ROCKWELL COLLINS PRO LINE 21 AVIONICS SYSTEM

Smart avionics for the Beechcraft King Air 350, B200GT and C90GTi.

Achieve a new level of situational awareness and operational efficiency. With Pro Line 21, superior information comes standard.

With Pro Line 21, your focus is where it needs to be – on flying the aircraft. Our fully integrated flight deck for the Beechcraft King Air 350, B200GT and C90GTi offers operators a new level of functionality and situational awareness. Integral to the system are the Integrated Flight Information System (IFIS), next-generation Flight Management System (FMS), outstanding dispatch reliability and superior display graphics technology.
Reducing pilot workload while increasing situational awareness

Combining the latest-technology sensors and displays in an integrated package that is smaller and lighter than traditional avionics, Rockwell Collins Pro Line 21 offers a real breakthrough in pilot workload reduction and situational awareness.

“Big picture” integrated displays
The superior graphics capabilities of our Pro Line 21 large-format Adaptive Flight Displays (AFDs) enable all essential flight situation inputs – including attitude, heading, airspeed, altitude, vertical speed, engine indicators, flight control, annunciation and navigational graphics – to be incorporated in one easy-to-scan, integrated picture. At the press of a button, turbulence-detection weather information, traffic, terrain, lightning or other proximity/alerting inputs can also be overlaid on a multifunctional display. In addition, an automated Maintenance Diagnostic System (MDS) provides instant access to status reports on key aircraft systems, helping to reduce unscheduled downtime and costs.

More innovations in automation
Other important package highlights include the dual Rockwell Collins AHS-3000 Attitude Heading Reference Systems (AHRS). These advanced sensors use digital quartz-rate technology to replace electromechanical gyros – thereby reducing system size and weight while increasing accuracy and reliability. Completing the package are the Rockwell Collins automatic flight control, digital air data and FMS-3000 systems. Together, these systems set a new benchmark for pilot workload reduction – providing full integration with multiple sensors and avionics to streamline flight deck management, accommodate growth, enhance situational awareness, and simplify direct-to-anywhere flight planning and navigation.

STANDARD FEATURES

- Three AFDs
- Dual flight director
- Integrated Flight Information System (IFIS)
  - Enhanced map overlays
  - Electronic charting
- Fail-passive autopilot
- Single FMS-3000
- Single Global Positioning System (GPS) sensor
- Dual solid-state AHRS
- Dual digital air data computers
- MDS
- Dual Mode S transponders
- IAPS
- RTU-4200 radio tuning unit
- Control display unit
- Pro Line 21 Communication, Navigation and Surveillance (CNS) sensors
- Radio altimeter
- TAWS
- Turbulence-detection weather radar (B200GT and 350)
An integrated approach to flight deck efficiency

At Rockwell Collins, we understand the need for greater flight deck efficiency, flexibility and situational awareness. That’s why the Beechcraft King Air 350, B200GT and C90GTi, the most successful line of twin turboprops in business aviation, are outfitted with our full Pro Line 21 avionics package. As a result, these flight decks have taken a major leap forward with the next generation of avionics technology, performance and systems growth capabilities. Our system integrates flight information into intuitive, easy-to-interpret menu formats with safety-enhancing reversion capability and future growth built in. For easy scanning and optimum situational awareness, all primary flight, navigation, engine and sensor data are graphically presented on the system’s three large 10 x 8-inch Liquid Crystal Displays (LCDs).

The ability to access critical flight information at a moments notice is essential in any situation. With our IFIS, pilots have real-time access to a virtually endless array of information in easy-to-understand formats. Now, information that would otherwise only be shown on multiple sources – or even in printed books – can be presented on an aircraft’s Multifunction Displays (MFDs).

Fully integrated with all on-board avionics sensors, the standard pilot and copilot Primary Flight Displays (PFDs) are paired with an enhanced central MFD, Rockwell Collins FMS-3000 Flight Management System and a centrally positioned Radio Tuning Unit (RTU) to streamline and automate input functions. All of which deliver greater situational awareness, efficiency and performance.

In addition, the system’s modular IAPS-3000 Integrated Avionics Processing System – which is half the size and weight of previous-generation equipment – makes it simple to upgrade or reconfigure functions and inputs as airspace requirements evolve. So, it’s easier than ever to outfit your King Air flight deck with tomorrow’s technology.

Primary flight displays
Large-format PFDs come standard at each pilot position on the King Air 350, B200GT and C90GTi flight decks. These active matrix LCDs use advanced graphical capabilities to provide intuitive, at-a-glance situational depictions for all phases of flight. Bezel-mounted buttons enable menu selection of full compass rose, partial arc or map navigation format.

Multifunction display
Augmenting the flight information on the PFDs, the central MFD provides primary and secondary engine information, system synoptics, checklists and navigation data – including planning maps, present-position maps and heading. Terrain, traffic, lightning, weather radar and other sensor information can also be displayed. In addition, the MFD functions as a reversionary display for the PFD.

NAV overlays
Pro Line 21’s enhanced mapping capabilities and integrated architecture enable pilots to overlay a number of safety-enhancing visual aids, including Terrain Awareness Warning System (TAWS), on the standard flight display. Flight progress can be monitored on various map displays, with pilots selectively integrating such data as desired track, winds, time-distance-bearing to next waypoint, waypoint identifiers, estimated time of arrival, etc., to maintain a complete picture of the current navigation situation.
**Advanced flight management has never been so simple**

**IFIS electronic charts**  
Rockwell Collins IFIS replaces heavy and bulky printed charts with large-format, high-resolution electronic charts. Now, critical departure, arrival, approach and airport information is instantly available to the flight crew.

**Integrated Flight Information System**  
Our Integrated Flight Information System (IFIS) sets the industry standard for system integration, quantity and quality of information presented while enhancing situational awareness, reducing pilot workload and improving overall flight deck efficiency. Fully integrated with the FMS, information such as georeferenced aircraft position is overlaid on the system’s electronic charts and airport diagrams, allowing flight crews to monitor actual aircraft position. As a result, operating in low visibility conditions at night or at unfamiliar airports becomes much easier and intuitive.

To take it one step further, we pioneered Chartlink™, an application that automatically updates and reconfigures chart information. Chartlink automatically loads the needed charts and links FMS flight plans with IFIS for the planned flight. For example, if weather causes a last-minute flight plan change, instead of requiring flight crews to manually search through chart binders, Chartlink provides an updated set of charts at the touch of a button.

**FMS-3000 Flight Management System**  
Rockwell Collins FMS-3000 combines workload-reducing automation on the flight deck with true multisensor navigation capability. The result: seamless takeoff-to-touchdown flight guidance, direct-to-anywhere simplicity and unprecedented eyes-up display capability. Integrated as part of our Pro Line 21 IAPS, the FMS-3000 synchronizes operation of all lateral and vertical flight plans, supports time/fuel planning, and automatically flies en route, terminal and approach procedures (as well as providing missed-approach guidance) – while offering graphical map support, automatic FMS-to-Instrument Landing System (ILS) transfers and steering/pitch commands to the autopilot.

Full-profile, coupled or advisory VNAV capability offers complete lateral and vertical navigation programming and automation for all phases of flight. This VNAV tracking capability ensures that altitude and speed constraints are met at waypoints or step-down fixes, speed limits at altitudes are honored and the vertical flight profile, as specified by the pilot, is followed precisely.

**FMS-3000 CDU**  
Offering a variety of advanced flight planning and navigation capabilities specifically tailored to the King Air 350, B200GT and C90GTi aircraft, the Rockwell Collins FMS-3000 offers pilots a whole new level of awareness and control. The system’s architecture anticipates emerging air traffic management requirements, computing optimum navigation solutions based on GPS, VOR, DME and other available sensor inputs.
Second FMS
Installation of a second FMS-3000 provides the redundancy and reliability required for enhanced dispatch capability. The second system enhances crew resource management by allowing independent operation by each crew member. For convenience it may also be synchronized with the pilot-side FMS.

LPV Approaches
Upgrade your FMS 3000 to include thousands of Localizer Performance with Vertical Guidance Approaches (LPV) in the United States and Canada. An LPV upgrade will provide decision altitude minimums as low as 200 feet with 1/2 mile of visibility similar to Category I ILS approaches. LPV takes advantage of the Wide Area Augmentation System (WAAS) in the United States and Canada, dramatically improving the GPS’s performance as measured by accuracy, availability, and integrity.

Uplink graphical weather
Uplink graphical weather provides the ability to display ground-based weather information on the multifunction display. Uplink weather products are available from two providers, Universal and XM Weather.

- XM Weather is provided on satellite-based uplinks and decode by a dedicated XM satellite receiver. XM products include NEXRAD imagery (1NM resolution), graphical and textural METARS, textural TAFs, graphical and textural SIGMETS, and textural AIRMETS. Latest additions to XM weather offering include infrared composite image, winds aloft, lightning, and temporary flight restrictions. Service available in Continental United States (CONUS) only.
- Universal Weather is a VHF-uplink-based data product accessed via the optional Rockwell Collins VHF data link hardware. Products include NEXRAD imagery (7 NM resolution), graphical winds, temperatures, turbulence and icing forecasts, graphical METARS, tops and Movement Charts.

Data link
Our data link system consists of a third VHF-4000 radio and the addition of communications management function in the Radio Interface Unit. Data link provides timely and reliable communications. It supports air traffic management, weather services through Universal Weather and aircraft operational communications as well as future growth as CNS/ATM evolves.

High Frequency Communication System
Our industry-leading HF-9000 High Frequency Communication System provides communication capability in oceanic and remote regions. The system provides 175 watts peak envelope power voice communications in the 2.000 to 30.000 MHz frequency range. Optional Selective Calling (SELCAL™) alerts are provided to the crew when the aircraft is being contacted.

Second DME
Our DME-4000 Distance Measuring Equipment receiver/transmitter provides complete DME information from three ground stations simultaneously. A second DME provides redundancy and the ability to cross-check navigational information. It also provides additional information for the FMS to use in calculating aircraft position.

Elementary Mode S (Flight ID)
In support of European mandated Mode S transponder capability for IFR flights, our TDR-94D Mode S transponder, RTU-4200 and the CDU-3000 are available with the Mode S Elementary Surveillance feature.

Automatic Direction Finder (ADF)
This can be added by replacing the NAV-4500 with a NAV-4000, which includes an ADF receiver in addition to VOR/ILS/Marker Beacon receivers. Our ADF receiver enables the flight crew to cross-check navigational information and has a frequency range of 190.0 to 1799.5 kHz, selectable in 500 Hz increments.
Global service and support from a trusted source.

Total service solutions you can count on. From initial delivery and throughout your King Air’s life cycle, we are here with comprehensive service and support solutions. Backed by our worldwide support network, we offer customized solutions from options that include performance-based maintenance and repairs, engineered solutions, provisioning, rental exchange, training and simulation solutions, all backed by the best turnaround times in the industry. Rockwell Collins delivers reliable solutions, anywhere, anytime – every time.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronics solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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