Setup MODAC SD Image

(15Aug2020 - needs updating once new Raspberry Pi OS works)

This document provides details from the original development of the MODAC PoC system’s SD card image. There have been several updated versions of both the OS and support libraries since that time.

Setup per: <https://www.raspberrypi.org/documentation/installation/installing-images/mac.md>

Start by downloading Raspbian Stretch with desktop and recommended software from (NOTE: raspbian is no longer the default OS for raspberry pi, but MODAC was built with these versions)

<https://www.raspberrypi.org/downloads/raspbian/>

2019-04-08-raspbian-stretch-full (in Mac’s project RPi3BPlus)

2019-07-10-raspbian-buster-full IFA Kiln Controller/Pi Images

SD Card is 32GB formatted FAT-32,

if it shows up read-only on mac : check physical lock issue

<https://www.youtube.com/watch?v=nehn7mh81vs>

part way tween open/locked

get BalenaEtcher <https://www.balena.io/etcher/>

select image, select drive, go… wait 30min or so

put sd card in Pi

boots to desktop, setup location,

pi user change pwd: modac

screen size (black box not visible)

setup wifi access – (isdale home, IfA location?)

rasp-config : enable i2c/spi interface options

reboot

copy & run [getModac.sh](https://github.com/morphoptic/modac1/blob/master/setupPi/getModac.sh)

from usb drive or github.com/morphoptic/…/setupPi

updates & configures os, installs software libraries, etc

Install Modac directory

edit shell scripts with to point to it properly

edit .bashrc and .rclocal

Install any extra utilities (eg. JetBrains pyCharm is very nice Python IDE for development)

Setup Ethernet Port for local comms

pynng requires an environ variable set to avoid an issue with loading a \_nng dependency

scipy (thermocouple) requires several things.

see update notes.txt on new raspOS card MODAC\_Dev/setupPi