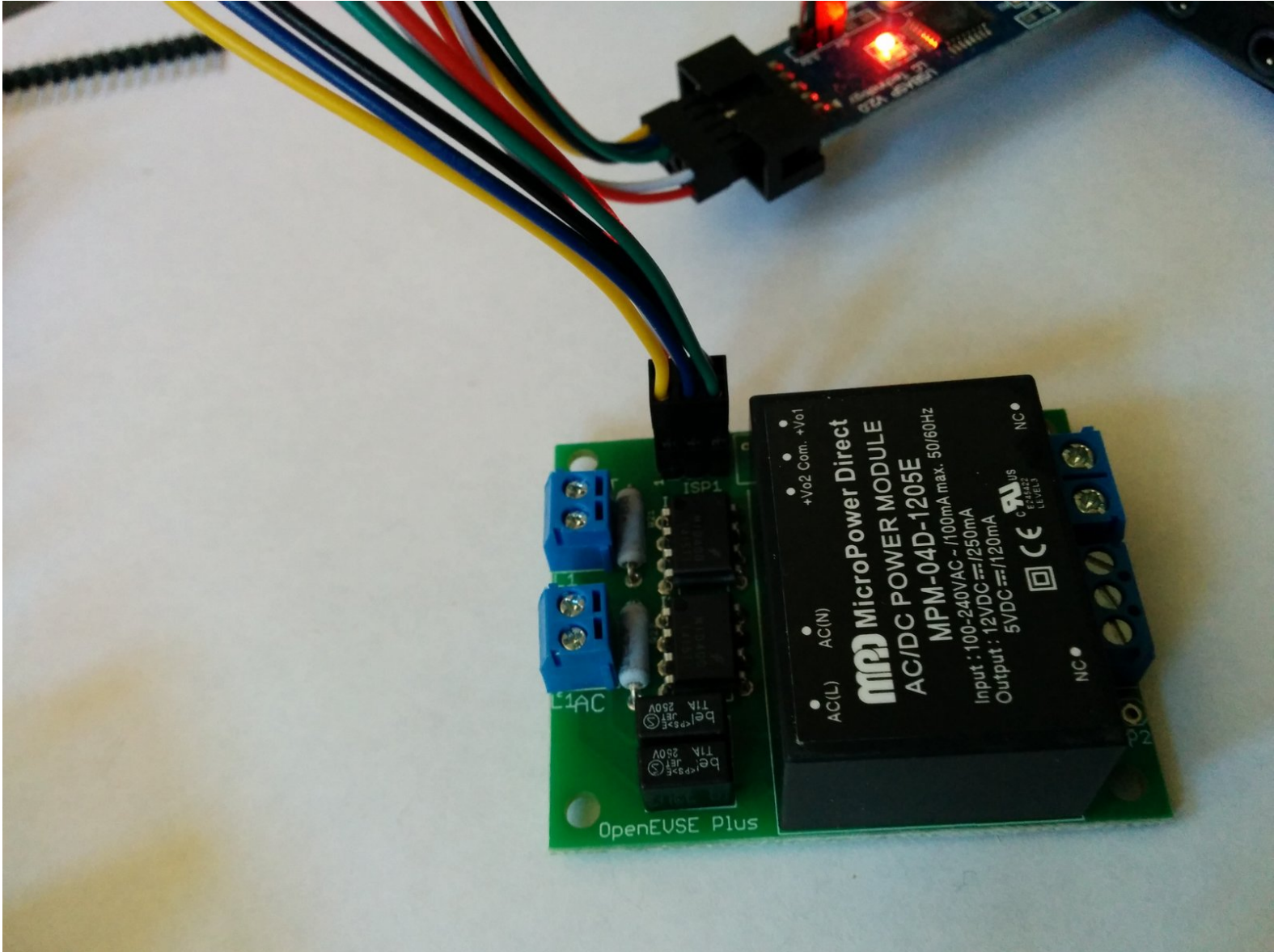


OpenEVSE

How to Load OpenEVSE Firmware (WinAVR)

Guide on how to load OpenEVSE firmware with OpenEVSE Programmer and WinAVR software.

Written By: Christopher Howell





TOOLS:

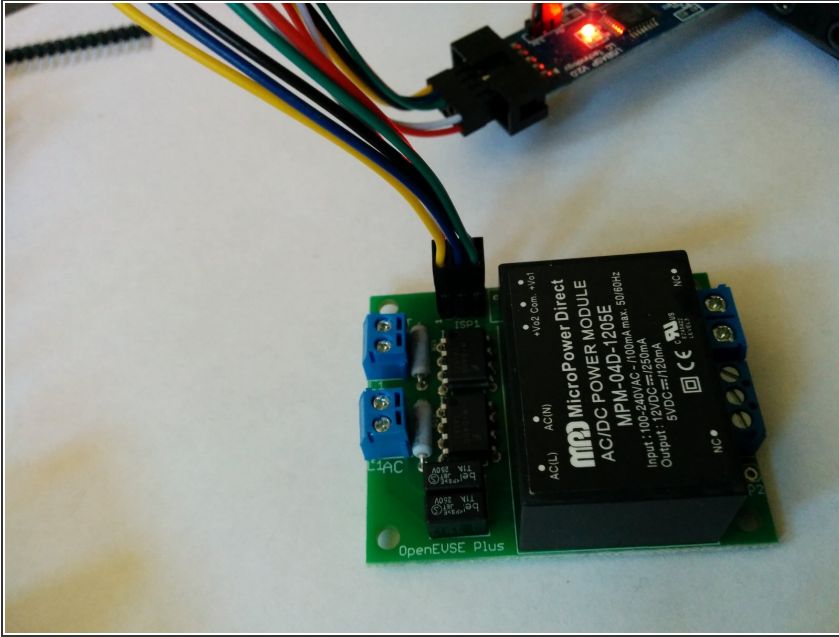
- [Windows PC](#) (1)



PARTS:

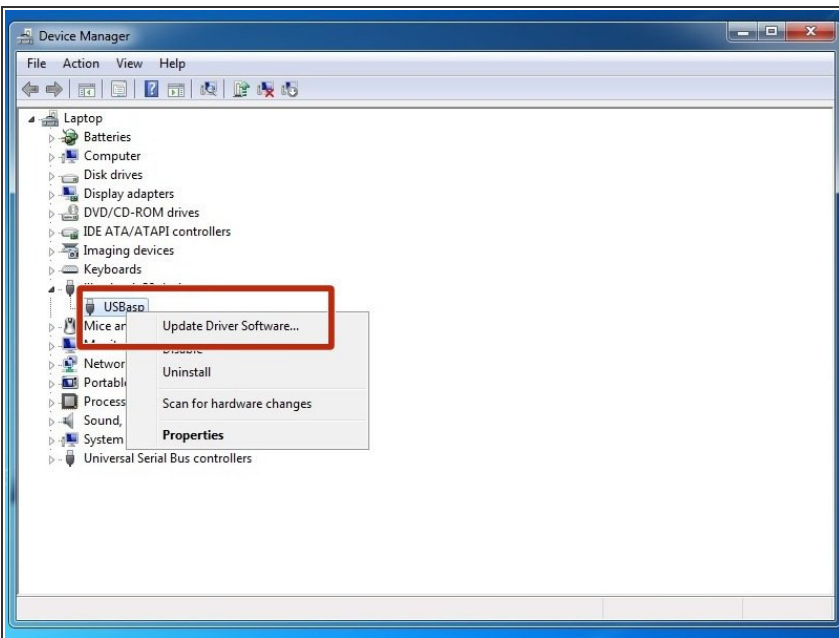
- [OpenEVSE Plus](#) (1)
- [OpenEVSE Programmer](#) (1)

Step 1 — How to Load OpenEVSE Firmware



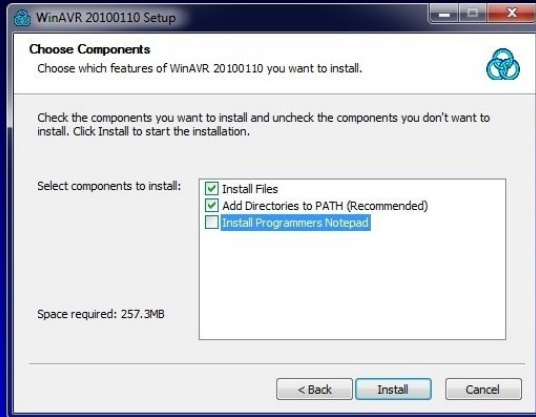
- This Guide explains the Firmware loading process for OpenEVSE.
- ❗ This guide is specifically intended for the Windows Operating system. Advanced users may use a similar process for MacOS and LINUX.

Step 2 — Installing Device Driver.



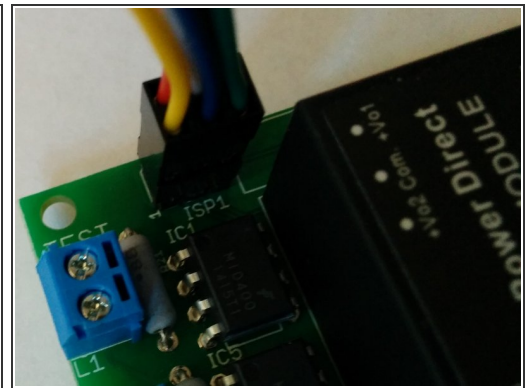
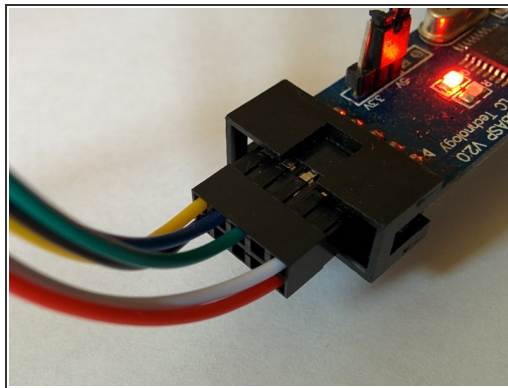
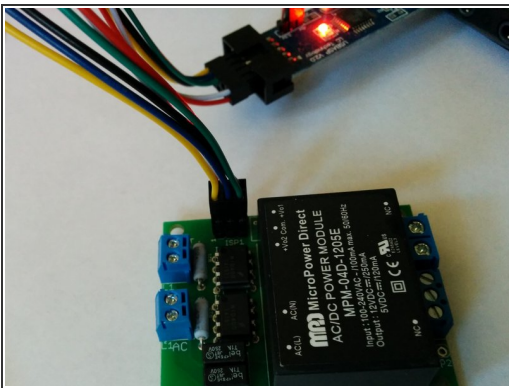
- Download Windows Driver for the OpenEVSE Programmer. Using this guide. <https://rayshobby.net/dead-simple-driver...>

Step 3 — Install WinAVR



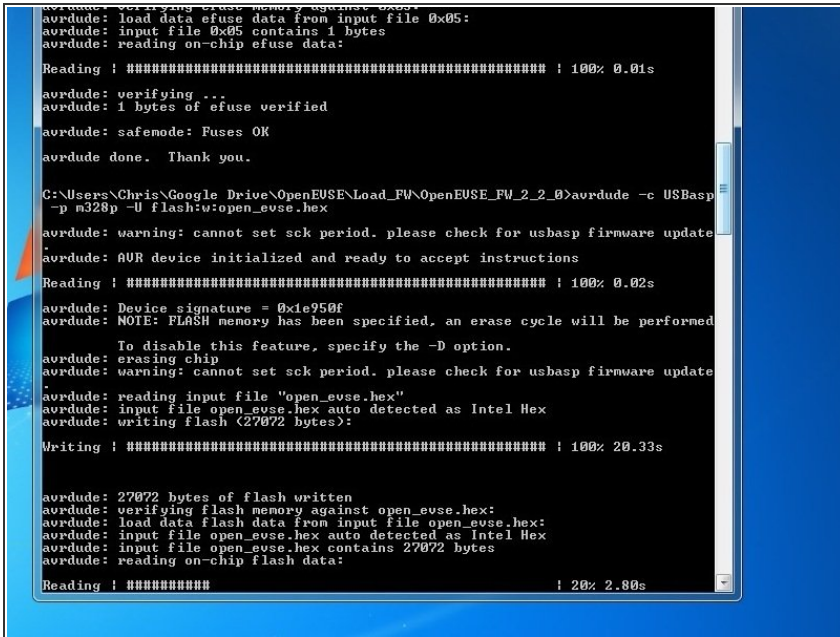
- Download and install the WinAVR software. [WinAVR](#)
- Select BOTH the Install Files and Add Path Options. Developers Notepad is Optional.

Step 4 — Connect OpenEVSE to programmer



- Connect Programmer to OpenEVSE then connect to USB port on PC.
- ❗ The red stripe on the ribbon cable or yellow wire on the 6 pin connector aligns with pin 1 of the ISP connector.

Step 5 — Loading firmware



```
avrdude: verifying fuse memory against 0x05:
avrdude: load data efuse data from input file 0x05:
avrdude: input file 0x05 contains 1 bytes
avrdude: reading on-chip efuse data:
Reading : ##### : 100% 0.01s
avrdude: verifying ...
avrdude: 1 bytes of efuse verified
avrdude: safemode: Fuses OK
avrdude done. Thank you.

C:\Users\Chris\Google Drive\OpenEVSE\Load_FW\OpenEVSE_FW_2_2_0>avrdude -c USBasp
-p m328p -U flash:w:open_evse.hex

avrdude: warning: cannot set sck period. please check for usbasp firmware update
avrdude: AVR device initialized and ready to accept instructions
Reading : ##### : 100% 0.02s
avrdude: Device signature = 0x1e950f
avrdude: NOTE: FLASH memory has been specified, an erase cycle will be performed
To disable this feature, specify the -D option.
avrdude: erasing chip
avrdude: warning: cannot set sck period. please check for usbasp firmware update
avrdude: reading input file "open_evse.hex"
avrdude: input file open_evse.hex auto detected as Intel Hex
avrdude: writing flash (27072 bytes):
Writing : ##### : 100% 20.33s

avrdude: 27072 bytes of flash written
avrdude: verifying flash memory against open_evse.hex:
avrdude: load data flash data from input file open_evse.hex:
avrdude: input file open_evse.hex auto detected as Intel Hex
avrdude: input file open_evse.hex contains 27072 bytes
avrdude: reading on-chip flash data:
Reading : ##### : 20% 2.80s
```

- Download a pre-compiled HEX file from the [OpenEVSE Sources](#) for your OpenEVSE product and your desired configuration.
- Download the latest firmware and save files into a local folder.

⚠ If the ATMEGA328P chip has never had firmware loaded fuse bit must be set with the following command:
avrdude -c USBasp -p m328p -U lfuse:w:0xFF:m -U hfuse:w:0xDF:m -U efuse:w:0x05:m

- ① To upgrade firmware, run the following command at a terminal or command prompt. `avrdude -c USBasp -p m328p -U flash:w:file_name_of the_firmware.hex`
- ① Warning can not set SCK period is normal and can be ignored.