

Name	Description	Designator	Quantity	Footprint
HC-05	Bluetooth HC-05	B11	1	HC-05
47uF	Tantal SMD Cap	C1	1	CAP_TANT_D
470uF	25V	C2	1	010K4.4H10
25v 470uF		C3	1	010K4.4H10
25v 47uF	Tantal SMD Cap	C4, C5, C10, C11	4	CAP_TANT_D
0.1uF	Ceramic SMD Cap	C6, C7, C8, C9, C12, C13, C14, C15, C21, C23, C24, C27, C28, C29, C30, C31, C32, C40, C52, C53, C54	21	CAP0805
220uF	50V	C16	1	08C3.2H12
1uF	Ceramic SMD Cap	C17, C18, C19, C20, C22, C25, C26, C33, C34, C35, C37, C44	12	CAP0805
100uF	25V	C36	1	010K4.4H10
33uF	Ceramic SMD Cap	C38	1	CAP0805
2.2uF	Ceramic SMD Cap	C40, C41	2	CAP0805
20uF	Ceramic SMD Cap	C42, C43	2	CAP0805
10uF	Ceramic SMD Cap	C46	1	CAP0805
3.3V	Zener Diode	D1	1	500-80
8.2V	Zener Diode	D2	1	500-80
AL4015	Buck converter	DA1	1	LOM3-3L
8 MHz	quartz 8MHz	G1	1	TSK-3225
LED1	LED smd	HL1	1	LE0X063_WHITE
B6	LED smd	HL2	1	LE0X063_WHITE
B8V	LED smd	HL3	1	LE0X063_GREEN
LED3	LED smd	HL4	1	LE0X063_WHITE
1G	LED smd	HL5	1	LE0X063_WHITE
12V	LED smd	HL6	1	LE0X063_GREEN
LED2	LED smd	HL7	1	LE0X063_WHITE
ST	LED smd	HL8	1	LE0X063_WHITE
2K	LED smd	HL9	1	LE0X063_WHITE
3V3	LED smd	HL11	1	LE0X063_GREEN
W_OH	LED smd	HL12	1	LE0X063_RED
White	LED smd	HL13, HL14, HL15, HL16	4	LE0X063_GREEN
Red	LED smd	HL17	1	LE0X063_RED
White	LED smd	HL18, HL19	2	LE0X063_WHITE
USB	SWD port	J1	1	USB-C_VERTICAL
47uH 2A	Inductance	L1	1	IND_B0477G
OR	RES smd	R1	1	RES0805
10K	RES smd	R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R14, R15, R17, R18, R19, R20, R22, R35, R36, R38, R41, R42, R43, R44, R46, R47, R54, R60, R67, R68, R73	31	RES0805
22K	RES smd	R12, R25	2	RES0805
1.3K	RES smd	R13, R49	2	RES0805
OR	RES smd	R16	1	RES1206
15R	RES smd	R21	1	RES1206
1K	RES smd	R23, R24, R26, R27, R29, R30, R31, R32, R33, R34, R45, R46, R50, R53, R56, R57, R58, R63, R64, R64, R65, R71, R72	23	RES0805
4.7K	RES smd	R28, R56	2	RES0805
100K	RES smd	R37, R40	2	RES0805
300K	RES smd	R39	1	RES0805
39K	RES smd	R51	1	RES0805
1.1K	RES smd	R52	1	RES0805
14K	RES smd	R55	1	RES0805
12K	RES smd	R59	1	RES0805
5.1K	RES smd	R61	1	RES0805
OR	RES smd	R66, R70	2	RES0805
POWER	Button	S81	1	OTS4-61N-V-T/R
RESET	Button	S82	1	OTS4-61N-V-T/R
BTN1	Button	S83	1	OTS4-61N-V-T/R
BTN2	Button	S84	1	OTS4-61N-V-T/R
RESET_BM1	Button	S85	1	OTS4-61N-V-T/R
BTN3	Button	S86	1	OTS4-61N-V-T/R
BM1	TACT 6.0 X 3.5	S87	1	PT5636 SP43 LFS
Role	ESP1010	SW1	1	ESP1010
Goal	ESP1010	SW2	1	ESP1010
Motor	ESP1010	SW3	1	ESP1010
STM32F407VGT6	ESP1010	SW4	1	ESP1010
DRV8870	DC motor driver 3.6A	U1	1	LQFP100
LM139DR	Quad differential comparator	U2, U3, U4, U5, U6, U7, U8, U9	8	DRV8870
Diode TVS	Protective diode	U10	1	SOIC-14
Diode Schottky	Protective diode	VD1, VD2	2	DO-214AC (SMA)
IR54427	Modest driver	VD3, VD5, VD6	3	DO-214AC (SMA)
STD300F06L	N-MOSFET Uds = 60 V Ids = 30 A Rds = 0.03 Ohm P = 55 W	VT2	1	DPAK
TPSTD10PF6	P-MOSFET Uds = 60 V Ids = 13 A Rds = 0.100 Ohm P = 60 W	VT3	1	DPAK
IRLML2502	N-MOSFET Uds = 20 V Ids = 4.2 A Rds = 0.035 Ohm P = 8 W	VT4, VT7	2	SOT-23-3
F0C6637	P-MOSFET Uds = 40 V Ids = 40 A Rds = 0.012 Ohm P = 3.0 W	VT5	1	DPAK
IRLML2502	N-MOSFET Uds = 20 V Ids = 4.2 A Rds = 0.035 Ohm P = 1.25 W	VT6	1	SOT-23-3
Line Board	IST_B8B-XH-A(LF)(SN)	XP1	1	IST_XH-8
TSOP Board	IST_B8B-XH-A(LF)(SN)	XP2	1	IST_XH-8
BALL_LED	IST_B2B-XH-A(LF)(SN)	XP3	1	IST_XH-2
CAP	IST_B2B-XH-A(LF)(SN)	XP4	1	IST_XH-2
BALL_SEN	IST_B2B-XH-A(LF)(SN)	XP5	1	IST_XH-2
Solenoid	IST_B2B-XH-A(LF)(SN)	XP6	1	IST_XH-2
HC-05	IST_B4B-XH-A(LF)(SN)	XP7	1	IST_XH-4
ST-Link	SWD header	XP8	1	3x2.54
OpenMV	IST_B4B-XH-A(LF)(SN)	XP9	1	IST_XH-4
BM1	IST_B4B-XH-A(LF)(SN)	XP10	1	IST_XH-4
SP1	IST_B4B-XH-A(LF)(SN)	XP11	1	IST_XH-4 (clear)
3-V3	IST_B2B-XH-A(LF)(SN)	XP12	1	IST_XH-2
C2	IST_B4B-XH-A(LF)(SN)	XP13	1	IST_XH-4
ESC_BN	IST_B2B-XH-A(LF)(SN)	XP14	1	IST_XH-2
ESC_PWR	XT30	XP15	1	XT30_30
M1	IST_B2B-XH-A(LF)(SN)	XP16	1	IST_XH-2
M2	IST_B2B-XH-A(LF)(SN)	XP17	1	IST_XH-2
M3	IST_B2B-XH-A(LF)(SN)	XP18	1	IST_XH-2
M4	IST_B2B-XH-A(LF)(SN)	XP19	1	IST_XH-2
BAT	XT30	XP20	1	XT30_30
XL6009 IN	IST_B2B-XH-A(LF)(SN)	XP21	1	IST_XH-2
XL6009 OUT	IST_B2B-XH-A(LF)(SN)	XP22	1	IST_XH-2