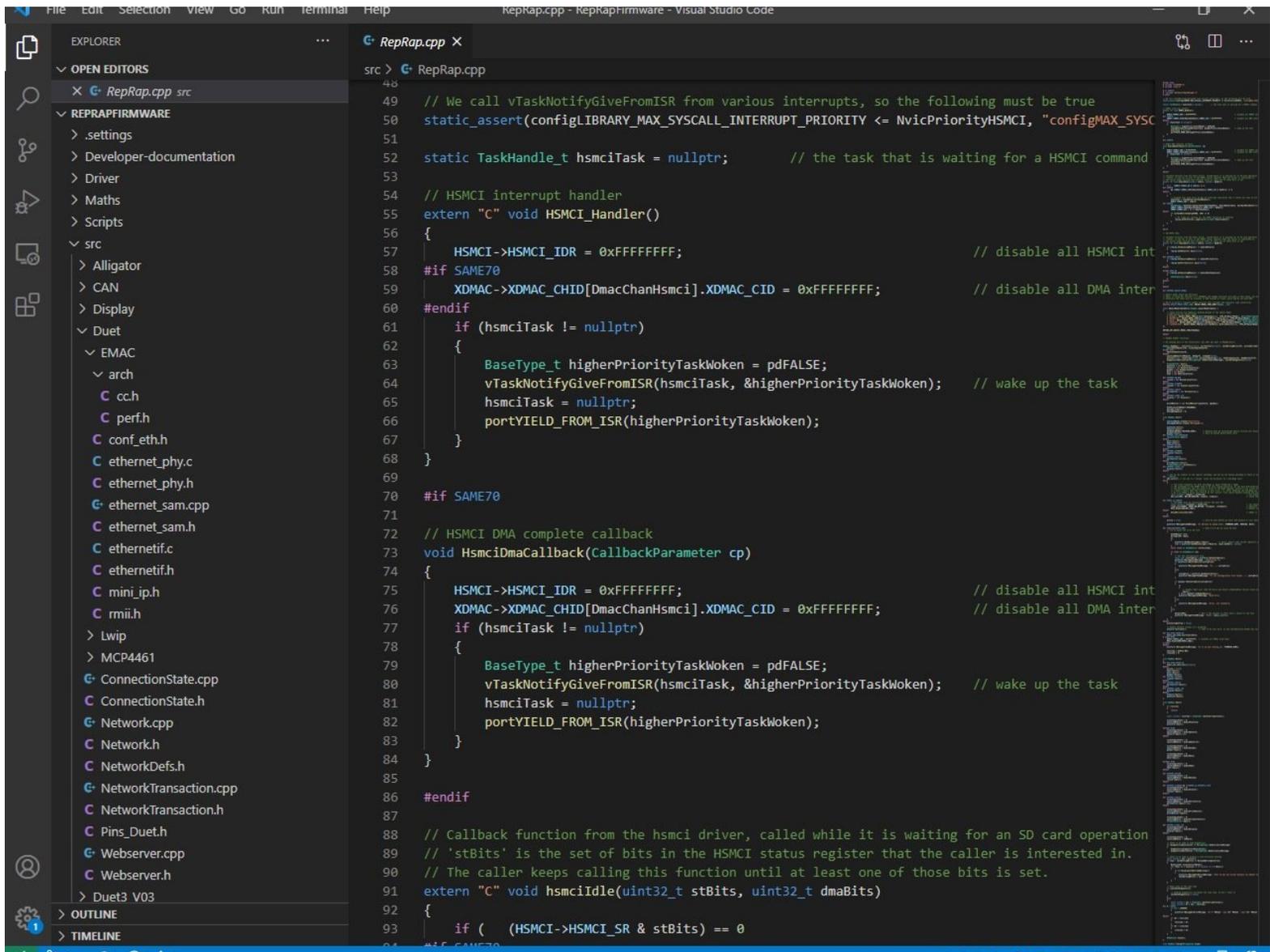


caribou3d

03_Upgrading Duet2Wifi Firmware From Older Versions

Upgrade Duet2Wifi to the latest firmware

Written By: Caribou3d



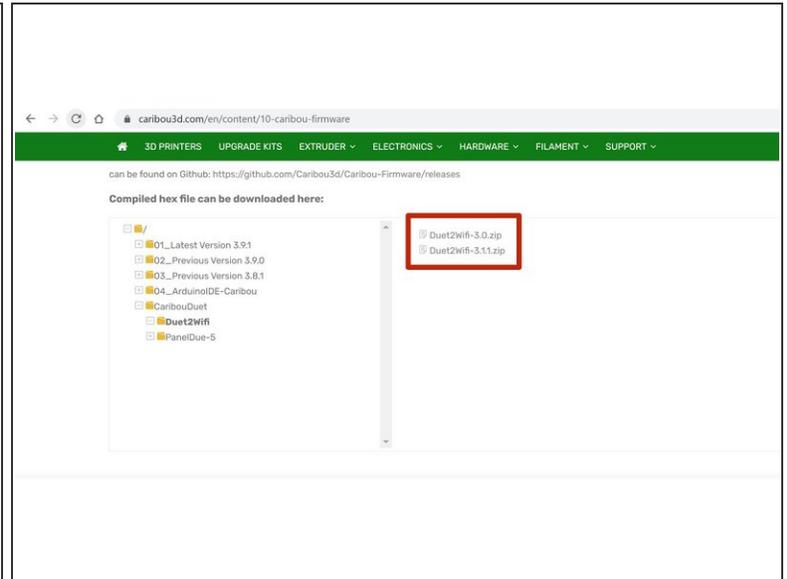
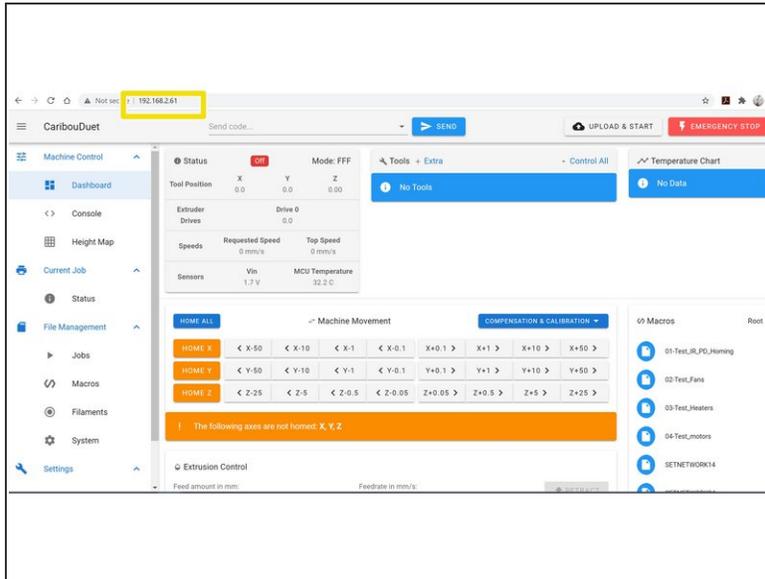
```
48
49 // We call vTaskNotifyGiveFromISR from various interrupts, so the following must be true
50 static_assert(configLIBRARY_MAX_SYSCALL_INTERRUPT_PRIORITY <= NvicPriorityHSMCI, "configMAX_SYSC
51
52 static TaskHandle_t hsmciTask = nullptr; // the task that is waiting for a HSMCI command
53
54 // HSMCI interrupt handler
55 extern "C" void HSMCI_Handler()
56 {
57     HSMCI->HSMCI_IDR = 0xFFFFFFFF; // disable all HSMCI int
58 #if SAME70
59     XDMAC->XDMAC_CHID[DmacChanHsmci].XDMAC_CID = 0xFFFFFFFF; // disable all DMA inter
60 #endif
61     if (hsmciTask != nullptr)
62     {
63         BaseType_t higherPriorityTaskWoken = pdFALSE;
64         vTaskNotifyGiveFromISR(hsmciTask, &higherPriorityTaskWoken); // wake up the task
65         hsmciTask = nullptr;
66         portYIELD_FROM_ISR(higherPriorityTaskWoken);
67     }
68 }
69
70 #if SAME70
71 // HSMCI DMA complete callback
72 void HsmciDmaCallback(CallbackParameter cp)
73 {
74     HSMCI->HSMCI_IDR = 0xFFFFFFFF; // disable all HSMCI int
75     XDMAC->XDMAC_CHID[DmacChanHsmci].XDMAC_CID = 0xFFFFFFFF; // disable all DMA inter
76     if (hsmciTask != nullptr)
77     {
78         BaseType_t higherPriorityTaskWoken = pdFALSE;
79         vTaskNotifyGiveFromISR(hsmciTask, &higherPriorityTaskWoken); // wake up the task
80         hsmciTask = nullptr;
81         portYIELD_FROM_ISR(higherPriorityTaskWoken);
82     }
83 }
84 #endif
85
86 // Callback function from the hsmci driver, called while it is waiting for an SD card operation
87 // 'stBits' is the set of bits in the HSMCI status register that the caller is interested in.
88 // The caller keeps calling this function until at least one of those bits is set.
89 extern "C" void hsmciIdle(uint32_t stBits, uint32_t dmaBits)
90 {
91     if ( (HSMCI->HSMCI_SR & stBits) == 0
92 #if SAME70
```

INTRODUCTION

This HOW-TO will show you how to upgrade your Duet2Wifi to the current firmware version.

It is based on the [Duet Wiki](#) which a lot more information as needed for the Duet2Wifi only. Please refer to that Wiki in case your need more in depth information.

Step 1 — Pre-Requisites



⚠ Make sure that you have set-up Wifi access to the board. If not then follow this guide [01_Troubleshooting Duet Wifi Set-Up](#)

- Connect to the WebControl interface using the IP address that you have used earlier
- Download the two files from [Caribou Duet Firmware Folder](#)

Step 2 — Checking Current Firmware Version

The left screenshot shows the Duet WebControl interface. The 'Settings' menu item is highlighted with a red box, and the 'Machine-Specific' section is highlighted with an orange box. The 'Status' section shows the following data:

Tool Position	X	Y	Z
	0.0	0.0	250.00

The 'Extruder Drives' section shows:

Extruder	Drive 0	Drive 1
	0.0	0.0

The 'Speeds' section shows:

Requested Speed	Top Speed
0 mm/s	0 mm/s

The 'Sensors' section shows:

Sensors	Vin	MCU Temperature	Fan RPM
	1.7 V	16.7 C	0

The 'Electronics' section shows:

Board: Duet WiFi 1.02 or later
 Firmware: RepRapFirmware for Duet 2 WiFi/Ethernet 2.05.1 (2020-02-09b1)
 Duet WiFi Server Version: 1.23

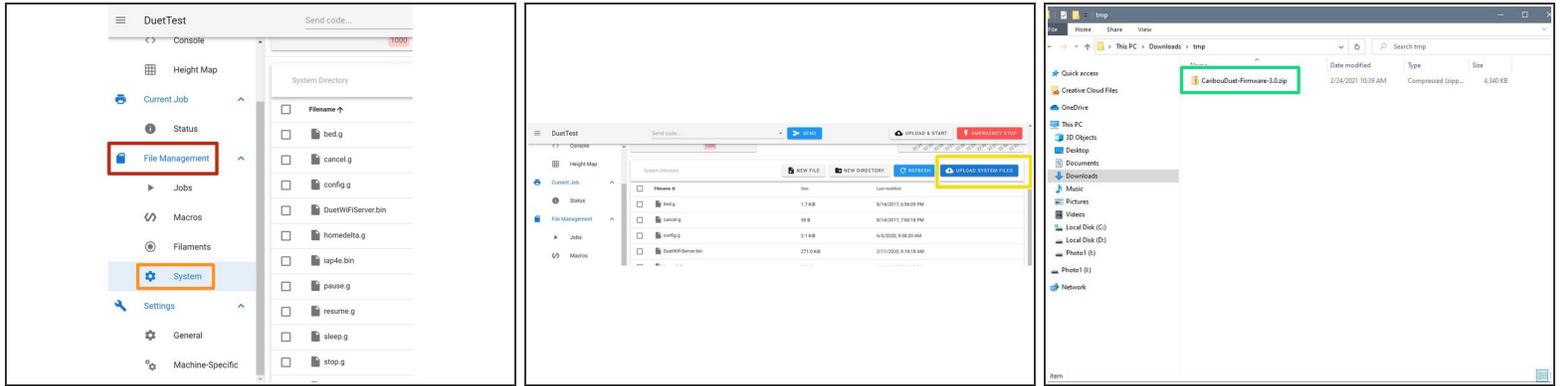
The right screenshot shows a file browser with the following structure:

- Configuration-Macros
- Duet2Wifi
 - 01_Latest Version 3.2
 - 02_Previous Version 3.1.1
 - 03_Previous Version 3.0
 - 04_Previous Version 2.0b
- TroubleShoot
- DuetWebControl
- PanelDue
- SD-Card
- SlicerBackground

The file 'CaribouDuet-Firmware-3.0.zip' is highlighted with a green box.

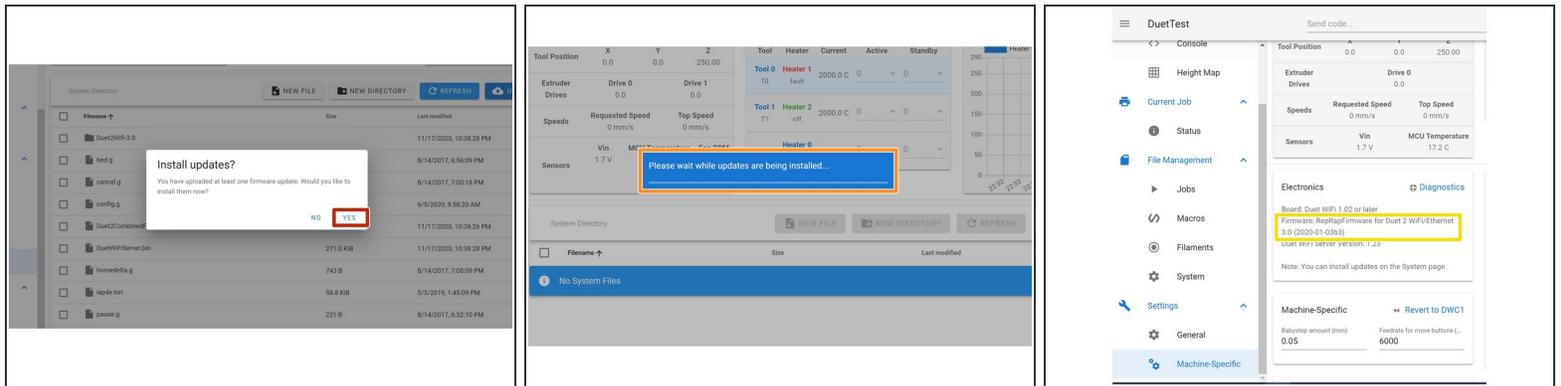
- In Duet WebControl goto:
 - "Settings"
 - "Machine Specific"
- Check the version that is currently installed. If you have a version 2.x you **must** first install version 3.0 otherwise the upgrade will fail.
- If you have installed a version 3.x you can continue to step 5. If you have a version 2.x continue to the next step
- ⚠ When version 2.x is installed you have to upgrade to Version 3.0 before upgrading to any higher firmware version. Continue to the next step.
- To upgrade to the version download the file [CaribouDuet-Firmware-3.0.zip](#) from the support website.

Step 3 — Installing System Files for 3.0



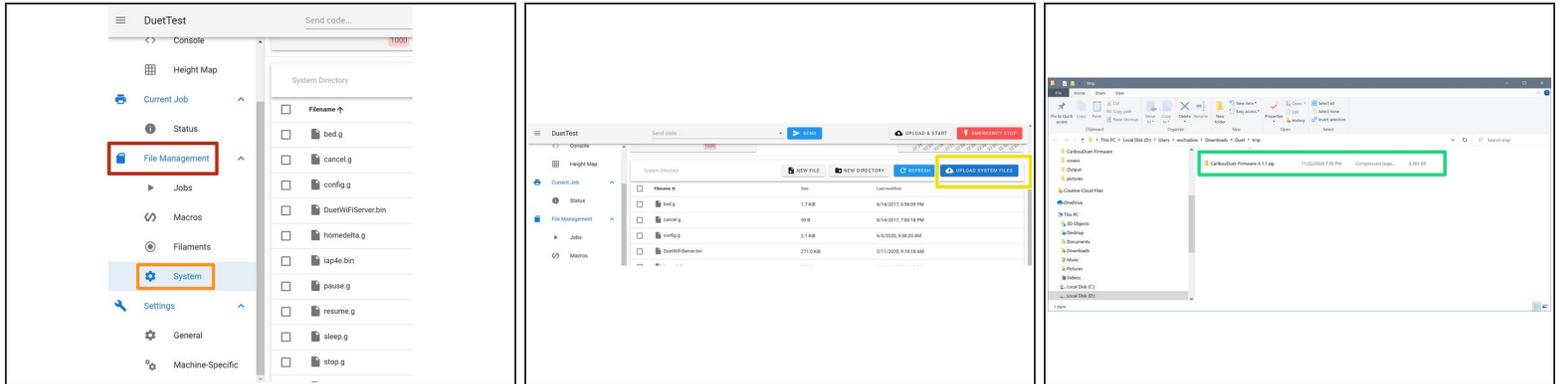
- In Duet Web Control click the following buttons:
 - File Management
 - System
 - Upload System Files
- Select the file "CaribouDuet-Firmware-3.0.zip" from the location where you have downloaded the file and click open. This will upload the archive to the /sys directory and extract the files.

Step 4 — Installing Firmware Version 3.0



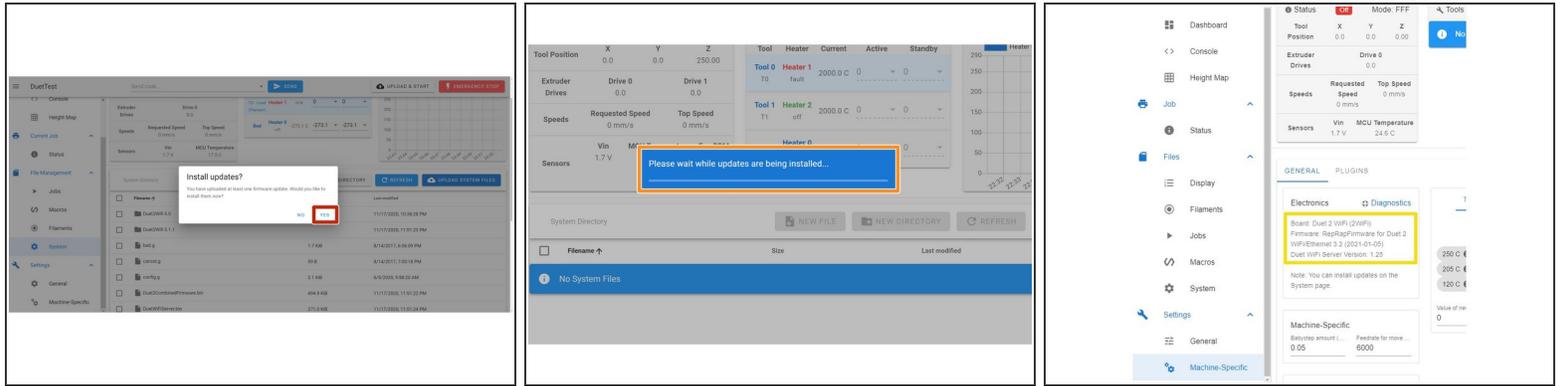
- Click "yes" to upgrade to firmware.
- The firmware is update and the connection temporarily disconnected. The update takes 30-60 seconds and the connection will be re-established automatically.
- After the update please check the installed version like you did in [step 2](#)
- ❗ If there were any issues or error messages please continue to steps 7 and 8.

Step 5 — Installing System Files for 3.2



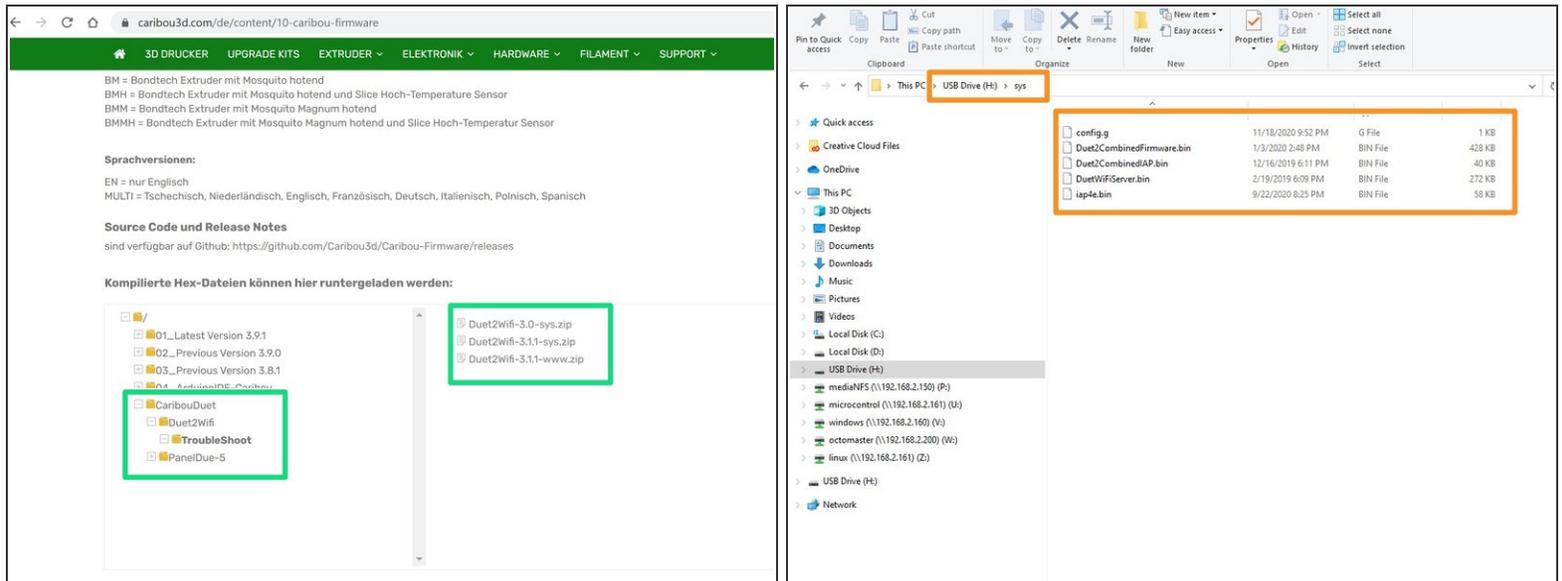
- In Duet WebControl goto:
 - Filemanagement
 - System
 - Update System Files
- Select the file "CaribouDuet-Firmware-3.2.zip" from the location where you have downloaded the files and click open. This will upload the archive to the /sys directory and extract the files.

Step 6 — Installing Firmware Version 3.1.1



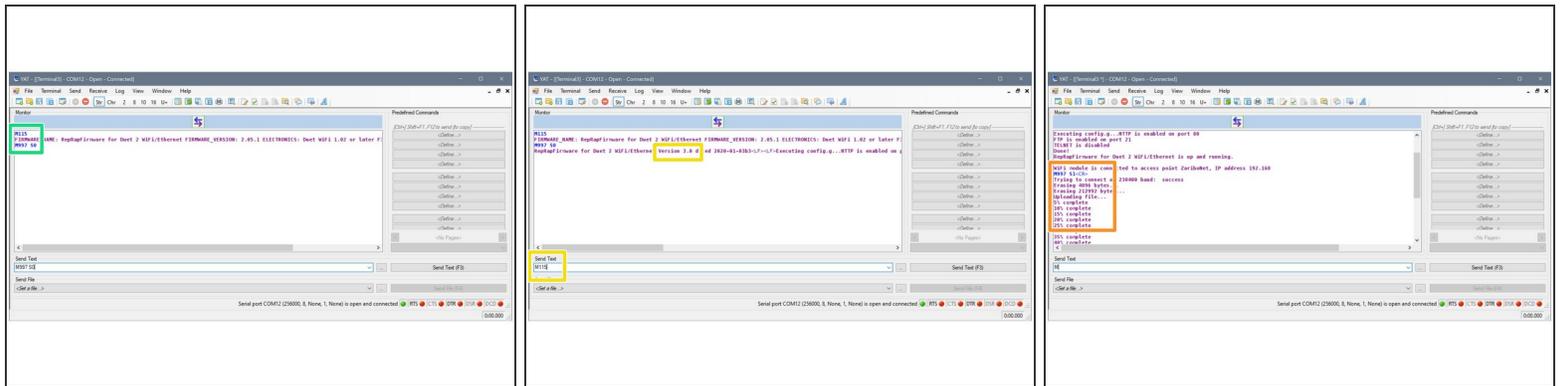
- Click "yes" to install firmware
- The firmware is update and the connection temporarily disconnected. The update takes 30-60 seconds and the connection will be re-established automatically.
- After the update please check the installed version like you did in [step 2](#)
- ❗ If there were any issues or error messages please continue to steps 9 and 10.
- ❗ Done with the firmware update

Step 7 — Troubleshooting RRF 3.0 (1)



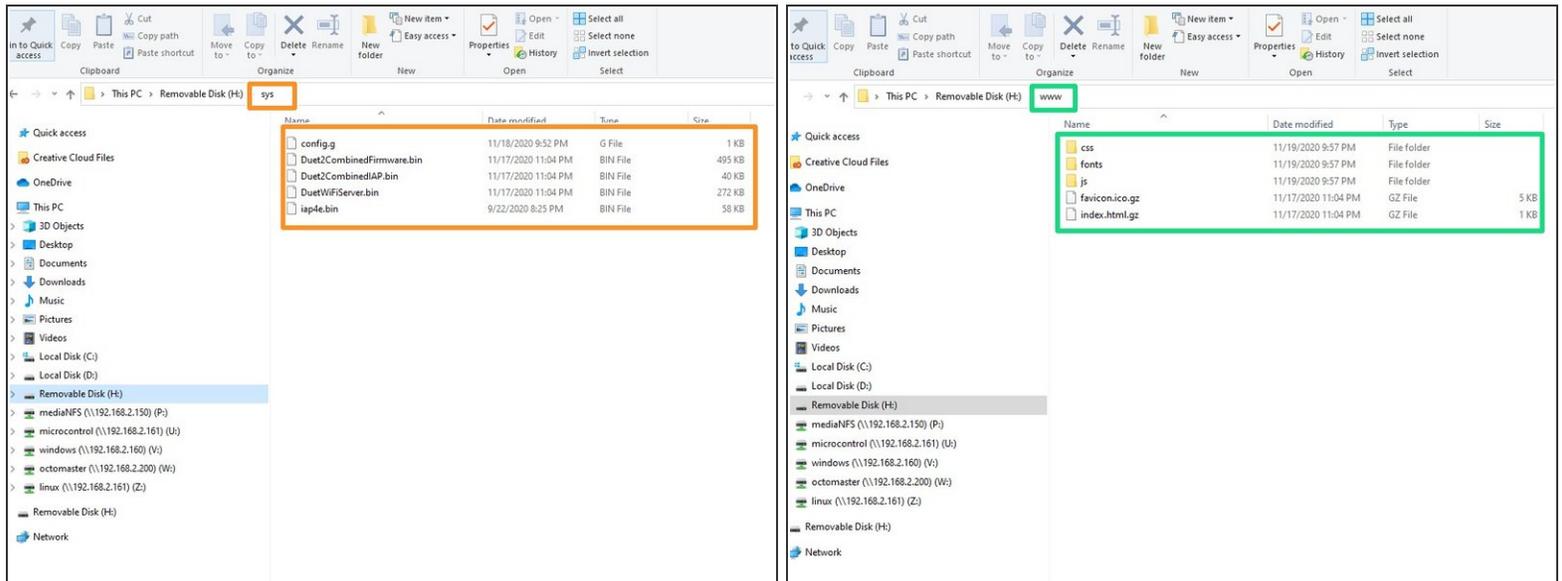
- Download the files from the "TroubleShoot" folder on CaribouDuet Firmware
- Take the on-board SD card out of the Duet2Wifi board and put it in a computer
- ⚠ Delete ANY existing firmware files in **/sys**
- Unpack the file "Duet2Wifi-3.0-sys.zip" into the folder **/sys**
- Eject/safely remove the SD card from the PC and put it back into the Duet2Wifi board

Step 8 — Troubleshooting: Installing Firmware 3.0



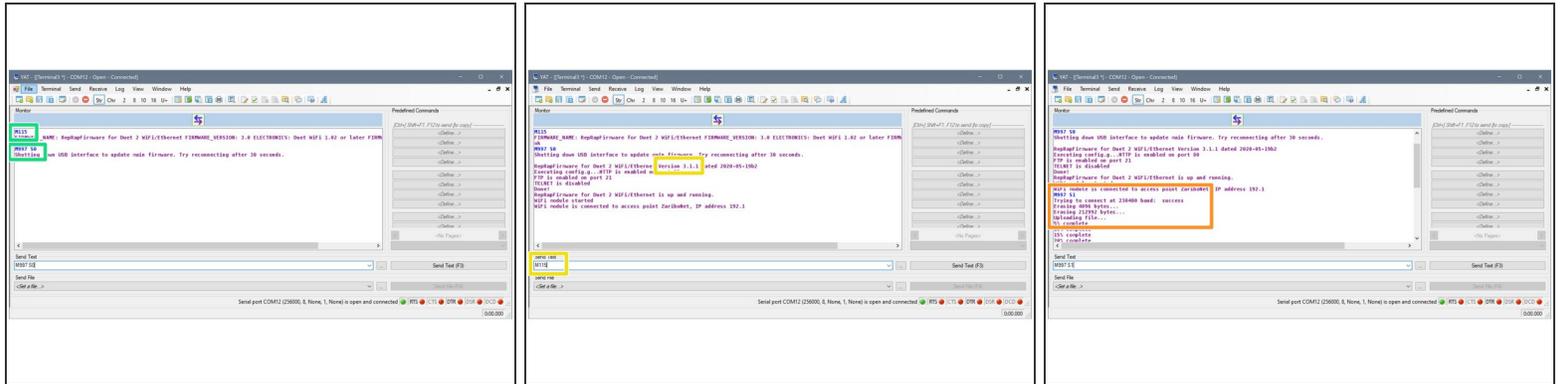
- Restart the Duet 2 WiFi and connect to your PC / Ipatop and the open Pronterface or YAT
- Send command **M997 S0** to install the firmware. The installation will take 20 seconds
- Send **M115** to confirm the new firmware version
- Send command **M997 S1** to install the WiFi module firmware.
- It will take about 30 seconds for installation of the WiFi module firmware. At the end of the process the blue light of the Wifi module should turn on

Step 9 — Troubleshooting: Preparing SD Card for Firmware 3.11



- Take the on-board SD card out of the Duet2Wifi board and put it in a computer
- ⚠ Delete ANY existing firmware files in /sys
- Unpack the file "Duet2Wifi-3.1.1-sys.zip" into the folder /sys
- ⚠ Delete ANY existing firmware files in /www
- Unpack the file "Duet2Wifi-3.1.1-www.zip" into the folder /www
- Eject/safely remove the SD card from the PC and put it back into the Duet2Wifi board

Step 10 — Troubleshooting: Installing Firmware 3.1.1



- Restart the Duet 2 WiFi and connect with Pronterface or YAT.
- Send command **M115** and make sure that firmware 3.0 is installed. Send command **M997 S0** to install the firmware. The installation will take 30 seconds
- Send **M115** to confirm the new firmware version
- Send command **M997 S1** to install the WiFi module firmware.
- It will take about 30 seconds for installation of the WiFi module firmware. At the end of the process the blue light of the Wifi module should turn on
- **i** You should now be able to connect to WebControl with your browser using the IP address you have obtained while doing the Wifi Set-up