

OTA firmware update

For provisioned devices (already in a Bluetooth mesh network)

Application note

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SILVAIR

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1. Introduction

Over-the-air update (OTAU) with the Silvair mobile app allows you to update the Silvair firmware or external (non-Silvair) firmware on your lighting devices. The update of the Silvair firmware is done automatically and the new version of firmware is sent from the cloud to the devices. To update external firmware, a zip file with the firmware must be manually uploaded to your iOS mobile device.

The main features of the OTAU in the Silvair mobile app are:

- ability to update the firmware of devices that have been added to the mesh network (provisioned),
- ability to update up to four devices at the same time,
- ability to update devices from one or more zones.

 After the update, the firmware cannot be downgraded to the previous version.

 To update the firmware of devices which have not been added to the mesh network or have been removed from the network (unprovisioned), use the Silvair DFU app. For more information, see [SF-120 OTA firmware update for unprovisioned devices](#).

2. Requirements


To update firmware, the following are necessary:

- an account in the Silvair web app (with “Installer”, “Manager”, or “Owner” role),
- an iOS mobile device with Bluetooth enabled,
- the Silvair mobile app,
- access to a project with devices to update,
- for external (non-Silvair) firmware update, a zip file with a new firmware version.


3. Updating the firmware

 We recommend that only one person does the update in a zone at a time.


1. If you want to update external (non-Silvair) firmware, continue as follows.
 - a. Upload the zip file with the external firmware to your iOS mobile device.
 - b. On your mobile device, open **Files**, and tap and hold the firmware file.
 - c. From the context menu, tap **Share** and then tap the **Silvair** mobile app icon.
2. Log in to the Silvair mobile app.
3. Select the project where you want to update devices.
4. In the **Area** field, tap **⋮ > Update devices**.
5. On the **Devices** tab, select the firmware version you want to update.


 You can select both the Silvair firmware and the external firmware. Firmware that is up to date cannot be selected.

6. If you have selected an external firmware, expand the **External firmware file** list and select the file.


 In the **Files** tab, you can remove the files with external firmware from your mobile device.


7. Tap **Next**.
8. Select one or more zones where you want to update devices, and tap **Next**.
9. Select devices to be updated.


 Make sure that the selected devices are close enough to your mobile device so that the Silvair mobile app can connect to them to do the update.

 Before the update make sure that the devices are powered on and keep them on during the update. If the device is powered off during the update, it may become unusable. Keep your mobile device close to the devices (no more than 30 meters away).

10. Tap **Update (XX) devices**.















 During the update the device may flash and its light level may be different from the normal level. This is expected behavior and may continue until the end of the update.

 If an error appears, tap **Retry all**. If the error persists, see [Troubleshooting](#).

 After the update is complete, a confirmation message appears.

11. To enable new firmware features in the project, continue as follows.
 - a. If the new features require a new project version, update the project.
 - i. In the [Silvair web app](#), go to your projects.
 - ii. In the project field, click **⋮ > Update > Update now**.
 - b. In the Silvair mobile app, remove all devices from all zones in the project.
 - c. Make sure that there are no devices remaining in the project.
 - d. Add devices to the zones again.

4. Troubleshooting

Error	Description
 <p>Device A3F0 OUT OF RANGE</p> 	<p>Your mobile device is too far away from the device to be updated.</p> <p>Move closer to the device and try to update again.</p>
 <p>Device A3F0 DEVICE ALREADY IN USE</p> 	<p>The device to be updated is being used by a different user (testing, updating, configuring).</p> <p>Close the app on other mobile devices using the same project or try to update again later.</p>
 <p>Device A3F0 MESH CONNECTION ERROR</p> 	<p>There is a problem with the connection to the mesh network.</p> <p>For networks with Silvair firmware 2.17 and earlier, there may be no proxy device in the mesh network. In this case, set a device in the zone to act as a static proxy and try to update again.</p> <p>For Silvair firmware later than 2.17, move closer to the device and try to update again.</p>
 <p>Device A3F0 INVALID FIRMWARE FILE</p> 	<p>The firmware file is invalid. It may be corrupted, in the wrong format, signed with an encryption key from a different device, or rejected by the current MCU firmware (for external firmware update).</p> <p>Upload the firmware file to your mobile device again or contact your external firmware provider.</p>
 <p>Device A3F0 UPDATE ERROR</p> 	<p>The update was interrupted by a different user, a connection error has occurred, or the device has failed.</p> <p>Try to update again and, if necessary, contact your device manufacturer for assistance.</p>
 <p>Device A3F0 FIRMWARE DOWNLOAD FAILED</p> 	<p>There was a problem with downloading the firmware zip file.</p> <p>Check your internet connection and try to update again.</p>
 <p>Device A3F0 0x04 - Invalid object</p> 	<p>A technical error occurred.</p> <p>Write down the error code and contact our support at support@silvair.com.</p>

5. Document revisions

Revision	Date	Editor	Changes
8.0	30 November 2022	GM	Redrafted the document. Added that up to four devices can be updated at the same time. Implemented Template v. 1.2.
7.1	7 October 2021	ZZ	Updated the document subtitle to <i>For provisioned devices (already in a Bluetooth mesh network)</i> , rearranged the document structure, made general document refresh, and added the Document revisions section.

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