

Project:

Matrix controller & panels

Issued: 23/11/2021

Part	Qty	Unit Price (£'s)	Cost (£'s)	Supplier	Comments
1N4006 Rectifier Diode 800V	1	£0.10	£0.10	ebay	Sunk cost - cost per cm
2mm x 10mm Steel Pozi Screws	4	£0.03	£0.10	ebay	Used to mount OLED display strap
DC Power Socket 5.5mm Ø2.1mm	1	£0.25	£0.25	Amazon	Sunk cost
Display 0.96inch white 64x128 OLED I2C	1	£1.74	£1.74	AliExpress	Needed for microcontroller menu system
ESP32 Dev Kit ESP-WROOM-32S	1	£4.10	£4.10	AliExpress	IMPORTANT - ensure you buy the correct version of ESP32
WS2812B 8x8 8x32 16x16 Pixel Panel Flexible Matrix Screen	3	£8.09	£24.26	AliExpress	16x16 LED panel, bought in pairs
360 Degree Rotary Encoder Code Switch Push Button EC11	1	£1.40	£1.40	Amazon	Used for menu selection on microcontroller
BTF-LIGHTING 20 Pairs 2pin SM JST 15cm Cable Female/Male connectors	1	£0.40	£0.40	Amazon	Cables need to link panel power bus, multipack of 20
Micro SD Card Module Memory Shield	1	£2.49	£2.49	ebay	Needed to mount and read microSD card
8GB meory card	1	£4.49	£4.49	Amazon	Bought as a pair, plenty of sources available
5V Power Supply 3A 15W Universal Power Adapter	1	£11.99	£11.99	Amazon	Good option for powering panels, you may need several, depends on your desigr
M3 x 30mm Nylon C-Sunk screws	1	£0.09	£0.09	RS Components	Can be re-used on other projects
2.54mm Row Straight Female Pin Header socket Strip	1	£0.73	£0.02	Amazon	Sunk cost
Single Row 40 Pin 2.54 mm Male Pin Header Connector	1	£0.17	£0.00	Amazon	Sunk cost
1.75mm PLA Filament 1kg reel	0.125	£24.00	£3.00	3DPrintz	Sunk cost
		Total:	£54.43		
		Optional:	£15.13		Can be re-used on other projects
		Re-use:	£35.95		Can be re-used on other projects
		Sunk:	£0.35		Sunk cost

Notes:

Prices are indicative. Bulk purchases may be required to achieve figures. ie. LEDs, screws, etc
 Consumeables like solder, flux, hook-up wire, etc are not included here, but are needed
 3-D printer is an estimate, but 1kg reel will do the job.
 2-part epoxy resin is needed, but no included in the above list