

WirelessHART™



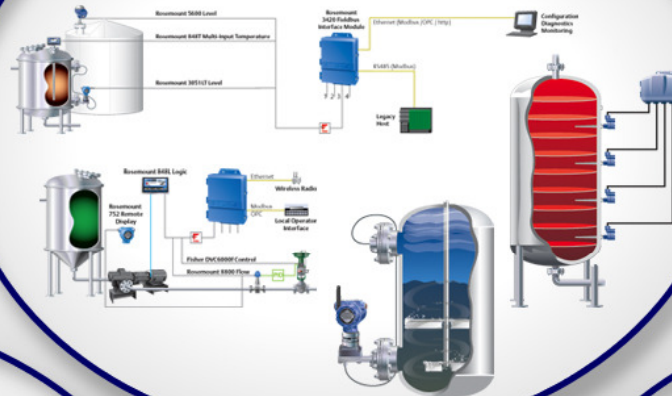
Reliable, robust, secure....and interoperable

- Channel hopping, self-organizing mesh with end-to-end encryption
- Optimized for low power process applications including control

Low barriers to adoption

- Backwards compatible with 30M HART devices
- Uses existing methods for engineering, asset management and system integration

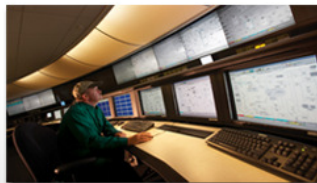
Designed for Process Control



Supported by global standards

- Based on IEEE 802.15.4
- Approved by HART Communication Foundation, HART 7.1
 - 210+ member HCF has 15+ years supporting the process industry
- Approved by the IEC 62591Ed.1)

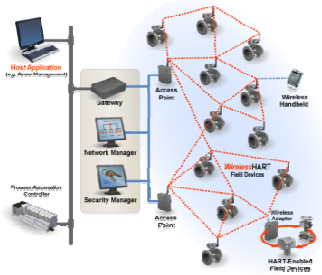
Seamless, Easy Integration with the Control Room



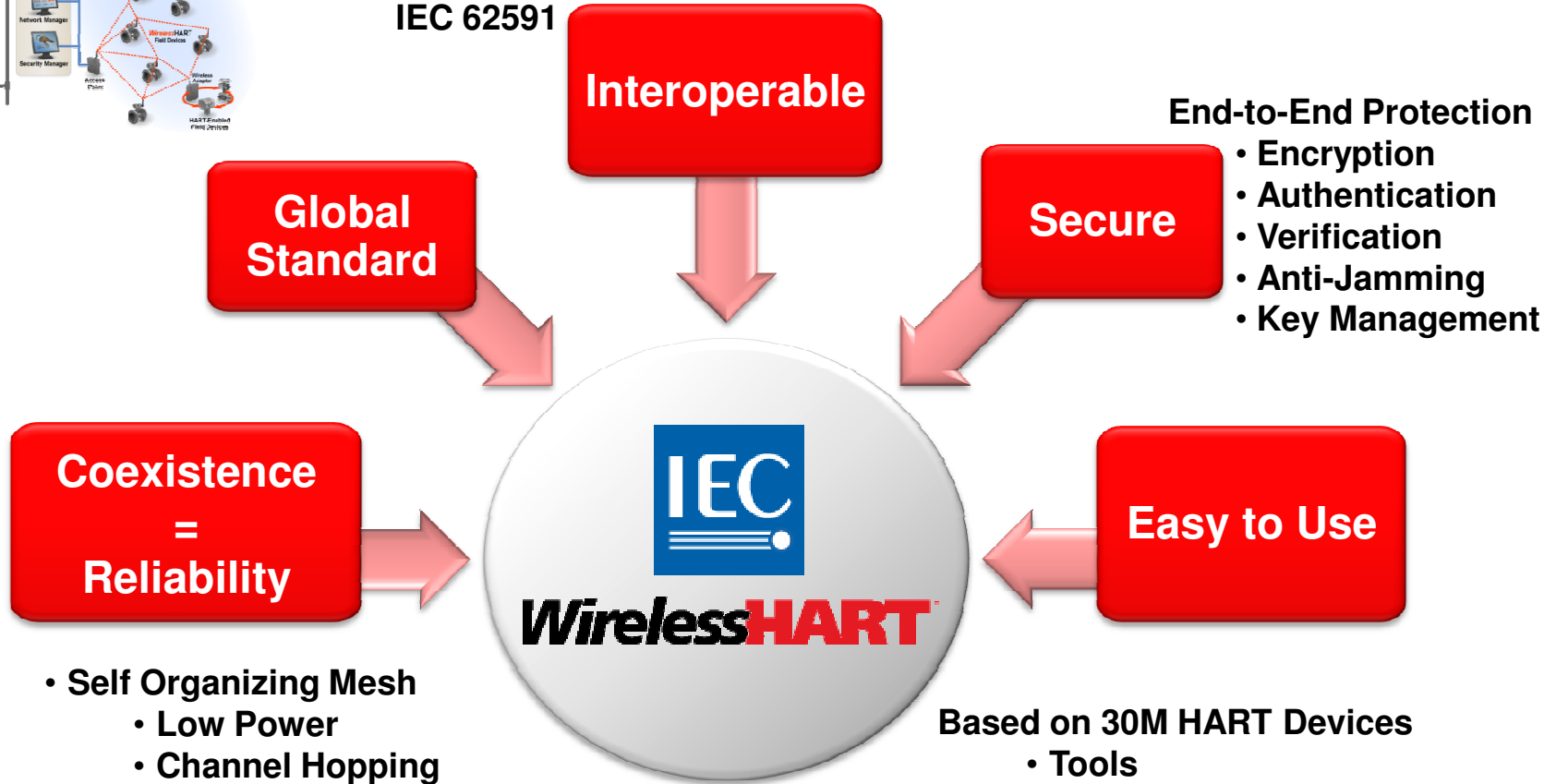
Real Time Diagnostics Improve Maintenance



WiHART Leveraging HART Infrastructure



HART Communication Foundation 7.1
IEC 62591



- End-to-End Protection**
- Encryption
 - Authentication
 - Verification
 - Anti-Jamming
 - Key Management

- Self Organizing Mesh
 - Low Power
 - Channel Hopping
 - Dynamic
 - Monitoring Applications
 - Control Applications

- Based on 30M HART Devices**
- Tools
 - Training
 - Installation
 - Work Practices
 - Asset Management
 - System Integration

Designed for the Process Industry

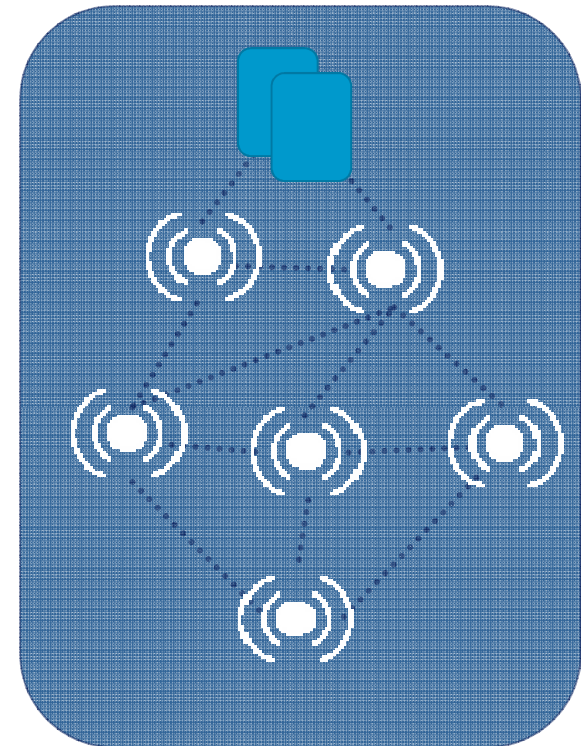
- Built on Proven Industry Standards



Smart Wireless Utilizes Robust Self-Organizing Technology

- **Self-Organizing Networks**

- Redundant data pathways eliminate single points of failure
- Automatic reconfiguration, No user intervention required
- Robust and tolerant to all types of interference
- Coexists with other wireless networks
- Real world installations consistently demonstrate >99% data reliability



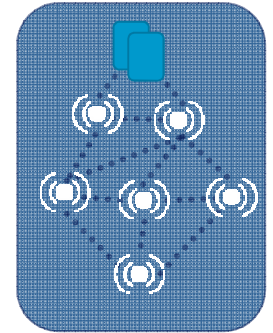
- **Global Standards**

FISHER – WirelessHART and IEC

WirelessHART

✓ High Data Reliability

- Field Proven >99.9% reliability
- Robust and tolerant to all types of interference without any site survey



✓ Ease of Use

- WirelessHART utilizes the same HART based tools that are used today for wired HART devices
- Seamless integration into any host

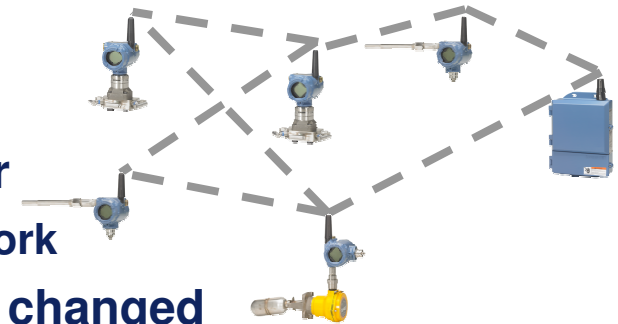
✓ Cost Effective Solution

- Requires no site surveys, just utilize best practice guidelines
- All you need is a gateway and wireless devices to get started

Integrated Security Protects Your Networks from Outside Threats

WirelessHART™
Expanding the Possibilities

- The ability to **Encrypt** the data
 - Protects your valuable information
- The ability to **Authenticate** sender and receiver
 - Verifies “good” communication within the network
- The ability to **Verify** that the data has not been changed
 - Ensures data integrity as it is communicated back to the gateway
- Effective **Anti-Jamming** technology
 - Channel hopping is employed to avoid interference and increase reliability
- Reliable **Key Management**
 - Automatic key rotation further protects your network from unauthorized access



Threat to:	Network Devices	Gateway	Information System
Protection			
Encryption	✓	✓	✓
Authentication	✓	✓	✓
Verification	✓	✓	✓
Anti-jamming	✓	✓	
Key Management		✓	✓

WirelessHART Devices



6081 pH



Hydrocarbon
Leak Detection



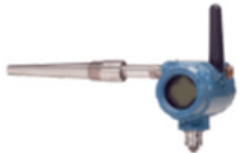
Smart Wireless
THUM Adapter



Smart Wireless
Gateway



4300 Series
Position Monitor



648 Temperature



702
Discrete



6081C Conductivity



CSI 9420
Vibration



2160 Vibrating
Fork Liquid
Level Switch



848T Multi Input
Temperature



3051S Series
Pressure, Level & Flow