

## Response of Pre-Bid Queries

### Janak Positioning and Surveying Systems Pvt. Ltd.

<b>RFP Section</b>	<b>Question</b>	<b>Response</b>
64,Annexure E - No of channels Min23( 11 Navic L5 & 12 GPS)	There are only 7 NavIC satellites. Are 4 additional NavIC channels required for future NavIC satellites	YES, NavIC constellation will be extended to 11 satellites
65 Annexure E - Desirable Interfaces: RS232, RS4222, USB, SPI etc	Are all these interfaces required or any one OR two are sufficient in the integrated receiver	RS232 (UART TTL/CMOS) is mandatory, others are optional
7& 8 Slope of work – Phase I	The design and chip fabrication of Navic + GPS receivers needs to be carried out outside of India only as no such facility, to the best of our knowledge exist in the country as on today. The only process of chip bonding and packaging can be carried out in India and that too is not desirable.  If that is the case, then in what way the foreign agency would be involved as the bidding partner?	As mentioned in clause 10.2, <i>'All members in the consortium should be registered legal entity in India.'</i> Additionally, as mentioned in Phase 1 in scope of work <i>'The bidder can form consortium with partners to meet the scope of work mentioned. The bidder can leverage the expertise of the partners – Design/Fabrication/ATMP/Sales or any other relevant expertise required to supply Integrated NavIC and GPS chips.'</i> This means while the bidder in India may only have design capability, they may form consortium for other functions with any suitable entity including those of foreign origin, who are registered as legal entity in India satisfying the eligibility criteria. The other approach would be to get the fabrication done as a service from outside India.
7& 8 Slope of work – Phase I	In case, the chip sets/modules having almost the same feature as advertised, are already available elsewhere outside India, whether those could be considered. Any suggestion/ clarification on this aspect?	Yes, as mentioned above, consortium may be formed with entity of foreign origin who is registered as legal entity in India. More importantly, the set/module quoted must satisfy all the technical requirement of the RFP including the ability to receive NavIC frequencies and meet technical specifications as mentioned in the RFP

7& 8 Slope of work – Phase I	What is the expected target price of the chip set/ module  and whether it is for the portable receivers or to be used in Mobile phone etc.	The responsibility of fixing the pricing is on the bidder. The applications may be varied for the chipset. The RFP is looking for bidder who can Design, Manufacture, Supply and Maintain Integrated NavIC and GPS Receivers
7& 8 Slope of work – Phase I	Nothing has been talked about the antenna, because active antenna for Navic + GPS receiver will be a critical component as it has widely separated bands L1&L5. Will it be the responsibility of Integrated receiver fabricator. Such antenna are not easily available specially for the portable receivers.	As mentioned in Technical specifications on Antenna – ‘ <i>One RF input for the signal and Capable of Supporting both passive and active antenna</i> ’ At Phase 2, the successful bidder must ensure that chipsets are getting deployed in the integrated NavIC and GPS receivers with required antenna

#### Signalchip Innovations Private Limited

RFP Section	Question	Response
Pg 8, No 2.2	Scope of work: The term GPS chips have been replaced by GPD receivers in the RFP. Does this mean the RFP is for the GPS receiver module and not the chip ( Semiconductor IC)	This mean that the RFP is not only for the chip (Semiconductor IC), but responsibility of the bidder includes deployment of GPS receivers.
Pg. 9, No 2.2.2	Are there any policy decisions planned by Govt. to ensure deployment of NavIC? Or any other form of Govt. assistance to support sale and deployment of NavIC?	As on date government is yet to mandate usage of NavIC but going forward, government may issue mandates related to necessary usage of NavIC in the GNSS chipset.
Pg. 22, No 5.4	Will the cost of the integrated NavIC and GPS chipset and/or cost of the GNSS module or GNSS receiver be considered in the financial bid evaluation.  For example a higher development cost can ensure a cheaper chipset, but if the bid is evaluated solely based on the support amount the bid might get rejected.	As mentioned in the RFP, ‘ <i>The bidder can supply the Integrated NavIC and GPS chips to Global Navigation Satellite System (GNSS) module manufacturers or directly to GNSS receiver manufacturers.</i> ’  Hence, financial bid would be based on cost for integrated NavIC and GPS chipset including its development cost.

Pg. 25, No 7.2 vi	In case a NavIC Chipset is being designed, does this mean the chipset Design related documents also have to be kept in ESCROW. Alternatively if the receiver is designed with market available chipset, then what is expected to be kept in ESCROW regarding the chipset	As mentioned in 'All design related documents would be kept in ESCROW account after validation of the same by ISRO and CDAC. The beneficiary of the ESCROW will be CDAC.' This implies that if receiver is designed with available chipset, design document of the receiver and technical data sheet of the used chipsets shall also be required to be kept in ESCROW.
Pg. 26, No 8, row 2	In case less than 12.5% of awarded quantity of receivers were deployed in a quarter and hence did not qualify to receive the support amount, can the numbers deployed be added to the numbers deployed in the subsequent quarters to claim support	As mentioned in section 8 of the RFP, 'Minimum average of 12.5% of awarded quantity of Integrated NavIC and GPS receivers must be deployed per quarter considering 4 quarters. In case the bidder has deployed more than 12.5% of awarded quantity of chips in a quarter, payment shall be made for the actual quantity supplied in that quarter.'
Pg. 30, No 10.1, ii	If the bidder is obliged to supply at the govt. determined rate, how can the commercial feasibility of the govt. determined rate be ensured.	As mentioned government shall determine the rate at that specified time. They may consider consultation at that time.
Pg. 31, No 10.1, xix	Can the bidder sell the IPRs and/or the chipset on their own independent of C-DAC? What happens to background and pre-developed IPRs? Does C-DAC need ownership of those IPRs as well?	As mentioned in the RFP, All intellectual property rights in the design, codes, etc. shall be owned by C-DAC and during the exit IPR to be shared with the required party. Selling IPR independent of C-DAC shall not be possible. Pre-developed IPR need not be owned by C-DAC.
Pg. 33, No 10.8	Is indemnification for Indian jurisdiction sufficient?	Yes. Indemnification shall be as per indemnification clause mentioned In the RFP.

### Astra Microwave Products Limited

RFP Section	Question	Response
-	Kindly specify intended Consumer base.	As mentioned in the RFP, Integrated NavIC and GPS receivers may be used for Terrestrial, Aerial and Marine Navigation, Disaster Management, Vehicle Tracking

		<i>and Fleet Management, Location Services on Mobile Phones, Mapping and Geodetic Data Capture, Terrestrial Navigation aid for Hikers and Travelers, Visual and Voice navigation for drivers etc.</i>
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### Telecommunications Consultants India Limited

RFP Section	Question	Response
Clause 10, Annexure A, Page 38/66	Kindly confirm that professional having educational background in Design of Semiconductor will qualify.	Yes. This shall suffice.

### POWAI LABS

RFP Section	Question	Response
	<p>We are sourcing IP licence from different sources for NavIC. That IP can't be transferred to CDAC/Escrow/Meity.</p> <p>For performance bank guarantee.</p> <p>a) Since it is to be provided for five years, it should take into account average value every year and not the total value over five years.</p> <p>b) Since advance taken are against bank guarantee, performance guarantee should be from the time prototype/samples ASICS qualify till the warranty period.</p> <p>c) MSME/SSI be exempted from performance bank guarantee.</p> <p>Mask set cost, fabrication, licence costs are best paid by MEITY directly to the third party on actuals. It unnecessarily blocks the capital for the bidder.</p>	<p>Cost of IP sourced for NavIC would be part of the Financial Bid. Before invocation of exit clause or in the case of noncompliance to the terms of RFP , IP's including the right to use sourced IP in NavIC project would be transferred to CDAC</p> <p>As per GFR</p> <p>As per GFR</p> <p>As per GFR</p> <p>RFP is based on different model.</p>

	NavIC IP built by ISRO/SAC should be made available to Indian MSME on royalty on sales basis.	NavIC IP built by ISRO/SAC may be offered as per ISRO Technology Transfer procedure
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### GEN Y VENTURES

RFP Section	Question	Response
	<p>I. What would be operating voltage supply: 3.3 V or 5V?</p> <p>II. Current limiter will be present in the supply or is required in the module.</p> <p>III. What instruction set has to be used for configuration settings, generally commercially available GPS receivers use AT commands instruction set, we have to use the same or different.</p> <p>IV. Is GLONASS receiving capability is required?</p> <p>V. Is patch Antenna required on the module?</p> <p>VI. The switch from hybrid mode to GPS only mode should be automatic or only user defined.</p>	<p>I. 3.3 V</p> <p>II. Preferable in the module</p> <p>III. Developer can provide configuration settings as per convenience, details must be provided in the data sheet</p> <p>IV. Not required</p> <p>V. Not mandatory, but if Antenna is embedded with the module. It must meet performance specifications</p> <p>VI. Hybrid mode is default. NavIC only or GPS Only Modes User Selectable</p>

### Alpha Design Technologies Pvt.Ltd.

RFP Section	Question	Response
Page 25-7-7.2 vi	All Design related documents would be kept and updated regularly in ESCROW account. – <i>Elaboration required.</i>	As mentioned in 'All design related documents would be kept in ESCROW account after validation of the same by ISRO and CDAC. The beneficiary of the ESCROW will be CDAC.' This implies that if receiver is designed with available chipset, design document of the receiver and technical data sheet of the used chipsets shall also be required.
Page 66, Annexure F	Basic Performance Features : GNSS Capability (Navic, GPS and GAGAN) - <i>Is GAGAN Feature mandatory?</i>	GAGAN is optional
Page 64, Annexure E	Operating Conditions :- 10 to +85 Degree Centigrade – <i>Maximum Operating Temperature is generally +55 Degree. Please reconfirm the requirement.</i>	Operating conditions as defined in RFP, - 10° C to +85° C OT is confirmed.
Page 31 – section 10 – Sub section 10.1 (xviii, xix)	IPR Clauses : Excluding IPs of the individual components that are part of the Chip. – <i>Elaboration required.</i>	Pre-developed IPR need not be owned by C-DAC

Page 65, Annexure E	Package size : 400 Sqmm – <i>Please clarify the maximum size.</i>	Vendor should target 400 mm <sup>2</sup> or less.
Page 65, Annexure E	Operating Conditions :- 10 to +85 Degree Centigrade. <i>Generally, for commercial Integrated Circuits, Maximum Operating temperature is +55 Degree Centigrade.</i>	Operating conditions as defined in RFP, -10° C to +85° C OT is confirmed.