

feature

Hosted on an iPad, FlightPartner operates in tandem with UA's FMS, enabling two-way exchanges of flight plan data in all phases of flight.



# *CONNECTED AVIONICS SOLUTION* **BOOSTS MISSION PREPAREDNESS**

STORY BY AMY FREED STALZER

*UA'S FLIGHTPARTNER AND FLIGHTREVIEW ENHANCE  
INTERACTIONS BETWEEN OPERATIONS AND MAINTENANCE  
TEAMS AND THE FMS DURING ALL STAGES OF FLIGHT.*



*FlightPartner provides an EFB and connected avionics solution with interactive maps, charting and weather, and information layering.*

For business aircraft operators, being able to improve and simplify the pilot workflow so they can save time and focus on flying missions is invaluable. Universal Avionics is striving to meet that need for customers by providing a dependable and automated way of delivering data with its FlightPartner and FlightReview applications.

UA has designed FlightPartner and FlightReview to meet two fundamental objectives – to enhance mission preparedness, both on the ground and in flight, and to optimize the day-to-day operations and maintenance of aircraft. The company has positioned the two programs as the first phase of its FlightPartner Connectivity Ecosystem, which will ultimately tie together its various avionics solutions to give customers 24/7 access to services and data.

The company asserts that the FlightPartner Connectivity Ecosystem will deliver new levels of efficiency by cutting preflight planning time in half; seamless database updates in 70% less time; and immediate safety and performance-related insights from its connected avionics.

Following its announcement of the apps in October 2021, UA has scheduled its first aircraft installations of the product to be deployed to business jet and air transport customers in the second quarter of 2023, following extensive cybersecurity-related validations, according to Jean-Marie Bégis, Universal Avionics

director of product management and partnerships.

FlightPartner and FlightReview initially will serve as a connectivity gateway between UA's WAAS/SBAS-enabled FMS and the company's cloud apps and services, such as seamless database updates, smart flight planning support, and flight event awareness.

This initial entry-to-service configuration will deliver a connected FMS solution for improved pilot workflow, data access, and database integration, said Bégis, who noted that connectivity to other Universal Avionics systems will be added later. The ecosystem's capabilities will expand in stages to integrate with UA products such as the InSight Display System, an integrated flight deck solution, and UniLink CMU, with datalink capabilities.

### **FlightPartner and FlightReview: Key Features**

Hosted on an iPad and Wi-Fi-enabled, FlightPartner and FlightReview work together to streamline and enhance two-way interactions between the flight operations team and the FMS across all phases of a trip – preflight, in the air, and after the flight. With data gathered during each flight, they also generate powerful analytics for operators to optimize their flight operations and aircraft availability, both for individual aircraft and for entire fleets.

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## CONNECTED AVIONICS

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FlightPartner is tightly coupled to the navigation data of the FMS. Operators can use it to build, brief, and file a complete flight plan on their iPad using a graphical interface, upload it to the FMS upon aircraft power-up, and dynamically alter it throughout the flight, directly on their tablet.

The FlightPartner dashboard gives access to the EFB and other pilot digital assistant resources like the data hub, checklists, documents, notepad, and logbook. Features include interactive maps, charting and weather, and information layering. Users can overlay approach plates on the map, showing SIDs, STARS, geo-

referenced approaches, and taxi charts to help navigate in the air and on the ground.

When connected to ground infrastructure, FlightPartner facilitates access to accurate weather modeling products and radar forecast, displayed in horizontal and vertical profiles, to assist flight planning and operations. For example, it can prepopulate a flight plan with winds and temperatures aloft, saving valuable time and increasing efficiency.

FlightPartner's benefits also extend to maintenance personnel, as it manages database updates to the FMS. By automatically connecting with the operator's account on UA's UniNet, FlightPartner can upload the latest databases to the tablet and

ensure seamless and secure delivery of the databases to the onboard FMS at the appropriate time.

Accessible from the FlightPartner dashboard, the FlightReview app provides convenient access to flight events and reports.

Through FlightReview, UA delivers comprehensive aircraft data reporting for operations and maintenance crews at any time to review performance, pinpoint issues, and optimize operations. Whether it's fuel consumption, abnormal events, ensuring operational performance of en-route CPDLC communications, or other issues, FlightReview assists the operations team with accurate data, supporting tools, and analysis.

With FlightReview, data is exchanged between the FMS and the tablet, then automatically uploaded to UA's cloud-based infrastructure at the appropriate time, enabling flight departments to view and analyze the content specific to their operations from any location. The data collection leverages UA's years of experience with the FMS and its existing iFDR capabilities, allowing UA to assist its customers and its distribution network in troubleshooting events based on the data captured.

### Industry reception, next steps

Bégis said industry reception to FlightPartner Connectivity Ecosystem demonstrations held during AEA and NBAA events in 2022 was strong. UA received "a lot of extremely positive feedback about improving pilot workflow, as well as the ability to simplify the aircraft support life cycle and the value of pilot performance reporting," he said.



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“We want to make sure operators benefit from increased flight data analytics to improve aircraft safety and performance while becoming more acquainted with the day-to-day events occurring on the aircraft.”

UA has developed a way of addressing cyber activity in a Wi-Fi environment with a unique design that supports implementation across a wide range of aircraft. “From a cybersecurity perspective, there are pilot controls that enable them to control or shut down suspicious activity at any time,” Bégis said. Another appealing design feature for pilots in the cockpit is the ability for one or two tablets to interact with one or two FMSs. “The design can address a variety of FMS configurations, and you can have two pilots using the tools simultaneously,” he said.

Looking ahead, Bégis notes that UA will be adding even more interactivity between the FlightPartner and FlightReview apps and the FMS. “You can exchange fuel and weight and other important data. At the end of a flight, additional interactions occur, such as capturing aircraft parameters and flight-related data for flight logging and aircraft performance reporting. Our intent is that more aircraft operations data is made available that can be used for the FMS, support applications, trending and analytics,” he said.

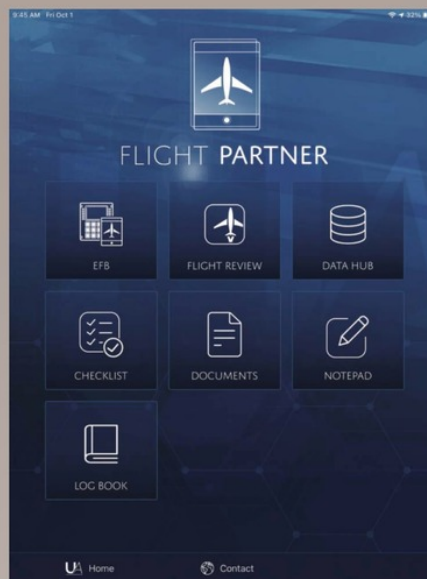
In future stages, the FlightPartner Connectivity Ecosystem will not only expand to encompass Universal Avionics systems like InSight and UniLink, but also support third-party partnerships that increase the range of data made available to operators.

“What we intend to do is work with partners to bring best-in-class data-driven apps and services to our customers,” Bégis said. “We’re working with several partners in the market so pilots can have access to any flight-planning tool, whether their own or others, within the connectivity ecosystem. We’re also looking to get into advanced performance integration with industry partners.

“This is a system designed to help operators do more, and we’re staying really focused on our UA customers.” □

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*To learn more about Universal Avionics,  
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## UA's Connectivity Ecosystem: At a glance

### FLIGHTPARTNER

Connected iPad to FMS flight planning app for all flight phases

### FLIGHTREVIEW

Comprehensive data reporting for flight-related operations

### COCKPIT OPERATIONS BENEFITS

- Optimized human-machine interface
- Convenient Nav database updates
- Connected, smart flight planning

### GROUND OPERATIONS BENEFITS

- Aircraft performance monitoring
- Dispatch reliability improvements
- Remote customer support