



TENDER DOCUMENT

OF

Procurement of I/O Cards for RT-HIL Simulation of Power System
FOR

M/s. VJTI TECHNOLOGY BUSINESS INCUBATOR

IN

THRUST AREA EQUIPMENTS

Veermata Jijabai Technological Institute - Technology Business Incubator

(Established under DST-NIDHI Initiative of Government of India)

H R Mahajani Road, Matunga (E), Mumbai-400019

LETTER OF INVITATION TO TENDERING PARTIES:

Name of the Work: Procurement of I/O Cards for RT-HIL Simulation of Power System

Sealed Tenders are invited for the proposed purchase to be carried out for the Thrust area Equipment under Technology Business Incubator in Veermata Jijabai Technological Institute, Matunga, Mumbai. Only those vendors should submit the Tender who have PAN number and Goods and Service Tax Registration Certificate. Submit Photocopy of PAN number and GST certificate along with the Tender.

The other Particulars are as below:-

1. Tender Processing fee: Rs. 5310/- (Rs. 4500/-+ GST @ 18% Rs. 810/-)
2. Earnest Money Deposit: Rs. 75,000/-
3. Date of Submission of Tender Document: From 03.03.2021 to 15.03.2021
4. Delivery Period: 15 days from date of PO release

You are invited to quote for the Equipment as per the above mentioned schedule

**CHAIRPERSON
VJTI-TECHNOLOGY BUSINESS INCUBATOR**

General Conditions

(Note: Vendor, please read the general conditions carefully before giving offer)

1.	Good Service Taxes (GST) should be included in the rates quoted by the Vendor. Any other Government (State / Center) Taxes as applicable shall be done. Deduction towards TDS shall also be done as per existing rules. The details of the Pan Card, GST Company details shall be submitted along with tender document, failing which the tender shall be rejected.
3.	The Vendor will be disqualified if tender becomes unbalanced due to his quoted rates.
4.	The Chairperson of VJTI-TBI reserves the right to reject any one or all the tenders without assigning any reason there for.
5.	The EMD of unsuccessful bidder will be refunded after 30-60 days.
6.	Vendor to give complete Bank Details.
7.	The Vendor shall mention below the BOQ the GST assumed in his rates.
8.	The Earnest Money Deposit & Tender processing fee in the form of Demand Draft. (2 Nos D.D. made separately) shall be put in the same envelope of tender; If the said D.D. are not found in the envelope the tender will be rejected. EMD and Tender Fee shall be made in the name of VJTI TECHNOLOGY BUSINESS INCUBATOR , payable at Mumbai.
10.	Vendor shall quote their offer in prescribed format only given in tender document on letterhead. Tender in any other form will be rejected.
11.	Vendor's own conditions will not be accepted.
12.	All the terms and conditions for the supply, delivery, payment, warranty, penalty, etc. will be as given herein and no change in any term or condition by the vendors will be acceptable.
13.	To assist the examination, evaluation, and comparison of bids, VJTI TECHNOLOGY BUSINESS INCUBATOR may at its discretion, ask the bidders for clarification of bids including price. The request for clarification and the response shall be in writing.
14.	Lowest competitive bidder will be considered on the basis of the final cost of the package. Individual Equipment-wise L1 will not be considered.
15.	Payment terms: 100% of the payment shall be released on successful satisfactory delivery and installation of Equipment by authorized VJTI TECHNOLOGY BUSINESS INCUBATOR representative.
16.	The supplier's request for payment shall be made in writing accompanied by relevant document such as proper invoice and satisfactory installation reports duly signed by VJTI TECHNOLOGY BUSINESS INCUBATOR's representative.
17.	VJTI TECHNOLOGY BUSINESS INCUBATOR reserves the right to accept or reject any or all offer(s) in part or full without assigning any reason thereof, and to amend the terms and conditions before award of the contract.

18	The items can be supplied by the manufacturer directly or through their authorized dealer/authorized channel partners/distributors. Letter of authorization from the manufacturer/parent company to be enclosed in case of authorized dealer/distributor.
19	The bidder shall quote the prices in INR of goods and services inclusive of all duties and all taxes, freight, levies, or charges.
20	In case of any discrepancy between the unit price and the total price, the unit price shall prevail and total price shall be corrected unless it is lower than the sum total of unit prices. If there is any variation between amount written in figure & words and then amount whichever is lower shall be taken into consideration.
21	Warranty period as and where applicable shall be mentioned with free services
22	Site acceptance Criteria: Communication on IO cards from OPAL RT OP5600 and Siemens SIPROTEC 5 relay/PMU (7SA,7SL,7TU Series)

I accept the above conditions.

Signature of the Vendor
Seal and Stamp

SPECIAL CONDITIONS OF CONTRACT

1.	Earnest Money Deposit	Rs. 75,000/- D.D. favouring ' VJTI TECHNOLOGY BUSINESS INCUBATOR ', payable at Mumbai.
2.	Refund of Earnest Money Deposit	Via NEFT or Check
3.	Refund of Security Deposit	After completion of Defects Liability Period
4.	Advance Payment	Nil
5.	Delivery period	15 days from Date of PO release
6.	Period of Honouring Certificates	30 days
7.	Final bill Certification	60 days
8.	Quotation validity	60 days
9.	Payment Stages	100 % of Tender value on completion of Delivery installation, testing and handover of Equipment

I accept the above conditions.

Signature of the Vendor
Seal and Stamp

A. Submission of Tender and its accompaniments

The bidder shall submit the Tender and documents as follows:

(It shall contain strictly the following documents duly numbered, signed and stamped by the bidder or his representative and in the serial order given below)

1.	Covering Letter for Enclosure	A covering letter stating the list of enclosures should be attached in the offer along with the checklist. Complete Address, contact details, email address, website address etc must be there on the letterhead for easy and fast communication.
2.	Payment of the Tender Fees	Demand Draft on nationalized/scheduled bank drawn in favour of: VJTI TECHNOLOGY BUSINESS INCUBATOR , payable at Mumbai For the value of Rs. 5310/- as a Tender Fee MUST be attached. Name of the firm and tender number should be written on the back side of the Demand Draft/ Pay Order has validity of 3 months. ** If the tender fee is not submitted, the offer of the bidder will be rejected.
3.	Earnest Money Deposit	Demand Draft on nationalized/scheduled bank drawn in favour of: VJTI TECHNOLOGY BUSINESS INCUBATOR , payable at Mumbai For the value of Rs. 75,000/- as an Earnest Money Deposit MUST be attached. Name of the firm and tender number should be written on the back side of the Demand Draft/ Pay Order has validity of 3 months. ** If the EMD is not submitted, the offer of the bidder will be rejected.
4.	Goods & Service Tax registration certificate	A photocopy of the GST Registration Certificate duly signed and attested, by the owner or his representative.
5.	PAN Copy	A photocopy of the PAN Card duly signed and attested, by the owner
6.	Income Tax Returns/Balance Sheet	Self-attested copies of Income Tax Returns of the firm for last Three consecutive years or Balance sheets of last Three consecutive years duly certified by a chartered accountant required as a proof to establish the financial capacity of the Vendor.
7.	List of Clients for past experience (Please See Format 1)	List of Clients other than this institute for verifying the quality of the equipment being supplied and after sales service rendered by the Vendor. This list will help the purchaser to ensure good performance of the make and model which is offered by the bidder.
8.	Performance of Bidder (Please see Format 2)	Past experience of bidder with other Clients or elsewhere regarding equipment supplied to this Department (Information to be submitted in giving Order No., date, name of equipment, name of consignee.)

B. INSTRUCTIONS TO BIDDERS

1. The full name and address of the bidder delivering the sealed cover containing tender shall be written on the bottom left hand corner.
2. Only enclosed formats as provided in original should be used. All sheets need to be submitted after affixing seal of the Company and Signature of the authorized signatory. Additional sheets, duly authenticated, may be attached to elucidate specifications or clarify the specific issues.
3. The prescribed documents consisting of (i) Technical Bid and (ii) Financial Bid, sealed separately in two different envelopes, super-scribing “Technical Bid” and “Financial Bid”, as the case may be, and placed in a duly sealed big single envelop super-scribing “**Bid for Procurement of I/O Cards for RT-HIL Simulation of Power System**” may be submitted to **VJTI Technology Business Incubator, CoE-CNDS Lab, Veermata Jijabai Technological Institute, Matunga,**
4. The bidder should ensure that their tender is received by **05:00 pm at VJTI Technology Business Incubator, CoE-CNDS Lab, Veermata Jijabai Technological Institute, Matunga, Mumbai - 400019** before the last date & time of the closing the tender.
5. The tender received after closing date and time will not be accepted at all. All the bidders should submit their tender to **VJTI Technology Business Incubator, CoE-CNDS Lab, Veermata Jijabai Technological Institute, Matunga, Mumbai -400019.**
6. Relevant product literature may be enclosed with the bid along with media (if any).
7. Corrections/Alterations, if any, in the offers should be attested properly duly signed by authorized signatory and affixing seal by the vendor, failing which the tender will be rejected.
8. The items can be supplied by the manufacturer directly or through their authorized dealer/authorized channel partners/distributors. Letter of authorization from the manufacturer/parent company to be enclosed in case of authorized dealer/distributor.
9. The bidder shall quote the prices in INR of goods and services inclusive of all duties and all taxes, freight, levies, or charges.
10. In case of any discrepancy between the unit price and the total price, the unit price shall prevail and total price shall be corrected unless it is lower than the sum total of unit prices. If there is any variation between amount written in figure & words and then amount whichever is lower shall be taken into consideration.
11. All the terms and conditions for the supply, delivery, payment, warranty, penalty, etc. will be as given herein and no change in any term or condition by the vendors will be acceptable
12. The firms should also submit a list of their clients/customers (with complete name, address of the firms and telephone number of the contact person therein) including in Govt. educational institutions & public sectors with details of the equipment supplied by them for information of the Institute.
13. Canvassing in any form will be viewed seriously and if any bidder is found to be resorting to such practice, the tender of such firm will be rejected.
14. The vendor should comply with the COVID-19 related safety health practises as laid by the Govt. of India, during completion of work.

C. Acceptance of Tender

Award of contract (Acceptance of Tender)	The Vendor awarded the tender is required to sign the Purchase order as acceptance within 7 days release of Purchase Order.
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Mandatory form for NEFT / RTGS Payment to Party / Vendor

Name of the Party / Vendor As written on Passbook	
Address of Party / Vendor for Communication	
Party / Vendor Permanent Account No. (PAN No.)	
Party / Vendor Goods and services Tax (GST No.)	
Mobile No.	
Email ID	
Name of the Bank where NEFT / RTGS to be done	
Bank Branch Name	
Address of the Branch	
Bank IFSC Code	
Bank Account Number	
I declare that all the information provided by me is true in all respect.	

Note: Cancelled cheque (Photocopy Copy) attached with this form.

Specification for Procurement of I/O Cards for RT-HIL Simulation of Power System

(To be submitted on letter head of Bidder only)

SL No	Description	Qty
01	<p>Analog Input</p> <p>Form factor : PMC Mezzanine Type-B Number of channels : 16 differential Resolution : 16 bits Max. Sampling Frequency : 500 kS/s Min Conversion / Acquisition Time : 2.5 μs per channel ADC Type : 8 x Dual ADC with 10 MBit/s Serial Output Transfer</p> <p>Dc Transfer Characteristics No missing codes resolution : 14 bits min. CMRR : 90 dB</p> <p>Dynamic Characteristics Bandwidth : Small signal (-3 dB): 820 kHz Large signal (0.1% THD) : 55 kHz System noise : 1.8 LSB rms (including quantization) Calibration Calibration factors are stored in on-board non-volatile memory (flash memory). This memory is not accessible for calibration.</p> <p>Recommended warm-up time : 5 min. Calibration interval : as required</p> <p>Dimensions : 6.60 cm x 12.50 cm (2.6" x 4.92")</p> <p>I/O connector : 80-pin high speed header to carrier</p> <p>Environmental Operating temperature : 10 to 40 °C Storage temperature : -55 to 85 °C</p>	01

	Relative humidity : 10 to 90%, non condensing	
02	<p>Analog Output-16 Channel Card</p> <p>Form Factor : PMC Mezzanine Type B Number of channels : 16 single-ended Resolution : 16 bits Default range : ± 16 Volts Maximum current : 15 mA/35mA Max. Sampling Frequency : 1 MS/s Min Conversion / Acquisition Time : 1 µs per channel DAC Type : 8 x Dual DAC with 10 MBit/s Serial Output Transfer</p> <p>Dc Transfer Characteristics CMRR : 100 dB</p> <p>Dynamic Characteristics Calibration : Programmable gain and offset calibration for each D/A. Calibration factors are stored in on-board non volatile memory (EEPROM) Maximum noise : 20 mV peak-to-peak Maximum offset : ± 80 mV Recommended warm-up time : 5 min. Calibration interval : as required</p> <p>Dimensions : 6.60 cm x 12.50 cm (2.6" x 4.92") I/O connector : 80-pin high speed header to carrier</p> <p>Environmental Operating temperature : 10 to 40 °C Storage temperature : -55 to 85 °C Relative humidity : 10 to 90%, non condensing</p>	02
03	<p>High Range DIO - Static IO Mixed/separate Digital Output Card</p> <p>Form Factor : PMC-Mezzanine Type B Number of channels : 32 digital outputs 2 banks of 16, fully isolated and independant of each other Galvanic isolator Isolation : 50 mA resettable fuse Output Protection : Over voltage: 30V ±5% Protection thresholds : Under voltage protection 5V ±2.5% Reverse voltage: maximum 30 V.</p>	01

	<p>Output Voltage range</p> <p>Output configuration</p> <p>Delay Low-to-High</p> <p>Delay High-to-Low</p> <p>Rise/Fall times Form factor Dimensions I/O connector</p> <p>Environmental</p> <p>Operating temperature</p> <p>Storage temperature Relative humidity</p>	<p>5 to 30 Vdc max</p> <p>Push-pull, tri-state output</p> <p>≤ 65ns @ 25°C for 30 V ≤ 200ns @ 25°C for 5 V</p> <p>≤ 65ns @ 25°C for 30 V ≤ 200ns @ 25°C for 5 V</p> <p>≤ 15 ns Mezzanine Type B 6.60 cm x 12.50 cm (2.6" x 4.92") 80-pin high speed header to carrier</p> <p>10 to 40 °C (50 to 104°F)</p> <p>-55 to 85°C (-67 to 185°F) 10 to 90%, non-condensing</p>	
04	<p>I/O Expansion Box, PCIe * Kintex-7 325T with PCI Express x4 Copper PCIe kit</p>	<ol style="list-style-type: none"> 1. FPGA Kintex-7 FPGA, 325T , 326,080 logic cells, 840 DSP slice (Multiplier- adder) 2. High speed fiber optic interface 4 sockets for optional Small Form-factor Pluggable (SFP&SFP+) 1 to 5 Gbits/s optical cable pairs (Rx/Tx) 3. OPAL-RT Software compatibility RT-LAB, eMEGAsim, eFPGAsim, MMC, HYPERSIM and ePHASORsim 4. FPGA software applications XILINX System Generator for Simulink, RT-LAB XSG, eHS FPGA electrical circuit solvers, library of floating point functions, resolvers and Finite-Element based motor models and converters 5. Performance 250 nanoseconds for models executed on the FPGA chips, 10 nanosecond timer resolution 	

Bidder to submit offer in following format:

Sr. No	Name of Equipment	Quantity (Nos)	Specification as per tender Document	Bidders Specifications	Deviation (if any)	Remark
1						

Date:-

Name and Signature with seal of Bidder

FINANCIAL BID

Price should be quoted in INR inclusive of Goods and Service Tax (GST).

Sr. No	Name of Equipment	Quantity	Rate per No.	Amount (Rs)	Taxes: Goods and Service Tax (GST)(Rs)	Total Amount (Rs)
1	2	3	4	5	6	(5+6)
1						

Total Bid Price in Rs (figure)	
Total Bid Price in Rs (word)	
Signature of Bidder with seal	
Business Address	
Tel No	
Mobile No	
Email Id	
Fax No	

We accept all terms & conditions of the contract.

Place:

Date:

Name and Signature of Bidder with seal.

(Note: Each page of PRICE STRUCTURE document should have Bidders signature and seal)

FORMAT 1
LIST OF CLIENTS FOR PAST EXPERIENCE

List of Clients other than VJTI-TBI for verifying the quality of Cards being supplied and after sales service rendered by the Vendor

Sr. No.	Name and address of Client	P.O. Number and Date	Contact Person	Amount	Remark (Please attach service reports of the Vendor)

Signature of the Vendor
Seal and Stamp

FORMAT 2
PERFORMANCE OF BIDDER

List of Copies of Completion Certificates for delivery of Cards within stipulated Period

Sr. No.	Name and address of Client	P.O. Number and Date	Amount	Remark (Please attach service reports of atleast three P.O's of similar amount)

Signature of the Vendor
Seal and Stamp