Wireless Information Network Solutions

Life Is On Schneider Electric

Wireless Information Network Solutions

Schneider Electric Wireless Information Network Solutions improve operational efficiencies through digitized information using innovative solutions

- Safe, Secure and Sustainable
- Economical
- Ease of use

Life Is On Schneider Electric

Wireless Value Propositions

Wireless Solutions Reduces Wiring Costs

Schneider Electric Solutions Enables New Digitized Information!!!

- New digitized information drives:
- Improving Operational Efficiencies
- Increased Productivity
- Better Asset management
- Safety
- Security
- Environmental
- Regulatory Compliance

Life Is On Schneider Electric

Wireless Information Network Solutions

IAN

Accutech

Centeron

Short

Mid

Long

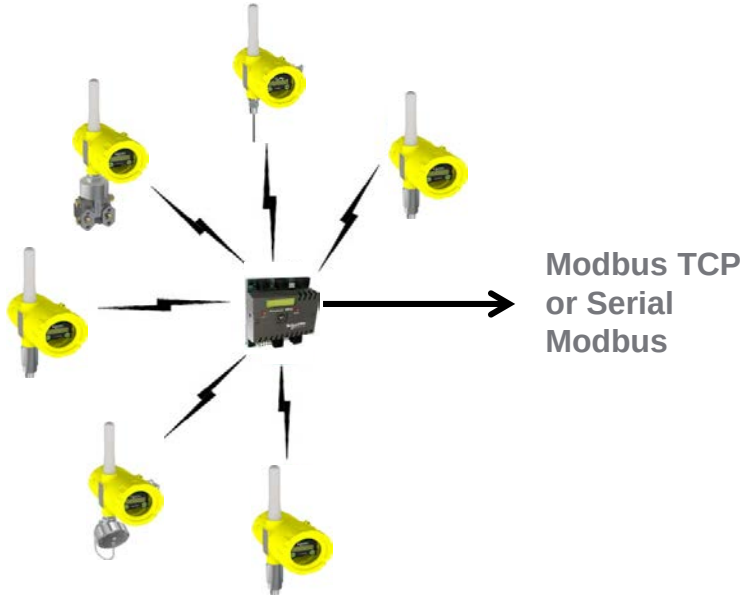
Rangeability

Life Is On Schneider Electric

Wireless Information Network Solutions

Accutech:

- **Point to Multipoint** architecture.
- **100** field units per base radio
- **Long distance** links (1000m+)
- **Hazardous** environments.
- **Modbus** connection from base radio.
- **3-5yr** typical battery life.



Life Is On Schneider Electric

Wireless Information Network Solutions

Centeron

- 4G / 5G Cellular and Satellite Wireless Tank Monitoring
- 4G / 5G Wireless Data Logger
-
- Cloud-based Inventory Management
- Hosted Data Center for Secure Reporting

Life Is On Schneider Electric

Wireless Information Network Solutions

- *Why Schneider Electric Wireless Information Networks Solutions?*
  - *Schneider Electric wireless networks are not just wireless field instruments*
    - *They are wireless information networks that can provide, temperature, pressure, level, or flow but they provide much more information to improve your business not just monitor your process.*
  - *Schneider Electric wireless networks are not limited to just one technology*
    - *BLE Bluetooth Low Energy for short range, 2.4 GHz (EMEA), 900mHz (USA) for mid-range and 4G/5G or satellite for long range. No other supplier can offer as broad of solutions.*
  - *Schneider Electric Instrument Area Network*
    - *IAN provides the lowest cost wireless solution without compromising performance.*
    - *IAN is the simplest wireless network to deploy. (just 2 clicks and your connected)*
    - *IAN has the longest battery life. (over 10 years)*
    - *IAN uses Smart Phone, Tablet or PC for configuration. (requires no costly handheld devices)*
  - *We are not just a Process Automation provider, we are your IIOT partner.*

Life Is On Schneider Electric

Confidential Property of Schneider Electric |

Instrument Area Network

Life Is On Schneider Electric

Instrument Area Network

Central Concentrator

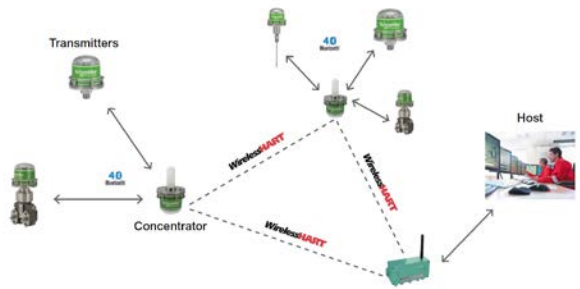
End Node or EN

Life Is On Schneider Electric

Why Schneider Electric Instrument Area Network?

The Schneider Electric IAN (Instrument Area Network)

- *IAN provides the lowest cost wireless solution without compromising performance.*
- *IAN is the simplest wireless network to deploy. (just 2 clicks and your connected)*
- *IAN has the longest battery life. (over 10 years)*
- *IAN uses Smart Phone, Tablet or PC for configuration. (requires no costly handheld devices)*
- *IAN is Secure with a 128 bit AES encryption*
- *IAN transmits over 65 M to the gateway*
- *IAN eliminates blind spots easy*
- *IAN uses BLE combined with WirelessHART*

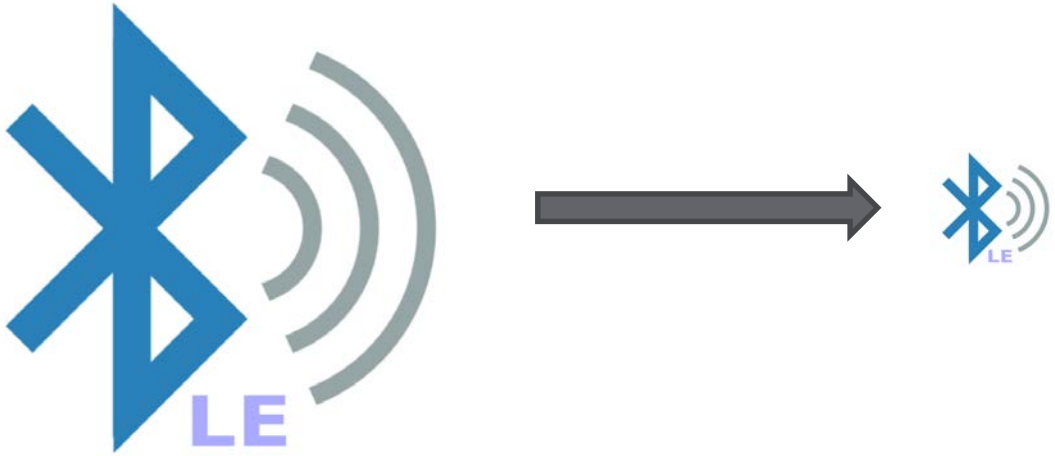


Hybrid architecture using WirelessHART mesh networking coupled with ultra-efficient BLE Instrument Area Networks

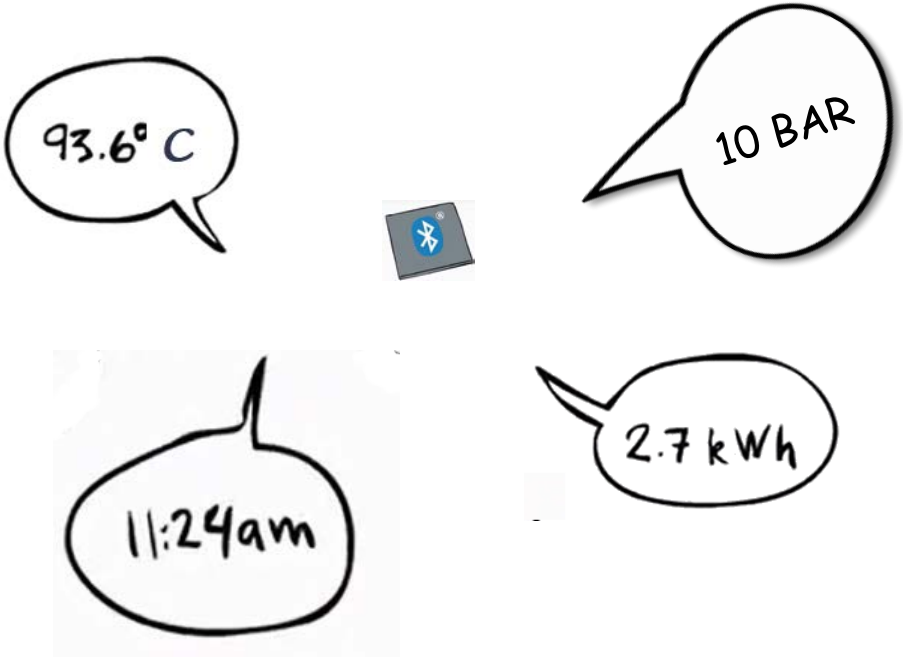
Life Is On Schneider Electric

Confidential Property of Schneider Electric |

BLE Has a Big Technology in a Small Footprint



BLE Can Measure Anything



Life Is On Schneider Electric

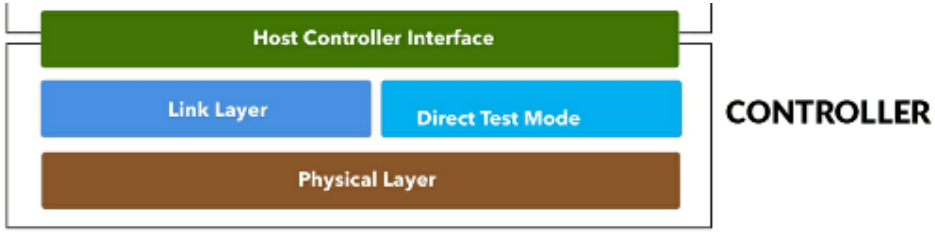
BLE is EASY for Business Everywhere!!!

Life Is On Schneider Electric

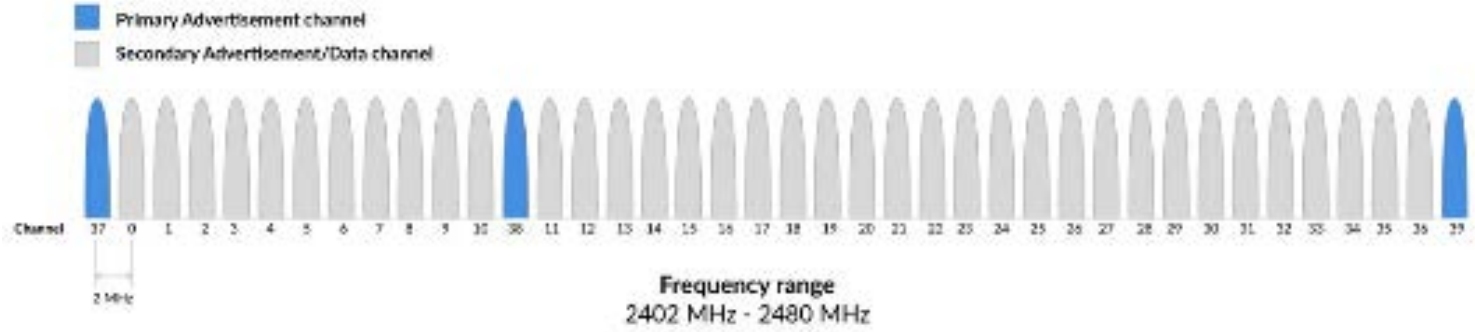
Wireless Security in BLE

- Authentication – Pairing and Bonding Functionality
- Integrity – Digital Signatures
- Confidentiality - Encryption
- Privacy – Resolvable Private Addresses

Bluetooth Low Energy Physical Layer



BLE operates in the ISM band (2.4 GHz spectrum), which is segmented into 40 RF channels, each separated by 2 MHz (center-to-center), as shown in the following figure:



Is On
Schneider Electric

Instrument Area Network - Features

End Node
EN

Central Concentrator
CC

Features

- Plant wide network capability
- 64 Gbit Flash memory – storage capabilities
- Foreign EN Bluetooth support – growth opportunity
- CC can handle 8 EN's
- Configurable / Readable via tablet
- 128 Bit AES encryption + FHSS technology
- NAM & ATEX Transmitters Certifications
- EN - Battery life is 10 years*
- CC - Battery life is 5 years*

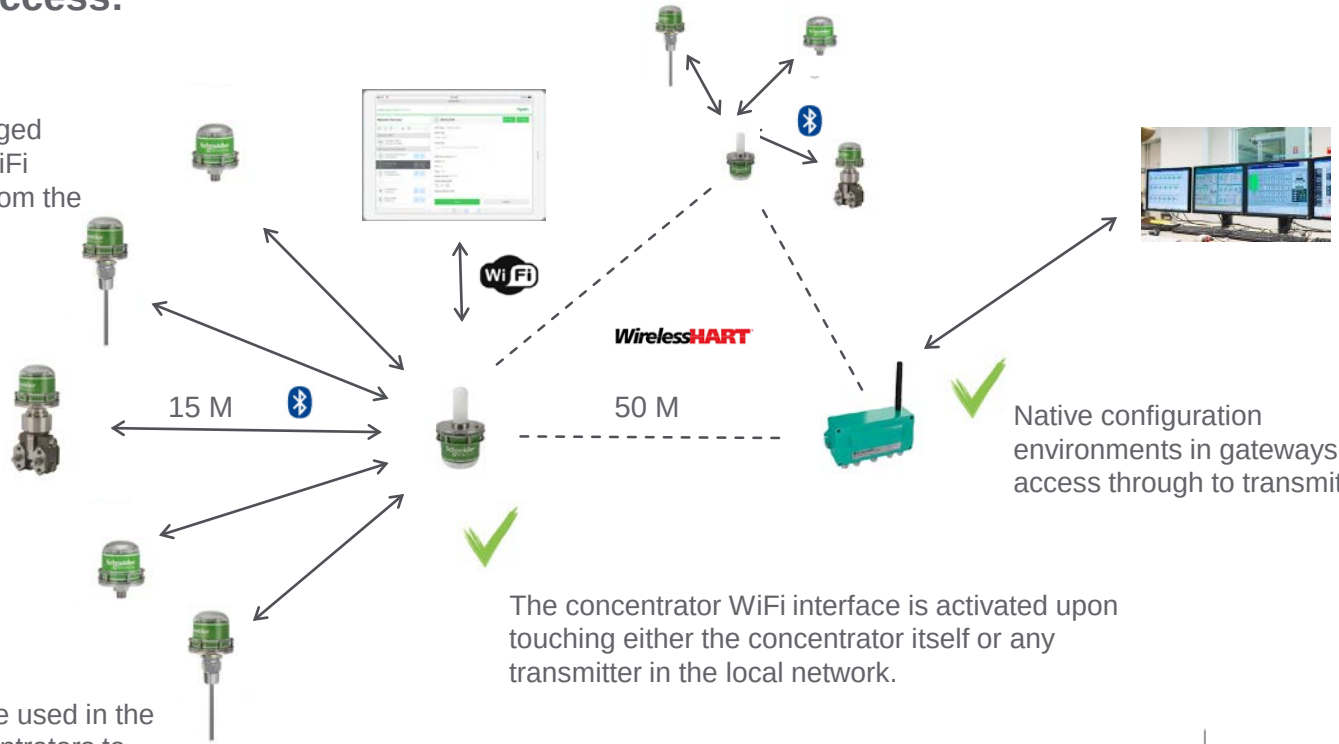
* Battery life based on reference conditions

Life Is On Schneider Electric

Instrument Area Network – The Basics

Configuration and Access:

IAN Transmitters are managed through the concentrator WiFi interface, the Gateway or from the Host.



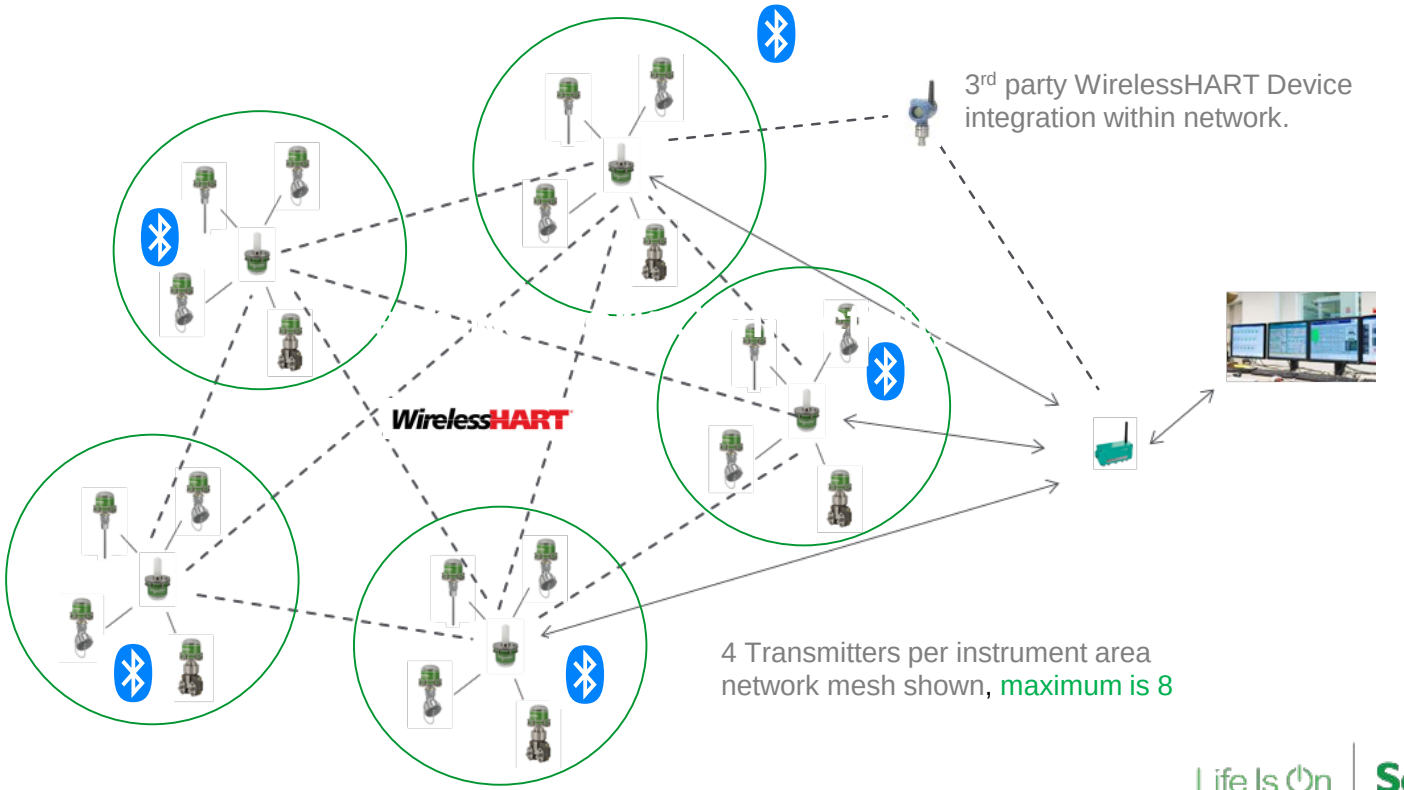
Native configuration environments in gateways offer access through to transmitters.

The concentrator WiFi interface is activated upon touching either the concentrator itself or any transmitter in the local network.

Powerful LED lights are used in the transmitters and concentrators to indicate connectivity during deployment.

Life Is On Schneider Electric

Mesh Network Connectivity



Life Is On Schneider Electric

Wireless Information Network Solutions

Schneider Electric Wireless Information Network Solutions

Enables Implementation of New Applications resulting in…

- Improved Business Efficiencies
- Improved Business Productivity
- Safer Businesses
- Environmentally Considerate Business
- Regulatory Compliant Business

Life Is On Schneider Electric

How it Aligns into EcoStruxure

EcoStruxure™ Innovation At Every Level

Life Is On Schneider Electric

Life Is On | Schneider Electric