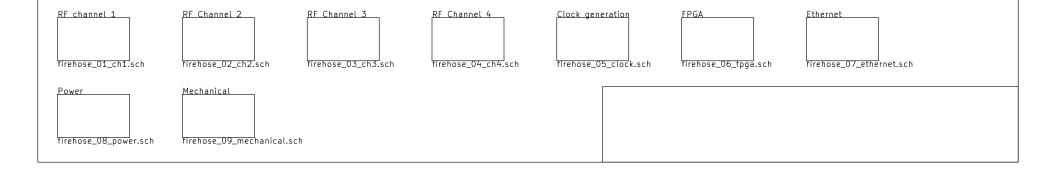
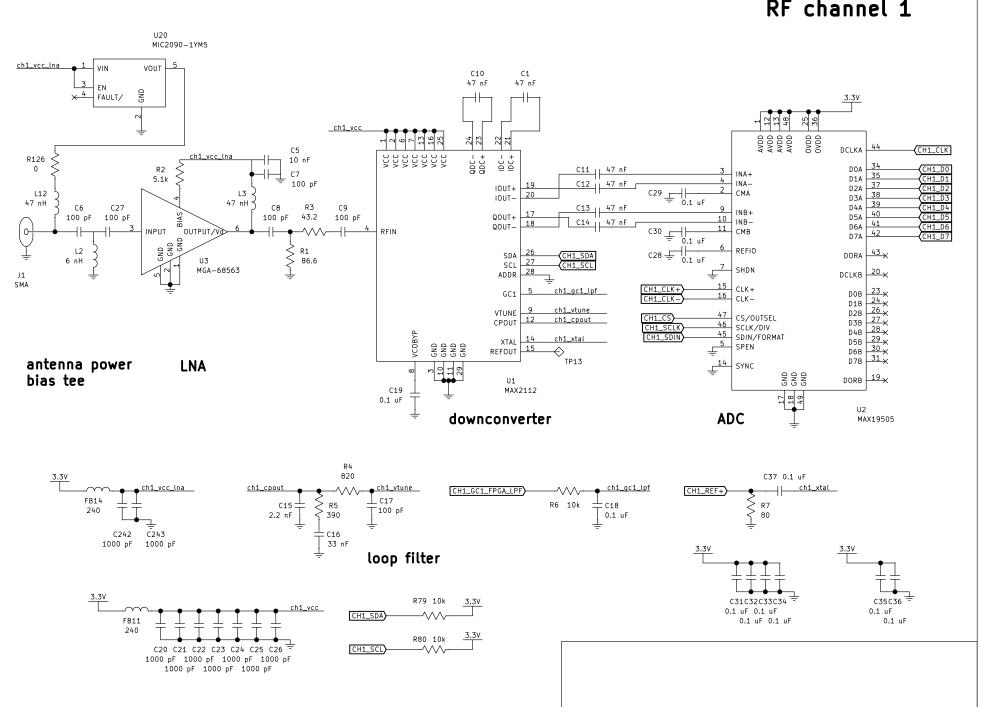
GNSS Firehose

Wideband front end for GPS, GLONASS, Galileo, BeiDou

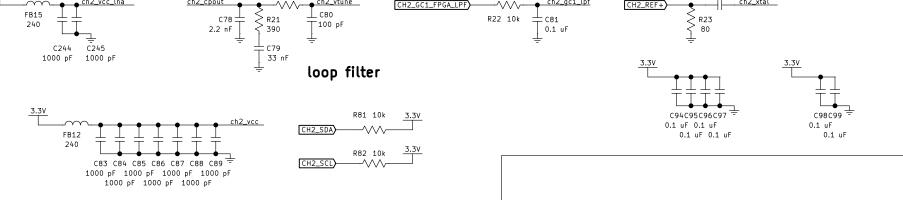
placeholder for block—diagram graphics



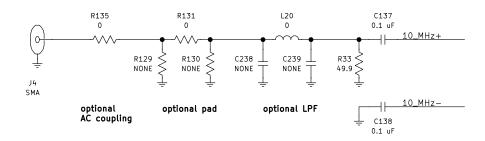
RF channel 1

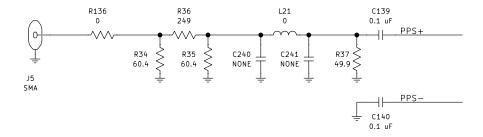


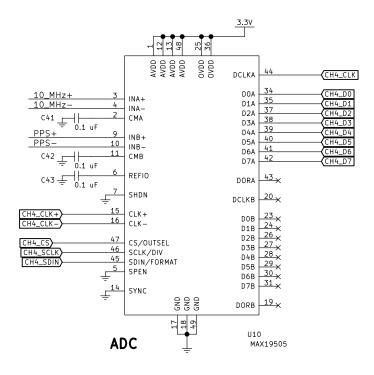
RF channel 2 U21 MIC2090-1YM5 ch2_vcc_lna VOUT C73 C67 47 nF 47 nF × 4 FAULT/ 3.30 ch2_vcc OVDD DCLKA C68 CH2_CLK QDC-QDC+ - DC + R127 10 nF C74 | 47 nF DOA 0 R18 C70 INA+ 5.1k D1A CH2_D1 C75 47 nF F 100 pF INA-IOUT+ D2A C92 🖵 СМА L13 L5 D3A 38 IOUT-47 nH C69 C71 R19 C72 C76 47 nF D4A CH2_D4 C90 INB+ 100 pF 100 pF 100 pF 43.2 100 pF QOUT+ 10 INB-D5A C77 47 nF 11 CMB QOUT-D6A INPUT OUTPUT/V RFIN D7A GND ₹ R17 86. REFIO L4 DORA 43× C91 🖵 SDA CH2_SDA 6 nH 86.6 U6 SCL DCLKB 20 × MGA-68563 SHDN J2 ADDR 15 CLK+ DOB 24 × 24 × 26 × 27 × 28 × 29 × 29 × 30 × 31 × ch2_gc1_lpf GC1 16 CLK-CH2_CLKch2_vtune VTUNE 47 CS/OUTSEL CH2_CS ch2_cpout CPOUT 46 SCLK/DIV CH2_SCLK 45 SDIN/FORMAT VCOBYP CH2_SDIN SDIN/ SPEN XTAL GND GND GND GND REFOUT SYNC antenna power LNA GND GND GND bias tee DORB 19× U4 C82 MAX2112 0.1 uF U5 downconverter **ADC** MAX19505 R20 820 C100 0.1 uF ch2_vcc_lna ch2_vtune ch2_gc1_lpf __ch2_xtal ch2_cpout CH2_GC1_FPGA_LPF CH2_REF+ FB15 L C80 ₹ R23 80 C78 士 R22 10k C81 240 ⊤100 pF 2.2 nF 390 0.1 uF C244 C245 C79 1000 pF 1000 pF 33 nF 3.3٧ 3.3٧ loop filter

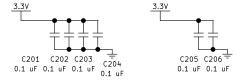


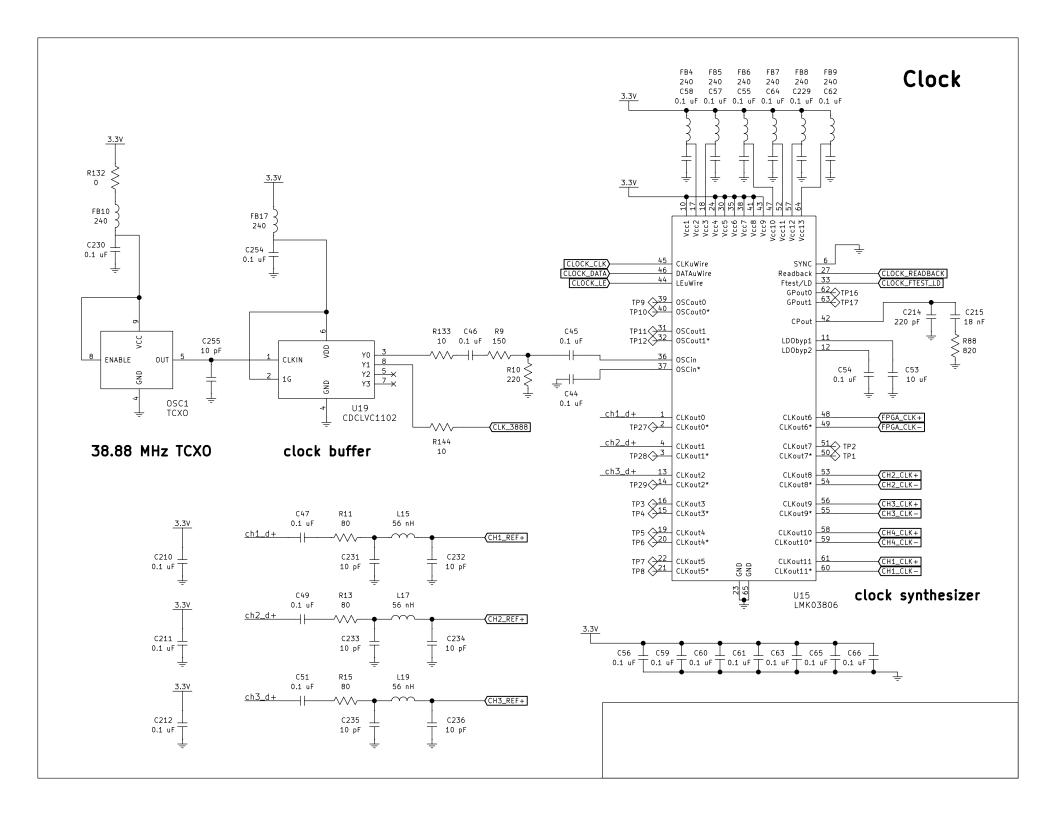
RF channel 3 U22 MIC2090-1YM5 ch3_vcc_lna VOUT C108 C102 47 nF 47 nF × 4 FAULT/ 3.3٧ ch3_vcc OVDD C103 DCLKA CH3_CLK QDC-QDC+ - DC -R128 10 nF DOA C109 47 nF R26 C105 INA+ 5.1k D1A CH3_D1 C110 47 nF F 100 pF INA-C127___ D2A IOUT+ CMA L14 L7 38 IOUT-D3A 47 nH C104 C106 R27 C107 C111 47 nF D4A CH3_D4 C125 INB+ 100 pF 100 pF 100 pF 43.2 100 pF QOUT+ 10 INB-D5A C112 47 nF ____C128____ QOUT-11 CMB D6A INPUT OUTPUT/V RFIN D7A GND ₹ R25 86. REFIO L6 DORA 43 × C126-SDA CH3_SDA 6 nH 86.6 U9 SCL DCLKB 20 × MGA-68563 SHDN 28 J3 ADDR SMA 15 CLK+ DOB 24 × 24 × 26 × 27 × 28 × 29 × 29 × 30 × 31 × ch3_gc1_lpf GC1 16 CLK-CH3_CLKch3_vtune VTUNE 47 CS/OUTSEL ch3_cpout CPOUT 46 SCLK/DIV CH3_SCLK) 45 SDIN/FORMAT VCOBYP CH3_SDIN SDIN/ SPEN XTAL GND GND GND GND REFOUT SYNC antenna power LNA GND bias tee DORB 19× U7 C117 MAX2112 0.1 uF U8 downconverter **ADC** MAX19505 R28 820 C135 0.1 uF ch3_vcc_lna ch3_gc1_lpf _ch3_xtal CH3_GC1_FPGA_LPF) CH3_REF+ FB16 C115 ₹ R31 80 C113 R30 10k C116 240 100 pF 2.2 nF 390 0.1 uF C246 C247 C114 1000 pF 1000 pF 33 nF 3.3٧ 3.3٧ loop filter R83 10k C129 C130 C131 C133 C134 C132 0.1 uF 0.1 uF 0.1 uF 0.1 uF 0.1 uF CH3_SDA FB13 240 R84 10k C118C119C120C121C122C123C124= 1000 pF 1000 pF 1000 pF 1000 pF 1000 pF 1000 pF 1000 pF

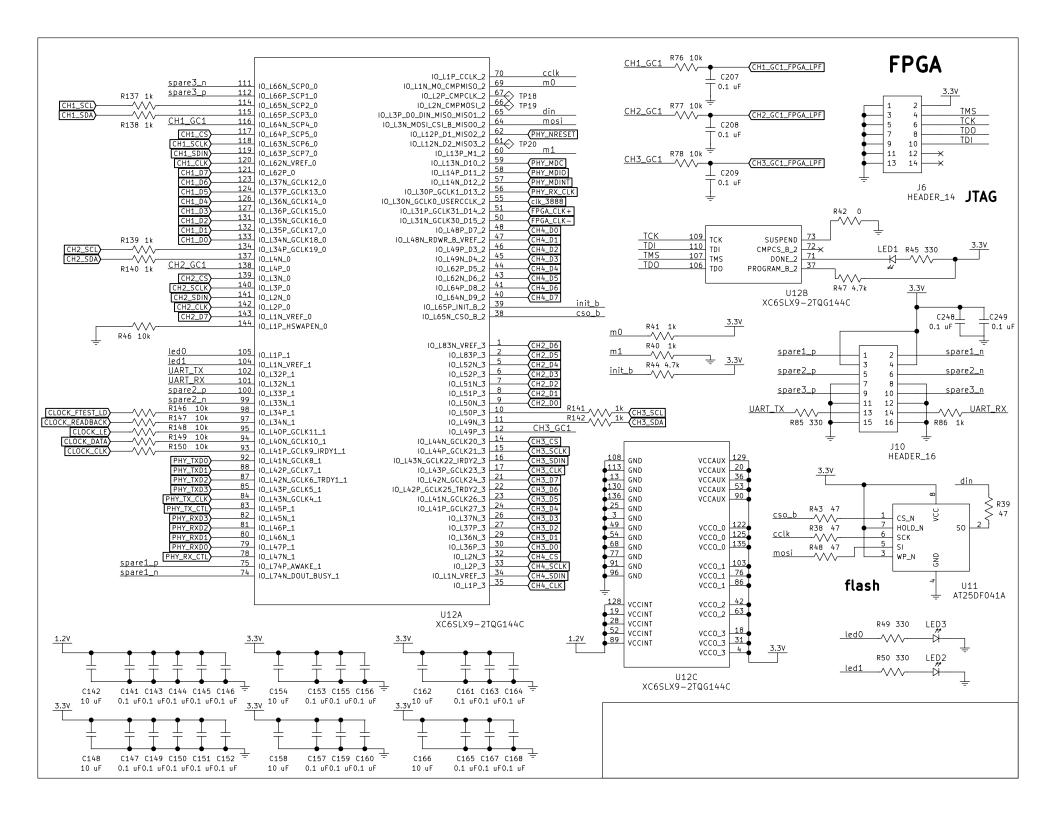


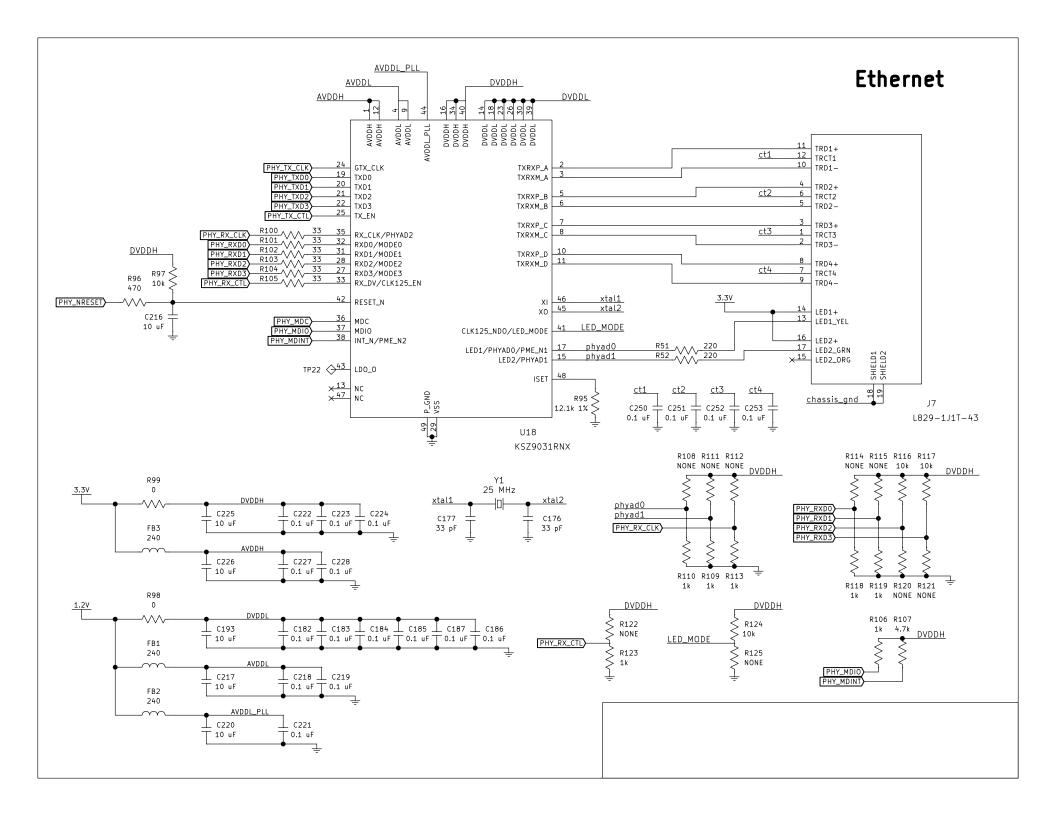




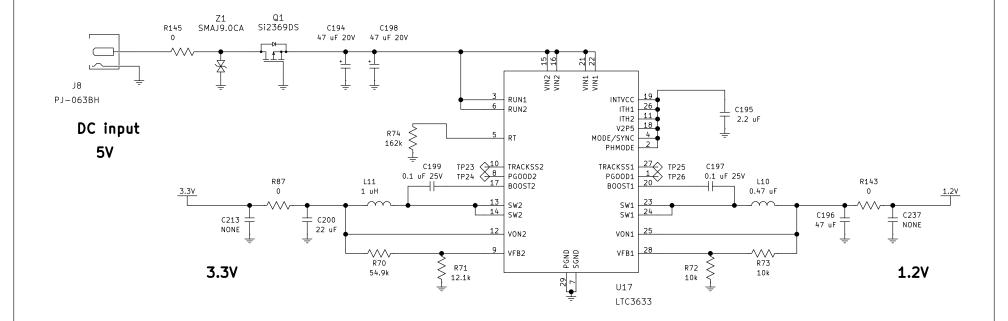






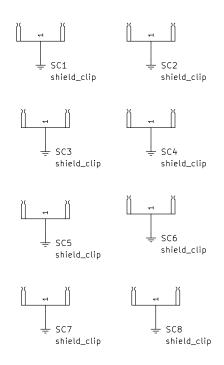


Power





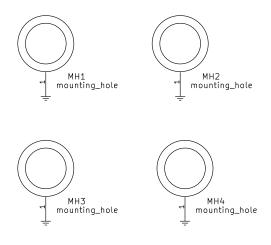
Mechanical



shield clips for RF channels



fiducials



mounting holes