

**Indian Institute of Technology Delhi**  
**Department of Electrical Engineering**

25<sup>th</sup> February, 2015

**Sub: Notice Inviting Quotation (NIQ) for Quadrotor Unmanned Air Vehicle (UAV) System**

On behalf of duly constituted purchase committee, sealed quotations are invited from the dealers for the supply of Quadrotor UAV System, to be used as a testbed for implementing complex control algorithms as per specifications given below.

The quadrotor UAV should have the following specifications:

**Motor:** 4 brushless motors

**Propellers:** 4 flexible propellers of dimension not greater than 8"

**Battery:** Lithium/Polymer battery 11.1 V, 2100mAh, operating endurance - at least 18 min. without payload, charge time - not more than 1 hour. Battery should come equipped with a charger, charging cable, adapters, and bag for storage.

**Maximum Thrust:** greater than 14 N

**Max Climb rate:** greater than 4 m/s

**Flight Time:** at least 18 min. without payload

**Range:** greater than 90 m, in line of sight

**Safety:** Propeller protection, Acoustic battery warning

**Payload:** greater than 200g

**Wireless communication:** XBee-module 2.4 GHz, R/C receiver, mini USB interface, RS-232

**Weight:** 350-400g (no payload and battery), 500-550 g (with battery and no payload)

**Dimensions:** not bigger than 40 x 40 x 10 cm

**Processor:** one or more on-board processors (>60 MHz)

**Sensors:** at least 3 accelerometers, 3 gyroscopes, pressure sensor, GPS receiver, 3D magnetometer

**JTAG module:** for online programming/debugging

**Other Accessories:** Flight Control Software, Mechanical and Electrical spare part kits which include 1x motor, 1x motor controller, 1x motor boom, screws.

### **Terms and Conditions:-**

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid". Both the sealed envelopes should be sent in a single sealed envelope, with clearly marked as Quotation for "Quadrotor Unmanned Air Vehicle (UAV) System". The quote should reach the following address on or before 12/03/2015 by 5.00PM.

2.

Name : Prof SantanuChaudhury  
Address : Control Lab,  
Room No. 11-214,  
Department of Electrical Engineering,  
IIT Delhi, New-Delhi - 110016 (India)

**NB: Lab Technical staff MrJaipal Singh is authorized to collect the same on behalf of Prof SantanuChaudhury**

3. Please quote the price at FOB/CIF New-Delhi, inclusive of installation charges.
4. For imported products, Quote should be in foreign currency and to be valid for at least three months.
5. Attached all technical literature and list of similar installation done in India.
6. Mention if you can provide any technical support like training of IIT Delhi personnel at IIT Delhi or in your factory and providing a technical person for operation of the machine for the initial period of 2 years. *Kindly mention about this in technical bid.*
7. If the quote is being submitted by the representative of the principals/manufactures themselves, a valid Agency ship/ Dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the Principals should be enclosed.
8. The institute reserves the rights to accept/reject any/all quotations without assigning any reasons thereof.
9. Complete set of manuals for the operation of the equipment should be given.
10. Delivery as early as possible in weeks on receipt of PO.

11. Clearly specify the installation requirements - Such as space, power, frequency, environment (Temperature and Humidity)
12. If the item quoted are proprietary in nature, please enclose proprietary certificate from the principals stating "certificate that ---- is proprietary item of M/s ----- and no other manufacture make these items".
13. If the bidder is Indian agent, the agency certificate should be enclosed.
14. Please produce compliance certificate for the specifications mentioned in the NIQ.
15. Please ensure that the Indian agent (if applicable) has been enlisted with the Department of Expenditure, evidence may please be attached.
16. All bank charges payable in India are to buyer's account and bank charges in seller's country to seller's account.

**Prof. SantanuChaudhury**  
**(P.I.) EE**  
**/ Tel: 6167**  
**Email: santanuc@ee.iitd.ac.in**