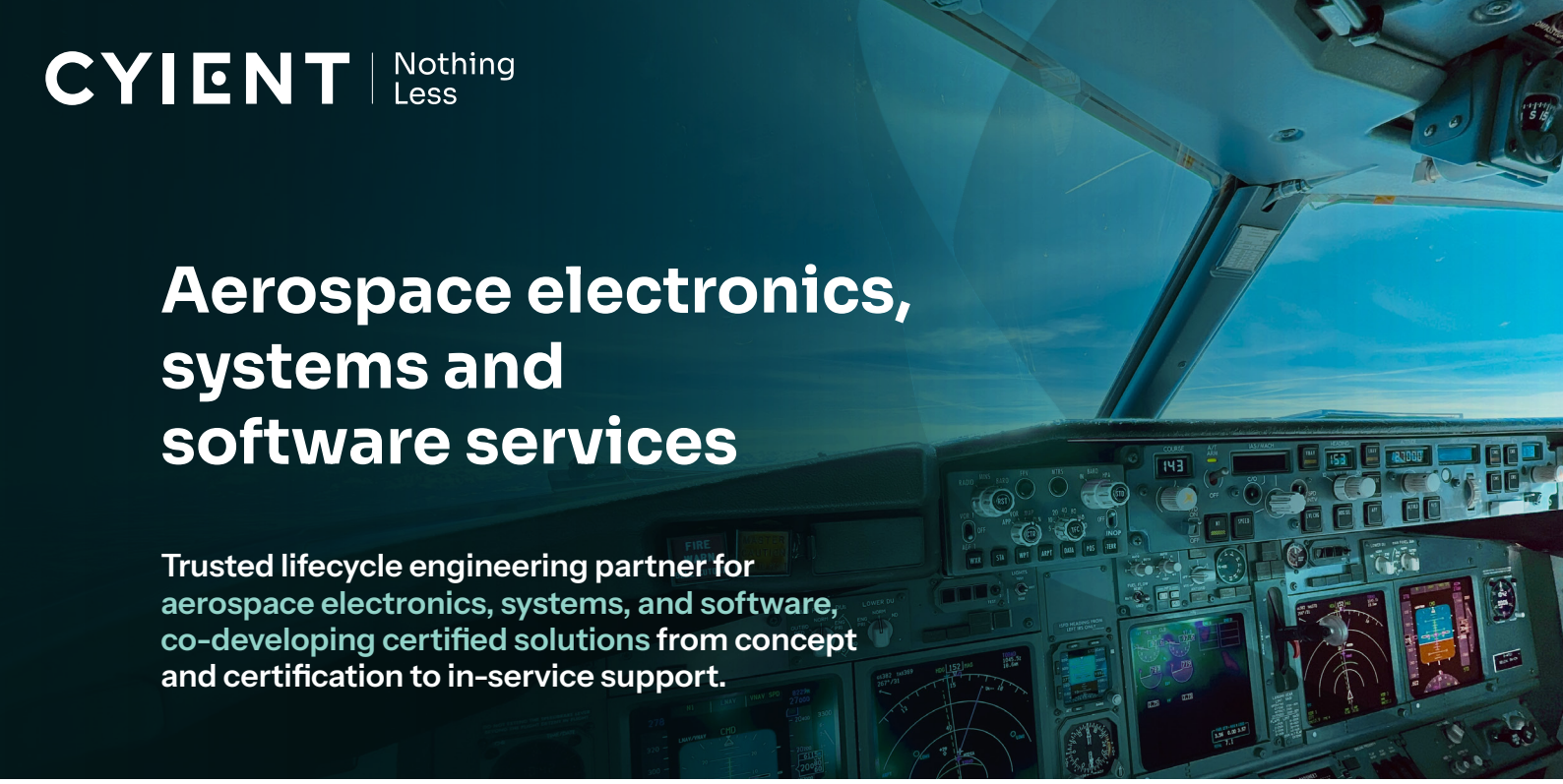
CYIENT | Nothing Less



Aerospace electronics, systems and software services

Trusted lifecycle engineering partner for aerospace electronics, systems, and software, co-developing certified solutions from concept and certification to in-service support.

We partner with global aerospace manufacturers to develop aerospace electronics, systems and software solutions. Our expertise spans across system engineering, design and development, prototyping, testing, and independent verification and validation. We ensure cybersecurity while reducing costs, enhancing reliability, and supporting sustainability.

- Lifecycle engineering solutions from requirements definition to certification
- System certification across all Design Assurance Levels (DAL) A to E, ARP 4754B , DO-178B/C , DO-254, DO-160E
- Obsolescence & upgrade and retrofit services
- Integration of technologies – digital and AI, to improve speed to market.

Cyient's offerings

A full-lifecycle partner for Aerospace Electronics, System & software certifications, from system engineering, development and through independent verification and validation.

Software development
DO-178B/C - *All DAL Levels*

From requirements management to final SCI, our DO-178B/C practice covers the complete software life cycle —new development, in-service upgrades, independent V&V, test simulators and ATE.

- SDLC — requirements to certification, DAL A–E
- MBSE & system architecture across DAL A–E
- STC support, MRO, fleet modernization
- Complete artifact suite: PSAC, SVP, SDP, SAS, SCI

Obsolescence & retrofit
STC - *OBS Management · STC · Sustenance*

We manage electronics Obsolescence and retrofit — from component redesign and RTOS migration to Supplement Type Certification — keeping the platform safe, modern & airworthy.

- GPP, ASIC/FPGA, RTOS & memory interface OBS resolution
- RTOS porting to new chipsets with full SDLC artefact regeneration
- Product sustenance — defect resolution & in-service support

Hardware design
DO-254 - *DO-254 · DO-160E · ASIC/FPGA*

Our hardware team manages the complete DO-254 life cycle -concept, simulation, PCB layout, manufacturing liaison and DO-160E qualification. We handle complex programmable devices and legacy component redesign.

- DO-254 hardware life cycle — All DAL levels
- ASIC/FPGA design, simulation & formal verification
- PCB layout, DFM and manufacturing support
- DO-160E pre-qualification & qualification testing
- Complete artifact suite: PSAC, SVP, SDP, SAS, SCI

Technical publications
1000D - *SNS 1000D · ATA Ch. 22-42 · IETMs*

Our tech pubs team produces SNS 1000D-compliant documentation for complex software architectures, wiring systems, and loading procedures — from ATA Chapter 22 through 42 — in traditional and interactive electronic formats.

- ATA Ch. 22–42 tech pubs per SNS 1000D
- Complex S/W architecture, wiring & signal flow documentation
- S/W loading, maintenance & fault isolation procedures
- Interactive Electronic Technical Manuals (IETMs)

Testing infrastructure
Hardware In Loop - Test Benches · Simulators

We design and build bespoke test stations, HIL rigs, and interface simulators tailored to your avionics architecture. Diagnostic applications run on desktops or cloud, giving real-time insight across development and in-service operations.

- Test station & bench development / upgrades
- MIL-STD-1553B, ARINC 429 & custom interface simulators
- Desktop & on Prem-hosted diagnostic applications
- Flight/Ground test support & system integration
- Cyber Security test suits meeting DO-326A/ED-202A

Digital engineering
Acceleration through Digital and AI solutions

We transform avionics development through intelligent automation without compromising transparency and traceability rigor.

- Requirements-based IV&V - textual & model-driven test suit through AI with human-in- loop
- AI-enhanced engineering workflows
- Complete certification suit checks through AI - faster time-to-cert

The Cyient advantage

Our engineering teams design, develop, and certify mission-critical electronics, systems and software services across full range of aircraft platforms.

Cabin management system
Intelligent cabin control — from lighting and climate to passenger services, certified and integrated.

Communication and navigation and systems
ATC comms to satellite nav — certified avionics integration from ARP 4754B to DO-178B/C.

Flight management and displays
Certification experience in Avionics (FMS & Displays) system, with inhouse intelligent automation test suite “Cyfast-178”.

In flight entertainment (IFE)
Seamless passenger experience — IFE architecture, software integration and airworthiness support

Power distribution systems
Safe, reliable aircraft power management — design, qualification and sustenance across all platforms.

Dedicated labs

Purpose-built lab infrastructure accelerates design validation and reduces program risk across every stage of the avionics lifecycle.

Digital lab
Lab equipment, tools, and simulators to enable development of high-speed boards (Analog, Digital, Mixed & RF), FPGA, Processors, LRU level test set up.

Power electronics lab
Lab equipment to enable development of power products up to 22.5 kVA (DC-DC Converters, Inverters, Power Distribution Boxes, Actuation, Battery Management etc.)

RF and comms lab
Calibrated test equipment and simulation tools to enable development of navigation, radars, communication systems up to <26.5 GHz.

Cyient is a global lifecycle engineering services company powering mission-critical industries from design to aftermarket across products, plants, and networks. With 300+ customers and 15,000+ associates across 30+ countries, we combine human expertise, deep domain knowledge, and AI to deliver intelligent engineering for every lifecycle across Aerospace and Rail, Automotive and Mobility, Connectivity, Energy, Healthcare, Mining, Utilities, and beyond.

To learn how we deliver exemplary outcomes, nothing less, visit www.cyient.com.

North America Headquarters
USA
T: +1 860 528 5430

Europe, Middle East, and Africa Headquarters
UK
T: +44 118 3043720

Asia Pacific Headquarters
Australia
T: +61 2 8887 8600

Global Headquarters
Hyderabad
T: +91 40 6764 1000

facebook.com/cyient @cyientnews linkedin.com/company/cyient

© Cyient 2026. All rights reserved.