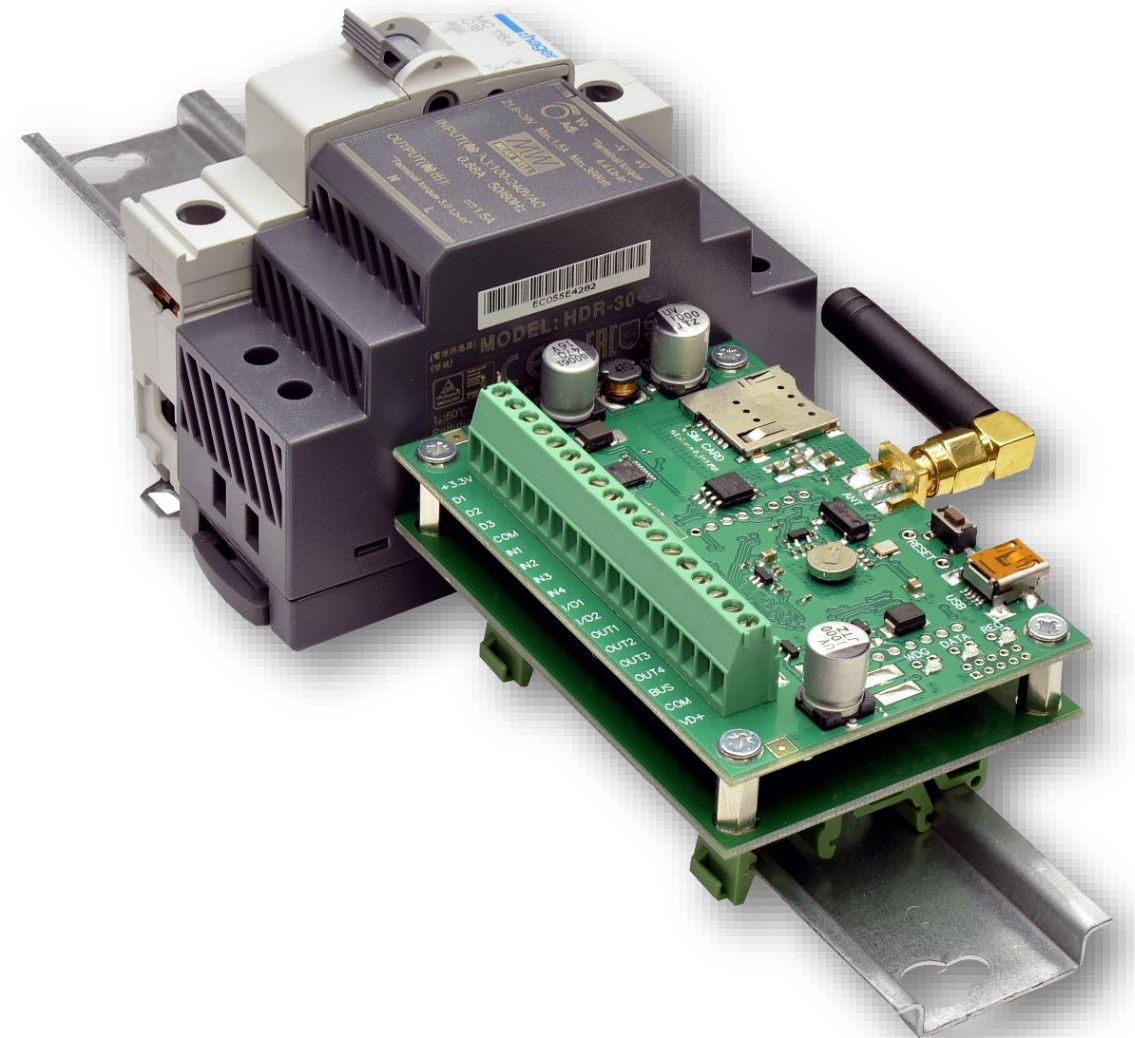


Heating automation

With the module **GTalarm2**

Website: <https://www.topkodas.lt>

Email: info@topkodas.lt



Example:

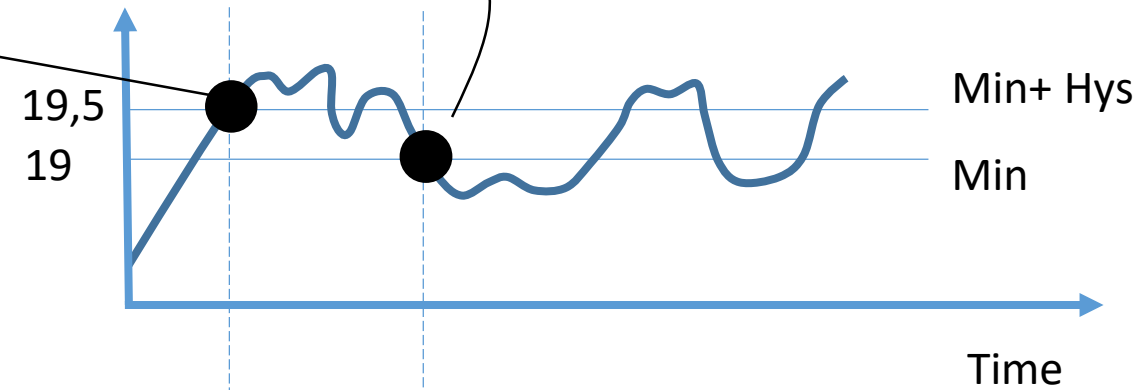
- The wanted minimum temperature is 19°C. So sensor1: Min=19 and Hysteresis=0.5

- When the controller is switched on,
- Out1 is activated because the temperature is out of range.
- This switches the heater ON

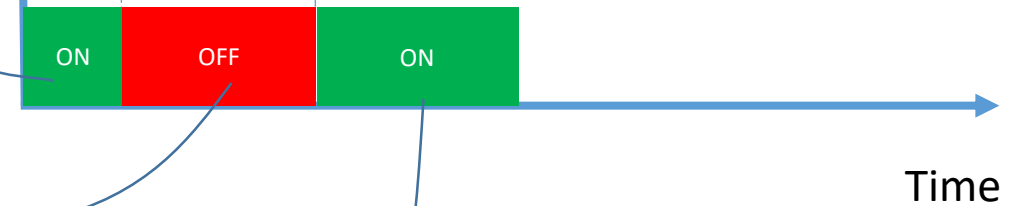
The temperature is going higher.

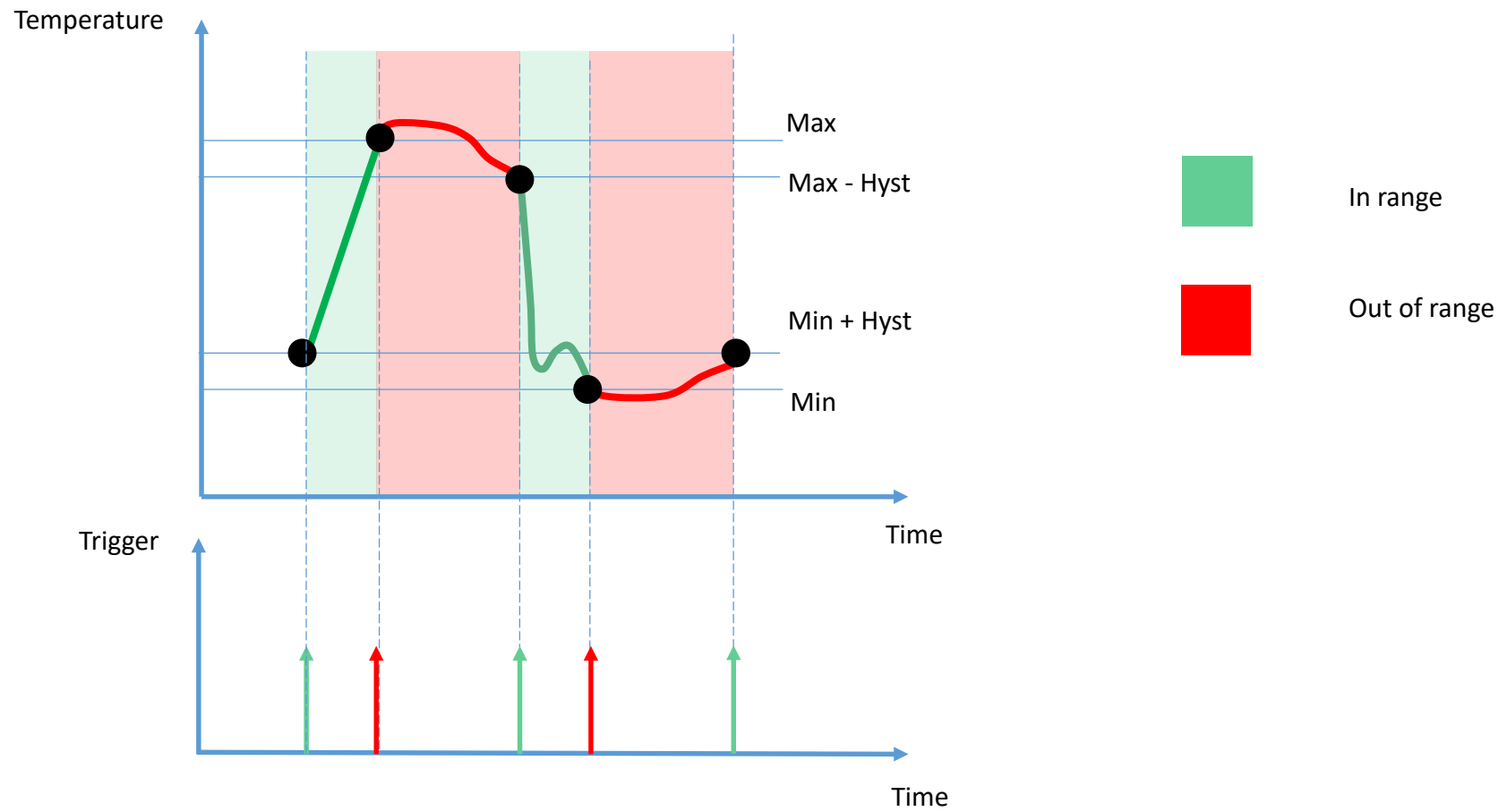
- When temperature reaches 19.5°C ($19.0 + 0.5$)
- it goes in range (trigger condition)
- Out1 is deactivated.
- The heater is switched off.
- The temperature falls and
- when it reached 19°C it goes out of range (trigger conditions)
- The Out1 is activated (heater is switched on).

Temperature



Output status





GTalarm2 and sensors DS18B20

When the temperature follow under 20 C
we want to start the heating, but
when it goes above 24 C , it should
stop the same heater.

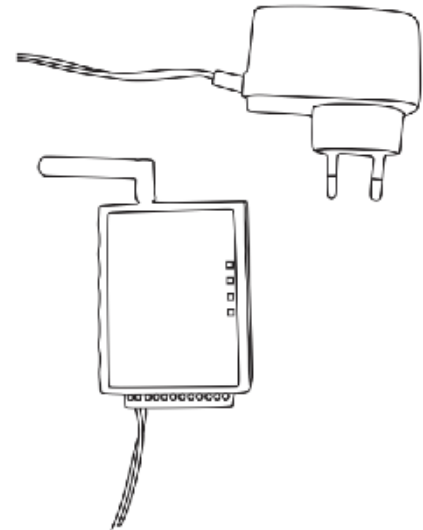
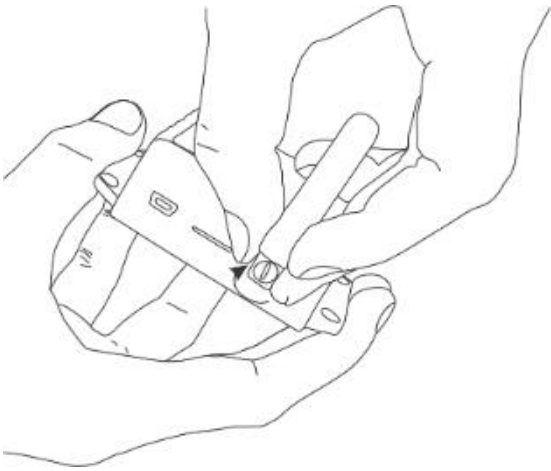
How to program that ?

Connect DS18B20 sensors to the module

Device power and USB must be disconnected

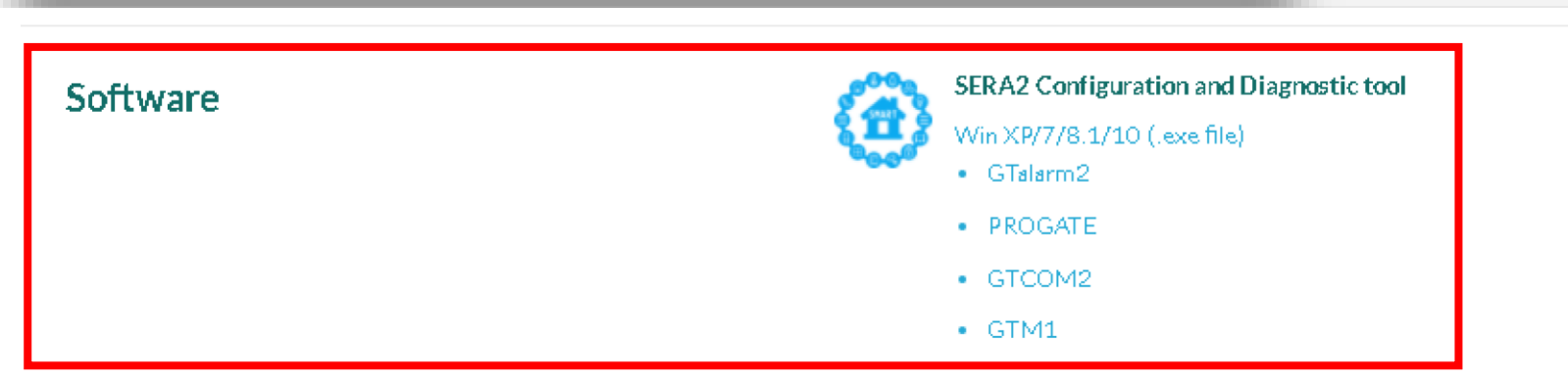
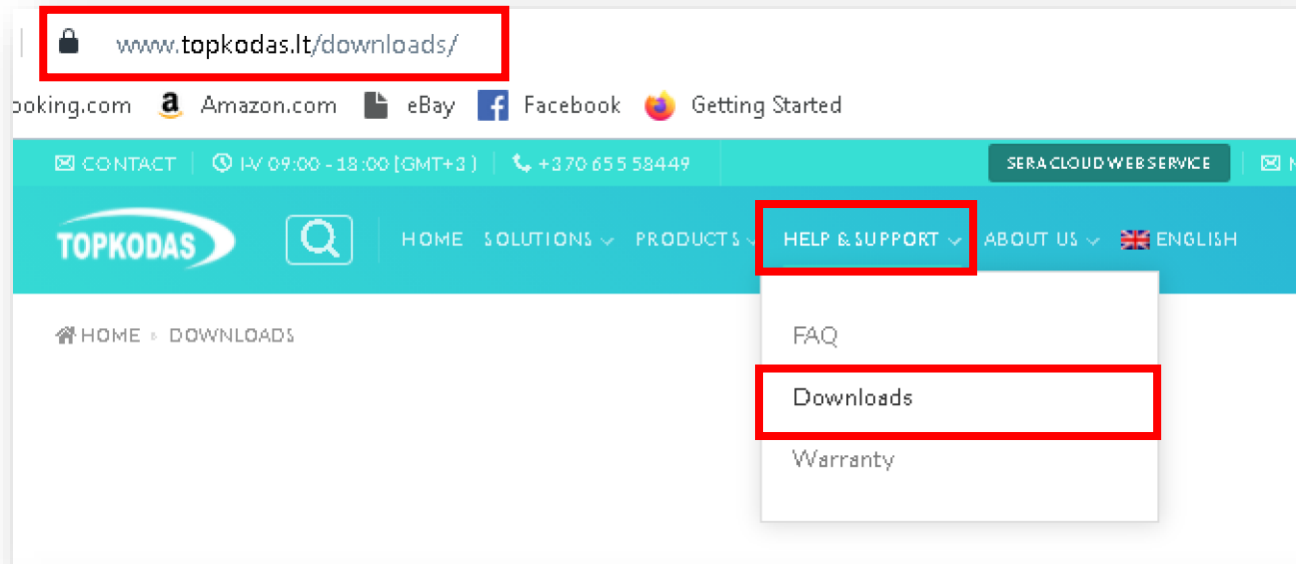
During sensors connection process

- Screw GSM antenna
- Insert SIM card
- Connect power supply

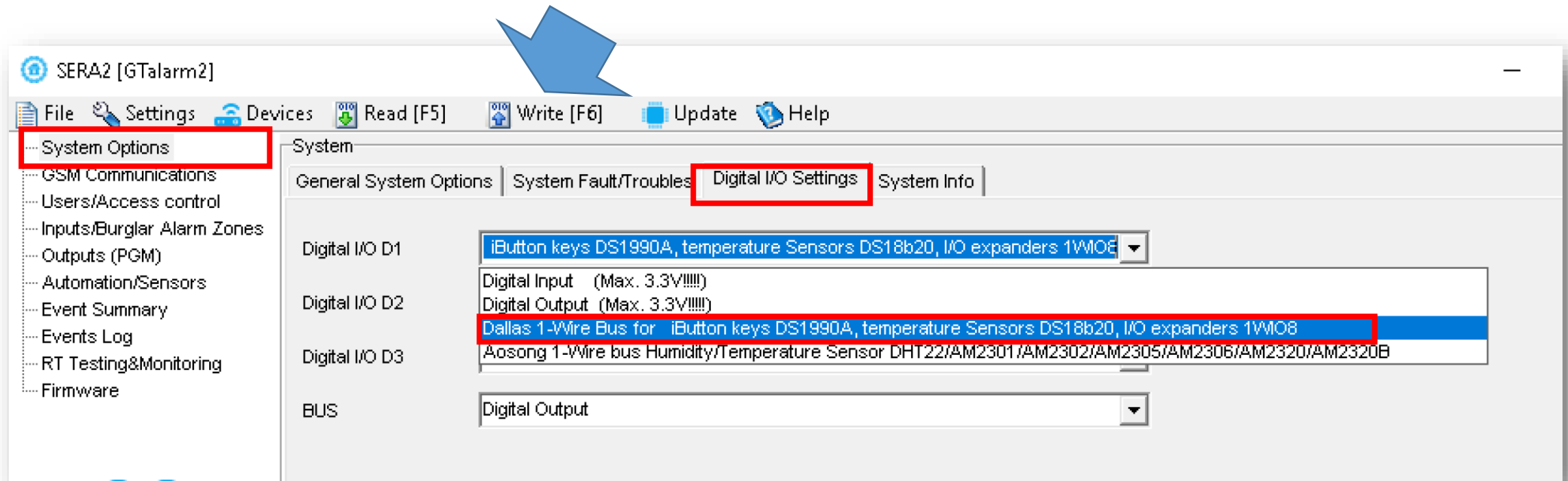


Install FREE testing, diagnostic software SERA2

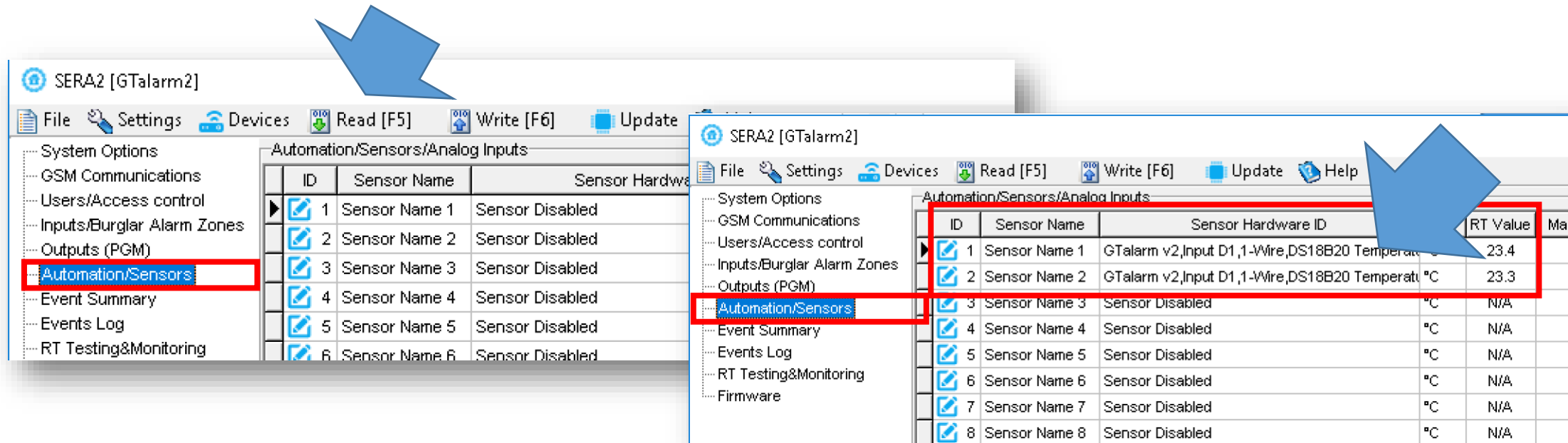
- Go to <https://www.topkodas.lt/downloads/>



- Connect the module to the computer via mini USB cable
- SERA2> System Options> Digital I/O Settings
- Digital I/O D1> Dallas 1-Wire Bus...
- Press “Write” in the command line



- SERA2> Automation/ Sensors
- Press “Read” in the command line
- Connected sensors will appear in the list
- Double click on the selected line



The image displays two screenshots of the SERA2 [GTalarm2] software interface, illustrating the steps to view sensor data.

Left Screenshot: The 'Automation/Sensors' menu item is highlighted in the left sidebar. A blue arrow points to the 'Read' button in the top toolbar.

Right Screenshot: The 'Automation/Sensors/Analog Inputs' table is displayed. A red box highlights the first two rows of the table. A blue arrow points to the 'Read' button in the top toolbar.

ID	Sensor Name	Sensor Hardware ID	RT Value	Ma
1	Sensor Name 1	GTalarm v2,Input D1,1-Wire,DS18B20 Temperat	23.4	
2	Sensor Name 2	GTalarm v2,Input D1,1-Wire,DS18B20 Temperat	23.3	
3	Sensor Name 3	Sensor Disabled	°C	N/A
4	Sensor Name 4	Sensor Disabled	°C	N/A
5	Sensor Name 5	Sensor Disabled	°C	N/A
6	Sensor Name 6	Sensor Disabled	°C	N/A
7	Sensor Name 7	Sensor Disabled	°C	N/A
8	Sensor Name 8	Sensor Disabled	°C	N/A

SERA2 [GTalarm2]

FileSettingsDevicesRead [F5]Write [F6]UpdateH

System Options

GSM Communications

Users/Access control

Inputs/Burglar Alarm Zones

Outputs (PGM)

Automation/Sensors

Event Summary

Events Log

RT Testing&Monitoring

Firmware

Automation/Sensors/Analog Inputs

ID	Sensor Name	Sensor Hardware ID
1	Sensor Name 1	DS18B20 Temperature,SN:28FF7B4A016
2	Sensor Name 2	GTalarm v2,Input D1,1-Wire,DS18B20
3	Sensor Name 3	Sensor Disabled
4	Sensor Name 4	Sensor Disabled
5	Sensor Name 5	Sensor Disabled
6	Sensor Name 6	Sensor Disabled
7	Sensor Name 7	Sensor Disabled
8	Sensor Name 8	Sensor Disabled
9	Sensor Name 9	Sensor Disabled
10	Sensor Name 10	Sensor Disabled
11	Sensor Name 11	Sensor Disabled
12	Sensor Name 12	Sensor Disabled
13	Sensor Name 13	Sensor Disabled
14	Sensor Name 14	Sensor Disabled
15	Sensor Name 15	Sensor Disabled
16	Sensor Name 16	Sensor Disabled
17	Sensor Name 17	Sensor Disabled
18	Sensor Name 18	Sensor Disabled
26	Sensor Name 26	Sensor Disabled
27	Sensor Name 27	Sensor Disabled

Sensor 1 Settings

Sensor Settings

Sensor Name:Sensor Name 1

Sensor type/hardware location:GTalarm v2,Input D1,1-Wire,DS18B20 Temperature,SN:28FF7B4A016

Sensor Unit Text:°C

High/Max (e.g. A/C Cooler, Fan) Value Action Settings

Max Value Alarm Event/SMS:30

Max Value To Activate Output:25

Max Value Hysteresis:1

Max Alarm Event Delay:10000ms

Max Value Output Control Delay:1000ms

Output:NONE

Contact ID Report Code:158

Alarm Event SMS Text:Max Value

Alarm Event/SMS☒

Restore Event/SMS☒

Low/Min (e.g. Heater) Value Action Settings

Min Value Alarm Event/SMS:5

Min Value To Activate Output:22

Min Value Hysteresis:2

Min Alarm Event Delay:10000ms

Min Value Output Control Delay:1000ms

Output:OUT1

Contact ID Report Code:159

Alarm Event SMS Text:Min Value

Alarm Event/SMS☒

Restore Event/SMS☒

High Temp Alarm

Low Temp Alarm

SMS Alarm High Temperature

SMS Alarm Low Temperature

Cooler Hysteresis

Heater Hysteresis

Comfort Zone

Cooler ON

Cooler OFF

Heater OFF

Heater ON

Sensor Calibration

X - Multiplier1

Y - Offset0

Equation: Temperature=X*ADC+Y

OK

SMART

Heater settings

- Min Value to activate output > 22
- Min Value Hysteresis > 2

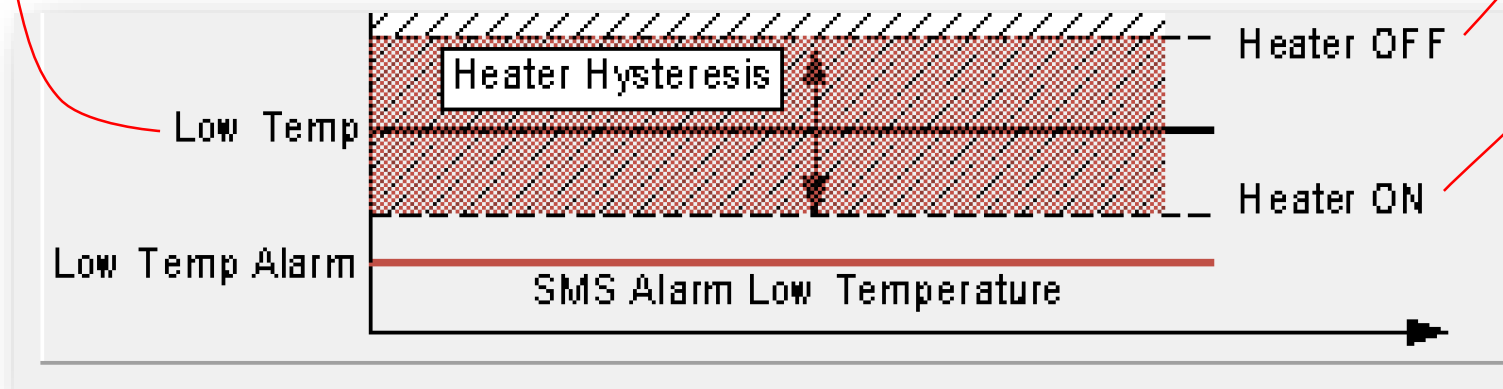
Low/Min (e.g. Heater) Value Action Settings

Min Value Alarm Event/SMS:	5
Min Value To Activate Output:	22
Min Value Hysteresis:	2
Min Alarm Event Delay:	10000 ms
Min Value Output Control Delay:	1000 ms
Output:	OUT1
Contact ID Report Code:	159
Alarm Event SMS Text:	Min Value
Alarm Event/SMS	<input checked="" type="checkbox"/>
Restore Event/SMS	<input checked="" type="checkbox"/>

Wanted temperature is 22 C

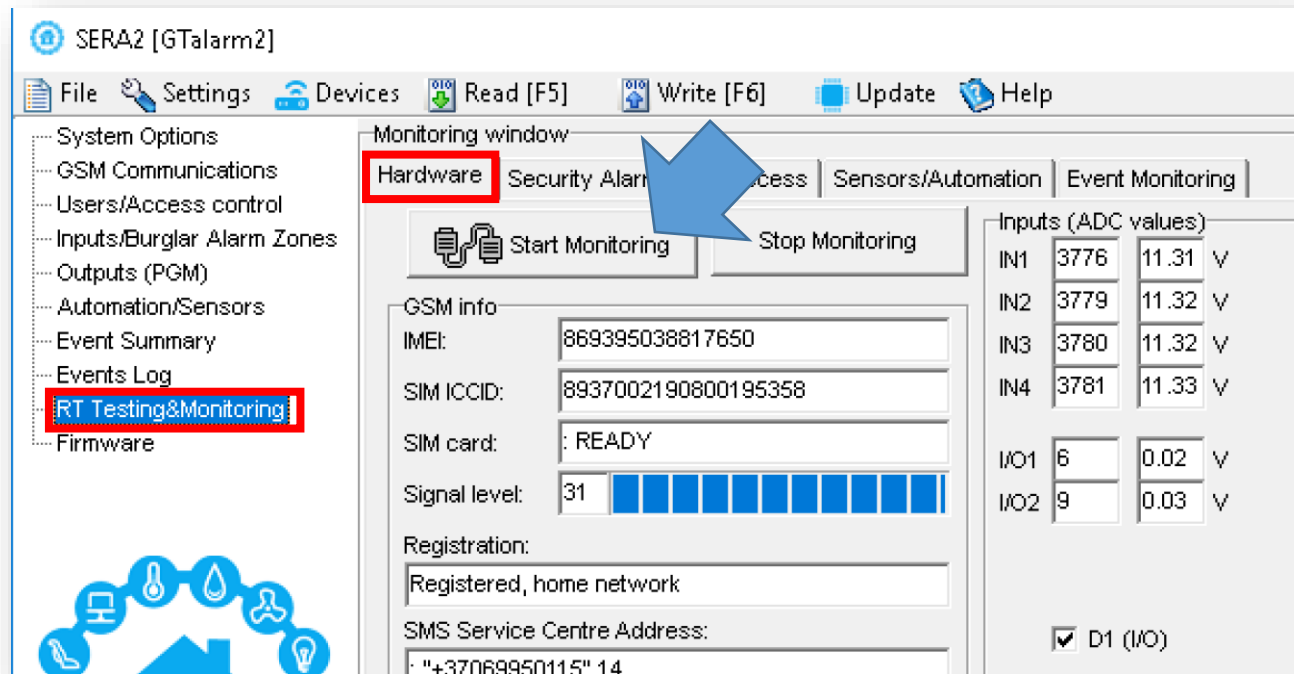
Temp = 20 C [22-2] > Heater ON

Temp = 24 C [22+2] > Heater OFF

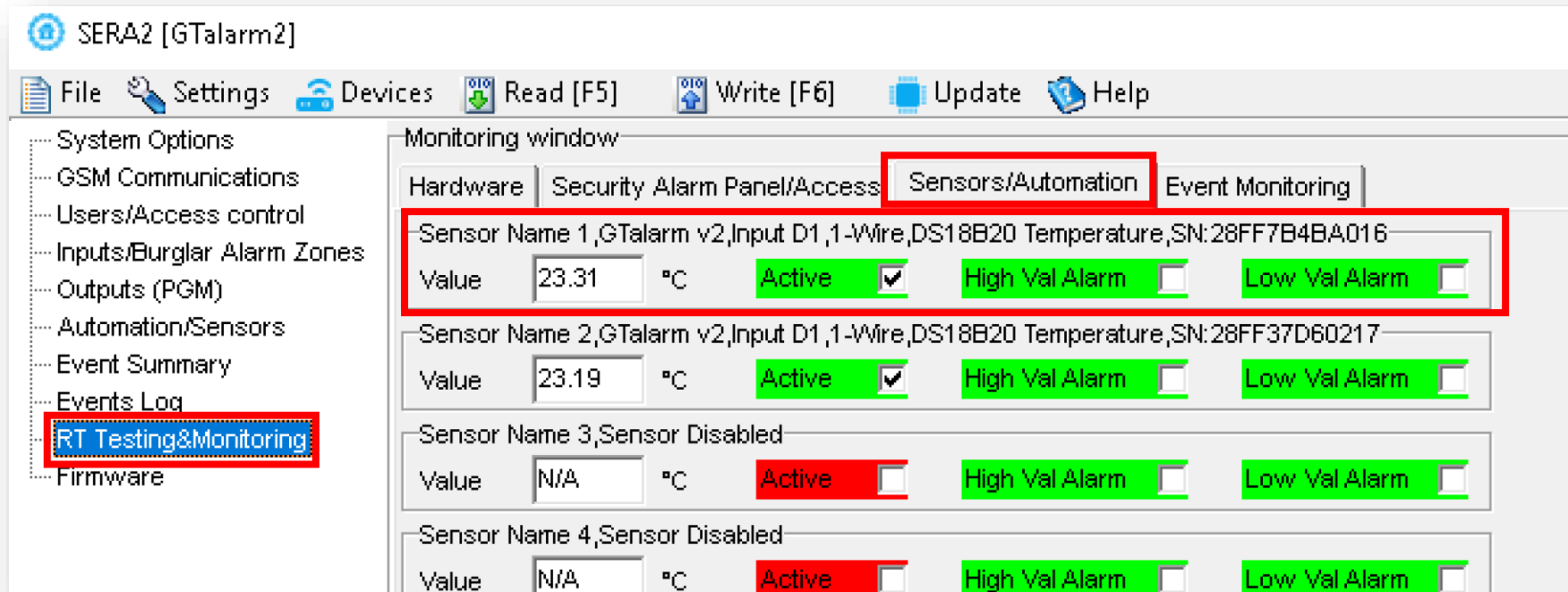


Testing

- SERA2> RT Testing & Monitoring> Hardware
- Press “Start Monitoring” button



- SERA2> RT Testing & Monitoring> Sensors/ Automation
- You will see real time sensor values



SERA2 [GTalarm2]

File Settings Devices Read [F5] Write [F6] Update Help

System Options GSM Communications Users/Access control Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event Summary Events Log **RT Testing&Monitoring** Firmware

Monitoring window

Hardware Security Alarm Panel/Access **Sensors/Automation** Event Monitoring

Sensor Name 1,GTalarm v2,Input D1,1-Wire,DS18B20 Temperature,SN:28FF7B4BA016

Value 25.25 °C Active ☒ High Val Alarm ☐ Low Val Alarm ☐

Sensor Name 2,GTalarm v2,Input D1,1-Wire,DS18B20 Temperature,SN:28FF37D60217

Value 24.63 °C Active ☒ High Val Alarm ☐ Low Val Alarm ☐

Sensor Name 3,Sensor Disabled

Value N/A °C Active ☐ High Val Alarm ☐ Low Val Alarm ☐

SERA2 [GTalarm2]

File Settings Devices Read [F5] Write [F6] Update Help

System Options GSM Communications Users/Access control Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event Summary Events Log **RT Testing&Monitoring** Firmware

Monitoring window

Hardware Security Alarm Panel/Access Sensors/Automation Event Monitoring

Start Monitoring Stop Monitoring

GSM info

IMEI: 869395038817650

SIM ICCID: 8937002190800195358

SIM card: READY

Signal level: 30

Inputs (ADC values)

IN1	3778	11.32 V
IN2	3780	11.32 V
IN3	3780	11.32 V
IN4	3781	11.33 V
I/O1	5	0.01 V
I/O2	7	0.02 V

Outputs states

<input type="checkbox"/> Out1	Out1 On/Off
<input checked="" type="checkbox"/> Out2	Out2 On/Off
<input type="checkbox"/> Out3	Out3 On/Off
<input type="checkbox"/> Out4	Out4 On/Off
<input type="checkbox"/> I/O1	I/O1 On/Off
<input type="checkbox"/> I/O2	I/O2 On/Off

SERA2 [GTalarm2]

File Settings Devices Read [F5] Write [F6] Update Help

System Options GSM Communications Users/Access control Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event Summary Events Log **RT Testing&Monitoring** Firmware

Monitoring window

Hardware Security Alarm Panel/Access Sensors/Automation Event Monitoring

Sensor Name 1,GTalarm v2,Input D1,1-Wire,DS18B20 Temperature,SN:28FF7B4BA016

Value 23.25 °C Active ☒ High Val Alarm ☐ Low Val Alarm ☐

Sensor Name 2,GTalarm v2,Input D1,1-Wire,DS18B20 Temperature,SN:28FF37D60217

Value 25.88 °C Active ☒ High Val Alarm ☐ Low Val Alarm ☐

Sensor Name 3,Sensor Disabled

Value N/A °C Active ☐ High Val Alarm ☐ Low Val Alarm ☐

Sensor Name 4,Sensor Disabled

Monitoring

Inputs (ADC values)

IN1	3778	11.32 V
IN2	3780	11.32 V
IN3	3780	11.32 V
IN4	3782	11.33 V
I/O1	5	0.01 V
I/O2	9	0.03 V

Outputs states

<input checked="" type="checkbox"/> Out1	Out1 On/Off
<input checked="" type="checkbox"/> Out2	Out2 On/Off
<input type="checkbox"/> Out3	Out3 On/Off
<input type="checkbox"/> Out4	Out4 On/Off
<input type="checkbox"/> I/O1	I/O1 On/Off
<input type="checkbox"/> I/O2	I/O2 On/Off

If you want to edit existing configuration

- You have to read configuration from the memory of the module,
- Press “Read” in the command line
- Edit it and write edited configuration to the memory
- Press “Write” in the command line



More information via email:

info@topkodas.it