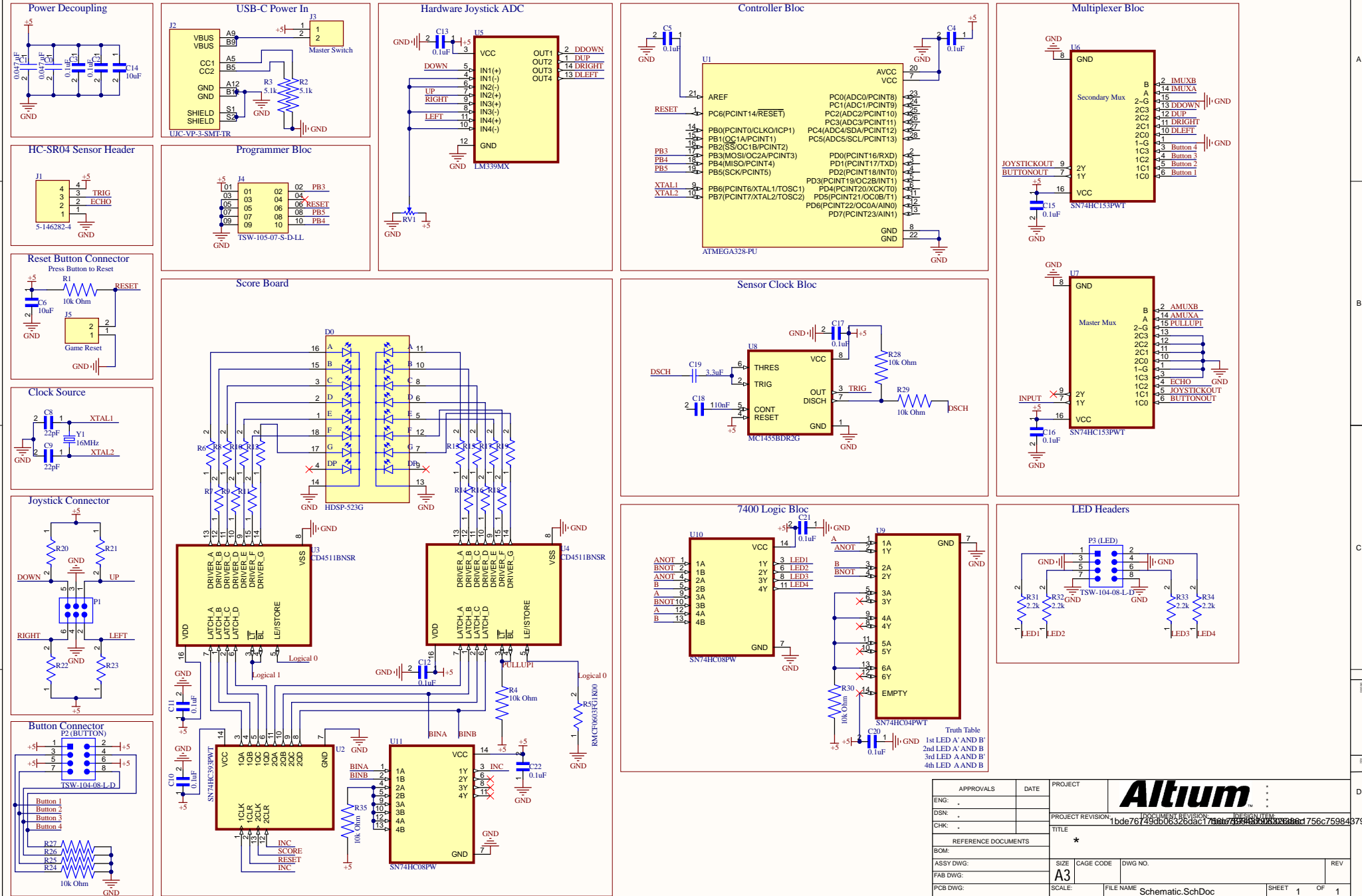


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## University of Pittsburgh ECE1895 Design Project No. 2. Mason Dill, Damien Hu, Shreya Khanal



APPROVALS	DATE	PROJECT	Altium
ENG: .		PROJECT REVISION: .	DESIGN: .
DSN: .		DOCUMENT REVISION: .	756c75984379200
CHK: .		TITLE: *	
REFERENCE DOCUMENTS			
ASSY DWG:	A3	CAGE CODE	DWG NO.
FAB DWG:	SCALE:	FILE NAME	Schematic.SchDoc
PCB DWG:			SHEET 1 OF 1

Comment	Description	Designator	Footprint	LibRef	Quantity
0.047 uF	CAP CER 0.047UF 100V 5% X7R 0603	C0, C1	FP-C0603C-CF-MFG	CMP-1035-02515-3	2
0.1uF	0.1uF A±10% 16V Ceramic Capacitor X7R 0603_1608 Metric	C2, C3, C4, C5, C10, C11, C12, C13, C15, C16, C17, C20, C21, C22	CAPC1608X90N	EMK107B7104KAHT	14
10uF	10 uF A±10% 10V Ceramic Capacitor JB 0603 (1608 Metric)	C6, C14	CAPC1608X90N	C1608JB1A106K080AC	2
22pF	22pF A±5% 25V Ceramic Capacitor COG, NPO 0603_1608 Metric	C8, C9	CAPC1608X90N	C0603C220J3GACAUTO	2
10nF		C18	CAPC2012X88N	C0805C103K1RECAUTO	1
3.3uF		C19	CAPC1608X90C35NL1 5T15	CMP-1035-02770-2	1
HDSP-523G	Display Modules - LED Character and Numeric Green 7- Segment 2 Character Common Cathode 2V 10mA 0.732 H x 0.984 W x 0.315 D (18.60mm x 25.00mm x 8.00mm) 18-DIP (0.600, 15.24mm)	D0	LED_HDSP-523G	HDSP-523G	1
5-146282-4	Connector Header Through Hole 4 position 0.100 (2.54mm)	J1	TE_5-146282-4	5-146282-4	1
UIC-VP-3-SMT-TR	USB Receptacle	J2	CUI_UIC-VP-3-SMT- TR	UIC-VP-3-SMT-TR	1
Master Switch	2-24 Poles, Screw Type, Horizontal, 5.0 Pitch, 26-14_AWG_ Terminal Block Connector	J3	CUI_TB003-500-P02BE	TB003-500-P02BE	1
TSW-105-07-S-D-LL		J4	SAMTEC_TSW-105-07- S-D-LL	TSW-105-07-S-D-LL	1
Game Reset	2-24 Poles, Screw Type, Horizontal, 5.0 Pitch, 26-14_AWG_ Terminal Block Connector	J5	CUI_TB003-500-P02BE	TB003-500-P02BE	1
TSW-103-08-G-D	0.025" SQ Post Header, Through- hole, Vertical, .55 to 125 degC, 2.54 mm Pitch, 6-Pin, Male, RoHS	P1	SMTC-TSW-103-08-X- D	CMP-1024-00338-1	1
TSW-104-08-L-D	Male Header, Pitch 2.54 mm, 2 x 4 Position, Height 8.38 mm, Tail Length 5.08 mm, .55 to 125 degC, RoHS, Bulk	P2 (BUTTON), P3 (LED)	SMTC-TSW-104-08-L- D_V	CMP-1681-00006-4	2
10k Ohm		R1, R4, R24, R25, R26, R27, R28, R29, R30, R35	RESC3116X60N	CRCW120610K0DHEAP	10
5.1k	Res Thick Film 2512 5.1K Ohm 1% 3W SMD T/R	R2, R3	RESC6332X120N	35225K1FT	2
RMCF0603FG1K00	1k0 ±1% 0.1W 0603 Thick Film Chip Resistor AEC-Q200 compliant	R5	FP-RMCF0603-IPC_B	CMP-26527-003160-1	1
100 Ohm	RES Thick Film, 1000, 1%, 0.25W, 100ppm/°C, 1206	R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19	FP-CRCW1206-e3- MFG	CMP-2003-04801-2	14
CRCW12062K20FKEA	RES Thick Film, 2.2kΩ, 1%, 0.25W, 100ppm/°C, 1206	R20, R21, R22, R23	FP-CRCW1206-e3- IPC_C	CMP-2003-02034-2	4
2.2k	RES Thick Film, 2.2kΩ, 1%, 0.25W, 100ppm/°C, 1206	R31, R32, R33, R34	FP-CRCW1206-e3- IPC_C	CMP-2003-02034-2	4
3290W-1-203	Trimming Potentiometer, 20 KOhm, 1W, -65 to 150 degC, 3-Pin THD, RoHS, Tube	RV1	BOUR-3290W	CMP-2000-05581-1	1
ATMEGA328-PU	AVR AVR® ATmega Microcontroller IC 8- Bit 20MHz 32KB (16K x 16) FLASH 28-PDIP	U1	DIP787W46P254L3467 H508Q28	ATMEGA328-PU	1
SN74HC393PWT		U2	SOP65P640X120-14N	SN74HC393PWT	1
CD4511BNSR		U3, U4	SOP127P780X200-16N	CD4511BNSR	2
LM339MX	Quad Comparator	U5	SOIC127P630X170- 14N	LM339MX	1
SN74HC153PWT	IC MULTIPLEXER 2 X 4:1 16TSSOP	U6, U7	SOP65P640X120-16N	SN74HC153N	2
MC14558DR2G	Single Precision Timer	U8	SOIC127P599X175-8N	NE555DR	1
SN74HC04PWT	Hex Inverters 14- TSSOP -40 to 85	U9	SOP65P640X120-14N	SN74HC04PWT	1
SN74HC08PW		U10, U11	SOP65P640X120-14N	SN74HC08PW	2
16MHz	16MHz A±30ppm Crystal 20pF 60 Ohms 2-SMD, No Lead	Y1	XTAL_ECS-160-20-23A- EN-TR	ECS-160-20-23A-EN- TR	1