

Bill of Materials

LIGO Project

D070071

Revision A

Project: ChassisTimingInterface.PrjPCB

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Number of boards

4

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Quantity	Distributor	Part Number	Comment	Description	Designator	Footprint	Assembly Type	Quantity to Order
28	Digi-Key	478-1395-1-ND	100n	Capacitor, surface mount	C1, C2, C5, C6, C8, C9, C10, C11, C12, C13, C14, C18, C19, C20, C23, C25, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C56, C95	CC2013-0805		120
8	Digi-Key	490-1709-1-ND	10u	Capacitor, surface mount	C3, C4, C75, C94, C104, C113, C122, C131	CC2013-0805		40
5	Digi-Key	490-1642-1-ND	10n	Capacitor, surface mount	C7, C24, C52, C54, C76	CC2013-0805		30
1	Digi-Key	311-1111-1-ND	100p	Capacitor, surface mount	C15	CC2013-0805		10
1	Digi-Key	490-3328-1-ND	470n	Capacitor, surface mount	C16	CC2013-0805		10
0	None		NL	Capacitor, surface mount, Resistor, surface mount	C17, C26, R18, R27	CC2013-0805, CR201		
2	Digi-Key	311-1122-1-ND	1n	Capacitor, surface mount	C21, C22	CC2013-0805		20
3	Digi-Key	399-4131-1-ND	1m	Tantalum capacitor, surface mount	C37, C48, C51	TC7343-2917		20
2	Digi-Key	PCC2332CT-ND	22u	Capacitor, surface mount	C38, C49	CC3216-1206		20
3	Digi-Key	PCC2319CT-ND	1u	Capacitor, surface mount	C39, C50, C53	CC2013-0805		20
4	Digi-Key	399-4138-1-ND	680u	Tantalum capacitor, surface mount	C40, C41, C42, C43	TC7343-2917		30
1	Digi-Key	311-1179-1-ND	100n	Capacitor, surface mount	C44	CC3216-1206		10
1	Digi-Key	PCC2333CT-ND	22u	Capacitor, surface mount	C45	CC3225-1210		10
1	Digi-Key	490-4539-1-ND	100u	Capacitor, surface mount	C46	CC3216-1206		10
1	Digi-Key	PCE3506CT-ND	3.3m	Electrolyte capacitor, surface mount	C47	AC190-075/K		10
2	Digi-Key	399-3827-1-ND	22u	Tantalum capacitor, surface mount	C55, C77	TC3216-1206		20
1	Digi-Key	399-3908-1-ND	68u	Tantalum capacitor, surface mount	C57	TC7343-2917		10
32	Digi-Key	PCC1721CT-ND	1n	Capacitor, surface mount	C58, C59, C60, C61, C67, C68, C69, C70, C78, C79, C80, C81, C82, C83, C84, C85, C96, C97, C98, C99, C105, C106, C107, C108, C114, C115, C116, C117, C123, C124, C125, C126	CC1005-0402		140
16	Digi-Key	399-3066-1-ND	10n	Capacitor, surface mount	C62, C63, C71, C72, C86, C87, C88, C89, C100, C101, C109, C110, C118, C119, C127, C128	CC1005-0402		70
11	Digi-Key	587-1456-1-ND	100n	Capacitor, surface mount	C64, C65, C73, C74, C90, C91, C92, C102, C111, C120, C129	CC1005-0402		50
6	Digi-Key	PCC2354CT-ND	1u	Capacitor, surface mount	C66, C93, C103, C112, C121, C130	CC1608-0603		30
2	Digi-Key	67-1270-ND	LED	Panel mount LED	DS1, DS3	LED-2	TH	9
1	Digi-Key	67-1553-1-ND	LED	Panel mount LED	DS2	LED-0805		9
1	Digi-Key	WM1633CT-ND, WM1634-ND	AFBR-5710	fiber optic transceiver, 1.25GB/s, MM, LC, SFP	J1	MSA/SFP2x10		9
2	Coilcraft	1008LS-102XJLB	1uH	Inductor	L1, L2	CL2520-1008		13
1	Coilcraft	MVR1251T-561MLB	560nH	Power inductor. MVR series	L3	MVR1251		9
2	Digi-Key	A31171-ND	Header 13X2	Header, 13-Pin, Dual row	P1, P2	HDR2X13	TH	9
1	Digi-Key	A31169-ND	Header 8X2	Header, 8-Pin, Dual row	P3	HDR2X8	TH	5
1	Digi-Key	A31134-ND	Header 5X2	Header, 5-Pin, Dual row	P4	HDR2X5	TH	5
1	Digi-Key	WM17469-ND	2mm Header 2x7	Xilinx JTAG header, 7-Pin, Dual row	P5	2MM_HDR2X7	TH	5

1	Digi-Key	281-1279-ND, 281-1243-ND	TBlock_5.08_2	Terminal block, 5.08mm, 2-Pin	P6	TBLOCK-5.08-2	TH	5
3	Digi-Key	FDV301NCT-ND	FDV301N	FDV301N, Digital FET, N-channel, SOT23	Q1, Q2, Q3	SO-G3/C2.25		17
1	Digi-Key	311-0.0ERCT-ND	0	Resistor, surface mount	R1	CR3216-1206		10
2	Digi-Key	RR12Q10DCT-ND	10	Resistor, surface mount	R2, R7	CR2012-0805		20
2	Digi-Key	RR12P4.7KDCT-ND	4.7K	Resistor, surface mount	R3, R39	CR2012-0805		20
4	Digi-Key	RR12P100DCT-ND	100	Resistor, surface mount	R4, R33, R34, R40	CR2012-0805		30
3	Digi-Key	742C083472JPTR	Resistor Array	Resistor Network, parallel, 4 resistors	R5, R36, R38	RES8-0.8		20
1	Digi-Key	742C043472JCT-ND	Resistor Array	Resistor Network, parallel, 2 resistors	R6	RES4-0.8		10
4	Digi-Key	RR12Q49.9DCT-ND	49.9	Resistor, surface mount	R8, R10, R24, R25	CR2012-0805		30
1	Digi-Key	RR12P22.0KDCT-ND	22K	Resistor, surface mount	R9	CR2012-0805		10
2	Digi-Key	311-402CRCT-ND	402	Resistor, surface mount	R11, R12	CR2012-0805		20
2	Digi-Key	RR12P30.0KBCT-ND	30K	Resistor, surface mount	R13, R31	CR2012-0805		20
4	Digi-Key	RR12P10.0KBCT-ND	10K	Resistor, surface mount	R14, R15, R29, R30	CR2012-0805		30
1	Digi-Key	RR12P11.3KBCT-ND	11.3K	Resistor, surface mount	R16	CR2012-0805		10
1	Digi-Key	RR12P1.62KBCT-ND	1.62K	Resistor, surface mount	R17	CR2012-0805		10
1	Digi-Key	RR12P2.0KBCT-ND	2.0K	Resistor, surface mount	R19	CR2012-0805		10
1	Digi-Key	RR12P8.06KDCT-ND	8.06K	Resistor, surface mount	R20	CR2012-0805		10
1	Digi-Key	RR12P8.2KBCT-ND	8.2K	Resistor, surface mount	R21	CR2012-0805		10
2	Digi-Key	RR12P470DCT-ND	470	Resistor, surface mount	R22, R23	CR2012-0805		20
1	Digi-Key	RR12P820DCT-ND	820	Resistor, surface mount	R26	CR2012-0805		10
1	Digi-Key	RR12P1.3KDCT-ND	1.3K	Resistor, surface mount	R28	CR2012-0805		10
1	Digi-Key	RR12P220DCT-ND	220	Resistor, surface mount	R32	CR2012-0805		10
1	Digi-Key	RR12P330DCT-ND	330	Resistor, surface mount	R35	CR2012-0805		10
1	Digi-Key	742C083103JCT-ND	Resistor Array	Resistor Network, parallel, 4 resistors	R37	RES8-0.8		10
1	Digi-Key	RR12P51.1KDCT-ND	51.1K	Resistor, surface mount	R41	CR2012-0805		10
1	Digi-Key	RR12P1.21KBCT-ND	1.21K	Resistor, surface mount	R42	CR2012-0805		10
1	Digi-Key	RR12P7.15KBCT-ND	7.15K	Resistor, surface mount	R43	CR2012-0805		10
1	Digi-Key	RR12P1.0KBCT-ND	1.00K	Resistor, surface mount	R44	CR2012-0805		10
1	Digi-Key	SW262CT-ND	B3SN-3112P	Switch, SMD, 6mm	S1	SW_SMD_6MM		9
1	Digi-Key	450-1343-ND	SW DIP-8	DIP Switch, 8 Position, SPST	S2	DIP_SW_8WAY_SMD		9
2	Digi-Key	5009K-ND	Testpoint	Testpoint, yellow	TP1, TP2	TP1	TH	9
7	Digi-Key	5005K-ND	Testpoint	Testpoint, red	TP3, TP4, TP5, TP6, TP7, TP8, TP11	TP1	TH	29
2	Digi-Key	5006K-ND	Testpoint	Testpoint, black	TP9, TP10	TP1	TH	9
1	Digi-Key	122-1481-ND	XC3S1600E-4FG320C	Spartan-3E 1.2V FPGA, 250 User I/Os, 320-Ball FBGA, Standard Performance, Commercial Grade	U1	FG320	BGA	5
2	Digi-Key	296-13624-5-ND	SN65LVDS100D	DIFF TRANSLATOR	U2, U5	SO-G8		13
1	Digi-Key	296-15391-5-ND	SN65LVDT101D	DIFF TRANSLATOR	U3	SO-G8		9
3	Digi-Key	296-6896-1-ND	SN65LVDT2	Single LVDS Receiver with 100 Ohm termination	U4, U10, U14	SO-G5/E2.4		17
1	Digi-Key	296-1240-5-ND	74LVC74D	Dual D-Type Positive Edge-Triggered Flip-Flop	U6	SO-G14		9
1	Vectron	VC-401-CRFC-205G	2*25Hz VCXO	Voltage controlled crystal oscillator	U7	VC-401-CFC-205G	TH	5
1	Digi-Key	OP284ESZ-ND	OP284ES	Precision Rail-to-Rail Input and Output Operational Amplifier	U8	SO-G8		9
1	Digi-Key	296-9845-1-ND	SN74LVC1G00	SN74LVC1G00	U9	SO-G5/E2.4		9
1	Digi-Key	122-1454-5-ND	XCF08PVOG48C	XCF00P Series, Platform Flash In-System Programmable Configuration 1.8V PROM, 48-Pin TSSOP, Pb-Free, 8-Megabit, Commercial Grade	U11	VOG48	FP	5
1	Digi-Key	296-8521-1-ND	SN74LVC541APW	Octal Buffer/Driver with 3-State Outputs	U12	PW020		9
1	Digi-Key	LT1963AEQ#PBF-ND	LT1963A	5 Terminal positive LDO regulator, 1.5A	U13	TO-263		9

1	Mouser	595-PTH08T240WAS	PTH08T240W	Adjustable power module, 10A, 4.5V to 14V input, non-isolated	U15	PTH08T240W		9
1	Digi-Key	LT1963AEQ-1.5#PBF-ND	LT1963A-2.5	5 Terminal positive LDO regulator, 1.5A	U16	TO-263		9
1	Digi-Key	LT1763CS8-1.8-ND	LT1763-1.8	Positive voltage regulator	U17	SO-G8		9
1	Digi-Key	LT1763CS8-5-ND	LT1763-5	Positive voltage regulator	U18	SO-G8		9
1	Digi-Key	LT1763CS8#PBF-ND	LT1763	Positive voltage regulator	U19	SO-G8		9
219	Total pieces							

Summary per Board	
Total # of unique parts	79
SMT Placements per board	197
Thru-Hole placement per board	20
Fine pitch placement per board	1
BGA placement per board	1