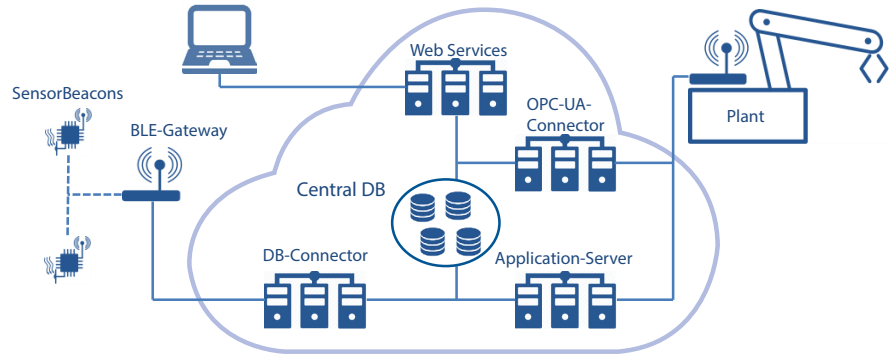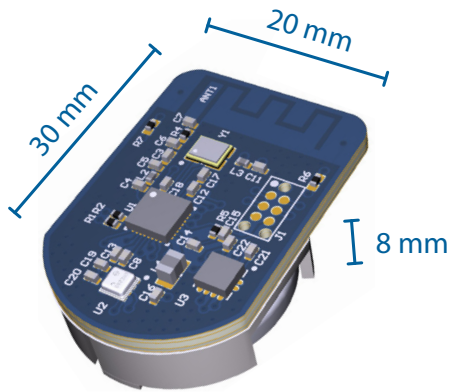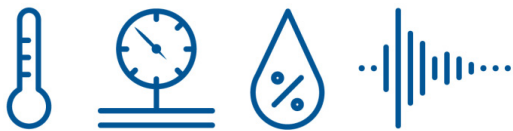# SensorBeacons & SensorCloud

New IoT Powered Concepts for Smart Manufacturing, Condition Monitoring and Predictive Maintenance

20 mm
30 mm
8 mm

SensorBeacon

Measurement of i.e. temperature, air pressure, humidity and acceleration in three axes

Characteristics

- Wireless (battery operated, radio transmission)
- Ultra low power technology with BLE
- Indoor range approx. 10 m – 20 m
- Many beacons possible at the same time
- Easy to install and connect via gateway to IoT platform
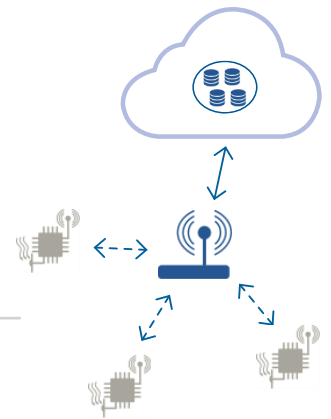- Battery lifetime up to five years

Power consumption example:

Communication Interval	Battery Life (230mAh Capacity)
1 sec.	> 8 months
30 sec	> 4 years

SensorCloud

Connection of SensorBeacons via BLE-Gateways

Small cell coverage by gateways:

- Minimization of radio interference and thus increase of possible throughput
- Flexible coverage of an area of any size
- Radio signals remain in the production hall
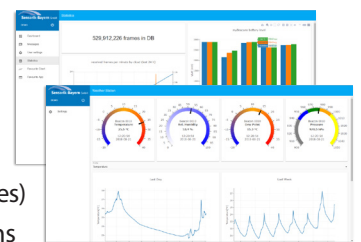- Seamless roaming between gateways

Architecture – Central Data Base

- MongoDB
- NoSQL
- Supports sharding (horizontal scalability)
- Supports replication (Increased availability due to mirror server)

Web Interface (Client)

- Web application, runs in browser, therefore cross-platform (tablet, PC etc.)
- Safe communication via https
- Data can be quickly visualized (chart templates)
- Web applications allow complex evaluations
- Multi-client / multi-user capable

Use Cases

- Monitoring for transport & storage
- Smart Manufacturing & process monitoring
- Retrofitting of sensors to existing systems without cabling effort
- Monitoring of high-quality products during production and lifetime

- Tracking of products or mobile equipment in production
- Implementation of predictive maintenance concepts by measuring loads/abnormalities
- Simple execution of control or test measurements, even simultaneously at many different locations ...

Customized versions available.

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