

materials list

Saturday, January 11, 2025 12:18 AM

STORAGE

ON-BOARD

DRIVERS	40 KB
BUILD	8.0 KB
TOTAL	2 MB

SDHC MICRO SD CARD

64 x MP3	≈ 8 MB
TOTAL	32 GB

POWER BUDGET

RPI PICO	- 100mA
TM1637 DISPLAY	- 80mA
4X4 KEYPAD	- 5mA
KY040 ENCODER	- 15mA
AUDIO MODULE	- 300mA
TP2399 DELAY	- 30mA
LM358 OP-AMP	- 20mA
PT2399 DELAY	- 30mA
LI-PO BATTERY	+ 10000mAh + 5000mAh + 2500mAh

TOTAL	10000mAh / 525mA
	19.05h
	5000mAh / 525mA
	9.53h
	2500mAh / 525mA
	4.76h

BILL OF MATERIALS

RPI PICO BOARD	RPI PICO \$1.95 OR RPI PICO 2 \$5.41
TM1637 DISPLAY	\$0.94-2.86
4X4 KEYPAD	\$3.14 \$0.66
KY040 ENCODER	\$1.53-4.68
POWER SUPPLY	5 VDC MINI-PLUG AC ADAPTER \$3.89 3.7V RECHARGABLE LI-PO BATTERY 10000mAh \$9.47 OR 3.7V RECHARGABLE LI-PO BATTERY 5000mAh \$7.49 OR 3.7V RECHARGABLE LI-PO BATTERY 2500mAh \$8.16 + LITHIUM BATTERY CHARGING MODULE \$0.99
AUDIO MODULE	RPI PICO AUDIO BOARD \$4.91 DFR0299 \$1.33 + PJ-320D 3.5MM TRS PANEL-MOUNT JACK \$0.12 LM358P DUAL OP-AMP \$2.35 B100K POTENTIOMETER \$1.03
MICRO SD CARD	32GB SDHC MICRO SD CARD \$3.05-6.63

TOTAL MIN	\$26.92
TOTAL MAX	\$40.03

OTHER COMPONENTS

5-WAY SWITCH	R16 ROTARY BAND SWITCH [SP5T] \$2.89
AUDIO-FX MODULE	PT2399 BOARD \$2.61-5.36
3.5MM TERMINAL	3-PIN MALE AUDIO/VIDEO PLUG \$2.61
4X1 KEYPAD	4-PIN INPUT ARRAY \$0.87