# KiBoM PCB Bill of Materials

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|---|---|
| Source File | C:\Users\akiku\GIT\rctelemetry\hw\Telemetry.sch |
| BoM Date | 23.2.2020 21.34.46 |
| Schematic Version | 1.1 |
| Schematic Date | 2020-02-23 |
| PCB Variant | [u'default'] |
| KiCad Version | Eeschema (5.1.5)-3 |
| Component Groups | 53 |
| Component Count (per PCB) | 118 |
| Fitted Components (per PCB) | 117 |
| Number of PCBs | 1 |
| Total Component Count (for 1 PCBs) | 117 |

# Component Groups

| | Description | References | Value | Footprint | Quantity Per PCB | Manufacturer | MPN | Datasheet |
|---|---|---|---|---|---|---|---|---|
| 1 | Unpolarized capacitor, small symbol | C101 C102 C103 C104 C105 C106 C303 C304 C306 C307 C403 C405 C406 C407 C408 | 100n/50V | C_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 15 | | | ~ |
| 2 | Unpolarized capacitor | C207 C211 C212 | 100n/50V | C_0805_2012Metric_Pad1.15x1.40mm_HandSolder | 3 | | | ~ |
| 3 | Polarized capacitor | C202 C208 | 100uF/10V | C_Radial_D7.5_L11.2_P2.5 | 2 | | | ~ |
| 4 | Unpolarized capacitor, small symbol | C203 C213 C302 | 10n/50V | C_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 3 | | | ~ |
| 5 | Unpolarized capacitor | C209 C210 | 10n/50V | C_0805_2012Metric_Pad1.15x1.40mm_HandSolder | 2 | | | ~ |
| 6 | Unpolarized capacitor | C206 | 10u/10V | C_0805_2012Metric_Pad1.15x1.40mm_HandSolder | 1 | | | ~ |
| 7 | Unpolarized capacitor, small symbol | C404 | 10u/10V | C_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 1 | | | ~ |
| 8 | Unpolarized capacitor | C205 C401 C402 | 1u/35V | C_0805_2012Metric_Pad1.15x1.40mm_HandSolder | 3 | | | ~ |
| 9 | Unpolarized capacitor, small symbol | C301 | 1u/35V | C_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 1 | | | ~ |
| 10 | Polarized capacitor | C204 | 22u/35V | C_Radial_D7.5_L11.2_P2.5 | 1 | | | ~ |
| 11 | Unpolarized capacitor, small symbol | C309 | 2u2/10V | C_0805_2012Metric_Pad1.15x1.40mm_HandSolder | 1 | | | ~ |
| 12 | Polarized capacitor | C201 | 470uF/35V | CP_Radial_D10.0mm_P5.00mm | 1 | | | ~ |
| 13 | Light emitting diode | D101 | LED_Green | LED_0603_HandSoldering | 1 | | | ~ |

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| 14 | Schottky diode | D201 D202 | SS54 | D_SMA_Handsoldering | 2 | | SS54 | https://www.farnell.com/datasheets/1441695.pdf |
| 15 | Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/) | J410 | AUDIO | PinHeader_1x02_P2.54mm_Vertical | 1 | | | ~ |
| 16 | Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/) | J102 | BOOT0 | Pin_Header_Straight_1x02_Pitch1.27mm | 1 | | | ~ |
| 17 | Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/) | J201 J301 J302 | Conn_01x02 | 2Pin_4mm | 3 | | | ~ |
| 18 | Generic connector, single row, 01x02, script generated (kicad-library-utils/schlib/autogen/connector/) | J401 J402 J403 J405 J406 J407 | Conn_01x02 | Molex_KK-254_AE-6410-02A_1x02_P2.54mm_Vertical | 6 | | | ~ |
| 19 | Generic screw terminal, single row, 01x04, script generated (kicad-library-utils/schlib/autogen/connector/) | J404 | HC_OUT | TerminalBlock_Phoenix_PT-1,5-4-5.0-H_1x04_P5.00mm_Horizontal | 1 | | | ~ |
| 20 | Generic connector, single row, 01x06, script generated (kicad-library-utils/schlib/autogen/connector/) | J103 J104 | SPORT | Pin_Header_Straight_2x03 | 2 | | | ~ |
| 21 | Generic connector, double row, 02x03, odd/even pin numbering scheme (row 1 odd numbers, row 2 even numbers), script generated (kicad-library-utils/schlib/autogen/connector/) | J409 | ServoCon | PinHeader_2x03_P2.54mm_Vertical | 1 | | | ~ |
| 22 | Generic connector, single row, 01x04, script generated (kicad-library-utils/schlib/autogen/connector/) | J106 | UART_EXP | PinHeader_2x02_P2.54mm_Vertical | 1 | | | ~ |
| 23 | USB Micro Type B connector | J105 | USB_B_Micro | USB_Micro-B | 1 | | | ~ |
| 24 | Jumper, normally closed, small symbol | JP101 JP401 | Jumper_NC_Small | PinHeader_1x02_P2.54mm_Vertical | 2 | | | ~ |
| 25 | Inductor | L202 | BCRH1212Y-680M | L_Sunlord_MWSA1206 | 1 | Sunlord | MWSA1206-470MT | https://datasheet.lcsc.com/szlcsc/Sunlord-MWSA1206-470MT_C115409.pdf |
| 26 | Inductor | L201 | SPN30304R7MPTE | L_Sunlord_MWSA0402 | 1 | Sunlord | MWSA0402-4R7MT | https://datasheet.lcsc.com/szlcsc/Sunlord-MWSA0402-4R7MT_C136097.pdf |
| 27 | 100A Id, 30V Vds, NexFET N-Channel Power MOSFET, 4.2mOhm Ron, Qg (typ) 11.8nC, SON8 5x6mm | Q404 Q408 | CSD17306Q5A | TDSON-8-1_HandSoldering | 2 | Texas Instruments | CSD17306Q5A | http://www.ti.com/lit/gpn/csd17306q5a |
| 28 | MOSFET N-CH 30V 5A SOT23 | Q401 Q402 Q403 Q406 | IRLML6344TRPBF | SOT-23-3 | 4 | Infineon Technologies | IRLML6344TRPBF | https://www.infineon.com/dgdl/irlml6344pbf.pdf?fileId=5546d462533600a4015356689c44262c |
| 29 | Resistor, small symbol | R402 R403 R404 R410 | 10 | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 4 | | | ~ |
| 30 | Resistor, small symbol | R409 R411 | 100 | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 2 | | | ~ |
| 31 | Resistor | R101 R201 R206 R401 R405 R406 | 10k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 9 | | | ~ |

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| | | R407 R408 R414 | | | | | | |
| 32 | Resistor, small symbol | R205 R302 R304 R305 R307 | 12k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 5 | | | ~ |
| 33 | Resistor, small symbol | R306 R308 | 18k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 2 | | | ~ |
| 34 | Resistor, small symbol | R105 | 1k5 | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 1 | | | ~ |
| 35 | Resistor, small symbol | R202 R208 | 24k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 2 | | | ~ |
| 36 | Resistor | R102 R103 | 470R | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 2 | | | ~ |
| 37 | Resistor | R104 R106 R107 R108 | 50R | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 4 | | | ~ |
| 38 | Resistor, small symbol | R204 | 5k6 | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 1 | | | ~ |
| 39 | Resistor, small symbol | R203 R301 R303 | 68k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 3 | | | ~ |
| 40 | Resistor, small symbol | R207 | 75k | R_0603_1608Metric_Pad1.05x0.95mm_HandSolder | 1 | | | ~ |
| 41 | Push button switch, generic, two pins | SW101 | SW_Push | SW_SPST_B3U-1000P | 1 | Omron | B3U-1000P | https://omronfs.omron.com/en_US/ecb/products/pdf/en-b3u.pdf |
| 42 | 100A Unidirectional Hall-Effect Current Sensor, +5.0V supply, 40mV/A, CB-5 PSF | U302 U304 | ACS758LCB-100B-PFF-T | Allegro_PFF | 2 | Allegro | ACS758LCB-100B-PFF-T | http://www.allegromicro.com/~/media/Files/Datasheets/ACS758-Datasheet.ashx?la=en |
| 43 | | U403 | AD5160BRJZ10-R2 | SOT-23-8 | 1 | AD5160BRJZ10-R2 | Analog Devices | https://www.analog.com/media/en/technical-documentation/data-sheets/AD5160.pdf |
| 44 | | U201 | AP1501-K5 | TO-263-5_TabPin3 | 1 | Diodes Inc | AP1501-K5 | https://www.diodes.com/assets/Datasheets/AP1501.pdf |
| 45 | | U102 | IS25LP032D | SOIC-8_W5.6mm | 1 | ISSI | IS25LP032D | http://www.issi.com/WW/pdf/25LP-WP032D.pdf |
| 46 | 150mA 16V Low-noise Low-dropout Regulator With Shutdown, 5.0V output voltage, SOT-23-5 | U301 | LP2985-5.0 | SOT-23-5_HandSoldering | 1 | Texas Instruments | LP2985-5.0 | http://www.ti.com/lit/ds/symlink/lp2985.pdf |
| 47 | | U401 U402 | MCP1416 | SOT-23-5_HandSoldering | 2 | Microchip | MCP1416 | http://ww1.microchip.com/downloads/en/DeviceDoc/20002092F.pdf |
| 48 | 1MHz, Low-Power Op Amp, SOT-23-5 | U303 U305 U404 | MCP6001-OT | SOT-23-5_HandSoldering | 3 | Microchip | MCP6001-OT | http://ww1.microchip.com/downloads/en/DeviceDoc/21733j.pdf |
| 49 | | U202 | RT6200 | SOT-23-6_Handsoldering | 1 | Richtek Tech | RT6200 | https://www.richtek.com/assets/product_file/RT6200/DS6200-04.pdf |
| 50 | | U101 | STM32F303CBx | LQFP-48_7x7mm_Pitch0.5mm | 1 | ST Microelectronics | STM32F303CB | https://www.st.com/resource/en/datasheet/stm32f303cb.pdf |
| 51 | OPTOISO 3.75KV PSH PULL SO6-5 | U405 U406 | TLP2361_TPL_E | SOIC-6-5_W4.55mm | 2 | Toshiba Semiconductor and Storage | TLP2361-TPLECT | https://toshiba.semicon-storage.com/info/docget.jsp?did=14229&prodName=TLP2361 |
| 52 | | X101 | SG-310_SCF_8.000000MHZ | SG- 310 | 1 | Epson | SG-310_SCF_8.000000MHZ | https://support.epson.biz/td/api/doc_check.php?dl=brief_SG-310SEF&lang=en |