



न्यूस्पेस इंडिया लिमिटेड (एनसिल)
NewSpace India Ltd. (NSIL)
(अंतरिक्ष विभाग के अधीन भारत सरकार की एक कम्पनी)
(A Central Public Sector Enterprise under Department of Space)

कार्यकारी सारांश / EXECUTIVE SUMMARY

RFP for realization of Tri band Full motion antenna system including its Supply, Installation and Commissioning

NewSpace India Limited (NSIL), a Govt. of India company under Department of Space and commercial arm of ISRO, is preparing to realize Ground Station Network for management of satellites operating in Low Earth Orbit. The proposed Ground Station Network is to carry out Telemetry, Tracking and Command (TTC) operations including supporting satellite data download.

The present proposal of NSIL is to realize several tri band (S/X/Ka) ground stations having full motion antenna systems, pedestal building, precise Antenna Control Servo Systems (ACSS), RF front end Electronics, including associated accessories and integration components at the designated sites across India (including Andaman Island).

Work packages and Deliverables under the RFP:

- I. Development, supply, Installation and commissioning of full motion tri band, tri axis antenna having receive, transmit and tracking feed system operating in S-band (2.2 – 2.3 GHz) for TTC operations and X-band (7.9 – 8.4 GHz) and Ka-band (25.5 – 27 GHz) for Data Reception.
- II. Precision Antenna Control Servo System (ACSS) meeting required pointing and tracking requirement for S/X/Ka band operations.
- III. RF front end electronics for S, X and Ka band receive and auto-track chain, S-band transmit chain, Frequency converter systems, simulation systems for S, X and Ka band, RF over Fiber lines etc.
- IV. Antenna Pedestal building with suitable specifications over which the antenna will be installed. Provision of Electrical power distribution and air conditioning for Pedestal building.
- V. Integration of all baseband / matrix switching system in a centralised building at designated site.
- VI. All required Integration and Installation components, Racks, operating consoles, workstations, station Monitoring and Control System etc.
- VII. Total warranty support for 03 years for complete system.

Antenna System Specifications:

No	Parameter	Specification
1	Receive G/T (at 5 deg. EL)	S-band: Min. 17.5 dB/K X-band: Min. 30.5 dB/K Ka-band: Min. 36.5 dB/K
2	Antenna Geometry	High efficiency shaped reflector Cassegrain geometry.
3	Antenna Mount Configuration	Elevation over Azimuth over train / tilt axis (To track Zenith passes)
4	S-band Transmit EIRP	49 to 59 dBW adjustable
5	Antenna Maximum Velocity	AZ: up-to 14 deg./ sec EL: up-to 7 deg./ sec
6	Antenna Travel Range	Azimuth: +/- 330 deg. Elevation: 1.0 to 90.0 deg.
7	Antenna Pointing Accuracy	60 mdeg. Or better (RMS)
8	Antenna Tracking Accuracy (RMS)	S-band: 60 mdeg., X-band: 35 mdeg., Ka-band: 20 mdeg.

Delivery schedule:

No	Activity	Projected Timeline
1	Delivery and installation of 1 st TWO set of antenna systems	Contract (T0) + 12 months
2	Delivery and installation of 2 nd set of TWO antenna systems	T0 + 14 months
3	Total Project Completion – with all antenna systems installation	T0 + 20 months

Bidder Eligibility Criteria:

1. The bidder shall be an ISO-9001:2015 certified company with established Quality Management Plan.
2. The bidder shall be System Integrator (SI) / OEM / any Authorized Agent/Vendor for OEM/SI or an organization/ a limited company, private company, or any agency capable of taking up works of such nature and magnitude. The bidder – if not OEM, shall produce an undertaking from OEM that the bidder is an authorized entity to quote for this tender and will provide support and spares to purchaser, for the offered system and also that the offered system will be supported by the OEM for the period of minimum 10 years after station commissioning.
3. The bidder/OEM shall have successfully performed supply, installation commissioning of at-least two nos. of ground stations based on full motion mono-pulse dual band

tracking antennas operating in S/C/X/Ku/Ka band of min. 5.0-meter and above antenna size on Turnkey basis during last five years. Bidder shall provide brief details of the project and its completion certificates with relevant references / contact details of the user agency towards this.

4. Bidder shall provide details of financial profile of the company, product range, manpower profile, turn-over status and experience in the field of satellite communication and its ground segment solution along with its techno-commercial bid. The Bidder must have successfully executed / completed at least one single order of INR 100 Cr. or two orders each of INR 50 Cr. for similar project/ service(s) in last five years for any Central / State Govt. Organization / PSU / Public Listed Company. Bidder shall provide documentary evidence towards successful execution / completion of above projects along with completion certificate from the customer.

General Terms & Conditions for Tender:

1. This is a **two-part public tender**. Bidder shall submit its offer in two parts viz., Techno-commercial bid and financial bid in two separate sealed covers super-scribing the enquiry reference number, name of the respective bid. If price information is revealed (either in part or full) in the techno-commercial bid, total bid is liable for rejection.
2. All information supplied by the Bidders as part of their bids in response to this RFP, may be treated as contractually binding on the Bidders, on successful award of the assignment by NSIL based on this RFP.
3. Bidder shall submit Non-Disclosure Agreement duly signed by Authorized Signatory as per the format provided by NSIL.
4. Bidder is required to provide EMD of INR 1,00,00,000.0 (One Crore rupees only) shall be made through Bank Guarantee in favor of "NewSpace India Limited", towards bidder participation for the tender.
5. The cost of the RFP document is Rs. 10,000/- (Ten Thousand only) + GST (18%). **After making payment for the tender document and signing NDA ONLY the detailed RFP document will be provided to bidder.**
6. Bidder shall submit an undertaking, duly signed by authorized signatory, while submitting the bid, stating that there has been or is no outstanding bankruptcy/ insolvency, judgment or pending legal action that could impair operations of the bidder.

NSIL Purchase Department Contact No:

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