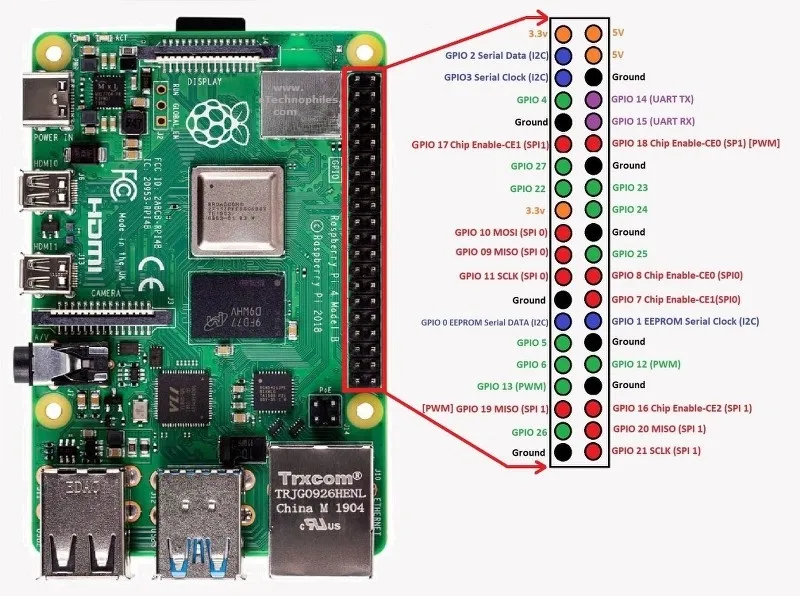
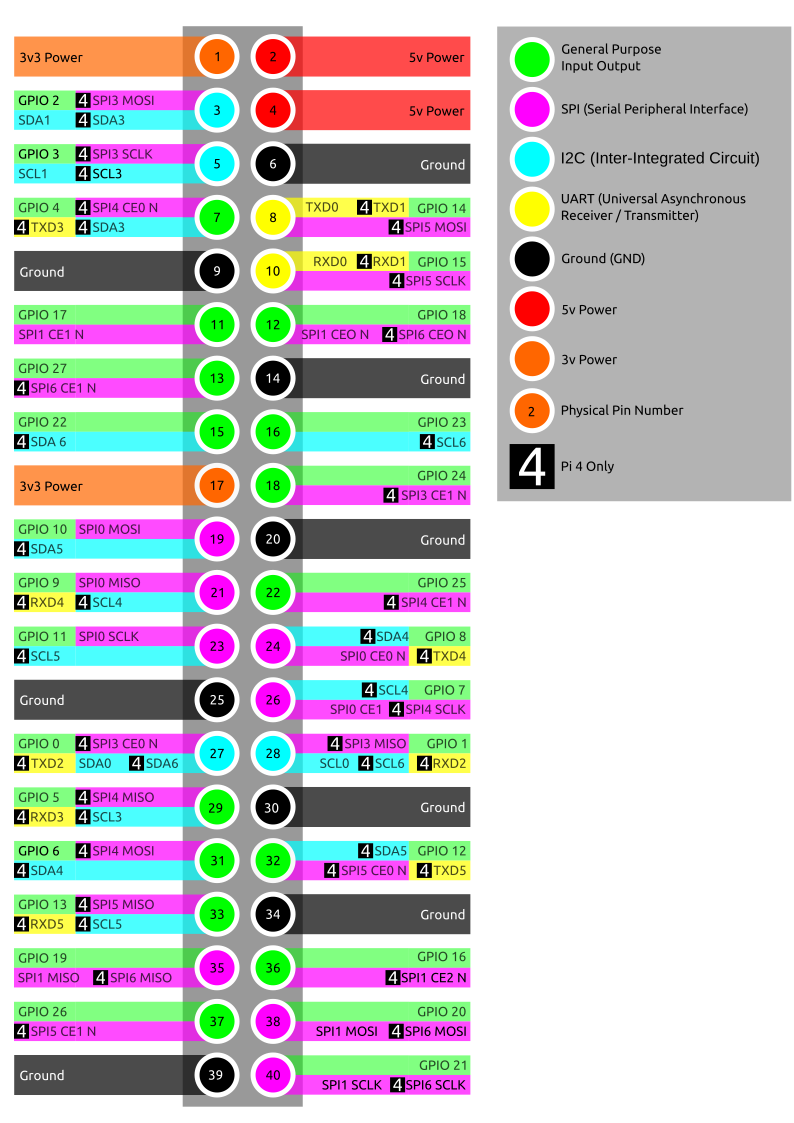
Raspberry Pi notes and builds





Wifi lte : LTE-F92B pass : 12345678

Teamviewer not always working, so using pitunnel instead

Pitunnel:

Pi4 Model B

From sd imaging : Pi OS (legacy) - Buster. - legacy for mono

* Mono
* Mission Planner
* OpenCV
* Gphoto2
  + Kill processes
  + Timelapse capture code
* TeamViewer
* Visual Studio Code
* MavProxy
* Video streamer
* LTE – LTE-F92B pass:12345678 if possible make image with it as default

Further

**Instructions**

Installing Mission Planner and QGroundControl on Rasp

Mission planner: \*\*note : mono works only on legacy raspbian buster, not bullseye yet

<https://www.mono-project.com/download/stable/#download-lin-raspbian>

<https://ardupilot.org/planner/docs/mission-planner-installation.html>

Go to /home/uberg/MissionPlanner

Open terminal window in that folder

Execute mono MissionPlanner**.**exe

QGroundControl \*supposed to be more stable

**Terminal commands for reinitialisation of a raspberry pi’s sd card (may 6,2022):**

\*\*\*\*pitunnel to access vnc and ssh

curl -s https://pitunnel.com/install/4j6TopcTd | sudo python3

\*\*\*\*mono https://www.mono-project.com/download/stable/#download-lin-raspbian

sudo apt install apt-transport-https dirmngr gnupg ca-certificates

sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv-keys 3FA7E0328081BFF6A14DA29AA6A19B38D3D831EF

echo "deb https://download.mono-project.com/repo/debian stable-raspbianbuster main" | sudo tee /etc/apt/sources.list.d/mono-official-stable.list

sudo apt update

sudo apt upgrade

sudo apt install mono-devel

\*\*\*\*

\*\*\*\*mission planner https://ardupilot.org/planner/docs/mission-planner-installation.html \*\*\*\*

\*\*\*\*opencv, gphoto, likes to be told to install separately Display USB camera video with Python OpenCV with Raspberry Pi (linuxtut.com)

sudo apt-get install usbutils python3-opencv libcanberra-gtk3-module v4l-utils qv4l2

\*\*\*\*

\*\*\*\*

\*\*\*\*mavproxy and controlling drone with raspberry pi

sudo apt-get update

sudo apt-get upgrade

\*\*not needed sudo apt-get install python-pip

\*\*not needed sudo apt-get install python-dev

sudo pip install future

sudo apt-get install screen python-wxgtk4.0 python-lxml

sudo pip install pyserial

sudo pip install dronekit

sudo pip install MAVProxy

sudo raspi-config : disabule UART for console, enable for serial port

go into /boot/config.txt and add "dtoverlay=disable-bt"

if ttyAMA0 isn’t in /dev, enable\_uart=1 in /boot/config

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

May7 image

Mavproxy.py --master=/dev/ttyUSB0

MAVProxy will, by default, show corrupted packets. To disable showing them, use set shownoise false in the MAVProxy console.

Text alert

[Raspberry Pi Tutorial 43: Send a Text Message!](https://www.youtube.com/watch?v=Oi37lg_ciJ8)



Web server

[Raspberry Pi Tutorial 39 - Setup a Website on your Pi! - YouTube](https://www.youtube.com/watch?v=5T69IQp6q2Q&list=PLNnwglGGYoTvy37TSGFlv-aFkpg7owWrE&index=43)



Add a crontab entry:  
0 5 \* \* \* /usr/bin/python /home/pi/python/ipget/myip.py

## **Making it robust**

The PI has a habit of becoming disconnected from the Wifi. With a headless machine you then don't know if it is working. It seems to be because the Wifi hardware gets powered off and then it has a hard time reconnecting. I did this to prevent the power off:  
sudo iw dev wlan0 set power\_save off

I used to have a lot of crashes where the PI froze. I thought it was power issues and finally concluded it was an issue with the SSD frequency that I had changed.

Now I see some occasional java VM crashes. I am researching those.

I wanted the Pi to automatically restart FoxTelm if it crashed. I researched the watchdog and found it to be quite complex, so I never installed it. Instead I created a cron entry that watches to see if FoxTelem is running and restarts it if it is not. It is based on the [robust scripts from the Fox Server](https://github.com/ac2cz/FoxServerSide/blob/master/cron/server_running).