

**Table 1. Bill of materials**

Item	Qty	Reference	Description	Manufacturer	Order code
1	0	R45 Not Fitted	RES, 10k, 1%, 1/16W, 0402	Stackpole Electronics	RMCF0402FT10K0
2	0	R54 Not Fitted	RES, 0R, Jumper, 1/16W, 0402	Vishay	CRCW04020000Z0ED
3	0	R11, R12, R41, R42 Not Fitted	RES, 10k, 1%, 1/20W, 0201	Vishay	CRCW020110K0FKED
4	0	R34, R51, R52, R70, R71 Not Fitted	RES, 0R, Jumper, 1/20W, 0201	Vishay	CRCW02010000Z0ED
5	1	J3 Fitted	CONN RCPT 30POS SMD GOLD, with PLCC28_Fox Module with module CM22BFX02	Hirose	BM28B0.6-30DS/2-0.35V(53)
6	1	J1 Fitted	CONN, USB TypeC Socket, right angle through hole + SMT	Stewart Connector	SS-52400-003
7	1	J5 Fitted	SMT/THROUGH-HOLE HEADER 5pts 1.27mm	Samtec	TFM-105-01-L-S-RA
8	1	J4 Fitted	CONN, HEADER, SMD, 2POS, 2.54mm, Right Angle	Samtec	TSM-102-04-F-SH
9	1	J2 Fitted	CONN, Jack, 22 pos, FFC and FPC, 0.5mm, Top contact	Hirose	FH12A-22S-0.5SH(55)
10	1	Q1 Fitted	MOSFET P-channel -30 V, 12 mOhm PowerFLAT	ST Microelectronics	STL9P3LLH6
11	1	U2 Fitted	USB Type-C 5Gbps Redriver 2:1 MUX for USB3.1 Super Speed port.	Texas Instruments	TUSB542RWQR
12	1	U8 Fitted	IC ARM9 USB3 CONTROLLER 121FBGA	Cypress Semiconductor	CYUSB3065-BZXI
13	1	U11 Fitted	IC, MUX Analogic, 10-channel MIPi analog	Texas Instruments	T55MP645YFPR
14	1	L1 Fitted	2 lines Common mode filter with ESD protection for High Speed	ST Microelectronics	ECMF2-40A100N6
15	1	U1 Fitted	STANDALONE USB TYPE-C PORT CONTROLLER WLCSPP	ST Microelectronics	STUSB4500LBJR
16	1	U13 Fitted	IC SWITCH DUAL SPDT	Diodes Incorporated	PI3A223ZMEX
17	1	D6 Fitted	LED RED CLEAR SMD	Lite-On Electronics	LTST-C191KRKT
18	1	U12 Fitted	IC Single Inverter Gate, 1.65 to 5.5, X2SON-4	Nexperia	74LVC1G14GX4-Q100Z
19	1	U9 Fitted	"IC INVERT SCHMITT 2CH 2-IN	SON-6"	Texas Instruments
20	1	U3 Fitted	Electronic Fuse Regulator for 5V line 3.6A (6.1V clamping)	ST Microelectronics	STEF05LPUR
21	1	U10 Fitted	FLASH - NOR Memory IC 128Mb (16M x 8) SPI - Quad I/O, QPI 133 MHz 21-WLCSPP-21(3x3.3)	RENESAS	AT25SL128A-UUE-T
22	1	R46 Fitted	RES, 10k, 1%, 1/16W, 0402	Stackpole Electronics	RMCF0402FT10K0
23	1	R53 Fitted	RES, 0R, Jumper, 1/16W, 0402	Vishay	CRCW04020000Z0ED
24	1	R3 Fitted	RES, 100R, 1%, 1/20W, 0201	Vishay	CRCW0201100RFKED
25	1	R16 Fitted	RES, 10R, 1%, 1/20W, 0201	Panasonic	ERJ-U01F10R0C
26	1	R2 Fitted	RES, 470R, 1%, 1/20W, 0201	Panasonic	ERJ-1GNF4700C
27	1	R21 Fitted	RES, 37.4k, 1%, 1/20W, 0201	Panasonic	ERJ-1GNF3742C
28	1	D2 Fitted	DIODE SCHOTTKY 30V 200MA 2DSN	ON Semiconductor	NSR02F30NXT5G
29	1	SW1 Fitted	SWITCH SLIDE DPDT 100MA 6V	Nidec Copal Electronics	CAS-220TA
30	1	Y1 Fitted	XTAL OSC XO 12MHZ CMOS SMD	ECS Inc.	ECS-2520MVLIC-120-CN-TR
31	1	X1 Fitted	XTAL OSC XO 19.2MHZ HCMOS SMD	ECS Inc.	ECS-3225SMV-192-FP-TR
32	1	D1 Fitted	High power transient voltage suppressor diode, 1610 package.	STMicroelectronics	ESDA25P35
33	2	C1, C74 Fitted	CAP, CER, 2.2uF, 35V, X5R, 0603	TDK	C1608X5R1V225K080AC
34	2	L2, L3 Fitted	4 lines Common mode filter with ESD protection for High Speed Serial	ST Microelectronics	ECMF4-40A100N10
35	2	R5, R17 Fitted	RES, 22k, 1%, 1/20W, 0201	Vishay	CRCW020122K0FKED
36	2	R4, R6 Fitted	RES, 1k, 1%, 1/20W, 0201	Vishay	CRCW02011K00FNED
37	2	D3, D4 Fitted	TVS DIODE 5VWM SOD882	ST Microelectronics	ESDALC5-1BM2
38	3	C45, C58, C60 Fitted	CAP, CER, 22uF, 10V, X5R, 0603	TDK	C1608X5R1A226M080AC
39	3	D5, D7, D8 Fitted	LED GREEN CLEAR SMD	Lite-On Electronics	LTST-C191KGKT
40	3	R29, R30, R32 Fitted	RES, 22R, 1%, 1/20W, 0201	Vishay	CRCW020122R0FNED
41	4	C16, C18, C26, C28 Fitted	CAP, CER, 47nF, 10V, X5R, 0201	Kemet	LMK063BJ473KP-F
42	4	C2, C4, C5, C6 Fitted	CAP, CER, 1uF, 10V, X5R, 0201	Murata	GRM033R61A105ME15D
43	4	C11, C13, C21, C23 Fitted	CAP, CER, 100pF, 25V, C0G/NP0, 0201	Murata	GRM0335C1E101JA01
44	4	C35, C40, C43, C63 Fitted	CAP, CER, 4.7uF, 20%, 6.3V, X6T, 0402	Kyocera	CM05X6T475M06AH
45	4	L4, L5, L6, L7 Fitted	Ferrite 600Ohms RDC=0.1Ohms 2000mA	Pulse Electronics	BBHV00160808601Y00
46	4	Q2, Q3, Q4, Q5 Fitted	MOSFET, N-CH, 20V, 1.2A, SOT-883	Nexperia	PMZ290UNE2
47	4	U4, U5, U6, U7 Fitted	Non-Isolated PoL Module DC DC Converter 1 Output 1 ~ 5V, 1A 4.5V - 17V Input	Cyntec	MUN12AD01-SH
48	4	R73, R74, R75, R76 Fitted	RES, 2.2k, 1%, 1/20W, 0201	Vishay	CRCW02012K20FKED
49	4	R24, R35, R36, R59 Fitted	RES, 560R, 1%, 1/20W, 0201	Panasonic	ERJ-1GNF5600C
50	5	C19, C20, C29, C30, C64 Fitted	CAP, CER, 100nF, 10V, X5R, 0201	Murata	GRM033R61A104KE15D
51	8	C32, C37, C46, C48, C50, C52, C54, C56 Fitted	CAP, CER, 10nF, 16V, X7R, 0201	Murata	GRM033R71C103KE14D
52	8	C12, C14, C15, C17, C22, C24, C25, C27 Fitted	CAP, CER, 10uF, 20%, 10V, X5R, 0402	Samsung	CL05A106MP5NUNC
53	8	R1, R18, R19, R20, R22, R23, R37, R38 Fitted	RES, 100k, 1%, 1/20W, 0201	Yageo	RC0201FR-07100KL
54	10	C3, C65, C68, C69, C71, C72, C75, C76, C78, C79 Fitted	CAP, CER, 100nF, 20%, 16V, X7R, 0201	Murata	GRM033Z71C104ME14D
55	13	R25, R33, R44, R47, R48, R49, R50, R55, R56, R57, R58, R68, R69 Fitted	RES, 0R, Jumper, 1/20W, 0201	Vishay	CRCW02010000Z0ED
56	22	R7, R8, R9, R10, R13, R14, R15, R26, R27, R28, R31, R39, R40, R60, R61, R62, R63, R64, R65, R66, R67, R72 Fitted	RES, 10k, 1%, 1/20W, 0201	Vishay	CRCW020110K0FKED
57	27	C7, C8, C9, C10, C31, C33, C34, C36, C38, C39, C41, C42, C44, C47, C49, C51, C53, C55, C57, C59, C61, C62, C66, C67, C70, C73, C77 Fitted	CAP, CER, 100nF, 16V, X7S, 0201	Murata	GRM033C71C104KE14J

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