

# 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 <sub>2</sub> , VOC, CO <sub>2</sub> , O <sub>2</sub> , particulate matter) |
| Obstacle avoidance radars                                                                           |
| Cargo release and spraying systems                                                                  |
| RTK positioning systems                                                                             |
| Industrial telemetry modules                                                                        |



## ► DRONES: XAP SIRIUS 20 H6 HEXACOPTER

### FLYING AUTONOMY - NO PAYLOAD

|                            |            |
|----------------------------|------------|
| Hover Endurance            | 52 minutes |
| Cruise Endurance (25 km/h) | 45 minutes |
| Cruise Range (25 km/h)     | 19 km      |

### FLYING AUTONOMY - 20 KG PAYLOAD

|                            |            |
|----------------------------|------------|
| Hover Endurance            | 22 minutes |
| Cruise Endurance (25 km/h) | 20 minutes |
| Cruise Range (25 km/h)     | 8,5 km     |

### 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                       |
| Battery Voltage (Max)        | 100 V DC                          |
| Battery Current (Max)        | TBD                               |
| Battery Configuration        | Dual battery, hot-swap compatible |
| Optional Tethered Supply     | 400V DC => 60V DC                 |
| Protocols                    | MAVLink, DroneCAN                 |
| Connectivity                 | 4G LTE, Wi-Fi, Ethernet           |
| Optional interoperability    | STANAG 4586                       |
| 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 (43.2 km/h)                        |

### SAFETY FEATURES

|                                          |                                                 |
|------------------------------------------|-------------------------------------------------|
| Main Kill-Switch                         | cf. XAP Remote drone circuit breaker            |
| Circuit breaker power Switching Capacity | 150 A continuous / 300 A peak                   |
| Auto Detection                           | Shock, abnormal motion, anti-flip               |
| Embedded Geocaging                       | Independent multi-zone module                   |
| Parachute System                         | Yes                                             |
| Remote Shutdown                          | Optional via 4G or drone remote                 |
| EMC Architecture                         | Segmented industrial buses                      |
| Telemetry Frequency                      | 20 Hz                                           |
| Cloud Infrastructure                     | Sovereign French IoT server                     |
| Security                                 | Encrypted communications, certificate per drone |
| Regulatory Target                        | EASA SORA – Heavy-Lift C6 Category              |

### AVAILABLE OPTIONS

|                               |           |
|-------------------------------|-----------|
| External sensors              | on demand |
| LiDar                         | on demand |
| Additional cameras            | on demand |
| Specific actuator integration | on demand |

### REFERENCES

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