

## INVITATION FOR QUOTATION

TEQIP-II/2016/GJ1G07/Shopping/115/IC/

14-Jun-2016

To,

### Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	DATA ACQUISITION TRAINER	1	60	GOVERNMENT ENGINEERING COLLEGE, SECTOR-28, GANDHINAGAR. GUJARAT PIN- 382028	Satisfactory performance & Installation

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase II** 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. Quotation,
  - 3.1 The contract shall be for the full quantity as described above.
  - 3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
  - 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.

- 3.4 Applicable taxes shall be quoted separately for all items.
- 3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 3.6 The Prices should be quoted in Indian Rupees only.
4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **55** days after the last date of quotation submission.
6. Evaluation of Quotations,  
The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which
- 6.1 are properly signed ; and
- 6.2 confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together.
8. 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.
- 8.1 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.
- 8.2 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.
9. Payment shall be made in Indian Rupees as follows:  
**Delivery and Installation - 0% of total cost**  
**Satisfactory Acceptance - 100% of total cost**
10. All supplied items are under warranty of **36** months from the date of successful acceptance of items.
11. You are requested to provide your offer latest by **15:00** hours on **28-Jun-2016** .
12. Detailed specifications of the items are at Annexure I.

13. Training Clause (if any) **Training and demonstration should be provided as per the requirements after successful installation at the institute.**
14. Testing/Installation Clause (if any) **SUCCESSFUL INSTALLATION & SATISFACTORY PERFORMANCE.**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,  
Government Engineering College Nr. Animal Vaccine Institute Sector-28 Gandhinagar
17. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)  
Name & Designation

#### **Annexure I**

<b>Sr. No</b>	<b>Item Name</b>	<b>Specifications</b>
1	DATA ACQUISITION TRAINER	As per Annexure

## **Annexure**

**Data Acquisition system must include following features and functionality.**

**Educational Practice Board for ARM Cortex M3 LPC1768 or higher should contain following detailed specifications (Qty.-10):**

CPU operating speed 100 MHz or better

Minimum 32-bit floating point unit (on-chip)

Minimum SRAM-68 KB on-chip

Minimum 512 KB on-chip Flash memory

On board 20 pin JTAG emulation connector

On chip Boot loader

Eight channel General Purpose DMA controller

On board 256 Kbit serial I2C EEPROM

It should have easy temperature sensor interface

USB Connector for UART-0 interface for Debug Console

USB connector for flashing the program

LED indication for USB

3 pin header for UART-0 interface

DB9 connector for UART-1 interface with Tx Rx indication LED

USB Connector for USB host interface

DB9 connector for CAN interface

Serial SPI based MMC card interface

Power-On LED indication

Minimum 16 GPIO lines with 20 Pin (10x2 header) Connector

Buzzer for GPIO Test point

LCD interface connector

Connector for Ethernet interface

Audio out speaker interface

Connector for ADC interface, minimum 6 channel

On-Chip ADC testing facility

Reset Switch with LED indication

Switch for Run/Program mode (Boot mode selection) with LED indication

This board should be compatible with LABVIEW software.

**Educational Practice Board for ARM Cortex M4 or higher should contain following detailed specifications (Qty.-10):**

CPU operating speed 168 MHz or better

Minimum 1MB Flash Memory

Minimum 192KB RAM

On board programmer and debugger via mini USB connector

USB powered, optionally can be powered on using external power supply also

On board 3-axis accelerometer

Audio sensor and reset switch is preferable

The board should be mounted on a pluggable base board having minimum 20 pin GPIO connector for GPIO interfaces with all in one general purpose board

The base board should also contain minimum 4 pin I2C interface connector and minimum 6 pin SPI interface connector

This board should be compatible with LABVIEW software.

**Expansion board with following features and facility for ARM Cortex M4 or higher (Qty.-10):**

Ethernet connector

Micro SD card connector

I2C & SPI Interfaces

Camera interface connector

DB9 for serial interface

TFT LCD interface connector for interfacing mentioned board.

**TFT Display with following features for ARM Cortex M4 or higher (Qty.-1) :**

Size: 3.5" or bigger

Resolution: 320X240 or better

Colors: 262K or better

Resistive touch screen

**General purpose interfacing board with following features and facility (Qty.-10):**

Interfaces with followings:

Minimum 8 LEDs

16X2 LCD display

Relay

Stepper Motor interface with H bridge driver IC

DC Motor Interface

Minimum 2 Seven Segment LED display

At least 2X2 Matrix Keypad, Minimum 4 Switches

I2C based EEPROM, SPI based EEPROM

Buzzer with two twenty pin connector on board for easy interface with above mentioned boards

**TFT/Touch screen Interfacing Kit having following features (Qty.-2):**

TFT display of minimum 3.5" along with a touch screen

SSD2119 controller

PWM controlled backlight

Resolution: 320X240 or better

34 pin connector for easy interface with ARM Cortex M3 or higher board

**Pluggable WiFi 2.4GHz IEEE 802.11b/g/n facility for interface with ARM Cortex M4 or higher board (Qty.-2)**

**Base board with following features (Qty.-5):**

Having facility to mount ARM Cortex M4 or higher board on it

It should have facility to mount various sensors on board and interface those sensors to ARM Cortex M4 or higher board and take the readings

The sensors should give outputs either on UART or I2C or SPI protocols

Embedded Gateway with HDMI (Qty.-1),

Ethernet connectivity

USB ports for connecting the above mentioned ARM Cortex M3 or higher boards

The embedded gateway should have on board Wifi

It should have on board Bluetooth facility

CPU working up to 1.2GHz and minimum 1 GB of RAM

Necessary Linux image should be ported on the board for functioning as mentioned above

Router with power supply (Qty.-1)

+5V DC Motor and 2Kg torque Stepper motor for interfacing with above mentioned ARM Cortex M3 or higher and ARM Cortex M4 or higher board(Qty.-5)

An IDE Configured for ARM Cortex M3 or higher and M4 or higher platform to be supplied along with these hardware for program compilation. Should support debug facilities.

**Data Acquisition Card with following features (Qty.-1):**

**Analog Inputs:** minimum 6 Differential, minimum 2 Single Ended, at least 16-Bit resolution, mV, V, mA inputs, Low Power, Built in Watch-Dog Timer, minimum 10 samples / sec., with RS-485 protocol

**Thermocouple Inputs:** Minimum 8 Channels, Resolution: minimum 16-Bit, J, K, R, T, S, and E type Thermocouples, plus mV, V and mA inputs, 10 samples/sec., Low Power, Built in Watch-Dog Timer with RS-485 protocol

**Digital input/output:**

Inputs – minimum 7, Logic Level 0 - 1V max, Logic Level 1 – 3.5V to 30V,

Outputs – 8, Open Collector – 30V, Built in Watchdog Timer

RS-232 TO RS485 Converter: Upto 115.2K baud, RS485 (2 wire) / selectable, RS422 (4 wire) /selectable

LED indicators for digital outputs.

Onboard 6 SPST switches for all digital inputs.

RED & Green LED for High & Low Alarm Indications

Minimum 6 ORANGE LEDs (High brightness) for Digital Output indication

Minimum 6 SPST Switches for Digital Input indication

Minimum 1 RED LED (High brightness) for HIGH ALARM indication

Minimum 1 GREEN LED (High brightness) for LOW ALARM

0-10Vdc Analog Input pot

24V / 2 Amp Power Supply for all Modules

RS-232C Cable for PC Connectivity.

It should contain lab workbook with the procedure to create the required VIs under NI-LABVIEW

A workbook featuring case studies and working procedures for above mentioned ARM Cortex M3 and M4 or higher platform should be supplied with proper screen shots of the software and hardware.

All kits to be supplied in a proper packing.

**Sensors Specifications:**

- Static and Dynamic Accelerometers with DC Response: Full Scale Range from 50 to 2000g. (Quantity-2)
- Differential Pressure Sensor with range: 0-250mbar to 0-200bar, 0-10Vdc output is preferable. (Quantity-2)
- Water Level Sensor Probe with height capacity up to 2m and output voltage 0-5V. (Quantity-2)
- Thermocouple type: J, K, R, E, T and S. It should follow ANSI Standard Limits of Error, Small Size and Fast Response preferable. (QTY 01 of each)
- 3 wire RTD with element material Platinum, temperature range: -200 to 850 degree Celsius, Small Size and follow ANSI Standard Limits of Error. (Quantity-2)
- Absolute encoder: (Quantity-2)
  - Size 1.0 inch or 1.0 inch diameter body
  - It should follow IP65 or higher

Absolute Resolution: Minimum: 30 pulses/revolution (higher upper capacity preferable)

200 kHz response frequency or higher

8 mm standard shaft

- Incremental encoder: (Quantity-2)
  - Size 1.0 inch or 1.0 inch diameter body
  - It should follow IP65 or higher.
  - Incremental Resolution: Minimum: 3 pulses/revolution to 5000 pulses/revolution (higher upper capacity preferable) 200 kHz response frequency or higher 8 mm hollow shaft
  
- Moisture Sensor (Qty; 01)
- Dust Sensor(Qty; 01)
- Water Sensor(Qty; 01)
- Soil Moisture(Qty; 01)
- Heart Rate Sensor(Qty; 01)
- Ultrasonic Ranger(Qty; 01)
- Gyrometer (Qty; 01)
- Magnetometer(Qty; 01)
- Color Sensor(Qty; 01)
- Weather Sensor(Qty; 01)
- Reed Switch module(Qty; 01)
- Touch key Sensor(Qty; 01)
- Vibration Sensor(Qty; 01)

These sensors should be either UART, I2C or SPI based.

Standard accessories: Detailed instruction & experimental manual, connecting probes and other mandatory accessories to complete experimental set up requirement of the Data Acquisition Trainer.



**FORMAT FOR QUOTATION SUBMISSION**  
(In letterhead of the supplier with seal)

Date: \_\_\_\_\_

To: \_\_\_\_\_  
\_\_\_\_\_

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
<b>Total Cost</b>							

Gross Total Cost (A+B): Rs. \_\_\_\_\_

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. \_\_\_\_\_ (Amount in figures) (Rupees \_\_\_\_\_ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of \_\_\_\_\_ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact No: \_\_\_\_\_