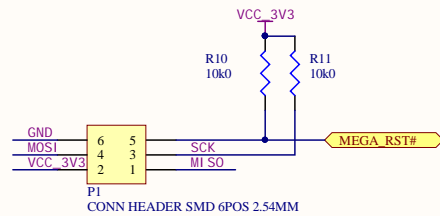
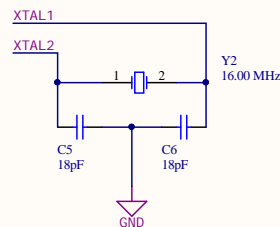
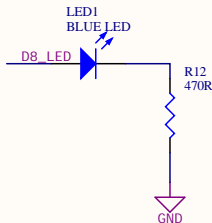


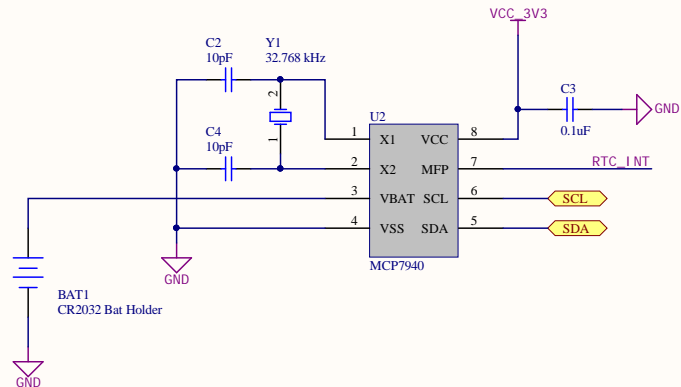
Signal Routing / Serial Termination



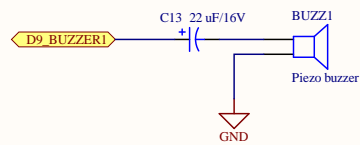
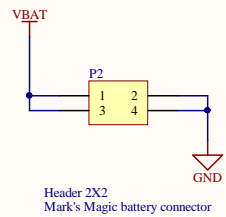
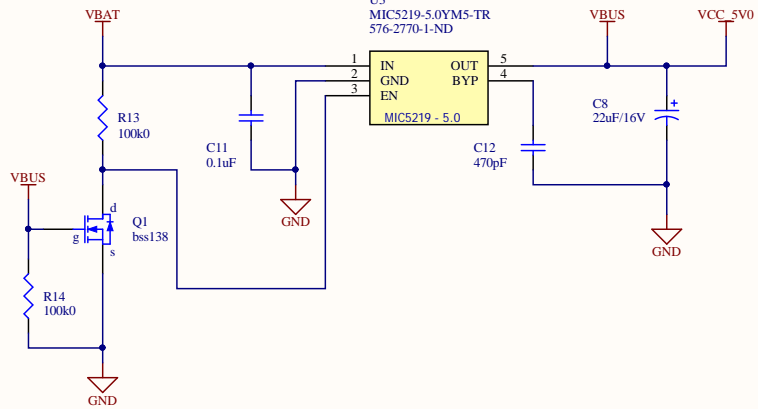
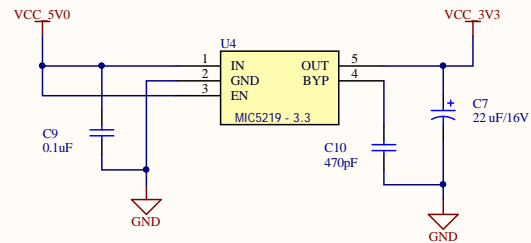
mega328P ISP/Debug



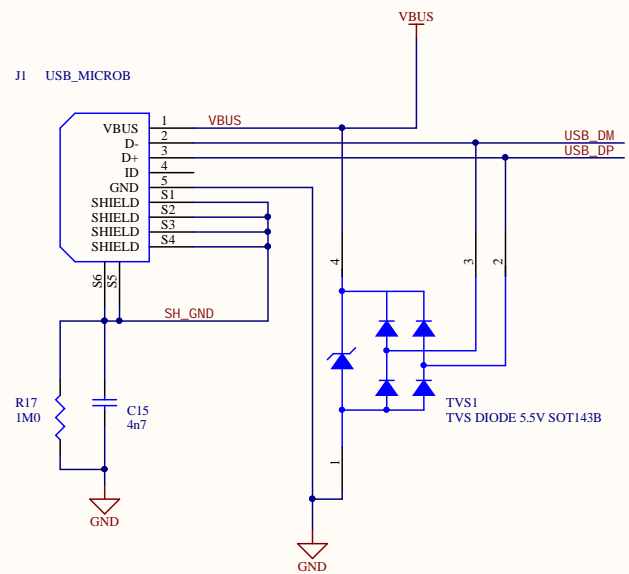
16 MHz Clock Source



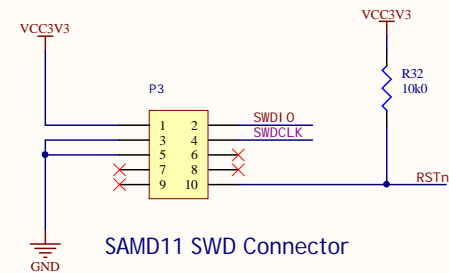
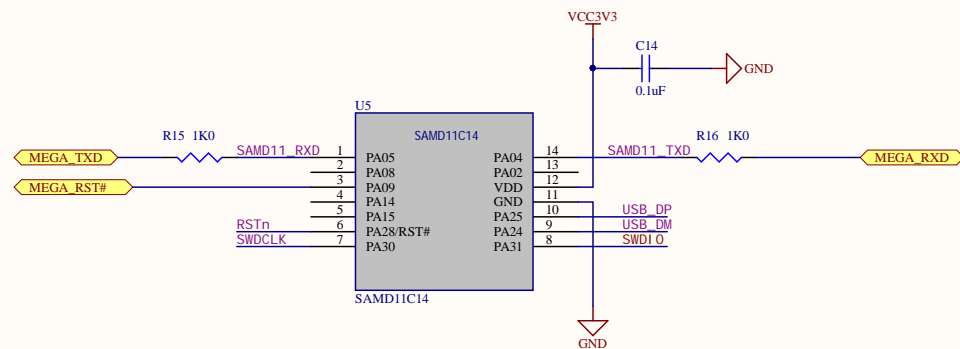
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Size	Number			Revision	
Legal				0.81	
Date:	4/9/2020			Sheet of	
File:	C:\Users\lp01_mcu\SchDoc			Drawn By: Bob Martin	



Title		PCB Course Badge	2 of 5
Size	Number	Revision	
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Date:	4/9/2020	Sheet of	
File:	C:\Users\...\lp02_power.SchDoc	Drawn By:	Bob Martin

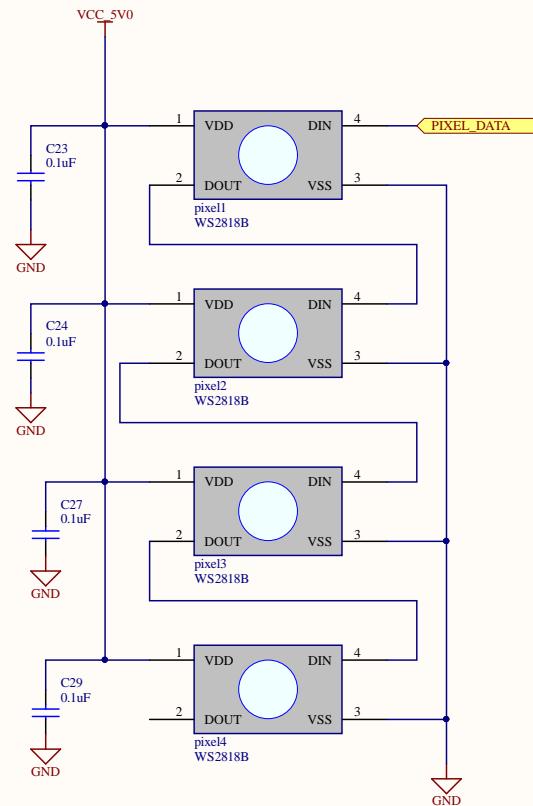
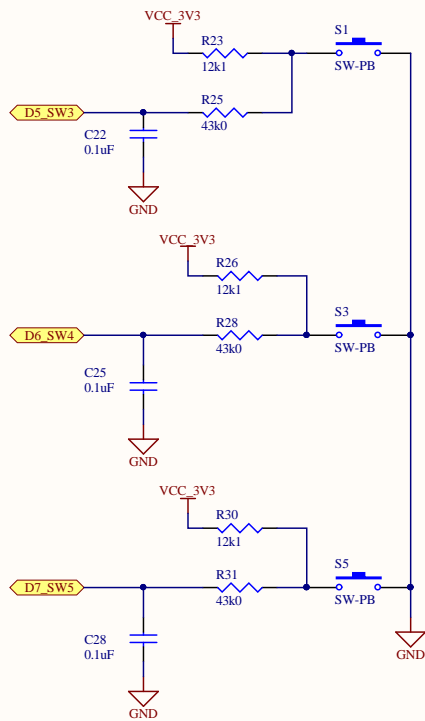
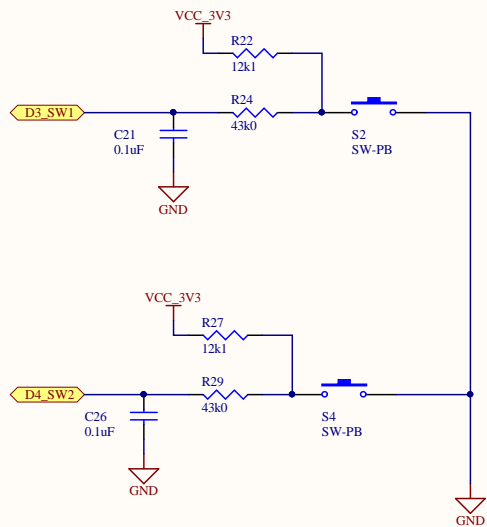


USB Micro B / ESD / TVS



SAMD11 SWD Connector

Title		PCB Course Badge		3 of 5	
Size	Number			Revision	0.81
Legal					
Date:	4/9/2020			Sheet of	
File:	C:\Users\lp03\usbdc.SchDoc			Drawn By:	Bob Martin



Title		PCB Course Badge		5 of 5	
Size	Number			Revision	0.81
Legal					
Date:	4/9/2020			Sheet of	
File:	C:\Users\...p05_leds_switches.SchDoc			Drawn By:	Bob Martin

Quantity	Designator	Digi-Key PN	Manufacturer	MPN	Value
1	BAT1	BK-883-ND	MPD (Memory Protection Devices)	BK-883	
1	BUZZ1	668-1448-ND	PUI Audio, Inc.	668-1448-ND	
7	C1, C3, C9, C11, C16, C18, C19	399-1100-1-ND	KEMET	C0603C104Z3VACTU	0.1uF
2	C2, C4	399-7746-1-ND	KEMET	C0402C100J3GACTU	10pF
2	C5, C6	399-7865-1-ND	KEMET	C0603C180J1GACTU	18pF
1	C7	399-11437-1-ND	KEMET	EDK226M016A9BAA	22 uF/16V
1	C8	399-11437-1-ND	KEMET	EDK226M016A9BAA	22uF/16V
2	C10, C12	399-7921-1-ND	KEMET	C0603C471J1GACTU	470pF
1	C13	399-11437-1-ND	KEMET	EDK226M016A9BAA	22 uF/16V
10	C14, C21, C22, C23, C24, C25, C26, C27, C28, C29	399-1100-1-ND	KEMET	C0603C104Z3VACTU	0.1uF
1	C15	399-16659-1-ND	KEMET	C0805C472KDRACAUTO	4n7
2	C17, C20	399-7874-1-ND	KEMET	C0603C220J1GACTU	22pF
1	IMU1	828-1058-1-ND	Bosch Sensortec	BNO055	
1	J1	H125718CT-ND	Hirose Electric Co Ltd	ZX62D-B-5PA8(30)	
1	LCD1	n/a	Buydisplay	ER-TFTM024-3	TFT LCD
1	LED1	475-2816-1-ND	OSRAM Opto Semiconductors Inc.	LB Q39G-L2OO-35-1	LED BLUE DIFFUSED 0603 SMD
1	P1	WM17457-ND	Molex	0015910060	CONN HEADER SMD 6POS 2.54MM
1	P2	WM17457-ND	Molex	0015910060	Mark's Magic battery connector
1	P3	609-3695-1-ND	Amphenol ICC (FCI)	20021121-00010C4LF	CONN HEADER SMD 10POS 1.27MM
4	pixel1, pixel2, pixel3, pixel4	n/a	Worldsemi	WS2812B	
1	Q1	BSS138CT-ND	ON Semiconductor	BSS138	MOSFET N-CH 50V 220MA SOT-23
8	R1, R10, R11, R18, R19, R20, R21, R32	RNCP0603FTD10K0CT-ND	Stackpole Electronics Inc	RNCP0603FTD10K0	10k0
2	R2, R3	RNCP0603FTD4K75TR-ND	Stackpole Electronics Inc	RNCP0603FTD4K75	4k75
6	R4, R5, R6, R7, R8, R9	RMCF0603JT22R0CT-ND	Stackpole Electronics Inc	RMCF0603JT22R0	22R
1	R12	RMCF0603JT470RCT-ND	Stackpole Electronics Inc	RMCF0603JT470R	470R
2	R13, R14	RMCF0603FT100KCT-ND	Stackpole Electronics Inc	RMCF0603FT100K	100k0
2	R15, R16	RNCS0603BKE1K00CT-ND	Stackpole Electronics Inc	RNCS0603BKE1K00	1K0
1	R17	RNCF0603BKC1M00CT-ND	Stackpole Electronics Inc	RNCF0603BKC1M00	1M0
5	R22, R23, R26, R27, R30	RMCF0603FT12K1CT-ND	Stackpole Electronics Inc	RMCF0603FT12K1	12k1
5	R24, R25, R28, R29, R31	RMCF0603FT43K0CT-ND	Stackpole Electronics Inc	RMCF0603FT43K0	43k0
5	S1, S2, S3, S4, S5	CKN9112CT-ND	C&K	PTS645SM43SMTR92 LFS	SPST-NO
1	SENSOR1	828-1063-1-ND	Bosch Sensortec	BME280	BME280
1	TVS1	1727-3884-1-ND	Nexperia USA Inc.	PRTR5V0U2X	TVS DIODE 5.5V SOT143B
1	U1	ATMEGA328P-AURCT-ND	Microchip Technology	ATMEGA328P-AUR	ATMEGA328P-AU
1	U2	MCP7940N-I/SN-ND	Microchip Technology	MCP7940N-I/SN	MCP7940 RTC
1	U3	576-2770-1-ND	Microchip Technology	MIC5219-5.0YM5-TR	MIC5219 5.0 LDO
1	U4	576-1281-1-ND	Microchip Technology	MIC5219-3.3	MIC5219 3.3 LDO
1	U5	ATSAMD11C14A-SSNTCT-ND	Microchip Technology	ATSAMD11C14A-SSNT	SAMD11C14
2	Y1, Y3	SER4311TR-ND	EPSON	MC-405 32.7680K-E3: ROHS	32.768 kHz
1	Y2	535-9103-1-ND	Abracon LLC	ABM3-16.000MHZ-B2-T	16.00 MHz