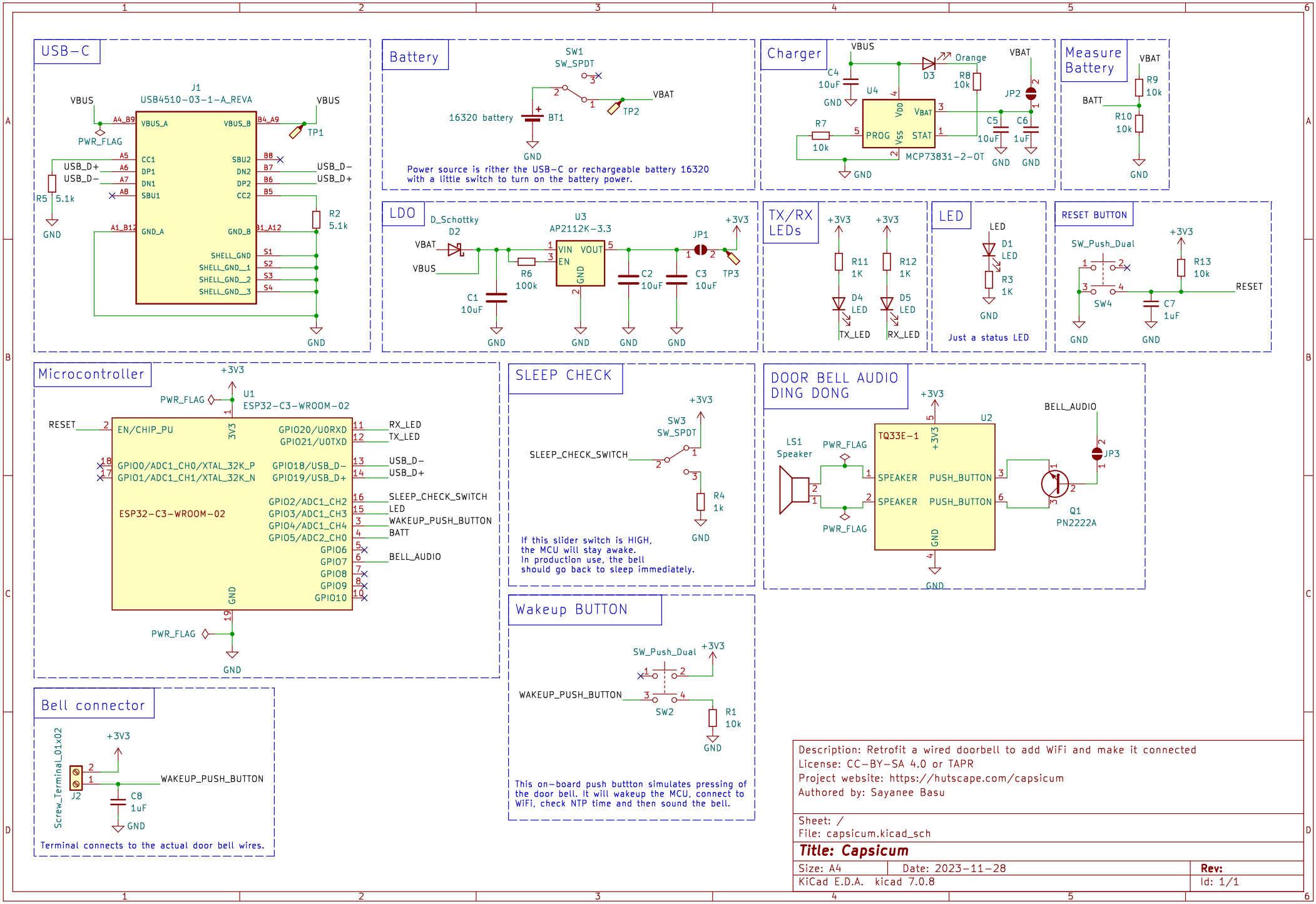
USB-C
J1
USB4510-03-1-A_REVA
VBUS
PWR_FLAG
TP1
USB_D+
USB_D-
R5 5.1k
GND
R2 5.1k
Battery
SW1
SW_SPDT
16320 battery
BT1
TP2
VBAT
Power source is rither the USB-C or rechargeable battery 16320 with a little switch to turn on the battery power.
Charger
Orange
D3
R8 10k
C4 10uF
U4
MCP73831-2-OT
R7 10k
JP2
C5 10uF
C6 1uF
Measure Battery
R9 10k
R10 10k
BATT
LDO
D_Schottky
D2
U3
AP2112K-3.3
R6 100k
C1 10uF
C2 10uF
C3 10uF
JP1
TP3
+3V3
TX/RX LEDs
R11 1K
R12 1K
D4 LED
D5 LED
TX_LED
RX_LED
LED
D1 LED
R3 1K
Just a status LED
RESET BUTTON
SW_Push_Dual
SW4
R13 10k
C7 1uF
RESET
Microcontroller
U1
ESP32-C3-WROOM-02
EN/CHIP_PU
GPIO20/U0RXD
GPIO21/U0TXD
GPIO0/ADC1_CH0/XTAL_32K_P
GPIO1/ADC1_CH1/XTAL_32K_N
GPIO18/USB_D-
GPIO19/USB_D+
GPIO2/ADC1_CH2
GPIO3/ADC1_CH3
GPIO4/ADC1_CH4
GPIO5/ADC2_CH0
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
RX_LED
TX_LED
SLEEP_CHECK_SWITCH
WAKEUP_PUSH_BUTTON
BELL_AUDIO
SLEEP CHECK
SW3
SW_SPDT
R4 1k
If this slider switch is HIGH, the MCU will stay awake. In production use, the bell should go back to sleep immediately.
DOOR BELL AUDIO DING DONG
U2
TQ33E-1
LS1 Speaker
SPEAKER
PUSH_BUTTON
JP3
Q1 PN2222A
Wakeup BUTTON
SW2
R1 10k
This on-board push buttton simulates pressing of the door bell. It will wakeup the MCU, connect to WiFi, check NTP time and then sound the bell.
Bell connector
Screw_Terminal_01x02
J2
C8 1uF
Terminal connects to the actual door bell wires.
Description: Retrofit a wired doorbell to add WiFi and make it connected
License: CC-BY-SA 4.0 or TAPR
Project website: https://hutscape.com/capsicum
Authored by: Sayanee Basu
Sheet: /
File: capsicum.kicad_sch
Title: Capsicum
Size: A4
Date: 2023-11-28
Rev:
KiCad E.D.A. kicad 7.0.8
Id: 1/1