J1
Conn_01x08_Socket
GND 1
+5V 2
Motor1_A 3
Motor1_B 4
Motor2_A 5
Motor2_B 6
GND 7
VD 8

J2
Conn_01x08_Socket
8 Direction 1
7 Step 1
6 CLK 1
5 UART2_RX
4 UART2_TX
3 MS 1_2
2 MS 1_1
1

Enable 1

J3
Conn_01x08_Socket
GND 1
+5V 2
Motor3_A 3
Motor3_B 4
Motor4_A 5
Motor4_B 6
GND 7
VD 8

J4
Conn_01x08_Socket
8 Direction 2
7 Step 2
6 CLK 2
5 UART3_RX
4 UART3_TX
3 MS 2_2
2 MS 2_1
1

Enable 2

J6
Conn_01x04
4 Motor1_A
3 Motor1_B
2 Motor2_A
1 Motor2_B

J9
Conn_01x04
4 Motor3_A
3 Motor3_B
2 Motor4_A
1 Motor4_B

Y2
16 MHz
4 EN
1 IN
2 GND
3 OUT
V+
+5V
CLK 1
CLK 2
GND

J5
Conn_02x20_Odd_Even
1 2 +5V
3 4
5 6 GND
7 8
9 10
GND
11 12
13 14
15 16
17 18
SPI1_MOSI 19 20
SPI1_MISO 21 22
SPI1_SCK 23 24
25 26
27 28
29 30
31 32
33 34
35 36
37 38
39 40

H1 MountingHole_Pad
H3 MountingHole_Pad
H2 MountingHole_Pad
H4 MountingHole_Pad
GND

J7
Conn_01x06
VDD 1
GND 2
SWDIO 3
SWCLK 4
NRST 5
GND 6

VDD
SW1 SW_Push
SW2 SW_Push
R14 10k
NRST
GND
7 NRST
VDD
44 BOOT0

removed bat because of space constraints
VDD VDDA
1 VBAT 24
36 VDD
48 VDD
9 VDDA

U4
STM32F103CB

5 PD0
6 PD1
2 PC13
3 PC14
4 PC15

Direction 2 18 PB0
Step 2 19 PB1
20 PB2
Enable 1 39 PB3
MS 1_1 40 PB4
MS 1_2 41 PB5
I2C1_SCL 42 PB6
I2C1_SDA 43 PB7
Step 1 45 PB8
Direction 1 46 PB9
UART3_TX 21 PB10
UART3_RX 22 PB11
MS 2_2 25 PB12
MS 2_1 26 PB13
Enable 2 27 PB14
HP INT 28 PB15

10 PA0
11 PA1
12 PA2 UART2_TX
13 PA3 UART2_RX
14 PA4 SPI1_SS
15 PA5 SPI1_SCK
16 PA6 SPI1_MISO
17 PA7 SPI1_MOSI
29 PA8
30 PA9 UART1_TX
31 PA10 UART1_RX
32 PA11
33 PA12
34 PA13 SWDIO
37 PA14 SWCLK
38 PA15

23 VSS
8 VSSA
VSS VSSA

VDD
C7 1uF
C19 10nF
VDD
GND
C1 4.7uF
C2 100nF
C3 100nF
C4 100nF
C5 100nF
C6 100nF
VSS 4.7uF has to be at Vdd3

VDDA
C20 10nF
C21 10nF
VSSA
GND VSS VSSA

U1
TS30013-M033QFNR

VD
GND

VDDA VDD

U3
MAX26405AFOAY+T

VD
EN
BST
SUP
PGND
LX
PGND

SYNCOUT
SYNC
PGOOD
VEA
OUT
FB
BIAS
GND
SUP

C26 2.2uF
C12 10uF
C13 4.7uF PGND
PGND
GND

C18 2.2uF +5V
GND PGND

C17 4.7uF

C14 22uF
C15 22uF
C16 22uF

L2 3.3-4.7uH

VSW
VCC
VCC
GND
FB
NC
NC
PG

EPAD
VSW
PGND
PGND
VSW
VSW
VCC
BST
EN

GND
L1 4.7uH
GND
VD
C25 0.1uF
VD
VD

R13 10k

GND
C11 1uF
VBUS+3.3V

0.2uF C10
0.2uF C9
1uF C8
GND

R5 bridge
R6 5.1k
+3.3V
+3.3V
R8
R7 5.1k dont connect
GND GND

J10
UJ40-C-H-G-SMT-P24-TRVBUS

VBUS   A4
VBUS_1   A9
VBUS_2   B4
VBUS_3   B9
DN1   A7
DP1   A6
DN2   B7
DP2   B6
RXN1   B10
RXP1   B11
TXN1   A3
TXP1   A2
CC1   A5
SBU1   A8
RXN2   A10
RXP2   A11
TXN2   B3
TXP2   B2
CC2   B5
SBU2   B8
GND   A1
GND_1   A12
GND_2   B1
GND_3   B12
SHIELD   SH1
SHIELD_1 SH2
SHIELD_2 SH3
SHIELD_3 SH4
SHIELD_4 SH5
SHIELD_5 SH6
SHIELD_6 SH7
SHIELD_7 SH8
SHIELD_8 SH9
SHIELD_9 SH10

C24 10uF
GND

CC1
CC2

GND

U2
CYPD3177-24LQ

VCCD
VBUS_IN
VDDD

VBUS_MAX
VBUS_MIN

ISNK_COARSE
ISNK_FINE

CC1
CC2

GND
VDC_OUT
VD
GND

FLIP
HPI_SCL
HPI_SDA
HPI_INT
VBUS_FET_EN
SAFE_PWR_EN
FAULT
GPIO_1

R9 2.2k
+3.3V

+3.3V GND
GND

CC1
CC2

SAFE PWR
I2C1_SCL
I2C1_SDA
HP INT

R17 1k
C22 1uF
R15 10k

VBUS

Q3
FDS8949

D1
B340B-13-F

50k R16

R12 2.2k
R11 2.2k
R10 2.2k

GND

C23 1uF
VD

VBUS

Q4
FDS8949

R19 49.9k
R18 1k
SAFE PWR

+5V