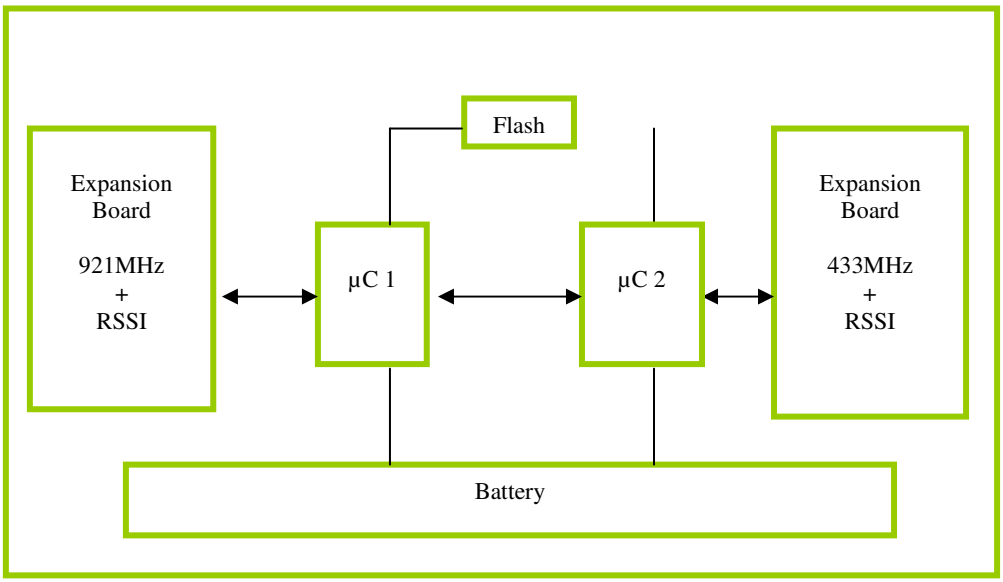
2. EverBlu Collector Technical Information

2.1. EverBlu Collector principle

EverBlu Collector extends the coverage of the concentrators allowing them to achieve higher ranges. Its main purpose is to receive and store the information coming from the allocated EverBlu MIUs and send this information to the EverBlu Access Point



- The internal battery supplies power to all the internal electronic components.

2.2. Network

Storage network data : 10 days

Network Sizing :

Manage upto 50 EverBlu Cybles.
Relay data from upto 200 EverBlu Cybles.
Manage upto 15 Child EverBlu Collectors.
Upto 4 chain relay EverBlu Collectors.

2.3. Radio Frequency Features

Conformity	CE marking (in accordance with the R&TTE directive)
Protocol	MFD (RADIAN user group) (433MHz) Proprietary (921MHz)
Modulation	Frequency Shift Keying
Frequency carrier	433.82 MHz / 921 MHz
Transmission	Symmetrical 2-way communication
Wake-up period	none for 433MHz (master) every 4 seconds for 921

2.3.1. Modulation & Frequency band

Frequency band = 433.82 MHz
Compared to the usual 433.92 MHz (car doors, toys, garage gates...), our frequency is slightly shifted in order to avoid RF noises in congested areas.
Modulation = Frequency Shift Keying (= frequency modulation)
Transmission = symmetrical 2-way (= the EverBlu Cyble is both a receiver and an emitter)
Radiated power < 10mW (in compliance with the European regulation)

Frequency band = 921MHz
Modulation = Frequency Shift Keying (= frequency modulation)

Transmission = symmetrical 2-way (= the EverBlu Access Point.is both a receiver and an emitter)
Radiated power ≈ 200mW (in compliance with the European regulation)

2.3.2. Protocol

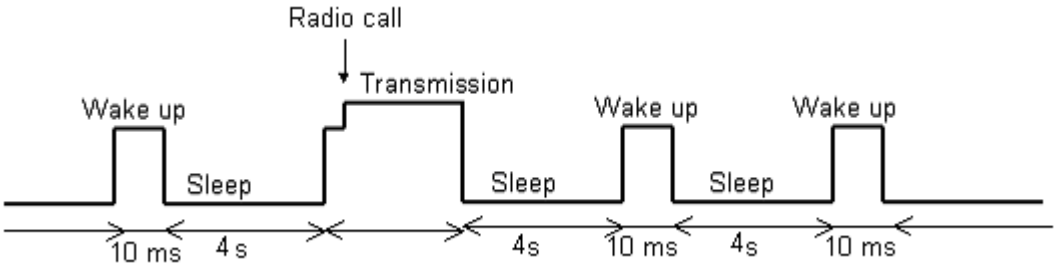
For frequency band = 433MHz
Same specifications as for the EverBly Cyble

For frequency band = 921Mhz
This protocol is proprietary.

Communication speed = 38400 bauds

2.3.3. Wake up profile

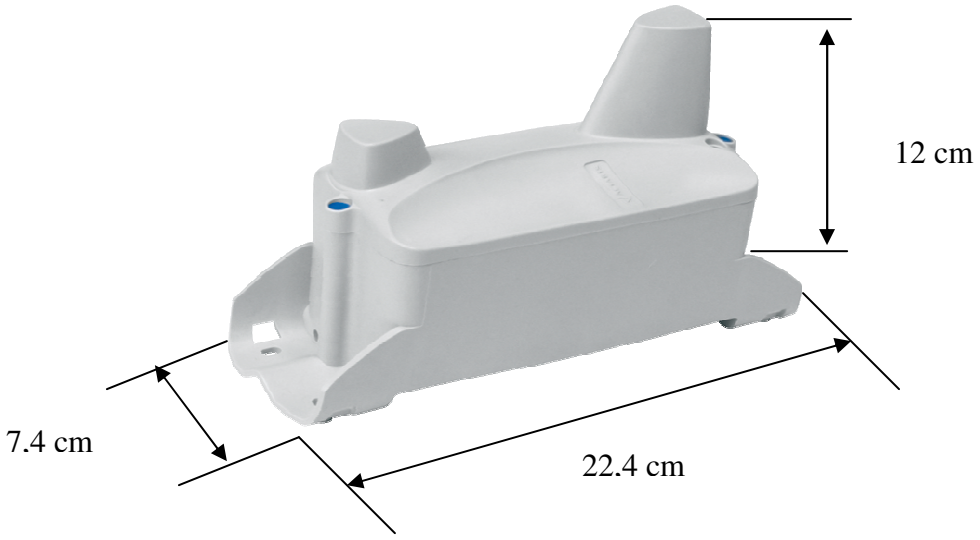
In order to save power consumption, the RF receiver does not remain ON all the time long.
It is then woken up for a short duration (10 ms), every given period (4 seconds).
This period is then the maximum time duration that the reader will have to wait until the Cyble RF is able to answer.



2.4. Functional Specifications

Dimensions	12 x 7,4 x 22,4
Power source	2 lithium batteries + 1 boost battery
Battery typical lifetime	10 years
Case protection	IP 65
Operating temperatures	-10°C / +40°C
Storage temperatures	-20°C / +70°C

2.4.1. Dimensions



2.4.2. Protection

The degree of protection of the EverBlu collector is IP65 . It is protected against water jets and dust but in no case must be submerged. The product is systematically completely potted with resin.
It can be installed indoor or outdoor.

2.4.3. Temperature range

-Operating temperature : -10°C / 40°C
Min operating temp : -20°C (<15 days/year)
Max operating temp : 55°C (<15 days/year)

Storage Temperature : -10°C / 50°C
Min storage temp : -20°C (<24 hours)
Max storage temp : 70°C (<24 hours)

2.4.4. Battery

The battery includes 2 lithium cells and one boost battery

The battery is not replaceable.
It provides the product with a 10 years lifetime .

2.4.5. Reading Distances

Reading distance mainly depends on the environment and on the reading system. We highly recommend that a trial should be carried out with the customer using the **EverBlu Site Survey Tools** in order to find out the real reading distance in your customer's sites.

2.5. Product Identification

The product label includes the following data:

- Name of the product
- Numeric / bar-coded serial number
- Manufacturing date
- CE marking
- EverBlu Collector version
- Lithium battery
- Logo cross out trash bin

The product housing includes the following information:

- Actaris logo