

Table 1. Bill of materials

Reference	Part/value	Footprint	Description
U1	STC3105	TDFN8 3 mm x 2 mm	Battery monitoring integrated circuit from STMicroelectronics
R1	0 Ω	0402	Strap
R2	0 Ω	0402	Isolate current to GND plane. Not necessary on the user's PCB.
Rcg	20 m Ω / $\pm 1\%$	0805	Shunt resistor
Rup1	4.7 k / $\pm 5\%$	0402	Pull-up resistor (onboard pull-up to VCC). In order to pull up to external I/O voltage, remove the resistor.
Rup2	4.7 k / $\pm 5\%$	0402	Pull-up resistor (onboard pull-up to VCC). In order to pull up to external I/O voltage, remove the resistor.
Rup3	4.7 k / $\pm 5\%$	0402	Pull-up resistor (onboard pull-up to VCC). In order to pull up to external I/O voltage, remove the resistor.
C1	1 μ F / 16 V / X7R	0402	Optional filtering capacitor
C2	1 μ F / 10 V / X7R	0402	Decoupling capacitor