

SIRIUS 20 H6 HEXACOPTER



ONE PLATFORM, EVERY MISSION

SIRIUS 20 H6 is a professional heavy-lift hexacopter designed to carry up to 20 kg of payload while ensuring high endurance, operational safety and mission reliability. Its redundant six-motor architecture makes it suitable for critical operations including infrastructure inspection, precision agriculture, environmental monitoring, emergency response and industrial surveillance.

Built around XAP's modular UAV architecture, SIRIUS combines exceptional maintainability with unmatched flexibility. Compatible with industry standards such as Mission Planner, QGroundControl, MAVLink, DroneCAN and RTK GNSS, it also integrates proprietary XAP technologies including advanced battery management, secure high-frequency telemetry and sovereign cloud connectivity.

Unlike conventional drones designed around fixed configurations, the SIRIUS platform integrates a unique isotropic airframe architecture with invariant center of gravity characteristics. This allows field reconfiguration between tri-rotor, quadcopter, hexacopter and VTOL configurations without requiring factory intervention.

Designed, assembled and maintained by XAP, SIRIUS delivers a reliable, scalable and fully controlled drone platform for demanding professional applications.

DEPLOY - FLY - RETURN

INDUSTRIAL ENDURANCE, MODULAR ARCHITECTURE, SINGLE CONTROL.

INDUSTRY-STANDARD ECOSYSTEM:

Native Mission Planner, QGroundControl and MAVLink compatibility allow operators to integrate SIRIUS into existing procedures without retraining or software migration.

ISOTROPIC MODULAR FRAME:

Single airframe architecture configurable as tri-rotor, quadcopter, hexacopter or VTOL. Field reconfiguration without factory return.

HEXACOPTER REDUNDANCY:

Six high-thrust propulsion units combined with mechanical fuse arms provide increased resilience and controlled recovery in the event of propulsion failure.

MASTERY OF DESIGN, MANUFACTURING AND MAINTENANCE:

Flight controller, battery management system, cell monitoring electronics and mission firmware developed and maintained by XAP.

RACE-PROVEN TELEMETRY:

200 Hz encrypted telemetry derived from high-performance motorsport systems, supported by secure CAN/CAN-FD communications and 4G connectivity.

PAYLOAD AGNOSTIC:

Compatible with RGB, thermal, multispectral, hyperspectral and LiDAR payloads, environmental sensors, obstacle avoidance radars and up to eight controlled actuators.

EXTENDED MISSIONS:

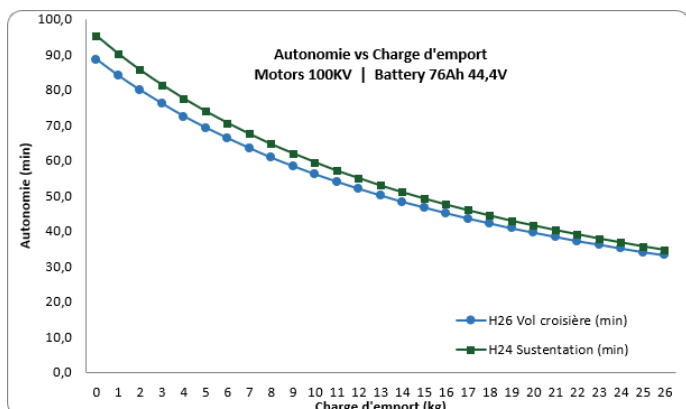
Optional tethered power supply from XAP POWER HUB infrastructure enables ultra-long-duration monitoring and persistent aerial surveillance missions.

STANDARD PAYLOAD OPTIONS

RGB inspection cameras
Thermal imaging cameras
Multispectral NDVI sensors
Hyperspectral imaging systems
Environmental sensors (H ₂ , VOC, CO ₂ , O ₂ , particulate matter)
Obstacle avoidance radars
Cargo release and spraying systems
RTK positioning systems
Industrial telemetry modules



► DRONES: XAP SIRIUS 20 H6 HEXACOPTER



TECHNICAL SPECIFICATIONS

Configuration	Hexacopter (6 motors / 6 arms)
Payload Capacity	20 kg
Empty Mass	20 kg
Maximum Take-Off Mass (MTOM)	40 kg
Propeller Diameter	Up to 45"
Maximum Thrust per Motor	200 N @ 1 m
Maximum Flight Time (Hover, No Payload)	41.5 min
Maximum Flight Time (Cruise, 20 kg Payload)	39.5 min @ 18 km/h
Maximum Range	11.8 km @ 18 km/h
Battery Voltage (Max)	80 V DC
Battery Current (Max)	320 A
Battery Configuration	Dual battery, hot-swap compatible
Battery Management	XAP BMS + XAP CMU
Optional Tethered Supply	400 V DC => 60 V DC
Flight Controller	XAP FC (Pixhawk Cube Class)
Ground Software	Mission Planner / QGroundControl
Protocols	MAVLink, CAN, DroneCAN, NMEA, J1939, MODBUS
Connectivity	4G LTE, Wi-Fi, Ethernet
Positioning	Multi-Constellation GNSS + RTK

MECHANICS

Frame Material	High-pressure forged isotropic carbon fiber
Arms	Foldable twill carbon fiber
Arm Protection	Mechanical fuse per arm
Folded Dimensions	520 × 800 × 400 mm
Rotor Span	2 070 mm
Internal Payload Volume	4 L upper bay + 4 L lower bay
Operating Temperature	-20 °C to +50 °C
Wind Resistance	≥ 12 m/s

SAFETY

Main Kill-Switch	CAN + LoRa 868 MHz
LoRa Range	2.5 km
Power Switching Capacity	80 V / 150 A continuous / 300 A peak
Auto Detection	Shock, abnormal motion, anti-flip
Embedded Geocaging	Independent module
Parachute System	Optional, coupled to battery cut-off
Remote Shutdown	Optional via 4G
EMC Architecture	Segmented industrial buses
Telemetry Frequency	200 Hz
Cloud Infrastructure	Sovereign French IoT server
Security	Encrypted communications, certificate per drone
Regulatory Target	EASA Specific Category (SORA), C5/C6

REFERENCES

PF1011	XAP SIRIUS 20 H6 HEXACOPTER
--------	-----------------------------