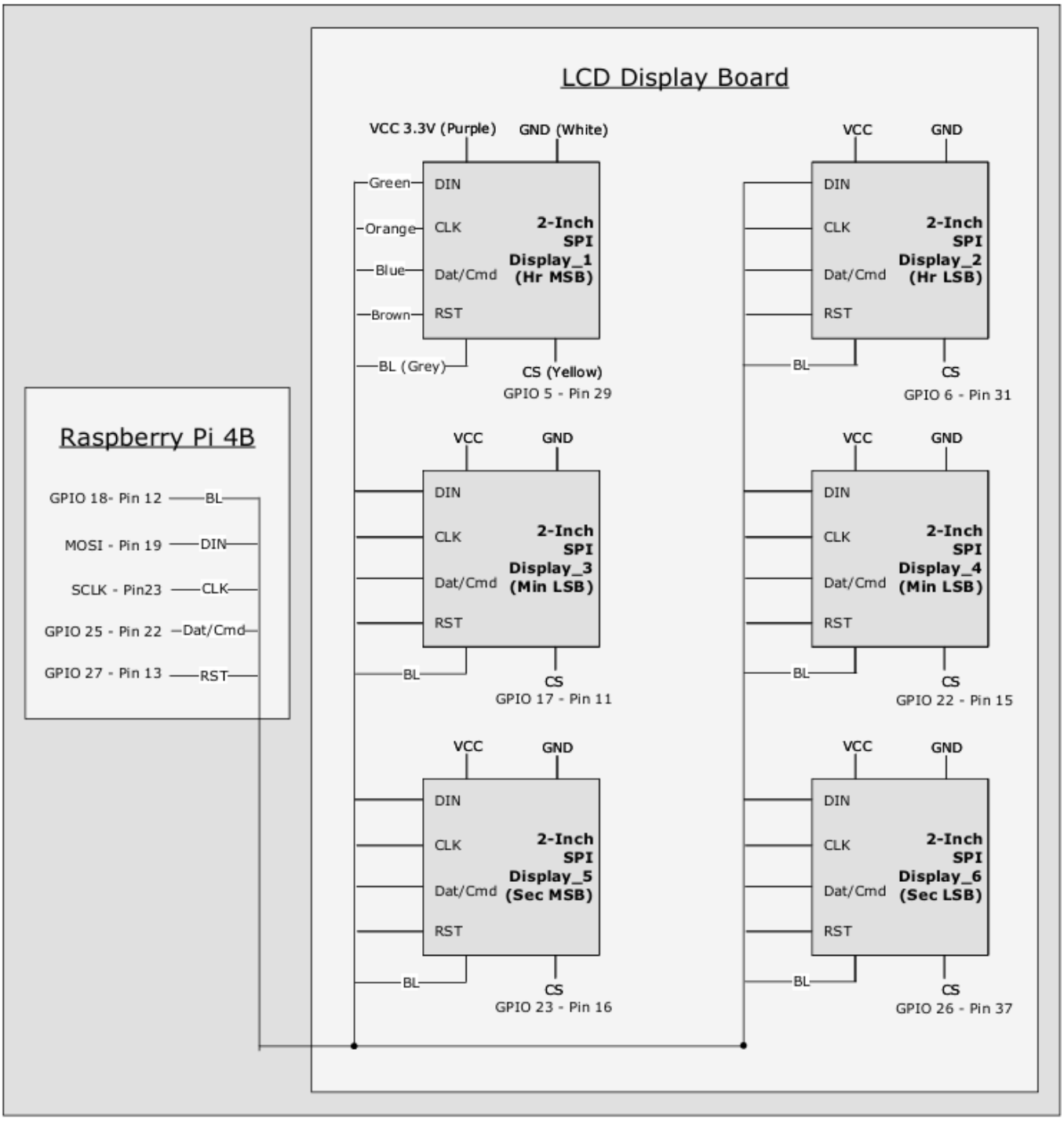
LCD Display Board
Raspberry Pi 4B
GPIO 18- Pin 12
BL
MOSI - Pin 19
DIN
SCLK - Pin23
CLK
GPIO 25 - Pin 22
Dat/Cmd
GPIO 27 - Pin 13
RST
VCC 3.3V (Purple)
GND (White)
Green
Orange
Blue
Brown
BL (Grey)
DIN
CLK
Dat/Cmd
RST
2-Inch SPI Display_1 (Hr MSB)
CS (Yellow)
GPIO 5 - Pin 29
VCC
GND
2-Inch SPI Display_2 (Hr LSB)
BL
CS
GPIO 6 - Pin 31
2-Inch SPI Display_3 (Min LSB)
GPIO 17 - Pin 11
2-Inch SPI Display_4 (Min LSB)
GPIO 22 - Pin 15
2-Inch SPI Display_5 (Sec MSB)
GPIO 23 - Pin 16
2-Inch SPI Display_6 (Sec LSB)
GPIO 26 - Pin 37

The following will work to allow you to use as many devices as you can find spare GPIO.

Find 8 spare GPIO (i.e. not being used by SPI or anything else in your project). Do not use or connect CE0.

I will refer to them as G1 to G8.

Connect the slave select (or whatever it is called for your chips) of ADC1 to G1, ADC2 to G2, ..., ADC8 to G8.

Connect the other SPI signals (MISO/MOSI/SCLK) in parallel to the ADCs as normal.

Initialise each of G1 to G8 as a high output.

Open the SPI device associated with CE0 (/dev/spidev0.0). Note, nothing should be connected to CE0.

To communicate with ADCx do the following.

1. Set Gx low.
2. Do a SPI transfer to the opened SPI device.
3. Set Gx high.

Repeat as needed for each ADC.

waveshare 2inch LCD Display Module,
Compatible with Raspberry Pi/Pi zero/Arduino/Esp32,
with ST7789 Driver, 262K Color, IPS Screen,
240×320 Resolution, SPI Interface WITH Cable.
Amazon $15 x 6 = 90 + 8 = 98 (tax, free ship)
Ordered 1/27/25

RPi (2G RAM), Heatsink, Tape, Pwr-Sup
adafruit 56+16+5= 77 (ship,tax)
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98+77 = $175