

INDIAN INSTITUTE OF TECHNOLOGY KANPUR
Department of Earth Sciences

Enquiry No: JNM/ES/2016-17/03

Date: May 16, 2016

Subject: Quotation for UAV/Hex-copter as per Technical Specifications

With reference to the above subject mentioned, **quotations are invited in a sealed envelope so as to reach us by May 23, 2016**. The quotations with all other details shall be submitted/sent in the form of a hard copy to the address mentioned below. If you have any questions please contact the undersigned or sent an email.

The prospective suppliers are requested to send the quotation in two separate sealed envelopes, as "Technical Bid" and "Financial Bid". The Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices. The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges. **The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Financial Bid".**

NOTE: Kindly write the inquiry no on the top of envelop.

Terms and Conditions:

1. Maximum education discount, if any should be offered
2. Validity of quotation should be at least for 60 days
3. Prices should be on CIF and FOB separately (if imported)
4. Prices should include the installation and training cost
5. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
6. Quotation should carry proper certifications like agency Certificate, Proprietary certificate (if applicable) etc.

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A) Technical Specifications for UAV/Hex-copter

Length/Width/Height	Around 1.10 x 1.10 x 0.5 m
Housing	Carbon Fiber Reinforced Polymer, with full enclosure - protection to all rotors
Dead Weight	3.4 kg
Take-off Weight	4.6–6.6 kg
Max. Payload	2.0 kg or up to 3.5 kg
Flight Height	Up to 1,000 m (preferable) – 3000 m
RC range	Up to 1,000 m, fly always in line-of-sight
Flight Time	20 min or more
Operating Temperature	-20° to 40°C (-4 to 104° F)
Should be equipped with	GPS-receiver; Accelerometer; Barometer; Gyroscope; Magnetometer; Ultrasonic Sensors; Adaptable Sensors
Control	Remote control, automatic waypoint flight
Batteries	Lithium-polymer 10,000 mA or better
Service	Service team, hotline, pilot trainings in India as well as abroad
Camera	32 Megapixels or higher with option for on top mounting.
Features	
Should have	<ul style="list-style-type: none"> • Fully integrated geo-referencing; Maximum collision protection to avoid accidents; High, flexible payload; Accurate navigation and precise data; GPS as well as manual control; Fully automatic take-off and landing; Reliable minimum altitude; Dynamic waypoints (POI); Position Hold function; Easy orientation function; Automatic return function. • Auto-pilot and manual flying mode
Software	
Flight Planning Software	<ul style="list-style-type: none"> • Ability to design waypoint-flights, which should be performed automatically upon instruction. • Should have capability in Way-point planning on geo-referenced imagery. • Should automatic generate raster data for photogrammetry • Aerial Image Management Module • Map-caching and offline planning function • Extensive camera database
Software Features	<p>Software should have capability in generating high-resolution geo-referenced ortho-photos, point clouds and exceptionally detailed:</p> <ul style="list-style-type: none"> • DEMs/DTM textured polygonal models. • Point cloud generation • Digital elevation model (DEM) generation • True ortho-photo generation • Geo-referencing of generated results • 4D reconstruction for dynamic scenes
Training	<ul style="list-style-type: none"> • A complete training at IITK or abroad should be provided. • A hard as well as a soft copy of detailed Operating Manual should be provided.