

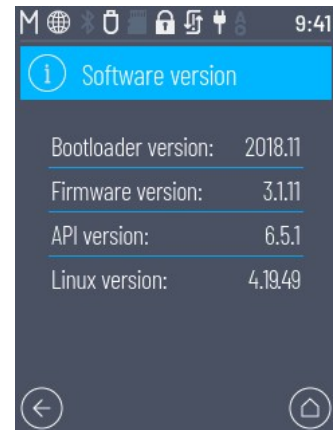
TXT 4.0 Controller: Firmware Upgrade 5.0.1

Overview

These instructions guide you step by step through the process of upgrading your TXT 4.0 controller from version 3.1.11 to 5.0.1.

Important: As you are switching between two major versions (3.1.x → 5.x.y), a firmware upgrade via micro SD card is required. A standard update (.raucb file) is not sufficient in this case.

You can find the current version of the TXT 4.0 controller on the controller itself in the menu: **Info -> Software Version.**



Prerequisites

Firmware base	Version 3.1.11 must already be installed (see the guide "Firmware Update TXT 4.0 Controller 3.1.11", download: https://www.fischertechnik.de/txt40controller)
Micro SD card	At least 4 GB ⚠ The card will be completely formatted – all data will be lost!
Hardware	Short cable to bridge input C4 to GND
Image file	.img.xz file (e.g. 20260818-mptool-5.0.1.upgrade.img.xz , download: https://www.fischertechnik.de/txt40controller)

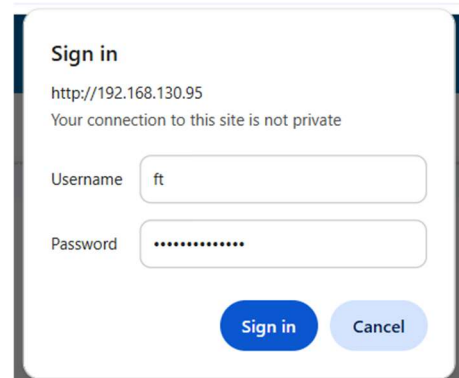
Step 1: Connect the TXT 4.0 controller

- Connect the TXT 4.0 controller to the computer:
 - via Wi-Fi (via an internet router), or
 - via a USB cable connected to 'USB2'

Step 2: Open the web interface

- Open your web browser.
- Enter the controller's IP address:
 - For Wi-Fi: e.g. 192.168.130.95 (example)
 - For USB: **192.168.7.2**
- Log in:

Field	Default entry
Username	ft
Password	fischertechnik



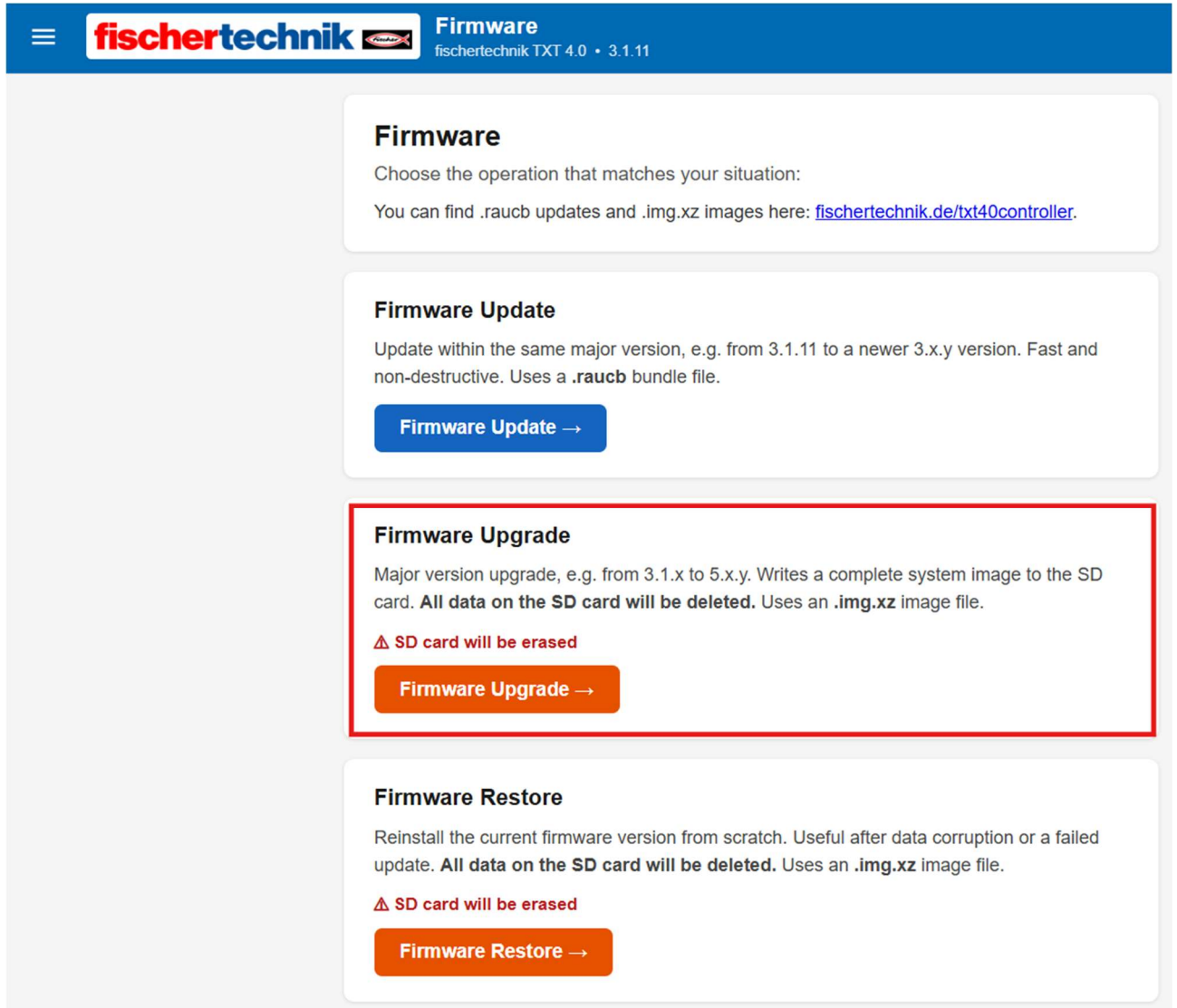
> **Recommendation:** After updating, change the default password under **Settings** → **User password**.

- Open the **Firmware** page via the menu (☰).



Step 3: Select firmware upgrade

- On the Firmware page, three options are available for firmware version 3.1.11. Select **Firmware Upgrade**:

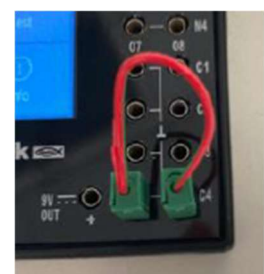


The screenshot shows the 'Firmware' page of the Fischertechnik website. The page has a blue header with the Fischertechnik logo and the text 'Firmware fischertechnik TXT 4.0 • 3.1.11'. Below the header, there are four sections:

- Firmware**: Choose the operation that matches your situation: You can find .raucb updates and .img.xz images here: fischertechnik.de/txt40controller.
- Firmware Update**: Update within the same major version, e.g. from 3.1.11 to a newer 3.x.y version. Fast and non-destructive. Uses a .raucb bundle file. A blue button labeled 'Firmware Update →' is present.
- Firmware Upgrade**: Major version upgrade, e.g. from 3.1.x to 5.x.y. Writes a complete system image to the SD card. **All data on the SD card will be deleted.** Uses an .img.xz image file. A warning icon and text 'SD card will be erased' are shown. An orange button labeled 'Firmware Upgrade →' is present. This section is highlighted with a red border.
- Firmware Restore**: Reinstall the current firmware version from scratch. Useful after data corruption or a failed update. **All data on the SD card will be deleted.** Uses an .img.xz image file. A warning icon and text 'SD card will be erased' are shown. An orange button labeled 'Firmware Restore →' is present.

Step 4: Prepare the hardware

- Insert a **micro SD card** (at least 4 GB) into the controller.
- Connect pin **C4 to GND**.
- Reload the page if the message '*C4 Jumper Required*' or '*No SD Card Detected*' appears.





C4 Jumper Required

Connector C4 is not bridged yet. Please connect C4 with a short cable or jumper before writing the image.

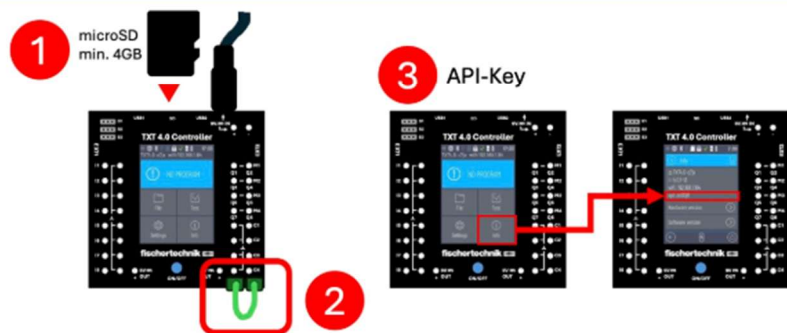
No SD Card Detected

No micro SD card found. Please insert a micro SD card (minimum 4 GB) and reload the page.

Preparation

Use case: Image Restore is intended for full system restore or major upgrades, e.g. from 3.1.x to 5.x.y. For regular updates within one major version, use [Firmware Update](#). Download .raucb updates and .img.xz images at fischertechnik.de/txt40controller.

Warning: The SD card will be formatted. All data on the selected SD card will be deleted.



1. Please insert a new micro SD card (minimum 4 GB).
2. Bridge connector C4 with a short cable or jumper.
3. Enter the controller's **API Key** (shown in the Info screen), select the firmware restore image (.img.xz) and click **Continue**.

Step 5: Upload the image file

- If necessary, enter the API key (found in the Info menu on the controller's display).
- Select the .img.xz image file (e.g. **20260818-mptool-5.0.1.upgrade.img.xz**) via 'Choose File'.

Upload Image

API Key

nt3YLZ

The API key is shown in the **Info** screen on the controller display.

Image file (.img.xz)

Choose file 20260814-mptool-5.0.1.upgrade.img.xz

Continue

- Click '**Continue**'.
- Wait until the upload is complete ("Uploading...").

Upload Image

API Key

nt3YLZ

The API key is shown in the **Info** screen on the controller display.

Image file (.img.xz)

Choose file 20260814-mptool-5.0.1.upgrade.img.xz

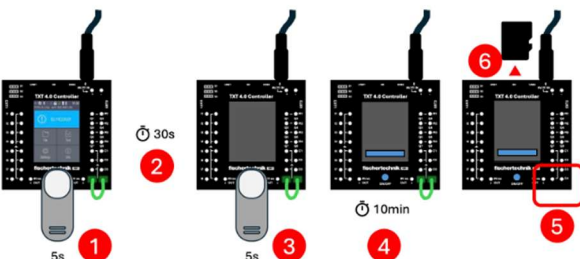
Continue

Uploading...

Once the file has been written successfully, the following message will appear:

✓ **Image written to SD card successfully.**

✓ Image written to SD card successfully.



Next Steps

1. Power off the device: press and hold the power button for **5 seconds**.
2. Wait **30 seconds** until the device is fully powered off.
3. Power on the device.
4. Wait approximately **10 minutes** while the firmware is written to the controller memory.
5. Remove the bridge cable from connector **C4**.
6. Remove the SD card — the controller will automatically reboot after **10 seconds**. If autoboot is not enabled, the controller must be powered on again after removing the SD card.

⚠ Do not power off the device while writing is in progress.

Start over

Step 6: Restart the controller

- **Switch off the device:** press and hold the power button for **5 seconds**.
- **Wait 30 seconds** until the device has switched off completely.
- **Switch on the device.**

CAUTION: Do not interrupt the power supply. Otherwise, the controller may be damaged. If the power supply is interrupted nonetheless: Reinsert the micro SD card and switch the controller back on whilst the C4 jumper is in place.

- **Wait approximately 10 minutes** while the firmware is being written to the TXT 4.0 controller's memory. **During the flashing process, the ON/OFF button flashes alternately red and green.** This indicates that the firmware is being transferred successfully.
- Once the process is complete, the button lights up **blue** if the flashing operation was successful, or red if an error occurred.
- **Remove the jumper wire from pin C4.**
- **Remove the SD card** — the controller will restart automatically after **10 seconds**. If 'Autoboot' is not enabled under **Settings → Power Management → Auto Boot**, the controller must be switched on again after removing the SD card.



Completion

After restarting, the controller will be running the new firmware version **5.0.1**. You can check this in the Info menu or in the header of the web interface.



Any questions? Please contact: fischertechnik-technik@fischer.de

FAQ

Problem: An error message appears during the update:

Upload fehlgeschlagen: Http failure response for /sdimage/upload: 0 Unknown Error

▲ Details

```
-- Logs begin at Thu 2026-07-23 17:48:44 UTC, end at Fri 2026-08-07 05:24:58 UTC. --
Jul 23 17:49:18 txt40-Z2n0 systemd[1]: Started TXT 4.0 SD card image flash server.
Jul 23 17:49:18 txt40-Z2n0 txt-sd-image[839]: starting (mode: api-only)
Jul 23 17:49:18 txt40-Z2n0 txt-sd-image[839]: txt-sd-image server listening on 127.0.0.1:
5002
```

Possible causes:

- A non-supported web browser is being used. The use of Google Chrome is recommended.
- The web browser was closed during the update process, or additional tabs were opened.
- The firmware file (.img.xz) is corrupted or could not be read correctly.

Solution: Download the image file again and repeat the upgrade procedure.