

SPECIFICATIONS OF A Vector Network Analyzer USM BID #22-25

SPECIFICATIONS OF A Vector Network Analyzer USM BID #22-25

BACKGROUND

The University of Southern Mississippi requires a Vector Network Analyzer (VNA) for an Air Force Research Laboratory project.

1. PURPOSE

The purpose of the Vector Network Analyzer (VNA) is to test component specifications and verify design simulations to make sure their systems and components work together.

2. GENERAL PERFORMANCE SPECIFICATIONS

The Vector Network Analyzer performance specifications must be specified below.

3. REQUIREMENTS

The following specifications are to ensure that the Vector Network Analyzer will perform the tasks necessary to satisfy the project's objectives. Any deviation from the following specifications must be explained and justified.

- A 4 port VNA with a 10 MHz to 67 GHz frequency range and 1.85 mm (m) connector.
- Receiver step attenuator on one port
 - Mechanical, 35 dB in steps of 5 dB
 - Protects receiver from compression when needed
 - Allows for 10dB more sensitivity by allowing to be set to 0dB.
- Additional trigger and control I/O ports
 - 3 trigger in, 4 trigger out, 4 pulse modulator control ports (I/O switchable)
 - Access to gating signals to/from the pulse modulators
 - More trigger inputs/outputs for complex AND / OR triggering applications
- Direct generator/receiver access for 4-ports
 - A third and fourth internal source would save wear and tear of antenna switching and increases testing throughput.
- External 1 GHz reference frequency input reduces calibration and increasing operational up time.
- Portable weight less than 70 pounds.
- Pulse modulation ratio on/off ratio nominally 80 db
- Dynamic greater than 129 dB
- Sensitivity greater than -120 db at 1 Hz IF bandwidth
- 100 dB continuous electrical power sweep range
 - Shiftable with attenuator
- Source power linearity of 0.2 dB from -40dBm to +10 dBm
- Receiver compression of 0.05 dB
- Trace noise less than 0.005 dB
- Control and data acquisition software

4. CUSTOMER SUPPORT

Sound customer support will be one of our main considerations for this purchase. The vendor should be willing to help The University of Southern Mississippi resolve any technical issues associated with the system, not only in the warranty period but also out of the warranty with reasonable service fee and leading time. It is preferred that the vendor is able to provide technical service through remote access and/or on-site technical support.

5. SAFETY

Safety should be well weighted in the machine design, engineering delivery and user interface communication.

Safety measures and appropriate designs for any moving parts.

Emergency stop systems should be available.

6. WARRANTY

Contractor warrants that the machinery shall be free from defects in material and workmanship under normal use and service with obligation to repair or replace any parts which are proven defective within one year from delivery.

7. DELIVERY

Vendor should quote the lead time required for delivery of the quoted equipment. Quoted prices should be F.O.B. Destination Freight Allowed.

8. POINTS OF CONTACT

For questions, contact the Buyer listed on the Bid Coversheet at:

bids@usm.edu

9. SUBMISSION INSTRUCTIONS TO BIDDERS

One (1) signed original, two (2) copies, and one (1) portable virus/malware free electronic version (USB jump drive) of the sealed bid response (if electronic copy is not included, USM reserves the right to request an electronic copy of the exact bid response prior to review of the bid), subject to the conditions made a part hereof, will be received by **2:00 PM CDT on Thursday, January 13th, 2022** in the USM Procurement and Contract Services office, as indicated in the General Terms, Conditions, and Instructions to Bidders described herein. It is the responsibility of the respondent to ensure that the proposal package arrives in the Procurement and Contract Services Office.

Each bid **must** be submitted in a sealed envelope bearing on the outside the name “Bid #22-25 Vector Network Analyzer (VNA),” the name of the Vendor, and the opening date specified on the coversheet.

The proposal should be addressed as follows:

For regular mail:

The University of Southern Mississippi
Attn: John Leggett, Buyer
118 College Drive, Box 5003
Hattiesburg, MS 39406
Bid 22-25

For FedEx, UPS, or other express couriers:

The University of Southern Mississippi
Attn: John Leggett, Buyer
2609 W. 4th Street
Hattiesburg, MS 39401
Bid 22-25

Hand-carried responses should be brought to:

The University of Southern Mississippi
Attn: John Leggett, Buyer
214 Bond Hall
Hattiesburg, MS 39406
Bid 22-25

As an alternative to traditional sealed proposals in envelopes, the University of Southern Mississippi is capable of receiving electronic bid responses. While this option is available, it is not required, and we ask that all potential respondents keep in mind that with any electronic system there could be delays or glitches with the submission process; therefore the University *highly encourages traditional sealed responses* which are either mailed or submitted in person. Additionally, the University will not be responsible for issues with attempted submissions of bids using the electronic method.

Please note that emailed bids will not be accepted.

Should a vendor choose to submit their response electronically, please follow the instructions below using the following website:

https://www.ms.gov/dfa/contract_bid_search/Home/Sell.

On this site you will find helpful links to procurement opportunities, as well as a link to supplier registration. If not already registered in this system, potential bidders will first need to click on 'Supplier Registration' and follow the steps outlined (a one-time process). Once registered, suppliers can return to the original website and click on 'Procurement Opportunities' where they can either search by keyword for the bid they desire to respond to or leave the search box blank and click 'Search' for a listing of all current bids and proposals for the various State of Mississippi offices.

Any bid may be withdrawn prior to scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered.

The University of Southern Mississippi reserves the right to accept or reject any or all bids and to waive any formalities.

The University of Southern Mississippi reserves the right to accept or reject optional line items included in the bid response.

Vendors are responsible for examining all specifications, terms, conditions, and instructions of this request. Failure to do so will be at Vendor's risk.

In order to ensure all interested bidders, receive any addenda that may be issued, proposers must email their intent to propose using the Intent to Bid link on the USM Bid Calendar under Bid 22-25 prior to the deadline to submit:

<https://www.usm.edu/procurement-contract-services/current-bids-and-sole-source-notices.php>

**THE UNIVERSITY OF SOUTHERN MISSISSIPPI
PROCUREMENT SERVICES
118 COLLEGE DRIVE #5003
HATTIESBURG, MS 39406-0001**

GENERAL TERMS, CONDITIONS AND INSTRUCTIONS FOR BIDS/PROPOSALS

- 1.) Failure to examine any drawings, specifications, and instructions will be at bidder' s risk.
- 2.) Samples of items when called for must be furnished free of expense and if not destroyed in testing, will, upon request, be returned at the bidder' s expense. Request for the return of samples must be made within ten (10) days following opening bids. Each individual sample must be labeled with bidder' s name and manufacturer' s brand name and number.
- 3.) Bids must be signed and sealed with bidder' s name and address on the outside of the envelope, and the time and date of the bid opening and the bid file number shown in the lower-left corner of the packages; envelopes, express mailing labels, boxes, etc.
- 4.) In order for your bid to be considered, it must be received and time stamped in our office by 2:00 P.M. of the bid opening date. It is the responsibility of the vendor to ensure their bid is received within the appointed time. If your bid package is not received in Bond Hall, Room 214, by 2:00 P.M. of the bid opening date, it will not be considered.

If you are delivering your bid, you need to hand carry the bid package to:

The University of Southern Mississippi
Procurement Services
Bond Hall, Room 214
Hattiesburg, Mississippi

If you are mailing your bid package via U.S. Postal Service, mail to:

The University of Southern Mississippi
Procurement Services
118 College Drive #5003
Hattiesburg, MS 39406-0001

If you are express mailing your bid package via Federal Express or UPS, or any other delivery service which requires the use of a physical address, deliver to:

The University of Southern Mississippi
Receiving Department
2609 West 4th Street
Hattiesburg, MS 39401

- 5.) Bids or proposals shall not be modified, corrected, altered, or amended after the specified closing time and the opening of such bids, unless otherwise noted in the request for bids or proposals.
- 6.) The University of Southern Mississippi reserves the right to reject any and all bids, to waive any informality in bids, and unless otherwise specified by the bidders, to accept any items on the bid. If the bidder fails to state the time within which bids must be accepted, it is understood and agreed that The University of Southern Mississippi shall have 60 days to accept. The University of Southern Mississippi reserves the right to make an award to this bid on an all or none basis, or on a line by line basis, whichever serves the best interest of The University of Southern Mississippi.
- 7.) Contracts and purchases will be made or entered into with the lowest, responsible bidder meeting specifications.
- 8.) A written purchase order or contract award mailed or otherwise furnished to the successful bidder within the time of acceptance specified in the Invitation for Bid results in a binding contract without further action by either party. The contract shall not be assignable by the vendor in whole or in part without the written consent of The University of Southern Mississippi.
- 9.) Bid files may be examined during normal working hours by bid participants. Non-participants will be prohibited from obtaining any information relative to the bid until the official award has been made.
- 10.) If purchase orders or contracts are canceled because of the awarded vendor's failure to perform or request for price increase, that vendor shall be removed from our bidders' list for a period of 24 months.
- 11.) No addendum will be issued within a period of two (2) working days prior to the time and date set for the bid opening. Should it become necessary to issue an addendum within the two-day period prior to the bid opening, the bid date will be reset giving bidders ample time to answer the addendum.
- 12.) Alternate bids, unless specifically requested or allowed, will not be considered.
- 13.) Bid openings will be conducted open to the public. However, they will serve only to open the bids. No discussion will be entered into with any vendor as to the quality or provisions of the specifications, and no award will be made either stated or implied at the bid opening. After the close of the bid opening meeting, the bids will be considered to be in the evaluation process and will not be available for review by bidders. Proposal openings are not required to be open to the public; however, the resulting award is open for public inspection.
- 14.) Prices quoted shall be firm for the term of the contract or for the stated time of

acceptance.

- 15.) The bidder understands that The University of Southern Mississippi is an equal opportunity employer and, therefore, maintains a policy which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, disability, or any other such discrimination; and the bidder, by signing this bid, agrees during the term of agreement that the bidder will strictly adhere to this policy in its employment practices and provision of products or services.
- 16.) Bidders must upon request of The University of Southern Mississippi furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. The University of Southern Mississippi reserves the right to make the final determination as to the bidder's ability.
- 17.) Questions or problems arising from bid procedures should be directed to the Buyer listed on the solicitation at:

The University of Southern Mississippi
118 College Drive #5003
Hattiesburg, MS 39406-0001
Phone: (601) 266-4131
- 18.) All items must equal or exceed the specifications listed. The absence of detail specifications or the omission of detail description shall be recognized as meaning that only the best commercial practices are to prevail and that only first quality materials and workmanship are to be used.
- 19.) It is the intent of the specifications to obtain a product that will adequately meet the needs of the user while promoting the greatest extent of competition that is practicable. It is the responsibility of the prospective bidder to review the entire Invitation to Bid packet and to notify The University of Southern Mississippi if the Specifications, Instructions, General, or Special Conditions are formulated in a manner which would unnecessarily restrict competition.
- 20.) It shall be incumbent upon the bidders to understand the specifications. Any requests for clarifications shall be in writing and shall be submitted to our Procurement Services office at least five (5) days prior to the time and date set for the bid opening, unless otherwise noted in the bid or proposal specifications.
- 21.) The minimum specifications are used to set a standard and in no case are used with the intention to discriminate against any manufacturer. Bidders should note the name and the manufacturer and model number of the product they propose to furnish and submit descriptive literature.
- 22.) Trade names, brand names, and/or manufacturer's information used in these specifications are for the purpose of establishing quality, unless otherwise noted. Bids on

products of other qualified manufacturers are acceptable, provided they are demonstrated as equal to those specified in construction, design and suitability. Each bidder shall submit with his bid a complete brochure with pictures on each item and shall point out specifically any deviations from the specified items. Failure to do so may disqualify any bid. Please bid as specified or an approved equal.

- 23.) A copy of the manufacturer's standard guarantee/warranty shall accompany and become a part of this bid.
- 24.) There are no federal or state laws that prohibit bidders from submitting a bid lower than a price or bid given to the U.S. Government. Bidders may bid lower than U.S. Government contract price without any liability as The University of Southern Mississippi is exempt from the provisions of the Robinson-Patman Act and other related laws. In addition, the U.S. Government has no provisions in any of its purchasing arrangements with bidders whereby a lower price to The University of Southern Mississippi must automatically be given to the U.S. Government.
- 25.) All invoices, unless noted otherwise, are to be billed to:
- The University of Southern Mississippi
Accounts Payable
118 College Drive #5104
Hattiesburg, MS 39406-0001
- 26.) All equipment bid shall be of current production and of the latest design and construction.
- 27.) Where all, or part(s), of the bid is requested on a unit price basis, both the unit prices and the extension of the unit prices constitute a basis of determining the lowest responsible and responsive bidder. In cases of error in the extension of price, the unit price will govern.
- 28.) All bidders/respondents are on notice that USM is a public agency of the State of Mississippi and is subject to the Mississippi Public Records Act, Miss. Code Ann. § 25-6-1, *et seq.* If a public records request is made for any information provided to the USM pursuant to this solicitation, USM shall promptly notify the Disclosing Party of such request. The Disclosing Party shall promptly institute appropriate legal proceedings to protect its information. No party to this agreement shall be liable to the other party for disclosures of information required by court order or required by law. For clarity, documents are not considered public record unless and until an award is made from such solicitation.
- 29.) Should the University of Southern Mississippi close due to inclement weather conditions, or any other unforeseen events on the bid opening date, sealed bids will open the following business day at the same time and location.

- 30.) As an alternative to traditional sealed bids in envelopes, the University of Southern Mississippi is capable of receiving electronic bid responses. While this option is available, it is not required and we ask that all potential respondents keep in mind that with any electronic system there could be delays or glitches with the submission process; therefore the University highly encourages traditional sealed bids which are either mailed or submitted in person. Should a vendor choose to submit their response electronically, please follow the instructions below using the following website: https://www.ms.gov/dfa/contract_bid_search/Home/Sell. On this site you will find helpful links to procurement opportunities, as well as a link to supplier registration. If not already registered in this system, potential bidders will first need to click on 'Supplier Registration' and follow the steps outlined (a one-time process). Once registered, they can return to the original website and click on 'Procurement Opportunities' where they can either search by keyword for the bid they desire to respond to or leave the search box blank and click 'Search' for a listing of all current bids and proposals for the various State of Mississippi offices.

With regard to construction bids, there is one additional step required during the bid submission process. Along with the bid response and other attachments, contractors will also need to attach their Certificate of Responsibility (COR), or a statement that the bid enclosed does not exceed Fifty Thousand Dollars (\$ 50,000.00). If their COR or such statement is not attached, the bid will be invalid and not considered.

AA/EOE/ADAI