

# MCU – ESP32–S3–WROOM–1 N16R8

Dual–core LX7 @ 240MHz, 16MB Flash, 8MB PSRAM

## GPIO ASSIGNMENT TABLE

### Display (8080 parallel):

GPIO4–11 = D0–D7 (8–bit data bus)  
GPIO12=CS GPIO13=RST GPIO14=DC  
GPIO46=WR GPIO3=RD GPIO45=BL

### Audio (I2S):

GPIO15=BCLK GPIO16=LRCK GPIO17=DOUT

### SD Card (SPI):

GPIO36=MOSI GPIO37=MISO GPIO38=CLK GPIO39=CS

### Controls (active low, 10k pull–up):

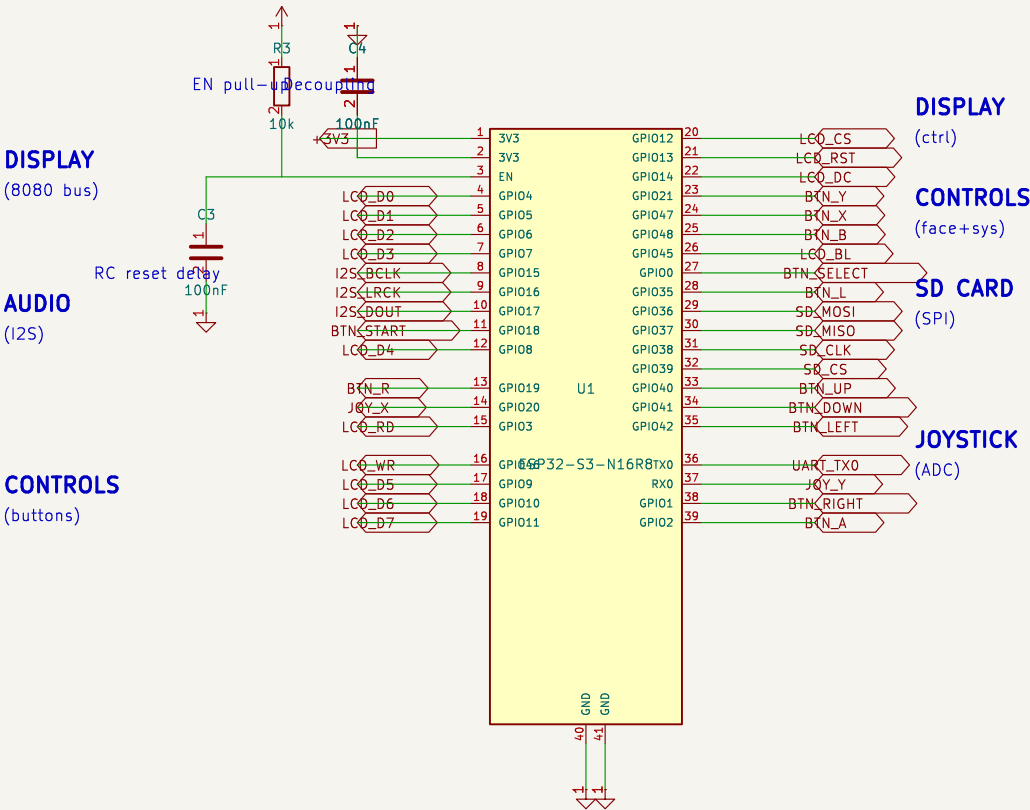
D–pad: GPIO40=UP 41=DOWN 42=LEFT 1=RIGHT  
Face: GPIO2=A 48=B 47=X 21=Y  
Sys: GPIO18=START 0=SELECT 35=L 19=R

### Joystick (ADC, optional):

GPIO20=X\_AXIS (ADC2\_CH9)  
GPIO44/RX0=Y\_AXIS (ADC2\_CH7)

### Reserved (do not use):

GPIO26–32 = Octal PSRAM (internal)  
GPIO43 = TX0 (debug UART output)



Generated by scripts/generate\_schematics  
ESP32 Emu Turbo – Handheld Retro Console

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