STATEMENT OF WORK
Title: High-performance FPGA board
Lab: PML/686

I. BACKGROUND INFORMATION

The semiconductor supply chain is global, specialized, and interconnected. Chipmakers do business with thousands of individual suppliers that provide the highly complex materials and tools used to produce semiconductors. To address the lack of full visibility into the semiconductors markets supply chain and R&D ecosystem gaps NIST will conduct the measurement science, or metrology, critical to the development of new materials, packaging, and production methods in chip manufacturing.

The Spin Electronics Group in the Applied Physics Division of the Physical Measurement Laboratory requires the purchase of a high-performance field programable gate array embedded evaluation board. This board will be used in our lab to test data sanitization methods for high performance magnetic random-access memory.

II. PURPOSE

This purchase will be used to evaluate data sanitization methods in magnetic random-access memory. In particular it will enable the evaluation of standard form factor DDR4 DIMM magnetic random-access memory.

III. MINIMUM REQUIREMENTS

The Contractor shall provide a system that meets all technical specifications identified below. All items must be new. Used or remanufactured equipment will not be considered for award. Experimental, prototype, or custom items will not be considered. The use of “gray market” components are not acceptable. All line items shall be shipped in the original manufacturer’s packaging and include all original documentation and software, when applicable.

Line Item 0001:
Description: high-performance field programable gate array embedded evaluation board
Quantity: 1

A. Technical Specifications

a. AMD Virtex™ UltraScale+™ 56G PAM4 VCU129 FPGA Evaluation KitFPGA Part number EK-U1-VCU129-G

IV. SCHEDULE OF DELIVERABLES

Deliverable Number	*Description*	*Quantity*	*Due Date*	*Place of Delivery*

1	**high-performance field programable gate array embedded evaluation board**	**1**	**No later than 4 weeks after receipt of order.**	**NIST Boulder**

Standards of Acceptance: The NIST POC or COR shall review all the above deliverables and respond with an acceptance or request for revision email to the Contractor Point of Contact (POC) within 14 days of receipt of deliverable. This section applies to deliverables which must be reviewed and approved for acceptances (e.g., draft plans, drawings, etc.)

PLACE OF PERFORMANCE
NIST Boulder
325 Broadway
Mailstop 686.00
Boulder CO 80305

PERIOD OF PERFORMANCE
6 Weeks ARO

V. DELIVERY TERMS

Delivery shall be F.O.B Destination (or equivalent incoterms, such as DDP) and shall occur in accordance with the delivery due dates provided in the below table.

FOB Destination means: The contractor shall pack and mark the shipment in conformance with carrier requirements, deliver the shipment in good order and condition to the point of delivery specified in the purchase order, be responsible for any loss of and/or damage to the goods occurring before receipt and acceptance of the shipment by the consignee at the delivery point specified in the purchase order; and pay all charges to the specified point of delivery.

The contractor shall deliver all Line Items to:
National Institute of Standards and Technology
Shipping and Receiving
325 Broadway
Boulder, CO 80305
POC (Michael Schneider Bld. 2 - 1228)

VI. INSPECTION & ACCEPTANCE

In addition to the inspection and acceptance terms articulated in the specific FAR clause that allows the Government reserves the right to perform such performance tests and evaluations as defined below to verify specified system performance. Such tests and evaluations, if performed, shall be conducted within the environment that the system is to be operated. The Contractor has the right to be present during the tests and evaluations, if performed, at the Contractor's expense.

NIST may choose at its discretion to forego this part of acceptance testing.
A visual inspection of the equipment will be performed by the NIST POC to identify surface defects or any form of indication that any equipment was damaged during transport to NIST. The Government shall have sole discretion to require repair or replacement of damaged and/or nonconforming supplies at no cost to the Government. The Government at any time prior to acceptance shall reject the equipment due to defects and/or nonconformance. The vendor is responsible for latent defects discovered any time after final inspection. However, the extent of its liability shall be prorated over the useful life of the equipment.

Ownership of the equipment shall transfer to NIST upon acceptance by the Government.

The Government will test, inspect, and accept or reject the equipment within 14 working days of the receipt of the equipment unless otherwise indicated above. The Government reserves the right to conduct quality assurance testing to confirm that a given instrument(s) meets the manufacturer's and/or the Government's performance specifications. It is anticipated that the equipment will meet all manufacturer's specifications and/or the Government's performance specifications identified in the most recent operations and maintenance manual for each piece of equipment and/or in this document.

VII. WARRANTY

The contractor shall warranty the entire system for a period of a minimum of 90 days after receipt of the equipment and shall be in accordance with terms in FAR 52.212-4. Warranty shall commence upon acceptance of the system by the Government and at a minimum shall include the following:

VIII. PAYMENT SCHEDULE

The Contractor will be paid, in accordance with the payments clause in the contract and as otherwise noted in this document, upon receipt of a proper invoice.

1. 100% after installation and acceptance by the POC of fully installed system, AND
2. After the successful completion of the testing requirements set forth in this document under section set forth in this document, AND
3. After successful demonstration by the instrumentation that it performs in accordance with the requirements set forth in this document.

NOTE: Partial shipments and partial invoices will not be accepted, unless otherwise requested and accepted by the Contracting Officer prior to award offer. Proposed payment schedules shall be submitted with vendor's response to the RFQ for consideration.