SURESENSE
by phact

A NEW STANDARD IN SENSOR NETWORKS

sensors and repeaters

Sub-1 GHz

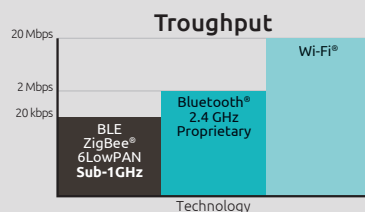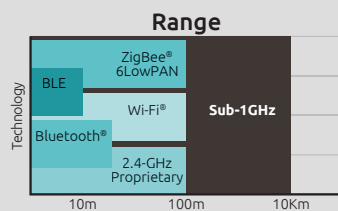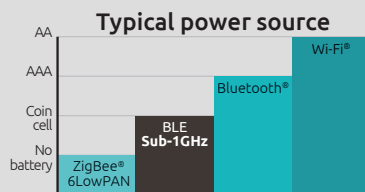portal
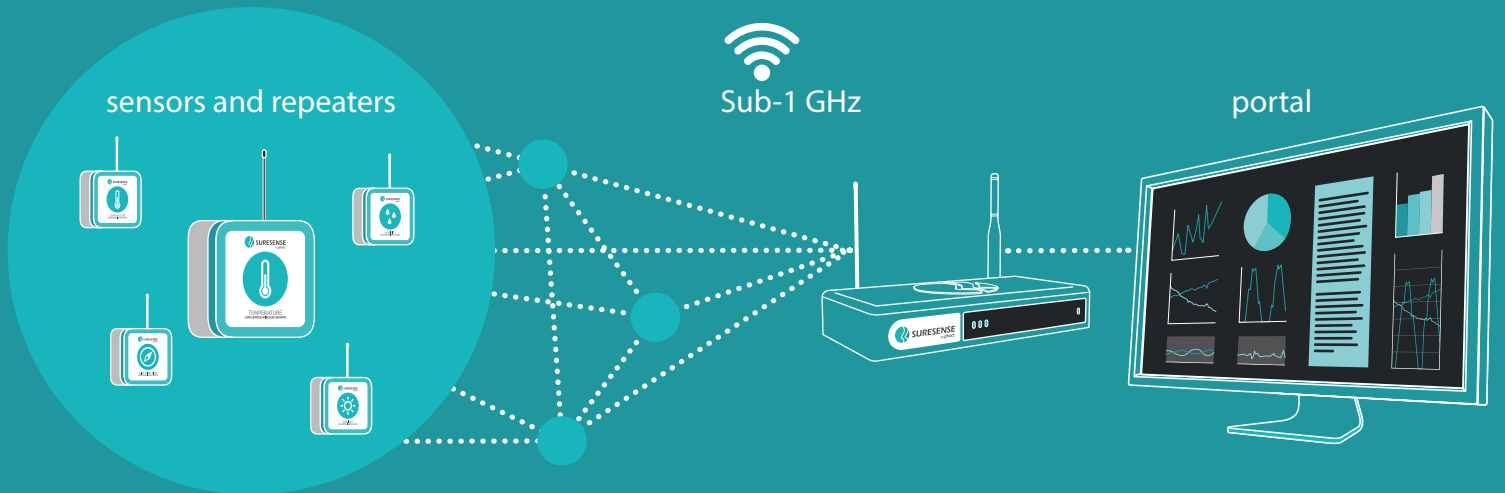
SureSense is a Low Power, Long Range IoT sensor mesh network technology based on the Texas Instruments © CC13xx Sub-1 Ghz Microcontroller. SureSense supports meshing which extends range even Longer.

THE ADVANTAGES OF SURESENSE

The SureSense Sub-1 GHz solutions offers very low power consumption and long range with a simple star topology. With support for meshing, it can even extend its range through multiple hops while maintaining low radio transmission power.

With SureSense it is possible to realize a reliable data transport network, in situations where problems arise when using alternative data transport networks. It outperforms networks like Z-Wave, which has limited reach and indoor penetration, and WiFi which is susceptible to overload and has higher power consumption.

Typical power source

AA — Wi-Fi®
AAA — Bluetooth®
Coin cell — BLE Sub-1GHz
No battery — ZigBee® 6LowPAN

Range

Technology:
BLE
ZigBee® 6LowPAN
Bluetooth®
Wi-Fi®
2.4-GHz Proprietary
Sub-1GHz

10m — 100m — 10Km

Troughput

20 Mbps — Wi-Fi®
2 Mbps — Bluetooth® 2.4 GHz Proprietary
20 kbps — BLE ZigBee® 6LowPAN Sub-1GHz

Technology

A SOLUTION ON A BUSY BEACH DAY

In places where many people gather, communicating through WiFi or 3G/4G might prove difficult. Many smartphones using Wifi or acting as a hotspot create a network overload. This might prove problematic, for example when you have waitstaff placing orders to a server.

A busy beach with many restaurants and bars turns out to be the perfect location to prove our concept. We developed a technology to replace WiFi that allows any smartphone or terminal to connect to the internet using Bluetooth and SureSense. Our proof of concept works: with a mobile Point of Sale (POS) terminal, we can place orders and process payments via the Sub-1 GHz frequency. The desired range of 150 meters was easily exceeded. And the adchived data throughut of 22 kb/s was more than sufficient for the required services.

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Phact has developed an entire SureSense product range to create your own sensor network.
All products can be used in combination or can be combined with existing technologies.
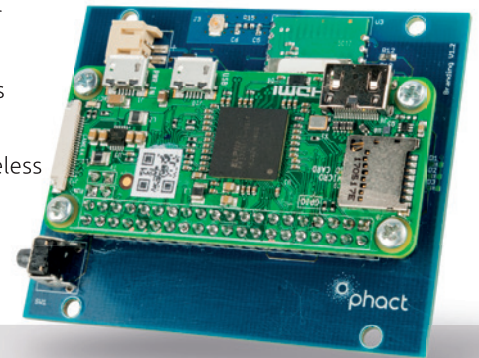
SENSORS

Phact has developed its own range of sensors that are robust, easy to install, configure and maintain and are suitable to perform in harsh conditions.

TECHNOLOGY

Our SureSense sensor network is based on the Texas Instruments © CC13xx Sub-1 GHz Ultra-Low Power Wireless Microcontroller with meshing support

GATEWAY

The SureSense gateway functions as a bridge between the SureSense Sub-1 GHz sensor network and the cloud. Easy to configure, robust and secure and suitable for various WAN technologies.

PORTAL

Phact has developed its own portal, that can be adapted to fit your wishes and therefore seamlessly fits your business processes. However, data from the SureSense sensor network can also be passed to your own application to use smoothly in your existing environment.

overview, insight and control

WE ARE PHACT

Phact is your partner for tailor-made software and hardware solutions, integration and Internet of Things projects. The R&D specialists of Phact have the expertise and years of experience in selecting and designing modern electronic devices. Delivering both standard and fully customized hardware solutions, we help you make the right choice between standard or customized hardware for all necessary building blocks within your Internet of Things project.
Our professionals are passionate about IT. Transparency, accessibility and mutual trust are part of our DNA. This makes Phact the one-stop-shop for innovative solutions.

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