



Indian Institute of Technology Madras
Chennai – 600 036, India

Prof. K. Murali,
Professor,
Room No: 005,
Department of Ocean Engineering,
IITMadras, Chennai – 600 036,
Tel : +91 (0)44 - 22574816;
E-mail : murali@iitm.ac.in

May 5, 2016
REF No:IC1516OEC070PPTXSASA
Due date: May 18th, 2016.

Dear Sir,

1. Quotations are invited for the items shown below/overleaf/enclosed list (Annexure I).
2. **Two bid system: Technical bid and Commercial bid.**
3. Vendors should give the technical presentation/demonstration on the equipment before the department purchase committee, if required.
4. The quotations duly sealed and super scribed on the envelope with reference no. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above
5. Brochure detailing technical specifications and performance, list of industrial and educational establishments where the items enquired have been supplied must be provided.
6. Fax and Email quotation are not acceptable.
7. Quotations should be valid for 60 days from the due date and period of delivery required, warranty terms etc. should also be clearly indicated. A minimum of one year warranty is required from the date of commissioning.
8. Imported supplies should be quoted for **CIF Madras**.
9. Local firms to quote for free delivery to this Institute. If quoted for Ex-Godown delivery charges be indicated separately.
10. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges, and collected back at the supplier's expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications
11. Sales Tax/General Taxes/ED if applicable and such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage. The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to Non-Government Educational Institutions run with no profit motive for which a concession is given. Sales Tax Certificate will be issued at the time of final settlement of the bill.
12. Goods should be supplied carriage paid and insured.
13. Goods shall not be supplied without an official supply order.
14. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
15. The Guarantee period of the item may be indicated clearly.
16. In case of LC. Payment, 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment.
17. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
18. **Acceptance and Rejection:-** I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Time 5:00 PM.

Annexure I

TECHNICAL SPECIFICATIONS OF DGPS EQUIPMENT

Technical Description	Specification
Satellite Tracking:	GPS L1 & L2, GLO NASS L1 & L2, SBAS.
No of Channels:	>120 channels
Measuring Modes:	Static, Kinematic, Real Time (RTK) with GPRS Module.
Accuracy :	
Static Performance :	
Horizontal accuracy:	<10mm in real-time+1 mm in ppm (Post Processing mode)
Vertical accuracy:	<6mm in real-time + 1mm in ppm (Post Processing mode)
RTK performance :	
With GPRS Module	<8mm in real-time + 1mm in ppm(Post Processing mode)
Horizontal accuracy:	
Vertical accuracy:	<15mm in real-time + 1mm in ppm(Post Processing mode)
Ports	One serial port for hand held device, One serial port for external radio/modem, external power port , network and Blue tooth .
RTK :	Internal GSM / GPRS Modem for Connection to Real Time networks
Operating Temperature for all major components:	-5°C to +55°C
Storage Temperature for all major components:	-30°C to +70°C
Position Update Rate:	5Hz or more CMR+ , RTCM
Battery & Chargers:	Li-Ion / NIMH, Hot Swappable preferable with appropriate dual chargers.
Water and dust proof:	IP65 or Higher
Controller	
Operating System:	Hand held controller with windows mobile operating system .
Display:	VGA color display with TFT COLOR, LED backlight
Keys:	Hard keys with Alphanumeric keypad.
	Integrated Blue tooth , One Serial Port for connecting Receiver

[Handwritten Signature]

Processor :	806MHz Marvell PXA-310 XscaleCPU or Better
Camera :	Integrated 3.0 megapixel camera or Better
Memory :	256MB RAM and 4GB TF internal storage or Better
ON-BOARD FIELD DATA COLLECTION SOFTWARE :	Software should be configurable survey style for static/fast static, RTK, PPK, etc.
	Software should have the capable of multitasking so that multiple operations like changing from RTK to PPK mode without stopping survey.
	Software should have datum and projection support. Will support Ground and Grid coordinates
	color graphical support .
	Software should supports Feature Coding with attributes for GIS data collection. Control Coding should be possible for automatic plot creation.
	Software should have COGO (Coordinate Geometry) functionality.
	Software is user -friendly.
	Data should be able to transfer between onboard software and office software is easy and simple.
	Software should be able to accept background maps.
Post processing software	
	Should Work on with windows XP or higher
	Should be able to import raw data from the GPS receiver as well as RINEX data. Also able to import raw data as well as precise ephemeris data via internet.
	Should be capable of processing GPS, GLONASS and other navigation system signals for static and PPK.
	Should be able to perform Network Adjustment using Least Square adjustment principle.
	Should be Capable of Exporting the data in RINEX format as well in GIS/CAD format.
	Software should be capable of



	generating reports directly for the surveyed data.
	Should be Capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datum.

Additional Requirements:

1. Vendors should provide continuous technical support and maintenance of equipment.
2. Vendors must have sufficient experience in supplying equipment in reputed organizations for research purpose. They must provide references of end users whom we can contact for their experience with the supplied machine. Experience of the end users may also be used as a criterion for the selection of bids that meet technical requirements.
3. Vendors must provide detailed documentation for the equipment.
4. Vendors must provide training to our technical staff for using the equipment.
5. All the expenses for installation, training and post sales technical support will be borne by the vendor.

Due date: May 18th, 2016

For details you may contact

Prof. K. Murali,
Professor,
Department of Ocean Engineering,
IIT Madras, Chennai – 600 036,
Tel : +91 (0)44 - 22574816;

