



ORION 2.2 TE

Tactical Tethered Drone
Designed for ISR and Telecommunications

ABOUT US

Elistair is a global expert in the design and manufacturing of tethered drone systems. Based in Europe and North America, the company's products have been successfully deployed by allied forces and public safety units in over 70 countries since 2014.

Our commitment is to help those who serve and protect make faster and better decisions in critical situations, with cutting edge and mission ready tethered drone technology.



ORION 2.2 TE

Backed by 6 years of Orion deployments for defense and security operations worldwide, the Orion 2.2 TE is a tactical upgrade of its predecessor for ISR and Telecommunications missions.

Designed as a 2-in-1 system, it can carry payloads up to 5 kg (11 lbs) by just switching its arms to a heavy lift configuration.

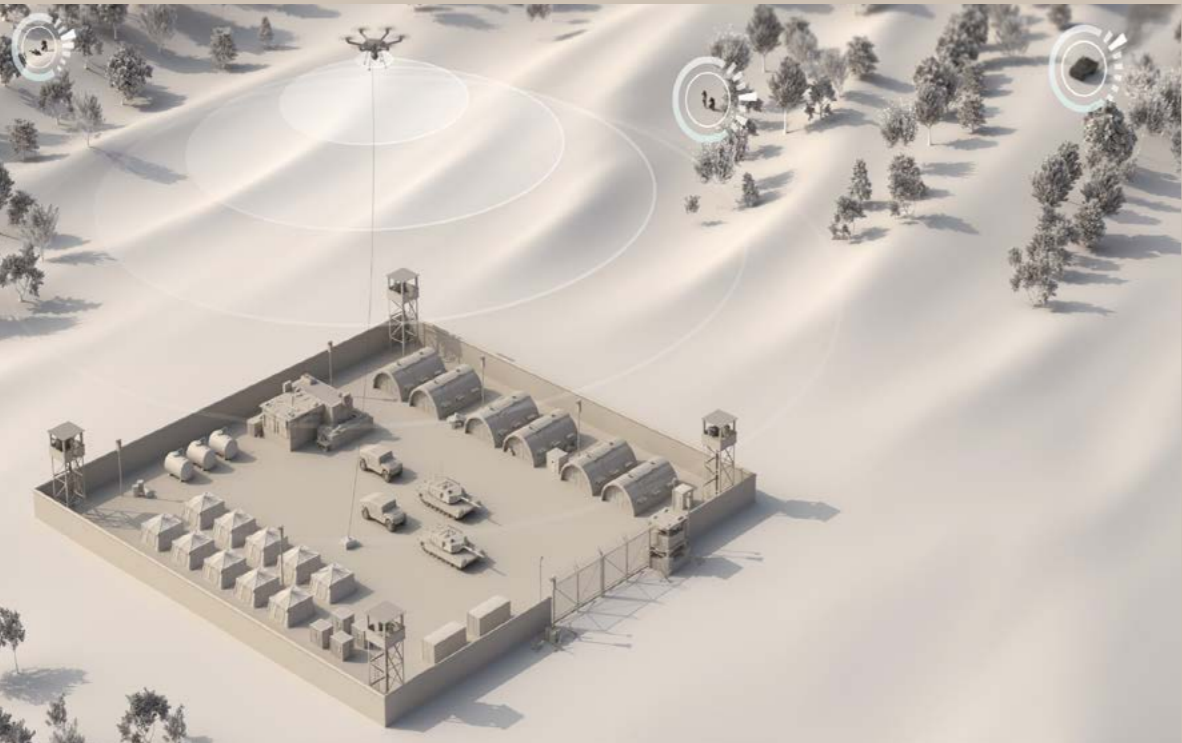
Ruggedized and automated, the Orion 2.2 TE can continuously operate for 50 hours of autonomous flight and resist changing weather conditions. It is easy to transport and deploy even in difficult-to-access areas.

- ITAR FREE
- NDAA COMPLIANT



BORDER AND PERIMETER SURVEILLANCE

Increase situational awareness of your area of operation. Quickly set up the Orion 2.2 TE by pushing the takeoff button and setting the altitude. Focus on the mission and instantly identify, localize, and track targets by day and night up to 10-km (6-miles) radius.



50 hrs endurance



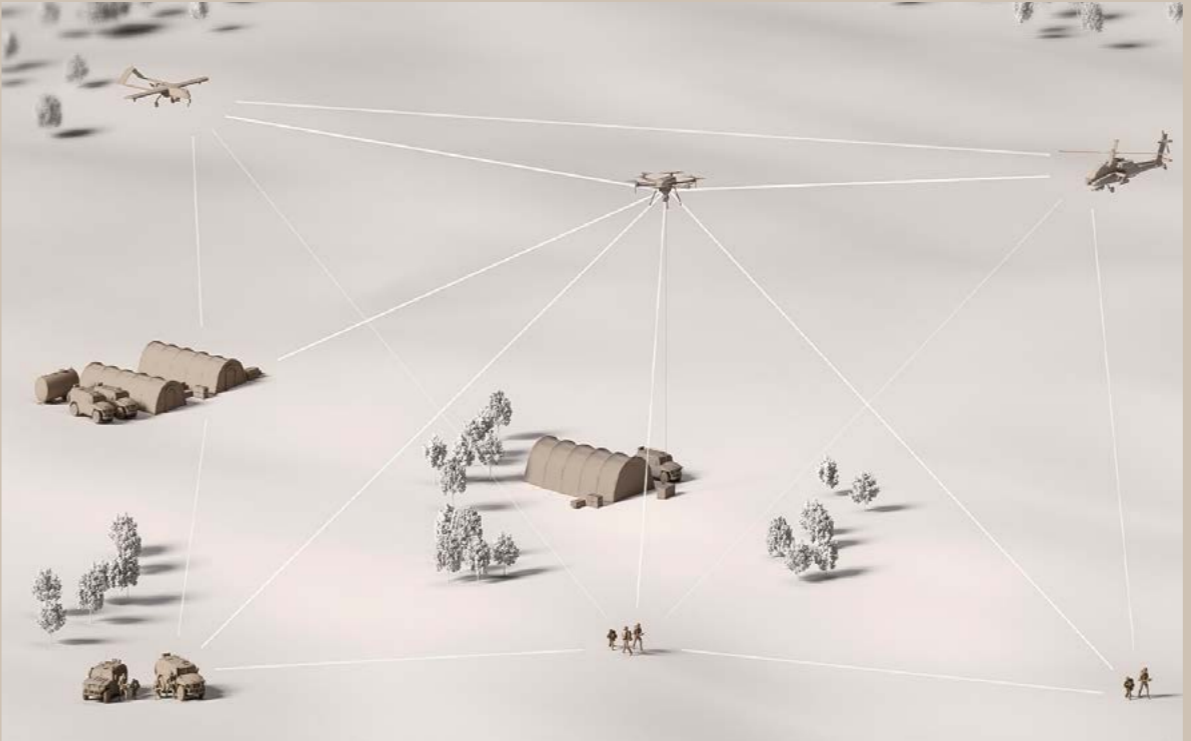
Multiple ISR payloads



100m tether (328 ft)

TACTICAL TELECOMMUNICATIONS

Use the 100-meter (328-feet) tether to overcome line-of-sight limitations in a communications network. The Orion 2.2 TE acts as an automated and discrete Variable Height Antenna (VHA) that quickly extends a network and improves communication between units. Easily switch to heavy lift configuration by changing arms and carrying payloads up to 5 kg (11 lbs).



Radio agnostic



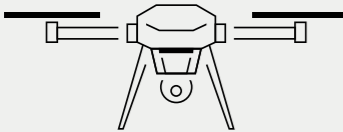
IP54 protection



5kg payload capacity

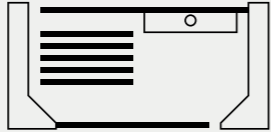
TWO-CASE MISSION PACKOUT

The Orion 2.2 TE is a turnkey tethered drone with a low logistical footprint. It is easily transportable in two pelicanses and quick to deploy with Elistair's push button software. The 2-in-1 system allows operators to quickly switch to a heavy lift configuration without tools.



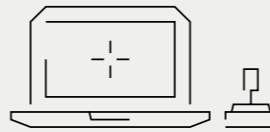
ORION 2.2 TE 2-IN-1 TETHERED DRONE

- 50 hours of uninterrupted flight time
- Automated flight profile
- Multi-level failsafe architecture
- A Comprehensive range of cameras for ISR, plus a Payload Development Kit
- Up to 5 kg payload capacity in heavy lift mode



SAFE-T 2 TETHERED STATION

- 100-m (328-feet) tether with automated winch reel
- Unlimited, efficient, and safe power transmission
- Ruggedized design with IP54 certification
- High-speed secured data transfer



GROUND CONTROL STATION / T-PLANNER SOFTWARE

- Push-button command and control
- Actionnable intelligence: POI, automated routines, object identification, localization and tracking
- System health monitoring and user maintenance
- Secured closed-loop system





T-PLANNER, ADVANCED MISSION SOFTWARE

Elistair's proprietary T-planner software enables intelligent image analysis and simplified drone and payload control. Operators can be airborne and deliver effect within minutes of arriving on the scene.

Automated flight profile

The Orion 2.2 TE will manage the mission profile so you can focus on operating the payload



Identification and tracking

Easily define points of interest, localize and track targets and launch automated scans



Ruggedized Laptop

The Orion 2.2 TE ground control station is ruggedized to resist shocks, water, and dust ingress



Laser Range Finder option

The XQT LRF sensor can provide coordinates and range to a target up to 3 km (1,8 mi)

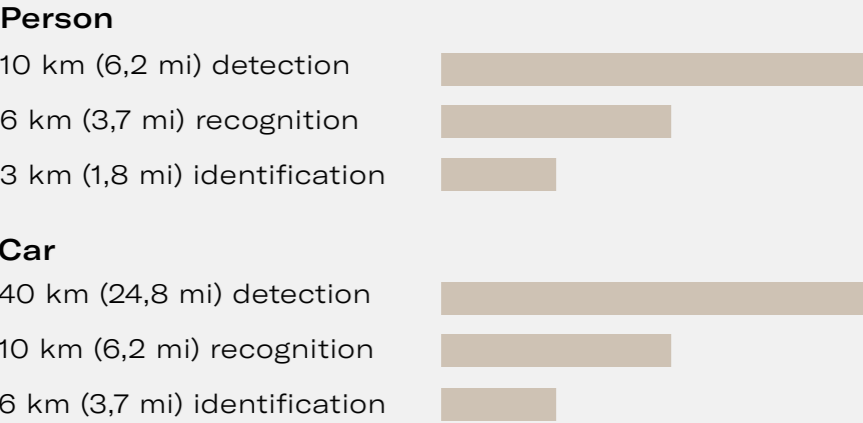


MULTIPLE PAYLOADS COMPATIBLE

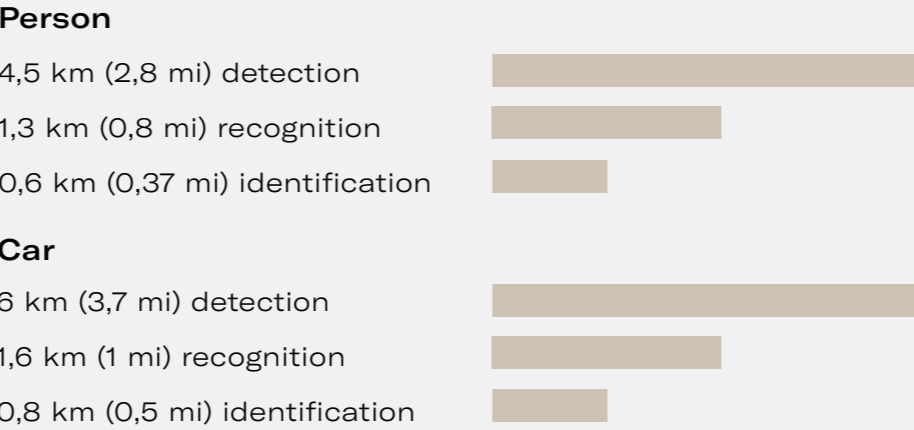


RAPTOR
The Raptor classification and tracking functions greatly facilitate continuous missions by helping the operator to easily focus on objects of interest, such as humans and vehicles, especially with a best-in-class IR sensor and an X80 EO zoom.

DAY DRI*



NIGHT DRI*



*According to manufacturer specifications



XQT-AI
The XQT-AI sensor is a powerful 3-axis gimbal featuring advanced AI object identification and target tracking with an EO day X40 optical zoom.



XQT-LRF
The XQT-LRF's laser rangefinder can display the GPS location and distance of the object within 3 km (1,8 mi). It is also equipped with EO/IR sensors.



PDK
Elistair Payload Development kit has been designed specifically for the Orion 2.2 TE to integrate payloads and sensors weighing up to 5 kgs (11 lbs).

HEAVY LIFT CONFIGURATION

The Heavy Lift is a specific configuration of the Orion 2.2. By simply switching to heavy lift arms with more powerful motors, the drone can carry heavier payloads.

SUPERIOR CARRYING CAPACITY

The Orion 2.2 TE can lift and power a 4KG (8,8 lbs) payload at 70 m (230 ft), and a 5KG (11 lbs) payload at 50 m (164 ft) for 50 hrs.

UPGRADED MOTORIZATION

Next generation motorization, hexacopter stability, and performance even in harsh environments.

PAYLOAD DEVELOPMENT KIT

Combined with the PDK, the Orion 2.2 TE can carry tactical communication relays, 4G cells, or other specialized payloads.

DATA LINK

High-speed secured data link, protected from interference and jamming, for instant and safe communications.



UNIQUE PERSISTENT AND SAFE ARCHITECTURE

The Orion 2.2 TE is a by-design tethered drone system built to endure extended flight times with its persistent, focused safety architecture and automated flight profiles.

Safe architecture



REDUNDANT PROPULSION

The hexacopter design provides increased security and allows a safe recovery in case of motor failure.



REDUNDANT POWER SUPPLY

An intelligent safety battery protects the Orion 2.2 against power loss from the ground.



REDUNDANT COMMAND AND CONTROL

Three levels of control using the tether (primary), radio link (secondary), and Remote control (tertiary).



SMART PARACHUTE

An integrated parachute is automatically or manually activated in an emergency situation.

2 Case Mission Packout



TWO CASE PACKOUT

One solid transport case for carrying the UAV, its batteries, arms, feet, GCS, joystick, and ethernet cable.



RUGGEDIZED TETHERED STATION

100 m (328 ft) tether in an aluminium shock-resistant case specifically designed to power the Orion series.

TECHNICAL DATA

GENERAL	STANDARD EDITION	HEAVY LIFT
Flight time capacity		50 hrs
Micro tether length		100 meters (328 feet)
Tensile strength		150 daN
Micro tether data transfer		100 Mb/s
Stealth mode		All lights shut mode
ITAR Free		Yes
Maximum payload weight	1,5 kg (3,3 lbs)	5 kg (11 lbs) at 50 m
Ingress protection		IP54
Operating temperature		-10°C to 45 °C (14 °F to 113 °F)

LOW LOGISTICAL FOOTPRINT / PORTABILITY

Deployment time	< 15 minutes
Space requirement	2 pelicases
Power source needed	120 VAC - 230 VAC ~ 50 - 60 Hz (generator minimum 4 kW)

FAILSAFE ARCHITECTURE

Smart battery	Charge while flying ability
Flight companion processor redundancy with failsafes	No single point of failure
Smart Parachute	Opens in case of critical failure

RAPTOR CAMERA	
Gyro-stabilization	2 axis + 3rd digital axis
Day channel zoom	X 80 (X 40 optical + X2 digital)
Resolution and frequency (day channel)	1280 x 720 pixels, 25 Hz
IR sensor (night channel)	1280 x 720 pixels, 9 Hz
Digital zoom (night channel)	X 4

XQT-AI CAMERA	
Gyro-stabilization	3 axis
Day channel zoom (optical)	X 40, F=4.25 ~ 170 mm
Resolution and frequency (day channel)	1920 x 1080 pixels, 30 Hz
IR sensor (night channel)	640 x 512 pixels, 9Hz
Digital zoom (night channel)	X 8

XQT-LRF CAMERA	
Gyro-stabilization	3 axis
Day channel zoom	X 30, F=4.3 ~ 129 mm
Resolution and frequency (day channel)	1920 x 1080 pixels, 30 Hz
IR sensor (night channel)	640 x 480 pixels, 9Hz
Laser range finder	3 km (1.86 miles)



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