## NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR Silchar - 788 010 (ASSAM)

No: NITS-PS-496-ECE-Equip-Microprocessor Lab-17 Date: 21/11/2017

### NOTICE INVITING TENDER

FOR SUPPLY AND INSTALLATION OF EQUIPMENT OF MICROPROCESSOR LAB FOR ECE DEPARTMENT AT NIT SILCHAR



LAST DATE & TIME OF SUBMISSION

26/12/2017 up-to 01.00 PM

DATE & TIME OF OPENING

26 / 12/2017 at 03.30 PM



### NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR - 788 010

Tel.No. Director: (03842) 224879

Fax: (03842) 224797

### NOTICE INVITING TENDER

Adv. No: NITS-PS-496-ECE-Equip-Microprocessor Lab -17

Sealed Tender/Quotations are invited from reputed Firms/Agencies/Manufacturer/Authorized Dealer FOR SUPPLY AND INSTALLATION OF EQUIPMENT OF MICROPROCESSOR LAB FOR ECE DEPARTMENT AT NIT SILCHAR along with Earnest Money Deposit (EMD) @2% of the total bid value in the form of Demand Draft/Bank Guarantee in favour of "The Director, NIT, Silchar", Payable at Silchar. No Interest shall be paid on EMD.

Detail specification of the item/items is given in (Annexure - A).

Tender documents can be obtained from Purchase Section, NIT Silchar or may be downloaded from our website <a href="www.nits.ac.in">www.nits.ac.in</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a>. The cost of tender document is Rs.5,00/-(Non-refundable) to be submitted in cash or in the form of DD in favour of The Director, NIT Silchar, Payable at Silchar. The last date and time for submission of Tender document will be 26/12/2017 upto 01.00PM and tender will be opened on the same date at 03.30 PM in office of HOD, ECE Dept., NIT SILCHAR.

The offers without Cost of Tender & Earnest Money Deposit (EMD) shall be out rightly rejected.

Director, NIT Silchar reserves the right to extend the date, or cancel the tender, accept or reject any/all quotations or not to purchase all or any of the items.

Quotations are to be sent/submitted in sealed covers addressed to:-

The Faculty-In-Charge, Purchase National Institute of Technology, Silchar 788 010 (Assam)

REGISTRAR, NIT SILCHAR

#### NOTICE INVITING TENDER

### Credential Criteria:

- The bidder should have provided similar nature of services to IITs/NITs/Govt. Departments/Semi Govt.
  Departments/PSU/Educational Institutions of National Importance etc. during last 3(three) years. Duly certified copies are to be enclosed.
- Quotations are to be submitted in TWO PARTS i.e. (a) Technical Bid and (b) Price Bid, in two separate properly sealed covers; and both these covers will have to be again put in to a single sealed cover. Also, the address of the firm submitting the quotation must appear distinctly on both the inner sealed covers, indicating also TECHNICAL BID / PRICE BID as may be applicable. The outer most cover shall be super scribed as

0	"QUOTATION FOR SUPPLY & INSTALLATION OF		FOR
	NI	T SILCHAR.	
0	VIDE TENDER REF NO NITS/PS-	, DATED	DATE OF

[The bid will summarily be rejected & returned to the bidder if the sealed envelope containing the quotation is not super scribed as above].

- Genuine Pricing (Both foreign & indigenous): Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold recently, particularly to IIT/Institutes and other Government Organization.
- No Part Delivery: Part shipment for any items will not be allowed.
- Any Optional item quoted by the supplier will not be entertained.
- o Termination for default: Default is said to have occurred -
- o If the supplier fails to deliver any or all of the items/services within the time period(s) specified in the purchase order or any extension thereof granted by NIT Silchar, the Institute may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable.

### TERMS & CONDITIONS:

- 1. The bidding agency should be reputed firm and having all necessary certificates, viz. GST registration certificate, PAN, Registration, Sale Tax clearance Certificate, Authorized Dealership/Distributorship certificate, etc. The photocopies of all the certificates should be attached with the tender.
- The firm should be an original equipment manufacturer (OEM) in the business of manufacture or supply
  of equipment for minimum 5 (five) years. The firm should submit audited financial statements for latest
  three financial years in support of this claim.
- 3. The items being quoted should be of Original Manufacturer and no non-standard item should be quoted. All detailed specifications with make & model no. of the items accompanied by proper leaflets should be clearly mentioned and attached with the offer. In case of proprietary or patented item, necessary certificates in support of the same should be attached. The bidder must submit the Compliance Statement and Deviation Statement of technical specification.
- 4. The firm should have satisfactorily manufactured and supplied equipment, as requisitioned in this tender, to IITs/NITs/Govt. Departments/Semi Govt. Departments/PSU/Educational Institutions of National Importance etc. during the last three years ending the last day of March 2017.
- 5. The rate quoted must be both in words and figures and F.O.R. / Destination National Institute of Technology, Silchar inclusive of packing, forwarding etc. Octroi, surcharge, insurance, Installation and any other charges. Educational discount, if any should be indicated clearly. Tenderer(s) may note that the Government of India exempts this Institute from paying custom duty/excise duty on selected items. Necessary documents will be furnished if required on demand by the Tenderer(s). Rate quoted for any other destination shall not be accepted.

- 6. Quoted rate should be inclusive of all taxes. Nothing extra will be paid by the Institution.
- Payment: Payment shall be made only after receipt and installation of the materials/articles in good and
  working conditions as per specifications and after satisfactory installation and commissioning of the
  equipment/machinery/accessories by the department.
- 8. Manufacturer's/Company's name, it's trademark should be mentioned in the Tender and illustrative leaflets giving technical particulars, etc. should be attached in the tender.
- 9. Tenderer(s) registered with the State/Central Government must quote his registration numbers, if any, and submit a Xerox copy of registration along with the tender.
- 10. Guarantee/Warranty period offered for the tendered item is to be clearly specified.
- 11. The rates to be quoted by the agency should be valid for a period of 6(six) months after the deadline date specified in the tender.
- The quantity against each item mentioned in the tender may vary according to the actual requirements at the time of placing Purchase Order.
- 13. All the items should be supplied by a single vendor.
- 14. Complete user manuals along with documentation for typical experiments should be provided.
- 15. Each bidder should clearly specify that the bidder agrees to abide by the conditions of this tender document on their printed letter head duly sealed & signed by an authorized person.

#### 16. Bid Price

- a) The contract shall be for the full quantity as described above. Corrections, if, shall be made by crossing out, initialing dating and rewriting.
- b) The bidder should quote the total price for each item inclusive of packing and forwarding, all duties, levies, insurance, installation, any other charges, etc. Only taxes & (discount if any) should be mentioned separately.
- c) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 17. Each bidder shall submit only one quotation.
- 18. All necessary documents shall be furnished along with the bid.
- 19. Validity of Tenders/Quotations: Tenders/Quotations shall remain valid for a period not less than 6 (six) months after the deadline date specified for submission of tender.

### 20. Packing

- a) The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall have to be taken into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- b) The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements.

#### 21. Evaluation of Quotations:

NIT Silchar will evaluate and compare the quotations determined to be substantially responsive i.e. which

- a) are properly signed
- b) Conform to the terms and conditions, and specifications.

#### 22. Award of contract:

- NIT Silchar will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
- a) The bidder whose bid is accepted will be notified of the award of contract by the NIT Silchar prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
- b) Normal commercial warranty/guarantee shall be applicable to the supplied goods.
- c) The goods (both indigenous & imported) should be insured against theft, loss or breakage during transit till destination.
- Upon delivery of goods, the supplier shall submit Suppliers Invoice, Insurance certificate, Warranty Certificate, or any other document.
- 23. Acknowledgement of the Purchase Order: The supplier shall give an acknowledgement of the Purchase Order within 15 days of the date of the Purchase Order. In case, the supplier fails to acknowledge the Purchase Order within the stipulated time, the Institute is at liberty to cancel the Purchase Order.
- 24. No alternations in tender forms shall be made by the bidder and if any such alteration is made, the tender is liable to be rejected.
  - a) Delivery Schedule and Penalty for Delay: Delivery of equipment should be made within 30days /as per Purchase Order from the date of issue of Purchase Order. Penalty at the rate of 0.5% or part thereof of the order value per week, subject to a maximum of 2.5% will be imposed for delayed delivery and installation.
- 25. Demurrages and penalty, if any, paid by the supplier shall not be borne by the Institute.
- 26. The tenders submitted shall clearly mention the name of the firm/person in whose favour the purchase order is to be placed.
- 27. Contact details of the person for all post sales/installation maintenance support should clearly be given with Name & Designation, Phone No, Fax No, Mobile, E-mail and official address.
- 28. National Institute of Technology Silchar is not liable for non-receipt of the tender forms in time due to wrong address/ any delivery delay of the mail service provider/ force majeure. Tender documents received after the last date and time for receiving tenders will be summarily rejected.
- 29. Successful bidder shall give a performance security @5% of the total order value in the form of Bank Guarantee. The performance security shall be furnished after the order for supply is placed and before the final payment. Validity of the Performance Security shall cover the warranty period.
  - The proceeds of the Performance Security shall be payable to the purchaser as compensation for any loss resulting from the suppliers failure to complete its obligations under the contract.
- 30. All legal disputes shall be under the jurisdiction of the Silchar Courts of Cachar District in the state of Assam.

Registrar, NIT Silchar

### **DECLARATION**

I / We hereby declare that no case is pending with the police/ court against the proprietor/ firm/
partner or the company (Agency). Also I /We have not been suspended / blacklisted by any PSU / Government
Department / Financial Institution / Court.

(Signature & seal of the contractor)

Place:

## NO DEVIATION CERTIFICATE

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions of the	nis
tender and we do not have any deviation to this tender enquiry. We hereby undertake and confirm that v	ve
have understood the scope of work properly and shall be carried out as mentioned in this tender enquiry.	

(Signature &	seal	of the	contractor
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Place:

### **BIDDERS DETAILS**

Name of the Contractor /Party/ Firm	:	
Name of Authorized Representative	1	
Phone Nos.	:	
Mobile Nos.	ŧ	
Fax No.	÷	
E-Mail Address	:	
Web Site Address ( If Any)	;	
		(Signature & seal of the contractor)
		(Signature & Sear of the contractor)

Place:

## **TECHNO-COMMERCIAL BID**

QTY.

Taxes in %

Rate per

**Total Amount in** 

NAME OF THE WORK: Supply and Installation of ...... at NIT Silchar

TENDER NO.: NITS/PS-...., Dtd...., LOS: ....., LOS:

Name of item with Specification,

SI.

No.	Make & Model	QIY.	Unit in		
			7		
				Total Amount	
			DI	raxes (if any)	
			Other C	harges (if any)	
				Total Amount	
(AMOUNT IN	WORDS)				

## **CHECK-LIST (TECHNICAL BID)**

### SUMMARY OF COMPLIANCE TO REQUIREMENT OF TENDER

SI. No.	Description of Requirement	Yes / No / NA	Page No.
1.	Tender Cost Rs.500/- (Non-refundable) in the form of Demand Draft in favour of "Director, NIT Silchar" in a separate envelope		
2.	EMD @2% of total bid value in the form of Demand Draft /Bank Guarantee in favour of "Director, NIT Silchar" in a separate envelope		
3.	Copy of Manufacturer/ Authorized Supplier Certificate		
4.	Audited financial statement for the last 3 years		
5.	Copy of the PAN card.		
6.	Copy of GST registration certificate		
7.	Copies of previous work order of similar work with completion certificate (if any)		
8.	Declaration certificate		
9.	No Deviation certificate		
10.	Bidder's details		
11.	Technical Specification		
12.	NSIC/SSI Certificate where applicable		
13.	All the pages of tender document have been signed		
14.	Price bid in separate sealed envelope.		
15.	Complete copy of Techno Commercial Bid submit along with the Price Bid.		

(Signature	&	seal	of	the	con	tracto	r)
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PI	a	C	e	:

## TECHNICAL SPECIFICATION OF ITEMS AND REQUIRED QUQNTITY :-

SI. No.	Product Description
1	8085 Microprocessor Kit (Qty.: 20 Nos.)
	<ul> <li>It should operates on SINGLE +5V power supply in on board keypad mode or from host PC through RS-232-C interface.</li> </ul>
	<ul> <li>In both stand alone and serial modes, user can enter programs, run them at full speed and debug them through breakpoint and single step facilities.</li> </ul>
	It should allow program editing through INSERT, DELETE and BLOCK MOVE commands.
	<ul> <li>It should allow direct read/write from/to a specified I/O port through IN BYTE and OUT BYTE commands.</li> </ul>
	<ul> <li>It should have four on board ribbon cable connectors for easy expansion and two user defined function keys.</li> </ul>
	On board battery backup for RAM.
	<ul> <li>It should be compatible with many interface modules like 8 Channel 12 Bit ADC Interface with MUX, Elevator Interface, Stepper Motor Interface with Stepper Motor (3Kgcm) &amp; Power Adapter, 6-digit, 7-Segment Display with Calculator KBD Interface, Traffic Lights Interface, 4-Digit, 7-Segment LED Display Interface etc.</li> </ul>
	It should have built in Text editor, Assembler and Disassembler facilities in serial mode.
	It should operate at 3.072 MHz.
	MEMORY: Three 28 pin JEDEC sockets offer 64K Bytes of memory as in the following configuration.
	ROM: 16K Bytes of monitor program in 27128 EPROM.
	ROM / RAM: 16K Bytes user expansion using any EPROM/SRAM.
	RAM: 32K Bytes supplied using 62256 CMOS static RAM with battery backup.
	8255: (Two Nos) One 8255 to give 24 programmable I/O lines. User can have 48 I/O lines by populating an additional 8255 in expansion socket.
	8253: 3 programmable interval timers - Timer 0 is used for implementing single step facility, Timer     1 is used for generating baud clock and Timer 2 is available to the user.
	8251: For serial communication. Supports all standard bauds from 110 to 19200.
	<ul> <li>8279: To Control 32 keys keyboard and 6-digit, half-inch size, seven segment LED display. Bus Expansion: Fully de-multiplexed and buffered TTL compatible bus signals brought out through two 26 pin ribbon cable connectors for expansion.</li> </ul>
	<ul> <li>Parallel I/O: 48 TTL compatible lines (2x8255) brought out through two 26 pin ribbon cable connectors.</li> </ul>
	Serial I/O : RS-232-C serial interface signals through on board 9 pin D type female connector
2	8086 Microprocessor Trainer Kit : (Qty.: 10 Nos.)
	<ul> <li>It should have on-board provision to interface optional LCD &amp; PC keyboard.</li> </ul>
	<ul> <li>It should have a powerful, general purpose microprocessor trainer which can be operated either with 8086 CPU or 8088 CPU with a clock frequency of 8MHz in maximum mode.</li> </ul>
	<ul> <li>It should be versatile and can be configured in a variety of ways via jumper options, to suit specific user requirements.</li> </ul>

- The basic system can be easily expanded through the system bus connectors.
- · User can have full 1MBytes of addressable memory.
- 128K Bytes of powerful system firmware provides keyboard monitor, serial monitor, single-line assembler, disassembler and driver programs for parallel printer interface.
- The software for the optional PROM programmer interface is also included in the firmware.
- It should be compatible with many interface modules like 8 Channel 12 Bit ADC Interface with MUX, Elevator Interface, Stepper Motor Interface with Stepper Motor (3Kgcm) & Power Adapter, 6-digit, 7-Segment Display with Calculator KBD Interface, Traffic Lights Interface, 4-Digit, 7-Segment LED Display Interface etc.
- Driver software for file upload / download to / from host PC.
- Provision for system bus expansion through FRC.
- Provision for on-board 8087 NDP
- 6 JEDEC 32 pin sockets provide the following memory configuration :

ROM: 256K bytes (128K X 2) system firmware using 27C010

RAM: 256K bytes using 628128 (128K X 2) upgradable to 512K bytes using 628512 (256K X 2)

Peripherals like 8255, 8253, 2681, 8042, 8259A, 8288, 8254, AD 1674, DAC 0800 should be there

### 3 <u>8051 BOARD</u>: (Qty.: 10 Nos.)

Target board 8051 with MCU

- 24 MHZ Clock frequency
- 64KB RAM
- 64 KB ROM
- · One USB and one RS232 port
- · LED with demonstration/example programs
- Boards should be supplied with schematic diagrams, necessary cables, power supplies etc.
- It should be possible to expand these boards with additional hardware like 8 Channel 12 Bit ADC Interface with MUX, Elevator Interface, Stepper Motor Interface with Stepper Motor (3Kgcm) & Power Adapter, 6-digit, 7-Segment Display with Calculator KBD Interface, Traffic Lights Interface, 4-Digit, 7-Segment LED Display Interface etc. Target board should be compatible with industry leading IDE/Software.

# 4 Professional Developer's Kit for the 8051 microcontroller family supports (25-user Classroom floating License)

- Software: Professional Developer's Kit, 25-user Classroom (floating) License
- Device support: All 8051 variants including extended devices up to 16MB
- · Code efficient compilers and assembler
- Project Management tools
- Support for third-party tools like emulators, target boards etc.
- Complete Device support including peripheral simulation
- Code banking support for extended memory for 8051 controllers
- · 32-bit IEEE floating point support
- · Optional-Syntax checking and detailed warning
- Royalty free configurable Real-time kernel for 8051 compilers
- Source level debugger with complex break-points
- Code optimization tools- Performance Analyzer/Code coverage tools
- Debugger with cycle accurate Simulation and target support
- Peripheral simulation to include CAN, I2C, SPI, UART, A/D, D/A
- Configurable Monitor software to be provided
- Configurable in-system debugger software
- Code optimization libraries to suite specific controllers
- · Profiler to record execution of the program

### 5 EXPANDABLE INTERFACE MODULES

- (i) 8 Channel 12 Bit ADC Interface with MUX (10 Nos)
- (ii) Elevator Interface (10 Nos)
- (iii) Stepper Motor Interface with Stepper Motor (3Kgcm) & Power Adapter (10 Nos)
- (iv) 6-digit, 7-Segment Display with Calculator KBD Interface (10 Nos)
- (v) Traffic Lights Interface (10 Nos)
- (vi) 4-Digit, 7-Segment LED Display Interface (10 Nos)

#### Note:

- 8051 Evaluation Board, 8085 & 8086/88 Trainer Kits should be supported by these various kind of interface modules i.e. 5(i) to 5(vi).
- FRC cables connectors should be supplied
- All interface modules should be covered with protective boxes as they are for training purpose
- · Example programs should be supplied compatible with popular IDE's.
- Complete documentation including schematic diagrams and interface details should be provided