

Iridium 9603 Beacon

Mass Budget

<u>Item</u>	<u>Mass (g)</u>	<u>Qty</u>	<u>Total Mass (g)</u>	<u>PCB Width (mm)</u>	<u>PCB Length (mm)</u>	<u>PCB Thickness (mm)</u>	<u>PCB Volume (mm³)</u>	<u>Approx. Density (g/mm³)</u>
Prototype Components								
Adafruit Adalogger M0	5.3	1.0	5.3	22.8	51.3	1.6	1871.4	0.0028
(GTop) Adafruit Ultimate GPS	7.1	1.0	7.1	25.5	34.0	1.6	1387.2	0.0051
MPL3115A2 Pressure & Temperature Sensor	1.1	1.0	1.1	15.8	18.4	1.6	465.2	0.0024
Satelligent Iridium 9603 DIP Adapter	5.6	1.0	5.6	40.6	35.6	1.6	2312.6	0.0024

Beacon Mass Estimate

Adafruit Adalogger M0 (smaller PCB without SD card or battery connector)	5.3	0.6	3.2
Adafruit Ultimate GPS (smaller PCB area)	7.1	0.8	5.7
MPL3115A2 Pressure & Temperature Sensor (smaller PCB area)	1.1	0.8	0.8
LTC3225 SuperCapacitor Charger (IC and PCB)	1.0	1.0	1.0
SuperCapacitor (1F 2.7V)	0.9	2.0	1.7
Batteries (3x AAA LiFeS2)	7.6	3.0	22.8
Battery Clips (Keystone Electronics 82)	0.6	6.0	3.9
Iridium 9603 Module	11.6	1.0	11.6
Iridium 9603 PCB (smaller PCB area)	5.6	0.8	4.2
Iridium 9603 Fixings	1.7	1.0	1.7
Iridium Antenna (Taoglas IP.1621.25.4.A.02)	10.0	1.0	10.0
Iridium Antenna PCB (30mm x 25mm)	2.9	1.0	2.9
Iridium Antenna Fixings	0.9	1.0	0.9
Iridium Antenna Cable (Molex 73412-0508 U.FL Plug-Plug 50mm)	0.3	1.0	0.3
Total			70.6