

Pro Line 21™ Major Retrofit for the King Air B200

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Prepare your aircraft for operational changes in the global airspace environment with our Pro Line 21™ retrofit avionics system.

Since its introduction, Pro Line 21 has become the industry standard for turboprop and turbine powered aircraft. In fact, today over 5,000 aircraft, and growing, fly with Pro Line 21 avionics. No matter where in the world they fly, each of those aircraft is backed by the industry's largest and best support organization with 22 service locations and more than 78 customer service engineers around the world.

Now you can enjoy that same high level Pro Line 21 performance, capability and support in your retrofitted aircraft. It's like buying a brand new airplane at a fraction of the cost. And because this is a Rockwell Collins package — our ongoing support is assured.

The biggest advantage to the Pro Line 21 Major Retrofit Program is that it's a complete avionics solution. The product family will receive continual improvements and upgrades that will ensure your system is always on the leading edge. That saves you time and money today, while maximizing the capabilities and value of your aircraft well into the future.

**Rockwell
Collins**

Building trust every day

SEAMLESS INTEGRATION OF AVIONICS COMPONENTS

Your aircraft will deliver the functionality, capabilities, reliability and the look of a brand new airplane. All the while, keeping the airplane you know and are comfortable with. A reduction in weight, greater than 100 pounds dramatically improves payload capabilities. It's the best of all worlds.

Another advantage of selecting the Pro Line 21 major retrofit package for your current aircraft is the seamless integration of avionic components and elimination of legacy wiring issues. The Pro Line 21 package includes all new wiring so there are no lingering issues with old wiring, corrosion, broken shielding or legacy splices.

KEY BENEFITS FOR PRO LINE 21 MAJOR RETROFIT

The typical Pro Line 21 major retrofit package includes:

- Three 8 x 10-inch LCDs with advanced graphics
- Wall to Wall ADI presentation
- Engine Indication System (EIS) on PFD or MFD
- All digital CNS radios with dual Comm/Nav
- Dual transponders
- Single DME
- Flight Management System with WAAS GPS
- Digital Flight Control System with coupled VNAV
- Integrated Flight Information System (IFIS)
- Dual channel radio altimeter
- Dual solid-state Attitude Heading Reference Systems (AHRS)
- Dual air data systems (RVSM compliant)
- Solid-state radar with turbulence detection
- Maintenance diagnostics system
- DBU-5010E USB data loader with Ethernet interface
- Five year warranty

Typical Pro Line 21 major retrofit package options include:

- Second FMS
- Second DME
- Second NAV-4000
- TCAS 4000
- Single or dual HF-9000 radios
- Data link system
- XM weather (CONUS only) or Universal weather
- NTSC Video on MFD
- Ascend Information Manager Server
- Search and Rescue (SAR) FMS

ADVANCED SYSTEMS. SUPERIOR CAPABILITIES.

LARGE-FORMAT CONFIGURABLE PFDS AND MFDS

The introduction of large-format LCD displays with the ability to deliver more information in ways that improve understanding, awareness and safety has revolutionized the modern cockpit. That's why the Pro Line 21 major retrofit package features large-format, (8 x 10) liquid crystal adaptive flight displays. The clearest, sharpest, most advanced displays in the business. Now, critical flight information including graphical weather, EGPWS, TCAS, lightning detection, engine information, airport location and more are available to you at the touch of a button.

The Pro Line 21 configurable display solution allows operators to choose from a growing list of third party interfaces, alternate engine and prop configurations and installation of aftermarket airframe upgrades that alter fixed airspeed cues and impending stall speeds. Configurable Data Concentrator Unit's (DCU) also allow for digital and analog IO conversions that are often required for third party integration, often eliminating the need for adapters.

THIRD PARTY INTERFACES

Pro Line 21 major retrofit displays may be configured to interface with many third party products. Integration testing has been accomplished and verified on many products Below is a list of products that have been verified to properly interface:

- TAWS – Universal and L-3
- EGPWS – Honeywell
 - MK V, MK VII, MK VIII and KGP-850
- Lightning Detection
 - L-3 WX1000E
- Inertial Reference Sensors (IRS)
 - Honeywell Laseref III, Laseref IV, and Laseref V
 - Litton LTN-101
- TCAS II
 - Honeywell CAS-67/67A
 - L-3 TCAS 2000

There are many similar products in the market. To determine compatibility, please contact your Rockwell Collins Authorized Dealer.

FMS-3000 FLIGHT MANAGEMENT SYSTEM WITH LPV

The FMS-3000 system includes the advanced GPS-4000S WAAS-enabled GPS sensor – the same FMS found on a King Air OEM aircraft. Integrated with the Pro Line 21 suite, the system gives you the tools you need to safely and efficiently navigate through today's complex ATC network. The advanced functionality and ease-of-use of the FMS-3000 extends the operational flexibility and enhances your situational awareness by providing capabilities that are not available in prior-generation systems. These functions include an "Eyes Forward" presentation on the MFD, scratch pad data entry for reduced pilot workload, full flight phase, multiple way point vertical navigation, RNP navigation, LPV and more.

LPV

Rockwell Collins Pro Line 21 is supporting Localizer Performance with Vertical Guidance (LPV). LPV approaches are providing pilots unprecedented access to runways and airports that do not have an ILS or in some cases providing a valuable back up to the ILS. LPV approaches are also giving operators Cat 1 like approach minimums as low as 200' and half mile visibility.

RNP NAVIGATION

Required Navigation Performance (RNP) allows for reduced obstacle clearance and closer route spacing via onboard monitoring and alerting capabilities. Pro Line 21 navigation capability supports:

- RNP 10 and RNP 4 for oceanic and remote continental airspace, and;
- B-RNAV /RNP 5 (Europe), RNP 5, RNP 2, RNAV 2, RNP 1, RNAV 1 and P-RNAV/RNP-1 (Europe) for continental en-route and terminal airspace

RNP Navigation does not support RNP AR (Authorization Required) approaches.

FCS-3000 FLIGHT CONTROL SYSTEM

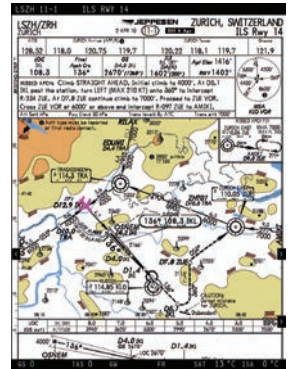
As autopilot certification costs are substantially higher than other avionics, most other solutions don't replace the older, less capable existing autopilot. The new generation FCS-3000 is the perfect complement to the Pro Line 21 avionics suite. The system features dual independent flight directors and a three-axis autopilot with automatic pitch control signals. But there's more to upgrading with the FCS-3000 than just replacing your worn out autopilot with a new digital system. The system not only reduces your workload, it delivers an exceptionally smooth ride for your passengers. The FCS-3000 provides a list of advanced features including high reliability from reduced parts count, coupled VNAV, Category II approach capability, RVSM compatible altitude tracking performance, extensive self diagnostics mode for reduced maintenance time, growth potential to provide on-going functionality and more.

ENGINE INDICATION SYSTEM

Configurable Engine Indication System (EIS) is baseline for Pro Line 21 King Air B200 operators. EIS is more than a replacement of the existing round dial gauges. Engine parameters can be configured to match the current Pilot Operations Handbook specifications for limitations and exceedances. This system continuously monitors Torque, ITT, N2, Prop RPM, Fuel Flow, Oil Pressure and Oil Temperature and alerts the crew with a flashing change in color whenever a parameter is outside the limits. Flight crew workload is reduced and safety is improved with Pro Line 21 Engine Indication System. Configurable Engine Indication System allows operators the flexibility to upgrade engines and props to take advantage of new designs. The engine configuration files are part of the STC.

ELECTRONIC CHARTS

IFIS provides high resolution electronic charts. Through integration with the aircraft GPS, the aircraft symbol can be displayed with geo-referenced approach, airport and airspace charts, allowing flight crews to monitor actual aircraft position. As a result, operating at night, in low visibility conditions or at unfamiliar airports becomes easier and more intuitive. Pan and zoom features, as well as selectable day or night mode operation, allows for easier viewing.



Paperless operation approval can be attained for a single MFD and single FSU solution when used with a Class I EFB. Paperless operational approval is achieved through your local certification office.

PROTECTING YOUR INVESTMENT TODAY AND TOMORROW

Rockwell Collins has an on-going enhancement plan for the entire Pro Line 21 family. This will provide you with an active upgrade path to ensure that the system you install today will be upgradeable to meet upcoming technology advancement and regulatory demands. With the Pro Line 21 Major Retrofit in your aircraft, you are assured of always flying with the best.

TRADE-IN CREDIT

A trade-in credit will be issued against the purchase of the King Air B200 Pro Line 21 Major Retrofit baseline equipment package upon Rockwell Collins receipt of the existing removed avionics equipment. The credit will be issued to the dealer after the existing equipment is received at the Rockwell Collins Wichita Service Center, 2051 Airport Road, Wichita, Kansas 67209, phone number 316-677-4808. Dealer acceptance of special pricing in this bulletin obligates the dealer to pass the applicable equipment trade-in amount to the aircraft end operator.

TERMS AND CONDITIONS

Unless otherwise noted, the programs listed are valid for orders placed between July 1, 2014 and December 31, 2014 with delivery requested by April 1, 2015. Warranty period for the new equipment within this program is five years and one year for modified equipment. Standard warranty does not apply to software.

BASELINE EQUIPMENT LIST FOR THE KING AIR B200^{1,2}

Type	Description	CPN	Qty
Flight Control System (FCS)			
FGP-3000	Flight Guidance Panel	822-1107-103	1
SVO-3000	Servo	822-1168-001	1
SVO-3000	Servo	822-1168-002	2
SVO-3000	Servo	822-1168-003	1
SMT-65	Servo Mount	622-5735-002	3
SMT-65	Servo Mount	622-5735-001	1
Electronic Flight Instrument System (EFIS)			
AFD-3010	Adaptive Flight Display	822-1084-421	2
AFD-3010E	Adaptive Flight Display	822-1753-421	1
DCP-3030	Display Control Panel	822-1828-061	2
CCP-3000	Cursor Control Panel	822-1746-001	1
Diagnostic System			
MDT-3110	Maintenance Diagnostic Tables	810-0042-221	1
DBU-5010E ⁶	Data Base Unit (USB/Ethernet)	822-3000-201	1
Radar System (WXR)			
RTA-852	Radar Transceiver (Turb)	622-8439-004	1
Aircraft Data Acquisition System (ADAS)			
DCU-3001C	Data Concentrator Unit	822-2362-003	4
Air Data System (ADS)¹			
ADC-3000	Air Data Computer	822-1109-132	2
Attitude Heading System (AHS)			
AHC-3000	Attitude Heading Computer	822-1110-002	2
ECU-3000	External Compensation Unit	822-1200-002	2
FDU-3000	Flux Detector Unit	822-1193-001	2
Radio Sensor System (RSS)			
ANT-462A	Single ADF Antenna	622-7383-001	1
VHF-4000 ⁷	VHF Transceiver	822-1468-110	2
NAV-4000	VOR/ILS/ADF Receiver	822-1465-101	1
DME-4000	Distance Measuring Equipment	822-1466-001	1
TDR-94D	Transponder	622-9210-309	2
ALT-4000	Radio Altimeter	822-0615-206	1
RTU-4220	Radio Tuning Unit	822-0730-461	1
NAV-4500	VOR/ILS Receiver	822-1579-101	1
GPS-4000S	GPS WAAS Receiver	822-2189-010	1

BASELINE EQUIPMENT LIST

Type	Description	CPN	Qty
Integrated Avionics Processing System (IAPS)			
FGC-3000	Flight Guidance Computer	822-1108-031	2
MDC-3110	Maintenance Diagnostic Computer	822-1987-006	1
CSU-3100	Configuration Strapping Unit	822-1363-002	2
OCM-3100	Options Control Module (EGPWS/LPV)	822-1484-228	2
ICC-3110	Integrated Card Cage	822-2190-001	1
IEC-3001	Internal Environmental Controller	822-1167-001	1
IOC-4110	Input/Output Concentrator	822-2065-001	2
IOT-4110	Input/Output Tables	810-0053-300	1
PWR-3000	IAPS Power Supply	822-1137-001	2
Flight Management System (FMS)			
FMC-3000	Flight Management Computer (LPV)	822-0883-053	1
CDU-3000	Control Display Unit with Flight ID	822-0884-491	1
Integrated Flight Information System (IFIS)			
FSU-5010	File Server Unit	822-1543-201	1
FSA-5000	File Server Application Software	810-0001-010 (Univ)	1
		810-0001-110 (XM)	1
ECH-5000 ⁴	Electronic Charts	810-0002-001	1
OVL-5000 ⁴	Geopolitical Overlays	810-0003-001	1
ECU-3000	External Compensation Unit	822-1200-998	1
MMT-5000	Mounting Tray (includes fan)	822-1811-004	1
Computer Based LPV Training (CBT) for Pilots⁸			
King Air B200 STC ^{3,5}		Place order using STC #SA10941SC	

AVIONICS OPTIONS FOR THE KING AIR B200

(SOME OPTIONS MAY REQUIRE EQUIPMENT UPGRADES FROM BASELINE EQUIPMENT LIST)

Type	Description	CPN	Qty	
Second DME				
DME-4000	Distance Measuring Equipment	822-1466-001	1	
Second ADF				
NAV-4000	VOR/ILS/ADF Receiver (Add)	822-1465-101	1	
NAV-4500	VOR/ILS Receiver (Remove)	822-1579-101	-1	
ANT-462A	Single ADF Antenna	622-7383-001	1	
Second Flight Management System				
FMC-3000	Flight Management Computer (LPV)	822-0883-053	1	
CDU-3000	Control Display Unit	822-0884-491	1	
Second GPS WAAS Receiver				
GPS-4000S	GPS WAAS Receiver	822-2189-010	1	
Search and Rescue (SAR) FMC				
FMC-3000	Flight Management Computer (LPV)	822-0883-054	1 or 2	
FMC-3000	Flight Management Computer (LPV)	822-0883-053	-1 or 2	
Traffic Alert and Collision Avoidance				
TTR-4100	TCAS Transceiver	822-3075-001	1	See TCAS II and Change 7.1 Marketing Bulletin (BRS-110082.6M) for information
TRE-920	TCAS Directional Antenna	622-8973-001	2	See TCAS II and Change 7.1 Marketing Bulletin (BRS-110082.6M) for information
IFIS- XM Weather (CONUS only)⁴				
GWX-3001	Graphical Weather	810-0058-001	1	
XMWR-1000	XM Weather Receiver	822-2031-002	1	
IFIS- Universal Weather (requires purchase of Data Link)⁴				
GWX-5000	Graphical Weather Application UW	810-0004-001	1	

Type	Description	CPN	Qty	
Data Link				
VHF-4000 ⁷	VHF Comm Transceiver	822-1468-310	1	
CMU-4000	Communications Management Unit	822-1739-003	1	
ECU-3000	External Compensation Unit	822-1200-999	1	
Video on MFD's				
OCM-3100	Options Control Module (EGPWS, and LPV)	822-1484-228	-2	
OCM-3100	Options Control Module (EGPWS, Video and LPV)	822-1484-314	2	
Ascend Aircraft Information Manager				
IMS-3500	Information Manager Server	822-2999-101	1	See Rockwell Collins Ascend Aircraft Information Manager - Pro Line 4 Marketing Bulletin IMBRS-110631.3M for information

NOTES

1. Rockwell Collins STC is capable of RVSM, please contact Aero Mech, Inc., for RVSM STC information.
2. A trade-in credit will be issued upon receipt of all applicable removed components (e.g. ADI/HSI/AHRS/ADC/FMS/Displays/Autopilot) as part of the Pro Line 21 King Air B200 Retrofit. Units need to be returned to Rockwell Collins, 2051 Airport Road, Wichita, KS 67209.
3. Rockwell Collins Authorized Dealers are responsible for any deviations from the King Air Pro Line 21 STC.
4. Charts, mapping and graphical weather features require subscriptions. Please reference Rockwell Collins Integrated Flight Information System (IFIS) Details and Procedures, 523-0810873 document via the Technical Publications website.
5. Place your order for the STC through Rockwell Collins Customer Account Administration.
6. Use Rockwell Collins AML STC #SA01430WI-D, to install the DBU-5010E.
7. Use Rockwell Collins AML STC #SA01636WI-D, to install the new VHF-4000.
8. Two sessions of on-line computer based pilot LPV training are available free of charge. Please contact the training registrar at 319-295-4672 or email trainingregistrar@rockwellcollins.com. Please contact your Rockwell Collins Authorized Dealer for more information.

SUBSCRIPTIONS

ELECTRONIC CHARTS

JEPPESEN

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Fax: 303.328.4124
www.jeppesen.com

ENHANCED MAP OVERLAYS

FMS and Data Base Support
400 Collins Road NE
Cedar Rapids IA 52498
Phone: 319.295.5000
Fax: 319.295.8757

XM WEATHER

XM Satellite Radio
Listener Care Center
Phone: 800.985.9200

How can we help?

Please call Rockwell Collins Customer Support at +1.319.295.5000.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronic 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.

For more information, contact:

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