00pm
2.	Tender Document download start Date & Time	6 <sup>th</sup> August 2021	6:00pm
3.	Bid Submission start Date & Time	6 <sup>th</sup> August 2021	6:00pm
4.	Bid Submission End date and Time	26 <sup>th</sup> August 2021	Upto 11:00am
5.	Tender opening Date and Time	27 <sup>th</sup> August 2021	At 11:30am

Online tenders are invited on behalf of the Director, IISER Mohali in **TWO BID SYSTEM** for following item(s) from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website [www.iisermohali.ac.in](http://www.iisermohali.ac.in). Tender fee in shape of Demand Draft of Rs 590/- (Non-refundable) should be submitted by bidder in favour of the Registrar, IISER Mohali payable at Mohali or through Online mode in Institute Account (Canara Bank Saving Account Number 4790101001912 and IFSC Code CNRB0004790) However, scanned copy of the Tender fee should be uploaded on website along with technical bid. The hard copy of the same in original to be sent to the address mentioned below duly superscribing the supply/work name and reference/tender ID on the envelope and same must reach before opening of the bid and if not received before due date the bid will be summarily rejected. **Micro & MSME/NSIC and Firms registered and the firms registered with concerned Ministries/ Departments, the bidders are exempted from payment of Tender Fee/EMD as per GOI notifications/GFR (2017) and Ministry of Finance OM No. F.9/4/2020-PPD dated 12 November 2020.**

**Bidders will also be required to execute bond/undertaking Bid Security Declaration Form attached as ANNEXURE-I for availing exemption to submit EMD.**

### **The Original Tender Fee should be sent to:**

Assistant Registrar (P&S)  
Indian Institute of Science Education and Research Mohali  
Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab,  
India, Pin: 140306

**Non-receipt of original Tender Fee will lead to rejection of tender.**

### **ITEM WISE DETAILS**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty. (in units)</b>
<b>1.</b>	<b>Supply and Installation of Microwave Signal generators with phase coherence (3 units or 3 channels)</b>  <b><u>TECHNICAL SPECIFICATIONS: AS PER ANNEXURE-III</u></b>  <b><u>*The attached ANNEXURE-III must be filled by the bidder duly stamped and signed.</u></b>	<b>03</b>

#### **A) IMPORTANT NOTES:-**

- I. This is a domestic Tender according to the DPIIT Order dated 15/07/2017 and subsequent amendments to the order for Public Procurement Preference & PROVISION FOR LOCAL SUPPLIERS TOWARDS PREFERENCE TO MAKE IN INDIA. Bidders should also give details of Localtions(s); at which the local value addition is made. Bidders are requested to furnish the declaration regarding local content/locations in Annexure II.**
- II. The online updated Price BOO is in INR format. Bids are invited in INR only against domestic tender.**
- III. The Online bids should be submitted directly by the original manufacturer/supplier. If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company.**
- IV. All MSME/NSIC/Startup Units shall be considered as per provisions/rules prescribed by Govt of India.**
- V. Auto-extension of last date for E-Tenders has been activated by CPP Portal which has participation 2 bids or less.**
- VI. Warranty: One year, if not specified above.**

#### **B) SUBMISSION OF TENDER**

- I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. <https://eprocure.gov.in/eprocure/app> only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.**
- II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.**
- III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.**

- IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped. **Also bidders applying against ‘MSME/NSIC Certificate’ issued by appropriate Authority, should ensure that the certificate attached is relevant to the area of service/supply. For example, If the tender is for “supply & installation of Desktop” the certificate should be issued for activity/area of “Computer supply and services activities etc” otherwise bid will be REJECTED without notice.**
- V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

### **C) INSTRUCTIONS**

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.
2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.
3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.
4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.
5. THE INSTITUTE IS EXEMPTED FROM CUSTOM DUTY under notification no-TU/V/RG/-CDE(1062)/201 CUSTOM DT.30.08.2016.
6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.
7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.
8. Bidder/s quoting in currency other than **Indian Rupee (INR)** should explicitly mention the currency in which tender quoted wherever applicable in Technical Bid along the tender documents.
9. The delivery period should be specifically stated. Earlier delivery will be preferred.
10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets & literature of the article quoted and also should enclosed **Technical Compliance Sheet**. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection. Tenders not accompanied by detailed information as required, are liable to be rejected.
11. If any information furnished by the bidder is, at any stage found to be incorrect, false or fabricated, the Institute/purchaser shall have the absolute right to forfeit E.M.D. and security deposits, in addition to cancellation of contract, forfeiting the warranty/performance Guarantees and other action in accordance with law, such as black-listing, risk & cost etc.
12. Validity of offer: 90 days.

13. The warranty period after satisfactory installation should be mentioned and firm should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. Security deposit/ Bank Performance Guarantee @ 3% of the value of supply order, in terms of *Ministry of Finance, DoE, GOI, OM. No. F.9/42020-PPD dated 12-11-2020* and as per norms may be sought from the firms.
14. The right to reject all or any of the quotation and to split up the requirements for itemized L-1 or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website <https://eprocure.gov.in/eprocure/app> and <http://www.iisermohali.ac.in>
15. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

–Sd–  
Assistant Registrar (P&S)

## **ANNEXURE-I**

### **Bid Securing Declaration Form**

Date: \_\_\_\_\_ E-Tender No. \_\_\_\_\_ E-Tender ID \_\_\_\_\_

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders. I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)  
in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)  
Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)  
Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

PS: *Furnish the above in original stationary/letter head with signed and sealed.*

## **ANNEXURE-II**

### **SELF DECLARATION** [For Local Content of Products, Services or Works]

To,

The Director  
Indian Institute of Science Education and Research  
(Established by Ministry of Education, Govt. of India)  
Sector-81, Knowledge city, PO-Manauli,  
SAS Nagar Mohali-140306, Punjab

1. With reference to Order no P.-45021/2/2017 PP (BE-II) dated 04.06.2020 and No. P-45021/2/2017-PP(BE-II) dated 16-09-2020 of DPIIT, Ministry of Commerce and Industry, Govt. of India, we fall under the following category of supplier (please tick the correct category) for the items for which this tender has been floated and being bided.

- ☐ Class I local supplier – has local content equal to more than 50%. Local contents added at \_\_\_\_\_ (name of location).
- ☐ Class II local supplier – has local content more than 20% but less than 50%. Local contents added at \_\_\_\_\_ (name of location).
- ☐ Non-local supplier – has local content less than or equal to 20%. Local contents added at \_\_\_\_\_ (name of location).

2. We are solely responsible for the abovementioned declaration in respect of category of supplier. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which we may can be debarred for up to 2 years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Signature & seal of the company

Name and address of the organization

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.....  
.....

**Note:** In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier' / 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

**ANNEXURE – III**

<b>Phase Coherent Microwave Signal Generators</b>			
General	Three Microwave Synthesizers must be provided with Phase coherence having high level of synchronization and modulation capabilities. They have to be 3 separate units for all three channels		Bidders must fill and submit alongwith the technical bid.
S. No.	Specs	Parameter	Compliance (apart from compliance provide Brochures, data sheets and application notes to show compliance. Also specify value of parameter)
1	Channel 1 Unit1	1MHz to 12.5 GHz or better with Vector modulation	
2	Channel2 Unit2	1MHz to 6 Ghz with CW	
3	Channel 3 Unit3	1MHz to 12.5 GHz analog with option to upconvert to 40 GHz quote vector modulation option separately	
4	Upconverter for Channel 3	Upconverter for channel 3 to increase range to 40 GHz in Scalar mode	
5	Pulse	Pulse option in Ch 1 internal and external 0 to 10 MHz repetition ~ 20 ns rise time and 45ns delay or better specs. 100nS to 100 S pulse length with 10ns setting resolution pulse period.	
6	Phase Coherence	Phase coherence via LO coupling mode with 80 MHz BW from carrier on all three channels, Phase Coherence via a clock reference of 1GHz or higher frequency	
7	LO coupling modes	Internal, External Should be available	
8	Drift in Rf out signal phase with temperature ( +1 °C)	0.4° (freq = 6 GHz, Power= +10 dBm)	
9	Ref Input frequency	10 MHz, 100 MHz, 1000 MHz	
10	Freq Setting resolution	0.001 Hz	
11	Phase offset Setting resolution	0.1°	
12	Aging	1 × 10 <sup>-6</sup> /year Give best oprion in Channel 1 if additional OCXO options are available.	
13	Output power	–10 dBm to +15 dBm upto full frequency range in all channels Quote extended high power range separately	
14	Level Setting resolution	0.01dB	
15	Level error	<1dB	
16	Level Setting time	< 2 ms	



17	Phase Noise	< -125 dBc @ 1 GHz freq and 20 KHz offset < -105 dBc @ 20 GHz freq and 20 KHz offset < -100 dBc @ 40 GHz freq and 20 KHz offset	
18	Harmonics	< -30 dBc or lower	
19	Wideband noise	-132 dBc	
20	RF out	Ch1: K type Ch2: SMA type Ch3 K-type	
21	RF out VSWR	<2	
22	I/Q Modulator Bandwidth Channel 2	100 MHz (f < 2.6 GHz) 1 GHz (2.6 GHz < f ≤ 12 GHz)	
23	I/Q Connector	SMA female(I in, Q in, I out, Q out)	
24	Maximum reverse power	+ 27dBm	
25	Remote Interface	USB, LAN with VISA Programming in MATLAB and Labview and Basic labview drivers also.	
26	Power supply	100 V to 240 V , 50 Hz to 60 Hz	
27	Electrical safety	Complied with IEC 61010-1, EN 61010-1, UL 61010-1	
28	EMC	EN 55011 class A, EN 61326	
29	Operating temperature	0 °C to +50 °C	
30	Warranty	3 years standard	
<b>QUOTE</b>			
Q1	Channel 1	As per specs	
Q2	Channel 2	As per specs	
Q3	Channel 3	As per specs	
Q4	Cables for phase coherence for all 3 units and 19" rackmount kit	Entire set of needed phase stable cables for LO or 1GHZ clock or any other phase matching routines . Additional 1set of phase stable cable for external inputs 2 pcs 1.5 m long	
Q5	Vector Modulation options for channel 2 separately.		
Q6	Scalar Upconverter for Channel3	Can be external upconverter or internal upgrade up to 40 GHz of continuous sweeps.	
Q7	Higher Power upto 20 dBm for Channel 2		
Q8	Higher Power upto 20 dBm for Channel 3		
Q9	Vector Modulation options for channel 3 separately.		
Q10	Pulse modulation for Channel 3		
Q11	OCXO option with lower drift for Channel 1		
Q12	2.92 mm cables	Hand formable 2.92 mm cables 0.085" OD 50ohms 3 meters 12 pcs 1 meter 12 pcs	

Q13	DC-18 GHZ Mixer amplifier	1) DC -18 Mixer gain block Minicircuits LTA-183M-D+ Gain block 6 units or equivalent from Analog devices units with Biasing circuits and SMA connectors with bias tees (internal or external) must be on appropriate Rogers or Taconic Laminates	
Q14	DC-40 GHz Gain block 3 units	Gain block DC-50GHz or 40 GHz gain block LTA-M1109-DG+ Gain block 3 units or equivalent from Analog devices units with Biasing circuits and 2.92 mm connectors . %Must have screw type 2.92 mm end launch connectors and must be on appropriate Rogers or Taconic Laminates	
Q15	Low noise pre amplifier 1-1000 MHz 10 units	LNA 1-1000 TSS-13HLN-DG+ with 1.4 dB NF and High 1dB comp 23 dBm or better with Biasing circuits and SMA connectors 6 units (with bias tees internal or external) Must have screw type SMA end launch connectors and must be on appropriate Rogers or Taconic Laminates	
Q16	SMA Attenuators 30 each of 3dB, 1dB and 10 dB	Chip level attenuators GaAs MMIC or Nichrome films 3 dB and 10 dB with SMA end launch connectors 30 each	
Q17	Bias tees	3 bias tees up to 18GHz for three units.	
Q17	2.92 mm Attenuators 20 each of 3dB, 1 dB and 10 dB	Chip level attenuators GaAs MMIC or Nichrome films 3 dB and 10 dB with 2.92mm end launch connectors 20 each	
Q18	DC blocks 20 Pcs	BLK-18-S+ min-circuits or equivalent	
Q19	Basic 19" rack	Give a basic 42U 19" rack with 800 mm depth 5 shelves, simple keyboard tray , simple set of 4 cooling fans on top , PDU with 6 hybrid 5A/15A sockets , earthing bus bar , 5 shelves, simple, lockable door and lockable PU caster.25 mounting screws This must be a simple low cost accessory with a good PDU.	
	<b>PRICE</b>	Items 1to 19 will be used . However only some sub units or multiples of some accessories will be procured.	
S1	Service	OEM Must have NABL accredited service and calibration facility in India	
S2	References	IISER reserves the right to ask for user references for any OEMs who do not have many installations of similar equipment in India	
	<b>MAKE IN INDIA</b>	Only companies with Class II or I make in India Components and having NABL accredited test facility will be qualified.	
Misc	Country of Origin.	If main unit is manufactured in a Country sharing land border with India appropriate Govt permissions must be submitted. Stores section may ask for more clarifications.	