**Request for Quote and Specifications of Probe-Station for High power measurement**

- The GEECI (Gallium Nitride Ecosystem Enabling Centre and Incubator) at SID-Indian Institute of Science is seeking bids from qualified vendors for **Probe-Station for High Power Measurement** with the specifications mentioned below.
- Companies need to submit two bids, a technical bid and a commercial bid, in **two separate** sealed envelopes. The bids should be submitted no later than 21 days from the date of posting of this tender and by 5 pm on the 21st day or next weekday in case the 21st day falls on a weekend.
- Deviations from the technical specifications requested are allowed. Such deviations must be highlighted and justified. Their acceptance or rejection will be left to the discretion of the technical committee.
- The setup will be used toward research development at the Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc). IISc is India's No. 1 academic institution on higher learning and the Centre for Nano Science and Engineering is home to one of the best academic fabs in the world.
- The technical response, corresponding to the setup being offered, should be in the form of a compliance table with at least 5 columns. Serial number in column 1. Each of the numbered technical items below should be addressed in a separate row of the table in column 2. Compliance to this requirement, in Yes/No, deviation from it and justification should be provided in the neighbouring columns 3-5. Post the opening of a hard copy of the technical bid the committee will request for a soft copy of the files for further processing. Companies should **NOT** mail soft copies of the files unless specifically requested for.
- Detailed technical specifications of the system being offered should be included.

Bids should be sent to Prof. Srinivasan Raghavan, Centre for Nano Science and Engineering, IISc, Bangalore, 560012. Direct all questions concerning this acquisition to Prof. Srinivasan Raghavan at sraghavan@iisc.ac.in and geeci.sid@iisc.ac.in

**Specification for Probe-Station for High power measurement**

| Sr. No. | Detailed Technical Specs / Modules | Qty |
|---|---|---|
| | **Manual 6" Probe Station (specs same or better as listed below)** | |
| | a. Chuck X-Y Travel 155mm-155mm | |
| | b. Chuck X-Y Fine Travel Resolution 5um | |
| | c. Chuck Load Stroke for Y axes 90mm | |

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| 1 | d. Chuck Z Height adjustment range: 10mm | 1 set |
| | e. Chuck Z Contact/Separation/Load Stroke 0-3mm adjustable | |
| | f. Chuck Theta Travel +/-8degree | |
| | g. Chuck surface planarity <10 um | |
| | i. Platen to chuck height minimum 16 mm | |
| | j. Platen separation lift 200um | |
| | k. Platen Z height adjustment range 20mm | |
| | l. Platen separation repeatability 1um | |
| | m. Platen Compatible for Vacuum and Magnetic manipulators | |
| | n. Platen capable to hold at least 6 DC positioner | |
| | **Power Handling of Chuck** | |
| | Maximum Voltage upto 3000V | |
| | Maximum Current upto 20 A DC and 50 A pulse | |
| 2 | **Microscope-Motic (PSM-1000) or equivalent or better (should be well calibrated)** | 1 set |
| | a. E.P. 20X | |
| | b. Objective 5X,10X & 20X | |
| | c. Total Magnification offered by this setup 20X to 400X (or better) | |
| | d. Fiber Optic Coaxial Light | |
| | e. Light intensity steepless control, Fluorescent Light | |
| | **Digital Imaging system (Should be well calibrated)** | |
| | CCD Camera: CMOS digital camera with imaging kit (5MP or better), USB based | |
| | CCD Adapter | |
| | Calibration and imaging software | |
| 3 | **Micropositioners: Standard** | 3 sets |
| | a. LinearX-Y-ZTravel12mm-12mm-12mm | |
| | b. Resolution of 1um | |
| | c. ON/OFF Magnetic base | |
| | **Micropositioners: High voltage and high current compatible Micropositioners** | 2 sets |
| | a. LinearX-Y-ZTravel12mm-12mm-12mm | |

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| | b. Resolution of 1um | |
| | c. ON/OFF Magnetic base | |
| | d. Should be able to handle high current probes and cables | |
| | e. Should be able to handle high voltage probes and cables | |
| 4 | **Triaxial Tip Holder-tubular: Standard** | 3 sets |
| | a. Triaxialcable1.5meters long with triax plug | |
| | b. Highly isolated and gold-plated needle clamping | |
| | c. Coaxial cable 2m long with Triax connectors | |
| | **High Current (upto 50A) capability tip holder** | 2 sets |
| | **High Voltage (>1500V) capability triax tip holder** | 2 sets |
| 5 | **Vacuum Pump** (To hold die or wafer on chuck) | 1 set |
| 6 | **Hot Chuck** | 1 set |
| | Thermal chuck from ambient to 300C | |
| 7 | **Safety and Shielding Enclosure (with 8 triax feedthrough, high current (upto 50 A) feedthrough, high voltage (>1200V) triax feedthrough, )** | 1 set |
| | Arcing Protection | |
| | Light-Tight electrically grounded and optimized design for EMC shielding | |
| | Automatic Safety Interlock for operator safety | |
| | Must work on Keithley Systems (such as 2657A, 2635B and 2651A) and software (such as ACS advance) | |
| | External ground protection/isolation | |
| | Common DC ground capability and protection | |
| 8 | **Active Vibration isolation table** | 1 set |
| | a. Air Damping System with Resonance Frequency of 2.5Hz | |
| | b. Automatic load leveling | |
| | c. Pressure Input Regulator with Gauge | |
| 9 | **Standard Probes:** Tungsten Tip, 25 PTT probe tips with 6um tip radius | 1 set |
| | **High Current Probes enabling wafer probing upto 50 A** | 10 Nos. |
| | **High Voltage probe with measurement capability >1500V** | 10 Nos. |

**Terms & Conditions:**

1. **Control and measurement software:** All the control and measurement software provided, must control all the associated instrumentation without requiring any manual intervention.
2. **Service / Support:** Telephone/web support should be free of charge for the warranty time.
3. **Manuals:** Operation and service manuals for the measurement system along with the manuals for respective third-party equipment should also be supplied (Both hardcopies and softcopies).
4. **Licensing:** Software must be licensed in the name of IISc.
5. **Warranty:** Minimum One year (preferred 2 years) for the entire system including third party equipment / modules.
6. **Installation & Trainings:** Price should include installation, set-up, and minimum 5 days training at IISc. Additional online training as and when required must be available. Besides, the local engineer should be available for on-site visit in case of issues (this should be without charge) and as and when we require additional training (IISc will pay travel and accommodation of this).

| **Common Terms and Conditions: A separate table to be included for each of the items below in the technical bid** |
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| **SEMI Standards:** The technical bid should include details of the SEMI standards the tool confirms to. |
| **Clean Room Compatibility:** The system should be compatible with better than class 1000 cleanroom environment. |
| **Shipping:** On all systems the cost of shipping up to IISc should be included. IISc will help with customs clearance at Bangalore Airport. Please include your payment option. IISc would prefer to retain at least 20% of payment till instruments have been commissioned and successfully demonstrated. |
| **Tool Training:** The bid should include as an option the cost of training personnel on site before shipment and post installation at IISc. |
| **Tool footprint and utilities**: A floor plan should be part of the technical bid. A list of utility requirements should be part of the technical bid. The system should be compatible with 240±10V, 50 Hz single phase or 415±20V, 50 Hz 3 phase supplies. The **MINIMUM** set of utility requirements needed are provided in Table 1. If there are additional utility requirements, please include them in the technical bid. **Please list connector types for all utilities.** |
| **Cost of Ownership and supply of spares:** The quote should include a listing of spares that need to be replaced periodically to ensure that the system is in operation in a stable fashion – the stability parameters being defined by the vendor and agreed to by the client – the cost of such items, the ability to guarantee their availability at this cost for a period of 5 years from the time of procurement. The aim of this exercise is to compare cost of ownerships between reactors. |
| **Maintenance**: The cost of an annual maintenance contract and cost of emergency technical support that may involve an engineer being on site should be quoted for in the commercial bid and addressed in the technical bid. The availability of trained engineers in India for servicing the system will be preferred and should be described in the technical bid. |
| **Maintenance:** On all systems a set of basic tools required -non-standard screw or spanner head that is required for routine tool maintenance should be mentioned- for performing routine maintenance should be included. |
| **Maintenance:** System operation, process and troubleshooting manuals and detailed drawings are a must. Their inclusion must be indicated in the technical bid. |
| **Online support:** System should have the capability for online diagnostics from a remote location in case of tool problems. |
| **Post sales service and Indian Presence:** Bidders should provide details of after sales service and support available in India. If not India, the nearest geographical location should be specified. Please provide details of the number of |

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| trained personnel in India who can service the machine, the number of tools sold in India and the corresponding number in the southern region or in Bangalore. |
| **Shipping:** On all systems the cost of shipping up to IISc should be included. IISc will help with customs clearance at Bangalore Airport. |
| **Payment Terms and Conditions:** On all systems the payment terms should be specified in the technical and commercial proposal and is subject to negotiation. Please include your payment option. IISc would prefer to retain at least 20% of payment till instruments have been commissioned and successfully demonstrated. |
| **References:** Bidders should provide details of other locations in India with similar tool installations. |
| **References:** Bidders should provide details of at least 3 other locations globally where similar tool installations have been deployed for device fabrication in a clean room preferably for production purposes. |
| **Company financials:** Bidder shall have to submit audited accounts of financial year 2017-18, 2018-19 and 2019-20. Audited statement must be signed and stamped by qualified chartered accounted. Income Tax return for assessment year – 2017-18, 2018-19 and 2019-20. |
| The following documentation should be provided. ISO9001 quality certification. CE marking confirmation. Must confirm to SEMI standards to be specified in the technical quoted. |