



Wireless Communication in Smart Energy / Smart Grid



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E-Senza Wireless Solutions GmbH

Defining Smart Energy

INTEGRATED ENERGY

A more intelligent, responsive, and secure grid is forming

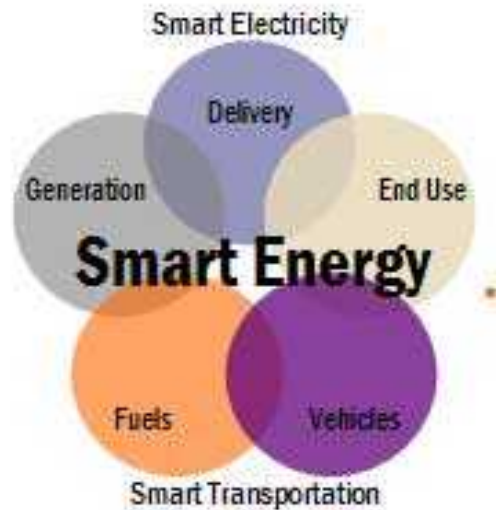


An Integrated approach to Energy From Generation to Consumption!

- Generation , Distribution , Storage are becoming pervasive
- Systems are complex and need more management, measurement, control

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Defining Smart Energy



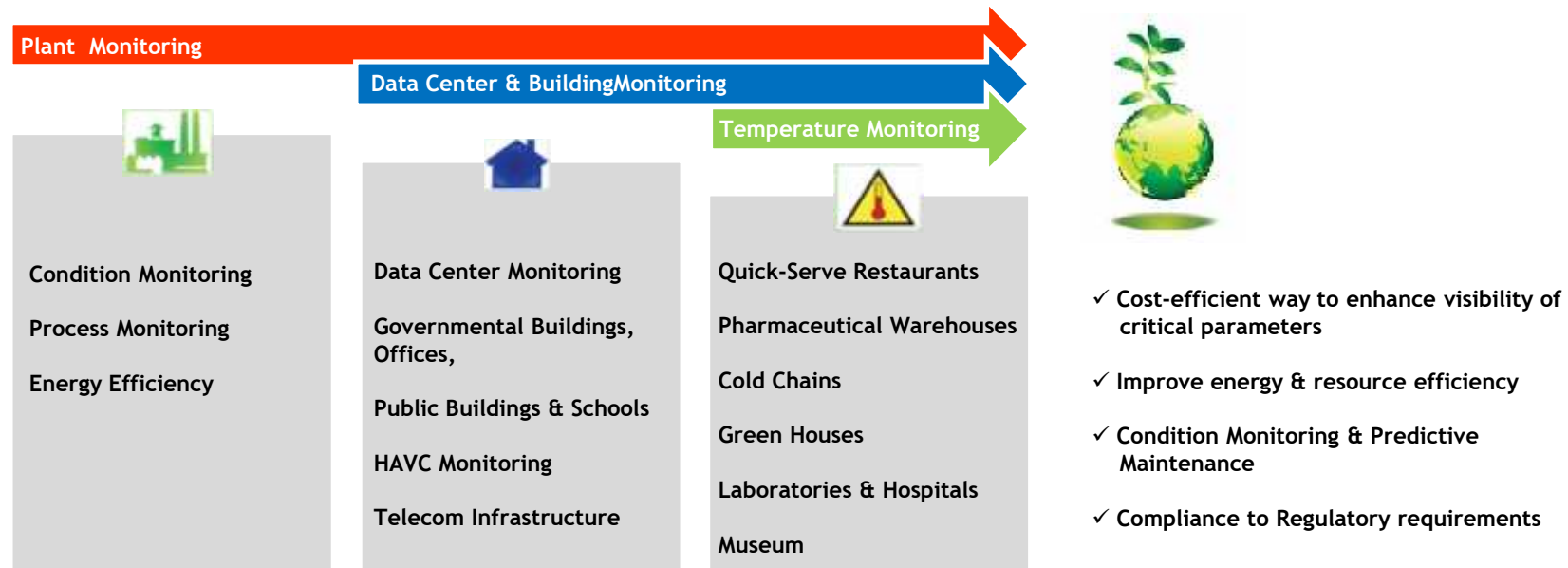
- AMI
- Demand Response System
- Integrated Home & Smart Appliances

Among other critical components Metering and energy consumption monitoring is critical components of any Smart Systems of today

E-Senza Solution

E-Senza offers Wireless communication Solutions to enable sensing metering and consumption measurements with the help of easy-to-use and easy-to-integrate wireless devices.

E-Senza is provider of IoT communication platform for devices



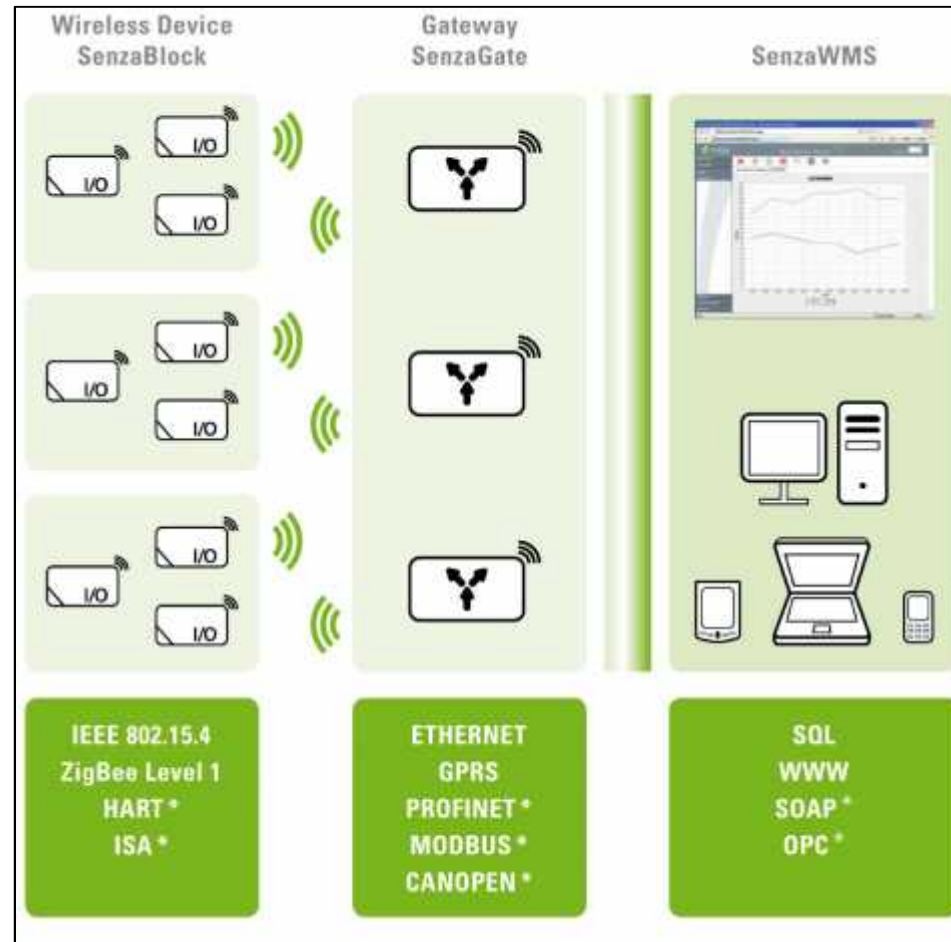
SenzaNET Technology



SenzaNET Mesh Network

- Time synchronized
- Channel hopping
- Store and forward data network for reliable transmission
- 2.4 GHz and 868Mhz Operating frequency
- 300 mt Communication range
- IEEE802.15.4 & 6LowPAN compliant

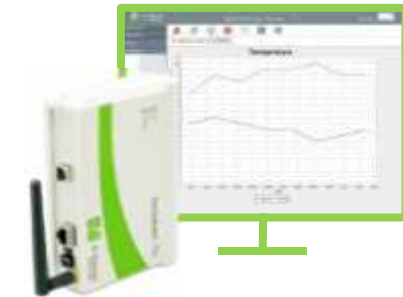
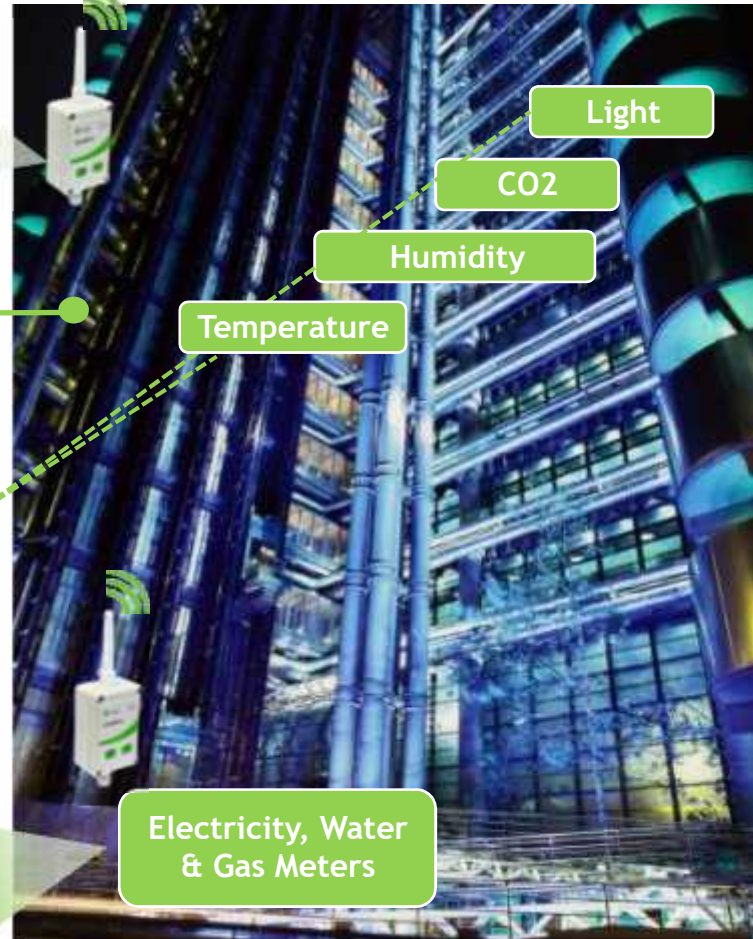
SenzaNET Architecture



Energy monitoring with E-Senza

Flexible expandable,
simple & reliable wireless
data collection

- Easy to deploy wireless sensors
- Run on battery for years
- Comprehensive, consistent & accurate data



- Instant access & visualization to all data
- Transmitting control commands for initiating specific actions
- Wireless adapters can be connected to existing building control system



Energy monitoring with E-Senza

SenzaNet of E-Senza Technologies

- Assumes measurement, control, control and monitoring tasks
- Site surveys reduced to minimal due to self-organizing multi-hop mesh architecture
- Generally a single SenzaNET network is sufficient made to cover a building or even an entire building complex
- For multi-tenant buildings or campus environments multiple overlapping networks span up to 65,000 nodes and can be configured for non-conflicting operations
- Easy integration into existing systems
- Creation of large sensor networks with up to 128 nodes possible
- Fast network setup and fast network restoration



Energy monitoring with E-Senza

SenzaNET USP

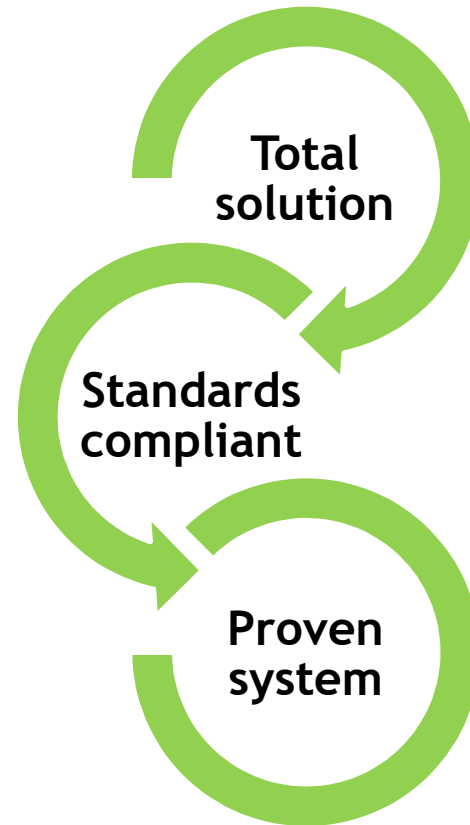
- Signal transfer from sensor to sensor(patent): only provider of this technology in Europe, data is always present.
- Due to their low power hardware design and tightly time-synchronized wakeup cycles, SenzaBlock wireless sensors and adapters can survive for years running on a battery.
- Long-term stability in accordance with the high requirements in area of wireless sensor technology.
- Wireless network finds alternative transmission paths in the case of faults enabling a significant reduction in installation and maintenance costs
- Quick network set-up

E-Senza products

- Wireless network solutions for continuous energy & environment monitoring to optimize energy in home, buildings and data centers as well as to meet statutory requirements.
- Our SenzaNET technology is a self-organizing mesh network consisting of wireless sensors and adapters, wireless gateways and the management software.
- Consumption and environmental data (energy/water/HVAC) are comprehensively recorded in real time, savings will be made visible



Why E-Senza?





Thank you!