



## [Manual for STE2 R2](#)

# Safety warning

The device has been tested and is in good working condition, meeting the standards required in the Czech Republic.

To keep it working properly, it's important to follow the safety and maintenance guidelines listed below. If the device is used improperly, it may not work safely.

Also, make sure that the power socket or the point where the device can be unplugged from the power supply is easy to reach.

Do not use the device if:

- It looks damaged
- It's not working properly
- There are loose parts inside
- It was exposed to moisture or water for a long time
- Someone who is not authorized tried to repair it
- The power adapter or its cable looks damaged
- You're using the device in a way that's not recommended, which may compromise its safety features
- The switch, fuse, and other power surge protection features must be part of the device's overall construction.

The manufacturer is only responsible for the device if it's being powered by an approved or supplied power source.

If you experience any difficulties with installing or starting up the device, please don't hesitate to reach out to our technical support team for assistance.

## **HW group s.r.o.**

<http://www.hw-group.com>

email: [support@HWg.cz](mailto:support@HWg.cz)

Rumunská 26/122

Prague, 120 00

Phone: +420 222 511 918

*Before contacting technical support, prepare a precise model of your device (on the manufacturing label and the firmware version (see below), if you know it.*

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# STE2 R2

**STE2 R2 is a reliable environmental monitoring solution for remote locations. Email alerts, SNMP monitoring or cloud service available.**

STE2 R2 is a reliable LAN & WiFi remote sensor monitoring product. External sensors for 2× RJ11 ports & detectors to 2× DI (Digital Input).

Whenever a too high or too low temperature is detected (door opened), an Alert is sent. Alerts (Emails) can be sent directly from the device (SMTP) or via the Portal service (SMS, ring-out, and device disconnected alerts).

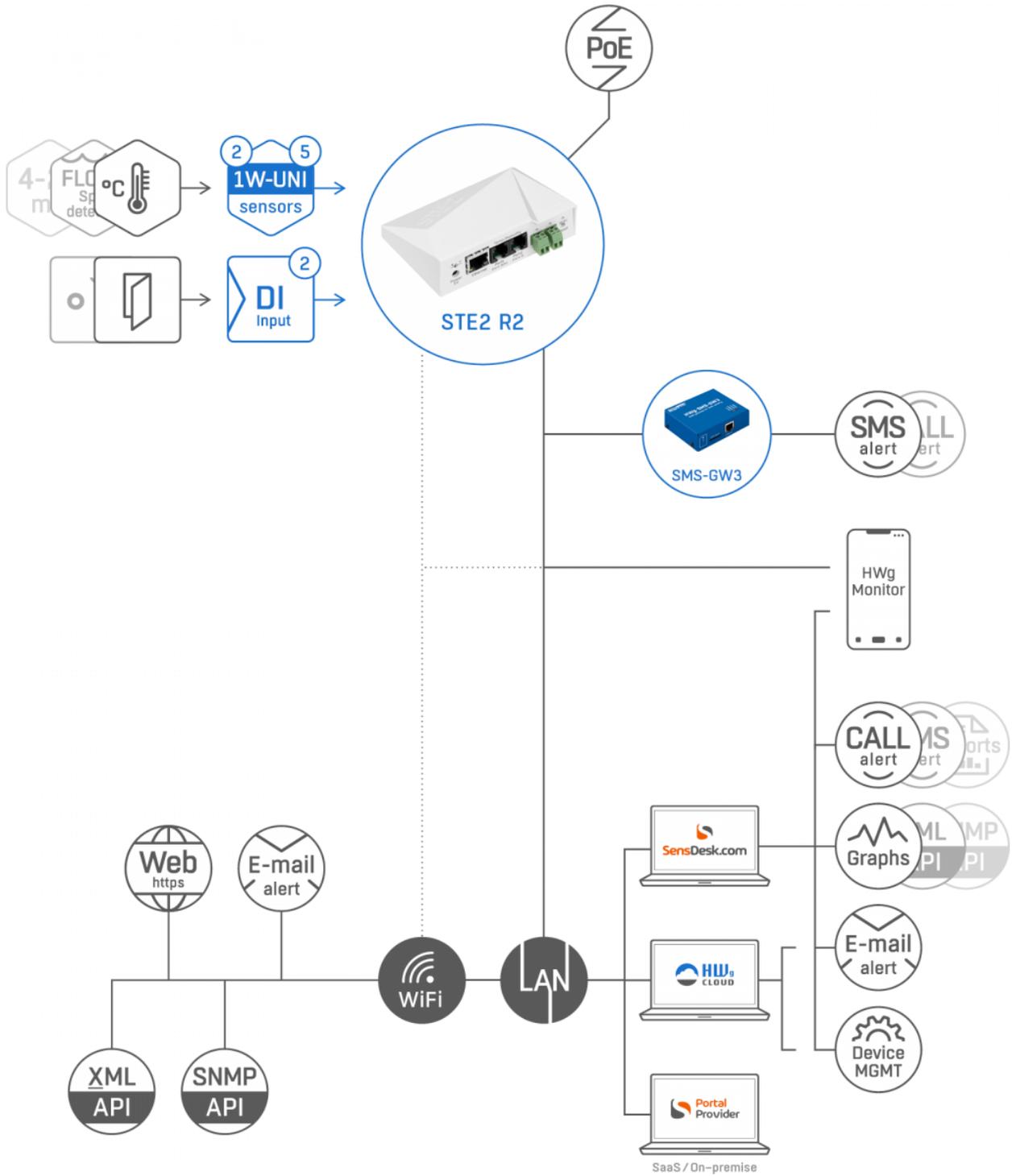
Even without the Portal service, STE2 R2 can send alerts via an external SMS gateway (on the same network). With or without the Portal, the HWg monitor (iOS/Android mobile application) displays current sensor values.

Additional sensors can be connected to a second RJ11 sensor port (%RH, Cryo temperatures, CO<sub>2</sub>, VoC, 4-20mA, water flooding, ...). RJ11 sensors can be daisy chained or one physical sensor can measure multiple values (°C + %RH + VoC = 3 values).

Device package contains (international) wall plug power adapter 5V and 3m RJ11 temperature sensor. Device can be powered by PoE.



# Product usage scheme



## Basic features

- The device supports LAN and WiFi connections via 802.11 b/g/n (2.4 GHz).
- It supports Ethernet and WiFi operation for easy configuration.
- The device can be powered by 5V (external power adaptor) or PoE.
- The device comes with a built-in WEB server that supports HTTPS. Standard Internet browser is enough for configuration.
- Open API: It can be connected to higher-level monitoring systems via XML or SNMP.
- The device can handle HTTP and HTTPS traffic simultaneously, with the option to disable one or both protocols for security reasons.
- If the sensor value (temperature) goes out of Safe Range, the device can send an email as an alert.
- The device supports TLS authorization (Gmail...) and is password protected.

## Application

### AC (Air Conditioning) failure

Changes in temperature alert you of the A/C cooling unit outages.

### Heating monitoring

Remote monitoring of the heating system, email or SMS alerts of freezing hazards.

### Monitoring of services provided

Easily create reports with temperature graphs at one or more locations via the Portal service. You can keep an eye on the quality of the outsourced services.

### Refrigerator or freezer monitoring

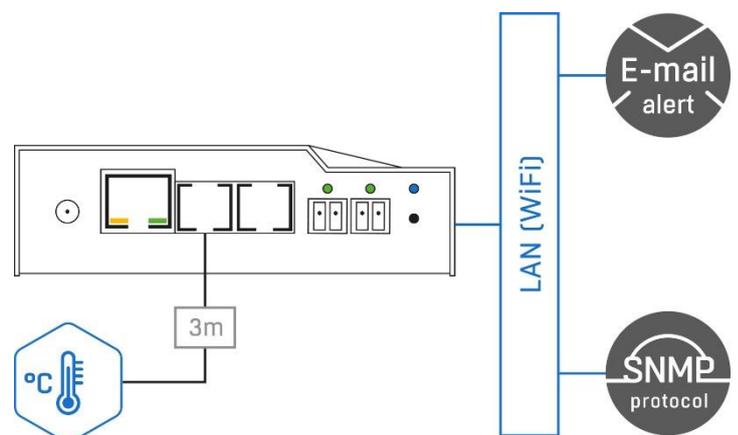
Sends an email when your refrigerator fails. Logging of operating and storage conditions.

### Heating optimization

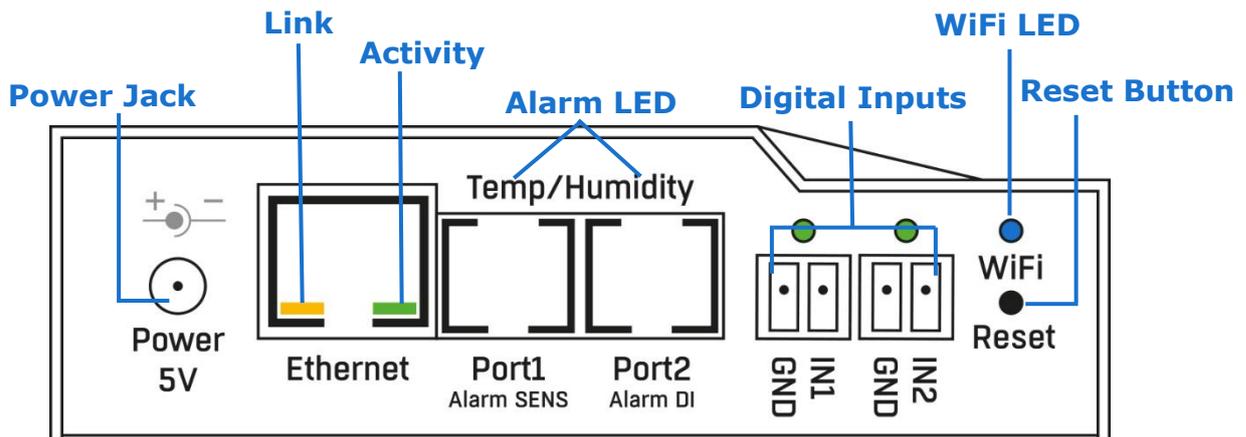
Save on heating and air conditioning costs.

### Food storage

Monitors optimal storage conditions. HACCP protocols can be created using the SensDesk Report feature (optional).



# Connectors and wiring



- **Ethernet** - LAN connectivity, default configuration also for WiFi connectivity.
- **2x RJ11 (Temp/Humidity)** - External RJ11 sensors from HW group.
  - Each port is max. 60m.
  - One physical sensor can provide several sensor values.
  - Temperature & Humidity sensor provides 2 sensor values.
  - Sensor values limit is for both RJ11 ports together.
- **Power** - 5V power supply (external adapter).

## Indication

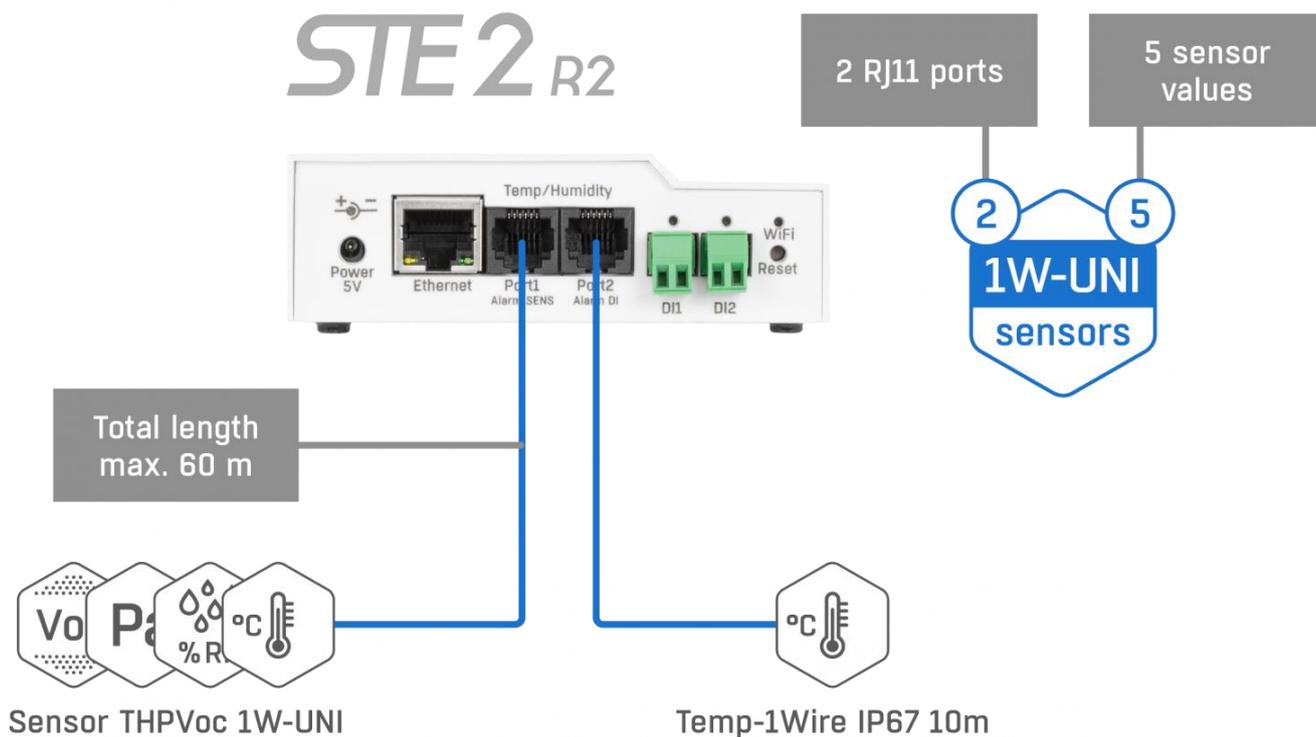
- **Digital Inputs** - Lighting when DI = 1(On).
- **Link** - A yellow LED signalizes connectivity to the computer network.
- **Activity** - A green flashing LED signalizes ongoing communication.
- **WiFi** - A blue LED signalizes connection to the WiFi AP.
- **Alarm LED** - Two LEDs hidden in the Port1 and Port2 connectors.
  - **Alarm SENS** - LED signal Alarm state on any of sensors.
  - **Alarm DI** - LED signal Alarm state on one of DI (Digital Input).

## Button

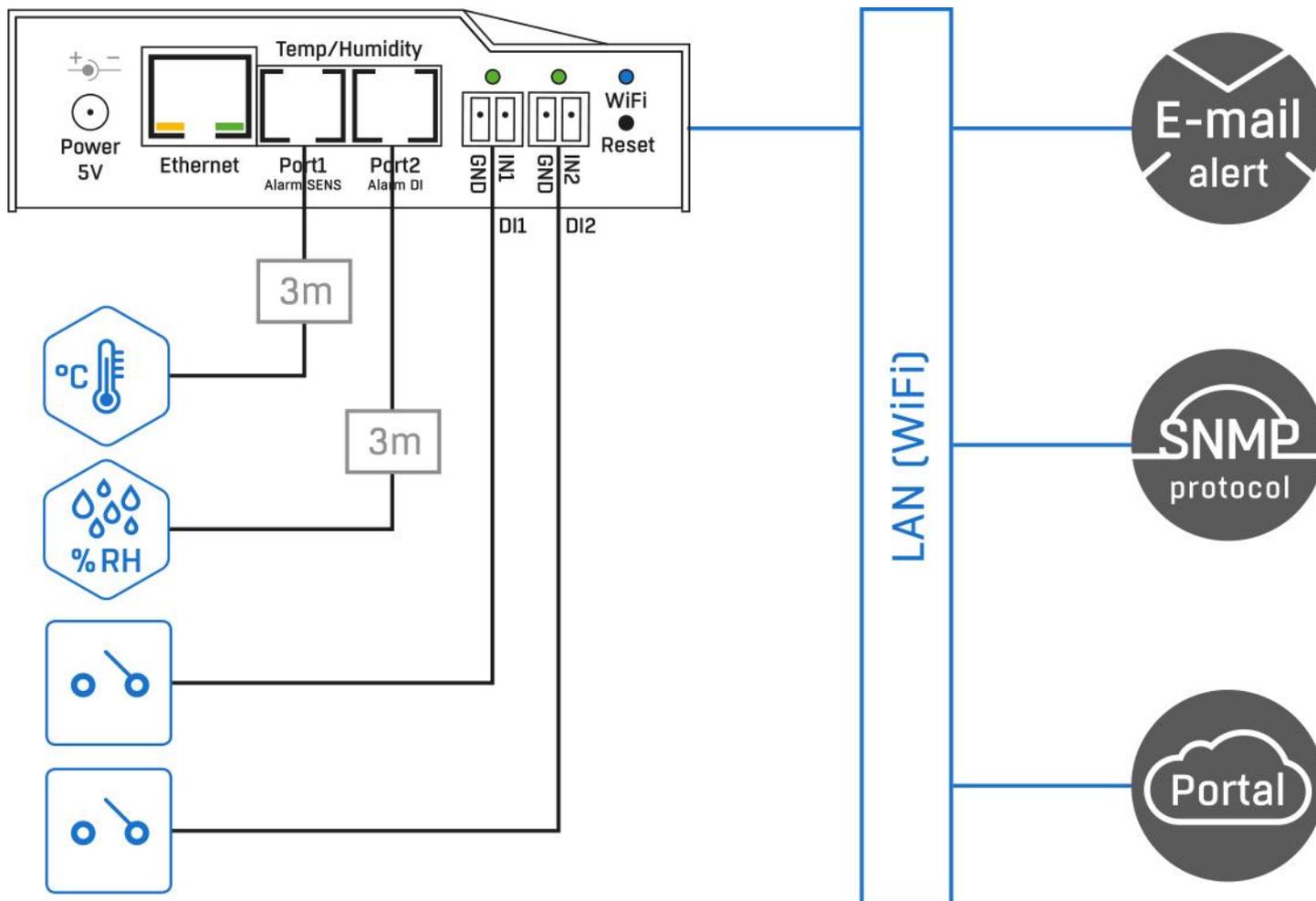
- **Reset** - serves to restore factory settings on the device.
  - 1) Switch the device off.
  - 2) Press and hold the button.
  - 3) Switch the device on and press the button for another 5 seconds.
  - 4) All the LEDs will gradually light up.
  - 5) Restart the device. Factory settings will be restored.

|                             | STE2 LITE                        | STE2 R2  | STE2 PLUS                                 |
|-----------------------------|----------------------------------|--|---|
| Ethernet                    | 10/100Mbit                       | <b>10/100Mbit</b>                                | 10/100Mbit                                |
| WiFi                        | IEEE 802.11bgn                   | <b>IEEE 802.11bgn</b>                            | IEEE 802.11bgn                            |
| IPv6                        | -                                | -  | YES                                       |
| SNMP                        | v1                               | <b>v1</b>  | v1 + v3                                   |
| SNMP Trap                   | -                                | -  | YES                                       |
| DHCP                        | YES                              | <b>YES</b>                                       | YES                                       |
| HTTP                        | YES                              | <b>YES</b>                                       | YES                                       |
| HTTPS                       | YES                              | <b>YES</b>                                       | YES                                       |
| XML                         | YES                              | <b>YES</b>                                       | YES                                       |
| SMTP                        | YES                              | <b>YES</b>                                       | YES                                       |
| SMTP TLS                    | YES                              | <b>YES</b>                                       | YES                                       |
| HWg-Push (SensDesk)         | YES                              | <b>YES</b>                                       | YES                                       |
| Net-GSM (SMS GW)            | YES                              | <b>YES</b>                                       | YES                                       |
| Syslog                      | --                               | -  | YES                                       |
| <b>Sensors</b>              |                                  |  |   |
| 1-Wire sensor values        | Max. 4                           | <b>Max. 5</b>                                    | Max. 15                                   |
| 1-Wire UNI                  | YES                              | <b>YES</b>                                       | YES                                       |
| DI (Digital Inputs)         | -                                | <b>2</b>   | 2   |
| DO (Outputs)                | -                                | -  | 8 VDO<br>Virtual Digital Outputs          |
| <b>Alarms</b>               |                                  |  |   |
| Email destinations          | 2                                | <b>5</b>   | 5   |
| Trap destinations           | -                                | -  | 5   |
| SMS destinations            | 2                                | <b>5</b>   | 5   |
| Alarm reminder              | -                                | -  | YES                                       |
| Periodical status           | -                                | -  | YES                                       |
| <b>Power and dimensions</b> |                                  |  |   |
| Power supply                | 5V / 300 mA                      | <b>5V / 300 mA</b>                               | 5V / 300 mA                               |
| Connector                   | Jack<br>(barrel, 1.35 / 3.5 mm)  | <b>Jack (barrel, inner 1.35 mm outer 3.5 mm)</b> | Jack (barrel, inner 1.35 mm outer 3.5 mm) |
| PoE                         | -                                | <b>YES</b>                                       | YES                                       |
| PoE current                 | -                                | <b>60 mA</b>                                     | 60 mA                                     |
| PoE class                   | -                                | <b>IEEE 802.3af Class 0</b>                      | IEEE 802.3af Class 0                      |
| Operating / Storage         | -30°C to 60°C<br>0% RH to 95% RH | <b>-30°C to 60°C<br/>0% RH to 95% RH</b>         | -30°C to 60°C<br>0% RH to 95% RH          |
| Weight                      | 85 g                             | <b>91 g</b>                                      | 91 g                                      |
| Dimensions                  | 68x63x32 mm                      | <b>98x68x33 mm</b>                               | 98x68x33 mm                               |
| Environment                 | SoHo, IT                         | <b>SoHo, IT</b>                                  | SoHo, IT                                  |
| Installation                | Table                            | <b>DIN, Table, Wall</b>                          | DIN, Table, Wall                          |
| Protection                  | IP40                             | <b>IP40</b>                                      | IP40                                      |

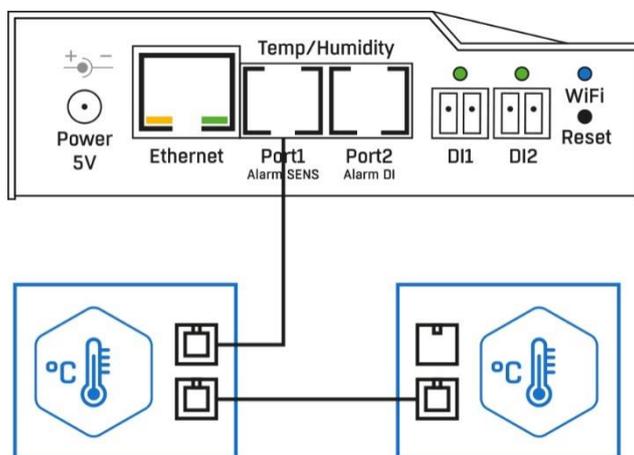
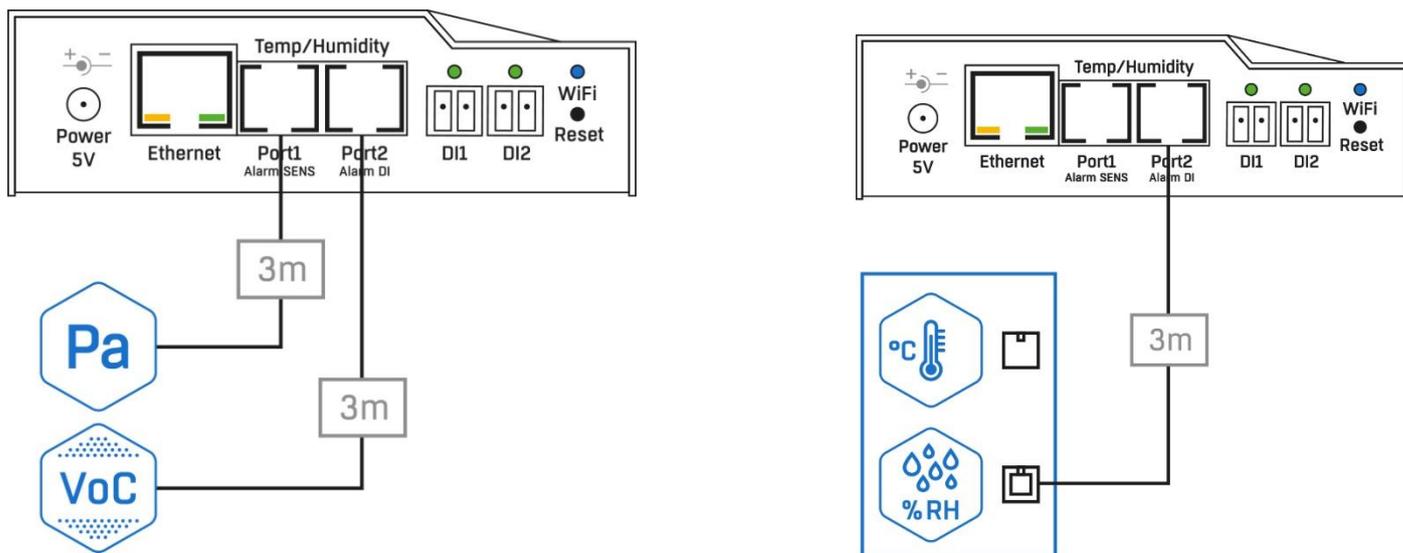
# Recommended connection



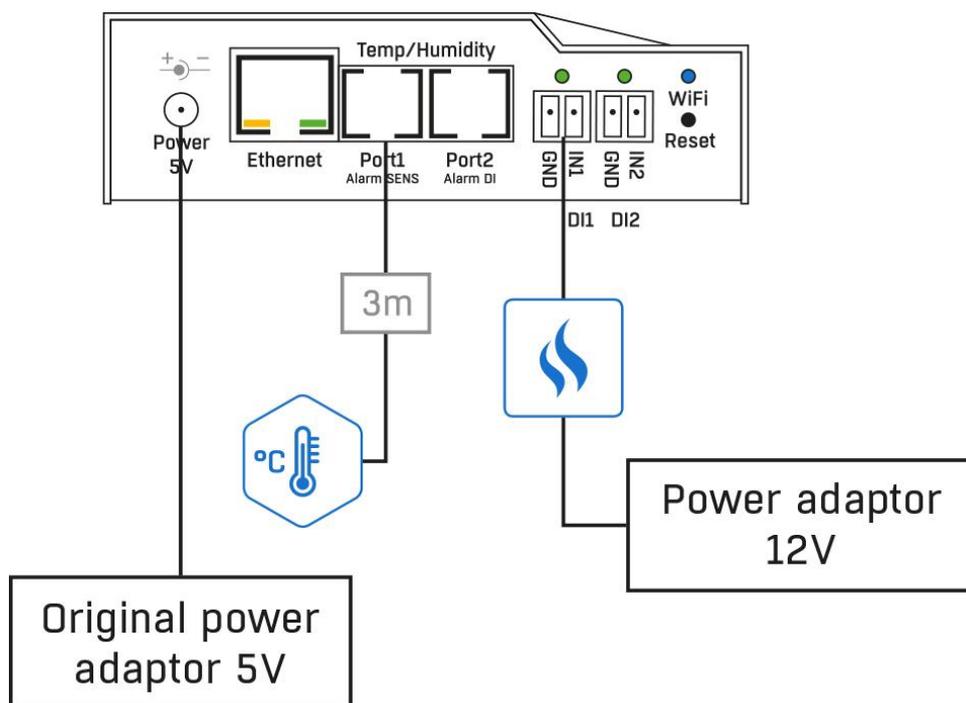
## STE2 R2 alarming options:



### RJ11 sensor connection options:



### Smoke detector connection:



## Compatible sensors

-  Atmospheric Pressure
-  Light Intensity
-  Air Quality CO<sub>2</sub>
-  Air Quality VoC
-  Temperature
-  Dew Point
-  AC / DC Voltage
-  Current interface
-  Water Spot detection
-  AC / DC Current
-  Relative Humidity

And many more available at HW group website in [Products](#) - [Sensors](#) section.



## Compatible detectors

-  Smoke detection
-  Vibration detection
-  Air flow detection
-  Power presence detection
-  Gas detection
-  230V presence detection
-  Door contact detection
-  Motion detection
-  Dry contact state detection
-  S0 pulse counter

And many more available at HW group website in [Products](#) - [Detectors](#) section.



# Remote Monitoring Ecosystem

HW group company is a manufacturer of the **Remote Monitoring Ecosystem**. Our devices, sensors and detectors could be combined into large industrial-grade, secure and reliable projects connected to the SensDesk Portal Technology.



**SMS-GW** is a central gateway that allows HWg devices, SensDesk portals, and third-party software/hardware to send text messages (SMS) and make voice calls alerts. Its main use is when customers have multiple HWg devices for remote monitoring. They can all connect to a single SMS-GW to send alarm alerts (SMS/voice calls) to different phone numbers.



- [SMS-GW3 \(GSM/2G\)](#)
- [SMS-GW3 LTE](#)

The **HWg-cloud.com** is a Portal (on-line service) from the HW group company to manage remote monitoring devices. It sends email alerts, displays graphs of sensor values, and helps with device management. You can use [www.HWg-cloud.com](http://www.HWg-cloud.com) for free, but it only works with sensors made by HW group company.



- [Free of charge Portal service](#)

The **SensDesk Technology** is a portal solution from the HW group to manage remote sensors and devices (only for HW group products), allowing central overview of all the values, sending the alarms, reporting, outputs into the Open API, etc.



- [SensDesk.com 5D/10D/25D subscription](#)

The **UPS 12V and 5V** is a backup power source for devices with 12V as well as 5V DC power supply which can be powered by the UPS simultaneously. Apart from a stable output voltage of 12V up to 1.5A and 5V up to 0.5A it provides information of external power supply outage as well as of the detailed UPS status to compatible HW group monitoring devices via the 1-Wire UNI output.



- [UPS 12V](#)
- [UPS 12V and 5V](#)

# First start-up

## 1) Cable connection

- Connect the device to the **Ethernet** (direct cable to the switch, crossed to PC).
- Connect the power adapter to the power grid and to the device.
- If the Ethernet connection is OK, the **LINK (yellow)** light should come up a moment later. The **ACTIVITY light (green)** indicates Ethernet activity.
- The **LINK (yellow)** flashes rapidly to indicate communication with the DHCP server.

## 2) The setting of the IP address - HWg-Config

The **HWg-Config** program for MS Windows can be downloaded at <https://www.hw-group.com> -> [Products](#) -> [Software](#) -> [HWg-Config](#).

- Launch **HWg-Config**, program automatically searches for LAN connected devices.
- If the device is connected later, click the **Find Devices** button. Local network devices will be listed. Click on the MAC address of the device to open the dialogue window for device settings.

HWg-Config 1.2.2 for HW group products (www.hw-group.com)

Version: 1.2.2 HW group, s.r.o. www.hw-group.com  
Config utility for the HW group devices

Your PC network settings  
**IP address:** 192.168.103.232  
**Netmask:** 255.255.252.0  
**Gateway:** 192.168.100.1

Prefer IPv6 protocol

Device list:

| MAC                               | Name                | * IP                            | Device type   | Port | Parameters          |
|-----------------------------------|---------------------|---------------------------------|---------------|------|---------------------|
| <a href="#">00:0A:59:05:55:B3</a> | STE2 Rev2 5905-55B3 | <a href="#">192.168.100.41</a>  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| <a href="#">00:0A:59:04:F8:2B</a> | Vitek stul          | <a href="#">192.168.100.46</a>  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| <a href="#">00:0A:59:05:E7:FB</a> | STE2 r2 5905-E7FB   | <a href="#">192.168.103.155</a> | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| <a href="#">00:0A:59:05:D4:96</a> | JCh/ STE2r2         | <a href="#">192.168.103.226</a> | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |

Searching modules... 47 device(s) found on network, 4 device(s) filtered and displayed Filter: STE2 r2 - Eth

## Set device network parameters:

- IP address / HTTP port (80 by standard)
- Your network mask
- IP address of your network gateway
- Device name (optional parameter)

Save the settings by clicking on **Apply Changes**.

The screenshot shows a 'Details' configuration window for the STE2 R2 device. The window contains the following fields and options:

- Name:** STE2 r2 5905-E7FB
- IP address:** 192.168.103.15(DHCP)
- Port:** 80
- Open in WEB browser:** Button with a globe icon.
- Enable DHCP:**
- IPv6:**
  - Link local address: Not supported
  - Address/prefix: Not supported
- Mask:** 255.255.252.0 (DHCP)
- Gateway:** 192.168.100.1 (DHCP)
- MAC:** 00:0A:59:05:E7:FB
- FW version:** 1.5.4
- Device type:** STE2 r2 - Eth (91)
- DHCP:** Supported
- Enable IP access filter:**
- IP filter value:** 0.0.0.0
- IP filter mask:** 0.0.0.0
- Default values:**
  - Load defaults:** Button with a refresh icon.
- Enable NVT:**
- Enable TCP setup:**  **Open:** Button
- Enable TEA authorisation:**
- Check if new IP address is empty:**
- Cancel:** Button with a red X icon (highlighted with a red box).
- Apply changes:** Button with a green refresh icon.

The status bar at the bottom of the window shows 'Ready'.

## Note: The device provides 2 options how to restore its default settings:

- 1) Right-click on the device's MAC address. Click on the **Load default values** item.  
Note: Device default values can be restored from the HWg-Config program only during the first 60 seconds after the device is powered up.
- 2) Switch off the device. Press the **RESET** button on the device, **hold it down and connect the device** power source (power adaptor). Hold the button down for another 5 seconds until all the LEDs light up.

### 3) How to open the device website

- 1) Enter the device IP address in your web browser if you know it.
- 2) Use right-click on device in the HWg-Config program. Select **Open in WEB Browser**.
- 3) Click on the underlined IP address in the HWg-Config program.

HWg-Config 1.2.2 for HW group products (www.hw-group.com)

Version: 1.2.2 HW group, s.r.o. www.hw-group.com  
Config utility for the HW group devices

Your PC network settings  
**IP address:** 192.168.103.232  
**Netmask:** 255.255.252.0  
**Gateway:** 192.168.100.1

Find Devices

Device list:

| MAC                               | Name                | * IP                            | Device type   | Port | Parameters          |
|-----------------------------------|---------------------|---------------------------------|---------------|------|---------------------|
| <a href="#">00:0A:59:05:55:83</a> | STE2 Rev2 5905-55B3 | <a href="#">192.168.100.41</a>  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| <a href="#">00:0A:59:04:F8:2B</a> | Vitek stul          | <a href="#">192.168.100.46</a>  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| <a href="#">00:0A:59:05:E7:FB</a> | STE2 r2 5905-E7FB   | <a href="#">192.168.103.155</a> | STE2 r2 - Eth |      |                     |
| <a href="#">00:0A:59:05:D4:96</a> | JCh/ STE2r2         | <a href="#">192.168.103.226</a> | STE2 r2 - Eth |      |                     |

Search for:  Filter: STE2 r2 - Eth

# WWW interface

## Home tab

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

### General Info

|             |                   |
|-------------|-------------------|
| Device Name | STE2 r2 5905-E7FB |
| Time        | 10:16:35          |
| Date        | 03.08.2023        |

### Sensors & Digital Inputs

| STATE    | NAME         | TYPE              | CURRENT VALUE |
|----------|--------------|-------------------|---------------|
| ✔ Normal | Sensor 35186 | Temp.             | 25.8 °C       |
| Normal   | Input 1      | Input Dry Contact | 0 (Open)      |
| Normal   | Input 2      | Input Dry Contact | 0 (Open)      |

## General Info section

- **Device Name** - This setting allows you to assign a unique name to the device, which can be helpful when managing larger installations. You can configure the device name on the General Setup tab.
- **Time** - Displays the current time of the device. You can set it manually in the Time tab, or you can choose to synchronize it automatically over the Internet. If the automatic synchronization is successful, the displayed time indicates that the device has Internet access.
- **Date** - Shows the current date of the device. You can set it manually in the Time tab, or you can synchronize it automatically over the Internet. If the automatic synchronization is successful, the displayed date indicates that the device has Internet access.

## Sensors & Digital Inputs section

- **State** - Current state of the input or sensor.
  - **Normal** - Quiet state, everything is fine.
  - **Alarm High** - The value has exceeded the upper allowable limit.
  - **Alarm Low** - The value has dropped below the lower allowable limit.
  - **Alarm** - Binary input in Alarm state (as set by the Alarm Alert item on the Digital Inputs page).
- **Name** - The name of the sensor used for better identification in larger systems. The name can be set in the Sensors or Digital Input page.
- **Type** - Sensor Type; determines what type of sensor it is (temperature/humidity/digital input, etc.).
- **Current Value** - The current value, including the measured quantity.

# General Setup tab

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

| General            |  |  |
|--------------------|--|--|
| NAME               | VALUE  | DESCRIPTION  |
| Device Name        | <input type="text" value="STE2 r2 5905-E7FB"/>   | 0 to 32 characters   |
| WWW Info Text:     | <input http:="" type="text" value="STE2 r2: For more information visit &lt;a href='\" www.hw-group.com\"'=""/> www.hw-group.com</a>"/> |  |
| Temperature unit   | <input type="text" value="Celsius"/>   | Celsius/Fahrenheit/Kelvin  |
| WWW Update period: | <input type="text" value="1"/>   | [s] Automatic update period in seconds. 0=> disabled             |
| Periodic restart   | <input type="text" value="Off"/>   | Periodic restart time  |
| HTTP Port          | <input type="text" value="80"/>  | Default 80   |
| HTTPS Port         | <input type="text" value="443"/>   | Default 443. See https settings at <a href="#">Security page</a> |
| LED disable        | <input type="checkbox"/>   | Disable device LEDs (not in Ethernet RJ-45 connector)            |

| Network IPv4  |  |                     |
|---------------|--|---------------------|
| NAME          | VALUE  | DESCRIPTION         |
| DHCP          | <input checked="" type="checkbox"/>          | DHCP Enable/Disable |
| IP Address    | <input type="text" value="192.168.103.110"/> | A.B.C.D             |
| Network Mask  | <input type="text" value="255.255.252.0"/>   | A.B.C.D             |
| Gateway       | <input type="text" value="192.168.100.1"/>   | A.B.C.D             |
| DNS Primary   | <input type="text" value="192.168.100.237"/> | A.B.C.D             |
| DNS Secondary | <input type="text" value="192.168.100.28"/>  | A.B.C.D             |

| Device Admin |                      |   |
|--------------|----------------------|---|
| NAME         | VALUE                | DESCRIPTION   |
| Username     | <input type="text"/> | Admin username/password for device configuration changes [0 to 16 characters] |
| Password     | <input type="text"/> |   |

## General part

- **Device Name** - The device name (default "STE2 r2 %Dev Hash%") helps to differentiate individual devices in the network.
- **WWW Info Text** - Text displayed in the footer of the device's web page.
- **Temperature Unit** - Allows selecting the unit to display temperature - Celsius, Fahrenheit or Kelvin. Safe Range values are automatically calculated based on this option.

- **Periodic Restart** - A feature that enables periodic automatic restart of the device to improve its stability in exposed networks.
- **Disable LEDs** - Allows disabling certain signaling LEDs on the device, except for those on the RJ45 connector.
- **HTTP Port** - The port number on which the embedded WWW server listens, which can be changed to access multiple devices from an external network through a router. The default port is 80, and setting the value to 0 disables HTTP support.
- **HTTPS Port** - The port number on which the embedded WWW server listens for secure HTTPS connections, which can be changed to access multiple devices from an external network through a router. The default port is 443 and setting the value to 0 disables HTTPS support. It's essential to verify any changes with the network administrator.

## Network IPv4 section

The IPv4 parameters of the RJ45 connection. The WiFi connection parameters are in the WiFi tab.

- **DHCP** - Enables the IP address setting function of the DHCP server, if available. Enabling or disabling DHCP depends on the needs of the user and the network administrator.
- **IP Address** - The IP address of the device, assigned by the network administrator.
- **Network Mask** - Network mask, assigned by the network administrator.
- **Gateway** - The IP address of the default gateway, assigned by the network administrator.
- **DNS Primary / DNS Secondary** - The IP address of the DNS server, assigned by the network administrator.

## Device Admin section

- **Username / Password** - The username and password used to secure access to the web device environment.

# Security tab

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

| HTTPS Server Certificate files |  |
|--------------------------------|--|
| TYPE:                          | SSLCERTIFICATEFILE   |
| Description:                   | Public key certificate file, ext. *.crt  |
| Filename:                      | *.crt  |
| Import file:                   | <input type="button" value="Choose file"/> No file chosen <input type="button" value="Upload"/>  |
| Edit File:                     | <input type="button" value="Delete File"/>   |
| TYPE:                          | SSLCERTIFICATEKEYFILE  |
| Description:                   | Secret key file, ext. *.key  |
| Filename:                      | *.key  |
| Import file:                   | <input type="button" value="Choose file"/> No file chosen <input type="button" value="Upload"/>  |
| Edit File:                     | <input type="button" value="Delete File"/>   |
| TYPE:                          | SSLCACERTIFICATEFILE   |
| Description:                   | CA certificate file, ext. *.pem  |
| Filename:                      | *.pem  |
| Import file:                   | <input type="button" value="Choose file"/> No file chosen <input type="button" value="Upload"/>  |
| Edit File:                     | <input type="button" value="Delete File"/>   |
| Generate:                      | <p><b>Generate a private SSL key and selfsigned certificate for closed networks or testing purposes.</b><br/>           The generated certificate is selfsigned and will be displayed as untrusted. Please add the certificate to the list of exceptions or use a certificate signed by a trusted certification authority. Please note that the generated data will replace the <b>SSLCertificateFile</b> and the <b>SSLCertificateKeyFile</b>. <b>Generating the key can take up to 10minutes. Do not restart the device and do not search for sensors. Otherwise the key generation will be interrupted.</b></p> <input type="button" value="Generate the SSL key and certificate"/> |

## HTTPS Server Certificate files

Manages certificates required for the HTTPS server. Allows you to upload or delete a public key, a private key, or a certificate from the certificate authority (CA) that issued the public key certificate.

## Generate SSL key and certificate

Generate a private SSL key and self-signed certificate for closed networks or testing purposes. The generated certificate is self-signed and will be displayed as untrusted.

Please add the certificate to the list of exceptions or use a certificate signed by a trusted certificate authority. Please note that the generated data will replace the SSL Certificate File and the SSL Certificate Key File.

Generating the key may take several minutes. Do not restart the device and do not search for sensors. Otherwise, the key generation will be interrupted.

# WiFi tab

When WiFi is off, only the Enable option is displayed:

The screenshot shows the STE2 R2 web interface. The 'WiFi Setup' section is active, displaying a table with one row: 'WiFi Enable:' with a value of an unchecked checkbox and a description of 'Enable/Disable'. A 'Save' button is visible at the bottom right.

| NAME         | VALUE                    | DESCRIPTION    |
|--------------|--------------------------|----------------|
| WiFi Enable: | <input type="checkbox"/> | Enable/Disable |

All options are available after enabling:

The screenshot shows the STE2 R2 web interface with WiFi enabled. It displays three sections: 'WiFi Info', 'WiFi Setup', and 'Network IPv4'. The 'WiFi Setup' section shows 'WiFi Enable:' checked, and fields for SSID, Password, and BSSID. The 'Network IPv4' section shows 'DHCP' checked and fields for IP Address, Network Mask, Gateway, DNS Primary, and DNS Secondary. A 'Save' button is at the bottom right.

| NAME         | VALUE  | DESCRIPTION  |
|--------------|--|--|
| WiFi Enable: | <input checked="" type="checkbox"/>  | Enable/Disable   |
| SSID:        | <input type="text"/>   | string, AP's SSID  |
| Password:    | <input type="text" value="Enter wifi password"/> Show <input type="checkbox"/> | string, MAX: 64 bytes ASCII                                      |
| BSSID:       | <input type="text"/>   | string, AP's MAC address, for several APs may have the same SSID |

| NAME          | VALUE                                      | DESCRIPTION         |
|---------------|--|---------------------|
| DHCP          | <input checked="" type="checkbox"/>        | DHCP Enable/Disable |
| IP Address    | <input type="text" value="192.168.1.91"/>  | A.B.C.D             |
| Network Mask  | <input type="text" value="255.255.255.0"/> | A.B.C.D             |
| Gateway       | <input type="text" value="192.168.1.1"/>   | A.B.C.D             |
| DNS Primary   | <input type="text" value="192.168.1.1"/>   | A.B.C.D             |
| DNS Secondary | <input type="text" value="0.0.0.0"/>       | A.B.C.D             |

## WiFi Info section

- **WiFi modem state**
  - **Disable** - WiFi is disabled.
  - **Wait for power on** - Waits for WiFi module when power on.
  - **Init** - Initializing of WiFi module.
  - **Connecting** - Connecting.
  - **SSID check** - SSID check.
  - **Connected** - Connected to selected WiFi network.
  - **Network WiFi scan** - Scans for available WiFi networks.
  - **Wait for scan** - Waits for Network WiFi scan.
- **Current SSID** - Current name of the network the device is connected to. If the parameter is missing, the device is not connected to any WiFi network.
- **Current BSSID** - Current identifier of the WiFi network connection point. If the parameter is missing, the device is not connected to any WiFi network.
- **Current RSSI** - Relative strength of signal input. The lower the RSSI, the stronger the signal.
- **Signal Quality** - Strength of WiFi signal in % with graphic indicator.
- **Current Channel** - WiFi channel on which the device communicates. If the parameter is missing, the device is not connected to any WiFi network.

## WiFi Setup section

- **WiFi Enable** - Enable or disable WiFi. By default, the wireless interface is disabled. Device restart follows enabling.
- **SSID** - The name of the WiFi network to which you want the device to connect. If you do not know your network name, use the Scan AP function at the bottom of the page.
- **Password** - Secured network password. If you do not know it, contact your network administrator.
- **BSSID** - Identifier of the WiFi network connection point (MAC address of the connection point). Optional data.

## Network IPv4 section

WiFi network parameters. Only the wireless interface is set here. Configure RJ45 LAN parameters in the General Setup tab.

- **DHCP** - Enables the IP address setting function of the DHCP server, if available. Enabling or disabling DHCP depends on the needs of the user and the network administrator.
- **IP Address** - The IP address of the device, assigned by the network administrator.
- **Network Mask** - Network mask, assigned by the network administrator.

- **Gateway** - The IP address of the default gateway, assigned by the network administrator.
- **DNS Primary / DNS Secondary** - The IP address of the DNS server, assigned by the network administrator.

## Wifi Scan List section

- **SSID** - Name of the WiFi network found.
- **BSSID** - Connection point identifier (MAC address).
- **Channel** - The WiFi channel where the AP communicates.
- **Security** - The security type of WiFi communication.
- **Signal** - WiFi signal strength in % with graphical indicator.

## Connecting to a discovered WiFi

- Click on the SSID of the discovered network to pre-fill the WiFi settings and then just fill in the Password. The BSSID field will remain blank. Standard settings. When you change the AP, it will reconnect itself.
- Clicking on the BSSID will pre-fill not only the network name (SSID) but also the MAC address of the specific AP (BSSID). The device will connect to that AP and in the case of pooled networks will not try to reconnect.

## Scan AP (WiFi Access Points)

| Wifi Scan List             |                                   |         |          |        |
|----------------------------|-----------------------------------|---------|----------|--------|
| SSID                       | BSSID                             | CHANNEL | SECURITY | SIGNAL |
| <a href="#">Scan AP</a>    |                                   |         |          |        |
| HWghost                    | <a href="#">7A:45:58:95:FA:54</a> | 6       | WPA2 PSK | 100%   |
| Poseidon                   | <a href="#">78:45:58:D5:FA:54</a> | 6       | WPA2 PSK | 100%   |
| PosDam                     | <a href="#">7A:45:58:A5:FA:54</a> | 6       | OPEN     | 100%   |
| HWghost                    | <a href="#">02:EC:DA:3E:38:12</a> | 1       | WPA2 PSK | 64%    |
| Poseidon                   | <a href="#">FC:EC:DA:3E:38:12</a> | 1       | WPA2 PSK | 64%    |
| PosDam                     | <a href="#">06:EC:DA:3E:38:12</a> | 1       | OPEN     | 62%    |
| HumaiSmart_C45BBE37D034    | <a href="#">C4:5B:BE:37:D0:35</a> | 1       | OPEN     | 60%    |
| HWghost                    | <a href="#">02:EC:DA:3E:39:E6</a> | 1       | WPA2 PSK | 60%    |
| PosDam                     | <a href="#">06:EC:DA:3E:39:E6</a> | 1       | OPEN     | 60%    |
| DIRECT-dc-HP M209 LaserJet | <a href="#">52:C2:E8:C6:22:DC</a> | 6       | WPA2 PSK | 60%    |
| Poseidon                   | <a href="#">FC:EC:DA:3E:39:E6</a> | 1       | WPA2 PSK | 58%    |
| HWghost                    | <a href="#">02:EC:DA:3B:ED:55</a> | 1       | WPA2 PSK | 36%    |
| Poseidon                   | <a href="#">FC:EC:DA:3B:ED:55</a> | 1       | WPA2 PSK | 36%    |
| PosDam                     | <a href="#">06:EC:DA:3B:ED:55</a> | 1       | OPEN     | 34%    |

## WiFi debug section

- Provides useful info for debugging WiFi connection

# Sensors tab

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

**Sensors list**

| STATE | ID    | TYPE  | NAME         | CURRENT VALUE | SAFE RANGE |      | HYSTERESIS | ALARM TRIGGER DELAY [S] | ALARM TARGET | SENSOR SERIAL CODE |
|-------|-------|-------|--------------|---------------|------------|------|------------|-------------------------|--------------|--------------------|
|       |       |       |              |               | LOW        | HIGH |            |                         |              |                    |
|       | 35186 | Temp. | Sensor 35186 | 25.1 °C       | 10.0       | 30.0 | 1.0        | 0                       | None         | 287289a708000da    |

## Sensor List section

- **State** - State of the DI (input) or sensor.
  - **Normal** - Quiet state, everything is fine.
  - **Alarm High** - The value has exceeded the upper allowable limit.
  - **Alarm Low** - The value has fallen below the lower allowable limit.
- **ID** - 2 bytes sensor ID (identical to ID on Poseidon2 devices).
- **Type** - Sensor type; indicates what type of sensor it is (temperature/humidity etc.).
- **Name** - The name of the sensor, used for better identification in larger systems. It can be set on the Sensor or Digital Input tab.
- **Current Value** - The current value including the measured quantity.
- **Safe Range** - Refers to the range of acceptable (allowed) values that are considered within normal limits. If the current value falls outside the Safe Range, an alarm is triggered to indicate that the measurement is out of bounds and requires attention.
- **Hysteresis** - The parameter specifies a range of insensitivity when the measured value exceeds the limit value. It prevents triggering of multiple alarms when the value oscillates around the limit. For more details, please refer to page 23 of the manual.
- **Alarm Target** - Allows you to define targets where Alarm messages (SMS + Email) will be sent. Target destinations are set in the Alarms tab. The drop-down menu allows you to assign an existing set of targets to the sensor or create a new one.
- **Alarm Trigger Delay [s]** - Delays the sending of alarm start information by a defined time.
- **Sensor Serial Code** - The full ID of the 1-Wire sensor.
- **Delete** - The button to delete a specific sensor.

## Sensor alarm state indication\*

STE2<sub>r2</sub>HW<sub>group</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

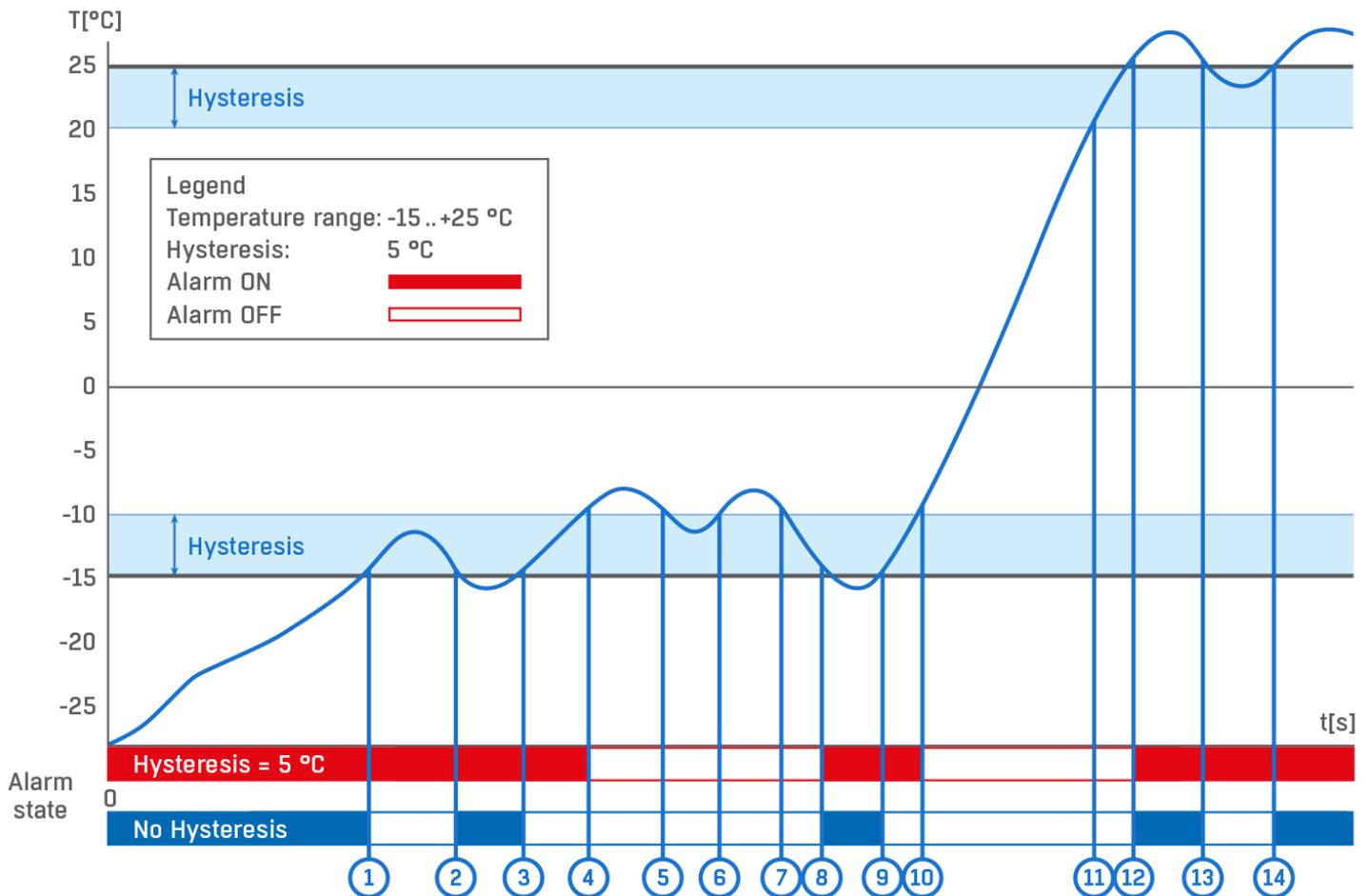
Sensors list

| STATE   | ID    | TYPE  | NAME                                      | CURRENT VALUE | SAFE RANGE                        |                                   | HYSTERESIS                       | ALARM TRIGGER DELAY [S]        | ALARM TARGET | SENSOR SERIAL CODE  |
|---|-------|-------|---|---------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------------|--------------|---|
|   |       |       |   |               | LOW                               | HIGH                              |                                  |                                |              |   |
|  | 35186 | Temp. | <input type="text" value="Sensor 35186"/> | 33.3 °C       | <input type="text" value="10.0"/> | <input type="text" value="30.0"/> | <input type="text" value="1.0"/> | <input type="text" value="0"/> | None         | <input type="text" value="287289a7080000da"/>  |

\* Sensor in the Alarm state is highlighted.

## Hysteresis

The Hysteresis value defines the width of the tolerance range for sending an alarm. This function stops multiple alarms from happening when the value goes up and down around a set point. You can see this on the graph.



Within the internal  $5\text{ °C}$  hysteresis band, the alarm would be activated at **point 8** and would end at **point 9**. Because of the hysteresis function, the alarm is extended until the temperature reaches the end of the hysteresis zone (point 10)  $5\text{ °C} + (-15\text{ °C}) = -10\text{ °C}$ .

- **Hysteresis (=  $5\text{ °C}$ ):** The unit sends **3** alerts (email, SMS, ...) Alarm at points **0-4, 8-10, 12** and upwards.
- **Without hysteresis ( $0\text{ °C}$ ):** The unit sends **8** alerts (email, SMS, ...) Alarm at points **0-1, 2-3, 8-9, 12-13, 14** and upwards.

# Digital Inputs tab

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

Digital Inputs list

| ID | CURRENT STATE | NAME                                 | STATE NAME                        |                                     | ALARM ALERT                           | ALARM TRIGGER DELAY [S]        | ALARM TARGET                      |
|----|---------------|--------------------------------------|-----------------------------------|-------------------------------------|---------------------------------------|--------------------------------|-----------------------------------|
|    |               |                                      | LOG 0                             | LOG 1                               |                                       |                                |                                   |
| 1  | 0 (Open)      | <input type="text" value="Input 1"/> | <input type="text" value="Open"/> | <input type="text" value="Closed"/> | <input type="text" value="Disabled"/> | <input type="text" value="0"/> | <input type="text" value="None"/> |
| 2  | 0 (Open)      | <input type="text" value="Input 2"/> | <input type="text" value="Open"/> | <input type="text" value="Closed"/> | <input type="text" value="Disabled"/> | <input type="text" value="0"/> | <input type="text" value="None"/> |

## Digital Inputs List\* section

- **ID** - Identification of the input within the device.
- **Current State** - List the current state of the input (0/1 and the state name).
- **Name** - Name of the input max. 22 characters (e.g. "2p door left", "smoke section 1").
- **Alarm Alert** - Alarm status definition for each input.
- **Alarm Target** - Allows you to define targets where Alarm messages will be sent (SMS + Email). Target destinations are set on the Alarms page. The drop-down menu allows you to assign an existing set of targets to the sensor or create a new one.
- **Active if Close** - Alarm active when the input is in state 1 (On).
- **Active if Open** - Alarm active when the input is in state 0 (Off).
- **Disabled** - The input does not have a defined Alarm state.
- **Alarm Trigger Delay [s]** - Delays the sending of alarm start information by a defined time.

\* DI input in the Alarm state is highlighted.

# Email tab

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS **EMAIL** SMS ALARMS SNMP TIME PORTAL SYSTEM

**Email Settings**

| NAME                | VALUE   | DESCRIPTION                             |
|---------------------|---|---|
| SMTP Server         | <input type="text" value="some.smtp.server"/> | IP Address or DNS Name                  |
| SMTP Port           | <input type="text" value="25"/>               | Default 25                              |
| Authentication      | <input type="checkbox"/>                      | Enable/Disable                          |
| Secure TLS mode     | <input type="checkbox"/>                      | Enable/Disable                          |
| Use HTML formatting | <input type="checkbox"/>                      | Uses html to format email message body. |
| Username            | <input type="text"/>                          | 0 to 128 characters                     |
| Password            | <input type="password"/>                      | 0 to 128 characters                     |
| Importance          | <input type="text" value="Normal"/>           | Email importance flag                   |
| From                | <input type="text" value="user@domain.com"/>  | Device email address                    |
| Subject             | <input type="text" value="subject"/>          | Beginning of email subject              |

**Email Test Log**

|               |   |                   |
|---------------|---|-------------------|
| Email address | <input type="text" value="recipient@domain.com"/> | Email for testing |
|---------------|---|-------------------|

## Email Settings

- **SMTP Server** - The IP address or domain address of the SMTP server.

*Note: Consider the long-term stability of the used SMTP server. If the service provider changes security requirements (separate username or password for example) your device alerting functionality will be lost without any warning. Consider using the Portal (SensDesk Technology) alerting services.*

- **SMTP Port** - Port number on which the mail server listens – 25 by default.
- **Authentication** - Enable authentication; check if the SMTP server requires authentication.

- **Secure TLS mode** - Check if the SMTP server requires secure communication via SSL/TLS.
- **Username** - Username for the SMTP server authentication. If the Authentication field is not checked, the content of this field is irrelevant.
- **Password** - Password for the SMTP server authentication. If the Authentication field is not checked, the content of this field is irrelevant.
- **Importance** - Sets the priority of the email message. Important for filtering and further processing alarm messages.
- **From** - Sender's Email address, i.e. of the device. The address may be required by the SMTP servers and can be used to identify the device or to filter and further process alarm messages.
- **Subject of the Email** - The field content can be used to identify the device or for filtering and further processing of alarm messages.

### Email Test Log section

In this section, the SMTP server settings can be tested. Click Test Email to send a test Email to the specified Email address. The Debug log window shows the communication with the SMTP server.

## SMS tab

This functionality requires a SMS-GW device with an active SIM card registered in the network.

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

**Remote SMS gateway**

| NAME                | VALUE                           | DESCRIPTION            |
|---------------------|---------------------------------|------------------------|
| Enable              | <input type="checkbox"/>        | Enable/Disable         |
| SMS Gateway Address | <input type="text"/>            | IP Address or DNS Name |
| Port                | <input type="text" value="80"/> | Default 80             |
| Username            | <input type="text"/>            |                        |
| Password            | <input type="text"/>            |                        |

Save

**SMS Test Log**

Phone number

*Phone number for testing*

*Debug log window.*

Test SMS
Test Call

### Remote SMS gateway

- **Enable** - Turns on the SMS sending function.  
For sending alert, the SMS alarm action must be configured in the Sensors or DI settings.
- **SMS Gateway Address** - IP address where SMS-GW device is located. It can be set including service - typically /service.xml (for example "<http://192.168.15.1/service.xml>")
- **Port** - The TCP port on which the gateway listens.
- **Username** - Username for authorization in SMS GW.
- **Password** - Password for authorization in SMS GW.
- **SMS + Ring When Alarm** - Enables sending an SMS and then dialing the number.

### SMS Test Log

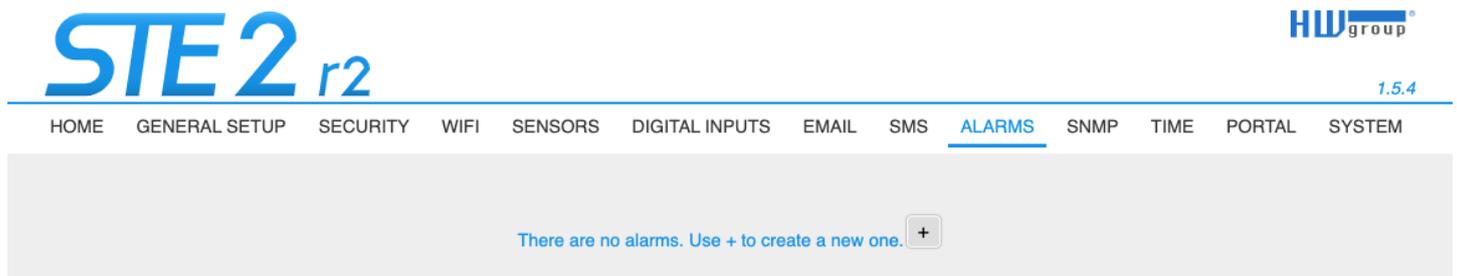
In this section, the SMS gateway settings can be tested.

- **Test SMS** - Sends a test text message to the specified Phone number.
- **Test Call** - Dials the specified Phone number.
- **Debug log window** - Shows the communication with the SMS gateway.

## Alarms tab

This tab is used to set alarm targets. Up to 2 sets of destinations can be created and each set can contain up to 2 email destinations and 2 phone number destinations for SMS and voice call alarms.

These sets are then assigned to individual sensors and Digital Inputs. The set is created either by pressing the + button on the Alarms page or by selecting **Add new...** on the Sensor or Digital Input edit page.



### Alarm Target

A set of targets. The set can be named for clarity.

- **Email list** - A set of email addresses to which alarm messages will be sent. The SMTP server on the Email tab must be set up correctly for the email to be sent.
  - **Email address** - The field can only contain one email address at a time.
- **SMS list** - A set of phone numbers to which alarm messages will be sent. To send SMS, the SMS gateway must be set up correctly in the SMS tab.
  - **Phone number** - The field may only contain one phone number at a time.
  - **Call** - If checked, the phone number will ring after the SMS is sent (the user does not need to hear the incoming SMS). Ringing lasts for about 20 seconds for each individual number and then is terminated. Answering the call only ends the ringing, no voice message is sent.

Default 1 +

Alarm Target: Default 1

DELETE ✕

EMAIL ADDRESS

Email list

|   |
|---|
| <input type="text" value="example@hwg.cz"/> |

| PHONE NUMBER | CALL |
|--------------|------|
|--------------|------|

SMS list

|  |                          |
|--|--------------------------|
| <input type="text" value="+420603603603"/> | <input type="checkbox"/> |

Save

# SNMP tab

The SNMP tab configure parameters for Open API - SNMP protocol.

The screenshot shows the STE2 R2 web interface with the SNMP tab selected. The page title is 'STE2 r2' and the version is '1.5.4'. The navigation menu includes HOME, GENERAL SETUP, SECURITY, WIFI, SENSORS, DIGITAL INPUTS, EMAIL, SMS, ALARMS, **SNMP**, TIME, PORTAL, and SYSTEM.

**SNMP Settings**

| NAME            | VALUE  | DESCRIPTION        |
|-----------------|--|--------------------|
| System Name     | <input type="text" value="STE2 r2 5905-E7FB"/> | 0 to 32 characters |
| System Location | <input type="text"/>                           | 0 to 32 characters |
| System Contact  | <input type="text" value="STE2 r2"/>           |                    |
| SNMP port       | <input type="text" value="161"/>               | Default port 161   |

[Show OID keys table](#)

**SNMPv1 Access**

| COMMUNITY                            | READ                                | WRITE                               | ENABLE                              |
|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="text" value="public"/>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <input type="text" value="private"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

## SNMP Settings section

- **System Name** - The name of the device within SNMP.
- **System Location** - The location of the device within SNMP.
- **System Contact** - The contact for the device administrator within SNMP.
- **SNMP Port** - The port number on which SNMP can communicate - 161 by default.

## SNMPv1 Access section

- **Community** - The name of the SNMP community for accessing the device over SNMPv1. 2 communities can be defined. For each Community you can define whether it has permissions for:
  - **Read** - Enables or disables the read function.
  - **Write** - Enables or disables the write function.
  - **Enable** - Enables or disables a specific community.

## Show OID keys table

This function lists the entire tree of variables with the full SNMP OID and explanations about the type variables. A MIB is also available for connecting devices to 3<sup>rd</sup> party monitoring systems.

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

### SNMP Table

| OID KEY            | VALUE                  | DESCRIPTION             | DATA TYPE     | ACCESS |
|--------------------|------------------------|-------------------------|---------------|--------|
| 1.3.6.1.2.1.1.1.0  | STE2 r2, fw:1.5.4_2373 | sysDescr                | ASN_OCTET_STR | RO     |
| 1.3.6.1.2.1.1.2.0  | 1.3.6.1.4.1.21796.4.9  | sysObjectID             | ASN_OBJECT_ID | RO     |
| 1.3.6.1.2.1.1.3.0  | 257154                 | sysUpTime               | TIMETICKS     | RO     |
| 1.3.6.1.2.1.1.4.0  | STE2 r2                | sysContact              | ASN_OCTET_STR | R/W    |
| 1.3.6.1.2.1.1.5.0  | STE2 r2 5905-E7FB      | sysName                 | ASN_OCTET_STR | R/W    |
| 1.3.6.1.2.1.1.6.0  |                        | sysLocation             | ASN_OCTET_STR | R/W    |
| 1.3.6.1.2.1.1.7.0  | 72                     | sysServices             | ASN_INTEGER   | RO     |
| 1.3.6.1.2.1.11.1.0 | 0                      | snmpInPkts              | COUNTER       | RO     |
| 1.3.6.1.2.1.11.2.0 | 0                      | snmpOutPkts             | COUNTER       | RO     |
| 1.3.6.1.2.1.11.3.0 | 0                      | snmpInBadVersions       | COUNTER       | RO     |
| 1.3.6.1.2.1.11.4.0 | 0                      | snmpInBadCommunityNames | COUNTER       | RO     |
| 1.3.6.1.2.1.11.5.0 | 0                      | snmpInBadCommunityUses  | COUNTER       | RO     |
| 1.3.6.1.2.1.11.6.0 | 0                      | snmpInASNParseErrs      | COUNTER       | RO     |
| 1.3.6.1.2.1.11.8.0 | 0                      | snmpInTooBigs           | COUNTER       | RO     |

Download the **MIB file** in the System section (Download MIB file).

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

### Download

| DESCRIPTION                  | FILE                                  |
|------------------------------|---------------------------------------|
| Backup configuration         | <a href="#">STE2 r2_Config.bin</a>    |
| Online setup in XML          | <a href="#">setup.xml</a>             |
| Online values in XML         | <a href="#">values.xml</a>            |
| SNMP MIB Table               | <a href="#">STE2 r2.mib</a>           |
| OID keys table               | <a href="#">Online OID keys table</a> |
| TXT list of common SNMP OIDs | <a href="#">STE2 r2_OID.txt</a>       |

# Time tab

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

## SNTP Settings

| NAME        | VALUE   | DESCRIPTION                                 |
|-------------|---|---|
| SNTP Server | <input type="text" value="europe.pool.ntp.org"/>                                  | IP Address or DNS Name                      |
| Time Zone   | <input type="text" value="1"/> : <input type="text" value="0 min"/>               | Number -12 ... +13                          |
| Summertime  | <input checked="" type="checkbox"/> <input type="text" value="Central European"/> | last Sun March 2:00 - last Sun October 3:00 |
| Interval    | <input type="text" value="1h"/>   | Sync period: Off/1h/24h                     |

## Time Settings

| NAME | VALUE                                   | DESCRIPTION |
|------|---|-------------|
| Time | <input type="text" value="11:15:15"/>   | hh:mm:ss    |
| Date | <input type="text" value="03.08.2023"/> | dd.mm.yyyy  |

## SNTP Log

Debug log window.

## SNTP Settings section

- **SNTP Server** - The IP address or domain address of the time synchronization server; europe.pool.ntp.org by default.
- **Time Zone** - Set the time zone of the device location. Used to set the correct system time. Necessary for correct recording of measured values.
- **Summertime** - Enable daylight saving time. Used to set the correct system time. Required for correct recording of measured values.
- **Interval** - Interval of time synchronization with the server.

## **Time Settings section**

Allows you to fill in the current date and time manually when synchronization with the time server cannot be used.

## **SNTP Log section**

The Sync button is used to perform an instant synchronization with the time server. It can also be used to test the settings.

## Portal tab

Configure parameters how to connect the device to remote SensDesk Technology based portal. It is using HTTP connection, HWg-PUSH protocol. More information about the protocol or support of portal solutions is available on the website <http://www.HW-group.com>.

The default preconfigured portal is [www.HWg-cloud.com](http://www.HWg-cloud.com), but **you have to enable Portal** in the device web configuration and define portal account name and password.

There are several portals available besides [www.HWg-cloud.com](http://www.HWg-cloud.com) or [www.SensDesk.com](http://www.SensDesk.com) (provided by HW group). Check the **Portal providers**.

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

### Portal Message

Portal disabled\_

### Portal settings

| NAME                               | VALUE  | DESCRIPTION  |
|------------------------------------|--|--|
| Portal                             | <input type="checkbox"/>                                     | Portal Enable/Disable  |
| Server Address                     | <input type="text" value="http://hwg-cloud.com/portal.php"/> | IP Address or DNS Name   |
| IP Port                            | <input type="text" value="80"/>                              | Default 80   |
| Team (provided by portal)          | <input type="text"/>   | Push device access parameters<br>Please have a look at <a href="#">My Team</a> on Sensdesk |
| Team Password (provided by portal) | <input type="text"/>   |  |

### AutoPush settings

| ID    | NAME         | TYPE  | CURRENT VALUE | AUTOPUSH                         |
|-------|--------------|-------|---------------|----------------------------------|
| 35186 | Sensor 35186 | Temp. | 26.2 °C       | <input type="text" value="5.0"/> |

Save

### Portal Debug Log

| NAME                  | VALUE | DESCRIPTION |
|-----------------------|-------|-------------|
| Push Period:          | 60    | [seconds]   |
| Log Period:           | 0     | [seconds]   |
| Current Push Timer:   | 0     | [seconds]   |
| Current Log Timer:    | 0     | [seconds]   |
| Current Check Timer:  | 0     | [seconds]   |
| AutoPush Block Timer: | 0     | [seconds]   |
| Retransmit number:    | 0     |             |

## Portal Message section

Feedback from the portal containing e.g., links to graphs, etc. Depends on the portal type.

## Portal settings section

- **Portal** - Enables or disables this function.
- **Server address** - Complete URL of the remote server.  
Connection to HWg-cloud.com portal is preset, but without account name.
- **IP Port** - Port where the portal listens.
- **Team** - Name of the Portal Team to which the device should be assigned.  
You can find it on your portal on the **"My Team"** tab.
- **Team Password** - Password of the Team (HWg Push protocol) to which the device should be assigned.

The screenshot shows the HWg Cloud portal interface. The user is logged in as 'rehak' and is viewing the 'My team' settings page. The page title is 'Team rehak'. There are tabs for 'View', 'Edit', 'Audit trail', 'values.xml', and 'Mobile app'. A 'Buy Tariff' button is visible in the top right and below the team name.

The 'PORTAL SETTINGS' section is highlighted with a blue box and contains the following information:

This is credential for your devices.  
**Portal URL:** http://hwg-cloud.com/portal.php  
**Portal port:** 80  
**Team:** rehak  
**Team password:** cBs6TZ

Below the portal settings are links for 'PUSH configurations': Default, NB Power Default, NB Battery Default, and Frozen.

The 'LIMITS' section shows various usage limits for the team 'rehak':

| Limit                      | Value         | Used   |
|----------------------------|---------------|--------|
| Team:                      | Team rehak    |        |
| Date of expiration:        | - Unlimited - | 1 used |
| Action - E-mail limit:     | - Unlimited - | 0 used |
| Action - Set output limit: | - Unlimited - | 0 used |
| Action - SMS limit:        | - Unlimited - | 0 used |
| Action - SNMP trap limit:  | - Unlimited - | 0 used |
| Dashboard limit:           | 1             | 1 used |
| Device limit:              | 20            | 1 used |
| Device group limit:        | - Unlimited - | 0 used |
| Location limit:            | - Unlimited - | 2 used |
| Log limit (days):          | 10            |        |
| Multigraph limit:          | 0             | 0 used |
| Notice limit:              | - Unlimited - | 1 used |
| Report limit:              | 0             | 0 used |
| Target limit:              | - Unlimited - | 1 used |
| User limit:                | 4             | 1 used |
| User SNMP enabled:         | Enabled       |        |
| values.xml enabled:        | Enabled       |        |

At the bottom of the page, there are additional settings:

- Default dashboard: [Team dashboard rehak](#)
- Default permission group:
- Default SMS gateway address:

## Portal Debug Log section

For debugging only. Event counters + Debug window for sending data to the portal.

- **Push Period** - Period of sending data to the remote portal. The period is determined by the portal and cannot be changed by the user.
- **Log Period** - Period of storing data for the portal in the device cache. The period is determined by the portal and cannot be changed by the user.
- **Current Push Timer** - Timer indicating the time remaining until sending data to the portal.
- **Current Log Timer** - Timer indicating the time remaining until saving the data for the portal in the cache.
- **AutoPush Block Timer** - Time of incidents for AutoPush. If the permitted number of incidents for one Push period is exceeded, the AutoPush function will be blocked.
- **Retransmit number** - Counts the number of invalid Push attempts.
- **Manual Push** - Button for instant sending of data to the portal.

## The AutoPush functionality

The device sends sensor data to the online portal at regular intervals defined by the portal. For the HWg-cloud.com portal, the default interval is every 15 minutes and cannot be changed by the user.

Alarming to the portal is based on 2 functions:

- **Notice Range** - alarming is fully managed in the portal. Reaction time up to 15 min.
- **SD SafeRange** - alarming is managed in the portal, but MIN & MAX values of the Safe Range are synchronized with the device. This helps respond to alarms faster when sensor values pass the alarm limits.

## AutoPush settings for each Sensor

AutoPush sends data to the portal faster when sensor values change by a certain amount since the last upload. When this happens, the STE2 device automatically connects to the portal and sends updated values for all sensors.

# System tab

# STE2<sub>r2</sub>



1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL **SYSTEM**

## Download

| DESCRIPTION                  | FILE                                  |
|------------------------------|---------------------------------------|
| Backup configuration         | <a href="#">STE2 r2_Config.bin</a>    |
| Online setup in XML          | <a href="#">setup.xml</a>             |
| Online values in XML         | <a href="#">values.xml</a>            |
| SNMP MIB Table               | <a href="#">STE2 r2.mib</a>           |
| OID keys table               | <a href="#">Online OID keys table</a> |
| TXT list of common SNMP OIDs | <a href="#">STE2 r2_OID.txt</a>       |

## System

| NAME                              | VALUE  |
|-----------------------------------|--|
| Product Name:                     | STE2 r2  |
| Serial Number:                    | 6006997474   |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB  |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC  |
| Version:                          | 1.5.4  |
| Build:                            | 2373   |
| Compile time:                     | Jun 5 2023, 12:58:02   |
| Up Time:                          | 13579 [s]  |
| Demo Mode:                        | <a href="#">Demo Mode</a>  |
| Network Upgrade                   | <a href="#">Read available version:---</a><br><a href="#">Start Network Upgrade:---</a>  |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> <input type="text" value=""/> |



## Download section

- **Backup configuration** - Device configuration backup in BIN format. Click on the link to save the current device configuration after its final settings for potential restore purposes.
- **Online setup in XML** - Configuration backup in XML format. Click on the link to save the current device configuration after its final settings for potential restore purposes.
- **Online values in XML** - Current values in XML format. Click on the link to save the current device configuration after its final settings for potential restore purposes.
- **SNMP MIB Table** - SNMP MIB file. MIB file address containing the definition of SNMP variables.

- **OID keys table** - The function draws up the entire tree of variables with an indication of the entire SNMP OID and explanations of the variable type.
- **TXT list of common SNMP OIDs** - Overview of the most important OID from the MIB table.

## System section

- **Product Name** - Device name (type).
- **Serial Number** - Device serial number.
- **Eth MAC Address** - MAC address of the device for cable connection.
- **WiFi STA MAC Address** - MAC address of the device for WiFi connection.
- **Version** - Firmware version. Serves for diagnostic purposes when troubleshooting.
- **Build** - Serves for diagnostic purposes when troubleshooting.
- **Compile time** - Firmware compile time. Serves for diagnostic purposes when troubleshooting.
- **Up Time** - Runtime of the device since the last switching on or restarting. Serves for diagnostic purposes when troubleshooting.
- **Demo mode** - Active demo mode prevents any changes in the device configuration. In this mode, users can browse and view all the web interface pages, but they are not allowed to change any values. A device with this setting can be placed on the public Internet with no risk of changes to its configuration. Demo mode can be turned off in the same way after entering the password.
- **Read available version** - Lists the latest firmware version on the HW group update server.
- **Start Network Upgrade** - Launches a firmware upgrade from the HW group update server.
- **Upload Firmware or Configuration** - Install newer firmware or configuration file to the device.

Restore configuration may not work if there is too big difference in firmware versions.

## Factory reset button

Restores factory settings. By default, DHCP setup is enabled. If the device does not receive an address within 60 seconds of switching it on, it defaults to 192.168.10.20 as the default IP. Neither the username nor the password are defined by default.

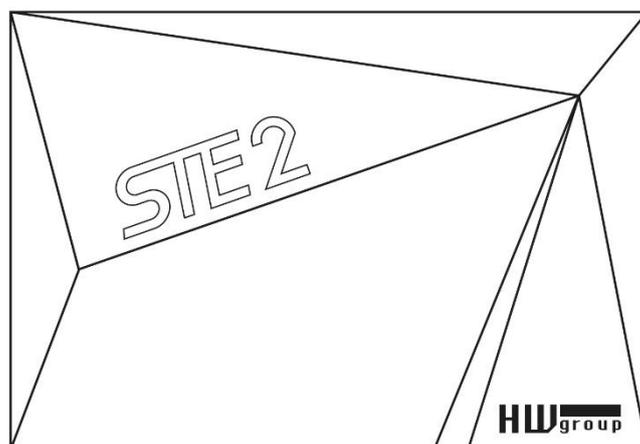
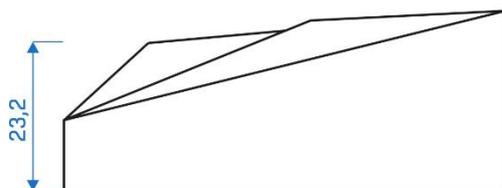
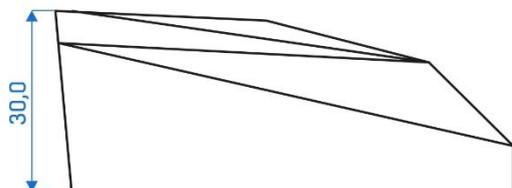
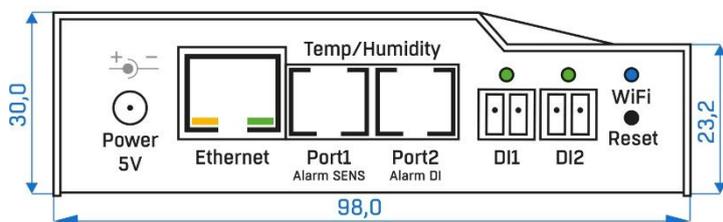
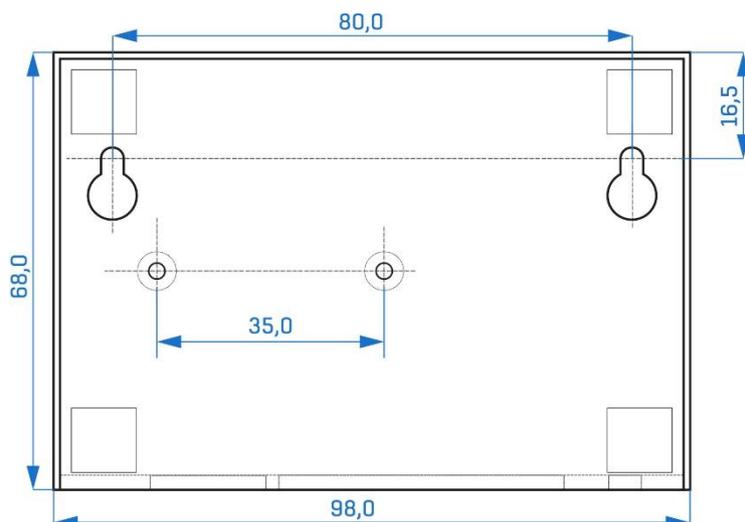
## Restart button

Restarts the device (reboot only, no default settings).

# Technical parameters

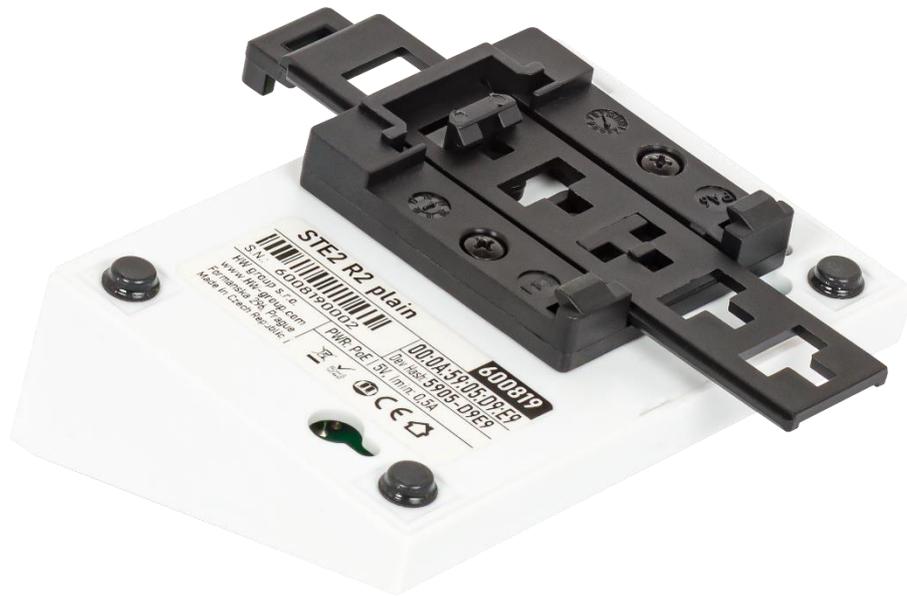
| <b>Ethernet</b>                       |  |
|---------------------------------------|--|
| Interface                             | RJ45 (10/100BASE-T)  |
| Supported protocols                   | IP: ARP, TCP/IP (HTTP, HTTPS, SNMP, SMTP, HWg-Push, netGSM, TLS), UDP/IP (SNMP, Syslog)  |
| SNMP                                  | Version 1  |
| <b>WiFi</b>                           |  |
| Supported standards                   | 802.11 b/g/n   |
| Frequency                             | 2.4GHz   |
| Output                                | +19.5 dBm output power in 802.11b mode<br>+16 dBm for 802.11n  |
| Security                              | WEP / WPA / WPA2 PSK   |
| Antenna                               | Internal   |
| <b>External sensors</b>               |  |
| Port/connector                        | Port1, Port2 / RJ11 (1W-UNI)   |
| Values limit                          | Up to 5 sensor values (°C, %RH, WLD, Voltage ...)  |
| Sensor type                           | Only sensors from HW group s.r.o.  |
| Sensors/distance                      | 2× Max. 60 meters total length (per each RJ11 port)  |
| <b>DI INPUTS (Dry Contact Inputs)</b> |  |
| Port/connector                        | I1, I2 / ø2 mm terminal block  |
| Type                                  | Digital Input (supports NO/NC Dry contact)   |
| Sensitivity                           | Sensitivity 1 (On) = 0-500 Ohm   |
| Max. distance                         | Up to 50m  |
| <b>Power supply</b>                   |  |
| Power voltage                         | 5V / 250 mA  |
| Connector                             | Connector Jack Ø3.5 x 1.35 / 10 [mm]   |
| PoE (Power over Ethernet)             | PoE (Power over Ethernet) RJ45 - IEEE 802.3af Class 0  |
| <b>LED</b>                            |  |
| Link                                  | Yellow - Ethernet connection state   |
| Activity                              | Green - Ethernet activity  |
| Alarm                                 | Port 1 - Alarm SENS - LED is lit in case of alarm active on a sensor<br>Port 2 - Alarm DI - LED is lit in case of alarm active on a DI |
| 2x DI input                           | Green - LED indicates switching on the DI Input  |
| WiFi                                  | Blue - connection state in operation (shining), search indicator (flashing slowly) and connecting (flashing quickly)                   |
| <b>Button</b>                         |  |
| Reset                                 | Restore default settings: hold and connect power supply, keep holding button for 5 seconds.  |
| <b>Other parameters</b>               |  |
| Operating temperature                 | -10 to 60 °C (device operating temperatures)<br>Sensors temperature range can vary widely  |
| Dimensions/weight                     | 98 × 68 × 33 (W × H × D) / 91 g  |
| Elmag. radiation                      | CE / FCC Part 15, Class B  |
| Elmag. compatibility                  | EN 61326-1:2013, EN 61010-1:2010, EN 55011:2009, EN 62311:2008   |

# Physical dimensions



## Optional DIN mount

DIN Rail box set - A mounting kit for installing HWg devices on a DIN rail.



## WiFi Radio

| Description                          | Min  | Typical | Max  | Unit |
|--------------------------------------|------|---------|------|------|
| Input frequency                      | 2412 | -       | 2484 | MHz  |
| <b>Tx power</b>                      |      |         |      |      |
| The output power of PA for 72.2 Mbps | 13   | 14      | 15   | dBm  |
| The output power of PA for 11b mode  | 19,5 | 20      | 20,5 | dBm  |
| <b>Sensitivity</b>                   |      |         |      |      |
| DSSS, 1 Mbps                         | -    | -98     | -    | dBm  |
| CCK, 11 Mbps                         | -    | -91     | -    | dBm  |
| OFDM, 6 Mbps                         | -    | -93     | -    | dBm  |
| OFDM, 54 Mbps                        | -    | -75     | -    | dBm  |
| HT20, MCS0                           | -    | -93     | -    | dBm  |
| HT20, MCS7                           | -    | -73     | -    | dBm  |
| HT40, MCS0                           | -    | -90     | -    | dBm  |
| HT40, MCS7                           | -    | -70     | -    | dBm  |
| MCS32                                | -    | -89     | -    | dBm  |
| <b>Adjacent Channel Rejection</b>    |      |         |      |      |
| OFDM, 6Mbps                          |      | 37      |      | dB   |
| OFDM, 54Mbps                         |      | 21      |      | dB   |
| HT20, MCS0                           |      | 37      |      | dB   |
| HT20, MCS7                           |      | 20      |      | dB   |

## WiFi signal strength

### What is signal strength

WiFi is a radio signal and it has limitations in reach given firstly by the transmission output and secondly by the quality and shape of the antennas. Signal strength is indicated in decibels per milliwatt of output (dBm), often (incorrectly) simplified to "dB". Signal strength has a negative value and it applies that the lower the value (a higher number after the minus sign), the worse.

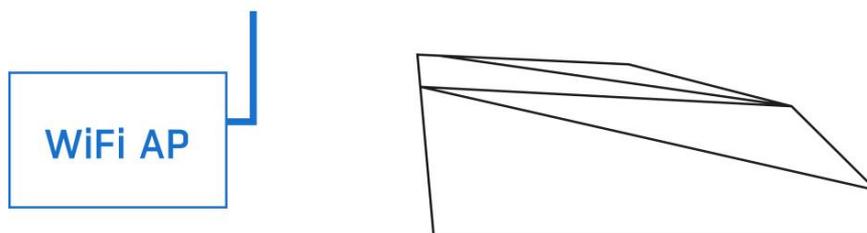
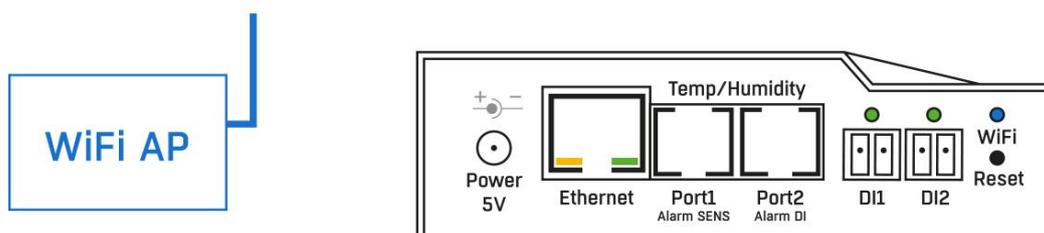
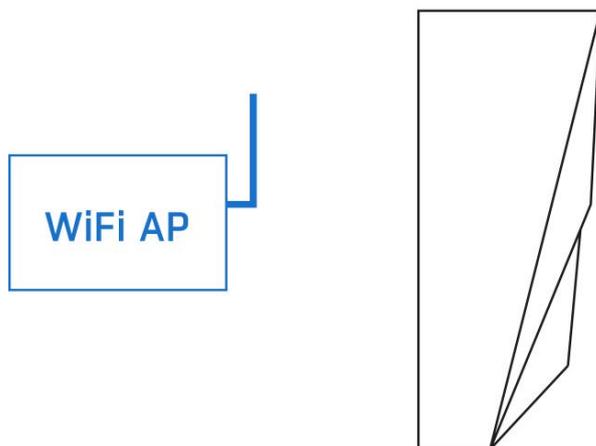
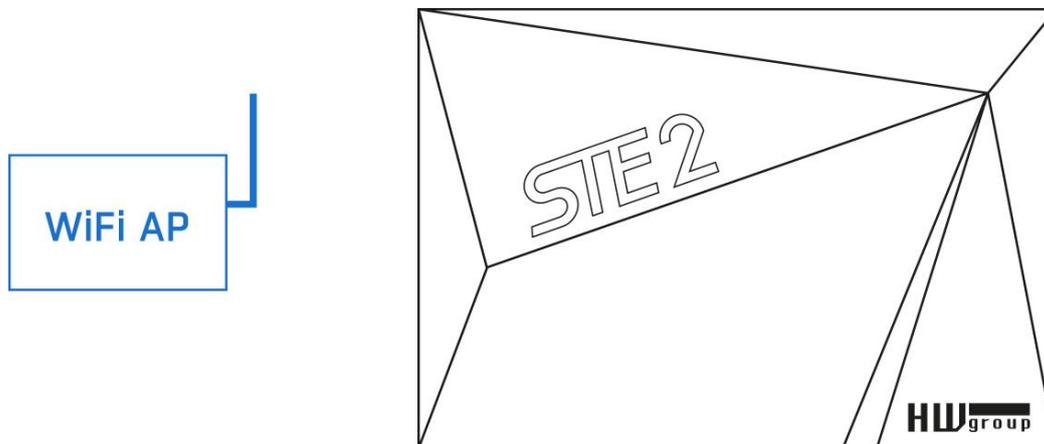
The decibel unit is non-dimensional and expresses the logarithm of a ratio of two values. In our case, it is the ratio of the received output to an etalon of 1 mW:

$$dBm = 10 * \log_{10} \frac{P_1}{1 \text{ mW}}$$

This means that if you have a signal of -54 dBm, it is higher (better) than a value of -82 dBm.

## Effect of device location relative to WiFi transmitter

In terms of sensitivity, flat antennas perform equally well or even better than multi-directional antennas (provided that the transition connector is excluded). However, the main disadvantage of flat antennas is their sensitivity to the position of the device relative to the connection point.



# Supported interfaces

## Digital Inputs

Dry contact, simple door contact or relay output can be connected to the green terminal block.

DIs are galvanically connected to the power supply.

- **Not switched input** has a value of „**0 (Off)**“.
- **Switched input** is identified as „**1 (On)**“, Ohmic resistance 0  $\Omega$  to 500  $\Omega$ .



### Connection parameters:

- Maximum cable length: 50 meters.
- Supported detectors: Any dry contact.
- Alarm alert setting for each DI input:
  - Alarm Disabled.
  - Alarm state = 1 (Active if close)
  - Alarm state = 0 (Active if Open)
- Alarm target:
  - None - No reaction.
  - Defined target (Notify of Alarm by sending an Email or SMS).
- Reading period: 800 ms.
- **Range of ID sensors:** DI (Digital Inputs) use address ID 1 or 2.
- **Name:** Each one DI can be named independently with up to 22 characters.
- **Sensor disconnection detection:** No, the disconnected sensor returns to the value „**0 (Off)**“.

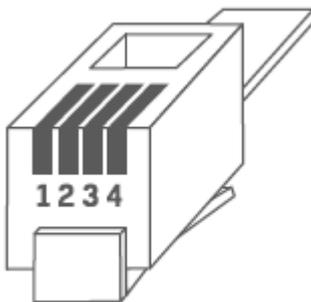
### Available detectors you can connect to DI port:

- Water flood detector (spot detection)
- WLD (Water Leak Detection) Relay with an external sensing cable
- Airflow detector
- Door contact detector
- PIR motion detector
- Gas leak detector
- Power presence (110/230V) detector
- Vibration detector

## Sensors RJ11 (1W-UNI bus)

Digital sensor bus, each sensor has a unique ID.

- STE2 R2 has 2 RJ11 ports
- Each port support max. distance 60m.
- Power: 5 V / 20 mA from RJ11 port.
- You can connect one RJ11 sensor to each port
- You can connect several physical RJ11 sensors to one port. Sensors can be daisy chained with respect to total max. distance.
- To help sensors daisy chaining, some sensors have 2 RJ11 ports.
- Avoid star topology (RJ11 splitters).
- Only sensors from HW group are supported.  
Do not connect any other sensors, it can damage the device.



| RJ11 (1W-UNI) |      |                      |
|---------------|------|----------------------|
| <b>1)</b>     | -    | Not used             |
| <b>2)</b>     | Data | 2 Data Transmit Data |
| <b>3)</b>     | GND  | 3 GND Ground         |
| <b>4)</b>     | +5V  | 4 +5V Power          |

### Note:

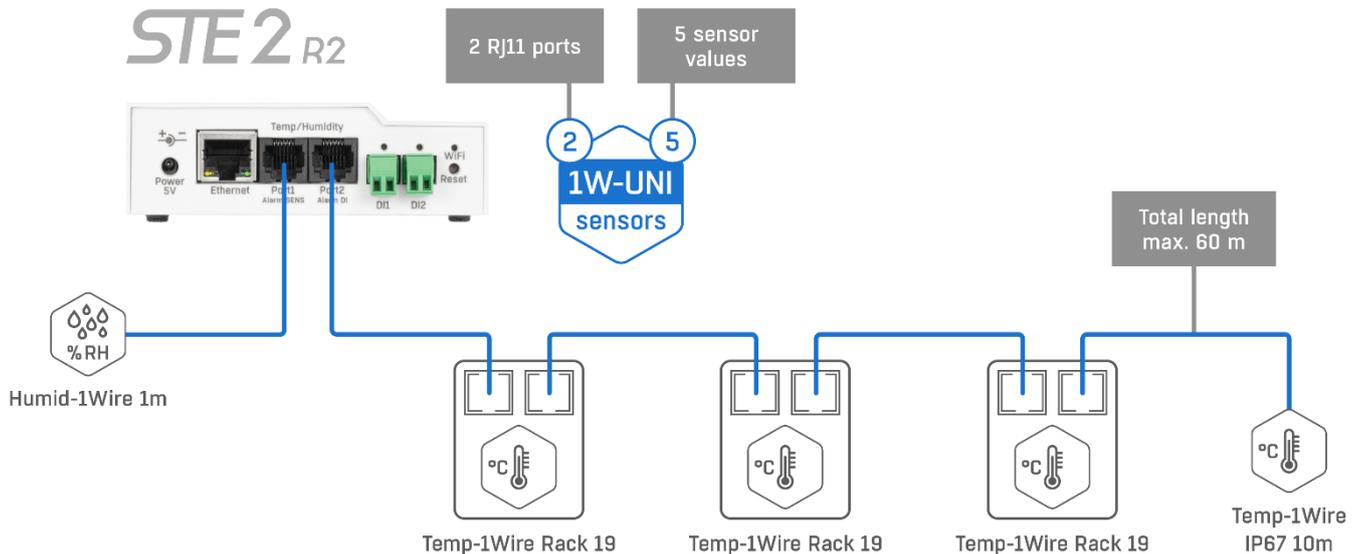
If a cable line is more than 60 meters from a connector on the device, we can't guarantee that it will work perfectly. It depends on the type of cable, how the line is set up, and the environment where it's installed.

In case of issues, check your cable and RJ11 connectors quality.

## Sensor values limit

Multiple sensor values can be connected to the device. Sensors can be daisy chained from RJ11 port. One physical sensor can measure several sensor values ( $^{\circ}\text{C} + \%RH = 2$  sensor values).

- STE2 R2 maximum limit is 5 sensor values in total.
- There can be limit based on powering external sensors. Contact our support.



## Available 1W-UNI sensors:

- Temperature sensors (Indoor / Outdoor / Cryo)
- Calibrated temperature sensors
- Relative Humidity sensors (Indoor / Outdoor)
- CO<sub>2</sub> & VOC sensors
- Light sensor
- AC / DC Current sensors
- AC Voltage sensor (0-230V)
- 4-20 mA sensors (converter) for industrial probes
- Water flood detector (spot detection)
- WLD (Water Leak Detection) with an external sensing cable

# Connecting STE2 to the SensDesk portal

1. Connect the device to the computer network and set the network parameters (see the [First Steps](#) chapter).

HWg-Config 1.2.2 for HW group products (www.hw-group.com)

Version: 1.2.2 HW group, s.r.o. www.hw-group.com  
Config utility for the HW group devices

Your PC network settings  
**IP address:** 192.168.103.232  
**Netmask:** 255.255.252.0  
**Gateway:** 192.168.100.1

Find Devices

Device list:

| MAC               | Name                | * IP            | Device type   | Port | Parameters          |
|-------------------|---------------------|-----------------|---------------|------|---------------------|
| 00:0A:59:05:55:B3 | STE2 Rev2 5905-55B3 | 192.168.100.41  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| 00:0A:59:04:F8:2B | Vitek stul          | 192.168.100.46  | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| 00:0A:59:05:E7:FB | STE2 r2 5905-E7FB   | 192.168.103.155 | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |
| 00:0A:59:05:D4:96 | JCh/ STE2r2         | 192.168.103.226 | STE2 r2 - Eth | 80   | TCP setup=N, DHCP=Y |

Searching modules... 47 device(s) found on network, 4 device(s) filtered and displayed Filter: STE2 r2 - Eth

2. Check the device website:

STE2 r2 1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

General Info

Device Name: STE2 r2 5905-E7FB

Time: 10:16:35

Date: 03.08.2023

Sensors & Digital Inputs

| STATE  | NAME         | TYPE              | CURRENT VALUE |
|--------|--------------|-------------------|---------------|
| Normal | Sensor 35186 | Temp.             | 25.8 °C       |
| Normal | Input 1      | Input Dry Contact | 0 (Open)      |
| Normal | Input 2      | Input Dry Contact | 0 (Open)      |

3. Check the **Enable Portal** option and save the changes using the **Save** button in the bottom right corner of the window.

Then click the Manual Push button in order to activate the portal function. Instead of "Portal disabled", a link HWg-Cloud.com: register your IP sensor should appear in the Portal Message field. Click this link in order to get to the HWg-Cloud.com portal.

## Portal Message

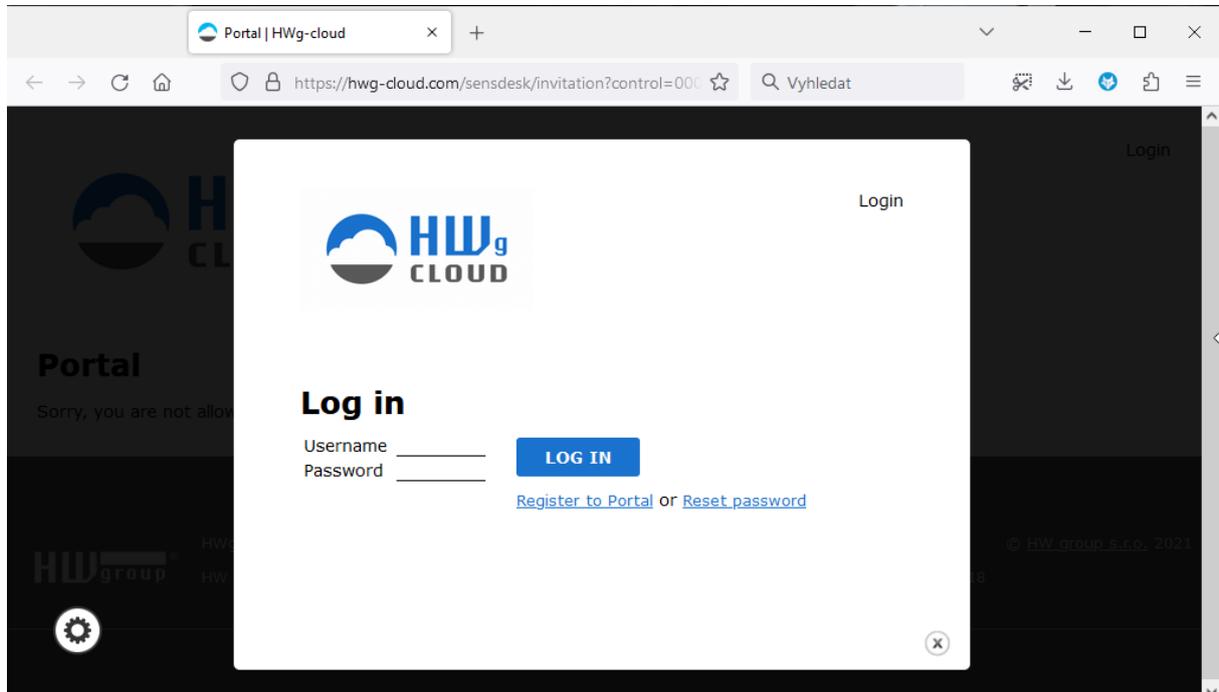
HWg-cloud: Check sensor online (2023-08-03 11:59:49 UTC)...

## Portal settings

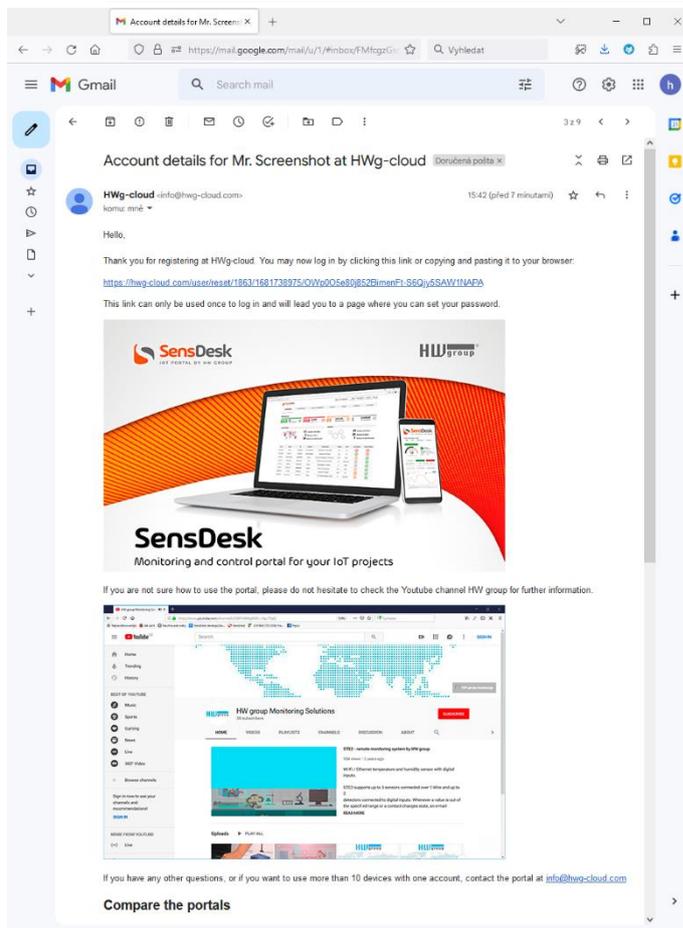
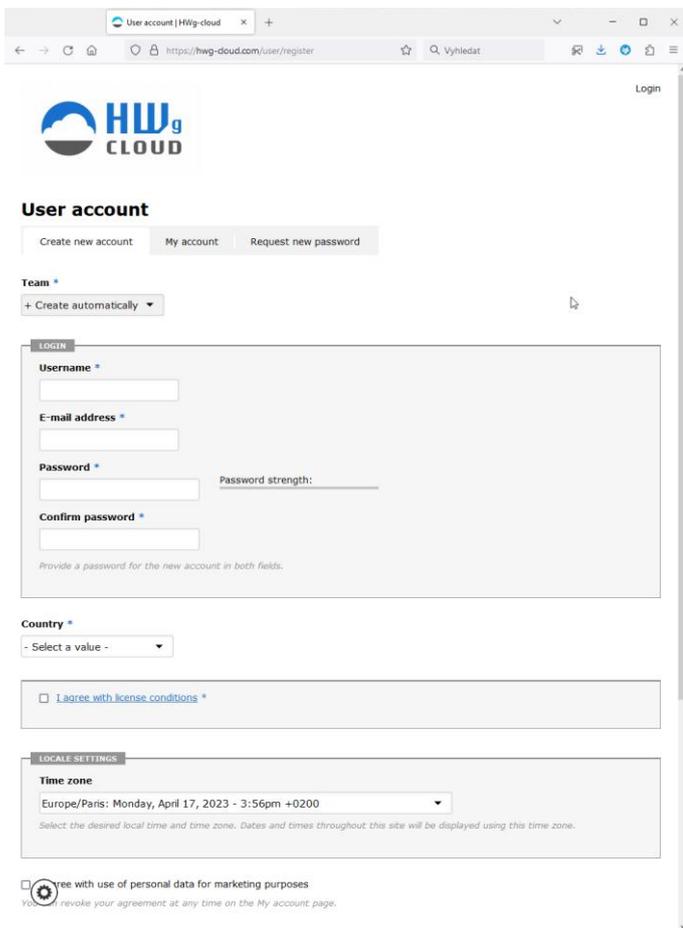
| NAME                               | VALUE  | DESCRIPTION  |
|------------------------------------|--|--|
| Portal                             | <input checked="" type="checkbox"/>                          | Portal Enable/Disable  |
| Server Address                     | <input type="text" value="http://hwg-cloud.com/portal.php"/> | IP Address or DNS Name   |
| IP Port                            | <input type="text" value="80"/>                              | Default 80   |
| Team (provided by portal)          | <input type="text" value="Team from Portal"/>                | Push device access parameters<br>Please have a look at <a href="#">My Team</a> on Sensdesk |
| Team Password (provided by portal) | <input type="password" value="....."/>                       |  |

## AutoPush settings

| ID    | NAME         | TYPE  | CURRENT VALUE | AUTOPUSH                         |
|-------|--------------|-------|---------------|----------------------------------|
| 35186 | Sensor 35186 | Temp. | 26.2 °C       | <input type="text" value="5.0"/> |



- In case you already have a user account, please enter your login details and the device will be automatically assigned to your account. If you do not have a SensDesk account yet, click the Register button and a registration form will be displayed.



**5. Enter the login details for your new account and the correct email address.**

This email address has to be unique for the server (cannot be already registered by another user).



- Dashboards
- Devices
- Sensors
- Locations
- Device groups
- Multigraphs
- Settings

Home

## STE2 r2 5905-E7FB

- View
- Edit
- Edit sensors
- Actions
- EventLog
- Delete
- Debug

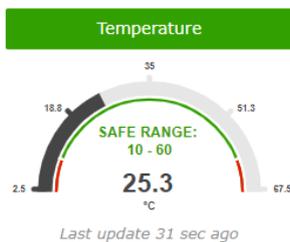


**Last log:**  
08.08.2023 15:47



**Device groups:** Not assigned  
**Location:** Not assigned  
**IP Address:** 192.168.103.155 port: 80

[Migrate device to another SensDesk technology based portal](#)



**6.** By activating the account, you will be redirected to the Devices > View page.

At this moment, the data-sending period is set to 10 seconds to show the sensors functionality. This quick communication with the portal is active for approximately 15 minutes after the first device registration, then the push period changes to standard 15 minutes.

The screenshot shows the 'Settings' page for a team named 'Team Mr. Screenshot'. The page includes a navigation menu, a team name, and a 'Buy Tariff' button. Below this, there are sections for 'PORTAL SETTINGS' and 'LIMITS'. The 'PORTAL SETTINGS' section lists the portal URL, port, team name, and password. The 'LIMITS' section shows the team name, expiration date, and usage for email and SMS actions.

| PORTAL SETTINGS                      |                                 |
|--------------------------------------|---------------------------------|
| This is credential for your devices. |                                 |
| <b>Portal URL:</b>                   | http://hwg-cloud.com/portal.php |
| <b>Portal port:</b>                  | 80                              |
| <b>Team:</b>                         | Mr. Screenshot                  |
| <b>Team password:</b>                | 5Jt!5J                          |

| LIMITS                            |                      |
|-----------------------------------|----------------------|
| <b>Team:</b>                      | Team Mr. Screenshot  |
| <b>Date of expiration:</b>        |                      |
| <b>Action - E-mail limit:</b>     | - Unlimited - 0 used |
| <b>Action - Set output limit:</b> | 0 0 used             |
| <b>Action - SMS limit:</b>        | 0 0 used             |

## 7. If you check the Teams link, you will find your Team Password.

This password, together with your login name, identifies the device in communication with your account and in the communication of mobile applications with SensDesk. The password cannot be changed for security reasons and is different from the login password.

# STE2<sub>r2</sub>

1.5.4

HOME GENERAL SETUP SECURITY WIFI SENSORS DIGITAL INPUTS EMAIL SMS ALARMS SNMP TIME PORTAL SYSTEM

### Portal Message

[HWg-cloud: Check sensor online \(2023-08-03 11:59:49 UTC\).](#)

### Portal settings

| NAME                               | VALUE  | DESCRIPTION  |
|------------------------------------|--|--|
| Portal                             | <input checked="" type="checkbox"/>                          | Portal Enable/Disable  |
| Server Address                     | <input type="text" value="http://hwg-cloud.com/portal.php"/> | IP Address or DNS Name   |
| IP Port                            | <input type="text" value="80"/>                              | Default 80   |
| Team (provided by portal)          | <input type="text" value="Team from Portal"/>                | Push device access parameters<br>Please have a look at <a href="#">My Team</a> on Sensdesk |
| Team Password (provided by portal) | <input type="password" value="....."/>                       |  |

### AutoPush settings

| ID    | NAME         | TYPE  | CURRENT VALUE | AUTOPUSH                         |
|-------|--------------|-------|---------------|----------------------------------|
| 35186 | Sensor 35186 | Temp. | 26.2 °C       | <input type="text" value="5.0"/> |

Save

## 8. Team Password can be used in devices to skip the logging procedure during assigning the device to your portal account, or in mobile applications:

The portal function periodically sends the data to a remote server and the sending period is set by this server.

AutoPush is a function allowing unusual measured data sending, beside the periodic logging, in case the value change is higher than the AutoPush delta parameter.

# HWg Monitor - mobile app

HWg Monitor allows users to check values from one or more HWg devices regularly. It reads data from either the LAN or the Portal (Cloud) and mainly helps to display sensor values.

The app also allows you to sort sensors by device or prioritize which ones show up first. Sensors in alarm or disconnected devices are marked with different colors.

Additionally, HWg Monitor can control Digital Outputs (DO) on Poseidon2 and Damocles2 devices connected directly to the LAN, as well as devices connected to the Portal.

- Mobile App for iOS and Android
- Can be used on Mobile phones, Tablets, Android compatible devices (TV).
- Display values from Sensors, DI, DO
- Data input
  - LAN devices (All HWg products)
  - Cloud Portal
    - SensDesk.com (HWg-cloud.com is not supported)
    - Portal Providers



## HWg Monitor: Define sensor values zoom as you need



## Specifics of selected SensDesk Technology portals:

The HWg Monitor application can work with all SensDesk Technology portals, but not all may have active support for this application. Support depends on the activation of XML API on the portal, which may be enabled or disabled by its provider. The HWg-Cloud.com portal has this support turned off as it is only available on the paid version of SensDesk.com. Portals from other providers may have different settings, so users should ask their portal provider for support for this application.

## Basic features of the HWg Monitor application:

- An unlimited number of monitored devices and sensors.
- Two types of data sources (Data source).
  - Direct communication with STE2, Poseidon2, Damocles2, HWg-PWR, WLD2 units.
  - Portals (Cloud) from the SensDesk Technology family with enabled integration (API) through XML (SensDesk.com, HWportal.cz, SensDesk.mcs-nl.com, and others).
- Option to select preferred sensors (favorites).
- Sorting options by name or status.
- Row or tile display.
- Integrated HWg config for searching devices on a local network.
- Widget for a quick preview.
- Output control on directly connected Poseidon2 and Damocles2 units.
- Simple application for iOS and Android.
- Optional number of tiles on the screen for setting up large screens.

Find out more: <https://www.hw-group.com/software/hwg-monitor>

# Firmware upgrade in STE2 R2 units

1) Open the device web interface in the System tab.

The screenshot displays the web interface for the STE2 R2 device. The top navigation bar includes links for HOME, GENERAL SETUP, SECURITY, WIFI, SENSORS, DIGITAL INPUTS, EMAIL, SMS, ALARMS, SNMP, TIME, PORTAL, and SYSTEM (which is currently selected). The main content area is divided into two sections: 'Download' and 'System'.

**Download Section:**

| DESCRIPTION                  | FILE                                  |
|------------------------------|---------------------------------------|
| Backup configuration         | <a href="#">STE2 r2_Config.bin</a>    |
| Online setup in XML          | <a href="#">setup.xml</a>             |
| Online values in XML         | <a href="#">values.xml</a>            |
| SNMP MIB Table               | <a href="#">STE2 r2.mib</a>           |
| OID keys table               | <a href="#">Online OID keys table</a> |
| TXT list of common SNMP OIDs | <a href="#">STE2 r2_OID.txt</a>       |

**System Section:**

| NAME                              | VALUE   |
|-----------------------------------|---|
| Product Name:                     | STE2 r2   |
| Serial Number:                    | 6006997474  |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB   |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC   |
| Version:                          | 1.5.4   |
| Build:                            | 2373  |
| Compile time:                     | Jun 5 2023, 12:58:02  |
| Up Time:                          | 13579 [s]   |
| Demo Mode:                        | <a href="#">Demo Mode</a>   |
| Network Upgrade                   | <a href="#">Read available version:---</a><br><a href="#">Start Network Upgrade:---</a>                                 |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> <input type="text"/> |

At the bottom of the interface, there are two red buttons: 'Factory reset' on the left and 'Restart' on the right.

2) The System section contains items to identify and download the current FW version.

| System                            |  |
|-----------------------------------|--|
| NAME                              | VALUE  |
| Product Name:                     | STE2 r2  |
| Serial Number:                    | 6006997474   |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB  |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC  |
| Version:                          | 1.5.4  |
| Build:                            | 2373   |
| Compile time:                     | Jun 5 2023, 12:58:02   |
| Up Time:                          | 107143 [s]   |
| Demo Mode:                        | <a href="#">Demo Mode</a>  |
| Network Upgrade                   | <a href="#">Read available version:---</a>   |
|                                   | <a href="#">Start Network Upgrade:---</a>  |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> |

**3) Read available version** - Serves to identify and display the current firmware version on the update server. Click on the Read available version link.

| System                            |  |
|-----------------------------------|--|
| NAME                              | VALUE  |
| Product Name:                     | STE2 r2  |
| Serial Number:                    | 6006997474   |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB  |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC  |
| Version:                          | 1.5.4  |
| Build:                            | 2373   |
| Compile time:                     | Jun 5 2023, 12:58:02   |
| Up Time:                          | 14652 [s]  |
| Demo Mode:                        | <a href="#">Demo Mode</a>  |
| Network Upgrade                   | <a href="#">Read available version:1.5.4</a>   |
|                                   | <a href="#">Start Network Upgrade:Firmware is up to date.</a>                                      |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> |

**4) Start Network Upgrade** - Serves to upgrade firmware to the device. The download progress is displayed while upgrading. Click on the Start Network Upgrade link.

5) After the upgrade, the user is requested to restart the device manually.

The screenshot shows the 'System' configuration page. At the bottom right, the 'Restart' button is highlighted with a blue border. Below the system information table, there are two buttons: 'Factory reset' and 'Restart'.

| NAME                              | VALUE  |
|-----------------------------------|--|
| Product Name:                     | STE2 r2  |
| Serial Number:                    | 6006997474   |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB  |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC  |
| Version:                          | 1.5.4  |
| Build:                            | 2373   |
| Compile time:                     | Jun 5 2023, 12:58:02   |
| Up Time:                          | 107143 [s]   |
| Demo Mode:                        | <a href="#">Demo Mode</a>  |
| Network Upgrade                   | <a href="#">Read available version:---</a><br><a href="#">Start Network Upgrade:---</a>            |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> |

To do this, press the Restart button. **The device will not restart automatically and this must be done manually (note: manual upload of firmware file will trigger restart automatically).**

Check the firmware version after restart.

The screenshot shows the 'System' configuration page after a restart. The 'Version' field is highlighted with a blue border, showing the value '1.5.4'.

| NAME                              | VALUE  |
|-----------------------------------|--|
| Product Name:                     | STE2 r2  |
| Serial Number:                    | 6006997474   |
| Eth MAC Address:                  | 00:0A:59:05:E7:FB  |
| Wifi STA MAC Address:             | 00:0A:59:05:E7:FC  |
| Version:                          | 1.5.4  |
| Build:                            | 2373   |
| Compile time:                     | Jun 5 2023, 12:58:02   |
| Up Time:                          | 107143 [s]   |
| Demo Mode:                        | <a href="#">Demo Mode</a>  |
| Network Upgrade                   | <a href="#">Read available version:---</a><br><a href="#">Start Network Upgrade:---</a>            |
| Upload Firmware or Configuration: | <input type="button" value="Choose file"/> No file chosen<br><input type="button" value="Upload"/> |

Firmwares can be also downloaded as a file at <https://www.hw-group.com> -> [Support](#) -> [Downloads](#) -> [Firmware](#) -> [STE2 rev.2 / WLD2 / SD devices](#) (or actual fw version is available at the product web page next to the manual download).

The screenshot shows the HW group website's firmware download page. The page title is "STE2 rev.2 / WLD2 / SD devices". The navigation menu includes Products, Solutions, Support, and Contact. The main content area lists several firmware versions with their respective release dates and file sizes. Each version entry includes a list of fixes. On the right side, there is a "Subscribe for software releases" form with fields for Name, E-mail, Company, Operating system, and Progr. language. Below the form is a CAPTCHA section and a "Subscribe" button. At the bottom right, there is a "NEWSLETTER" graphic.

| Version                              | Release date       | File size | Download                 |
|--------------------------------------|--------------------|-----------|--------------------------|
| STE2 rev.2 / WLD2 / SD devices 1.5.4 | 06/26/2023 - 13:50 | 894.77 KB | <a href="#">Download</a> |
| STE2 rev.2 / WLD2 / SD devices 1.5.2 | 05/24/2023 - 10:02 | 894.67 KB | <a href="#">Download</a> |
| STE2 rev.2 / WLD2 / SD devices 1.4.9 | 01/11/2023 - 09:30 | 787.2 KB  | <a href="#">Download</a> |
| STE2 rev.2 / WLD2 / SD devices 1.4.8 | 08/31/2022 - 08:48 | 787.19 KB | <a href="#">Download</a> |
| STE2 rev.2 / WLD2 / SD devices 1.4.7 | 07/29/2022 - 09:49 | 787.14 KB | <a href="#">Download</a> |
| STE2 rev.2 / WLD2 / SD devices 1.4.6 | 06/22/2022 - 11:16 | 790.98 KB | <a href="#">Download</a> |

**Fixes for STE2 rev.2 / WLD2 / SD devices 1.5.4:**

- Add: 60 sec timeout for DHCP, then set the address from the configuration
- Mod: Change the default IP address from 192.168.1.90 to 192.168.10.20, see STE2 R2 manual
- Mod: Changing the Default button in UDP setup to 60 seconds as the manual says, it was 30
- Mod: Saving of the uni sensor unit in the configuration
- Fix: Disable file upload in demomode
- Fix: DI reading period
- Fix: uptime in snmp
- Fix: web refresh after fw upload.
- Fix: files with OID description

**Fixes for STE2 rev.2 / WLD2 / SD devices 1.5.2:**

- Fix SNMP traps for STE2 PLUS
- Fix: DHCP
- Fix Text Demo mode in Demo mode in page header
- Fix: network stability

**Fixes for STE2 rev.2 / WLD2 / SD devices 1.4.9:**

- Fix: Generating self-signed certificates

**Fixes for STE2 rev.2 / WLD2 / SD devices 1.4.8:**

- Fix: Saving calibration values

**Fixes for STE2 rev.2 / WLD2 / SD devices 1.4.7:**

- Fix: HTTPS certificate

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**NEWSLETTER**



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