

BoM, for kit building assembly

ref	value	Vendor	Vendor P/N	NOTE1	NOTE 2
BT1	BATT_RTC	DigiKey	3003K-ND		Battery Socket
*	3V CR2032 Battery	DigiKey	P189-ND		LR2032 Coin Battery
C1,C2,C8	100u	DigiKey	P833-ND		Capacitor Voltage Rating >= 16V
C3,C4,C5,C6,C7,C9,C10	100n	DigiKey	399-5863-ND		Decoupling capacitor
D1 to D128	LED	DigiKey	C535A-WJN-CU0V0231-ND		CREE LED 5mm Cool White Clear 110deg
D258	DBG	DigiKey	1080-1134-ND		Debug LED, 3mm or 5mm LED, any Color
D260	PWR	DigiKey	1080-1134-ND		Power On LED, 3mm or 5mm LED, any Color
J1	V_IN	DigiKey	H2960CT-ND		USB-Mini Socket
K1	PWR	DigiKey	SAM1031-50-ND		Header, Male, 3 pin, for PWR_SEL
*		DigiKey	S9341-ND		Jumper socket for PWR_SEL K1
K2	LED_ENABLE	DigiKey	SAM1031-50-ND		Header, Male, 3 pin, for LED_ENABLE
*		DigiKey	S9341-ND		Jumper socket for LED_ENABLE K2
K4	SCL	DigiKey	SAM1031-50-ND		Header, Male, 2 pin, Link for INT, OPEN for EXT
*		DigiKey	S9341-ND		Jumper socket for SCL, K4
K5	SDA	DigiKey	SAM1031-50-ND		Header, Male, 2 pin, Link for INT, OPEN for EXT
*		DigiKey	S9341-ND		Jumper socket for SDL, K5
P7	FTDI	DigiKey	SAM1031-50-ND		Header, Male, 6 pin, for FTDI
Q1 to Q17	2N5401	DigiKey	2N5401GOS-ND		Transistor, TO-92-3
R1 to R16	100	DigiKey	CF18JT100RCT-ND		Resistor, 1/8W, 5%
R17,R18,R19,R22,R23,R31,R36,R37,R38	10k	DigiKey	CF18JT10K0CT-ND		Resistor, 1/8W, 5%
R20,R21	4k7	DigiKey	CF18JT4K70CT-ND		Resistor, 1/8W, 5%
R24,R25,R26	1k	DigiKey	CF18JT1K00CT-ND		Resistor, 1/8W, 5%
R30	100E	DigiKey	CF18JT100RCT-ND		Resistor, 1/8W, 5%
R32	LDR SOCKET	DigiKey	A32932-ND		Socket header, 2 pin, for LDR
--	LDR	DigiKey	PDV-P9007-ND		LDR, 10k to 100k
R33,R35	680E	DigiKey	CF18JT680RCT-ND		Resistor, 1/8W, 5%
R34	2k	DigiKey	3352T-202LF-ND		Pot, Thumbwheel, Ceramic,
SP1	SPEAKER	DigiKey	102-1169-ND		Audio Buzzer
SW12,SW22,SW32,SW52	INC	DigiKey	450-1647-ND		Push button switch, Long Button
SW42	RST	DigiKey	450-1649-ND		Push button switch, Short Button
U1	STP8DP05	DigiKey	497-6271-5-ND		IC, Row Driver
*	Socket STP8DP05	DigiKey	A100206-ND		Socket for IC U1
U2	7805	--	--		SHORTING LINK between VI and VO
U3	ATMEGA8-P	DigiKey	ATMEGA328-PU-ND		Micro Controller
*	IC ATMEGA8-P	DigiKey	A100210-ND		Socket for IC U3
U4	74HC154	DigiKey	568-1407-5-ND		IC, Column Driver
*	IC 74HC154	DigiKey	3M5479-ND		Socket for IC U4

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U6	DS3231N	DigiKey	DS3231S#-ND		IC, RTC
X1	16MHz	DigiKey	X908-ND		Resonator, with capacitors, 3 pin

NOT USED COMPONENTS

C11,C12	22p	DigiKey	BC1034CT-ND	Optional	if using crystal instead of resonator
CD1,CD2,CD3	CDOT1	DigiKey	3M9515-ND	Optional	if using I2SD, rtcBoB or ChronoDot, Socket, 4 pin
DIL-U1	STP16DP05	DigiKey	3M5479-ND	Optional	if using rowBoB, 24 pin IC socket
J2	V_IN	DigiKey	ED2982-ND	Optional	USB-B, Socket
J3	V_IN	DigiKey	CP-002B-ND	Optional	Barrel socket
K3	7Seg_Sel	--	--	Optional	Solder Bridge for uC pin selection
P1	7SegDisp	Sparkfun	COM-09766	Optional	7 segment 4 digit display
P13	ISP	DigiKey	SAM1095-36-ND	Optional	Header, 3x2 pin
P41	STACK-L	DigiKey	SAM1009-50-ND	Optional	Socket, 4 pin, right angle, for daisy-chaining boards
P42	STACK-R	DigiKey	SAM1043-50-ND	Optional	Header, 4 pin, right angle, for daisy-chaining boards
P43	CONN_1	--	Break Out Pad, no component	Optional	ATMega Port PC2
SW1,SW2,SW3,SW4,SW5	INC	DigiKey	450-1657-ND	Optional	Right Angle switch, for Top access
U2	7805	DigiKey	MC7805CTGOS-ND	Optional	ONLY if V_IN > 5V. ELSE USE SHORTING LINK

MISC. COMPONENTS

BF1	BAFFLE			Angus Hines
BP1	BackPlate			Angus Hines
FM1	FRAME			Ikea or None
FP1	FacePlate			Angus Hines
P8,P9,P10,P11	CONN_1	McMaster	P/N 92855A313	Fixing Screw for Board
P14,P15,P53,P54	CONN_1	McMaster	P/N 92855A313	Fixing Screw for Baffle
P49,P40,P51,P52	CONN_1			Fixing Screw for rtcBoB
rowBoB1	CONN_1			Fixing Screw for rowBoB
P24 to P39	DIL6			Prototyping area
PCB1	PCB			Main Board, seeed
Nuts, M3	--	McMaster	P/N 91828A211	
StandOff's/Spacers, 20mm x M3	--	Local		(from Anool)