

Elno Gateway Manual

The Elno Gateway (Elnogw) collects the measurements from the remote wireless sensors, stores them internally then appends a date and location code and sends the measurement data to the Elno Cloud Server. It can monitor and collect data for several days to provide continuous monitoring even if the local Internet is disrupted. When the Internet connection to the cloud is restored it will push the history to the cloud server for plotting and review. The operation of the Elnogw is pretty automated, it will detect and report new and missing sensors automatically. The standard sensor sample rate is 1 minute.

First Time Startup

Upon first power up, the ELNO Gateway will be in AP mode, start your laptop or tablet in wifi mode and connect to the gateway with the WiFi SSID of **elnogw** and Password of **12345678**. Once connected, open your web browser and enter the address elno. A welcome page and see a list of the local wifi SSIDs nearby. You select your wifi, enter your wifi passphrase and connect. The Elnogw SSID will be turned off and the gateway will use the selected WiFi to upload data to the ELNO web site.

Power

The Elno Gateway uses its own 5 volt power module because most USB chargers do not provide the 2.5 amps needed for safe operations.

It is recommended to have the gateway plugged into a UPS to remove power glitches. The Elnogw can operate on a small 400 watt UPS for 4 to 6 hours depending on number of sensors and Internet connection.

Antenna

The antenna is a 900 Mhz omnidirectional design to provide max range to the remote sensors. For best range and performance it should be in vertical position (pointing straight up). To provide maximum range the remote sensors should also be vertical with the antenna pointing up.

Light Patterns

What do the different colors and blinking lights mean?

The led is the only visible way to know the ElnoGw is working. The led provides different blink patterns and colors based on the status as it starts all the internal components.

When first starting up it comes on green for 1 second then turns Blue. During that time it is connected to the Internet. Then it turns blue-green for 1 second then blue Red.

During this time it is loading all the programs. The last sequence turns blue-green then Red. That tells you all the applications are loaded and starting.

Once loaded and functioning as a gateway, it starts blinking with a cycle of 4 Greens and one Red. This indicates none of the remote sensors have connected to the gateway. If the unit has been off for a few days or more it may take several hours for the local sensors to wake up and try to communicate, but normally this only takes a few minutes. When one or more sensors are detected the led changes to breathing Green. The led light also indicates failure conditions.

1. Fail to connect to Internet is 6 blinking Reds and one Green blink
2. Fail to connect to Elno Servers is 3 blinking Reds and one Green blink.
3. An internal data logging error shows as an alternating Red Green blink. You will need to contact support if this error occurs.

Black Button

The black button on back has three different functions, it can Reset the Gateway, Shut the Gateway Down and can reset the WiFi and all the operators to change WiFi's.

When you press the button the LED will show a blue color to let you know it sees that the button is pressed.

Button Commands and Blink Codes

Pressing the reset button for more than a second will cause the LED to turn Blue then turn Turquoise

At 4 seconds it will turn **Yellow** to Indicate Letting go of the button will **Shutdown** the Gateway

At 6 seconds it will turn **Red** to indicate letting go of the button will **Reboot** the Gateway.

At 10 seconds it will turn **Green** to indicate that it will now go into **WiFi Setup** mode.

At 15 seconds it will turn **White** to indicate that it will now be reset back to **Factory Settings** but will keep the current WiFi Settings.

Options:

1. To Reset the Elno Gateway press and hold the button down till LED turns **Yellow**
 - a. The process can take up to thirty seconds, it tries to tell the cloud it is going off
 - b. Wait about 5 seconds after you see the light go out before pulling power
2. To Shut down the gateway, press and hold the button down till the LED turns **Red**
 - a. The process can take up to thirty seconds, it tries to tell the cloud it is going off

- b. Wait about 5 seconds after you see the light go out before pulling power
 3. To restart the WiFi back to defaults and make the gateway in hotspot mode
 - a. Press and hold the button down until the LED turns **Green**.
 - b. After that start your laptop or table in wifi mode and connect to the gateway with the WiFi SSID of **Elnogw** and Password of **12345678**.
 - c. Once connected, open your web browser and enter the address 10.0.0.1.
 - d. A welcome page and see a list of the wifi SSIDs nearby. You select your wifi, enter your wifi passphrase and connect.
 - e. The **Elnogw** SSID will be turned off and the gateway will use the selected WiFi to upload data to the ELNO web site.
 - f. If Successful the led should turn to Green breathing