

Dahlia Carrier Board V1.0B
Toradex AG

Description	Manufacturer	Manufacturer Part Number	Component Designators	Component Count
Capacitor Ceramic X7R 100nF 16V 10% 0402	Generic	X7R-100n-16V-10%-0402	C1, C2, C5, C7, C8, C9, C10, C11, C16, C19, C23, C24, C27, C29, C30, C31, C32, C33, C34, C36, C38, C39, C40, C41, C42, C47, C48, C49, C50, C51, C52, C53, C54, C62, C82, C97, C99, C106, C107, C108, C109, C112, C116, C125, C126, C134, C135, C136, C137, C139, C140, C142, C148, C151, C152, C153, C154, C166, C167, C171, C174, C177, C180, C183, C185, C186, C187, C189, C190, C191, C192, C193, C194, C195, C198, C200, C201, C202, C203, C204, C205, C206, C207, C208, C210, C212, C213, C214, C215, C217, C219, C220, C222, C224, C225, C226, C227, C229, C230, C231, C234, C235, C236, C76	104
Capacitor Ceramic X7R 2.2nF 200V 10% 1206	Generic	X7R-2.2n-200V-10%-1206	C104	1
Capacitor Ceramic X7R 2.7nF 50V 10% 0402	Generic	X7R-2.7n-50V-10%-0402	C117	1
Capacitor Ceramic X5R 1nF 50V 10% 0402	Generic	X7R-1n-50V-10%-0402	C12, C20, C25, C43, C44, C55, C56, C80, C98, C105, C115, C133, C181, C196, C228, C233	16
Capacitor Ceramic X7R 330pF 50V 10% 0402	Generic	X7R-330p-50V-10%-0402	C127, C128	2
Capacitor Ceramic X5R 100uF 10V 20% 1210	Generic	X5R-100uF-10V-20%-1210	C14, C17, C21, C26	4
Capacitor Ceramic X7R 10nF 50V 10% 0402	Generic	X7R-10nF-50V-10%-0402	C15, C60, C73, C92, C94, C143	6
Capacitor Ceramic X7R 470pF 50V 10% 0402	Generic	X7R-470p-50V-10%-0402	C155, C156, C159, C168, C169	5
Capacitor Ceramic X7R 220pF 50V 10% 0402	Generic	X7R-220pF-50V-10%-0402	C161, C164	2
Capacitor Ceramic X5R 2.2uF 6.3V 10% 0402	Generic	X5R-2.2u-6.3V-20%-0402	C172, C176	2
Capacitor Ceramic X7R 1nF 2KV 10% 1206	Generic	X7R-1nF-2KV-10%-1206	C18, C22, C130, C138, C211	5
Capacitor Ceramic X5R 10uF 6.3V 20% 0402	Generic	X5R-10u-6.3V-20%-0402	C28, C96, C141, C162, C165, C221	6
Capacitor Ceramic X5R 1uF 16V 20% 0402	Generic	X5R-1uF-16V-20%-0402	C3, C74, C75, C124, C129, C158, C160, C163, C188, C78	10
Capacitor Ceramic NP0 12pF 50V 5% 0402	Generic	NP0-12pF-50V-5%-0402	C35, C37, C216, C218	4
Capacitor Ceramic X5R 10uF 10V 20% 0603	Generic	X5R-10u-10V-20%-0603	C4, C13, C66, C132, C146, C147, C149, C150, C223	9
Capacitor Ceramic X5R 4.7uF 6.3V 20% 0402	Generic	X5R-4.7u-6.3V-20%-0402	C45, C59, C79, C157, C170, C173, C175, C178, C179, C182, C184, C197, C199, C209	14
Capacitor Ceramic X7R 4.7nF 16V 10% 0603	Generic	X7R-4.7nF-16V-10%-0603	C6	1

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Capacitor Ceramic X7R 100nF 50V 10% 0402	Generic	X7R-100n-50V-10%-0402	C61, C64, C65, C110, C113, C131	6
Capacitor Ceramic X5R 4.7uF 10V 10% 0603	Generic	X5R-4.7uF-10V-10%-0603	C63, C111, C119, C120, C121, C122, C123	7
Capacitor Ceramic X5R 10uF 50V 20% 1210	Generic	X5R-10uF-50V-20%-1210	C67, C68, C93, C95, C101, C102, C103, C114, C232	9
Capacitor Ceramic X5R 47uF 10V 20% 0805	Generic	X5R-47uF-10V-20%-0805	C69, C70, C71, C72, C144, C145	6
Capacitor Ceramic X5R 22uF 10V 20% 0805	Generic	X5R-22uF-10V-20%-0805	C81, C83, C84, C85, C86, C87, C89, C90, C118	9
Capacitor Ceramic X7R 100pF 50V 10% 0402	Generic	X7R-100p-50V-10%-0402	C88, C91, C100	3
Battery Holder	Keystone	3000	BAT1	1
Header male, 1x2 Pins, 2.54 mm pitch	FCI	68000-202HLF	JP1, JP2, JP3, JP5, JP6, JP7	6
Jumper, 3-Pin	Tyco	826936-3	JP4	1
DDR4 SODIMM Socket, 260 pins, 5.2mm(H), 0.5mm Pitch	TE Connectivity	2309409-2	X1	1
RJ45 Ethernet Connector 1000BaseT Connector	LINK-PP	LPJK7436A98NL	X11	1
6 Contacts Nano Sim Card Holder	Molex	1042240820	X12	1
Mini PCIe Connector	Molex	67910-5700	X13	1
3.5mm Stereo Jack SMD With Detect Contact	CUI	SJ-43516-SMT-TR	X14	1
0.50mm Pitch FFC/FPC Vertical	Hirose	FH12-24S-0.5SVA(54)	X16	1
High Speed Ground Plane Socket	Samtec	QSH-030-01-L-D-A	X17	1
Header 2x40 pin 2.54mm pitch	Samtec	TSW-110-07-G-D	X19	1
4-pin terminal block	CUI	TBLH10-500-04BK	X2	1
2X20 PIN Header 2.54mm	Samtec	TSW-120-07-G-D	X20	1
USB 3.1 Gen 2, Input Output Connectors, USB type C, Receptacle, Top mount, dual-row SMT, 1.6mmPCB	Amphenol	12401598E4#2A	X3, X10, X18	3

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USB 3.0 Type A Stacked Right Angled	Amphenol	GSB311231HR	X4	1
Header female, 2X3 pins, 2.54mm pitch	Samtec	SSW-103-01-G-D	X5	1
MicroSD card holder with card detect, Push-Push type	Würth Elektronik (Wuerth Elektronik)	693071010811	X7	1
Male Header, 10-Pin, 1.27mm Pitch	Samtec	FTSH-105-01-L-DV	X8	1
Power Jack	SwitchCraft	RAPC722X	X9	1
SMD Crystal	Qantek	QC5A25.0000F10B22R	OSC1	1
12MHz Ceramic SMD Crystal, Hong Kong X'tals Limited, HKC3225SX-12MHz-29105-R4V1, 30ppm, -40C to +85C	HKC Hong Kong X'tals	HKC3225SX-12MHz-29105-R4V	OSC2	1
ESD Protection Diode	ON Semiconductor	ESD9101P2T5G	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D21, D23, D25, D32, D33, D39, D48, D49	25
Schottky 30V / 0.20A	ON Semiconductor	BAT54XV2T5G	D18, D19, D38, D47, D50, D51, D52	7
D-OnSemi-1N4148WT	ON Semi	1N4148WT	D20	1
DIODE ZENER 10V 300MW SOD323	ON Semiconductor	MM3Z10VT1G	D27, D34, D35	3
4 CHANNEL LOW CAPACITANCE TVS DIODE ARRAY	Diodes Inc	D3V3F4U10LP-7	D28, D29, D36, D37, D42, D43, D44, D45, D46	9
BIDIRECTIONAL TVS DIODE 5V 12.9V SOD923	ON Semiconductor	ESD7951ST5G	D40, D41	2
CAN FD Transceiver with Silent Mode	Microchip	MCP2558FDT-H/SN	IC1	1
Push Button On/Off Controller IT range	Linear	LTC2954ITS8-2#PBF	IC10	1
LDO regulator, Vout = 5V, Iout(max) = 0.4A, Vin = 5.5V to 40V, SOT-223	ON Semiconductor	NCV4274CST50T3G	IC11, IC24	2
Supervisor Open Drain or Open Collector 1 Channel HVSOF5	Rohm	BD4142HFV-TR	IC13	1
Integrated Boost Regulator	TI (Texas Instruments)	TPS61022RWUR	IC14	1
Integrated Buck Regulator	Diodes	PAM2310BECADJR-SOP8	IC15, IC16	2

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Description	Manufacturer	Manufacturer Part Number	Component Designators	Component Count
Reverse Protection Controller with Bidirectional Circuit Breaker	Linear	LTC4368IDD-2#PBF	IC18	1
High Side Load Switch, TDFN4 1.2 x 1.6	Microchip Micrel	MIC94073YMT	IC2, IC3, IC17, IC29	4
20V Protection Switch with True Reverse Current Blocking	Alpha & Omega Semiconductor	AOZ1327DI-01	IC20	1
CURRENT/POWER MONITOR with I2C Interface	Texas Instruments	INA219BIDR	IC21	1
USB Charger Detection	Texas Instruments	BQ24392RSER	IC22	1
USB Type-C Port Controller for Power Sinks	Cypress	CYPD3177-24LQXQ	IC23	1
Low Dropout Regulator, 2A	Semtech	SC4215ASTRT	IC26	1
Stereo Audio Interface IC	CIRRUS	WM8904CGEFL/RV	IC27	1
EEPROM, Serial I ² C bus , SOIC-8, -40C to +85C	ST	M24C02-FMN6TP	IC30	1
Voltage Level Shifter 4 channels, UQFN-16 (2.6mm x 1.8mm), -40C to +85C	TI	SN74AVC4T774RSVR	IC32, IC34, IC37	3
Quad High Speed USB to Multipurpose UART/MPSSE	FTDI	FT4232HL	IC33	1
8-Bit Shift Registers With 3-State Output Registers	TI (Texas Instruments)	SN74HC595PW	IC36	1
NCP511SN33T1G LDO Regulator	ON Semi	NCP511SN33T1G	IC38	1
5V/3A Smart Current Limited Load Switch with True Reverse Current Blocking	Alpha & Omega Semiconductor	AOZ1353DI-01	IC4	1
USB Type-C Configuration Channel Logic and Port Controlwith	TI (Texas Instruments)	TUSB321AIRWBR	IC5	1
1A Dual High Side Switch (Current Limiting (Fixed), Over Temperature, Reverse Current, UVLO)	Texas Instruments	TPS2066CD	IC6	1
Low Power USB 3.1 hub	Microchip	USB5744T-I/2G	IC7	1
Voltage Level Translator for I2C Applications	ON Semi	FXMA2102L8X	IC8, IC19, IC25, IC28, IC31	5

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Description	Manufacturer	Manufacturer Part Number	Component Designators	Component Count
8A (Iout(max)) Synchronous Buck Regulator, QFN-22L (4mmx 4mm), Vin = 6.5V to 28V	A&O	AOZ2261AQI-10	IC9	1
220R@100MHz 2A EMI FILTER	TDK	MPZ1608S221A	L1, L4, L13, L43	4
Inductance 1.5uH, 20%, Irms=16A, Isat=33A, DCR=4.6 mOhm	Pulse Electronics	PA4342.152NLT	L14	1
Inductance 1uH, 20%, Irms=7A, Isat=11A, DCR=14 mOhm	Pulse Electronics	PA4340.102NLT	L15	1
2.2µH Shielded Wirewound Inductor 4A 61mOhm Max 2-SMD	Bourns	SRP4020TA-2R2M	L16	1
1.2µH Shielded Wirewound Inductor 4.8A 30mOhm	Bourns	SRP4020TA-1R2M	L17	1
Common Mode Choke High Speed 12R 100mA	Panasonic	EXC14CH120U	L2, L5, L6, L7, L9, L10, L11, L33, L34, L35, L36, L37, L38, L39, L40, L41, L42, L47	18
Power Supply FB 10A	Laird	35F0121-0SR-10	L20, L21, L48, L49	4
5R@100MHz 500mA EMI FILTER	Generic	BLM15BB050SN1D	L23, L24, L25, L26, L27, L28, L29, L30, L31, L32	10
33R@100MHz 3A EMI FILTER	Murata	BLM18PG330SN1D	L3, L22	3
Ferrit Bead	Generic	120R-600mA-25%-0402	L44, L45	2
LED green Osram LG T67K-H2K1-24-Z	Osram	LG T67K-H2K1-24-Z	LED1, LED2, LED3, LED4, LED5, LED7, LED9, LED11, LED12, LED14, LED15, LED16, LED17, LED18, LED19, LED20, LED21, LED22, LED28	19
LED yellow Osram LY T67K-J2L1-26-Z	Osram	LY T67K-J2L1-26-Z	LED23, LED24, LED25, LED26, LED27	5
LED red, Osram LS T67K-K1L2-1-Z	Osram	LS T67K-K1L2-1-Z	LED6, LED8, LED10, LED13	4
Shunt Jumper	Assmann	AKSPT/G-BLACK	JMP1, JMP2, JMP3, JMP4, JMP5, JMP6, JMP7	7
Mini PCI-E Latch with Cover	Molex	48099-5701	MECH1	1
Round Standoff M2x0.4 (2.00mm)	Würth	9774020243R	MECH2, MECH3, MECH8, MECH9	4
Round Standoff M3x0.5 (8.00mm)	Würth	9774080360R	MECH4, MECH5, MECH6, MECH7	4
EEPROM, 1k, 64x16, serial, SOIC8	Microchip Technology	93LC46BT-I/SN	IC35	1

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Description	Manufacturer	Manufacturer Part Number	Component Designators	Component Count
Label	Generic	Label	MECH10	1
Resistor 0 ohm 63mW 1% 0603	Generic	0R-63mW-1%-0603	R351, R1, R3, R8, R9, R11, R13, R25, R29, R34, R64, R67, R68, R77, R81, R89, R92, R95, R101, R116, R129, R130, R131, R132, R133, R145, R146, R150, R155, R162, R165, R183, R190, R194, R199, R210, R211, R213, R216, R217, R231, R232, R234, R244, R246, R247, R260, R266, R267, R268, R269, R274, R275, R278, R279, R280, R281, R292, R293, R294, R295, R296, R325, R326, R327, R328, R343, R344	68
Resistor 150 Kohm 63mW 1% 0402	Generic	150K-63mW-1%-0402	R100, R106, R107	3
10 mOhms ±1% 0.5W,Chip Resistor 1206 (3216 Metric) Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	Vishay	WSK1206R0100FEA18	R135, R167	2
Resistor 22 Kohm 250mW 1% 1206	Generic	22K-250mW-1%-1206	R136	1
Resistor 300 Kohm 250mW 1% 1206	Generic	300K-250mW-1%-1206	R138	1
Resistor 330 ohm 63mW 5% 0402	Generic	330R-63mW-5%-0402	R139, R204, R205, R206	4
Resistor 412 Kohm 250mW 1% 1206	Generic	412K-250mW-1%-1206	R140	1
Resistor 84.5 Kohm 250mW 1% 1206	Generic	84.5k-250mW-1%-1206	R143	1
Resistor 15 Kohm 250mW 1% 1206	Generic	15K-250mW-1%-1206	R144	1
Resistor 2.2 ohm 63mW 5% 0603	Generic	2.2R-63mW-5%-0603	R154, R160, R161	3
Resistor 28.7 Kohm 63mW 1% 0603	Generic	28.7K-63mW-1%-0603	R17	1
Resistor 1 Kohm 63mW 5% 0603	Generic	1K-63mW-5%-0603	R176	1
Resistor 5.1 Kohm 63mW 1% 0603	Generic	5.1K-63mW-1%-0603	R187, R188, R297, R298	4
Resistor 2.4 Kohm 63mW 1% 0603	Generic	2.4K-63mW-1%-0603	R195, R197	2
Resistor 1.8 Kohm 63mW 1% 0402	Generic	1.8K-63mW-1%-0402	R196, R263, R264, R270, R271, R289, R290, R347, R348	9

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Resistor 100 Kohm 63mW 5% 0402	Generic	100K-63mW-5%-0402	R175, R2, R10, R12, R14, R15, R16, R22, R30, R33, R35, R36, R58, R66, R78, R80, R87, R88, R93, R96, R97, R102, R109, R110, R113, R114, R115, R120, R121, R123, R126, R128, R137, R147, R152, R163, R166, R168, R169, R170, R178, R184, R202, R203, R218, R222, R226, R228, R236, R239, R245, R261, R282, R283, R284, R285	56
Resistor 887 Kohm 63mW 1% 0402	Generic	887K-63mW-1%-0402	R20	1
Resistor 1Mohm 63mW 5% 0603	Generic	1M-63mW-5%-0603	R23, R26, R98, R193, R207, R304, R305, R314, R321, R322, R323, R324	12
Resistor 40.2 Kohm 63mW 1% 0402	Generic	40.2K-63mW-1%-0402	R237	1
Resistor 20 Kohm 63mW 1% 0402	Generic	20K-63mW-1%-0402	R238	1
Resistor 20 ohm 63mW 1% 0402	Generic	20R-63mW-5%-0402	R242, R243, R256, R257	4
Resistor 5.6 Kohm 63mW 5% 0402	Generic	5.6K-63mW-5%-0402	R250, R252, R253, R255	4
Resistor 22 ohm 63mW 5% 0402	Generic	22R-63mW-5%-0402	R31, R32, R104, R219, R224, R316	6
Resistor 10 Kohm 63mW 5% 0402	Generic	10K-63mW-5%-0402	R37, R59, R63, R72, R79, R105, R112, R119, R124, R141, R142, R156, R172, R208, R209, R223, R229, R235, R240, R241, R251, R254, R272, R273, R286, R287, R299, R301, R302, R307, R308, R309, R311, R312, R318, R329, R330	37
Resistor 1 Kohm 63mW 5% 0402	Generic	1K-63mW-5%-0402	R38, R39, R52, R62, R86, R127, R134, R179, R185, R191, R192, R220, R221, R225, R227, R258, R303, R315, R317, R319, R320, R331	22
Resistor 56 ohm 63mW 5% 0603	Generic	56R-63mW-5%-0603	R4, R5	2
Resistor 0 ohm 63mW 1% 0402	Generic	0R-63mW-1%-0402	R43, R148, R201	3
Resistor 200 Kohm 63mW 5% 0603	Generic	200K-63mW-5%-0603	R47, R50	2
Resistor 12 Kohm 63mW 1% 0402	Generic	12K-63mW-1%-0402	R51, R306	2
Resistor 10 ohm 63mW 5% 0402	Generic	10R-63mW-5%-0402	R53, R157, R158	3
Resistor 2.2 Kohm 63mW 5% 0402	Generic	2.2k-63mW-5%-0402	R7, R24, R27, R28, R151, R159, R164, R173, R180, R181, R182, R186, R249, R310	14
Resistor 330 Kohm 63mW 1% 0402	Generic	330KR-63mW-1%-0402	R70	1

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Resistor 47k 63mW 1% 0402	Generic	47K-63mW-1%-0402	R71, R74, R212	3
Resistor 15 Kohm 63mW 1% 0402	Generic	15KR-63mW-1%-0402	R75	1
Resistor 261 Kohm 63mW 1% 0402	Generic	261K-63mW-1%-0402	R82	1
Resistor 100 Kohm 63mW 5% 0603	Generic	100K-63mW-5%-0603	R84	1
Resistor 33 Kohm 63mW 1% 0402	Generic	33K-63mW-1%-0402	R85	1
Resistor 732 Kohm 63mW 1% 0402	Generic	732K-63mW-1%-0402	R90	1
Resistor 100 Kohm 63mW 1% 0402	Generic	100K-63mW-1%-0402	R91	1
Resistor 300 Kohm 63mW 1% 0402	Generic	300K-63mW-1%-0402	R99	1
Resistor Array 22 R 63mW 5% 4x0603	Generic	22R-63mW-5%-4x0603	RA1, RA2, RA3, RA4, RA5, RA6, RA7, RA8, RA9, RA10, RA12, RA13, RA14, RA15, RA16, RA17, RA18, RA19, RA20, RA21, RA22, RA23	22
Push Button	Wealth Metal	TD-03XB-Z-TR	SW1, SW3, SW5	3
N- and P-Channel MOSFET 20V	ON Semi	NTZD3155CT1G	T1, T4, T6	3
P-Channel MOSFET Enhancement Mode	Diodes Inc.	DMP2022LSS-13	T11	1
N-Channel MOSFET Enhancement Mode	Diodes Inc.	BSS138-7-F	T13, T16, T21, T23, T24, T25, T26, T27, T40	9
P-channel MOSFET, DMP4015SSS-13	Diodes Inc	DMP4015SSS-13	T15	1
MOSFET N-CH 60V 68A SO8FL	ON Semi	NTMFS5C670NLT1G	T17, T18	2
MOSFET P-CH 50V 130MA SOT23-3	Diodes	BSS84-7-F	T22	1
P-Channel MOSFET, IRLML6401PbF	International Rectifier	IRLML6401PbF-SOT-23	T3, T32	2
Bipolar Transistor NPN 160V 600mA 225mW Surface Mount SOT-23-3	ON Semi	MMBT5551LT1G	T5, T19, T20	3
Dual N-Channel 20V (D-S) MOSFET	ON Semi	NTZD3154NT1G	T7, T8, T9, T10, T12, T14, T28, T29, T30, T31, T33, T34, T35, T36, T37, T38, T39	17

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	Generic	No Physical Component	L8, C58, C46, C57, C77, D31, IC12, L18, L19, R103, R117, R118, R122, R125, R174, R214, R233, R349, R352, R57, R73, R111, R18, R19, R21, R54, R55, R149, R153, R171, R198, R230, R259, R265, R291, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R345, R346, R354, R44, R48, R6, R61, R65, R69, R94, R177, R189, R200, R215, R288, R313, R332, R300, R46, R49, R76, R83, SW2, SW4, SW6, X15, X6, R42, R45, R353, R56, R60, R350, R40, R41, R108, T2	81