

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 (RD/BL tied +3V3 on FPC)

Audio (I2S):

GPIO15=BCLK GPIO16=LRCK GPIO17=DOUT

SD Card (SPI):

GPIO44=MOSI GPIO43=MISO GPIO38=CLK GPIO3

Controls (active low, 10k pull–up):

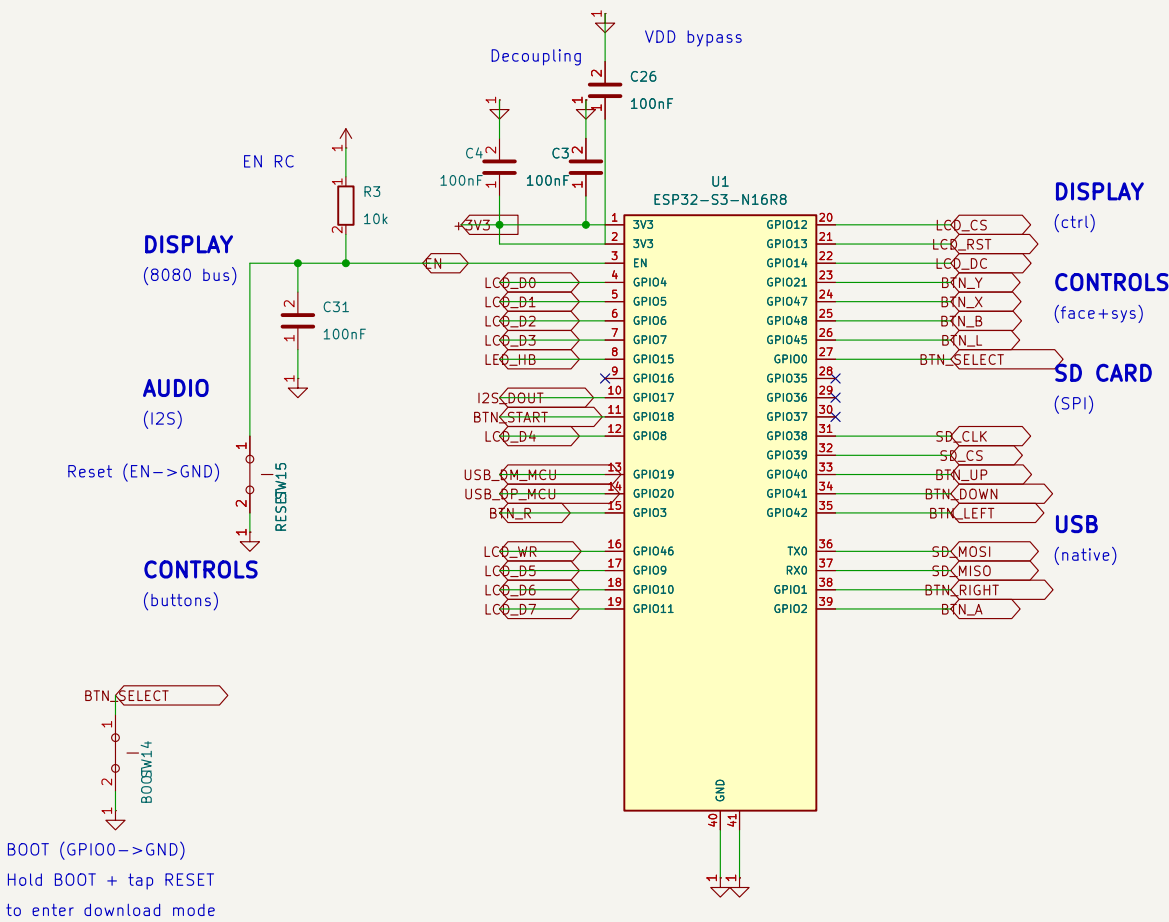
D–pad: GPIO40=UP 41=DOWN 42=LEFT 1=RIGHT
Face: GPIO2=A 48=B 47=X 21=Y
Sys: GPIO18=START 0=SELECT 45=L 3=R

USB (native, firmware flash + debug):

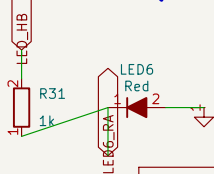
GPIO19=D– GPIO20=D+

Reserved (do not use, module–internal):

GPIO26–32 = Octal Flash (N16)
GPIO33–37 = Octal PSRAM (R8)



HEARTBEAT LED (GPIO15, DNP in production)



Generated by scripts/generate_schematics
ESP32 Emu Turbo – Handheld Retro Console

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