



Bill of Materials

PCB Name: Hero Board
PCB Number: P0012
PCB Revision: A
BOM Number: P0012
BOM Revision: A
Variant: standard version
Date: 2017-09-22
Engineer: Pieter Conradie
Template revision: 02

130

#	Part ID	Quantity	Fitted	Group	Designator	Description	Footprint ID	Value	Manufacturer1	Manufacturer1 PN
1	CAP00001	25	Fitted	Electronic	C1, C4, C5, C8, C9, C11, C12, C13, C14, C15, C19, C20, C21, C22, C23, C24, C31, C32, C33, C35, C37, C41, C42, C43, C44	Capacitor 0603 100n 10% X7R 16V	0603	100n	Kemet	C0603C104K4RAC
2	CAP00014	2	Fitted	Electronic	C2, C3	Capacitor 0603 18p 5% COG 50V	0603	18p	Samsung	CL10C180JB8NNNC
3	CAP00008	4	Fitted	Electronic	C6, C26, C27, C45	Capacitor 0805 4u7 10% X5R 16V	0805	4u7	Murata	GRM21BR61C475KA88L
4	CAP00003	4	Fitted	Electronic	C7, C28, C30, C38	Capacitor 0603 10n 10% X7R 50V	0603	10n	Kemet	C0603C103K5RAC
5	CAP00002	5	Fitted	Electronic	C10, C16, C17, C18, C36	Capacitor 0603 1u 10% X5R 16V	0603	1u	Kemet	C0603C105K4PAC
6	CAP00006	3	Fitted	Electronic	C25, C29, C34	Capacitor 0805 10u 10% X5R 16V	0805	10u	Kemet	C0805C106K4PACTU
7	CAP00004	2	Fitted	Electronic	C39, C40	Capacitor 0603 47p 5% COG 50V	0603	47p	Kemet	C0603C470J5GAC
8	OPT00018	2	Fitted	Electronic	D1, D9	LED,SMD,0603,Green,6mcd,130deg	0603	LTST-C190GKT	LITE-ON	LTST-C190GKT
9	OPT00002	3	Fitted	Electronic	D2, D3, D7	LED,SMD,0603,Red,3mcd,130deg	0603	LTST-C190EKT	LITE-ON	LTST-C190EKT
10	DIO00002	1	Fitted	Electronic	D4	Diode Schottky Dual Common Anode-Cathode SOT23 BAS40-04 0.12A 40V	SOT23	BAS40-04	NXP	BAS40-04
11	DIO00007	2	Fitted	Electronic	D5, D8	Diode Schottky Dual Common Cathode SOT23 BAS40-05 0.12A 40V	SOT23	BAS40-05	NXP	BAS40-05
12	DIO00001	1	Fitted	Electronic	D6	Diode Schottky SMA B140-13-F 1A 40V	SMA	B140-13-F	Diodes Inc.	B140-13-F
13	OPT00001	1	Fitted	Electronic	DS1	128x64 Monochrome LCD	SMD	TSE2G0330-E	Truly	TSE2G0330-E
14	IND00001	4	Fitted	Electronic	FB1, FB3, FB4, FB5	Ferrite Bead 0603 BLM18BB151SN1D 20% 0.5A 150R	0603	BLM18BB151SN1D	Murata	BLM18BB151SN1D
15	CON00007	1	Fitted	Electronic	H1	Header, 1x2, Vertical, 2.54mm pitch	Leaded	210-71-02GB01	Pinrex	210-71-02GB01
16	CON00011	1	Fitted	Electronic	H3	Connector, 1x3, Leaded Vertical, 2mm pitch, Wire to board connector	Leaded	53253-0370	Molex	53253-0370
17	CON00033	2	Fitted	Electronic	H15, H18	Header, 1x3, Leaded, 2.54mm pitch, Vertical	Leaded	210-71-03GB01	Pinrex	210-71-03GB01
18	CON00012	1	Fitted	Electronic	H16	Header, 1x5, Leaded, 2.54mm pitch, Vertical	Leaded	210-71-05GB01	Pinrex	210-71-05GB01
19	CON00003	1	Fitted	Electronic	H17	Header, 1x4, Leaded, 2.54mm pitch, Vertical	Leaded	210-71-04GB01	Pinrex	210-71-04GB01
20	CON00032	2	Fitted	Electronic	J1, J2	Connector, 1x5, SMD&TH, 0.65mm pitch, Micro USB Receptacle type B	SMD	10118194-0001LF	FCi	10118194-0001LF
21	CON00002	1	Fitted	Electronic	J3	Connector, 1x28, SMD, 0.5mm pitch, Bottom contact	SMD	979-41-728300	Pinrex	979-41-728300
22	CON00008	1	Fitted	Electronic	J4	Connector, 1x8, SMD, 1.1mm pitch, Micro SD Push-push connector	SMD	502570-0893	Molex	502570-0893
23	CON00029	1	Fitted	Electronic	JP1	Jumper, 2 Way, 2.54mm		7021JBK	Communica	7021JBK
24	IND00003	1	Fitted	Electronic	L1	Inductor SMD 2u2 20% 1A 0.168R	SMD	2u2	TAIYO YUDEN	NRH2412T2R2MNGH
25	SEN00006	1	Fitted	Electronic	LS1	Speaker Leaded PT-1340P-P	Leaded	PT-1340P-P	Hitpoint	PT-1340P-P
26	MEC00021	1	Fitted	Electronic	PCB1	P0014 ST STM32L052C8 Hero Board		P0014-A		
27	TRA00004	1	Fitted	Electronic	Q1	MOSFET P SOT23 DMP2305U-7 4.2A 20V	SOT23	DMP2305U-7	Diodes Inc.	DMP2305U-7
28	TRA00007	2	Fitted	Electronic	Q2, Q3	MOSFET N/P Dual TSOT26 DMC2038LVT 3.7A 20V	TSOT26	DMC2038LVT	Diodes Inc.	DMC2038LVT
29	RES00004	2	Fitted	Electronic	R1, R2	Resistor SMD Metal Film 0603 4k7 1% 100mW	0603	4k7	YAGEO	RC0603FR-**4K7L
30	RES00005	8	Fitted	Electronic	R3, R10, R11, R14, R15, R37, R38, R41	Resistor SMD Metal Film 0603 10k 1% 100mW	0603	10k	YAGEO	RC0603FR-**10KL
31	RES00009	4	Fitted	Electronic	R4, R5, R8, R23	Resistor SMD Metal Film 0603 270R 1% 100mW	0603	270R	YAGEO	RC0603FR-**270RL
32	RES00003	3	Fitted	Electronic	R6, R9, R26	Resistor SMD Metal Film 0603 27R 1% 100mW	0603	27R	YAGEO	RC0603FR-**27RL
33	RES00006	12	Fitted	Electronic	R7, R16, R17, R18, R21, R29, R30, R32, R36, R39, R40, R42	Resistor SMD Metal Film 0603 56k 1% 100mW	0603	56k	YAGEO	RC0603FR-**56KL
34	RES00002	5	Fitted	Electronic	R19, R20, R22, R24, R33	Resistor SMD Metal Film 0603 1k 1% 100mW	0603	1k	YAGEO	RC0603FR-**1KL
35	RES00018	1	Fitted	Electronic	R31	Resistor SMD Metal Film 0603 1k2 1% 100mW	0603	1k2	YAGEO	RC0603FR-**1K2L
36	RES00015	2	Fitted	Electronic	R34, R35	Resistor SMD Metal Film 0603 1M 1% 100mW	0603	1M	YAGEO	RC0603FR-**1ML
37	MEC00002	8	Fitted	Electronic	S1, S2, S3, S4, S5, S6, S7, S8	Push Button, SMD, Normally Open	SMD	DTSM62NV	APEM	DTSM62NV
38	IC00042	1	Fitted	Electronic	U1	Ultra-low-power 32-bit MCU ARM Cortex-M0+, up to 128 KB Flash memory, 20 KB SRAM,	LQFP64	STM32L072RBT6	ST Microelectronics	STM32L072RBT6
39	IC00002	1	Fitted	Electronic	U2	USB to BASIC UART IC (Rev D+)	SSOP16	FT230XS-*	FTDI Chip	FT230XS-*
40	IC00003	1	Fitted	Electronic	U3	4-megabit 2.7-volt DataFlash	SO8	AT45DB041E-SSHN-*	adesto	AT45DB041E-SSHN-*
41	IC00012	1	Fitted	Electronic	U4	Single-Cell, Fully Integrated Li-Ion Li-Polymer Charge Management Controller	SOT23-5	MCP73831T-2ATI/OT	Microchip	MCP73831T-2ATI/OT
42	IC00039	1	Fitted	Electronic	U5	2-MHz, 600-mA, 3.3V Step-Down DC-DC Converter	SOT23-5	LM3671MF-3.3/NOPB	Texas Instruments	LM3671MF-3.3/NOPB
43	IC00029	1	Fitted	Electronic	U6	Very low capacitance ESD protection	SOT23-6	USBLC6-2	ST Microelectronics	USBLC6-2
44	IC00041	2	Fitted	Electronic	U7, U8	Single bit dual power supply translating transceiver with 3 state outputs	SOT363	74AVC1T45	Diodes Inc.	74AVC1T45DW-7
45	OSC00003	1	Fitted	Electronic	Y1	Crystal SMD 32.768kHz 20ppm -40/85C 12.5pF	SMD	32.768kHz	WTL	WTL1M32122
46	CON00036	0	Not Fitted	Electronic	H2	Header, 2x20, Leaded, 2.54mm pitch, Vertical	Leaded	210-72-20GB01	Pinrex	210-72-20GB01
47	CON00014	0	Not Fitted	Electronic	H4	Connector, 1x2, Leaded Vertical, 2mm pitch, Wire to board connector	Leaded	B2B-PH-K-S	JST	B2B-PH-K-S

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48	CON00007	0	Not Fitted	Electronic	H12, H19	Header, 1x2, Vertical, 2.54mm pitch	Leaded	210-71-02GB01	Pinrex	210-71-02GB01
49	CON00029	0	Not Fitted	Electronic	JP2, JP3	Jumper, 2 Way, 2.54mm		7021JBK	Communica	7021JBK
50	RES00002	0	Not Fitted	Electronic	R12, R13	Resistor SMD Metal Film 0603 1k 1% 100mW	0603	1k	YAGEO	RC0603FR-**1KL