A Maharatna CPSE

Tender Notification

Template Name:	IMM-OS-OPEN-SINGLEBID	**Buyer:**	IMM	**Tender :**	**Authorized**
Tender Authorized User Name:	BODA BHASKAR	**Tender Authorized User Designation:**	Senior Manager (Purchase)		

Tender Header Term Setup			
* **Tender:**	SLRDC/HAL/COMM/UHFSATCOM/202526/RFI/1	**Tender Creation Date and Time:**	14-01-2026 16:06
* **Title:**	OPEN TENDER	* **Contact Name/Designation/Dept:**	SANJAY KUMAR
* **Email:**	bhaskar.boda@hal-india.com	**Stage:**	One Stage
* **Bidder Type(Nationality):**	Both	**Remarks if Any:**	Refer Tender Document for more details
Tender Fee Details			
* **Run Line Number:**	01	* **Estimated Cost:**	0
* **Form Fee:**	0	* **EMD:**	0
* **DD Drawn in Favour of:**	HAL	* **Validity of Quotation in Days:**	180
* **Tender Mode:**	1. IMM	* **Region:**	Accessories Complex -SLRDC-Hyderabad
* **Description Of Work:**	Request for Information for UHF SATCOM Blade Antenna for Rotary Wing and Fixed Wing Aircraft	* **Qualification Criteria:**	AS PER RFI
* **Additional Notes:**	AS PER RFI		
Important Dates			
1. **Tender Closing Date and Time:** *	30-01-2026 16:00	2. * **Cost Open Date and Time:**	30-01-2026 16:30

Printed from : https://eproc.hal-india.co.in/HAL
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Printed by User Designation : Senior Manager (Purchase)

Request for Information (RFI) for UHF SATCOM Blade Antenna for Rotary Wing & Fixed Wing Aircraft

DOCUMENT NO: SLRDC (HAL)/COMM/UHF-SATCOM/2025-26/RFI/1

RFI Date: 14.01.2026

RFI Due date: 30.01.2026

STRATEGIC ELECTRONICS RESEARCH & DESIGN CENTRE,

HINDUSTAN AERONAUTICS LIMITED,

HYDERABAD – 500 042

Request for Information (RFI) for UHF SATCOM Blade Antenna for Rotary Wing & Fixed Wing Aircraft

Hindustan Aeronautics Limited, HAL, Strategic Electronics Research & Design Centre (SLRDC), solicits information from Vendors for supply of Airborne Blade Antenna regarding UHF band SATCOM terminal for Supersonic & subsonic Aircraft.

1. This Request for Information (RFI) consists of two parts as indicated below:-
   (a) **Part I:** The first part of the RFI incorporates desired functional requirements and features of proposed module.

   (b) **Part II:** The second part of the RFI lists the technical and general aspects for which detailed information is required from vendors.

PART-I

2. **Introduction:** SLRDC, HAL, Hyderabad is intending to procure Airborne Blade Antenna regarding UHF band SATCOM terminal. The proposed airborne blade antenna shall provide Radiation in UHF band for establishing communication with GEO stationary satellite.

3. **Important Functional and Technical Parameters:** The desired functional and technical parameters of Airborne Blade Antenna are placed at **Appendix-A.**

PART-II

4. **Objective:** The objective of this RFI is to seek responses from potential vendors for supply of **UHF SATCOM Blade Antenna for Rotary Wing & Fixed Wing Aircraft**

5. **Quantity:**
   Quantity during the development Phase : 3 Nos (Approximately)
   Quantity during the production phase : 200 Nos(approximately)

6. **Response for RFI:** The vendors are requested to clearly indicate the following in their response:-

   a) **Technical Details**: The vendors are requested to provide technical details of their existing products and provide para-wise compliance against the technical requirements listed at Appendix-A. Non–availability of information on any of the paragraphs at Appendix A may be commented specifically.

   b) Vendor shall make a complete technical presentation on their capabilities

   c) **Cost Estimate:** Approximate cost estimate for airborne Blade Antenna module to be provided. The estimated cost should make consideration of all aspects of supply, Qualification testing, warranty, training and support. Other aspects (if any), may be mentioned specifically.

   d) Vendor shall state clearly if the module is already in use or under development.

   e) Vendors are requested to clearly state their ability to customize/modify/upgrade the existing Airborne Blade Antenna, as per HAL requirements.

   f) The enclosed technical details are only tentative in nature and are subject to change and may be considered only as advance information for market exploration. HAL will freeze the technical scope based on response to subject RFI and as deemed necessary at the time of issuing RFQ (Request for Quotation), at HAL's discretion

   g) This document is not intended to form the basis of any decision to finalize the contract and it does not constitute an offer or invitation or solicitation of an offer to review/purchase

   h) Vendors are also requested to confirm a full life cycle product support for the module and indicate the time period for the same. It may include integration issues, spares, and maintenance and component level repairs. Vendor shall support spares & life items for at least for 10 years after delivery.

   i) Firm shall be ISO 9001/ AS9100 certified (latest)

   j) **Warranty:** The Vendors are requested to furnish the duration of warranty for the equipment.

7. **Tentative Delivery Schedule**: Desirable timeline for delivery of airborne Blade antenna is 3 months from the date of placement of order.

8. **Future Process**: Based on an evaluation of RFI proposals received, HAL will finalize technical requirements and float Request For Proposal (RFP) at HAL's discretion

9. Vendors are to furnish information sequentially, as per Para numbers for information requested in this document. Additional information, if any, is to be attached with appropriate cross-reference to serial number in this RFI. Each sheet of the RFI response shall be duly signed by authorised signatory.

   Additional literature on the product can also be attached with the response form.

   a) Vendors must fill the form of response as given in **Appendix B**.

   b) The response to this RFI should be forwarded to the following email id:

      Deputy General Manager (Design)
      Strategic Electronics Research & Design Centre (SLRDC), Communications
      Hindustan Aeronautics Limited
      Hyderabad – 500042
      Tel no: 040-23826433
      Fax no: 040-23879570
      Email Ids: jyoti.gupta@hal-india.co.in

   c) Due date for submission of RFI response is **Two weeks** from the date of releasing the RFI to the vendors. A Presentation on the subject may also be sought in case it is felt that certain parameters mentioned in replies to this RFI need further clarification.

   Thanking You,

Yours faithfully,
For Hindustan Aeronautics Limited,

Sd/-
Senior Manager (Purchase)

Appendix- A

1. Technical Requirements

S.No	Specification	Value
1	Frequency range	240-320 MHz
2	Polarization	Circular (RHCP) or Linear Polarization with Max Gain In Zenith
3	Gain	NLT +2 dBi for RHCP or NLT +4 dBi for linear
4	Axial Ratio	Better than 5 dB
5	VSWR	Better than 2.0:1
6	Azimuth Beam Width	Suitable for establishing and maintaining link with GEO stationary satellites from an airborne platform. Exact beam width values to be provided by vendor.
7	Elevation Beam Width	
8	Power Handling	50W CW
9	Connector	TNC Female
10	Topology	➢ Blade Type ➢ Antenna shall be designed to operate without a dedicated metallic ground plane on Aircraft/Helicopter. ➢ ***Horizontal Stabilizer like structure i.e., BATWING or MUSHROOM Type Configuration is not acceptable.***
11	Environment Qualification	Qualification as per MIL STD 810G.
12	Dimension (mm)	NMT 230 (H)* 95 (w)* 385 (D)
13	Weight	Less than 2 Kg

2. List of QT tests

S.N	Test	Severity	Duration	Reference
1	Altitude	Pressure corresponding to 60,000ft (18.3km) altitude Altitude change rate: 20m/s	1 hour	**MIL-810G, Change 1:** Method 500.4; Procedure-II (Operational)
2	High Temperature-Storage cum Operation	High Operational Temperature: +71°C, Maximum Non-operating Temperature: 170°C From 35°C to 170°C diurnal cycle	3 Cycles of 24 hours each Operational check at 65°C during each cycle	**MIL-810G, Change 1:** Method 501.6
3	Low Temperature-Storage/Operation	Soak at -55°C (equipment in its storage configuration)	4 hours soaking followed by Operational check	**MIL-810G, Change 1:** Method 502.6; Procedure-I

4	Thermal Shock	Temperature: -55°C to +95°C Duration: 60 minutes at each temperature Transit Time: ≤1 min	3 cycles	**MIL-810G, Change 1:** Method 503.6, Procedure-IC
5	Fluid Contamination	Temperature: 65°C Test Fluid: As listed below (Intermittent contamination) • Fuel DERD 2494 • Hydraulic fluid MIL-H-5606 E • Lubricating oil mixtures to DERD 2497/MIL-L-7808 • Soap water	3 cycles (1 cycle is 8 hours of chemical application and 16 hours of soak) *Applicable on representative sample of the equipment*	**MIL-810G, Change 1:** Method 504.2, Procedure-I
6	Solar Radiation	Accelerated Intensity of heat flux: @1200W/m2 Exposure: Continuous	10 cycles	**MIL-810G, Change 1:** Method 505.6, Procedure-II
7	Blowing Rain	Rainfall rate: 4inch/hr Droplet size: 0.5 to 4.5mm Wind Velocity 18m/s	30 minutes	**MIL-810G, Change 1:** Method 506.6, Procedure-I
8	Humidity	Temperature: 30°C to 60°C RH: 95%	10 cycles of 24 hours with 1 conditioning cycle.	**MIL-810G, Change 1:** Method 507.6, Procedure-II
9	Fungus	Spore suspension as per Table 508.7-I of the standard	28 days	**MIL-810G, Change 1:** Method 508.7
10	Salt Fog	Sodium chloride containing not more that 0.1% Sodium chloride iodide and impurities not more than 0.5%	2 cycles (Each cycle comprises of 24 hours of exposure followed by 24 hours of drying)	**MIL-810G, Change 1:** Method 509.5
11	Blowing Dust	Dust concentration: 10.6 ± 7gm/m³ Air velocity: 1.5m/s to 8.9m/s RH: <30% Temperature: 70°C for Airborne LRUs'	12 Hours (6 hours at ambient temperature and additional 6 hours at high operating temperature)	**MIL-810G, Change 1:** Method 510.6, Procedure-I
12	Blowing Sand	Temperature: 70°C RH: Not exceeding 30% Air Velocity:18 to 29 meters/sec. Sand concentration: 0.18±0.2 g/m3.	90minutes per face	**MIL-810G, Change 1:** Method 510.6, Procedure-II
13	Acceleration	Operational: 10g Structural: 15g	1minute in all the 6 direction	**MIL-810G, Change 1:** Method 513.7, Procedure-I & II

14	Vibration	To be conducted as per profile given in Figure-514.7D-1 (Category 12-Fixed Wing Jet Aircraft) & as per Helicopter Profile (2 different Profile) Note: Vibration profile to be shared along with PO.	1 hour in all the 3 axis for Fixed wing Platform (one profile) & 4 Hours per axis for Helicopters (2 different Sine over Random profiles)	**MIL-810G, Change 1:** Method 514.7, Procedure-I (General Vibration)
15	Mechanical Shock-Functional	20g saw tooth wave (or 15g half sine) for 11ms	3 shocks on each of 6 directions(Total 18 shocks)	**MIL-810G, Change 1:** Method 516.7, Procedure-I
16	Transit Drop	Drop Height: 122cm (for equipments< 45.4kg)	26 drops (for equipments< 45.4kg)	**MIL-810G, Change 1:** Method 516.7, Procedure-IV
17	Bench Handling	Raise one edge by 10cm or 45°, whichever is less and drop	4 drops on each face	**MIL-810G, Change 1:** Method 516.7, Procedure-VI
18	Icing/Freezing Rain	Water Spray on top, side, front and rear. Spraying pre-cooled water temperature 5°C Ice thickness 6mm followed by 13 mm thickness.	Duration: 4 hrs.	**MIL-810G, Change 1:** Method 521.3
19	Lightning Direct Effects	Test is conducted to determine the ability of externally mounted equipments to withstand the direct effects of a severe lightning strike	------	**RTCA/DO-160F: Section 23**
20	Side load test	Limit Load: 12 psi (Load for 1 min) – Ultimate load:15 psi (Load the antenna for 5 seconds(minimum) without breaking)	Limit load test has to be carried out for 4 cycles.	**MIL DTL-85670**

Appendix- B

INFORMATION PROFORMA

1. **Name of the OEM/ Company/ Firm**

_____

_____

2. **General Details**

SlNo	Details	Vendor's Response
1	Brief Company Background?	
2	Expertise available / Product Portfolio	
3	Is the supplier is OEM/Authorized Vendor/ Distributor	
4	A. Whether the relevant Airborne Blade Antenna product is readily available with Vendor ? B. Please provide Data-sheet along with 2D drawing of the Antenna.	
5	If the product is available, delivery timeline and budgetary cost to be provided	
6	Vendors experience with MIL Qualificationof antennaWith CEMILAC/DGAQA on a Supersonic Airborne platform to be provided.	
7	Performance feedback of the delivered product, if available to be provided.	
8	A. Is the product MIL qualified or yet to be qualified? B. Provide the details of compliance standard. C. Provide feedback on the compliance to the QT tests listed in Appendix-A.	
9	If the product is yet to be qualified, the approx. Product cost along with qualification cost to be provided.	
10	Duration of Warranty support to be provided	
11	How many years the product can be further supported by vendor?	
12	Any limitations of the product?	

3. **Financial Details:**

   a) Category of Industry (Large / Medium / Small Scale) : _____

   b) Annual Turnover : _____

   c) Number of employees in firm : _____

   d) Details of Manufacturing Infrastructure: _____

4. **Declaration**

   It is certified that the above information is true.

(Authorised Signatory)