U1 STM32F103C8T6

PA0-WKUP 10 ENC_A
PA1 11 ENC_B
PA2 12
PA3 13
PA4 14
PA5 15
PA6 16
PA7 17

PA8 29 SPEED_RESET
PA9 30 SPEED_SET
PA10 31 ABS
PA11 32 SUSPENTION
PA12 33 HAZARD
PA13/JTMS/SWDIO 34 SWDIO
PA14/JTCK/SWCLK 37 SWDCLK
PA15/JTDI 38 LIGHT

OSC_IN/PD0 5
OSC_OUT/PD1 6

BOOT0 44 1kΩ R26 GND
NRST 7 RESET

VBAT 1 +3.3
VDD_1 24
VDD_2 36
VDD_3 48
VDDA 9

PB0 18 EN
PB1 19 WAKE
PB2/BOOT1 20 HORN
PB3/JTDO 39
PB4/JNTRST 40 WHEEL_UP
PB5 41 WHEEL_DOWN
PB6 42 MENU_UP
PB7 43 MENU_DOWN

PB8 45 HORN
PB9 46
PB10 21 TxD
PB11 22 RxD
PB12 25 T_CANCEL
PB13 26 T_LEFT
PB14 27 T_RIGHT
PB15 28 SPEED_EN

PC13-TAMPER-RTC 2 ENC_BUTTON
PC14-OSC32_IN 3
PC15-OSC32_OUT 4

VSS_1 23
VSS_2 35
VSS_3 47
VSSA 8
GND

C14 100nF GND +3.3
R24 1kΩ R25 1kΩ

ENC_BUTTON
EC1110120005
ENC_A A 1
ENC_B B 2
C 0
J3
1kΩ R? +3.3
GND

+3.3 C4 100nF C5 100nF C6 100nF C7 100nF C13 100nF GND

SWDIO 0Ω R27 SWDIO

SWDCLK 1 1kΩ R18
GND 2
SWDIO 3 10kΩ R19
RESET 4 10kΩ R20
GND +3.3
C8 100nF J2
GND

+3.3 R1..R15 1kΩ C15 100nF GND
T_LEFT T_RIGHT T_CANCEL SPEED_RESET SPEED_SET SPEED_EN MENU_UP MENU_DOWN WHEEL_UP WHEEL_DOWN HORN LIGHT HAZARD SUSPENTION ABS
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15
GND

U2 TPIC1021AQDRQ1
RxD 1 RxD INH 8
EN 2 EN VSUP 7
WAKE 3 Wake LIN 6 LIN
TxD 4 TxD GND 5
680Ω R16 +3.3
VIN
C1 10uF C2 100nF GND
680Ω R17
C3 18pF
GND

U3 LT1963ES8-3.3
+3.3 1 3.3V IN 8 VIN
2 3.3V SHDN 5
3 GND
6 GND GND 7
C9 10uF C10 100nF C11 100nF C12 10uF
GND

J1 0436500304
GND 1
LIN 2
VIN 3
GND

+3.3 RED ORANGE
D3 TLMG1100-GS08 D1 TLMS1100-GS08 D2 TLMO1100-GS08
R21 1kΩ R22 1kΩ R23 1kΩ
GND GND GND

Comment	Description	Designator	Footprint	LibRef	Quantity
10uF	10uF 25V 0603 X5R	C1, C9, C12	C0603_H	Capacitor 0603 10uF 25V	3
100nF	100nF 50V 0603	C2, C4, C5, C6, C7, C8, C10, C11, C13, C14, C15	C0603_M	Capacitor 0603 100nF 50V	11
18pF	18pF 50V 0603 NPO	C3	C0603_L	Capacitor 0603 18pF 50V	1
TLMS1100-GS08	Vishay RED LED 0603	D1	TLMS1100	TLMS1100-GS08	1
TLMO1100-GS08	Vishay ORANGE LED 0603	D2	TLMO1100	TLMO1100-GS08	1
TLMG1100-GS08	Vishay GREEN LED 0603	D3	TLMG1100	TLMG1100-GS08	1
0436500304	Connector 3 pin Molex TH	J1	0436500304	0436500304	1
338068-4	Micromatch 4 pin TH with Lock	J2	338068-4	338068-4	1
EC1110120005	Encoder TH	J3	EC1110120005	EC1110120005	1
1k 1%	SMD Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R21, R22, R23, R24, R25, R26, R?	R0603_1k	Resistor 0603 1k 1%	22
680R 1%	SMD Resistor	R16, R17	R0603_680R	Resistor 0603 680R 1%	2
1k 1%	0402 Resistor	R18	R0402_1K	Resistor 0402 1k 1%	1
10k 1%	SMD Resistor	R19, R20	R0603_10k	Resistor 0603 10k 1%	2
0R	SMD Resistor Jumper	R27	R0603_0R	Resistor 0603 0R	1
EVQP9P02W	Button EVQP9P02W	S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15	EVQP9P02W	EVQP9P02W	15
STM32F103C8T6	ARM Cortex M3	U1	LQFP48	STM32F103C8T6	1
TPIC1021AQDRQ1	LIN Transceiver, 20 Kbaud, 7V to 27V Supply, 5.5V/3.5mA Output, SOIC-8	U2	SO8	TPIC1021AQDRQ1	1
LT1963ES8-3.3	3.3V 1.5A LDO	U3	SO8	LT1963ES8-3.3	1