ORION 2
Tethered UAS

Designed for Defense, Homeland Security
and Civil Organizations
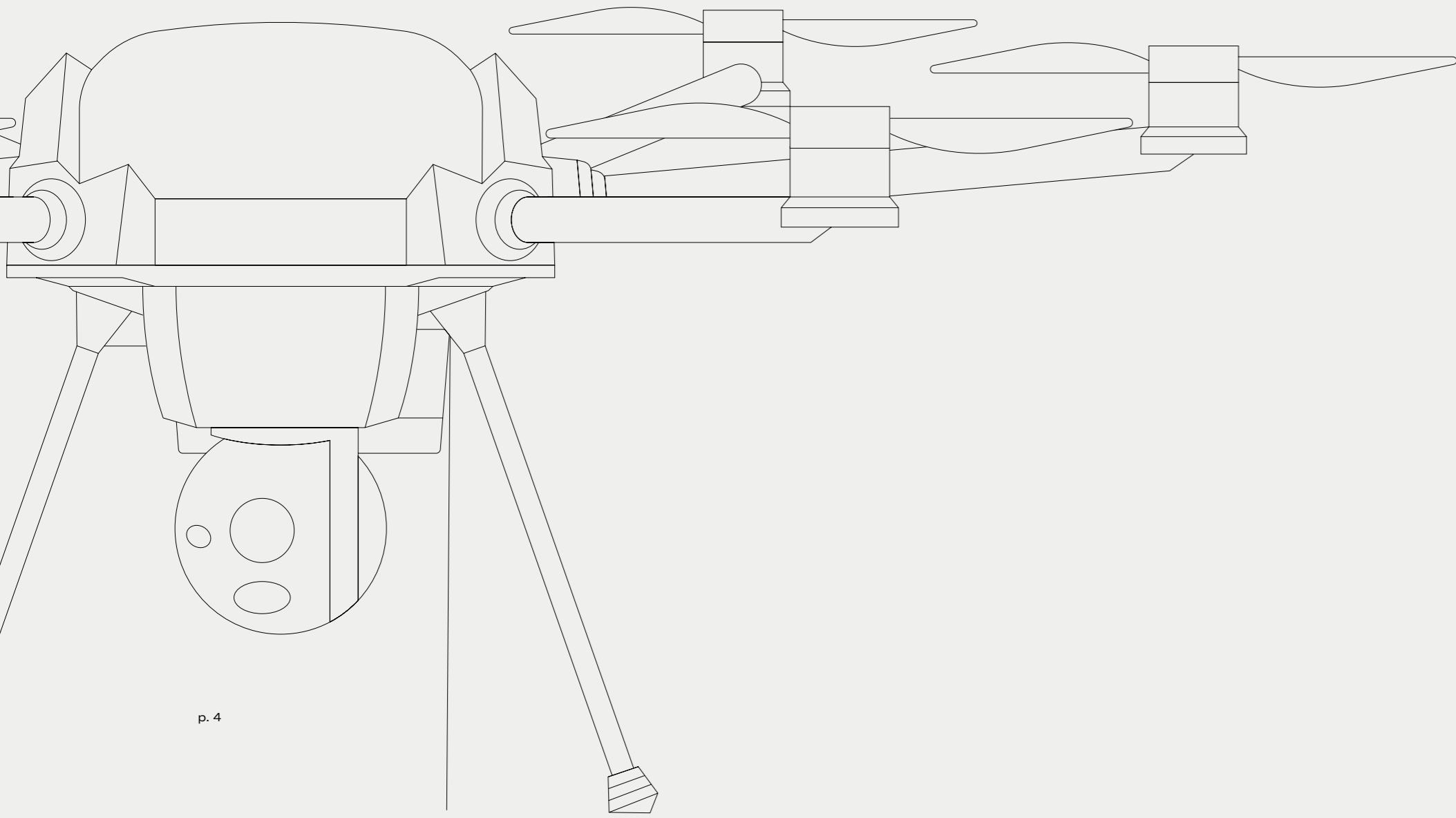
Intelligence is not measured from the feet to the head, but from the head to the sky.
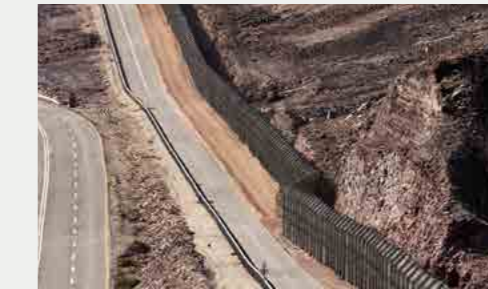
Napoléon Bonaparte

APPLICATIONS

Perimeter Surveillance

The Orion 2's EO and IR sensors provide you with uninterrupted, all-around, day and night surveillance of a 10 kms (6-miles) area. This rapidly deployable capability gives operators the actionable intelligence they need to make critical decisions in high stress environments.

Protection of Borders

Have access to an enduring, wide-area view of borders or crossing points to facilitate safe control of these critical areas. Rapidly deploy in vulnerable or difficult-to-access border areas to coordinate against criminality and unauthorized crossings.

Tactical Communications

Increase the range and connectivity of a communication network by using the Orion 2 as a 50-hour Variable Height Antenna up to 100 meters (330-feet). Use the Payload Development Kit to integrate a wide range of communication payloads for your mission.

The Orion 2 advanced
tethered UAS provides
timely and actionable
intelligence to help
people in the field
protect lives and assets.

PERIMETER AND BORDER SURVEILLANCE

Gain situational awareness of your area of operation by deploying
the Orion 2 in an ISR role to capture actionable intelligence over a 50-hour period.
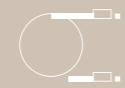
PERSISTENT SURVEILLANCE

Powered and controlled through the
tether, the Orion 2 can remain on station
for 50 hours, ensuring that you maintain
continuous overwatch.

ACTIONABLE INTELLIGENCE

The Orion 2 software will help you
identify the location of threats and
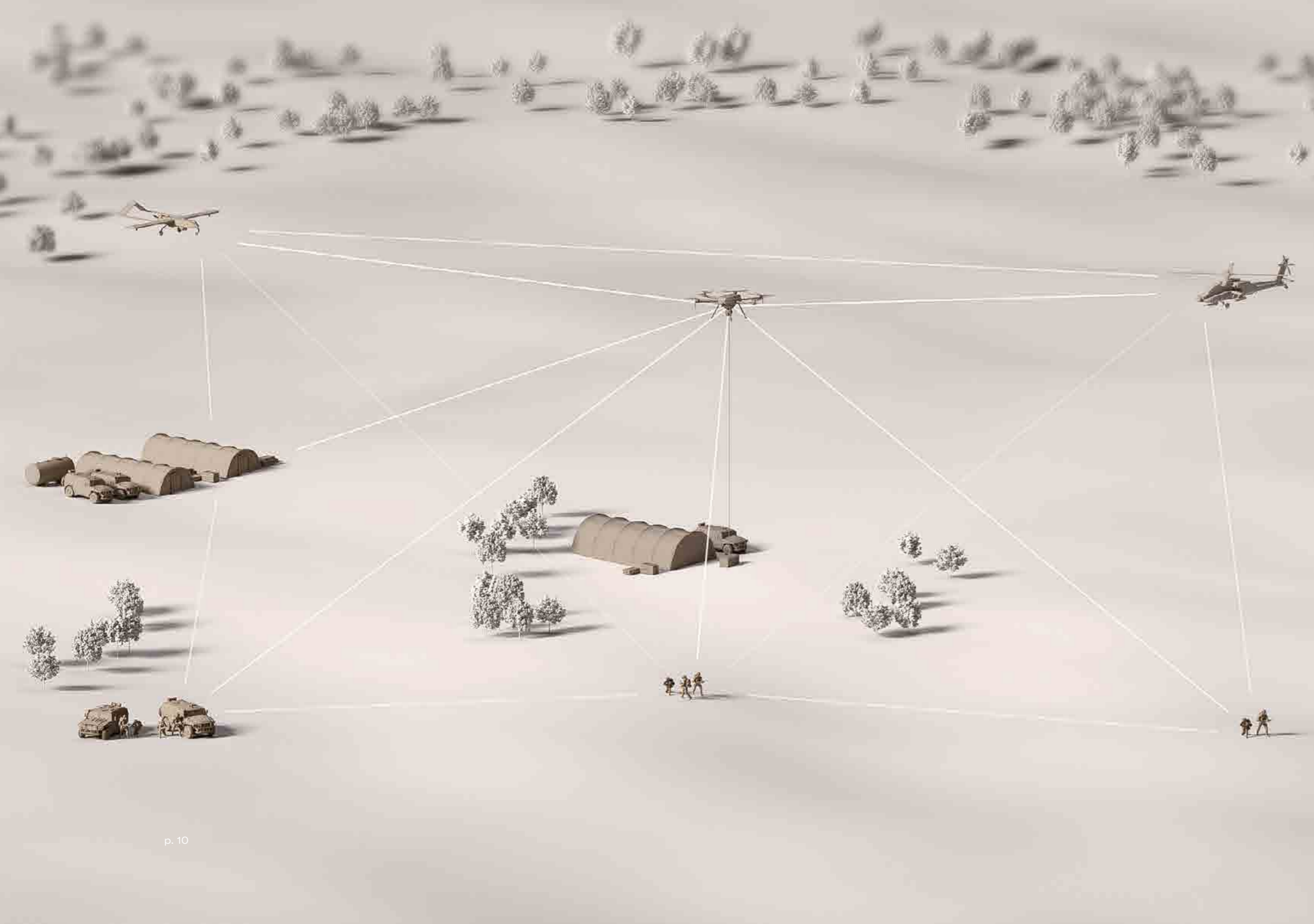allow you to communicate actionable
intelligence on what you can see.

WIDE-AREA, DAY / NIGHT COVERAGE

Fly day-into-night missions using a dual
EO/IR sensor and remove the need to
land and change payloads.

50 hrs endurance

Secured comms

2 pelicases

TACTICAL COMMUNICATIONS

Use the 100 meters (330-feet) tether to overcome line of sight limitations in a communications network. The Orion 2 acts as an automated and discrete aerial antenna that quickly extends a network and improves communications between units while saving on weight, size and costs of a traditional mast.

ADAPTABLE TO VARIOUS PAYLOADS

The Payload development Kit (PDK) allows to integrate multiple types of radio onto the Orion 2, providing mission flexibility.

VARIABLE HEIGHT ANTENNA

Set up a temporary 100 m (330-feet) "mast" to overcome connectivity issues over longue distance or uneven terrain.

LOW LOGISTICAL FOOTPRINT

Easily transportable in two pelicases and quickly launched within 15 minutes, the Orion 2 can be deployed and redeployed to fit the mission need.

50 hrs endurance

IP54 protection

100 m micro-tether

TURNKEY SYSTEM

The Orion 2 is a complete tethered drone which is easily transportable in two pelicases. The system includes the Orion 2 UAS, the Safe-T 2 tether station, the payload(s), and the Ground Control Station (GCS). Operators can be airborne and deliver effect within minutes of arriving on the scene by using Elistair's touch button software.
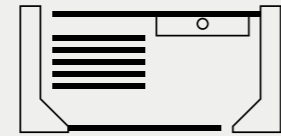
ITAR FREE

TURNKEY SYSTEM
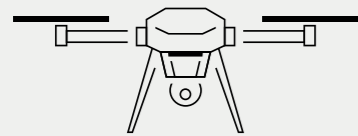
ORION 2
TETHERED DRONE

· 50 hours of uninterrupted
  flight time

· Automated flight profile

· Multilevel failsafes hierarchy

SAFE-T 2
TETHERED STATION

· 100 m (330-feet) tether

· Unlimited secured power and
  communications

· Ruggedized design with
  IP54 certification
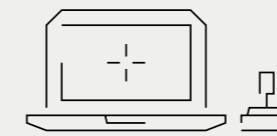
GROUND CONTROL STATION /
T-PLANNER SOFTWARE

· Push-button command and control

· Actionable intelligence, payload
  management

· System health monitoring and user
  maintenance

UNIQUE
PERSISTENT
AND SAFE
ARCHITECTURE

The Orion 2 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 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).

PARACHUTE

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

Payload

XDM 3 AXES DAY/NIGHT

Fly day-into-night missions using a dual EO/IR sensor and remove the need to land and change payloads.

TECHNICAL DATA

GENERAL

Flight time capacity	50 hrs
Micro tether length	100 meters (330 feet)
Tensile strength	150 daN
Micro tether data transfer	100 Mb/s
Total take off weight (w/o payload)	8,5 kgs (19 lbs)
Maximum payload weight	2 kgs (4,4 lbs)
Stealth mode	All lights shut mode
ITAR Free	Yes

WEATHER RESISTANCE

Ingress protection	IP54
Operating temperature	-10ºC to 45 ºC (14 ºF to 113 ºF)
Wind resistance	35 km/h (22 Mph)
Operation in gusts of wind	50 km/h (31 Mph)

LOW LOGISTICAL FOOTPRINT / PORTABILITY

Deployment time	< 15 minutes
Space requirement	2 pelicases
Power source needed	230 V ~ 50 Hz (generator minimum 3 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

PAYLOAD 3-AXES XDM CAMERA

Gyro-stabilization	3 axes
Day channel zoom (optical)	X 30, FOV 63.7º to 2.3º
EO sensor (day channel)	Sony FCB EV7520A
Resolution and frequency (day channel)	1080 p, 30 fps
IR sensor (night channel)	640 x 480 pixels / 9Hz
Digital zoom (night channel)	X 4

ELISTAIR

EU OFFICE

12, Chemin des Hirondelles
69570 Dardilly
France
+33 9 83 57 06 39
enquiries@elistair.com

US OFFICE

331 Page Street, Suite 1,
Stoughton, MA. 02072
Boston, USA
+1 (347) 305 0191
enquiries@elistair.com

AFRICA OFFICE

CCIFCI 18 BP 189 Abidjan 18,
Boulevard de Marseille - Biétry
Ivory coast
+225 07 69 43 31 78
enquiries@elistair.com

www.elistair.com