Table of Contents

Table of Contents

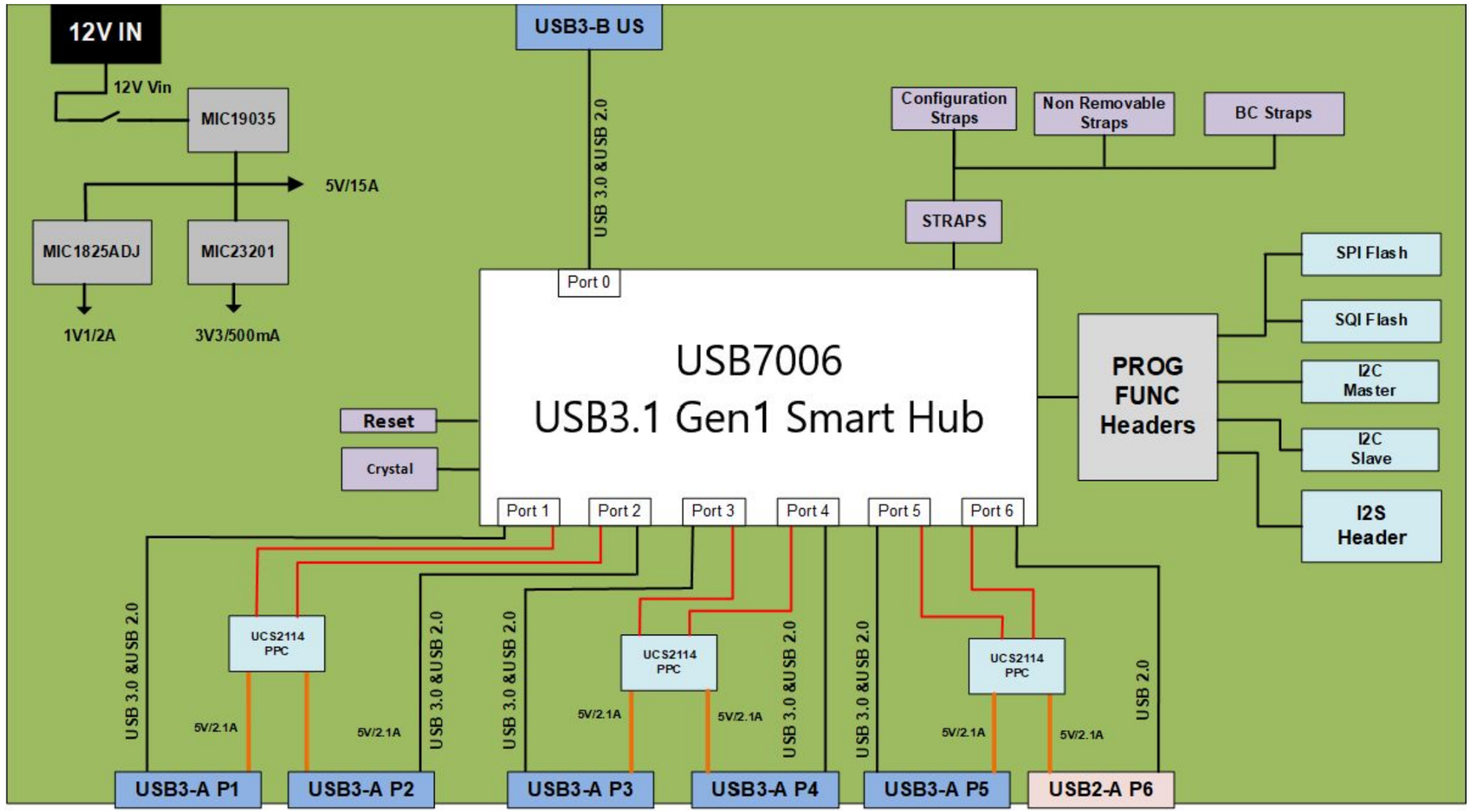
Sheet	Description
1	Table of Contents
2	USB7006 and SPI/Reset
3	USB7006 and Upstream Port
4	Downstream Ports 1 & 2
5	Downstream Ports 3 & 4
6	Downstream Ports 5 & 6
7	Power

Revision History

Revision	Date	Revision Summary	Author
1	1/14/2021	Initial release of design	Andrew Rogers

Default Selections

1	Resistors are 1%, 100mW, 0603
2	Capacitors are X5R, X7R, or C0G, 50V, 0402



Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: Table of Contents			
Size: Tabloid	SCH #: 03-08320	Rev:1	Date: 1/14/2021
	PCB #: 04-11292	Rev:1	Sheet 1 of 7
File: 11292_A_1-Title.SchDoc			

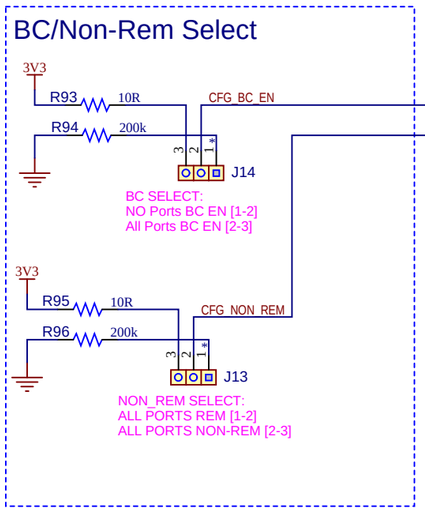
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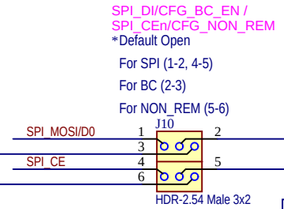
Designed with Altium

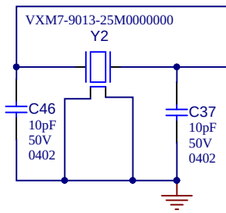
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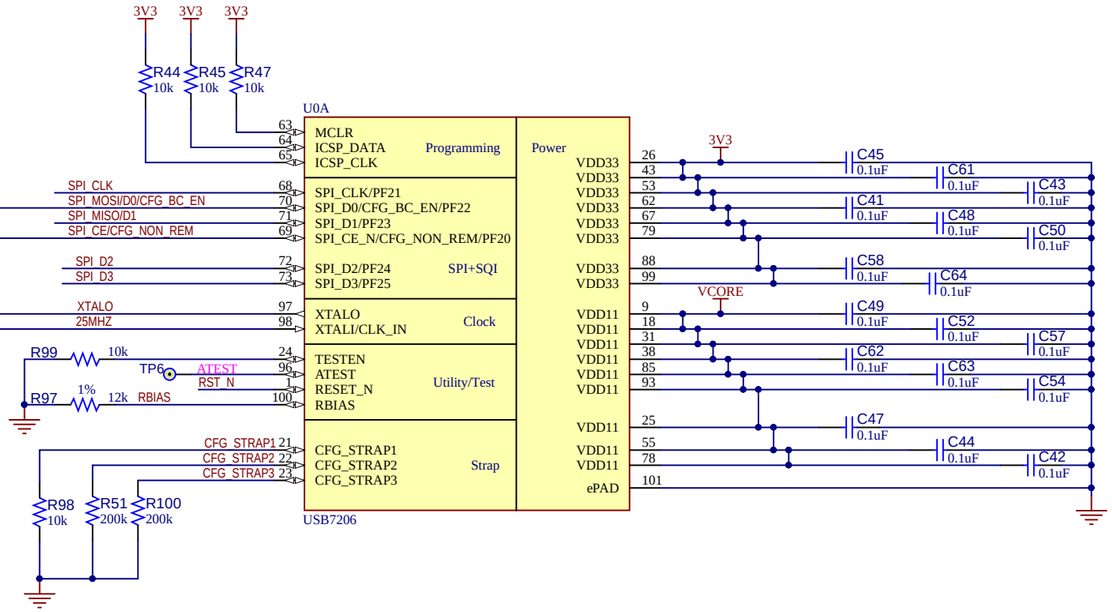
USB7006 and SPI/Reset

BC/Non-Rem Select

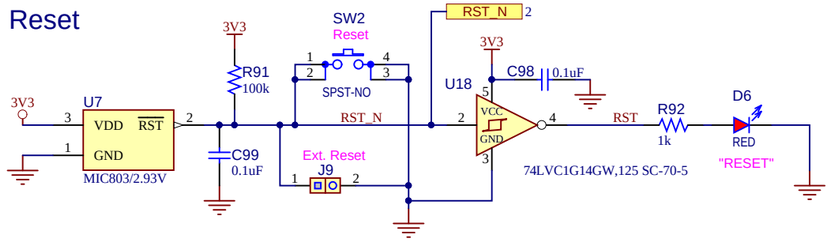




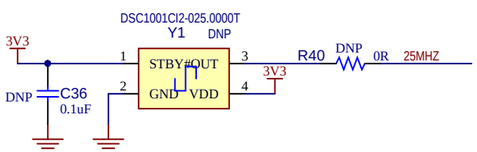




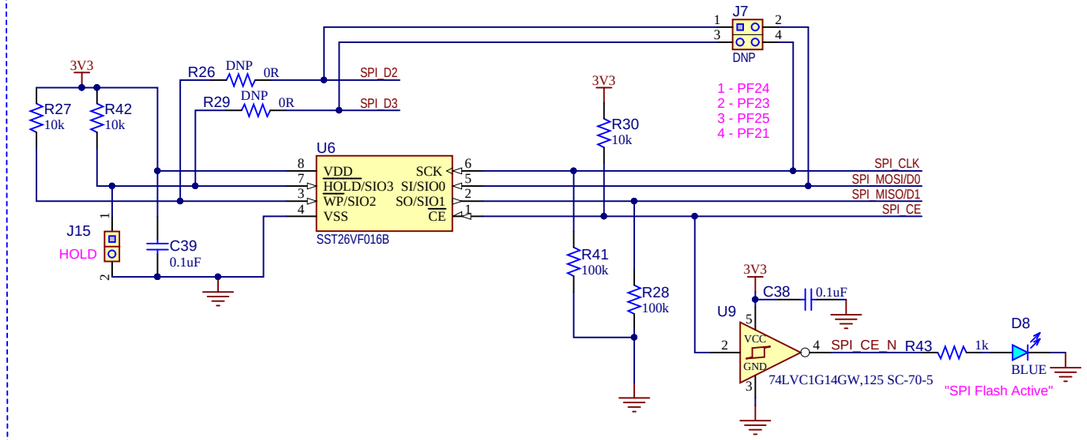
Reset



25 MHz Oscillator



SPI Flash

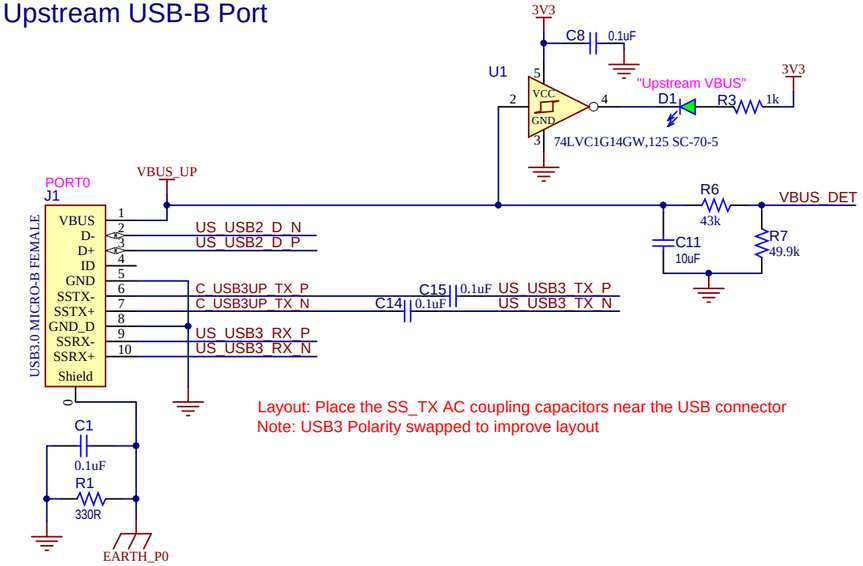


3V3 VCORE

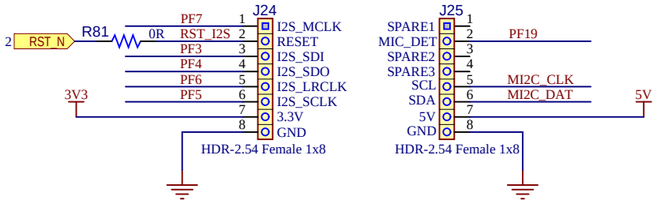
Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: USB7006 and SPI/Reset			Designed with Altium — Altium.com
Size: Tabloid	SCH #: 03-08320 Rev:1	PCB #: 04-11292 Rev:1	Date: 1/14/2021 Sheet 2 of 7
File: 11292_A_2-USB7006_SPI_RESET.SchDoc			

USB7006 and Upstream Port

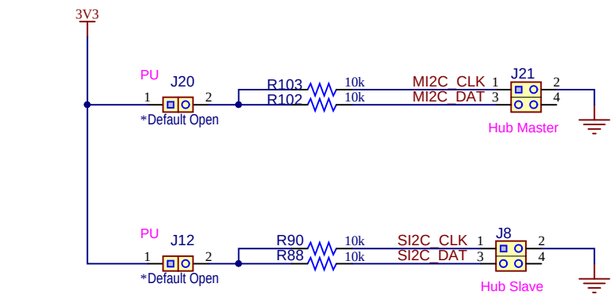
Upstream USB-B Port



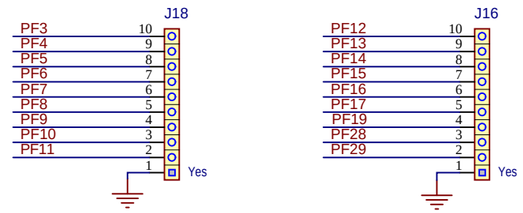
Audio Codec Socket

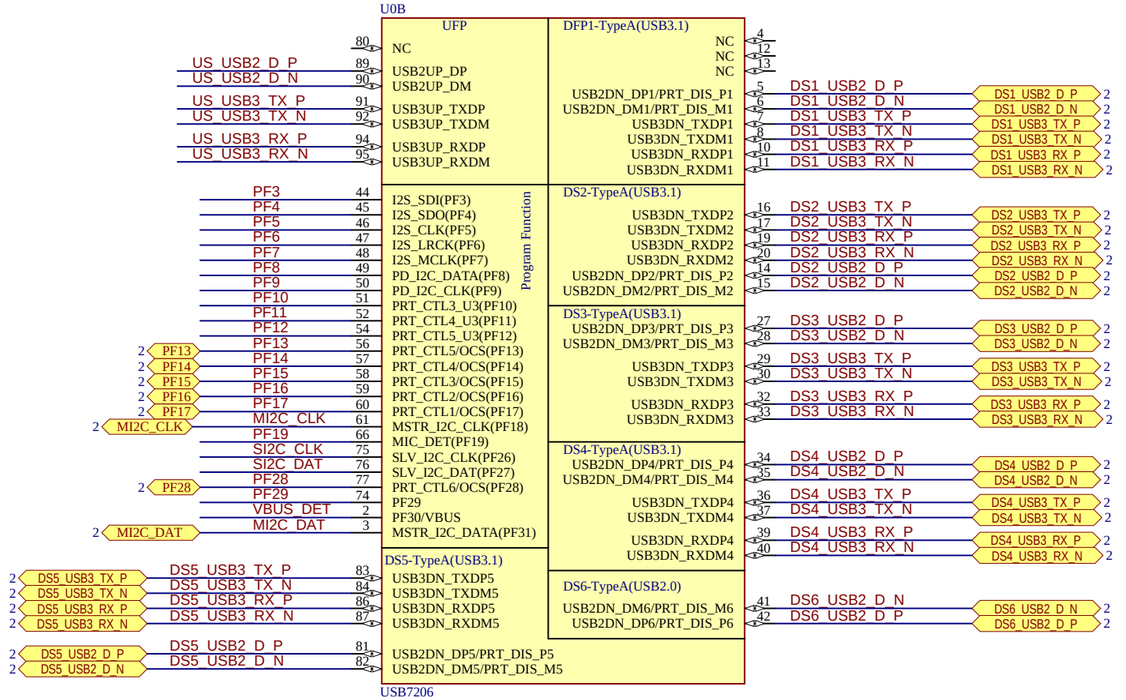


I2C Headers



PF Probe





Default PF Functions

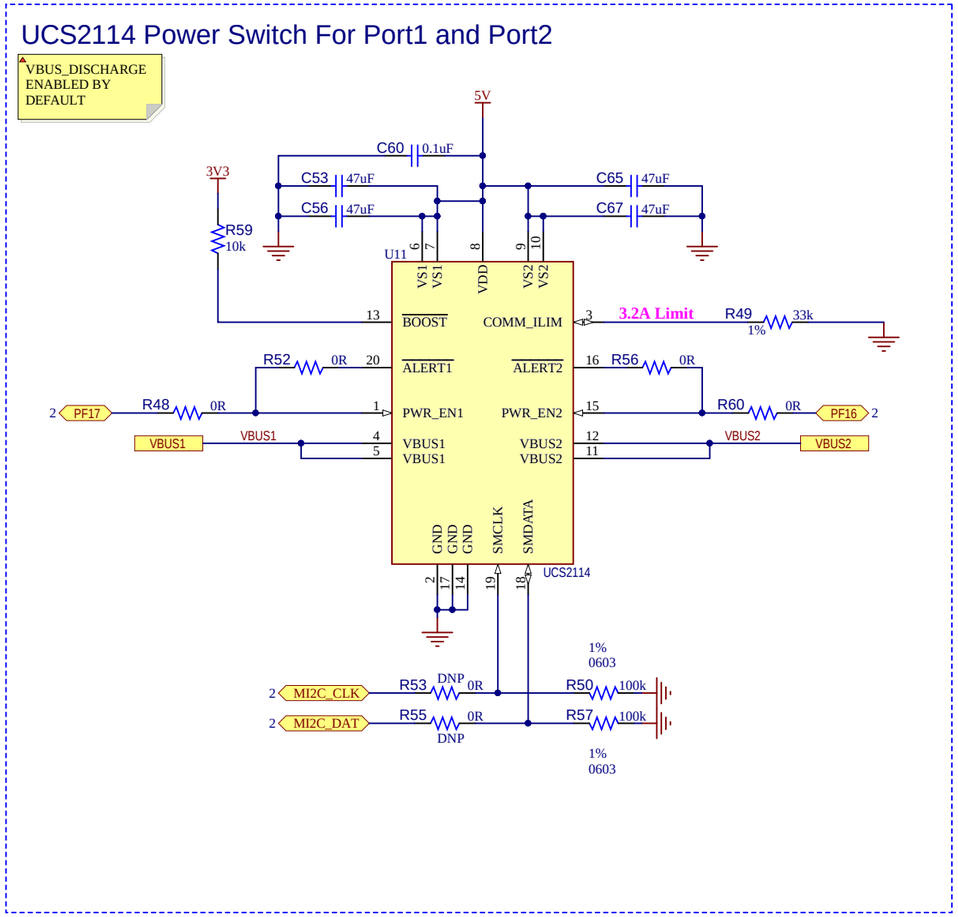
		PF17	PRT_CTL1/OCS
PF3	I2S_SDI	PF18	MSTR_I2C_CLK
PF4	I2S_SDO	PF19	GPIO (MIC_DET)
PF5	I2S_CLK	PF20	SPI_CE_N
PF6	I2S_LRCK	PF21	SPI_CLK
PF7	I2S_MCLK	PF22	SPI_D0
PF8	PF8	PF23	SPI_D1
PF9	PF9	PF24	SPI_D2
PF10	PRT_CTL3_U3	PF25	SPI_D3
PF11	PRT_CTL4_U3	PF26	SLV_I2C_CLK
PF12	PRT_CTL5_U3	PF27	SLV_I2C_DATA
PF13	PRT_CTL5/OCS	PF28	PRT_CTL6/OCS
PF14	PRT_CTL4/OCS	PF29	GPIO
PF15	PRT_CTL3/OCS	PF30	VBUS_DET
PF16	PRT_CTL2/OCS	PF31	MSTR_I2C_DATA



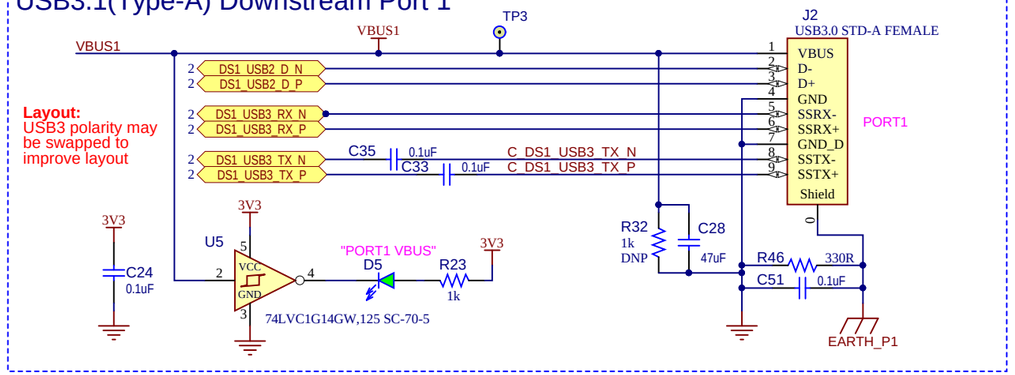
Drawn By: Andrew Rogers		MICROCHIP	
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: USB7006 and Upstream Port		Designed with Altium	
Size: Tabloid	SCH #: 03-08320 Rev:1	Date: 1/14/2021	Altium.com
	PCB #: 04-11292 Rev:1	Sheet 3 of 7	
File: 11292_A_3-USB7006_UPSTREAM.SchDoc			

Downstream Ports 1 & 2

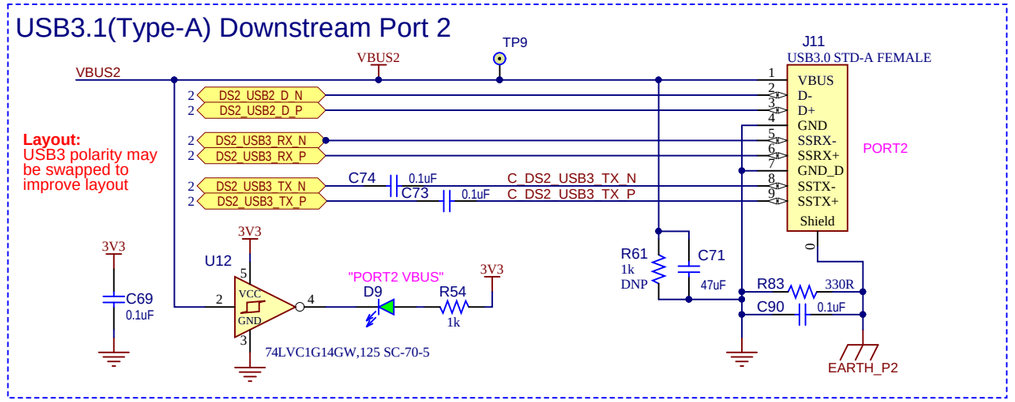
UCS2114 Power Switch For Port1 and Port2



USB3.1(Type-A) Downstream Port 1



USB3.1(Type-A) Downstream Port 2



3V3 VBUS1 VBUS2 5V

EARTH_P1 EARTH_P2

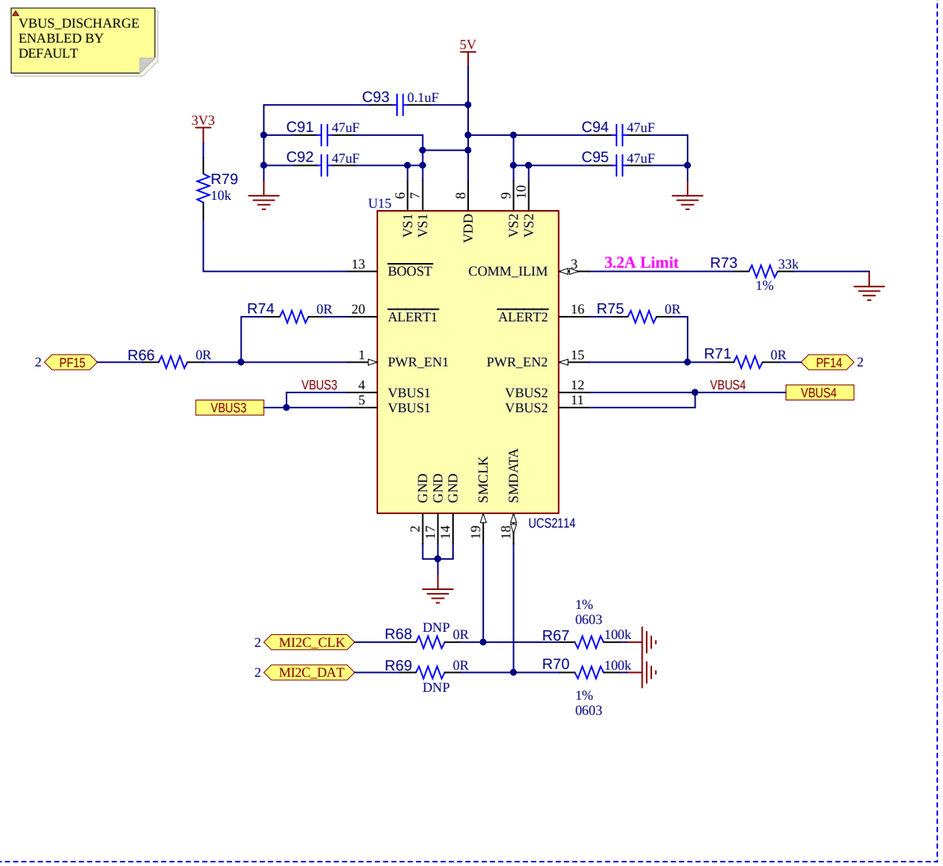
Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: Downstream Ports 1 & 2			
Size: Tabloid	SCH #: 03-08320	Rev:1	Date: 1/14/2021
	PCB #: 04-11292	Rev:1	Sheet 4 of 7
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MICROCHIP

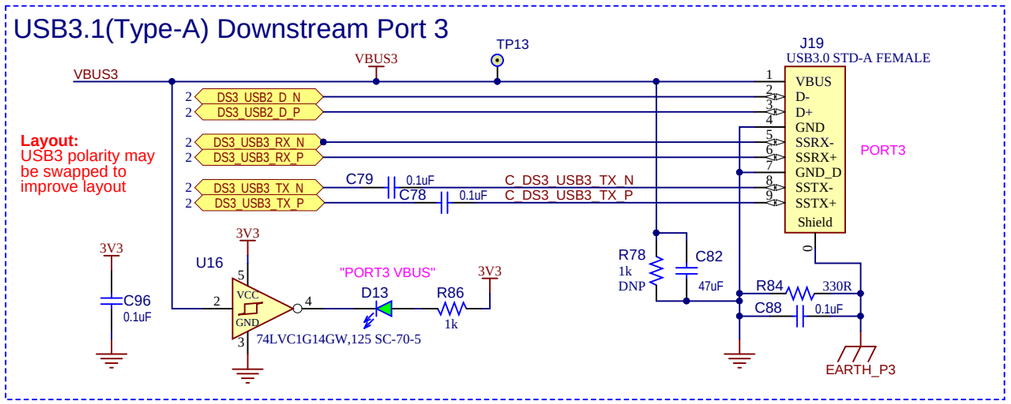
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Downstream Ports 3 & 4

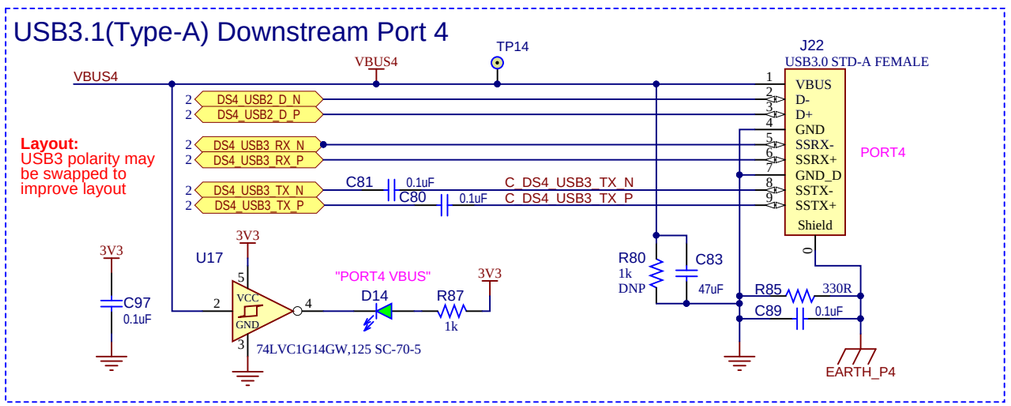
UCS2114 Power Switch For Port3 and Port4



USB3.1(Type-A) Downstream Port 3



USB3.1(Type-A) Downstream Port 4



3V3 VBUS3 VBUS4 5V

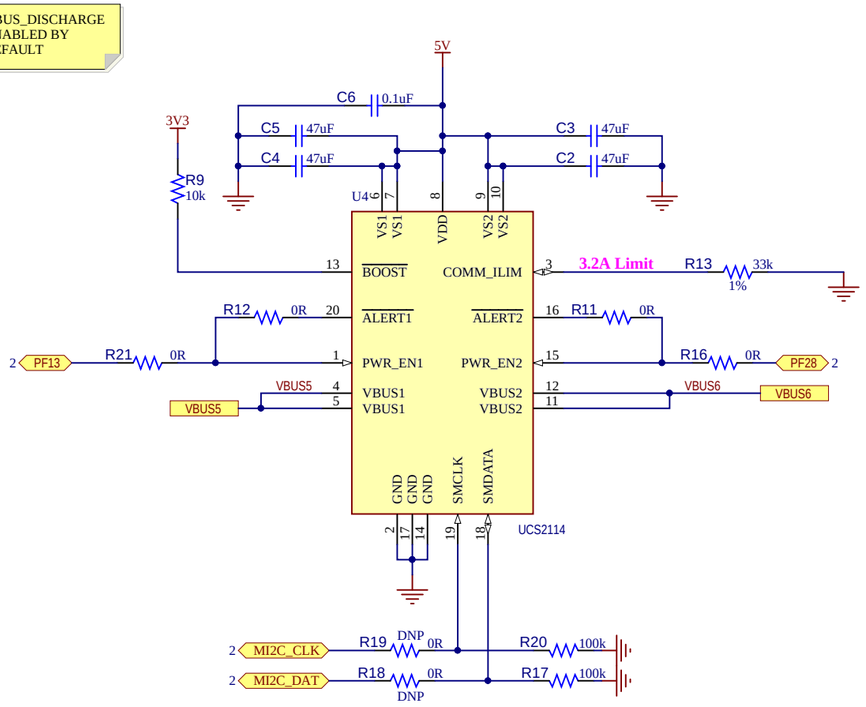
EARTH_P3 EARTH_P4

Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: Downstream Ports 3 & 4			Designed with Altium
Size: Tabloid	SCH #: 03-08320	Rev:1	Date: 1/14/2021
	PCB #: 04-11292	Rev:1	Sheet 5 of 7
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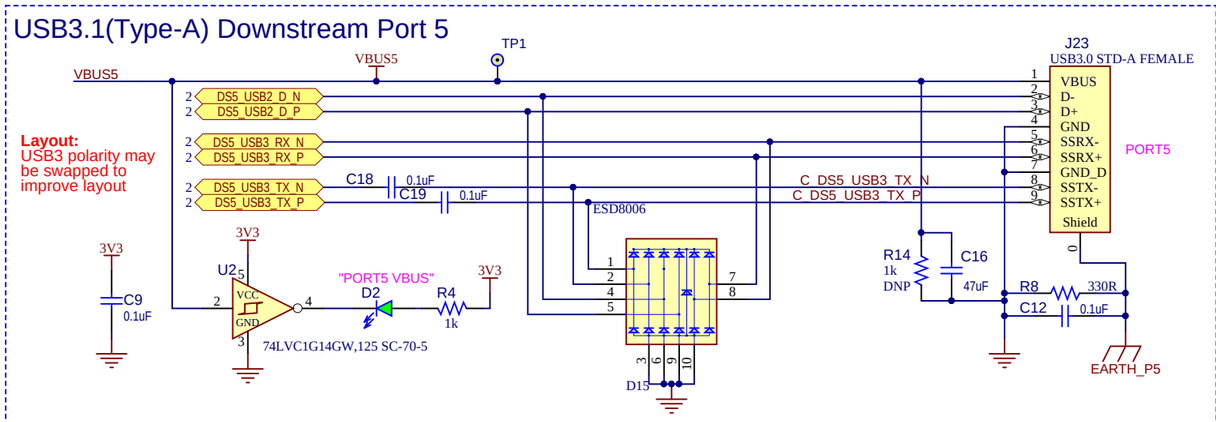
Downstream Ports 5 & 6

UCS2114 Power Switch For Port5 and Port6

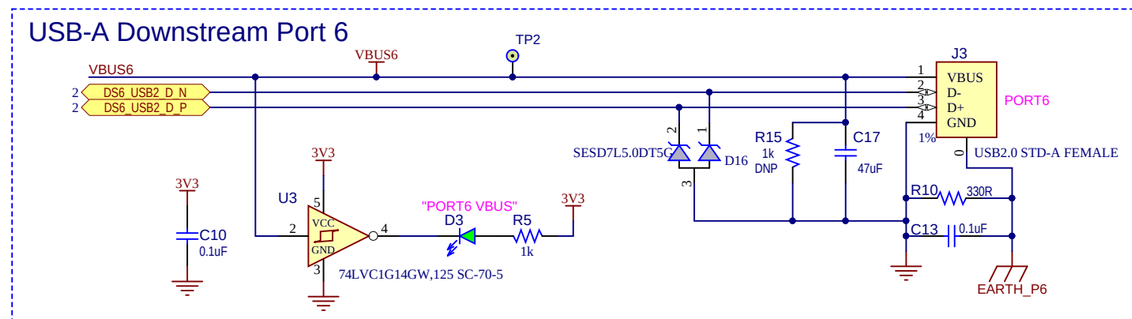
VBUS_DISCHARGE ENABLED BY DEFAULT



USB3.1(Type-A) Downstream Port 5



USB-A Downstream Port 6



3V3 VBUS5 VBUS6 5V

EARTH_P5 EARTH_P6

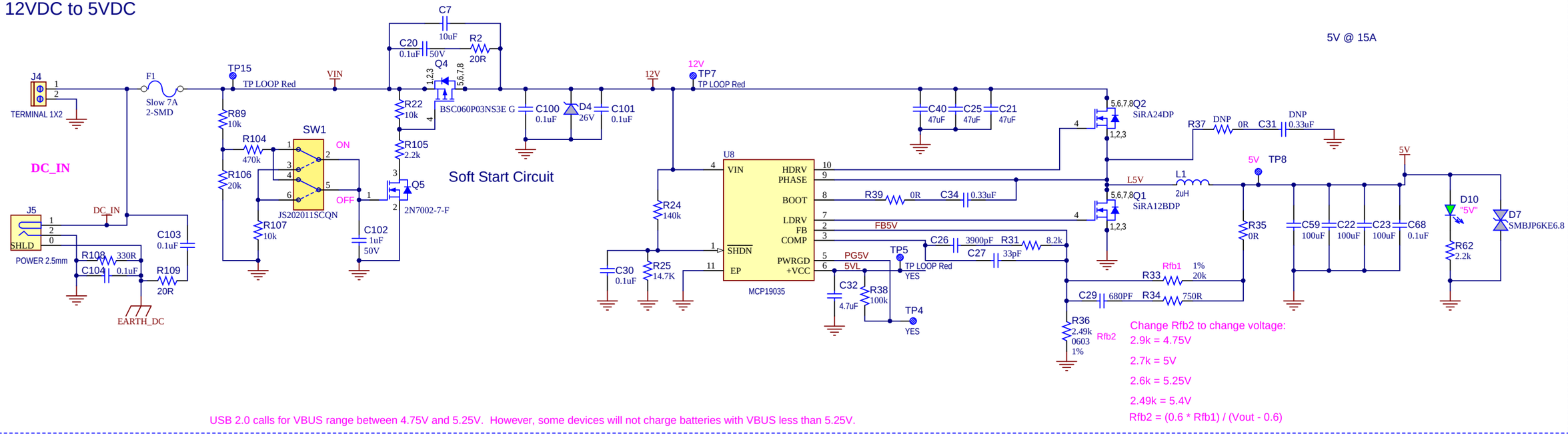
Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*	Variant: [No Variations]	
Sheet Title: Downstream Ports 5 & 6			
Size: Tabloid	SCH #: 03-08320	Rev:1	Date: 1/14/2021
	PCB #: 04-11292	Rev:1	Sheet 6 of 7
File: 11292_A_6-DSP5_DSP6.SchDoc			

MICROCHIP

Designed with Altium — Altium.com

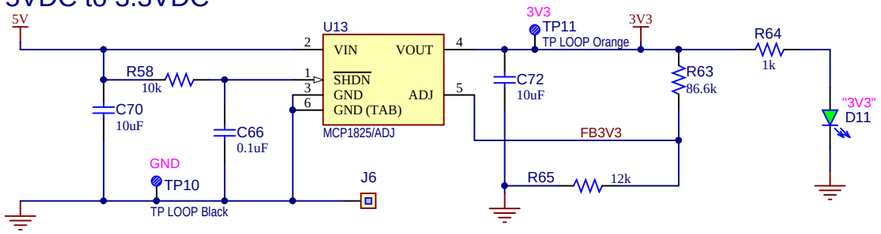
Power

12VDC to 5VDC

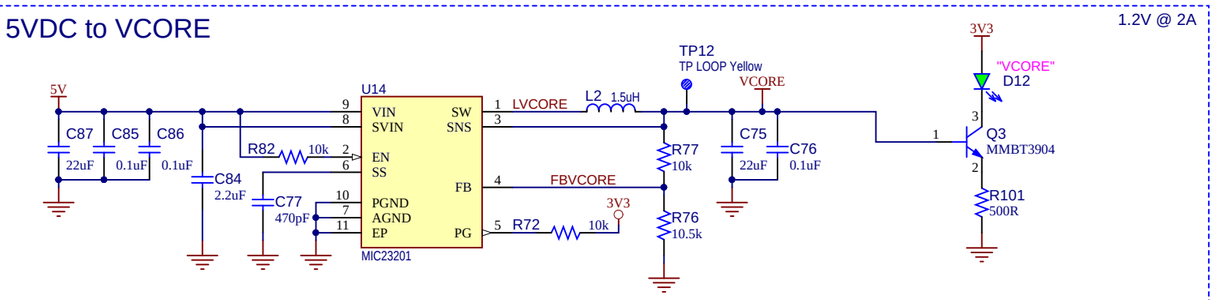


USB 2.0 calls for VBUS range between 4.75V and 5.25V. However, some devices will not charge batteries with VBUS less than 5.25V.

5VDC to 3.3VDC



5VDC to VCORE



Jumpers
Install: J10[2-3]
JP1
Shunt 2.54mm 1x2
Install: J10[5-6]
JP2
Shunt 2.54mm 1x2
Install: J13[1-2]
JP3
Shunt 2.54mm 1x2
Install: J14[2-3]
JP4
Shunt 2.54mm 1x2

LABEL1
Product number/revision
Serial number
PCBA LABEL 18X6mm

Fiducials
FID1 FID3 FID2
FID5 FID6 FID4

Mounting Holes
MH1 MH4 MH2 MH3

Rubber Pad Cyl D7.9H5.3
PAD1 PAD2 PAD3 PAD4

3V3 5V L5V 12V VIN VCORE LVCORE

EARTH_DC

Drawn By: Andrew Rogers			
Engineer: Andrew Rogers			
PartNumber: EV17D04A	Project Title: *USB7006 Smart Hub EVB*		Variant: [No Variations]
Sheet Title: Power			
Size: Tabloid	SCH #: 03-08320	Rev:1	Date: 1/14/2021
	PCB #: 04-11292	Rev:1	Sheet 7 of 7
File: 11292_A_7-POWER.SchDoc			

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