



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

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CPPP/Institute Website

IISERM (1484-2)21/22-Pur-GTE

Dated: 28th February 2022

ई - निविदा आमंत्रण सूचना NOTICE INVITING E-TENDER

माइक्रोवेव सिग्नल जनरेटर चरण सुसंगतता के साथ (3 इकाइयां या 3 चैनल) की आपूर्ति और स्थापना के लिए दो बोली प्रणाली में निदेशक, आईआईएसईआर मोहाली की ओर से ऑनलाइन निविदाएं आमंत्रित की जाती हैं। तकनीकी विनिर्देश और नीचे दिए गए विवरण के अनुसार और सीपीपीपी पर मूल निर्माता / आपूर्तिकर्ता से बीओक्यू सूची अर्थात् <https://eprocure.gov.in/eprocure/app> निविदा दस्तावेज ई-प्रोक्योरमेंट पोर्टल की वेबसाइट <https://eprocure.gov.in/eprocure/app> और संस्थान की वेबसाइट www.iisermohali.ac.in से डाउनलोड किए जा सकते हैं।

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.

Sd/-

सहायक कुलसचिव (क्रय तथा भंडार)
Assistant Registrar (Stores & Purchase)



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
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ई - निविदा आमंत्रण सूचना / E-TENDER NOTICE

Tender Ref.- IISERM(1484-2)21/22-Pur-GTE	Dated : 28 th February 2022
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Critical Date Sections

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	28 th February 2022	6:00pm
2.	Tender Document download start Date & Time	28 th February 2022	6:00pm
3.	Bid Submission start Date & Time	28 th February 2022	6:00pm
4.	Bid Submission End date and Time	29 th March 2022	Upto 11:00am
5.	Tender opening Date and Time	30 th March 2022	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. Online Tender fee of Rs 590/- (Non-refundable) should be submitted by bidder in favour of IISER Mohali through Online mode in Institute Account (Canara Bank Saving Account Number 4790101001912 and IFSC Code CNRB0004790). However, scanned copy of the Tender fee/UTR copy should be uploaded on website along with technical bid. **Micro & MSME/NSIC and Firms registered and the firms registered with concerned Ministries/ Departments, the bidders are exempted from payment of Tender Fee 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 Tender Fee.

ITEM WISE DETAILS

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

A) IMPORTANT NOTES:-

- I. **The online updated Price BOQ is in INR format. If bidder want to quote other than INR please specify the quoted currency in the Technical Bid/Part and fill the amount in same updated BOQ.**
- II. **Please bifurcate the price on shipping terms i.e. Ex-works -> FCA/FOB -> CIP/CIF in price BOQ and specify the same in technical bid without price.**
- III. **If quoted in foreign currency, kindly clearly specify the terms of delivery/country of origin/bank details with swift code/weight/size/dimension of shipment.**
- IV. **Restriction under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 under sub clause 3, in terms of DOE, MoF No. F.18/37/2020-PPD dated: 8th February, 2021:**
 - (i) A bidder is permitted to procure raw material, components, sub-assemblies etc. from the vendors from countries which shares a land border with India. Such vendors will not be required to be registered with the Competent Authority, as it is not regarded as "sub-contracting".
 - (ii) However, in case a bidder has proposed to supply finished goods procured directly/indirectly from the vendors from the countries sharing land border with India, such vendor will be required to be registered with the Competent Authority.
- V. **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.**
- VI. **All MSME/NSIC/Startup Units shall be considered as per provisions/rules prescribed by Govt of India.**
- VII. **Auto-extension of last date for E-Tenders has been activated by CPP Portal which has participation 2 bids or less.**

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 Annexure I (Bid Securing Declaration Form). 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. 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)/2016 CUSTOM DT. 12.10.2018.
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 enclose **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/-
सहायक कुलसचिव (क्रय तथा भंडार)
Assistant Registrar (Stores & Purchase)

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

PHASE COHERENT MICROWAVE SIGNAL GENERATORS			
			Compliance (apart from stating compliance provide reference to Brochures, data sheets and application notes to justify)
Sno	Specs	Parameter	
1	General	3 separate Microwave units with out puts and phase coherence as specified. If PXI units are quoted 3 independent chassis must be quoted to operate the units separately as well as In phase synchronous manner.	
2	Unit 1	10 MHZ to 12 GHz or better range with Vector modulation	
3	Unit2	1MHz to 6 GHz or better with vector modulation	
4	Unit3	10 MHz to 12 GHz better with vector modulation	
5	Upconverter or upgrade for Channel 3	Upconverter or upgrade for channel 3 or 1 to increase range to 40 GHz	
6	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.	
7	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 to minimize errors	
8	LO coupling modes	Internal, External Should be available	
9	Drift in Rf out signal phase with temperature (+1 °C)	0.4° (freq = 6 GHz, Power= +10 dBm)	
10	Ref Input frequency	10 MHz, 100 MHz, 1000 MHz	
11	Ref output frequency	10 MHz and 1GHz with 0dbm or higher amplitude	
12	Freq Setting resolution	0.001 Hz or lower	
13	Phase offset Setting resolution	0.1° or lower	
14	Aging	1×10^{-6} /year or lower	
15	Output power	-10 dBm to +15 dBm up to full frequency range in all channels or better upper and lower range. Up to 1 or 2dbm lower in extremities of low or high frequency end may be permitted if other specs are met	
16	Level Setting resolution	0.01dB	

17	Level error	<1dB	
18	Level Setting time	< 2 ms	
19	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	
20	Harmonics	< -30 dBc or lower	
21	Wideband noise	-132 dBc or lower	
22	RF out	Ch1: K type Ch2: SMA type Ch3 K-type	
23	RF out VSWR	<2 over full range	
24	I/Q Modulator Bandwidth in all channels	100 MHz (f< 2.6 GHz) 1 GHz (2.6 GHz < f ≤ 12 GHz)	
25	I/Q Connector	SMA female or 3.5 mm or 2.92 mm (I in, Q in, I out, Q out)	
26	Maximum reverse power	+ 27dBm	
27	Remote Interface	USB and Ethernet LAN with VISA Programming in MATLAB, Python and Labview and SCPI commands in addition to any proprietary software	
28	Power supply	100 V to 240 V , 50 Hz to 60 Hz	
29	Electrical safety	Complied with IEC 61010-1, EN 61010-1, UL 61010-1 or equivalent	
30	EMC	EN 55011 class A, EN 61326 or equivalent	
31	Operating temperature	0 °C to +50 °C	
32	Warranty	3 years standard warranty on all units	
Items to be Quoted			
Q1	Unit 1	As per specs	
Q2	Unit 2	As per specs	
Q3	Unit 3	As per specs	
Q4	Cables for phase coherence for all 3 units and phase stable cables	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 4pcs around 1.5 m long	
Q5	19" rackmount kit	Rack mount bracket for all units. Provide low cost locally made brackets	
Q6	Upconverter or frequency upgrade for Channel 1 or 3	Can be external upconverter or internal upgrade up to 40 GHz for CW.	
Q7	Pulse modulation for Channel 3	—	
Q8	2.92 mm cables we need only 2.92 mm as users may use converters for higher frequencies	Hand formable 2.92 mm cables 0.085" OD 50ohms 3 meters 12 pcs 1 meter 12 pcs . Must be good quality like Rosnberger or good local equivalent	
Q9	DC-18 GHZ Mixer amplifier	DC -18 Mixer gain block Minicircuits LTA-183M-D+ 5 pcs pcs or equivalent specs	
Q10	DC-40 GHZ Gain block 3	Gain block DC-50GHz or 40 GHz gain block LTA-M1109-DG+ 5pcs	

Q11	Low noise pre amplifier 1-1000 MHz	LNA 1-1000 TSS-13HLN-DG+ with 1.4 dB NF and High 1dB comp 23 dBm or better 10 pcs	
Q12	Bare Die attenuators of 3dB , 1dB and 10 dB	Chip level attenuators GaAs MMIC or Nichrome films 3 dB Model KAT-3-DG+ KAT-1-DG+, KAT-10-DG+	
Q13	SMT attenuators 30 each of 3dB ,10dB and 10 dB	1) Model KAT-10+ KAT-3+ KAT-1+ from minicircuits or equivalent	
Q14	Bis Tees packaged	Minicircuits ZX85-12G-S+ or equivalent 4 pcs	
Q15	Bias Tee dies for cryogenic use	BTL-0035SMG-1 BTL-0035SMG-2 Marki Microwave 6 pcs each orientation total 12 pcs	
Q16	DC blocks 20 Pcs	BLK-18-S+ min-circuits or equivalent	
O1	Price	All items may be used for comparison. However IISER may decide to remove or add more accessories or upgrades . IISER may also downgrade options with L1 if funds are not available.	
O2	Service	OEM Must preferably have NABL accredited service and calibration facility in India. OEM or Agent must agree to give appropriate Bank guarantee or equivalent documents when shipping equipment for repair/calibration for a period of 10 years. Service life of model must be around 10 years and not less than 8 years. If NABL accredited service centre is not present in India Agent and OEM must agree to give demo units with Bank Guarantee to take out Instrument during warranty and Bank Guarantee for repairs out of warranty period.	
O3	References	IISER reserves the right to ask for user references if OEM is not a familiar reputed International manufacturer. Not having satisfactory references for similar products in India may lead to rejection.	
O4	Country of Origin	If main unit is manufactured by an OEM in a Country sharing land border with India appropriate Govt permissions must be submitted. Stores section may ask for more clarifications.	