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**DEPARTMENT OF ENGINEERING DESIGN
INDIAN INSTITUTE OF TECHNOLOGY MADRAS**

**SETTING UP OF INCUBATION CENTRE FOR AUTOMATION,
INSTRUMENTATION AND AUTOMOBILE**

**PROCUREMENT OF GOODS
UNDER
NATIONAL SHOPPING PROCEDURES**

**Quotation Enquiry No: ED/14-15/AUTOMOBILE/02
2014-2015**

Date 02/07/2014

**Last date & Time of Submission: 24/07/2014, up to 2.30 P. M.
Date & Time of Opening: 24/07/2014, at 3.00 P. M.**

**INVITATION FOR QUOTATIONS FOR SUPPLY OF
GOODS UNDER NATIONAL SHOPPING PROCEDURES**

Dear Sir/Madam,

Sub: INVITATION FOR QUOTATIONS FOR RAPID CONTROL PROTOTYPING SYSTEM: Quotation Enquiry No: ED/14-15/AUTOMOBILE/02 dated 02/07/2014.

1. You are invited to submit your most competitive quotation for the following goods:

Sr. No.	Brief Description of the Goods	Specifications	Qty	Delivery Period	Place of Delivery	Installation Requirement if any
1)	Rapid Control Prototyping System	As per Annexure-A	One	Within 8 Weeks	Department of Engineering Design, IIT Madras	Installation is required.

2. Government of India has received a credit from the International Development Association (IDA) in various currencies equivalent to US\$ _____ towards the cost of the _____ Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. **Bid Price**

- a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
- b) All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.
- c) Sales tax in connection with the sale shall be shown separately.
- d) 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.
- e) **The Prices shall be quoted in Indian Rupees only.**
- f) The warranty period should be **TWO** years. The annual maintenance cost (for **THREE** years following the expiry of the warranty period) for the equipment should also be included in the quote.

4. Each bidder shall submit only one quotation.

5. **Validity of Quotation**

Quotation shall remain valid for a period not less than 60 days after the deadline date specified for submission.

6. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive, i.e., which

- (a) are properly signed; and

- (b) conform to the terms and conditions, and specifications.

The Quotations would be evaluated separately for each item.

Annual Maintenance Cost for maintaining the equipment in the operating condition as per the specification for the period of **THREE** Years from the date of expiry of the Warranty period shall be added to the bid price for evaluation.

Sales tax in connection with sale of goods shall not be taken into account in evaluation.

7. **Award of contract**

The Purchaser 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.

- 7.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- 7.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
8. Payment shall be made immediately after delivery of the goods.
9. Normal commercial warranty/ guarantee of **24 months** shall be applicable to the supplied goods.
10. You are requested to provide your offer latest by 2.30 p.m. Indian Standard Time on 24 July 2014.
11. We look forward to receiving your quotations and thank you for your interest in this project. Please send the quotation to

The Project Coordinator
Department of Engineering Design
IIT Madras
Chennai 600036
Attention: Dr. C. S. Shankar Ram
Phone: +91-44-22574705
E-mail: shankarram@iitm.ac.in

1) **Liquidity damages :-**

The penalty clause also will be applicable in case of late delivery of Stores. The rate of liquidity damages shall be 0.5% per week and the maximum deduction is 10% of the contract.

2) **Performance Security**

1. Within 15 days after the Supplier's receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of 5% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations.
2. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
3. The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms:

(a) A Bank guarantee or irrevocable Letter of Credit, issued by a nationalized/scheduled bank located in India or a bank located abroad acceptable to the Purchaser, in the form provided in the bidding documents or another form acceptable to the Purchaser; or

(b) A cashier's check, certified check, or demand draft.

The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations.

3) **Authorisation from Manufacturer**

In the case of a Bidder offering to supply goods under the contract, which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in India.

4) **Proof of Manufacturing and past performance .**

Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past one year and details of current contracts in hand and other commitments.

Annexure-A

TECHNICAL SPECIFICATIONS

Specifications for RAPID CONTROL PROTOTYPING SYSTEM

The Department of Engineering Design, IIT Madras, is planning to purchase a rapid control prototyping system. The bidder/supplier should provide the complete hardware and software required for operating this equipment. The following specifications should be met by the bidder/supplier:

1. The objective of this purchase is to create a highly flexible real time control system that can be used for testing control algorithms related to automotive applications. The potential applications include the real time control of automotive brake, steering and suspension systems of heavy commercial road vehicles (such as trucks, buses and tractor-trailers). The system should also be flexible enough to permit its integration with other applications such as motor control.
2. The quote should include the cost of the hardware and associated software. It is expected that a commercially available real time dynamic simulation software for heavy commercial road vehicles (for example, TruckSim, TruckMaker, etc.) be available as part of the proposed system.
3. The test setup should support both teaching and research activities. That is, it should be possible to run well-designed pedagogical experiments for teaching, while it should be flexible enough to carry out research investigations.
4. The complete set of hardware with the necessary modules for integration with real equipment (with a minimum of 8 analog input channels, 8 analog output channels, 8 digital input channels and 8 digital output channels) should be provided.
5. The complete suite of software necessary for operating the system should be provided.
6. The hardware of an automotive steering, which can be interfaced with the proposed system, should be provided.
7. The department already has a completely instrumented heavy vehicle brake system hardware. The supplier should demonstrate the capability of the supplied equipment to interface with this brake system to facilitate brake control applications.
8. Detailed manuals (1 hard copy and soft copy) of all hardware and software components should be provided. These manuals must also contain details of experiments that can be performed.
9. The bidder/ supplier is responsible for the complete installation and demonstration of the equipment at IIT Madras. The quotation should also include the requirements (such as electrical connections, etc.) expected from IIT Madras towards installation.
10. The Department of Engineering Design would provide a desktop computer towards this setup. The quote should include the minimum expected configuration of this computer.