

WTG Wireless sensor firmware update

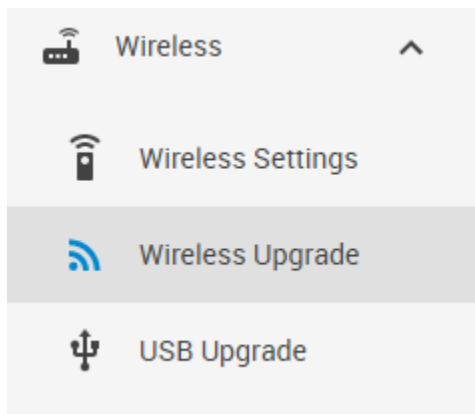
Wireless sensor firmware can be updated in 2 ways:

- Firmware Update Over The Air (FUOTA – slower but upgrades multiple sensors)
- Firmware update with direct USB connection to WTG unit (faster but upgrades only 1 sensor)

Below we'll describe the steps, but the WebUI might look different on your unit.

In both update modes, the unit will update only the sensors of the same type (based on the firmware binary file), therefore you'll need to re-run the update for different sensor types.

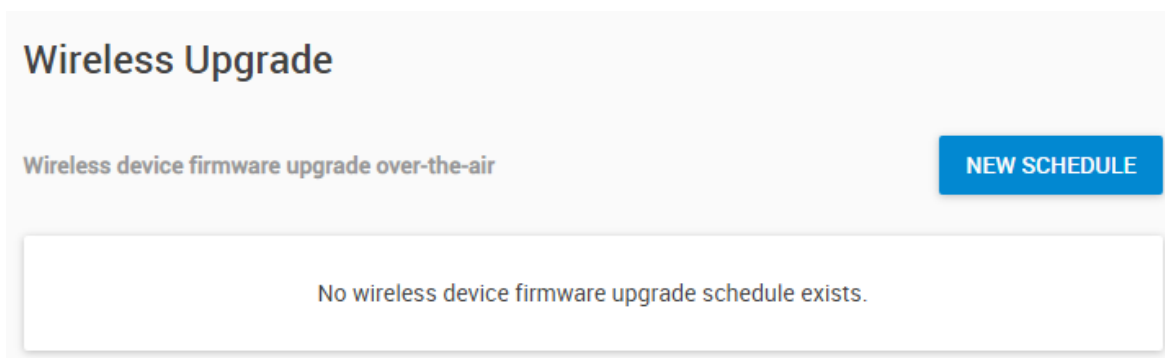
FUOTA update



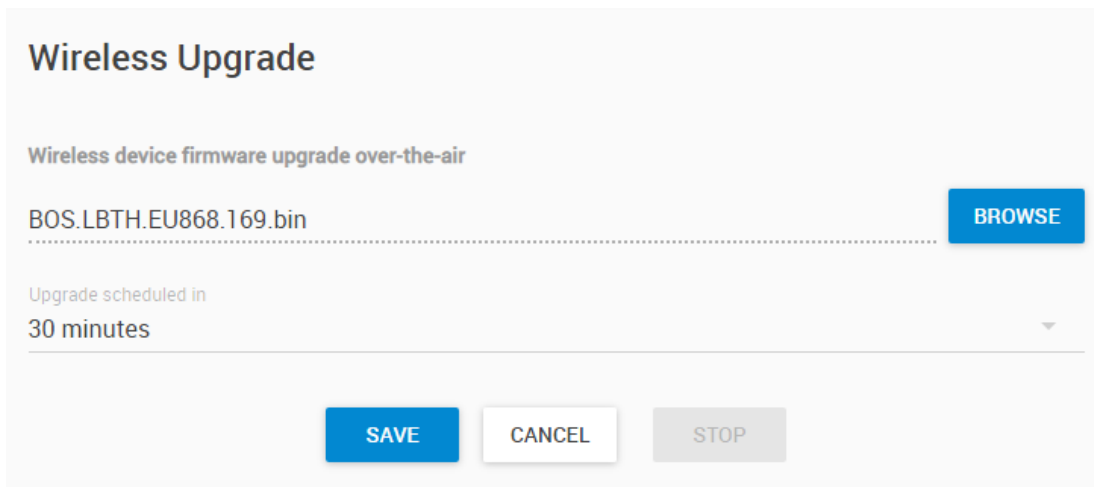
This is a method of updating the wireless sensor firmware over the air, with radio packets only. It takes a long time due to the packet send, receive and verify mechanism.

Open the **Settings** menu, and expand the **Wireless** menu.

Click on the **Wireless Upgrade** option.



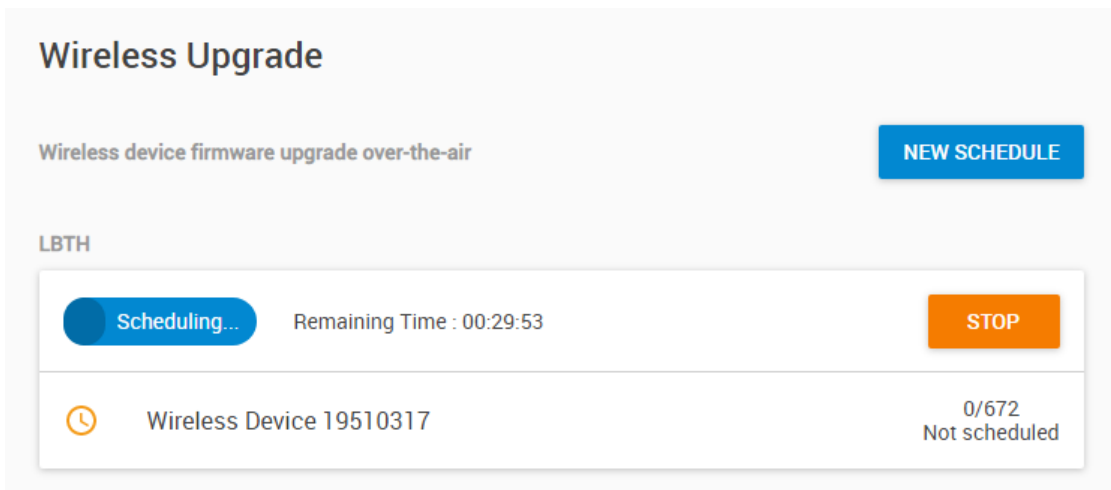
Create a new upgrade schedule by clicking **New Schedule**.



Create a schedule for the upgrade (between 30 minutes and 1 day). This has been done to improve the efficiency of the upgrade, and let each sensor have time to prepare for the upgrade.

First, you'll need to select your firmware binary file. It will define which sensor types it can update. It needs to be uploaded to the unit first with the **Browse** button. Then press the **Save** button to start this schedule.

Note: only 1 type of sensor can be upgraded at a time, and only 1 schedule can exist! This means that for example you would need to re-run the upgrade for LBTH and then the LBTB sensors.



If you have multiple sensors of the same type, they will all get upgraded.

Orange icon: the sensor didn't yet receive an upgrade request. The upgrade will fail if it doesn't change to green icon.

Green icon: the sensor received an upgrade request, and is waiting for the firmware upload from the unit.

Red icon: failure occurred

Wireless Device Firmware
Probe Manager / Wireless Device Firmware

Wireless device firmware upgrade over-the-air

BOS.LBTD.EU868.81.bin BROWSE

Upgrading... Cycle #1 (14/672 Blocks)

lbt

⚠ LBTD ED#01 CZ () 0/672

UPGRADE STOP

First cycle: the unit sends the update packets, and asks the wireless sensors if they received all correctly.

Note: the wireless sensor will stop transmitting packets and enter pause mode during the upgrade (if it doesn't receive further packets it will return to normal mode after a few minutes).

The sensors which have received most (or all) update packets will update their packet counter.

Those which didn't respond will remain in orange warning state (no answer) and they won't be updated.

Wireless Device Firmware
Probe Manager / Wireless Device Firmware

Wireless device firmware upgrade over-the-air

BOS.LBTD.EU868.81.bin BROWSE

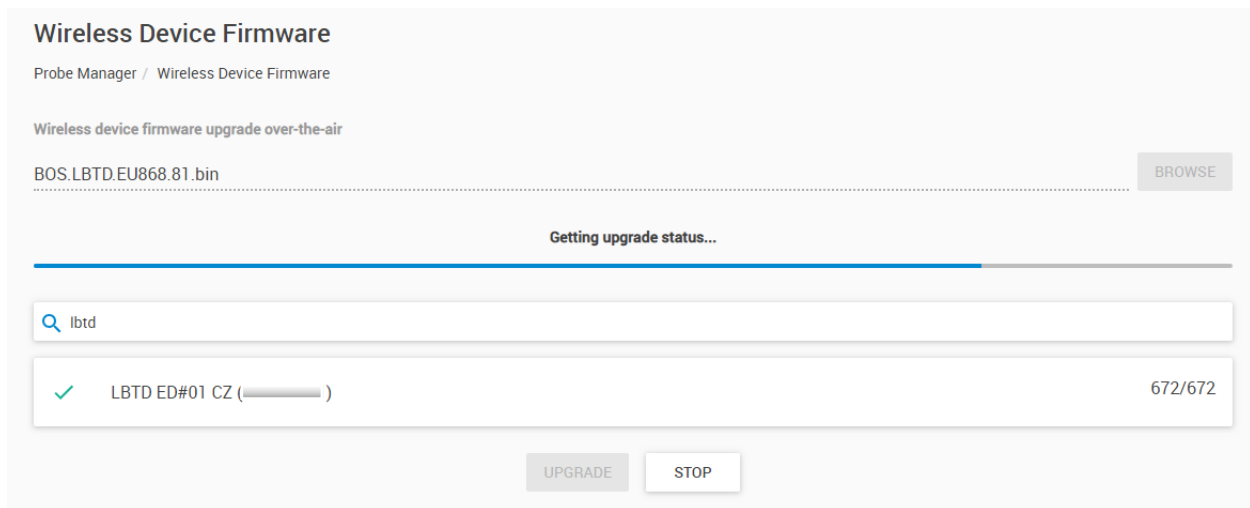
Upgrading... Cycle #2 (236/672 Blocks)

lbt

● LBTD ED#01 CZ () 669/672

UPGRADE STOP

Second cycle: the unit asks the sensors for the missing packets and it will resend them, until no wireless sensor asks for further packets.



Third cycle: the unit will wait until it doesn't receive any packet queries from the wireless sensors, then display "upgrade successful" on the WebUI.

In this case the "upgrade successful" message means that the firmware was sent to the air and each wireless sensor has responded that they got the new firmware successfully. After this step, the wireless sensors will begin the upgrade by themselves.

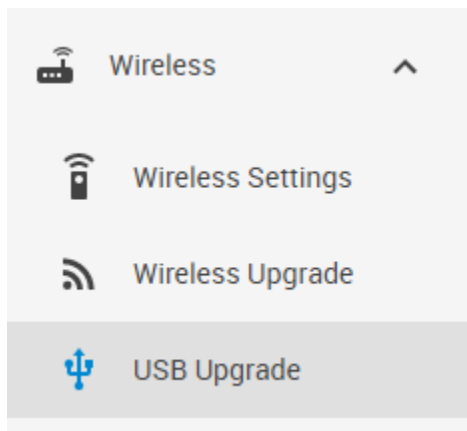
Note: the graphing will still run on the sensors while in upgrade mode, the sensor will store graph data inside of its flash and send to the WTG later.

After the wireless sensor has finished the upgrade, it will return to normal running mode by itself, and start to send data packets again.

Usually the upgrade has finished when the wireless sensor reports its new firmware version number.

In case the upgrade fails for some reason, you can recover the sensor by flashing the firmware with the USB method (see below).

USB upgrade



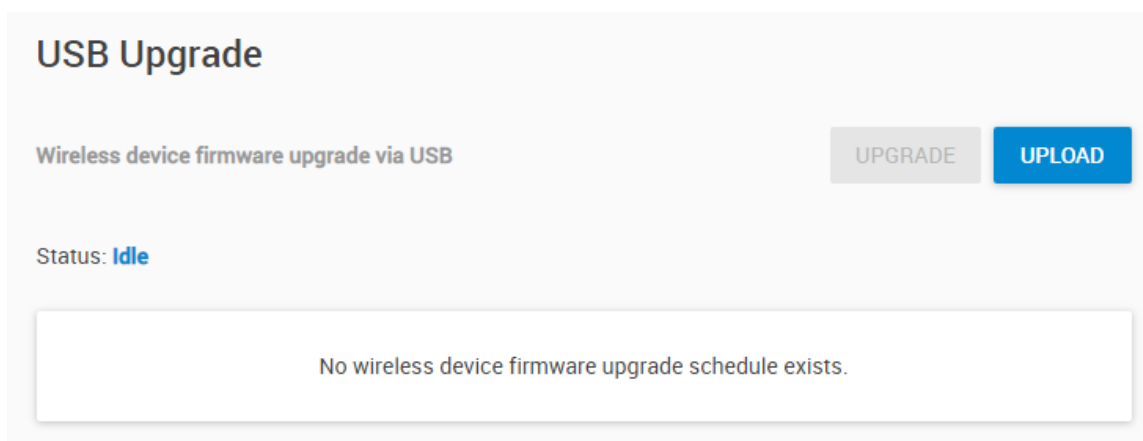
Using the **USB Upgrade** option, you can upgrade the wireless sensor's firmware in a conventional way.

Only 1 sensor at a time can be upgraded this way.

Important: the sensor needs to be directly connected to the WTG unit's USB port via a USB data cable. If the cable doesn't provide USB data signaling, the upgrade will fail.

The system might display an unknown error code if you attempt the upgrade without connecting the sensor via USB data cable.

Note: with this method you can recover sensors that had earlier failed the upgrade, even if they're in "unreachable" state - but their network parameters have to be correct, and the sensor should not be removed from the unit's sensors list.



First you need to select the firmware binary file with the **Upload** button.

Wireless device firmware upgrade via USB

UPGRADE

UPLOAD

After the file has been uploaded, you can start the update with the flashing **Upgrade** button.

USB Upgrade

Wireless device firmware upgrade via USB

Status: **Idle**

LBTH

Go to bootloader

STOP

No Items

The upgrade will proceed automatically.

It is similar to the wireless upgrade process, but finish much faster and the schedule is immediate.

First the firmware is uploaded to the sensor and then applied. The sensor will return to normal running mode after the upgrade.

Please contact support@akcp.com if you have any further technical questions or problems.

Thanks for Choosing AKCP!