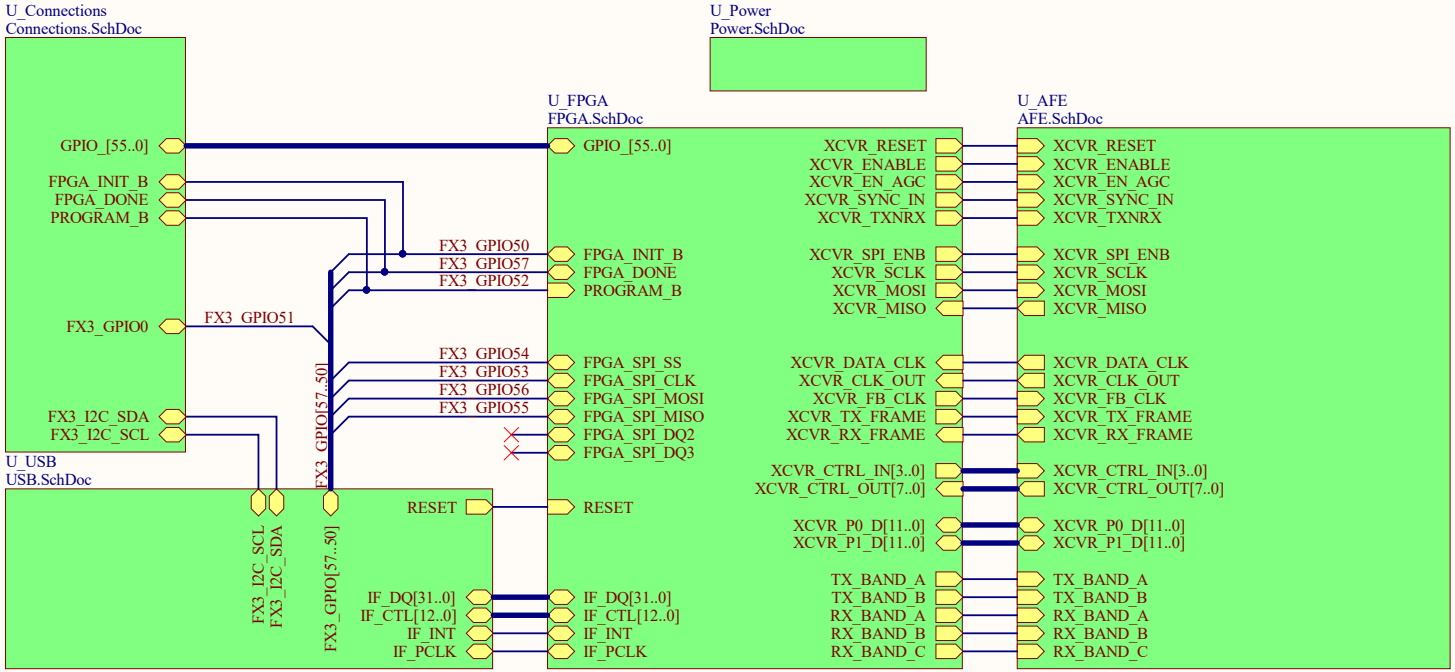
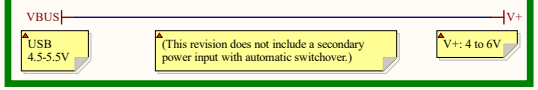
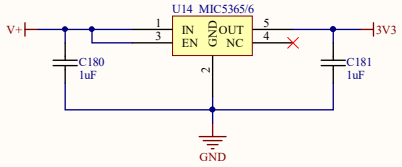


Title	**FreeSRP**		
Size	Number		Revision
A4	**1**		**2**
Date:	6/10/2017	Sheet 1 of 7	
File:	FreeSRP.SchDoc	Drawn By: Lukas Lao Beyer	

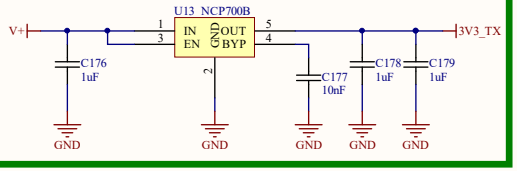
BUS/EXTERNAL POWER SELECTION



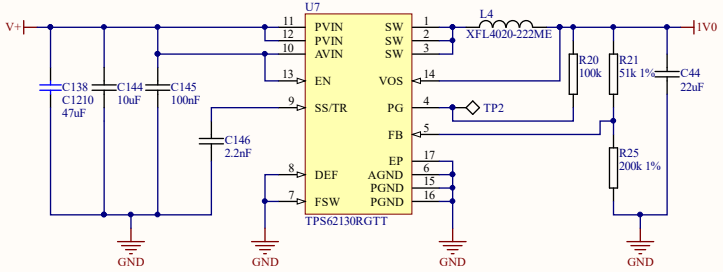
3V3: 3.30V, 0.15A



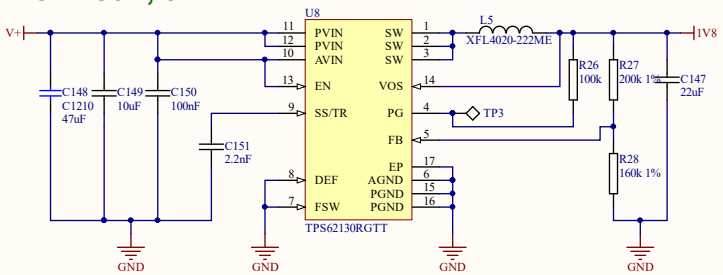
3V3_TX: 3.30V, 0.2A



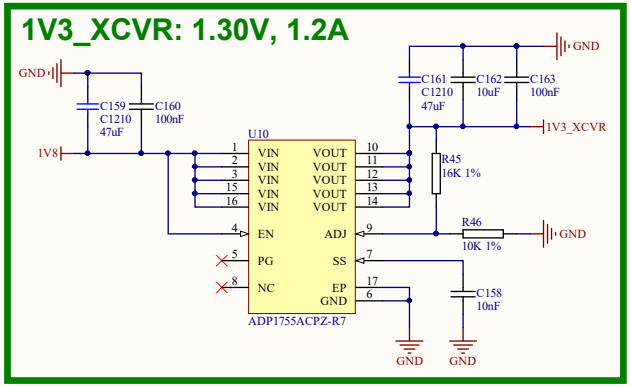
1V0: 1.00V, 3A



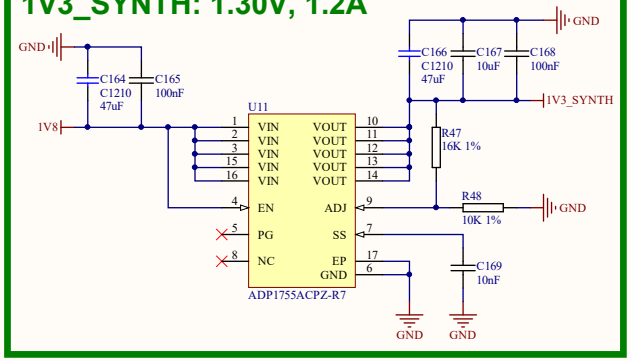
1V8: 1.80V, 3A



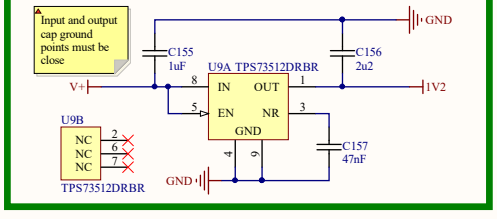
1V3_XCVR: 1.30V, 1.2A



1V3_SYNTH: 1.30V, 1.2A

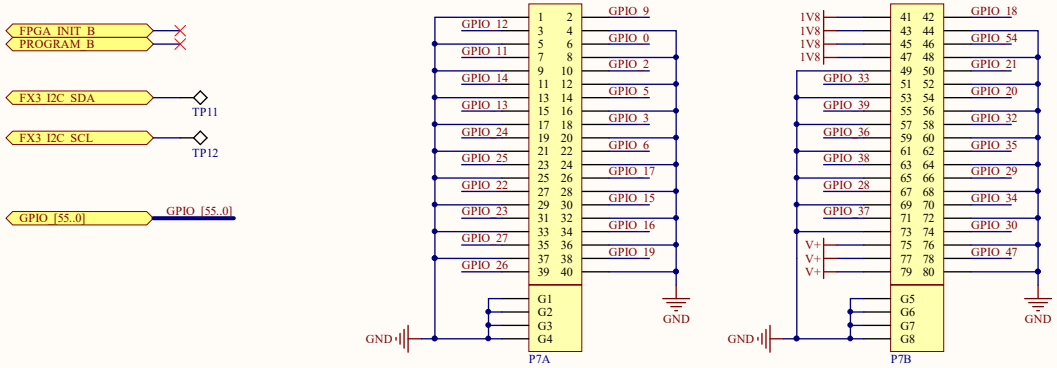


1V2: 1.20V, 0.5A

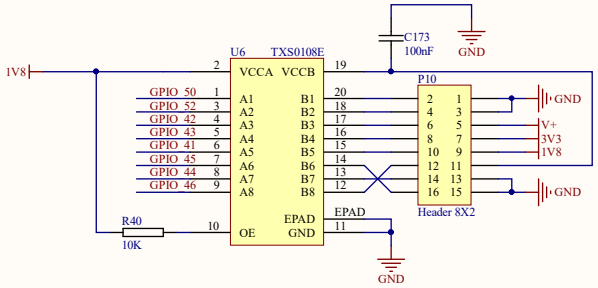


Title: **Power**		
Size: A3	Number: **2**	Revision: **2**
Date: 6/10/2017		Sheet 2 of 7
File: Power.SchDoc		Drawn By: Lukas Lao Beyer

EXPANSION HEADERS

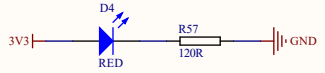


LEVEL SHIFTED GPIO

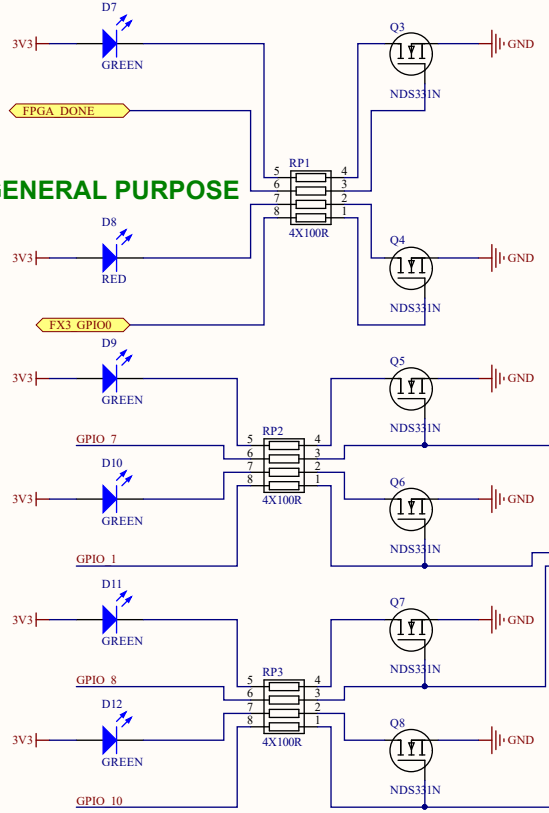


LED INDICATORS

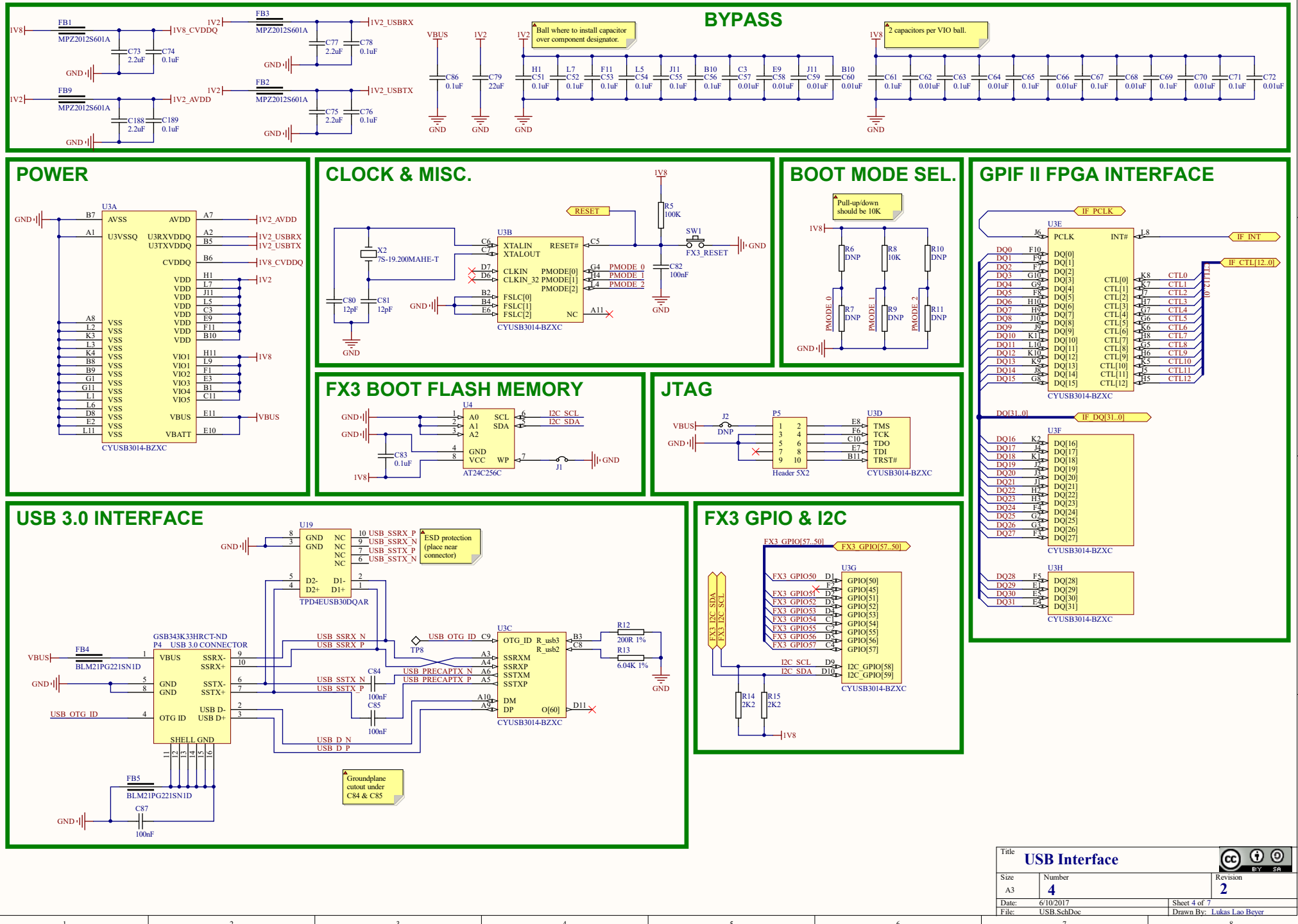
POWER INDICATORS

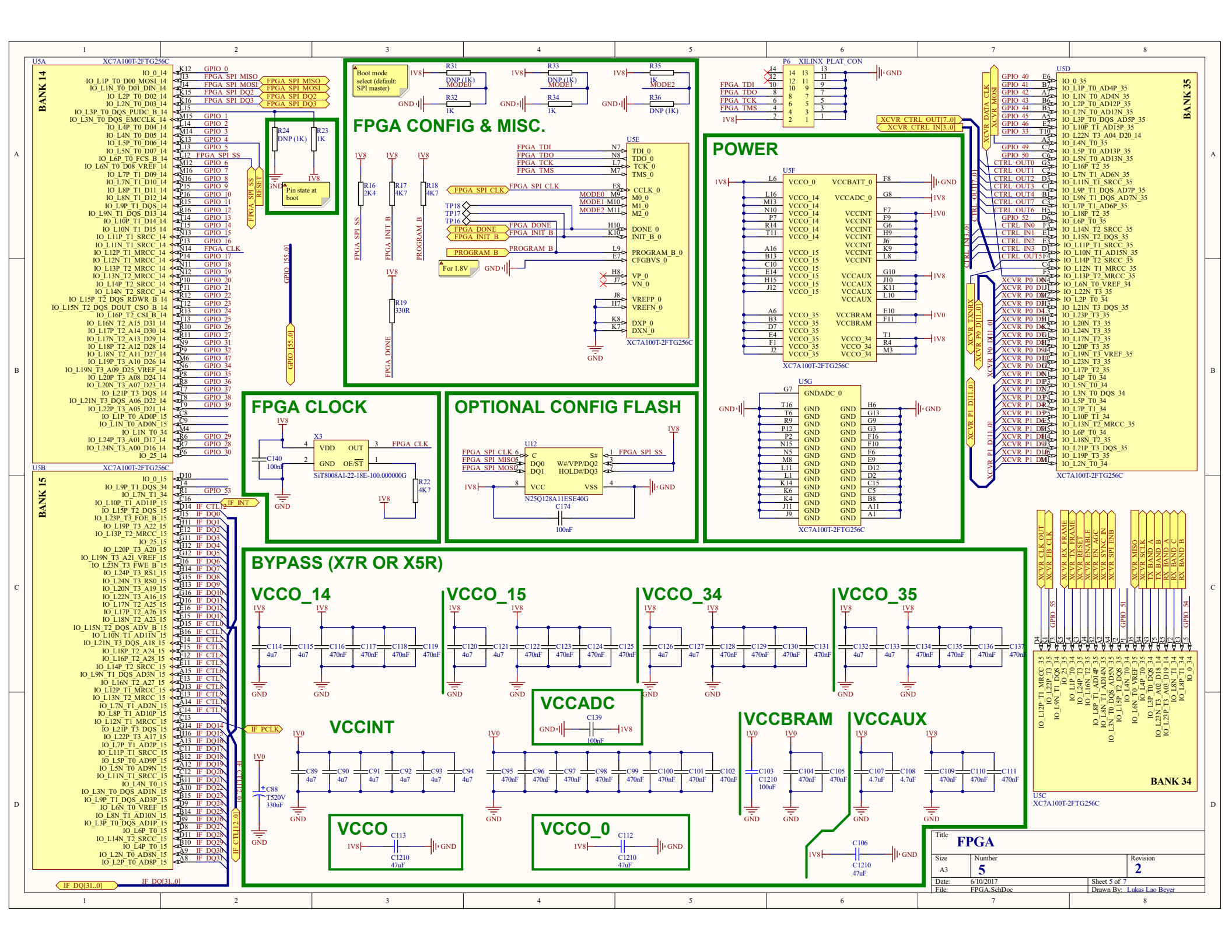


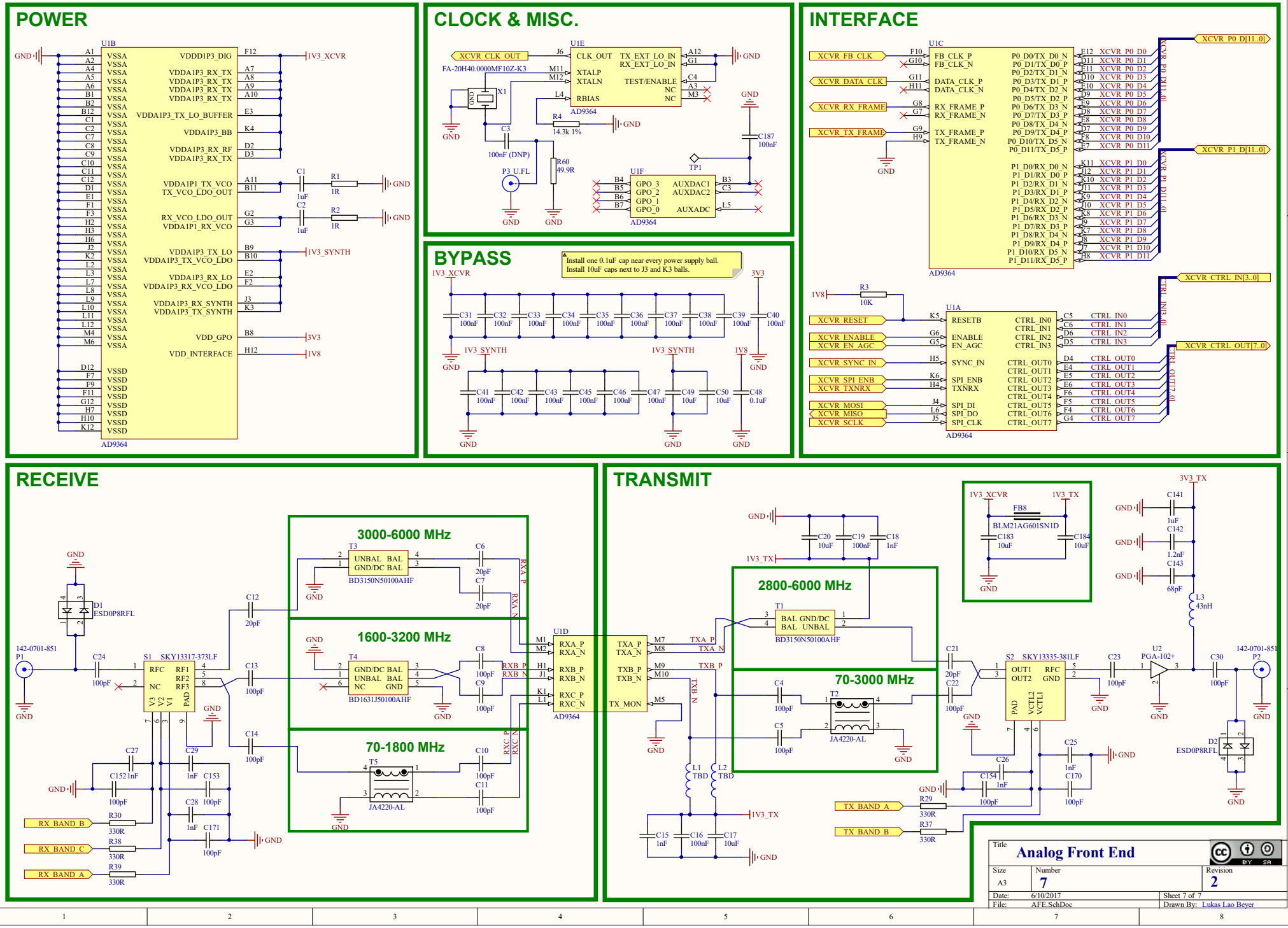
FPGA DONE



Title	Expansion Connectors and Status LEDs	
Size: A3	Number: 3	Revision: 2
Date: 6/10/2017		Sheet 3 of 7
File: Connections.SchDoc		Drawn By: Lukas Lao Beyer


BYPASS
POWER
CLOCK & MISC.
BOOT MODE SEL.
GPIF II FPGA INTERFACE
FX3 BOOT FLASH MEMORY
JTAG
USB 3.0 INTERFACE
FX3 GPIO & I2C
Ball where to install capacitor over component designator.
2 capacitors per VIO ball.
Pull-up/down should be 10K
ESD protection (place near connector)
Groundplane cutout under C84 & C85
CYUSB3014-BZXC
AT24C256C
TPD4EUSB30DQAR
GSB343K33HRCT-ND
P4 USB 3.0 CONNECTOR
Header 5X2
Title
USB Interface
Size
A3
Number
4
Revision
2
Date:
6/10/2017
Sheet 4 of 7
File:
USB.SchDoc
Drawn By:
Lukas Lao Beyer


FPGA CONFIG & MISC.
POWER
FPGA CLOCK
OPTIONAL CONFIG FLASH
BYPASS (X7R OR X5R)
VCCO_14
VCCO_15
VCCO_34
VCCO_35
VCCADC
VCCINT
VCCBRAM
VCCAUX
VCCO
VCCO_0
BANK 14
BANK 15
BANK 34
BANK 35
U5A XC7A100T-2FTG256C
U5B XC7A100T-2FTG256C
U5C XC7A100T-2FTG256C
U5D XC7A100T-2FTG256C
U5E XC7A100T-2FTG256C
U5F XC7A100T-2FTG256C
U5G XC7A100T-2FTG256C
P6 XILINX_PLAT_CON
Boot mode select (default: SPI master)
Pin state at boot
SiT8008AI-22-18E-100.000000G
N25Q128A11ESE40G
Title FPGA
Size A3
Number 5
Revision 2
Date: 6/10/2017
File: FPGA.SchDoc
Sheet 5 of 7
Drawn By: Lukas Lao Beyer


POWER
CLOCK & MISC.
INTERFACE
BYPASS
Install one 0.1uF cap near every power supply ball.
Install 10uF caps next to J3 and K3 balls.
RECEIVE
3000-6000 MHz
1600-3200 MHz
70-1800 MHz
TRANSMIT
2800-6000 MHz
70-3000 MHz
Title
Analog Front End
Size
A3
Number
7
Revision
2
Date: 6/10/2017
File: AFE.SchDoc
Sheet 7 of 7
Drawn By: Lukas Lao Beyer