



Versatile | Proven | Certification-ready

X-KIT

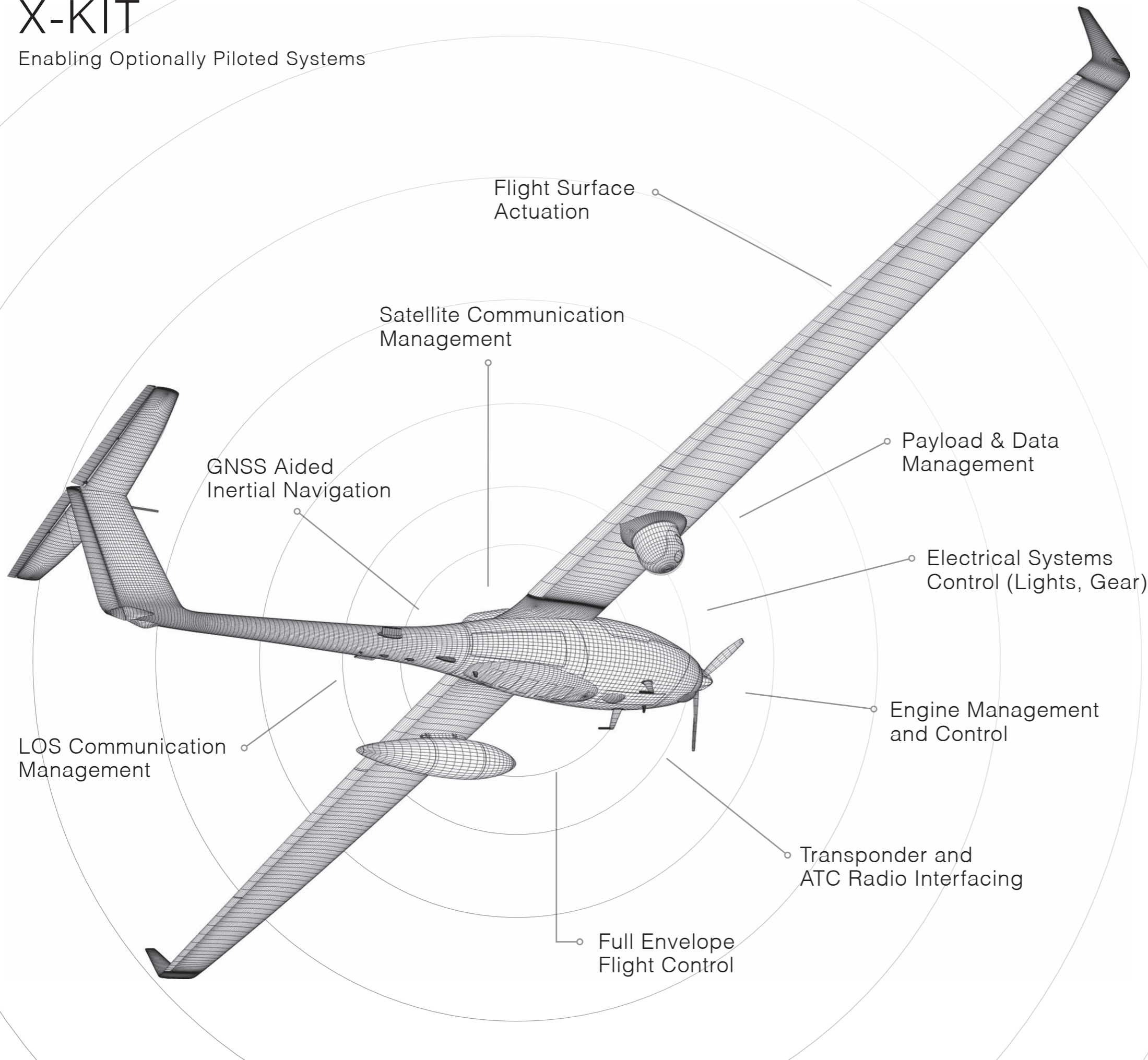
Pilot Optional

The S-PLANEX-KIT is a comprehensive certification-ready solution that offers a means to rapidly convert a manned aircraft into an Optionally Piloted System (OPS) or Unmanned Aerial System (UAS). Built on proven and rugged X-SERIES technology the X-KIT can be readily applied to almost any fixed or rotary wing aircraft. Seamlessly integrating the X-KIT (including Automation, Communication, Ground Control and Simulation solutions) with ISR sensor payloads and aircraft, brings state-of-the-art, versatile autonomous systems of the future to today.

X-KIT

Enabling Optionally Piloted Systems

Versatile | Proven | State-of-the-art | Certification-ready



The OPV

A highly versatile platform

The OPV is an ideal merger of the benefits of manned and unmanned aircraft. As a manned aircraft it can execute missions that demand human judgement and control. As an unmanned aircraft (UAV) it can operate with extreme endurance and in dull, dirty and dangerous conditions. The OPV can rapidly and easily be ferried in manual piloting mode and then, when arriving at the operational location, be switched over to unmanned operation.

The X-KIT

The UAS/OPS conversion solution

Comprehensive UAS functionality

- Fully automated flight, take-off and landing and landing (ATOL)
- LOS and BLOS communications management
- Extreme duration flight

Safety critical design

- Certification-ready
- Comprehensive system-wide redundancy
- Airspace integration systems (transponders, ATC radio)
- Programmed actions for contingencies

Flexible architecture

- Supports fixed-wing and rotary-wing aircraft
- Applicable to almost any manned airframe
- Accommodates a wide range of third party systems

Use existing airframes

- Cost-effective alternative to bespoke development
- Low risk development path
- Preserve certification status

Ease of installation

- Rapid conversion for quick time to market
- Use existing maintenance resources
- Revert to original aircraft on removal

X-KIT

The X-CUBE and Engage/Disengage Unit (EDU) serve as the core of the X-KIT and interface with other S-PLANE and third-party products. Comprehensive system-level functionality is enabled through the use of the X-KIT including S-PLANE's proven Automation (X-CUBE), Communication (TRACKER 100+, LOSCom, SatCom), Ground Control (Ground Control Consoles, TDU with ParagonC2 and ParagonISR) and Simulation (Flight and Mission Simulator, HILS-ITS) Solutions.



X-KIT Specifications

Servo Actuation	Rugged and redundant design; robust disconnect and pilot override; supports a large number of servos with high torque; designed for UAS/OPS certification.
Flight Control	Manual piloting; remote piloting; fully autonomous mission flight with automatic take-off and landing; emergency control modes.
Navigation	Multi-constellation GNSS aided inertial navigation with air-data assist; redundant sensors with dissimilar hardware.
Electrical Interfacing	Redundant power buses; overload and short circuit protection; continuous health monitoring and control; robust electrical disengage for manual flight.
Communications Management	LOS and BLOS communications management with automatic failover; critical data prioritisation; real-time payload streaming.
Payload Management	Multiple payloads of various types; full rate on-board data recording; retrieval and compression for bandwidth-constrained links.



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