National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) / Acquisition Management Division

Sources Sought for Commercial Item Purchase
The National Institute of Standards and Technology (NIST) seeks information on vendors that are capable of providing:

- Item 1 (Quantity = 2): FMC667-2-1-1-1 DSP board.
- Item 2 (Quantity = 3): FMC108-2-2-1-1 ADC board.

In accordance with the technical specifications as outlined within the attached specifications.

This announcement is not a formal Request for Quotations (RFQ) and does not commit the Government to award a contract now or in the future. No solicitation is available at this time. The purpose of this synopsis is to identify organizations with the requisite qualifications to meet the requirements of the item(s) stated herein. After results of this market research are obtained, analyzed and compared with NIST's minimum technical specifications NIST may conduct a competitive procurement and subsequently award a contract.

If at least two (2) qualified small businesses are identified during this market research stage, then this acquisition may be solicited as a small business set aside. NIST is seeking responses from all responsible sources, including large and small businesses (SB, SDB, WOSB, HUB Zone, SDVOSB and VOSB). This requirement is assigned a NAICS code of 334111. The specific purpose of this Sources Sought Announcement is to determine if there are small businesses, within the parameters identified above, that are capable of providing the item(s) identified herein.

Interested organizations that believe they are capable of meeting the requirement(s) should submit electronic copies of their capability statements (include solicitation number: NB686070-16-02376). Limit your statement to no more than five (5) pages.

Responses should include the following information:
1. Name of company that will provide product.
2. Name of company that will manufacture the product.
3. Spec sheets and examples of products that meet the specifications.
4. Typical lead time to deliver the product after receipt of order.
5. Any other relevant information that is not listed above which the Government should consider in developing its minimum specifications and finalizing its market research.

Specifications
for FPGA-based digital controller boards
NB686070-16-02376

PURPOSE

The Applied Physics Division of National Institute of Standards and Technology (NIST) is developing digital controller based on field programmable gate array (FPGA). This FGPA-based digital controller will be used for optical two-way time-frequency transfer. The goal of this system is to synchronize two optical clocks at the end points of a free-space link. We will require two digital controllers for each of the two clocks that are to be synchronized, and a third digital controller for off-line development of the firmware/software.

TECHNICAL SPECIFICATIONS

The FPGA controller requires multiple boards including a compatible 8-channel analog-to-digital converter (ADC) and a digital signal processor (DSP). To complete the systems, we require the ADC and DSP boards. We will require the boards to fabricate three total systems (two operating systems and one backup/development system). Since we already own one DSP board from a previous project, we require the purchase of three ADC boards and two DSP boards.

There are a wide variety of ADC and DSP boards available. However, we require two specific boards since the firmware has already been developed to interface these boards with the XILINX Virtex-7 FPGA VC707 evaluation board. This firmware is specific to the hardware and has been tested for compatibility and functionality on the specific boards listed here (using boards borrowed from another project).

DELIVERABLES

Item 1 (Quantity = 2): FMC667-2-1-1-1 DSP board.

The FMC667 is a Digital Signal Processor FMC daughter card based on the Texas Instruments TMS320C6678 device. The part number corresponds to commercial temperature range and no conformal coating.

Item 2 (Quantity = 3): FMC108-2-2-1-1 ADC board.

The FMC108 is an eight-channel ADC FMC (FPGA Mezzanine Card) which is fully compliant with the VITA 57.1-2010 standard. The FMC108 card provides eight A/D 14-bit 250MSPS channels which can be sampled by an internal clock source (optionally locked to an external reference) or an externally supplied sample clock. The part number corresponds to the commercial temperature range, added cascade option, single-ended AC coupling, and conformal coating.

DELIVERABLES SCHEDULE

The Contractor shall deliver two (2) DSP boards and three (3) ADC boards no later than three (3) weeks from date of award.

INSPECTION AND ACCEPTANCE
The Boards will be tested within thirty (30) days upon arrival

GOVERNMENT FURNISHED PROPERTY OR INFORMATION:
None

Any proprietary information should be so marked as such. Deadline for submittal of the written capability statement, is no later than Tuesday April 12, 2016, close of business. The capability statement shall identify the businesses socioeconomic status.

Only electronic statements will be accepted. Faxes will not be accepted. Send to Marc Zurasky, Contract Specialist at marc.zurasky@nist.gov. Direct all questions to this e-mail.