BendixKing Buyer’s Guide

HSB 2019BK_O_03 CNI 5000 ADS-B Out Upgrade

CNI 5000 Integrated Avionics System
ADS-B Out Upgrade
(Rev 5 – Feb 6, 2019)

BendixKing is pleased to offer a mandate compliant solution for CitationJet models 525 & 525A and the Citation Bravo (model 550)

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Effective Dates: 6 Feb 2019 through 31 Dec 2019
Order Shipped by: 31 Dec 2019
Pricing: Catalog pricing

BendixKing
9201-B San Mateo Blvd. NE
Albuquerque, NM 87118
CNI 5000 Integrated Avionics System
ADS-B Out Upgrade

1. Introduction

1.1 Purpose of this Buyer’s Guide

BendixKing is pleased to offer the CNI 5000 Integrated Avionics System ADS-B Out Upgrade. This Buyer’s Guide provides information on the BendixKing CNI 5000 ADS-B upgrade for the CitationJet (models 525 and 525A) and the Citation Bravo (model 550). It describes the simplest way to upgrade a CNI 5000 equipped aircraft to be compliant with the United States January 1, 2020 ADS-B Out mandate.

1.2 Product Description

Why settle for an ADS-B solution that requires unnecessary downtime? The CNI 5000 ADS-B Out upgrade provides a direct replacement of the two KT 70 transponders with two of the popular KT 74 ADS-B Out transponders. This solution reuses the existing mounting trays, rack, and connectors, saving unnecessary downtime.

The CNI 5000 upgrade offers:
- ADS-B mandate compliance
- Slide-in replacement of existing transponders
- Minimal installation cost and aircraft downtime
- No rack modification required
- New custom panel overlay
- Consistent aesthetics in the cockpit
- Transponder bezel redesign specific to the CNI 5000
- Best value and lowest cost solution
- Quick turnaround time for service centers
- ADS-B weather and traffic sent wirelessly to a tablet

1.3 STC Certification

CitationJet 525 & 525A: AML STC (#SA00765DE) covers the ADS-B Out upgrade.

Citation Bravo (model 550 - Part 25): STC (#ST00892DE) covers the ADS-B Out upgrade and is available for purchase (see below for ordering instructions).
2. Equipment Guide

2.1 CNI 5000 Equipment

**ADS-B Out**

KA 96
WAAS GPS Antenna
071-01620-0001

KGX 150R
GPS/UAT Receiver
GPS Position Source
99000316-150
Remote mount

**ADS-B In** (Optional)

UAT Antenna
ADS-B In Traffic and Weather

Wi-Fi module
ADS-B In to tablet
89000016-002
Remote mount w/KGX

Custom front
Panel overlay
89000029-001

KT 74
Transponders
89000007-002002

Install KIt:
KT 74 – included with transponder
KA 96 antenna - 050-03729-0000
KGX 150R - 89000016-004
KGX Wi-Fi - 89000016-017

1. Field approval required for GPS antenna installation. See FAQ #9.
2. Field approval required for ADS-B In system and installation. See FAQ #10.
3. Pricing

Available in three configurations:
1. Panel overlay + KT 74 Transponders
2. Panel overlay + KT 74 Transponders + GPS
3. Panel overlay + KT 74 Transponders + GPS + Wi-Fi (ADS-B In)

Valid through June 30, 2019

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STC Availability:
- CitationJet 525 & 525A – Part 23 AML STC is available for use by authorized dealers.
- Citation Bravo (model 550) – Part 25 STC is available for purchase from BendixKing. The list price is $1,000. See Section 6 below for purchasing instructions.
### ADS-B Upgrade w/o GPS

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### STC Availability:

**CitationJet 525 & 525A** – Part 23 AML STC is available for use by authorized dealers

**Citation Bravo (model 550)** – Part 25 STC is available for purchase from BendixKing. The list price is $1,000. See below Section 6 for purchasing instructions.
4. Technical Characteristics

**KT 74 Mode S ADS-B Out Transponder**
- Characteristics:
  - Dimensions: 6.3” W x 10.7 D x 1.7” H
  - Weight: 2.98 pounds
  - Type: Class 1 Mode S Level 2 ELS
  - Supply voltage: 11-33 VDC
  - No fan required
  - Nominal transmitter power: 240 W at connector
  - Current consumption at 14V: Idle: 0.22A, Active: 0.45A
- Certifications:
  - TSO-C166B
  - DO-160G
  - DO-181E
  - DO-260B
  - DO-178B Level B
  - DO-254 Level C
  - Class B1S
  - STC approved in accordance with AC20-165A

**KGX 150R WAAS GPS and ADS-B In Weather/Traffic Receiver**
- Characteristics:
  - Dimensions: 5” W x 5.75” D x 1.7” H
  - Weight: Less than 1 pound
  - Transponder interface: Mode A/C Mode S
  - Inputs: 2 ARINC 429, 1 RS-485, 4 discrete
  - Output: 1 ARINC 429 4 RS-232/422, 2 discrete
  - Input voltage: 10-40 VDC
  - Input current: 0.2 A 12 VDC
  - Output voltage: 6.5 VDC
  - Output current: 350 mA
- Certifications:
  - TSO-C157A (FISB)
  - TSO-C195A (TIS-B)
  - TSO-C154C (UAT)
  - TSO-C145C (For GNSS)
  - DO-160G
  - DO-178B Level C
  - DO-254 Level C
  - STC approved in accordance with AC20-165A
5. FAQ

1. What models is this available for?

   The upgrade is available for CitationJet (models 525 and 525A) and the Citation Bravo (model 550).

2. Which STC covers the installation of the ADS-B Out system upgrade for the CNI 5000?

   CitationJet 525 & 525A – AML STC #SA00765DE
   Citation Bravo (model 550) - STC #ST00892DE

3. What is the cost for the STC?

   CitationJet 525 & 525A – this Part 23 AML STC is available for use by authorized dealers at no cost.
   Citation Bravo (model 550) – this Part 25 STC is available to purchase for $1,000.

4. Are the STCs validated outside the United States?

   STC #SA00765DE (models 525 & 525A) – Mexico, Canada (March 2019), Argentina
   STC #ST00892DE (model 550) – Mexico, Canada

   Any additional approvals are region specific and will be handled on a case by case basis.

5. The Bravo model 550 STC lists KT 74 part number 89000007-0002002 but I can only order part number 89000007-002002 on Aviall.com. Is that an issue?

   No. The orderable part number 89000007-002002 is a kit that consists of:
   - KT 74 Transponder – p/n 89000007-000002 – QTY 1
   - KT 74 Installation Kit – p/n 89000007-001001 – QTY 1
   - KT 74 Pilot Guide – p/n D201308000036 – QTY 1
   - Authorized release certificate
   - Certificate of conformity

6. What should I expect the installation time to be?

   The replacement of the transponders does not require any changes to the rack and requires only minimal changes to the wiring harness. The front panel is custom designed to mount to the existing rack utilizing the six ¼ turn connectors. The installation of the antennas (WAAS GPS and UAT for ADS-B In) is more involved as it requires adding the antennas to the fuselage and running wire to the transponders. For a complete installation, expect roughly 110 - 130 hours. For installations that
exclude the UAT antenna and Wi-Fi module (optional ADS-B In), expect about 80 hours. All installation times are estimates, actual times may vary.

7. Which GPS antenna is required for the installation?

Per the STC, BendixKing part number 071-01620-0001, KA 96 WAAS GPS antenna, is required for an ADS-B Out compliant installation.

8. Which UAT antenna is required for the optional ADS-B In installation?

BendixKing recommends the Comant antenna, part number CI 110-60-30. However, any antenna that meets the STC requirements may be used. The STC requirements are, “The KGX 150 Receiver requires a TSO-C66, C74, C112, or C154 Ultra High Frequency (UHF) antenna(s). Ensure that the antenna has 50Ω impedance with a Voltage Standing Wave Ratio (VSWR) < 1.7:1 at 978 MHz.”

9. Is approval required for the installation of the GPS antenna?

The GPS antenna installation will need to be field approved. From the STC, “3.3. GPS Antenna – The installation of the GPS antenna requires that the antenna mount is structurally approved. Details related to the footprint of the approved GPS antenna are included in Section 3.3.2. This STC does not include instructions for installing the GPS antenna onto the pressure vessel of pressurized aircraft. The GPS antenna must be installed per an approved means (separate TC, STC or 337 field approval). Contact Textron Aviation or Peregrine for approved antenna mounting service options.”

10. Is approval required for the installation of the ADS-B In system (UAT antenna and ADS-B In functionality of the KGX 150R)?

The UAT antenna installation will need to be field approved. From the STC, “This STC does not include the introduction or implementation of the “ADS-B In” functionality of the KGX 150 Receiver. This STC covers installation and integration with the KGX 150 Receiver for use of the equipment as a GPS/WAAS position source for the KT 74 transponder. Integration of the equipment as part of an “ADS-B In” system and installation of the GPS/WAAS and UAT antennas must be addressed per an approved means other than this STC (separate TC, STC or 337 field approval).”

11. Is approval required for use of the Wi-Fi module?

The Wi-Fi module has been successfully classified as carry-on equipment and been remote-mounted in a location readily accessible to the pilot.

12. How does the KT 74 transponder receive the GPS signal?

The remote mounted KGX 150R GPS receiver is the ADS-B compliant GPS source for the KT 74 transponders. Optionally, the Wi-Fi module coupled with the UAT antenna provides ADS-B In weather and traffic that can be displayed on a tablet using the software application of your choice.

13. Is the KT 74 transponder single or dual band?
The KT 74 ADS-B Out transponder is single band, operating on the 1090 MHz frequency. The UAT option receives ADS-B In information on 978 MHz.

14. How is the ADS-B In information received (weather and traffic)?

Traffic broadcasting on 978 MHz is received directly via the UAT antenna (air to air). Weather and 1090 ES traffic information is received from the ground station rebroadcast by the optional UAT antenna on the 978 MHz frequency. This information can be sent to a compatible tablet via the optional KGX Wi-Fi module.

15. Is the KGX 150R TSO 195b certified?

Yes.

6. Ordering Information

To order products referenced in this Buyer’s Guide, please contact your local BendixKing dealer. See https://support.bendixking.com/dealer-search to locate the dealer nearest your location.

The BendixKing sales team contact information can be found at the following link: www.bendixking.com/en/sales-team.

7. Terms and Conditions

BendixKing reserves the right to rescind or revise this guide or modify through future sales bulletins and/or buyer’s guides.

8. Contact Information

Please contact your local BendixKing Area Sales Manager if you have any questions regarding this guide or need assistance.

The BendixKing sales team contact information can be found at the following link: www.bendixking.com/en/sales-team.