

Interloper Board Assembly/BOM

Project: 1010260 Open Image

Part #: 1010260-900-0010

Revision: A

Released 03/12/2020 RMP

Part Supplied by Creare

DNP = Do Not Populate

Item	Quantity	Reference	Description	Manufacturer	Manufacturer Part#	Suggested Vendor	Suggested Vendor Part #	Footprint	Temp Min	Temp Max
1	1	DOC	Schematic	Creare	1010260-900-0011, Rev. A	N/A	N/A	N/A	N/A	N/A
2	1	PCB	PCB		1010260-900-0012, Rev. A	N/A	N/A	N/A	N/A	N/A
3	4	C1,C2,C17,C18	10uF, 35V, 10%, X5R, Ceramic, 0805	TDK Corporation	C2012X5R1V106K085AC	Digi-Key	445-14417-1-ND	CAPC2013X100N	85°C	-55°C
4	8	C3,C4,C5,C6,C19,C20,C21,C22	100uF, 16V, 20%, X5R, Ceramic, 1210	Taiyo Yuden	EMK325ABJ107MM-T	Digi-Key	587-3152-1-ND	CAPC3225X270N	85°C	-55°C
5	18	C7,C9,C11,C12,C13,C15,C23,C25,C27,C28,C29,C279,C281,C282,C283,C284,C286,C287	0.1uF, 100V, 10%, X7R, Ceramic, 0603	Murata Electronics North America	GCJ188R72A104KA01D	Digi-Key	490-13420-1-ND	CAPC160X80X90L35N	125°C	-55°C
6	23	C8,C10,C14,C16,C24,C26,C30,C65,C67,C73,C78,C87,C122,C124,C131,C138,C231,C238,C242,C265,C266,C280,C285	1uF, 35V, 10%, X5R, Ceramic, 0402	TDK Corporation	C1005X5R1V105K050BC	Digi-Key	445-9073-1-ND	CAPC100X50X55L15N	85°C	-55°C
7	48	C31,C32,C33,C35,C37,C38,C39,C40,C41,C43,C45,C46,C47,C48,C49,C50,C52,C54,C55,C56,C58,C60,C61,C62,C89,C90,C91,C93,C95,C96,C97,C98,C99,C101,C103,C104,C105,C106,C107,C108,C110,C112,C113,C114,C116,C118,C119,C120	10nF, 100V, 10%, X7R, Ceramic, 0805	AVX Corporation	08051C103KAT2A	Digi-Key	478-1358-1-ND	CAPC2013X94N	125°C	-55°C
8	16	C34,C36,C42,C44,C51,C53,C57,C59,C92,C94,C100,C102,C109,C111,C115,C117	47pF, 50V, 1%, C0G, Ceramic, 0603	Kemet	C0603C470F5GACTU	Digi-Key	399-7916-1-ND	CAPC160X80X87L35N	125°C	-55°C
9	2	C63,C121	1nF, 50V, 1%, C0G, Ceramic, 0402	Murata	GRM1555C1H102FA01D	Digi-Key	490-6189-1-ND	CAPC100X50X55L25N	125°C	-55°C
10	4	C64,C70,C129,C130	10nF, 50V, 5%, X7R, Ceramic, 0603	Murata Electronics North America	GCM188R71H103JA37D	Digi-Key	490-14356-1-ND	CAPC160X80X90L35N	125°C	-55°C
11	34	C66,C68,C69,C71,C74,C75,C76,C77,C79,C80,C81,C82,C83,C84,C85,C86,C88,C123,C125,C126,C127,C132,C133,C134,C135,C139,C140,C141,C142,C143,C144,C145,C146,C244	0.1uF, 50V, 10%, X7R, Ceramic, 0402	TDK	CGA2B3X7R1H104K050BB	Digi-Key	445-6899-1-ND	CAPC100X50X55L20N	125°C	-55°C
12	2	C72,C128	1pF, 50V, 0.05pF, C0G, Ceramic, 0603	AVX Corporation	ML03511R0AAT2A	Digi-Key	478-6732-1-ND	CAPC1608X73N	125°C	-55°C
13	6	C136,C273,C275,C277,C292,C296	10UF, 25V, 10%, X5R, Ceramic, 0805	Murata Electronics North America	GRM21BR61E106KA73L	Digi-Key	490-5523-1-ND	CAPC200X125X135L45N	85°C	-55°C
14	10	C137,C241,C243,C269,C271,C274,C276,C278,C293,C297	0.1uF, 50V, 10%, X7R, Ceramic, 0508	AVX	05085C104KAT2A	Digi-Key	478-2897-1-ND	CAPC127X200X102L25	125°C	-55°C
15	16	C147,C150,C151,C152,C160,C171,C172,C179,C185,C190,C191,C198,C204,C251,C252,C259	2.2uF, 50V, 10%, X7R, Ceramic, 0805	TDK	CGA4J3X7R1H225K125AE	Digi-Key	445-172477-1-ND	CAPC200X125X145L30N	125°C	-55°C
16	44	C148,C149,C153,C154,C155,C156,C157,C158,C162,C164,C165,C166,C168,C169,C170,C173,C174,C177,C178,C181,C182,C184,C186,C187,C188,C189,C192,C193,C196,C197,C200,C201,C203,C205,C206,C248,C250,C253,C254,C257,C258,C261,C262,C264	2.2uF, 100V, 10%, X7S, Ceramic, 1206, Soft Term	TDK Corporation	CGA5L3X7S2A225K160AE	Digi-Key	445-8800-1-ND	CAPC3317X190N	125°C	-55°C
17	16	C159,C161,C163,C167,C175,C176,C180,C183,C194,C195,C199,C202,C255,C256,C260,C263	1uF, 100V, 10%, X7S, Ceramic, 0805	Murata Electronics North America	GRJ21BC72A105KE11L	Digi-Key	490-10918-1-ND	CAPC200X125X150L55N	125°C	-55°C
18	16	C207,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C220,C221,C222	220pF, 250V, 5%, C0G, Ceramic, 0603	KEMET	C0603C221JAGAC7867	Digi-Key	399-14964-2-ND	CAPC160X80X87L35N	125°C	-55°C
19	3	C223,C224,C229	4.7uF, 50V, 10%, X5R, Ceramic, 0805	TDK Corporation	C2012X5R1H475K125AB	Digi-Key	445-5980-1-ND	CAPC2013X145N	85°C	-55°C
20	1	C225	22uF, 25V, 20%, X5R, Ceramic, 0805	TDK Corporation	C2012X5R1E226M125AC	Digi-Key	445-9112-1-ND	CAPC2013X145N	85°C	-55°C
21	3	C226,C227,C235	47uF, 25V, 20%, X5R, Ceramic, SMD	Taiyo Yuden	TMK325ABJ476MM-P	Mouser	TMK325ABJ476MM-P	CAPC320X250X280L60N	85°C	-55°C
22	7	C228,C230,C233,C234,C236,C237,C240	10uF, 35V, 10%, X7R, Ceramic, 1206	TDK	C3216X7R1V106K160AC	Digi-Key	445-14799-1-ND	CAPC320X160X190L30N	125°C	-55°C
23	2	C232,C239	10nF, 50V, 5%, X7R, Ceramic, 0603	Kemet	C0603C103J5RACTU	Digi-Key	399-1092-1-ND	CAPC160X80X87L35N	125°C	-55°C
24	4	C245,C246,C247,C249	1000uF, 100V, 20%, Aluminum, Axial	Vishay BC Components	MAL202119102E3	Digi-Key	4102PHBK-ND	CAPPAD4750W80L3950D2150	85°C	-40°C
25	4	C267,C268,C270,C272	1nF, 50V, 10%, X7R, Ceramic, 0603	Murata	GCM188R71H102KA37D	Digi-Key	490-4777-1-ND	CAPC160X80X90L35N	125°C	-55°C
26	6	C288,C289,C294,C295,C298,C299	330pF, 50V, 1%, NP0, Ceramic, 0603	AVX Corporation	06035A331FAT2A	Digi-Key	478-6031-1-ND	CAPC1608X90N	125°C	-55°C
27	4	C290,C291,C300,C301	470pF, 50V, 2%, NPO, Ceramic, 0603	AVX Corporation	06035A471G4T2A	Digi-Key	478-11817-1-ND	CAPC160X80X90L25N	125°C	-55°C
28	2	C302,C303	1uF, 16V, 10%, X5R, Ceramic, 0603	Kemet	C0603C105K4PACTU	Digi-Key	399-5090-1-ND	CAPC1608X90N	85°C	-55°C
29	2	D1,D2	Diode, Schottky, Series Pair, 30V, 225mW, SOT23-3	ON Semiconductor	MMBD452LT1G	Digi-Key	MMBD452LT1GOSCT-ND	SOT23-3P95_237X111L42X43N	125°C	-55°C
30	16	D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18	Diode, Dual, GP, 100V, 200mA, SOT23-3	ON Semi	MMBD4148SE	Digi-Key	MMBD4148SECT-ND	SOT23-3P95_240X120L25X48N	150°C	-55°C

31	2	E1,E2	Ferrite Bead, 120 Ohm @ 100MHz, 3A, 0603	Murata Electronics North America	BLM18SG121TN1D	Digi-Key	490-3996-1-ND	INDC1608X95N	125°C	-55°C
32	1	J1	Header, 24-pos, 2.54mm, 5.4A, Gold, SMD	Samtec	TSM-112-02-L-DV-LC	Mouser	TSM-112-02-L-DV	SAMTEC_TSM-112-02-L-DV-LC	125°C	-55°C
33	16	J5,J6,J8,J9,J10,J11,J12,J13,J14,J15,J16,J17,J18,J19,J20,J7	Header, 2-pos, 2.54mm, 3A, Vert., Gold, TH	Sullins Connector Solutions	PBC02SAAN	Digi-Key	S1011E-02-ND	SULLINS_PBC02SAAN	125°C	-65°C
34	2	J21,J22	Barrier Block, 4pos, 8.26mm, TH	TE Connectivity AMP Connectors	1546927-4	Digi-Key	A112382-ND	TE_1546927-4	120°C	-40°C
35	1	J23	Header, 3-pos, 2.54mm, 4A, Gold, TH	Molex	0022112032	Digi-Key	WM2701-ND	MOLEX_0022112032	105°C	-40°C
36	2	J2,J3	Header, Male, 400 pin, 10-row, 1.27mm, SMD	Samtec	ASP-134488-01	Digi-Key	SAM8730-ND	SAMTEC_ASP-134488-01		
37	1	J4	Socket, 156-pos, 2.54mm, 5A, Stacking, Gold, TH	ITT Cannon, LLC	DL1-156RW-6B	Digi-Key	1003-1094-ND	ITT_DL1-156RW-6B	105°C	-55°C
38	5	MTG1,MTG2,MTG3,MTG4,MTG5	Mounting Hole, #4, Electrical Connection	NA	NA	DNP	DNP	MTG_4-E		
39	24	R1,R8,R13,R18,R23,R28,R33,R38,R51,R54,R71,R74,R80,R87,R92,R97,R102,R107,R112,R117,R129,R130,R150,R153	100 Ohms, 0.1%, 75V, 1/16W, Thin, 0402	Susumu	RG1005P-101-B-T5	Digi-Key	RG10P100BCT-ND	RESC100X50X40L25	155°C	-55°C
40	56	R2,R3,R11,R12,R20,R21,R29,R30,R48,R52,R62,R64,R81,R82,R90,R91,R99,R100,R108,R109,R127,R131,R141,R143,R159,R160,R161,R162,R163,R164,R165,R166,R167,R168,R169,R170,R175,R176,R177,R178,R183,R184,R185,R186,R196,R197,R198,R199,R214,R215,R216,R217,R218,R219,R220,R221	Jumper, 1A, 75V, 1/10W, Thick, 0603	Panasonic	ERJ-3GEY0R00V	Digi-Key	P0.0GCT-ND	RESC160X85X55L30N	155°C	-55°C
41	16	R4,R9,R15,R19,R26,R31,R36,R39,R83,R88,R94,R98,R105,R110,R115,R118	DNP, Resistor, 0805	NA	NA	DNP	DNP	RESC205X125X50L35N		
42	16	R5,R10,R17,R22,R27,R32,R37,R40,R84,R89,R96,R101,R106,R111,R116,R119	1.37K, 1%, 75V, 1/10W, Thick, 0603	Vishay Dale	CRCW06031K37FKEA	Digi-Key	541-1.37KHCT-ND	RESC1609X50N	155°C	-55°C
43	16	R6,R7,R14,R16,R24,R25,R34,R35,R85,R86,R93,R95,R103,R104,R113,R114	49.9 Ohms, 1%, 200V, 3/4W, Thick, 1206	Vishay Dale	CRCW120649R9FKEAHP	Digi-Key	541-49.9UCT-ND	RESC3116X65N	155°C	-55°C
44	14	R41,R42,R43,R44,R45,R120,R121,R122,R123,R124,R138,R139,R208,R209	DNP, Resistor, 0603	NA	NA	DNP	DNP	RESC160X85X55L30N		
45	8	R46,R50,R55,R125,R126,R133,R210,R211	249 Ohms, 1%, 75V, 1/10W, Thick, 0603	Panasonic	ERJ-3EKF2490V	Digi-Key	P249HCT-ND	RESC160X85X55L30N	155°C	-55°C
46	32	R47,R57,R59,R60,R61,R67,R68,R69,R70,R72,R73,R75,R76,R77,R78,R79,R135,R136,R140,R145,R147,R148,R149,R151,R152,R154,R155,R156,R157,R158,R212,R213	10K, 1%, 75V, 1/10W, Thick, 0603	Vishay Dale	CRCW060310K0FKEC	Digi-Key	541-2979-1-ND	RESC160X85X50L30	155°C	-55°C
47	4	R49,R53,R128,R132	20K, 1%, 75V, 1/10W, Thick, 0603	Vishay Dale	CRCW060320K0FKEA	Digi-Key	541-20.0KHCT-ND	RESC155X85X50L30N	155°C	-55°C
48	4	R56,R58,R134,R137	1K, 0.1%, 75V, 1/10W, Thin, 0603	Panasonic	ERA-3AEB102V	Digi-Key	P1.0KDBCT-ND	RESC160X80X55L30N	155°C	-55°C
49	6	R63,R65,R66,R142,R144,R146	10 Ohms, 0.5%, 75V, 1/16W, Thin, 0402	Susumu	RG1005R-100-D-T10	Digi-Key	RG10R10.0DCT-ND	RESC100X50X40L25	155°C	-55°C
50	16	R171,R172,R173,R174,R179,R180,R181,R182,R187,R188,R189,R190,R200,R201,R202,R203	1K, 1%, 200V, 3/4W, Thick, 2010	Panasonic Electronic Components	ERJ-12SF1001U	Digi-Key	P1.00KACCT-ND	RESC5025X70N	155°C	-55°C
51	1	R191	100K, 1%, 50V, 1/16W, Thick, 0402	Vishay	CRCW0402100KFKED	Digi-Key	541-100KLCT-ND	RESC100X50X40L25	155°C	-55°C
52	1	R192	5.62K, 1%, 75V, 1/10W, Thick, 0603	Vishay Dale	CRCW06035K62FKEA	Digi-Key	541-5.62KHCT-ND	RESC1609X50N	155°C	-55°C
53	1	R193	120K, 1%, 75V, 1/10W, Thick, 0603	Vishay Dale	CRCW0603120KFKEA	Digi-Key	541-120KHCT-ND	RESC1609X50N	155°C	-55°C
54	2	R194,R195	80.6K, 1%, 50V, 1/16W, Thick, 0402	Vishay	CRCW040280K6FKED	Digi-Key	541-80.6KLCT-ND	RESC100X50X40L25	155°C	-55°C
55	4	R204,R205,R206,R207	10M, 1%, 150V, 1/8W, Thick, 0805	Vishay	CRCW080510M0FKEA	Digi-Key	541-10.0MCCT-ND	RESC205X125X50L35N	155°C	-55°C
56	2	T1,T2	Transformer, RF, 75 Ohm, 1:1, SMD	Mini-Circuits	ADT1-1WT	Winsource	ADT1-1WT	MINICIRCUITS_ADT1-1WT	85°C	-20°C
57	62	TP1,TP2,TP3,TP4,TP5,TP6,TP7,TP8,TP9,TP10,TP11,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20,TP21,TP22,TP23,TP24,TP25,TP26,TP27,TP28,TP29,TP30,TP31,TP32,TP33,TP34,TP35,TP36,TP37,TP38,TP39,TP40,TP41,TP42,TP43,TP44,TP45,TP46,TP47,TP48,TP49,TP50,TP51,TP52,TP53,TP54,TP55,TP56,TP57,TP58,TP59,TP60,TP61,TP62	Test Point, Miniature, 3.4mm x 1.8mm Pad, SMD	Keystone	5015	Digi-Key	36-5015CT-ND	TP340X180N		
58	1	TP63	DNP, Test Point, SMD, 50 x 25 mil Oblong Pad	NA	NA	DNP	DNP	TP_B127X64		
59	9	U1,U2,U3,U4,U5,U6,U7,U8,U9	Level Translator, Bidirectional, 8-Ch, 24TSSOP	TI	SN74AVCH8T245PW	Digi-Key	296-33829-5-ND	SOP24P65_780X640X120L62X24N	85°C	-40°C
60	2	U10,U23	Ultrasound AFE, Octal, 144LFBGA	Analog Devices Inc.	AD9670BBCZ	Digi-Key	AD9670BBCZ-ND	BGA144CP80_12X12_1000X1000X140B45N	85°C	0°C

61	2	U11,U19	Amplifier, Differential, 1GHz, 17VQFN	Analog	ADA4938-1ACPZ-R7	Digi-Key	ADA4938-1ACPZ-R7CT-ND	QFN17P50_300X300X80L40X24T130N	85°C	-40°C
62	2	U20,U33	Voltage Reference, Precision 1.6V, ±0.2%, SOT23-3	Maxim Integrated	MAX6018AEUR16+T	Digi-Key	MAX6018AEUR16+TCT-ND	SOT95P237X112-3N	85°C	-40°C
63	2	U21,U34	DAC, 8-Bit, 10MHz, 16-TSSOP	Analog	AD5424YRUZ	Digi-Key	AD5424YRUZ-ND	SOP16P65_500X640X120L60X24N	125°C	-40°C
64	2	U22,U35	Opamp, Dual, 230MHz, R-R, 10-MSOP	Analog	ADA4897-2ARMZ	Digi-Key	ADA4897-2ARMZ-ND	SOP10P50_300X490X110L55X22N	125°C	-40°C
65	4	U36,U37,U38,U39	Pulse Generator, 4 channel, 64-VFQFN	Microchip	HV7321K6-G	Digi-Key	HV7321K6-G-ND	QFN65P50_900X900X100L40X24T770N	85°C	0°C
66	1	U40	DC/DC Converter, Dual, 2.5-24Vout, 2.6-20Vin, 1A, 77-BGA	Linear	LTM8049EY#PBF	Digi-Key	LTM8049EY#PBF-ND	BGA77CP127_11X7_1500X900X262B75N	125°C	-40°C
67	2	U41,U44	Voltage Regulator, LDO, Adj. 1.4V-20.5V, 1A, 20VQFN	TI	TPS7A4700RGWT	Digi-Key	296-34769-1-ND	QFN21P65_500X500X100L55X30T300N	125°C	-40°C
68	1	U42	Voltage Regulator, LDO, 5V, 0.5A, DPAK	ON Semi	NCP5501DT50G	Digi-Key	NCP5501DT50GOS-ND	TO229P990X238-3_4N	85°C	-40°C
69	1	U43	Voltage Regulator, LDO, ±5V, 150mA, 14DFN	Linear	LT3032EDE-5#PBF	Digi-Key	LT3032EDE-5#PBF-ND	LINEAR_DE14MA	125°C	-40°C
70	2	Y1,Y2	Oscillator, 18MHZ, MEMS, SMD	SiTIME	SIT8008BI-22-33E-18.000000G	Digi-Key	1473-30696-1-ND	PSON4P210_320X250X80L70X90N	85°C	-40°C