

# Sensor to Systems Connectivity

*Flexible, Reliable, Ultra Low-Power*



**E-Senza**<sup>®</sup>  
Technologies

*Leveraging Power of Wireless*<sup>®</sup>

# Markets & Applications



## Temperature Monitoring

- Refrigeration system management
- Cold chain monitoring
- Industrial process monitoring
- HACCP / HASP compliance
- FDA 21 CFR Part 11 compliance



## Energy Management

- Residential smart home networks
- Smart metering / Smart grids
- Data center Power Utilization Efficiency (PUE)
- Commercial building ventilation management



## Industrial Monitoring & Control

- Tank level management
- Predictive maintenance
- Process monitoring

## Who uses SenzaNET



- Data centers
- Smart homes
- Amusement park chain
- Kitchens & refrigeration systems
- Assembly lines
- Agricultural facilities
- Water treatment plants
- Pharmaceuticals
- Food industry
- Construction sites



# Simplified with SenzaNET

## Benefits

- Cuts installation and project cost by up to 80%
- Save up to 20-30% on running costs
- Easy to install and maintain
- Minimum administrative efforts
- Can be deployed world-wide
- Robust and long range wireless communication
- Secure and reliable data transmission
- High network reliability due to store and forward
- Rugged design make it suitable for harsh deployments

## Features

- Uses license-free frequency spectrum of 2.4 GHz
- 0 dBm, 1mW radio power
- Delivers a range of up to 600 mt LoS outdoors
- IEEE 802.15.4 compliant mesh network
- Time synchronized, time slotted and channel-hopping wireless networking
- Self-organizing & self correcting wireless network
- Timestamping of data at source
- Supports star, mesh and hybrid mesh topologies
- Store and forward network
- Operating range of -40 to +85 °C
- CE, R&TTE and FCC certified
- Various enclosure options from OEM to IP65 & ATEX
- Works with AA battery and/or 12-24V DC power
- Multi-channel analog / digital I/O support
- Numerous pre-packaged sensors
- Seamless integration into existing infrastructure via IT & Fieldbus interfaces
- SQL, OPC & SOAP interfaces for data integration



## Why E-Senza?

- Total solution from one company
- Product development and OEM design-in services
- Standards compliant
- Proven products and systems
- Large customer and partner network base world-wide



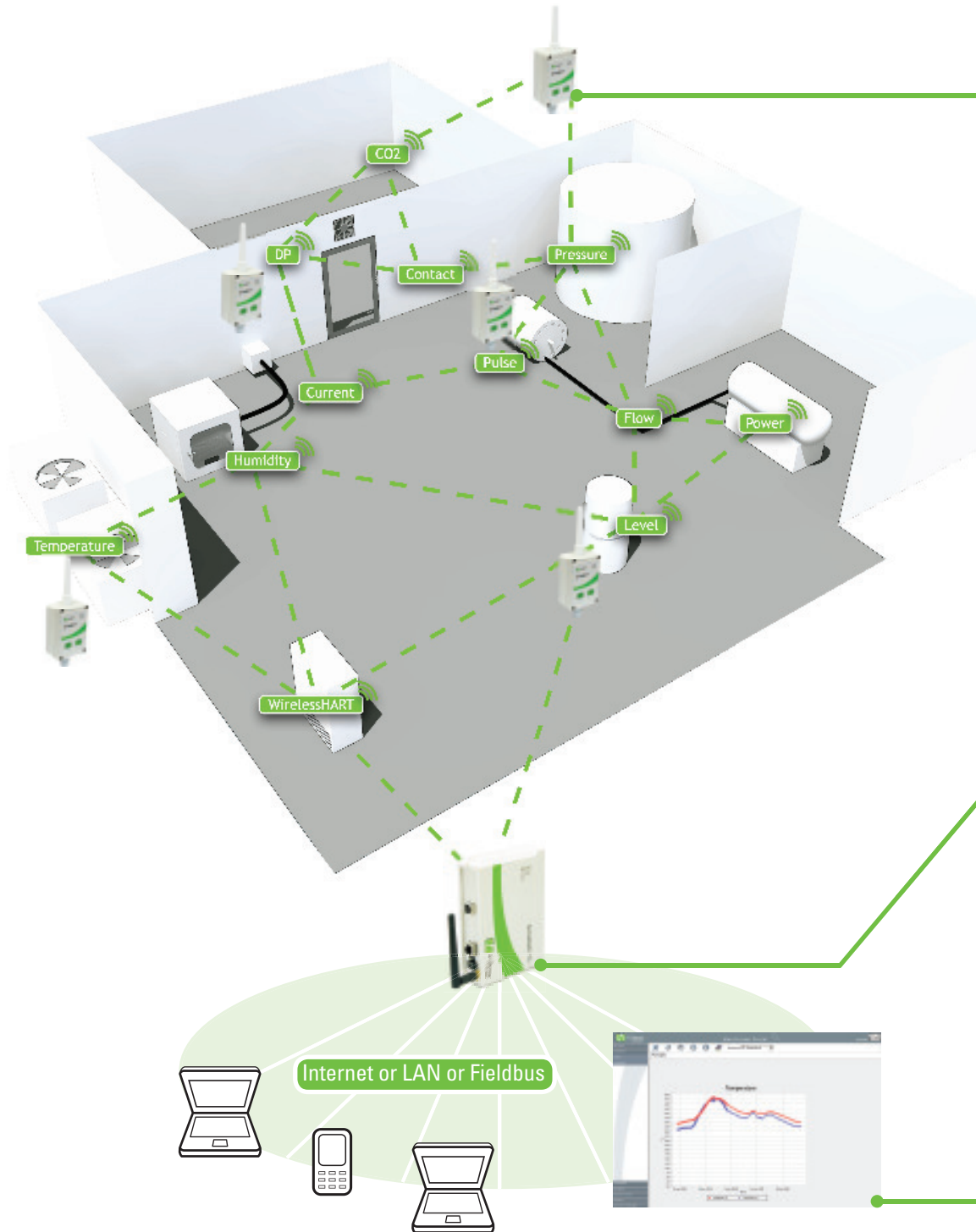
# Out-of-the-Box Wireless Device Networking

*Quick &  
Easy  
Solution*

*Step 1:  
Connect to  
Sensors*

*Step 2:  
Plug-in to  
a Network*

*Step 3:  
Monitor &  
Manage*





## Wireless Sensors & Adapters

- Runs on standard AA battery for years
- Built-in mesh capability
- Time stamping at source
- Over the air configuration & calibration
- Local datalogging, alarms and alerts capability
- Several packaging options: OEM, IP40, IP65, IP68 & ATEX to choose from
- SenzaBlock for common electrical interfaces like Analog, Digital IO's
- SenzaBlocks with integrated sensors for measuring:
  - Temperature
  - Level
  - Energy
  - Electricity, Water, Gas Meters
  - Air Differential Pressure
  - Humidity
  - CO<sub>2</sub>
  - Light



## Wireless Gateway & Repeater

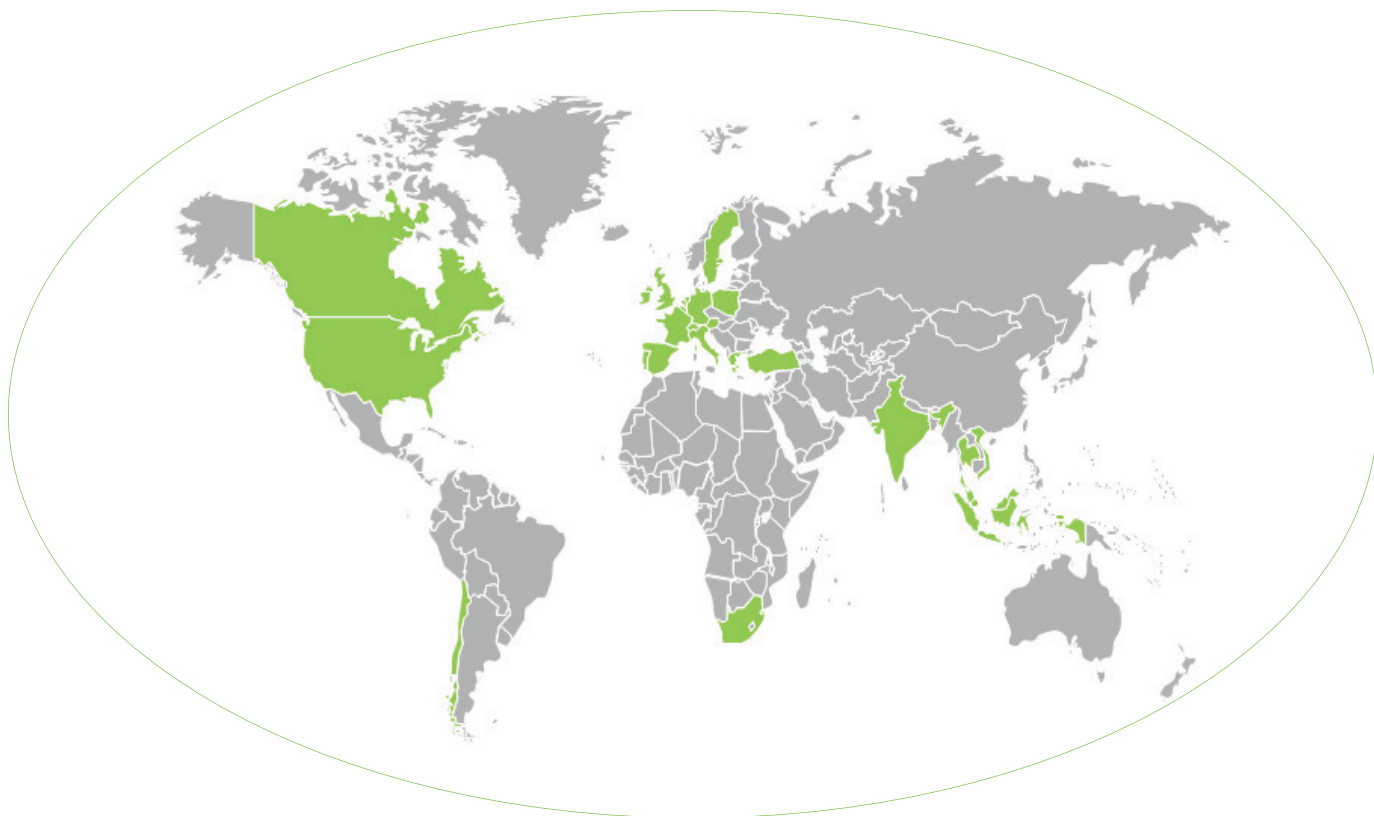
- Wireless network monitor, manager
- Monitors, configures sensors and actuators
- Manages networks of up to 32 (extendible up to 255) SenzaBlocks
- Wide choice of connectivity options: USB, RS232, RS485, Ethernet, GPRS and Wi-Fi
- Fieldbus connectivity to Profibus DPV1, ModbusTCP, CAN2.0 also available
- Simple I/O options also possible
- Deploy SenzaHub as a repeater to increase network range and/or reliability



## Wireless Monitoring Software

- Web based network monitoring & configuration tool
- Configures SenzaBlocks & network parameters
- Support data collection & storage in an SQL database
- Scalable architecture
- Monitor and manage several wireless networks simultaneously
- Manages several incoming interfaces viz. USB, Ethernet, GPRS and Wi-Fi
- Easy to integrate via SOAP, SQL or socket interface

# Available Globally, Supported Locally



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For more information, visit  
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