

1. Micro SIM card slot	5. S2 button	9. Micro USB control port
2. Battery 3.6 [V]	6. Micro USB (service) port	10. Processor status LED
3. LED	7. S1 Button	11. – 15. Sensor inputs
4. LED	8. Antenna connector	16. Antenna socket

- SAM-1 device-
battery, antenna + accessories, as per order

- ✓ Before using the the device, please read this Operating Manual carefully.
- ✓ Adherence to this manual does not exempt from the need to comply with other safety regulations.
- ✓ Any repairs or interference with the device and its accessories may only be carried out by an authorized service centre of the manufacturer.
- ✓ The devices are covered by a 24-month warranty starting on the date of purchase.
- ✓ In connection with the continuous development of the device, the manufacturer reserves the right to update this manual without the need to notify the users of the device.
- ✓ The current version of the manual is available at www.ratmon.com



The SAM-1 device is a device for remote supervision of objects at risk of flooding with water or other liquid. The device can operate with 4 sensors of input (flooding or door open) signals. In addition, the device is equipped with a temperature sensor and optionally a humidity sensor. Communication takes place using the MQTT protocol and the IoT network. Visualisation and supervision is implemented in the RATMON system.

The SAM-1 control panel should, whenever possible, be installed in the place where network coverage will be ensured (near a manhole, window, etc.) using mounting pins.

- a) Installation of flood sensors ("floats") – flood sensors should be mounted to the wall on a grounded DIN rail (vertically). Several "floats" can be mounted on one rail at different heights to reflect different levels of flooding (e.g. 20 cm and 1 m above the floor level).
- b) Hatch opening sensor – 1 sensor is responsible for one hatch/door. The sensor should be installed in such a way that opening of the hatch causes deformation (excitation) of the sensor.

IMPORTANT NOTE! When inserting and removing the SIM card, the battery must be removed!

The SAM-1 device operates in continuous 24/7 mode. Each activation of the sensor causes excitation of the control panel and transmission of the relevant information, e.g. to the RATMON system, where all information can be viewed. The device operates: flood sensor, hatch/door opening sensor, temperature sensor.

We recommend contacting the manufacturer before connecting other sensors.

The level of the GSM signal can be displayed on the LEDs **(3) (4)**. LEDs are switched off by default to conserve battery.

To check the level of the control panel GSM signal at once, press the S1 button **(7)** once and then press the S2 button **(5)** once. The LED **(3)** should light continuously and the LED **(4)** will indicate the status of the network connection.

- fast flashing means connecting to the network
- continuous light means established connection to the network
- after the continuous light, the LED will display the GSM signal level by means of a number of flashes (1 to 4) in two series

If the device flashes with the LED **(3)** for more than 5 minutes, it means that the device cannot establish connection to the network. The next connection attempt will take place spontaneously after 5 minutes, during which time it is recommended to place the device in a place with a better exposure to the GSM signal or use an external antenna.

To enter the service mode, connect the micro USB cable to the port **(6)** and press the S1 button **(7)**. The LED **(3)** will light up continuously.

Waste electrical and electronic equipment should be collected selectively, i.e. not disposed of with other types of household waste. Waste electronic equipment should be handed over to the collection point in accordance with the local regulations on Waste Electrical and Electronic Equipment.

Before handing over the equipment to a collection point, do not disassemble any parts of this equipment yourself. Always observe local regulations for the disposal of packaging, waste batteries and rechargeable batteries.

DEVICE CONFIGURATION

We can configure the SAM-1 device with a dedicated program, which can be downloaded from the website: <https://www.ratmon.com..>

To set up the device you will need: SAM-1 with battery, micro USB cable Windows computer

1. insert the batteries into the device, and connect the micro USB cable to the input No. (6) and the computer
2. the program will bring up the following view for you:

(1) the serial number of the SAM-1 device and its software versions

(2) sensor settings

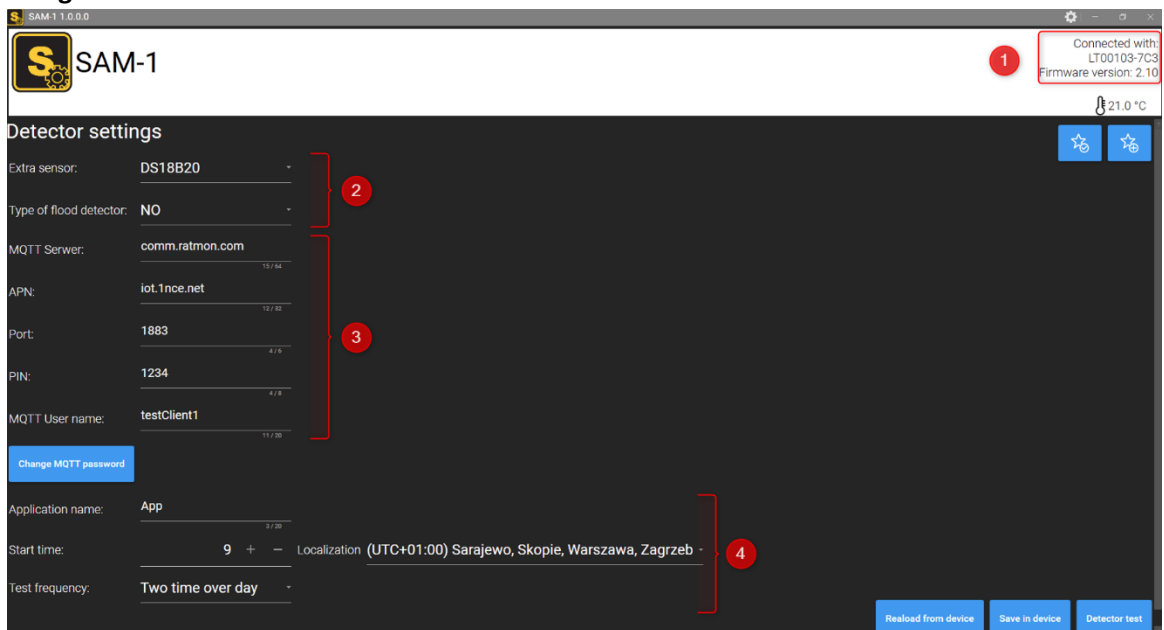
- Extra sensor e.g. temperature sensor, digital distance sensor, etc.,

- Type of flood detector - S-1 sensor, S-2 flood opening sensor

(3) MQTT client settings (to be determined with the client)


(4) settings of measurement time period and time zone

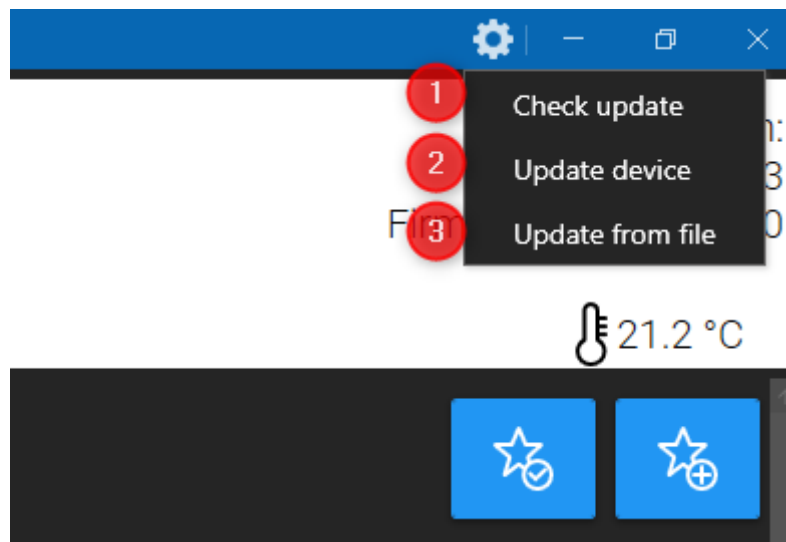
Every change made should be saved!



DEVICE UPGRADE

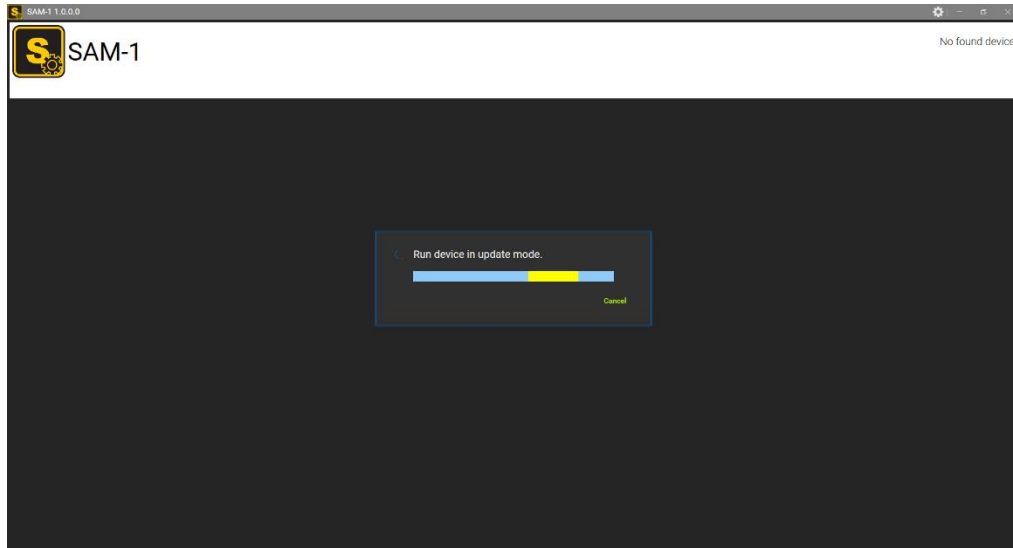
To update the device you will need: SAM-1 with battery, micro USB cable Windows computer

1. insert the batteries into the device, and connect the micro USB cable to the input No. **(6)** and the computer
2. In the upper right corner, select settings  , and then choose the appropriate update method:



- (1)** Checks for new software versions for the SAM-1 device
- (2)** Update the SAM-1 device from the cloud
- (3)** Update the SAM-1 device from a file

3. To the SAM-1 device you need to enter a special mode for communication. To do this, click in sequence:
 - hold S2 **(5)** button
 - briefly click S1 **(7)**
 - then release the S2 **(5)** button



4. The device will begin to go through the update process. When the process is properly completed, you will be informed by an appropriate message:

