

COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING

MEPNN Supplier Scouting Opportunity Synopsis

*The submitting entity agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. For instances where the submitting entity is an MEP Center submitting on behalf of a client, the MEP Center agrees to notify NIST MEP on behalf of their client. For instances where the submission is direct from federal/state agencies or is a private company, the submitting federal/state agency or private company entity agrees to notify NIST MEP. Notification should be via email to scouting@nist.gov, indicating the following:

- Contact with matches identified in report complete and supply contract awarded, process complete
- Contact with matches identified in report complete and no supply contract awarded, process complete
- Contact with matches identified in report complete and supply negotiations underway, process in progress
- Contact with matches identified in report underway; supply negotiations not yet begun; process in progress
- Contact with matches identified in report not yet begun, process in progress
- Contact with matches identified in report will not occur within the next 6-months, process complete

Atomic Force Microscope

Item to be Scouted

_____ 30 _____ days

Opportunities will be posted for 30 days unless specified

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

The National Institute of Standards and Technology (NIST) seeks information on commercial vendors that are capable of providing a large sample, wafer scale (at least 150 mm diameter) Atomic Force Microscope/Scanning Probe Microscope (AFM/SPM) in support of nanofabrication activities in the Center for Nanoscale Science and Technology (CNST) user facility. The system will be sited and used as a shared resource accessible to researchers from industry, academia, NIST, and other government agencies in the NIST NanoFab cleanroom. The system will be used to investigate a wide range of materials and nanostructures. High-resolution, high speed imaging and analysis of surface topography and other surface properties will be required.

2022-113

Supplier Scouting Number (NIST MEP use)

334516

Scouting customer/product [NAICS Code](#), if known

TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought* <input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
		b. Reason for scouting submission* <input type="checkbox"/> 2nd Supplier <input type="checkbox"/> Price <input type="checkbox"/> Re-shore <input type="checkbox"/> Past supplier no longer available <input type="checkbox"/> New Product Startup <input checked="" type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	a. Describe the manufacturing processes (elaborate to provide as much detail as possible).* <div style="font-size: 24pt; text-align: center;">Purchased as a complete unit</div>
		b. Provide dimensions / size / tolerances / performance specifications for the item.* Because of increasing demand for wafer-scale characterization in the CNST NanoFab, NIST has a need for an AFM/SPM that has the capability to perform non-destructive, nanoscale surface topography and related measurements at several sites across a wafer as large as 150 mm in diameter with high scanning speed. Additional requirements for a stand-alone AFM/SPM are as follows: MEASUREMENT CAPABILITIES: The AFM/SPM shall be capable of multiple imaging modes, including: • Electric Force Microscopy (EFM); • Magnetic Force Microscopy (MFM); • Conductive AFM; and • Frequency Modulation (FM). The AFM/SPM shall be capable of: • closed loop scanning for accurate and linear measurements; and atomic resolution imaging with closed loop scanning enabled. SAMPLE HANDLING: • The AFM/SPM shall have a motorized sample stage that can accommodate round substrates up to at least 150 mm in diameter and samples at least 10 mm thick. The stage should be capable of accessing the full 150 mm-diameter area. PROBE AND

		<p>SAMPLE IMAGING: • The AFM/SPM shall include top-view optics for probe imaging and alignment. • The AFM/SPM shall include top-view optics with zoom capability to image the scanning regions of interest. COMPUTER: • The computer system used to operate the tool shall have at least a Windows 10 operating system. TRAINING: • The vendor shall provide at least three business days of on-site application training. OPTIONAL TRADE-IN: Subsequent purchase contracts that may include the trade-in of an existing, Bruker FastScan AFM system will be considered to provide additional value to the government.</p>
		<p>c. List required materials needed to make the product, including materials of product components.*</p>
		<p>Purchased as a complete unit.</p>
	<p>2. Summary of Technical Specifications and Performance Requirements cont:</p>	<p>d. Are there applicable certification requirements?* <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain</p>
		<p>e. Are there applicable regulations?* <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain</p>
		<p>f. Are there any other standards, requirements, etc.?* <input type="checkbox"/> Yes <input type="checkbox"/> No Please explain</p>
		<p>g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain.</p>
<p>BUSINESS INFORMATION:</p>	<p>3. Volume and Pricing</p>	<p>3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:</p>
		<p>1 unit</p>
		<p>b. Estimated target price / unit cost information (flexible and negotiable <u>not</u> accepted) *:</p>
		<p>\$500,000.00</p>
<p>4. Delivery Requirements:</p>	<p>a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)*</p>	<p>6-10 months after a contract is awarded</p>
	<p>b. Describe packaging requirements (i.e., individually/group packaging)*</p>	<p>Flexible</p>
	<p>c. Where will this item be shipped? *</p>	<p>NIST, 100 Bureau Drive, Gaithersburg, MD 20899</p>

-	5. Additional Comments:	Is there other information you would like to include?
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Photos or diagrams of the item (helpful but not required).

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