

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		AMPS311	Any		
C1, C18	2	0.1uF	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0201	0201	CL03A104KP3NNNC	Samsung Electro-Mechanics		
C2, C19	2	0.1uF	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0201	0201	CL03A104KA3NNN	SAMSUNG ELECTRO-MECHANICS		
C3, C4, C5, C20, C21, C22	6	10uF	Cap Ceramic 10uF 25V X5R ±20% Pad SMD 0603 +85°C T/R	0603	CL10A106MA8NRNC	Samsung		
C9, C26	2	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402	CL05A106MP5NUNC	Samsung Electro-Mechanics		
C10, C27	2	2.2uF	Cap Ceramic 2.2uF 10V X5R ±20% Pad SMD 0201 +85°C T/R	0201	CL03A225MP3CRNC	Samsung		
C11, C12, C14, C28, C29, C31	6	1uF	CAP, CERM, 1 uF, 10 V, +/- 20%, X5R, 0201	0201	CL03A105MP3NSNC	Samsung Electro-Mechanics		
C35, C36, C42, C43	4	1uF	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	08055C105K4Z2A	AVX		
C37, C44, C46	3		General Purpose Ceramic Capacitor, 1210, 10uF, 10%, X7R, 15%, 50V		12105C106KAT2A			
C39	1	1uF	CAP, CERM, 1 uF, 50 V, +/- 20%, X5R, AEC-Q200 Grade 3, 0603	0603	CGA3E3X5R1H105M080AB	TDK		
C40, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82	14	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0402	0402	C1005X7R1H104K050B B	TDK		
C41	1	47uF	CAP, AL, 47 uF, 63 V, +/- 20%, 0.65 ohm, AEC-Q200 Grade 2, SMD	SMT Radial F	EEE-FK1J470P	Panasonic		
C48, C49	2		Cap Ceramic 4.7uF 16V X7R 10% Pad SMD 0805 +125°C Automotive T/R		CGA4J3X7R1C475K125AB			
D1, D2	2	Blue	LED, Blue, SMD	LED 0805	LTST-C170TBKT	Lite-On		
FID4, FID5, FID6	3		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		
H1, H2, H3, H4	4				HNSS440	B&F Fastener Supply		
H6, H7	2		8MM RD X 6MM X M3	10x10mm	M3561-SS	RAF Electronic Hardware		
H9, H10, H11, H12	4		Standoff; 1/4 Hex Male/female; 4-40 Thread; Stainless Steel; .750LENGTH	HEX_STANDOFF	4538-440-SS	RAF Electronic Hardware		
J1, J7, J12, J18	4		Header, 100mil, 2x2, Gold, TH	2x2 Header	TSW-102-07-G-D	Samtec		
J2, J3, J13, J14	4		Standard Banana Jack, Uninsulated, 5.5mm	Keystone_575-4	575-4	Keystone		
J4, J5, J15, J16, J26, J33, J38, J39, J42, J43, J44, J45, J46, J47, TP13, TP15, TP28, TP30	18		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions		
J6, J10, J17, J21	4		Header, 100mil, 3x1, Gold, TH	PBC03SAAN	PBC03SAAN	Sullins Connector Solutions		
J8, J19, J24, J27, J28, J29	6		Standard Banana Jack, insulated, 10A, red	571-0500	571-0500	DEM Manufacturing		
J9, J20	2		Terminal Block with Pushbutton, 2-pole, Height 5.6mm, SMD	Terminal Block, 2-Pole, Body 11.7x15.2mm	2061-0602_T	WAGO		
J11, J22, J25, J30, J31, J32	6		Standard Banana Jack, insulated, 10A, black	571-0100	571-0100	DEM Manufacturing		
J23	1		Power Jack, mini, 2.5mm OD, R/A, TH	Jack, 14.5x11x9mm	RAPC712X	Switchcraft		
J35, J36	2			CONN RCPT24	SSQ-112-04-G-D	Samtec		
J37	1		Connector, Header, High Speed, 20 pairs, SMT	QTE-020-01-X-D-A	QTE-020-01-L-D-A	Samtec		
J40	1		Header, 100mil, 4x1, Tin, TH	Header, 4x1, 100mil, TH	5-146278-4	TE Connectivity		
J41	1		Header, 100mil, 4x2, Tin, TH	Header, 4x2, 100mil, Tin	PEC04DAAN	Sullins Connector Solutions		
L1, L2	2	1uH	POWER INDUCTOR 1uH, ±20%, Isat 4.2A, Itemp 4.1A, DCR Max 0.043Ω, 0806	0806	CIGT201610EH1R0MN	Samsung		
R12, R13, R14, R15, R18, R19, R34, R35, R36, R37, R40, R41, R74, R75, R77, R78, R79, R80	18		RES SMD 0 OHM JUMPER 1/20W 0201	0201 (0603 Metric)	RC0201JR-070RL	Yageo		
R16, R17, R38, R39	4	0	0 Ohms ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Anti-Sulfur Thick Film	0603	D1TFAS0603WJUMPF-T5	Thin Film Technology		
R20, R21, R42, R43, R81, R82, R91, R93	8	10k	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GEJ103X	Panasonic		
R22, R44	2	0	RES, 0, 5%, 0.05 W, 0201	0201	CRCW02010000Z0ED	Vishay-Dale		
R45	1	66.5k	RES, 66.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060366K5FKEA	Vishay-Dale		
R46	1	36k	RES, 36 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060336K0JNEA	Vishay-Dale		
R60, R61, R62, R63, R64, R65, R67, R73	8	0	RES, 0, 5%, 0.063 W, 0402	0402	ERJ-2GE0R00X	Panasonic		
R66, R68, R70, R71	4	33	RES, 33.0, 1%, 0.1 W, 0402	0402	ERJ-2RKF33R0X	Panasonic		
R76, R83, R84, R85, R88, R89	6	10.0k	RES, 10.0 k, 1%, 0.063 W, 0402	0402	RC0402FR-0710KL	Yageo America		
R86, R87	2	1.50k	RES, 1.50 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	RMCF0402FT1K50	Stackpole Electronics Inc		
R90, R92	2	330	RES, 330, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2RKF3300X	Panasonic		
S1, S2	2		Switch, Slide, 2 SPST, Off-On, 0.025 A, 24 VDC, SMT	7x7.5mm	A6SN-2104	Omron Electronic Components		
S3	1		Switch, SPST-NO, 0.05 A, 12 VDC, SMT	3.9x2.9mm	SKRKAEE020	Alps		

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SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9, SH-J10, SH-J11, SH-J12, SH-J13, SH-J14, SH-J15, SH-J16, SH-J17, SH-J18, SH-J19, SH-J20, SH-J21, SH-J22, SH-J23, SH-J24, SH-J25, SH-J26, SH-J27, SH-J28, SH-J29, SH-J30	30	1x2	Shunt, 100mil, Flash Gold, Black	Closed Top 100mil Shunt	SPC02SYAN	Sullins Connector Solutions		
TP2, TP5, TP9, TP11, TP14, TP17, TP20, TP24, TP26, TP29	10		Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone Electronics		
TP6, TP21	2		Header, 2.54mm, 1x1, Gold, TH	Header, 2.54mm, 1x1, TH	TSW-101-08-G-S	Samtec		
TP31, TP32, TP33, TP34, TP35, TP37	6		Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone		
U1, U2	2		TAS2573YCF	DSBGA48	TAS2573YCF	Texas Instruments		
U3, U4	2		5-A, Low-VIN (0.7V), Low-Noise, High-Accuracy, Ultra-Low Dropout (LDO) Voltage Regulator	WQFN16	TPS7A5701RTET	Texas Instruments		
U8, U12	2		TCA9416DDF	SOT23-8	TCA9416DDF	Texas Instruments		
U9	1		4-Bit Dual-Supply Bus Transceiver With Configurable Voltage-Level Shifting and 3-State Outputs, RSV0016A (UQFN-16)	RSV0016A	SN74AVC4774RSVR	Texas Instruments		Texas Instruments
U10	1		512K I2C Serial EEPROM, TSSOP	TSSOP-8	24FC512-I/ST	Microchip		
U11	1		Low-Power Dual Buffer/Driver With Open-Drain Outputs, DCK0006A (SOT-SC70-6)	DCK0006A	SN74AUP2G07DCKR	Texas Instruments		
U13, U14	2		Single-Bit Dual-Supply Bus Transceiver, DBV0006A (SOT-23-6)	DBV0006A	SN74AXC1T45DBVR	Texas Instruments		Texas Instruments
C6, C23	0	10µF	Cap Ceramic 10uF 25V X5R ±20% Pad SMD 0603 +85°C T/R	0603	CL10A106MA8NRNC	Samsung		
C7, C8, C24, C25	0		CAP, CERM, 47 uF, 10 V, +/- 20%, X5R, 0805	0805		TDK		
C13, C30, C67, C68, C69	0	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402	CL05A106MP5NUNC	Samsung Electro-Mechanics		
C15, C16, C17, C32, C33, C34	0	1000pF	CAP, CERM, 1000 pF, 25 V, +/- 10%, X5R, 0201	0201	C0603X5R1E102K030B A	TDK		
C38	0		General Purpose Ceramic Capacitor, 1210, 10uF, 10%, X7R, 15%, 50V		12105C106KAT2A			
C45, C47	0		Chip Multilayer Ceramic Capacitors for General Purpose, 1210, 22uF, X7R, 15%, 10%, 25V		GRM32ER71E226KE15 L			
C50	0	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C104KA88 D	MuRata		
C51	0	100nF	0.1 µF ±10% 50V Ceramic Capacitor X7R 0805 (2012 Metric)	0805	8.85012E+11	Würth Elektronik		
C52	0	2.2uF	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0603	0603	EMK107BB7225KA-T	Taiyo Yuden		
C53	0	4.7uF	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X5R, 0603	0603	GRM188R6YA475KE15 D	MuRata		
C54	0	15uF	CAP, CERM, 15 uF, 35 V, +/- 20%, X5R, 0805	0805	C2012X5R1V156M125A C	TDK		
C55	0	150pF	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	C0603C151J5GACTU	Kemet		
C56, C57	0	47uF	CAP, CERM, 47 uF, 25 V, +/- 20%, X5R, 1206_190	1206_190	C3216X5R1E476M160A C	TDK		
C58, C59	0	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 5%, X7R, 0402	0402	C0402C103J5RACTU	Kemet		
C60	0	0.022uF	CAP, CERM, 0.022 uF, 16 V, +/- 10%, X7R, 0402	0402	GRM155R71C223KA01 D	MuRata		
C61, C62	0	330pF	CAP, CERM, 330 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0201	0201	CGA1A2X7R1H331K03 0BA	TDK		
C63	0	0.1uF	CAP, CERM, 0.1 uF, 35 V, +/- 10%, X5R, 0402	0402	GMK105BJ104KV-F	Taiyo Yuden		
C64, C65, C66	0	10uF	CAP, CERM, 10 uF, 35 V, +/- 20%, X5R, 0603	0603	GRM188R6YA106MA73 D	Murata		
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	N/A		
H13, H14	0		Standoff, Male/Male Thread, 5.15 mm, M3 x 0.5	Standoff	SO-0515-02-02-01	Samtec		
J34	0		USB - C (Type - C) USB 2.0 Receptacle Connector 24 Position Surface Mount, Right Angle, Through Hole	CONN_USB_9MM58_7MM53	USB4105-GF-A	GCT		
L3	0	4.7uH	Inductor, Shielded, Composite, 4.7 µH, 10.5 A, 0.0144 ohm, AEC-Q200 Grade 1, SMD	IND_6.4x6.1x6.6	XAL6060-472MEB	Coilcraft		
L4	0	600 ohm	Ferrite Bead, 600 ohm @ 100 MHz, 2 A, 0805	0805	MPZ2012S601AT000	TDK		
LBL1	0		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll		PCB Label 0.650 x 0.200 inch	THT-14-423-10		Brady
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33	0		RES SMD 0 OHM JUMPER 1/20W 0201	0201 (0603 Metric)	RC0201JR-070RL	Yageo		
R47	0	30.0k	RES, 30.0 k, 1%, 0.1 W, 0603	0603	RC0603FR-0730K	Yageo		
R48	0	100k	100 kOhms ±1% 0.063W, 1/16W Chip Resistor 0402 (1005 Metric) Thick Film	0402	CRCW0402100KFKED C	Vishay		

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R49	0	4.12k	RES, 4.12 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW04024K12FKED	Vishay-Dale		
R50	0	30.1k	RES, 30.1 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	CRCW040230K1FKED	Vishay-Dale		
R51	0	10k	RES, 10 k, 5%, 0.05 W, 0201	0201	RC0201JS-7D10KL	Yageo America		
R52, R53, R54, R55	0	100k	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402	RMCF0402FT100K	Stackpole Electronics Inc		
R56, R57, R58, R59	0	1.00k	RES, 1.00 k, 0.01%, 0.063 W, 0603	0603	RNCF0603TKY1K00	Stackpole Electronics Inc		
R69, R72	0	0	RES, 0.5%, 0.063 W, 0402	0402	ERJ-2GE0R00X	Panasonic		
TP1, TP3, TP4, TP7, TP10, TP12, TP16, TP18, TP19, TP22, TP25, TP27	0		Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator	PBC02SAAN	Sullins Connector Solutions		
U5	0		USB Type-C and USB PD Controller with Integrated Power Switches Optimized for Power Applications	WQFN38	TPS25730DRJKR	Texas Instruments		
U6	0		4.5-V to 28-V Input, 8-A Synchronous Buck Converter	VQFN-HR10	TPS56837HRPAR	Texas Instruments		
U7	0		22-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A	TVS2200DRVR	Texas Instruments		Texas Instruments

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