



SPECIAL MISSION AIRCRAFT

Mission-ready Aircraft Modifications
Sensor Integration
Certified Engineering Solutions

AAS
ATLAS AIR SERVICE AG

FT
A company of the Peiker family

CATALOG
Issue July/2026



www.aas.ag



www.ftigroup.net

Purpose & Partnership

Atlas Air Service and FTI provide an one-stop capability for design, production, certification, integration and MRO delivery of tailor-made Special Mission Aircraft.

ATLAS AIR SERVICE AG

- MRO delivery and aircraft modification capability
- EASA/FAA/ANAC/TCCA Part-145 maintenance environment
- Program management, installation and customer support



FTI ENGINEERING NETWORK GMBH

- Approved design organisation (EASA Part-21J)
- Approved production organisation (EASA Part-21G)
- Track record in engineering excellence for aircraft modifications and STCs
- System design, integration and compliance verification



A company of the Peiker family

» CATALOG SCOPE

- Fuselage radomes and payload integration solutions
- Wing-mounted hardpoints, mission pods and external payload installations
- Operator consoles, power distribution systems and mission equipment racks
- Cloud seeding aircraft modifications and atmospheric research platforms
- High-speed connectivity solutions, including cabin Wi-Fi and data networks
- Cabin modifications and customized interior adaptations

» DELIVERY PRINCIPLE

- Understand and define the customer's operational requirements and mission objectives.
- Configure the aircraft around the mission profile – not the mission around the aircraft.
- Maximize the use of modular provisions to minimize downtime and enable cost-effective future upgrades.
- Integrate approved STCs or develop tailor-made modifications to meet specific operational needs.
- Maintain transparency of certification, operational opportunities and risks from concept development through entry into service.

SPECIAL MISSION AIRCRAFT PRODUCT CATALOG

Issue July/2026

LEGAL NOTICE

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Fuselage Radome – Size M (fixed fuselage hardpoints)

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: on request

DESCRIPTION

Belly-mounted multi-purpose radome with 2 main payload stations for **MEDIUM** sensor packages up to 38" diameter (fwd) and 15" diameter (aft) with a total payload capability of up to 129,5 kg/285 lb.

Three-piece installation designed for maintainability and payload access.

KEY FEATURES

- Lightweight: 42 kg/92 lb (total installation incl. fairing and hardpoints)
- Transmissivity in the HF- to Ka-bands
- Main Fwd payload station
 - Up to 38" diameter and 14" height
 - Up to 61 kg/135 lbs payload
 - Typical payloads: radar, direction finder antenna
- Main aft payload station
 - Up to 15" Diameter
 - Up to 62kg/137 lbs payload
 - Typical payloads: EO/IR turret, MX15 or similar
- Secondary payload stations
 - Up to 6,5 kg / 14,5lbs
 - Typical payloads: self protection system, mission equipment

OPTIONS

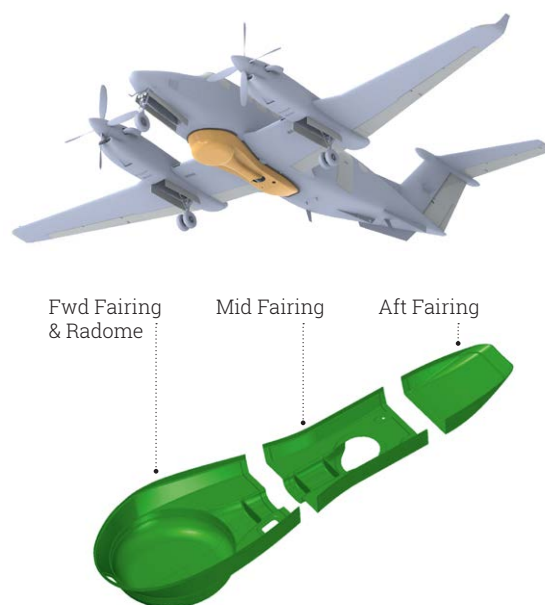
- Mission power and signal routing to cabin equipment

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- OEM-STC for basic aircraft to be considered:
 - Heavy weight kit
 - Mission strakes
 - ER fuel tanks



Belly-mounted multi-purpose radome concept



Three-piece radome/support structure model

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Fuselage Radome – Size L

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: on request

DESCRIPTION

Belly-mounted multi-purpose radome with 5 main payload stations for **LARGE** sensor packages with a total payload capability of up to 290 kg/640 lbs or 2,25 m³/80 ft³

Three-piece installation designed for maintainability and payload access.

KEY FEATURES

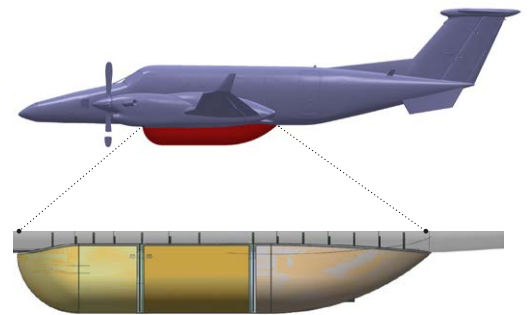
- Lightweight construction
- Transmissivity in the HF- to Ka-bands
- Flex frame interface structure: easy customizable payload integration
- Typical Fwd #1 payload station
 - Up to 40" diameter and 23" height
 - Up to 70 kg/155 lbs payload
 - Typical payloads: Radar, Direction Finder Antenna
- Typical Fwd #2 payload station
 - Up to 40" Diameter
 - Up to 70 kg/155 lbs payload
 - Typical payloads: EO/IR turret, MX15 or similar
- Payload station #3-#5
 - Up to 50 kg/110 lbs
 - Typical payloads: self protection system, mission equipment

OPTIONS

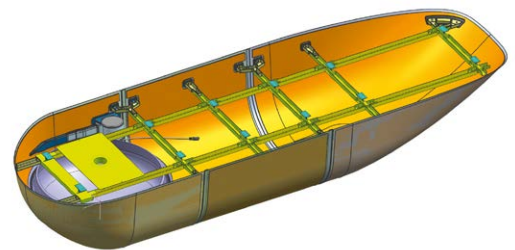
- Mechanical and electrical design for the dedicated systems incl. IT backbone and system architecture
- If desired, dedicated mission wiring and power provisions
- Ground test access and inspection openings

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Recommended OEM-STC for basic Aircraft to be considered:
 - Heavy weight kit
 - Mission strakes
 - 3rd mission generator or 400-AMP generator kit
 - ER fuel tanks



Large radome integration reference



Support structure attached to fuselage and coverage fixed to this structure



Large radome integration

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Wing Hardpoints incl. Under-Wing Wiring Duct

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

DESCRIPTION

Under-wing hardpoint provisions for external mission equipment, sensor carriers or pods requiring controlled structural load paths, incl. under-wing wiring duct for wire routing from hardpoint to the fuselage.

KEY FEATURES

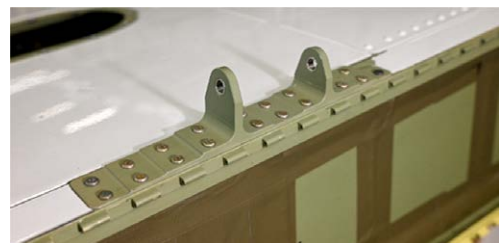
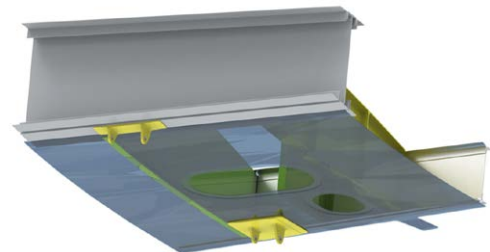
- External payload provisions with fairing options
 - Payload on hardpoint max. 180kg
- Maintenance access and inspection-friendly design
- Modular capability for future wing-mounted mission systems

OPTIONS

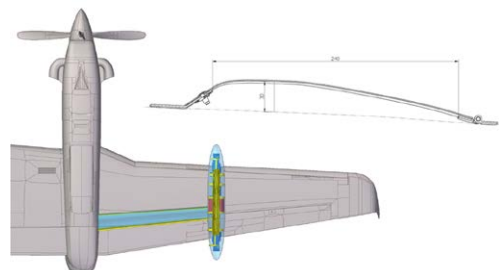
- Mission pod incl. removable covers/aerodynamic fairings
- Antenna or rack interface
- Electrical and data connectors interface

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- For payload to be defined on the hardpoint: Payload mass, center of gravity and operating limitations by configuration
- Recommended OEM-STC for basic Aircraft to be considered:
 - Heavy weight kit
 - Mission Straks
 - 3rd mission Generator
 - ER fuel tanks



Under-wing hardpoint integration/structural hardpoint reference



Under-wing wiring duct for wire routing from hardpoint to fuselage

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Wingpods incl. Pylon

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

» DESCRIPTION

External mission pod provisions for sensors, antennas, communication hardware or environmental payloads where cabin space or field of view is constrained with interface between pod and wing hardpoint

» KEY FEATURES

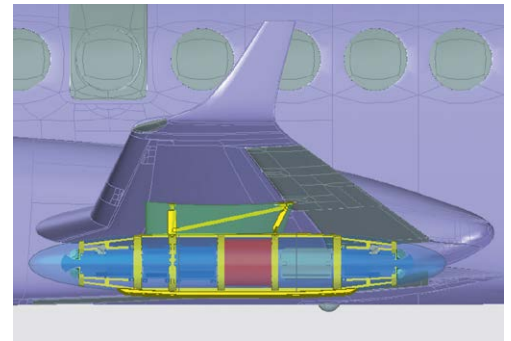
- Aerodynamic pod enclosure for mission payloads
- Payload access panels and environmental protection
- Configurable internal mounting rails or frames
- Upgrade path through standardized interface points

» OPTIONS

- Sensor pod empty
- Customized design mechanical and electrical design for the pod payload
- Customized design for the pylon, if required
- Removable mission kit approach
- Using the Aircraft with and without pods

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Payload heat, moisture and vibration limits impact the drive design
- Heavy weight kit
- Mission strakes
- 400 AMP kit
- ER fuel tanks



Generic external pod reference



Aircraft integration as certified

Mission Cabin (typical)

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300 Pilatus PC 12	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

DESCRIPTION

Configurable cabin layouts for surveillance, communication, cloud-seeding and other missions.

KEY FEATURES

- Operator seating, workstations and equipment access
- Lighting, storage and service provisions
- Human factors and emergency egress driven layout

OPTIONS

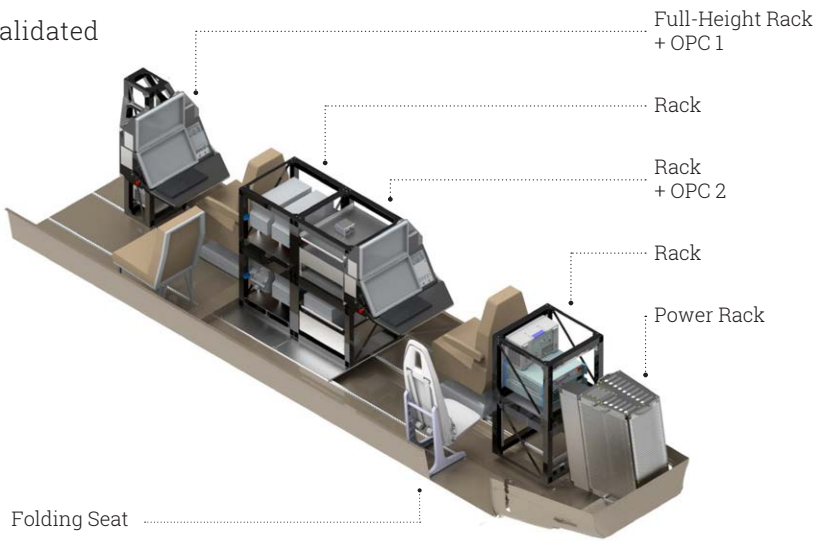
- Operator console integration
- Equipment racks and cabinets
- Storage modules and mission kit provisions
- Cabin Wi-Fi and communication interfaces

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Mission layout must preserve emergency exit and placards
- Operational role changes may require reconfiguration procedures
- Weight & balance envelope to be validated for each kit
- 400 AMP kit



Cabin completion reference



Typical cabin layout for special missions

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Operator Console (OPC)

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300 Pilatus PC 12	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

» DESCRIPTION

Modular operator workstation configured around mission workflow, display size, operator ergonomics and avionics integration constraints.

» KEY FEATURES

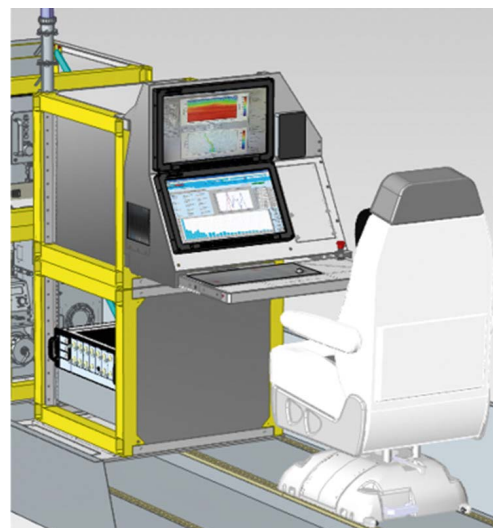
- Quick mount on equipment racks
- CAN bus network for power management control
- Slide-out keyboard
- Mission Software e.g. Cartenav
- Human factors-oriented layout

» OPTIONS

- 15" or 21" monitor configuration (touch display – optional)
- Intercom control panel
- Hand controller for cameras and PTT provisions
- Specific control panel for specific systems
- Operator seat

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Cabin layout and emergency exit access must remain compliant
- Thermal management and equipment noise to be considered
- Payload interface freeze recommended before production
- 400 AMP kit



Operator workstation concept attached to mission rack for customized system



Typical operator workstation

Mission Power Console (MPC)

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: on request

DESCRIPTION

Modular mission power cabinet installed in the cargo compartment for controlled distribution, protection and growth of mission equipment loads.

KEY FEATURES

- Dedicated mission power distribution architecture
- Circuit protection and load segregation
- Rack concept sized for maintainability and future expansion
- Integration with structural frame reinforcement

OPTIONS

- AC/DC distribution modules
- Mission equipment breakers and switching
- Load shedding and growth provisions
- Power monitoring and status indication

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Electrical load analysis and emergency load shedding required
- 400 AMP kit



Cabin integration
mission power rack concept



Front view
power/LRU equipment reference

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Equipment Racks

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

DESCRIPTION

Modular equipment racks for mission LRUs, communication hardware, recorders, routers and payload processing units.

KEY FEATURES

- 19" or custom rack architecture
- LRU mounting, cable routing and service access
- Cooling and ventilation provisions
- Shock, vibration and emergency load substantiation path

OPTIONS

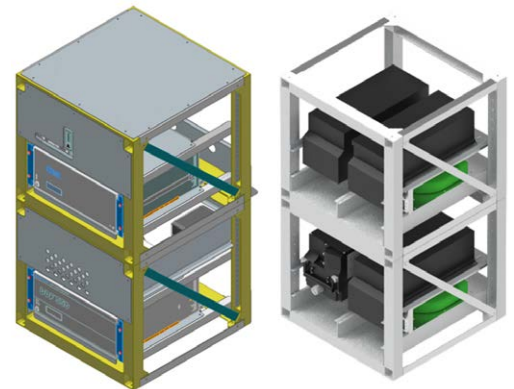
- Communications rack
- Video/data processing rack
- Network, recording and storage hardware
- Spare capacity for future mission kits

INTERFACES & INTEGRATION

- Mission power and protection from MPC or aircraft bus
- Data/video/audio routing to OPC

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Heat rejection and access envelope need early definition
- Weight concentration in cabin/cargo area affects center of gravity
- Qualification level depends on selected equipment



As example for equipped mission racks



Modular cubical racks

AC Cabinet

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: on request

DESCRIPTION

Crashworthy cabinet replacing the RH cockpit divider areas with protected equipment space and integrated ventilation provisions.

KEY FEATURES

- Ventilated cover and upper/lower front panels
- Crashworthy bulkhead for emergency landing loads
- Removable chassis while rack remains installed

OPTIONS

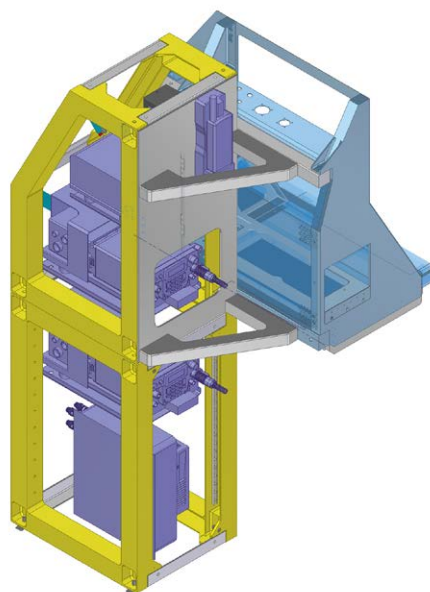
- Operator console
- Network switch, intercom encoder and video baluns
- Additional equipment space for future upgrades

INTERFACES & INTEGRATION

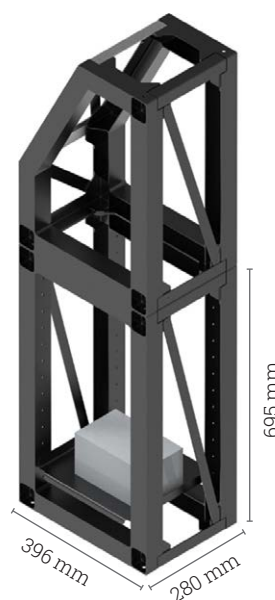
- Power supply
- Wiring protection through structural integration

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Thermal load, cooling and electromagnetic compatibility to be verified



AC cabinet installation concept with OPC attached



AC cabinet – dimensions

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Cloud Seeding Research Aircraft

AIRCRAFT TYPE	STC/EO STATUS	CERTIFICATION
Beechcraft King Air B300 Beechcraft King Air B200	In Service/In Production	LBA (German CAA) STC EASA/FAA: on request

» DESCRIPTION

Aircraft provisions for weather modification operations using externally mounted cloud-seeding equipment and mission control interfaces.

» KEY FEATURES

- Best in class seeding capabilities for top and bottom seeding
- Up to 64 burn-in-place-flares and 204 ejectable flares
- Digital firing system with advanced telemetry
- Powerful cabin control station for operator
- Optimized ergonomics for fast turnaround and easy maintenance

» OPTIONS

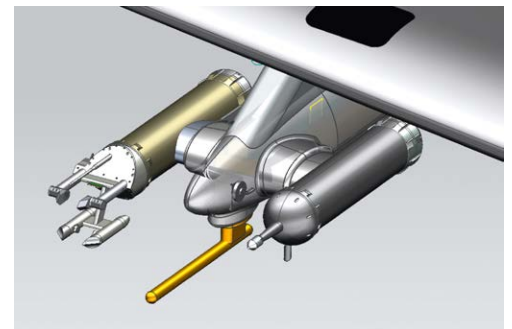
- Wing-mounted sensor & generator pods
- Wing-mounted seeding flare rack provisions
- Cabin control station
- Mission logging and status monitoring
- Protective covers for ferry or non-mission operation

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Hazard classification and operating procedures are customer-specific
- Local regulatory approval and operational authority required
- Ground handling, storage and safety documentation must be defined
- Recommended OEM-STC for basic Aircraft to be considered:
 - Heavy weight kit
 - 3rd Mission Generator or 400 AMP Generator kit
 - ER fuel tanks



Cloud seeding research aircraft



Under-wing weather modification pod (WeMo-Pod)

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Cloud Seeding A/C with Flare Racks, only

AIRCRAFT TYPE

Beechcraft King Air B300
Beechcraft King Air B200

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: on request

DESCRIPTION

External rack provisions for mission-specific flare or cartridge payloads, primarily intended for cloud-seeding and special mission applications.

KEY FEATURES

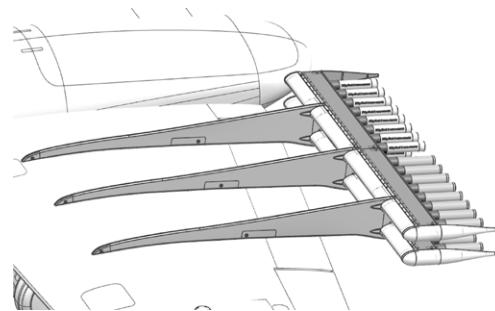
- Best in class seeding capabilities with up to 64 burn-in-place-flares
- Digital firing system with advanced telemetry
- Quick change option to remove wing flare rack
- Unmodified cabin enables multi role operation

OPTIONS

- Single or paired rack arrangement
- Operator panel and mission enable switch
- Status feedback and event logging

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Exact store type drives certification and safety case
- Operational approvals may vary by country and mission type
- Handling and loading procedures must be developed with operator



Wing flare rack (WFR)



Wing attachment reference (B200)

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Gogo Galileo High-Speed Internet

AIRCRAFT TYPE

Embraer Phenom 300/E,
Cessna Citation 525,
Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

LBA (German CAA) STC
EASA/FAA: available*

» DESCRIPTION

High-speed internet connectivity installation packages for business aviation platforms, including antenna, router, cabin Wi-Fi and installation documentation.

» KEY FEATURES

- Connect your productivity and entertainment applications seamlessly and efficiently
- Video and data live streaming
- Up to 60 Mbps for download and 11 Mbps for upload
- Wi-Fi connectivity via personal device

» OPTIONS

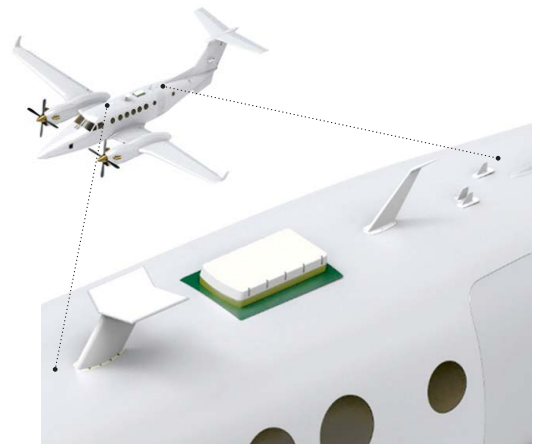
- Different router options e.g. encryption
- Future upgrade provisions

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Aircraft availability and downtime planning are key
- Connectivity service plan and hardware availability by provider
- Certification package dependent on aircraft serial and equipment type



Connectivity antenna installation reference
(Phenom 300)



Installation/MRO integration reference
(King Air B300)

* Available for Phenom 300/E and Cessna Citation 525.
On request for Beechcraft King Air B300.

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

OEM Special Mission Solutions



KINGAIR

Utility Nose and Lift Kit

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

EASA/FAA: available

DESCRIPTION

The utility nose lift kit installs an EO/IR turret lift system that is compatible with sensors up to 16.5" in diameter and 130 lbs in weight. An optional conversion kit provides the parts necessary to make the lift system accommodate a sensor up to 21" in diameter and 210 lbs in weight. Once installed in the utility nose, the lift mechanism is controlled from the cockpit with a dedicated control panel that allows the pilot to extend and retract the EO/IR sensor.

KEY FEATURES

- Integrated to original airframe structure to maximize space and weight
- Zero impact on aircraft life
- Adds approx. 12 cubic feet of stowage space in additional nose compartment
- New aircraft OEM airframe warranty remains intact
- Adds approximately 97.5 lb (44.2 kg) of weight
- Improves Aircraft CG to allow additional cabin loading

OPTIONS

- Lift kit

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Heavy weight landing gear
- Mission strakes



Side view of the utility nose with a camera lift kit



Utility nose with lift kit during installation

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Drop Hatch

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

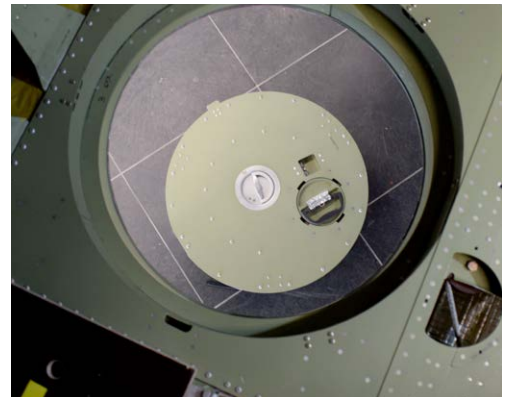
EASA/FAA: available

» DESCRIPTION

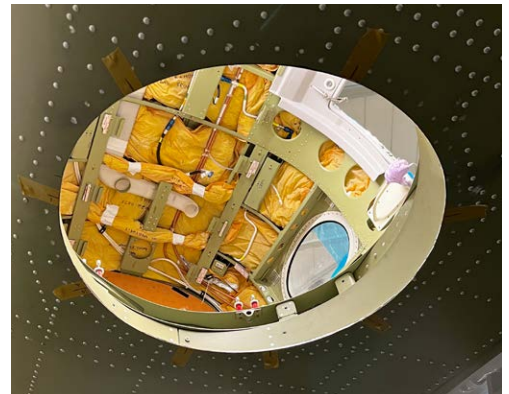
To assist with search and rescue operations, a drop hatch can be provided that allows an operator to drop surveillance or rescue equipment out of the aircraft. The drop hatch is located on the right side of the aircraft approx between F.S. 312 and F.S. 339. The diameter of the drop hatch is approximately 20" and has a separate integral hatch (4") to drop dye markers. There is a safety restraint added for the person opening the hatch and dropping stores to secure themselves to. There is also a CAS message that alerts the flight crew when the drop hatch is opened or not latched securely.

» KEY FEATURES:

- Rapid aerial resupply and increased safety, without the need for an additional landing
- Support for search and rescue (SAR) operations
- Precise cargo drop: the hatch is designed for controlled drops, allowing equipment to be deployed precisely at the desired location.
- Greater flexibility: the aircraft can be used for various missions — such as maritime search and rescue, environmental monitoring, or disaster response — without extensive modifications.



Drop hatch bottom view



Drop hatch top view

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Special Mission Dual Aft Strakes

AIRCRAFT TYPE Beechcraft King Air B300	STC/EO STATUS In Service/In Production	CERTIFICATION EASA/FAA: available
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» **DESCRIPTION**

This installation replaces the standard B300 strakes with larger, more durable, stand-alone dual aft ventral strakes. The purpose of this installation is to provide additional aircraft directional stability should this be required for special mission applications.

» **KEY FEATURES**

- Performance supplement is included



Aft mission strakes installation in progress



Side view of the special mission dual aft strakes

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

400 AMP Starter Generator

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

EASA/FAA: available

DESCRIPTION

The change to the airplane electrical system incorporates replacement of the existing 300-Ampere starter-generators with 400-Ampere units and the addition of two mission buses, powered through a mission power switch located in the cockpit center pedestal. Location of the mission power switch may vary within the pedestal. Replacement of the starter-generator units includes replacement of the following electrical system components: generator control units (GCUs); battery bus tie; load meter shunts; and starter relays. In addition, the following electrical system components have been added: bus shed relays, 200-Ampere current limiters for each mission bus; power and logic relays; and a mission power switch.



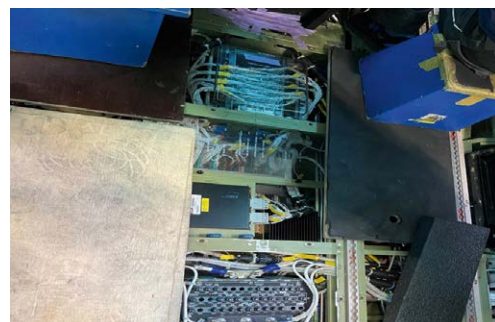
400 AMP Generator

KEY FEATURES

- The left and right generator buses provide power through individual 200-Ampere current limiters and mission power relays to left and right mission buses. The mission power switch is magnetically latched in the ON position and relaxes to OFF if either generator fails or is turned off, or if either the left bus tie or right bus tie opens.

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Can be combined with 3rd Generator if more electrical power is needed



Mission bus installation

Extended Range (ER) Fuel Tanks

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

In Service/In Production

CERTIFICATION

EASA/FAA: available

DESCRIPTION

High endurance for critical missions

- Increased range and endurance
- Increases total fuel capacity by 236 gallons (893 liters) to 775 gallons (2.934 liters)
- Deploy world-wide without ferry tanks
- 2,500+nm range, up to 12 hour endurance
- Delivers significantly higher mission flexibility

KEY FEATURES

Includes:

- Special mission rudder
- Software upgrade
- Updated fuel control panel
- Heavy weight landing gear



Extended range (ER) fuel tank



Range extension map

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Atlas Air Service Concept Studies



C408 Drone Defense Laser

AIRCRAFT TYPE

Textron Sky Courier C408

STC/EO STATUS

Project-specific/TBD

CERTIFICATION

EASA/FAA: on request

DESCRIPTION

Airborne drone defense system

- Laser module by INLEAP Photonics
- Laser module inside the aircraft
- Laser turret beneath the aircraft fuselage
- Intercepting the airspace and eliminating the drone threat
- Multiple drones within a few seconds
- Long endurance loitering within the airspace

KEY FEATURES

- eye-safe laser operation
- Laser range 3000m

OPTIONS

- Extended range fuel tanks
- Side facing laser turret position (cargo door)
- Belly-mounted laser turret

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Airspace surveillance through patrol flights
- Detection and identification of drones
- Intercepting the drone from above
- Eliminating the drone with the laser system
- Multiple drones within a few seconds



Concept rendering drone defense laser



Laser module by INLEAP Photonics

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

LUMUS Carrier

AIRCRAFT TYPE Beechcraft King Air B300	STC/EO STATUS Project-specific/TBD	CERTIFICATION EASA/FAA: on request
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» DESCRIPTION

LUMUS conceptual design for an unmanned aerial system (UAS).

- The system can be deployed directly from a carrier aircraft.
- Aim: Provide flexible and efficient solutions for a wide range of mission scenarios.
- Beechcraft King Air B350/B360 serves as the carrier aircraft.
- Designed to operate autonomously and independently
- Data should be transmitted in real time to the carrier aircraft or to ground stations.



LUMUS concept in carrier configuration

» KEY FEATURES

UAV:

- Wingspan 3,9 m
- Length 2,75 m
- Engine power 4,05 kW 5,5 HP
- Cruise Speed 28 m/s
- Max. Altitude 10000 ft
- Approx. Endurance 3-9 h



Deployed LUMUS

» OPTIONS

- Wingtip hardpoint mounts
- Double mounts for inboard hardpoints
- Fuselage mounts and hardpoints
- Installation of up to 10 LUMUS units

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Search and Rescue (SAR) missions
- Surveillance and reconnaissance missions
- Cloud seeding and weather research
- Environmental and disaster monitoring
- Research and testing of new technologies
- Flexible operations in hard-to-reach areas
- Military applications possible

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

B300 Rotatable Antenna Wing-Pod

AIRCRAFT TYPE Beechcraft King Air B300	STC/EO STATUS Project-specific/TBD	CERTIFICATION EASA/FAA: on request
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» DESCRIPTION

- Wing-Pod with in-flight adjustable antenna angle (rotatable)
- Manual or computer/IMU assisted pointing of antenna

» KEY FEATURES

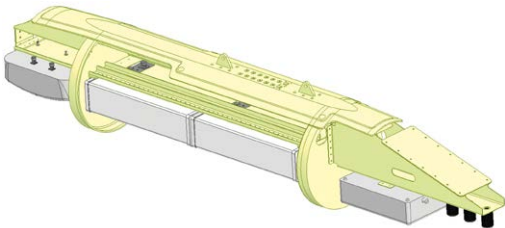
- Motorized
- Maximum tilt angle: 30° to either side from vertical position
- Compensation of A/C attitude relative to target

» OPTIONS

- Different antennas, according to use case

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Research
- SAR
- ISR
- Military applications



Concept rendering: internal parts of the Wing-Pod with rotatable Tx and Rx antennas



First mockup of the rotatable antenna wing-pod

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

B300 Modular Fuselage Mounted Quick Change Antenna and Sensor Mounting System

AIRCRAFT TYPE Beechcraft King Air B300	STC/EO STATUS Project-specific/TBD	CERTIFICATION EASA/FAA: on request
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» DESCRIPTION

- Modular system for installation of antennas and sensors on top of the fuselage
- Equipment can be changed fast for different missions – once installed no more modifications on fuselage skin necessary
- Antennas and sensors are installed to interchangeable, non-pressurized panels that are easy to modify

» KEY FEATURES

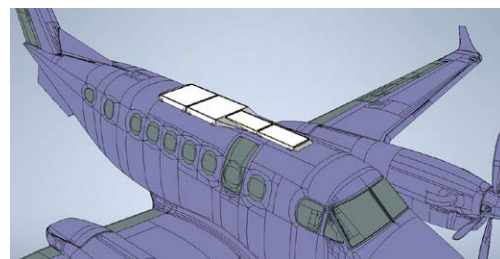
- Easy installation and removal of equipment
- Fast response to new mission requirements
- Suitable for non-permanent equipment tests
- Acts like a saddle plate for antennas with a larger footprint e.g., full-duplex AESA-sat-com antennas

» OPTIONS

- Different number of installed segments possible
- Different sizes of segments available (745 x 737 mm and 745 x 382 mm)

» OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Research and development
- ISR
- Other military applications



Concept rendering: antenna and sensor mounting system on top of fuselage



First mockup of the modular system

B300 Drop Hatch Sensor Adapter Plate

AIRCRAFT TYPE

Beechcraft King Air B300

STC/EO STATUS

Project-specific/TBD

CERTIFICATION

EASA/FAA: on request

DESCRIPTION

Drop hatch sensor adapter plate

- For various sensors and mounts possible, e.g.
 - Airborne laser scanning
 - Aerial photography
 - Gyro-stabilized sensor mounts
- Custom Solutions

KEY FEATURES

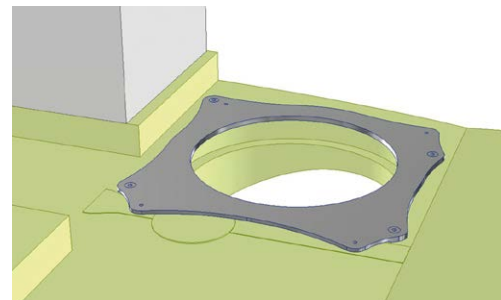
- Easy installation and removal
- Weight: depending on type of sensor used e.g., 4,1 kg for Somag AG GSM5000 Stabilized mount (in top picture)

OPTIONS

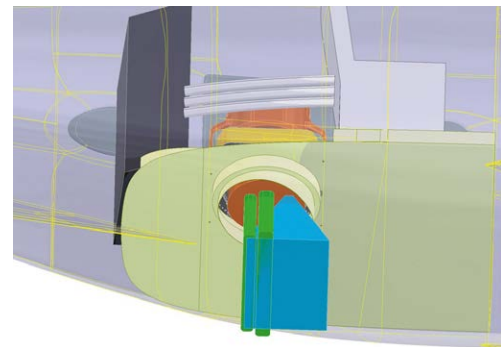
- Pressure-tight options possible (depending on sensor)

OPERATIONAL CONSIDERATIONS AND ADD-ONS

- Depending on sensor and type of adapter plate no cabin pressurisation possible (e.g. with gyro-stabilised mounts)



Concept rendering: adapter plate installed over drop hatch



Example of an airborne laser scanner integrated in drop hatch

Configuration, aircraft effectivity and certification basis are subject to customer requirements and authority review.

Atlas Air Service & FTI Delivery Packages



Feasibility Package

- Mission fit check
- Preliminary layout and risk register

Engineering Package

- Compliance plan and design data
- Structural/electrical substantiation

Modification Package

- Part-145 installation
- Conformity, ground test and release support

NEXT STEP

Select the target aircraft, payload baseline and desired mission role. Atlas Air Service and FTI can then define the recommended configuration, certification path and installation plan.

Typical Mission Aircraft Architecture

1.

Payload layer

EO/IR turret, radar, DF, antenna, seeding or external stores

2.

Airframe layer

Radome, hardpoints, support structures, fairings and provisions

3.

Electrical layer

Mission power distribution, circuit protection and load management

4.

Data layer

Video, IT backbone, RF, intercom, recording and operator control

5.

Certification layer

Loads, EMI/EMC, safety assessment, flight test and documentation

DESIGN TARGET

A modular, maintainable and certifiable aircraft system baseline that can be adapted to future payloads and customer mission profiles.

From Mission Requirement to Delivery

1.

Define

Mission profile, aircraft type, payload, operating environment

2.

Design

Structures, electrical loads, equipment integration, human factors

3.

Certify

Compliance plan, substantiation, authority engagement and test evidence

4.

Install

Part-145 installation, conformity, ground test and functional check

5.

Deliver

Flight test support, documentation, training and lifecycle support

RISK CONTROL

Early design freeze, clear airworthiness assumptions and a change-controlled configuration baseline reduce schedule and certification exposure.

Your Notes



LET'S CONFIGURE YOUR NEXT SPECIAL MISSION AIRCRAFT

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