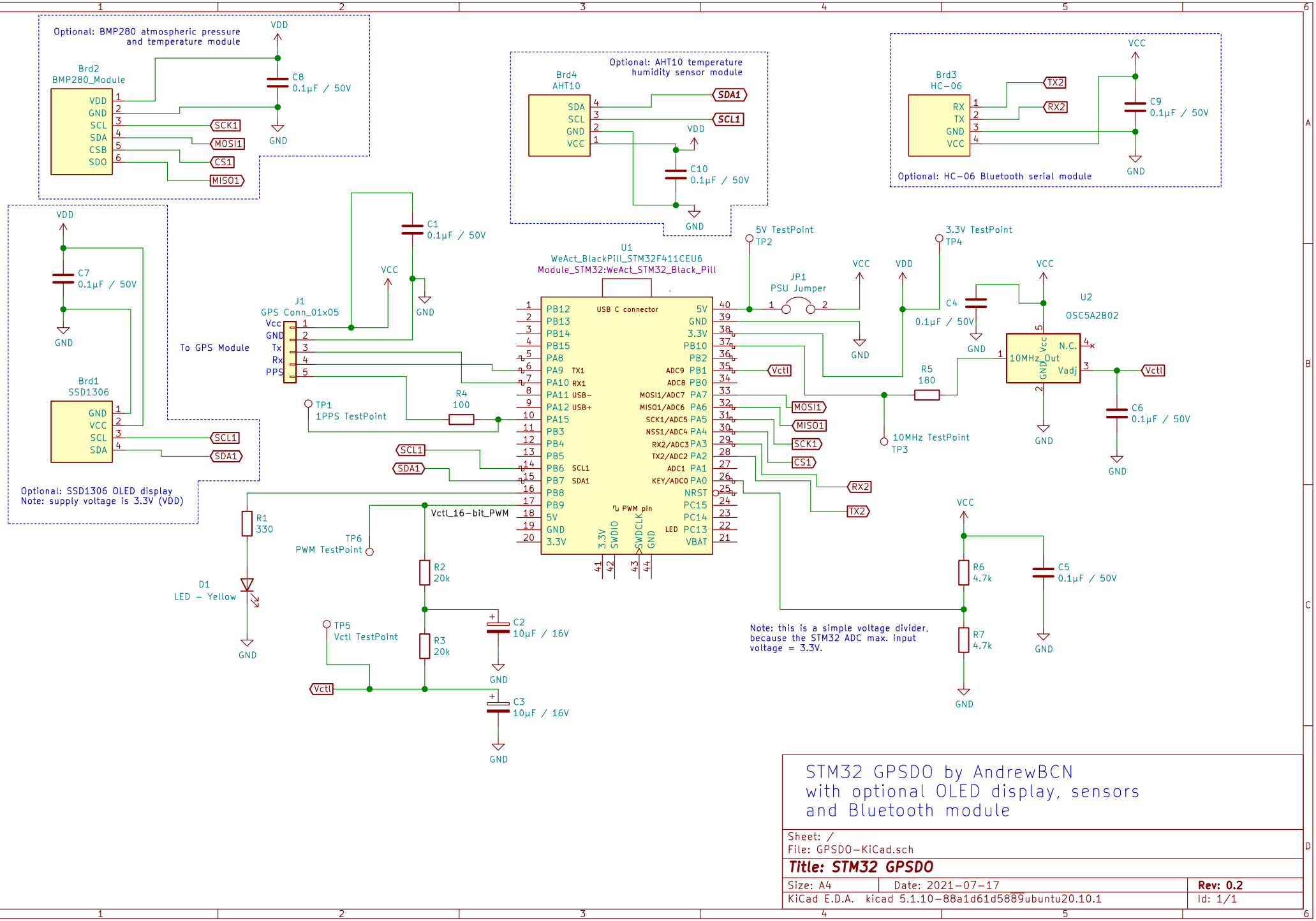
Optional: BMP280 atmospheric pressure and temperature module
Brd2
BMP280_Module
VDD
GND
SCL
SDA
CSB
SDO
SCK1
MOSI1
CS1
MISO1
C8
0.1µF / 50V
Optional: AHT10 temperature humidity sensor module
Brd4
AHT10
SDA1
SCL1
C10
0.1µF / 50V
Optional: HC-06 Bluetooth serial module
Brd3
HC-06
RX
TX
TX2
RX2
C9
0.1µF / 50V
Optional: SSD1306 OLED display
Note: supply voltage is 3.3V (VDD)
Brd1
SSD1306
C7
0.1µF / 50V
To GPS Module
J1
GPS Conn_01x05
Vcc
Tx
Rx
PPS
C1
0.1µF / 50V
U1
WeAct_BlackPill_STM32F411CEU6
Module_STM32:WeAct_STM32_Black_Pill
USB C connector
PB12
PB13
PB14
PB15
PA8
PA9 TX1
PA10 RX1
PA11 USB-
PA12 USB+
PA15
PB3
PB4
PB5
PB6 SCL1
PB7 SDA1
PB8
PB9
5V
GND
3.3V
PB10
PB2
ADC9 PB1
ADC8 PB0
MOSI1/ADC7 PA7
MISO1/ADC6 PA6
SCK1/ADC5 PA5
NSS1/ADC4 PA4
RX2/ADC3 PA3
TX2/ADC2 PA2
ADC1 PA1
KEY/ADC0 PA0
NRST
PC15
PC14
LED PC13
VBAT
PWM pin
SWDIO
SWDCLK
5V TestPoint
TP2
JP1
PSU Jumper
3.3V TestPoint
TP4
C4
0.1µF / 50V
U2
OSC5A2B02
10MHz_Out
N.C.
Vadj
C6
0.1µF / 50V
R5
180
10MHz TestPoint
TP3
TP1
1PPS TestPoint
R4
100
Vctl
MOSI1
MISO1
SCK1
CS1
RX2
TX2
SCL1
SDA1
R1
330
D1
LED - Yellow
TP6
PWM TestPoint
Vctl_16-bit_PWM
R2
20k
R3
20k
C2
10µF / 16V
C3
10µF / 16V
TP5
Vctl TestPoint
R6
4.7k
R7
4.7k
C5
0.1µF / 50V
Note: this is a simple voltage divider, because the STM32 ADC max. input voltage = 3.3V.
STM32 GPSDO by AndrewBCN
with optional OLED display, sensors
and Bluetooth module
Sheet: /
File: GPSDO-KiCad.sch
Title: STM32 GPSDO
Size: A4
Date: 2021-07-17
Rev: 0.2
KiCad E.D.A. kicad 5.1.10-88a1d61d5889ubuntu20.10.1
Id: 1/1