The forward-scalable solution to meet your avionics modernization needs.

Flight2™

NEXT-GENERATION AVIONICS MANAGEMENT SYSTEMS

Rockwell Collins
Building trust every day
Our vision. Your avionics answer to ever-changing mission requirements.

In 1999, Rockwell Collins unveiled a new flight deck avionics system for the C/KC-135 Global Air Traffic Management program. We called this system Flight2™ — for the second century of flight. Traditionally, flight operations have focused solely on pilot “see and avoid” responsibilities for flight hazards related to navigation, terrain, traffic and weather. Flight2 advances traditional flight operations with an intelligent avionics system that not only automatically detects these hazards but provides complete situational awareness and hazard avoidance guidance for flight crews.

Flight2 transformed a federated system into a modern digital system and provided commonality with commercial aircraft. Its high degree of integration and commercial off-the-shelf (COTS) equipment offer a greater degree of:

- Direct lineage with commercial avionics development using common modules for the displays, control display units (CDUs) and processing centers
- Ethernet local area network
- Fault tolerance
- On-board diagnostics

Today, because of the flexible design of the Flight2 architecture, the system is as relevant as it was 20 years ago. Our next-generation Flight2 system continues to build upon that visionary architectural design, so you can easily and cost effectively upgrade your aircraft today with a flexible platform designed for future growth linked to commercial development.

Configurable solutions

Our evolutionary Flight2 system’s configurable architecture helps you maximize your budget while minimizing aircraft downtime. Flight2 seamlessly integrates new-generation displays and avionics with your aircraft’s legacy analog sensors, radios, autopilots and other systems. This integration brings a host of new capabilities to popular aircraft types, including the C-130, P-3, KC-135, KC-10, C-2A, E-3 and others.

Flight2 is based on Rockwell Collins’ Pro Line 21™ integrated avionics system — the most popular commercial retrofit avionics solution — giving you more installation options than any other system. Configurable solutions can begin with simple modernization of your aircraft’s Communications, Navigation and Surveillance (CNS) systems and end with the creation of the ultimate tactical avionics suite, including satellite communications, large-format digital flight displays, HUD/EVS, tactical situational awareness and more.

The Flight2 system delivers the most advanced capabilities available today, but with a foundation based on proven, scalable, all-digital architecture. With it, you can easily integrate emerging technologies and capabilities into your aircraft. We created Flight2 to address obsolescence issues while providing complete CNS/Air Traffic Management (ATM) capabilities.

When the goal is to cost effectively increase the safety, functionality and capabilities of your current fleet, the one solution is Flight2.
Stand-alone component upgrades
This approach addresses immediate needs such as communications, surveillance and/or obsolescence. You can choose to install any or all of the components as federated systems. For example: 8.33 V/UHF radios, traffic collision avoidance systems (TCAS), Mode S transponder, weather radar and electronic engine instrument displays.

<table>
<thead>
<tr>
<th>FM immunity</th>
<th>8.33 V/UHF radios</th>
<th>HF radios</th>
<th>TCAS 7.1</th>
<th>Mode S transponder</th>
</tr>
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<tbody>
<tr>
<td>WXR with wind shear detection</td>
<td>ELT</td>
<td>CVR/FDR</td>
<td>EIDS</td>
<td>Cargo ACLADS</td>
</tr>
</tbody>
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Integrated CNS/ATM capabilities
Flight2 provides a fully integrated avionics system to meet global civil airspace requirements. Key components include the Flight Management System (FMS), multi-function displays, GPS/EGI and a digital autopilot and flight director.

<table>
<thead>
<tr>
<th>GPS/EGI</th>
<th>Digital autopilot/flight director</th>
<th>ADC/AHS</th>
<th>ADS-B Out</th>
<th>TAWS</th>
</tr>
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</tr>
<tr>
<td>VOR/ILS</td>
<td>DME</td>
<td>CVR/FDR</td>
<td>SATCOM voice/data (a/c specific)</td>
<td>CPDLC/FANS 1/A (a/c specific)</td>
</tr>
</tbody>
</table>

Additional mission capabilities
The configurable Flight2 system enables you to increase its operational capabilities with additional mission capabilities as well as situational awareness and safety upgrades. From EFB/digmap, to head-up displays (HUDs) and Enhanced Vision System (EVS), to Link 16, Flight2 delivers incredible capabilities today while ensuring a path to future technologies and capabilities.

<table>
<thead>
<tr>
<th>ADF</th>
<th>DF</th>
<th>TACAN</th>
<th>ELT</th>
<th>EIDS</th>
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</thead>
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<tr>
<td>EFB digmap</td>
<td>SAASM</td>
<td>M-Code GPS/EGI</td>
<td>Anti-jam</td>
<td>Link 16</td>
</tr>
<tr>
<td>WXR with wind shear detection</td>
<td>HUD/EVS</td>
<td>SVS</td>
<td>Cargo ACLADS</td>
<td>FLIR</td>
</tr>
</tbody>
</table>

Mission, situational awareness and safety capabilities
Flight2 provides configurable avionics solutions based on your requirements and budget. From stand-alone components, to full CNS/ATM upgrades, to mission, situational awareness and safety capabilities, we have a proven solution to meet your avionics needs.

- CNS/ATM component upgrades
  - FM immunity
  - 8.33 V/UHF radios
  - HF radios
  - TCAS 7.1
  - Mode S transponder
  - WXR with wind shear detection
  - ELT
  - CVR/FDR
  - EIDS
  - Cargo ACLADS

- Full CNS/ATM capabilities
  - FMS RNP 0.3
  - PFD/MFD
  - GPS/EGI
  - Digital autopilot/flight director
  - ADC/AHS
  - ADS-B Out
  - TAWS
  - FM immunity
  - 8.33 V/UHF radios
  - HF radios
  - TCAS 7.1
  - Mode S transponder
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- Additional mission capabilities
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  - FLIR
Flexible, military-proven technologies ensuring optimum capabilities now and in the future.

Flight2’s integrated avionics suite gives military mission planners a no-compromise solution to meet both their tactical and civil operations requirements. At the heart of the system is a proven, open architecture that not only provides integration with current digital and legacy analog instruments and systems, it also ensures seamless modernization to newly emerging technologies.

Because Flight2 continues a long tradition of providing unparalleled functionality, reliability and value to military operators, the system ensures smooth civil airspace interoperability while meeting specialized mission demands. This works to save operators both time and money.

**Flight2 installation flexibility**

With Flight2, military aircraft operators have the widest variety of digital displays, avionics and control units available, from large-format liquid crystal displays (LCDs), to CNS/ATM communications, to the FMS. The open-system architecture of each Flight2 component gives you the flexibility to specify an avionics modernization solution that best fits your needs – along with the ability to integrate with legacy analog units.

**Flight2 displays**

Flight2 gives you the option of installing either 6-by-8-inch or 9-by-12-inch large-format LCDs. Proven in the most demanding commercial and military applications, these high-resolution primary flight displays (PFDs) and interactive multi-function displays (IMFDs) provide pilots with mission-critical information in familiar, easy-to-interpret formats.
Flight2 CNS/ATM

With its all-digital CNS/ATM units, Flight2 gives your flight crews the clearest, most accurate communications, ensuring compliance with global air traffic control.

Flight2 FMS

The CDU-7000 control display unit is the processing home of our powerful, integrated FMS. The FMS is driven by a proven complement of autonomous civil and military navigation sensors. This combination enables continuous precision navigation around the world, including an autonomous self-contained approach capability equivalent to a Category I ILS. In addition, the FMS automatically computes a variety of mission-related calculations, including search and rescue patterns and holding procedures for use in both civil and military airspace. The CDU-7000 also drastically reduces workload through automation. The NVG-compatible CDU serves as the primary mode control and status reporting interface with all major avionics subsystems, eliminating the need for inefficient remote control mode and tuning panels.

Enhanced system reliability you can count on

Legacy avionics can develop CNS/ATM performance issues that could compromise crew safety and mission success. Our next-generation Flight2 components are highly reliable, fully ruggedized and mission proven around the world.

Each Flight2 unit features a solid-state, all-digital architecture, which greatly reduces vibration- and shock-induced failures. Reliability and maintainability are further enhanced by state-of-the-art fault tolerance monitoring and full-time diagnostics to alert flight crews of any problems.
Not so much radical change as evolutionary gains.

Multiple aircraft. One proven solution.

When first introduced in 1999, Flight2 quickly became one of the world’s most popular avionics modernization solutions for military customers. More than 900 Flight2 integrated cockpits fly aboard a wide array of aircraft, including the C-130, P-3, KC-135, KC-10, E-2C, C-2A, E-3, HC-130H and HC-144A.

We developed Flight2 as an avionics solution that would evolve to take advantage of emerging capabilities and technology, ensuring that military customers would have the functionality their flight crews needed for mission success.

Today’s next-generation Flight2 tiered solution delivers true 21st-century capabilities while continuing the original system’s proven installation flexibility. Flight2’s all-digital displays and components easily integrate with the avionics already on board your aircraft, enabling you to systematically and effectively complete a partial or full avionics modernization program.

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**C/KC-135 Stratotanker**

*Unrestricted CNS/ATM compliance*

- USAF C/KC-135 419 a/c Awarded 1999, program complete
- Turkey KC-135 7 a/c Awarded 2010, program complete
- France KC-135 3 a/c Awarded 2013, program complete

**USAF/International C-130 Hercules**

*Unrestricted CNS/ATM compliance, growth for civil data links*

- France C-130 14 a/c Awarded 2016, on contract
- Morocco C-130 5 a/c Awarded 2016, on contract
- Pakistan C-130 16 a/c Awarded 2016, in flight test
- USAF EC-130 15 a/c Awarded 2013, in production
- U.S. Coast Guard 2 a/c Awarded 2012, program complete
- Other int’l. C-130 138 a/c Awarded 1997-2015

**E-2C Hawkeye**

*Unrestricted CNS/ATM compliance*

- E-2C Hawkeye 27 a/c Awarded 2004, program complete

**KC-10 Extender**

*Unrestricted CNS/ATM compliance*

- USAF KC-10 59 a/c Awarded 2013, program complete
Train them on the exact flight deck they’ll use in the cockpit.

One of the biggest challenges facing military operations is the speed at which their flight crews can be trained to use new avionics. To ease the transition, you can complete Flight2’s initial and ongoing training with our Virtual Avionics Procedures Trainer (VAPT).

The VAPT is the only system that operates on the same software and hardware found in the Flight2 cockpit. It’s the most cost-effective solution available that enables pilots to train on the equipment they’ll use in the aircraft. Not simulations or replications – the real thing. Pilots walk away from a VAPT session with the knowledge and confidence they need to safely operate in today’s active military operations environment.

With the VAPT, you have just one more element in your Rockwell Collins toolbox to ensure that Flight2 systems will meet your expectations now and well into the future.

### P-3/EP-3 Orion
*Unrestricted CNS/ATM compliance, growth for civil data links*

- U.S. Navy P-3C/EP-3: 165 a/c Awarded 2002, program complete
- South Korea P-3: 16 a/c Awarded 2013, program complete
- Greece P-3: 4 a/c Awarded 2016, on contract
- Chile P-3: 2 a/c Awarded 2017, on contract

### E-3 Sentry AWACS
*Unrestricted CNS/ATM compliance*

- USAF E-3: 31 a/c Awarded 2010, in flight test
- NATO E-3: 17 a/c Awarded 2010, in production
- France E-3: 4 a/c Awarded 2017, on contract
Building trust every day.

Rockwell Collins delivers innovative aviation and high-integrity solutions that transform commercial and government customers’ futures worldwide. Backed by a global network of service and support, we are deeply committed to putting our solutions to work for you, whenever and wherever you need us. In this way, working together, we build trust. Every day.

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