

# Ecofishy Specification

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## Abstract

Ecofishy realizes to monitor the environment of fish tank, control the equipments such as the feed machine and the heater, and also you can access the visualized information of environmental data.

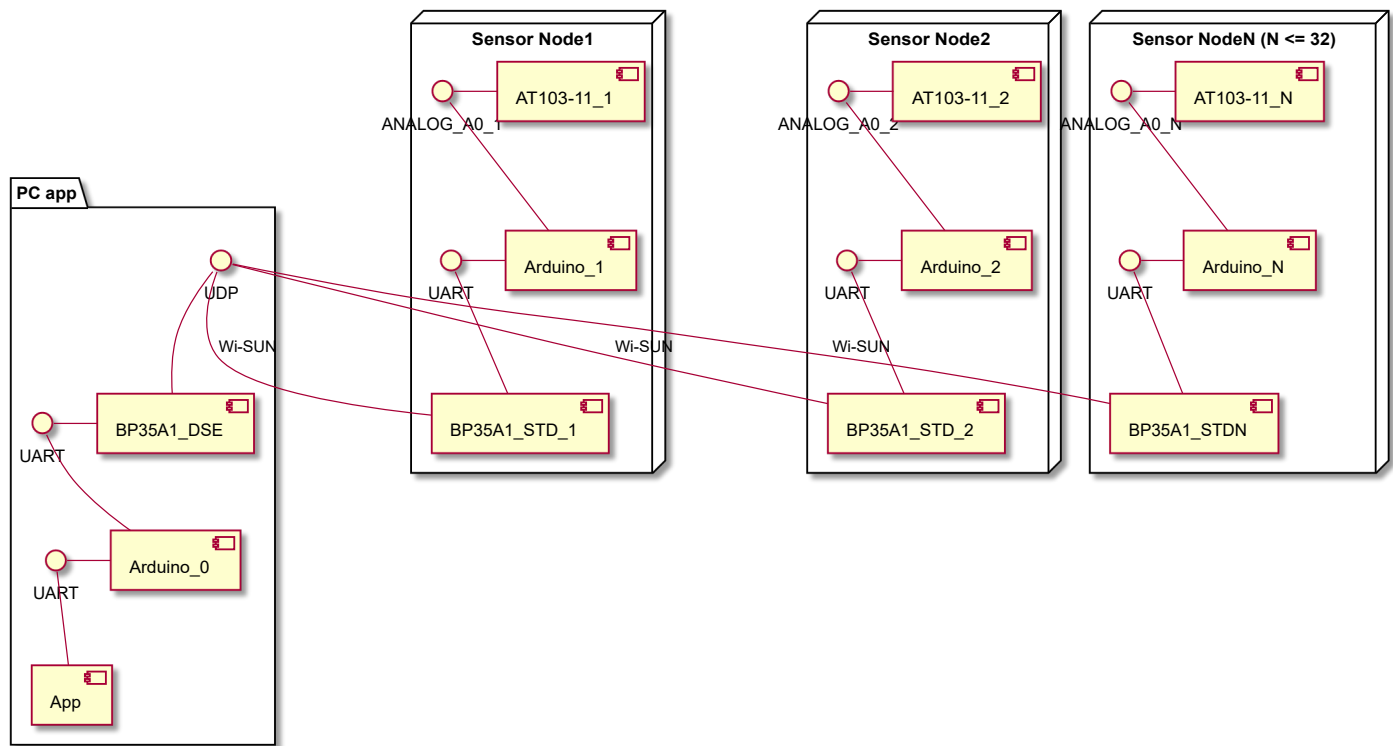
This system is dedicated to owner of animal, learn ecology system, electric hobby and programming in education.

You can get more information about ecology system, electric knowledge, and the source code check our website.

["www.echofishy.sugee.com"](http://www.echofishy.sugee.com)

**Let's Enjoy it!**

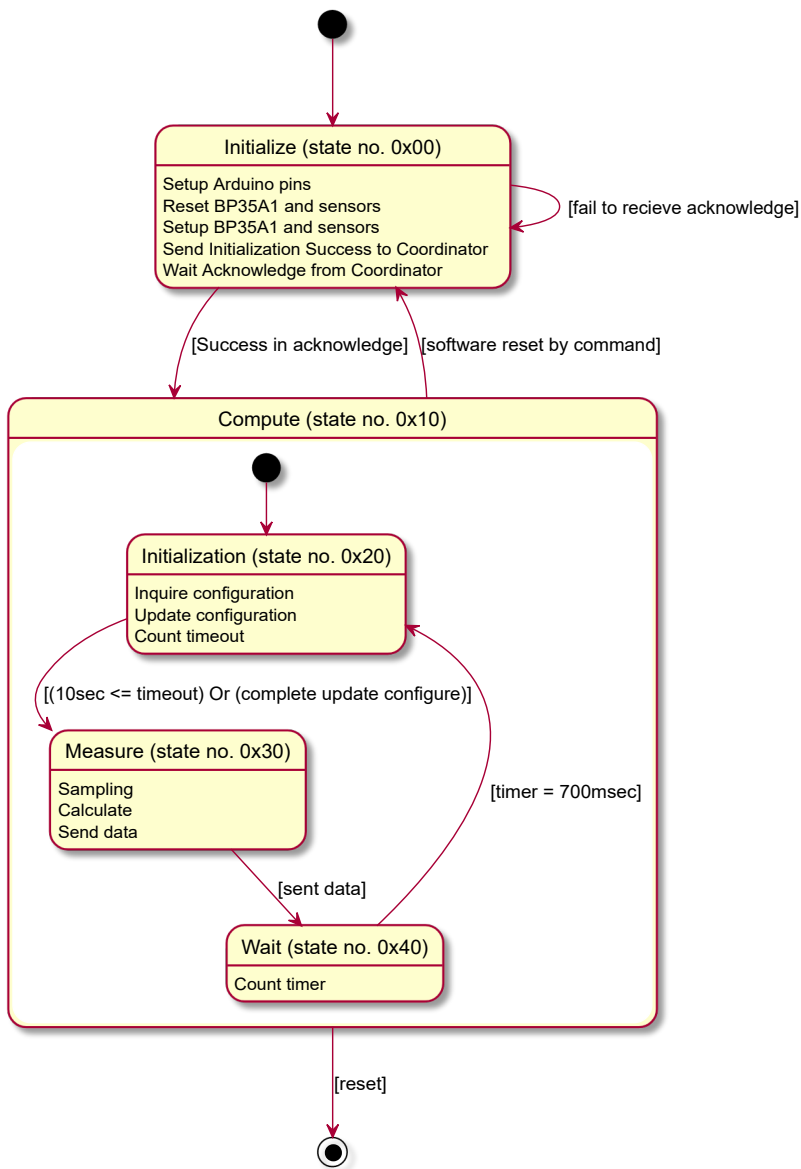
## System component



Ecofishy is composed of the Application for user and sensor nodes to monitor fish tank.

The application receives data by wireless communication and shows the data graph.

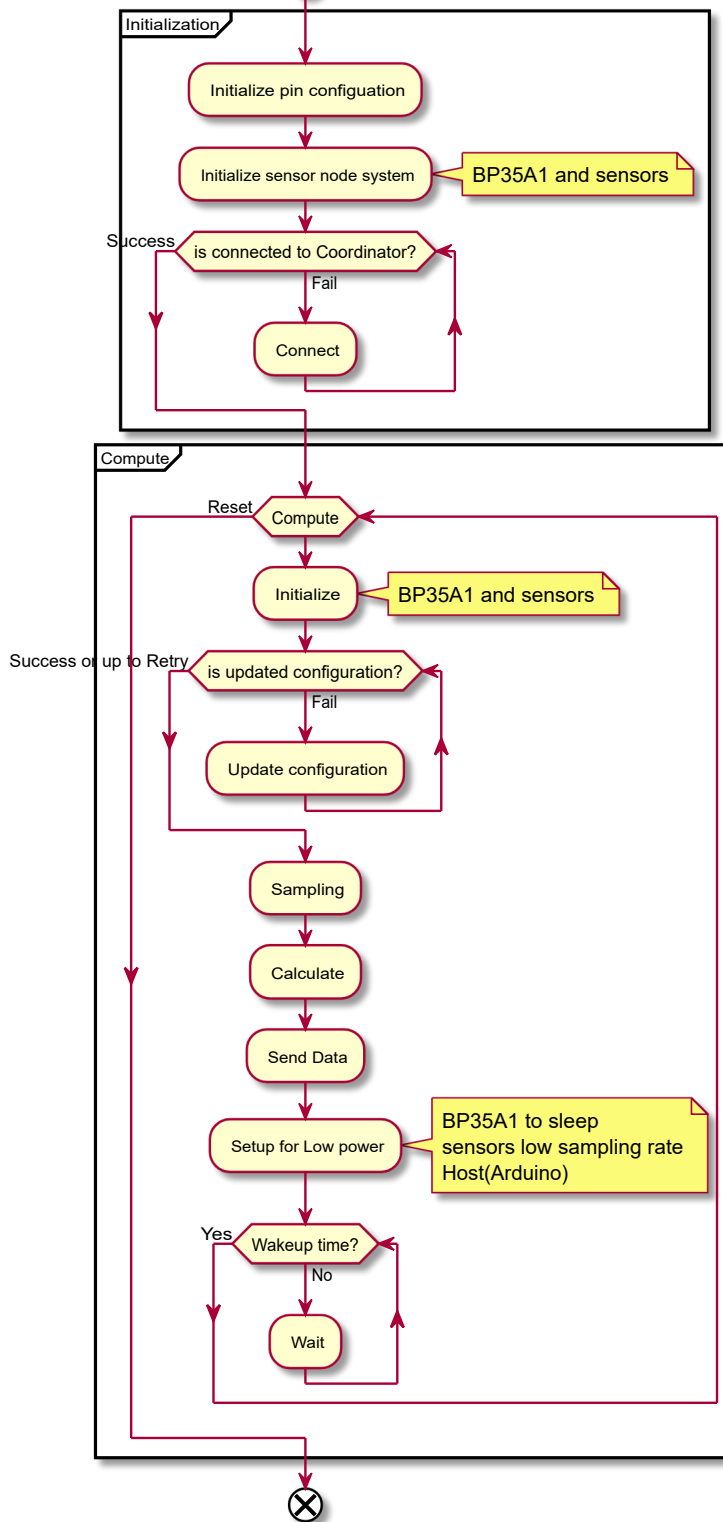
## Statemachine



[\[to the Constents\]](#)

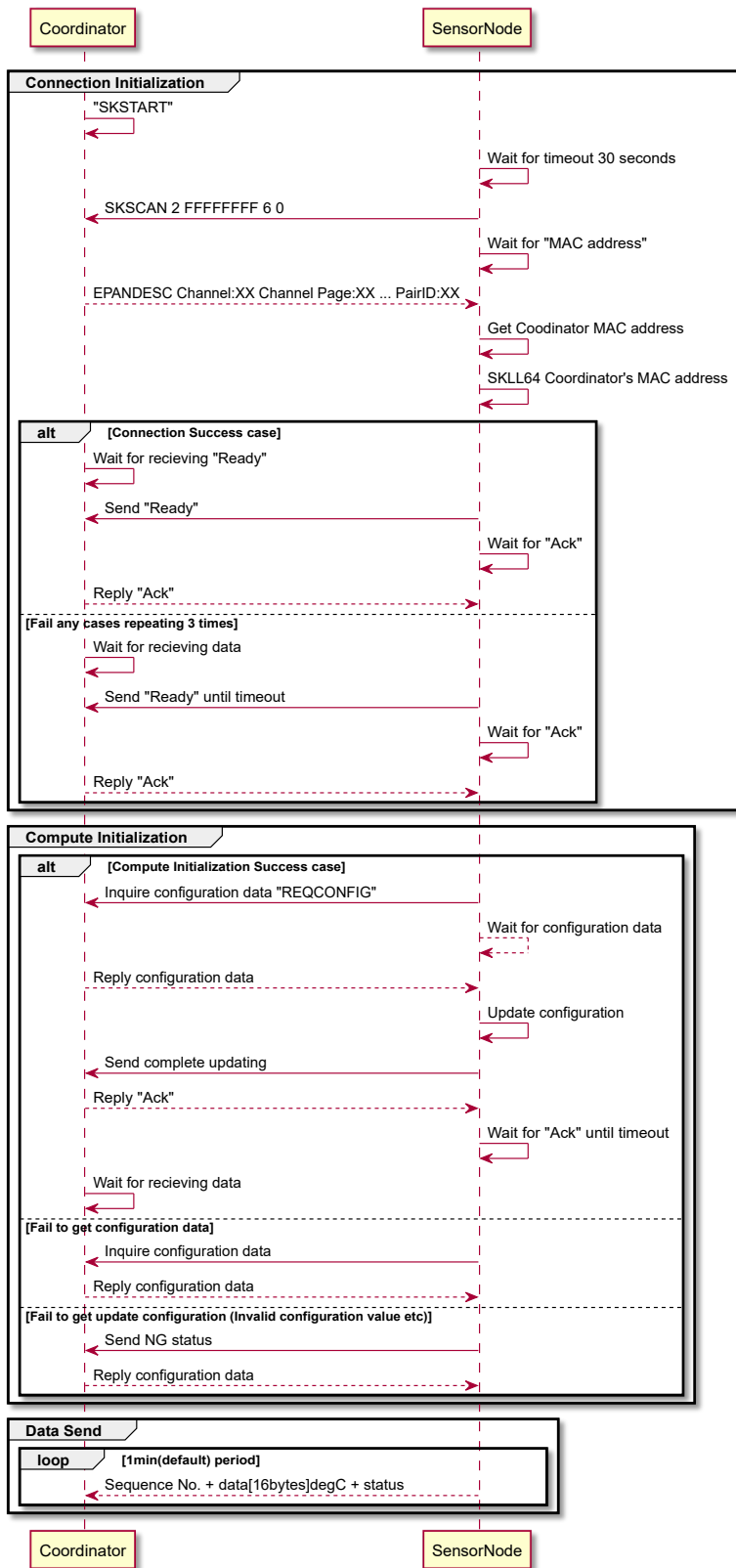
# Compute

## Sensor\_Node\_Operating\_Flow



[\[to the Constents\]](#)

# Wireless communication sequence



# Data format

SN + data + system status

SN: sequence number

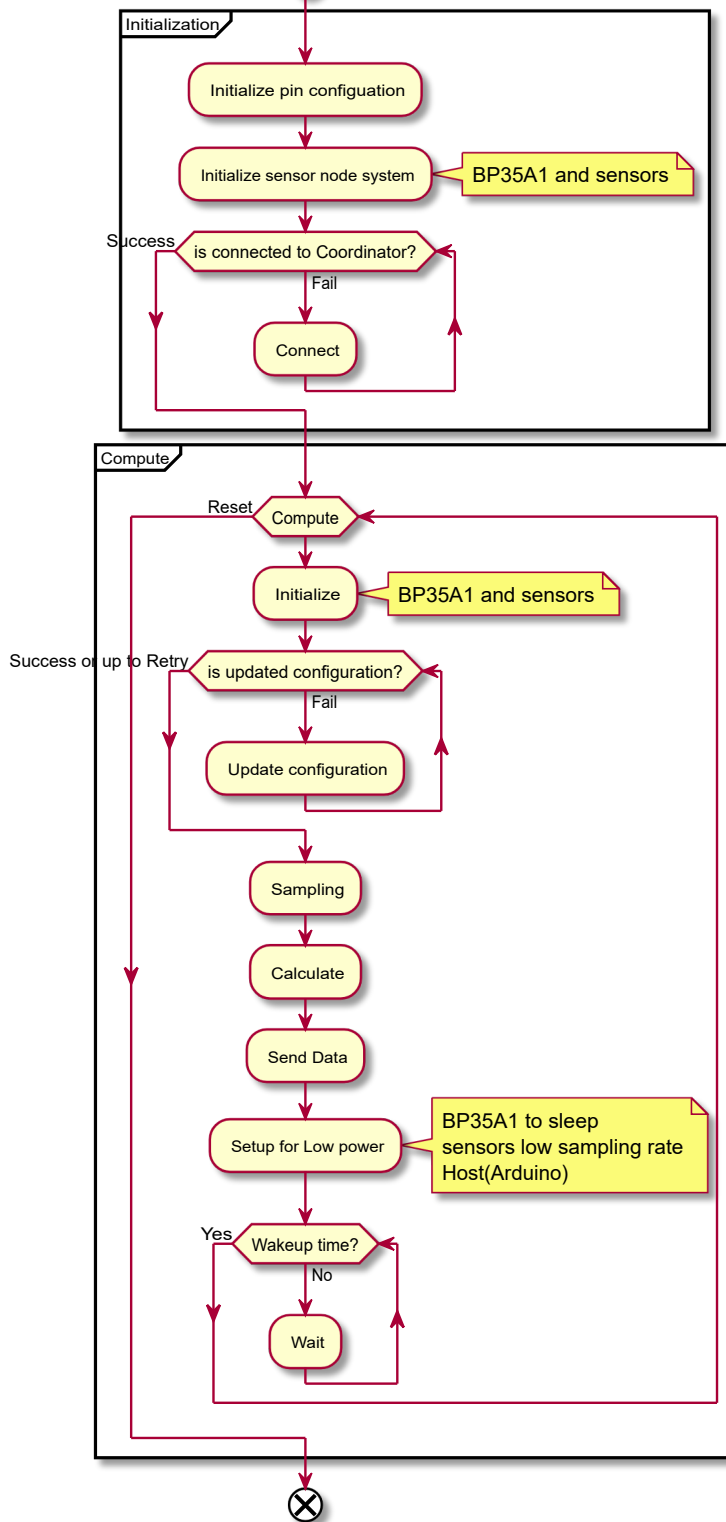
data: sensor data

systeme status: show working well or not

[\[to the Constents\]](#)

# Sensor node operating flow

## Sensor\_Node\_Operating\_Flow



## Control sensor node

User selectable parameters are below.

Key name	value	Description
SleepTime	1 - 6000 sec	Decimal
SensorType	Sensor Node:0, Host:1	
CH	21 - 38	Decimal
Low Power	0: Disable, 1: Enable	
LED color	0: red, 1: green, 2: blue, 3: purple, 4: yellow, 5: aqua, 6: white	
LED brightness	0 - 255	
Node No	auto numbering	Connected sensor node

## Configuration format

Configuration format is json style.

values can be number, character, boolean.

```
{"Key name": "value"}
```

ex.

```
{"SleepTime": "1000"}
```

```
{"SensorType": "1"}
```

```
{"NodeNo": }
```