



**MAHARASHTRA MARITIME BOARD**  
Indian Mercantile Chamber, 3<sup>rd</sup> floor,  
14, Ramjibhai Kamani Marg,  
Ballard Estate, Mumbai- 400 001.

**E TENDER**

**B-1 TENDER FORM**

**OF**

**DIFFERENTIAL GLOBAL POSITIONING SYSTEM  
(DGPS)**

**Tender No. HGR/06 for 2013-14**

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GOVERNMENT OF MAHARASHTRA, HOME DEPARTMENT (PORTS & TRANSPORT)

**MAHARASHTRA MARITIME BOARD**

Indian Mercantile Chambers, 3rd Floor, Ramjibhai Kamani Marg, Ballard Estate,  
Mumbai - 400 001. Tel.: 22612143 Fax : 22614331,  
Website : [www.mahammb.com](http://www.mahammb.com) Email: [ceommb@gmail.com](mailto:ceommb@gmail.com)



**Tender Notice (Year 2013-2014)**

Main Portal: <https://maharashtra.etenders.in>

Departmental Portal: <https://home.maharashtra.etenders.in>

Digitally signed E-Tender for following work is invited by Chief Executive Officer, Maharashtra Maritime Board, Mumbai, from firms/companies/agencies registers under the companies for following work in B1 Tender Form.

Sr. No.	Estimated Requirement	Earnest Money amount in Rs.	Cost of Blank Tender form in Rs.	Time limit for completion of work
1.	Supply of 3 Sets of Differential Global Positioning System.	1,15,000/-	5,000/-	4 Month

The details can be viewed online and downloaded directly from the Government of Maharashtra e-Tendering Portal <https://maharashtra.etenders.in> on sub Portal of Home Department <https://home.maharashtra.etenders.in> from 20-01-2014 At 19:01 hours (IST) onwards.

The right to reject any or all tenders without assigning any reason is reserved.

Sd/  
Chief Executive Officer,  
Maharashtra Maritime Board, Mumbai

## BREIF TENDER NOTICE

### 2.1 E-Tender notice

Online Tenders (e-tender) in B-1 form for the following work are invited by Maharashtra Maritime Board, Mumbai on Government of Maharashtra Electronic Tender Management System portal <https://maharashtra.etenders.in> as per Tender Schedule Published on the web portal. The details can be viewed online and downloaded directly from the Government of Maharashtra e-Tendering Portal <https://maharashtra.etenders.in> on sub Portal of Home Department <https://home.maharashtra.etenders.in> form 20-01-2014 At 19.01 hours (IST) onwards.

#### NOTICE DETAILS

<b>Tender Reference no. (Original Agreement No.)</b>	CEO / MMB/ HGR/06 for 2013-14
<b>Name of Work</b>	Supply of Differential Global Positioning System 3 Sets.
<b>Cost of blank tender document &amp; Mode of Payment</b>	Demand Draft of Rs. 5,000/- (Rs. Five Thousand Only) (Non-Refundable) payable at Mumbai drawn on Nationalized Bank / Scheduled Bank in favour of Chief Executive Officer , Maharashtra Maritime Board, Mumbai .
<b>Last Date , Time &amp; Place for Submission of Original [Mode of Payment] for Tender Document Fees</b>	To be submitted in the office of Chief executive Officer, Maharashtra Maritime Board, Mumbai , on or before last date and time of Online Bid Submission up to 17:00 hrs on working days
<b>EMD Amount &amp; Mode of Payment</b>	Demand Draft of Rs 1,15,000/- (Rs. One Lac Fifteen thousand Only) payable at Mumbai drawn on Nationalized Bank / Scheduled Bank in favour of Hydrographer, Maharashtra Maritime Board Mumbai.
<b>Last Date , Time &amp; Place for Submission of Original [Mode of Payment] for EMD</b>	To be submitted in the office of Chief executive Officer, Maharashtra Maritime Board, Mumbai, on or before last date and time of Online Bid Submission up to 17:00 hrs on working days
<b>Date ,Time and Place of Pre Bid Meeting</b>	on 04-02-2014 at 15.00 Hrs.
<b>Venue of online opening of tender</b>	Office of the Chief executive officer ,Maharashtra Maritime Board, Mumbai
<b>Address for Communication</b>	Maharashtra maritime Board, Indian Mercantile chamber, 3 <sup>rd</sup> floor, Ramjibhai Kamani Marg, Ballard Estate, Mumbai-400001
<b>Contact Telephone &amp; Fax Numbers</b>	Telephone-22671734, 22658375, Fax- 22614331.
<b>e-Tendering Helpline Support: Monday to Friday - 09:00 AM - 08:00 PM Saturday - 09:00 AM - 06:00 PM</b>	<b>Telephone:</b> 020 - 253 155 55 <b>Email:</b> <a href="mailto:support.gom@nextenders.com">support.gom@nextenders.com</a>

The Chief Executive Officer, Maharashtra Maritime Board, Mumbai may accept or reject any or all tenders, at any stage of tender procedure without giving any reason to the bidders.

Date:  
Place: Mumbai

## E-TENDER TIME SCHEDULE

**Please Note:** All bid related activities (Process) like Tender Document Download, Bid Preparation, and Bid Submission will be governed by the time schedule given under Key Dates below:

Sr. No.	Activities	Start Date & Time -- Expiry Date & Time
1	Online Tender Release	20.01.2014 11:00 Hrs To 20.01.2014 17:00 Hrs
2	Online Tender Document Purchase & Download	20.01.2014 17:01 Hrs To 10.02.2014 17:00 Hrs
3	Online Bid Preparation	20.01.2014 17:01 Hrs To 10.02.2014 17:00 Hrs
4	Online Technical Bid Closing	10.02.2014 17:01 Hrs To 11.02.2014 17:00 Hrs
5	Online Commercial Bid Closing	10.02.2014 17:01 Hrs To 11.02.2014 17:00 Hrs
6	Online Submission of Bid (Decryption & Re-encryption)	11.02.2014 17:01 Hrs To 14.02.2014 17:00 Hrs
*7	Online Tender Opening(Technical)	15.02.2014 11:00 Hrs To 21.02.2014 17:00 Hrs
*8	Online Tender Opening(Commercial)	24.02.2014 11:00 Hrs To 24.02.2014 17:00 Hrs

Activities to be performed by the Department

Activities to be performed by the Bidders  
(All Bidders' Activities are Mandatory)

*\* Dates mentioned here, are scheduled dates for Bid Opening Activities. Any changes in dates of opening of technical and commercial tenders shall be notified in 'Press Notice / Corrigendum' section on the e-Tendering sub portal of the department before opening of the same.*

**Note:-**

1. All eligible/interested Bidders are required to be enrolled on portal <https://maharashtra.etenders.in> before downloading tender documents and participate in e-tendering.
2. Bidders are requested to contact on following telephone numbers any doubts/information/difficulty regarding online enrollment or obtaining digital certificate Sify Technologies Ltd. Nextender (India) Pvt. Ltd. on 020-25315555
3. Bidders should submit the document related to tender online However. Bidders should submit personally the earnest money in form of FDR. , Tender form fee in form of D.D. otherwise Bidders cannot participate in e-tendering.
4. Other instructions can be seen in the tender form. All or any one of the tender may be rejected by competent authority.
5. The Electronic tendering system for Home Department of Government of Maharashtra will be available on separate Sub Portal with URL <https://home.maharashtra.etenders.in> as part of the Electronic Tendering System of Government of Maharashtra which is available on the Portal <https://maharashtra.etenders.in>



GOVERNMENT OF MAHARASHTRA, HOME DEPARTMENT (PORTS & TRANSPORT)

**MAHARASHTRA MARITIME BOARD**

Indian Mercantile Chambers, 3rd Floor, Ramjibhai Kamani Marg, Ballard Estate,  
Mumbai - 400 001. Tel.: 22612143 Fax : 22614331,  
Website : www.mahammb.com Email: ceommb@gmail.com



Tender Document Issued to: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Tender For Supply  
Of  
DIFFERENTIAL GLOBAL POSITIONING SYSTEM  
Tender No. HGR/06 for 2013-14**

1. About Maharashtra Maritime Board

The Maharashtra Maritime Board (M.M.B.) (herein after mentioned as “MMB”) was constituted by Maharashtra Ordinance No.XVI of 1996, dated 4.10.96 on 22<sup>nd</sup> November, 1996 under the clause (3) of Article 348 of Constitution of India. As per the MMB Act, Clause 15 of 1997, various departments started functioning with rules framed in it.

The MMB intends to purchase the Differential Global Positioning System to be used in the Hydrographic Department. It should be of branded product and used by a large no of customers.

The detailed technical specifications of the requirements of Differential Global Positioning System are given in ANNEXURE-I.

2. Duty exemption

The MMB is registered with the Department of Scientific and Industrial Research (DSIR), Govt. of India (i) for the purpose of availing Custom Duty Exemption in terms of Govt. Notification No.51/96-customs Dtd. 23.07.96 and (ii) for the purpose of availing Central Excise Duty Exemption in terms of Govt. Notification No.10/97. Central Excise Dtd. 1 March 1997 vide DSIR Registration No.TU/V/Rg-CDE (881) 2003-dated 27-11-2003. No CDEC will be provided, custom duties can be shown separately in the offer.

3. General guidelines for submission of Tender

The details of equipment are given in this tender document. The tenderers are advised to study the same carefully before submitting their tender and they shall be deemed to have fully acquainted themselves with the same.

### 3.1 Blank Tender Forms

Blank Tender Forms can be downloaded from the <https://home.maharashtra.etenders.in> as stipulated in the Tender Notice

### 3.2 Manner of Preparation & Submission of tender and its accompaniments

Both the Tenders (Technical as well as Commercial) shall have to be prepared and subsequently submitted online only. Tenders not submitted online will not be entertained. The tenderer shall submit the tender and documents in two digitally sealed envelopes as below:

#### Online Bid preparation stage:-

In Bid Preparation stage, bidders get access to Online Technical and Commercial Envelopes where they require uploading documents related to technical eligibility criteria and quote commercial offer for the work / item in respective online envelopes.

#### 3.2.1 ENVELOPE NO. 1 (FOR TECHNICAL BID - DOCUMENTS)

Following documents should be uploaded in Online Technical Envelope (T1) in PDF format, if required can be zipped as well and then uploaded. These documents need to be digitally signed by individual contractor's digital signature and uploaded during Online Bid Preparation stage.

#### Documents to be uploaded in Technical Bid:-

(A)	The scan copy of Authorisation letter if the bids are submitted by an Authorised Distributor or Representative of a manufacturer.	The authorisation letter of the Company allowing their Indian Authorised Distributors/ Representatives to submit the tender should invariably be enclosed in the Technical Bid.
(B)	The scan copy of I.S.O. Certificate	If the bidder has I.S.O. accreditation, the proof for the same may be enclosed in the Technical Bid envelope.
(C)	The scan copy of DD of Earnest Money Deposit (E.M.D.)	The Technical Bid envelope must be accompanied by a bank demand draft of E.M.D. The amount of E.M.D. for Differential Global Positioning System is Rs. 1,15,000/- The E.M.D. may be either in Indian currency or in foreign currency and in the form of crossed Account Payee Demand Draft drawn on any Indian nationalised bank payable at Mumbai and favouring "Hydrographer, Maharashtra Maritime Board". The EMD will be return after acceptance of tender. Tender without E.M.D. will be summarily rejected. EMD cannot be submitted as bank guarantee, it should be in the form of DD as per Tender.
(D)	The scan copy of documents related to Technical Information	The relevant product information, Company Profile, Technical Specification sheets, Technical Test results, Test Printouts, Benchmarking Reports should be submitted along with Technical Bid. Failure to submit this information could result in disqualification.
(E)	The scan copy of Annexure II	Annexure II duly filled in must be enclosed in Technical Bid. Failures will be disqualified.

(F)	The scan copy of Token of Acceptance of Terms and Conditions of Tender.	Tender documents duly signed and stamped at the bottom of each page indicating token of acceptance of tender's Terms & Conditions should be enclosed.
(G)	The scan copy of Questionnaire	The enclosed ANNEXURE IV must be submitted with complete response to the questionnaire in the technical bid. Failures will be disqualified.
(H)	The scan copy of PAN NO.	Bidder has to submit photocopy of Company PAN card
(I)	The scan copy of Registration of Sale Tax	Bidder has to submit photocopy of Registration of Sale Tax
(J)	The scan copy of Registration	Bidder has to submit photocopy of registration under the Companies Act, 1956.

### 3.2.2 ENVELOPE NO. 2 (FINANCIAL BID)

All financial offers must be prepared online (An online form will be provided for this purpose in Online Commercial Envelope (C1), during Online Bid Preparation stage).

The second envelope shall contain only the main tender. A tender submitted without this would be considered as invalid.

He should not quote his offer any where directly or indirectly in Envelope No.1. The contractor shall quote for the work as per details given in the main tender and also based on the detail set of conditions issued/ Additional stipulations made by the Department as informed to him by a letter from Chief Executive Officer Maharashtra Maritime Board, Mumbai. Indian Mercantile chamber, 3rd floor, Ballard Estate Mumbai. 400 001 / after Pre-Tender Conference..

**Note:** During Online Bid Preparation stage, bidders are allowed to make any changes or modifications in the bid data uploaded by them in Technical (T1) as well as Commercial (C1) envelope. Once a bidder successfully completes the Bid Preparation stage (by generating the Hash Values for T1 and C1), system won't allow him/her to make any further changes or modifications in the bid data.

### 3.3 ONLINE SUBMISSION OF TENDER:-

The date and time for receipt of envelope Containing tender shall strictly apply in all cases.

In this stage, bidders who have successfully completed their Bid Preparation stage are required to transfer the data, already uploaded by them during Bid Preparation stage, from their custody to department's custody.

**Note:** During this stage, bidders won't have any capability to make any kind of changes or editing into technical as well as commercial data.

### 3.4 OPENING OF TENDERS:

The tenders that are submitted online successfully shall be opened online as per the date and time given in detailed tender schedule (if possible), through e-Tendering procedure only in the presence of bidders.



Tenders shall be opened either in the presence of bidders or its duly authorised representatives. The bidder representatives who are present shall sign a register evidencing their attendance. Only one representative per applicant shall be permitted to be present at the time of opening the tender.

**3.4.1 ENVELOPE NO. 1:-**

First of all, Technical Envelope of the tenderer will be opened online through e-Tendering procedure to verify its contents as per requirements.

At the time of opening of technical bid the tenderer should bring all the original documents that have been uploaded in the Online Technical Envelope (T1) so that same can be verified at the time of opening of technical bid.

If the tenderer fails to produce the original documents at the time of opening of technical bid then the decision of the committee taken on the basis of document uploaded will be final and binding on the tenderer.

If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderer's Envelope No.2 will not be considered for further action and the same will be recorded.

Decision of the tender opening authority shall be final in this regard.

The commercial tenders shall not be opened till the completion of evaluation of technical tenders.

The commercial Tenders of only technically qualified Bidders as mentioned above will be opened.

**3.4.2 ENVELOPE NO. 2 :- (Financial Bid)**

This envelope shall be opened online as per the date and time given in detailed tender schedule (if possible), through e-Tendering procedure only,

This envelope shall be opened immediately after opening of Envelope No.1, only if contents of Envelope No.1 are found to be acceptable to the Department; the tenderer rate in Schedule 'B' or percentage above / below the estimated rates shall then be read out.

**3.5** No escalation in the Tender rates will be permitted throughout the period of contract or the period of completion of the job whichever is later on account of any variation in prices of materials or cost of labour or due to any other reasons. Claims on account of escalation shall not be arbitrable.

**3.6** Any annotations or accompanying documentation in the bid shall be in English language only and in metric system. Tenders filled in any other language will be 6If the space in the bid form or in the Appendices thereto is insufficient, additional pages shall be separately added. These pages shall be consecutively page numbered and shall also be signed by the Bidder.

**3.7.** MMB shall have unqualified option under the said bid bond to claim the amount thereunder in the event of the Bidder failing to keep the bid valid up to the date

Specified or refusing to accept work or carry it out in accordance with the bid if the MMB decides to award the work to the Bidder.

- 3.8.** The bid document shall be completed in all respects and shall be submitted together with the requisite information and appendices. They shall be complete and free from ambiguity, change or inter-lineation. In case MMB requires any information / clarification(s) from the Bidder in respect of the bid documents, the bidder shall be required to furnish the same in writing, to MMB at the earliest where no time is specified by MMB to furnish the same. Failure to furnish the same shall entitle MMB to cancel/reject the bid.
- 3.9** All costs, charges and expenses including stamp duty if any, in connection with the tender submission shall be borne by the Tenderer. In addition, all costs, charges and expenses incurred by the tenderer for preparation and completion of agreement including Tenderers Attorney fees shall be borne and paid by the Tenderer. No claim in this regard shall be entertained by MMB.

#### 4. General Terms & Conditions

(A)	Rates	The rates quoted by the bidder should be including  (a) FOB/C.I.F. price of the equipment. (b) Installation and commissioning charges (c) One year comprehensive maintenance at site under warranty covering parts, service, visits, etc. This period will start from the date of commissioning. (d) Freight and forwarding charges at actuals shall be paid by the MMB in Indian Rupees. The vendor should arrange for the shipment of items freight-to-pay basis and clear the items from custom, However the charges will be paid on submitting bill at actual.
(B)	Insurance, clearing & forwarding, handling	The transit insurance should be borne by the bidder. The bidder should also quote the charges for forwarding, clearing and handling separately.
(C)	Validity of Quotation	The offer should hold good for a period of 120 days from the date of opening of the tender.
(D)	Offer should be in foreign & Indian currency.	MMB intends to purchase the items. Therefore, FOB/C.I.F. prices must be quoted in foreign as well as in Indian currency. Exchange rate as per RBI/ SBI at the time of tender (price bid) opening will be considered.
(E)	Transfer of Tender Document	The tender document is not transferable. Only the party who has purchased the tender document shall be entitled to quote.
(F)	Erasures/Alteration in the offer	The unsigned offer containing erasures or alterations will not be considered.

(G)	Date & time of submission of tender	The tender duly signed and securely sealed should reach the MMB, Mumbai, on or before ----- at 1200 hrs IST (Indian Standard time). The technical offers will be opened in the presence of attending tenderers at 1500 hrs IST on the due date, i.e -----
(H)	Short listing of Vendors	The MMB will shortlist technically qualifying vendors and commercial bids of those vendors will be opened later. The venue, date and time for opening of commercial bids will be intimated at appropriate time to the concerned bidders.
(I)	Acceptance of tender	The MMB does not bind itself to accept the lowest or any other tender. The MMB reserves the right to reject one or all tenders without assigning any reason for the non-acceptance. The MMB may also at its sole discretion accept full or part quantity of the tender
(J)	Benchmarking of the item	This MMB may choose to perform benchmarking of machines before arriving at the final decision.
(K)	Warranty	The bidder must give on site comprehensive warranty covering all parts of equipment's, peripherals supplied. The warranty should be for 12 months from the date of commissioning and certification by a panel of inspecting authorities appointed by the MMB.
(L)	Quoting for all items	The bidder must quote for all the items. Partial quoting may disqualify the bidder and result in rejection of the tender, but separate purchase order for each product will be issued.
(M)	Terms of Payment	Payment will be made through Letter of Credit / In case of Indian Supplier payment will be in Rupees. The bidder has to give the bank guarantees from International Bank/ Indian Nationalised bank amounting to 10% of the accepted value of tender for one year before opening of Letter of credit and will be released after satisfactory installation of equipment. 80% payment will be released by L.C against shipping documents and remaining 20% payment on successful installation and commissioning of equipment (through L.C). MMB reserve the right to encash the performance bank guarantee in case of failure to give proper service support and performance of equipment during warranty period.
		Payment will be made after supply & 20% after successful installation of equipment. MMB reserves the right to encash the performance bank guarantee in case of failure to give proper service support and performance of equipment during warranty period.
(N)	Delivery, Installation & Commissioning	The bidder must deliver the material within 12 (twelve) weeks from the date of Letter of Credit/ Purchase order. The bidder must deliver all the material in one lot. In any

		case part supply will not be accepted. Before delivery the supplier's own inspection report of goods being dispatched must be forwarded to the MMB. Installation and commissioning must be completed within 16 (sixteen) weeks from the date of letter of credit/ purchase order. In case of delay in delivery, installation and commissioning the penalty at the rate of half percent per week of accepted value will be charged and recovered from the 10 % of the bank guarantee given for the accepted value.
(O)	Inspection	The material to be supplied should be strictly as per the technical specification mentioned in the Purchase Order. The physical inspection of equipment will be undertaken on receipt of delivered material will be inspected by the panel appointed by the MMB. The suppliers will have to replace the rejected material at their cost within a period of one month. The demonstration of equipment is required during technical evaluation.
(P)	Increase or Decrease in tender quantity	The quantity of items mentioned in the tender may be increased or decreased. The supplier will not be entitled to any compensation for a decrease in the quantity. In case of increase in the quantity of items the supplier must supply the items at the rates mentioned in the Purchase Order.
(Q)	Technical Conditions (i)	Differential Global Positioning System will have to be supplied with all the latest software drivers and manuals for the display controller(Details given in Annx-1).
	(ii)	Annual maintenance: The vendor should also quote separately for Annual Comprehensive Maintenance at site for 3 years from the date of expiry of the Warranty Maintenance. This should be quoted as

		1 <sup>st</sup> year price 2 <sup>nd</sup> year price 3 <sup>rd</sup> year price
	(iii)	The bidder must give commitment to provide maintenance at the price quoted for 3 years from the date of commissioning.
	(iv)	All drivers, necessary server management software, backup software will have to be supplied on CDs and wherever possible on pen drives too.

	(v)	All drivers and software will have to be supplied with user manual, software drivers, interface cards, cables etc.
	(vi)	All drivers & software should be supplied with the latest version.
	(vii)	All sorts of manuals required for installation and use should be provided with the software/equipement.
	(viii)	The bidder should replace all the damaged parts / equipment, if any, at their own cost within a period of one month.
(R)	Failure of supply	In case the tenderer fails to supply the ordered materials within the stipulated period of time, the MMB may forfeit the tenderer's E.M.D. amount.
(S)	Signature on Tender Document	Tender Document must be signed by the authorised Signatory or Proprietor or Principal or Power of Attorney holder. When the tender document is signed by a person other than the Principal or Proprietor, a certificate of authorisation must be enclosed.
(T)	Training	Theoretical and Practical Training to employees of MMB for at least 5 days should be provided free of cost.
(V)	Jurisdiction for legal matter	No suit or any legal proceeding with regard to any matter arising in respect of this tender shall lie in any court save the competent city civil court at Mumbai.

HYDROGRAPHER  
Maharashtra Maritime Board, Mumbai

## ANNEXURE - 1

### Specification of Differential Global Positioning System

#### 1. Differential Global Positioning System (3 sets) used for Hydrographic surveys.

Sr. No.		Technical Specifications (Receivers)	Identical Hardware of Receivers for both base and rover
1.	A.	Type	Tripple frequency, GNSS, Geodetic Tripple frequency receiver with separate Antenna and Receiver
	B.	No. of Channels	120 Channels Minimum
	C.	Maximum Simultaneous tracked satellites Satellite Signals to be tracked	More than 50 Satellites simultaneously on two frequencies. GPS: L1, L2, L2C GPS L5 GLONASS: L1, L2 Galileo E1, E5a, E5b and AltBOC Upgrade Compass Upgrade WASS, EGNOS, GAGAN and MSAS
	D.	GNSS Measurements	Fully independent code and phase measurements of all frequencies. GPS: Carrier phase full wave length, code (C/A, P narrow code) GLONASS: Carrier phase full wave length, Code (C/A, P narrow code) Galileo: Carrier Phase full wave length, Code
	E.	Receiver Technology	Fast acquisition, strong signal, Low noise.
	F.	LED Status indicators	Excellent tracking, even to low satellites and in adverse conditions. Interference resistant should have inbuilt integrity. Monitoring for continuously determining the ambiguities in back ground should have inbuilt multipath mitigation.
	G.	Communication Port	For Bluetooth, Position, Logging. 2 Serial RS232 lemo 1 Bluetooth 1 Power Only Port 1 TNC Port for antenna
	H.	Power Consumption	Power consumption should be 3.2W typically
	I.	Weight	Light weight receiver

Environmental Sepcification for Receiver		
A.	Operational Temperature	-40 <sup>0</sup> C to +65 <sup>0</sup> C
B.	Storage Temperature	-40 <sup>0</sup> C to +80 <sup>0</sup> C
C.	Humidity	100%
	Protection against	Protection against blowing rain
		Waterproof to temporary submersion into water (maximum depth of 1m)
D.	Water, Sand and Dust	Dust-tight, protection against blowing dust
E.	Drops	Withstands 1m drop onto hard surfaces.
Accuracy Specification for Receiver		
A.	Static with long observations Horinzontal Vertical	3 mm + .1 ppm 3.5 mm + .4 ppm
B.	Static and Rapid Static Phase Horizontal Vertical	5 mm + .5 ppm 10 mm + .5 ppm
C.	Kinematic (Phase) in moving mode after initialization Horizontal Vertical	10 mm + 1 ppm 20 mm + 1 ppm
D.	Code Only Accuracy Real Time Kinematic	Typically 25 cm
E.	Kinematic phase moving mode after intialisation Horinzontal Vertical	10 mm + 1 ppm 20 mm + 1 ppm
Performance Specification of Receivers		
A.	Reliabilty of initialization	Better than 99.99%
B.	Time for OTF initialisation	Typically 8 secs.
C.	Reacquisition Time	Less than 1 second
D.	OTF/RTK Range	Typicall 30 kms under normal conditions
E.	Position Update Rate	0.05 sec (20 Hz)
F.	Position Latency	0.03 sec and less
G.	Data Recording rate	Upto 20 Hz
H.	Navigation	Full navigation information in position and stakeout displays
		Positon, Course, Speed, bearing and distance to waypoint.
I.	Logging	All the receivers should have capability to log the RINEX data directly into receiver onboard without any external converter.

	Power Supply		
	A.	Internal Battery	Internal Rechargeable batteries should be supplied with each of more than 4.4 Ah, Hot swappable batteries should be present.
	B.	Operation Time	Two Batteries should power receiver and antenna for more than 14 hours.
	C.	Chargers	External Chargers should be supplied with each instruments to charge two batteries simultaneously.
	Real Time Interface Protocols Methods		
	A.	RTK Data Formats for Transmission Proprietary and other compatible formats and reception RTCM Formats	RTCM Versions 2. X
	B.		Supporting messages 1,2,3,9,18,19,20,21,22,23,24 And RTCM Version 3
	C.	Simultaneous transmissions	2 real time output interfaces via independent ports, providing identical or different RTK/RTCM formats
	D.	NMEA Sentences	NMEA 0183
	E.	RADIO MODEMS Tx Radio Power  Rx Radio  Base Mount  Rover Mount	Radio with Transmission power of 25-35 watt to be supplied with base station. Radio built into housing separate from receiver capable of replace in the field should be supplied Base Radio Antenna Mount of 5 meter should be offered with all the cables Rover Radio Antenna Mount for 1.3 meter above ground should be offered.
2.		GNSS ANTENNA	Tripple Frequency Multiconstellation Antenna identical for both base and rover
	A.	Satellite	Should have the capability of tracking GPS: L1, L2, L5 and GLONASS, Galileo and Compass
	B.	Ground Plane	Should have in built ground plane.
	C.	Weight	Light weight less than 1 kgs
	D.	Drop and Vibration	Should withstand 1.5 m drop on hard surface and withstand vibrations during operations.



Environmental Specification for Antenna			
	A.	Operational Temperature	-40 <sup>0</sup> C to + 65 <sup>0</sup> C
	B.	Storage Temperature	-40 <sup>0</sup> C to + 80 <sup>0</sup> C
	C.	Humidity	100%
		Protection against	Protection against blowing rain Waterproof to temporary submersion into water (Maximum depth of 1 m)
	D.	Water, Sand and Dust	Dust-tight, Protection against blowing dust
	E.	Drops	Withstands 1m drop onto hard surfaces.
3.		DISPLAY CONTROLLER	Identical controllers for both base and rover  Hardware Specifications for Controller
	A.	Display	640 X 480 Pixel (VGA) Color TFT with Led backlight and touch screen.
	B.	Keyboard	Should have Alphaumeric keypad with touch sensitive TFT.
	C.	Graphical Display	Controller should be capable of creating complete points, Lines and polygons in the field which will be displayed graphically on the screen.
	D.	Weight	Lightweight controller with weight less than 800 grams.
	E.	Ports	1 USB 2.0, 1 Lemo Rs. 232 Port/DB9 connector, SD, CF and SIM card slot.
	F.	Use	Should be possible to use the controller with both GPS and Total Station.
	G.	Upgrade	Should be possible to upgrade controller to a L1 GIS data collector with internal Antenna for phase data collection.
Coordinates System on controller			
	A.	Ellipsoids	All common ellipsoids User-definable ellipsoids Mercator Transverse Mercator User definable UTM and country specific Oblique Mercator Lambert (1 and 2 standard parallels)
	B.	Map Projection	Soldner Cassini Polar Stereographic Double Stereographic RSO (rectified skewed orthomophic projection)
	C.	Geoidal model	Upload geoidal model to system.
	D.	Transformation in receiver	Classical – 7 – parameter 3-D Helmert One step and two step (direct WGS84 to grid). The transformation approach should also allow the determining of transformation

			with only one common for a small survey field. The residuals hours also be distributed on board.
	On Board Software on controller		
	A.	Graphics	Graphical representation of points, lines and areas. Application result plots.
	B.	Icons	Icons indicating the current status of measure, setting, battery etc. it should be possible to configure or see status of the iconed devices by touching on the screen.
	C.	Function Keys	Direct Function keys for quick and easy operation.
	D.	Configuration Sets	Ability to store and transfer all instruments and application configuration setting for different operators, survey tasks etc.
	E.	Free Coding	Recording codes with optional attributes in between of measurements. Manual Codes entry or selection from a user defined codelist. Coding points, lines and areas with optional attributes when measuring.
	F.	Thematical Coding	Manual Code entry or selection from a user defined codelist.
	G.	Quick Coding	Recording a measurement with a point code or free code by entering a numerical quick code from user defined codelist.
	H.	Averaging	Averaging of multiple points within user defined averaging limit.
	I.	On Board Programmes	Surveying, Staking, CoGo, Area, Two Point Distance, Automatic Recording Points with user defined time distance, Hidden Point Measurements.
	J.	On Board Application	Controller should have software to work in both GPS and TPS mode should support survey data collection, job creation, Graphical Stake out, Map screen with Zoom in and out, pan and Zoom Window icons, should be possible to attach a CAD dxf file to the survey data.
	Environmental Specification for Controller		
	A.	Temperature Operation	-30 to 60 <sup>0</sup> C
	B.	Temperature Storage	-40 to 80 <sup>0</sup> C
	C.	Humidity	100% condensing (MIL-STD-810F, Method 507.4-1) II
	D.	Drop	1.2 m
	E.	Vibration	MIL-STD-810F, Method 514.5-Cat24

4.	POST PROCESSING SOFTWARE		
	A.	Description	The software should be a combined software capable of handling the GPS, TPS and Digital Level Data.
	B.	Import	Capables of importing the RAW Data logged from GPS and RINEX data with maps created in the field to be downloaded as such. Also should be capable of downloading data from Total Stations and Digital Levels.
	C.	Export	Capable for Exporting the data in RINEX format as well as capable of transferring the Maps directly to CAD with the code lists enabling the symboloy to be attached with out manual editing.
	D.	Reporting	Software should be capable of generating HTML style reports directly for the surveyed data.
	E.	Processing Options	Capable of processing the Raw static data of GPS and GLONASS for both manually and automatically.
	F.	Datum Transformation	Capable of transferring the data from one datum to another for given set of common points with or with out the knowledge of datums.
	G.	Adjustment	Capable of performing 3D adjustments for the surveyed area of GPS networks.
	H.	COGO Calculations	Software should be capable of computing the Coordinates of unknown points using reference points and coordinate geometry.
	I.	Image Referencing	The software should have an image referencing module and the surveyed data should be imported directly on this back ground Raster Image.
	ACCESSORIES		
	A.	Static Survey Kit	Receiver Kit for performing the static survey with suitable Tripod arrangement for base and rover units.
	B.	RTK Survey Kit	Rover back pack and pole holder kit for RTK survey.

**GENERAL CRITERIA:**

1. Should be compatible to perform all the tasks by using software Hypack latest version, apart from the licenced software supplied.
2. Demonstration of equipment in MMB Office (Mumbai) at 7 days notice.
3. Authorised Service Center in Mumbai which will be inspected by a team of MMB officers.
4. On job training for 5 days in any of the creeks close to Mumbai.
5. Model of the equipment offered should have been supplied to the defence / Govt. agencies. (Separate List of Defence and Govt. agency to be enclosed)
6. List of agencies (Defence, Govt. and Civil) presently using the product (indicate model-wise user list)
7. Capable of providing clarifications on operating procedure / parameter during the warranty period of one year at Mumbai.

## ANNEXURE-II

### Complying of Tender Enquiry

Specification for Differential Global Positioning System:

Sr. No.	Technical Specifications given in the tender Enquiry		Specifications quoted by the tenderer	The bidder has to examine and state whether complied with specification of tender inquiry mentioned in column number 2 & 3 or not	If not complied with the specification quoted in col. Nos 2 & 3, clarification if any may be given
1	2	3	4	5	6
1.	Reliability of Initialisation	Better than 99.99%			
2.	Time Of OTF	8 sec			
3.	OTF/RTK Range	30 KMS			
4.	Position update Rate	0.05 sec			
5.	Position Latency	0.03 sec and less			
6.	Data Recording Rate	Upto 20Hz			
7.	Internal Battery	Rechargeable batteries with each more than 4.4h			
8.	RTK Data Formats for Transmission	RTCM formats (lates Version)			
9.	NMEA Sentences	NMEA0183			

## ANNEXURE – III

### PROFORMA OF QUOTATION

**Note:** *Commercial Offer has to be entered online only. An Online Form, will be available to the bidders in Commercial Envelope (C1) during Online Bid Preparation stage where bidders would quote their offer.*

Description of material / equipment (with ) tech. Specification	CIF Rate in Foreign / Indian currency (in figure and in words)	Charges for local handling and custom clearance etc.and supply at MMB Office at Khardanda	Qty. as per Tender Enquiry	Amount in foreign /Indian currency (Col.2 X 4) (in figure and in words)	Validity of Quotation	Delivery period offered	Remarks, if any
1	2	3	4	5	6	7	8
			3 Sets.		120 Days after opening of price bid.		

**Note:** Failure to give details of any of the above columns, i.e., 1 to 6 will render the tender invalid and the decision of the Maharashtra Maritime Board Committee in this respect will be final. Overwriting, Erasures must be avoided.

## ANNEXURE – IV

### QUESTIONNAIRE

1. Please attach the list of your clients situated in India.
2. In view of quality which certificate do you have for your product?
  - (a)
  - (b)
3. Please mention the name of the country where these DGPS is being manufactured (i.e. Country Origin)
4. If you have sales Network & Market share in India please indicate its details and future projections.
5. Please state the average Down Time of DGPS you have supplied.
6. Do you have service support in the state of Maharashtra (India)? (Yes/No) :  
(If yes, please give details)
7. Please mention how many of your field Engineers are stationed in Maharashtra state.  
(India) (Regional Office)
8. How do you plan for support during warranty period?
9. Please specify your terms & conditions of Annual Maintenance Contract after warranty period for
  - First year
  - Second year
  - Third year
10. Please attach list of inventory you will keep at Maharashtra Maritime Board/ Service Station for maintaining DGPS supplied to Maharashtra Maritime Board during Warranty Period.
11. Please attach supporting documents to this questionnaire; you must submit complete response to questionnaire along with technical tender bid.

**Name of work: - Supply of Differential Global Positioning System.(DGPS):**

**DECLARATION OF THE CONTRACTOR**

I/we agree to abide by the terms and conditions specified for this Tender and in the event of my/our tender being successful. I/we abide by it and arrange supplies to your entire satisfaction as per the delivery period stipulated in supply order.

Yours faithfully,

Signature of authorised Signatory

Place : \_\_\_\_\_

Date :        /        /2013



## INSTRUCTIONS TO BIDDERS RELATED TO E-TENDERING

### 1. GENERAL INSTRUCTIONS:

The bidders are requested to familiarize themselves with the use of the e-Tendering portal of Government of Maharashtra well in advance

To view- Tender Notice, Detailed Time Schedule, Tender Document for this Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of Government of Maharashtra: <https://maharashtra.etenders.in>

The Contractors participating first time for e-Tenders on GoM e-tendering portal will have to complete the Online Registration Process for the e-Tendering portal. A link for enrollment of new bidders has been provided on <https://maharashtra.etenders.in>

All bidders interested in participating in the online e-Tendering process are required to procure Digital e-Token having 2 certificates inside it, one for Signing/Verification purpose and another for Encryption/Decryption purpose. The tender should be prepared & submitted online using individual's Digital e-Token.

An important Training Workshop on e-Tendering procedure will be held on \_\_\_\_\_ at 11.00 Hrs. at Maharashtra Maritime Board Mumbai

e-Tendering Tool Kit for Bidders (detailed Help documents, designed for bidders) has been provided on e-Tendering website in order to guide them through different stages involved during e-Tendering such as online procedure for Tender Document Purchase, Bid Preparation, Bid Submission.

The interested contractors / bidders will have to make online payment (using credit card/debit card/net banking) of Rs. 1038/- (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (Sify NextTenders) at the time of entering Online Bid Submission stage of the tender schedule.

If any assistance is required regarding e-Tendering (registration / upload / download) please contact GoM e-Tendering Help Desk on number: 020 – 253 155 55 (Pune Helpline), Email: [support.gom@nextenders.com](mailto:support.gom@nextenders.com)

### 2. PURCHASE AND DOWNLOADING OF TENDER FORM:-

The tender document is uploaded / released on Government of Maharashtra, (GOM) e-tendering website <https://maharashtra.etenders.in>. Tender document and supporting documents may be purchased and downloaded from following link of Home Department on e-Tendering website of Government of Maharashtra, <https://home.maharashtra.etenders.in> by filling Demand Draft details online. Subsequently, bid has to be prepared and submitted online ONLY as per the schedule.

The Tender form will be available online only. Tender forms will not be sold / issued manually from office of Maharashtra Maritime Board, Mumbai .

Only those Tender offers shall be accepted for evaluation for which non-refundable Tender Fee of **Rs. 10,000/- ( INR Ten Thousand Only)**, in the form of Demand Draft drawn on Nationalized Bank / Scheduled Bank in favour of "Maharashtra Maritime board, Mumbai 400001" payable at par at Mumbai, is deposited in the office of Chief Executive Officer

Maharashtra Maritime Board, Mumbai on or before scheduled date given in *NOTICE DETAILS* of the tender on working days.

The bidders are required to download the tender document within the pre-scribed date & time mentioned in online tender schedule. After expiry of the date and time for tender document download, Department will not be responsible for any such failure on account of bidders for not downloading the document within the schedule even though they have paid the cost of the tender to the Department. In such case the cost of the tender paid by the bidders will not be refunded.

### **3. INSTRUCTION TO BIDDERS FOR ONLINE BID PREPARATION & SUBMISSION:-**

During the activity of Bid Preparation, the tenderer is required to upload all the documents of the technical bid by scanning the documents and uploading those in the PDF format. This apart, tenderer will have to quote commercial offer for the work / item, for which tenders are invited, in an online form made available to them in Commercial Envelope. This activity of Bid Preparation should be completed within the pre-scribed schedule given for bid preparation.

After Bid Preparation, the tenderer is required to complete Bid Submission activity within pre-scribed schedule without which the tender will not be submitted.

Interested contractors / bidders will have to make online payment (using credit card/debit card/net banking/Cash Card) of Rs. 1038/- (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (Sify NexTenders) at the time of commencing Online Bid Submission stage of the tender schedule.

Non-payment of processing fees will result in non submission of the tender and Department will not be responsible if the tenderer is not able to submit their offer due to non- payment of processing fees to the e-tendering agency.

Detailed list of different modes of online payment to e-tendering service provider (E-Payment Options) has been provided under E-Tendering Toolkit For Bidder section of <https://maharashtra.etenders.in> .

The date and time for online preparation followed by submission of envelopes shall strictly apply in all cases. The tenderers should ensure that their tender is prepared online before the expiry of the scheduled date and time and then submitted online before the expiry of the scheduled date and time. No delay on account of any cause will be entertained. Offers not submitted online will not be entertained.

If for any reason, any interested bidder fails to complete any of online stages during the complete tender cycle, department shall not be responsible for that and any grievance regarding that shall not be entertained.

Any amendment to the tender will be placed on sub portal of the Department, who have invited the tenders, on e-tendering portal of the Govt. of Maharashtra. The tenderer will not be communicated separately regarding the amendment.