



GEOL/Purchase/2026-2795

Date: 07-08-2026

NOTICE INVITING QUOTATION

Quotations in sealed cover are invited from established/reputed supplier/dealers/ distributors/authorized agents/OEM for supply of a type-certified drone/UAV and sensors in the small category by the Department of Geology, North-Eastern Hill University, Shillong – 793022, as per the technical details given below.

Quotations complete in all respects should reach the undersigned on or before 05.00 PM of 21st August 2026 at the Department of Geology, North-Eastern Hill University, Shillong - 793022. Quotation should be submitted in hard copy only in a sealed envelope superscribed as NIQ "GEOL/Purchase/2026-2795 dated 07.08.2026." Quotations received after the due date will not be entertained.

Terms and conditions:

1. Price should be quoted in Indian Rupees and must mention all applicable taxes. No separate packing, forwarding, freight & insurance charges are applicable. The quoted price should include all charges.
2. The quotation should be in the following format:

Sr. No.	Item	Make and Model	Unit price	Quantity	Amount	Discount	Discounted Price	GST Rate	Total GST	Total Amount

3. Quotations submitted via FAX or E-MAIL will not be accepted
4. Payment will be made by the Finance Officer, NEHU, only after satisfactory receipt and acceptance of the items. Vendors/suppliers must contact the Finance Officer at NEHU for any subsequent payment-related issues.
5. For any query related to the technical specification, the bidder may contact the undersigned at least 10 days before the last date.
6. The quotation should be complete in all respects and free from ambiguity
7. The delivery location will be the Department of Geology, NEHU, Shillong, Meghalaya 793022
8. The offer must remain valid for a minimum of 180 days from the date of tender opening.
9. The Department of Geology, North-Eastern Hill University reserves the right to change terms and conditions during the pendency of the contract.
10. The Department of Geology, North-Eastern Hill University, reserves the right to accept or reject any bid, in part or in full, without assigning any reason, and this decision shall be binding on the bidder.
11. Canvassing by tenderers in any form, including unsolicited letters or tender corrections, shall render their tender liable for rejection.
12. Incomplete offers or those not conforming to the above terms are liable to be rejected.
13. Manufacture Authorisation should be submitted along with the Bid.



14. The OEM should have a presence in India for at least 5 years, including a functional office and service center(s) to ensure timely technical support, maintenance, training, and after-sales service. Documentary proof to be attached.
15. Proper Compliance Statement, Technical Offer & detailed product brochure should be submitted with the bid.
16. In case the bidder quotes an indigenous (Indian-manufactured) product, the quoted model must be duly approved/certified by the relevant Government of India agency or competent authority. The bidder shall submit documentary evidence of such approval/certification along with the bid, failing which the offer may be considered non-responsive
17. Hardware & Software should be preferably from the same OEM.
18. The bidder should have supplied drone/survey instruments to IITs/NITs/Govt. educational institutions. Minimum of five such orders in preceding five financial years must be produced.
19. The warranty period should be a minimum of 1 year with spares or as mentioned in technical specifications (whichever is higher) from the date of installation with satisfactory performance report as per the technical specifications. For standard items that carry a warranty of more than one year, the standard warranty shall apply.
20. If after delivery, acceptance, installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectification of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.
21. Technical Compliance of the bidder with reference to the Specification of Equipment should be mentioned in the following format:

Item	Technical specification mentioned in the tender	Features available in the equipment (Yes or No)	Deviation from the specification (if any)	Corresponding part number/datasheet/page no in brochure in support of specification	Comments (Department of Geology)
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22. The bidder should provide an undertaking that the proprietor/Director/Partner have not been blacklisted or debarred or declared ineligible for corrupt/fraudulent practices either indefinitely or for a particular period of time by any Government or other agency. Further declare that no criminal case is registered on pending against the firm/company or its owner/partners/directors anywhere in India. Also, there are no contractual restrictions, legal disqualifications, or other obligations that would prevent the applicant from participating in the tender process.
23. The quoted drone/UAV must be a complete package in a ready-to-use mode including hardware and software. The mapping capabilities of the drone/UAV should not be compromised by the absence of any hardware or software component.



Technical Specification of Drone

S. No.	Specification Category	Parameter	Requirement
		Type of UAV	Small Category: Type-certified drone and sensors
1	UAV General Characteristics	Weight	Max 8 kg (with battery and payload)
		Size	Compact design, < 1700mm in length/width
		Endurance	Minimum 60 minutes flight time @1000m AMSL (24MP RGB Sensor)
		Range	Minimum 5 km radius for data transmission
		Cruise Speed	For a more detailed point cloud density: Speed < 5 m/s For a default point cloud density: Speed > 10 m/s
		Propulsion	Battery-powered
		Max Operating Altitude	UAV should be capable of flying up to 120m AGL or 3000 m AMSL or higher
		Temperature Range	Operates reliably between -20°C and 50°C
		Dust & Drizzle Resistance	IP54
		Noise Level	< 40 dB at 300 m AGL
		Wind Resistance	10 m/s or higher
		Lifespan	Minimum 1000 landings
		Lifespan	Minimum 1000 landings or 2 years
		UAV Type, Launch & Recovery	Quadcopter, Autonomous VTOL (Vertical Take-Off & Landing)
		VTOL capability	Minimum 100 m or better
		Recovery Space	Vertical Take-Off and Landing (VTOL) from 5 m x 5 m open area with clear air space of 25 m x 25 m around the landing area.



		Autonomy	Full autonomy from take-off to landing
		Deployment Time	< 10 minutes
		Packaging	Waterproof carrying case, IP66 rating
	B.)	Payloads & their Characteristics	
		Photogrammetry Payload Characteristics	
	1	Resolution	24 MP resolution or Better
	2	Sensor Type	APS-C Sensor
	3	Sensor Size	23.2 mm X 15.4 mm or better
	4	X, Y Accuracy at 120m AGL	<10 Cm or better
	5	Z Accuracy at 120m AGL	<20 Cm or better
	6	Mapping Coverage at 120m AGL, 80/70 Overlap	Minimum 2 sq. Km or better
	7	Ground Sampling Distance at 120m AGL	3 - 4 Cm or better
	8	On-board Storage	Minimum 64 GB or better
		Optional Payloads & its Characteristics	
		Optional Payload compatibility for future integration (Sensor should be Type certified as per DGCA norms with supplied UAV)	Integrated (EO and Thermal) Payload, LiDAR and Oblique Sensor
2	Failsafe Features	Failsafe Features	Auto-Return to Home and Land - On Communication Failure - On Low Battery - Multiple GNSS modules on-board for redundancy - On exceeding Wind limit of the system - On Battery Imbalance - On exceeding the UAV health parameters (Temperature, vibration and throttle limit of the system) - Auto initiating Return To Home and Land in conditions of UAV vibration - Auto mid flight calibration - UAV should have more than 1 GPS for handling one GPS failure



3	GNSS Grade	GNSS Grade	PPK Enabled onboard GNSS along with Base (Master) GNSS receiver with L1 & L2 frequencies capable to achieve accuracies stipulated in bid document. GNSS receiver in the Drone should be Ready within 5 minutes of power-on after assembly.
4	Nominal Coverage	Nominal coverage at the flying height AGL of at least 120 m. (400 ft) Side overlap 50%	Nominal coverage at the flying height AGL of at least 120 m. (400 ft) overlap 80/70% : 2 sq.km or better
5	Battery	Battery Type	Rechargeable Li-Ion
		Battery Charging time	Less than 3 hours
		Battery life/warranty	Up to 200 charging cycles or 1 years
6	Emergency Recovery	Emergency Recovery Mode	Ability of auto detection and return back to launch pad or home position with landing accuracy of 3 meter or better in case of low battery/power and high wind (more than operational wind speed) etc.
7		Onboard storage	(i) Minimum 64GB or more (ii) Extra 01 Nos. of 64GB memory card / pendrive to be provided
		Warranty	1 year std warranty & 5 year AMC (may be quoted separately if not included)
		Security	128-bit encryption
		Data Link	Communication data link complying with an international standard. Frequencies used should not interfere with other users allocated frequency spectrum. Frequencies used should also not interfere with other drones flying in adjacent area in VLOS during Drone flying operations.
		Communication distance between GCS and flying Drone/UAV	2 km (VLOS as per DGCA guidelines/ Drone Rules 2021)
		Frequency Band	2.4/5 GHz for uplink and downlink
9	GCS Software Features	Flight Modes	Autonomous (take-off, waypoint navigation, hover, return to home)
		Map & Video Display	Real-time 2D/3D map, stabilized video, target tracking, UAV trajectory display
		Terrain Handling	Automatic terrain avoidance, geofencing, and altitude hold (where available)



		Weather Forecast	Weather Forecast to be provided in the GCS-software
		Geo-Features	Map annotations, ability to define no-fly zones and virtual boundaries
		User Controls	One-click take-off, land, and hover commands; joystick and touchscreen control options
		Flight planning & control software	• A navigation software package that enables the user to plan and perform complex flight patterns for different surveying applications (Corridor and Area mapping) and should allow the combination of telemetry data with the recorded images/data. • The software should feature functions that enable the use of 2D/3D data for flight planning in different terrain, should have an interface to insert SoI data, SRTM & CARTOSAT data other than default. • The software should facilitate simultaneous flight & mission planning for multiple villages or polygons without manual intervention, Optimal input for GNSS co-ordinates, Acquisition of different flight data with distinction for easy accessibility, Efficient image capture focused solely on the mission polygon, On board GNSS observation, Winds speed display facility and many more etc. Complex Area Capture Mode: The UAV should be capable of reducing its speed to less than 5 m/s, capturing data in a cross-grid mode, and executing sharp turns efficiently. This improves readability while maintaining the technical accuracy.
10	Mapping		
	Should automatically detect and overscan if a small polygon is selected		
	The GCS software should support importing custom or user-generated maps in formats such as GeoTIFF and Dt2. This feature should allow safe navigation using these custom or user maps and elevations.		
	Capability to Auto execute mapping plan including negative altitude from the take-off point within Radio Line Of Sight from the operator.		



	The system should support multipolygon mapping with the capability to user selectable and editable sequence within a single flight plan with the capability to capture images only inside the defined polygons. Additionally, it should allow for in-flight modifications to the flight plan without the need to land.		
	The PPK/Geotagging software should feature automatic data download of all flight data from UAV, including rover files and IMU files, as well as base files, with single click. The software should be able to sort this data without the need for physical connections with UAV and Basestation. such as cables or memory cards.		
	The GCS software should support direct importing of polygons in vector formats like KML, KMZ and shape file into the software without the need for third-party tools.		
	The PPK/Geotagging software should include options to change image names based on folder names and incorporate date and time information to enhance sorting capabilities.		
	The PPK/Geotagging software should be able to process multiple flight data without human intervention, starting each flight data separately.		
	The Geotagging software should have options to perform geotagging, transfer data, and trigger photogrammetry processing on a remote PC directly from the software.		
	The GCS software should offer features for marking man-made obstacles directly on the GCS, and the flight plan/mapping plan should change to cater for the marked obstacle		
	Export mapping plan in KML format with all mapping parameters (like overlap, altitude) which is editable as per field requirements		
	UAV and GCS software should support swappable payloads		
11	Data Processing Software	Terrain Analysis	Digital Elevation Model (DEM) and Digital Surface Model (DSM) generation
		Data Output Formats	Supports standard GIS formats (GeoTIFF, Shapefile, LAS/LAZ for LiDAR)
		Compatibility	Windows/Linux OS, integration with common GIS software platforms



		Software	Software for post-processing like Px4D or AGI or similar industry-standard software meeting the prescribed quality standard, in the absence of which the service consumer/Employer will reserve the right unconditionally to order a change to the required software, so as to achieve the desired quality without any additional cost to the service consumer/ Employer. At least there be an assurance from the contractor by undertaking that by whatever industrial-approved software utilized, in retrieving the data from the drone into the storage device/data grid, the software must be uniform for the duty of the contractor for conversion of the software if any to incur so that the storage must be with one software for future easy accessibility of data.
13	Additional Features	Training	On-site training for 7days
		Warranty std	Minimum 12 months or 200 landings
		Compliance	Manufacturer/ OEMs should have an industrial manufacturing license from DIPP.
		Standard Accessories	Rugged Transport single box with foam for all accessories.
			• Complete set of UAV with charger with power cable along with 1 extra battery
			• 01(one) 12V cord & clamps for car charger, 01(one) Memory card adaptor, communication cables,
			• Manuals e.g. Users, Crash report manual, Flight Controller remote control, quick start etc. are to be provided.
		Type Certification	The unit quoted should have a valid Type Certificate from DGCA for the UAV with Payload i.e RGB, LiDAR & Oblique
		Spare Parts details & costs	The Bidder must provide a list of spare parts, their availability, costs, and delivery times within the 1-year warranty period.
		The equipment shall also be equipped with the following serviceable components.	i. GNSS for horizontal and vertical position fixing.
			ii. Autonomous Flight Termination System or Return Home (RH) option.
			iii. Flashing anti-collision strobe lights.
			iv. Fire-resistant identification plate inscribed with UIN; bidder will give an undertaking to arrange UIN, as and when DGCA provides.
			v . Flight controller with flight data logging capability
			vi. Geo-fencing capability



			vii. Barometric equipment capability inbuilt.
			viii. Detect and Avoid capability
			ix. Manufacture Serial Number at time of delivery.
			x. The drone should be capable of operation in plains, hills, desert and coastal regions of typical Indian conditions
			End-to-end solution from a single OEM (UAV platform, GCS, software, training and support) with future required sensors i.e LiDAR, Oblique & Surveillance (EO and Thermal) sensor
14	Demonstration	Demonstration of the capability	Demonstration of all the specified features shall be mandatory during the technical qualification stage. Any bidder/OEM failing to demonstrate the required specifications during the demonstration shall be directly rejected from the technical qualification process.

Yours,

(Teacher-In-Charge, Geology)

Teacher- In- Charge
Department of Geology
NEHU, Shillong- 22