BS91/103000 operational description

General

The BS91/103000 is a part of a point-to-multipoint smart sensors network.
The BS91/103000 is the base station that downlink the synchronization, acknowledge and command messages and collect the uplink messages from the sensors network .

The transmission regime

The base station and the sensors maintain a syncronized network between themselves.
The down and uplink are Time Devisioned on the same frequency channel, the time allocated to the uplink is much greater than the time allocated to downlink.
The synchronization between Base station and sensors network is done by a synchronization message being sent by the base station at the begining of every second, The sensors open their recivers every 5 seconds and synchronize their clock according to synchronization message.
In addition to the synchronization message the downlink time is also allocated to send acknowledge messages as response to uplink messages uplinked from sensors.

Hardware functionality

The Base station comprises of 4 paralel trancivers, each for frequency channel, however the base station can transmit through only one channel at the time. It can recieves through all channels in parallel.
The base station uses an ethernet PHY hardware to deliver to/from sensors messages to/from system services, running on customer computer server.