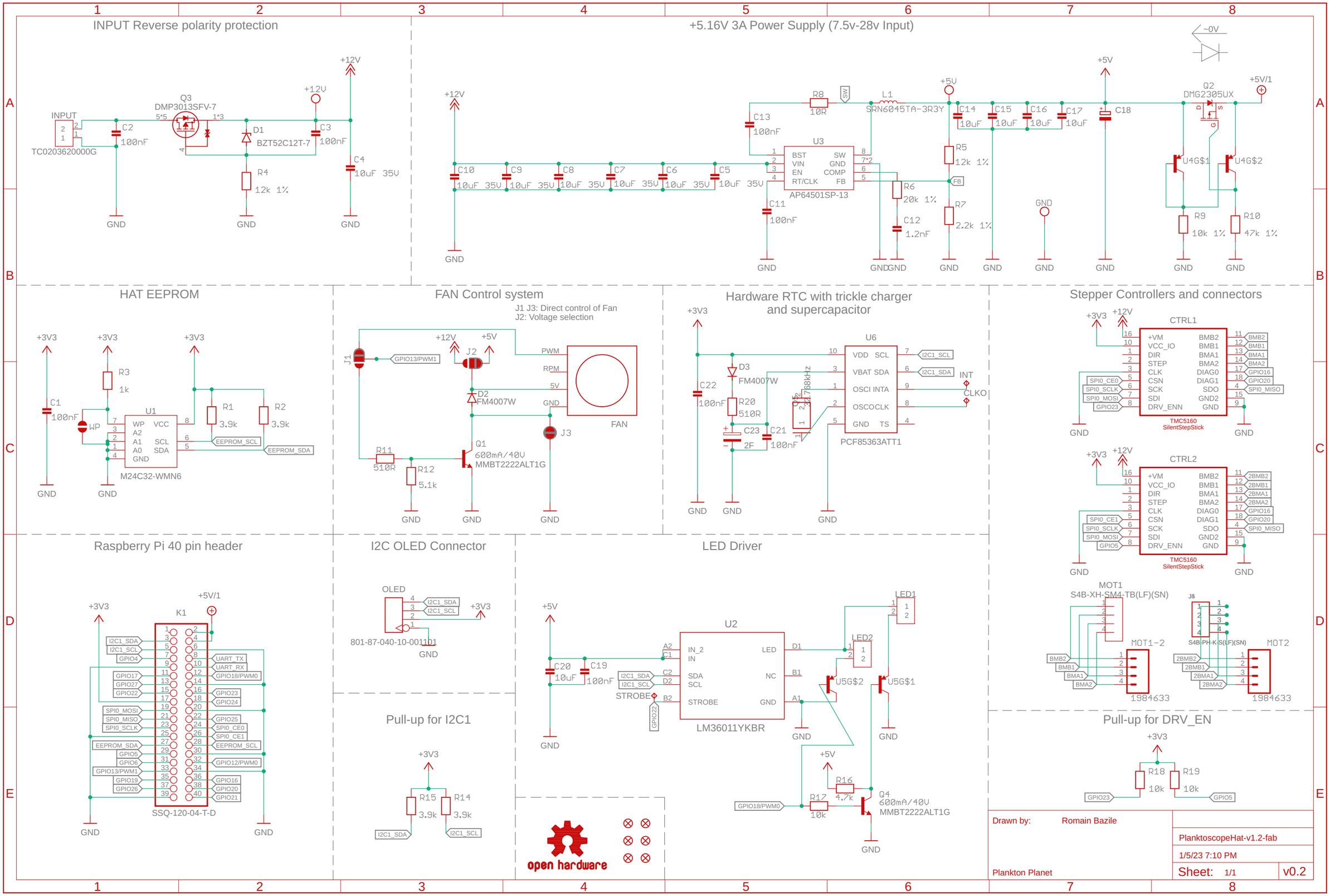
INPUT Reverse polarity protection
INPUT
TC0203620000G
Q3
DMP3013SFV-7
D1
BZT52C12T-7
C2
100nF
C3
100nF
C4
10uF 35V
R4
12k 1%
+12V
GND
+5.16V 3A Power Supply (7.5v-28v Input)
U3
AP64501SP-13
BST
VIN
EN
RT/CLK
SW
GND
COMP
FB
R8
10R
L1
SRN6045TA-3R3Y
C13
100nF
C10
10uF 35V
C9
10uF 35V
C8
10uF 35V
C7
10uF 35V
C6
10uF 35V
C5
10uF 35V
C11
100nF
R6
20k 1%
C12
1.2nF
R5
12k 1%
R7
2.2k 1%
C14
10uF
C15
10uF
C16
10uF
C17
10uF
C18
+5V
Q2
DMG2305UX
+5V/1
U4G$1
U4G$2
R9
10k 1%
R10
47k 1%
~0V
HAT EEPROM
U1
M24C32-WMN6
WP
VCC
A2
A1
SCL
A0
SDA
GND
R3
1k
C1
100nF
R1
3.9k
R2
3.9k
EEPROM_SCL
EEPROM_SDA
+3V3
FAN Control system
J1 J3: Direct control of Fan
J2: Voltage selection
J1
GPIO13/PWM1
J2
PWM
RPM
5V
GND
FAN
J3
D2
FM4007W
Q1
600mA/40V
MMBT2222ALT1G
R11
510R
R12
5.1k
Hardware RTC with trickle charger
and supercapacitor
U6
PCF85363ATT1
VDD
SCL
VBAT
SDA
OSCI
INTA
OSCO
CLK
GND
TS
I2C1_SCL
I2C1_SDA
INT
CLKO
D3
FM4007W
R20
510R
C22
100nF
C23
2F
C21
100nF
Q5
32.768kHz
Stepper Controllers and connectors
CTRL1
CTRL2
TMC5160
SilentStepStick
+VM
VCC_IO
DIR
STEP
CLK
CSN
SCK
SDI
DRV_ENN
BMB2
BMB1
BMA1
BMA2
DIAG0
DIAG1
SDO
GND2
GND
GPIO16
GPIO20
SPI0_MISO
SPI0_CE0
SPI0_SCLK
SPI0_MOSI
GPIO23
GPIO5
MOT1
S4B-XH-SM4-TB(LF)(SN)
MOT1-2
MOT2
1984633
Raspberry Pi 40 pin header
K1
SSQ-120-04-T-D
I2C1_SDA
I2C1_SCL
GPIO4
GPIO17
GPIO27
GPIO22
GPIO23
GPIO24
GPIO25
GPIO12/PWM0
GPIO16
GPIO21
GPIO6
GPIO19
GPIO26
UART_TX
UART_RX
GPIO18/PWM0
I2C OLED Connector
OLED
801-87-040-10-001101
Pull-up for I2C1
R15
3.9k
R14
3.9k
LED Driver
U2
LM36011YKBR
IN_2
IN
SDA
SCL
STROBE
LED
NC
C20
10uF
C19
100nF
LED1
LED2
U5G$1
U5G$2
R16
4.7k
R17
10k
Q4
600mA/40V
MMBT2222ALT1G
Pull-up for DRV_EN
R18
10k
R19
10k
open hardware
Drawn by: Romain Bazile
Plankton Planet
PlanktoscopeHat-v1.2-fab
1/5/23 7:10 PM
Sheet: 1/1
v0.2