

# SHIELD

## SHOTGUN INTERDICTION OF ENEMY LOW-FLYING DRONES

When conventional disruption and neutralization methods fail, it's time to choose a kinetic solution. The Space Dynamics Laboratory (SDL) has developed Shotgun Interdiction of Enemy Low-flying Drones (SHIELD), a counter-small unmanned aerial system (C-sUAS) solution.

SHIELD is a demonstrated proof of concept for an automated, state-of-the-art kinetic C-sUAS system. It can quickly eliminate drones and swarms at ranges up to 100 meters.

The current SHIELD weapon system consists of an ultra-reliable, high-capacity, semi-automatic shotgun with a specialty choke shooting tungsten shot. Other weapon systems are optional.

This shotgun is coupled with a precise remote weapon system (RWS). The RWS adds target tracking and real-time ballistics, ensuring high first-round hit probability. Battle-network capable, SHIELD can slew to cue and cue other networked systems.

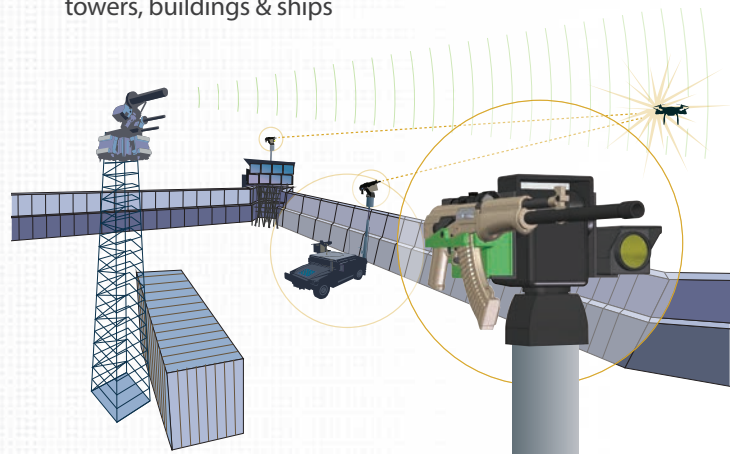
SHIELD draws on the demonstrated heritage of precision RWS development at SDL.

### SHIELD FEATURES

- Enables automated kinetic takedown of hostile drones & swarms
- Proves effective against RCAS, quadcopters & fixed wing
- Uses a 12 gauge shotgun with specialty shot as the interdiction method
- Provides integrated sensors: EO/IR cameras, laser range finder, weather, radar, INS/GPS
- Employs automatic target detection, recognition & tracking
- Enables secure battle networking, e.g., Cursor-on-Target (CoT)
- Integrates with third-party sensors (acoustic, visible, IR, hostile fire)
- Provides geospatial slew to cue with onboard position & attitude
- Implements a high safety level: safety interlocks, mechanical/software stops & proven fire control system

### SHIELD SPECIFICATIONS

- **Max effective range:** 100 m using current weapon system
- **Max firing rate:** 3 rounds per second
- **Less lethal range:** ~300 m
- **Magazine capacity:** 12 round box or 25 round drum
- **Reload time:** <1 min
- **Operating modes:** Automatic response, manual
- **Ballistics calculations:** Real-time holdover, windage & predictive target lead
- **Deployment options:** Telescoping mast, vehicles, guard towers, buildings & ships





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### SHIELD-OPTIC

SHIELD-Optic is a C-sUAS aiming solution, effectively a man-packable version of SHIELD that attaches to an issue weapon. It can be mounted to a variety of individual weapons, including shotguns. SHIELD-Optic presents the operator with an optimized aiming point calculated in real time, along with slew-to-cue and battle network information.

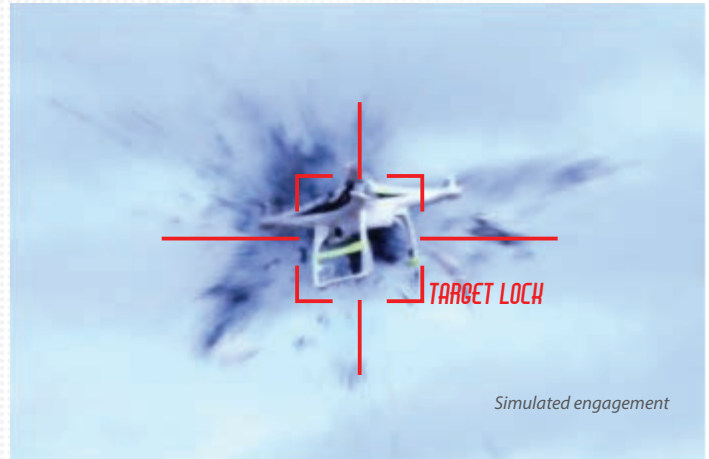
### SHIELD-OPTIC FEATURES

SHIELD-Optic shares many features with SDL's SHIELD weapon system. Additional features include:

- Installs easily on inventory weapons
- Greatly improves small arms C-sUAS effectiveness
- Provides high probability of kinetic kill against drones/swarms
- Minimizes response time
- Maximizes organic C-sUAS capability
- Extends maximum effective range
- Preserves baseline combat capability
- Provides battle-networked & slew-to-cue capability
- Includes a human to machine interface with augmented reality
- Provides fire control, sensor integration & automated target tracking
- Enables inertial position & attitude estimation
- Adds minimal SWaP impact on operator
- Empowers users with cost-effective & proportional response

### SHIELD-OPTIC SPECIFICATIONS

- **Max effective range:** 100 m using shotgun with tungsten shot
- **Magazine capacity:** Host weapon dependent
- **Sensors:** EO/IR, radar, INS/GPS
- **Dimensions:** 3 x 3 x 8 in
- **Weight:** 2 lbs
- **Power source:** Internal battery
- **Platform:** Fixed site, vehicle, or ruck portable
- **Ballistics calculations:** Real-time holdover, windage & predictive target lead
- **Mounting options:** Unit attached to host weapon's Picatinny rail



Simulated engagement



M320 Grenade Launcher  
1010-01-557-2542

