

www.esc.guide/robotican

ROBOTICAN

Smart Autonomous Robotic Solutions



The perfect tactical tool

The Rooster is a cutting-edge tactical cross-breed drone designed for ISR (Intelligence, Surveillance, and Reconnaissance) operations in communication-denied environments. This drone combines the capabilities of both rolling robot and rotary-wing UAVs, making it highly versatile and effective for a wide range of missions. The Rooster is designed with three key capabilities that set it apart from other ISR drones: traversability, endurance, and mesh communication.

The Rooster's advanced traversability system allows it to operate in challenging environments and maintain stable flight even in adverse weather conditions. Its long endurance capabilities mean it can operate for extended periods, providing uninterrupted ISR coverage. The mesh communication system enables the Rooster to establish a network of drones that can share data and relay messages even in environments where traditional communication methods are disrupted.

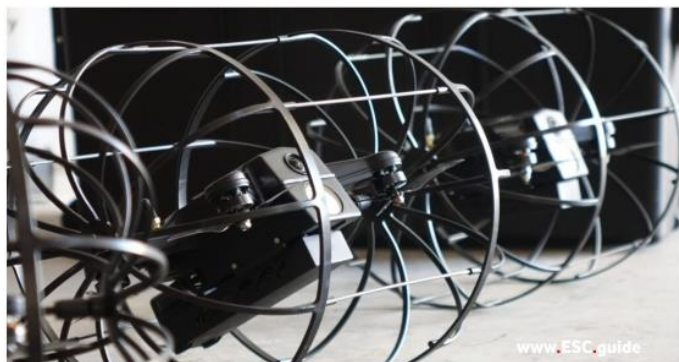
With its combination of advanced capabilities, the Rooster has the potential to revolutionize ISR operations and provide military and law enforcement organizations with the tools they need to gather critical intelligence and make informed decisions in the field.

More Information:

Web Link Presentation: <https://www.esc.guide/robotican>

Official Web Site: <https://robotican.net>

www.esc.guide/robotican



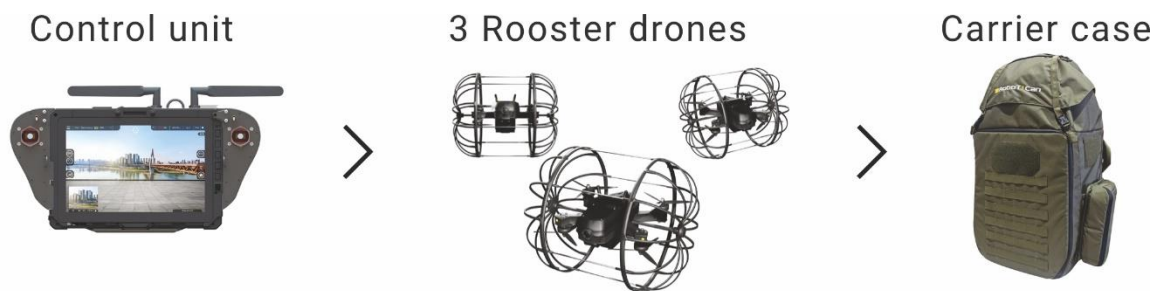
Rooster ISR System



Rooster

The Rooster is a revolutionary semi autonomous hybrid system for indoor and underground unmanned ISR missions. The combination of ground robotic and airborne drone capabilities provides a fast maneuvering platform with long-endurance capabilities that support indoor missions. Healing mesh communication increases its underground penetration distance. Additional payloads can be mounted on the Rooster to meet custom end-user needs.

System Components








Operational Use

-  Subterranean environment
-  Indoor buildings

Application & Use

Perfect for ISR in communication denied environments: Caves / Subterranean, Buildings, Rubbles, Industrial, Tunnels
Disaster sites

Specifications

 Weight 1350 gr	 Max hovering time 12 min	 Max roll time 30 min	 Typical mission time 8-90 min
 Payload option 300 gram	 Communication frequency 2.3/2.4/2.5Ghz	 Communication topology Mesh (3 platforms)	 Camera type Day / Low light / NIR
 Video format & resolution 1080p/720p/480p	 Lens angle 130° HFOV, 90° VFOV		

www.esc.guide/robotican



SAR - instant survivors detection

Search and rescue tool and instant damage appraisal. The perfect tool for situational awareness, designed for Indoor rapid exploration of buildings, caves and other confined space environments. Providing a Hybrid platform solution that roles as a robot and flies as a drone that benefits from both ground and air platforms advantages. The Rooster is capable of rolling into narrow passes and fly over obstacles, stair cases or flight through windows. It can stop, turn off its motors to listen and to watch for any clue of potential survivors. The Roster support's the first response teams to execute their mission in a agile and efficient matter with minimal risk to team members.



Security & defense

A reconnaissance hybrid system in flight, while rolling and at stationary position. Rolls like a robot and flies like a drone. Urban environment fighting has enormous challenges and risks to combat soldiers mostly generated by lack of intelligence on enemy activity indoors and underground. Robotican's Rooster designed especially to provide real time vision from these hard to reach environments. Underground facilities and indoor operations challenge the communication link to regular drones & robots, using a mesh radio link enables Roosters to relay comm. between each other and by using three Roosters enabling steady communication throughout ISR missions.



Preventive Maintenance Inspections

The Rooster capability to roll as a robot, fly as a drone, park as a rock and provide video imagery make it the ideal device to scan indoor facilities and building. The Rooster will roll on the floor, fly over obstacles and up staircases, in and out of rooms and be stationed at standby as a remote observation sentinel. Real-time video streaming from inaccessible areas, easily approach hazardous facilities and inspect in confidence narrow passes relying on the ROOSTER's robust and flexible structure.



www.esc.guide/robotican



Goshawk

Aerial defense system



Goshawk

The **Goshawk** is a powerful autonomous drone for capturing and retrieving hostile drones, using a special net effector for controlled disposal of captured drones in designated areas. This high-performance drone saves lives, protects large areas and prevents collateral damage.

24/7 Autonomous Aerial Protection:

Drones and UASs have become a worldwide threat that requires governments and authorities to control and prevent their illegal use – such as terrorism, smuggling, surveillance, etc.

Many authorities have begun using Counter UAS systems to detect and intercept hostile drones. The common interception method is by using Electronic Warfare (EW) that have issues of effecting the public and causes collateral damage, therefore, it is not good enough. The requirements are to prevent any kind of collateral damage during the interception phase and to capture the hostile drone.

Robotican's Goshawk system provides the ultimate interception capability to capture the hostile drone. The Goshawk drone is an autonomous drone that can execute an interception mission by catching the hostile drone while in-flight. The autonomous capability includes target detection in flight, track, lock, seek to the target and catch it. Adding to this, the Goshawk flight performance makes it the ultimate drone interceptor.

C-UAS use:



Critical infrastructure,
Military bases, FOBs



Prisons



Valuable assets



Mobile forces



Border protection



Airports

Zero Collateral Damage:

Capturing the drone ensuring minimized to no collateral damage to the user and 3rd party protected individuals in its surrounding area, enabling the Goshawk drone to perform controlled disposal of the captured drone at any chosen location such as an explosive pit for a weaponized drone, or at home base for further close UAV investigation or to be used as evidence in court against the hostile drone operators. The Goshawk system could use as a standalone system or it can be easily integrated with any existing drone detection system or any C2 Counter UAS system, and provide the optimal interception capability to the end-user.

System Components:

IMS
Interception Management
System



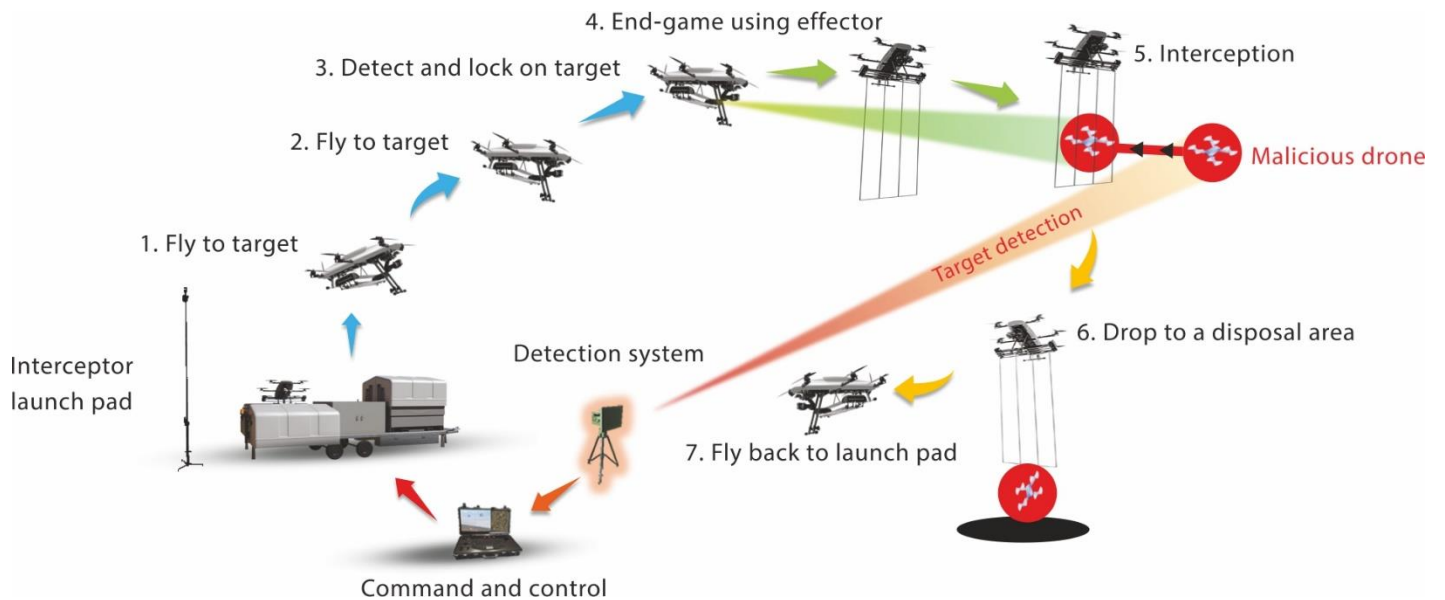
Smart nest



Interceptor



GOSHAWK Interception Cycle:



Specifications:

Flight time
30 min

Effective operation range
3.2 km (2 miles)

Weight
21KG (46LB)

Velocity
30 min

Launch time
12 min

Length
30 min

System features:

- 24/7
- No collateral damage
- Operator free
- Autonomous
- Mobile
- Surgical mitigation



Imitating nature: Drones are a marvel of modern technology, capable of mimicking the forces of nature and the instincts of animals.

Vulture instincts: Its level of precision and control allows the Goshawk to perform a wide range of tasks, from tracking, launching and mitigation aerial threats.

We hunt drones: With its advanced sensors and intuitive controls, Goshawk is able to navigate through complex environments, detect threats and hunt them down with no collateral damage.

Capturing nimble air threats: Surgical discreet C-UAS mitigation.

www.esc.guide/robotican



Combat field support

Drones and small unmanned aerial systems (sUAS), have proliferated rapidly and are available to individuals and organizations with no control nor limitation and in large quantities. These systems provide low-cost means of conducting intelligence, surveillance, reconnaissance and attack missions. Furthermore, many small UASs cannot be defeated by traditional air defense systems due to their size, material components and flight altitude, in addition the logistics of those traditional systems do not enable a low profile and prevent detection before take-off.

Hostile drone could be launched to missions at a very close range and prevent the ability to detect and respond to stop its mission in time. The common method used to defeat the hostile drones is by using RF jammers, these are not effective if the hostile drones are autonomous and have a backup to its GPS navigation.

The Goshawk autonomous interceptor is the effective solution, its effective range overcomes any hand-held device, its capability to capture the drone and release it anywhere prevents collateral damage caused by using missiles or long-range air-defense weapons. The autonomous performance enables any untrained personnel to control the system and respond rapidly



Airports

Around the globe airports are facing illegal Drone flights that are becoming a hazard to airline aircrafts and passengers. Near collisions have been reported by pilots and airport employees of drones causing air towers to stop flight activity of entire airports. Authorities are purchasing C-UAS systems to detect and intercept these drones with the downside of collateral damage caused by both jamming GPS and RF signals devices and by hard kill technologies. These hard kills technologies are hazardous to aircrafts in the air and on the ground in addition to the damaged caused by drones falling from the sky.

Robotican's Goshawk interception & capturing system is the optimal platform for intercepting drones and capturing them with a net and safely disposing them in a designated controlled location. The Goshawk interceptor is a powerful drone fully autonomous able to fulfill its drone capturing mission with no humans in the loop, it enables any C4 operator to handle interception mission with no need for special training as required for a 24/7 standby system. All it needs is to be connected to any drone detection system, receive the target initial location and it will execute the mission.



Strategic facilities

As Drone technologies and methodologies continue to advance at a rapid pace, and becoming available at a low cost, drone use is broadened for both the commercial use and illegal use. illegal drone use could be by curious civilians whom are not aware of the regulations, by criminals to cause damage, for spying or to support other illegal activities.

Production plants, commercial facilities that could be affected by illegal drone activity need to prevent it by technology devices with no collateral damage and preferable capture of the intruding drone, enabling investigation & identification of the hostile drone operator.

The Goshawk system is the ideal solution, it catches the intruder drone and returns it to the security officer for investigation, it executes the mission autonomously with the officer confirm mission take-off without any training. In addition, the system is on standby mode 24/7 for a rapid launch to mission.

Goshawk could be operated from an existing Security command and control center with no additional manpower. Its broad protection radius enables flexibility for its Nest smart launch pad location, for extra large facilities the Goshawks will require more than one interceptor and yet will be operated by one C2.