REQUEST FOR INFORMATION (RFI)

Program: B-1B Lancer Digital Antenna Electronics (DAE) Upgrade
Subject: Digital Antenna Electronics compatible with GAS-1 CRPA & GPS M-Code

Date: 11 August 2026

1.0 PURPOSE

This Request for Information (RFI) is issued for informational and planning purposes only. It does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. The Government is seeking to identify potential sources and industry capabilities to provide a Digital Antenna Electronics (DAE) unit for the B-1B Lancer. The proposed DAE must be fully compatible with the GAS-1 Controlled Reception Pattern Antenna (CRPA) P/N 01-01664 and be able to fully process and support M-code GPS encryption modes.

2.0 BACKGROUND

The B-1B Lancer requires resilient, highly accurate navigation and timing capabilities to operate effectively in contested, GPS-degraded, and GPS-denied environments. The integration of advanced anti-jam capabilities through the GAS-1 CRPA requires updated Digital Antenna Electronics to process signals effectively before routing them to the aircraft's primary navigation systems. The Government is exploring options for a modernized DAE that bridges the GAS-1 CRPA with current and future navigation systems and be able to fully process and support M-code GPS encryption modes while adhering to strict Size, Weight, Power, and Cost (SWaP-C) constraints.

3.0 TECHNICAL OBJECTIVES & REQUIREMENTS

The B-1 System Program Office (SPO) has a requirement to procure an estimated 60 to 130 DAEs capable of receiving and processing M-code encrypted GPS signals to replace existing AEUs. The B-1 SPO requests potential suppliers provide information on existing DAE solutions. Respondents should describe their proposed DAE solution's ability to meet or exceed the following technical objectives as well as answer specific questions below:

- **GAS-1 CRPA Compatibility:** The DAE must be fully compatible with the existing GAS-1 CRPA, providing necessary processing (e.g., null-steering, beamforming, and digital filtering) to mitigate advanced jamming and spoofing threats.
- **Digital Processing Capabilities:** Provide low-latency, high-fidelity analog-to-digital and digital-to-analog RF processing suitable for high-dynamic aviation environments.

- **SWaP Constraints:** The solution should minimize Size, Weight, and Power. Ideally, the proposed DAE should fit within the physical footprint of the legacy Raytheon AEU (AS4555A/AR) to minimize aircraft modification requirements.
- **Environmental & EMI/EMC:** The system must meet standard military aviation environmental (MIL-STD-810) and electromagnetic interference/compatibility (MIL-STD-461) requirements applicable to the B-1B platform.

4.0 REQUESTED INFORMATION

Interested parties are requested to submit a White Paper detailing their capabilities and proposed solutions. The White Paper should address the following:

1. **Product Identification:** Provide the part number for the DAE, the National Stock Number (if currently cataloged by US Government), as well as any additional nomenclature of the DAE product.
2. **System Architecture & Technical Approach:** Provide a high-level description of the proposed DAE architecture, specifically highlighting how it interfaces with the GAS-1 CRPA and M-Code GPS receiver, as well as how compatibility has been demonstrated and verified with each.
3. **Modes and Features:** State whether the DAE supports L1 or L2 nulling, simultaneous L1 and L2 nulling, if the DAE supports beam-forming, and identify the frequency bandwidth of the DAE.
4. **Technology Readiness Level (TRL):** State the current TRL of the proposed DAE system or its core components. If the system is not at TRL 7 or higher, provide a roadmap to achieve TRL 8/9.
5. **Manufacturing Readiness Level (MRL):** Provide the manufacturing Readiness Level, the production lead time, and the production rate of the DAE product.
6. **SWaP-C Estimates:** Provide preliminary Size, Weight, and Power profiles, as well as cooling requirements.
7. **Integration & Testing:** Describe the anticipated integration challenges onto the B-1B platform and proposed mitigation strategies. Provide answers to the following questions:
    - What are the physical mounting provisions of the DAE?
    - Does the DAE require cooling beyond ambient air?

- What are the environmental qualifications for the DAE? Including but not limited to: Temperature, Altitude, Vibration, Corrosion, Pressure changes, Lightning protection, EMC emissions/susceptibility, humidity, etc.?
- What signal interfaces does the DAE require? Provide ICD if available.
- What Status reporting (Built-in-test or similar) does the DAE provide?

8. **Rough Order of Magnitude (ROM):** Provide a ROM for the non-recurring engineering (NRE) costs, unit production costs, and an estimated schedule for delivering prototype and production units. Provide a ROM cost for DAE products in the following quantity ranges:

i. Quantity 10-15

ii. Quantity 16-30

iii. Quantity 31-60

iv. Quantity 61+

9. **Maintainability and Support:** State the Mean Time Between Failure (MTBF) of the DAE product, whether the DAE product is repairable, the Mean time To Repair (MTTR), and the expected lifespan of support for the DAE product.

10. **Location:** Provide corporate location as well as the location of where the product is manufactured.

11. **Points of Contact (POC):** Provide business development POC and a technical POC.

5.0 SUBMISSION INSTRUCTIONS

1. **Format:** Responses must be submitted in PDF format, not exceeding 15 pages (excluding cover page and administrative notes). Include technical and descriptive text and photographs/illustrations to provide sufficient detail.

2. **Information:** The Government may contact respondents to obtain additional information or clarification in order to fully understand a company's response

3. **Proprietary:** Respondents shall clearly mark proprietary data with appropriate markings. Any material that is not marked will be considered publicly releasable. Government-contracted contractor support personnel may handle proprietary data submitted in response to this RFI.

4. **Existing Effort:** If you are currently providing your proposed capability on an existing government contract, please identify the contract and a Government POC.

5. **Participation:** Broad industry participation for this RFI is encouraged. U.S. and non-U.S. firms are permitted to respond. Please note that prospective contractors must be registered in the System for Award Management (SAM) database to be awarded a DOD contract. To learn more, visit the SAM website at: https://www.sam.gov/portal/SAM

6. **Classification:** If a respondent intends to submit information that is classified, contact the POC for submission instructions. Unclassified responses are due electronically by the deadline listed. Any proprietary information should be clearly marked and segregated. State whether there is involvement of unapproved vendors, as well as compliance with export control, the Buy-American Act, and International Traffic in Arms Requirement (ITAR).

7. **Deadline:** 11 September 2026

8. **Point of Contact:** Please direct all submissions and questions regarding this RFI to the Contracting Officer at cory.milford@us.af.mil .

Note: This RFI is for market research purposes. The Government will not reimburse respondents for any costs associated with preparing or submitting a response to this RFI.