PCB Components – Raspberry Pi Hat

Note that all components were ordered from Imperial College London approved suppliers:

* Farnell
* RS
* Mouser Electronics
* Medisave

Cheaper options may be available from other suppliers but were not considered during this project.

# Custom Raspberry Pi Hat

A price range is given for each of the following components to illustrate the cost if purchased in bulk or if purchased individually or in small packages (depends on the component). This board was printed and build during the project and the following components are the ones which were ordered and soldered on the board. They may not be the cheapest options available on the market.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name on PCB | Component/Footprint | Description / Value | Supplier | Manufacturer | Unit Price (exc VAT) / £ |
| U1 | LFCSP | AD8232ACPZ-WP | RS | Analog Devices | 1.82 - 4.32 |
| U2 | MCP3008-I/SL | Analogue to Digital Converter | Farnell | Microchip | 1.31 - 1.72 |
| R1, R2, R10, R11, R13, R14 | 0603 SMD Resistor |  | RS | Vishay | 0.003 - 0.025 |
| r12 | 0603 SMD Resistor |  | Farnell | Multicomp | 0.0013 - 0.0019 |
| R6, R7, R9 | 0603 SMD Resistor |  | RS | Vishay | 0.005 - 0.03 |
| R5 | 0603 SMD Resistor |  | RS | TE Connectivity | 0.224 - 0.472 |
| R3, R4 | 0603 SMD Resistor |  | RS | Vishay | 0.004-0.024 |
| R8 | 0603 SMD Resistor |  | RS | TE Connectivity | 0.009 - 0.027 |
| R15 | 0603 SMD Resistor |  | RS | Vishay | 0.005 - 0.032 |
| R16 | 0603 SMD Resistor |  | RS | TE Connectivity | 0.002 - 0.032 |
| R17, R19 | 0603 SMD Resistor |  | RS | Vishay | 0.009 - 0.018 |
| C2 | 0603 SMD Capacitor |  | RS | KEMET | 0.009 - 0.069 |
| C1 | 0603 SMD Capacitor |  | RS | KEMET | 0.008 - 0.043 |
| C3 | 0603 SMD Capacitor |  | RS | KEMET | 0.011 - 0.069 |
| C5, C7 | 0603 SMD Capacitor |  | RS | TDK | 0.017 - 0.069 |
| C4, C6 | 0805 SMD Capacitor |  | RS | KEMET | 0.078 - 0.206 |
| D1 | 0603 LED | Red | Farnell | ROHM | 0.0735 - 0.206 |
| JP2, JP6 | 3.5mm Audio Jack SMD Connector | 3 pole | RS | Switchcraft | 1.52 - 1.75 |
| J2 | 3.5mm Audio Jack PCB Mount Connector | 4 pole | Farnell | CLIFF | 0.26 - 0.36 |