

XII-Boy V2 PCB BOM

LZ / RZ PCB

Reference	Quantity	Description	Manufacturer Product Number
B1, B2	2	SWITCH TACTILE SPST-NO 0.05A 15V	TL3315NF250Q

Link
https://www.digikey.com/en/products/detail/e-switch/TL3315NF250Q/1870396

L / R PCB

Reference	Quantity	Description	Manufacturer Product Number
B1, B2	2	Dual Tact Button	TMHF07
P1	1	CONN FFC BOTTOM 7POS 0.5MM R/A	5051100792

Link
https://www.aliexpress.com/item/33003093225.html
https://www.digikey.com/en/products/detail/molex/5051100792/5700455

Controller PCB

Reference	Quantity	Description	Manufacturer Product Number
B1	1	SWITCH TACTILE SPST-NO 0.05A 15V	TL3315NF250Q
C1, C2, C3	3	CAP CER 0.1UF 16V X7R 0402	GRM155R71C104KA88J
D1	1	DIODE ARR SCHOTT 20V T0236AB	PMEG2005CT 215
P1	1	CONN FFC BOTTOM 10POS 0.5MM R/A	5051101092
P2	1	CONN FFC BOTTOM 7POS 0.5MM R/A	5051100792
P3, P4	2	CONN FFC BOTTOM 5POS 0.5MM R/A	5051100592
R1, R2	2	RES 10K OHM 5% 1/16W 0402	RC0402JR-0710KL
R3	1	RES 100 OHM 1% 1/16W 0402	RC0402FR-07100RL
U1	1	IC MCU 8BIT 32KB FLASH 28QFN	PIC18F25K42T-I/ML
U2	1	IC MOTOR DRIVER 2.5V-5.2V 10QFN	DRV2603RUNR

Link
https://www.digikey.com/en/products/detail/e-switch/TL3315NF250Q/1870396
https://www.digikey.com/en/products/detail/murata-electronics/GRM155R71C104KA88J/2610892
https://www.digikey.com/en/products/detail/nexperia-usa-inc/PMEG2005CT-215/2119859
https://www.digikey.com/en/products/detail/molex/5051101092/5700458
https://www.digikey.com/en/products/detail/molex/5051100792/5700455
https://www.digikey.com/en/products/detail/molex/5051100592/5700453
https://www.digikey.com/en/products/detail/yageo/RC0402JR-0710KL/726418
https://www.digikey.com/en/products/detail/yageo/RC0402FR-07100RL/726527
https://www.digikey.com/en/products/detail/microchip-technology/PIC18F25K42T-I-MI/6685387
https://www.digikey.com/en/products/detail/texas-instruments/DRV2603RUNR/3487230

Main PCB

Reference	Quantity	Description	Manufacturer Product Number
B1, B2, B3, B4	4	SWITCH TACTILE SPST-NO 0.05A 12V	TL3336AF160Q
C1, C2, C3, C12, C15	5	CAP CER 1UF 6.3V X5R 0402	CL05A105MQSNNNC
C4	1	CAP CER 10UF 6.3V X5R 0402	GRM155R60J06ME05D
C5, C6, C7, C8, C9, C10, C11	7	CAP CER 2.2UF 6.3V X5R 0402	CL05A225MQSNNNC
C13, C14	2	CAP CER 4.7UF 6.3V X5R 0402	GRM155R60J475ME87J
LED1	1	LED RGB 0606 SMD	B38C3RGB-1000003H2U1930
P1	1	CONN RCPT TYPE C 6P SMD RA	USB4125-QF-A
P2	1	CONN FFC BOTTOM 10POS 0.5MM R/A	5051101092
P3	1	MICRO SD PUSH/PUSH SMALL 8C	5033981892
P4	1	CONN FFC BOTTOM 17POS 0.5MM R/A	5051101792
P5	1	CONN RCPT 16POS SMD GOLD	541020164
P6	1	CONN RCPT 20POS SMD GOLD	529910208
P7	1	CONN JACK STEREO 3.5MM SMD R/A	SJ-3524-SMT-TR
R1, R2, R4	3	RES 10K OHM 5% 1/16W 0402	RC0402JR-0710KL
R3	1	RES 24K OHM 1% 1/16W 0402	WR04X2402FTL
R5	1	RES 3K OHM 1% 1/16W 0402	WR04X1001FTL
U1	1	IC MCU 8BIT 7KB FLASH 16UQFN	PIC16LF15324-I/Q
U2	1	IC REG LINEAR 2.5V 250MA SOT23-5	LP5907MFX-2.5/NOPB
U3	1	IC AMP CLASS D STER 2.5W 32WQFN	LM49450SQ/NOPB
U4	1	CH224K USB PD Protocol Sink Chip IC	CH224K
U5	1	GL823K GL823 SSOP-16	GL823K

Link
https://www.digikey.com/en/products/detail/e-switch/TL3336AF160Q/14123602
https://www.digikey.com/en/products/detail/samsung-electro-mechanics/CL05A105MQSNNNC/3886893
https://www.digikey.com/en/products/detail/murata-electronics/GRM155R60J06ME05D/11500166
https://www.digikey.com/en/products/detail/samsung-electro-mechanics/CL05A225MQSNNNC/3887127
https://www.digikey.com/en/products/detail/murata-electronics/GRM155R60J475ME87J/9867918
https://www.digikey.com/en/products/detail/harwin-ic-corporation/B38C3RGB-1000003H2U1930/13689733
https://www.digikey.com/en/products/detail/usb4125-gf-a/USB4125-QF-A/113547388
https://www.digikey.com/en/products/detail/molex/5051101092/5700458
https://www.digikey.com/en/products/detail/molex/5033981892/4555393
https://www.digikey.com/en/products/detail/molex/5051101792/5700465
https://www.digikey.com/en/products/detail/molex/541020164/3197036
https://www.digikey.com/en/products/detail/molex/529910208/1059850
https://www.digikey.com/en/products/detail/cul-devices/SJ-3524-SMT-TR/281298
https://www.digikey.com/en/products/detail/yageo/RC0402JR-0710KL/726418
https://www.digikey.com/en/products/detail/walsin-technology-corporation/WR04X2402FTL/16569971
https://www.digikey.com/en/products/detail/walsin-technology-corporation/WR04X1001FTL/13240628
https://www.digikey.com/en/products/detail/microchip-technology/PIC16LF15324-I-Q/6691288
https://www.digikey.com/en/products/detail/texas-instruments/LP5907MFX-2.5-NOPB/5018039
https://www.digikey.com/en/products/detail/texas-instruments/LM49450SQ-NOPB/4874761
https://www.aliexpress.com/item/1005005284290184.html
https://www.aliexpress.com/item/1005007494983714.html

RVL-PMS (Gman)

Reference	Quantity	Description	Manufacturer Product Number
U1 U2 US U4	4	IC REG BUCK ADJUSTABLE 4A 16VQFN	TLV62095RQTR
U5	1	IC REG BOOST 5V 4A 150VON	TPS61232DRCR
U6	1	IC MCU 8BIT 7KB FLASH 16UQFN	PIC16F15324T-I/Q
U7	1	IC NVDC CHARGER 12C 24WQFN	BQ25895MRTWR
R1	1	RES SMD 44.2K OHM 1% 1/10W 0603	RC0603FR-0744K2L
R2 R4 R6 R8	4	RES SMD 160K OHM 1% 1/10W 0603	RC0603FR-07160KL
R3	1	RES SMD 75K OHM 1% 1/10W 0603	RC0603FR-0775KL
R5	1	RES SMD 200K OHM 1% 1/10W 0603	RC0603FR-07200KL
R7	1	RES SMD 510K OHM 1% 1/10W 0603	RC0603FR-07510KL
R9 R10 R11	3	RES 1.2K OHM 1% 1/10W 0603	RMCF0603FT1K20
R12 R13 R17 R18	4	RES SMD 10K OHM 1% 1/10W 0603	RC0603FR-0710KL
R14	1	RES SMD 261 OHM 1% 1/10W 0603	RC0603FR-07261RL
R15 R16	2	RES SMD 4.7K OHM 1% 1/10W 0603	RC0603FR-074K7L
C1 C3 C5 C7 C9 C10 C11 C12 C13, C14, C15, C16, C17, C18, C19, C20	16	CAP CER 22UF 6.3V X5R 0805	CL21A226MQQNNNE
C14 C15 C16 C17 C18 C19 C20	4	CAP CER 10000PF 50V X7R 0603	06035C103KATAA
C2 C4 C6 C8	1	CAP CER 1UF 25V X7R 0805	GCN21BR71E105KA56L
C21	1	CAP CER 0.1UF 25V X5R 0603	CL10A104K8NNNC
C22	1	CAP CER 0.047UF 25V X7R 0603	C0603C478K3RAC7U
C24 C26 C27 C28	4	CAP CER 10UF 16V X5R 0805	CL21A106MQQNNNG
C25	1	CAP CER 4.7UF 16V X5R 0803	CL10A475K08NNNC
L1 L2 L3 L4 L5	5	FIXED IND 1UH 5.1A 27 MOHM SMD	MDWK4040T1R0MM
L6	1	FIXED IND 2.2UH 8A 20 MOHM SMD	ASPI-0630HI-2R2M-T15

Link
https://www.digikey.com/product-detail/en/texas-instruments/TLV62095RQTR/29646277-1-ND/7033452
https://www.digikey.com/product-detail/en/texas-instruments/TPS61232DRCR/29644498-1-ND/6110792
https://www.digikey.com/product-detail/en/microchip-technology/PIC16F15324T-I-Q/PIC16F15324T-I-QCT-ND/7346310
https://www.digikey.com/en/products/detail/texas-instruments/BQ25895MRTWR/5413643
https://www.digikey.com/product-detail/en/yageo/RC0603FR-0744K2L/311-44-2KHCRT-ND/730188
https://www.digikey.com/product-detail/en/yageo/RC0603FR-07160KL/311-160KHCRT-ND/729920
https://www.digikey.com/product-detail/en/yageo/RC0603FR-0775KL/311-75.0KHCRT-ND/730325
https://www.digikey.com/product-detail/en/yageo/RC0603FR-07200KL/311-200KHCRT-ND/729991
https://www.digikey.com/product-detail/en/yageo/RC0603FR-07510KL/311-510KHCRT-ND/730233
https://www.digikey.com/product-detail/en/stackpole-electronics-inc/RMCF0603FT1K20/RMCF0603FT1K20CT-ND/1942999
https://www.digikey.com/product-detail/en/yageo/RC0603FR-0710KL/311-10.0KHCRT-ND/729827
https://www.digikey.com/product-detail/en/yageo/RC0603FR-07261RL/311-261KHCRT-ND/730042
https://www.digikey.com/product-detail/en/yageo/RC0603FR-074K7L/311-4.70KHCRT-ND/730159

https://www.digikey.com/product-detail/en/samsung-electro-mechanics/CL21A226MQQNNNE/1276-1100-1-ND/3889186
https://www.digikey.com/product-detail/en/ave-corporation/06035C103KATAA/478-10055-1-ND/6564278
https://www.digikey.com/product-detail/en/murata-electronics-north-america/GCN21BR71E105KA56L/490-4785-1-ND/1641704
https://www.digikey.com/product-detail/en/samsung-electro-mechanics/CL10A104K8NNNC/1276-1857-1-ND/3889943
https://www.digikey.com/product-detail/en/kemet/C0603C478K3RAC7U/399-7931-1-ND/2471564
https://www.digikey.com/product-detail/en/samsung-electro-mechanics/CL21A106MQQNNNG/1276-8455-1-ND/5959083
https://www.digikey.com/product-detail/en/samsung-electro-mechanics/CL10A475K08NNNC/1276-1784-1-ND/3889870
https://www.digikey.com/product-detail/en/alpa-yuden/MDWK4040T1R0MM/587-4447-1-ND/5880837
https://www.digikey.com/product-detail/en/abracon-llc/ASPI-0630HI-2R2M-T15/ASPI-0630HI-2R2M-T15CT-ND/3060148

Screen Driver Board

Reference	Quantity	Description	Manufacturer Product Number
Crystal (Y1)	1	CRYSTAL 27.000MHZ 8PF SMD	LNC01-27M
Inductor (L14)	1	FIXED IND 22UH 450MA 910MOHM SMD	74404024220

Link
https://www.digikey.com/en/products/detail/ndk-america-inc/LNC01-27M/1128824
https://www.digikey.com/en/products/detail/w%C3%BCrth-elektronik/74404024220/4865382

Other

Name	Quantity	Description	Manufacturer Product Number
Wifi Antenna	2	RF ANT 2.45GHZ PCB TRACE CAB ADH	ANTX100P011B24003
Battery Clips	4	BATT CONT SPR MULTI SOLDER LUG	1107-1
Thermistor	1	THERMISTOR NTC 10KOHM 3470K BEAD	MF52A2103J3470
Light Pipe	1	LIGHT PIPE PNL 3MM DFF FLAT.100°	PLP1-100-FD

Link
https://www.digikey.com/en/products/detail/pulse-electronics/ANTX100P011B24003/9360397
https://www.digikey.com/en/products/detail/keystone-electronics/1107-1/5056817
https://www.digikey.com/en/products/detail/cantherm/MF52A2103J3470/1191033
https://www.digikey.com/en/products/detail/bivar-inc/PLP1-100-F-D/5721997