

KANNUR UNIVERSITY

THAVAKKARA, CIVIL STATION P.O.,

KANNUR, KERALA - 670002

Tel: 04972715243**e-mail: registrar@kannuruniv.ac.in, sopmud@kannuruniv.ac.in****NOTICE INVITING RE-TENDER**

The Registrar, Kannur University invites e-tender(s) in **Two Bid System (Two cover)** for the **Supply, Installation, Testing and Commissioning of Table-top AFM system for ambient operation with active vibration isolation stage and advanced imaging options** at the Department of Physics, Swami Ananda Theertha Campus, Payyannur (under PM USHA scheme) from **original equipment manufacturers (OEMs) or authorized distributors/dealers** as per the technical specifications and schedule given below. The rate quoted should be inclusive of all taxes, installation charges and other charges. The Registrar, Kannur University reserves the right to accept or reject the tenders without assigning any reason thereof. The list of equipment/accessories proposed to be purchased, including its quantity and specifications are furnished in the schedule of items given below. Since this is an e-tender, only those bidders who have enrolled in the **<http://etenders.kerala.gov.in>** portal with their own Digital Signature Certificate (DSC) can participate in the tender. E-Tender document and other details can be obtained from the above e-portal.

TENDER SCHEDULE

Tender I D (Re-tender)	2025_KnrU_775134
Description of Work	Supply, Installation, Testing and Commissioning of Table-top AFM system for ambient operation with active vibration isolation stage and advanced imaging options
Last date and time for online submission of e - Tender	05.08.2025, 11.00 AM
Date and time of tender opening	06.08.2025, 03.00 PM
Earnest Money Deposit (EMD)	₹ 80,000
Tender fee (Excluding GST)	₹ 12000
Place of supply and installation	Department of Physics, Swami Ananda theertha Campus, Payyannur, Kannur, Kerala - 670327

For further details, logon to <http://etenders.kerala.gov.in>

SPECIFICATION OF THE EQUIPMENT

SI No.	Name of the equipment	Required quantity
1	Table-top AFM system for ambient operation with active vibration isolation stage and advanced imaging options	1

AFM system	The AFM system should have the capability of imaging both biological as well as material samples.
	The AFM must have a XYZ tip or sample scanning configuration.
	The AFM system should include necessary and sufficient optics for proper sample observation and adjustments.
	The AFM system must be capable of scanning small, medium and large size samples without any modification to the scanner.
	The AFM system should have an active vibration isolation table and an acoustic enclosure for noise cancellation.
	The AFM should have an upgradation capability with an external or inbuilt inverted optical microscope.
Mode of Operation	<p>Following scanning modes must be included in the offer:</p> <ul style="list-style-type: none"> • Contact Mode • Tapping Mode • Lateral Force Microscopy • Phase Imaging • Force Modulation Microscopy • Lithography • Force Distance (F-D) Spectroscopy • Conductive AFM • Kelvin probe microscopy
Scanner	<ul style="list-style-type: none"> • Flexure-based XY scanner and decoupled piezo-based Z-scanner.; Piezo tube scanners are not acceptable; Open and Closed loop Z-control of the AFM scanner is a must. • The quoted scanner must have a XY axes scanning range $\geq 100 \mu\text{m}$, and Z axes scanning range $\geq 10 \mu\text{m}$ • The XY scanner must have drive resolution of 0.05 nm or better. • The Z scanner must have scan drive resolution of 0.005 nm or better. • Z-measurement noise level $\leq 0.035 \text{ nm}$ (RMS, dynamic mode in air) • Must have possibility to have an ample choice of detachable cantilever holders with kinematic mount to accommodate standard commercially available cantilevers with or without alignment grooves.
Sample Stage	Manual/motorized XYZ sample positioning with range of 20 mm x 20 mm or better.
Sample Size	The AFM system should be able to accommodate sample sizes up to 100 mm in diameter and 15mm or higher in thickness.

<p>System Optics</p>	<ul style="list-style-type: none"> • The optics associated with the AFM system should have sufficient resolution ($< 1.5\ \mu\text{m}$ or better) with a 5-megapixel or better. • The scanning cantilever/probe of the AFM and the surface should be viewable in real time via direct optical video access by CCD/CMOS and should include software to display and store the optical image from within the AFM-software. • The optics must have software-controlled white LED illumination.
<p>System Controller and software requirements</p>	<ul style="list-style-type: none"> • The AFM controller should have the capability for all digital signal processing for maximum freedom of operations • Very sensitive 24 Bit ADC/DAC for Zoom-In and precise acquisition • 16 bit controllers are strictly not acceptable • Highest quality of analog signal handling for minimum electronic noise • X/Y/Z-Axis Scan & Position Controller 3 x 24Bit DAC, 200kHz or better • X/Y/Z-Axis Position Measurement 3 x 24Bit ADC, 200kHz or better • Excitation & Modulation Outputs 4 x 16Bit DAC, 20MHz • Analog signal input bandwidth DC to 5MHz • Main Input Signal capturing 2 x 16Bit ADC, 20MHz, 2 x 24Bit ADC, 200kHz • Additional User Signal Outputs 3 x 24Bit DAC, 200kHz • Additional User Signal Inputs 3 x 24Bit ADC, 200kHz • Additional Monitor Signal Outputs 2 x 24Bit ADC, 200kHz • Digital Synchronization 2 x Digital Out, 2 x Digital In, 2 x I2C Bus • FPGA Module & Embedded Processor ALTERA FPGA, 32Bit NIOS-CPU, 80MHz • 256MB RAM, Multitasking OS • Communication: USB 2.0 Hi-Speed to PC • System synchronization 10MHz internal quarts or external clock • Power 90-240 V AC, 70W, 50/60H • The data acquisition system must be capable of recording individual image sizes of Minimum 4000 to 8000 pixels or greater. All the above 16 channels should acquire higher pixels. • The software automatically recognizes the hardware and configures with the software appropriately. • Minimum 2 inbuilt Lock-in amplifier must be included in AFM configuration.
<p>Detector</p>	<ul style="list-style-type: none"> • High-speed, low-noise 4-quadrant photodiode detector. • Preferable to have a low coherence red laser for avoiding interference from sample surface reflection. • The laser on/off should be controlled through software.
	<ul style="list-style-type: none"> • Image Display: dual imaging window for scan and retrace images. • Sample Navigator: assistant for localized zooming with respect to a large area scan.

Image Analysis software	<ul style="list-style-type: none"> • Analysis Functions: line (single line profile) extraction, localized zooming, roughness display, measure length & angles on the on the images, 2D FFT etc. • Image Processing Tool: spatial and Fourier low-pass filtering, background subtraction, zooming, contrast, slope correction etc.
Computer	<ul style="list-style-type: none"> • Latest branded PC with windows 10 operating system, 1TB hard disk (or better), 8 GB ram (or better), dual 23 inch monitor and licensed software for the operation of the instrument. • Software must be a single package for all modes and attachments with no need for additional software programs. • Software package must include both image acquisition and data processing software in one package with no need for different programs or operation.
Power Supply	The system should be compatible with the Indian power supply e.g., 90–240 V AC, 70 W, 50/60Hz
Installation and Training	<ul style="list-style-type: none"> • The system must be installed and demonstrated by the engineers of the manufacturing company at Department of Physics, Payyanur, Kannur University free of charge. • Comprehensive on-site training on all modes purchased is required to our satisfaction. • XYZ calibration should be demonstrated and calibration samples must be provided. • Hard copy of all manuals should be provided.
Warranty and Support	<ul style="list-style-type: none"> • Three year comprehensive warranty must be included along with the bid/offer on all parts and labour (mention the warranty policies clearly). • Warranty period should start after the completion of the installation.
Delivery Time	Within 3-4 months after the receipt of the purchase order.

Terms and Conditions

1. Tender fee and EMD should be remitted through online (SBI MOPS) as indicated on e-tender website. The **18% GST amount on tender fee should be remitted to the GST department directly by the bidder.**

Sl. No	Equipment	Tender Fee in Rupees (₹)		EMD (₹)
		Excluding GST	GST (18 %)	
1	Table-top AFM system for ambient operation with active vibration isolation stage and advanced imaging options	₹ 12000	₹ 2160	₹ 80000

2. All the MSMEs with Udyog Aadhar Registration or any other body specified by the Ministry of Micro, Small and Medium Enterprises working **within the state of Kerala** will be exempted from the payment of Tender Fee and EMD. Under MSME category, only Manufactures for Goods and Service Providers for Services are eligible for EMD/Tender fee exemption.
3. Custom Clearance of the consignment including all the stages of custom clearance will be under the purview of supplier.

4. The tender should be submitted in two cover system (Technical bid & Financial bid).
5. The successful bidder shall, before signing the agreement and within the period specified in the letter of acceptance of his tender, deposit a sum equivalent to **5 % of the value of the contract** by way of Demand Draft drawn in favour of the Finance Officer, Kannur University payable at SBI Kannur Branch or Kannur Branch of other Nationalized or Scheduled bank, **as performance security** for the satisfactory fulfilment of the contract.
6. The bidder should be registered company/firm. Certificate of incorporation/Company registration certificate/Memorandum and Articles of Associations/Valid GST registration certificate/Valid Income tax registration certificate/Valid Service tax registration certificate should be uploaded/ submitted along with the e-tender.
7. The bidders shall keep their rate firm for a period of **120 days**.
8. Profile of Bidder as per Annexure 1 shall be provided.
9. The bidder should have the responsibility to attend the first level service if any complaint report. The bidder should provide minimum one preventive maintenance during warranty period. Relevant documents or undertaking signed by the personnel with address and contact person's name, phone no, and URL of complaint logging website to be submitted in case, if the bidder doesn't have their own service centre in Kerala and the bidder authorize another service centre/service engineers for attending service.
10. The earnest money deposit (EMD) of the unsuccessful bidders will be returned through ONLINE NEFT Transaction and the EMD of successful bidders will be discharged upon the bidder executing the contract and furnishing the security deposit that will have to be deposited for the satisfactory fulfilment of the contract.
11. Forfeiture of EMD:
 - (i) If any bidder withdraws from his tender before the expiry of the bid validity period specified **or**
 - (ii) in case after being successful bidder, he/firm fails to sign the contract, and to furnish the performance security.
12. The bid shall contain detailed technical specifications, Brochures and pamphlets of all the item/items quoted.
13. All the claimed specifications (make, model, year of manufacture, warranty etc.) should be mentioned in the Brochure or Catalogue of the equipment.
14. All charges, taxes, duties and levies should be clearly indicated and the rate tendered should be inclusive of all taxes and other charges.
15. The installation, commissioning and the initial operation will be the responsibility of the supplier.
16. In case of under performance during the warranty period, the item should be replaced and the period of warranty will recommence from the date of replacement.
17. The payment will be made after completion of supply, installation and commissioning.
18. The final acceptance of the tenders rests entirely with the University who do not bind themselves to accept the lowest or any tender.
19. Communication of acceptance of the tender normally constitutes a concluded contract. Nevertheless, the successful bidder shall also execute an agreement for the due fulfilment of the contract within the period to be specified in the letter of acceptance. In cases where a successful bidder, after having made partial supplies fails to fulfil the contracts in full, all or any of the materials not supplied may at the discretion of the Registrar, be purchased by means of another tender/quotation or by negotiation or from the next higher bidder who had offered to supply already and the loss, if any, caused to the University shall thereby together with such sums as may be fixed by the University towards damages be recovered from the defaulting bidder.
20. The bidder shall undertake to supply materials according to the standard sample and /or specifications.
21. No representation for enhancement of rates once accepted will be considered.
22. Bidders should be prepared to accept orders subject to the penalty clause for forfeiture of security in the event of default in supplies or failure to supply within the stipulated period.

23. The prices quoted should be inclusive of all taxes, duties, cess etc., which are or may become payable by the contractor under existing or future laws or rules of the country of origin/supply or delivery during the course of execution of the contract.
24. Special conditions, if any, of the bidders attached with the tenders will not be applicable to the contract unless they are expressly accepted in writing by the purchaser.
25. The bidder should upload along with his tender **an agreement executed and signed in Kerala Stamp Paper of value Rs.200/- purchased in Kerala State**. Tenders without the agreement in stamped paper will be rejected outright. But in deserving cases where agreement has not been received, the Registrar may exercise his discretion and call upon such bidder to execute the agreement within a period of ten days from the date of issue of such intimation, if the Registrar is satisfied that the omission to forward the agreement along with the tender was due to causes beyond the control of the bidder and was not due to any negligence on his part. Agreement received from a bidder after the above time limit will not be considered. [Format of agreement appended].
26. The bidder shall quote their rate in the standard BOQ provided indicating the break up details.
27. The provisions of Kerala Stores Purchase Manual are applicable to this Tender and further proceedings.
28. The University reserves all rights to accept or reject any or all the tenders without assigning any reason whatsoever at its discretion.
29. The bids shall be opened online at Kannur University on the date mentioned in Invitation Bid. If the date fixed for opening happens to be a holiday/due to net failure, the tenders will be opened on the next working day, at the same time.
30. Prices shall be quoted in Indian currency only.
31. Bidders must not be blacklisted by any Government or Public Sector Undertaking.

DOCUMENTS TO BE SCANNED AND UPLOADED

1. Bidder Profile (as per format mentioned in Annexure 1)
2. Bid Particulars (as per format mentioned in Annexure 2)
3. Scanned copy of valid registration certificate (GST) & PAN Card
4. Scanned copy of Preliminary Agreement in **Kerala Stamp Paper of Rs.200/-** (as per format mentioned in Annexure 3)
5. Scanned copy of relevant Brochure of the equipment including make & model and copy of its certifications like ISO certification.
6. Valid authorization certificate from OEM (in case of resellers)
7. Warranty certificate/ details
8. MSME certificate/ UDYAM registration certificate in case of MSMEs.
9. Details of active/ functioning service centres in India.

Sd /-

Prof.(Dr.) Wilson V A
Development Officer (Registrar

in-charge)

ANNEXURE 1**BIDDER PROFILE**

Sl.No.	Particulars	
Details of bidder (Firm/Company)		
1	Name	
2	address	
3	Telephone & Fax	
4	Email & website	
Details of Authorized Person		
5	Name	
6	Address	
7	Telephone & Email	
Information about the company		
8	Status of Company (Public Ltd. / Pvt. Ltd)	
9	Details of Registration of Firm (Provide Ref.)	
10	Number of Professionals	
11	Location and address of offices (in India & overseas)	
12	Service Tax Registration Number	
13	Income Tax Registration Number(PAN)	
14	GST Registration Number	

Signature of the Bidder

ANNEXURE 2

TECHNICAL BID (BID PARTICULARS)

1. Tender Number :-----
2. Name of the Bidder :-----
3. Full Address of the Bidder :-----
4. Name of the actual signatory of the
product(s) offered :-----
5. Bidder's proposal number and date :-----
- 6 . Name & Address of the officer to
whom all references shall be made
regarding the Tender :-----

Telephone :-----

Fax :-----

E-mail :-----

Bidder Signature Name -----

Designation -----

Company -----

Date -----

ANNEXURE – 3

Preliminary Agreement

Articles of agreement executed on this the day of
..... between the Registrar, Kannur University (hereinafter referred to as “the University”) of the one part and Shri.....
..... (H.E. name and address of the tenderer)(hereinafter referred to as “the bounden”) of the other part.

Whereas in response to the Notification No..... dated the bounden has submitted to the University a tender for the specification therein subject to the terms and conditions contained in the said tender;

Whereas the bounden has also deposited with the University a sum of Rs.....as earnest money for execution of an agreement undertaking the due fulfilment of the contract in case his tender is accepted by the University.

NOW THESE PRESENTS WITNESS and it is hereby mutually agreed as follows:

1. In case the tender submitted by the bounden is accepted by the University and the contract for is awarded to the bounden, the bounden shall within.....days of acceptance of his tender execute an agreement with the University incorporating all the terms and conditions under which the University accepts his tender.
2. In case the bounden fails to execute the agreement as aforesaid incorporating the terms and conditions governing the contract, the University shall have power and authority to recover from the bounden any loss or damage caused to the University by such breach as may be determined by the University by appropriating the earnest money deposited by the bounden if the earnest money is found to be inadequate the deficit amount may be recovered from the bounden his properties movable and immovable in the manner hereinafter contained.
3. All sums found due to the University under or by virtue of this agreement shall be recoverable from the bounden and his properties movable and immovable under the provisions of the Revenue Recovery Act for the time being in force as though such sums are arrears of land revenue and in such other manner as the University may deem fit.

In witness where of Shri (name and designation) for and on behalf of the University and Shri.

..... Bounden have hereunto set their hands the day and year shown against their respective signatures.

Signed by Shri. (date)

In the presence of witnesses:

1.
2.