

Trulifi 6002

Trulifi for office

Trulifi 6002 Controller Unit – Quick Start Guide

1 Introduction

The Trulifi 6002 platform uses a Controller to manage the LiFi in your office environment.

Signify makes the LiFi Controller available both as a Controller Unit or as a Controller Application software for Linux. This document only describes the Controller Unit.

This document is intended for IT professionals responsible for installation and management of enterprise IT systems.

2 Hardware installation

The mechanical and electrical installation of the Controller Unit is described in the Quick Start guide provided by MSI, please refer to this document.

The LAN wiring of the Controller Unit is described in the Installation Instructions included with the Trulifi 6002.2 Access Point.

Once you have completed the mechanical, electrical and LAN installation steps, please proceed with this manual. In

the remainder of this document we describe the configuration of the controller.

3 Using the controller GUI

A browser-based GUI is built into the Trulifi Controller.

It allows up to five users to simultaneously browse through the controller management pages to configure parameters and to monitor the operational status of the controller and its associated access points.

The controller GUI is supported by the following web browsers:

- Microsoft Edge Version 44.x or higher (Windows)
- Mozilla Firefox, Version 73 or higher (Windows, Mac)
- Google Chrome, Version 80.x or higher (Windows, Mac)
- Apple Safari, Version 13 or higher (Mac)

Note: Please ensure that your screen resolution is set to 1280x800 or more. Lower resolutions are not supported.

4 Configuring the controller

This section describes the required steps at first-time setup of the Controller Unit.

Step 1 Controller (GUI) access

Connect your PC to the ethernet port and browse to <http://trulifi-controller.local>. The following login page appears:



The default password is **admin**.

Step 2: LAN settings

The controller can obtain an IP address from a DHCP server or you can assign a static IP address. To select your preferred IP address method:

- Choose **Network > LAN Settings** to open the LAN Settings page.
- Depending on your network configuration select Dynamic or Static.
- In case of a dynamic IP address, all fields are filled-in automatically by the DHCP server and cannot be changed. Click the **Dynamic** button to validate your choice.
- In case of a static IP address, after having selected the **Static** button you are requested to provide the **IP Address, Subnet Mask, Gateway, DNS Server, Alternative DNS Server** information and then confirm your selection by clicking the **Save** button. Your selection is not confirmed as long as all fields are not correctly filled in.

By default, the Controller will use dynamic IP address.

Step 3: Trulifi Encryption password

To create a secure connection between a LiFi access point and a USB key, the LiFi link is encrypted using a password. This LiFi encryption password must be configured in each access point and each USB key in the LiFi domain.

To facilitate this task, the controller can populate the new password in each access point in your LiFi domain. This automatic password change can only be performed on access points that are associated to your LiFi domain (the

status page lists the associated access points). In case an access point is not connected or associated at that moment, the access point will be blocked i.e. no LiFi communication will be possible by this access point after reconnecting it. To unblock this access point, you need to resynchronize the passwords between the controller and this access point. Go to the web interface of the access point and change the LiFi encryption password manually (see “trulifi 6002.1 USB key - User Manual”).

The controller cannot change the passwords of the USB keys. The passwords of the USB keys have to be configured manually (see “trulifi 6002.1 USB key - User Manual”).

To change the LiFi encryption password from the controller:

- Choose **Network > Security** to open the security page.
- Enter the **previous password**, the **new password** and **confirm** the password. Passwords are case-sensitive and can contain from 7 to 32 ASCII characters. Password can contain spaces and special characters.
- Click **Change Password**.

The default password for every access point, USB key and controller is **trulifi**.

Step 4: Login password

The Controller UI is protected by a password that can be changed:

- Choose **System > Administration** to open the administration page.
- Enter the **previous password**, the **new password** and **confirm** the password. Passwords are case-sensitive and can contain from 7 to 32 ASCII characters. Password can contain spaces and special characters.
- Click **Change Password**.

The default login password is **admin**.

Step 5: Date and time

The system time on your controller is based on the Universal Time Clock. The UTC is automatically set up from an internet time server. Two server URL addresses can be selected. The time zone can be manually adjusted to reflect your current region. To change the time setting:

- Choose **System > Date & Time** to open the date page.
- From the **Timezone** drop-down list, choose the Country/City.
- In the **Time-Server** text box, enter an internet time server.
- In the **Alternative Time-Server** text box, enter a second internet time server
- Click **Save** to confirm the change

The controller is provided with two default Time server URL addresses.

Step 6: Logout

To logout from the controller:

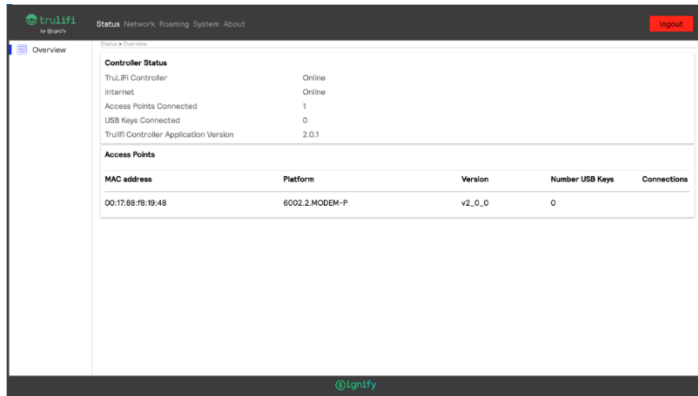
- Click Logout in the top right corner of the page to complete the log out process and prevent unauthorized users from accessing the controller GUI.

Note: automatic logout after 15 min of user inactivity with redirection to the login page.

5 Advanced configuration

5.1 Controller status

The controller status page provides information about the controller and the LiFi domain.



Controller status information

The controller

The Controller text field can be:

- Detecting: Network internet connection detection is ongoing.
- Offline: Something went wrong during the start-up of the controller. An additional pop-up message on the bottom side screen will give the user further information (e.g.: no network detected, ...).
- Online: Everything is up and running.

The Internet text field can be:

- Detecting: Network internet connection detection is ongoing.
- Offline: Controller is not connected to a network backbone.
- Online: Network backbone connection found.

LiFi domain devices information

The controller manages one or more LiFi domains. Domains consists of one access point and one or more USB keys. All domains must be protected with the same LiFi encryption

password. This password must be the same for every access point and USB key in the domain. Any access point or USB key that does not have the same LiFi encryption password will be rejected from the domain.

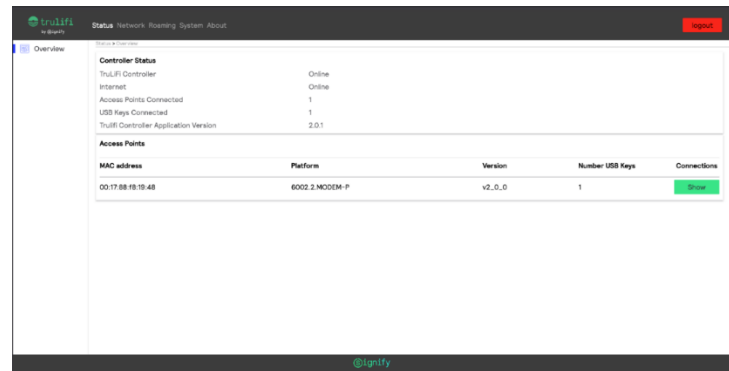
- Access Points without the correct password will not be authorized to communicate with a USB key, even with USB keys configured with the same password as the controller
- USB keys without the correct password will not be able to connect to any access points, even with access points configured with the same password as the controller

The following text fields indicate the number of devices associated to the domain:

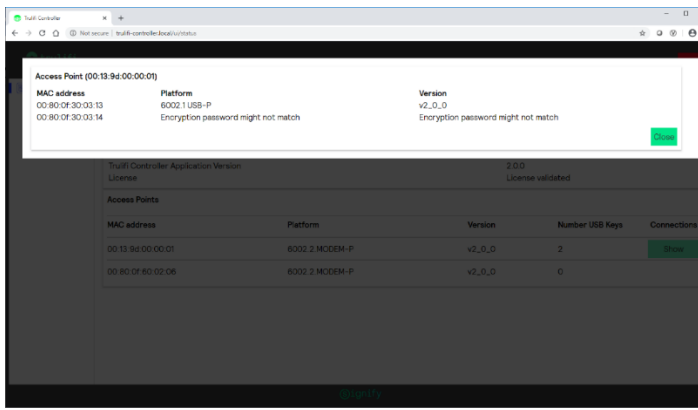
- **Access Points Connected** text field indicates the number of access points connected and associated to the controller.
- **USB Keys Connected** text field indicates the number of USB keys connected to the domain.

Further details per access point can be found in the Access Points table at the bottom of status page:

- Access point MAC address
- Access point platform revision
- Firmware version of the Access point
- Number of USB keys associated with the access point



If at least one USB key is attached to the access point, a green button **show** can be clicked to open an extra window giving further details for every USB key associated with it:



For every USB key, you can find:

- USB key MAC address
- USB key platform revision
- Firmware version of the USB key

Note: every USB key that is not configured with the correct LiFi encryption password is detected and reported as:

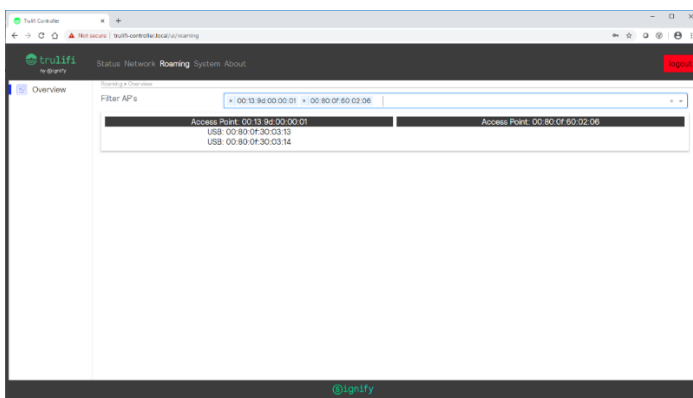
Encryption password might not match.

The access point table is not refreshed automatically. Please click the refresh button of your web browser to update the information. Use the Roaming overview page to track the devices in the LiFi domain in real-time.

5.2 Roaming overview

The roaming page gives an overview of the LiFi domain devices in real-time. The roaming screen shows the access points and USB keys currently associated with the LiFi domain.

A filter can be used to select which access points you want to display. A drop-down list and two buttons can be used to configure this filter. The buttons **clear all** and **select all** allow to quickly select/unselect the full list. It is also possible to select the access points one by one by ticking the checkbox associated to each access point's MAC address.

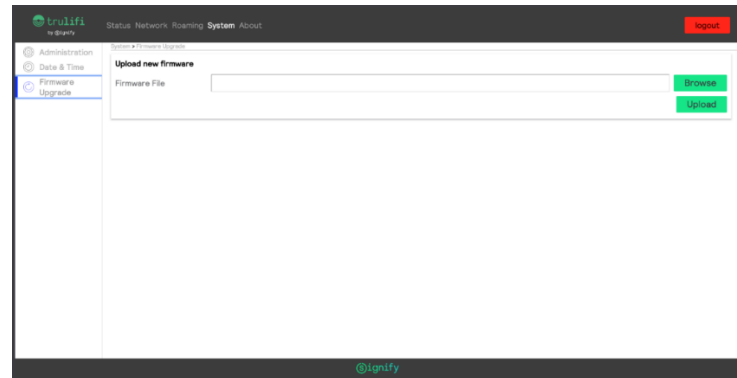


5.3 Firmware upgrades

The controller can upgrade the following Trulifi devices:

- Controller
- USB key
- Access Point

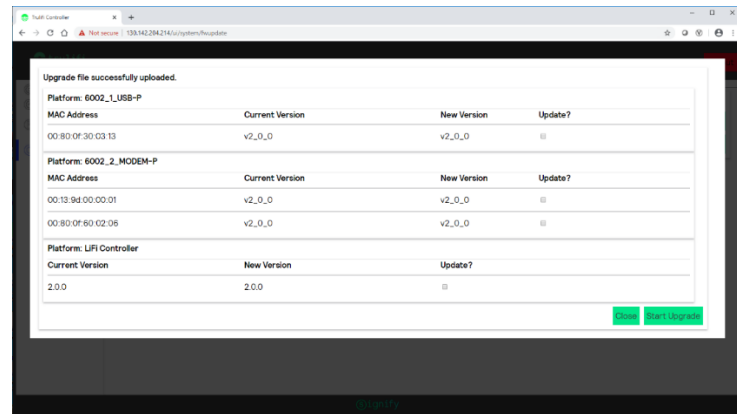
The firmware files for these 3 device types are provided in one single compressed file (.zip extension) that must be uploaded via the following web page:



To upgrade the TruLiFi devices:

- Choose **System > Firmware Upgrade** to open the firmware update page.
- Click the **Browse** button, a file section appears.
- In the File Name to Install text box, enter the path to the firmware (*.zip)
- Click **Upload** to launch the upload.

The upload process might take several seconds before a new window appears showing the versioning status for the TruLiFi devices.

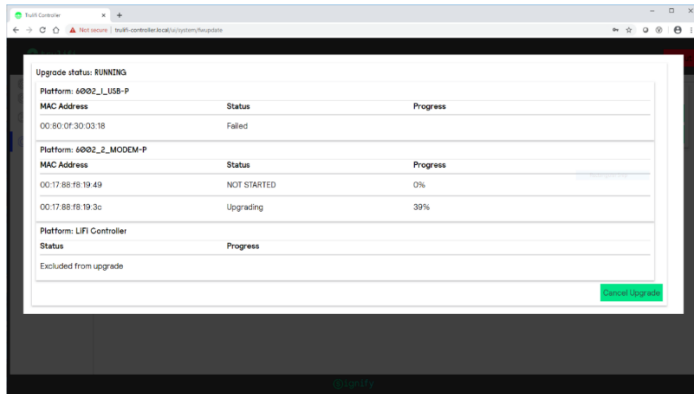


In this new window, the current and new version columns give a status of the current firmware/software version per TruLiFi device family:

- USB Key (6002_1_USB-P platform name)
- Access point (6002_2-MODEM-P platform name)
- LiFi controller

It is possible to select which device should be upgraded by ticking the corresponding checkbox in the update column and then click on the **start upgrade** button.

When the USB keys and access points are being updated, a percentage text gives information about the progress status.



The Status column provides information about the upgrading steps:

- NOT STARTED
- Upgrading: progress indicates in percentage in the Progress column
- Succeeded
- Failed

Note 1: the controller performs the upgrade sequentially device per device and always in the same order: USB key, access point, Controller. If any of this device families are empty, it is skipped.

Note 2: the USB key upgrade is performed over the air, which means that any interruption of the LiFi link during this process will result in a failure, which will be reported in the progress status column with a **failed** status. In case of an access point or USB key upgrade failure, you have first to finish the current upgrade session. Then restart the complete upgrade procedure but this time selecting only the previously failing devices.

When the controller is being upgraded, a progress bar in a new window is displayed. After 30 seconds, when the upgrade is correctly finished, the login page appears.



When the upgrade session has terminated, click on the bottom right **close** button.

5.4 About

The LiFi controller is built upon several Open Source Software packages. The complete list with the license details can be found into the about page.