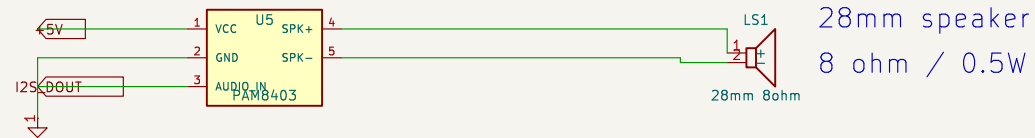


# AUDIO OUTPUT

I2S DAC -> PAM8403 Class-D Amplifier -> 28mm 8ohm Speaker

## I2S Bus (directly from ESP32-S3):

I2S_BCLK	GPIO15 - Bit Clock (1.411 MHz @ 44.1kHz)
I2S_LRCK	GPIO16 - L/R Word Select (44.1kHz)
I2S_DOUT	GPIO17 - Serial Data Out -> PAM8403



## Design Notes:

- PAM8403: filterless Class-D stereo amplifier (3W per channel max)
- Only one channel used for mono audio
- No external DAC needed: ESP32-S3 has built-in I2S with DMA
- Powered from +5V rail for max headroom (3.3V limits volume)
- DMA-driven audio streaming for low CPU overhead

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ESP32 Emu Turbo - Handheld Retro Console

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File: 04-audio.kicad\_sch

**Title: Audio - I2S -> PAM8403 -> Speaker**

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