FROM RESEARCH TO INDUSTRY

cea tech

CEA TECH SERVICES FOR THE AEROSPACE INDUSTRY

Technology for the challenges facing the aerospace industry:

CHALLENGES FOR THE AEROSPACE INDUSTRY

Certification and security
System reliability and security; obsolescence management; certification processes; secondary systems; electromagnetic protection; cybersecurity

Air traffic infrastructure and optimization
Infrastructure cost/performance ratio; dynamic air traffic management; flight booking management; airport logistics

Passenger services and amenities
Multimedia services; cabin amenities; signage; personalized information services

Electrical power systems and energy efficiency
Developing lighter structures, electrical propulsion and power systems; alternative fuels; energy-efficient electronics; and logistics vehicles

Reduced environmental impacts
Reducing pollution and noise; lifecycle analysis; low-environmental-impact materials

Manufacturing, maintenance, and reliability
Assisted and preventive maintenance for increased uptime; production line optimization, ergonomics, and flexibility; process control

CEA Tech technology

- Software
- Energy production and storage
- Reliability and troubleshooting
- Sensor systems and integration
- Electronics and embedded systems
- Big Data and data analysis
- Materials and assembly
- Non-destructive testing
- HMI

CEA Tech can help the following businesses:

- Aircraft and aircraft component manufacturers
- Airlines
- Certification organizations
- Airport and infrastructure operators
- Logistics companies

Here are some of the ways CEA Tech can support your development:

CEA TECH KNOW-HOW

APPLICATIONS FOR THE AEROSPACE INDUSTRY

Energy production, recovery, and storage	Energy production systems (batteries, fuel cells, energy recovery systems); charging equipment; electric propulsion systems
Energy-system management	Reducing the consumption of auxiliary systems; optimizing and balancing energy systems (such as propulsion)
Electronic components and architecture	Integrated circuit and system architecture (RF, digital, near-sensor, GaN-based power electronics); secure-circuit design; low-power electronics; systems-on-chip
HMI (virtual and augmented reality, OLED)	Flight instrument panels; pilot assistance systems; augmented vision systems for maintenance; multimedia interfaces for passengers; low-power displays; training interfaces
Non-destructive testing	Manufacturing-defect and wear detection
Heterogeneous sensor integration and management	Monitoring aircraft mechanical structures; measuring environmental indicators and pollution; seating comfort
Materials and assembly	Reducing the weight of structural components to reduce costs; improved material properties (thermal, mechanical, etc.)
Cable diagnostics	Onboard troubleshooting or on-ground maintenance of electrical cable networks
Embedded software and systems design	Software security and reliability; fault detection; electronic components for embedded systems
Vision systems (IR, THz)	Passenger and baggage scanning and security
Robotics and cobotics	Operator assistance for loading and unloading
Data analysis and expert systems	Predictive maintenance; engine monitoring; air-traffic monitoring
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