

Request for Information (RFI)
Under the
Expeditionary Missions Consortium – Crane (EMC²)
Number: N00164-24-9-0001

EMC²-RFI-26-05

SENSEI (Sensing for Interdiction)
Electro-Optic Infrared System Technical Refresh
For Counter Unmanned Aerial Systems (C-UAS)

RFI Issue Date: 24 April 2026

RFI Responses Due: 9 June 2026

DISTRIBUTION STATEMENT A. Approved for public release: distribution unlimited.

Background

This Request for Information (RFI) is issued by the Expeditionary Missions Consortium – Crane (EMC²) in support of the Naval Surface Warfare Center (NSWC) to identify potential prototype solutions under the statutory authority of 10 U.S.C. § 4022. The Topic Sponsor desires to collaborate with EMC² Members and industry, including non-traditional defense contractors, to assess the current technology landscape, evaluate prototype feasibility, and shape a potential future Request for Solutions (RFS) for a Prototype Other Transaction (OT) agreement.

Please note: Feedback will not be provided, and responses to the RFI papers will not be returned.

RFI Topic

EMC²-RFI-26-05: SENSEI (Sensing for Interdiction) Electro-Optic Infrared System Technical Refresh For Counter Unmanned Aerial Systems (C-UAS)

RFI Topic Sponsor: SSP Strategic Systems Programs

Objective

To maintain operational superiority and prototype the next generation of SENSEI capabilities, this RFI seeks solutions that meet the following technical objectives:

- Identify innovative, proven, and production-ready Electro-Optic Infrared System (EO/IR) solutions suitable for prototype adaptation and integration. All High Definition (1280 x 1024) Sensors or greater for long range detecting, tracking, and identifying small, low-contrast, and fast-moving targets, including swarming UAS in complex visual environments
- High Compliance to DRAFT: Navy Ashore C-sUAS Electro Optic / Infrared Subsystem Performance Specification, Document Number: ASHORECUAS-0015
- High Compliance to: NAVSEA DESIGN PRACTICES AND CRITERIA MANUAL
- SURFACE ELECTRO-OPTIC AND INFRARED (EO/IR) SENSOR STANDARDS, T9070-BY-DPC-010/457-1
- Sensor design, such as high-resolution imaging, multispectral and hyperspectral capabilities, plenoptic multispectral systems
- advanced processing algorithms, and emerging artificial intelligence/machine learning (AI/ML) techniques for detection, tracking, multi-target tracking, recognition, and identification
- Total System Point Accuracy 1mRad Threshold, 0.25mRad Objective
- Prototype System MTBF 10,000 hours

Topics to be Addressed within RFI Response

- Completion of Attachment 1 - Vendor Product Specification Form
- Completion of Attachment 2 - Compliance Matrix of current system to: DRAFT Navy Ashore C-sUAS Electro-Optic Infrared Subsystem Performance Specification: Document Number: ASHORECUAS-0015 (located on EMC² Members Only site)
- Additional RFI Paper addressing the following:

- 1.a. Current proven, and production ready EO/IR solutions suitable for prototype adaptation and integration which increase compliance with: DRAFT: Navy Ashore C-sUAS Electro Optic / Infrared Subsystem Performance Specification, Document Number: ASHORECUAS-0015
- 1.b. NAVSEA DESIGN PRACTICES AND CRITERIA MANUAL SURFACE ELECTRO-OPTIC AND INFRARED (EO/IR) SENSOR STANDARDS, T9070-BY-DPC-010/457-1
2. Plan and Path or Spiral Upgrades for the current system to a high level of compliance with 1. a), or 1. a) & b).
3. Projected prototype system/s costs/unit, step ladder pricing if available & projected build lead times
4. Non-Reoccurring Engineering Costs & Timeline per: prototype system, subsystem, lowest replaceable unit
5. Prototype system compliance of Modular Open System Architecture (MOSA) standards for video (RAW and Compressed), command & control, power, and mechanical interfaces

Note:

- The SENSEI program serves as a cornerstone capability for addressing critical Counter-Unmanned Aircraft Systems (C-UAS) missions across naval and expeditionary domains, where the threat environment is evolving rapidly. Existing Electro-Optical/Infrared (EO/IR) systems face increasing limitations in detecting, tracking, and identifying small, low-contrast, and fast-moving targets, including swarming UAS in complex visual environments. As adversaries employ more sophisticated and dynamic tactics, SENSEI requires advanced EO/IR technology that can provide superior reliability in a range of environmental conditions, while remaining agile, scalable, and interoperable with existing open-architecture platforms.
- To maintain operational superiority, the SENSEI program seeks a technical refresh of its EO/IR system, leveraging advancements in sensor design, such as high-resolution imaging, multispectral and hyperspectral capabilities, advanced processing algorithms, and emerging artificial intelligence/machine learning (AI/ML) techniques. This Request for Information (RFI) aims to identify innovative, proven, and production ready EO/IR technology solutions suitable for prototype adaptation and integration that align with SENSEI's objectives and bring them together to increase EO/IR performance reliability. Industry participants are invited to submit proposals showcasing systems capable of enhancing detection and classification of C-UAS threats, with an emphasis on mission scalability, integration readiness, low-latency processing, lifecycle affordability, and long-term sustainment. This

refreshment represents a critical opportunity to significantly enhance SENSEI's ability to address both current and emerging EO/IR spectrum threats effectively.

- Prototype systems will be land based hard mounted on Towers or Building for Ashore purposes. In the future the system may be deployed on ships.
- The range performance has been left blank and will not be provided at part of this RFI.
- Importance of the requirements are as follows: Range performance, Interfaces (C2, Video, Mechanical and Electrical ICDs, at the system, system, subsystems and LRU level)
- The GOV is mainly interested in the Narrow Field of View portion of the attached specification

Format Requirements of the RFI Papers

Minimum Required

- 10-page limit, inclusive of contact information but not including Attachment 1 & 2
- Times New Roman 10 (or larger) Single-spaced, single-sided, 21.6 x 27.9 cm (8.5 by 11 inches).
- Smaller type may be used in figures and tables but must be clearly legible.
- No pictures of a marketing/advertising nature or hyperlinks are allowed.
- File format must be Microsoft Word or PDF for white paper. The same Microsoft Excel format in which the Compliance Matrix will be proved
- These RFI submissions will be shared with the Sponsor; therefore, all information must be **non-proprietary**.
- Do not submit classified information.

Nice to Have Extra Information

- Compliance Matrix of future system to: DRAFT Navy Ashore C-sUAS Electro-Optic Infrared Subsystem Performance Specification: Document Number: ASHORECUAS-0015 (located on EMC² Members Only site)
- Detailed Cost and Schedule of Current EO/IR (Gant Charts & Spread Sheets)
- Cost and Schedule of Non-Reoccurring Engineering for future EO/IR (Gant Charts & Spread Sheets)
- Night Vision – Integrated Performance Model (NVIPM) Modeling Deck or associated appendixes filled out from Vendor Product Specifications Document: Multi-Sensor EO-IR, Laser, Stabilized, Gimbaled Systems; Appendices A-F, FRM/22/JXQQ/258 REV. -; CHG. -, of current
- Mechanical Interface Control Documents (ICDs), Electrical ICDs, Interface Design Document of current or both current and future systems

Eligibility

Any industry member is authorized to submit a solution for the listed RFI above. However, to be eligible to view additional CUI documents connected to the RFI, respondents must be a member of the EMC² Consortium. To be eligible to respond to any future RFS, respondents must be a member of the EMC² Consortium and be a 'Member in Good Standing'.

Submission Instructions

Respondents are required to submit complete RFI documents that demonstrate the objectives identified above.

Submit responses and technical questions to the ATI email address listed below:

emc.responses@ati.org

To access additional documents concerning the RFI as well as CUI attachments for submission visit the EMC² Members Only site at emccrane.org. To view the documents you will be required to be a member of EMC², membership requirements and application information can be found on the site.

For general submission questions or for a secure link to send CUI documents, please contact the EMC² Consortium Manager, ATI, at emc@ati.org or visit the EMC² website at emccrane.org for membership requirements.

This RFI is issued solely for information purposes. It does not constitute an RFS or a promise to issue an RFS in the future. This RFI does not commit the Government to contract for any supply or service in any manner. Respondents are advised that the U.S. Government will not pay for any information or administrative costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested parties' expense. Not responding to this RFI does not preclude participation in any future RFS, if any is issued.