

Freedom computer - firmware and license update

All Freedom variants use the same firmware; differences are defined in license file. Both firmware distribution and license files are encrypted using strong cipher. This solution ensures:

- authenticity
- correct firmware for the device
- corrupted file detection

Firmware distribution

You can download latest firmware revision from our web pages <http://www.divesoft.cz/support/freedom-12>. The manual and DSLoader flashing utility is available there as well. DSLoader is available for Microsoft Windows only.

Device driver install

1. Unpack device driver from .zip
2. Connect Freedom with computer using delivered USB cable.
3. Start Freedom.
4. Enter Service menu: push both buttons, release one of them, press it again and release both. Service menu should appear.
5. Select Bootloader item. The built-in bootloader should start.
6. Press and keep any button, until reading “waiting...” changes to “bootloader mode activated”.
7. Start Device Manager in Windows (depends on Windows version).
8. Find item called “Unknown device”.
9. Right-click on it and select Update driver.
10. Click through dialogs and choose Install from specific location, open directory with divesoft_bootloader_driver32-64.inf.
11. Wait until driver is installed.
12. Windows can complain the driver is not signed, you can ignore this warning. Freedom bootloader uses Windows built-in standard drivers, the .inf file only associates them with the device.
13. Find created COM port and check if it has number up to 8 (COM1..COM8). If it is greater, change it as said above. (Right click – Properties – Port Settings tab – Advanced – COM Port Number).

DSLoader install

It is not necessary to do full install, it is sufficient to unzip all files to a directory. In case runtime libraries are not installed, you can download them from Microsoft site <http://www.microsoft.com/en-us/download/details.aspx?id=5555>. Choose suitable version according to your system.

DSLoader description

DSLoader utility is used to firmware and/or licence install in Divesoft products.

There are four panels:

- **Connection** is used to establish connection with device. Used protocol offers access for chained control units, but for Freedom it is not applicable. Leave the box “Route path” with default value.
- **Information** of attached device and current loaded firmware.
- **License** for license upload. It shows properties of selected license file.
- **Firmware** for new firmware upload. It shows properties of selected firmware file. There is an option to start new firmware after successful upload or you can start it from menu Operation.

Firmware flashing

1. Start DSLoader utility
2. Select COM port where the Freedom is installed
3. Start bootloader mode as specified in section “Device driver install”.
4. During countdown (be quick, 4 seconds only) press Connect button. If connect is successful, remaining fields are enabled and Freedom stops countdown.
5. Choose appropriate firmware. If it belongs to attached device and is not corrupted, its properties are displayed and Upload button is enabled.
6. Press Upload button and wait until the firmware is loaded.
7. It is possible the device locks itself and the process freezes. In such case Freedom restarts itself in 15 seconds and enters bootloader mode automatically. You have to disconnect DSLoader and repeat the procedure.
8. If it refuses connection, disconnect Freedom from PC and connect back and repeat the procedure.

Licence loading

Freedom computer has several variants, according to diver’s skill and needs. All variants share the same firmware; the differences are defined by a license file. License is individual for every computer and is bound to its serial number. License file can be freely overwritten, as long as the serial number in license file is identical. If a licence with different serial number is uploaded to the device, it behaves as none licence is loaded and offers only very basic functionality.

The procedure is the same as firmware upload, with the only difference you use the License panel. Be sure to check the serial number.

It is recommended to save your licence to disc before new license is uploaded.

1. Start DSLoader and connect with Freedom as above.
2. Select Read License from menu Operation.
3. Choose suitable filename for old licence file.