TRANSPORTATION ENGINEERING LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY KANPUR
KANPUR 208 016 , INDIA

Enquiry No – CE/TE/RTBD/01/15-16 Date: 24/08/2015

Sub: Real Time Based Data Acquisition System and Data Integrator with Sensors for Research in Transportation Engineering

Dear Sir,

Please send sealed quotation(s) in Indian rupees with **all technical details** of,

S. No	Name	Qty	Specification
1.	Real Time Based Data Acquisition System and Data Integrator with Sensors for Research in Transportation Engineering	01	A real time, modular data acquisition system to interface with multiple sensors on a real world moving vehicle (as described below) to collect the data from around and inside the vehicle to understand the driver behaviour w.r.t. transport engineering. The hardware selected to build this system should satisfy the following minimum conditions. Real Time Controller with following specifications (1 Quantity) - High-performance multi-core system for intense embedded monitoring and control applications - 1.33 GHz dual-core Intel Core i7 processor or better, 32 GB nonvolatile storage or better, 2 GB DDR3 800 MHz RAM or better - 1 MXI-Express, 4 USB Hi-Speed, 4 Gigabit Ethernet, and 2 serial ports for connectivity, expansion - 8-slot Spartan-6 LX150 FPGA chassis for custom I/O timing, control, and processing or better - LabVIEW Real-Time for determinism or Shock and vibration resistant - Windows Embedded Standard 7 for flexibility - 0 to 55 °C operating temperature range Measurement Modules Steering sensor (1 Quantity) - Steering angle sensors, 308 deg - Volts out 0-10 VDC max - Power supply 5-12 VDC - 40 °C to 70 °C operating range, 5 g vibration, 50 g shock

			Accelerator & Brake Pedal Sensors - Event sensors with force measurements, 0-50 Khf Gear shift sensors - Gear shift sensor for selection, Max upto 5 gears - Gear shift force measurement with force measurements, 0-50 Khf Brake sensors - Event sensors with force measurements, 0-150 Khf IMU sensor - Vehicle roll, pitch & yaw measurement, rate 300 degree/sec - Vehicle longitudinal, lateral, Jounce Accelerations measurements in X, Y, & Z Axes Wide angle camera basilar with GigBit/USB or Ethernet - Should provide continuous 360 degree view of the surroundings of the vehicles - Should provide continuous inside view of the car - Minimum 2 MP with 1024X 2048 resolution - Should have night vision capabilities - \Shock and vibration resistant LIDAR Scanning Sensors - Velodyne Model VLP-16 - Should be able to measure distance headway of surrounding features in 360 degrees while the vehicle is in motion. 12VDC Battery - Battery to powering DAQ and sensors External hard drive - To Store all the synchronized data real-time. - Minimum 1 TB

Kindly arrange to send the sealed quotation(s) to the following address: Professor In Charge, Transportation Engineering Laboratory, Department of Civil Engineering, IIT Kanpur, 208016 by **07-09-2015 DATE EXTENDED up to 16/09/2015 ,12:00 Noon.**

Note:

1. The integrated system should be complete with all enclosures, connectors and cables. The software development to collect the correlated data has to be done by the vendor.
2. The vendor should provide an authorization certificate from the OEM of the Real Time Data Acquisition to quote for this tender.
3. Quotation must be valid for at least 30 days.

4. . IIT Kanpur can ask the vendor to give a live DEMO of the system at IIT Kanpur as a part of technical evaluation
5. Delivery period should not be more than **4 weeks** and delivery should be at IIT Kanpur..
6. Send complete detail of the product(s).

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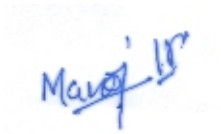
Thanking you

Sincerely,



(Manoj Kumar)

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