CONNECTED DEFENSE

Connecting the Battlespace for Today’s Warfighter
The very nature of warfare has changed, and so has the way we engage adversaries on land, on sea, in the air, and across the information environment. What has not changed is Honeywell’s dedication to maximizing tactical readiness with autonomous and intelligent capabilities and services that protect warfighters in the field.

This is the age of Connected Defense. When it comes to mission success, there’s no substitute for seamless, reliable, fast and secure communication capabilities. Our technologies enable informed, reliable situational awareness to support command decision-making and peak performance of air, land and sea assets anywhere they are positioned.
Connected Defense delivers trusted data that commanders need to make informed decisions and the secure channels to communicate with warfighters and assets in the field. It enables mobile, ground and airborne C4I throughout the battlespace accelerating decision speed for mission effectiveness, improves situational understanding, reduces disruptions, and increases availability, safety and efficiency across all combat domains.

Honeywell Delivers Total Connected Defense Solutions
Honeywell has domain expertise, real-world experience and essential commitment to deliver Connected Defense capabilities that ensure a competitive edge for military operators. We’re the only end-to-end provider of proven connectivity hardware, software, services, applications and airtime. With Honeywell, you get the advantage of having an integrated solution provider with a proven record of performance under the most demanding conditions imaginable.

Connected Weapon Systems
We help you get connected, stay connected and realize all the operational advantages of fast, reliable onboard Wi-Fi in the cockpit and the backend crew, and much more. Connected technologies improve operational and mission performance by turning aircraft systems data into actionable information for flight crews, command post decision makers and maintenance chiefs. Honeywell is the leader in satellite communications solutions that enable the secure transfer of information on and off the aircraft.

With Honeywell, you get:

**Total Connected Defense Solutions**

- **Fleet Management**
  Capabilities that reduce operational disruptions by 35% and help you shrink operating, maintenance, and data-loading and retrieval costs.

- **Ground Operations**
  Improvements that reduce time spent on the ground and cut troubleshooting costs by as much as 25%.

- **Flight Operations**
  Enhancements that lessen network disruptions, turnaround times, and trim fuel costs by up to 5%.

- **Cybersecurity Protection**
  across weapon systems and supporting framework/processes.

- **Situational Awareness**
  Improvements that enable combat operations and provide reliable, secure onboard Wi-Fi with speeds up to 100 times faster than legacy connections.

Connected Defense Creates an Edge
JetWave™ - Fixed Wing
Honeywell’s JetWave satellite communications hardware connects pilots and passengers to Inmarsat’s Global Xpress satellite network for secure, fast and reliable communications anywhere. With JetWave and Global Xpress global Ka-band services, senior staff can access live video streaming of FLIR camera footage off the aircraft back to command post or mission control and access the internet, send and receive emails and large files, and view map displays, even on transoceanic flights. Flight crews can access real-time weather information and other critical data.

Aspire® - Fixed Wing and Helicopters
Aspire is our next-generation satellite communications system for high-speed flight deck connectivity. It’s smaller and lighter than comparable systems, making it ideal for fixed-wing and helicopter retrofits where size and weight are critical factors. Aspire connects to the Iridium NEXT or Inmarsat SwiftBroadband networks that enable live streaming, voice calls, push to talk, IM type communications via mobile applications and more. The system can also enable electronic flight bag applications to put relevant information at pilots’ fingertips. Aspire is available in several configurations and as a dual-hybrid system for line-fit installations.

Aircraft Data Gateway – Fixed Wing
Loading database and software updates is easy with the Aircraft Data Gateway, our integrated solution for wireless data transfer. Instead of multiple data loading or interface units, the gateway uses a single unit that keeps information secure, with encryption, transmission and monitoring built in. It’s ideal for transferring navigation and other mission-critical databases, loadable software and flight data. The gateway permits remote loading regardless of aircraft location and offers many other efficiencies compared to the way most data is moved on or off the aircraft today.

GoDirect Router – Fixed Wing and Helicopters
Honeywell’s GoDirect Router offers big performance in a small package. In the most important advancement in router technology in years, Honeywell has reinvented the airborne router – slashing size, weight and power consumption – without sacrificing any of the speed, performance or reliability. With the GoDirect Router, you get the first true distributed architecture for the connected aircraft.

CNX900 – Fixed Wing and Helicopters
The CNX-900 cabin network router offers passengers the luxury to send and receive emails, host video conferences and surf the web with a secure and wireless connection. It offers more bandwidth, giving everyone onboard more speed so that they’re able to download large files, stream videos and connect more devices to the internet.

Integrated Space Combat Systems
Honeywell’s integrated space and terrestrial systems can provide concurrent mission performance and security through:
• Crystal Bird modeling, emulation and simulation platforms.
• Trusted, secure communications and VISM 3D monolithic, high-performance SoC architectures.
• Highly integrated, custom microwave satellite payload solutions for failsafe, assured communications.
• Honeywell Sentience Big Data analytics for data-driven space cloud and mobile networks and systems.

Connected Systems - Get Connected
VIPER – Fixed Wing
The VIPER roll-on, roll-off, satellite communications terminal, paired with the Hatch-Mounted Inmarsat Antenna, enable C-130 and C-17 operators to quickly and easily equip aircraft with robust voice and data connectivity for any region of the world. It is ideal for real-time data exchange with missions in remote or challenging environments, including search and rescue operations and elite forces deployments and is optimized to work with Swift 64 and SwiftBroadband services.

Sky Connect® Tracker—Helicopters
The Sky Connect Tracker enables voice, data and position tracking via the Iridium network. Track mission progress and support the safety of personnel during hazardous operations. It enables near real-time tracking of aircraft status, 3D location, flight route and arrival time.

Health and Usage Monitoring Systems (HUMS) – Helicopters
Health and Usage Monitoring Systems (HUMS) for helicopters provide diagnostic information required for optimum performance. HUMS sensors and embedded diagnostic software monitor and communicate the health and maintenance needs of critical components. It increases aircraft availability, reduces maintenance costs, optimizes parts inventory management, enhances safety and more.

Honeywell offers a comprehensive suite of satellite communications airtime services and value added applications to deliver unparalleled connectivity and functionality to the military operator. From use of the satellite systems Iridium L-band, Inmarsat L-Band to Inmarsat Ka-Band, Honeywell has the connectivity solution for any mission application. Our suite of GoDirect services enables real-time Satcom communications, large file transmissions, in-flight briefings, weather updates and more.

Honeywell’s GoDirect services gives you the control by providing the tools necessary to put real-time data and information at the operator’s fingertips. From GoDirect Routing Software, GoDirect Fitering, and everything in between, Honeywell provides the most up-to-date information to increase safety and situational awareness for any mission.

We offer tailored packages for both helicopters and fixed wing aircraft. GoDirect airtime subscription services are available for any satellite communication hardware and provide solutions to help manage connectivity for the entire fleet. With GoDirect, you can customize services to best fit your mission needs.
Services – Experience the Advantages

**GoDirect™ Flight Analytics**
GoDirect Flight Analytics is part of our value-adding GoDirect portfolio of services and applications. GoDirect Flight Analytics uses “big data” to help military operators understand how their aircraft are using fuel and uncover opportunities to reduce fuel burn and enhance mission success. Using advanced data analytics to examine dozens of inputs, the software can provide additional fuel savings of up to 5 percent over current fuel efficiency programs.

**GoDirect Flight Optimization**
GoDirect Flight Optimization helps the flight crew make strategic, in-flight decisions about the aircraft’s vertical flight path. Part of the electronic flight bag suite of applications, this Honeywell application uses advanced algorithms and models to calculate the best possible flight profile using the latest wind, temperature and aircraft performance information. The result is additional fuel savings of up to 0.3 percent.

**GoDirect Weather**
Pilots can access the latest weather information along their entire route with GoDirect Weather from Honeywell. This electronic flight bag application provides real-time, trend and forecast weather information throughout the flight, giving flight crews all the information they need to make the best possible routing choices, avoid severe weather, enhance safety and reduce flight time and fuel consumption.

**GoDirect FMS Datalinks**
GoDirect FMS Datalink enables flight crews to uplink the latest wind and temperature information to their aircraft’s flight management system during flight. With this fresh data, the FMS can calculate the most efficient step-climb and cruise altitude along the route, saving pilot workload and reducing flight time and fuel consumption. Flying the optimal flight path can result in fuel savings of 50-250 kg per flight.

**GoDirect Connected Maintenance**
Advancements in the Industrial Internet of Things have enabled Honeywell to develop capabilities that go well beyond predictive trend monitoring. Honeywell Connected Maintenance improves mission effectiveness and reduces maintenance costs for military operators, using advanced data science. Connected Maintenance takes thousands of inputs and uses advanced algorithms to predict line replaceable unit failures long before they happen, helping maintenance crews stay ahead of the game and keep critical assets flying.

**GoDirect Ground**
GoDirect Ground services gives ground crews the tools they need to manage turnarounds and get aircraft back where they belong – in the air – quickly and efficiently. The software solution uses mobile devices to manage speed turnarounds, reduce flight delays by 22 percent and improve on-time performance by 30 percent.
Control and Navigation Suite
Military operators can improve operations and stay on schedule with Honeywell’s Control and Navigation Suite. The solution uses multiple systems and data sources to handle air-side and terminal-side operations. It helps staff members see the entire operation at a glance in real time, to make better decisions about passenger status, flow and queuing.

Vocollect™ - Connected Tech
Honeywell’s Vocollect is an innovative voice-recognition technology solution that improves the efficiency and accuracy of personnel conducting inspections and maintenance on the flight line or in the field. Vocollect provides instructions and checklists via an interactive headset and saves time by eliminating manual data entry.

Cybersecurity Solutions
Honeywell works hard to ensure that every product, software solution and application we provide has the best available, end-to-end security measures embedded. We use our unique expertise to develop and work alongside military leaders to protect the integrity of data coming on and off weapon systems. Our Cybersecurity Assurance Center supports many IoT domains enabling the range of functions that include vulnerability assessments through predictive analytics.

Intrusion Detection
Intrusion detection and prevention systems installed in a weapon system can monitor, detect and respond to known cybersecurity threats. Our security experts, augmented with artificial intelligence systems, continuously monitor security data and edge devices to discover and defend against new and emerging threats. Honeywell enables military users to assess the cyber vulnerability of an entire weapon ecosystem and respond proactively.
Honeywell – the Right Choice for Connected Defense

To learn more about Connected Defense solutions from Honeywell, visit:
honeywellconnectedaircraft.com