

Honeywell OneWireless Network



Honeywell's OneWireless universal mesh network supports multiple industrial protocols and applications simultaneously, providing a single wireless network that is simple to manage and efficient to operate. Supporting XYR™ 5000 and XYR 6000 wireless transmitters, along with 802.11-based devices and applications such as Honeywell's Instant Location System, this network delivers a global solution with robust security, predictable power management and multi-speed monitoring. This is the only wireless network you'll need for your industrial plant.

Honeywell's award-winning wireless transmitters are currently installed in over 500 industrial applications delivering real economic value, far beyond avoiding the wire cost. The breakthrough value lies in the ability to integrate data into control systems and advanced applications, while also sharing that data with other networked applications, to improve plant reliability and efficiency. In addition, combining wireless-enabled applications with a high-speed wireless network helps operators and field personnel respond quickly to pending safety risks.

The OneWireless network is:

- **Universal** – One network supporting many field protocols simultaneously
- **Simple** – One system to learn, operate and maintain
- **Efficient** – One platform enabling many applications with best bandwidth utilization and scalability

These key attributes provide the following benefits:

- Lowest initial cost – single plant wide infrastructure
- Lowest operational cost
- Most secure system
- Most reliable network – field proven for best uptime
- Most flexible and upgradeable system

Universal

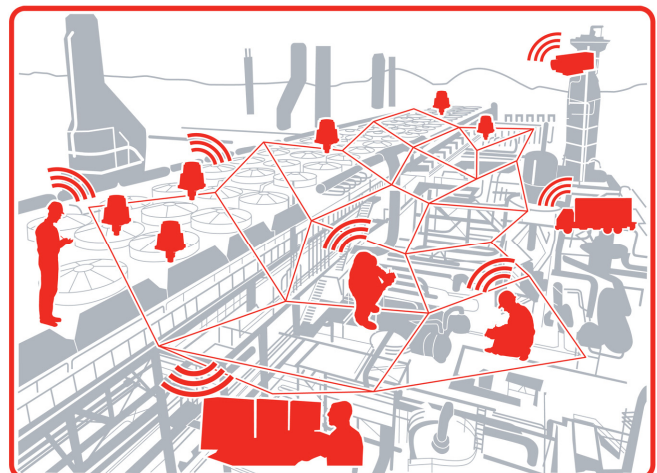
Multi-functional mesh: Single network supporting both sensors and 802.11 Wi-Fi applications for simple network management. With just one network required to support multiple applications, deployment, network maintenance and security management are simplified.

Open and global with multi-protocol support: Provide choices based on existing 802.11 standards and integration or co-existence with existing protocols for cost-effective solutions. This allows you to standardize on one wireless solution for world-wide facilities and enables connection to any plant system and inherently support transport of existing protocols.

Simple

Self-contained and predictable power management: Ensure uptime, day or night, with no additional devices and with optimal use of the 10-year battery shelf life. The OneWireless network uses multinode gateways, not the wireless transmitters, to form the backbone to allow independent field instrument reporting rates for optimal battery life.

End-to-end industrial security: Protect plant information and ensure safe operations with advanced communications encryption.



Efficient

Reliability and performance: Optimize performance with efficient use of ISM bandwidth and prioritizing messages so critical information is received first. With a high-speed and self-organizing mesh network, OneWireless delivers flexible channel allocation and a robust architecture with latency control and redundancy for safe wireless control.

In addition, signal interference is avoided by employing frequency hopping spread spectrum (FHSS). This technique modulates the data signal with a carrier signal that periodically "hops" from frequency to frequency across a wide band.

Scalable: Customize to your business needs, from a single sensor to a total in-plant network utilizing limited bandwidth.

Multi-speed monitoring: Meet plant condition monitoring needs for alarms and events with one-second updates and standard configurations.

Investment protection: Support and expand existing products with a solution ready for emerging standards. With multi-protocol, OneWireless allows connection to any plant system to continue benefiting from your current installation.

The Honeywell OneWireless network is formed with multi-protocol communication nodes, called multinodes, that create a managed, secure and redundant mesh network. Multinodes support both 802.11 and field sensor-based transmissions. The Multinode interfaces with Honeywell's PC-based Wireless Server, which offers configuration capabilities, network management, and OPC Server communications with your control system and applications. You may add subsequent multinodes to form a mesh that provides both 802.11 a/b/g wireless access point coverage as well as wireless field I/O coverage to provide a flexible remote communication solution.

Our flexible and open infrastructure allows manufacturers to take advantage of new and innovative applications as they arise. Current applications include:

Wireless field I/O transmitters – A comprehensive suite, including Honeywell's XYR family of transmitters, enables automated monitoring in areas where traditional hard-wired transmitters are too costly, difficult or time-consuming to implement. The XYR 6000 transmitter family includes devices or accurately monitoring gauge pressure, absolute pressure, differential pressure, temperature, and corrosion. The line also includes an analog input interface for adding wireless capabilities to 4-20 mA devices.

IntelaTrac PKS - An integrated software and hardware solution for wireless field data collection and intelligent asset management to automate operator rounds.

Mobile Station – View Experion Station graphics on a wireless tablet to extend access to critical process information, historical data, graphics and other key functions to the field.

Instant Location System - Integrates with the Experion® Process Knowledge System (PKS) to deliver real-time safety and security location information from across the plant where it can be used for security, mustering, and even as process variables for the control system.



Details

Network Architecture	
<ul style="list-style-type: none"> Integrated multi-functional 802.11 mesh network supporting handheld and sensor devices, including XYR 5000 and XYR 6000 wireless transmitters, IntelaTrac PKS, Mobile Station, real-time location applications and other 3rd-party devices Control ready with built-in redundancy and managed message routes 	
Network Security Management	
End-to-end security: WPA2, AES-based, device authentication, FIPS 140-2 based encryption	
Network Communications	
<ul style="list-style-type: none"> Frequency hopping spread spectrum Built-in sensor redundancy for assured communication Integrated 802.11 high-speed, self-organizing mesh network Class 1, Div 2 for general plant deployment Full performance, flexible channel allocation for plant wireless governance Up to 6 miles (10 km) multinode to multimode communication; sensor to multinode designed for over 2,000 ft (.6 km) 	<ul style="list-style-type: none"> Built-in read-write messaging for configuration and priority alarms - optimized performance for all functionality Radio receivers with high selectivity for co-existence Protocol tolerant to missing packets with automatic repeat requests Multi-speed monitoring – One second reporting with latency control and the ability to configure sensors on the same network at different rates
Network Protocols	
<ul style="list-style-type: none"> 2.4 GHz-based for use in facilities worldwide 	<ul style="list-style-type: none"> Open protocol - connects to any system
Sensor Power Management	
Self-contained and predictable power management designed for 10-year sensor battery life (rain or shine)	

OneWireless, XYR and Profit Suite are trademarks and Experion is a registered trademark of Honeywell International Inc. IntelaTrac is a registered trademark of SAT Corporation.

More Information

To learn more about Honeywell's wireless solutions, visit www.honeywell.com/ps/wireless or contact your Honeywell account manager.

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