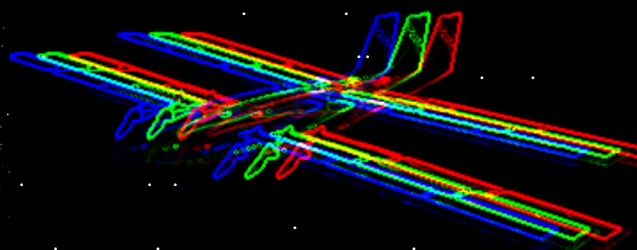




LONG RANGE
BEYOND VISUAL LINE OF SIGHT
SOLAR POWERED
AUTONOMOUS
UNMANNED AERIAL VEHICLE



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Technology has some wonderful benefits. We use the Sun to fly.

After years of research and development, we can now offer the most affordable autonomous UAV that can carry multiple sensors over very long distances and for an entire day.

SOLAR POWERED
ONE SOLUTION
ZERO EMISSIONS
MANY MISSIONS



DETECT - ANALYSE - ACT

CONFIDENTIAL





Up to 12 hours of flight for aerial data acquisition.

State-of-the-art aerospace components and
innovative wing design to capture the Sun's energy.



FLY FURTHER
SMARTER





SEE FURTHER SMARTER



ONE MAN CATAPULT LAUNCH



REMOTE FLIGHT CONTROL

ISR SYSTEM / INTEGRATION BY XSUN

Specification

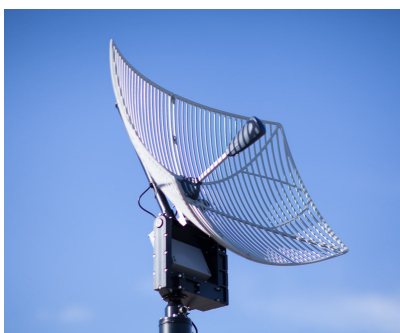
Stabilization:	±100 µrad
Weight:	1,27 kg / 2,80 lb
Size:	Diameter - 140 mm / 5.5 in Height - 195 mm / 7.7 in
Environmental protection:	IP64 (sealed and dry gas filled structure)
Operating temperature:	-40°C to +55°C / -40° to 131° F
Rotation limits:	360° continuous pan, -80° to +10° elevation
Slew rate:	120 deg/sec
Power:	17W typical / 75W peak
Voltage:	22-26 VDC
Video out:	Digital H.264 encoded video, analog, PAL, or NTSC
Control interface:	RS 232, Ethernet
Installation direction possibility:	belly or nose mounted

EO Sensor Specifications

Type:	EO sensor
Global shutter:	Yes
FOVs:	62.9° - 2.2°(v) x 37.9° - 1.3° (v)
Resolution:	HD 1280x720px
Optical zoom:	45x
Digital zoom:	4x

IR Sensor Specifications

Type:	LWIR, uncooled
Spectral Band:	7.5 - 13.5 µm
Sensitivity:	<30mK and <60 mK versions
Bandwidth:	120 Hz
IR Lens:	25 mm, F1.0
FOVs: 25° (h) x 18,9° (v)	
Resolution:	SD 640x512px
Digital zoom:	4x
Frame rate:	30 Hz / 9 Hz



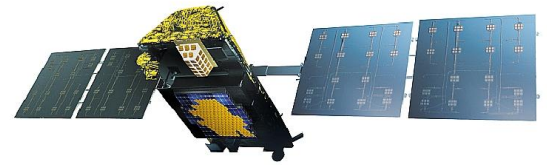
The UAV is launched by catapult and recovered by belly landing

From take-off to landing, the UAV flies autonomously and is followed using encrypted radio signals from the command center. The UAV has several safety redundancy systems including a parachute

For a maximum total UAV mass of 25kg, the maximum weight for the payload is 5kg. Different payloads for different missions can be installed. In the case of ISR applications, we partner with several manufacturers depending on the mission.

Whether it is for a day or night mission, we can provide the right equipment that has the appropriate sensors, all gimbal mounted for maximum image stability.

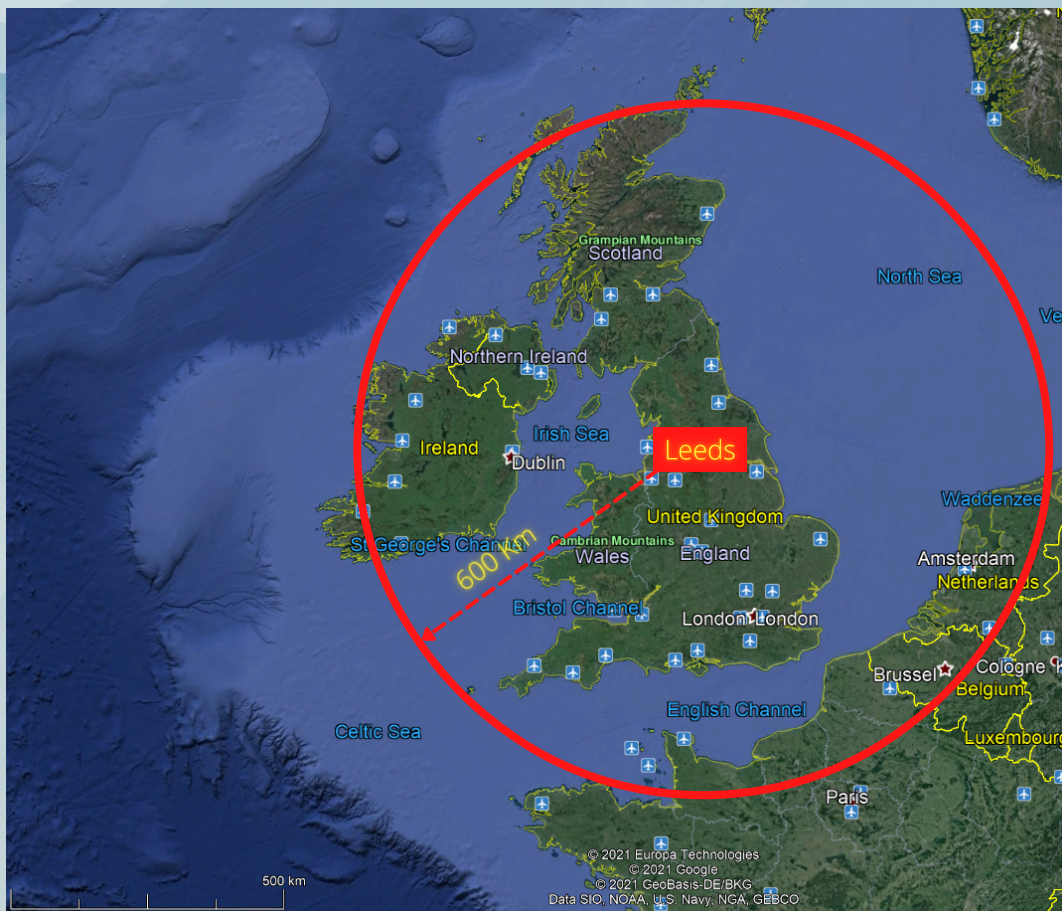
With its optimised design for long flights and quiet noise signature, our UAV is the perfect solution for monitoring over land or sea.



C2 communication

1. Private dedicated radio link
2. SATCOM (Iridium) - World coverage
3. Cellular (2G/3G/4G) via cloud

The ground tracking antenna is fully autonomous and enable a long-range communication for both flight control management and payload data. The MIMO configuration on board and on the ground avoid any loss of visibility. This full IP link is highly secure (AES 128/256 Encryption) with a proprietary waveform to prevent radio interception and has a very low latency (<70 ms uplink and <30ms downlink).



Range simulation: 600 Km radius from Leeds using a relay network



Research and Development

Our highly skilled engineers constantly improve, integrate, adapt new technologies for building the best autonomous flying machine powered by the Sun



Design, testing and advanced simulation software is used for optimisation and customisation.

With a long experience in aeronautics, our team has been able to use the solar power energy in an innovative wing design ensuring maximum endurance, low stall risk and low noise.



USE FURTHER SMARTER

XSun has a unique network of financiers, partners and corporates.

We have excellent references from happy customers.

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European
Commission

Horizon 2020
European Union funding
for Research & Innovation

Finance	Institutions	R&D	Corporate
UNION EUROPÉENNE Région PAYS de la LOIRE CE PROJET EST COFINANCÉ PAR LE FONDUS EUROPÉEN DE DÉVELOPPEMENT RÉGIONAL FRENCH TECH SEED La FRENCH TECH bpi france FONDUS RÉGIONAIRE CA ATLANTIQUE VENDÉE Centrale Innovation BNP PARIBAS	ATLANPOLE Land of innovation Cap Atlantique S2E2 EMC2 PÔLE MER BRETAGNE ATLANTIQUE Initiative France reseauentreprendre CENTRALE NANTES Audencia Nantes ensa Nantes	CENTRALE NANTES IREENA icam IMN esa cnes	DASSAULT SYSTÈMES Partenaire AIRBUS GROUP Lauréat Total Développement Régional TOTAL NVIDIA AXANDUS

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