

Company Profile

Automation Innovation

S-PLANE Automation (Pty) Ltd is an internationally recognised aerospace company delivering proven certification-ready Automation, Simulation, Communication and Ground Control Solutions for civilian and military fixed- and rotary-wing aircraft. S-PLANE combines its own and other market-leading products with system engineering, integration and testing support services to customise and deliver these Solutions. Most notably, S-PLANE Solutions are used to create Unmanned Aerial Vehicles (UAVs) and Optionally Piloted Vehicles (OPVs), as well as Manned ISR Aircraft that are easily upgraded to become UAVs or OPVs.





Innovation
Pushing Technology
Boundaries



Excellence
Competence,
Commitment, Precision



Integrity
Responsibility, Respect,
Relationships, Trust



Efficiency
Modern, Pragmatic,
Goal-Oriented



Manned ISR Aircraft
Manned fixed- and rotary-wing
aircraft, Upgradeable to OPV or
UAV, Certified



**Optionally Piloted
ISR Aircraft**
Manned or unmanned
operation, Exceptional
versatility, Certification-ready



Unmanned ISR Aircraft
Unmanned fixed- and rotary-
wing aircraft, Mini, Tactical and
MALE UAVs and converted
manned aircraft, Certification-
ready



Automation
State-of-the-art UAV and OPV, Safety-critical and
Standards-based Design, Certification-ready



Communication
40km to 200km LOSCom, High bandwidth, Redundant,
Reliable, SatCom equipment and Data Services



Simulation
Flight and Mission Simulation, Hardware-In-the-Loop
Integration and Testing Stations, Integral to GCS



Ground Control Stations
Command and Control, Remote Piloting, Payload Operator, Common Operating Picture,
Safety-critical and Standards-based Design, Easy to use, Complete Integration

Values

Selected
Products

Applications

S-PLANE
AUTOMATION (PTY) LTD

Solutions

Services

Development Services

Standards-based: RTCA, STANAG &
MIL-STD, Customisation of Products to
meet System Requirements



xSERIES
xKIT for OPV/UAV Conversion, xFCU,
Tactical/MALE/Manned airframe
Automation



nxSERIES
nxFCU, Integrated Flight Control,
Sensors and Communication, Mini/
Tactical airframes



Paragon
User-friendly ParagonC2, ParagonISR,
ParagonCOP, Multi-vehicle operation



LOSCom
Rugged TRACKER with integrated links
and antennas, 40km to 200km range,
High BW MIMO Diversity Mesh links,
S/C-band and UHF



SatCom
Inmarsat and Iridium, L/K-band,
Equipment and Data Services,
Bandwidth Management



HILS-203R
High fidelity HIL Simulator,
Integration and Testing,
Automated ATPs



System Architectures
Requirements, Architectures/System
Designs, V&V, Standards-based: ARP
& RTCA with DAL assessments



Aviation Services
Requirements analysis, Architectures/
System Designs, Aircraft Selection,
Airworthiness



**Environmental
Qualification**
RTCA DO-160G, MIL-STD-461F,
MIL-STD-810G



Training Services
Operation, Deployment, Maintenance,
Engineering Skills

Applications

S-PLANE's Aircraft Automation, Communication and Ground Control Solutions, combined with suitable sensor payloads, are integrated onto rotary-wing and fixed-wing manned aircraft in order to create powerful Manned, Optionally Piloted and Unmanned ISR platforms. Integration can be performed for new aircraft or as modernisation and upgrade projects for existing fleets. Manned ISR aircraft created with S-PLANE technology are seamlessly upgraded to state of the art certification-ready Optionally Piloted or Unmanned systems. These Solutions also apply to dedicated Unmanned platform designs.



Solutions



AIRCRAFT AUTOMATION SOLUTIONS

Airframes designed for manned or for unmanned operation are fully automated to become Unmanned or Optionally Piloted Vehicles (UAVs and OPVs). The typical MTOWs of these aircraft range between 50 kg and more than 10 000 kg. The primary building blocks are S-PLANE's state of the art, reliable and redundant nxFCU and xKIT certification-ready products, combined with system engineering, integration, flight testing and certification support.



COMMUNICATION SOLUTIONS

Manned and unmanned aircraft enjoy exceptional RF link connectivity in both Line of Sight (LOS) and non-LOS environments. Building blocks include S-PLANE's TRACKER 100+ integrated antenna tracker and industry-leading Satellite and Line-of-Sight communication links. S-PLANE provides system engineering, integration, flight testing and certification support in order to realise complete Solutions.



GROUND CONTROL SOLUTIONS

Multi-vehicle Ground Control is provided via a rugged and transportable Tactical Deployment Unit (TDU) serving as the heart of any ISR Ground Control Station (GCS). The TDU, combined with an HMI console, provides complete Command and Control (C2) functionality, connectivity between the payload operator in the GCS and the on-board pilot (if the aircraft is manned), and mission and payload situational awareness to the aircraft and payload operators via S-PLANE's ParagonC2 and ParagonISR appliances.



SIMULATION SOLUTIONS

Simulation Solutions include Flight and Mission Simulation and Hardware-In-the-Loop Simulation (HILS). Flight and Mission Simulation is integral to S-PLANE's Tactical Deployment Unit (TDU), normally installed within a GCS. Simulation is used for training and to allow operators to optimise and practice real missions before they are flown. At S-PLANE, HILS supports automated execution of acceptance tests as part of an efficient system engineering tool chain for customer integration, testing and maintenance.



Contact Details

9B Cyclonite Road, The Interchange, Somerset West, South Africa, 7130
 Phone: +27 21 851 9282, Fax: +27 86 298 4587
 Email: info@s-plane.com, Web: www.s-plane.com