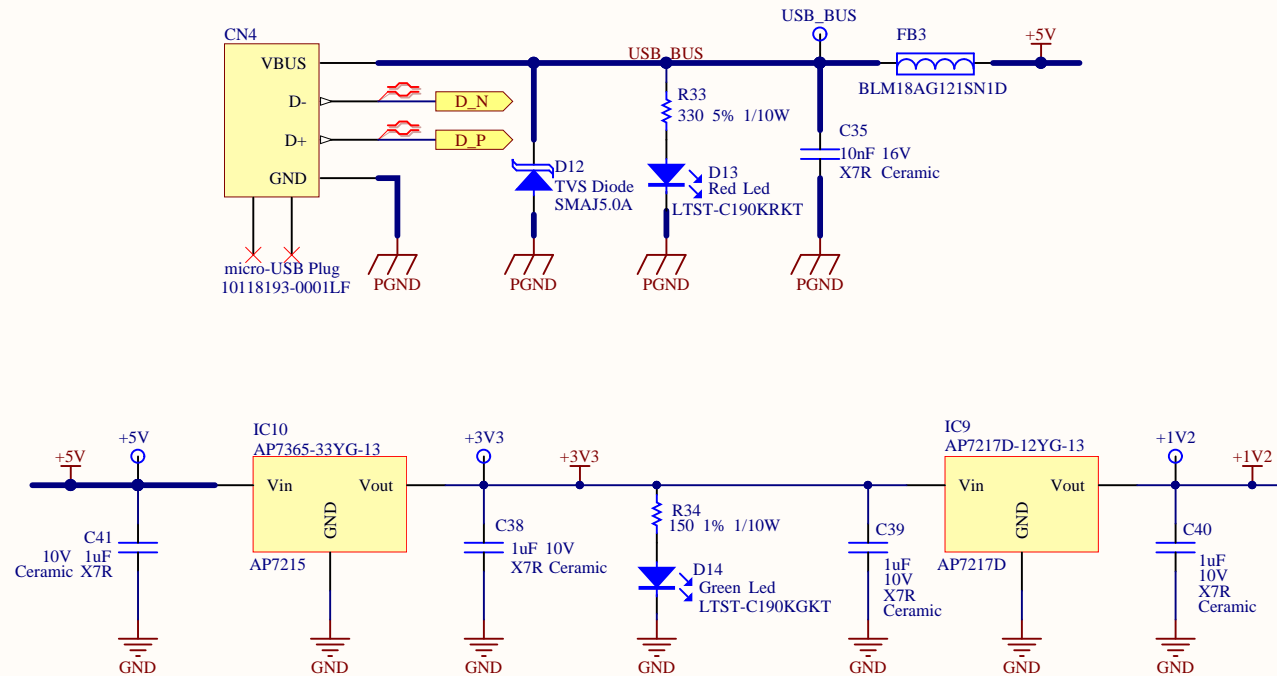


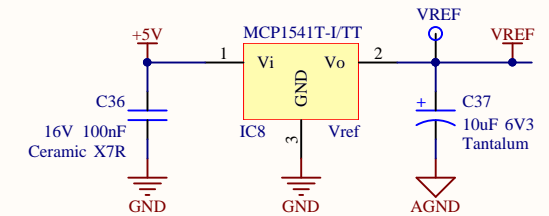
Title		
MercurialSDR - Block Diagram		
Size	Number	Revision
A4		Rev2.0
Date:	10/10/2019	Sheet 1 of 6
File:	C:\Users\...\MercurialSDR_BLK.SchDoc	Drawn By: Andres Højnadel

Power Stage

USB to +3V3 and +1V2

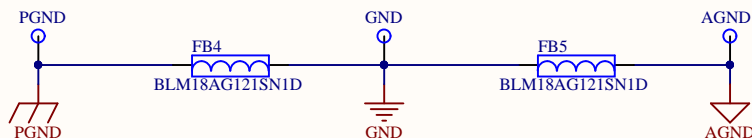


Reference Voltage



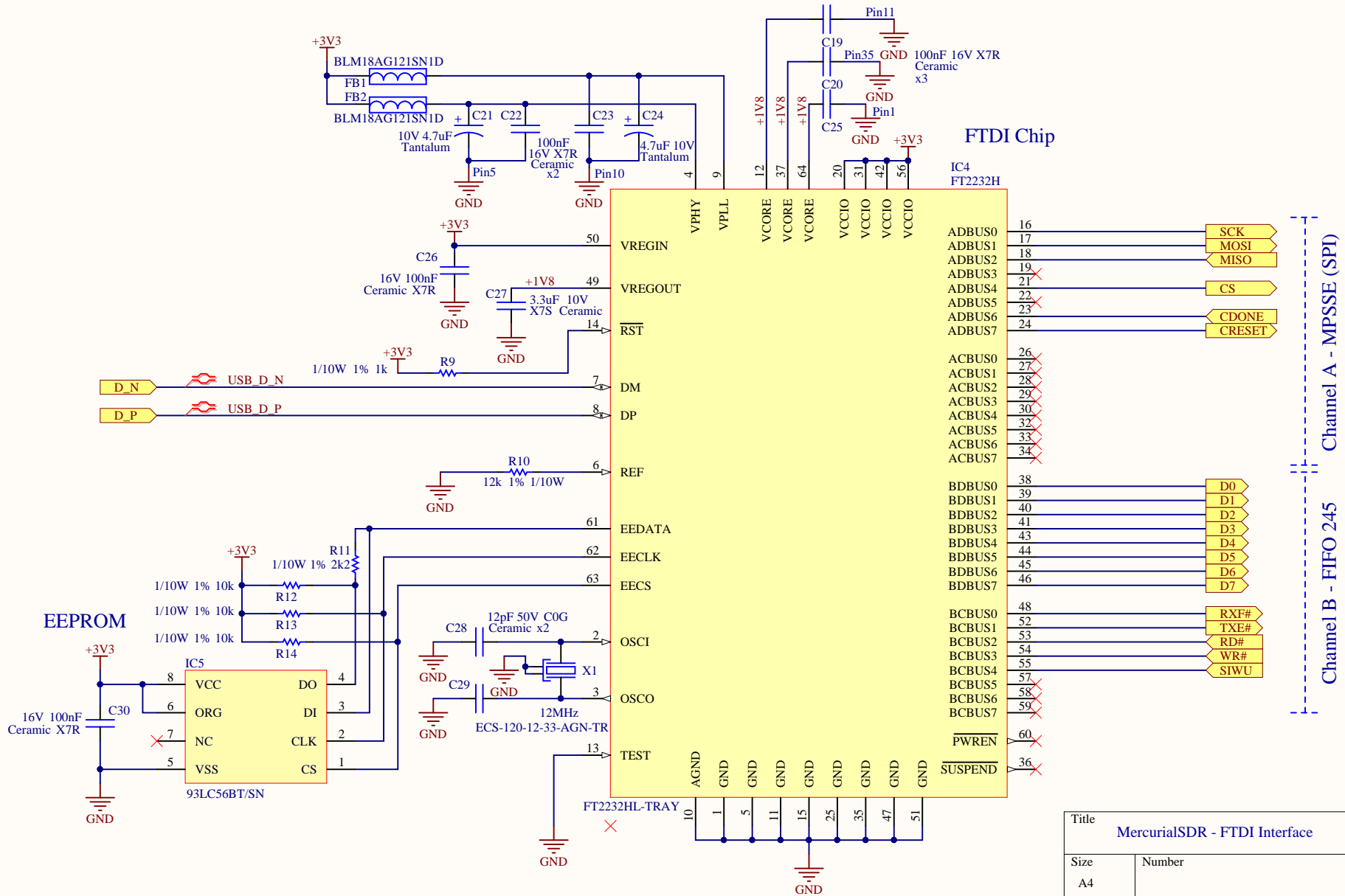
This is a precision voltage reference for DAC (IC1).
Them must be close.

Ground Connections



Title MercurialSDR - Power Stage		
Size A4	Number	Revision Rev2.0
Date:	10/10/2019	Sheet 2 of 6
File:	C:\Users\...\MercurialSDR_PWR.SchDoc	Drawn By: Andres Hojnadel

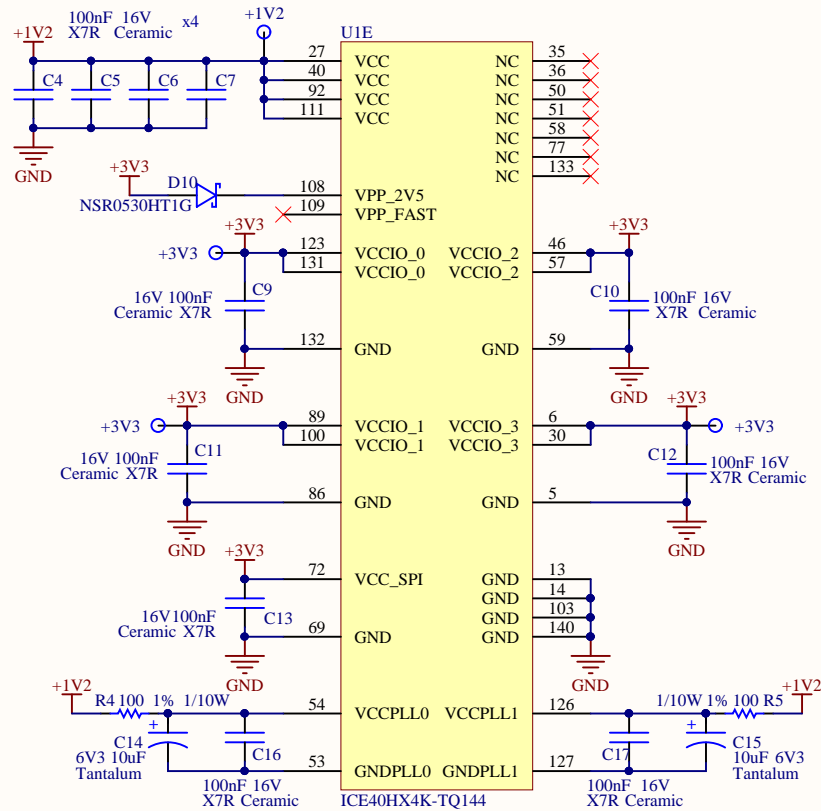
FTDI Interface



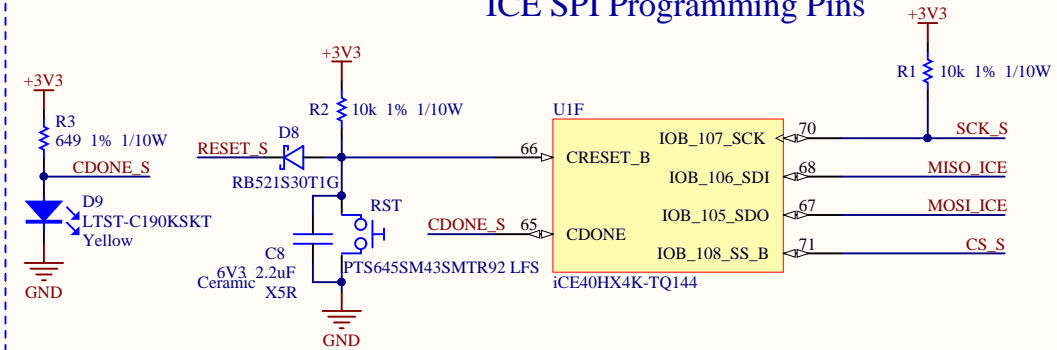
Title MercurialSDR - FTDI Interface		
Size A4	Number	Revision Rev2.0
Date:	10/10/2019	Sheet 3 of 6
File:	C:\Users\...\MercurialSDR_FTDI\SchDoc	Drawn By: Andres Hojnadel

ICE Programming & Power

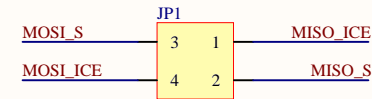
iCE Power



ICE SPI Programming Pins

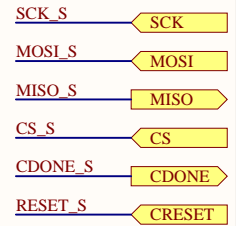


ICE/Flash programming selection

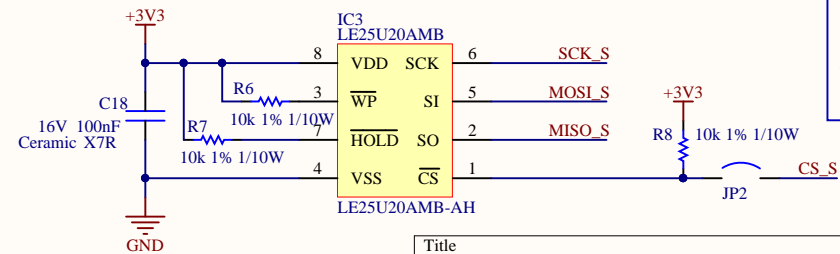


For programming Flash: shunt 1-3 & 2-4
For programming ICE: shunt 1-2 & 3-4

FTDI Ports



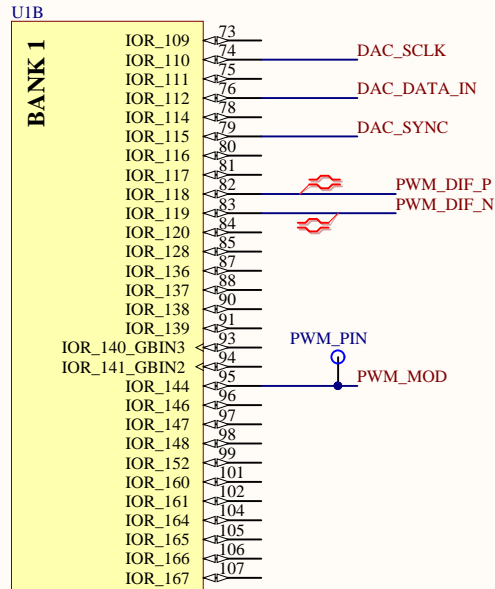
Flash Memory



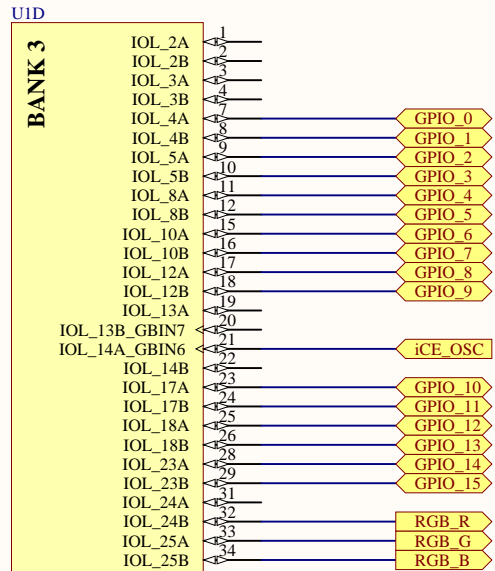
Remove JP2 only for programming ICE
Shunt JP2 for Flash programming or normal operation

Title MercurialSDR - iCE Power & Program.		
Size A4	Number	Revision Rev2.0
Date:	10/10/2019	Sheet 4 of 6
File:	C:\Users\...\MercurialSDR_FPGA_P&P_Sch	Drawn By: Andres Hojnadel

FPGA Banks

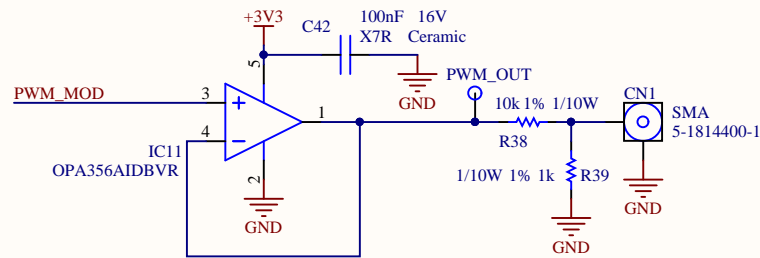


iCE40HX4K-TQ144

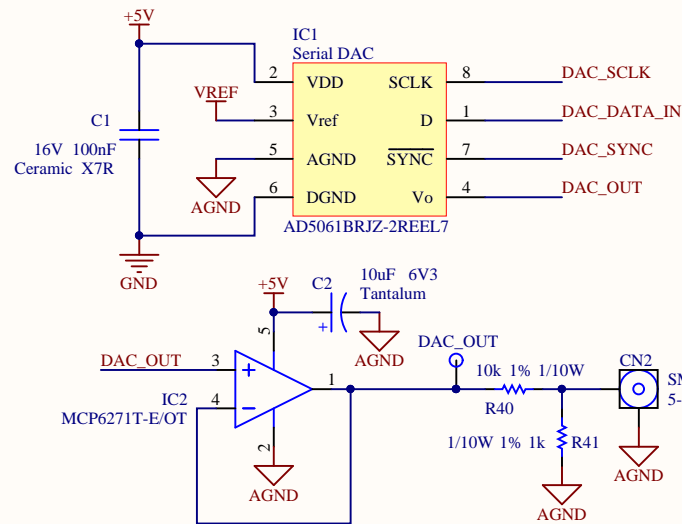


ICE40HX4K-TQ144

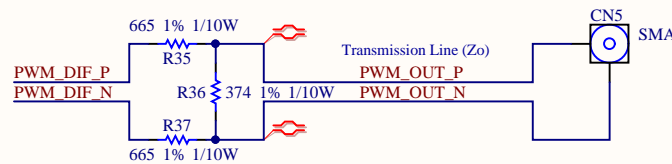
One-Pin-RF Single Ended Output



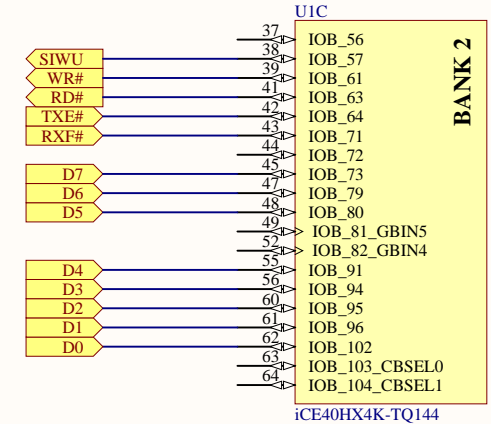
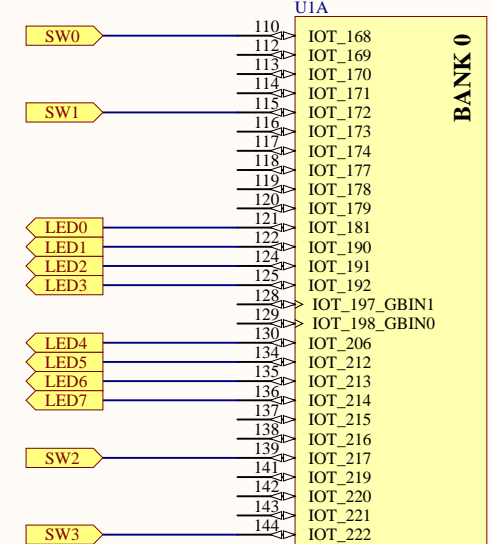
PAM Output



One-Pin-RF Differential Output



The resistors network must be close to the FPGA differential output pins

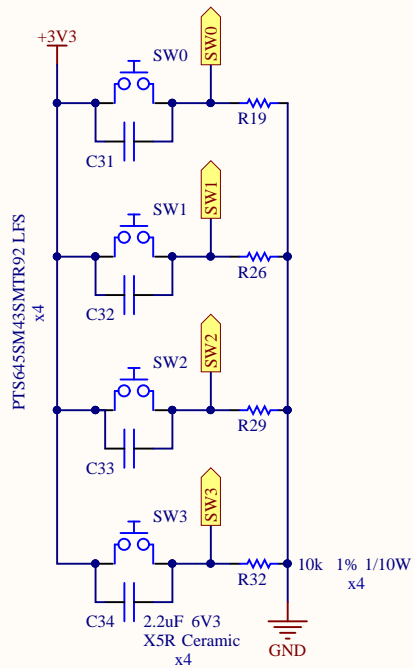


FIFO 245

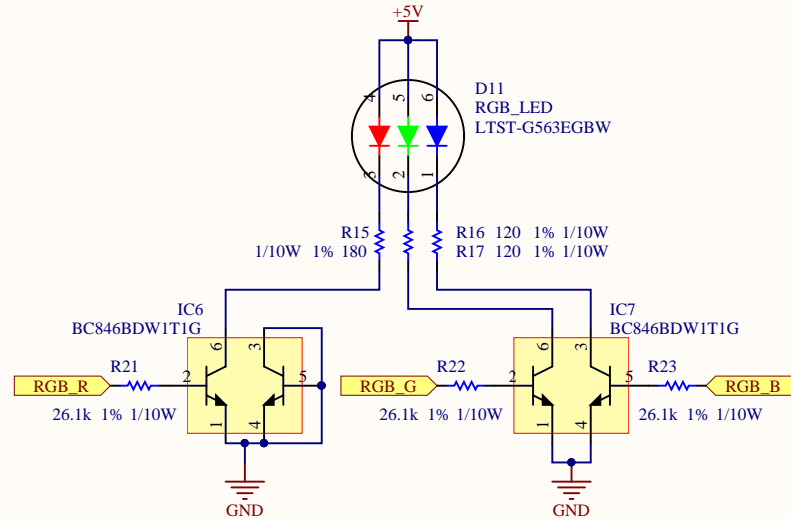
Title		
MercurialSDR - iCE Banks		
Size	Number	Revision
A4		Rev2.0
Date:	10/10/2019	Sheet 5 of 6
File:	C:\Users\...\MercurialSDR_FPGA_BNK_SchDoc	Drawn By: Andres Hojnadel

Miscellaneous

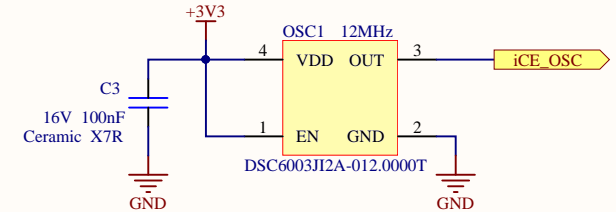
Buttons



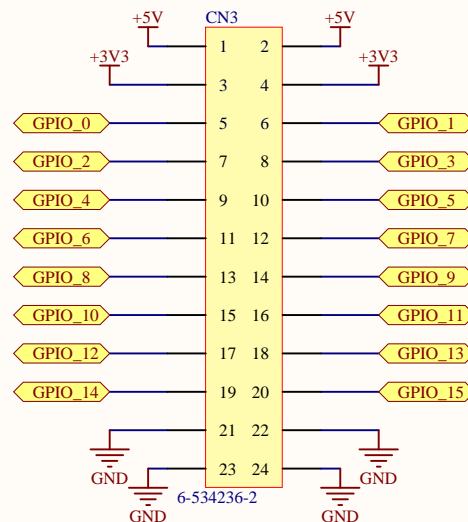
RGB Led



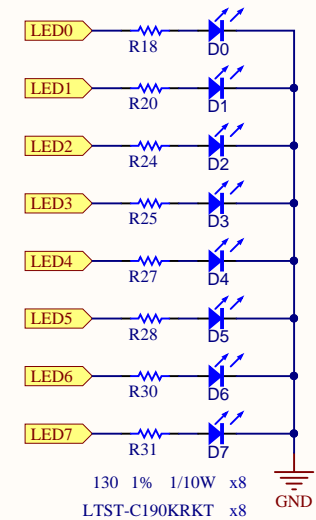
iCE Oscillator



GPIO Ports



8-Led Array



Title MercurialSDR - Miscellaneous		
Size A4	Number	Revision Rev2.0
Date:	10/10/2019	Sheet 6 of 6
File:	C:\Users\...\MercurialSDR_MISC.SchDoc	Drawn By: Andres Hojnadel

