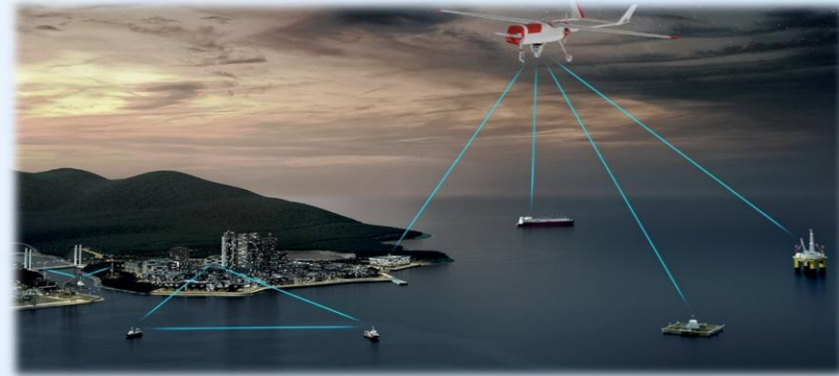




PHOENIX UAV Surveillance Use Cases

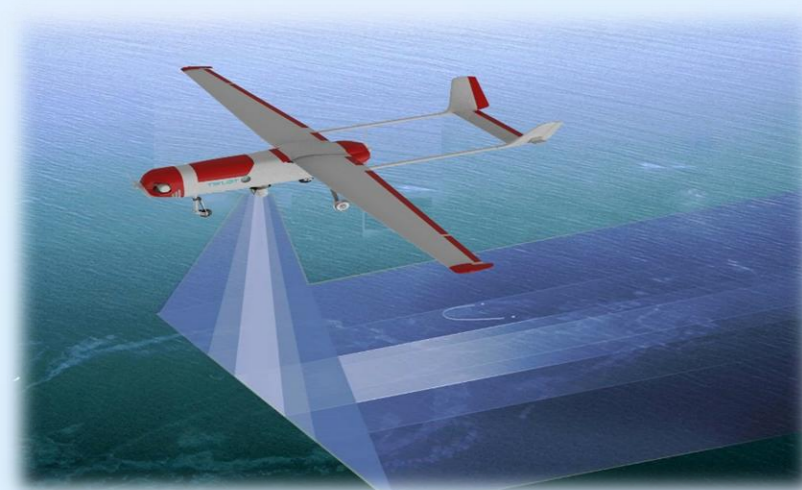
Maritime traffic monitoring

The powerful PHOENIX camera records boat movements and detects their identifiers day and night for coastal surveillance, combating illegal fishing and smuggling, and detecting hydrocarbon pollution from illegal COW (Crude Oil Washing) by tankers.



Pipeline inspection and hydrocarbon leak detection

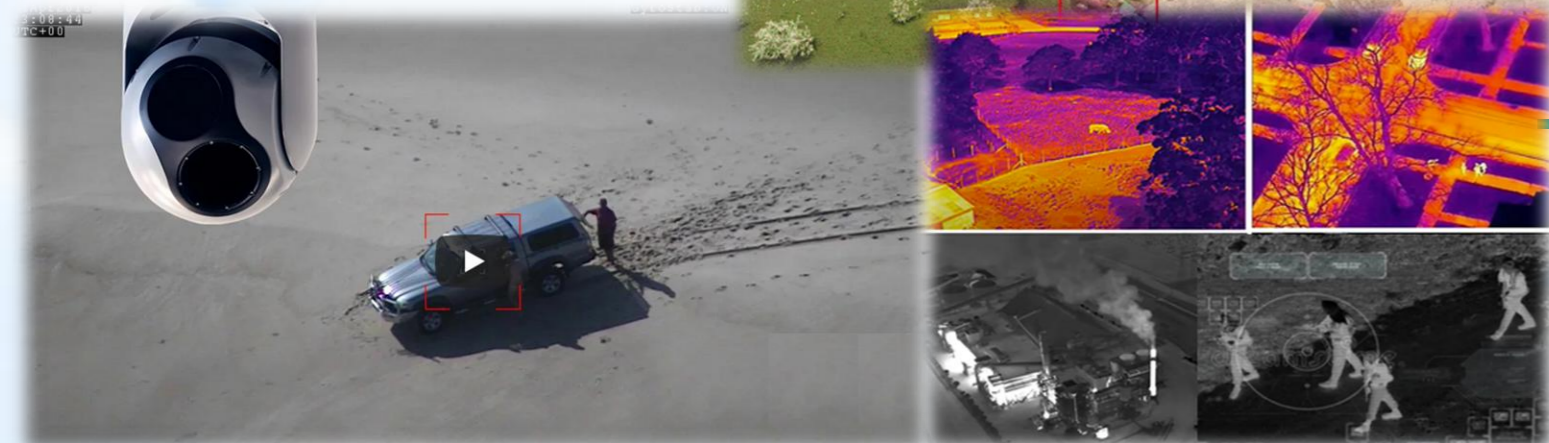
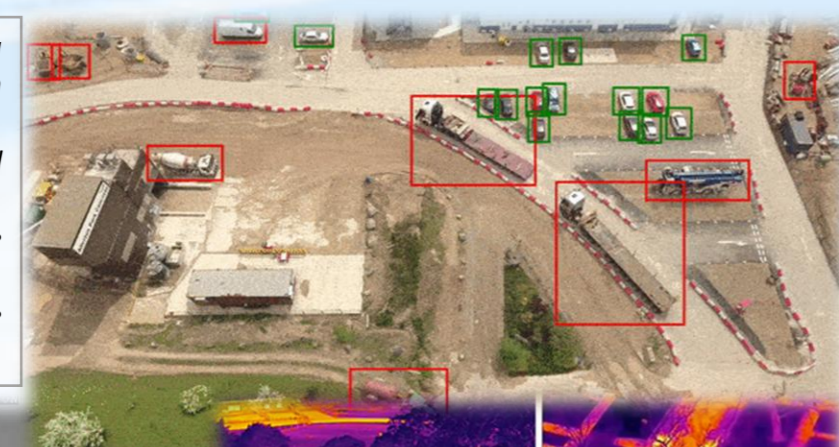
The PHOENIX drone can carry a long-range multispectral camera and specific detectors for the detection, visualization and precise location of oil leaks on pipelines.



Surveillance, Reconnaissance and Rescue

Equipped with a day and night vision camera with a powerful zoom, the PHOENIX drone can perform missions such as:

- Automatic recognition of vehicles, people and weapons,
- Tracking of moving targets and precise geolocation by laser,
- Search flights and dropping of rescue equipment.

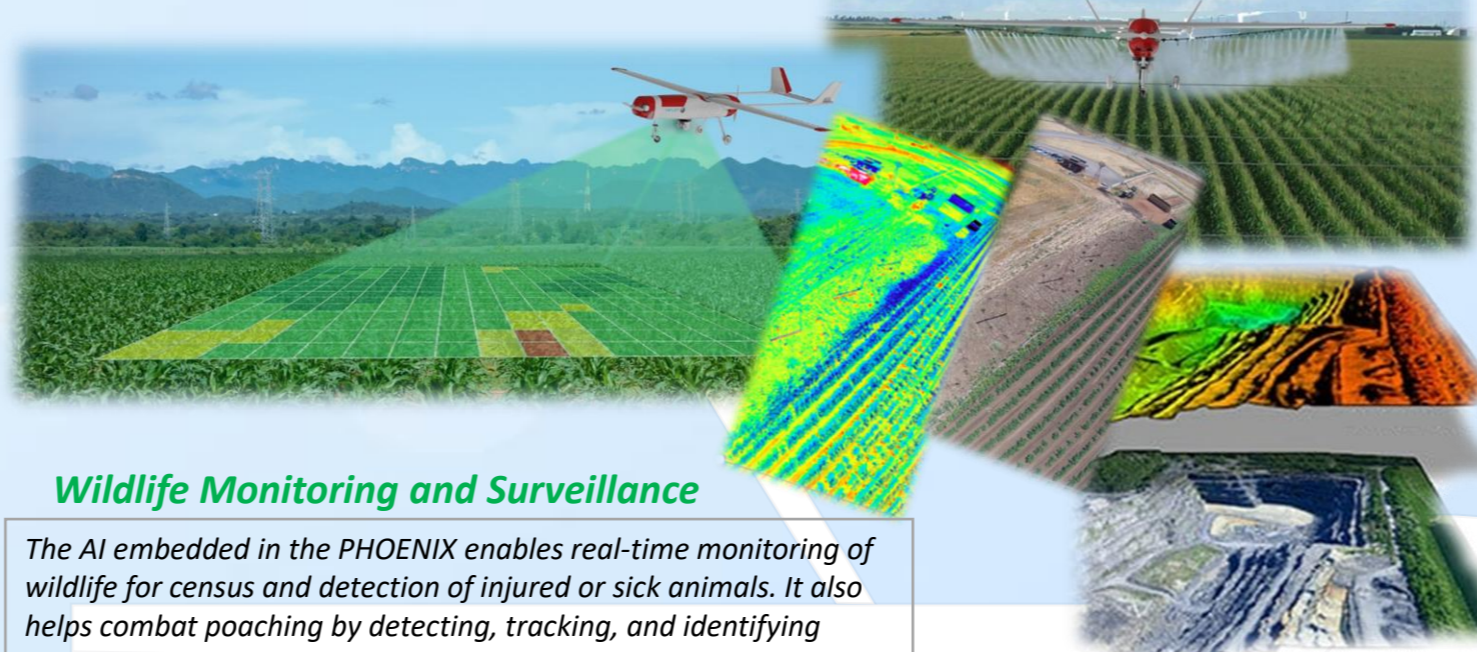


PHOENIX UAV Agriculture Use Cases

Crop inspection and smart spraying

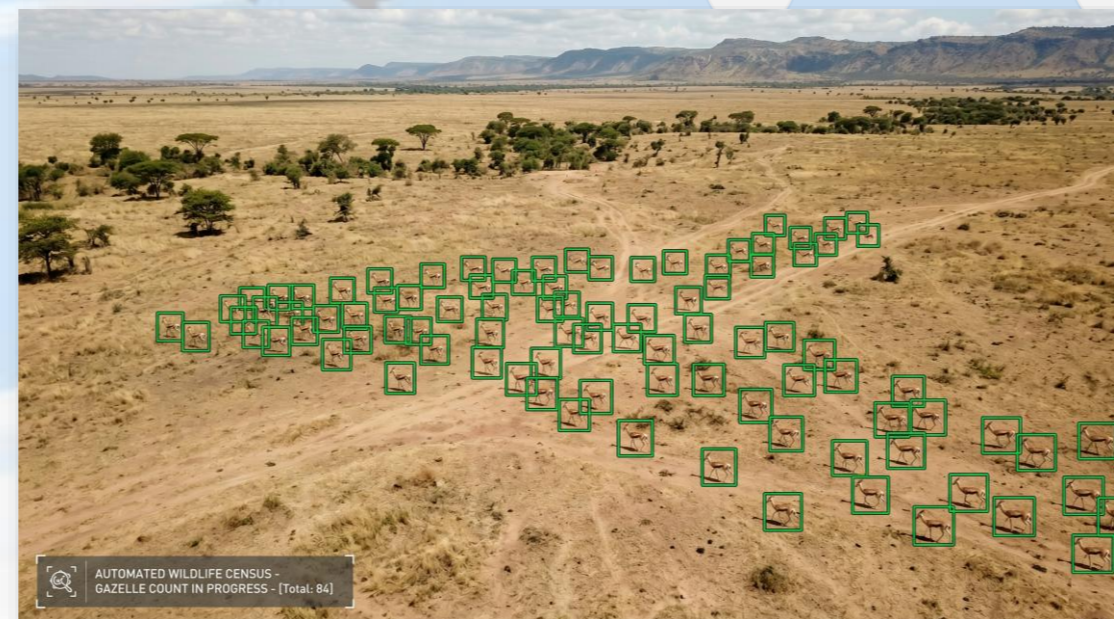
PHOENIX drones can adjust their altitude and flight paths based on topography using LiDAR measurements, ensuring even crop spraying. The multispectral camera detects the Vegetation Health Index (VHI) of each plot, allowing the spraying system to instantly adjust its application parameters.

LiDAR also enables topographic surveys and the generation of digital terrain models.



Wildlife Monitoring and Surveillance

The AI embedded in the PHOENIX enables real-time monitoring of wildlife for census and detection of injured or sick animals. It also helps combat poaching by detecting, tracking, and identifying poachers.



TELNET Centre Urbain Nord, Imm. Ennour – 1082 Tunis - Tunisie

(+216) 71 70 69 22 @ info@groupe-telnet.net

https://www.phoenix-uav.aero/





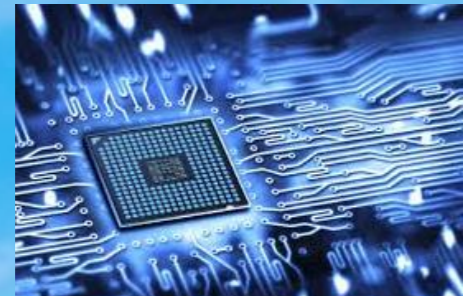
PHOENIX UAV

Multidisciplinary Expertise

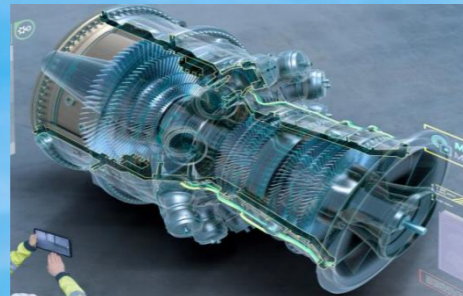
With over 30 years of expertise in high-tech consulting for international clients in the fields of embedded software, electronics, and mechanics, TELNET is also a Digital Industrialist offering various high-value technological products in the AEROSPACE sector.



Embedded Systems



Electronics

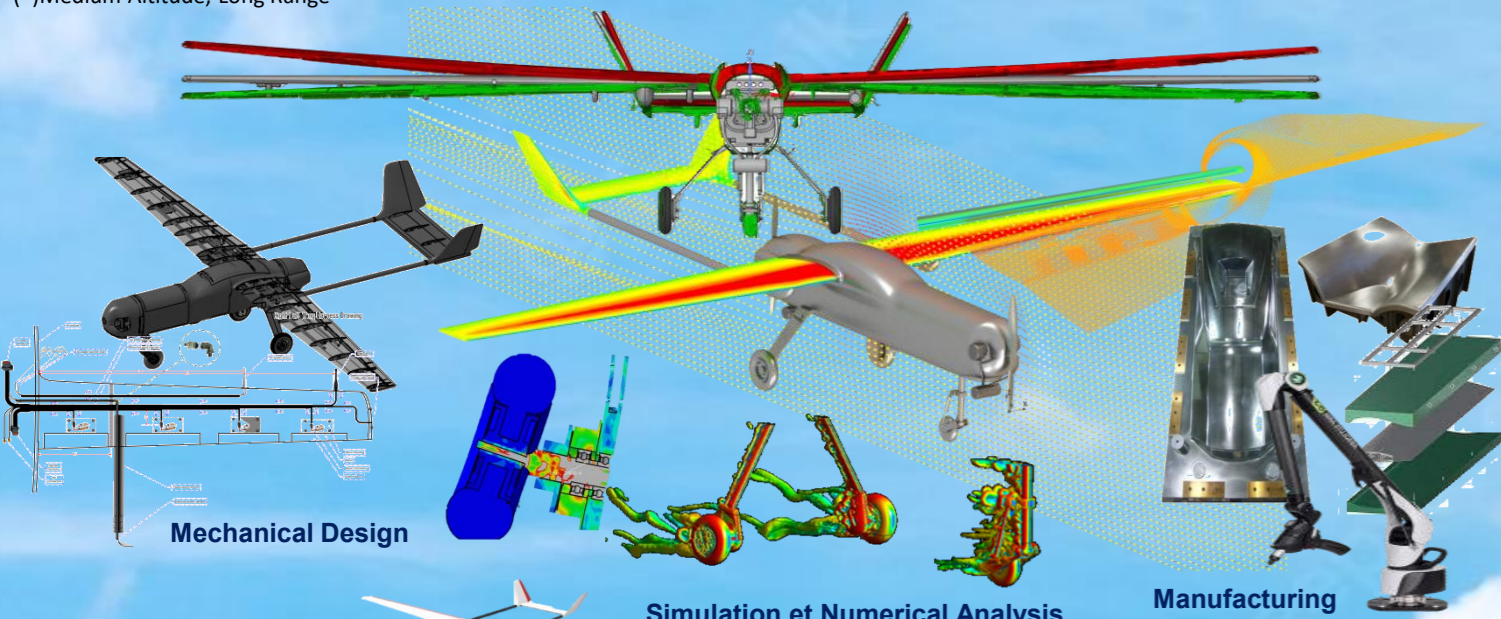


Mechanics

Among the flagship products launched by TELNET in the aerospace sector, the **PHOENIX** drone meets the need for a **versatile, multidisciplinary** drone with a **wide range** of action, capable of carrying **fairly heavy loads** and totally **autonomous** thanks to its **automatic piloting system**.

Entirely designed by TELNET and manufactured in an Extended Factory model within the Tunisian aerospace supply chain, the PHOENIX drone is a unique **MALE*** platform offered in various wingspans and with thermal, electric, or hybrid propulsion options. The multitude of available optional equipment and accessories, as well as the various payloads compatible with the PHOENIX platform, allow our drones to meet a **wide range of civil and military mission requirements**.

(*Medium Altitude, Long Range)



Mechanical Design

Simulation et Numerical Analysis

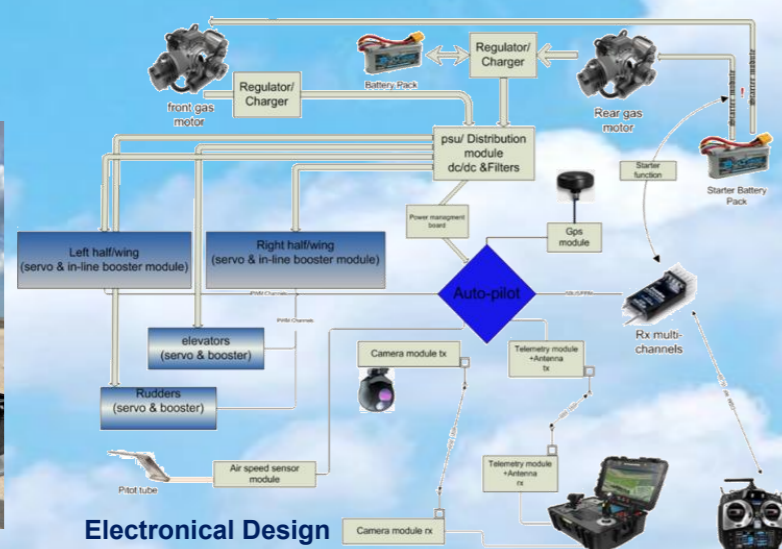
Manufacturing



Telemetry & Communication



Ground Control Station



Electrical Design



PHOENIX UAV

Versatile, multiple Payload

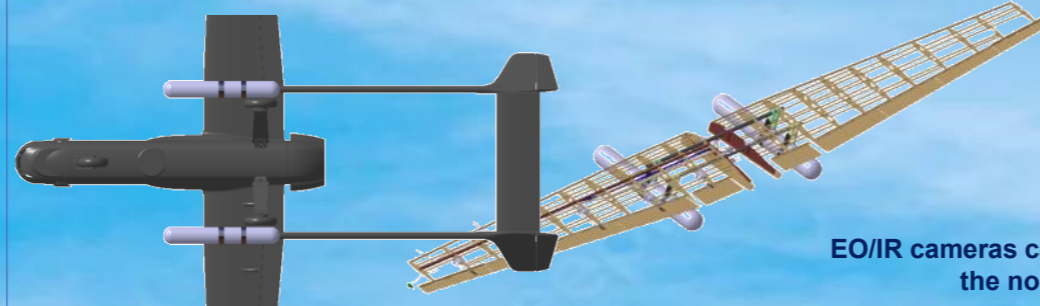
To satisfy a **wide range of missions**, the robust chassis of the PHOENIX drone, based on an aluminum structure and composite materials, can be easily configured to carry **multiple payloads, optional equipment**, and to be powered by one or two thermal or electric motors.



One rear engine version (Push)



Two engines version (Push/Pull)



Additional fuel tanks to increase range and operational radius can be mounted under the wings



EO/IR cameras can be mounted under the fuselage or under the nose of the drone, as shown above.



The dropping system can be added under the wings to release a double load or under the fuselage for a single load.

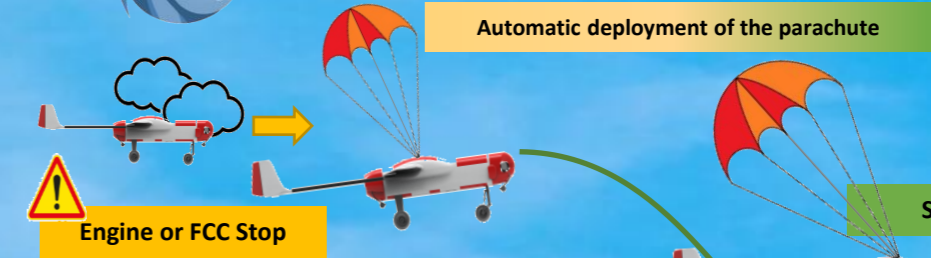
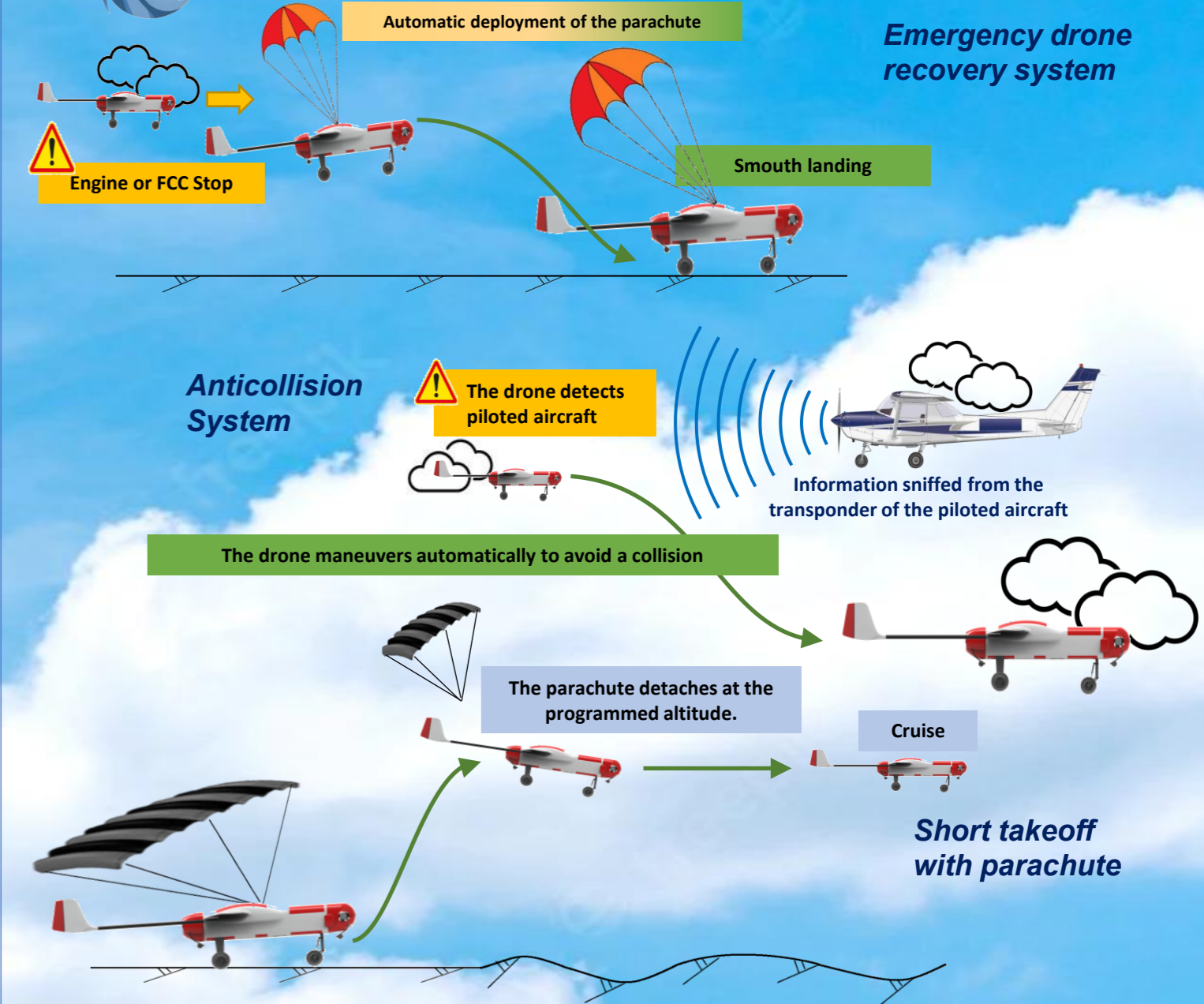
PHOENIX B-1C UAV SPECIFICATIONS

UAV Type	Fixed Wing	
Length	3.36 m	11'
Wingspan	4.74 m	15' 6"
Height	0.80 m	2'7"
Weight (without fuel)	35 Kg	77 lbs
MTOW	55 Kg	121 lbs
Tank Capacity	9L - 7 Kg Fuel	2.4 gal - 15 lbs Fuel
Maximum Payload	13 Kg	29 lbs
Maximum Speed	140 Km/h	76 Knots 87 mi/h
Cruise Speed	110 Km/h	59 Knots- 68 mi/h
Flight Duration	8 Hours/ 800 Km	8 Hours/ 497 miles
Ceiling	4 700 m	15 420 Feet
Motorization	2xMotors - 4 Strokes 2 Cylinders 85cc Electronic Injection - 2x 4,8 KW (2x 6,6 HP) Or 1xMotor - 4 Strokes 2 Cylinders 170cc Electronic Injection - 9,6 KW (13,2 HP)	
Fuel	Ordinary Gasoline mixed with Oil	
Electric Generator	2x 350 W or 1x 700 W	



PHOENIX UAV

Security Features



Emergency drone recovery system

Anticollision System

The drone detects piloted aircraft

Information sniffed from the transponder of the piloted aircraft

The drone maneuvers automatically to avoid a collision

The parachute detaches at the programmed altitude.

Cruise

Short takeoff with parachute

Specification PHOENIX - U-2S

Length	1.39 m = 4.56 ft
Wingspan	2m = 6.56 ft
Height	0.31m = 1.02 ft
Weight	5 kg = 11.02 lb
MTOW	6.5 Kg = 14.33 lb
Max Speed	80 km/h = 43.2 kt
Cruising Speed	50 - 60 km/h = 27 - 32.4 kt
Duration	2.5 Hours (137 km - 85 miles)
Max Payload	1.5 kg = 3.31 lb
Power	Electric Brushless Motor
Battery	Lithium Polymer Battery 4Cell x 2 ; 5000 mAh

Specification PHOENIX - U-3S

Length	2.1 m = 6.89 ft
Wingspan	3 m = 9.84 ft
Height	0.46 m = 1.51 ft
Weight	14 kg = 28.66 lb
MTOW	18 Kg = 39.68 lb
Max Speed	130 km/h = 70.2 kt
Cruising Speed	80 - 110 km/h = 43.2 - 59 kt
Duration	5 Hours (400 km - 248 miles)
Max Payload	4 kg = 8.81 lb
Power	Gasoline 4T- 60 CC Engine
Battery	Lithium Polymer Battery 3Cell ; 5000 mAh