

R2D2 Alarm Clock Project Documentation

2. Wiring & Pinout List (ESP32-C3 SuperMini)

The Display (TM1637)

- VCC → 5V
- GND → GND
- CLK → GPIO 20
- DIO → GPIO 21

The Audio (DFPlayer Mini YX5200)

- VCC → 3.3V (*Not the 5V)
- GND → GND
- RX → GPIO 6
- TX → GPIO 8
- SPK_1 / SPK_2 → Connect directly to Speaker

The Knob (HW-040 360 Degrees Rotary Encoder)

- VCC → 5V
- GND → GND
- SW (Switch) → GPIO 3
- DT (Data) → GPIO 4
- CLK (Clock) → GPIO 5

The LEDs

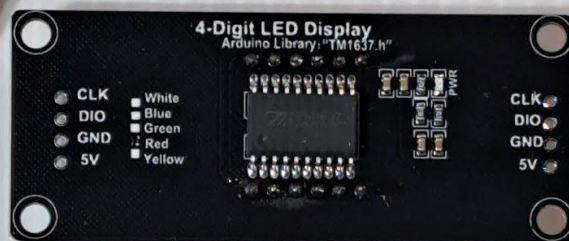
- Red LED → GPIO 2 (Use 220Ω Resistor)
- White LED → GPIO 7 (Use 100Ω or 220Ω Resistor)
- Blue LEDs → GPIO 10 (Use 100Ω or 220Ω Resistor)

Speaker 40lms

Esp32 C3 SMini

Rotary Encoder hw-040

tm-1637.h



2leds@3mm, 2leds@5mm



3 resistors@220 1 resistor@100
@100lms

