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Drone SUAV less-lethal removable platform for crowd control and cover/concealment

Technology / Capability Overview:

Safely, effectively, and quickly deploy reload and redeploy less-lethal Chemical Irritants (CI) from the AES patented drone platform to reduce officer and soldier injuries and de-escalate unsafe situations.

- Remotely initiate large CI aerosol sprays mechanically
- Remotely initiate CI smoke grenades and colored smoke grenades
- Versatile mounting options
- Holds up to 4 large aerosol canisters or 4 large smoke CI canisters
- Designed for rapid deployment and fast reload
- Easily impact a football field sized area with CI or colored smoke

Relevance to Combatant Command or other Need:

Category* : Weapons

- Designed for CI dispensing and cover and concealment missions.
- Large Platform: Developed and currently sold to law enforcement. Completed detailed design review and engineering pilot. Currently implementing changes from end user feedback. Can carry up to 4 large or small smoke grenades (CI or colored smoke). Option 2 is 1-4 large aerosol spray canisters.
- Medium Platform: Prototyped and tested currently in the detailed design review phase. Can carry up to 2 small smoke grenades (CI or colored smoke) or 2 aerosol spray canisters.
- Small Platform: In the preliminary design phase. AES is working on single and multiple carry options.

Past Performance of Technology and Company:

- The product has been thoroughly tested and is fully functional from software, electronics, cabling, and mechanical functionality
- Platform designed to repeatedly withstand heat and temperatures produced by CI smoke grenades above 800 deg F
- Attach and initiate up to 4 devices on a single payload
- Developed a smart circuit that detects specific payload and discharges accordingly
- Designed a reliable smoke grenade reload initiator that is compatible with M2A1 type fused products

Maturity / Scalability / Cost / Schedule

TRL : 6

The large platform is in the launch and customer feedback stage and the small platform is in the preliminary design review stage. The large platform has been demonstrated in a relevant law enforcement environment and is post sales. The small platform is in the preliminary design review phase. The concept has been tested in a relevant law enforcement environment, and the smaller platform is still under development. Time to market with financial assistance would greatly decrease the “protype to viable military product” timeline from 3 to 4 years to 1.5 to 2 years. We expect that a 1.5 to 2 year development cycle (to move from prototype to manufacturing for a military grade small platform) would cost $727K to $745K.

* Relative to Combatant Command Common Capability Needs Chart at: https://defenseinnovationmarketplace.dtic.mil/wp-content/uploads/2020/02/CCMD-Common-Capability-Needs-Feb-2020.pdf