**Heltec Kit Parts List**

NOTE: a number of parts use PVC cement to fix the 3D printed parts to the enclosure. Use a small artists’ paint brush to smear the glue otherwise you may get runs which require wiping quickly before the glue sets.

For STEM training events the glued parts will be pre-assembled.

| **Item** | **Qty** |  | **Comments** |
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|  | 1 |  | Enclosure available from [Ebay](https://www.ebay.co.uk/itm/IP65-Waterproof-Weatherproof-Junction-Box-Plastic-Enclosure-Case-UK/283521326596?ssPageName=STRK%3AMEBIDX%3AIT&var=584680955588&_trksid=p2060353.m2749.l2649) |
|  | 2 |  | Inner Vent Plug – provides support for Vent Pipes  STL in 3D parts folder |
|  | 2 |  | Side Vent Filter – to be fitted to the bottom end of the vent pipe  NOTE: this is not the same size as the bottom drain.  STL in 3D parts folder |
|  | 1 |  | Bottom drain  NOTE: this is not the same size as the Side Vent Filters.  STL in 3D parts folder |
|  | 1 |  | Cable inlet plug for connecting the cable gland.  STL in 3D parts folder |
|  | 1 |  | M16 4-8mm Cable gland for PSU cable entry  Threaded section should be 16mm dia. Screws into.  Available from [Amazon](https://www.amazon.co.uk/gp/product/B07QM6JMTV/ref=ppx_yo_dt_b_asin_title_o02_s00?ie=UTF8&psc=1) |
|  | 2 |  | Vent Pipe 21.5mm internal dia.  Available in B&Q in packs of 3 for £1.98 and various other internet vendors. |
|  | 1 |  | BME280  humidity, pressure & temperature sensor.  Cable fitted (not shown) terminating in 6 way JST.  Available on Ebay/Amazon |
|  | 1 |  | SDS011 particulate sensor  Available from Amazon and Ebay and Aliexpress (if you can wait.) |
|  | 1 |  | Heltec V2 (must be V2). Firmware is pre-installed but available on [github](https://github.com/ConnectedHumber/Air-Quality-Kit) .  Available from Amazon or Ebay or Aliexpress.  Comes with an antenna.  Fits into socket on the PCB. Pins usually need to be soldered. |
|  | 1 |  | Heltec based controller PCB – assembled. |
|  | 1 |  | Sensor linking pipe.  STL in 3D parts folder |
|  | 4 | M3x7 Poppstar Hard Drive Screws | for mounting carrier plate to enclosure.  Available from [Amazon](https://www.amazon.co.uk/gp/product/B01HBRG4JU/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1) . |
|  | 2 | clear poly pipe 25mm long x 8mm od | Connects SDS011 inlet to linking pipe and linking pipe to upper inlet vent.  Available in B&Q |
|  | 1 | 5mm nylon pcb standoffs F-F 3mm thread | fits between SDS011 and carrier plate |
|  | 2 | 5mm nylon standoff F-M 3mm thread | fits between SDS011 and carrier plate |
|  | 2 | 18mm nylon standoffs F-F 3mm thread | fits on top of SDS011 |
|  | 2 | 25mm nylon standoffs F-F 3mm thread | Carrier plate to PCB |
|  | 1 | 3mm x 10mm nylon screw | for securing antenna bracket |
|  | 8 | 3mm x 6mm nylon screws | for securing the nylon standoffs |
|  | 1 |  | Clear Perspex Sensor Carrier.  2.4mm thick Perspex base plate – pre-drilled. |
|  | 1 |  | Antenna Mount |
|  | 1 |  | 2 way terminal block 3A (small) |
|  | 1 | SDS connector JST 6pin to JST 4 pin 2.54mm | Connects SDS to MCU PCB |
|  | 1 | JST-2 pin with fly leads | Connects MCU 5V to the 2 way terminal block. |
|  | 2 |  | Optional enclosure mounting plates.  These will be cemented to the enclosure using PVC weld glue and will ensure no rain water can penetrate the rear of the enclosure. |
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