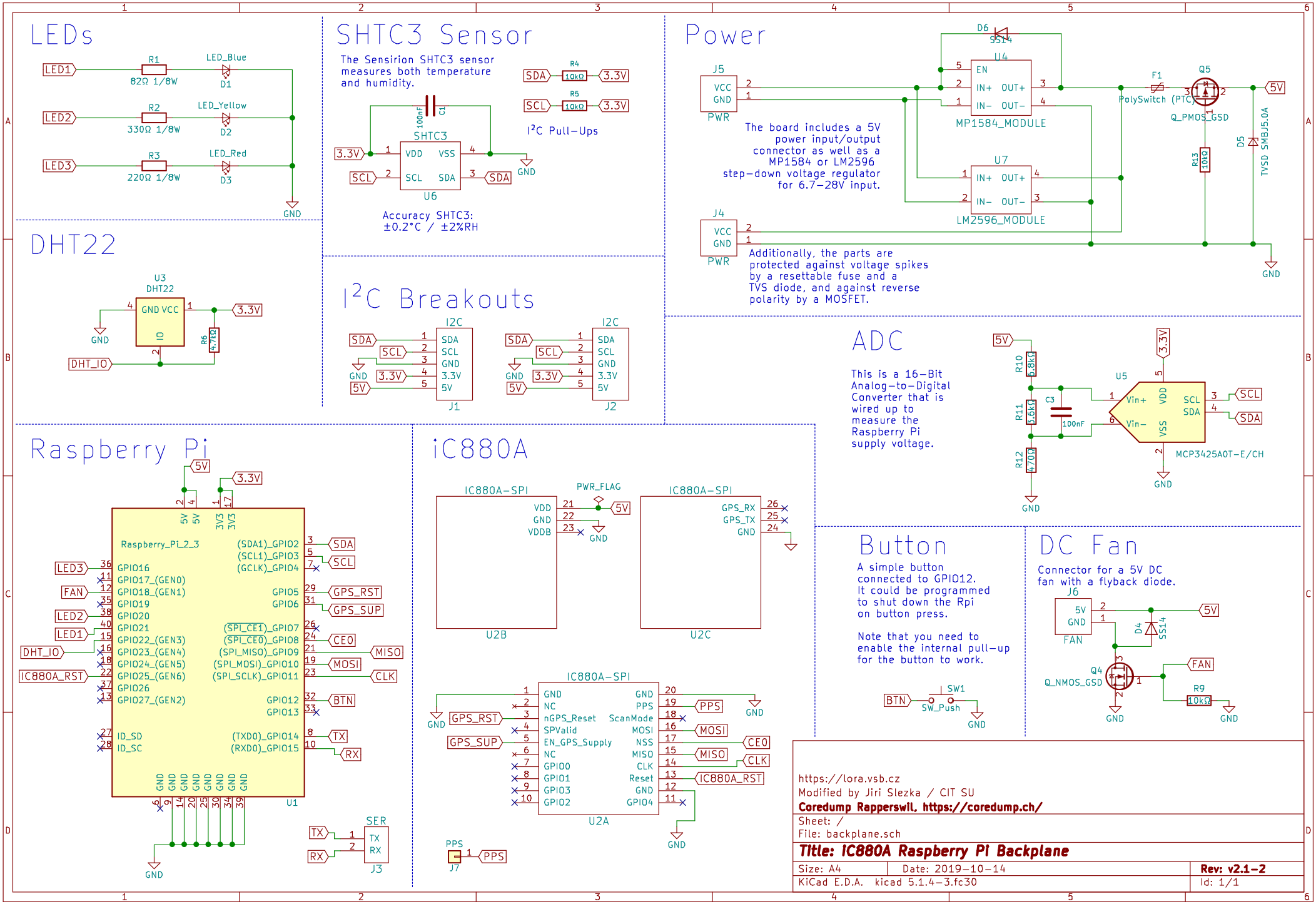
LEDs
LED1
R1
82Ω 1/8W
LED_Blue
D1
LED2
R2
330Ω 1/8W
LED_Yellow
D2
LED3
R3
220Ω 1/8W
LED_Red
D3
GND
SHTC3 Sensor
The Sensirion SHTC3 sensor measures both temperature and humidity.
100nF
C1
SHTC3
3.3V
VDD
VSS
SCL
SDA
GND
U6
Accuracy SHTC3:
±0.2°C / ±2%RH
R4
10kΩ
R5
10kΩ
I²C Pull-Ups
Power
J5
VCC
GND
PWR
The board includes a 5V power input/output connector as well as a MP1584 or LM2596 step-down voltage regulator for 6.7-28V input.
D6
SS14
U4
EN
IN+
OUT+
IN-
OUT-
MP1584_MODULE
U7
LM2596_MODULE
F1
PolySwitch (PTC)
Q5
Q_PMOS_GSD
5V
R13
10kΩ
D5
TVSD SMBJ5.0A
J4
Additionally, the parts are protected against voltage spikes by a resettable fuse and a TVS diode, and against reverse polarity by a MOSFET.
DHT22
U3
DHT22
GND VCC
IO
R6
4.7kΩ
DHT_IO
I²C Breakouts
I2C
SDA
SCL
GND
3.3V
5V
J1
J2
ADC
This is a 16-Bit Analog-to-Digital Converter that is wired up to measure the Raspberry Pi supply voltage.
R10
6.8kΩ
R11
5.6kΩ
R12
4.70Ω
C3
100nF
U5
Vin+
Vin-
VDD
VSS
SCL
SDA
MCP3425A0T-E/CH
Raspberry Pi
Raspberry_Pi_2_3
(SDA1)_GPIO2
(SCL1)_GPIO3
(GCLK)_GPIO4
GPIO16
GPIO17_(GEN0)
GPIO18_(GEN1)
GPIO19
GPIO20
GPIO21
GPIO22_(GEN3)
GPIO23_(GEN4)
GPIO24_(GEN5)
GPIO25_(GEN6)
GPIO26
GPIO27_(GEN2)
GPIO5
GPIO6
(SPI_CE1)_GPIO7
(SPI_CE0)_GPIO8
(SPI_MISO)_GPIO9
(SPI_MOSI)_GPIO10
(SPI_SCLK)_GPIO11
GPIO12
GPIO13
ID_SD
ID_SC
(TXD0)_GPIO14
(RXD0)_GPIO15
GPS_RST
GPS_SUP
CE0
MISO
MOSI
CLK
BTN
TX
RX
U1
SER
J3
iC880A
IC880A-SPI
PWR_FLAG
VDD
GND
VDDB
U2B
GPS_RX
GPS_TX
U2C
NC
nGPS_Reset
SPValid
EN_GPS_Supply
GPIO0
GPIO1
GPIO3
GPIO2
ScanMode
MOSI
NSS
MISO
CLK
Reset
GPIO4
PPS
IC880A_RST
U2A
J7
Button
A simple button connected to GPIO12. It could be programmed to shut down the Rpi on button press.
Note that you need to enable the internal pull-up for the button to work.
SW1
SW_Push
DC Fan
Connector for a 5V DC fan with a flyback diode.
J6
FAN
D4
SS14
Q4
Q_NMOS_GSD
R9
10kΩ
https://lora.vsb.cz
Modified by Jiri Slezka / CIT SU
Coredump Rapperswil, https://coredump.ch/
Sheet: /
File: backplane.sch
Title: iC880A Raspberry Pi Backplane
Size: A4
Date: 2019-10-14
Rev: v2.1-2
KiCad E.D.A. kicad 5.1.4-3.fc30
Id: 1/1