



(NTPWC)

Door no.606, 6th floor New academic complex

IIT Madras -Chennai -600036- PHONE:22578915.

Ref: No. PROJECT NO. OEC/17-18/138/MOSH/KMUR

DATE:22.01.2019

Tender ref no. NTPWC/FBGARTEC/KMUR/009

Item Description: FPGA BASED REAL TIME EMBEDDED CONTROLLER -2no. (as per specification attached)

Due date : 08.2.2019 at 3.00 P.M.

Dear Sir,

1. Quotations/Tender with compliance sheet are invited in duplicate for the various items shown below/overleaf/**enclosed list**. The quotations are to be in **Two parts as Technical Offer and as Commercial offer**: The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in the one bigger envelope duly sealed and super scribed with reference number and due date and must be addressed to the undersigned so as to reach him on or before the due date stipulated above.
2. Fax and Email quotation are not acceptable.
3. Quotations should be valid for 90 days from the due date and period of delivery required, warranty terms etc. should also be clearly indicated. Warranty clause will be as said in the specification.
4. Imported supplies should be quoted **for CIP chennai basis indicating mode of shipment**.
5. Local firms to quote for free delivery to this Institute. If quoted for Ex-Godown delivery charges be indicated separately.
6. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges and collected back at the supplier's expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications
7. Sales Tax/General Taxes/ED if applicable and such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to Non-Government Educational Institutions run with no profit motive for which a concession is given. Sales Tax Certificate will be issued at the time of final settlement of the bill.
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
11. The Guarantee period of the item may be indicated clearly.
12. No Advance payment will be made for Indigenous purchase. However 90% Payment against Delivery and 10% after installation are agreed to wherever the installation is involved. In case of import supplies the payment will be made only through 100% Letter of Credit i.e. (90% payment will be released against shipping documents and 10% after successful installation wherever the installation is being done). (IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty and GST for 5%. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
13. **Acceptance and Rejection**:- I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.
14. **All tender amendments will be uploaded on the website only**. Bidders should keep themselves updated & conditions mentioned in the specification needs to be strictly followed

Tenders to be addressed to : The project co-ordinator,NTPWC, room no.606, 6th floor new academic complex, IIT Madras, chennai- 600036

TENDER SPECIFICATION OF FPGA BASED REALTIME EMBEDDED CONTROLLER

1. The Scope of the supply

Supply of the two numbers of FPGA based Real time embedded controller and suitable accessories.

2. Requirements

The FPGA based real time embedded controllers are required to monitor the any type of environmental parameters of the ports waterways.

3. Technical Specification

Sl.no	Parameter	Description/Range
1	Type of the controller	Field Programable Gate Array based Real time embedded controller
2	Quantity	2 no's
3	No of slots at chassis	Eight
4	Programming modes	<ul style="list-style-type: none"> · Scan mode · FPGA mode
5	Connectivity	<ol style="list-style-type: none"> 1. USB 2.0 port 2. Ethernet port 3. Serial port RS 232/RS 485
6	Ability to program	<ul style="list-style-type: none"> • LabVIEW (required), • Embedded C (optional)
7	FPGA resolution	< 200 ppm
8	Real time controller	1.33 GHz dual core, Intel Atom
9	Hard drive memory	8 GB or more
10	RAM	2 GB,DDR3 or better
11	Software and driver	To install in PC for hardware configuration and parameter settings
12	Status indication	LED
13	Additional features	<ol style="list-style-type: none"> 1. Able to accommodate C series NI DAQ modules for sensor integration. 2. Able to interface with common sensors 3. Network connectivity
14	Auxiliary Voltage	9-36V DC
15	Auxiliary power consumption, Max	50 W
16	Working Temperature	<50°C

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17	Operating vibration	
	Random	IEC 60068-2-64
	Sinusoidal	IEC 60068-2-6
18	Operating shock	IEC 60068-2-27
19	Ingress protection	IP 20
20	Humidity	<95% RH
21	EMC	· IEC 61326-1
22	Safety	· IEC 61010-1/UL61010-1
23	Warranty/Hardware service pack	Three Year

4. Eligibility

The bidder must have a strong presence of at least ten years in the Indian market and Should have supplied similar type of equipment to a govt agency

5. General

Items to be supplied along with calibration/test certificate.

6. Specification test

Specification of all items to be ensured by IITM before acceptance of the same.

7. Training

Hands on training to be provided to get operating knowledge of the items.

8. Dispatch

All items should be properly packed in the suitable box and it should be dispatched to NTCPWC, IITM, Chennai 36

9. Delivery

Items should be supplied within 8-12 weeks from the date of receipt of purchase order.

10. Validity

The offer should be valid for 90 days.