

KiBoM PCB Bill of Materials

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|---------------------------------------|---|
| Source File | D:\Files\GIT\rctelemetry\hw\Telemetry.sch |
| BoM Date | 29.5.2019 19.46.45 |
| Schematic Version | 0.1 |
| Schematic Date | 2019-05-20 |
| KiCad Version | Eeschema (5.0.0) |
| Component Groups | 48 |
| Component Count (per PCB) | 120 |
| Fitted Components (per PCB) | 120 |
| Number of PCBs | 1 |
| Total Component Count (for 1 PCBs) | 120 |

Component Groups

KiCad Fields (default)

Generated Fields

User Fields

Empty Fields

| | Description | Part | References | Value | Quantity Per PCB | Datasheet |
|---|-----------------------|---------|---|-------|---------------------|-----------|
| 1 | Unpolarized capacitor | C_Small | C101 C102 C103 C104 C105 C106 C203 C303 C304 C306 C307 C403 C405 C406 | 100n | 14 | ~ |
| 2 | Unpolarized capacitor | C_Small | C302 | 10n | 1 | ~ |
| 3 | Unpolarized capacitor | C_Small | C404 | 10u | 1 | ~ |
| 4 | Unpolarized capacitor | C | C205 | 1u | 1 | ~ |
| 5 | Unpolarized capacitor | C_Small | C301 | 1u | 1 | ~ |

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|----|---|---------------------|-------------------------------------|------------|---|---|
| 6 | Unpolarized capacitor | C_Small | C401 C402 | 1u | 2 | ~ |
| 7 | Polarised capacitor | CP | C201 C202 C204 C208 | 22u | 4 | ~ |
| 8 | Unpolarized capacitor | C | C206 C309 | 2u2 | 2 | ~ |
| 9 | LED generic | LED | D101 | LED | 1 | ~ |
| 10 | Schottky diode | D_Schottky | D201 D202 | SS54 | 2 | https://www.farnell.com/datasheets/1441695.pdf |
| 11 | Generic connector, single row, 01x02, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x02 | J410 | AUDIO | 1 | ~ |
| 12 | Generic connector, single row, 01x02, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x02 | J101 J102 | BOOT0 | 2 | ~ |
| 13 | Generic connector, single row, 01x02, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x02 | J201 J301 J302 | Conn_01x02 | 3 | ~ |
| 14 | Generic connector, single row, 01x02, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x02 | J401 J402 J403 J405 J406 J407 | Conn_01x02 | 6 | ~ |
| 15 | Generic connector, single row, 01x02, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x02 | J404 J408 | Conn_01x02 | 2 | ~ |
| 16 | Generic connector, single row, 01x06, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x06 | J104 | SBUS | 1 | ~ |
| 17 | Generic connector, double row, 02x06, odd/even pin numbering scheme (row 1 odd numbers, row 2 even numbers), script generated (kicad-library- utils/schlib/autogen/connector/) | Conn_02x06_Odd_Even | J409 | SERVO_OUT | 1 | ~ |
| 18 | Generic connector, single row, 01x06, script generated (kicad- | Conn_01x06 | J103 | SPORT | 1 | ~ |

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|----|---|-----------------|---|-----------------|----|---|
| | library- utils/schlib/autogen/connector/) | | | | | |
| 19 | Generic connector, single row, 01x04, script generated (kicad- library- utils/schlib/autogen/connector/) | Conn_01x04 | J106 | UART_EXP | 1 | ~ |
| 20 | USB Micro Type B connector | USB_B_Micro | J105 | USB_B_Micro | 1 | ~ |
| 21 | Jumper, normally closed | Jumper_NC_Small | JP101 JP401 | Jumper_NC_Small | 2 | ~ |
| 22 | Inductor | L | L202 | BCRH1212Y-680M | 1 | https://datasheet.lcsc.com/szlcsc/Bao-Cheng-Elec-BC-BCRH1212Y-680M_C238002.pdf |
| 23 | Inductor | L | L201 | SPN30304R7MPTE | 1 | https://datasheet.lcsc.com/szlcsc/1901081516_Darfon-Elec-SPN30304R7MPTE_C359291.pdf |
| 24 | MOSFET P-CH 30V 4A SOT23 | AO3401A | Q201 Q202 | AO3401A | 2 | http://aosmd.com/res/data_sheets/AO3401A.pdf |
| 25 | 100A Id, 30V Vds, NexFET N- Channel Power MOSFET, 4.2mOhm Ron, Qg (typ) 11.8nC, SON8 5x6mm | CSD17306Q5A | Q404 Q408 | CSD17306Q5A | 2 | http://www.ti.com/lit/gpn/csd17306q5a |
| 26 | MOSFET N-CH 30V 5A SOT23 | IRLML6344TRPBF | Q203 Q204 Q401 Q402 Q403 Q405 Q406 Q407 | IRLML6344TRPBF | 8 | https://www.infineon.com/dgdl/irlml6344pbf.pdf?fileId=5546d462533600a4015356689c44262c |
| 27 | Resistor, small symbol | R_Small | R412 | 0R | 1 | ~ |
| 28 | Resistor, small symbol | R_Small | R402 R403 R404 R409 R410 R411 | 10 | 6 | ~ |
| 29 | Resistor, small symbol | R_Small | R209 R210 R212 R214 | 100k | 4 | ~ |
| 30 | Resistor | R | R101 R104 R201 R206 R211 R213 R401 R405 R406 R407 R408 R413 R414 R415 | 10k | 14 | ~ |
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|----|--|--------------------|--------------------------------|--------------------|---|---|
| 31 | Resistor, small symbol | R_Small | R205 R302 R304 R305 R307 | 12k | 5 | ~ |
| 32 | Resistor, small symbol | R_Small | R306 R308 | 18k | 2 | ~ |
| 33 | Resistor, small symbol | R_Small | R202 R208 | 24k | 2 | ~ |
| 34 | Resistor | R | R102 R103 | 470R | 2 | ~ |
| 35 | Resistor, small symbol | R_Small | R204 | 5k6 | 1 | ~ |
| 36 | Resistor, small symbol | R_Small | R203 R301 R303 | 68k | 3 | ~ |
| 37 | Resistor, small symbol | R_Small | R207 | 75k | 1 | ~ |
| 38 | Push button switch, generic, two pins | SW_Push | SW101 | SW_Push | 1 | |
| 39 | 100A Unidirectional Hall- Effect Current Sensor, +5.0V supply, 40mV/A, CB-5 PSF | ACS770xCB-100U-PSF | U302 U304 | ACS770xCB-100U-PSF | 2 | http://www.allegromicro.com/~media/Files/Datasheets/ACS758-Datasheet.ashx?la=en |
| 40 | 10k 256-Position SPI- Compatible Digital potentiometer | AD5160BRJZ10-R2 | U403 | AD5160BRJZ10-R2 | 1 | https://www.analog.com/media/en/technical-documentation/datasheets/AD5160.pdf |
| 41 | 150kHz, 3A PWM Buck DC/DC Converter | AP1501-K5 | U201 | AP1501-K5 | 1 | https://www.diodes.com/assets/Datasheets/AP1501.pdf |
| 42 | 32Mb SERIAL FLASH MEMORY WITH 133MHZ MULTI I/O SPI & QUAD I/O QPI DTR INTERFACE | IS25LP032D | U102 | IS25LP032D | 1 | http://www.issi.com/WW/pdf/25LP-WP032D.pdf |
| 43 | 150mA 16V Low-noise Low- dropout Regulator With Shutdown, 5.0V output voltage, SOT-23-5 | LP2985-5.0 | U301 | LP2985-5.0 | 1 | http://www.ti.com/lit/ds/symlink/lp2985.pdf |
| 44 | 1.5A High speed power MOSFET driver with non- inverting output, SOT-23-5 | MCP1416 | U401 U402 | MCP1416 | 2 | http://ww1.microchip.com/downloads/en/DeviceDoc/20002092F.pdf |
| 45 | 1MHz, Low-Power Op Amp, SOT-23-5 | MCP6001-OT | U303 U305 U404 | MCP6001-OT | 3 | http://ww1.microchip.com/downloads/en/DeviceDoc/21733j.pdf |
| 46 | 0.6A, 36V, 1.2MHz Step-Down Converter | RT6200 | U202 | RT6200 | 1 | https://www.richtek.com/assets/product_file/RT6200/DS6200-04.pdf |
| 47 | Arm®-based Cortex®-M4 32b MCU+FPU, up to 256KB Flash+ | STM32F303CBx | U101 | STM32F303CBx | 1 | https://www.st.com/resource/en/datasheet/stm32f303cb.pdf |

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| 48 | Crystal oscillator (SPXO) CMOS output | SG- 310_SCF_8.000000MHZ | X101 | SG- 310_SCF_8.000000MHZ | 1 | https://support.epson.biz/td/api/doc_check.php?dl=brief_SG-310SEF&lang=en |
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