INDIAN INSTITUTEOFTECHNOLOGY KANPUR
Department of Earth Sciences

Enquiry No.: JNM/ES/2016-17/01   **Date: May 16, 2016**

Subject: Quotation for GNNS Reference Station Receivers and antenna

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) GNSS Reference Station Receiver

Sl. No	Parameter	Specification
1.	Receiver Type	Multi-frequency GNSS reference station Receiver
2.	Simultaneous satellite tracking and logging	All channels of GPS, GLONASS, GALILEO Minimum 550 channels, code and phase tracking
3.	Sampling interval	0.02 sec to 30 sec, user selectable, the receiver supports simultaneous sampling at least 3 different rate and log/streaming of raw data.
4.	Input/output data format	Correction format: RTCM, RTCM 2.3, 3.0, 3.1 Observables: RTCM 3.0, 3.1, proprietary format NEMA-0183 v3.01 Met sensor support
5.	Position performance	Static (long) 3mm + 0.1 ppm (Horizontal) RMS 3.5mm + 0.4 ppm (Vertical) RMS Fast (or Rapid) static 5mm + 0.5 ppm (Horizontal) RMS 10mm + 0.5 ppm (Vertical) RMS RTK 10mm + 1 ppm (Horizontal) RMS 20mm + 1 ppm (Vertical) RMS
6.	Communication, monitoring /control ports	Serial port: RS232, USB (Device & Host); Slot-in-communication device for GSM/GPRS; Ethernet: RJ45 jack, HTTP, HTTPS, TCP/IP, UDP, FTP, Ntrip Support Support minimum 3 simultaneous streaming rates
7.	Data logging	Internal/slot in 8GB and Removable 32 GB Data retrieval FTP Push
8.	User interface	Multi-functional LED Front Display Web user interface: Allow remote configuration and firmware update for GNSS receiver and met package
9.	Security	Real Time Stream Authentication
10.	Antenna	3D-GNSS Choke Ring antennas with Dorne Margoline (DM) element with Radome, 30m-antenna cable.
11.	Force centering device	Force centering device (automatic/manual) for antenna mounting
12.	Power	10V to 16V DC external battery & 230V AC, 50Hz Power Supply. Automatic switching of power source.
	Power consumption	< 4W

13.	Environment	Operating temperature: -20˚C to +60˚C Humidity: 100% Package: IP67 Shock & vibration: As per international standard.
14.	Accessories	All required accessories including cable (Power, Ethernet, POE etc.) & manual to be supplied Surge arrestor, lightening arrestor would also be supplied. Supplier will design/fabricate some security arrangement for the antenna
15.	Met package interface	• NEMA, Remote monitor, configure the station through receiver via Web interface • The receiver should support Met package from multiple vendors • The receivers automatically store the met data in a binary file and produce separate met file upon Rinexing

Note: *(a) Vendor should provide data conversion tools from native format to RINEX and vice-versa.*
(b) All reference station should be connected, direct data download and monitoring at IITK.