

ReSES Gateway (HW-SES-GTW-01) purpose is to transfer the data from SES Logger to [ReSES.net](https://data.reses.net) Cloud based CBM Information platform. ReSES Gateway replaces the need to use mobile device with installed ReSES Communicator app.

### Prerequisites:

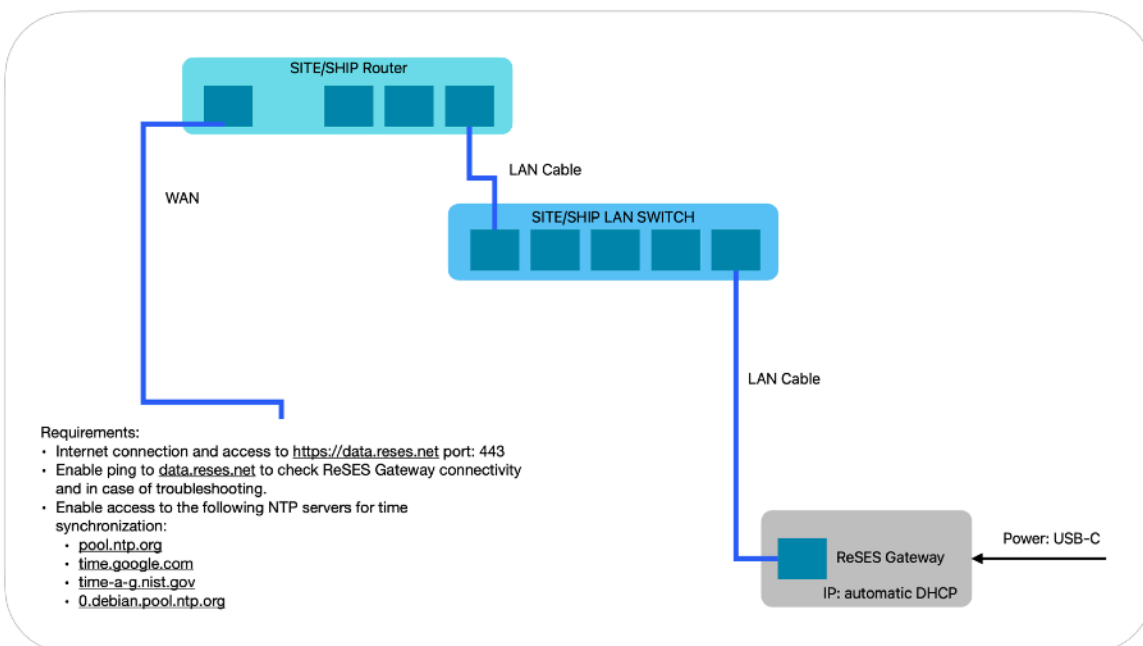
- USB power charger
- LAN cable
- **Internet connection and access to <https://data.reses.net> port: 443**
- **Enable ping to [data.reses.net](https://data.reses.net) to check ReSES Gateway connectivity and in case of troubleshooting.**
- **Enable access to the following NTP servers for time synchronization:**
  - **pool.ntp.org**
  - **time.google.com**
  - **time-a-g.nist.gov**
  - **0.debian.pool.ntp.org**

### Installation:

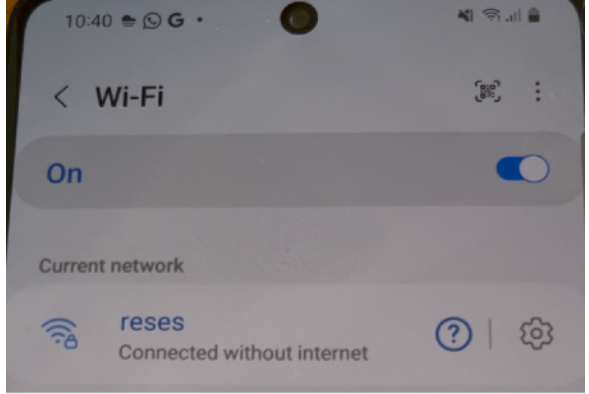
- Unpack the ReSES Gateway
- Connect the LAN cable to the device and local network. (Cable is not included)

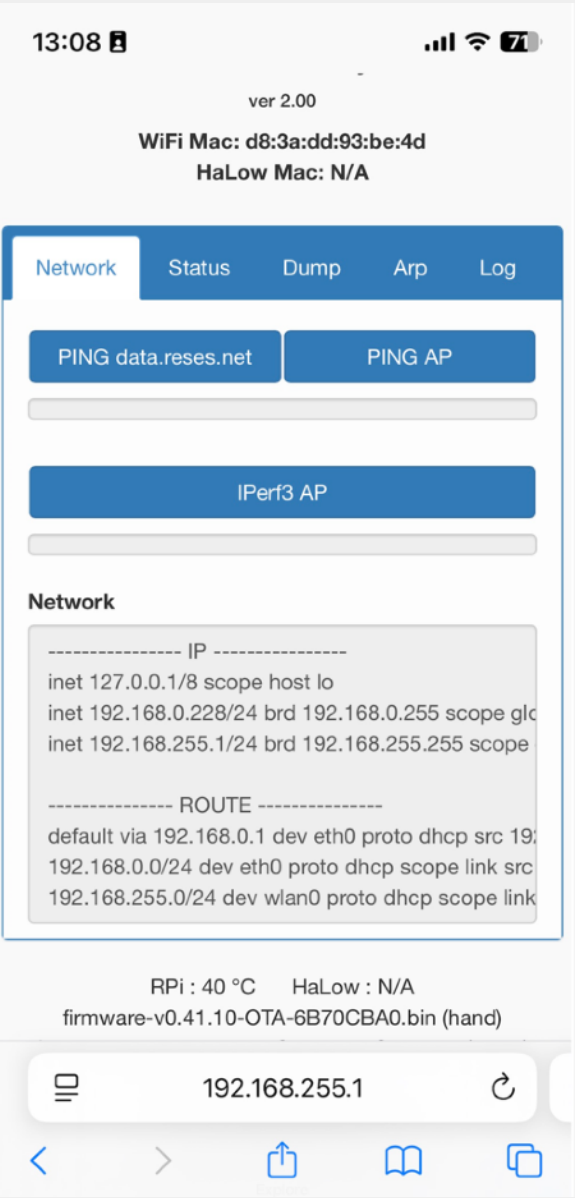
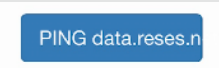
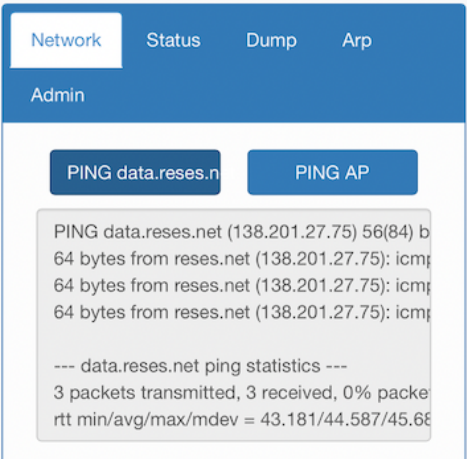


- Connect the USB C power cable to a charger (not included)
- Wait for 5 minutes the device to be initiated. During the startup green LED will blink intensely in the beginning. The red LED will be almost constant.



### Check connectivity to reses.net

Step	Notes
<p>Connect your computer or mobile device to the ReSES Gateway WiFi. (Scan the QR code (1)) or find WiFi network SSID: <b>reses</b> and connect with password: <b>reses638</b></p>	 <p>The screenshot shows the 'Wi-Fi' settings on an iPhone. The Wi-Fi toggle is turned 'On'. Under 'Current network', the 'reses' network is selected and shows 'Connected without internet'. The status bar at the top indicates the time is 10:40 and the device is connected to the 'reses' network.</p>

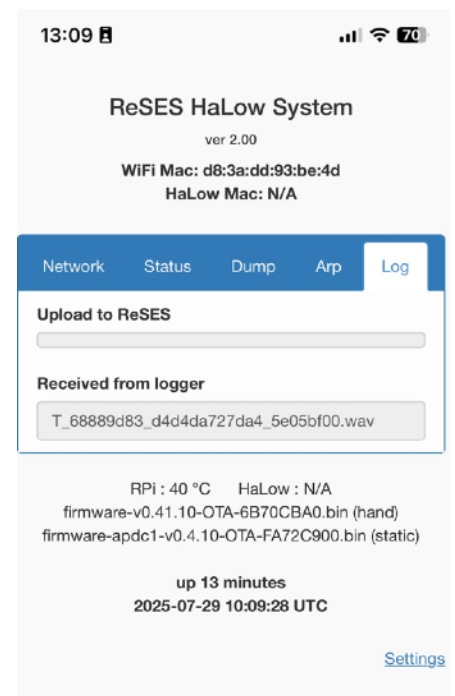
Step	Notes
<p>Open the ReSES Gateway Home page. Scan the QR code (2) on the label or open a browser and type the following IP: 192.168.255.1</p>	
<p>Press  button. In case of successful connection to the <a href="http://data.reses.net">data.reses.net</a> a log with access time will appear. <b>NOTE:</b> the IP address that you should see is 138.201.27.75. If you see another IP address, likely the communication goes through proxy servers and ReSES Gateway won't be able to transfer data.</p>	

Step	Notes
Check the time of the Gateway. It should show the current GMT time. If not, likely there is no connection to the Internet or the access to NTP servers is disabled.	<div style="text-align: center;"> <p>RPi : 38 °C    HaLow : N/A</p> <p>firmware-v0.36.44-OTA-5CB7B932.bin (hand)</p> <p>firmware-apdc1-v0.3.2-OTA-DBB1713A.bin (static)</p> <p><b>up 1 hour, 11 minutes</b></p> <p><b>2024-05-29 18:27:17 UTC</b></p> <hr/> <p>192.168.255.1</p> </div>
To verify full functionality, you can send an email to <a href="mailto:support@relianceering.com">support@relianceering.com</a> to confirm that the ReSES Gateway is visible in ReSES.net.	

- If there is no connection check the firewall settings and internet connectivity. Check the LAN cable.

#### Data transfer to reses.net:


- Once the ReSES Gateway is up and running there is not a need to be switched off
- After the data collection place the logger near to the ReSES Gateway box (less 4" (10 cm) distance) and turn the logger on.
- Wait for 3 minutes and the logger will inmate the data collection process or press twice the button to start the data collection. (<https://youtu.be//shCflKY57cg>)
- Once the data are transferred SES Logger 11' LED will become white.
- The ReSES Gateway initiates data transfer to the platform at every 15 minutes
- To check receiving data from the logger press Log tab (only for ver. 2.00 or higher). The log will show you files received from the logger and pending to be sent to reset.net

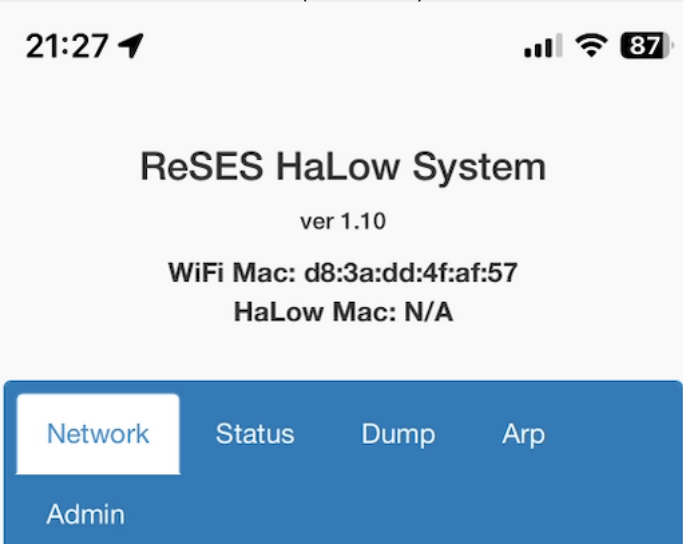


#### NOTE:

- DO NOT REMOVE THE SD CARD
- If you have questions, please contact us at [support@relianceering.com](mailto:support@relianceering.com)
- ReSES Gateway “reses” do not provide access to the Internet for connected devices
- The ReSES Gateway FW is updated automatically.

**Troubleshooting**

Case	Causes and solutions
<p><b>Can not connect to the device network “reses”.</b></p>	<p><b>The device has not be initiated yet.</b> Wait fro a few more minutes and try again.</p>
	<p><b>If can not find the “reses” WiFi after 10 min.</b> Check that SD card is on place, reboot the device. Record the device LEDs behavior and provide this information to <a href="mailto:support@relianeering.com">support@relianeering.com</a> together with the SN.</p>
	<p><b>Damaged SD card.</b> Contact <a href="mailto:support@relianeering.com">support@relianeering.com</a></p>
	<p><b>The device is not powered.</b> Check the device LED, the red LED shall be On constant. Use another USV-C cable or power supply.</p>
<p><b>Can not access reses.net and send data</b></p>	<p><b>LAN cabled is not firmly plugged in.</b> Check the LAN cable and device LEDs</p> 

Case	Causes and solutions
	<p><b>The local firewall does not allow access to the Internet:</b> Contact your IT support. Provide the following information.</p> <p>The device MAC address. (WiFi Mac)</p>  <p>The device IP The second net IP is the received DHCP. <b>NOTE:</b> The gateway gets automatic IP given from the router DHCP. It is not possible to set a static IP. <b>NOTE:</b> The IT team can include the MAC address of the device as device with permission to access the required sites (NTP and <a href="https://data.reses.net">https://data.reses.net</a> port: 443)</p> <p><b>Network</b></p> <pre> ----- IP ----- inet 127.0.0.1/8 scope host lo inet 192.168.2.24/24 brd 192.168.2.255 scop inet 192.168.255.1/24 brd 192.168.255.255 s  ----- ROUTE ----- default via 192.168.2.1 dev eth0 proto dhcp s 192.168.2.0/24 dev eth0 proto dhcp scope lir 192.168.255.0/24 dev wlan0 proto dhcp scop </pre>

Case	Causes and solutions
	<p><b>Ping data.reses.net returns ping but the data can't be sent</b></p> <p>Likely the communication goes through proxy server. The IP address that you should see is 138.201.27.75. If you see another IP address, likely the communication goes through proxy servers and ReSES Gateway won't be able to transfer data.</p> <p>Contact local IT team.</p>
	<p><b>The device IP is not in "white list"</b></p> <p>Some LAN are set to allow only particular range of IPs to have access to the Internet.</p> <p>Contact the local IT team. Provide the device MAC address and request the to assign an IP from the white list for this particular MAC address.</p>
<p><b>Can not transfer data from the logger to the gateway</b></p>	<p><b>SES logger 11' becomes red</b></p> <p>Check that the gateway is ON and you can connect a mobile device to "reses" WiFi.</p> <p>Position the logger close to the gateway and try again.</p> <p>Try a few times. Sometimes the environment is crowded with WiFi signals and the logger could not see the gateway at the first time.</p> 