I/O Master v1.0 - Populated P	arts				Qty 1		Qty 100	
Qty. Refdes.	Description	Manufacturer	Manufacturer PN	Digikey PN		xtended Price U	nit Price E	Extended Pri
1 PCB1	Bare PCB, 4 layer, 1oz copper, 1.6mm, ENIG, 100x100mm w/ stencil	JLCPCB			\$11.35	\$11.35	\$1.81	\$1
1 C1	0.47uF Ceramic Capacitor, 10%, 25V, X7R, 0603	Samsung	CL10B474KA8NFNC	1276-2082-1-ND	\$0.12	\$0.12	\$0.04	\$0
1 C2	1uF Ceramic Capacitor, 10%, 25V, X5R, 0603	Samsung	CL10A105KA8NNNC	1276-1102-1-ND	\$0.10	\$0.10	\$0.02	\$0.
2 D1, D2	Schottky diode, Vf=0.41V, 1A, SMA	Diodes Inc	B130L-13-F	B130L-FDICT-ND	\$0.36	\$0.72	\$0.17	\$0
1 D3	Orange LED, Vf=2V, 0603	Lite-On Inc.	LTST-C190KFKT	160-1434-1-ND	\$0.24	\$0.24	\$0.08	\$0
2 D4, D5	Blue LED, Vf=3.2V, 0603	Wurth	150060BS55040	732-12013-1-ND	\$0.18	\$0.36	\$0.15	\$0
1 D6	Green LED, Vf=2V, 0603	Würth Elektronik	150060VS75000	732-4980-1-ND	\$0.14	\$0.14	\$0.11	\$0
1 F1	PTC Fuse, 500mA hold, 1A trip, 1206	Bel Fuse	0ZCJ0050FF2G	507-1802-1-ND	\$0.13	\$0.13	\$0.10	\$0
1 F2	PTC Fuse, 100mA hold, 250mA trip, 1206	Bel Fuse	0ZCJ0010FF2E	507-1794-1-ND	\$0.13	\$0.13	\$0.10	\$0
1 J1	DC Barrel Jack, 5.5mm OD, 2.1mm ID, THT	Tensility	54-00166	839-54-00166-ND	\$0.47	\$0.47	\$0.33	\$0
1 J2	Micro USB Connector, SMD	Amphenol	10118193-0001LF	609-4616-1-ND	\$0.43	\$0.43	\$0.31	\$0
1 J3	0.1" Header, 2x5 pins, THT	Sullins Connector	PPPC052LFBN-RC	S7108-ND	\$0.71	\$0.71	\$0.54	\$0
1 Q27	P-ch MOSFET, 30V, 3.8A, SOT-23-3	Diodes Inc	DMP3099L-7	DMP3099L-7DICT-ND	\$0.34	\$0.34	\$0.12	\$0
1 R5	1Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06031K00FKEA	541-1.00KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
2 R6, R7	10Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW060310K0FKEA	541-10.0KHCT-ND	\$0.10	\$0.20	\$0.01	\$0
1 R8	4.7Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06034K70FKEA	541-4.70KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 R262	100Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603100KFKEAC	541-3950-1-ND	\$0.10	\$0.10	\$0.01	\$0
1 TP4	Multipurpose Test Point	Keystone	5011	36-5011-ND	\$0.35	\$0.35	\$0.30	\$0
3V Regulator								
1 U1	Linear Regulator, 4.6-15V input, 3.3V output, 800mA, SOT-223	Diodes Inc	AZ1117IH-3.3TRG1	AZ1117IH-3.3TRG1DICT-ND	\$0.37	\$0.37	\$0.18	\$0
2 C3, C6	0.1uF Ceramic Capacitor, 10%, 25V, X7R, 0603	Samsung	CL10B104KA8NNNC	1276-1006-1-ND	\$0.10	\$0.20	\$0.01	\$0
1 C4	10uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A106KAYNNNG	1276-6454-1-ND	\$0.25	\$0.25	\$0.09	\$0
1 C5	22uF Ceramic Capacitor, 10%, 25V, X5R, 1210	Samsung	CL32A226KAJNNNE	1276-1101-1-ND	\$0.57	\$0.57	\$0.26	\$0
-15V Regulator								
1 C100	10uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A106KAYNNNG	1276-6454-1-ND	\$0.25	\$0.25	\$0.09	\$0
2 C101, C106	1uF Ceramic Capacitor, 10%, 25V, X5R, 0603	Samsung	CL10A105KA8NNNC	1276-1102-1-ND	\$0.10	\$0.20	\$0.02	\$0.
1 C104	0.22uF Ceramic Capacitor, 10%, 25V, X5R, 0603	Samsung	CL10A224KA8NNNC	1276-1875-1-ND	\$0.12	\$0.12	\$0.04	\$0
1 C105	82pF Ceramic Capacitor, 5%, 50V, C0G, 0603	Samsung	CL10C820JB8NNNC	1276-1242-1-ND	\$0.10	\$0.10	\$0.03	\$0
2 C107, C108	22uF Ceramic Capacitor, 10%, 25V, X5R, 1210	Samsung	CL32A226KAJNNNE	1276-1101-1-ND	\$0.57	\$1.14	\$0.26	\$0.
2 D30, D31	Schottky Diode, Vf=0.62V, 30V, 500mA, SOD-323	ON Semi	NSR0530HT1G	NSR0530HT1GOSCT-ND	\$0.16	\$0.32	\$0.06	\$0
1 L2	10uH Inductor, 1.3A rated, 1.4A saturation, shielded, SMD	Abracon	ASPI-0418FS-100M-T3	535-10763-1-ND	\$0.55	\$0.55	\$0.35	\$0
1 L3	15uH Inductor, 1.8A rated, 2.0A saturation, shielded, SMD	Taiyo Yuden	NR5040T150M	587-2366-1-ND	\$0.45	\$0.45	\$0.28	\$0
1 R241	5.36Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06035K36FKEA	541-5.36KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 R242	390Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603390KFKEA	541-390KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 R243	2.43Mohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06032M43FKEA	541-2.43MHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 R244	137Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603137KFKEA	541-137KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
R245	118Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603118KFKEA	541-118KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 R246	2.32Mohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06032K32FKEA	541-2.32KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 U36	Switching Regulator, pos & neg output, 2.5-15V input, 20-TSSOP	Analog Devices	ADP5070AREZ	ADP5070AREZ-R7CT-ND	\$6.10	\$6.10	\$4.57	\$4
	3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4					,,,,,		
3-15V Adjustable Regulator								
2 C41, C46	10uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A106KAYNNNG	1276-6454-1-ND	\$0.25	\$0.50	\$0.09	\$0
1 C42	0.1uF Ceramic Capacitor, 10%, 25V, X7R, 0603	Samsung	CL10B104KA8NNNC	1276-1006-1-ND	\$0.10	\$0.10	\$0.01	\$0
1 C43	1uF Ceramic Capacitor, 10%, 25V, X5R, 0603	Samsung	CL10A105KA8NNNC	1276-1102-1-ND	\$0.10	\$0.10	\$0.02	\$0
1 C44	33pF Ceramic Capacitor, 5%, 50V, C0G, 0603	Samsung	CL10C330JB8NNNC	1276-1070-1-ND	\$0.10	\$0.10	\$0.02	\$0
1 D13	Schottky Diode, Vf=0.62V, 30V, 500mA, SOD-323	ON Semi	NSR0530HT1G	NSR0530HT1GOSCT-ND	\$0.16	\$0.16	\$0.02	\$0
1 L1	82uH Inductor, dual windings, 0.86A rated, 0.89A saturation, shielded, SMD	Bourns	SRF0703-820M	SRF0703-820MCT-ND	\$1.01	\$1.01	\$0.68	\$0
1 R47	220Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603220KFKEAC	541-4039-1-ND	\$0.10	\$0.10	\$0.00	\$0
R48	110Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603220KFKEA	541-110KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
R49	10Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale Vishay Dale	CRCW060310K0FKEA	541-10.0KHCT-ND	\$0.10	\$0.10	\$0.01	\$0
1 K49 1 U4		Texas Instruments	LM2621MMX/NOPB	LM2621MMX/NOPBCT-ND	\$0.10	\$0.10	\$1.36	\$0 \$1
. 04	Switching Regulator, 1.2-14V input, 1.24-14V output, 2.85A, 8-TSSOP	rexas moliuments	LIVIZUZ I IVIIVIA/NOPB	LIVIZUZ TIVIIVIA/INUPDUT-INU	\$Z.UT	⊅∠. U1	\$1.30	\$1
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icrocontroller Subsystem	2 2uE Coromio Consoiter 100/ 251/ VED 000E	Comouna	CI 21A22EKAENINIO	1276 6460 1 ND	60.40	#0.33	en ne	
2 C7, C14	2.2uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A225KAFNNNG	1276-6458-1-ND	\$0.16	\$0.32	\$0.06	\$0
3 C8, C29, C37	4.7uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A475KAQNNNG	1276-6462-1-ND	\$0.17	\$0.51	\$0.06	\$0

/O Master v1.0 - Populated Parts						ty 1		y 100
Qty. Refdes.	Description	Manufacturer	Manufacturer PN	Digikey PN	Unit Price	Extended Price	Unit Price	Extended Price
C9, C15, C16, C17, C19, C20, C22, C23, C24 20 C25, C26, C27, C28, C30, C31, C32, C35, C3 C38, C39		Samsung	CL10B104KA8NNNC	1276-1006-1-ND	\$0.10	\$2.00	\$0.01	\$0.2
2 C10, C11	1uF Ceramic Capacitor, 10%, 25V, X5R, 0603	Samsung	CL10A105KA8NNNC	1276-1102-1-ND	\$0.10	\$0.20	\$0.02	2 \$0.0
4 C12, C13, C33, C34	20pF Ceramic Capacitor, 5%, 50V, C0G, 0603	Samsung	CL10C200JB8NNNC	1276-1187-1-ND	\$0.10	\$0.40	\$0.02	2 \$0.
4 D7, D8, D9, D11	Green/Yellow LED, independent, SMD	Kingbright	APTB1615YSGC-F01	754-1151-1-ND	\$0.42	\$1.68	\$0.20	\$0.
1 D10	RGB LED, independent, SMD	Everlight Electronics	19-337C/RSBHGHC-A88/4T	1080-1631-1-ND	\$0.44	\$0.44	\$0.21	1 \$0.
1 D12	Zener Diode, Vz=5.42V, SOD-323F	Diodes Inc	DDZ5V6ASF-7	DDZ5V6ASF-7DICT-ND	\$0.16	\$0.16	\$0.06	\$0.
1 FB1	Ferrite Bead, 100mA, 0603	Bourns	MZ1608-102Y	MZ1608-102YCT-ND	\$0.10	\$0.10	\$0.04	\$0.
1 J4	0.1" Header, 2x5 pins, THT	Sullins Connector	PPPC052LFBN-RC	S7108-ND	\$0.71	\$0.71	\$0.54	\$0.
R10, R12, R14, R15, R17, R20, R21, R23, R2 20 R25, R26, R31, R32, R34, R35, R36, R37, R3 R41, R42	4,	Vishay Dale	CRCW0603100KFKEAC	541-3950-1-ND	\$0.10	\$2.00	\$0.01	\$0.5
8 R11, R13, R19, R22, R30, R33, R39, R40	1Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06031K00FKEA	541-1.00KHCT-ND	\$0.10	\$0.80	\$0.01	\$0.
2 R16, R18	4.7Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06034K70FKEA	541-4.70KHCT-ND	\$0.10	\$0.20	\$0.01	\$0.
3 R27, R28, R29	330ohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603330RFKEA	541-330HCT-ND	\$0.10	\$0.30	\$0.01	\$0.
1 R43	10Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW060310K0FKEA	541-10.0KHCT-ND	\$0.10	\$0.10	\$0.01	\$0.
1 R44	820ohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603820RFKEA	541-820HCT-ND	\$0.10	\$0.10	\$0.01	\$0.
1 R45	12Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW060312K0FKEAC	541-4046-1-ND	\$0.10	\$0.10	\$0.01	\$0.0
1 R46	1Mohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06031M00FKEA	541-1.00MHCT-ND	\$0.10	\$0.10	\$0.01	\$0.
1 SW1	Slide Switch, SPDT, SMD	C&K	JS202011SCQN	401-2002-1-ND	\$0.48	\$0.48	\$0.39	\$0.
1 SW2	Push Button, SPST-NO, SMD	Panasonic	EVQ-Q2B03W	P12932SCT-ND	\$0.12	\$0.12	\$0.12	2 \$0.
1 U2	32-bit Microcontroller, 144-LQFP	STmicro	STM32H743ZIT6	497-17721-ND	\$10.65	\$10.65	\$8.27	7 \$8.3
1 U3	USB 2.0 HS PHY, 32-QFN	Microchip	USB3300-EZK-TR	USB3300-EZK-CT-ND	\$1.24	\$1.24	\$0.99	\$0.9
1 Y1	Crystal, 48MHz, SMD	Murata Electronics	XRCGB48M000F4M02R0	490-18354-1-ND	\$0.35	\$0.35	\$0.24	\$0.
1 Y2	Crystal, 24MHz, SMD	Murata Electronics	XRCGB24M000F0L00R0	490-5575-1-ND	\$0.35	\$0.35	\$0.24	\$0.
Level Shifter Subsystem C18, C21, C47, C48, C49, C50, C51, C52, C5 C54, C57, C58, C60, C61, C62, C63, C68, C6 C70, C71, C73, C74, C75, C76, C77, C78, C7 C80, C83, C84, C86, C87, C88, C89, C94, C9 C96, C97	9, 9, 0.1uF Ceramic Capacitor, 10%, 25V, X7R, 0603	Samsung	CL10B104KA8NNNC	1276-1006-1-ND	\$0.10	\$3.80	\$0.01	\$0
8 C64, C65, C66, C67, C90, C91, C92, C93	10uF Ceramic Capacitor, 10%, 25V, X5R, 0805	Samsung	CL21A106KAYNNNG	1276-6454-1-ND	\$0.25	\$2.00	\$0.09	\$0.0
2 C72, C98	1000pF Ceramic Capacitor, 10%, 50V, X7R, 0603	Samsung	CL10B102KB8WPNC	1276-6838-1-ND	\$0.10	\$0.20	\$0.01	\$0.
4 D14, D15, D28, D29	Zener Diode, Vz=9.1V, SOD-323	ON Semi	MM3Z9V1ST1G	MM3Z9V1ST1GOSCT-ND	\$0.13	\$0.52		\$0.
6 Q3, Q6, Q9, Q17, Q20, Q23	NPN Transistor, 40V, 200mA, SOT-323	ON Semi	MMBT3904WT1G	MMBT3904WT1GOSCT-ND	\$0.13	\$0.78	\$0.05	\$0.
4 Q4, Q7, Q18, Q21	PNP Transistor, 40V, 200mA, SOT-323	ON Semi	SMMBT3906WT1G	SMMBT3906WT1GOSCT-ND	\$0.12	\$0.48	\$0.05	\$0.
4 Q5, Q8, Q19, Q22	P-ch N-ch MOSFET Pair, 60V, 360mA, SOT-563	Diodes Inc	DMG1029SV-7	DMG1029SV-7DICT-ND	\$0.39	\$1.56	\$0.18	\$0.
2 Q10, Q24	Dual N-ch MOSFET Pair, 30V 220mA, SOT-363	ON Semi	DMN63D8LDW-7	DMN63D8LDW-7CT-ND	\$0.31	\$0.62	\$0.10	\$0.
R50, R51, R52, R53, R54, R55, R56, R57, R7 R75, R83, R88, R89, R96, R97, R102, R103, R104, R105, R106, R107, R112, R113, R117, T118, R168, R169, R170, R171, R172, R173, R174, R175, R192, R193, R201, R206, R207, R214, R215, R220, R221, R222, R223, R224, R225, R230, R231, R235, R236	4, 100Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603100KFKEAC	541-3950-1-ND	\$0.10	\$5.00	\$0.01	\$0.7
16 R58, R59, R60, R61, R62, R63, R64, R65, R1 R177, R178, R179, R180, R181, R182, R183	110K011111 Resistor, 0.1%, 1/10W, 0003	Panasonic	ERA-3AEB114V	P110KDBCT-ND	\$0.35	\$5.60	\$0.12	2 \$1.8
16 R66, R67, R68, R69, R70, R71, R72, R73, R1 R185, R186, R187, R188, R189, R190, R191	1W01IIII Resistor, 0.1%, 1/1000, 0003	Yageo	RT0603BRD071ML	YAG4498CT-ND	\$0.33			
8 R76, R80, R82, R85, R194, R198, R200, R203		Vishay Dale	CRCW0603110KFKEA	541-110KHCT-ND	\$0.10			
8 R79, R81, R84, R87, R197, R199, R202, R209		Vishay Dale	CRCW06031M00FKEA	541-1.00MHCT-ND	\$0.10			
8 R86, R90, R92, R93, R204, R208, R210, R21		Vishay Dale	CRCW060347K0FKEAC	541-4021-1-ND	\$0.10	\$0.80	\$0.01	1 \$0.
R94, R95, R98, R99, R100, R101, R108, R108 R116, R212, R213, R216, R217, R218, R219, R226, R227, R234	9, 10Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW060310K0FKEA	541-10.0KHCT-ND	\$0.10	\$1.80	\$0.01	
4 R114, R115, R232, R233	Jumper, 1/10W, 0603	Yageo	RC0603JR-070RL	311-0.0GRCT-ND	\$0.10	\$0.40	\$0.01	\$0.0
8 R119, R120, R121, R122, R237, R238, R239, R240	120ohm Resistor, 1%, 1/8W, 0805	Yageo	RC0805FR-07120RL	311-120CRCT-ND	\$0.10	, , , , ,		
1 U5	DAC, 12-bit, 4 channel, address = 000, 10-MSOP	Microchip	MCP4728A0T-E/UN	MCP4728A0T-E/UNCT-ND	\$1.89			
2 U6, U23	Quad Op-Amp, rail-to-rail, +/-15V supply, 14-TSSOP	ON Semi	NCV20074DTBR2G	NCV20074DTBR2GOSCT-ND	\$1.01	\$2.02	\$0.66	\$1.

I/O	/O Master v1.0 - Populated Parts						Qty 1		Qty 100	
Qty.	Refdes.	Description	Manufacturer	Manufacturer PN	Digikey PN	Unit Price	Extended Price	Unit Price	Extended Price	
4	U7, U9, U24, U26	Comparator, high speed, 2.2-5V supply, SOT-353	STmicro	TS3011ICT	497-11990-1-ND	\$1.01	\$4.04	\$0.66	\$2.62	
1	U8	DAC, 12-bit, 1 channel, address = 00, SOT-23-6	Microchip	MCP4725A0T-E/CH	MCP4725A0T-E/CHCT-ND	\$0.96	\$0.96	\$0.73	\$0.73	
2	U10, U27	Analog Switch, 1.65-5.5V supply, SPDT, SOT-363	Diodes Inc	PI5A3157CEX	PI5A3157CEXCT-ND	\$0.36	\$0.72	\$0.18	\$0.36	
10	U11, U12, U13, U15, U16, U28, U29, U30, U32, U33	Op-Amp, high speed, +/-15V supply, 8-SOIC	Texas Instruments	LM7171BIMX/NOPB	LM7171BIMX/NOPBCT-ND	\$2.89	\$28.90	\$2.02	2 \$20.20	
2	U14, U31	Analog Switch, +/-15V supply, SOT-23-8	Diodes Inc	DG449DS-T1-E3	DG449DS-T1-E3CT-ND	\$1.50	\$3.00	\$0.98	\$1.96	
4	U17, U18, U34, U35	Analog Switch, high speed, +/-15V supply, SPST-NO, 6-TSOP	Vishay	DG448DV-T1-E3	DG448DV-T1-E3CT-ND	\$1.29	\$5.16	\$0.84	4 \$3.37	
1	U22	DAC, 12-bit, 4 channel, address = 010, 10-MSOP	Microchip	MCP4728A2-E/UN	only available on MicrochipDirect	\$1.89	\$1.89	\$1.44	\$1.44	
1	U25	DAC, 12-bit, 1 channel, address = 01, SOT-23-6	Microchip	MCP4725A1T-E/CH	MCP4725A1T-E/CHCT-ND	\$0.96	\$0.96	\$0.73	\$0.73	
Circ	uit Protection Subsystem									
8	C111, C112, C113, C114, C115, C116, C117, C118	0.1uF Ceramic Capacitor, 10%, 25V, X7R, 0603	Samsung	CL10B104KA8NNNC	1276-1006-1-ND	\$0.10	\$0.80	\$0.01	1 \$0.10	
8	D16, D20, D24, D32, D36, D37, D38, D39	Zener Diode, Vz=14.66V, SOD-323	ON Semi	MM3Z15VST1G	MM3Z15VST1GOSCT-ND	\$0.13	\$1.04	\$0.05	5 \$0.41	
8	D17, D18, D21, D22, D25, D26, D33, D34	Diode, SOD-323	Diodes Inc	1N4148WS-7-F	1N4148WS-FDICT-ND	\$0.17	\$1.36	\$0.07	7 \$0.53	
4	D19, D23, D27, D35	Red LED, Vf=1.9V, 0603	Würth Elektronik	150060SS75000	732-4979-1-ND	\$0.14	\$0.56	\$0.11	1 \$0.46	
4	Q11, Q13, Q15, Q25	Dual N-ch MOSFET Pair, 30V 220mA, SOT-363	ON Semi	DMN63D8LDW-7	DMN63D8LDW-7CT-ND	\$0.31	\$1.24	\$0.10	\$0.41	
4	Q12, Q14, Q16, Q26	PNP Transistor, 40V, 200mA, SOT-323	ON Semi	SMMBT3906WT1G	SMMBT3906WT1GOSCT-ND	\$0.12	\$0.48	\$0.05	5 \$0.19	
4	R123, R138, R153, R247	2ohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06032R00FKEA	541-2.00HHCT-ND	\$0.10	\$0.40	\$0.02	2 \$0.07	
16	R124, R125, R136, R137, R139, R140, R151, R152, R154, R155, R166, R167, R248, R249, R260, R261	10Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW060310K0FKEA	541-10.0KHCT-ND	\$0.10	\$1.60	\$0.01	1 \$0.22	
36	R126, R127, R128, R129, R130, R131, R132, R133, R135, R141, R142, R143, R144, R145, R146, R147, R148, R150, R156, R157, R158, R159, R160, R161, R162, R163, R165, R250, R251, R252, R253, R254, R255, R256, R257, R259	100Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW0603100KFKEAC	541-3950-1-ND	\$0.10	\$3.60	\$0.01	1 \$0.50	
4	R134, R149, R164, R258	6.8Kohm Resistor, 1%, 1/10W, 0603	Vishay Dale	CRCW06036K80FKEA	541-6.80KHCT-ND	\$0.10	\$0.40	\$0.01	1 \$0.06	
4	U19, U20, U21, U37	Quad Op-Amp, rail-to-rail, +/-15V supply, 14-TSSOP	ON Semi	NCV20074DTBR2G	NCV20074DTBR2GOSCT-ND	\$1.01	\$4.04	\$0.66	\$2.63	
						BOM Total	\$151.30	BOM Total	l \$74.07	

I/O	I/O Master v1.0 - Depopulated Parts						
Qty.	Refdes.	Description					
2		Transistor, SOT-323					
4 R1, R2, R3, R4 Resistor, 0603		Resistor, 0603					
+/-15	iV Regulator						
3	C99, C109, C110	Ceramic Capacitor, 1210					
2 C102, C103 Ceramic Capacitor, 0603							
3.3-1	5V Adjustable Regulator						
2	C40, C45	Ceramic Capacitor, 1210					
Micro	ocontroller Subsystem						
1	R9	Resistor, 0603					
Leve	Level Shifter Subsystem						
6	C55, C56, C59, C81, C82, C85	Ceramic Capacitor, 0603					
6	R77, R78, R91, R195, R196, R209	Resistor, 0603					
4	R110, R111, R228, R229	Jumper, 0603					