

Part	Description	Vendor	Part number / link	Required	Notes
	Printed Circuit Board	OSH Park	https://oshpark.com/shared_projects/Shj2PfbI	1	Getting the boards made is one of the more expensive parts.
	RFM69HCW 915Mhz +20dBm HopeRF Wireless Transceiver (RFM69HCW-915S2)	HopeRF	RFM69HCW-915S2	1	
	1.8 inch SPI Color TFT LCD Display ST7735S Module + Red PCB adapter	Amazon	B01LXWJ5O1	1	A lot of places in China copy this module and sell it.
	PkCell Lithium Polymer battery, LP803860 with JST connector	Adafruit	2011	1	We had these manufactured for the kit from PkCell, but Adafruit sells the same battery
	JST Header PH Side 2 Pos 2MM	Digikey	455-1719-ND	1	
SW1	Apem Tactile Switches 7.8mm square tact	Mouser	MJTP1243	1	
R24	Xicon 270 Series 47 Ohm 1/8W Metal film resistor	Mouser	270-47-RC	1	
LED11	IR LED 940nm 100mA 210mW	Mouser	782-TSAL6400	1	
U3	Vishay IR Receiver Module 2.5-5.5V 38kHz 45Deg 4000 bits/s	Digikey	TSOP2138	1	
	Würth Electronics 2.54mm 4-pin Header	Mouser	61300411121	1	
	M3*14+6 Nylon Hex Standoff Spacer M3 Male x M3 Female 14mm	Amazon	SPC-NLB3MF/14-50	4	You only need four, but the part is for a bag of 50
	M3 x 6mm Screws Nylon Round Head Phillips Drive Robot Light Bolts Plastic Black	Amazon	a16051100ux1000	4	You only need four, but the part is for a bag of 100
	M3 Nylon Hex nuts Black	Amazon	a15070300ux0188	4	You only need four, but the part is for a bag of 100
	.125"(3.2mm) x 12" x 12" Grey 2074 Acrylic Sheet	US Plastics	P-274	1	
C1	Multilayer Ceramic Capacitors MLCC - Johanson SMD/SMT 250volts 0.5pF ULTRA HIGH Q NPO	Mouser	251R14S0R5BV4T	1	
C2	Multilayer Ceramic Capacitors MLCC - Würth Electronics SMD/SMT WCAP-CSGP 100000pF 0603 10% 10V MLCC	Mouser	885012206020	1	
C15	Multilayer Ceramic Capacitors MLCC - Würth Electronics SMD/SMT WCAP-CSGP 10000pF 0603 10% 16V MLCC	Mouser	885012206040	1	
C16 C17 C18	Multilayer Ceramic Capacitors MLCC - AVX SMD/SMT 6.3V 4.7uF X5R 0603 20% Tol	Mouser	06036D475MAT4A	3	
C19 C20	Multilayer Ceramic Capacitors MLCC - AVX SMD/SMT 25V 47pF NP0 0603 10% Tol Auto	Mouser	06033A470K4T2A	2	
C21	Multilayer Ceramic Capacitors MLCC - Würth Electronics SMD/SMT WCAP-CSGP1uF 0603 20% 10V MLCC	Mouser	885012106010	1	
C22 C23 C24 C25	Multilayer Ceramic Capacitors MLCC - Würth Electronics SMD/SMT WCAP-CSGP 47000pF 0603 10% 16V MLCC	Mouser	885012206044	4	
F1	Bel Resettable Fuses - PPTC	Mouser	0ZCJ0050FF2G	1	
L1	Murata Ferrite Beads 0805 220 OHM	Mouser	BLM21PG221SN1D	1	
L2	Bourns Fixed Inductors 10nH 5% MultiLayer High Frequency	Mouser	652-C1160808-10NJ	1	
L3	Bourns Fixed Inductors 4.7nH .3% MultiLayer High Frequency	Mouser	C1160808-4N7D	1	
LED12 LED13	Lumex Standard LEDs - SMD Super Green, 565nm 2.2V, 20mcd	Mouser	SML-LX0603SGW-TR	2	
R1 thru R10	Vishay Thick Film Resistors - SMD 1/4watt 47ohms 5%	Mouser	CRCW120647R0JNEA	10	
R11 thru R21 R31 R32	KOA Speer Thick Film Resistors - SMD 1/10W 5.1K OHM 5%	Mouser	RK73B1JTTDD512J	13	
R22 R30 R33 R34 R35	KOA Speer Thick Film Resistors - SMD 1/10W 2K OHM 5%	Mouser	RK73B1JTTDD202J	5	
R23	Panasonic Thick Film Resistors - SMD 0603 470ohms 5% AEC-Q200	Mouser	ERJ-3GEYJ471V	1	
R25	Vishay Thick Film Resistors - SMD 1/10watt 10Kohms 1%	Mouser	CRCW060310K0FKEA	1	
R26 R27	KOA Speer Thick Film Resistors - SMD 1/10W 27 OHM 5%	Mouser	RK73B1JTTDD270J	2	
R28	KOA Speer Thick Film Resistors - SMD 1/10watts 68ohms 1%	Mouser	RK73H1JTTD68R0F	1	
	ARM Microcontrollers - STMicroelectronics MCU 32-Bit ARM Cortex M4 72MHz 128kB MCU FPU	Mouser	STM32F302RBT6	1	
ANT	Johanson Antennas 915MHz ANTENNA	Mouser	0915AT43A0026E	1	
U1	ROHM Semiconductor LDO Voltage Regulators 1ch 500mA CMOS LDO Regulator	Mouser	BU33SD5WG-TR	1	
U2	Microchip Battery Management Li-Ion/Li-Poly Chrg Mgmt 4.5V Vreg out	Mouser	MCP73831T-5ACI/OT	1	
Y1	Murata Resonators 8.000MHZ .5% CHIP RESONATOR	Mouser	CSTCE8M00G52-R0	1	
LED1 thru LED10	OSRAM LED YELLOW CLEAR 2SMD 222.5mcd 2V 20mA	Mouser	720-LYT776Q2T126Z	10	Can be substituted with 720-LYT776S1T126Z
	Note, this kit was designed to have most the surface mount parts assembled by pick and place. While it is possible build the kit yourself, and solder everything by hand, it is more difficult than the kit sold at DEF CON.				
	However similar techniques can be used to hand solder, but extra parts should be ordered in anticipation of small parts getting lost forever. To save on costs, I would also suggest working with other darknet agents to do a group order and take advantage of price breaks.				