

Count	Value	RefDes	Part description	Case	Mfg name	Mfg ref	Distributor	Distributor Ref	Unit price (eu)
BOM VERSION WITH AUTO TRACK MODE									
SMD PARTS									
4	NC	R45,R48 R49,R51	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS <i>NOTE : Mount R49/R51 for CH1 track or R45/R48 for CH2 track. When no track, don't mount them.</i>	805	Vishay	CRCW08050000Z0EA	Mouser	71-CRCW0805-0-E3	0,09 €
1	0	R20	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08050000Z0EA	Mouser	71-CRCW0805-0-E3	0,09 €
1	0	R44	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS (mounted for tracking mode enabled)	805	Vishay	CRCW08050000Z0EA	Mouser	71-CRCW0805-0-E3	0,09 €
1	4.7	R18	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08054R70FKEA	Mouser	71-CRCW0805-4.7-E3	0,09 €
1	243	R64	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805243RFKEA	Mouser	71-CRCW0805-243-E3	0,09 €
10	499	R19,R38 R55,R56 R57,R58 R59,R60 R61,R62	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805499RFKEA	Mouser	71-CRCW0805-499-E3	0,09 €
1	732	R65	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805732RFKEA	Mouser	71-CRCW0805732RFKEA	0,09 €
5	1k	R41,R42 R43,R53 R54	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08051K00JNEA	Mouser	71-CRCW0805J-1K-E3	0,09 €
6	2k	R72,R73 R74,R75 R76,R77	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08052K00JNEA	Mouser	71-CRCW08052K00JNEA	0,09 €
2	10k	R46,R47	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW080510K0JNEA	Mouser	71-CRCW0805J-10K-E3	0,09 €
1	NC	C17	Ceramic multilayers capacitor, X7R 20%,25V CMS case 0805	805	Vishay	VJ0805Y104MXXAC	Mouser	77-VJ0805Y104MXXAC	
1	NC	C18	Ceramic multilayers capacitor?, X5R dielectric, case 0603, 1uF/25V 10% (decoupling only)	603	Murata	GRM188R61E105KA12	Mouser	81-GRM188R61E105KA12	
3	NC	C45,C46 C47	Ceramic multilayers capacitor, NPO 5%, CMS case 0805	805	Vishay	VJ0805A102KXA	Mouser	77-VJ0805A102KXA	
4	100pF/25V	C7,C11 C26,C38	Ceramic multilayers capacitor, NPO 2%, 25V CMS case 0805	805	Vishay	VJ0805A101GXX	Mouser	77-VJ0805A101GXX	0,05 €
4	100nF/16V	C21,C22 C23,C24	Ceramic multilayers capacitor, X7R 5%, 16V CMS case 0603	603	Vishay	VJ0603Y104JXJ	Mouser	77-VJ0603Y104JXJ	0,05 €
8	100nF/25V	C3,C13 C15,C25 C27,C53 C55,C16	Ceramic multilayers capacitor, X7R 20%,25V CMS case 0805	805	Vishay	VJ0805Y104MXXAC	Mouser	77-VJ0805Y104MXXAC	0,05 €
6	1uF/25V	C5,C6 C30,C32 C40,C41	Ceramic multilayers capacitor, X7R 10%, CMS case 0805	805	TDK	GRM219R71E105KA88D	Mouser	81-GRM219R71E105KA88D	0,17 €
8	1uF/25V	C8,C9 C10,C19 C20,C34 C35,C36	Ceramic multilayers capacitor, X5R dielectric, case 0603, 1uF/25V 10% (decoupling only)	603	Murata	GCM188R71C105KA64D	Mouser	81-GCM188R71C105KA64D	0,28 €
3	4.7uF/16V	C49 C51,C54	Ceramic multilayers capacitor, 4.7uF 16V X7R, SMD, CMS size 1206	1206	Murata	GRM31CR61C475KA88L	Mouser	81-GRM31CR61C475KA88L	0,29 €
3	10uF/10V	C5,C37 C39	Ceramic multilayers capacitor, 10uF, X7R 20%,10V CMS case 0805	805	Murata	GRM21BR71A106MA73L	Mouser	81-GRM21BR71A106MA3L	0,19 €

1	22uF/10V	C29	Ceramic multilayers capacitor, 22uF/10V X7R 20%,25V CMS case 0805	BomV2_Track	805	Murata	GRM21BZ71A226ME15L	Mouser	81GRM21BZ71A226ME5L	0,46 €
4	47uF6.3V	C14,C28 C33,C44	Condensateur alu CMS/SMD, D5mm, H 6.2mm, base 5.3x5.3mm, 47uF 6.3V		5.3x5.3_D5 h6.2mm	Wurth	865230142003,00	Mouser	710-865230142003	0,18 €
2	47uF/20V POLY	C12,C31	Aluminium polymer capacitor , 2000h@ 105dC, 47uF20V, lac=2670mA, ESR=25mR, SMD, CMS		C_D6X6E2.5MM_DUALIMP	WE	875105445006,00	Mouser	710-875105445006	0,63 €
1	NC	L1	SMD chip beads, 0805 case, -40+125dC, I _{max} 300mA, R _{dc} =0.7 Ohms max, CMS		805	Faire-Rite	2508051527Y0	Mouser	81-2508051527Y0	
6	1k5@100MHz	L3,L4 L5,L6 L7,L8	SMD chip beads, 0805 case, -40+125dC, I _{max} 300mA, R _{dc} =0.7 Ohms max, CMS		805	Faire-Rite	2508051527Y0	Mouser	81-2508051527Y0	0,09 €
1	NC	OSC1	quartz oscillator, 4MHz, HCMOS, V _{cc} = 3.3V, 50ppm/dC, SMD,CMS, case 5x7mm		OSC_SMD_5X7MM	Fox	FXO-HC735-4,00000	Mouser	XPO-HC735-4,00000	
1	MBR0540	D1	Schottky diode, I _f = 0.5A, V _{rrm} = 40V, V _f =0.5V _{max} @1A , CMS		SOD123	Vishay	MBR0540	Mouser	833-MBR0540-TP	0,33 €
1	BAT54S	D20	Dual shottky diode in serie, BAT54S, I _f =200mA, V _{fmax} 0.4V, V _{rrm} 30V, SOT23-3 ,SMD CMS		SOT23_3L	STM	BAT54S	Mouser	78-BAT54S-G3-08	0,07 €
2	RED/GREEN	D17,D18	3mm cylindrical bicolor LED, colors Bright red, V _f =2V@20mA(30mcd) and Bright green V _f =2.2V@20mA(3mcd)		LED3MM	Kingbright	WP115EGW	Mouser	604-WP115VEGW	0,205
1	SM6T15A	D19	Unidirectional Transil protection diode (A),V _r =15V@ 1mA V _{cl} =21V@28A , I _{fsm} 100A, P _{pp} =600W, P=4kW(8/20us		DO214AA-SMB	ST	SM6T36A	Mouser	511-SM6T15A	0,40 €
4	SI2301CDS	T17,T18 T19,T20	P channel MOSFET, Ron=110mohm, V _{dsm} = -25V I _d = -3A V _{gsth} = -0.4/-1V ,SOT23-3 case, SMD, CMS		SOT23_3L	Vishay	SI2301CDS	Mouser	781-SI2301CDS-E3	0,14 €
1	5M570ZT100C5N	U2	Programmable logic array, ALTERA MAX V serie, F _{max} =304MHz, 570 logics elements, 100 pins (74 I/O) TQFP,		TQFP100_0.5mm	Altera	5M570ZT100C5N	Mouser	989-5M570ZT100C5N	6,38 €
1	AD8310ARMZ	U1	95dB DC to 440MHz low cost logarithmic amplifier, V _{cc} =2.7..5.5V, MSOP8, CMS		MSOP8	AD	AD8310ARMZ	Mouser	584-AD8310ARMZ	8,35 €
2	C74ACT540DTR2G	U3,U5	8 bits inverting buffer , 3 states outputs, TTL /ACT compatible, +/-24mA fanout , V _{cc} +2..+6V, SMD, CMS		TSSOP_20_L	ON	C74ACT540DTR2G	Mouser	863-MC74ACT540DTR2G	0,55 €
1	LM317MDCY	U7	Positive low power linear voltage regulator, adustable V _{out} , I _{outmax} 500mA, V _{out} =1,25-37V, V _{in} =40V _{max} , CMS,		SOT223	TI	LM317MDCY	Mouser	595-LM317MDCY	0,83 €
1	MCP3202-CI/SN	U6	Dual channels 12bits SAR ADC 2.7-5.5V 100ksp,Ref V _{cc} low poser, SPI,SMD, CMS		SOIC8_N	Microchip	MCP3202-CI/SN	Mouser	579-MCP3202-CI/SN	2,41 €
1	TLV71318PDBV	U9	LDO linear voltage regulator 150mA, V _{in} 5.5V _{max} , V _o =1.8V, SMD SOT23-5, CMS		SOT23-5	TI	TLV71318PDBV	Mouser	595-TLV71318PDBVR	0,35 €
1	TLV71333PDBV	U12	LDO linear voltage regulator 150mA, V _{in} 5.5V _{max} , V _o =3.3v, SMD SOT23-5, CMS		SOT23-5	TI	TLV71333PDBVR	Mouser	595-TLV71333PDBVR	0,35 €
2	ULN2803ADW	U10,U11	Octal darlington array (relay driver) 50V 500mA TTL/CMOS input with clamp diode, SMD, CMS		SOIC18	TI	ULN2803ADW	Mouser	595-ULN2803ADWRG4	1,20 €
1	THS4531ID	U8	Ultral low power RRIO FDA (fully differential amplifier Vs 2.5/5.5V _{max} , Offset 1000uV, I _{bias} =200nA SR= 200V/us		SOIC8_N	TI	THS4531ID	Mouser	595-THS4531IDGKR	2,30 €
16	TQ2-SS-12V	K1,K2 K3,K4 K5,K6 K7,K8 K9,K10 K11,K12 K13,K14 K15,K16	Subminiature Relay, 12V coil 140mW , 2RT (polarised) , 1A/30Vdc - 0.5A/125Vac, coil 1028R, contact 50mR		RELAY_TQ_SSTYPE	Panasonic	TQ2-SS-12V	Mouser	769-TQ2SS-12V	2,93 €
-	-	-	THRU HOLES PARTS		-	-	-	-	-	-
2	0.39	R17,R37	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series		RES_AXIAL	Vishay	MFR-25FTF52-0R39	Mouser	603-MFR-25FTE52-0R39	0,39 €
2	3.9	R39,R40	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series		RES_AXIAL	Vishay	MFR-25FTE52-3R9	Mouser	603-MFR-25FTE52-3R9	0,20 €
2	15.4	R16,R36	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series		RES_AXIAL	Vishay	RN55C15R4FB14	Mouser	71-RN55C-F-15.4	0,14 €
2	33.2	R1,R21	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series		RES_AXIAL	Vishay	RN55D33R2FB14	Mouser	71-RN55D-F-33.2	0,10 €
2	64.9	R2,R22	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series		RES_AXIAL	Vishay	RN55D64R9FB14	Mouser	71-RN55D-F-64.9	0,09 €
2	113	R15,R35	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series		RES_AXIAL	Vishay	RN55D1130FB14	Mouser	71-RN55D-F-113	0,29 €
2	124	R3,R23	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series		RES_AXIAL	Vishay	RN55D1240FB14	Mouser	71-RN55D-F-124	0,10 €

BomV2_Track										
2	221	R4,R24	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2210FRE6	Mouser	71-RN55D2210F/R	0,10 €	
2	365	R5,R25	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3650FB14	Mouser	71-RN55D3650F	0,32 €	
2	392	R14,R34	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3920FB14	Mouser	71-RN55D-F-392	0,09 €	
2	511	R6,R26	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5110FB14	Mouser	71-RN55D-F-511	0,09 €	
2	590	R7,R27	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5900FB14	Mouser	71-RN55D-F-590	1,30 €	
4	604	R8,R9 R28,R29	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D6040FB14	Mouser	71-RN55D6040F	0,09 €	
2	1.02k	R13,R33	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1021FB14	Mouser	71-RN55D-F-1.02K	0,09 €	
2	2.32k	R12,R32	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2321FB14	Mouser	71-RN55D-F-2.32K	0,09 €	
2	4.87k	R11,R31	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D4871FRE6	Mouser	71-RN55D4871F/R	0,09 €	
2	10.2k	R10,R30	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1022FRE6	Mouser	71-RN55D1022F/R	0,09 €	
2	10k	P1,P2	Trimming potentiometer, 25 turns 10% 0.75W100ppm/dC, low profile PCB mount vertical adjustment	3296W	Vishay	652-3296W-1-103LF	Mouser	3296W-1-103LF	2,05 €	
1	EN11-VSM1AF20	S1	Rotary encoder with push button, 20 detents 20 PPR, right angle PCB mount, 5mm threaded bushing, 20mm flat shaft, 6mm axis, low cost		BI Technologies	EN11-VSM1AF20	Mouser	858-EN11-VSM1AF20	0,96 €	
1	ON-ON (MOM)	S2	Toggle switch, single pole, 2A 250VAC, 5A120Vac-28VDC, right angle PCB mount.low cost.		Mountainwitch	1MS1T2B4M7QE-EVX	Mouser	108-1MS1T2B4M7QE-EVX	3,06 €	
4	BNC_50R_FEM_RA	X1,X2 X3,X4	BNC connector, female, right angle PCB mounting, 50 Ohms, low cost	BNC_COUDE_BLD1	Molex	SD73137-5006	Mouser	538-73137-5003	2,03 €	
4	H2x5	X18,X19 X20,X21	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546		
1	HE10 10 br MD	X5	HE10 10 2x10 pins straight male PCB connector, 2,54mm pitch <i>Note : Can be replaced by any 2,54mm pitch 2x5 straight male header (for CPLD programming purpose only)</i>	HE10_10_D_01	Harting	09 18 510 6324	Mouser	617-09185106324	1,24 €	
1	JACK_RAPC712	X8	Right angle PCB mount female miniature JACK connector with switch, 5A, Di 2.5mm, De .4mm, Rct 0.030R	JACK_RAPC712	Switchcraft	RAPC712	Mouser	502-RAPC712X	0,93 €	
2	H2x5	X9,X10	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546		
1	H2x5	X6	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546	0,31 €	
1			2,54mm jumper for pin header		Harwin	M7686-46	Mouser	855-M7686-46	0,29 €	
1	LTC-4627JR	AF1	4 digits multiplexed red leds display, 10mm digit height, 12.8x40.2 mm common anodes.		LITEON	LTC-4627JR	Mouser	859-LTC-4627JR	1,92 €	
2	V14MLA0805N	V1,V2	Metal oxyde varistor (MOV), Vm 14Vdc / 10Vac, C=360pF@1MHz, 300mJ, 32V@1A, SMD, CMS	805	Littlefuse	V14MLA0805N	Mouser	576-V14MLA0805NH	0,55 €	
1			Knobs & Dials BLK 15mm D-SHAFT		Eagle Plastic Device	450-AA150	Mouser	450-AA150	0,84 €	
1			Knobs & Dials RED CAP 9mm		Eagle Plastic Device	450-CP151	Mouser	450-CP151	0,56 €	
1	1455L1601		Hammond 1455 series aluminium extruded enclosure, for 100x160mm PCB, 30mm height, natural color		Hammond	1455L1601	Mouser	546-1455L1601	21,68 €	
184								TOTAL	136,51 €	

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BOM VERSION WITHOUT TRACK MODE									
SMD PARTS									
1	243	R64	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805243RFKEA	Mouser	71-CRCW0805-243-E3	0,09 €
8	499	R55,R56 R57,R58 R59,R60 R61,R62	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805499RFKEA	Mouser	71-CRCW0805-499-E3	0,09 €
1	732	R65	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805732RFKEA	Mouser	71-CRCW0805732RFKEA	0,09 €
5	1k	R41,R42 R43,R53 R54	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08051K00JNEA	Mouser	71-CRCW0805J-1K-E3	0,09 €
2	10k	R46,R47	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW080510K0JNEA	Mouser	71-CRCW0805J-10K-E3	0,09 €
1	NC	C17	Ceramic multilayers capacitor, X7R 20%,25V CMS case 0805	805	Vishay	VJ0805Y104MXXAC	Mouser	77-VJ0805Y104MXXAC	
1	NC	C18	Ceramic multilayers capacitor?, X5R dielectric, case 0603, 1uF/25V 10% (decoupling only)	603	Murata	GRM188R61E105KA12	Mouser	81-GRM188R61E105KA12	
3	NC	C45,C46 C47	Ceramic multilayers capacitor, NPO 5%, CMS case 0805	805	Vishay	VJ0805A102KXA	Mouser	77-VJ0805A102KXA	
4	100nF/16V	C21,C22 C23,C24	Ceramic multilayers capacitor, X7R 5%, 16V CMS case 0603	603	Vishay	VJ0603Y104JXJ	Mouser	77-VJ0603Y104JXJ	0,05 €
6	100nF/25V	C55,C13 C15,C25 C27,C53	Ceramic multilayers capacitor, X7R 20%,25V CMS case 0805	805	Vishay	VJ0805Y104MXXAC	Mouser	77-VJ0805Y104MXXAC	0,05 €
5	1uF/25V	C5 C30,C32 C40,C41	Ceramic multilayers capacitor, X7R 10%, CMS case 0805	805	TDK	GRM219R71E105KA88D	Mouser	81-GRM219R71E105KA8D	0,17 €
6	1uF/25V	C8,C9 C10,C34 C35,C36	Ceramic multilayers capacitor, X5R dielectric, case 0603, 1uF/25V 10% (decoupling only)	603	Murata	GCM188R71C105KA64D	Mouser	81-GCM188R71C105KA64D	0,28 €
1	4.7uF/16V	C54	Ceramic multilayers capacitor, 4.7uF 16V X7R, SMD, CMS size 1206	1206	Murata	GRM31CR61C475KA88L	Mouser	81-GRM31CR61C475KA8L	0,29 €
4	47uF6.3V	C14,C28 C33,C44	Condensateur alu CMS/SMD, D5mm, H 6.2mm, base 5.3x5.3mm, 47uF 6.3V	5.3x5.3_D5 h6.2mm	Wurth	865230142003,00	Mouser	710-865230142003	0,18 €
2	47uF/20V POLY	C12,C31	Aluminium polymer capacitor , 2000h@ 105dC, 47uF20V, lac=2670mA, ESR=25mR, SMD, CMS	C_D6X6E2.5MM_DUALIMP	WE	875105445006,00	Mouser	710-875105445006	0,63 €
1	NC	L1	SMD chip beads, 0805 case, -40+125dC, I _{max} 300mA, R _{dc} =0.7 Ohms max, CMS	805	Faire-Rite	2508051527Y0	Mouser	81-2508051527Y0	
4	1k5@100MHz	L5,L6 L7,L8	SMD chip beads, 0805 case, -40+125dC, I _{max} 300mA, R _{dc} =0.7 Ohms max, CMS	805	Faire-Rite	2508051527Y0	Mouser	81-2508051527Y0	0,09 €
1	NC	OSC1	quartz oscillator, 4MHz, HCMOS, V _{cc} = 3.3V, 50ppm/dC, SMD,CMS, case 5x7mm	OSC_SMD_5X7MM	Fox	FXO-HC735-4.00000	Mouser	XPO-HC735-4.00000	
1	MBR0540	D1	Schottky diode, I _f = 0.5A, V _{rrm} = 40V, V _f =0.5V _{max} @1A , CMS	SOD123	Vishay	MBR0540	Mouser	833-MBR0540-TP	0,33 €
1	BAT54S	D20	Dual shottky diode in serie, BAT54S, I _f =200mA, V _{fmax} 0.4V, V _{rrm} 30V, SOT23-3 ,SMD CMS	SOT23_3L	STM	BAT54S	Mouser	78-BAT54S-G3-08	0,07 €
2	RED/GREEN	D17,D18	3mm cylindrical bicolor LED, colors Bright red, V _f =2V@20mA(30mcd) and Bright green V _f =2.2V@20mA(3mcd)	LED3MM	Kingbright	WP115EGW	Mouser	604-WP115VEGW	0,205
1	SM6T15A	D19	Unidirectional Transil protection diode (A),V _f =15V@ 1mA V _{cl} =21V@28A , I _{fsm} 100A, P _{pp} =600W, P=4kW@20µs	DO214AA-SMB	ST	SM6T36A	Mouser	511-SM6T15A	0,40 €

BomV2_notrack										
4	SI2301CDS	T17,T18 T19,T20	P channel MOSFET, Ron=110mohm, Vdsmax = -25V Id= -3A Vgsth = -0.4/-1V ,SOT23-3 case, SMD, CMS	SOT23_3L	Vishay	SI2301CDS	Mouser	781-SI2301CDS-E3	0,14 €	
1	5M570ZT100C5N	U2	Programmable logic array, ALTERA MAX V serie, Fmax=304MHz, 570 logics elements, 100 pins (74 I/O) TQFP,	TQFP100_0.5mm	Altera	5M570ZT100C5N	Mouser	989-5M570ZT100C5N	6,38 €	
2	C74ACT540DTR2G	U3,U5	8 bits inverting buffer , 3 states outputs, TTL /ACT compatible, +/-24mA fanout , Vcc +2..+6V, SMD, CMS	TSSOP_20_L	ON	C74ACT540DTR2G	Mouser	863-MC74ACT540DTR2G	0,55 €	
1	LM317MDCY	U7	Positive low power linear voltage regulator, adustable Vout, loutmax 500mA, Vout=1,25-37V, Vin=40Vmax, CMS,	SOT223	TI	LM317MDCY	Mouser	595-LM317MDCY	0,83 €	
1	TLV71318PDBV	U9	LDO linear voltage regulator 150mA, Vin 5.5Vmax, Vo=1.8V, SMD SOT23-5, CMS	SOT23-5	TI	TLV71318PDBV	Mouser	595-TLV71318PDBVR	0,35 €	
1	TLV71333PDBV	U12	LDO linear voltage regulator 150mA, Vin 5.5Vmax, Vo=3.3v, SMD SOT23-5, CMS	SOT23-5	TI	TLV71333PDBVR	Mouser	595-TLV71333PDBVR	0,35 €	
2	ULN2803ADW	U10,U11	Octal darlington array (relay driver) 50V 500mA TTL/CMOS input with clamp diode, SMD, CMS	SOIC18	TI	ULN2803ADW	Mouser	595-ULN2803ADWRG4	1,20 €	
16	TQ2-SS-12V	K1,K2 K3,K4 K5,K6 K7,K8 K9,K10 K11,K12 K13,K14 K15,K16	Subminiature Relay, 12V coil 140mW , 2RT (polarised), 1A/30Vdc - 0.5A/125Vac, coil 1028R, contact 50mR	RELAY_TQ_SSTYPE	Panasonic	TQ2-SS-12V	Mouser	769-TQ2SS-12V	2,93 €	
THRU HOLES PARTS										
2	0.39	R17,R37	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series	RES_AXIAL	Vishay	MFR-25FTF52-0R39	Mouser	603-MFR-25FTE52-0R39	0,39 €	
2	3,9	R39,R40	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series	RES_AXIAL	Vishay	MFR-25FTE52-3R9	Mouser	603-MFR-25FTE52-3R9	0,20 €	
2	15.4	R16,R36	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55C15R4FB14	Mouser	71-RN55C-F-15.4	0,14 €	
2	33.2	R1,R21	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D33R2FB14	Mouser	71-RN55D-F-33.2	0,10 €	
2	64.9	R2,R22	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D64R9FB14	Mouser	71-RN55D-F-64.9	0,09 €	
2	113	R15,R35	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1130FB14	Mouser	71-RN55D-F-113	0,29 €	
2	124	R3,R23	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1240FB14	Mouser	71-RN55D-F-124	0,10 €	
2	221	R4,R24	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2210FRE6	Mouser	71-RN55D2210F/R	0,10 €	
2	365	R5,R25	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3650FB14	Mouser	71-RN55D3650F	0,32 €	
2	392	R14,R34	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3920FB14	Mouser	71-RN55D-F-392	0,09 €	
2	511	R6,R26	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5110FB14	Mouser	71-RN55D-F-511	0,09 €	
2	590	R7,R27	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5900FB14	Mouser	71-RN55D-F-590	1,30 €	
4	604	R8,R9 R28,R29	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D6040FB14	Mouser	71-RN55D6040F	0,09 €	
2	1.02k	R13,R33	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1021FB14	Mouser	71-RN55D-F-1.02K	0,09 €	
2	2.32k	R12,R32	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2321FB14	Mouser	71-RN55D-F-2.32K	0,09 €	
2	4.87k	R11,R31	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D4871FRE6	Mouser	71-RN55D4871F/R	0,09 €	
2	10.2K	R10,R30	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1022FRE6	Mouser	71-RN55D1022F/R	0,09 €	
1	EN11-VSM1AF20	S1	Rotary encoder with push button, 20 detents 20 PPR, right angle PCB mount, 5mm threaded bushing, 20mm flat shaft, 6mm axis, low cost		BI Technologies	EN11-VSM1AF20	Mouser	858-EN11-VSM1AF20	0,96 €	
1	ON-ON (MOM)	S2	Toggle switch, single pole, 2A 250VAC, 5A120Vac-28VDC, right angle PCB mount.low cost.		Mountainwitch	1MS1T2B4M7QE-EVX	Mouser	108-1MS1T2B4M7QE-EVX	3,06 €	
4	BNC_50R_FEM_RA	X1,X2	BNC connector, female, right angle PCB mounting, 50 Ohms, low cost	BNC_COUDE_BLD1	Molex	SD73137-5006	Mouser	538-73137-5003	2,03 €	

BomV2_notrack									
4	H2x5	X18,X19 X20,X21	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546	
1	HE10 10 br MD	X5	HE10 10 2x10 pins straight male PCB connector, 2,54mm pitch <i>Note : Can be replaced by any 2,54mm pitch 2x5 straight male header (for CPLD programming purpose only)</i>	HE10_10_D_01	Harting	09 18 510 6324	Mouser	617-09185106324	1,24 €
1	JACK_RAPC712	X8	Right angle PCB mount female miniature JACK connector with switch, 5A, Di 2.5mm, De .4mm, Rct 0.030R	JACK_RAPC712	Switchcraft	RAPC712	Mouser	502-RAPC712X	0,93 €
2	H2x5	X9,X10	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546	
1	H2x5	X6	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546	0,31 €
1	LTC-4627JR	AF1	4 digits multiplexed red leds display, 10mm digit height, 12.8x40.2 mm common anodes.		LITEON	LTC-4627JR	Mouser	859-LTC-4627JR	1,92 €
2	V14MLA0805N	V1,V2	Metal oxyde varistor (MOV), Vm 14Vdc / 10Vac, C=360pF@1MHz, 300mJ, 32V@1A, SMD, CMS	805	Littlefuse	V14MLA0805N	Mouser	576-V14MLA0805NH	0,55 €
1			Knobs & Dials BLK 15mm D-SHAFT		Eagle Plastic Device	450-AA150	Mouser	450-AA150	0,84 €
1			Knobs & Dials RED CAP 9mm		Eagle Plastic Device	450-CP151	Mouser	450-CP151	0,56 €
1	1455L1601		Hammond 1455 series aluminium extruded enclosure, for 100x160mm PCB, 30mm height, natural color		Hammond	1455L1601	Mouser	546-1455L1601	21,68 €
146								TOTAL	114,95 €

AT2380V2 NO TRACK

Count	Value	Part description	Case	Mfg name	Mfg ref	Distributor	Distributor Ref	Unit price (eu)
1	243	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805243RFKEA	Mouser	71-CRCW0805-243-E3	0,09 €
8	499	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805499RFKEA	Mouser	71-CRCW0805-499-E3	0,09 €
1	732	SMD resistor, case 0805, 1, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW0805732RFKEA	Mouser	71-CRCW0805732RFKEA	0,09 €
5	1k	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW08051K00JNEA	Mouser	71-CRCW0805J-1K-E3	0,09 €
2	10k	SMD resistor, case 0805, 1%, 100ppm, 125mW, 150V , CMS	805	Vishay	CRCW080510K0JNEA	Mouser	71-CRCW0805J-10K-E3	0,09 €
4	100nF/16V	Ceramic multilayers capacitor, X7R 5%, 16V CMS case 0603	603	Vishay	VJ0603Y104JXJ	Mouser	77-VJ0603Y104JXJ	0,05 €
6	100nF/25V	Ceramic multilayers capacitor, X7R 20%,25V CMS case 0805	805	Vishay	VJ0805Y104MXXAC	Mouser	77-VJ0805Y104MXXAC	0,05 €
5	1uF/25V	Ceramic multilayers capacitor, X7R 10%, CMS case 0805	805	TDK	GRM219R71E105KA88D	Mouser	81-GRM219R71E105KA8D	0,17 €
6	1uF/25V	Ceramic multilayers capacitor, X5R dielectric, case 0603, 1uF/25V 10% (decoupling only)	603	Murata	GCM188R71C105KA64D	Mouser	81-GCM188R71C105KA64D	0,28 €
1	4.7uF/16V	Ceramic multilayers capacitor, 4.7uF 16V X7R, SMD, CMS size 1206	1206	Murata	GRM31CR61C475KA88L	Mouser	81-GRM31CR61C475KA8L	0,29 €
4	47uF6.3V	Condensateur alu CMS/SMD, D5mm, H 6.2mm, base 5.3x5.3mm, 47uF 6.3V	5.3x5.3_D5 h6.2mm	Wurth	865230142003,00	Mouser	710-865230142003	0,18 €
2	47uF/20V POLY	Aluminium polymer capacitor , 2000h@ 105dC, 47uF20V, Iac=2670mA, ESR=25mR, SMD, CMS	_D6XE2.5MM_DUALIMI	WE	875105445006,00	Mouser	710-875105445006	0,63 €
4	1k5@100MHz	SMD chip beads, 0805 case, -40+125dC, Imax 300mA, Rdc=0.7 Ohms max, CMS	805	Faire-Rite	2508051527Y0	Mouser	81-2508051527Y0	0,09 €
1	MBR0540	Schottky diode, If = 0.5A, Vrrm = 40V, Vf=0.5Vmax@1A , CMS	SOD123	Vishay	MBR0540	Mouser	833-MBR0540-TP	0,33 €
1	BAT54S	Dual shottky diode in serie, BAT54S, If=200mA, Vfmax 0.4V, Vrrm 30V, SOT23-3 ,SMD CMS	SOT23_3L	STM	BAT54S	Mouser	78-BAT54S-G3-08	0,07 €
2	RED/GREEN	3mm cylindrical bicolor LED, colors Bright red, Vf=2V@20mA(30mcd) and Bright green Vf=2.2V@2C	LED3MM	Kingbright	WP115EGW	Mouser	604-WP115VEGW	0.205
1	SM6T15A	Unidirectional Transil protection diode (A),Vr=15V@ 1mA Vcl=21V@28A , Ifsm 100A, Ppp=600W, P-	DO214AA-SMB	ST	SM6T36A	Mouser	511-SM6T15A	0,40 €
4	SI2301CDS	P channel MOSFET, Ron=110mohm, Vdsmax = -25V Id= -3A Vgsth = -0.4/-1V ,SOT23-3 case, SMD	SOT23_3L	Vishay	SI2301CDS	Mouser	781-SI2301CDS-E3	0,14 €
1	5M570ZT100C5N	Programmable logic array, ALTERA MAX V serie, Fmax=304MHz, 570 logics elements, 100 pins (72	TQFP100_0.5mm	Altera	5M570ZT100C5N	Mouser	989-5M570ZT100C5N	6,38 €
2	C74ACT540DTR2G	8 bits inverting buffer , 3 states outputs, TTL /ACT compatible, +/-24mA fanout , Vcc +2..+6V, SMD, C	TSSOP_20_L	ON	C74ACT540DTR2G	Mouser	863-MC74ACT540DTR2G	0,55 €
1	LM317MDCY	Positive low power linear voltage regulator, adustable Vout, Ioutmax 500mA, Vout=1,25-37V, Vin=40'	SOT223	TI	LM317MDCY	Mouser	595-LM317MDCY	0,83 €
1	TLV71318PDBV	LDO linear voltage regulator 150mA, Vin 5.5Vmax, Vo=1.8V, SMD SOT23-5, CMS	SOT23-5	TI	TLV71318PDBV	Mouser	595-TLV71318PDBVR	0,35 €
1	TLV71333PDBV	LDO linear voltage regulator 150mA, Vin 5.5Vmax, Vo=3.3v, SMD SOT23-5, CMS	SOT23-5	TI	TLV71333PDBVR	Mouser	595-TLV71333PDBVR	0,35 €
2	ULN2803ADW	Octal darlington array (relay driver) 50V 500mA TTL/CMOS input with clamp diode, SMD, CMS	SOIC18	TI	ULN2803ADW	Mouser	595-ULN2803ADWRG4	1,20 €
16	TQ2-SS-12V	Subminiature Relay, 12V coil 140mW , 2RT (polarised), 1A/30Vdc - 0.5A/125Vac, coil 1028R, contac	RELAY_TQ_SSTYPE	Panasonic	TQ2-SS-12V	Mouser	769-TQ2SS-12V	2,93 €
2	0.39	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series	RES_AXIAL	Vishay	MFR-25FTF52-0R39	Mouser	603-MFR-25FTE52-0R39	0,39 €
2	3.9	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, MFR series	RES_AXIAL	Vishay	MFR-25FTE52-3R9	Mouser	603-MFR-25FTE52-3R9	0,20 €
2	15.4	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55C15R4FB14	Mouser	71-RN55C-F-15.4	0,14 €
2	33.2	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D33R2FB14	Mouser	71-RN55D-F-33.2	0,10 €
2	64.9	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D64R9FB14	Mouser	71-RN55D-F-64.9	0,09 €
2	113	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1130FB14	Mouser	71-RN55D-F-113	0,29 €
2	124	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1240FB14	Mouser	71-RN55D-F-124	0,10 €
2	221	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2210FRE6	Mouser	71-RN55D2210F/R	0,10 €
2	365	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3650FB14	Mouser	71-RN55D3650F	0,32 €
2	392	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D3920FB14	Mouser	71-RN55D-F-392	0,09 €
2	511	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5110FB14	Mouser	71-RN55D-F-511	0,09 €
2	590	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D5900FB14	Mouser	71-RN55D-F-590	1,30 €
4	604	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D6040FB14	Mouser	71-RN55D6040F	0,09 €
2	1.02k	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1021FB14	Mouser	71-RN55D-F-1.02K	0,09 €
2	2.32k	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D2321FB14	Mouser	71-RN55D-F-2.32K	0,09 €
2	4.87k	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D4871FRE6	Mouser	71-RN55D4871F/R	0,09 €
2	10.2k	Metal Film Resistors -Through Hole 1/8watt 1% 100ppm, RN55 series	RES_AXIAL	Vishay	RN55D1022FRE6	Mouser	71-RN55D1022F/R	0,09 €
1	EN11-VSM1AF20	Rotary encoder with push button, 20 detents 20 PPR, right angle PCB mount, 5mm threaded bushing, 20mm flat shaft, 6mm axBI Technologies	EN11-VSM1AF20	Mountainwitch	EN11-VSM1AF20	Mouser	858-EN11-VSM1AF20	0,96 €
1	ON-ON (MOM)	Toggle switch, single pole, 2A 250VAC, 5A120Vac-28VDC, right angle PCB mount.low cost.	1MS1T2B4M7QE-EVX	Mountainwitch	1MS1T2B4M7QE-EVX	Mouser	108-1MS1T2B4M7QE-EVX	3,06 €
4	BNC_50R_FEM_RA	BNC connector, female, right angle PCB mounting, 50 Ohms, low cost	BNC_COUDE_BLD1	Molex	SD73137-5006	Mouser	538-73137-5003	2,03 €
1	HE10 10 br MD	HE10 10 2x10 pins straight male PCB connector, 2.54mm pitch	HE10_10_D_01	Harting	09 18 510 6324	Mouser	617-09185106324	1,24 €
1	JACK_RAPC712	Right angle PCB mount female miniature JACK connector with switch, 5A, Di 2.5mm, De .4mm, Rct C	JACK_RAPC712	Switchcraft	RAPC712	Mouser	502-RAPC712X	0,93 €
1	H2x5	2.54mm pitch vertical PC tail socket assembly, 2x5 pins, Tin plated	BARETTE_2X05D_P2.54	Harwin	M20-9760546	Mouser	855-M20-9760546	0,31 €
1	LTC-4627JR	4 digits multiplexed red leds display, 10mm digit height, 12.8x40.2 mm common anodes.	LITEON	LITEON	LTC-4627JR	Mouser	859-LTC-4627JR	1,92 €
2	V14MLA0805N	Metal oxide varistor (MOV), Vm 14Vdc / 10Vac, C=360pF@1MHz, 300mJ, 32V@1A, SMD, CMS	805	Littlefuse	V14MLA0805N	Mouser	576-V14MLA0805NH	0,55 €
1		Knobs & Dials BLK 15mm D-SHAFT		Eagle Plastic Devic	450-AA150	Mouser	450-AA150	0,84 €
1		Knobs & Dials RED CAP 9mm		Eagle Plastic Devic	450-CP151	Mouser	450-CP151	0,56 €
1	1455L1601	Hammond 1455 series aluminium extruded enclosure, for 100x160mm PCB, 30mm height, natural color		Hammond	1455L1601	Mouser	546-1455L1601	21,68 €

TOTAL 114,95 €