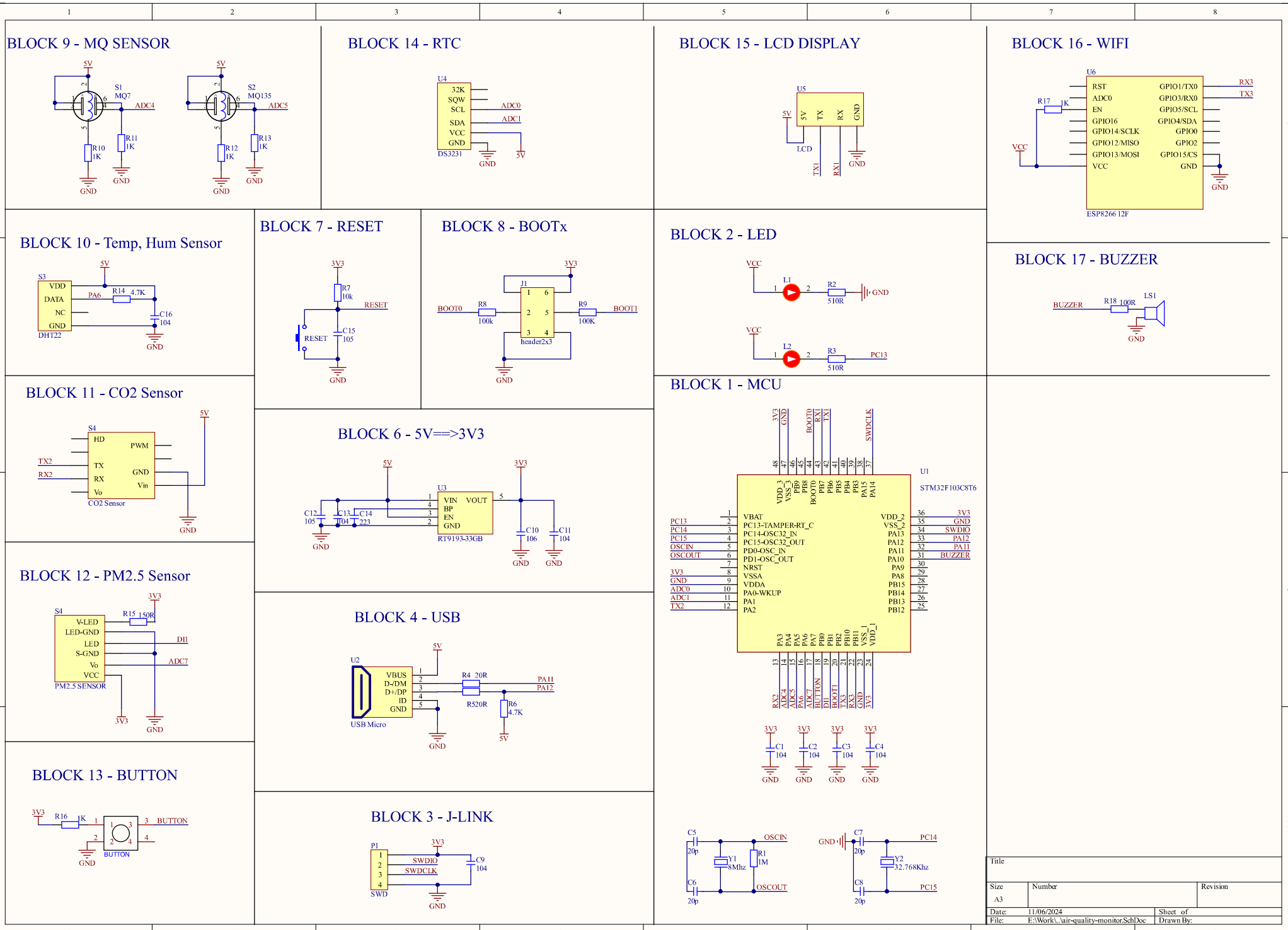
BLOCK 9 - MQ SENSOR
S1 MQ7
S2 MQ135
ADC4
ADC5
R10 1K
R11 1K
R12 1K
R13 1K
BLOCK 14 - RTC
U4
32K
SQW
SCL
SDA
VCC
GND
DS3231
ADC0
ADC1
BLOCK 15 - LCD DISPLAY
U5
5V
TX
RX
GND
LCD
TX1
RX1
BLOCK 16 - WIFI
U6
RST
ADC0
EN
GPIO16
GPIO14/SCLK
GPIO12/MISO
GPIO13/MOSI
VCC
GPIO1/TX0
GPIO3/RX0
GPIO5/SCL
GPIO4/SDA
GPIO0
GPIO2
GPIO15/CS
GND
RX3
TX3
R17 1K
ESP8266 12F
BLOCK 10 - Temp, Hum Sensor
S3
VDD
DATA
NC
GND
DHT22
PA6
R14 4.7K
C16 104
BLOCK 7 - RESET
R7 10k
RESET
C15 105
BLOCK 8 - BOOTx
J1
header2x3
BOOT0
BOOT1
R8 100k
R9 100K
BLOCK 2 - LED
L1
L2
R2 510R
R3 510R
PC13
BLOCK 17 - BUZZER
BUZZER
R18 100R
LS1
BLOCK 11 - CO2 Sensor
S4
HD
TX
RX
Vo
PWM
GND
Vin
TX2
RX2
CO2 Sensor
BLOCK 6 - 5V==>3V3
U3
VIN
BP
EN
GND
VOUT
RT9193-33GB
C12 105
C13 104
C14 223
C10 106
C11 104
BLOCK 1 - MCU
U1
STM32F103C8T6
VBAT
PC13-TAMPER-RT_C
PC14-OSC32_IN
PC15-OSC32_OUT
PD0-OSC_IN
PD1-OSC_OUT
NRST
VSSA
VDDA
PA0-WKUP
PA1
PA2
VDD_2
VSS_2
PA13
PA12
PA11
PA10
PA9
PA8
PB15
PB14
PB13
PB12
PA3
PA4
PA5
PA6
PA7
PB0
PB1
PB2
PB10
PB11
VSS_1
VDD_1
SWDIO
SWDCLK
BUZZER
OSCIN
OSCOUT
C1 104
C2 104
C3 104
C4 104
C5 20p
C6 20p
Y1 8Mhz
R1 1M
C7 20p
C8 20p
Y2 32.768Khz
BLOCK 12 - PM2.5 Sensor
S4
V-LED
LED-GND
LED
S-GND
Vo
VCC
PM2.5 SENSOR
R15 150R
DI1
ADC7
BLOCK 4 - USB
U2
VBUS
D-/DM
D+/DP
ID
GND
USB Micro
R4 20R
R520R
R6 4.7K
PA11
PA12
BLOCK 13 - BUTTON
R16 1K
BUTTON
BLOCK 3 - J-LINK
P1
SWD
SWDIO
SWDCLK
C9 104
Title
Size
A3
Number
Revision
Date: 11/06/2024
Sheet of
File: E:\Work\..\air-quality-monitor.SchDoc
Drawn By: