Countering the threat caused by drones is now a global issue and an increasing concern for militaries, governments and homeland security forces across every continent. It is expected that unmanned aerial systems (UAS) will increasingly be used for malicious purposes, given their ability to carry cameras, weapons, toxic chemicals and explosives, and they are already being used for terrorism, espionage and smuggling purposes.

EOS has developed the Titanis counter UAS (CUAS) system to address the growing threat from malicious and threatening UAS.

Using robust, battle-proven technology from best-in-class sensor and defeat system providers, the Titanis CUAS capability can counter single drones within 8 seconds of detection out to a range of up to 10 km (6 miles).

The Titanis system is designed to defeat not only single drone threats but also swarm drone tactics recently observed in operational theatres across the Middle East.

It detects the drone using state-of-the-art software and a defined, multi-mission, 4D AESA pulse Doppler radar. It tracks the threat using high-precision infrared and daylight cameras and advanced video tracking software, before using a non-kinetic radio frequency (RF) inhibitor to defeat the drone. Should the RF inhibitor not be effective, Titanis switches to hard kill to destroy the drone.

Titanis is built upon field-proven sub-systems that can detect all types of drones, including fixed wing and quadcopters up to 600 kg (Group 3).

EOS is committed to constantly evolving the Titanis capability to respond to new threats and to staying ahead in the dynamic UAS countermeasures market. Titanis is a tactical system designed for use by the military, police, other government and non-government agencies for protecting high-value critical national infrastructure and personnel.

TITANIS: A FULLY INTEGRATED COUNTER UAS SYSTEM WITH SOFT, HARD AND DIRECTED ENERGY KILL CAPABILITIES
These threats include the following:

**Military operations**
- Battlefield reconnaissance
- Suicide drones
- Swarm attacks

**Militant groups exploiting consumer drones**
- Dropping small bombs/IEDs
- Propaganda footage for recruitment videos

**Drug smuggling**
- Prosumer and custom-built drones are being used for international cross-border smuggling of narcotics

**Industrial espionage**
- Hostile surveillance by rival manufacturers for reasons of IP theft (vehicle proving grounds and test tracks)
- Breaching secure perimeters for cyber hacking and covert information gathering

Untrained users around sensitive areas
- Airports
- Key national sites (e.g. courts, parliaments, etc.)
- Power stations
- Incursions by inquisitive operators
- Unwanted surveillance by paparazzi
- VIP privacy intrusion
- Borders
- Prisons

Titanis is designed to mitigate all of the above threats.

**LESS THAN 8 SECONDS FROM THREAT DETECTION TO THREAT DEFEAT EVEN IF THE DRONE, IS NOT RF DEPENDENT**

The rise of commercial drone markets, combined with the proliferation of military drones, has demonstrated the wide range of new and existing potential threats within the CUAS threat landscape.
7.62 MM, M240B & 30 × 113 MM PROXIMITY FUSED AIRBURST

DIRECTED ENERGY
EOS TITANIS DRONE DEFEAT

- Integrated command and control
- Integrated soft/hard kill and Directed Energy effectors
- Swarm defeat capable
- Layered sensor fusion and integration
- Very low false alarm rate
- Fixed and mobile installations
- Protection for facilities, key personnel and mobile forces
- Technology transfer and local production possible
- Locally supportable

30 × 173 MM & 30 × 113 MM CANNON
The Titanis CUAS capability is based on EOS’ proven R-Series remote weapon stations (RWS) and features Directed Energy and soft kill capabilities to provide layered protection against UAS threats.

The solution enables the identification and defeat of UAS targets with both soft and hard kill capabilities, as well as the ability to operate under protection.

The Titanis capability is based on the in-service R400 RWS, meaning the cost of introducing the CUAS capability is reduced, since training, support and operation are all based on the legacy RWS.

The system also features hard kill solutions that offer options to reduce fratricide.
Titanis is a scalable, layered drone defeat system. The base system sensors include radar, camera and RF detection to complement existing security systems.

Soft/hard kill and Directed Energy effectors steered by the command and control system offer the full spectrum of defeat solutions to counter the threat of drone use.

**Radar**
- Pulse Doppler; software-defined radars
- AESA (active electronically scanned array) antenna; GaN technology
- Extremely high elevation coverage
- Non-rotating, solid state radars
- Digital: beam forming, receivers, pulse compression
- Compact and mobile
- High reliability

**RF detection**
- Fully compatible with dense urban environments
- High accuracy and long range detection
- Passive detection
- High probability on intercept and zero false alarm rates
- Small footprint and form factor
- Fixed and portable deployments
- Large area coverage
- Swarm target tracking
- Identify UAS operator location

**Hard kill effector**
- Concentrated point defence; R400 mounting 7.62 mm Dillon Aero mini-gun
- R400 mounting M230LF with programmable proximity airbursts
- R800 mounting MK44S with programmable airburst munitions
- Effective range out to 3,000 m
- Low collateral damage ammunition options
- Defeat drone swarm tactics

**Directed Energy effector**
- 35 kW high-power laser
- Minimal collateral damage
- Effective range out to 4,000 m against Group 1, 2 and 3 drone threats
- Swarm defeat capable with high rates of target engagement
- Transferable technology

**Camera**
- Powerful optic and thermal drone detection and tracking
- Swarm target detection and tracking
- Passive system

**Soft kill effector**
- Defeats C2, video and/or navigation system
- Effect – land immediately or return to launch point
FIND OUT MORE: EOS-AUS.COM/DEFENCE

EOS Defence Systems Pty Limited
18 Wormald St, Symonston, ACT 2609, Australia

EOS Defense Systems USA, Inc.
2865 Wall Triana Hwy SW, Huntsville, Alabama 35824, USA

EOS Advanced Technologies LLC
Tawazun Industrial Park, Ajban, Abu Dhabi, UAE

EOS Defence Systems PTE Limited
10 Pandan Crescent #06-01, Singapore, 128466

EOS Optronics GmbH
Ulrichsberger Str. 17, 94469 Deggendorf, Germany

EOS Defence Systems Netherlands
Kalvermarkt 53, 2511 CB, The Hague, The Netherlands