



NATIONAL SUPERCOMPUTING MISSION
INFRASTRUCTURE | APPLICATIONS | R&D | HRD

Centre for Development of Advanced Computing

A Scientific Society of Ministry of Electronics & Information Technology,

Government of India

Innovation Park, PANCHAVATI, Pashan Road, Pune - 411008

Tel: +91-20-25868086 / 020-25503673-75

www.cdac.in / mmg@cdac.in

Tender No: CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331

C-DAC invites ON-LINE bids for Supply, Installation & Support of Oscilloscope with probes, accessories etc. at C-DAC Pune.

Prospective Bidders may download the Tender Document from www.cdac.in / <https://eprocure.gov.in/eprocure/app>. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission' and submit duly filled bids online on the website <https://eprocure.gov.in/eprocure/app> as per the schedule given in the Tender Document.

Tender Schedule

Tender No: CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331

Name of the Institute	Centre for Development of Advanced Computing, Pune 411008.
Place of Supply, Installation & Commissioning, Support etc.	Centre for Development of Advanced Computing, Pune.
Date of Release of Tender	April 8, 2021
Last date of submission of bids	April 30, 2021 - 1500 Hrs
Date of opening of Technical bids	April 30, 2021 - 1600 Hrs
Place of opening of technical bids	C-DAC, Pune 411008.

1. Instructions for On-line Bid Submission

The bidders are required to submit soft copies of their bids electronically through the portal (www.eprocure.gov.in) using valid Digital Signature Certificates (DSC). The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

2. Assistance to Bidders:

Any query relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24*7 CPP Portal Helpdesk on :- 0120-4200 462, 0120-4001 002, 0120-4001 005, 0120-6277 787,

- e-mail for Technical - support-eproc@nic.in.

3. In case of any doubts and/ or queries pertaining to technical solution, specifications terms and conditions of the tender, prospective bidder may send their queries in writing through e-mail (mmg@cdac.in). The queries, requests for clarifications etc. must be sent within 7 days from the date of publication of the Tender. The bidders are requested to go through the entire tender document thoroughly, before raising any query. C-DAC, Pune shall address the queries raised by the bidders. The replies to queries would be made available on C-DAC's web site in due course of time. All the queries, doubts, clarifications etc. must be submitted in xls format only as below.

Name of the bidder:				
Sl.No.	Section / Page No	Clause Reference	Query from bidder	C-DAC Response

SECTION I: INSTRUCTIONS TO BIDDERS (ITB)

1. Introduction:

Centre for Development of Advanced Computing (C-DAC) - is a scientific society under the administrative control of Ministry of Electronics & Information Technology, Government of India. C-DAC invites 'ON-LINE' bids from eligible bidders for supply, installation and support of **33GHz, 4-Channe Oscilloscope** with probes, accessories, software etc., as per Schedule of Requirements (**Section- IV**) and other terms and conditions stipulated in this document.

2. Contact information:

Material Management Group
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune 411008, Maharashtra, INDIA
Tel No.: +91-20-25503673-75/ 2586 8086, E-mail: mmg@cdac.in

3. Two bid System:

The Two e-bid systems will be followed for this tender.

I: **e-Packet No. 1: "Technical e-Bid"**

II: **e-Packet No. 2: "Commercial e-Bid"**

The documents pertaining to Technical Bid and Commercial Bid must be uploaded electronically through <https://www.eprocure.gov.in/eprocure/app>.

Note: All the documents listed in e-packet-1 and e-packet-2 must be arranged in the flow / sequence as mentioned as per Annexure-F strictly.

3.1 e-Packet No. 1: "Technical e-Bid":

The bidder must upload the copies of pdf documents through e-Packet – 1, as listed below:

- a. **Annexure-F Table with indexing, page nos etc.**
- b. Covering letter, as per **Annexure – A**.
- c. Authority letter, as per **Annexure – B**.
- d. Scanned copy of Demand Draft towards tender fee of Rs. 2000/- (Rupees One Thousand Only) (Non-refundable / Non-Exempted) drawn in favour of C-DAC payable at Pune. However, the original Demand Draft must be submitted to C-DAC at address given at para 2 above, on or before the Due Date & Time of the Tender Submission.
- e. Scanned copy of EMD / bid security declaration, as given in **Annexure – E**.
- f. A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document showing date and place of incorporation, as applicable.

The Technical e-bids will be opened - online on the date given in tender schedule, through www.eprocure.gov.in/eprocure/app portal at:

Centre for Development of Advanced Computing (C-DAC)

Innovation Park, Panchavati, Pashan Road, Pune 411008,
Maharashtra, INDIA.

Tel No.: +91-20-25868086 / 020-2550 3673-75.

E-mail: mmg@cdac.in

Note: Please do not put "Commercial Bid" (prices offered) in the technical bid documents e-packet. If the price offered is submitted / leaked with technical bid, the tender will be rejected at the sole discretion of C-DAC.

7. Opening of commercial e-bids :

Commercial e-bids of the qualified bidders only will be opened. The decision of C-DAC's bid evaluation committee in this regard will be final and binding on bidders. C-DAC's bid evaluation committee will be authorised to take appropriate decision on minor deviations, if any.

The date, time and venue of opening of commercial bids will be informed later to the qualified bidder.

The bidder's name, bid prices and other appropriate details will be displayed after the date & time of the opening of the commercial bids and completing the internal process.

(END OF SECTION I)

SECTION II: GENERAL CONDITIONS OF CONTRACT (GCC)

1. Location for the Supply, Installation & Warranty Services:

The Oscilloscope with probes, software, accessories etc. as described in Schedule of Requirements must be supplied, installed & supported at

Centre for Development of Advanced Computing, Innovation Park, Pashan Road, Pune.

2. Delivery Period:

The Test & Measurement Instrument – Oscilloscope with probes, software, accessories etc. covered in this tender must be supplied, installed along with the final acceptance testing within **8 weeks** from the date of placement of order.

3. Order Placements & Payments by:

Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune 411008, Maharashtra, INDIA.

4. Eligibility Criteria:

The bidder must comply with the minimum eligibility criteria stipulated below.

- 4.1. The bidder must submit the documents as listed at para 3.1 and 3.2, Section – I of this document.
- 4.2. The bidder must be either a Principal Manufacturer (OEM – Original Equipment Manufacturer) of T&M-High Bandwidth & High-Performance Oscilloscope or their respective Indian subsidiary, or their (OEM's) authorized distributor in India.
- 4.3. The bidder must be a legal Indian entity registered under appropriate Law/ Act.
- 4.4. If the bidder is an authorised system integrator/distributor, the specific authorisation letter/s from Principal/s, as per **Annexure - C** must be submitted along with the technical bid. In this case, the authorization letter (Annexure – C) issued by the Indian subsidiary of Principal Manufacturer is acceptable.
- 4.5. If the bid is submitted by the Indian subsidiary of Principal Manufacturer (OEM), the letter from Principal Manufacturer (OEM) must be submitted certifying that the bidder is the subsidiary company of the Principal Manufacturer (OEM) in India.
- 4.6. The Indian agent or System Integrators/distributor and the Principal manufacturer (OEM) of Test & Measurements equipments cannot bid simultaneously.
- 4.7. The bidder must quote for all the items required to complete the installations, commissioning etc. for given in **Section V** of this document.

- 4.8. The bidder must have minimum annual sales turnover of Rs. 5.00 Cr. (Rs. Five Crore Only) for each of last three financial years.
- 4.9. The bidder must have executed successfully at least one order of High frequency Oscilloscopes of similar frequency and channels in India.
- 4.10. The bidder must submit all the documents as per Document Checklist – **Annexure F**, with appropriate page nos for the same. The flow of the submitted documents **must be in the same order/sequence**.
- 4.11. The bidder must not be blacklisted by any Govt. Organizations as on date of submission of the bids. A certificate or undertaking to this effect must be submitted (**Annexure – A**).
- 4.12. The bidder should provide sufficient documentary evidence to support the eligibility criteria and exemptions mentioned in point 5 below. C-DAC reserves the right to reject any bid not fulfilling the eligibility criteria.

5. Exemptions:

If in the view of bidder, any exemption / relaxation are applicable to them from any of the eligibility requirements, under any rules, process, guidelines, Directives of Government of India, bidder may submit their claim for the applicable exemption /relaxation, quoting the valid rule, process, guidelines or directives. In this case the bidder must submit necessary and sufficient valid documents along with the technical bid, in support of their claim. The relevant and valid certificates in support of claim of exemption must be submitted. Similarly, the latest Govt. Notifications will be binding on the bidders.

6. Amendment to Bidding Documents

- 6.1. At any time prior to the deadline for submission of bids, C-DAC may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.
- 6.2. The amendments to the tender documents, if any, will be notified by release of Corrigendum Notice on www.eprocure.gov.in/eprocure/app/ / www.cdac.in/tender against this tender. The amendments/ modifications will be binding on the bidders.
- 6.3. C-DAC at its discretion may extend the deadline for the submission of bids if it thinks necessary to do so or if the bid document undergoes changes during the bidding period, in order to give prospective bidders time to take into consideration the amendments while preparing their bids.

7. Preparation of Bids

Bidder should avoid, as far as possible, corrections, overwriting, erasures or postscripts in the bid documents. In case however, any corrections, overwriting, erasures or postscripts have to be made in the bids, they should be supported by dated signatures of the same authorized person signing the bid documents.

However, bidder shall not be entitled to amend/ add/ delete/ correct the clauses mentioned in the entire tender document. The documents uploaded through eprocure portal (CPP Portal) will be treated final.

8. Earnest Money Deposit (EMD)

- 8.1. The bidder must submit EMD / bid security declaration, as given in **Annexure - E**, subject to the conditions stipulated therein
- 8.2. The successful bidder, on award of contract / order, must send the contract/ order acceptance in writing, within 10 days of award of contract/ order, failing which C-DAC reserves the right to forfeit the EMD declaration and cancel the order.
- 8.3. The EMD declaration may be forfeited:
 - If the bidder withdraws the bid during the period of bid validity specified in the tender.
 - In case a successful bidder, fails to furnish the Security Deposit (Refer Clause 3 of Section III).
 - If the bidder fails to furnish the acceptance in writing, within 10 days of award of contract/ order.

9. Period of validity of bids

- Bids shall be valid for minimum 120 days from the date of submission. A bid valid for a shorter period shall stand rejected.
- C-DAC may ask for the bidder's consent to extend the period of validity. Such request and the response shall be made in writing only. The bidder is free not to accept such request without forfeiting the EMD declaration/BG. A bidder agreeing to the request for extension will not be permitted to modify his bid.

10. Submission of Bids- Online :

The Bid documents shall be neatly arranged and all pages should be numbered. They should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. **The conditional bid will be summarily rejected.** Insertions, postscripts, additions and alterations shall not be recognized, unless confirmed by bidder's signature.

11. Bid Opening & Evaluation of Bids

The technical bids will be evaluated in two steps.

- 11.1. The bids will be examined based on eligibility criteria stipulated at Para 4 of Section – II to shortlist the eligible bidders.
- 11.2. The technical bids of only the short listed eligible bidders shall be evaluated based on technical specifications stipulated at Section – IV.

The bidders whose technical bid is found to meet both the requirements as specified above will qualify for opening of the commercial bid and will be informed about the date and time of the opening of the commercial bid.

The duly constituted Tender Evaluation Committee (TEC) shall evaluate the bids. The TEC shall be empowered to take appropriate decisions on minor deviations, if any.

12. Comparison of Bids

- Only the short-listed bids from the technical evaluation shall be considered for commercial comparison.
- The total price quoted for all the items as listed in Section – VI (excluding customs duty / GST @Concessional Rates, as applicable) will be considered for evaluation and comparison. C-DAC may include the actual applicable - GST / Customs Duty in the offered prices to achieve the final amounts for processing. But, bidder has to quote the applicable Customs Duty / GST rates, if the Duty/Taxes column is kept blank/zero, it will be assumed that the Duty/Taxes are all inclusive. However, C-DAC reserves the right and has sole discretion to reject the lowest evaluated bid.
- The prices offered in foreign currency, if any will be converted to INR for the comparison. The exchange rate as on the date of opening of technical bids will be taken for this conversion.

13. Award of Contract

13.1. C-DAC shall place the order(s) on the eligible bidder whose technical bid has been accepted and determined as the lowest evaluated commercial bid. However, C-DAC reserves the right and has sole discretion to reject the lowest bid.

13.2. If more than one bidder happens to quote the same lowest price, C-DAC reserves the right to place the order on the eligible bidder having larger sales turn-over for last financial year. The decision of C-DAC shall be final.

14. Purchaser's Right to amend / cancel

14.1. C-DAC reserves the right to amend the eligibility criteria, commercial terms & conditions, Scope of Supply, quantities, technical specifications etc. The same shall be published on the portals.

14.2. C-DAC reserves the right to cancel the entire or partially tender without assigning any reasons thereof.

14.3. C-DAC reserves the right to reject the bid submitted by the lowest evaluated bidder.

15. Corrupt or Fraudulent Practices

15.1. It is expected that the bidders who wish to bid for this project have highest standards of ethics.

15.2. C-DAC will reject bid if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices while competing for this contract;

15.3. C-DAC may declare a vendor ineligible, either indefinitely or for a stated duration, to be awarded a contract if it at any time determines that the vendor has engaged in corrupt and fraudulent practices during the award / execution of contract.

16. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity/ dispute in the interpretation of any of the clauses in this Tender Document, the interpretation of the clauses by Director General, C-DAC shall be final and binding on all parties.

(END OF SECTION II)



The successful bidder will be required to furnish the Security Deposit in INR equivalent to 3% of the order value within 10 days of receipt of Supply Order. The Security Deposit should be submitted in the form of Bank Guarantee drawn in favour of C-DAC payable at Pune. The Security Deposit will be valid for the period till completion of installation and commissioning and will be returned upon completion of installation & commissioning of entire system and on submission of Performance Bank Guarantee (PBG).

4. Performance Bank Guarantee (PBG):

The successful bidder will be required to furnish the Performance Guarantee towards the supplies etc. supplied, in the form of a Bank Guarantee in INR equivalent to 3% amount of the total order value, as per the format attached to this document (**Annexure – D**). This bank guarantee should be submitted along with the invoice after successful installation within 15 days. The Bank Guarantee shall remain valid for the period of 62 months from the date of acceptance. The PBG must be negotiable at a branch of issuing bank in India. In case of no warranty/services claims towards the items under warranty and services during the validity period of bank guarantee, the PBG will be returned on completion of warranty period.

C-DAC reserves the right to invoke the Performance Bank Guarantee(s) submitted by bidder, in case of the following:

- a. The Components/solutions of Test & Measurement Equipment, probes, software etc. fail to achieve the performance as stipulated in this document or
- b. The bidder fails to provide the warranty and other services in scheduled time frame, as stipulated in this document or
- c. The bidder delays to provide the warranty services and response time as stipulated in this document.

5. Completeness Responsibility:

Notwithstanding the scope of work, engineering, supply and services stated in bid document, any equipment or material, engineering or technical services which might not be even specifically mentioned under the scope of supply of the bidder and which are not expressly excluded there from but which – in view of the bidder - are necessary for the performance of the equipment in accordance with the specifications are treated to be included in the bid and has to be performed by bidder.

The items which are over & above the scope of supply specified in the Schedule of Requirements may be marked as “Optional Items”.

6. Warranty:

The Supplier warrants that all the Goods are new, unused, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the order. The supplier further warrants that all Goods supplied shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the supplier. The warranty should be comprehensive on site, repair/replacement basis free of cost.

The supplier also warrants that the said goods would continue to conform to the description and quality aforesaid for a period of min. 5 years from the date of acceptance by the end user and that notwithstanding the facts that the Purchaser/ end user (Inspector) may have inspected and/or approved the said Goods. If during the aforesaid period of 5 years the Goods be discovered not to conform to the description and quality aforesaid or have deteriorated Purchaser will be entitled to reject the Goods or such portion thereof as may be discovered not to conform to the said description and quality. On such rejection, the Goods will be at the supplier's risk and all the provisions herein contained relating to rejection of Goods, shall apply. The supplier if called upon to do so, shall replace within one month or such further period as may be extended by the Purchaser on his discretion on an application made thereof by the supplier the goods or such portion thereof as is rejected by Purchaser and in such an event the above mentioned warranty period shall apply to the Goods replaced from the date of acceptance of the replacement otherwise, the supplier shall pay to the Purchaser such damages as may arise by reason of breach of the conditions therein contained.

All the Goods supplied must have 5 (five) years onsite comprehensive warranty with 24x7 support along with 8 hours response time and 48 hours resolution time, covering all parts & labor starting from the date after the successful installation, demonstration of performances and acceptance by C-DAC, Pune. During the warranty period, supplier will have to undertake comprehensive maintenance of the entire hardware components, equipment, support and accessories supplied at the place of installation of the equipment.

The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary. Goods requiring warranty replacements must be replaced on free of cost basis.

Onsite comprehensive warranty and support for complete supplies including Hardware, Software, probes, accessories for five years from the date of acceptance of the solution.

The warranty support will be backed by supplier by submitting a Performance Bank Guarantee, as per para 4 of Section – III.

7. Payments:

7.1. For payment in Foreign Currency:

90% amount of the order value will be released through 30 days Irrevocable Letter of Credit (LC). The LC operating charges within India shall be to C-DAC account and those for outside India shall be to beneficiary's account. LC confirmation charges, if required shall be to beneficiary account. The charges towards LC amendment required on request of beneficiary shall be to beneficiary account.

Balance 10% amount shall be released against submission of PBG, as per clause 4 of Section III given above. PBG must be submitted within 15 days from the date of acceptance report. In case of non-submission of PBG within 15 days, any loss due to fluctuation in foreign exchange rates will be at beneficiary account.

7.2. For payment in INR:

90% amount of the order value will be released on receipt of material at site with 30 days credit.

Balance 10% amount shall be released against submission of PBG, as per clause 4 of Section III given above. PBG must be submitted within 15 days from the date of acceptance report. In case of non submission of PBG within 15 days, any loss due to fluctuation in foreign exchange rates will be at beneficiary account.

7.3. Applicable TDS will be deducted.

8. *Penalty for delayed Delivery /Services*

- 8.1. In case, the supplier fails to complete any part of scope of the work (i.e. delivery, inspection, installation, commissioning, acceptance and training) or part thereof within the period as stipulated in the order, C-DAC reserves the right to recover from the supplier, as agreed liquidated damages and not by way of penalty, a sum of 0.5% of the price of total order value for each week or parts thereof, of the delay, subject to a maximum of 10% of basic contract value without taxes.
- 8.2. The period of delay in delivery and/or installation not attributed to the supplier, delay in site preparation, delay in submission of required documents by C-DAC etc. and the conditions arising out of Force Majeure will be excluded from delay period while calculating the delay period for penalties.
- 8.3. C-DAC reserves the right to cancel the order in case of delays of more than 10 weeks.

9. *Force Majeure:*

C-DAC may consider relaxing the liquidated damages and delivery requirements, as specified in this document, if and to the extent that, the delay in performance or other failure to perform its obligations under the contract is the result of an Force Majeure. Force Majeure is defined as an event of effect that cannot reasonably be anticipated such as acts of God (like earthquakes, floods, storms etc.), acts of states / state agencies, the direct and indirect consequences of wars (declared or undeclared), pandemic, hostilities, national emergencies, civil commotion and strikes at successful Bidder's premises or any other act beyond control of the bidder.

10. *Arbitration:*

In case any dispute arises between the C-DAC and successful bidder with respect to this RFP, including its interpretation, implementation or alleged material breach of any of its provisions both the Parties hereto shall endeavour to settle such dispute amicably. If the Parties fail to bring about an amicable settlement within a period of 30 (thirty) days, dispute shall be referred to the sole arbitrator mutually appointed by both the parties. If the sole arbitrator is not appointed mutually by both the parties then the District Court Pune shall have exclusive jurisdiction for appointment of sole arbitrator through court. Arbitration proceedings shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and Rules made there under, or any legislative

amendment or modification made thereto. The venue of the arbitration shall be Pune. The language of arbitration shall be English. The common cost of the arbitration proceedings shall initially be borne equally by the Parties and finally by the Party against whom the award is passed. Any other costs or expenses incurred by a Party in relation to the arbitration proceedings shall ultimately be borne by the Party as the arbitrator may decide. Courts in Pune only shall have the exclusive jurisdiction to try, entertain and decide the matters which are not covered under the Arbitration and conciliation Act.

11. Risk:

All risks, responsibilities and liabilities thereof in all goods shall remain with selected bidder till successful installation and commissioning of the goods as specified in this document.

12. Limitation of Liability:

The liability of the bidder arising out of breach of any terms, conditions of the tender, contract, works order and addendums/amendments thereto, misconduct, and wilful default will be limited to the total order value. However, liability of the bidder in case of death, injury, damage caused to the personnel/property due to/arising out of/incidental to any act/omission/default/deficiency of bidder, will be at actuals.

In no event shall either Party, its officers, directors, or employees be liable for any form of incidental, consequential, indirect, and special or punitive damages of any kind.

13. Termination:

Validity of order/ Contract will remain till fulfilment of all obligations (Including but not limited to providing comprehensive warranty/support till Completion of five years from acceptance of the supplies by the successful bidder. If bidder fails to comply with the requirements, C-DAC shall have the right to terminate the contract and / or cancel the order/s. The successful bidder agrees and accepts that he shall be liable to pay damages claimed by C-DAC, in the event of termination of contract / cancellation of order, as detailed in this tender.

C-DAC will release the due amount payable to successful bidder towards the material and / or services provided till the date of termination, those are accepted by C-DAC/ end user. However, the amount towards penalty, if any will be deducted from the payable amounts.

SECTION IV: SCHEDULE OF REQUIREMENTS

T&M EQUIPMENT - OSCILLOSCOPE FEATURES, SPECIFICATIONS ETC.

S.No.	Parameter	Technical Specifications, features, description
1	Number of Analog Channels	4 Channels
2	Analog Bandwidth (-3dB)	33 GHz or more per channel simultaneously on all four channels
3	Rise Time (20% to 80%)	> 9ps
4	Input Impedance for Analog channels	50 Ω with $\pm 3\%$
5	Absolute maximum input voltage(directly at input)	± 5 V
6	Vertical Resolution	10 bits, more than 12 bit with averaging
7	Vertical Sensitivity	1 mV/div to 1V/div or better
8	Analog Channels Horizontal Specs	
A)	Time Base Range	< 5 ps/div to 20 s/div or better
B)	Sample Rate	>100 GS/s on all 4 channels simultaneously
C)	Standard Memory depth per channel	at least>100 Mpts for all 4 channels simultaneously or better
9	Input Coupling	DC
10	Effective number of bits (ENOB) at 100 mV/div at 33GHz bandwidth	5.5 or better
11	Time scale accuracy immediately after calibration	± 0.1 ppm or better
12	Time scale accuracy ageing	less than ± 0.1 ppm/year
13	Intrinsic Jitter	<100 fs or lower
14	Acquisition Modes	Averaging, hi-resolution, peak detect, segmented memory.
15	Trigger Types	Edge, Glitch, Runt, Width, Transition Time, Timeout, Pattern, State, Setup/Hold, Window.
16	Bandwidth Limit and Filter Response	User configurable Bandwidth limits should be available from 1 GHz to full bandwidth per channel. The limit filter should be configurable as "Brick wall" or "4th Order Bessel".
17	High Bandwidth Probe Amplifier	One 30 GHz Probe Amplifier must be supplied
18	6 GHz Active Probe Amplifier	Differential Active probe amplifier with 6 GHz Bandwidth

19	Probe 30 GHz	30 GHz or higher bandwidth Probe Head with variable spacing from 20 mil – 125 mil (0.5 mm – 3.1 mm) or better. Probe should have integrated LED light for illumination.
		Minimum 4 Replacement tips should be included.
20	Probe 6 GHz	Differential probe head for differential or single-ended signals with variable spacing from 0.25 – 5.80 mm (10 – 230 mils) or better should be provided. Minimum 5 Replacement tips should be included
21	Probe calibration	Fixture should be provided for Probe Calibration. Calibration certificate should be provided.
22	Probe Positioner	Probe positioner with a flexible, articulating arm compatible with above probes should be provided
23	Display	Integrated Display color XGA TFT-LCD with touch screen, resolution 1024 X 768 pixels or better
24	Grids	Up to 16 waveform grids, each with 8-bit vertical resolution
25	Operating System	Windows10
26	RAM	16 GB DDR RAM or better
27	Storage Drive	Inbuilt minimum 500 GB or more removable SSD.
28	IO Ports	USB 2.0, USB 3.0, LAN, Display port (support for two simultaneous displays)
29	Protocol decode Software	Ethernet 10G BASE-KR, I2C, SPI, JTAG, PCIe 1/2/3/4/5, USB 2/3, SATA, SVID, UART.
30	Jitter and Noise Measurements Software	Jitter Measurements
		Composite histogram views of separated RJ, PJ, DJ, DDJ, DCD and ISI jitter subcomponents
		Bathtub curve of total jitter versus eye-opening
		Tail-fit and spectral method jitter separation
		Jitter Trend, Histogram, Jitter Spectrum
		Noise measurements:
		Total interference (TI)

		Deterministic interference (DI)
		Random noise (RN)
		Periodic interference (PI)
31	Serial Data Analysis Tools	Real-time eye diagram display and unfolding to locate failures versus time
		Real-time eye BER contour
		Clock Recovery and Recovered clock display
		8b/10b symbol decode
32	Mask Creation and Mask Test	Eye Diagram Mask testing should be available.
		Tool to draw mask or enter mask coordinates should be available in oscilloscope software
33	Crosstalk Analysis Tools	Analysis of Crosstalk on Victim by Aggressors in below scenarios:
		Transmission line aggressors: Near-End Crosstalk (NEXT) and Far-End Crosstalk (FEXT)
		Power supply aggressors: Power Supply Induced Jitter (PSIJ) and voltage-dependent amplitude noise
		Power supply victim: Simultaneous Switching Network (SSN)
34	De-embedding Software	Removal (De-embedding) of channel insertion loss of cables, fixture, traces
		Measurement plane relocation to view any voltage waveform by moving the simulation node to any location in a circuit.
		Remove loading effects of oscilloscope probe
35	Serial Data Equalization Software	Emulate and model Feed-Forward (FFE), Decision Feedback (DFE), and Continuous-Time Linear Equalization (CTLE)
		Should allow customization of the tap values
36	PAM Analysis Software	Analysis of PAM-4 Signals
		PAM4 Eye measurements - Eye centre, eye width, eye height, eye skew
		PAM4 Level measurements- Level mean, level RMS, level thickness, level skew

		PAM4 Rise/fall times (for all edges at once)
		PAM4 Jitter measurements - PBR513Q (J4u, Jrms, Even Odd Jitter)
		PAM4 Clock recovery
		Pam4 Equalizers CTLE, FEE/LFE
		PAM4 De-embedding: Channels, cables, fixtures
37	Presets for PCIe, SATA, USB3	Clock Recovery Presets for SATA 1/2/3, USB 3.1 Gen1/2, PCIe Gen 3/4 should be part of Clock Recovery Setup
		Equalizer Presets for USB 3.1 Gen1/2, PCIe Gen 3/4 should be part of Equalization Setup
38	Tool for recording, playback and automation	Macro recorder to record, play back, save set of macro commands that can be executed as SCPI commands and exported to automation software.
39	Report Generation	Feature should be available to quickly save a measurement report containing information about the oscilloscope setup, waveform screen capture, measurement results etc to a PDF or HTML file.
40	Integration with SI Tools	Import/Export of waveforms to/from SI Tools should be supported
41	Connectors	2.92 mm connectors with connector savers per channel
42	Standard Accessories to be supplied	Power Cord, Manual, Calibration Certificates
43	Warranty	5 Years of oscilloscope and 1 year on probes and accessories
44	SATA Tx Compliance Software	
45	PCI Express Tx Compliance Software for PCIe5.0, PCIe4.0, PCIe3.0, PCIe2.0	
46	Provision for BNC adapter connectivity	Minimum 4
47	Provision for SMA connector connectivity	Minimum 4
48	Equipment to be supplied along with International accredited calibration.	
49	Probe calibration and deskew kit, Power deskew kit	
50	Any associated accessory if required	

51	Licenses for all the related software to be supplied should be Node-locked Perpetual
52	Warranty for all the items to be supplied should be 5 Years
*	Bidder must submit the compliance table as per above listed parameters, feature, specifications, description along with the deviations, if any.

(END OF SECTION IV)

SECTION- V: TECHNICAL BID- CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331

Name of Bidder:

Detail Address:

Contact Person:

Mobile No:

Foreign Currency Order to be placed on Name & Address: (wherever applicable):

Sr No.	Description/ Item	Make/ Model No	Country of Origin	Country of Manufacture	Country of Shipment
1.01	T&M Equipment offered High Frequency Oscilloscope				
2	SOFTWARE Lic				
2.01	SW TOOLS				
3	Accessories, Probes, Connectors etc.				
4	Any other components / items etc required to complete the Scope of the Tender				

Bidder may add rows for the items required to cover the entire scope as per the Schedule of Requirements, Calibration kits, Probes, Software etc.

NOTES:

(END OF SECTION – V)

SECTION – VI: UNPRICED / PRICE BID (B.O.Q. Format)

CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331

Sr. No.	Description	Qty	Unit	Currency	Unit Price	Customs Duty / GST %	Amount
1.01	T&M Equipment offered	1	Set				
2	Software Lic	1	Lot				
2.01	SW Tools	1	Set				
3	Accessories, probes etc.	1	Set				
4	Any other components/items required to complete the total scope of the tender	1	Set				
5	Other Charges like customs clearance, installation, calibrations fees etc. (if any)	1	Lot				

Prices: on F.O.R. Site / D.D.P. Site basis. (C-DAC, Pune).

(END OF SECTION – V)

ANNEXURE A – COVERING LETTER

Date:

To:

**The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA**

Subject: Submission of bid for Supply and installation of T&M with probes, accessories, software etc.

Dear Sir,

We, the undersigned, offer to supply T&M Solutions to C-DAC, in response to your Tender No **CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331**. We are hereby submitting our proposal for same, which includes Technical bid and the Financial Bid through www.eprocure.gov.in portal.

We hereby declare that all the information and statements made in this bid are true and we accept that any misinterpretation contained in it, may lead to our disqualification.

We undertake, if our proposal is accepted, to submit a Security Deposit of 3 % of the contract / order value, as per terms stipulated in the tender.

We confirm that the deliveries, installation, commissioning will be done within 8 weeks, if the order is placed.

We hereby certify that my/ our firm has not been disqualified and / or blacklisted by any Office/ Department/ Undertaking of the State Government / Central Govt. of India, PSU/ Autonomous Body of Government of India, as on the date/time of submission of this bid.

We agree to abide by all the terms and conditions of the tender document, including corrigenda. We would hold the terms of our bid valid for 120 days as stipulated in the tender document.

We understand you are not bound to accept any Proposal you receive.

The undersigned is authorized to sign this bid document. The authority letter to this effect is enclosed.

Yours sincerely,

Authorized Signatory:
Name and Title of Signatory:
e-mail:
Mobile No:

ANNEXURE B – AUTHORITY LETTER

Date:

To:

**The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA**

Subject: Authority Letter

Reference: Tender No **CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331**

Dear Sir,

We, M/s _____ (Name of the bidder) having registered office at
_____ (address of the bidder) herewith submit our bid against the said tender document.

Mr./Ms. _____ (Name and designation of the signatory), whose signature is appended below, is authorized to sign and submit the bid documents on our behalf against said RFP

Specimen Signature:

The undersigned is authorised to issue such authorisation on behalf of us.

For M/s _____ (Name of the bidder)

Signature and company seal

Name

Designation

Email

Mobile No.

ANNEXURE C – UNDERTAKING(S) BY PRINCIPAL MANUFACTURER/OEM

(To be submitted in Original on Letterhead-ALL T&M components respectively/separately)

Date:

**The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA**

Subject: Undertaking by Principal Manufacturer against tender no. **CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331** for Supply, Installation & Commissioning of **T&M Solutions etc. at C-DAC, Pune.**

Dear Sir,

We, M/s _____ (*Name of the manufacturer*) having registered office at _____ (*address of the manufacturer*) by virtue of being manufacturer for _____ (*Name of the product/s*), hereby certify that M/s _____ (*Name of the bidder*) having their office at _____ (*Address of bidder*) are our Authorised System Integrator for our range of products quoted by them, as listed below:

1. T&M Equipment offered
2. T&M Probes, Accessories, interconnects etc.
3. Software Components (Licences, Tools etc.)
4. Other required items

Within the scope of requirement as per the tender mentioned above, we undertake to provide technical & other support towards fulfilling the requirements of installation, commissioning, acceptance criteria and product warranty services of the components to be supplied and installed at C-DAC, site by M/s. (*Name of bidder*) against said tender.

We also certify that the products offered are not nearing end-of-life / end-of-support five years down the line from the date of bidding.

The undersigned is authorised to issue this certificate on behalf of M/s _____ (*Name of the manufacturer*).

For M/s _____ (*Name of the manufacturer*)

Signature & company seal

Name

Designation

Email

Mobile No.

ANNEXURE D – PROFORMA OF BANK GUARANTEE

(on non-judicial paper of appropriate value)

To,

**Centre for Development of Advanced Computing
Innovation Park, PANCHAVATI,
Pashan Road, Pune – 411 008**

BANKS GUARANTEE NO:

DATE:

Dear Sir(S)

This has reference to the Purchase Order No. _____ Dated _____ been placed by Centre for Development of Advanced Computing(C-DAC), Pune on M/s _____ (Name & Address of vendor) for supply, installation, commissioning and warranty of _____ (description of items) at C-DAC, site.

The conditions of this order provide that the vendor shall,

1. Arrange to deliver the items listed in the said order to the consignee, as per details given in said order, and
2. Arrange to install and commission the items listed in said order at client's site, to the entire satisfaction of C-DAC and
3. Arrange for the comprehensive warranty service support towards the items supplied by vendor on site as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the Supply Order No. _____ M/s. _____ (name of vendor) holds an account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter.

C-DAC shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the bidders obligations and / or liabilities under or in connection with the said contract or to vary the terms vis-a – vis the bidder or the said contract or to grant time and or indulgence to the bidder or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the bidder under the said contract and/or the remedies of C-DAC under any security now, or hereafter held by C-DAC and no such dealing(s) with the bidder or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of C-DAC hereunder or of prejudicing right of C-DAC against the bank.

This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of C-DAC and liabilities of the supplier arising up to and until _____ (date)

This undertaking guarantee shall be in addition to any other undertaking or guarantee or security whatsoever that C-DAC may now or at any time have in relation to its claims or the supplier's obligations/liabilities under and / or in connection with the said contract and C-DAC shall have the full authority to take recourse to or enforce this undertaking guarantee in preference to the other undertaking or security (ies) at its sole discretion and no failure on the part of C-DAC in enforcing or requiring enforcement of any other undertaking or security shall have the effect of releasing the bank from its full liability hereunder.

We _____ (Name of Bank) hereby agree and irrevocably undertake and promise that if in your (C-DAC's) opinion any default is made by M/s _____ (Name of Vendor) in performing any of the terms and /or conditions of the agreement or if in your opinion they commit any breach of the contract or there is any demand by you against M/s _____ (Name of Vendor), then on notice to us by you, we shall on demand and without demur and without reference to M/s _____ (Name of Vendor), pay you, in any manner in which you may direct, the amount of Rs. _____/- (Rupees _____ Only) or such portion thereof as may be demanded by you not exceeding the said sum and as you may from time to time require. Our liability to pay is not dependent or conditional on your proceeding against M/s _____ (Name of Vendor) and we shall be liable & obligated to pay the aforesaid amount as and when demanded by you merely on an intimation being given by you and even before any legal proceedings, if any, are taken against M/s _____ (Name of Vendor)

The Bank hereby waives all rights at any time inconsistent with the terms of this undertaking guarantee and the obligations of the bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the supplier (whether or not pending before any arbitrator, Tribunal or Court) or any denial of liability by the supplier or any order or any order or communication whatsoever by the supplier stopping or preventing or purporting to stop or prevent payment by the Bank to C-DAC hereunder.

The amount stated in any notice of demand addressed by C-DAC to the Bank as claimed by C-DAC from the supplier or as suffered or incurred by C-DAC on the account of any losses or damages or costs, charges and/or expenses shall as between the Bank and C-DAC be conclusive of the amount so claimed or liable to be paid to C-DAC or suffered or incurred by C-DAC, as the case may be and payable by the Bank to C-DAC in terms hereof.

You (C-DAC's) shall full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

You will have full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s _____ (Name of Vendor) and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s _____ (Name of Vendor) which under law relating to the sureties would but for the provisions have the effect of releasing us.

Your right to recover the said sum of Rs. _____/- (Rupees _____ only) from us in manner aforesaid will not be affected/ or suspended by reason of the fact that any dispute or disputes have been raised the said M/s _____ (Name of Vendor) and/ or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

The guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the said M/s _____ (Name of Vendor) but shall in all respects and for all purposes be binding and operative until payment of all dues to C-DAC in respect of such liability or liabilities.

Our liability under this guarantee is restricted to Rs. _____/- (Rupees _____ Only). Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

- A. Our liability under this guarantee shall not exceed Rs _____ (in words)
- B. This bank guarantee shall be valid up to _____ & unless a suit for action to enforce a claim under guarantee is filed against us within 1 month from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e. after one month from the date of expiry of this Bank guarantee
- C. We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before _____
- D. The Bank guarantee will expire on (Min 62 months from the date of successful installations of the items in the order) _____

Granted by the Bank

SEAL OF THE BANK

Yours faithfully,
For (Name of Bank)

Authorised Signatory

ANNEXURE E – UNDERTAKING

Date:

To:

The Director General,
Centre for Development of Advanced Computing (C-DAC)
Innovation Park, Panchavati, Pashan Road,
Pune - 411008 Maharashtra, INDIA

Subject: Undertaking as per GFR – 2017, Rule 170(iii)

Dear Sir,

We, the undersigned, offer to Supply the **T&M Solutions, probes, software, components etc.** as per tender at C-DAC, Pune, in response to your Tender No **CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331**. We are hereby submitting our proposal for same, which includes Technical bid and the Financial Bid through www.eprocure.gov.in. As a part of eligibility requirement stipulated in said tender document, we hereby submit a declaration in lieu of Earnest Money Deposit (EMD), as given below:

- 1. Our bid shall remain valid for 120 days from the date of submission and that we will not withdraw or modify our bid during the validity period,**
- 2. In case, we are declared as successful bidder and an order is placed on us, we will submit the acceptance in writing within 10 days of placement of order on us.**
3. In case, we are declared as successful bidder and an order is placed on us, we undertake, to submit a Security Deposit of 3 % of the order value, as per terms stipulated in the tender.
4. In case of failure on our part to comply with any of the above said requirements, we are aware that we shall be declared as un-eligible for said tender and /or debarred from any **future bidding process of C-DAC for a period of minimum one year.**
5. The undersigned is authorized to sign this undertaking.

Yours sincerely,

Authorized Signatory:

Name and Title of Signatory:

e-mail:

Mobile No:

ANNEXURE F – DOCUMENTS LIST / INDEX

Sr	Description	Page No (s)
1	Annexure-F duly filled and neatly arranged in the following sequence only. The bidder must submit all the documents as per Document Checklist – Annexure F, with appropriate page nos for the same. The flow of the submitted documents must be in the same order/sequence.	
2	Covering letter, as per Annexure – A.	
3	Authority letter, as per Annexure – B.	
4	Demand Draft towards tender fee of Rs. 2000/- (Rupees Two Thousand Only) (Non-refundable / Non-Exempted).	
5	Earnest Money Deposit declaration as per Annexure-E	
6	A copy of Certificate of Incorporation, Partnership Deed / Memorandum and Articles of Association / any other equivalent document showing date and place of incorporation, as applicable, in support of eligibility criteria.	
7	Copies of PAN and GST registration certificates, as applicable.	
8	The detailed technical solution offered as per format given in Section – IV / V.	
9	Unpriced FINANCIAL BID as per Section – VI (without rate/prices)	
10	Compliance statement indicating the compliance of the items, equipments, solution offered with the tender specifications.	
11	The copies of audited Profit and Loss Accounts OR the certificate from a Chartered Accountant certifying the annual sales turnover of the bidder for the last 3 financial years.	
12	The undertakings from the Principal Manufacturers (OEMs) of equipments/ items offered as per Annexure – C.	
13	Other documents necessary in support of eligibility criteria, product catalogues, brochures etc.	
14	The bidder must have executed successfully at least one order of High Frequency T&M Equipments with similar frequency/channels in India.	
15	The bidder must submit all the documents as per Document Checklist – Annexure E , with appropriate page nos for the same. <u>The flow of the submitted documents must be in the same order.</u>	
16	The bidder must not be blacklisted by any Govt. Organizations as on date of submission of the bids. A certificate or undertaking to this effect must be submitted (Annexure – A).	
e-Pkt-2	PRICE BID IN B.O.Q. FORMAT IN FINANCIAL BID (EPACKET-2)	

ANNEXURE (MANDATORY Declaration/Undertaking)

To:
Director General,
Centre for Development of Advance Computing,
Pune – 411 008

Ref: Tender Ref. No: CDACP/NSM-HPC-OSCILLOSCOPE/21-22/331

We hereby certify that the goods being offered by us vide our proposal, comply with the provisions of order No. Order No P-45021/2/2017-PP (BE-II), dated 4th June, 2020 issued by Public Procurement Division, Department of Investment and Internal Trade, Ministry of Commerce, GoI, read with order number W-43/4/2019-IPHW- MeitY, dated 7th September, 2020 issued by IPWH division of MeitY, GoI.

We hereby certify the details pertaining to goods offered by us, as given below:

Sr. No	Item Description, Make, Model	Country of origin of OEM	Country of Manufacture of item	Country of Shipment	* Percentage of local contents as defined by order number W-43/4/2019-IPHW- MeitY, dated 7th September, 2020 issued by IPWH division of MeitY, GoI & DPIIT Dt. 4th June 2020 or thereof.
1					
2					
X					

*** If no bidder complies with these requirements, C-DAC reserves the rights to process further with the bids received against this tender.**

We also certify that, we are not from a country sharing land border with India as defined in order No. F/No/6/18/2019-PPD dated 23 July 2020 issued by public procurement Division, Dept. of Expenditure, Ministry of Finance, GoI and the goods offered by us comply with the provisions of said order. (This condition must be fulfilled).

For (Name of bidder)

Authorized Signatory

Name & Designation:

Mobile No:

(END OF DOCUMENT)