

CYIENT

OFFERING HIGH-VALUE AEROSTRUCTURE SOLUTIONS

How we have emerged as the most trusted global solutions provider
to leading OEMs

Aerospace at Cyient

Cyient delivers aerospace engineering solutions from concept to qualification, with system-level ownership for engines, avionics systems, structures, aero systems and interiors. With over 16 years of experience in aerospace engineering, Cyient is engaged in providing product development engineering solutions, integrated product engineering processes, engineering design solutions, and complete test engineering life cycle supports for sub-systems in aero interiors, avionics flight management systems, aero engines and aerodynamic aerostructures. Additionally, Cyient expertly manages aftermarket value streams such as repair engineering, reliability engineering, technical documentation and performance monitoring on behalf of OEM's worldwide.

With over 32+ million hours of aero engineering experience, our collaborative approach combines domain expertise, process rigor, design automation, and program management skills to deliver large system level designs – on time and within budgets.

Since 2000, Cyient has delivered complete product life-cycle engineering solutions to the global aerospace industry. With over 18+ million hours of implementing Aerospace projects, Cyient has gained extensive domain knowledge in aerostructures, interiors, engines, systems and avionics. Our aerospace competencies and business models make us the engineering partner of choice for major aerospace suppliers worldwide.

Paving the future of aerostructures

Cyient delivers innovative wing and fuselage subassembly design solutions which provide lower fuel consumption, operating costs and supports its clients to manufacture lightweight aircraft capable of encompassing longer flight distances within a shorter time. Cyient's key competency lies in delivering wing and fuselage subassembly design solutions that are safe, efficient and reliable.

Cyient is well positioned to handle manufacturing nonconformance, stress justifications and design office dispositions after signatory approvals. Cyient also possesses extensive expertise in managing the aftermarket value streams through activities such as structural repair engineering, technical publications, reliability engineering, retrofit engineering, and passenger-to-cargo conversion.

Service offerings

Cyient provides the following aerostructures solutions to its clients:

Design

- Conceptual design
- Detailed design (preliminary and critical design phases)
- Design, BOM, MBD and drawings release

Analysis

- Finite element meshing and analysis
- Static, dynamic and buckling analysis
- Stress sizing and justification
- Bird strike analysis
- Fatigue and damage tolerance
- Certification by analysis
- Aeroelastic analysis
- Kinematics modeling and analysis
- Aircraft certification documents (ACD4, ACD6 and other standards)
- Test simulations and crash simulation
- Structural analysis using tools and classical method (hand calculations)
- Materials modeling – nonlinear

Value engineering

- Retrofit designs and development
- Structural weight reduction and optimization
- Should-cost analysis
- Design for manufacturing
- Reverse engineering
- Mylar conversion

Post-design release engineering

- Concessions and engineering liaison request
- Structures Repair Manuals (SRM)
- Static and fatigue report



- Structural repair design and justification
- Cargo-to-passenger conversion
- Test engineering
- Design of test equipment, routing and installations of test equipment
- KBE applications (engineering-centric IT)

Manufacturing engineering

- Process planning
- CNC programming
- Tool design and manufacturing
- First Article Inspection reports
- Vendor management for low-cost manufacturing
- Manufacturing transition management

Areas of expertise

Cyient is highly committed to delivering cutting-edge aerostructures solutions and with over 16+ years of experience in aerostructures, Cyient is fully compatible to provide customized aerostructures solutions and cater to the client's requirements. Cyient's strength in aerostructures lies in providing design and analysis solutions with certification support.

Areas of engagement

Cyient possesses expertise across all platforms within the aerostructures as described below:

Wing structures

- Wing Tip
- Horizontal tail
- Wing box
- Pylon structures

- Inner fixed shroud
- Outer false work
- Spoiler support fittings
- Fixed trailing and leading edges

Fuselage and fairings

- Wing to body fairings
- Mid body integration
- Rear fuselage
- Floor grid

Control surface

- Aileron
- Flap structures

How we have helped our clients

- Delivered lighter structures from conceptual designs
- Reduction in part count
- Managed programs from preliminary design to drawing release ahead of schedule
- Provided cost-effective solutions
- Partnering with clients to reduce program schedule and meet customer timelines

Key Highlights

- Achieved significant weight savings on wings
- Hands on experience in analytical and FEA solutions
- 16 years + of experience in delivering aerostructure solutions
- Capability to propose alternate solutions (concept/preliminary design)
- Manufacturing transitioning through local supplier partnerships

About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, network and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with our domain knowledge and technical expertise, to help our clients solve complex business problems. As a Design-Build-Maintain partner that takes solution ownership across the value chain, we empower our clients to focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. We partner with organizations in ways that best suit their culture and requirements. With nearly 14,000 employees in 21 countries, we combine global delivery with proximity to our clients, functioning as their extended team. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

Follow news about the company at www.twitter.com/cyient

Contact Us

NAM Headquarters

Cyient, Inc.
99 East River Drive
5th Floor
East Hartford, CT 06108
USA
T: +1 860 528 5430
F: +1 860 528 5873

EMEA Headquarters

Cyient Europe Ltd.
High Holborn House
52-54 High Holborn
London WC1V 6RL
UK
T: +44 20 7404 0640
F: +44 20 7404 0664

APAC Headquarters

Cyient Limited
Level 1, 350 Collins Street
Melbourne, Victoria, 3000
Australia
T: +61 3 8605 4815
F: +61 3 8601 1180

Global Headquarters

Cyient Limited
Plot No. 11
Software Units Layout
Infocity, Madhapur
Hyderabad - 500081
India
T: +91 40 6764 1000
F: +91 40 2311 0352

cyient.com
connect@cyient.com