

## BRIEF

### VEHICLE MOUNTED COUNTER SWARM DRONE SYSTEM

1. **Name of Proposal.** Vehicle Mounted Counter Swarm Drone System.
2. **User Directorate.** Army Air Defence Directorate (AAD-7).
3. **Brief Description.** The proposed system envisages integration of detection and tracking solutions with effective and proven Hard Kill (kinetic) means to provide a credible and effective counter to swarm of drones intrusions and attacks. In view of the available/ displayed indigenous technological capability of system development, integration and miniaturization, it is proposed that the system be developed indigenously in a multi stage spiral development manner in two versions.
4. **Operational Justification of Proposal.**
  - (a) Development of emerging technologies coupled with miniaturization of components has resulted in exponential proliferation of hostile aerial targets with low RCS like Drones, UAVs, UCAVs and RPAs, especially along the Northern Borders. The Artificial Intelligence softwares/algorithms have further enhanced the lethality of these minaturized aerial platforms by providing options of individual or swarm of drones attacks/incursions with multiple payloads for surveillance as well as destruction.
  - (b) These low cost aerial platforms provide cheaper and more flexible options than high maintenance aircrafts to target own assets. In particular, the swarm of drones configuration poses a **credible assymetric threat** to all assets deployed in the tactical battle area.
  - (c) These may be employed against Armoured/Mechanized concentrations, Gun Areas, Logistic echelons, Vehicle Columns, deployed Headquarters and various other tactical targets including troops in open. Swarm of drones capability with over 3000 individual units/drones has been displayed. The drones are now combatized to deliver a destructive payload on the intended targets while they continue to be used extensively for surveillance purposes.
  - (d) However, swarm of drones threat has inherent structural vulnerabilities and can be countered with an integrated and cohesive response by all stake holders. Therefore, there is an urgent requirement of developing and procuring weapon systems for countering and neutralising this emerging threat of Swarm of Drones.
  - (e) The proposed system should have a surveillance and detection capability, tracking facility, microprocessor and a kinetic weapon system for Hard Kill. It should be able to be deployed independently or in conjunction with embedded in-service Air Defence weapon systems in all types of terrain as obtainable in India (Plains, Desert & HAA) in support of Field Formations.
5. **Approx Quantity.** Quantity 48 of Vehicle Mounted Counter Swarm Drone Systems (Version I) are proposed to be procured.
6. **Approx Cost.** The cost is being ascertained from the Development Agencies.

7. **Indigenous Content.** Buy (Indian-IDDM) Category (minimum of 50%) as per provisions of Para 8 read in conjunction with Para 21 of Chapter I of DAP 2020.

8. **Tech Parameters.** Tech parameters desired (for version I) are as under:-

- |     |                                     |   |
|-----|-------------------------------------|---|
| (a) | Surveillance & Detection System     | - Not less than 6 Kms (for RCS 0.01 Sqm drones)   |
| (b) | Passive RF Detection System         | - Not less than 6 Kms   |
| (c) | Tracking System (EOTS)              | - Not Less than 6 Kms (for target size 0.3 x 0.3 m) for drones  |
| (d) | Hard Kill System (Missile Solution) | - 300m to not less than 2.5 Kms   |
| (e) | Missile Launcher                    | - Capable of firing Bank of missiles. Inclined launcher should have capability to be moved in Azimuth upto 10 degrees (either side) |
| (f) | Missile Speed                       | - More than 150m/s  |
| (g) | Altitude of Target                  | - Upto 1500m  |
| (h) | Microprocessor                      | - Based on TR modules with minimum heat emissions and capable of undertaking selective launch at Swarm of Drones                    |
| (j) | Vehicle Configuration               | - Not more than Two in service vehicles upto 2.5 Tons or lighter/successor  |

9. **Contact Details.**

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