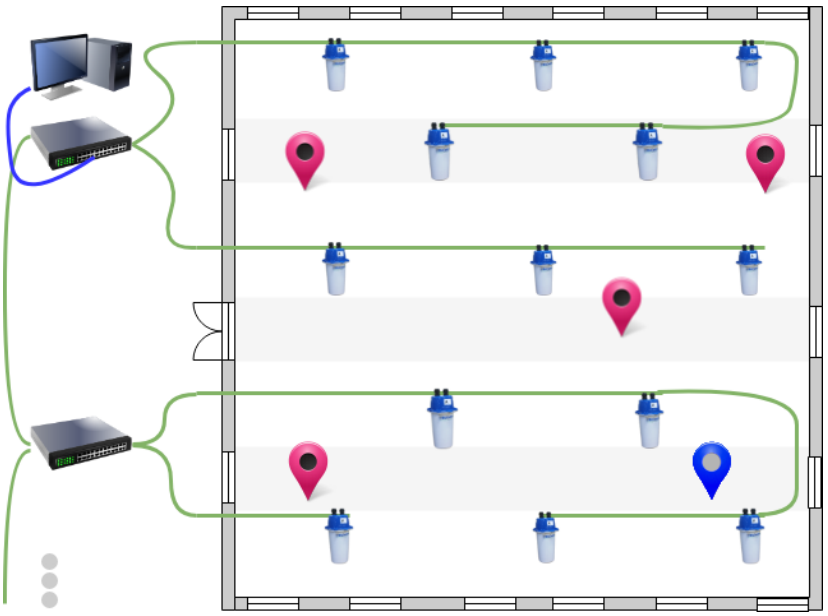
BioControl
Technology for biology

RTLS

# RTLS

## Precise, Expandable UWB Real Time Location System

- **Accuracy up to 15 cm**
- **Up to 1000 tags in area**
- **Easily expandable**
- **Easily connectable (API, DataBase, TCP Server)**

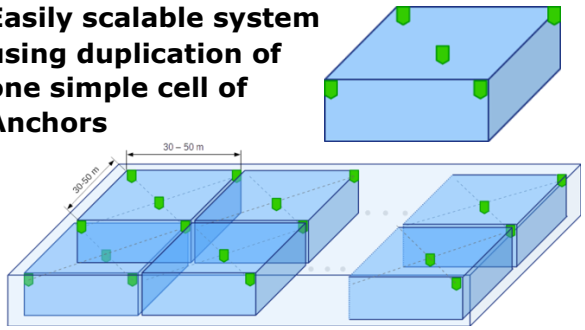


## System description:

Biocontrol Real Time Locating Systems (RTLS) enables the user to track items and receive data from the tracked items in real time with accuracy up to 15 cm inside or outside of a building. Wireless RTLS Tags are attached to objects and fixed anchors receive radio signals from Tags to determine their location. The system is based on UWB (Ultra-Wideband) technology compliant with IEEE 802.15.4-2011. Both, Tags and fixed receivers (Anchors), are closed in IP67 rated enclosures. The system includes a set of software for tag tracking, data processing, planning, configuration tools for system installation and tags management.

| | |
|---|---|
| **Cell size** | Up to 2500 $m^2$ |
| **Radio range** | Up to 50 m |
| **Tags blinking rate** | 30 ms – 10 min |
| **Placement** | Indoor/Outdoor |
| **Waterproof** | Tag/Anchor IP67 rated enclosure |

**Easily scalable system using duplication of one simple cell of Anchors**




## Main features:

- Minimum 5 anchors in the system (up to 2500 $m^2$ cells)
- Range up to 50 meters (depending on the conditions)
- Cable connected clock synchronization, PoE and Ethernet data transmission(chain and star topology)

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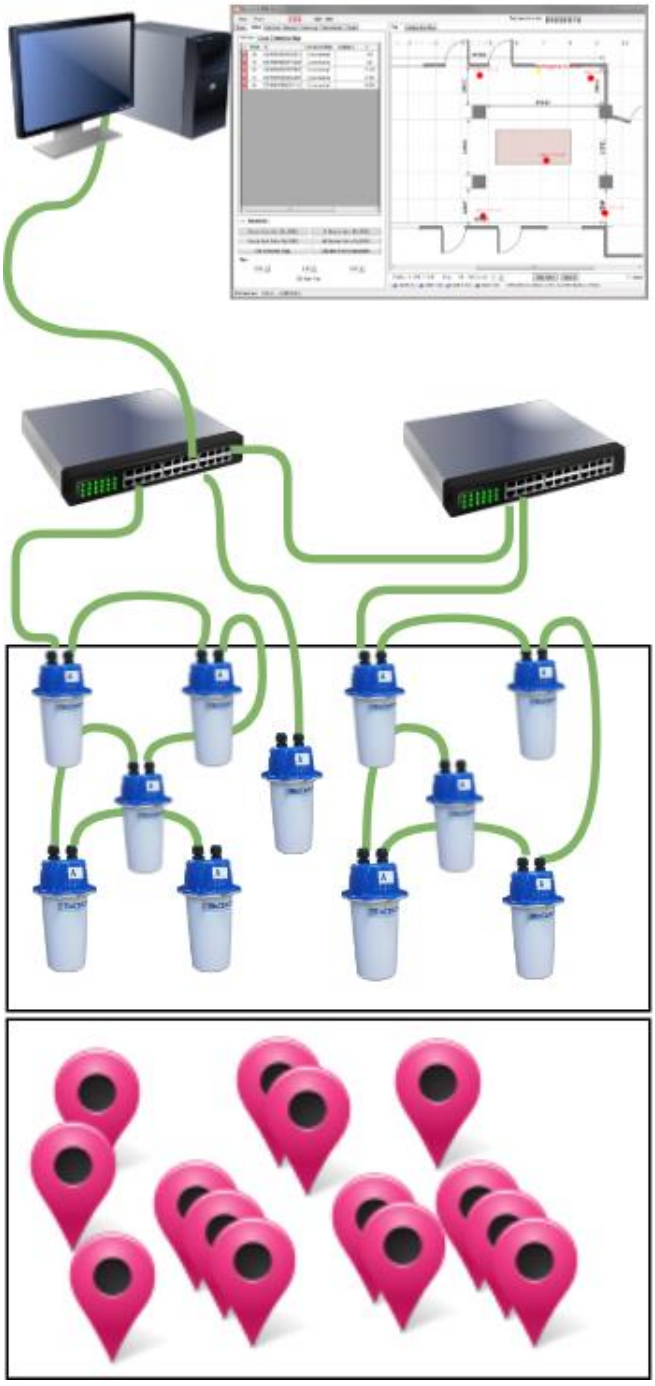
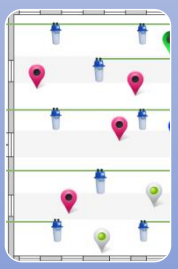
## System Components



### Server



- System configuration, monitoring, management software
- Tag position calculation
- RTLS Suite
- Database Server
- REST API

### Clock (Repeater)

- RTLS synchronization
- Built-in Ethernet switch and POE
- 7 ports (support 5 Anchors in each port)
- Repeater extends Clock range and ports up to 35

### Anchor

- Receives Tag messages and sends it to Server
- Cable length up to 100 m
- One cable connection (Synchronization, Data, PoE)
- Up to 5 anchors in Chain
- Automatic Positioning

### Tag

- Up to 1000 tags in system
- Changable Blinking frequency (30ms - 1 min)
- IP 67 Enclosure
- Position, temperature, voltage, accelerometter

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