Indian Institute of Technology Delhi
Electrical Engineering Department

18-02-2014

Sub: NIQ for Target Machine for Real-time Simulation and Control using xPC Target

On behalf of a duly constituted purchase committee, quotations are invited for a 'Target Machine for Real-time Simulation and Control using xPC Target', with the following particulars. Sealed quotations are to be submitted as per following technical specifications (not inferior than those specified below) and Terms & Conditions.

Target Machine Processor and Mainboard:

1. Ruggedized chassis with industrial mainboard
2. Intel Core 2 Duo 2.23 GHz CPU
3. 2048MB RAM
4. 1024MB industrial-grade CompactFlash device
5. Two On-board Gigabit Ethernet controllers
6. Two PCI slots for I/O modules
7. Two RS232 Serial Port
8. Two USB 2.0 ports
9. Power Supply: 24VDC, 240V/50Hz with 50W power adapter

I/O Module:

10. 32 single-ended or 16 differential analog input (software selectable)
11. 4 analog output (single ended), range: -10 to 10 volts
12. 8 digital TTL input
13. 8 digital TTL output channels (16-bit)

Multi-purpose FPGA-based I/O module:

14. 64 TTL I/O lines and Xilinx Virtex-II chip with 7k logic cells
15. FPGA bitstream for xPC Target for R2012a
16. 3x PWM (pulse train generation).
17. 3 x CAP (capture).
18. 3 x QAD (quadrature decoding of incremental encoder sensors).
19. 1 x INT (interrupt).
20. 1 x Negation
21. Suitable Matlab/Simulink driver blocksets

Software

22. RTOS: xPC Target kernel, preinstalled on CompactFash Drive
23. Driver software for xPC Target
24. For Host PC - Utilities for kernel transfer, I/O drivers and Simulink test models
25. Support for hardware-in-the-loop simulations

Accessories

26. I/O cables and associated connectors
27. Breakout/terminal board with 64 terminals
28. DVI-I to VGA adapter
29. USB memory stick

Terms & Conditions: In addition to the general terms and conditions for purchase as stipulated by IIT

Delhi, the following should be agreed to by the supplier,

- TECHNICAL and FINANCIAL bids are to be provided in separate sealed envelopes. Mark the two envelopes clearly as “Technical Bid” and “Financial Bid”. Both the sealed envelopes should be sent in a single sealed envelope, clearly marked as “Target Machine for Real-time Simulation and Control using xPC Target.”

- A compliance statement of specifications must be enclosed along with the technical bid. This has to be in the form of a table (A template for this table is given at the end of this NIQ). Rows of the table must correspond to the technical specifications listed above (in exactly the same order). Against each row in the next column, it must be stated what the exact specifications of the quoted item are. The following column should clearly state whether the quoted item is compliant or not (Indicate either a “Yes” or a “No”). This answer must be justified in another column, with a reference stating the location (page number/ paragraph number/ line number) in official brochure or other technical literature. Remarks, if any may be required, can be stated in another column. This statement must be officially signed. Absence of such a statement or ambiguous/ incorrect/ inconsistent information provided will result in automatic disqualification of the quote from the purchase process.

- Complete set of manuals for the operation of the equipment should be given. All circuit diagrams, other mechanical and electrical schematics must be provided to main unit, sub systems and accessories.

- Please quote prices at FOB/ CIF New Delhi, inclusive of installation charges.

- Quote should be valid for at least three months.

- Clearly indicate the tax component of the prices quoted. If prices are inclusive of tax, please mention.

- Payment will be made on the basis of an invoice after delivery and satisfactory installation.

- Three years comprehensive on-site warranty (Parts and labour) required. Extended warranty may be quoted separately.

- Indicate if a special discount/ rebate, wherever admissible, is provided in view of the fact that the supplies are being purchased for academic purposes in a Public Institution of national importance.

- If the items quoted are proprietary in nature, please enclose proprietary certificate from the principals stating “Certified that -------- is a proprietary item of M/s and no other manufacturer makes these items”.

- Should a purchase order be placed, the delivery and installation should be complete as soon as possible. State the schedule of delivery and installation.

- The equipment should be delivered and installed by the supplier as part of the supply process in the Department of Electrical Engineering, IIT Delhi.

- In case of service related orders the vendor authorizes IIT Delhi to deduct the service tax at prevalent rates while releasing payment.

- If the quote is being submitted by the representative of the Principals/ manufacturers themselves, a valid Agency ship/ Dealership Certificate authorizing the agent to quote to IIT Delhi on behalf of Principals should be enclosed.

- If the bidder is Indian agent, the agency certificate should be enclosed.

- The Institute/Purchase Committee has the right to accept/reject any/all bid/quotations without assigning any reasons whatsoever.

Sealed quotation should be addressed to Dr. Shubhendu Bhasin and can be submitted at Control Lab (Block II-214) - IIT Delhi, latest by 11 AM on 05.03.2014.

Technical Compliant Sheet

S. No.	Technical Spec	Exact Spec of quoted item	Compliant (Yes/no)	Reference	Remarks
1	Ruggedized chassis with industrial mainboard				
2	Intel Core 2 Duo 2.23 GHz CPU				
3	2048MB RAM				
4	1024MB industrial-grade CompactFlash device				
5	Two On-board Gigabit Ethernet controllers				
6	Two PCI slots for I/O modules				
7	Two RS232 Serial Port				
8	Two USB 2.0 ports				
9	Power Supply: 24VDC, 240V/50Hz with 50W power adapter				
10	32 single-ended or 16 differential analog input (software selectable)				
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12	8 digital TTL input				
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14	64 TTL I/O lines and Xilinx Virtex-II chip with 7k logic cells				
15	FPGA bitstream for xPC Target for R2012a				
16	3x PWM (pulse train generation).				
17	3 x CAP (capture).				
18	3 x QAD (quadrature				

	decoding of incremental encoder sensors).				
19	1 x INT (interrupt).				
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21	Suitable Matlab/Simulink driver blocksets				
22	RTOS: xPC Target kernel, preinstalled on CompactFash Drive				
23	Driver software for xPC Target				
24	For Host PC - Utilities for kernel transfer, I/O drivers and Simulink test models				
25	Support for hardware-in-the-loop simulations				
26	I/O cables and associated connectors				
27	Breakout/terminal board with 64 terminals				
28	DVI-I to VGA adapter				
29	USB memory stick				