# **Department of Mechanical Engineering Indian Institute of Technology**

Hauz Khas, New Delhi-110 016

## **NOTICE INVITING QUOTATIONS**

Dated: 26 Dec 2013

Tender No:

Subject: Purchase of Embedded Electronic Kits

#### **Invitation for Tender Offers**

Indian Institute of Technology Delhi invites sealed tender offers in two bid format (Technical bid and Commercial bid) from eligible and experienced OEM (Original Equipment Manufacturer) OR OEM Authorized Dealer for **Supply of Embedded Electronic Kits** with one years on site comprehensive warranty from the date of receipt of the material as per terms & conditions specified in the tender document

The quotation should reach to <u>Dr. Sunil Jha</u>, Room 156 Block III Dept. Of Mechanical Engineering IIT Delhi, Hauz Khas, New Delhi – 110016 latest by 5:00 P.M. on 10<sup>th</sup> Jan 2014.

#### **TECHNICAL SPECIFICATIONS:**

S.No.	Items		Qty
1.	ARM C	ortex-M3 32-bit RISC core Microcontroller Development	10 nos.
	kit with JTAG Debugger and following specifications:		
	a.	72 MHz STM32F103RB ARM Cortex <sup>TM</sup> -M3 processor-	
		based MCU in 64-pin LQFP	
	b.	On-Chip Memory: 128KB Flash & 20KB RAM	
	c.	USB 2.0 Full Speed Device Interface	
	d.	CAN and UART interfaces	
	e.	I2C, SPI and GPIO via PCB headers	
	f.	Character LCD (16x2)	
	g.	Analog Voltage Control for ADC Input	
	h.	8 LEDs and 3 push-buttons	
	i.	Power via USB connector	
	j.	Debug Interface Connectors	
	k. JTAG debugger should include all major IDE built in direct		
		support, support unlimited breakpoints in flash memory,	
		support 800 KByte/sec download speed into RAM, include	
		support for GDB server, and support JTAG speed up to	
		12MHz	

2.	ARM Cortex-M3 32-bit RISC core Microcontroller Development	5 nos.
	kit with JTAG Debugger and following specifications:	<i>5</i> 1105.
	a. 72MHz STM32F107VC ARM Cortex <sup>TM</sup> -M3 processor-	
	based MCU in 100-pin LQFP	
	b. On-Chip Memory: 256KB Flash & 64KB RAM	
	c. External Memory: 8KB I2C Flash	
	d. Color QVGA TFT LCD with touch screen	
	e. 10/100 Ethernet Port	
	The state of the s	
	g. 2 CAN Interfaces h. Serial/UART Port	
	i. Micro SD Card Interface	
	<ul><li>j. 5-position Joystick and push-button</li><li>k. 3-axis Motion sensor / Accelerometer</li></ul>	
	$\mathcal{E}$	
	m. Audio CODEC with Line-In/Out and Speaker	
	n. 80 GPIO pins	
	o. Debug Interface Connectors	
	p. JTAG debugger should include all major IDE built in direct	
	support, support unlimited breakpoints in flash memory,	
	support 800 KByte/sec download speed into RAM, include	
	support for GDB server, and support JTAG speed up to	
	12MHz	2 Nos.
3.	DRV8412 evaluation kit (DRV8412-C2-KIT) includes everything	
	needed to control two brushed DC or a single stepper motor	
	i) the DRV8412 motor driver,	
	ii) a C2000 Piccolo F28035 MCU controlCARD,	
	iii) getting started GUI, software, code development	
	environment, and motors	10.77
4.	Digital IC Trainer Kits with Following Features:	10 Nos.
	a. Power Supplies: $+5V/1A$ , $\pm 12V/500$ mA, Ripple Less than 1mV,	
	Regulation Less than 0.1%	
	b. Protection against Load and short circuit	
	c. BCD to Seven Segment Decoder - 2 Segments	
	d. TTL Clocks - 1Hz to 1MHz	
	e. Indication of output - Single/Dual colour High intensity LED	
	f. Monopulse - High &Low	
	g. IC Sockets - Four 16 Pin ZIF Sockets	
	h. Solder less Bread board	
	i. Logic I/P and O/P - 12 No's	
	j. Dimension of Terminals- 2mm Sockets	
	k. Manual - One Set	
	i) Patch cords - One set of 10 No's	1 Set
5.	Interface Modules for ARM 7 Microcontroller Development kits	
	(S.No. 1 & 2)	
	a. LCD (16X2) Interface. (5 nos.)	
	b. Stepper Motor Interface with Stepper Motor (3kgcm) & Power	
	Adapter. (2 nos.)	
ĺ	c. Traffic Lights Interface. (5 nos.)	

- d. Seven segment Display. (10 nos.)
- e. Elevator Interface. (5 nos.)
- f. DC Motor Interface. (2 nos.)
- g. Keyboard Display Interface. (5 nos.)
- h. DAC for ADC and Temperature sensor Interface. (5 nos.)
- i. Real Time Clock Interface. (5 nos.)
- j. Logic controller Interface. (10 nos.)
- k. 16 Channel 8-bit ADC Interface. (5 nos.)
- 1. Opto Isolated Input Interface. (5 nos.)
- m. Opto Isolated Output Interface. (5 nos.)
- n. Relay Output Interface. (5 nos.)
- o. Temperature Transducer (RTD) Interface. (5 nos.)

#### **Terms & Conditions**

- 1. IIT Delhi is exempted from paying custom duty under notification No.51/96 (partially or fully) and necessary "Custom Duty Exemption Certificate" can be issued after providing following information.
  - a. Shipping details i.e. Master Airway Bill No. and House Airway No. (if exists)
  - b. Forwarder details i.e. Name, Contact No., etc.

Custom Duty Exemption Certificate will be issued to the shipment in the name of the Institute and Bills of Entry should be submitted to IIT Delhi later on.

- 2. Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- 3. If the bidder is an authorized dealer of any manufacturer, the authorized Indian dealership certificate from the principles should be enclosed. Similarly, proprietary certificate for proprietary items should be provided.
- 4. IIT Delhi is exempted from paying Excise Duty and necessary Excise Duty Exemption Certificate will be provided for which following information are required
  - a. Quotation with details of Basic Price, Rate & Amount on which ED is applicable.
- 5. Please quote prices of imported items at FOB (Freight on Board) IIT Delhi inclusive of all taxes, freight, delivery, installation and onsite training charges. The quotation should provide the total price of the system including all taxes and transportation charges.
- 6. In case IIT Delhi is imposed with demurrage charge due to import on CIF, the entire demurrage charge has to be borne by the Indian Agent of foreign supplier.

- 7. Three years comprehensive warranty be provided and AMC price beyond 3 years should be mentioned separately.
- 8. Payment Options (any one to be chosen by the Department/ center)

Letter of Credit: 90% payment against shipping documents & balance 10% after satisfactory installation. For large purchase i.e. costing over Rs. 1 crore, 100% payment be made through LC.

Sight Draft: Payment against documents through bank.

Against Delivery: Payment by wire transfer after receipt of material.

Advance payment: pre-payment by wire transfer (for orders less than Rs. 5 lakh)

- 9. Delivery period: within 1 month from the issue of supply order.
- 10. The quotations must have validity of at least three months.
- 11. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated clearly.
- 12. In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.
- 13. If the delivery is not made within the due date for any reason, the Committee will have the right to impose penalty 1% per week and the maximum deduction is 10% of the contract value / price.
- 14. Compliancy certificate must be provided indicating conformity to the technical specifications.
- 15. Authority of IIT Delhi reserves the right to reject any or all quotations without assigning any reasons.

(Dr. Sunil Jha)

# **ANNEXURE-I**

# **Sub.**: Compliance Report against supply of ......

S1.	Details	
No.		No
1.	We have gone through the terms & conditions of the tender document	
2.	Our organization or any of its subsidiaries have not been blacklisted by	
	any Govt. / Autonomous bodies / Universities / Govt. Institutes.	
3.	The quoted price is valid for 3 months from the last date of submission	
4.	Income Tax Certificate attached*	
5.	VAT & TIN number copy attached*	
6.	Service Tax & Sales Tax Registration Certificate attached*	
7.	A detailed list showing number of items supplied by our company in last	
	six months to various Government Organizations/ Institutions/ IITs / NITs with their full address, name of the contact person, fax number,	
	mobile number, telephone Nos. and E-mail identity is attached.*	

	(Signature of authorized person)
Name:	
	Seal of the company
	Date

### **ANNEXURE-II**

#### **DECLARATION**

<u> </u>	THUTTOT!					
this tender specification are true ar have gone through the specification	hereby certify, that all the information and data furnished by me with regard to this tender specification are true and complete to the best of my knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.					
2. I, further certify, that I am the d mentioned tenderer.	,					
3. I, further certify that my company I laid down to take part in the tender.	meets all the conditions of eligibility criteria					
Listed or put to any Holiday by an	I, further specifically certify that my company has not been Black Listed/De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking in the last three years.					
Name of Tendering Company/ Firm/ Agency (Attach certificates of registration)						
Name of proprietor/Director of Company/Firm/Agency						
Full Address of Office with Telephone No. and FAX						
E-Mail						
PAN No. (Attach attested copy)						
Service Tax & Sales Tax Registration No. (Attach attested copy) Contact Person Name						
Mobile Number						
	(Signature of authorized person) Name:					
	Seal of the company					
	Date					