

BoM, for kit building assembly

ref	value	Manufacturer	Mfr. P/N	Vendor	Vendor P/N	NOTE1
BT1	BATT_RTC	MPD (Memory Protection Devices)	BU1632SM-JJ-GTR	Digikey	BU1632SM-JJ-GCT-ND	SMD Battery socket for CR1632
--	CR1632	Panasonic - BSG	CR1632	DigiKey	P036-ND	Battery, CR1632
C1	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C2	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C3	2u2	Nichicon	F921A225MPA	DigiKey	493-2331-1-ND	Filter capacitor, Tantalum, Polarized, 10V
C4	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C5	2u2	TDK Corporation	C2012Y5VIC225Z/0.85	DigiKey	445-3459-1-ND	Filter capacitor, Ceramic
C6	100u	Nichicon	UCL1E101MCL1GS	DigiKey	493-3937-1-ND	Filter capacitor, Al.
C7	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C8	47u	Panasonic Electronic Components	EEE-1AA470WR	DigiKey	PCE3875CT-ND	Filter capacitor, Al.
C9	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C10	22p	Kemet	C0805C220J5GACTU	DigiKey	399-1113-1-ND	Capacitor for Crystal
C11	22p	Kemet	C0805C220J5GACTU	DigiKey	399-1113-1-ND	Capacitor for Crystal
C12	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C13	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C14	100n	Kemet	C0805C104K3RACTU	DigiKey	399-1168-1-ND	Decoupling capacitor, Ceramic
C15	1n	Kemet	C0805C102K5RACTU	DigiKey	478-6218-1-ND	Decoupling capacitor, Ceramic
C16	10n	Kemet	C0805C103K5RACTU	DigiKey	399-1158-1-ND	Decoupling capacitor, Ceramic
D1	LED	OSRAM Opto Semiconductors Inc	LG M67K-H1J2-24-Z	DigiKey	475-2730-1-ND	LED, indicator, 5V0
D2	LED	OSRAM Opto Semiconductors Inc	LG M67K-H1J2-24-Z	DigiKey	475-2730-1-ND	LED, indicator, 3V3
D3	RB886G	Rohm Semiconductor	RB886GT2R	DigiKey	RB886GT2RCT-ND	Schottky Diode, low Vfwd, for GPS
D4	RB886G	Rohm Semiconductor	RB886GT2R	DigiKey	RB886GT2RCT-ND	Schottky Diode, low Vfwd, for GPS
D5	MBRM110LT1G	ON Semiconductor	MBRM110LT1G	DigiKey	MBRM110LT1G0SCT-ND	Protection diode, barrel socket reverse pol,
D6	LED	OSRAM Opto Semiconductors Inc	LG M67K-H1J2-24-Z	DigiKey	475-2730-1-ND	LED, indicator, Bink
D7	SMBJ5.0CA-TR	STMicroelectronics	SMBJ5.0CA-TR	DigiKey	497-3145-1-ND	Protection diode, transients, USB socket
D8	MBRM110LT1G	ON Semiconductor	MBRM110LT1G	DigiKey	MBRM110LT1G0SCT-ND	Protection diode, servo reverse pol,

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F1	nanoSMDC110F	TE Connectivity	NANOSMDC110F-2	DigiKey	NANOSMDC110FCT-ND	Fuse, USB socket
F2	nanoSMDC110F	TE Connectivity	NANOSMDC110F-2	DigiKey	NANOSMDC110FCT-ND	Fuse, servo protection, internal powered
IC1	ATMEGA328-PU	Atmel	ATMEGA328-PU	DigiKey	ATMEGA328-PU-ND	Microcontroller
DIP1	DIP	TE Connectivity	1-390261-9	DigiKey	A100210-ND	Socket, 28 pin, 0.3", for Microcontroller
P1	BCM2835_GPIO	FCI	67996-130HLF	DigiKey	609-3456-ND	Header, Male, 13x2
P2	GPU_JTAG	FCI	67996-130HLF	DigiKey	609-3456-ND	Header, Male, 8x1
P3	LAN_JTAG	--	--	--	--	Header, Male, 8x1
P4	PWM_SERVO	Sullins Connector Solutions	PREC040SAAN-RC	DigiKey	S1012EC-40-ND	Header, Male, 8x1
P5	5V_SERVO	--	--	--	--	Header, Male, 8x1
P6	GND_SERVO	--	--	--	--	Header, Male, 8x1
P7	GPS_UP501	--	--	--	--	Header, Male, 6x1
P8	FTDI	--	--	--	--	Header, Male, 6x1
P9	ICSP	--	--	--	--	Header, Male, 3x2
P10	V_IN	CUI Inc	PJ-002B	DigiKey	CP-002B-ND	
P11	U6_OE	--	--	--	--	Header, Male, 3x1
P12	UUSB_B	FCI	10118193-0001LF	DigiKey	609-4616-1-ND	USB, Micro-B socket, for Power only
P13	AREF	--	--	--	--	Header, Male, 3x1
Q1	FDN340P	Fairchild Semiconductor	FDN340P	DigiKey	FDN340PCT-ND	MOSFET
R1	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R2	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R3	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R4	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R5	1k5	Stackpole Electronics Inc	RMCF0805JT1K50	DigiKey	RMCF0805JT1K50CT-ND	Resistor
R6	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R7	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R8	1k5	Stackpole Electronics Inc	RMCF0805JT1K50	DigiKey	RMCF0805JT1K50CT-ND	Resistor

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R9	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R10	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R11	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
R12	1k	Stackpole Electronics Inc	RMCF0805JT1K00	DigiKey	RMCF0805JT1K00CT-ND	Resistor
R13	10k	Stackpole Electronics Inc	RMCF0805JT10K0	DigiKey	RMCF0805JT10K0CT-ND	Resistor
SD1	SD_CARD_MICRO	?	?	seeed	ST-SD-006A	Micro SD Card Scket
SW1	SW_PUSH	Panasonic Electronic Components	EVQ-P2602W	DigiKey	PI230ISCT-ND	Reset Switch
U1	LP2985-33DBVR	Texas Instruments	LP2985-33DBVR	DigiKey	296-18476-1-ND	Voltage Regulator, 3V3
U2	74HC125	ON Semiconductor	MC74HC125ADG	DigiKey	MC74HC125ADG0S-ND	Voltage Level translaton
U3	NCP1117ST50T3G	ON Semiconductor	NCP1117ST50T3G	DigiKey	NCP1117ST50T3G0SCT-ND	Voltage Regulator, 5V0
U4	DS3231N	Maxim Integrated Products	DS3231S#	DigiKey	DS3231S#-ND	RTC Chip
U5	LM358N	STMicroelectronics	LM358ADT	DigiKey	497-1590-1-ND	Buffer
U6	TXS0108	Texas Instruments	TXS0108EPWR	DigiKey	296-23011-1-ND	Voltage Level translaton
X1	CRYSTAL_2	AVX Corporation	CX3225GB16000D0HEQZ1	DigiKey	478-6622-1-ND	Crystal

DO NO POPULATE

B2	I/O	breakout pad, RTC chip
B3	I/O	breakout pad, RTC chip
B15	I/O	breakout pad, RTC chip
G1	Logo_Wyolum	wyolum logo, front
G2	Logo_Wyolum	wyolum logo, back
G3	Logo_OH	OSHW logo, front
G4	Logo_OH	OSHW logo, back
PCB1	PCB	PCB
SHIELCARDUINO_SHIELD		Arduino stacking headers

		32.66	30.75				
NOTE 2	QTY	RATE	AMOUNT	Position X	Position Y	Orientation	Layer
	1	0.65	0.65				
--	1	1.08	1.08				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.46	0.46				
	1	0.07	0.07				
	1	0.13	0.13				
	1	0.87	0.87				
	1	0.07	0.07				
	1	0.43	0.43				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.07	0.07				
	1	0.05	0.05				
	1	0.05	0.05				
	1	0.22	0.22				
	1	0.22	0.22				
	1	0.46	0.46				
	1	0.46	0.46				
OPTIONAL	0	0.46	0.00				
	1	0.22	0.22				
	1	0.58	0.58				
	1	0.46	0.46				

[illegible]

[illegible]