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Lansitec Badge OTA for Windows 10

User Guide

Ver 1.0.3

Date	Version	Description
September 2020	1.0.1	First release
October 2020	1.0.2	Add a description for automatic DFU

1. General Introduction

Lansitec Badge OTA is a desktop application for unattended Over-The-Air upgrade of Lansitec Badges. Once the IT manager has laid out the application, Lansitec Badge users can upgrade the badge firmware near the desktop, by themselves, without the need for the IT manager to be on duty and avoid human contact.

2. Environment Requirements

- Microsoft Windows 10
- nRF52840 USB Dongle

3. Installation

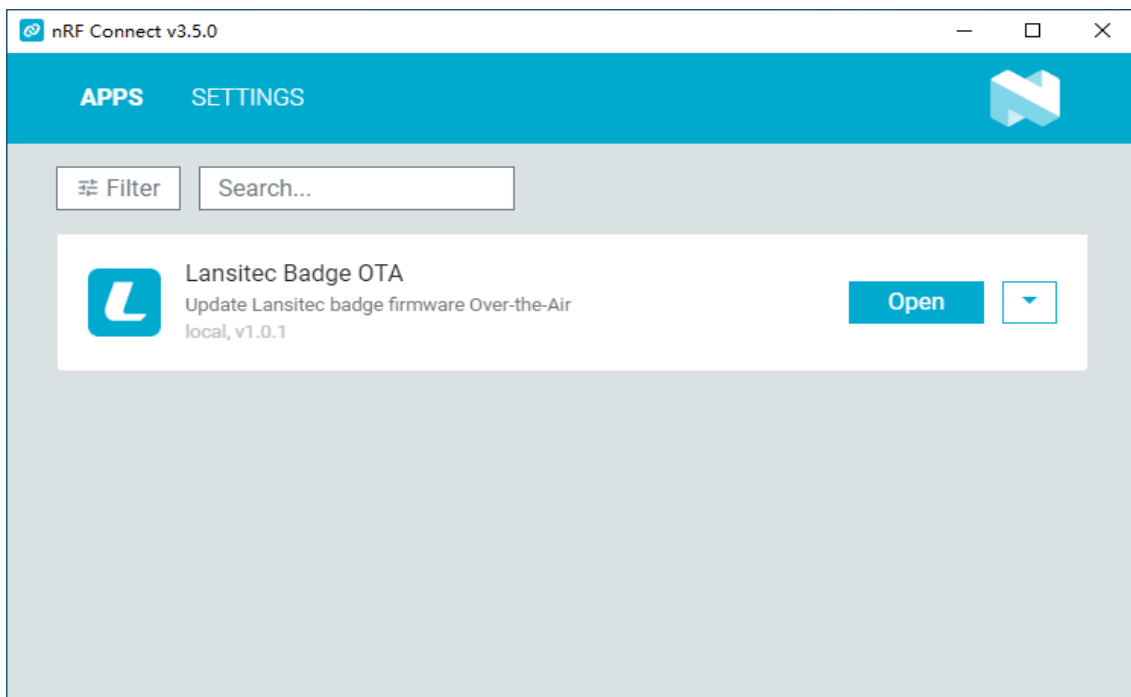
- 1) Download and install nRF Connect for Desktop3.5.0.

URL: <https://www.nordicsemi.com/Software-and-Tools/Development-Tools/nRF-Connect-for-desktop>

- 2) Copy the *lansitec-badge-ota-1.0.1.tgz* file to %USERPROFILE%\nrfconnect-apps\local directory.

Note: If the directory *lansitec-badge-ota* already exists in the path %USERPROFILE%\nrfconnect-apps\local, you need to delete the previous one first.

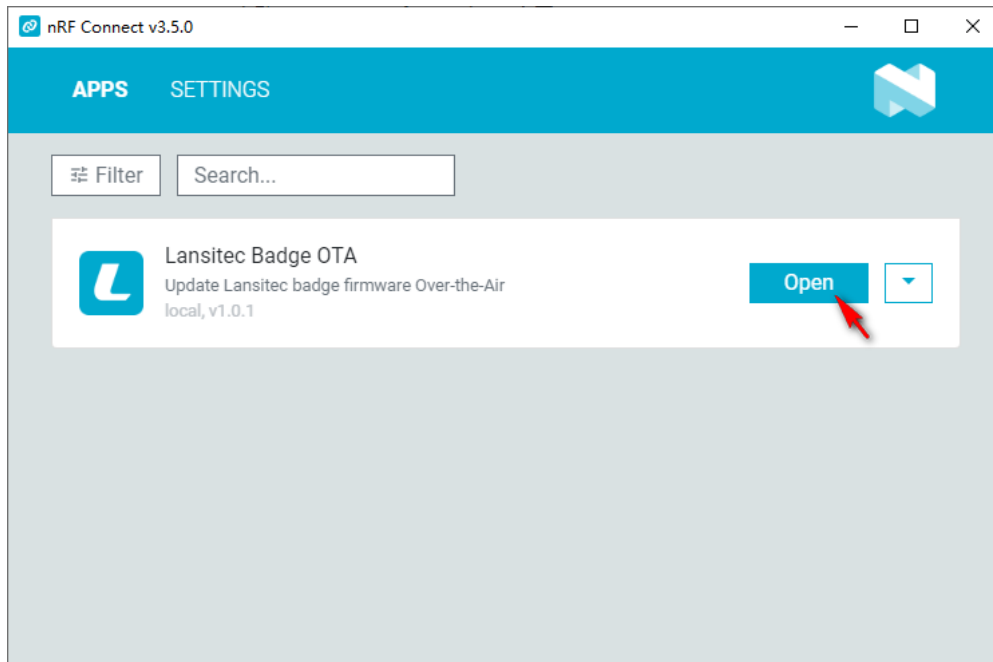
- 3) Then launch the nRF Connect for Desktop. You will see the following interface indicating a successful installation.



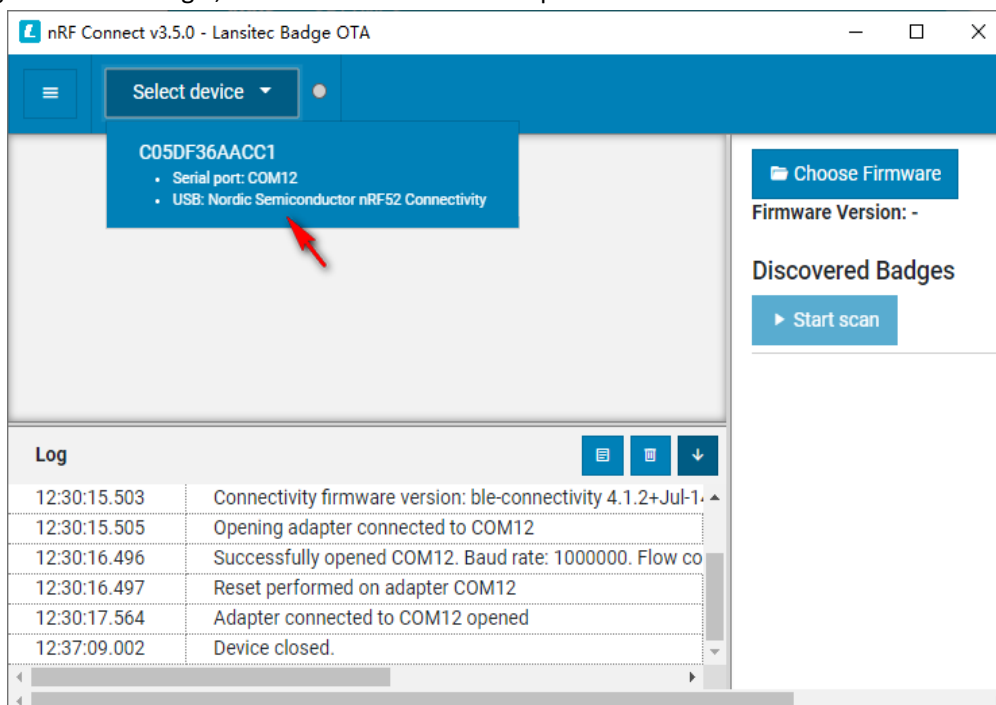
4. Instructions for IT Managers

4.1 Enter the working state

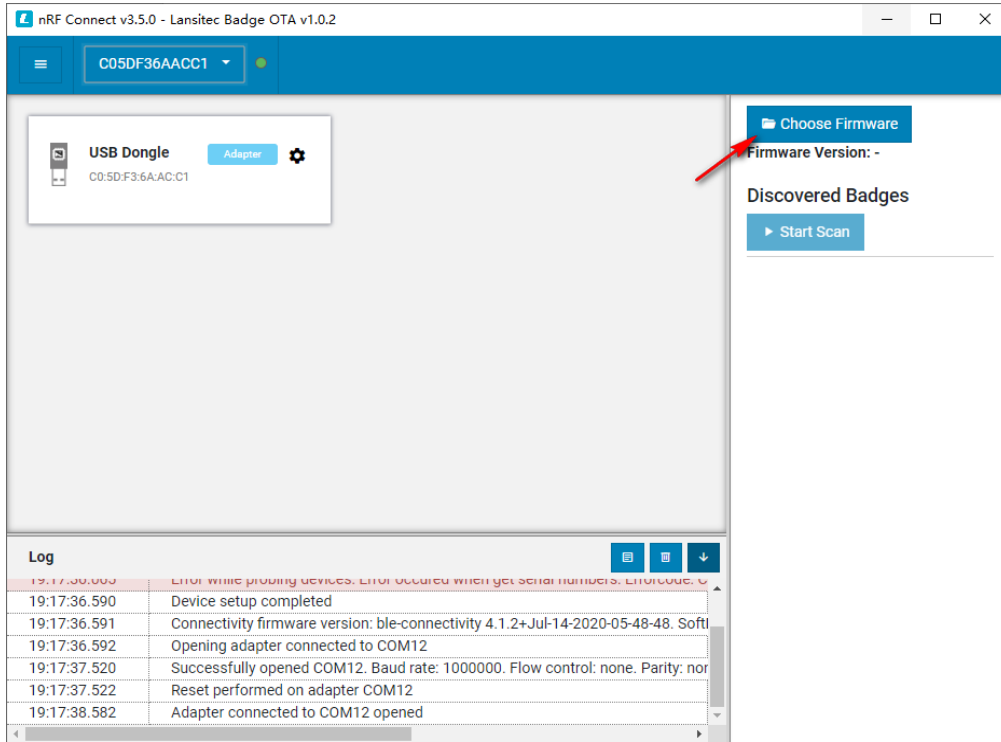
- 1) Launch the nRF Connect for Desktop application
- 2) Click Open button to launch the Lansitec Badge IoT APP




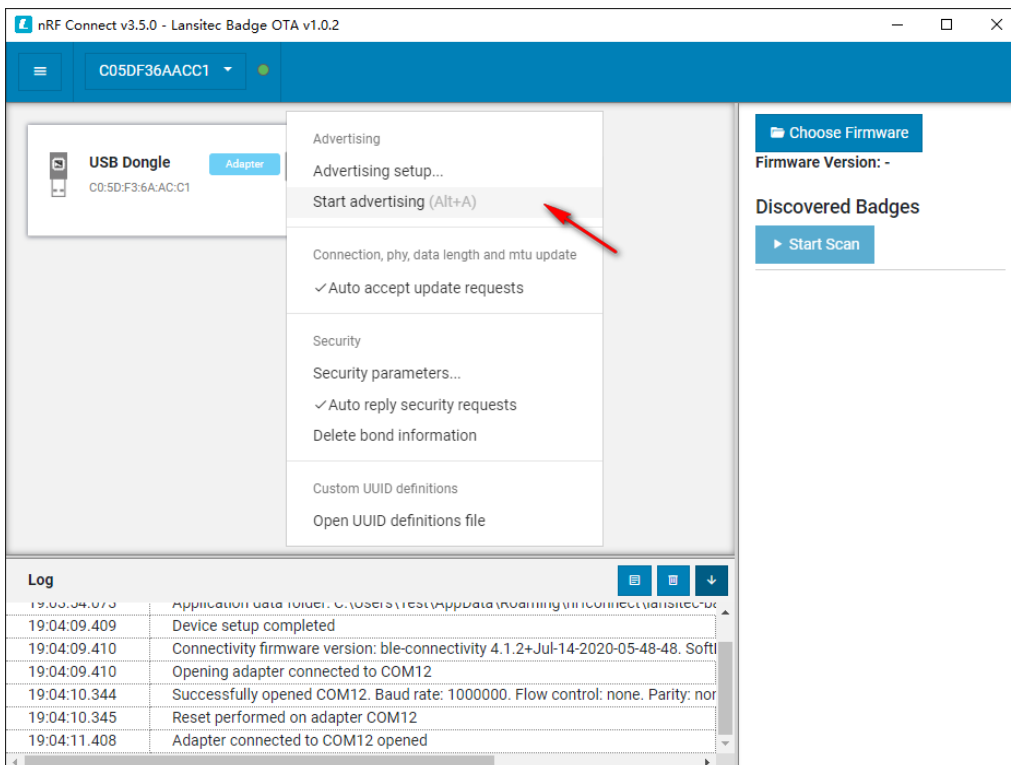
- 3) Plug in the USB Dongle, then click **Select device** drop-down button and select



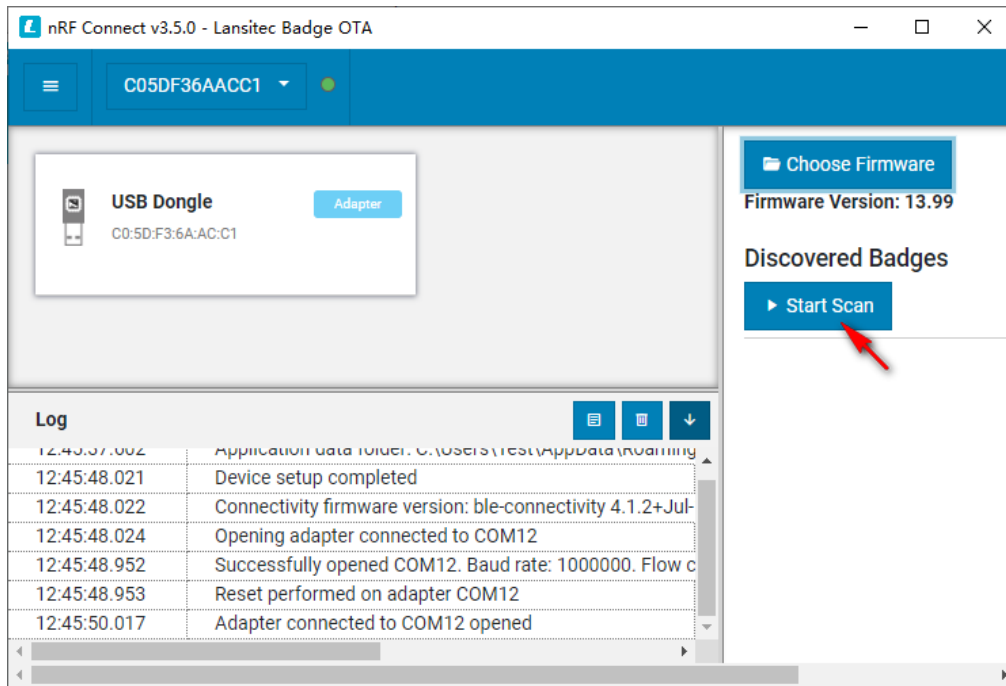
- 4) Click **Choose Firmware** button to open a file dialog and select the *.zip firmware file to be upgraded to



- 5) Click  and Click Start advertising

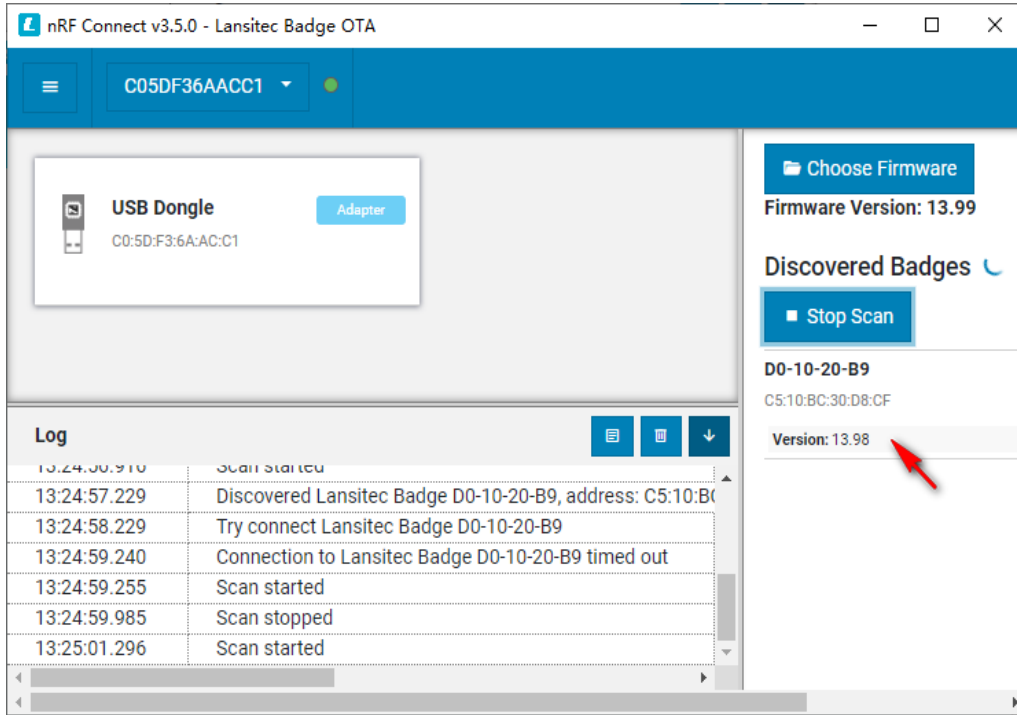


- 6) Click Start Scan button, then the deployment is completed



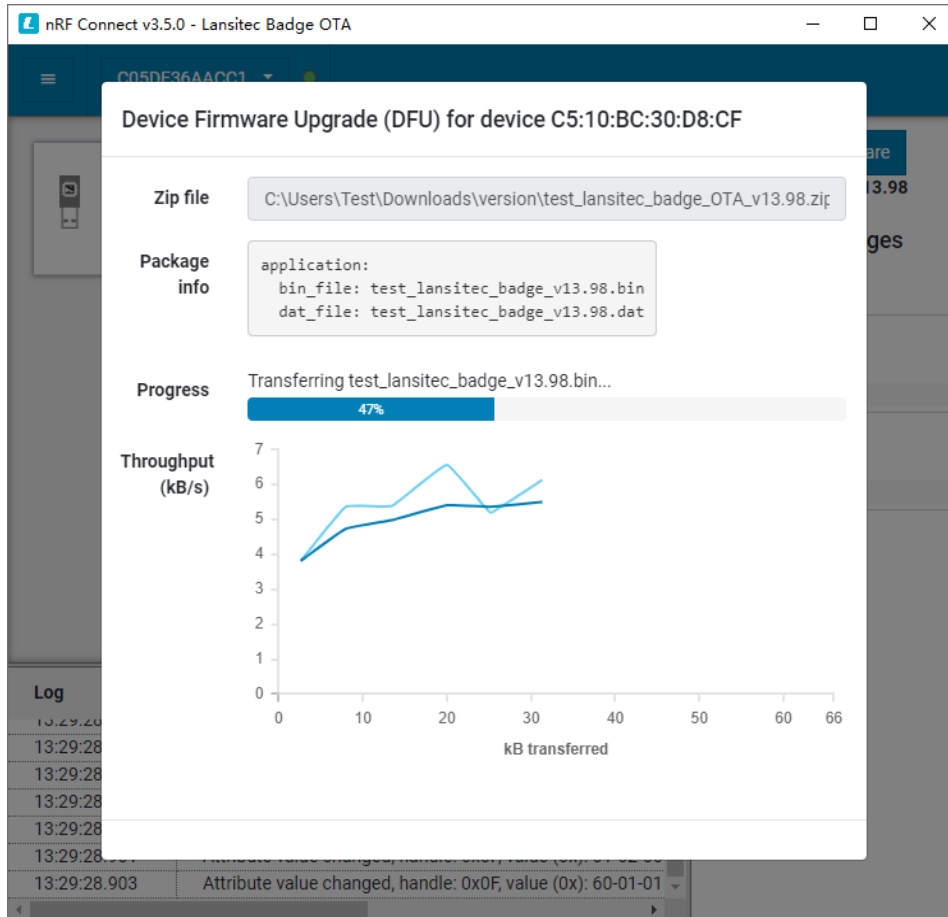
4.2 The upgrading process

After start scanning, badges that are discovered in need to be upgraded will be shown in the side-bar list.



If a badge which is powered on within 3 minutes, and the firmware version does not match, a dialog with a progress bar will be shown.

In firmware 13.26 and higher, “DFU mode switch” is supported. If the switch is enabled and the badge is less 5 meters to the dongle, it can be upgraded automatically.



Generally, the upgrading process will be completed in about 20s. After completion of the upgrade, the dialog box will automatically close and re-enter the scanning state.

4.3 Exit the working state

When there is no ongoing upgrade process, simply exit the application.

4.4 Other instructions

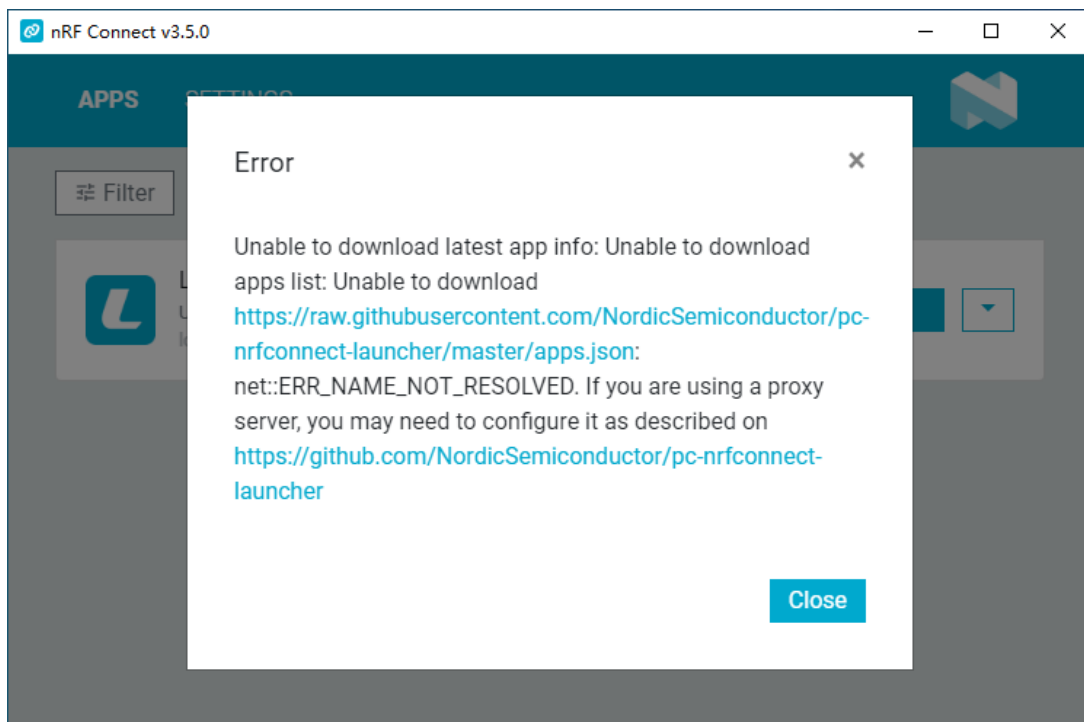
1. The operating range of the USB dongle is about 5 meters.
2. In firmware 13.26 and higher, the badge can be upgraded automatically when “DFU mode switch” is enabled. It also can be upgraded Over-The-Air, within 3 minutes after the reboot.
3. Only one badge can be upgraded at a time. Simultaneous upgrading of multiple badges is not supported.
4. If the badge leaves the operating range or there is a blockage in between while upgrading, the transmission rate will be slow. If the upgrade is not completed in 60 seconds, the upgrade process will timeout and exit. At this point, the APP returns to the scanning state and tries to find the next

badge to be upgraded. The badge will reboot after 3 minutes due to the failed upgrade and will run with the original firmware.

5. It is recommended to upgrade badges one by one to avoid human contact and to avoid the situation where the user cannot confirm whether his or her badge is being upgraded.

4.5 Troubleshooting

- 1) Detailed log files are recorded in `%USERPROFILE%\AppData\Roaming\nrfconnect\lansitec-badge-ota\logs` directory.
- 2) If the following error dialog pops up, just click the **Close** button to ignore.



- 3) It will take longer time for the badges (in normal DFU mode, within the 3 minutes duration after powered on) to enter the upgrading state, in the following situation:
More than 30 badges come near the USB Dongle with mismatching firmware version, and those 30 badges are not in DFU mode after powered on for 3 minutes.

The reason is that the software needs to constantly polling every badge, to determine whether it is in DFU mode to be ready for upgrading.

Suggestion: When there are many badges waiting to be upgraded, they should firstly be powered off and then powered on one by one to initiate upgrading. Or DFU mode switch should be turned on.

5. Instructions for Badge Users

- 1) Be within the 5-meter-range of the laptop or the desktop that is used for upgrading.
- 2) Power on your badge, wait for the progress bar to appear.

Note: The badge is in DFU mode for 3 minutes after being powered on, and can be upgraded Ove-The-Air within the 3 minutes duration. Badges that are not in DFU mode cannot be upgraded Over-The-Air. Or if “DFU mode switch” is enabled, the badge can be upgraded at any time.

- 3) Please do not walk away. Wait for the progress bar to complete.

Note: Leaving in the middle of the upgrading will cause the process to fail, and the badge will reboot after 3 minutes and run with the previous firmware version.

- 4) Your badge will reboot and run when the new firmware is loaded.