

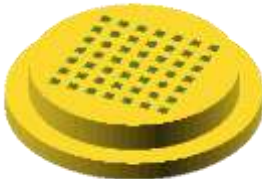
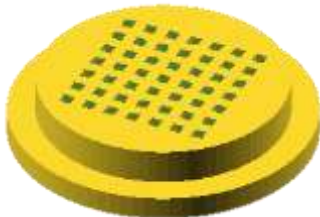



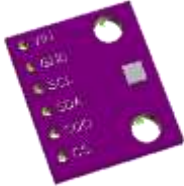
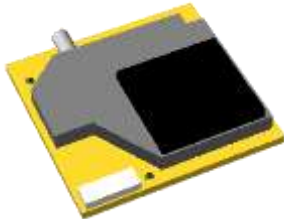





Heltec Kit Parts List

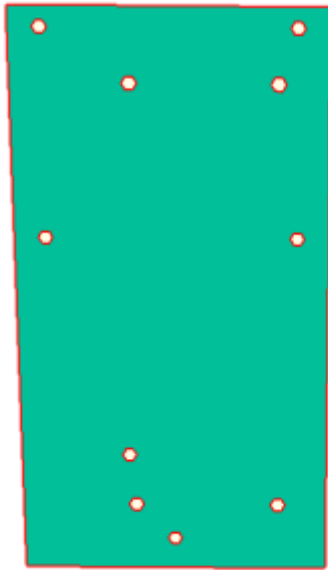
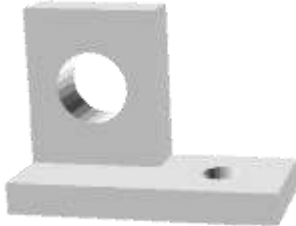

NOTE: a number of parts use PVC cement to fix the 3D printed parts to the enclosure. Use a small artists' paint brush to smear the glue otherwise you may get runs which require wiping quickly before the glue sets.

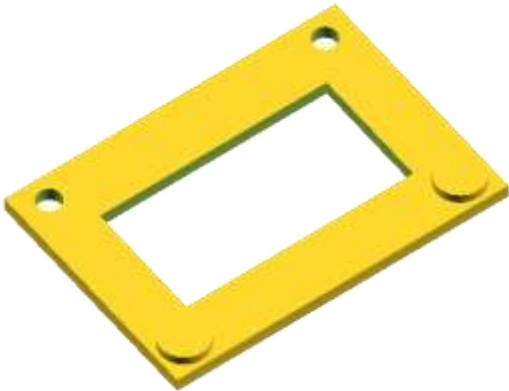
For STEM training events the glued parts will be pre-assembled.

Item	Qty		Comments
	1		Enclosure available from Ebay
	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

Item	Qty		Comments
	1		<p>Cable inlet plug for connecting the cable gland.</p> <p>STL in 3D parts folder</p>
	1		<p>M16 4-8mm Cable gland for PSU cable entry</p> <p>Threaded section should be 16mm dia. Screws into.</p> <p>Available from Amazon</p>
	2		<p>Vent Pipe 21.5mm internal dia.</p> <p>Available in B&Q in packs of 3 for £1.98 and various other internet vendors.</p>
	1		<p>BME280 humidity, pressure & temperature sensor.</p> <p>Cable fitted (not shown) terminating in 6 way JST.</p> <p>Available on Ebay/Amazon</p>
	1		<p>SDS011 particulate sensor</p> <p>Available from Amazon and Ebay and Aliexpress (if you can wait.)</p>
	1		<p>Heltec V2 (must be V2). Firmware is pre-installed but available on github.</p> <p>Available from Amazon or Ebay or Aliexpress.</p> <p>Comes with an antenna.</p> <p>Fits into socket on the PCB. Pins</p>

Item	Qty		Comments
			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 .
	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

Item	Qty		Comments
	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.

Item	Qty		Comments
	2		<p>Optional enclosure mounting plates.</p> <p>These will be cemented to the enclosure using PVC weld glue and will ensure no rain water can penetrate the rear of the enclosure.</p>