



AVCON  
INDUSTRIES, INC.



## SPECIAL MISSION CATALOG

VERSION **24.01**

Governments and organizations across the globe rely on Avcon for custom Special-Mission aircraft modifications. We are a one-stop shop that handles design, manufacturing, installation, and certification. Our team consists of design engineers, in-house FAA DER teams, machine/fabrication technicians, installation technicians, and test pilots. Avcon takes pride in its ability to partner with customers and enhance their special mission capabilities.

We have developed or enhanced over 300 Federal Aviation Administration STC-approved airplane modifications for missions including:

- Atmospheric Research
- Mapping
- Deforestation Monitoring
- Environmental Testing
- Coastal Erosion Monitoring
- Search & Rescue (SAR)
- Police & Homeland Security Missions
- Fire Detection & Monitoring
- Disaster Relief Control
- Oil Spill Detection

Avcon specializes in business jet and turboprop airplane modifications. Our portfolio includes work with an array of aircraft, including the King Air, Caravan (208/208B), Citation, Challenger, and Learjet, among others.

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Includes sensor provisions integrated into the exterior of the airplane fuselage. Examples include antenna arrays, nose extensions, sensor-carrying and cargo pods, and radomes for sensors and/or communication.

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Includes camera/sensor ports, drop hatches, and replacement of cabin windows with optical glass.

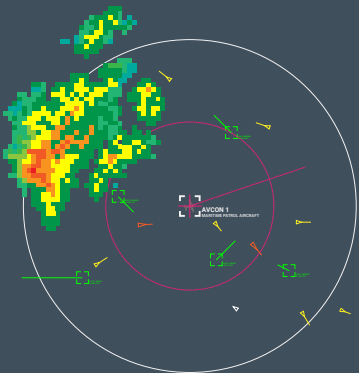
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Inboard, outboard, and fuselage-mounted hardpoints for various aircraft.

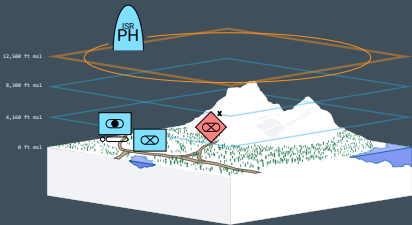
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Includes alternators and generators, interior missionization (operator consoles, equipment racks), aerodynamic enhancements, and door modifications for cargo/air-ambulance.

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Avcon modifications are used for mapping, archaeology, mining, geophysics, intelligence, surveillance, wildlife / deforestation monitoring, precision agriculture, airborne fire detection, radiation detection, and more.



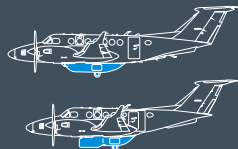
# Pods, Radomes, and External Structures

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*With its modular design, the Avcon Multi-Mission Pod adapts to new missions in a few hours.*

## Avcon Industries Multi-Mission Pod

The *Avcon Multi-Mission Pod* is the most complete modular pod in the market. Installed on the bottom fuselage of the aircraft, the Multi-Mission Pod provides up to 40 cubic feet of space for custom sensor configurations.

### Configurability

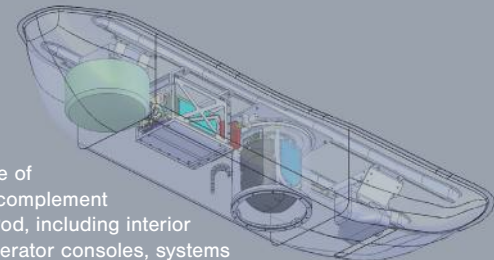
Avcon offers retractable sensor provisions for  $\leq 15"$  diameter (vertical lift) and  $\leq 20"$  diameter (swing-arm) sensors. An enlarged "blister" pod variant is also available to fit large-format (up to 47" diameter) Synthetic Aperture Radar. Depending on mission requirements, the Pod can be constructed with specific materials, such as Quartz or E-Glass.

### Modular Sensor Attachment System

All the sensors inside the pod are attached to an STC approved Rail Payload Attachment System (STC No. SA01902WI) that can be customized with mounting provisions for specific equipment.

### Comprehensive Special Mission Solutions

Avcon offers a suite of modifications that complement the Multi-Mission Pod, including interior missionization / operator consoles, systems integration, equipment racks, communication equipment and integration (e.g. LOS Datalink and SATCOM systems for real-time video, picture, voice, and data transfer), and electrical power enhancements.





*An enlarged, front-facing "blister" is available to fit large-format sensors.*



*Up to two camera ports can be installed alongside the Multi-Mission Pod under existing Avcon FAA-approved STCs.*



## Compatible Equipment

The configurable Multi-Mission Pod supports equipment including:

- LRU, LiDAR, or Hyperspectral Sensors
- Radar or Synthetic Aperture Radar (up to 47" diameter)
- Retractable EO/IR or GMTI (up to 20" diameter)
- IR/UV Scanners

The Multi-Mission Pod also works with most LOS Datalink and SATCOM systems to allow transfer of real-time video, pictures, voice or data to other aircraft or ground support.

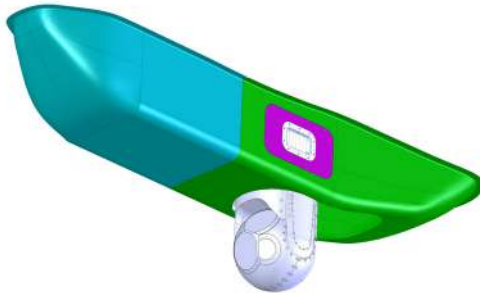
<b>FAA Approved</b>	Yes (SA2300CE)
<b>EASA Approved</b>	Yes
<b>Applicable Aircraft</b>	200 Series, B300 Series

<b>SA2300CE</b>	Installation of lower fuselage multi-mission radome/pod
<b>SA01902WI</b>	Lower fuselage payload rail system
<b>SA01893WI</b>	15-in Retractable EO/IR sensor provisions
<b>SA01953WI</b>	20-in Retractable EO/IR sensor provisions

## Compatible Camera Ports

The Multi-Mission Pod is compatible with the Aft Camera ports (**STC SA2429CE - B300 only**) and baggage compartment port (**SA2428CE - B200 & B300 only**).





## Retractable MX-20 Provisions

### Swing-Arm - SA01953WI

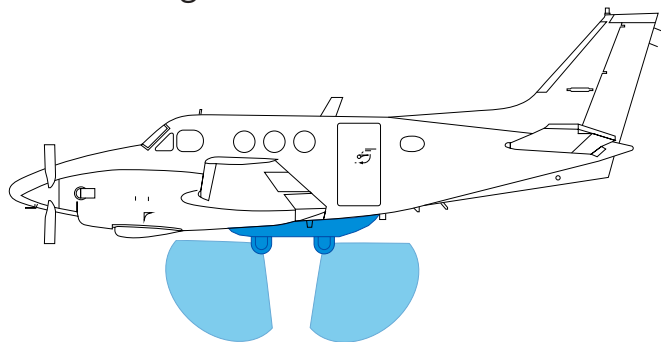
Avcon has FAA approval of a sensor-lift mechanism supporting equipment up to 20" in diameter. The heavy-duty mechanism was designed for the Wescam MX-20 and proven through hours of operation in the field. When retracted, the swing-arm design stows the MX-20 inside the Avcon POD. The Avcon MX-20 Lift System is available for most King Air B200 and B300 (King Air 350) airplanes.

## Retractable MX-15 Provisions

### Vertical Lift - SA01893WI

Avcon also has FAA approval of a vertical lift mechanism for sensors up to 15" in diameter. The compact lift mechanism allows usage of sensors such as the MX-15 with the Avcon Multi-Mission Pod.

## ISR/SAR/GMTI Pod For King Air C90 GT



**STC No. SA1746CE** installs structural mounting provisions (ISR Pod) for dual fixed-position sensors such as the Thales I-Master, Wescam MX series (MX-15, MX-15D, MX-20), FLIR Star Safire HD, FLIR Star Safire III, Raytheon Assault TSU QE, Axsys V14HD, UltraForce 350, and others.

Dual sensors offer enhanced surveillance flexibility with a wider field of view. Combined with well-trained crew and interior operator consoles, an Avcon Pod-equipped King Air C90 becomes a formidable intelligence tool.



## SA1746CE

BEECHCRAFT KING AIR C90GT

<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	No (By Request)
<b>Applicable Aircraft</b>	C90GT



## 40ft<sup>3</sup> Cargo Pod

The Avcon Cargo Pod (per **STC No. SA2449CE** or **SA2300CE**) is 40 ft<sup>3</sup> (1.132 m<sup>3</sup>) in volume, aerodynamically designed, and fully enclosed. It carries baggage for up to 13 passengers or cargo payload up to 500 lbs (227 kg). There is convenient access through a Large Side Door (19" X 39"), with an optional Aft Door for loading skis or other lengthy equipment.

The pod is 156 inches (396 cm) in length, 27 inches (69 cm) in width, and 22 inches (56 cm) in depth. Lightweight materials, including reinforced fiberglass, limit the cargo pod's weight to approximately 75lbs. Kits are available, dependent on customer location and capability per approved drawings.



### SA2300CE & SA2449CE

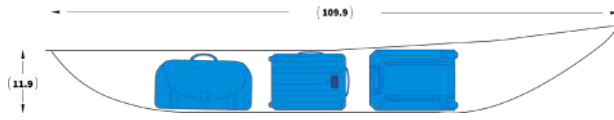
Technical Specifications

STC No.	King Air Series	Payload	Dimensions
<b>SA2300CE</b>	200, B200, 200C, B200C, A200, A200C, A200CT	500 lbs (227 kg)	156 x 27 x 22 in
<b>SA2449CE</b>	100, A100 (U-21F), A100A, B100	500 lbs (227 kg)	156 x 27 x 22 in

## 15.5ft<sup>3</sup> Cargo Pod (AeroPak)

Providing 15.3 ft<sup>3</sup> (0.439m<sup>3</sup>) of additional baggage or cargo space, the Avcon AeroPak Cargo Pod is certified for an additional 300 lbs payload, accessible via a 10 1/2 inch tall by 34 1/2 inch wide side mounted door.

The AeroPak Cargo Pod weighs approximately 55 lbs (24.95 kg).



### SA1746CE & SA2104CE

Technical Specifications

STC No.	King Air Series	Payload	Dimensions
<b>SA1746CE</b>	200, 200C, B200, B200C	300 lbs (136 kg)	112 x 24 x 12 in
<b>SA2104CE</b>	100, A100, A100A, A100C, B100	300 lbs (136 kg)	112 x 24 x 12 in



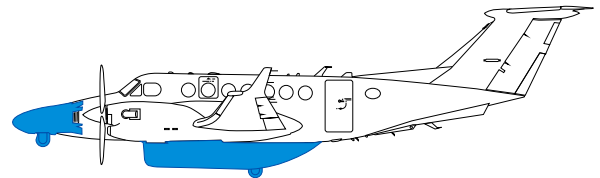
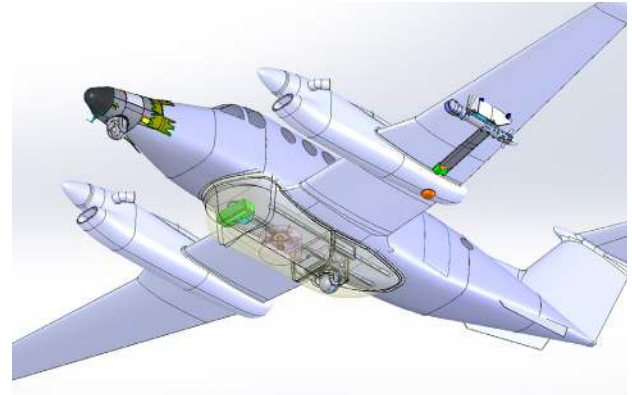
## Nose Extension & External Belly Radome STC SA04581CH

FAA STC SA04581CH covers the Installation of a Nose Extension (with an EO/IR Turret Lift Mechanism) and an External Belly Radar Radome on Textron Aviation Model B300/B300C Aircraft (up to 17,500 lbs. MTOW and PT6A-67A Engines).

The oversized, aerodynamically designed "Whale Pod" is made specifically for large sensor configurations. The forward section of the lower fuselage radome can accommodate radars with swept volumes of up to 57.30 inches in diameter.

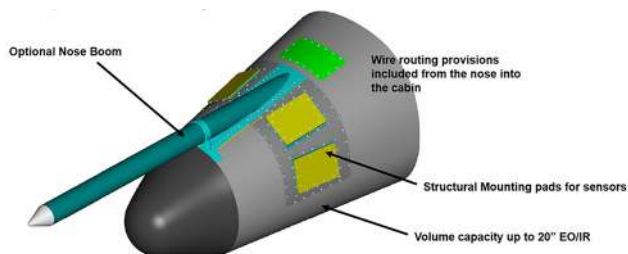
The external radome is compatible with the SA2429CE aft camera port, SA2428CE scanner port, BLOS upper radome, and underwing hardpoints/pods.

**For details regarding the Nose Extension, see the next page.**



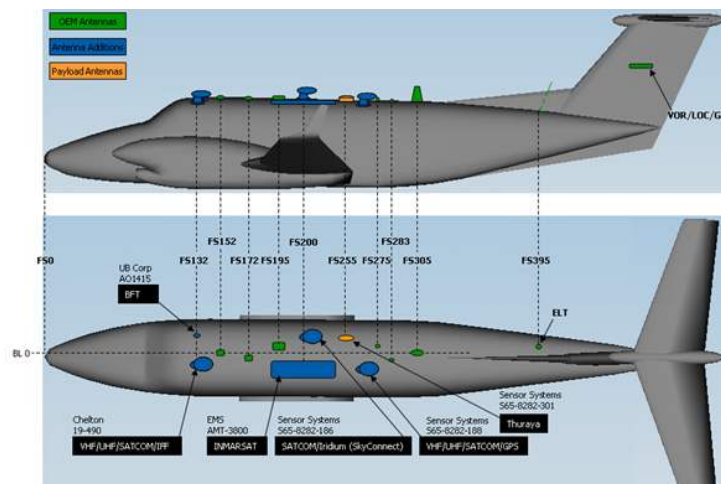
## Avcon Nose Extension

The Avcon 28" King Air Nose Extension is currently rated for up to 200 lbs of payload. This upgrade has been optimized to accommodate multiple sensor configurations (15" or 20" EO/IR turrets, Air-to-Air radars, cameras, scanners and others).



## Special Mission Antennae

The Avcon Special Mission Antenna STC (No. **SA01581WI**) is used to meet customer special mission demands. The STC can be amended to include other antenna arrays.



## SA01581WI

BEECHCRAFT KING AIR 350

ITAR Controlled	No
FAA Approved	Yes
EASA Approved	No (By Request)

## 18" SATCOM BLOS Radome

### STC SA04204NY



Avcon manufactures a cost-effective satellite communication (SATCOM datalink) antenna radome kit for most King Air Model 350 and 200 airplanes. The Avcon SATCOM Radome is designed to cover an 18-inch dish antenna for typical Ku, Ka and X band operations. Avcon design features include minimal installation time, quick-disconnect removable radome (allows flight operations with only the antenna baseplate) and compatibility with many other Avcon FAA-approved modifications. The FAA-approved and cost-effective Avcon SATCOM/BLOS Radome and Radome Kit is a great option for King Air operators.

The radome is removable, allowing conversion back to standard configuration. It does not require large strakes nor a special mission rudder.

The Satellite Communication (SATCOM) Antenna allows a high-speed satellite data link to send reports containing description of a suspected target, including its coordinates and time of observation and any other target property data, optionally with added EO/IR video or images over the SATCOM data link during the flight.

The data link functionality allows the system operator to select and transmit Search Radar, EO/IR, video or photographic images, video sequences, map overviews and mission reports to Headquarters or to a command post/vehicle/vessel.

#### Applicability

King Air B300/B300C, 200, 200C, A200, B200/B200C, B200GT/B200CGT

#### FAA Approved

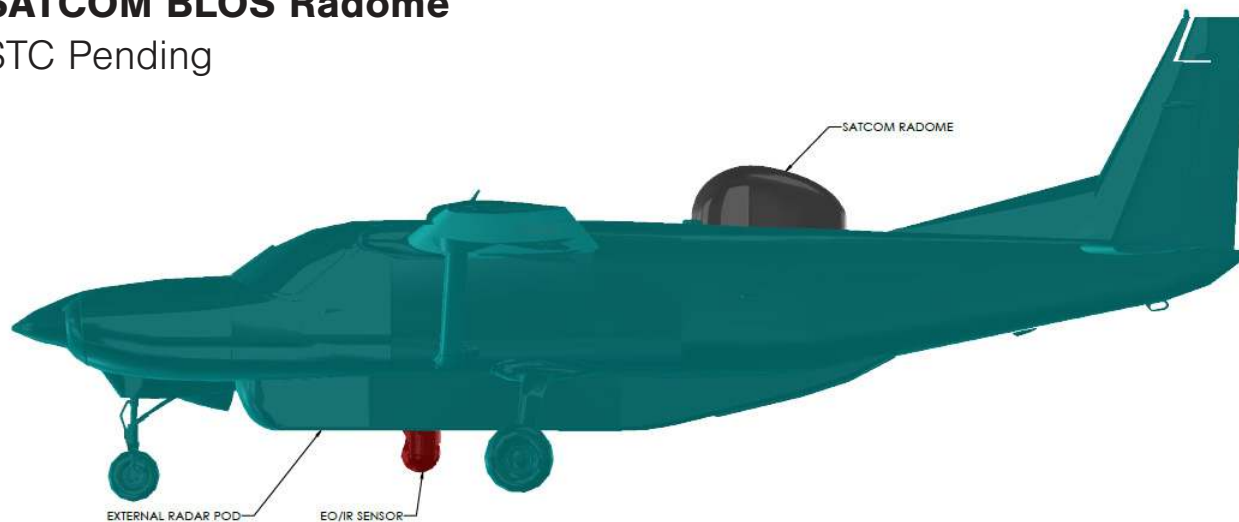
Yes (STC SA04204NY)

#### EASA Approved

Yes

## SATCOM BLOS Radome

STC Pending



Avcon is developing a SATCOM datalink antenna radome kit for the Cessna Caravan. Similar to the Avcon King Air BLOS radome, the Avcon SATCOM Radome for the Caravan is designed to cover an 18-inch dish antenna for typical Ku, Ka and X band operations. Avcon design features include minimal installation time, quick-disconnect removable radome (allows flight operations with only the antenna baseplate) and compatibility with other Avcon FAA-approved modifications.

FAA STC approval of the SATCOM Radome for the Cessna Caravan is pending.

The Satellite Communication (SATCOM) Antenna allows a high-speed satellite data link to send reports containing description of a suspected target, including its coordinates and time of observation and any other target property data, optionally with added EO/IR video or images over the SATCOM data link during the flight.

The data link functionality allows the system operator to select and transmit Search Radar, EO/IR, video or photographic images, video sequences, map overviews and mission reports to Headquarters or to a command post/vehicle/vessel.





## Aerial Surveillance Platform For Challenger CL-604

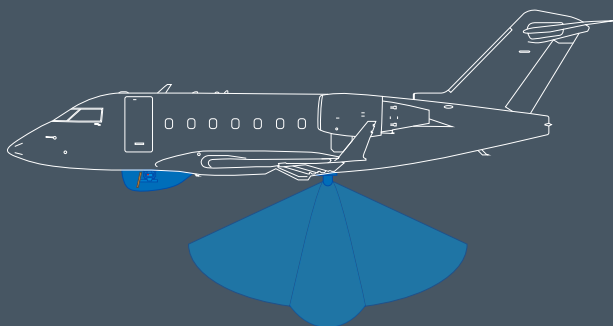
Using Avcon **STC No. ST01622WI** and a **Bombardier STC**, Avcon transforms the Challenger CL-604 into a versatile surveillance platform by adding dual aft camera provisions and an underbelly radome.

The modification adds dual side by side camera / retractable sensor provisions, per Avcon STC ST01622WI. The belly radome for Special Missions equipment such as SAR Radar, life raft, or under-wing hardpoints and interior missionization are installed under the Bombardier STC.

### ST01622WI

BOMBARDIER CHALLENGER CL-604

<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	No (By Request)
<b>Applicable Aircraft</b>	CL-600-2B16 (CL-604)



# Ports, Windows, & Hatches

## Category Index

### 30 Camera Mounting Provisions and Drop Hatch for King Air

- SA2428CE
- SA2429CE



### 34 Camera Provisions with Sliding Door and Drift Sight for King Air

- SA1726CE



### 36 Dual Camera/Sensor Ports for Caravan

- SA01975WI



### 38 Cabin Optical Glass Replacements for King Air

- SA2795CE
- SA2788CE



Avcon offers a variety of options for camera and sensor ports on business jet and turboprop airplanes. Some of these modifications can be converted to drop hatches for search-and-rescue operations. Avcon also offers replacement of cabin windows with optical glass for handheld camera operations.

#### Configurability

Many Avcon camera port modifications have configurable options, including lens coatings, oversized ports (for large sensors or gyros), alternate locations (for some aircraft and port sizes), and drift sights.

#### Compatibility

Avcon camera ports are compatible with most popular equipment, including film and digital cameras, EO/IR sensors, LIDARs, magnetometers, and more. Some Avcon provisions are also compatible with gyro mounts such as the Leica PAV30, T-AS Mount, and GSM 4000. Contact us for specific compatibility information.

#### Protection

Avcon camera port modifications protect your equipment with customer-configurable optical glass (e.g. BK-7, S-BSL7). The sensor is further protected during takeoff, landing, and storage by a sliding door that covers the camera port. Defog systems prevent sensor obstruction.

#### Pressurization

Avcon camera modifications allow the aircraft to maintain pressurization. Most Avcon aircraft modifications can be reverted to standard interior configurations with structural plugs / accessory kits (available for order). Optical glass can be removed for unpressurized operations. For technical details on open-air operation of Avcon camera modifications, please contact us.

## Camera Ports

Avcon provides Single or Dual Camera Mounting Provisions (Tandem Cameras) for the King Air 200, 300, and B300 series, per **STC No. SA2429CE**. A third baggage-compartment camera port is available under **STC No. SA2428CE**. Together, the two STCs add provisions for a total of three ports, converting the King Air into a versatile mapping and survey platform.

### Dual Camera Ports

SA2429CE is used to install single or dual sensors from manufacturers including Leica, Optech, Trimble, Ultracam, and others. The modification uses an S-BSL-7 Optical Glass Window to maintain aircraft pressurization at altitude without inhibiting sensor operation - but the optical glass can be removed for unpressurized, open-air operations.

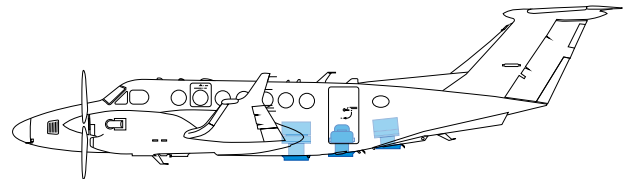
### Baggage Compartment Port

STC No. SA2428CE provides a single camera port near the baggage compartment, compatible with most vertical mapping cameras.

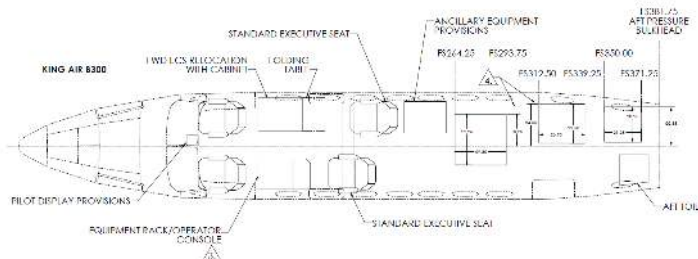
## Drop Hatch Option

The drop hatch can easily be converted into a camera port and vice-versa.

This FAA approved Drop Hatch allows the Special Mission operators to drop rescue equipment out of the aircraft while in flight. The hatch is located on the right-hand side of the cabin across from the entry door and consists of an 18" hole with a metallic plug/hatch that opens into the cabin. For operator safety, the STC includes an approved restraint attachment point on the sidewalls, as well as annunciator lights that indicate the open/close & secure latch position of the plug.



<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	Yes
<b>Applicable Aircraft</b>	200 Series, 300 Series, B300 Series



## SA2429CE

### Technical Specifications

Description	Effectivity	Popular Sensors
<b>STC No. SA2429CE</b>	100, A100, A100A, A100C, B100, 200, 200C, 200CT, 200T & 300 & A200 (C-12A), A200 (C-12C), A200C (UC-12B), A200CT (C-12D), A200CT (C-12F), A200CT (FWC-12D), A200CT (RC-12D), A200CT (RC-12G), A200CT (RC-12H), A200CT (RC-12K), A200CT (RC-12P), A200CT (RC-12Q), B200, B200C, B200CGT, B200CT, B200GT, B200T, B300, B300C (350)	DMC DMCile FLIR Star 380 FLIR Star Safire Leica ADS-40 Leica ADS-80 Leica ALS-50 Leica ALS-60 Leica ALS-70 Leica RC30 Optech Gemini TABI 1800 Trimble Harrier 68i Wescam MX-15 Wescam MX-20 Zeiss RMK TOP Zeiss RMK-A
Dual or Single Camera Provisions		

1. The camera models on the list above are those that have been previously installed at Avcon. Please contact Avcon if you have a sensor of interest that is not listed.

2. Other sensors that can be fitted in the camera ports include HySpex SWIR, HySpex VNIR, IGI Litemapper 7800, ITRES CASI-1500, ITRES SASI-600, Optech Orion, Optech Shoals 3000, Optech Pegasus, Reigl LMS-Q1560, Trimble DSS, UltraCAM Eagle, Visionmap A3, etc.

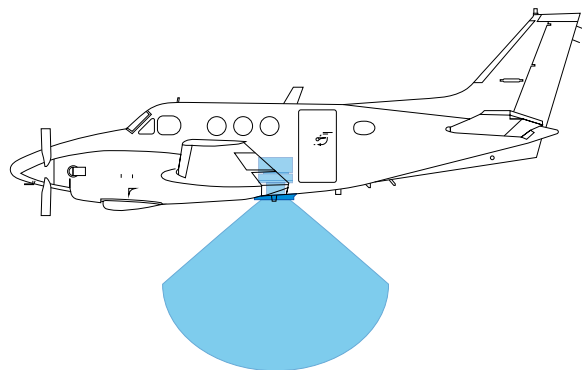
#### Port Dimensions & Frame Stations Location

Standard FWD	Oversize FWD	Aft
<b>Port Size:</b>	<b>Port Size:</b>	<b>Port Size:</b>
24.00" by 26.75"	29.25" by 29.50"	22.50" by 26.75"
<b>Frame Location:</b>	<b>Frame Location:</b>	<b>Frame Location:</b>
King Air 100, 200, 300: FS 233.00 – 259.75	King Air 100, 200, 300 FS 230.25 – 259.75	King Air 100, 200, 300 FS 278.50 – 305.26
King Air B300 (350) FS 267.00 – 293.75	King Air B300 (350) FS 264.25 – 293.75	King Air B300 (350) FS 312.50 – 339.25

3. The camera provisions are compatible with most Gyro Mounts such as Leica PAV30, Leica PAV80, Leica PAV100, AS-5 Mount, T-AS Mount, GSM 3000, and GSM 4000.

4. AS-5 Mount and GSM3000 Mount can only be installed in the forward port. The spacer used on the GSM3000 will determine whether or not the oversized forward port is needed.

## Camera Provisions with Sliding Door & Drift Sight For King Air 90 Series



Avcon offers structural mounting provisions for a Single Camera Port with a sliding door and drift sight on the King Air 90 Series Aircraft, approved by **STC No. SA1726CE**.

This installation supports most modern cameras, LIDAR, scanners, and other sensors from major manufacturers such as Leica and UltraCam.

**STC No. SA1726CE** is also approved for unpressurized, open-air operations with the optical glass pane removed.



## SA1726CE

### Technical Specifications

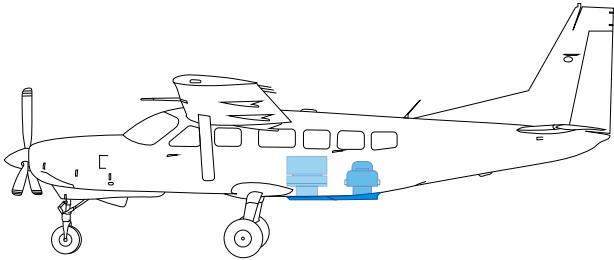
Description	Effectivity	Popular Sensors
<b>STC No. SA1726CE</b>		DMC I Leica ADS-80 Leica ALS-50 Leica RC-30 Leica SH40 SpectIR AisaDual UltraCam X or D
Camera Provisions with Sliding Door and Drift Sight	B90, C90, C90A, C90GT, C90GTi, E90	

### Port Dimensions & Frame Stations Location

- 24.00 inches by 26.95 inches
- FS 197.00 to FS 223.95
- The camera models listed are those Avcon has installed previously. We are capable of installing cameras other than those listed above. Please contact Avcon if you have a camera of interest that is not listed.
- The camera provisions are compatible with popular Gyro Mounts such as the Leica PAV20, PAV 30, PAV 80, PAV 100, T-AS, GSM 3000, and GSM 4000.



## Dual Camera/Sensor Ports For Cessna Caravan 208/208B



### STC SA01975WI

Avcon modifies the Textron/Cessna 208/208B (Caravan), providing single or dual oversized sensor (camera) ports with up to a 27.5" x 25" FOV opening. The cost-effective Avcon C-208/208B modification fits the latest generation of mapping sensors.

The FAA STC-approved modification includes wire routing and electrical provisions. The Avcon Special Mission Caravan modification has been optimized for minimal downtime. There are no material performance changes.



#### FAA Approved

Yes (SA01975WI)

#### Applicable Aircraft

Cessna Caravan 208 / 208B

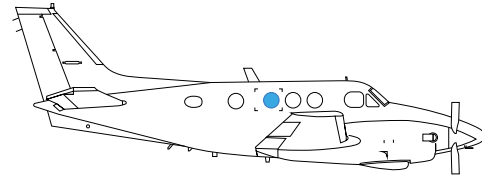
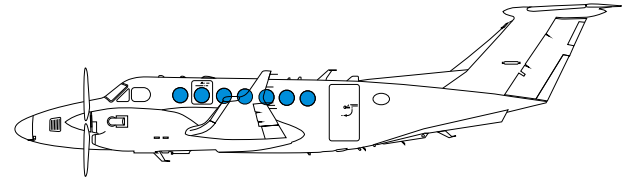
## Cabin Optical Glass

Cabin Optical Glass Windows enhance the surveillance capabilities of cabin crew and equipment by installing Optical Glass to the specified windows.

**STC No. SA2795CE** (right-top, for the King Air 200, 300, and B300) installs optical glass on the escape window and/or any other desired cabin windows.

**STC No. SA2788CE** (right-bottom, for the King Air 90 series) installs an optical glass on the escape window to provide the operator additional surveillance and recognition flexibilities with portable cameras.

When desired, Avcon can seek a deviation on the STC to install optical glass in a location other than the escape window.



### SA2795CE

KING AIR 200, 300, AND B300

<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	No (By Request)
<b>Applicable Aircraft</b>	200 Series, 300 Series, B300 Series

### SA2788CE

KING AIR 90 SERIES

<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	No (By Request)
<b>Applicable Aircraft</b>	90 Series

# Wing & Fuselage Hardpoints

## Category Index

### 42 Outboard / Wingtip Hardpoints for King Air

- SA01965WI



### 44 Inboard Hardpoints for King Air

- SA04178NY
- SA04191NY



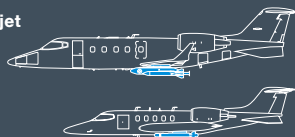
### 46 Fuselage Rails / Hardpoints for King Air

- SA01902WI



### 48 Underwing Hardpoints for Learjet

- ST01783WI
- ST01984WI



Hardpoints are used to store external payloads underneath the wing or fuselage of the aircraft.

#### Configurability

Many Avcon Hardpoint modifications can be configured to meet specific requirements. For example, our King Air Hardpoints are available with standard 14" NATO lug spacing, and wingtip hardpoints can be fitted with 3-arm pylons to carry multiple payloads.

#### Wire Tunneling

Many of our hardpoint STCs include wire tunneling provisions to allow for easy routing of wires between hardpoint-attached sensors and the aircraft cabin/cockpit. Contact Avcon for information regarding cabling for a specific hardpoint STC.

#### Sensor Pods

Avcon Hardpoints are ideal for storing external sensor pods for research and special-mission applications. Sensor pods can be directly integrated with interior operator consoles or cockpit equipment.

#### Target Towing

Our Learjet hardpoints are compatible with target-towing equipment such as the MTR-101 Reeling Machine. ST01984WI, for the Learjet 60, supports up to 1000lbs of payload under each wing.



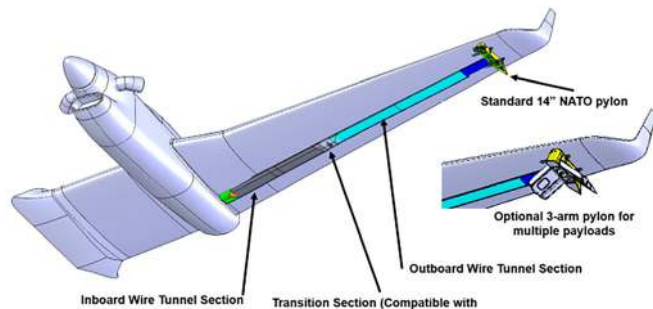
## Outboard Hardpoints

### SA01965WI

Avcon wingtip/outboard underwing hardpoints are FAA approved under STC SA01965WI for various King Air 200 and 300 models. Up to 225 lbs may be carried on each wing.

The solution includes multiple custom-designed Pylon/Strong back systems with standard 14" NATO lug spacing and optional 3-arm pylons for carrying multiple payloads. The modification also provides FAA approved wire tunnels for easy routing of cables from the aircraft cockpit or operator workstation to the pylons/sensors.

These wingtip hardpoints are strategically located far from the aircraft fuselage for improved field of view.



#### FAA Approved

Yes

#### EASA Approved

Yes

#### Applicable Aircraft

200, 200C, A200, B200, B200C, B200GT, B200CGT, 300, B300, B300C



## Inboard Hardpoints

### SA04178NY & SA04191NY

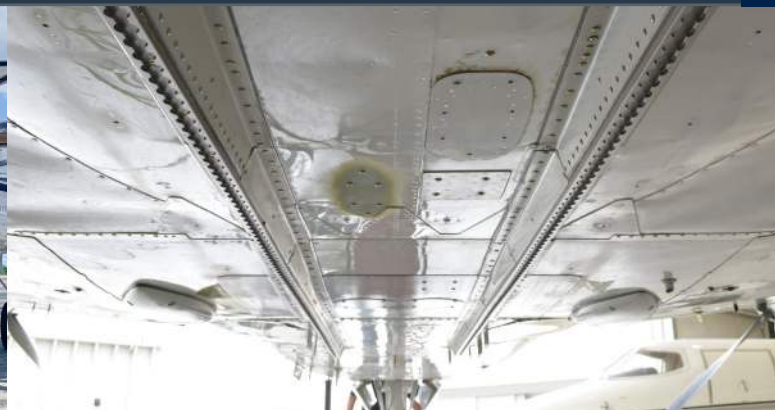
Avcon internal underwing hardpoints are FAA approved under STC SA04178NY and SA04191NY for various King Air models. The internal wing hard-points are strategically located far from the propwash and centered on WS 194.829. This solution includes multiple custom designed Pylon/Strong back systems that support NATO 14" lug spacing, carrying up to 325 lbs on each wing. This STC allows for flight of both symmetrical and asymmetrical payloads in accordance to the AFMS.

The Avcon solution also includes an FAA approved cable feed-thru system on both sides of the aircraft, engine nacelles, and under the wing. The feed-thru system provides wiring provisions for a variety of bulkhead connectors (Power, Coax and Ethernet), making it easy to connect from the aircraft cockpit or operator workstation to sensors installed on the pylons.



STC No.	King Air Series	EASA
SA04178NY	200, A200C, 200C, B200, B200C, A200, 200T, 200CT, A200CT, B200T, B200CT, B200GT, B200CGT, 300, 300LW, B300, B300C	Yes
SA04191NY	B300, B300C	No

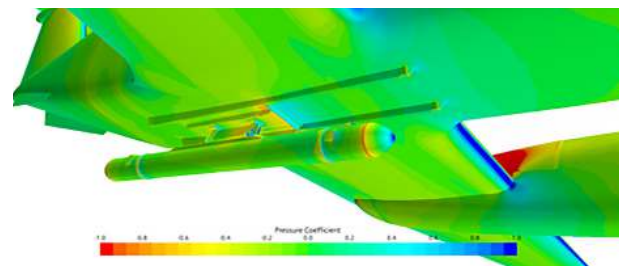




## Lower Fuselage Rails for Special Mission Payloads SA01902WI

FAA approved STC SA01902WI allows installation of special mission rails with provisions for any sensor pod that can be mounted externally. The reinforced belly structure features multiple loading zones and supports heavy payloads (even higher than 2,000 lbs).

The rail mounting system is frequently used in tandem with other Avcon STCs, such as the Multi-Mission Pod, to meet unique special-mission requirements.



<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	Yes
<b>Applicable Aircraft</b>	200, 200C, 200CT, 200T, A200, A200C, A200CT, B200, B200C, B200CT, B200T, B200GT, B200CGT, 300, B300, B300C



## Underwing Hardpoints For Learjets

### Learjet 60 Hardpoint STC

Avcon developed STC No. ST01984WI for NATO-store-compatible hardpoints on the Learjet 60. The Learjet 60 STC supports up to 1000lbs of payload underneath each wing, and can be used with target towing systems (such as the MTR-101) or special-mission/sensor-carrying pods. The modification includes wire tunnels and cable provisions from the pylon to the cabin. Both single (asymmetrical) and dual-store configurations are approved.

With a stand-up cabin and space for up to four operator consoles, the Learjet 60 is an attractive special mission platform.

### Legacy STC - Learjet 60, 55, 36, 35, 31, & 25

Avcon also holds STC No. ST01783WI for hardpoints on the Learjet 60 and a number of older Learjet variants. For more information on that STC, please contact Avcon.

STC No.	Effectivity	FAA	EASA
ST01984WI	Learjet 60	Y	N
ST01783WI	Learjet 60, 55, 30, and 20 Series	Y	Y



# Performance & Utility Modifications

## Category Index

### 52 Special Mission Power Alternators & Generators for King Air

- SA03698AT
- SA11298DS



### 54 Range & Weight Increase + Aerodynamic Fins for Learjet

- SA1726CE



### 56 Cargo & Utility Doors For King Air

- SA2788CE



### 58 Operator Consoles & Equipment Racks

- Various STCs



Avcon Performance and Utility modifications include power systems, aerodynamic enhancements, interior operator consoles and equipment racks, and cargo doors.

#### Special Mission Power

Avcon Special Mission Power solutions drive critical equipment both inside and outside the aircraft. These modifications support heavy-duty equipment configurations by increasing the amount of electrical power available.

#### Operator Consoles & Equipment Racks

Interior consoles/racks are crucial for special mission aircraft operators. Our solutions include custom consoles for computers and human-machine interfaces, as well as reinforced racks for heavier equipment.

#### Learjet Performance Enhancements

Avcon Stabilizer Fins and the Avcon R/X Mod for Learjets enhance the abilities of these already-legendary light business jets. These modifications are ideal for those seeking additional range, useful load, and aerodynamic stability.

#### Cargo Doors

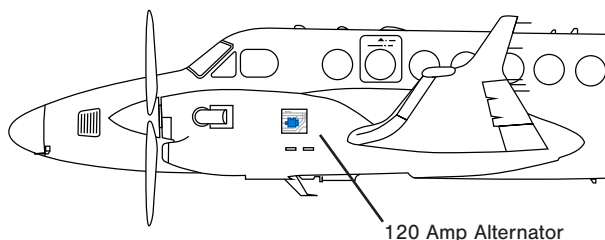
Avcon offers cargo and baggage doors for King Airs.

## Special Mission Alternator STC SA03698AT

The Avcon Supplemental Alternator (approved by **STC No. SA03698AT**) provides up to 120 amps, 28 VDC to an isolated power bus designed to feed mission equipment.

The belt-driven alternator is installed on the left engine on the available accessory pad. Controls are installed in the cockpit to monitor bus load and voltage.

This installation does not affect the performance of the aircraft.



### SA03698AT

BEECHCRAFT KING AIR  
B200, 300 & 350 SERIES

<b>FAA Approved</b>	Yes
<b>EASA Approved</b>	Yes
<b>Applicable Aircraft</b>	B200, 300, 350 Series
<b>Amps</b>	Up to 120
<b>VDC</b>	28



## Dual 400 Amp Generator STC SA11298DS

The Avcon Dual 400 Amp Starter-Generator is available for King Air airplanes with Pratt and Whitney PT6A-67A engines.

This STC provides a total generator capacity of 800 Amps compared to the two factory-standard starter-generators. The installation also features a user-customizable power distribution system with 400 Amps of power from two dedicated electrical buses, making it ideal for special mission operations.

The 400 Amp power modification for the PT6A-67A and PT6A-60 equipped King Air significantly increases the capabilities in light of the continuing demand for power for electronic ISR systems.

**When combined with the Avcon Special Mission Alternator, a King Air can have up to 920 amp of total power!**

## Range & Weight Extension

### Avcon R/X Mod

The Avcon R/X Mod includes **Aerodynamic Fins** (right) as well as tip-tank extensions and a weight increase package.

#### Range Increase

By extending the tip tanks, Avcon R/X mod adds room for approximately 750lbs of additional usable fuel in the aircraft. This provides up to 40 minutes of additional flight time at normal cruise speeds and altitudes.

#### Weight Increase Package

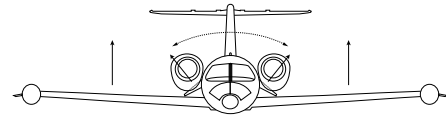
With the aerodynamic enhancements provided by Avcon Fins, maximum weight can be increased (with landing gear install pursuant to AAK 80-3 or equivalent).

- **Takeoff Weight:\*** 19,600 lbs (8890 Kg)
- **Landing Weight:\*** 16,000 lbs (7257 Kg)
- **Zero Wing & Tip Fuel Weight:\*** 14,500 lbs (6577 Kg)
- **Δ Useful Load:\*** + 1,200 lbs (544.3 Kg)
  
- **Fuel Capacity:** + 750 lbs (340.2kg)
- **Flight Time:\*\*** +40 minutes
- **IFR Range Estimates with Full Fuel:\*\*\***
  - Lear 35: > 2,100 Nautical Miles
  - Lear 36: > 2,800 Nautical Miles

\* Max Weight Estimates for Learjet 36/36A with Avcon R/X Weight Increase package. Example figures only. Details for your Learjet may vary due to configuration and equipment, including landing gear. Please see your Learjet Airplane Flight Manual and Pilot Training Manual when determining maximum weight figures.

\*\* Flight time increase is estimated for flight under normal conditions at cruising speeds, altitudes, and atmospheric conditions.

\*\*\* Range Estimates based on conservative extrapolation of data published in B / CA Annual Planning and Purchasing. True range may vary based on jet configuration and environmental factors such as weather and headwinds.



## Aerodynamic Fins

Avcon Fins eliminate the FAA dispatch requirement for operable yaw dampers. The aerodynamic strakes interact with the vertical stabilizer to create positive stability in all three axes and reduce drag by smoothing airflow around the tail cone area. The increased dispatch reliability and the enhanced stability (both in the landing phase and at high altitude) give the aircraft a solid and predictable handling profile.

At cruise airspeeds, Avcon Fins are aligned to provide aerodynamic stability when the aircraft attempts to stray from the intended line of flight (e.g. during turbulence). This "self-correcting" feature controls yaw and helps keep the aircraft on the step for optimal range performance. During landing and other low-speed maneuvers, Avcon Fins eliminate divergent dutch roll tendencies by providing additional lift and directional stability.





## Baggage / Air-Ambulance Door SA00415WI

**STC No. SA00415WI** installs a 13" Air Ambulance / Baggage Door immediately behind the existing airstair door. It expands the total cabin door width to 38 inches, an increase of almost 38%. This is ideal for air-ambulance and cargo applications.

The modification is available for the following King Air models:

- 90:** B90, C90, C90A, E90, H90 (T-44A)
- 100:** 100, A100 (U-21F), A100A, A100C, B100
- 200:** 200, A200 (C-12C), 200T, B200, B200T
- 300:** 300, 300LW, B300, 350



## Cargo & Airstair Door SA2192CE

Avcon Cargo Door / Airstair Door combinations are used worldwide for air-ambulance and cargo operations.

**STC No. SA2192CE** installs the King Air Cargo / Airstair Door Combination, manufactured by Beechcraft (the same door offered on new King Air's at the factory). STC No. SA2192CE is FAA and EASA approved for the King Air 200 series and 300 series.

The **52x52 inch Cargo door** is top-hinged and held open with gas springs, providing extensive maneuverability that assists heavy operations such as loading freight from forklifts or moving stretchers and equipment into or out of the cabin.

The **airstair door** is fitted inside the cargo door, and can be opened while the cargo door is closed - allowing easy adaptation between freighter and passenger configurations, without compromising the passenger experience.



## Interior Missionization

### Custom Solutions for Any Mission

Avcon has produced a variety of workstations, consoles, and equipment racks. Contact our sales team to create a customized solution for your aircraft.

#### Operator Consoles

We design and install custom operator consoles for special mission equipment. Operator consoles are fully integrated into the aircraft's avionics using custom plumbing, wiring, and power supplies.

#### Equipment Racks

Avcon also offers custom reinforced racks for secure attachment of heavy equipment/payloads. For example, Avcon developed a reinforced baggage subfloor structure to support large equipment racks, approved for a total payload of up to 300 lbs.



# Notes

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**Avcon Industries has completed over 300 STC projects.**

With in-house design engineering and FAA DER teams, on-site manufacturing capabilities, and expert installation technicians, Avcon is a one-stop-shop for virtually any special mission project or custom installation. We take great pride in delivering premium-quality service to customers around the globe.



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