

G8 Open Source  
 Bill of Materials  
 Main Board

Qty	P/N	Title	Ref(m)	Vendor
2	T100355-20K	Res,1/10W,1% 0603	R14,R15	
1	T100355-30K1	Res,1/10W,1% 0603	R11	
6	T100356	Res Array,1.8K,742C083	RN1,RN2,RN3,RN4,RN5,RN6	Mouser
14	T100357	Cap,100n,Cer,SMT 0603	C3,C5,C6,C7,C8,C9,C11,C12,C14,C17,C18,C19,C20,C21	Digikey
2	T100366	Cap,100p,Cer,0603 SMT	C1,C2	Digikey
1	T100359	Cap,1n,Ceramic,0603,SMT	C4	Mouser
2	T100372	cap,22u,25V SMT	C10,C13	Mouser
1	T100360	IC,Hex Buf,74AC244,TSSOP20	U11	Digikey
4	T100361	IC,Shift Reg,74HC595,TSSOP16	U1,U3,U4,U10	Mouser
1	T100362	IC,Inverter,74LVC1G14,SOT23-5	U5	Digikey
1	T100077	IC,Inverter,74LVC2G14,SOT23-6	U6	Digikey
1	T100348	IC,Volt Reg,78L05,SOT-89 SMT	U9	Digikey
1	T100363	IC,Proc,MEGA164A,MLF44	U2	Digikey
3	T100030	Diode,Schottky,BAS40-04,SOT-23	D1,D2,D3	Mouser
1	T100308	IC,VOLT REF,LM4040,2.5V,SOT23	U8	Arrow
1	T100364	IC,Opamp,OPA171,SOT23-5	U7	Digikey
2	T100331	Diode,SS14,SMT	D4,D5	Mouser
1	T100365	Crystal,20M,SMT 5x3.2	Q1	Mouser
2	T100358	Cap,18p,Ceramic,0603,SMT	C1,C2	Digikey
4	T100355-2K00	Res,1/10W,1% 0603	R7, R8, R9, R16	
3	T100373	Res,0R0,0603 SMT	R3, R4, R5	
1	T100355-1K	Res,1/10W,1% 0603	R12	
6	T100355-10K	Res,1/10W,1% 0603	R1, R2, R6, R13, R19, R20	
2	T100355-100K	Res,1/10W,1% 0603	R10, R21	Mouser

Vend-P/N	Vend-Desc	Mfr	Mfr-P/N
774-742C083182JP	Resistor Networks & Arrays 1.8Kohms 50V 5%	CTS	742C083182JP
445-1314-2-ND	CAP CER 0.1UF 50V 10% X7R 0603	TDK	C1608X7R1H104K080AA
445-1281-2-ND	CAP CER 100PF 50V 5% NP0 0603	TDK	C1608C0G1H101J080AA
581-06035C102K	MLCC - SMD/SMT 0603 1000pF 50volts X7R 10%	AVX	06035C102KAT2A
667-EEE-1EA220WAR	22UF 25V VS SMD	Panasonic	EEE-1EA220WAR
296-8276-6-ND	IC BUFF/DVR TRI-ST DUAL 20TSSOP	Texas Instruments	SN74HC244PWR
595-SN74HC595PWR	Counter Shift Registers 8-Bit Shift Register	Texas Instruments	SN74HC595PWR
296-11607-6-ND	IC SCHMITT TRIG INV SOT-23-5	Texas Instruments	SN74LVC1G14DBVR
296-13010-1	IC INVERTER DUAL SHMT-T SOT-23-6	TI	SN74LVC2G14DBVR
296-11118-6-ND	IC REG LDO 5V 0.1A SOT89-3	Texas Instruments	UA78L05ACPK
ATMEGA164A-MU-ND	IC MCU 8BIT 16KB FLASH 44VQFN	Atmel	ATMEGA164A-MU
771-BAS40-04235	BAS40-04	NXP	BAS40-04,235
LM4040C25IDBZR	IC Voltage Reg 2.5V SOT-23	Texas Instruments	LM4040C25IDBZR
296-28052-6-ND	IC OPAMP GP RRO 3MHZ LP SOT23-5	Texas Instruments	OPA171AIDBVT
625-SS14-E3	Schottky Diodes & Rectifiers 1.0 Amp 40 Volt	Vishay Semi	SS14-E3/61T
717-7A-20.000MAAJ-T	Crystals 20.000MHz 30ppm -20 +70C 18pF	TXC	7A-20.000MAAJ-T
445-1272-2-ND	CAP CER 18PF 50V 5% NP0 0603	TDK	C1608C0G1H180J080AA
302-100K-RC	Thick Film Resistors - SMD 1/10WATT 100KOHMS	Xicon	302-100K-RC

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Control Board

Qty	P/N	Title	Ref(m)	Vendor	Vend-P/N
11	T100284	Jack,3.5mm,Stereo,Vert		QingPu	WQP-PJ301CM
8	T100255	LED,Rd/Gn,T1,3 lead		Mouser	604-WP115VEGW
1	T100341	Switch,PB,DPDT,VERT,MOM,PTH		Heilind	TL2201OAZB
8	T100347	Spacer,led 3mm,0.36"		Mouser	534-7365
11	T100237	Nut,Knurled,for 3.5mm jack		QingPu	
1	T100307	Cap,Black,Round,for switch T100303		Mouser	612-1R-BK

Note: The jacks are also available from Connect-Tech Products  
([ctp@connect-tech-products.com](mailto:ctp@connect-tech-products.com)) as part number J-355W-09  
The knurled nuts are available from CTP as part number N-003

Vend-Desc	Mfr	Mfr-P/N	Detail
Through Hole Red Green 625 568nm Diffused 50 30mcd	Kingbright	WP115VEGW	J-355W-09
LED Mounting Hardware .36" T1 BI-LEAD (optional) matching knurled nut	E-Switch		TL2201OAZA
Switch Hardware 9 X 5MM RND CAP BLK	Keystone	7365	
	E-Switch	1RBLK	