



SDR Cube Transceiver

Online Assembly Guide

Detailed construction notes for building and testing each of the SDR Cube kit modules

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Complete Bill of Materials

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DSP BOARD

Designator	QTY	Description	Source	P/N
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SMT Card

C42, C43	2	CAP CERAMIC 15PF 50V NP0 1206	Digi-Key	311-1151-1-ND
C18, C19, C23	2	CAP CERAMIC 22PF 50V NP0 1206	Digi-Key	478-3779-1-ND
C1, C3, C7, C12, C13, C14, C15, C16, C17, C20, C22, C33, C34, C41, C44, C45, C49, C50, C51, C52, C61, C65, C113	23	CAP .1UF 25V CERAMIC X7R 1206	Digi-Key	PCC1883CT-ND
C8, C9, C10, C11, C30	5	CAP CER 3300PF 50V 5% C0G 0805	Digi-Key	490-1632-1-ND
C25, C26, C27, C28, C64, C68	6	CAP CER .47UF 16V X7R 20% 1206	Digi-Key	445-4032-1-ND
C21, C114	2	CAP TANT 10UF 20V 20% SMD	Digi-Key	399-5152-1-ND
LD3	1	LED RED FACE UP 1206	Digi-Key	P11141CT-ND
LD4	1	LED GREEN FACE UP 1206	Digi-Key	P11529CT-ND
R46	1	RES 0.0 OHM 1/4W 1206 SMD	Digi-Key	RMCF1206ZT0R00CT-ND
R1, R24, R66	3	RES 10.0 OHM 1/4W 1% 1206 SMD	Digi-Key	541-10.0FCT-ND
R10, R18, R19, R48, R77	5	RES 100 OHM 1/4W 1% 1206 SMD	Digi-Key	541-100FCT-ND
R4, R6, R7, R8	4	RES 1.00K OHM 1/4W 1% 1206 SMD	Digi-Key	RHM1.00KFCT-ND
R5, R11, R16, R17,				

R20, R21, R51, R52, R54, R58, R73, R74	12	RES 1/8W 10K OHM 0.1% 1206	Digi-Key	RNCS1206BKE10K0TR-ND
R15, R22	2	RES 22.0K OHM 1/4W 1% 1206 SMD	Digi-Key	P22.0KFCT-ND
R3	1	RES 47.0K OHM 1/4W 1% 1206 SMD	Digi-Key	P47.0KFCT-ND
R2, R53	2	RES 100K OHM 1/4W 1% 1206 SMD	Digi-Key	P100KFCT-ND
R25, R26, R27, R32, R33, R45	6	RES 220K OHM 1/4W 1% 1206 SMD	Digi-Key	P220KFCT-ND
R75, R76	2	RES 1M OHM 1/4W 5% 1206 SMD	Digi-Key	RMCF1206JT1M00CT-ND
R47	1	(open)		

IC Bag

IC1	1	IC, Microchip 128x8 bit EEPROM, 24LC256, 8SOIC	Digi-Key	24LC256T-I/SNCT-ND
IC2	1	IC, OP AMP QUAD LOW V R-R 14-SOIC	Digi-Key	LMV324MXCT-ND
IC3	1	IC, DSPIC MCU/DSP 256K 100TQFP	Digi-Key	DSPIC33FJ256GP710-I/PF-ND
IC4	1	IC, STEREO AUDIO CODEC 28-TSSOP (TLV320AIC23BPW)	Digi-Key	296-15635-5-ND
IC9	1	IC, MUX SWITCH ICS QUAD BILATERAL ANALOG (14-SOIC)	Mouser Digi-Key	595-SN74HC4066DRE4 296-8327-5-ND
IC10	1	IC, RS232 driver, LTC1386CS	Digi-Key	LTC1386CS#PBF-ND 296-21080-1-ND
IC11, IC12	2	IC, LDO REG FXD 3.3V 800MA SOT223	Digi-Key	LT1117CST-3.3#PBF-ND 497-1241-1-ND
Q1, Q2	2	Transistor, FET, 2N7000, TO92	Digi-Key	2N7000_D26DZCT-ND
X1	1	CRYSTAL 12.288 MHZ 20PF 49US	Digi-Key	X228-ND
X2	1	CRYSTAL 7.3728 MHZ 20PF 49US	Digi-Key	X1084-ND

CONTROLS BOARD

Designator	QTY	Description	Source	P/N
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SMT Card

C3	1	CAP CER 1000PF 50V 5% C0G 1206	Digi-Key	490-1749-1-ND
C1, C4, C5, C31, C35, C36, C51, C52, C53, C54, C55, C56, C57, C61, C71, C72, C73, C74, C75, C80, C82, C83	22	CAP CER .1UF 50V 10% X7R 1206	Digi-Key	PCC1883CT-ND 490-1775-1-ND
R6, R7	2	RES 0.0 OHM .5W 1206 SMD	Digi-Key	RMCF1206ZT0R00CT-ND
R3, R8, R28, R44, R49, R85	6	RES 10.0 OHM 1/4W 1% 1206 SMD	Digi-Key	541-10.0FCT-ND
R37, R69, R70, R80	4	RES 100 OHM 1/4W 1% 1206 SMD	Digi-Key	541-100FCT-ND
R40, R41	2	RES 200 OHM 1/4W 1% 1206 SMD	Digi-Key	RHM200FRCT-ND
R4, R5	2	RES 1.00K OHM 1/4W 1% 1206 SMD	Digi-Key	RHM1.00KFCT-ND
R29	1	RES 3.90K OHM 1/4W 1% 1206 SMD	Digi-Key	P3.9KFCT-ND
R1, R2, R61, R62, R63, R64, R65, R72, R81	9	RES 1/8W 10K OHM 0.1% 1206	Digi-Key	RNCS1206BKE10K0TR-ND
R55	1	RES 33.0K OHM 1/4W 1% 1206 SMD	Digi-Key	P33.0KFCT-ND
R38, R39	2	RES 100K OHM 1/4W 1% 1206 SMD	Digi-Key	P1000KFCT-ND
R42	1	RES 470K OHM 1/4W 5% 1206 SMD	Digi-Key	P470KECT-ND

Anti-Static Bag

Q2, Q3	2	MOSFET N-CH 60V 350MA TO-92	Digi-Key Digi-Key	2N7000_D26DZCT-ND 497-3110-ND
IC11	1	IC, LDO REG FXD 3.3V 800MA SOT223	Digi-Key	LT1117CST-3.3#PBF-ND
IC13, IC14	2	IC, Octal Level Shifting Buffer, TXB0108 (TSSOP-20)	Digi-Key Mouser	296-21527-1-ND 595-TXB0108PWR

Loose

BZ1	1	Piezo buzzer	Digi-Key	433-1023-ND
C62, C66	2	CAP 10UF 35V ELECT FC SMD	Digi-Key	PCE3118TR-ND
ENC1	1	Encoder, Rotary, 11MM VERT 20PPR (ACZ11BR4E-15FD1-20C)	Digi-Key CAM-RPC	102-1769-ND REB-163
J1	1	Receptacle, 40P 2ROW STRT SOCKET (2x20, 0.1") (rear mounted)	Mouser	517-852-01-20
LCD	1	LCD, CFAG12864, 128x64, graphics	Crystalfontz	CFAG12864BTFHV

R43, R71	2	Trim Pot, 10K	Mouser	652-3306W-1-103
R56, R57, R59, R60	4	Resistor, POT 100K OHM	Mouser Digi-Key	317-2090F-100K 3310Y-001-104L-ND
SW1, SW2, SW3, SW4	4	Pushbutton, DPST, momentary "PVA1 OA H1"	Newark Digi-Key	19C6398 401-1133-ND (0.634 ea)

W1	1	Flex Cable, 20-wire, 1", 0.1" (FSN-21A-20)	Newark	31M5102
PCB-Controls	1	PCB, Controls		
	4	Cap, Pushbutton, Gray, 8.8x10.5mm Rnd	Digi-Key Mouser	EG1092-ND 612-TAG-GY
	4	Knob (pots), BLACK .50 D X .61 H, 6.35mm shaft	Mouser	450-2023-GRX
	1	KNOB BLK GLOSS.75"DIA .250"SHAFT KNOB BLK/MATTE.75"DIA .250"SHAFT Plastic version (backup)	Digi-Key Digi-Key Mouser	226-1126-ND 226-4102-ND 5164-1202BA

HARDWARE BAG

	8	Machine screw, pan slotted, #2-56x1/4"	Small Parts	ZBHS-0256-04-C
	4	Spacer, nylon, hex tapped, #2, 3/8" (LCD)	NAPPCO	NAP-2055-256-N-0
	4	Spacer, AL, hex tapped, #2, 9/16" (0.562"), (PCB)	NAPPCO	NAP-2058-256-AL-0*#
	4	hex nut, #2 (spacer), "2057", .060" thick	NAPPCO	1HMSN002C
	8	machine screw, 2-56, 1/4", phillips, fillister head	NAPPCO	1PLMS002C025

CLOCK OPTION - Si570

IC1	1	IC, CLK GEN, Si570		
P17	1	Pinheader, 2x2, 0.1"	Mouser	517-836-01-36

CLOCK OPTION - DDS

IC5	1	IC SYNTHESIZER DDS/DAC 28-SSOP	Digi-Key	AD9851BRSZ-ND
IC6	1	OSC, 5V, 50PF, 30MHZ,	Mouser	695-CMX309FLC-30.000MTR
IC7	1	IC DUAL POS_EDG_TRG D F-F 14SOIC (SN74AC74DR)	Digi-Key	296-1063-1-ND
IC15	1	IC, Octal Level Shifting Buffer, TXB0108 (TSSOP-20)	Digi-Key Mouser	2916-21527-1-ND 595-TXB0108PWR
P17	1	Pinheader, 2x2, 0.1"	Mouser	517-836-01-36
L1, L2	2	Ferrite bead, 750R @ 100 MHz, BK2125LM751, SMT 0805	Digi-Key	587-1913-1-ND
L3, L7, L8	3	INDUCTOR WW CERAM 470NH 0805, Q=33 @ 100MHz, self-resonant 430 MHZ	Digi-Key	535-10509-1-ND
C37, C50	2	CAP CERAMIC 10PF 50V NP0 1206	Digi-Key	311-1150-1-ND
C48, C49	2	CAP CERM 22PF 10% 100V NP0 1206	Digi-Key	478-3779-1-ND
C47	1	CAP CERM 1PF 50V NP0 1206	Digi-Key	478-1456-1-ND
C39	1	CAP CERM 2.2PF 50V NP0 1206	Digi-Key	478-1460-1-ND
C46	1	CAP CERM 3.3PF 50V NP0 1206	Digi-Key	478-1462-1-ND

IO BOARD

Designator	QTY	Description	Source	P/N
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SMT Card

C7, C38	2	CAP CER 1000PF 50V 5% C0G 1206	Digi-Key	490-1749-1-ND
		CAP CER 4700PF 630V X7R 10%		

C3	1	1206	Digi-Key	445-2290-1-ND
C2, C4, C60, C67, C70, C78, C79, C81	8	CAP CER .1UF 50V 10% X7R 1206	Digi-Key	490-1775-1-ND
C27	1	CAP CER .47UF 16V X7R 20% 1206	Digi-Key	445-4032-1-ND
R83, R84	2	RES 10.0 OHM 1/4W 1% 1206 SMD	Digi-Key	541-10.0FCT-ND
R12, R23, R94	3	RES 100 OHM 1/4W 1% 1206 SMD	Digi-Key	541-100FCT-ND
R95	1	RES 1.00K OHM 1/4W 1% 1206 SMD	Digi-Key	RHM1.00KFCT-ND
R1, R50	2	RES 2.20K OHM 1/4W 1% 1206 SMD	Digi-Key	P2.2KFCT-ND
R3, R9, R13, R14, R78, R79, R82	7	RES 1/8W 10K OHM 0.1% 1206	Digi-Key	RNCS1206BKE10K0TR-ND

Loose

C1, C22, C23, C30, C32	5	CAP 10UF 35V ELECT FC SMD	Digi-Key	PCE3118TR-ND
C69	1	CAP 47UF 35V ELECT FC SMD	Digi-Key	PCE3121CT-ND
D1	1	DIODE SCHOTTKY 20V 1A DO-41	Digi-Key	1N5817RLGOSCT-ND
IC1	1	Voltage regulator, 5V Switching, PT78ST105H, 5V	Mouser	595-PT78ST105H
J10	1	Coaxial DC power connector, 2.1mm	Mouser	163-7620-E
J7	1	8-pin Mini-DIN	Mouser Digi-Key	161-2208 CP-2280-ND
J3, J4, J5, J6	4	Audio jack, stereo, 3.5mm, pcb mount	Mouser	161-MJ352-EX
P1	1	Pinheader, 1x2, 0.1"	Mouser	517-834-01-36
P2	1	Pinheader, 80P, 2ROW, (2x40), 0.1", right angle	Mouser	517-5121TG
SW1	1	Switch, toggle, SPDT, PCB mount	Mouser	10TF130
R68	1	RES 2.00K OHM 1/4W 1% 1206 SMD	Digi-Key	RHM2.00KFCT-ND
R67	1	RES 1/8W 10K OHM 0.1% 1206	Digi-Key	RNCS1206BKE10K0TR-ND
		HARDWARE		
	8	Machine screw, pan #4-40x3/16", phillips	Small Parts	ZPHP-0440-03-C
	4	Spacer, AL, hex tapped, #4, 1/4" (PCB)	NAPPCO	NAP-2100-440-AL-0
PCB-I/O	1	PCB, I/O		

SR-Base

Designator	QTY	Description	Source	P/N
C1, C8	2	1000pF ceramic	Allied	649-0067
C2, C4, C6, C9, C11, C13, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C31	19	10uF 16v	Digi-Key	P807-ND
C3, C10	2	100pF ceramic	Allied	649-0010
C5, C7, C12, C14	4	0.022uF ceramic	Allied	541-0336
C27	1	0.033uF ceramic	Allied	541-0274
C30, C34	2	0.01uF ceramic	Allied	649-0073
C35	1	4.7uF ceramic	Digi-Key	445-2880-ND
C32, C33	2	4.7uF ceramic	Digi-Key	445-2880-ND
C36, C37	2	0.047uF ceramic	Allied	649-0097
C38, C39	2	CAP CER 4700PF 50V C0G RAD	Digi-Key	445-4791-ND
C40, C41, C42, C43, C44, C45, C46,				

C47, C48, C49, C50, C51, C55, C60, C62, C63, C64, C65	18	0.1uF 1206 SMT	Allied	541-1048
C52, C53, C54, C56	4	0.01uf 1206 SMT	Allied	541-1042
C57, C58, C59, C61	4	0.01uf 1206 SMT	Allied Digi-Key	541-1042 490-1774-1-ND
D1, D2	2	1N4003	Digi-Key	1N4003DICT-ND
J1	1	4 pin, SIP sockets	Mouser	517-974-01-36
J2	1	5 pin, SIP sockets	Mouser	517-974-01-36
J3	1	2 pin, SIP sockets	Mouser	517-974-01-36
J4	1	3 pin, SIP sockets	Mouser	517-974-01-36
Q1, Q3, Q4	3	2N3904	Mouser	610-2N3904
Q2	1	2N3906	Mouser	610-2N3906
Q7, Q8	2	BS170	Mouser	512-BS170
P2	1	2 pin, SIP pinheader, R/A	Mouser	
P3, P4	2	2 pin, SIP pinheader	Mouser	
P5, P6, P7	3	3 pin, SIP pinheader	Mouser	
R1, R2, R4, R5, R7, R8, R10, R11	8	10.0k, 1%	Allied	840-0419
R19, R20, R25, R44, R45, R48	6	10.0k, 1%	Allied Digi-Key	840-0419 CF18Jt10K0CT-ND
R3, R6, R9, R12, R18, R17	6	49.9, 1%	Allied	840-0377
R13, R14, R16, R22	4	2.21k, 1%	Allied	840-0406
R15	1	3.32k, 1%	Allied	840-0411
R23	1	22.1, 1%	Allied	840-0374
R24	1	22.1k, 1%	Mouser	271-22.1K-RC

R27	1	22.1k, 1%	Mouser Digi-Key	271-22.1K-RC RNF18FTD22K1CT-ND
R51, R52	2	1.00k, 1%	Allied	840-0399
R46, R47, R49, R50	4	10.0, 1%	Allied	840-0371
R55, R56	2	100, 1/6 W	Digi-Key	100EBK-ND
R28	1	221, 1%	Allied	840-0387
R21, R29, R30, R53, R54	5	4.99k 1%	Mouser	660-MF1/4DCT52R4991F
R26	1	4.99k, 1%	Mouser Digi-Key	660-MF1/4DCT52R4991F RNF18FTD4K99CT-ND
U1, U2	2	TLV2462	Mouser	595-TLV2462CD
U3, U10	2	FST3253	Avnet	FST3253MX/BKN
U4	1	LM7805	Digi-Key	LM7805CT-ND
U5	1	LP2992AIM5-3.3V	Digi-Key	LP2992AIM5-3.3CT-ND
U9	1	74AC74	Digi-Key	296-1063-1-ND
U11	1	LT6221	Arrow	LT6221CS8#PBF
U7	1	SI570		
RFC-1	1	BN-43-2402, 4T, #26		
	1	Wire, #26, 6"		
RFC-1 (alternate)	1	RFC, 100mH, SMT, 1210	Digi-Key	445-1749-1-ND
	1	PCB		
		Hardware		
Standoffs	4	Spacer, AL, hex tapped, #4, 1/4" (PCB)	NAPPCO	NAP-2100-440-AL-0
Screws	8	Machine screw, pan slotted, #4-40x3/16"	Small Parts	ZPHP-0440-03-C

TXPA

Designator	QTY	Description	Source	P/N
C206, C207, C208, C209, C210, C211	6	0.1uF 1206 SMT	Allied	541-1048
D200	1	1N4003	Allied	236-0003
P200	1	4 pin, header	Mouser	517-6111TG
P201	1	5 pin, header	Mouser	517-6111TG
Q200	1	2N2222A	Digi-Key	497-2598-ND
Q204	1	2N3904	Mouser	610-2N3904
Q201, Q202, Q203	3	BS170	Mouser	512-BS170
R200	1	475, 1%	Allied	840-0393
R201	1	56.2, 1%	Allied	840-0378
R203, R208	2	2.21k, 1%	Allied	840-0406
R204, R205, R206	3	221, 1%	Allied	840-0387
R207	1	22.1k, 1%	Digi-Key	RNF14FTD22K1CT-ND
R209	1	33.2, 1%	Digi-Key	33.2XBK-ND
R210, R211	2	2.2, 5%	Allied	840-0052
Hardware				
for Q200	1	TO18 heat sink	Digi-Key	HS100-ND
for the group Q201, Q202, Q203	1	TO220 heat sink	Jameco	158051
for the group Q201, Q202, Q203	1	TO220 Sil Pad	Digi-Key	345-1079-ND
	1	6-32, 1/2" screw	NAPPCO	
	1	6-32, hex nut	NAPPCO	
	1	#6 lockwasher	NAPPCO	
	1	#4 nylon washer	NAPPCO	
	1	Wire, #30, 15-ft	Mouser	566-8055
	1	Wire, #26, 2-ft	Mouser	566-8053
	1	PCB		

Band-Specific: 30/20/17				
82pF	2	C200, C201	Digi-Key	490-3768-ND
220pF	1	C202	Digi-Key	BC1017CT-ND
150pF	2	C203, C205	Digi-Key	BC1015CT-ND
330pF	1	C204	Digi-Key	BC1019CT-ND
68.1	1	R202	Allied	840-0271
T30-6, 1.6uH, 21T #30, 14"	1	L200	Kits & Parts	
T37-6, 0.6uH, 14T #26, 10"	1	L201	Kits & Parts	
T37-6, 0.6uH, 14T #26, 10"	1	L202	Kits & Parts	
T30-6, Pri: 11T bifilar #30, 2x8", Sec: 1.74uH, 22T #30, 14"	1	T200	Kits & Parts	
BN-61-2402, Pri: 6T #30, 10", Sec: 3T bifilar, 2x5"	1	T201	Kits & Parts	
BN-61-2402, Pri: 4T bifilar #30, 2x6", Sec: 5T #30, 9"	1	T202	Kits & Parts	
Band-Specific: 80/40				
220pF	2	C200, C201	Digi-Key	BC1017CT-ND
470pF	2	C203, C205	Digi-Key	BC1021CT-ND
820pF	1	C204	Digi-Key	490-3766-ND
T30-2, 4.7uH, 33T #30, 17"	1	L200	Kits & Parts	
T37-2, 1.4uH, 19T #26, 13"	1	L201	Kits & Parts	
T37-2, 1.4uH, 19T #26, 13"	1	L202	Kits & Parts	
T30-2, Pri: 17T bifilar #30, 2x10", Sec: 5uH, 34T #30, 19"	1	T200	Kits & Parts	
BN-43-2402, Pri: 6T #30, 10", Sec: 3T bifilar, 2x5"	1	T201	Kits & Parts	
BN-43-2402, Pri: 4T bifilar #30, 2x6", Sec: 5T #30, 9"	1	T202	Kits & Parts	

RxAmp

Designator QTY Description Source P/N

SMT Card

C1, C2, C3, C4, C6	5	Capacitor, .1uF, X7R, 0805 SMT	Digi-Key	399-1170-1-ND
C5	1	CAP CER 10UF 16V Y5V 0805	Digi-Key	445-3458-1-ND
D1, D2	2	Diode, Gen Purp Switching, SMT, SOT-323	Mouser	610-CMSD2836
L1, L2	2	INDUCTOR POWER 100UH 1008	Digi-Key	445-1749-1-ND
R10, R7a	2	RES 10 OHM 1/8W 5% 0805 SMD	Digi-Key	P10ACT-ND
R7b	1	RES 22.0 OHM 1/8W 1% 0805 SMD	Digi-Key	P22.0CCT-ND
R3	1	RES 39.0 OHM 1/8W 1% 0805 SMD	Digi-Key	RHM39.0CCT-ND
R7c	1	RES 47 OHM 1/8W 5% 0805 SMD	Digi-Key	RHM47ARCT-ND
R101	1	RES 56 OHM 1/8W 5% 0805 SMD	Digi-Key	RHM56ARCT-ND
R6	1	RES 71.5 OHM 1/8W 1% 0805 SMD	Digi-Key	P71.5CCT-ND
R4, R5	2	RES 95.3 OHM 1/8W 1% 0805 SMD	Digi-Key	P95.3CCT-ND
R1, R2	2	RES 150 OHM 1/4W 1% 0805 SMD	Digi-Key	RNCP0805FTD150RCT-ND
R8	1	RES 1.50K OHM 1/8W 1% 0805 SMD	Digi-Key	P1.50KCCT-ND
R9	1	RES 4.70K OHM 1/8W 1% 0805 SMD	Digi-Key	P4.70KCCT-ND
R11, R12	2	RES 100K OHM 1/8W 1% 0805 SMD	Digi-Key	P100KCCT-ND
Q1, Q2	2	FET, 2N7002, SMT, SOT-23	Mouser	610-2N7002
Q3	1	RF Bipolar Small Signal transistor, SOT-323	Mouser	771-BFR93AW115

Loose

P101	1	Pinheader, 0.1", 1x3	Mouser	517-834-01-36
P1	1	Pinheader, 0.1", 2x2	Mouser	517-836-01-36
P100	1	Pinheader, 0.1", 1x2	Mouser	517-834-01-36
RLY1, RLY2	2	Relay, DPDT, SMT, 5V (Axicom IM03GR)	Digi-Key Farnell	PB1061CT-ND 1175069
T1	1	Common Mode Transformer	Würth	744205
PCB-RXAMP	1	PCB, RXAMP		

RXAMP BAND COMPONENTS (on SMT Card)				
80m (24 MHz)				
C7, C101	2	CAP CER 1500PF 50V C0G 0805	Digi-Key	490-3317-1-ND
C100	1	CAP 680PF 50V CERM CHIP 0805 SMD NPO	Digi-Key	PCC681CGCT-ND
L3	1	INDUCTOR 4.7UH 150MA 1210 10% HI-Q	Digi-Key	495-1703-1-ND
L4, L5	2	INDUCTOR 2.2UH 270MA 1210 10% HI-Q	Digi-Key	495-1699-1-ND
40m (4-8 MHz)				
C7, C101	2	CAP CERM 820PF 5% 50V NP0 0805	Digi-Key	478-1327-1-ND
C100	1	CAP CERM 390PF 5% 50V NP0 0805	Digi-Key	478-1323-1-ND
L3	1	INDUCTOR 2.2UH 270MA 1210 10% HI-Q	Digi-Key	495-1699-1-ND
L4, L5	2	INDUCTOR 1.0UH 5% 1210 SMD	Digi-Key	M8540CT-ND
20m (8-15 MHz)				
C7, C101	2	CAP CERM 390PF 5% 50V NP0 0805	Digi-Key	478-1323-1-ND
C100	1	CAP 180PF 50V CERM CHIP 0805 SMD NPO	Digi-Key	PCC181CGCT-ND
L3	1	INDUCTOR 1.0UH 5% 1210 SMD	Digi-Key	M8540CT-ND
L4, L5	2	INDUCTOR POWER 0.47UH 1210 HI-Q	Digi-Key	445-1515-1-ND
17m (15-30 MHz)				
C7, C101	2	CAP 180PF 50V CERM CHIP 0805 SMD NPO	Digi-Key	PCC181CGCT-ND
C100	1	CAP CERM 82PF 5% 50V NP0 0805	Digi-Key	478-1315-1-ND
L3	1	INDUCTOR POWER 0.33UH 1210 HI-Q	Digi-Key	445-1514-1-ND
L4, L5	2	INDUCTOR POWER 0.68UH 1210 HI-Q	Digi-Key	445-1516-1-ND

X-LPF Board

Designator	QTY	Description	Source	P/N
P1, P2, P3	3	Pinheader, 0.1", 1x2	Mouser	517-836-01-36
P4	1	Pinheader, 0.1", 1x3	Mouser	517-834-01-36
Shunt	1	Pinheader, 1x2 shunt	Mouser	517-951-00
	1	PCB		

SMT Card

80m				
C300, C302	2	CAP CER 390PF 50V C0G 0805	Digi-Key	478-1323-1-ND
C301	1	CAP 1000PF 50V CERM CHIP 0805 SMD NPO	Digi-Key	478-1328-1-ND
L300, L301	2	INDUCTOR 2.7UH 270MA 1210 10% HI-Q	Digi-Key	PCD1833CT-ND
30m				
C300, C302	2	CAP CER 100PF 50V C0G 0805	Digi-Key	478-1316-1-ND
C301	1	CAP 330PF 50V CERM CHIP 0805 SMD NPO	Digi-Key	478-1322-1-ND
L300, L301	2	INDUCTOR 1.0UH 270MA 1210 10% HI-Q	Digi-Key	M8540CT-ND

CABLES

Designator	QTY	Description	Source	P/N
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INTERNAL SOFTROCK CABLE HARNESSSES

Cable-1	1	DSP-to-I/O Cable		
J101, J102	2	CONN 40POS IDC SOCKET 10GOLD	Mouser	517-D89140-0031HK
Cable-2	1	ATTEN Cable		
J103, J104	2	Receptacle, 2x2, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
Cable-3	1	LINE-IN Cable		
J105	1	Receptacle, 2x2, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J106	1	Receptacle, 1x3, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
Cable-4	1	CLOCK Cable		
J107	1	Receptacle, 2x2, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J108	1	Receptacle, 1x3, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
Cable-5	1	LINE-OUT Cable		
J109	1	Receptacle, 2x2, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J110	1	Receptacle, 1x3, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
J116	1	Receptacle, 1x2, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
Cable-6	1	SOFTROCK POWER Cable		
J111	1	Receptacle, 1x2, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36

J112	1	Receptacle, 1x2, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
Cable-7	1	RF Cable		
J113, J117	2	Receptacle, 1x2, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
	0.5	Flat Cable .050 50C 10 COLOR 28AWG STRANDED	Mouser	517-3302/50
	18	Heat Shrink Tubing & Sleeves FP-301 1/8 X4' RED	Mouser	5174-1184
	32	Heat Shrink Tubing & Sleeves FP-301 1/8 X4' BL	Mouser	5174-1182

EXTERNAL SOFTROCK CABLE HARNESES

Cable-1 (wire)	1	DSP-to-I/O Cable		
J101, J102	2	CONN 40POS IDC SOCKET 10GOLD	Mouser	517-D89140-0031HK
Cable-8: (wire)	1	External Cable Harness		
J103	1	Receptacle, 2x4, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J105	1	Receptacle, 2x4, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J107	1	Receptacle, 2x4, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J109	1	Receptacle, 2x4, 0.1", cut from 20P 2ROW STRT SOCKET	Mouser	517-975-01-10
J111	1	Receptacle, 1x2, 0.1", cut from 36P 1ROW STRT SOCKET	Mouser	517-974-01-36
J115	1	D-style, 15p, female, panel mount	Mouser	523-G17S1500110EU
P117	1	D-style, 15p, male, cable mount	Mouser	523-G17S1510110EU
	1	D-style backshell, 15p	Mouser	523-17E-1725-1

ENC

Designator	QTY	Description	Source	P/N
ENC	1	Enclosure (Chassis, Sub-Chassis and Cover)	Ten-Tec	
FEET-Front	2	Rubber feet, 0.937" x 0.625"	Mouser	546-1421T7
FEET-rear	2	Rubber feet, 0.5" dia x 0.14"	Digi-Key	SJ5012-0-ND
	2	Screw, sheet metal, #4, 1/2" (FEET)	NAPPCO	1PPT/S004X050-A
	2	Washer, #2, flat (FEET)	NAPPCO	1FWC2*
	2	Machine screw, pan phillips, #4-40x3/16", (SUB-CHASSIS-REAR)	NAPPCO	1PPMS004C018
	2	Nut, #4 (SUB-CHASSIS-REAR)	NAPPCO	1HMSN004C
	2	Screw, sheet metal, #4, black, 1/4" (SUB-CHASSIS-BOTTOM)	NAPPCO	SPPT/S004x025ZBK-AB
	4	Machine screw, flat head, phillips, #4-40x3/16", black (cover)		
J114	1	BNC, panel mount	Mouser	523-31-221-RFX



Accessory Enclosure

Designator	QTY	Description	Source	P/N
ENC	1	Enclosure	Ten-Tec	
FEET-Front	2	Rubber feet, 0.937" x 0.625"	Mouser	546-1421T7
FEET-rear	2	Rubber feet, 0.5" dia x 0.14"	Digi-Key	SJ5012-0-ND
	2	Screw, sheet metal, #4, 1/2" (FEET)	NAPPCO	1PPT/S004X050-A
	2	Washer, #2, flat (FEET)	NAPPCO	1FWC2*

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