



INDIAN INSTITUTE OF TECHNOLOGY KANPUR
DEPARTMENT OF CIVIL ENGINEERING

Bharat Lohani, PhD

Associate Professor

Phone: +91-512-259 7413 (O) -259 8719 (R) Fax: +91-512-259 7395 Email: blohani@iitk.ac.in

7 December 2011

Enquiry No. IIT/CE/GI/BL/02-2011

Opening date: 7 December 2011

Closing date: 15 December 2011

Invitation for quotation

We are planning to procure the following items. Please send your quotation for item with following or equivalent specifications:

Item details:

1. Integrated MEMS INS/GPS with following specifications:
 - a. Precision Position Data to be Provided in the Case of Short-Term GPS Loss
 - b. Should provide position, velocity and precision time, altitude, delta velocity, delta theta, heading, pitch and roll angles using onboard Kalman Filter.
 - c. GPS-Aiding of Velocity & Altitude
 - d. Output data GPS time stamped
 - e. Low Noise Gyros 0.002d /sec/ $\sqrt{\text{Hz}}$
 - f. Low Noise Accelerations 0.03mg/ $\sqrt{\text{Hz}}$
 - g. In-Run Gyro Bias 10d /hour 1σ
 - h. Heading $\pm 0.5\text{d}$ stationary
 - i. Common data transfer protocol with Data Rate 100Hz
 - j. GPS Receiver – 50 Channel & 5 Hz Position Data Update Rate
 - k. GPS Accuracy $\pm 2.5\text{m}$ CEP
 - l. Should be ruggedized to operate in outdoor and indoor environment
 - m. Should be calibrated for sensor misalignment, gyro G-sensitivity, and gyro scale factor non-linearity to third order; gyro in-run bias to be estimated and compensated by the Kalman filter
 - n. Relevant Software that configures, reads, displays and saves data generated by the device on common Operating systems.
 - o. SDK for application to be written at our end.

Terms and conditions:

1. The quotation must reach the undersigned in a sealed envelope on or before 5 PM, 15 December 2011.
2. Indicate separately where you differ from aforesaid specifications and in what manner.
3. Add educational discount in the quotation.



INDIAN INSTITUTE OF TECHNOLOGY KANPUR
DEPARTMENT OF CIVIL ENGINEERING

Bharat Lohani, PhD

Associate Professor

Phone: +91-512-259 7413 (O) -259 8719 (R) Fax: +91-512-259 7395 Email: blohani@iitk.ac.in

4. Add proprietary certificate if applicable.
5. Quotation should be valid for 60 days.
6. Mention warranty period and rate to obtain extended warranty.
7. If the weight of item is less than 5 kg do not include shipping charge, as our FedEx agent will collect it. In otherwise case add shipping charge with FOB to nearest Airport.
8. Send quotation with relevant product details, white paper etc.
9. The quantity mentioned in this enquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute.
10. The right to reject all or any of the quotations and to split up the requirements or relax any or all of the above conditions without assigning any reason is reserved.

Thanking you.

Sincerely,

(Bharat Lohani)