

Darby Linux — Creating Bootable USB Drives

Step-by-step guide for creating bootable installation media from a Darby Linux ISO image.

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Prerequisites

What You Need

- **Darby Linux ISO** — built using `create_iso.sh` (see below)
- **USB flash drive** — 4 GB minimum (8 GB+ recommended)
- **Another computer** — to write the USB (can be Linux, macOS, or Windows)

Important Notes

 **Creating a bootable USB will ERASE ALL DATA on the USB drive.** Back up any important files before proceeding.

The Darby Linux ISO supports both **UEFI** and **Legacy BIOS** boot modes.

Building the ISO

Quick Build

```
# Build a standard Darby Linux ISO
sudo ./scripts/build/create_iso.sh build

# Build with office suite included
sudo ./scripts/build/create_iso.sh build --include-office

# Build a minimal ISO (smaller, faster)
sudo ./scripts/build/create_iso.sh build --minimal

# Preview what would be built
sudo ./scripts/build/create_iso.sh build --dry-run
```

Build Options

Option	Description
<code>--arch amd64</code>	Target architecture (amd64, i386, powerpc)
<code>--include-office</code>	Include LibreOffice, GIMP, Inkscape
<code>--include-gaming</code>	Include Steam, Wine, Lutris
<code>--minimal</code>	Base system + XFCE only
<code>--name darby-linux</code>	Custom ISO label
<code>--version 1.4.0</code>	Custom version string
<code>--output /path/to/dir</code>	Output directory

Snapshot Current System

```
# Create ISO from your running system (excludes personal data)
sudo ./scripts/build/create_iso.sh snapshot
```

Verify ISO Integrity

```
# Verify SHA256 checksum
sudo ./scripts/build/create_iso.sh verify

# Manual verification
cd build/dist
sha256sum -c darby-linux-*.sha256
```

Creating a Bootable USB on Linux

Method 1: dd (Recommended)

The simplest and most reliable method.

```
# 1. Identify your USB drive
lsblk

# Look for your USB drive (e.g., /dev/sdb). Make sure you identify
# the CORRECT device – dd will erase everything on the target!

# 2. Unmount if auto-mounted
sudo umount /dev/sdb* 2>/dev/null

# 3. Write the ISO
sudo dd if=build/dist/darby-linux-1.4.0-amd64.iso of=/dev/sdb \
    bs=4M status=progress oflag=sync

# 4. Sync and eject
sync
sudo eject /dev/sdb
```

Method 2: Ventoy (Multi-ISO USB)

Ventoy allows you to boot multiple ISOs from a single USB drive.

```
# 1. Install Ventoy
wget https://github.com/ventoy/Ventoy/releases/download/v1.0.99/ventoy-1.0.99-
linux.tar.gz
tar xzf ventoy-*.tar.gz
cd ventoy-*

# 2. Install Ventoy to USB (first time only – erases USB)
sudo ./Ventoy2Disk.sh -i /dev/sdb

# 3. Copy ISO to USB (Ventoy partition auto-mounts as exFAT)
cp build/dist/darby-linux-*.iso /media/$USER/Ventoy/

# You can add multiple ISOs – Ventoy presents a boot menu
```

Method 3: balenaEtcher (GUI)

```
# Install Etcher
wget https://github.com/balena-io/etcher/releases/latest/download/balena-
etcher_*_amd64.deb
sudo dpkg -i balena-etcher_*.deb

# Launch
balena-etcher-electron
```

Then select the ISO, select the USB drive, and click “Flash!”

Method 4: GNOME Disks

1. Open **GNOME Disks** (Disks)
2. Select your USB drive

3. Click ☰ → **Restore Disk Image...**
 4. Select the Darby Linux ISO
 5. Click **Start Restoring...**
-

Creating a Bootable USB on macOS

Method 1: `dd` (Terminal)

```
# 1. Identify your USB drive
diskutil list

# Look for your USB drive (e.g., /dev/disk2)

# 2. Unmount the USB drive
diskutil unmountDisk /dev/disk2

# 3. Write the ISO (use 'rdisk' for faster writes)
sudo dd if=darby-linux-1.4.0-amd64.iso of=/dev/rdisk2 bs=4m

# 4. Eject
diskutil eject /dev/disk2
```

Method 2: balenaEtcher (GUI)

1. Download [balenaEtcher](https://www.balena.io/etcher/) (<https://www.balena.io/etcher/>) for macOS
2. Open Etcher
3. Select the Darby Linux ISO
4. Select your USB drive
5. Click “Flash!”

Method 3: Disk Utility (GUI)

1. Open **Disk Utility**
 2. Select USB drive → **Erase** (format as MS-DOS/FAT)
 3. Open Terminal
 4. Run the `dd` command above
-

Creating a Bootable USB on Windows

Method 1: Rufus (Recommended)

1. Download [Rufus](https://rufus.ie/) (<https://rufus.ie/>) (free, portable)
2. Run Rufus
3. **Device:** Select your USB drive
4. **Boot selection:** Click **SELECT** → choose the Darby Linux ISO
5. **Partition scheme:** Select based on your target:
 - **GPT** for UEFI systems (modern Macs and PCs)
 - **MBR** for Legacy BIOS systems (older PCs)
6. **File system:** FAT32 (default)

7. Click **START**
8. Select “Write in DD Image mode” when prompted
9. Wait for completion

Method 2: balenaEtcher (GUI)

1. Download [balenaEtcher](https://www.balena.io/etcher/) (https://www.balena.io/etcher/) for Windows
2. Run Etcher
3. Select the Darby Linux ISO
4. Select your USB drive
5. Click “Flash!”

Method 3: Win32 Disk Imager

1. Download [Win32 Disk Imager](https://sourceforge.net/projects/win32diskimager/) (https://sourceforge.net/projects/win32diskimager/)
2. Run as Administrator
3. Select the ISO file (change filter to *.* to see .iso files)
4. Select your USB drive letter
5. Click **Write**

Verifying the USB

After creating the bootable USB, verify it was written correctly:

Linux

```
# Compare checksums (first N bytes matching ISO size)
ISO_SIZE=$(stat -c %s darby-linux-1.4.0-amd64.iso)
sudo dd if=/dev/sdb bs=4M count=$(( ISO_SIZE / 4194304 + 1 )) | sha256sum
# Compare with the expected checksum
cat darby-linux-1.4.0-amd64.iso.sha256
```

Quick Boot Test

```
# Test in QEMU virtual machine (optional)
qemu-system-x86_64 -m 2048 -boot d -cdrom darby-linux-1.4.0-amd64.iso
```

Booting from USB

Intel Macs (2008-2019)

1. Power off the Mac
2. Insert the USB drive
3. Power on while holding **Option (⌥)** key
4. Select the USB drive (may appear as “EFI Boot” or “Windows”)
5. Select “Darby Linux (Live)” from the boot menu

PowerPC Macs (1999-2006)

1. Power off the Mac
2. Insert the USB drive (may not work on all G3 models — use CD instead)
3. Power on while holding **Option (⌥)** key
4. Or enter Open Firmware (`Cmd+Opt+O+F`) and type:

```
boot ud:,\\:tbxi
```

Windows PCs — UEFI

1. Power off the PC
2. Insert the USB drive
3. Power on and press the boot menu key:
 - **Dell:** F12
 - **HP:** F9 or Esc
 - **Lenovo:** F12
 - **ASUS:** F8 or Esc
 - **Acer:** F12
 - **MSI:** F11
4. Select the USB drive (UEFI mode)
5. Select “Darby Linux (Live)” from GRUB menu

Windows PCs — Legacy BIOS

1. Power off the PC
2. Insert the USB drive
3. Enter BIOS Setup (usually Del, F2, or F1 during boot)
4. Set USB drive as first boot device (or enable USB boot)
5. Save and exit
6. Select “Darby Linux (Live)” from ISOLINUX menu

Troubleshooting

USB not detected at boot

- Try a different USB port (USB 2.0 ports are more reliable for booting)
- Re-write the USB using `dd` method (DD image mode is most compatible)
- For UEFI: disable Secure Boot in BIOS settings
- For Macs: try holding Option at the very first startup chime

“No bootable device” error

- Verify the ISO was written correctly (check checksums)
- Try `dd` instead of GUI tools
- On Macs, try both Option key and Open Firmware boot
- Check if your PC supports booting from USB (very old systems may not)

Boots to black screen

- At the boot menu, select “Safe Mode” (adds `nomodeset`)
- For ISOLINUX: type `darby-safe` and press Enter

- For GRUB: edit the entry and add `nomodeset` to the kernel line

USB write fails or is very slow

- Use `dd` with `bs=4M` or `bs=1M` for best speed
- On macOS, use `/dev/rdisk*` (raw disk) instead of `/dev/disk*`
- Ensure the USB drive is not faulty — try a different drive
- On Windows, run Rufus/Etcher as Administrator

Secure Boot issues

- Disable Secure Boot in UEFI settings for the initial install
- After installation, Secure Boot can be re-enabled if using signed kernel/shim

Quick Reference

Platform	Tool	Command/Action
Linux	dd	<code>sudo dd if=darby.iso of=/dev/sdX bs=4M status=progress</code>
Linux	Ventoy	Copy ISO to Ventoy USB partition
macOS	dd	<code>sudo dd if=darby.iso of=/dev/rdiskN bs=4m</code>
macOS	Etcher	GUI — Select ISO → Select USB → Flash
Windows	Rufus	GUI — DD Image mode recommended
Windows	Etcher	GUI — Select ISO → Select USB → Flash