

# (केंद्रीयविश्वविद्यालय/A Central University)

### कुलसचिवकाकार्यालय/OFFICE OF THE REGISTRAR

तेजपुर-784028 :: असम/ TEZPUR-784028 :: ASSAM

#### **NOTICE INVITING BID**

TU/GeM/BoQ-Bid (106)/2021-22/ 1549 Date 22-08-22

**Bids** in **02 Bid System (Technical and Financial)** are invited on **GeM** from reputed manufacturers/authorized dealers for setting up a **state of the art Machine Learning on FPGA Laboratory** for Dr. Bhabesh Deka, Department of Electronics and Communication Engineering, Tezpur University.

Please read the Bid document carefully before participating. It shall be deemed that submission of bid by the bidder has been done after their careful study and examination of the Bid terms with full understanding to its implications. Any lack of information shall not in any way relieve the bidder of its responsibility to fulfill its obligations under the Bid.

The University will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the Purchase Order. Fraudulent Practice means a misrepresentation of facts in order to influence a procurement process and includes collusive practice among bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive Tezpur University of the benefits of free and fair competition. Corrupt Practice means offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of this purchase execution.

For any queries/doubt please contact the Stores & Purchase Section (e-mail: <a href="mailto:snp@tezu.ernet.in">snp@tezu.ernet.in</a>) or in the email id mentioned in the GeM Bid.

#### **GENERAL TERMS & CONDITIONS:**

 Rates: Rates quoted should be on FOR Tezpur University, Napam, Tezpur, Door Delivery Basis, for indigenous items and CIP Tezpur University, Napam, Tezpur or Delivered Duty Paid, for imported item. Failure to comply with this term may lead to rejection of the quotation.

2. Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Banker Cheque) for ₹ 26,000.00 (Rupees Six Thousand) only drawn in favor of Registrar, Tezpur University, payable at Tezpur. No request for consideration of earlier deposited EMD will be considered. ii) Bidders who are MSME/NSIC registered needs to furnish a "Bid Security Declaration" (format enclosed at Annexure – I) in lieu of EMD accepting that if they withdraw or modify their bids during period of validity etc., they will be suspended for a period of Three (03) years from participating in any future bid invited/published by Tezpur University. Bidders who are MSME/NSIC registered seeking exemption from payment of EMD are to submit valid documents in support of their claim. Bidders seeking exemption are asked to clearly mention the category under which exemption is claimed. The category of exemption under MSME/NSIC will be strictly adhered to. original copies of the EMD/Bid Security Declaration deposited/submitted/reach the office of the undersigned before opening of the Bids in an envelope superscribed as "Quotation/Participation Fee and EMD for TU/GEM/BOQ-

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BID/(105)/2021-22/....1549......DT-....22-08-22.... addressed to the Assistant Registrar-GA, Tezpur University. Failure to do so may result in rejection of the bid.

- 3. Bidders/Tenderers are to ensure that they are GST compliant and that their quoted tax structure/rates are as per GST law. The rates should be exclusive of taxes and applicable tax percentage should be clearly indicated. Financial/Price Bid format where taxes cannot be mentioned separately, in such cases, the percentage of taxes applicable should be mentioned in the Technical Bid document.
- 4. Validity of Quotation: Quoted rates must be valid for at least 180 days from the last date of submission of quotation.
- 5. Applicable levies, surcharge and discounts should be clearly indicated item wise.
- 6. The rates should be quoted along with supporting documents of specifications and technical features and list of users, wherever applicable.
- 7. Literature a must: All the quotations must be supported by technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such technical leaflet/literature. The model and specifications quoted should invariably be highlighted in the leaflet/literature for easy reference.
- 8. After Sales Service Guidelines: In case of imported goods, bidders should clearly state the detailed address, contact number and email ids of 'after sales service centre' preferably in Tezpur/Guwahati, India or any place in Assam without which their offers shall be liable for rejection. Service against any complaint must be provided within 24hours.
- 9. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must upload valid dealership certificate.
- Quality Certificates: Valid certificate to prove that the products are genuine and of international standard, as mentioned below, must be uploaded: (a) Manufacturer's certificate; (b) ISO/ISI certificate.
- 11. **Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this item has been sold, particularly to Universities/IITs/Institutes and other Government Organization.
- 12. Payment:100% payment after successful delivery, installation and commissioning (if required in the scope of supply) and acceptance by the user.
- 13. **PENALTY FOR DELAYED DELIVERY**: The date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning, the vendor shall be liable for a penalty deduction as per prevailing rule.
- 14. As per Gol Notification dated 14.11.2017 GST % for Public Funded Research Institution or a University has been reduced to 5%. Hence, rate of GST may be charged as per reduced rate. Exemption Certificate will be provided on request.
- 15. The University is exempted from paying Custom and Excise duty.
- 16. Warranty/Guarantee applicable if any, period should be specifically mentioned in the quotation.
- 17. Irresponsive/incomplete quote will be rejected.
- 18. Conditional tenders not acceptable: All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on Tezpur University.
- 19. Enquiry during the course of evaluation not allowed: No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful

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bidder(s). However, the Purchase Committee or its authorized representative (Tezpur University) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.

#### Termination for default: Default is said to have occurred

- a. If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
- b. If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by Tezpur University.
- c. If the supplier fails to perform any other obligation(s) under the contract.
- d. Under the above circumstances Tezpur University may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, Tezpur University may at its discretion also take the following actions: Tezpur University may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate Tezpur University for any extra expenditure involved towards goods and services obtained. Besides, the Vice-Chancellor, Tezpur University, and reserves the right to impose any other form of penalty as deemed fit including blacklisting of the vendor.

#### 20. Selection criteria:

#### i. Evaluation Criteria:

To ensure that each bidder has the necessary qualifications and resources to full fill its obligations under the contract, the following criteria shall be evaluated. The Eligibility, Financial, Experience & Support criteria should be passed before the technical criteria. Technical criteria will be evaluated and ranked by the award of ACCEPT and/or REJECT. Only the ACCEPTED vendors will be considered for price bid. In case a joint venture makes a bid, any one of the members of the joint venture need to be qualified for each of the criteria mentioned below.

#### ii. Eligibility Criteria:

a. The bidder or the OEM should not be blacklisted by Tezpur University or any other Educational /R&D/ PSU/ Govt organizations. A certificate or undertaking to this effect must be submitted.

#### iii. Technical Criteria

Technical bids will be evaluated and ranked by the award Accepted & Rejected. The price bids of Accepted vendors would then be considered by the concerned Purchase Committee of the institute

#### **Delivery Period**

21. The delivery installation and commissioning should be completed with <u>60 Days</u> of the award of BID without any deviation.

Assistant Registrar-GA, i/c

**Tezpur University** 



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# <u>Technical Specifications cum Compliance Report</u> (To be submitted on Company's/Firm's Letterhead Signed and Sealed)

#### Item:

Parameter	Description
High-End FPGA	Feature: Quad-core ARM Cortex- A53 application processor
Board 1 with	:Dual-core Cortex-R5 real-time processor
installation kit for	:Mail-400 MP2 praphics processing unit
Machine Learning	: 4 KP60 capable integrated video code unit support
v	H.264/H.265
	:Optimized to work with SDSoC/revision development environment
	with OpenCV and Machine Learning libraries
	System Logic Cells: 504K
15.	DSP Slices: 1,728
	Video Codec Unit:1
	Maximum I/O Pins: 464
	Memory: 38Mb
	: PS DDR4 64-bit Component
	: Quad-SPI flash
	Control & I/O:4x directional pushbuttons
	:DIP switches
	: PMBUS, clocks, and 12C bus switching
	Display: HDMI 2.0 video input and output (3x GTH)
	: Display Port (2x GTR)
	Communication and Networking: RJ-45 Ethernet connector
	:USB-UARTs with FT4232H JTAG/3xUART Bridge
	:SATA (M.2) for SSD access
	Expansion Connectors: FMC LPC (1x GTH), 3PMOD connectors
	:PL DDR4 SODIMM Connector-64 bit
	Accessories: 1080p60 USB3 Camera, 4-Port USB 3.0 Hub, Ethernet cable
	Software: Xilinx Vivado Prime Edition software with perceptual licence for
	the FPGA board
Machine Vision	Effective pixels: 1600x1200 (HxV)*
Camera setup for	Chroma: Color and Monochrome
FPGA board &	Pixels : 2 MP and above
Machine Learning	Frame Rate : 30 fps or above
	No. of camera : Minimum 4 camera setup with 2
	integrated camera
	Cameras: 3D vision camera with short, medium and
	long distance version base plate
	: Digital camera with color and monochrome





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lenses of same model

Lenses: High resolution, low distortion lenses,

**CCTV** lenses

Controllers: Box type controller with LCD monitor,

Monitor Cable, Input Device: Controller integrated with LCD,

touch pen, etc.

Others: 3D calibration tool, camera cable for bend

resistance, right angle, long distance, etc., lenses with extension tubes, camera stand

high-luminance lighting

Workstation for high speed FPGA &

**Machine Learning** 

Processor: Intel Core i9

n roccissor : litter core 19

Processor generation: 11th gen or latest

OS: Windows

RAM: 32 GB HDD: Any

SSD: 1 TB

Dedicated GPU: 6 GB or above

Monitor Resolution: 1980x1080

Processor Speed: 3.2 GHz and above

Other features: Wireless monitor, wireless keyboard,

wireless mouse, wireless adapter, Bluetooth,

mousepad, digital writing pas, webcam, digital pen,

wireless speaker

High-End FI

FPGA

Board 2 with

installation kit for

Machine Learning

Feature: Dual-core ARM Cortex-A9(HPS)

: 110K PLEs

: 5,761 Kbits embedded memory

: 6 fractional PLLs

: 2 hard memory controllers

Memory device: 64 MB(32Mx16) SDFRAM for FPGA

: 1GB 92x256MBx16) DDR3 SDRAM for the HPS

Display: 24-bit VGA DAC

: 128x64 dots LCD Module with backlight on HPS

Audio: 24-bit CODEC, Line-in, Line-out and microphone in jacks

Video input: TV decoder (NTSC/ PAL/ SECAM) and video-in connector

Switches: 5 user keys

: 11 user LEDs

: Six 7- segment displays

Capacitive LCD Multi-touch screen: 7-inch TFT LCD with pixel

resolution of 800x480

:16 million colors(24-bit RGB)

: 5 point capacitive touch

8-MP Digital Image Sensor :3264Hx2448V active pixels with Bayer

Pratile 1/2 AR (GA) ilc



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color arrangement

: Sensitivity 940mV/Lux-sec

Other features: Ambient Light Sensor

: MPU9250 Nine-Axis Sensor

Software: Quartus Prime Edition Software with perceptual licence for the

FPGA Board





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Annexure-I

(To be submitted on Company's/Firm's Letterhead signed and sealed)

<b>Bid-Security Declaration Form</b>	
	Date: Bid No
To (insert complete name and address of the purchaser)	
/We. The undersigned, declare that:	
/We understand that, according to your conditions, bids must be supported Declaration.	by a Bid Security
/We accept that I/We may be disqualified from bidding for any contract with you fo year from the date of notification if I am /We are in a breach of any obligation under because I/We	
(a) have withdrawn/modified/amended, impairs or derogates from the tend the period of bid validity specified in the form of Bid; or	er, my/our Bid during
(b) having been notified of the acceptance of our Bid by the purchaser duralidity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to fur Security, in accordance with the Instructions to Bidders.	ring the period of bid rnish the Performance
I/We understand this Bid Securing Declaration shall cease to be valid if I am/we as Bidder, upon the earlier of (i) the receipt of your notification of the name of the sucthirty days after the expiration of the validity of my/our Bid.	re not the successful ccessful Bidder; or (ii)
Signed: (insert signature of person whose name and capacity are shown) in the cacapacity of person signing the Bid Securing Declaration).	apacity of (insert legal
Name: (insert complete name of person signing he Bid Securing Declaration)  Duly authorized to sign the bid for an on behalf of: (insert complete name of Bidde	r) Dated on
day of(insert date of signing)	

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid).