



QTY	designation	part-number	alternate part	mfg	part description	comment	pins	package	size in mm	\$ @ 1	\$ @ 10K	\$ @ 100K
		--- capacitors ---	aluminum, ceramic...									
1	C211	2222 138 16222	2222 021 16222	vishay	2200uF 25v aluminum cap	10000hr : larger	2	axial	18 x 18 x 32	2.25	1.430	1.240 ? too big ?
0	C211	2222 021 16222	2222 138 16222	vishay	2200uF 25v aluminum cap	1000hr : smaller	2	axial	15 x 15 x 32	1.62	1.030	0.900 size okay
4	C207 ~ C210	UUD0J152MNL1GS	UWT0J152MNL1GS	nichicon	1500uF 6.3v aluminum cap	5000hr : value	2	radial : SF	11 x 11 x 11	1.04	0.290	0.240
---	C207 ~ C210	EEV-FK0J152GP		panasonic	1500uF 6.3v aluminum cap	5000hr : value	2	radial : SF	11 x 11 x 11	0.94	0.310	0.280
1	C206	EEEHD1E30AP		panasonic	33uF 25v aluminum cap	5000hr : value	2	D case	07 x 07 x 7		0.11	
---	C206	<b>KT5250C336M55N0T00</b>		chemi-con	33uF 25v ceramic cap	5000hr : value	2	2220	06 x 06 x 3	1.22		
59	C001 ~ C059	ECJ-2FH1A106Z	cheaper than 6.3v equiv	panasonic	10uF 10v ceramic cap	value	2	0805	02 x 01 x 1	0.51	0.160	0.042 ~ 0.035 ~
---	C001 ~ C059	GRM21BR60J226ME39L	C2012X5R0J226M	murata / TDK	22uF 6.3v ceramic cap	value	2	0805	02 x 01 x 1	0.290	0.114	0.062 ~ 0.055 ~
4	C060 ~ C063	C3216Y5V1E106Z		TDK	10uF 25v ceramic cap	value	2	1206	03 x 02 x 1	0.150	~ 0.043 ~	~ 0.032 ~
82	C064 ~ C145	GRM188R60J105KA01D		TDK	1uF 6.3v ceramic cap	value	2	0603	01 x 01 x 1	0.029	0.012	~ 0.005 ~
---		C1005Y5V0J105Z		TDK	1uF 6.3v ceramic cap	value	2	0402	01 x 01 x 1	0.033	0.013	~ 0.006 ~
4	C156 ~ C159	ECJ0E801474M (or K)	JMK105F474ZV-F	panasonic	470nF 6.3v ceramic cap	0.470uF	2	0402	01 x 01 x 1	0.26	0.059	0.016 0.012
46	C160 ~ C205	ECJZE80J224M		panasonic	220nF 6.3v ceramic cap	0.220uF	2	0201	01 x 01 x 1	0.47	0.110	0.038 0.027 0.017
4	C146 ~ C149	06036C104KAT9A	C0603C104K9RACTU	AVX / kemet	100nF 6.3v ceramic cap	0.100uF	2	0603	01 x 01 x 1		~ 0.060 ~	~ 0.050 ~
4	C150 ~ C153			panasonic	36pF ceramic capacitor	for 25MHz xtals	2	0603	01 x 01 x 1		0.01	
2	C154 ~ C155			panasonic	25pF ceramic capacitor	for 32KHz xtal	2	0603	01 x 01 x 1		0.01	
	210 SMT above	--- resistors ---	bulk, metal film...									
2	R01 ~ R02	ERJ-2GEJ200X		panasonic	resistor 20 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
0	R03 ~ R07			panasonic	resistor 40 Ω	put 50Ω on LEDs	2	0402	01 x 01 x 1	0.02	0.005	0.003
15	R03 ~ R17	ERJ-2GEJ510X		panasonic	resistor 50 Ω	51 Ω	2	0402	01 x 01 x 1	0.02	0.005	0.003
2	R18 ~ R19	ERJ-2GEJ301X		panasonic	resistor 300 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
8	R20 ~ R27	ERJ-2GEJ471X		panasonic	resistor 470 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
7	R28 ~ R34	ERJ-2GEJ202X		panasonic	resistor 2000 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
4	R35 ~ R38	ERJ-2GEJ472X		panasonic	resistor 4700 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
1	R39	ERJ-2RKF5101X = 1%	ERJ-2GEJ512X = 5%	panasonic	resistor 5000 Ω	5100 Ω	2	0402	01 x 01 x 1	0.02	0.009	0.005
1	R40	ERJ-2RKF8201X = 1%	ERJ-2GEJ822X = 5%	panasonic	resistor 8000 Ω	8200 Ω	2	0402	01 x 01 x 1	0.02	0.009	0.005
8	R41 ~ R48	ERJ-2GEJ103X		panasonic	resistor 10000 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
1	R49	ERJ-2RKF1502X = 1%	ERJ-2GEJ153X = 5%	panasonic	resistor 15000 Ω	15000 Ω	2	0402	01 x 01 x 1	0.02	0.009	0.005
1	R50	ERJ-2RKF232X = 1%	ERJ-2GEJ243X = 5%	panasonic	resistor 23000 Ω	23200 Ω	2	0402	01 x 01 x 1	0.02	0.009	0.005
29	R51 ~ R79	ERJ-2GEJ104X		panasonic	resistor 100000 Ω		2	0402	01 x 01 x 1	0.02	0.005	0.003
4	R80 ~ R83	ERJ-2GEJ474X		panasonic	resistor 470000 Ω	???	2	0402	01 x 01 x 1	0.02	0.005	0.003
[ 4 ]	R80 ~ R83	ERJ-2GEJ684X		panasonic	resistor 680000 Ω	???	2	0402	01 x 01 x 1	0.02	0.005	0.003
[ 4 ]	R80 ~ R83	ERJ-2GEJ105X		panasonic	resistor 1000000 Ω	???	2	0402	01 x 01 x 1	0.02	0.005	0.003
	83 SMT above	--- connectors ---	header, socket, jack...									
1	F01	A32932	picofuse holder		2-pin socket for picofuse		2		06 x 03 x 04			
1	F01	???	picofuse	littelfuse	picofuse : 3A @ 125V	F3172TR-ND	2		08 x 03 axial		0.28	0.24
10	H00 ~ H09	30340-6002HB	4 need 4 pins removed	3M	40-pin header : 2x20	box shroud	40	---	20 x 09 x 10		0.60	
3	H10 ~ H12	4-103741-0		tyco	40-pin header : 1x40	breakaway	3		07 x 05 x 10		0.20	
1	U34	L829-1J1T-43	RJ45 + magnetics & LEDs	bel magjack	jack : RJ45, magnetics, LEDs	ordered 15	20		24 x 17 x 12	6.00	4.00	~3.00~
1	U35	PJ-102AH	raw power input	cul	jack : power-in	jack for power	3		15 x 09 x 11		1.00	
2	U36 ~ U37	SJ1-3533NG	microphone & headphone	cul	jack : microphone/headphone	jack for signals	3				1.00	
0	BT1	3000TR	to battery backup RTC		battery holder		2					
	338 SMTs	--- miscellaneous ---	fuse, battery, button...									
1	U38	B3U1000P		omron	button	momentary	2		05 x 03 x 02		0.46	

NOTE: Items with quantities listed in square brackets (like [8] for example) are components not stuffed for every version of product.

# ice-eye - BOM

QTY	designation	part-number	alternate part	mfg	part description	comment	pins	package	size in mm	\$ @ 1	\$ @ 100	\$ @ 1K	\$ @ 10K	\$ @ 100K
		----- mechanical -----	PCB, case, bolts...											
8		#4 x 32 x 1/2"			bolt	stainless						~ 1.00 ~		
1	CASE01	3" x 3" x 0.6250"			front-plate	aluminum						~ 2.00 ~		
1	CASE02	3" x 3" x 0.3750"			back-plate	aluminum						~ 2.00 ~		
1	PCB01	2.8" x 2.8" x 6-layers	www.pcbinternational.com	<====	PCB --- 6 layers	FR4 fiberglass			71 x 71 x 2	500.00	5.00	2.00	~ 1.50 ~	~ 1.00 ~
		--- integrated circuits ---	CCD, CPU, LVDS, etc...											
1	U01	MT9P4011I25TC		aptina	2592x1944x12 CMOS CCD		48	iLCC	10 x 10 x 1	33.39	23.97	18.92	~ 25.00 ~	~ 20.00 ~
[ 1 ]	U02	C8051F120		silicon labs	100MHz 8051 CPU + i/o		100	OFF	17 x 17 x 1	24.30	16.88	? 14.00 ?	? 12.00 ?	? 10.00 ?
[ 1 ]	U03	65LVDS387		TI	16x LVDS transmitter	parallel i/o	64	TSSOP	17 x 09 x 1			6.25		
[ 1 ]	U13	65LVDI390	LVDT = LVDS+-termination	TI	4x LVDS receiver	serial i/o	16	TSSOP	07 x 05 x 2			1.85		
[ 1 ]	U14	65LVDS391		TI	4x LVDS transmitter	serial i/o	16	TSSOP	07 x 05 x 2			1.85		
		--- active discretes ---	crystals, speakers, etc											
[ 1 ]	X01	300-8218-1-ND 10ppm		abracon	25 MHz xtal - ABM3B	for CPU	4		05 x 04 x 1	1.93	1.24	~ 1.00 ~		
[ 1 ]	L01	SMT-0540-S-R	buy 10ppm version	pui audio	speaker / tone / beep maker	find alternative	2		06 x 05 x 2	3.51	2.34	~ 2.00 ~	~ 1.90 ~	~ 1.80 ~
		--- capacitors ---	aluminum, ceramic...											
---	C01 ~ C10	ECJ-2FF1A106Z	cheaper than 6.3v equiv	panasonic	10uF 10v ceramic cap	value	2	0805	02 x 01 x 1	0.51	0.160	0.064	0.042	~ 0.035 ~
[ 1 ]	C10	GRM21BR60J226ME39L	C2012XS0J226M	murata / TDK	22uF 6.3v ceramic cap	cost 2x vs 10uF	2	0805	02 x 01 x 1		0.290	0.114	0.062	~ 0.055 ~
[ 1 ]	C11	C3216Y5V1E106Z	to filter 7500mv power	TDK	10uF 25v ceramic cap	value	2	1206	03 x 02 x 1		0.150	~ 0.043 ~	~ 0.032 ~	~ 0.028 ~
28	C12 ~ C39	GRM188R60J105KA01D		murata	1uF 6.3v ceramic cap	value	2	0603	01 x 01 x 1		0.029	0.012	~ 0.006 ~	~ 0.005 ~
17	C40 ~ C56	ECJZE0J224M		panasonic	220nF 6.3v ceramic cap	0.220uF	2	0201	01 x 01 x 1	0.47	0.110	0.038	0.027	0.017
[ 2 ]	C57 ~ C58			panasonic	36pF ceramic capacitor	for 25MHz xtals	2	0603	01 x 01 x 1			0.01		
		--- resistors ---	bulk, metal film...											
8	R01 ~ R08	ERJ-2GEJ101X		panasonic	resistor 100 Ω		2	0402	01 x 01 x 1			0.02	0.005	0.003
1	R09	ERJ-2GEJ102X		panasonic	resistor 1000 Ω		2	0402	01 x 01 x 1			0.02	0.005	0.003
3	R10 ~ R12	ERJ-2GEJ472X		panasonic	resistor 4700 Ω		2	0402	01 x 01 x 1			0.02	0.005	0.003
4	R13 ~ R16	ERJ-2GEJ103X		panasonic	resistor 10000 Ω		2	0402	01 x 01 x 1			0.02	0.005	0.003
13	R17 ~ R29	ERJ-2GEJ104X		panasonic	resistor 100000 Ω		2	0402	01 x 01 x 1			0.02	0.005	0.003
	45 SMT parts	--- connectors ---	header, button, etc...											
4	H00 ~ H03	30340-6002HB	2 need 4 pins removed	3M	40-pin header	box shroud	40		20 x 09 x 10					
[ 4 ]	H00 ~ H03	SBH11-PBPC-D20-ST-BK	2 need 4 pins removed	sullins	40-pin header	box shroud	40	alternate	20 x 09 x 10					
[ 4 ]		AMP40-7241-T-R	on ice-eye ribbon cable	assmann	40-pin ribbon cable header	female - crimp	40							
0		AMP26-8241-T-R	on ice-eye ribbon cable	assmann	26-pin ribbon cable header	female - crimp	26							
[ 1 ]		AMP20-8241-T-R	ditto --- but optional	assmann	20-pin ribbon cable header	female - crimp	20							
[ 1 ]		AMP16-8241-T-R	ditto --- but optional	assmann	16-pin ribbon cable header	female - crimp	16							
[ 1 ]		AMP10-8241-T-R	ditto --- but optional	assmann	10-pin ribbon cable header	female - crimp	10							
1 / 50		2010/40 100	2 ribbon cables per ice-eye	3M	ribbon cable - off white	100 foot roll	40			100' ==>	118.74	~ 2.40 ~	<<== 2'	
2	U06 ~ U07	B3U1000P		omron	button	momentary	2		05 x 03 x 02			0.46		

NOTE: Many capacitors need not be stuffed unless the optional chips are installed, since the MT9P401 circuit does not consume any 3.3V power (only 1.8V and 2.8V).