



Fedora 38 Installation on the Framework Laptop 13

How to install Fedora 38 Linux on a Framework Laptop 13.

Written By: Matt Hartley



INTRODUCTION

Once you have your Framework Laptop 13 set up following the [Quick Start Guide](#), you're ready to install your preferred OS. The Framework Laptop 13 is running some very recent hardware, and we've worked with the team at Fedora to improve support. Fedora 38 is one of the Linux distributions we recommend most, as it has full hardware support with very little setup required, and it offers a great user experience overall.

One note on Fedora is that the distro follows a fairly aggressive update policy on new kernels. This means that if you have the most recent generation of hardware, there is a higher risk that a kernel update could have a driver regression. On older platforms, this is less of a risk. To avoid this risk altogether, you can use a more conservative distro like Ubuntu LTS.

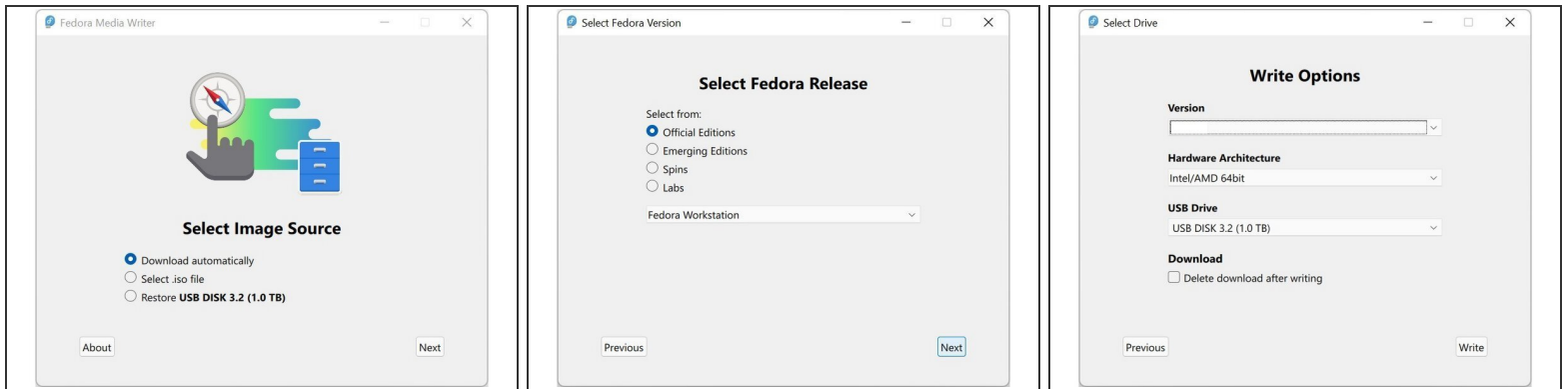
This is an [Officially Supported Linux Distribution](#). [Learn more here](#).



PARTS:

- [Storage Expansion Card](#) (1)
-

Step 1 — Fedora 38 Installation on the Framework Laptop 13



- Fedora has a fantastic tool called Fedora Media Writer to create USB installers. It's available for Windows, OS X, and Linux. For Windows and OS X, you can download it here:

<https://fedoraproject.org/workstation/>

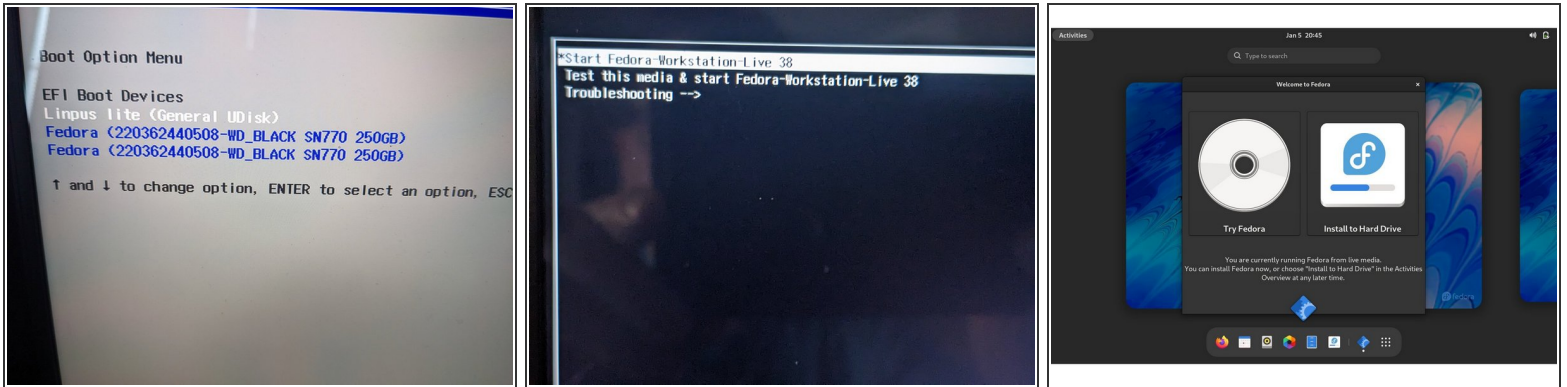
⚠ NOTE: If you are installing to an **AMD Ryzen 7040 Series** Framework 13, we are recommending [Fedora 39 at this time](#) due to installation challenges with Fedora 38.

⚠ If upgrading from **Fedora 37**, we [recommend backing up your home directory](#) and doing a clean installation. If you decide you prefer to upgrade from 37, make absolutely sure your 37 installation is fully up to date first.

i If you're coming from another Fedora install or Linux distro, you can install Fedora Media Writer following the steps here: <https://docs.fedoraproject.org/en-US/fed...>

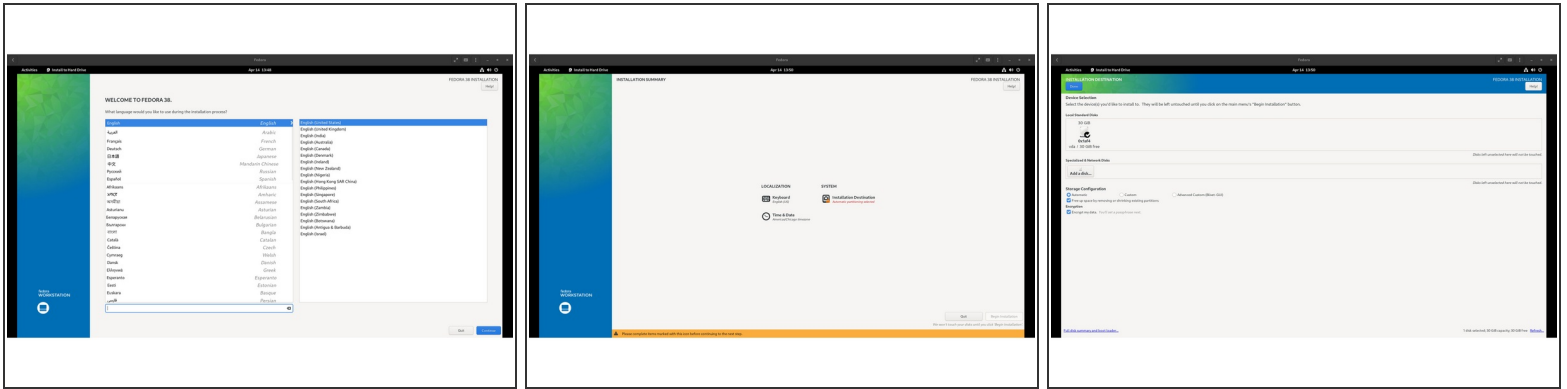
- Insert your USB drive (2GB or larger). Note that it will be reformatted, so make sure you are ok with erasing any data that is on it.
- After installing Fedora Media Writer, run it. Click Next to go to the "Select Fedora Release" screen. We'll proceed with the Official Fedora Workstation release for this guide, but there are a range of other options available. Now click Next.
- The latest version of Fedora will be selected by default. Make sure the correct USB Drive is selected in the drop down, and then click Write.
- Once the USB drive creation is complete, you can click Finish, close Fedora Media Writer, eject your USB drive, and if you'd like to, delete the downloaded ISO file.

Step 2 — Booting to Live Fedora USB



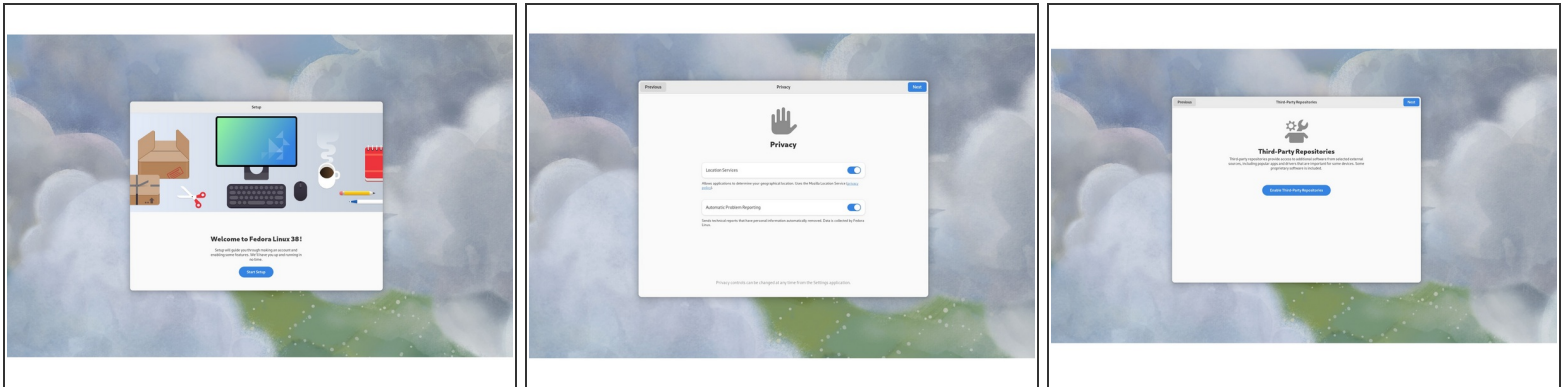
- Insert the USB drive into your powered off Framework Laptop 13, and then power on. If you have an existing OS installed on the Storage drive in your laptop, immediately after the power light comes on begin rapidly tapping (continuously) the F12 key - you must begin tapping well before you see the Framework logo.
- Select Linpus lite (General UDisk) with your arrow keys. Enter key.
- Next select Start Fedora Workstation-Live 38. Hit the enter key.
- After a few seconds, you're in! If you just want to try Fedora out, you can click on the Try Fedora button and browse through the live USB version of it without touching the internal storage drive. If you do want to install Fedora to the internal storage drive, go on to the next step.

Step 3 — Installing Fedora to a drive



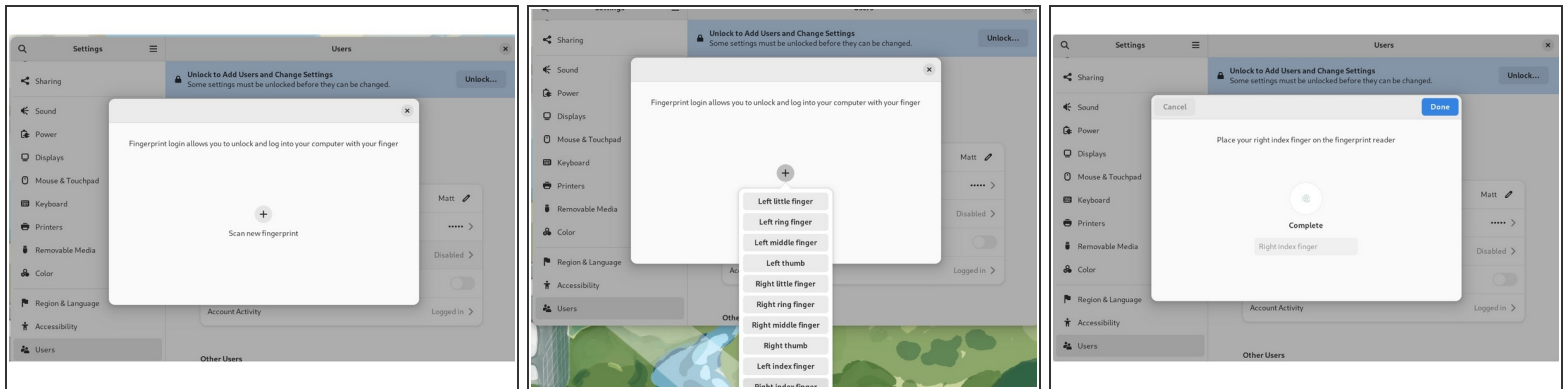
- Click on the Install Fedora button.
- Select the keyboard language you'd like to use. On the next screen, click on the Installation Destination button to choose the disk. Note that you can install Fedora onto a USB drive or a Storage Expansion Card as an alternative to installing it onto your internal drive.
- ❗ If there is an OS already installed on the target drive, you'll need to follow the guided steps in the installer to resize partitions or delete the existing partitions. This is out of scope of this guide, but Fedora has very detailed documentation: <https://docs.fedoraproject.org/en-US/qui...>
- Click Finish Installation and then reboot into your new Fedora install!
- ❗ The installer will close the window, but not reboot. You can click on the power icon in the top right, click Power Off / Log Out, and click Restart.

Step 4 — Welcome to Fedora Screen - Setting Up



- Click on Start Setup button. This begins the process of completing the initial setup of your Fedora installation.
- Connect to Wi-Fi or Skip. If you wish not to connect to wireless just yet, you can skip this and return to connecting to Wi-Fi later on.
- Choose your Privacy settings. Here you can decide if you would like to allow Location Services using Mozilla Location Service or not.
- Click on Enable Third-Party Repositories. Unless you have a specific reason for not doing so, it's recommended that these repositories are enabled for access to additional drivers and applications.
- Connect Online Accounts or Skip. Connect to Google, Nextcloud or Microsoft online accounts to access your email, calendar, contacts, documents and photos.

Step 5 — Configure the fingerprint reader



- Let's setup fingerprint login. Click on Activities, search for user.
 - Choose Fingerprint Login. Then select Scan new fingerprint. Select your desired fingerprint. Carefully tap your finger tip on the sensor (power button). You may need to try a few attempts as everyone's prints are different.
 - Once it's successful, you will see the word Complete.
- ❗ Always try registering a fingerprint first before trying to update firmware - you may not need to.

⚠ **For 11th, 12th Gen Intel Core Framework Laptop 13:** If you're finding that it cannot enroll your fingerprint or you would like to allow sudo to also use your fingerprint, please click through to [this knowledge base article](#).

⚠ **For 13th Gen Intel Core or AMD Ryzen 7040 Series Framework Laptop 13 where you've experienced a device not detected error:** There may be a firmware update [available for your fingerprint reader](#).

Step 6 — Completing Setup

This is for 13th Gen Framework 13 ONLY.

This Fedora guide will assist with:

- Workaround needed to get the best suspend battery life for SSD power drain.
- Enable improved fractional scaling support Fedora's GNOME environment using Wayland.
- Enable tap to click on the touchpad.
- Getting your finger print reader working for Fedora user login.

Make sure to update your packages first

```
sudo dnf upgrade
```

Enable brightness keys

```
sudo grubby --update-kernel=ALL --args="module_blacklist=hid_sensor_hub"
```

If you want to enable fractional scaling on Wayland:

```
gsettings set org.gnome.mutter experimental-features "[ 'scale-monitor-framebuffer' ]"
```

If you want to enable tap-to-click on the touchpad:

```
gsettings set org.gnome.desktop.peripherals.touchpad tap-to-click true
```

This is for 12th Gen Framework 13 ONLY.

This Fedora guide will assist with:

- Workaround needed to get the best suspend battery life for SSD power drain.
- Enable improved fractional scaling support Fedora's GNOME environment using Wayland.
- Enable tap to click on the touchpad.
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If you want to enable tap-to-click on the touchpad:

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```

This is for 11th Gen Framework 13 ONLY.

This Fedora guide will assist with:

- Workaround needed to get the best suspend battery life for SSD power drain.
- Enable improved fractional scaling support Fedora's GNOME environment using Wayland.
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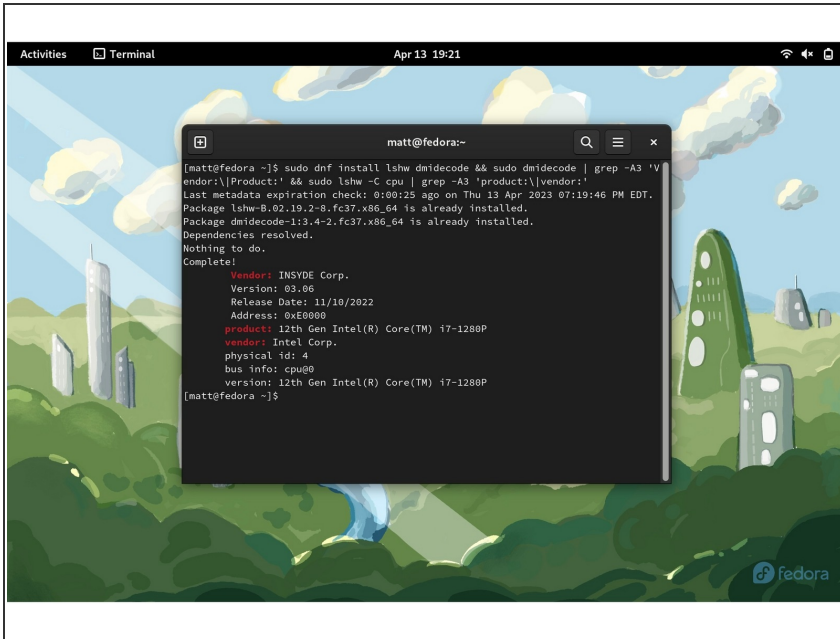
```
gsettings set org.gnome.desktop.peripherals.touchpad tap-to-click true
```

Improve power saving for NVMe drives:

```
sudo grubby --update-kernel=ALL --args="nvme.noacpi=1"
```

- We're almost done. Please follow the links to your individual Framework Laptop 13 model (11th, 12th and 13th Gen Intel Core.
 - ❗ [Click here](#) for the completion guide for 13th Gen Intel Core.
 - ❗ [Click here](#) for the completion guide for 12th Gen Intel Core.
 - ❗ [Click here](#) for the completion guide for 11th Gen Intel Core.
- ⚠ Please [install Fedora 39](#) for AMD Ryzen 7040 Series.
- 📌 Our recommendations for [Optimizing Fedora Battery Life](#).

Step 7 — Recommended: Updating to the latest firmware



```
[matt@fedora ~]$ sudo dnf install lshw dmidecode && sudo dmidecode | grep -A3 'Vendor:'
[matt@fedora ~]$ sudo dnf install lshw dmidecode && sudo dmidecode | grep -A3 'Vendor:'
Last metadata expiration check: 0:00:25 ago on Thu 13 Apr 2023 07:19:46 PM EDT.
Package lshw-3.02-19.2-0.fc37.x86_64 is already installed.
Package dmidecode-3.4-2.fc37.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!

Vendor: INSYDE Corp.
Version: 83.65
Release Date: 11/10/2022
Address: 0xE0000
product: 12th Gen Intel(R) Core(TM) i7-1280P
vendor: Intel Corp.
physical id: 4
bus info: cpu@0
version: 12th Gen Intel(R) Core(TM) i7-1280P
[matt@fedora ~]$
```

- Go to Activities, search terminal and launch it. Please [follow this link](#) to copy and paste the code into your terminal, then press enter.
- The output as seen in the image on the right will tell you if you have an 11th or 12th Gen Intel Core Framework Laptop 13 and also which BIOS version you're using.

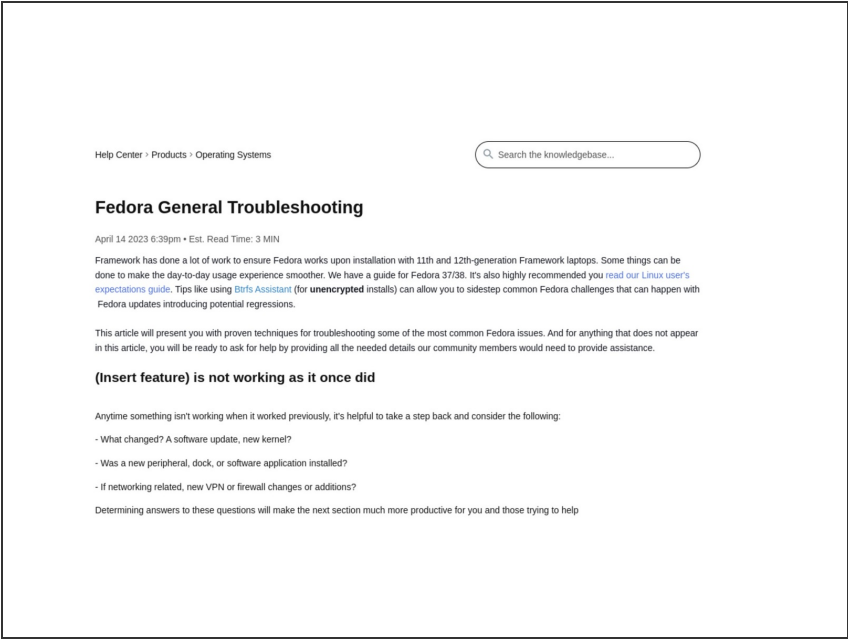
⚠ If you have Intel 11th Gen Intel Core, you can check [here for the latest firmware](#).

⚠ If you have Intel 12th Gen Intel Core, you can check [here for the latest firmware](#).

⚠ If you have Intel 13th Gen Intel Core, you can check [here for the latest firmware](#).

⚠ If you have AMD Ryzen 7040 Series, you can check [here for the latest firmware](#).

Step 8 — Fedora Troubleshooting



- Expecting different touchpad behavior? [The touchpad help guide](#) is here.
- Need help? Please visit our [troubleshooting guide](#) first.
- If you need additional help, feel free to visit our [active support community](#).

Enjoy using Fedora on your Framework Laptop 13! If you have any questions or run into any issues, we recommend bringing them to the Community in the [Fedora 38 topic](#). Members of the Framework team and sometimes the Fedora team as well participate in discussions there.