

Part ID	Name	Desc./Size	Qty	Cost
<b>ICs</b>				
U\$1	DS3232MZ	I2C MemS RTC, Maxim Integ.	1	\$7.30
U\$2	CH340G	USB UART Bridge, WCH	1	\$5.76
U\$3	ATMEGA328P-AU	8 Bit Micro, TQFP, Microchip	1	\$2.01
U\$4-U\$9	74HC595D	8 Bit Serial Shift Register, SO16, Toshiba	6	\$0.39
<b>Crystals</b>				
Y1	16MHz Crystal	HC49U-V	1	\$0.18
Y2	12MHz Crystal	5x3.2mm 2 Pad SMD	1	\$0.46
<b>Connectors</b>				
POWER	Micro USB		1	\$0.45
J1,J4	CONN_06LOCK	1x6 0.1" Male Header	2	\$0.12
J2	USB MINI-B SMT		1	\$0.55
J3	ICSP Header	2x3 0.1" Male Header	1	\$0.12
J5	CONN_06LOCK	1x6 0.1" Female Header	1	\$0.52
<b>Capacitors</b>				
C1,C4,C5,C7-C15	0.1uF 50V	C0805	12	\$0.10
C2,C3	22pF 50V	C0603	2	\$0.10
C6	100uF 50V	150CLZ-0810	1	\$0.64
<b>Resistors</b>				
R1,R2,R9	10K 1/8W 5%	R0805	3	\$0.10
R3-R5	1K 1/8W 5%	R0805	3	\$0.10
R6,R7	4.7K 1/8W 5%	R0805	2	\$0.10
R8	2.2K 1/8W 5%	R0805	1	\$0.10
<b>Diodes</b>				
D1-D7	1N4148	MINIMELF 100V 200mA SOD-80	7	\$0.10
<b>Switches</b>				

H,M	Tact Switch	Momentary Right Angle	2	\$0.23
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**Misc.**

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L	Red LED	L0805	1	\$0.18
LDR	PHOTORESISTOR-5528-10K	5.0x4.2mm, 10K	1	\$0.95
SP1	Piezo Speaker	AL60P	1	\$0.32
SC	0.22F 5.5V Super Capacitor	axial, horizontal PTH	1	\$2.69
V1-V6	IV-16 Numitron Tube		6	\$35.85
B1-B4	Grain of Wheat Bulb		4	\$4.49

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			Total	\$261.23
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## Source

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<https://www.digikey.com/en/products/detail/maxim-integrated/DS3232MZ-TRL/3087654>

<https://www.ebay.com/itm/5pcs-WCH-SOP-16-CH340G-USB-turn-Serial-chip/264869706361?hash=item3dab76fa79:g:JOUAAOSwqyFfZMbT>

<https://www.digikey.com/en/products/detail/microchip-technology/ATMEGA328P-AU/1832260>

<https://www.digikey.com/en/products/detail/toshiba-semiconductor-and-storage/74HC595D/5879984>

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<https://www.digikey.com/en/products/detail/raltron-electronics/AS-16-000-18/10271769>

<https://www.digikey.com/en/products/detail/cts-frequency-controls/445C35A12M00000/3135821>

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<https://www.digikey.com/en/products/detail/amphenol-icc-fci/10118192-0001LF/2785387>

<https://www.digikey.com/en/products/detail/adam-tech/PH1-06-UA/9830394>

<https://www.digikey.com/en/products/detail/adam-tech/MUSB-B5-S-RA-SMT-PP-T-R/9832228>

<https://www.digikey.com/en/products/detail/adam-tech/PH2-06-UA/9830396>

<https://www.digikey.com/en/products/detail/sullins-connector-solutions/PPTC061LFBN-RC/810145>

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<https://www.digikey.com/en/products/detail/avx-corporation/08055C104KAT4A/6816312>

<https://www.digikey.com/en/products/detail/avx-corporation/06035C220JAT2A/1600097>

<https://www.digikey.com/en/products/detail/kemet/EDK107M050A9MAA/3083087>

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<https://www.digikey.com/en/products/detail/bourns-inc/CR0805-FX-1002ELF/3593209>

<https://www.digikey.com/en/products/detail/bourns-inc/CR0805-JW-102ELF/3593156>

<https://www.digikey.com/en/products/detail/bourns-inc/CR0805-JW-472ELF/3741035>

<https://www.digikey.com/en/products/detail/bourns-inc/CR0805-JW-222ELF/3741032>

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<https://www.digikey.com/en/products/detail/on-semiconductor/FDLL4148/458846>

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<https://www.digikey.com/en/products/detail/panasonic-electronic-components/EVQ-PF106K/286368>

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<https://www.digikey.com/en/products/detail/w%C3%BCrth-elektronik/150080RS75000/4489918>

<https://www.digikey.com/en/products/filter/optical-sensors-photo-detectors-cds-cells/540?s=N4lgTCBcDaIA4AsD2AXJAnApgZwJbbXRAF0BfIA>

<https://www.digikey.com/en/products/detail/murata-electronics/PKM13EPYH4000-A0/1219329>

<https://www.digikey.com/en/products/detail/cornell-dubilier-electronics-cde/EDC224Z5R5H/10412911>

<https://www.ebay.com/itm/6x-IV-16-Nixie-Numitron-Tubes-displays-digits-Lamp-Soviet-Tube-Clock-NEW-580/372800455768?hash=item56cca38458:g:P>

<https://www.ebay.com/itm/CM715-Miniature-Bead-Grain-Of-Wheat-Bulb-5V-5-each-HP-8660/173956376262?hash=item28809ba6c6:g:CmQAAOSw2CBI>

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\*Note prices are as of 12/1/2020 and may not account for shipping, fluctuations, or added fees