

Honeywell

THE POWER OF **CONNECTED**

WELCOME TO THE AGE OF THE CONNECTED AIRCRAFT



The Connected Aircraft

Honeywell is changing the way people communicate on and with an aircraft today and in the future — making the business of flying safer, more productive, and more entertaining.

Introduction

Connectivity, already transforming the world we live in, is revolutionizing the aerospace industry. The incredible amount of data generated in flight is changing the way an airplane operates, from takeoff to landing to maintenance, making it smarter and more efficient.

This revolution brings immense opportunity to increase an aircraft's flight efficiency, productivity and availability as well as reduce its operating cost, all while delivering a more comfortable, enjoyable, and safer experience for passengers.

Why Honeywell?

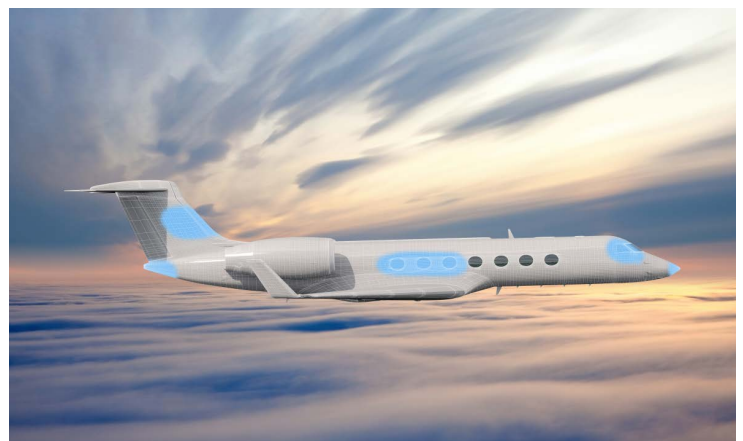
Honeywell has taken the lead in delivering high-speed Wi-Fi in the skies. Through acquisition and in-house expertise, no other company can match our extensive product portfolio, install base and “satellite to services, airtime to apps” offerings. We are differentiated by our breadth and depth of technologies, our expertise in avionics, mechanical components, and propulsion systems coupled with our leading position in satellite communications. This means we are uniquely placed to deliver and leverage the Connected Aircraft.

Safety and security are paramount at Honeywell; they are at the center of all we do. More than half of Honeywell's 22,000 engineers worldwide work on software, and cybersecurity is a key part of our software development process. Whether it's the avionics systems providing critical communications links to the ground or reliable mechanical systems that ensure an aircraft arrives safely at its destination, Honeywell is there to provide the tools and technology operators need.

Building upon this legacy of excellence, and leveraging our position in the Connected Aircraft market, Honeywell is protecting the virtual world as well, securing the large caches of data coming on and off the aircraft. Further, Honeywell is enhancing our efforts by developing a Cybersecurity Center of Excellence designed to support our customer's Connected Aircraft needs.

Benefits of the Connected Aircraft:

- Improve passenger comfort and safety
- Reduce pilot and flight crew workload
- Cut maintenance time and costs
- Lowers cost of ownership



Benefits: Owners and Operators



The Connected Aircraft revolutionizes business aviation – dramatically improving aircraft availability and cost of ownership. Access to real-time information enables directors of maintenance and aircraft managers to translate aircraft data into actionable metrics to improve efficiency and save money.

GoDirect™ Cabin Connectivity

GoDirect Cabin Connectivity is a suite of services and applications that allow business jet owners and operators to easily manage and control their satellite communications and connectivity network from an online portal or mobile device. Honeywell is the first to offer business jet passengers specific control of data flow, credit card and voucher billing for each personal device. In addition, the GoDirect Portal's new flight tracking feature can be synced with the GoDirect Network application to let operators and fleet managers maintain control of their connectivity services with real-time updates of the aircraft location, network health and data consumption. GoDirect Cabin Connectivity ensures passengers have seamless inflight Wi-Fi while helping operators control and save costs.

GoDirect Flight Planning Services

Honeywell offers a wide range of flight planning services to meet the needs of various aircraft types and fleets. From self-service to Flight Sentinel – a 24/7 concierge offering, Honeywell provides accurate flight plans designed for business aviation. Convenient access to our worldwide flight planning is available via the telephone, on the Internet, and through datalink communications. GoDirect Flight Services utilizes OEM aircraft performance data combined with the most current atmospheric forecasts to yield very precise fuel burn and time calculations on every flight plan we create.

GoDirect Connected Maintenance

Connected Maintenance solutions help keep an aircraft operations efficient – improving on-time performance and reducing delays. It translates aircraft data into actionable metrics to save money.

GoDirect Cabin Connectivity

SAVING UP TO

\$100,000

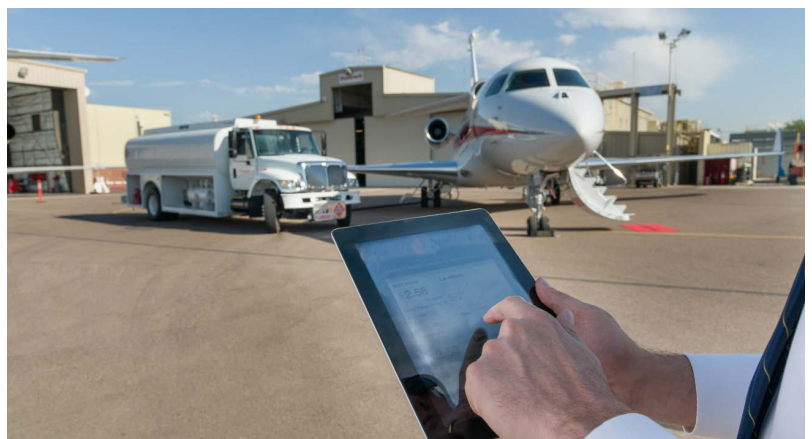
GoDirect Cabin Connectivity offerings help business jet operators gain control of connectivity services and usage, saving up to \$100,000 per aircraft annually.

GoDirect Flight Sentinel



“The service certainly pays for itself. With Honeywell Flight Sentinel™, you're getting dedicated professionals, 24/7. It's a must for any flight department that does not have an in-house dispatcher.”

Aviation Department Manager, CP Management



Benefits: Pilots & Flight Crew



The Connected Aircraft will provide the flight crew with more information about the flight environment than ever before. The following are some examples of the services and applications Honeywell is developing to benefit flight crews.

Weather

Our suite of weather related solutions including the Connected Radar and Weather Information Service enable flight crews to view, track and share weather data in real-time. This improves strategic maneuvering, thus reducing flight times and optimizing route miles ahead of bad weather.

GoDirect Flight Bag Pro

Flight Bag Pro is a premier global flight planning and electronic flight bag iPad app. Using this app, flight crews can create and file flight plans, calculate and compare aircraft cruise modes for optimal performance, access up-to-the-minute weather updates and airspace information, view airport approach plates, and more.

GoDirect Flight Preview

Applications such as Flight Preview, with its unique 3-D animated view increases a pilot's situational awareness around their destination airport and allows them to prepare visually and mentally for an approach like never before – making aviation safer.

Aspire Satellite Communication Systems

Honeywell's Aspire series provides cockpit voice and safety services for various aircraft types to improve overall safety of operations.

Connected Weather = Real Time Weather

 **Crowd Sourcing**
weather data from
aircraft ahead

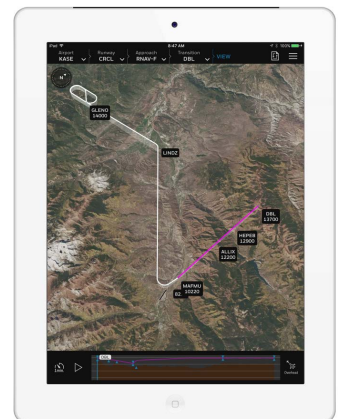
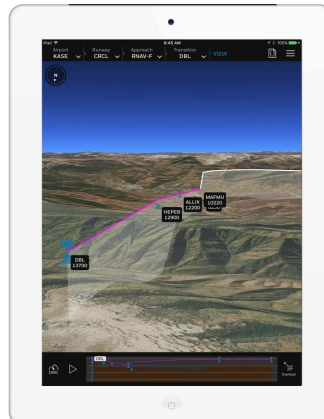
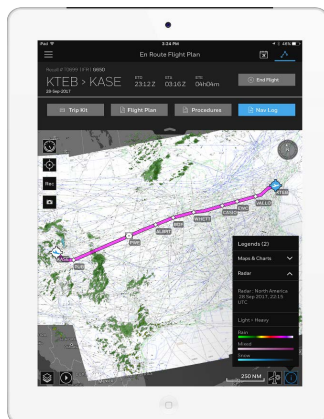
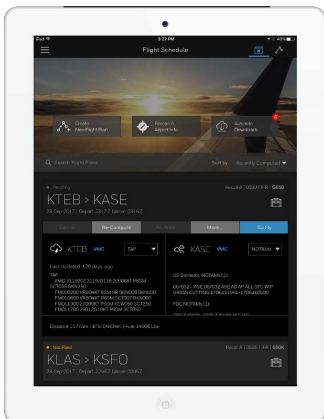
 **Fewer Bumps**
and fewer delays
equals happier
passengers

GoDirect Flight Bag Pro

 **Pilot Designed, Pilot Approved**

 **Up To 50%**
Time Reduction
in flight planning

 **Save Up To 12 Minutes**
per flight plan



Benefits: Maintainers



The Connected Aircraft makes work easier for maintainers and helps reduce aircraft grounded time.

Wireless Data Loading

Honeywell's Secure Data Gateway and CNX 900 router can enable wireless database loading while eliminating the need for multiple boxes, floppy disks, etc. Secure Data Gateway requires only one integrated unit instead of multiple data loading or interface units and keeps information secure with encryption, transmission and monitoring built in. The CNX 900 for aircraft equipped with Honeywell's Primus Epic avionics system can now remotely load their databases onto aircraft through Honeywell's GoDirect portal. Wireless data loading saves time and improves user experience for maintainers.

GoDirect Connected Maintenance

By applying big data techniques and connecting various data sources together, Honeywell can drive improved predictive analysis. This allows ground crews to identify components that will require maintenance or replacement before the components fail — and ensure spare parts are available, if needed, ready for installation when it does. For example, capturing and analyzing aircraft data on usage and wear enables auxiliary power units, wheels and brakes, and environmental control systems to be more efficiently inspected, undergo more rapid and streamlined maintenance processes, and realize lower costs.

MyMaintainer

MyMaintainer is an iPad application for the on-ground maintainers and as a web-based environment for maintenance specialists. The tool retrieves fault history database or aircraft condition monitoring files from the Honeywell Primus® Epic/Apex cockpits to help reduce troubleshooting and turnaround times.

Save time and money with GoDirect Connected Maintenance



Up to 35% Reduction
in inoperative equipment



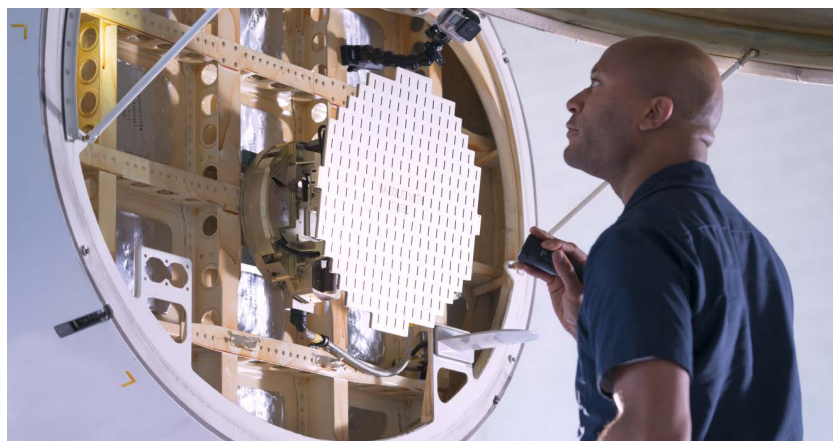
Reduces Maintenance and
Operations Costs

CNX 900 = 2-in-1 Solution



Wireless Database Loading
while serving the cabin connectivity
with one unit

* Included in savings outlined in Pilots & Flight Crew Benefits



Benefits: Passengers



The Connected Aircraft will bring significant benefits to the passenger as well. With shorter flights, more punctual departures, enhanced in-flight entertainment, connectivity and productivity as well as fewer in-flight bumps, all contributing to an improved passenger experience.

JetWave™

Honeywell's JetWave™ system exclusively powers Inmarsat's GX Aviation global high-speed Ka-band service. Designed to deliver 'home equivalent' connectivity, Honeywell can help airlines provide a consistently outstanding passenger experience all over the world.

GoDirect Cabin Connectivity

GoDirect Cabin Connectivity's suite of offerings including airtime services enable passengers to have the inflight Wi-Fi they need whenever they want. From checking emails to streaming movies, Honeywell offers service plans and support for all aircraft types.

Connected Weather

Through our Connected Weather solutions the flight crew can identify and avoid hazardous weather – making flights and the passenger experience smoother and safer.

GoDirect Connected Maintenance

Connected Maintenance solutions help keep an airline's operations efficient – improving on-time performance and reducing delays. Passengers will be able to complete their journeys on-time as scheduled.

Home Equivalent Connectivity



JetWave & GX Aviation delivers 10-100 times faster inflight Wi-Fi than other existing global networks



Office Equivalent Productivity and 'home equivalent' connectivity at 35,000ft – anywhere/anytime

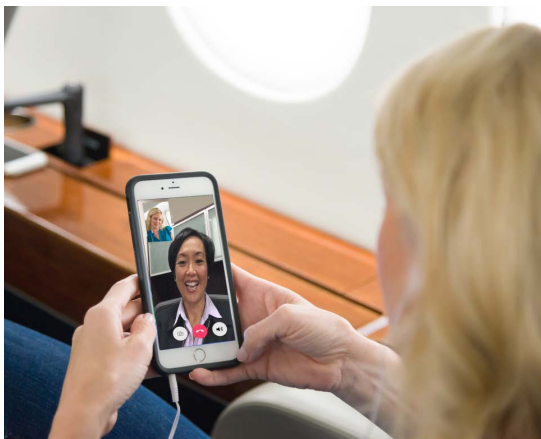
Smoother & Safer Passenger Experience



Connected Maintenance reduces aircraft ground time and improves on-time performance



Connected Weather Solutions means fewer in flight bumps for smoother passenger experiences



Honeywell Connected Aircraft Offerings:

Data Management

GoDirect Connected Loading
Database Loading

GoDirect™ Flight Support Services

GoDirect Datalink
GoDirect Flight Planning/GoDirect Flight Sentinel
GoDirect Flight Bag Pro
GoDirect Flight Preview
GoDirect Weather
GoFuel

GoDirect Cabin Connectivity Services

GoDirect Access
GoDirect Filter
GoDirect Global Mobile Data
GoDirect Media
GoDirect Routing Software
GoDirect Network
GoDirect Toolkit
GoDirect Data Control
GoDirect Connectivity Consultation
Airtime Services

Connectivity Equipment

Aspire Satcom Systems
Cabin Satcom Systems – JetWave™
Cockpit Satcom Systems for L-band and Iridium
CNX-900
Network Routing
Antennas
Recorders Transmitters
Secure Data Gateway

GoDirect Maintenance Services

GoDirect Connected Maintenance
MyMaintainer
Software & Data Analysis Services

Want to know what the Connected Aircraft can do for you and your operations?

Visit honeywellconnectedaircraft.com to learn more!

Honeywell Aerospace

Honeywell Aerospace is a global leader of integrated avionics, engines, surface systems and service solutions for aircraft manufacturers, airlines, business and general aviation, military, space and airport operations. We give you the power to protect and the technology to perform – even in the most challenging environments – while optimizing energy efficiency and product lifespan and increasing the productivity of critical assets in order to minimize maintenance costs.

All estimates on performance, operational benefits and cost savings provided within this document are based on Honeywell data.

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