

CERTIFY YOUR IDEAS, MAKE THEM FLY

EASA Approved Aircraft Design and Certification Engineering
Jan 2026



OVERVIEW

Aerospace Engineering Solutions (AES) is an EASA Part 21J Design Organisation Approval (DOA) holder (EASA.21J.722). Additionally, we hold UAE CAR 21 General Civil Aviation Authority (GCAA) Design Approval (DOA/181).

We specialise in providing engineering solutions to the aerospace community, covering structural design, cabin interiors, avionic systems, repairs, certification, materials procurement of kits, interior components, and spares.

Our comprehensive portfolio includes over 3500 modifications and 70+ Supplemental Type Certificates (STCs), showcasing our commitment to innovation, high-quality and meticulous attention to detail.

With a team of over 20 professionals, including CVEs, design engineers, a project manager, and administrative staff, AES is dedicated to expanding its capabilities and expertise to meet the evolving needs of the aerospace industry.

Shannon

Braintree, Essex

UK

Málaga

SPAIN



الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY



aes
aerospace engineering solutions

KEY STAFF



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APPROVALS & CAPABILITIES

- Primary and secondary structure
- Medical conversion (A/C and HEMS)
- Cabin interiors and interior equipment
- Avionic systems
- IFE & Power systems
- Environmental systems
- Hydro mechanical systems
- Power plant and fuel systems
- Repairs (Cabin / Structures)
- Structural substantiation reports
- ELA reports

- Technical publications (ICA)
- Manual supplements
- Research and development (R&D)

In addition, we can provide:

- Wiring kits - in house
- Lease / Data plates
- Placards (Interior / Exterior) + A/C wraps and Temp Reg kits
- Modification kitting
- Bespoke manufacturing
- Repair and overhaul of parts (control surfaces / galley LRU)

(With UK or EASA Form 1 options)

AIRCRAFT TYPES

- Boeing 737 Classic and New Gen
- Boeing 737 Max
- Boeing 747
- Boeing 757
- Boeing 767
- Boeing 777
- Boeing 787
- Airbus A320 Family (NEO & CEO)
- Airbus A330 / A340 Family
- Airbus A350
- Embraer 170 & 190
- Leonardo Rotorcraft
- Various VIP Aircraft

SCOPE OF APPROVAL

Small and Large Aeroplanes and Rotorcraft

RTCA/DO-178C Level E

		TC	STC	Major changes	Minor changes	Major repairs	Minor repairs	Flight conditions	Permit to fly
Avionics	All areas								
Cabin	All areas								
Electrical Systems	All areas								
Environmental Control Systems	All Areas								
Hydro-Mechanical Control Systems	Flight controls								
	Fuselage doors								
	Hoist systems / Cargo hook								
	Hydraulics / Pneumatics systems								
	Landing gear systems								
Powerplant and Fuel Systems	Powerplant instalations								
Structures	Control surfaces / Moveables								
	Empennage								
	Engine mounts								
	Fuselage								
	Landing gears								
	Support for external equipment								
	Wings								

SCOPE OF WORK

Areas and projects



AVIONICS &
ELECTRIAL SYSTEMS



CABIN INTERIORS



STRUCTURES



CERTIFICATION &
TECHNICAL SERVICES

SCOPE OF WORK



Avionics & Electrical Systems

- EGPWS / TCAS / Elementary / Enhanced Mode S
 - FDR/CVR upgrades
 - CPDLC installation
 - MMR Installation
 - FMC STC
 - Nav and comms equipment installations
 - Wireless minQAR
 - Pin programming
 - ADS B (Out)
 - T-PED testing
 - LF-ULD installation (CAT.IDE.A.285(f))+ Kits
 - IFE installations (Zodiac / Digecor / Panasonic / Thales / Rockwell Collins)
 - Wi-Fi Installations / cabin wireless LAN (Local Area Network)
 - EFB installation
 - VHF / HF installation
 - Cargo loading system removal
 - Fuel bussing plugs
 - Galley electrical inserts installation
 - In seat power and seat articulation power
 - Galley electrical insert installation / removal
 - USB - aircraft seat power
- (B737, B747, B757, B767, B777, A319-A321, A330, Avro RJ)

SCOPE OF WORK



Cabin Interior

- Cabin conversions and reconfigurations (Boeing, Airbus, Embraer plus other manufacturers)
- EIS changes inc. Mode S, Selcal, EGPWS call-outs, FDIMU, aircraft data plates
- Monuments (galleys, lavatories, OHSC, class dividers, closets) installation / removals
- Crew rest installations (curtain and full crew rest assemblies)
- Cabin furnishing changes (carpet/ NTF / EPL / curtains / stretcher installation)
- Placard installations + kits (interior, cargo compart., dual language)
- Weight reductions / optimization
- Helicopters: interior bracketry provisions for medical
- Emergency equipment layout configuration + kits
- ELT installations (Minor Classification)
- OHSC bin dividers all models
- Cabin lighting
- Seat modifications (upholstery changes, IFE install & removals, repairs, replacement moulded backs)
- Cabin furnishing repairs (metallic, composite, fabric)
- Laminate changes

SCOPE OF WORK



Structures

- Primary and secondary structural modifications to include:
 - Primary skin changes and antenna installations
 - VHF / GPS / IMS / Iridium
- Major and minor repairs
- Floor beam modifications
- Exterior liveries
- Design and stress analysis using of raw analytical methods coupled with software to provide efficient solutions: CATIA / AUTOCAD / SOLID WORKS / FEMAP / NASTRAN / WINBEAM / AFGROW

SCOPE OF WORK



Certification
& Technical
Services

- STCs / AMLs (Over 70 STCs)
- Electrical Load Analysis (ELA)
- Flammability testing
- Strength substantiation reports
- Technical substantiating reports (CAT IDE OPS)
- On Board Acceptance Test Reports (OATP)
- System Safety Assessment (SSA)
- DDP preparation for equipment & systems
- FMECA
- Cabin inspection
- R & D for new projects / feasibility studies / new technology
- Parts procurement and kitting
- Dedicated project management service
- FAA validation

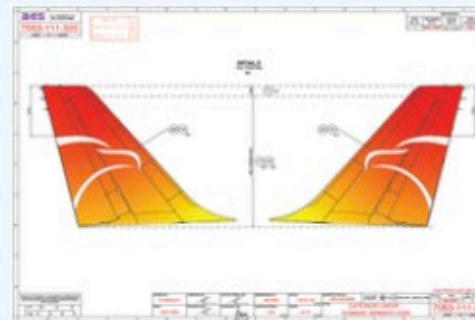
MARKETING



AIRCRAFT LIVERY

MANDATORY MARKINGS

Whether you are an aircraft operator or lessor, Aerospace Engineering Solutions can provide you with EASA Part21J solutions to support any changes to an aircraft's exterior livery or mandatory markings.



Support for Airlines

- ▶ New or existing liveries for aircraft entering service
- ▶ Airline rebranding
- ▶ Retro liveries
- ▶ Promotional liveries

Lessors with transitioning aircraft

- ▶ White tail liveries & de-branding
- ▶ Registration markings changes (Temporary or Permanent)
- ▶ External mandatory markings changes (single or dual language)

Our Solutions

- ▶ Applicable to all aircraft types
- ▶ EASA Approved Minor Modification with accomplishment instructions & installation drawings
- ▶ Livery paint stencil kits provided
- ▶ Supply stencil kits or decals for mandatory marking & registrations changes.



AIRCRAFT POWERED W-IFE INSTALLATION

BLUEBOX WOW

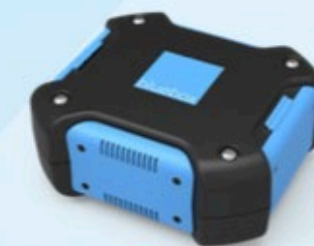
EASA STC 10076801

This STC is for the installation of the aircraft powered version of Bluebox Aviation Systems' wireless streaming hardware platform, Bluebox Wow, which can be deployed to deliver in-flight entertainment, onboard retail, and other digital services.

Utilising aircraft power eliminates the need for the logistical management of batteries whilst still offering a considerably lighter and lower-cost system than fully fitted W-IFE.



- ▶ Applicable to A320 Family
- ▶ Additional aircraft types in progress
- ▶ Supplied with EASA Form 1 approval
- ▶ Installation kits provided
- ▶ Cost-effective solution for on board W-IFE solution
- ▶ Lunchbox-sized unit stowed securely in overhead bins.



MARKETING



CABIN USB POWER

BOEING 737, AIRBUS A320 & A330



Aerospace Engineering Solutions (AES) has developed a solution USB Power for the passenger airplane.

Each outlet assembly can be provided under seat (2 or 3 outlets per triple seat). Output is 5-6V, 2.1A per outlet.



The outlets can be installed behind the seat or integrated in the seat back. The Power Supply Unit is the same footprint as a standard SEB unit, allowing retrofit solutions simple. All PSU connections are standard aerospace grade (exceeding most of the competitor solutions).

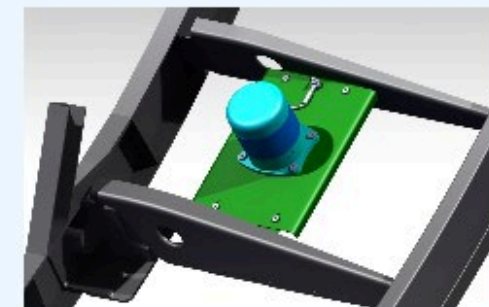
Full aircraft and seat installation engineering is provided, hands on labour to fit the seat mounted hardware is also available.

Installation kits are available and supplied with EASA Form 1.



LF-ULD SOLUTION

ALL BOEING AND AIRBUS AIRCRAFT TYPES

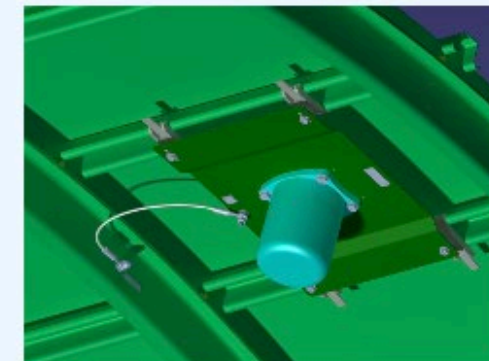


Requirement

EASA CAT.IDE.A.285(f) states that, all aircraft with a maximum take-off mass of over 45,000 kg operating over oceanic areas are to be fitted with the Low Frequency Underwater Locator Device (LF-ULD) by 1st January 2019.

Solution

Aerospace Engineering Solutions (AES) has developed a retrofit solution for Airbus and Boeing aircraft family. AES can provide the full engineering, LRU (NovegaSID88) and installation kit to meet this new requirement.



Benefits

The design solution is engineered to allow operators and leasing companies to achieve full compliance with the applicable ruling in a convenient and timely fashion.

Lead time - within 4 weeks.

FAA validation also offered.

MARKETING



ZERO PASSENGER LAYOUT

EASA STC 10070986

BOEING 737NG & BOEING 757



Aerospace Engineering Solutions (AES) has developed an STC for “Incomplete Passenger Cabin” often referred to as “zero passenger place” cabin configuration.

Our solutions is for Boeing Single Aisle airplane types. Often required to ferry the aircraft or to accommodate end of lease or entry into service requirements. The change is classified Major via EASA Certification Memo CM-CS-010-001 Issue 01 and AES is pleased to be able to support this for Boeing aircraft.

Additional Boeing aircraft types to be added to our capabilities.

CABIN PARTITIONS (B737NG, BSI)

AES Global have developed a cost effective solution for forward left and right hand partitions for Boeing Single Aisle airplanes.

Manufactured from lightweight composite materials with standard Isovolta 70F1 decorative laminate. The partitions are track mounted at the floor and tie rod mounted at the top. Aluminium edging can be anodised or powder coated with airline branding colours. All have a stainless steel kick strip.

Options

- Stowage areas on forward wall
- Leather Literature Pockets
- Bassinet Provisions
- IFE Provisions
- Rub Strips on forward face.

Applicable Aircraft

This modification is available on Boeing single aisle aircraft.

To obtain more information or request a quotation, please see contact information below.

Aerospace Engineering Solutions Ltd

EASA Part 21 Approval EASA.21J.036
GCAA Approval DOA/181 (UAE)
ECAA/AW/AE/0151/R0
BSI ISO 9001:2015 CERTIFICATE NO: FS 600282
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Contact: Eamonn McAuley Email: eamonn.mcauley@aesglobal.co.uk



CABIN PARTITIONS (A319 / A320 / A320)

AES Global have developed a cost effective solution for forward left and right hand partitions for Airbus Single Aisle airplanes.

Manufactured from lightweight composite materials with standard Isovolta 70F1 decorative laminate. The partitions are track mounted at the floor and spigot mounted at the top. Aluminium edging can be anodised or powder coated with airline branding colours. All have a stainless steel kick strip.

Options

- Direct View Window
- Leather Literature Pockets
- Bassinet Provisions
- IFE Provisions
- Rub Strips on forward face.

Applicable Aircraft

This modification is available on Airbus Classic / Enhanced aircraft.

To obtain more information or request a quotation, please see contact information below.



Taken from Airbus A320 Installation

CUSTOMERS

OEM



HELICOPTERS



CUSTOMERS

AIRLINES

Aer Lingus 

airx

AirArabia
العربية للطيران

ASL
AIRLINES
BELGIUM

 Emerald
Airlines

Aerolitalia

British Midland
International 

 Blue Panorama
airlines

brussels
AIRLINES 

condor 

 AirEuropa


LIMITLESS
AVIATION

DHL

EASTAR JET
이스타항공

 **Atlantic**
airways

flydubai

IBERIA 

BEOND

flydubai

الجزيرة.
Jazeera.

Jet2.com



Alaska

smartwings 

 Loganair
Scotland's Airline

NATIONAL
WE DELIVER THE WORLD

neos 

PEGASUS
AIRLINES 

ACS
AERO CAPITAL SOLUTIONS

 **AVION**
EXPRESS

 **RoyalFlight**

 **RYANAIR**

 **TUI GROUP**



vistara
A SITA BIA JV

 **CDB AVIATION**

pop
fly

aes
aerospace engineering solutions

CUSTOMERS

AIRCRAFT LEASING

AERCAP

CASTLELAKE

AVIATION
CAPITAL GROUP

AIR LEASE
CORPORATION

AVOLON

STRATOS
GLOBAL CORPORATION

BBAM
AIRCRAFT LEASING & MANAGEMENT

SMBC

WINGS CAPITAL
PARTNERS

Carlyle Aviation
PARTNERS

AirTanker

Charles
Taylor

FORTRESS AVIATION

AFG
AIRCRAFT FINANCE GERMANY

Gap

MCAP

Fachverband
Gebäude-Klima e.V.

AVIATORCAPITAL

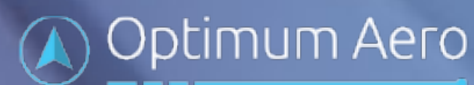
STRATEGIC PARTNERS



- Seats (supply/refurbishment)
- Cabin furniture (luggage bins, sidewalls and soft furnishings etc).
- IFE Wi-Fi system

- Bespoke manufactured parts with POA partners
- Installation services – MRO/Part 145 partners

- **CAMO Services – Air Worthy**
- Cabin wiring, kitting and electronics
- 3D printed samples



HIGHLIGHTS



+20

YEARS OF EXPERIENCE



+20

EMPLOYEES



+3000

MINOR MODIFICATIONS
APPROVED



+70

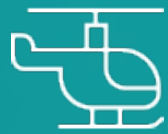
STCs APPROVED



+100

CURRENT CLIENTS

OTHER BUSINESS



Growing the
helicopter
business



Broaden our
software
scope



Drone
certification process
R&D



Certification of
additive
manufactured parts
R&D



Military
projects

WHY CHOOSE US?

- ✓ Spain and UK Based Part 21J Company – always available when you need us
- ✓ We define value; Customer value - comes down to identifying what matters most to our customers and delivering on it - on time.
- ✓ Attention to detail; Our Modification documents are 99.9% accurate delivery, ensuring no delays for you and your aircraft

SUMMARY

- ✓ Part 21J Design (EASA, GCAA) & FAA Validation
- ✓ Design Project Management
- ✓ Parts Kitting for small and large Projects
- ✓ Delivery / Re-Delivery transition support
- ✓ On call advice
- ✓ Dedicated customer contact
- ✓ On Site Support During Embodiment
- ✓ Spares Procurement and Management
- ✓ Bespoke Manufacturing with Partner POA's



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