

## **SOCOM221-D004: Advanced Precision-Variable Power Scope**

### **MODERNIZATION PRIORITIES:**

General Warfighting Requirements (GWR)

### **TECHNOLOGY AREA(S):**

Battlespace, Human Systems, Sensors, Weapons

### **OBJECTIVE:**

The objective of this topic is to develop applied research toward an innovative capability that will allow operators to detect and engage targets from 50-1500 meters and beyond in sniper rifle engagements while simultaneously viewing laser rangefinder, wind, and ballistic data in the optic's field of view.

### **ITAR:**

The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), 22 CFR Parts 120-130, which controls the export and import of defense-related material and services, including export of sensitive technical data, or the Export Administration Regulation (EAR), 15 CFR Parts 730-774, which controls dual use items. Offerors must disclose any proposed use of foreign nationals (FNs), their country(ies) of origin, the type of visa or work permit possessed, and the statement of work (SOW) tasks intended for accomplishment by the FN(s) in accordance with section 3.5 of the Announcement. Offerors are advised foreign nationals proposed to perform on this topic may be restricted due to the technical data under US Export Control Laws.

### **DESCRIPTION:**

The Advanced Precision-Variable Power Scope (AP-VPS) will allow operators to detect and engage targets from 50-1500 meters and beyond in mounted sniper rifle engagements while simultaneously viewing laser rangefinder, wind, and ballistic data in the optic's field of view. The AP-VPS shall have the same capabilities of the Precision-Variable Power Scope (P-VPS, SU-295/SU-296), but will also incorporate a micro data display to display firing solution, range finding, ballistics offsets, and other engagement data within the optic's field of view. These AP-VPS will upgrade the Family of Sniper Weapon Systems (FSWS) family of sniper scopes previously fielded as part of the sniper weapon system. This topic is seeking information regarding advanced technology pertaining to advancements in materials, miniaturization, weight reduction, weapon shock and environmental durability, Laser Range Finder interface, and direct view detect/recognize/identify performance.

### **PHASE I:**

Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraphs entitled "Objective" and "Description". The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all known options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

### **PHASE II:**

Develop, install, and demonstrate up to 4 prototype systems determined to be the most feasible solution during the Phase I feasibility study on a AP-VPS unit that will allow operators to detect and engage targets for 50-1500 meters and beyond in day-night mounted sniper rifle engagements while simultaneously viewing laser rangefinder, wind, and ballistic data in the optic's field of view. This capability shall meet the requirements in the description above. The testing and demonstration will contain scenarios, environments, and test objectives to demonstrate program and operational objectives.

### **PHASE III DUAL USE APPLICATIONS:**

This AP-VPS could be used for observation, fire control, and target engagement for SOF Sniper weapons as well as potentially designated marksman rifles in a broad range of military, law enforcement, and homeland security applications.

**REFERENCES:**

1) MIL-STD-810H DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL ENGINEERING CONSIDERATIONS AND LABORATORY TESTS (<https://quicksearch.dla.mil/ImageRedirector.aspx?token=5755401.35978>);

2) MIL-STD-1913 NOTICE 1 MILITARY STANDARD DIMENSIONING OF ACCESSORY MOUNTING RAIL FOR SMALL ARMS WEAPONS ([https://quicksearch.dla.mil/qsDocDetails.aspx?ident\\_number=115317](https://quicksearch.dla.mil/qsDocDetails.aspx?ident_number=115317));

3) Interface Control Document (ICD) for Weapon Mounted Ballistic Calculators and Micro-Displays Revision D.

**KEYWORDS:**

Optics; Direct View Optics; Sniper; Target Engagement; Micro-Display

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