



iDEX Innovations for
Defence Excellence
PM Awardee

Re-Open Batch 2.0

Problem Statements

S. No	Name of Agency	Number of Problem Statements
1.	Indian Army	01
Total		01

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INDIAN ARMY

PROBLEM STATEMENT

DISC 12 Problem Statement – 6: UHF Satellite Applique Unit for SDR

Organization Name	Indian Army (Mission DefSpace)
Problem Statement/ Challenge title	UHF Satellite Applique Unit for SDR
Challenge brief/definition	<p>To develop an applique unit that can be attached to existing SDR to enable seamless BLOS satellite communication.</p> <p>Modern military operations demand robust and agile communication networks capable of operating in diverse and often hostile environments. However, reliance on traditional fixed infrastructure leaves communications vulnerable to disruption, limitations in deployment, and lack of interoperability. Existing Software-Defined Radios (SDRs), offer immense potential for secure and flexible communication. However, they lack native support for direct and seamless satellite communication.</p> <p>Development of a secure and cost-effective UHF Band satellite applique unit will aid in enhancing seamless integration with existing space segment as under :-</p> <ul style="list-style-type: none"> (a) Direct access to secure, real-time satellite communication across UHF band, even in challenging environments with compromised terrestrial infrastructure. (b) Robust communication despite jamming and interference. (c) Compact and lightweight design facilitates rapid deployment and mobility. (d) Support for multiple satellite protocols and networks allow seamless communication across different platforms and units, fostering better coordination and situational awareness. (e) Leveraging existing SDR platform through an applique unit reduces procurement and integration costs, while the modular design enables quick deployment and scalability.