Limited Tender Notification
Dated 6/4/2021

Sealed quotations are invited for the following items/ instruments from those firms/suppliers registered with HNB Garhwal University.
Sealed tender/ quotations may kindly be sent to:
Professor Y P Sundriyal
PI DST Project
Department of Geology
HNB Garhwal University, Chauras campus
Post Office; Kilkileshwar via Kirtinagar
District Tehri- Uttarakhand

The last date of receiving the sealed quotations/ tenders is 27/4/2021; no tender/ quotation will be accepted after the above date. Quotations/tenders will be accepted only through the speed Post

Specifications and items are given below:

1. **Work Station-1. Specification core i-7/ 128 GB RAM/ NVidia GeForce 8 GB Graphic card/1TB/2TB SSD genuine window and original MS Office.**
2. **Laptop/ Note book. Specifications-2 :** Core i-7, 16 GB RAM, 1 TB/ 2TB SSD, 10th generation, genuine window, and original MS office
3. DESK TOP-2 Specification10th generation/CORE i7 Processor/ 256 SSD/1TB HD/23.8 FHD/ 4 GB Graphic card, genuine window and original MS office
4. **UAV -1. (Unmanned Air Vehicle)**
   Specifications

   (A) Aircraft

   (i) Dimension (diagonal):<400 mm; **(ii)**Weight: < 2 kg (with batteries and propellers); **(iii)** Maximum flight time: ~ 30 minutes; iv. Operation temperature (minimum range): 0°C to 40°C; **(v)** Hover Accuracy Range Vertical : ±0.1 m; Horizontal : ±0.1 m (in RTK mode) **(vi)** Built-in high performance RTK Module (GNSS=GPS+GLONASS+ Galileo) **(vii)** Remote controller with monitor **(viii)** Maximum flying speed=> 50 km/hour (P Mode) and >55 km/hour (A mode) **(ix)** Max Service Ceiling: > 60000 meters; **(x)** RTK ground system kit (base station with batteries, tripod, bipod and charger); **(xi)** Spare batteries for (2 set) for each component **(xii)** Spare propeller Included **(xiii)** All battery chargers (charging-hub) **(xiv)** Mapping accuracy Class III digital Ortho-photos **(xv)** Ground sample distance ≤ H/36.5 (cm/pixel); H is aircraft altitude in meters **(xvi)** Landing pad (for aircraft) **(xvii)** Warranty 2 years (minimum)

(B) Camera system: (i)lens 24 mm (included); **(ii**) Lens FOV 84°

(C) Sensor : (i) size ≥1 inch **(ii)** Format CMOS **(ii)** Effective Pixel ≥ 20 MP **(iii)** Recording options JPG, MOV; **(iv)** Storage Micro SD 128 GB (4 included) **(v)** Sutter type Mechanical shutter

(D) **Software:** Latest Photogrammetry software compatible with the aircraft model and camera.

(E) Training: On-site basic demonstration training on flying the aircraft and photogrammetry software.

Note/remark: The UAV system must include all small accessories necessary for a successful flight controlled with high precession GNSS and production of a 3D model of the surveyed landform. One Price should be quoted for above all

4. **Mobile Mapper (high accuracy GPS):**

Microsoft Windows CE .NET 4.2, ARM920T based processor, 64 MB SDRAM, 128 MB Nand Flash Memory, Removable SD card memory for data storage, Full-color daylight readable display with touch panel, Field-worthy, rugged design (IPX7), removable, rechargeable battery or cell, Integrated alphanumeric keypad, Built-in speaker and microphone, Integrated Bluetooth wireless technology GPS, Sub-meter vertical accuracy, 14 parallel channels with integrated WAAS/EGNOS, Lemo coaxial external antenna connector Software, Microsoft WordPad, Internet Explorer, Windows Explorer, Terminal, ActiveSync, Windows Media Player and Inbox, Microsoft File Viewers: Excel, Word and Image Viewers, EZ Recorder – sound record and playback program, Software Development Kit (SDK) and GPS Application Programming Interface (API) Standard Accessories, 32 MB Secure Digital memory card (expandable) , USB data cable with carrying case, hand strap and stylus pen

5. **Mobile Mapper Pro (High accuracy GPS)**

System Components

• MobileMapper Pro receiver and data collection software • MobileMapper Office software • Receiver-to-PC serial data cable • 16 MB SD card • Getting Started Guide and User Manual • 2 AA Li-ion batteries GPS Accuracy (Horizontal, 95%)

• Real-Time Autonomous: 7-10 m • Real-Time with WAAS/EGNOS or MobileMapper Beacon < 3m • Post-Processed: < 1 m • All accuracies assume an open sky environment, #SVs > 5 and PDOP < 4

Receiver Components

• 12 independent GPS (L1 code and carrier phase) and WAAS/EGNOS channels • RS232 port for outputting GIS/GPS data and NMEA messages and inputting RTCM corrections and external power • Quadrifilar helix antenna with multipath rejection

Internal Memory Capacity

• 4 MB RAM • 16 MB internal, removable SD card; upgradable to higher memory cards

Physical Characteristics

Weight • 0.22 kg (.48 lb) Size • 16.5 cm H x 7.3 cm W x 3 cm D (6.5 in H x 2.9 in W x 1.2 in D)

User Interface

• Color display with backlight: 5.6 cm H x 3.9 cm W (2.2 in H x 1.6 in W) •
Display resolution:
120 x 160 • Keyboard with backlight: 12 buttons
Power Characteristics
• Battery type: 2 AA-cell internal • Battery life: 8 hours with backlight and Li-ion batteries @ 25°C (77°F); 16 hours with backlight off • External power port for extended operation time
Environmental Characteristics
• Operating Temp.: -10°C to 60°C (14°F to 140°F) • Storage Temp.: -20°C to 70°C (-4°F to 158°F) •
MobileMapper Pro field software combines GIS data collection functions with full navigation features. Key GIS data logging capabilities include: • GIS feature libraries for logging feature descriptions • Support for logging point, line and area features • Offset function for logging hard to reach features • Nesting function for logging features without closing other features already being logged, e.g., inserting a telephone pole while mapping a road • Repeat feature function for rapid logging of features with identical descriptions, e.g. poles along with a road • Grid mapping utility for collecting evenly distributed measurements (water depth, chemical concentration, etc.) required for contour map generation • Software feature for collecting data for post-processed differential correction •
Language Support: - English
MobileMapper Office Software
MobileMapper Office user-friendly office software package linking MobileMapper Pro to GIS. Key software functions shouls include:
• Data post-processing to get sub-meter accuracy
• Feature library creation
• GIS data display and editing
• Uploading of GIS data and base maps toMobileMapper Pro
• Raster image georeferencing and background image support
• Definition of data collection grids
• Display in different coordinate systems and map datums

Optional Accessories
• SD cards, 32 MB and 64 MB capacity
• Carrying case
• Power/data cable
• PC cable with cigarette lighter adapter
• Serial-to-USB cable

Dr YP Sundriyal
Professor
Dept. of Geology
H.N.B G.U Srinagar Garhwa