

Bruce Firmware for ESP32-DIV

Installation Guide - Version 1.0

1. What you need

- A Windows PC (Windows 8, 10 or 11)
- The ESP32-DIV device
- A USB cable that carries DATA (many cheap cables are charge-only and will not work)
- The files from this ZIP, unzipped to any folder

2. Install the USB driver (only if needed)

Connect the ESP32-DIV to the PC with the USB cable. Windows 10/11 normally installs the driver automatically. If step 3 says "No device found", download and install the Silicon Labs CP210x driver, then reconnect the device:

<https://www.silabs.com/developer-tools/usb-to-uart-bridge-vcp-drivers>

3. Flash the firmware

Double-click this file (inside the unzipped folder):

FLASH-BRUCE.bat

The script finds the device automatically and writes the firmware (about 1 minute).

When you see "FLASH COMPLETE" the device restarts into the Bruce firmware and you can unplug it. No other software needs to be installed on the PC.

4. First start

- The device shows a short startup, then the Bruce main menu (icon grid).
- If the unit has a working touch panel, it calibrates automatically at the first start: follow the corner markers on the screen.
- On units without touch, use the 5 physical buttons (below).

5. Controls

UP / DOWN / LEFT / RIGHT navigate the menus

SELECT (short press) open the selected item

SELECT (hold about 1 second) ... Back / Exit

Touch screen (if available) tap icons directly

What is included

Bruce is a complete wireless toolkit: Wi-Fi scanner and attacks (Evil Portal, deauth detector, sniffer, wardriving), Bluetooth/BLE tools, Sub-GHz radio (CC1101) scan & replay, 2.4 GHz NRF24 tools, IR send/receive, NFC/RFID (PN532), BadUSB over BLE, GPS, microSD support and a serial command shell (115200 baud).

Hardware notes

- microSD card (FAT32) is optional - needed to save captures and logs.
- NRF24 module: the firmware checks all three sockets at every start and uses the one where a module is detected.
- Sub-GHz (CC1101), NFC (PN532) and GPS use the stock ESP32-DIV wiring.

Troubleshooting

Problem	Solution
"No device found"	Use a USB data cable; install the CP210x driver (page 1); try another USB port.
Flash fails or stuck at "Connecting"	Hold the BOOT button, unplug USB, plug it back in while holding BOOT, release the button, run FLASH-BRUCES.bat again.
Screen stays white or black	Re-run FLASH-BRUCES.bat. If it persists, hold BOOT while replugging and flash again.
Touch screen does not respond	Use the 5 physical buttons - all functions work without the touchscreen.
"CC1101 not found"	Check that the CC1101 module is firmly seated in its socket, then restart the device.
"NRF24 not found"	Check that the NRF24 module is firmly seated (any of the 3 sockets), then restart.
Restore the original firmware	Open the stock-firmware folder and run RESTORE-STOCK.bat.

Legal notice

This firmware is an offensive-security toolkit intended for LEGAL AND AUTHORIZED security testing and education only. Only use it on networks and devices you own or have explicit written permission to test. Unauthorized use may violate local laws. The seller is not liable for any misuse of this device.