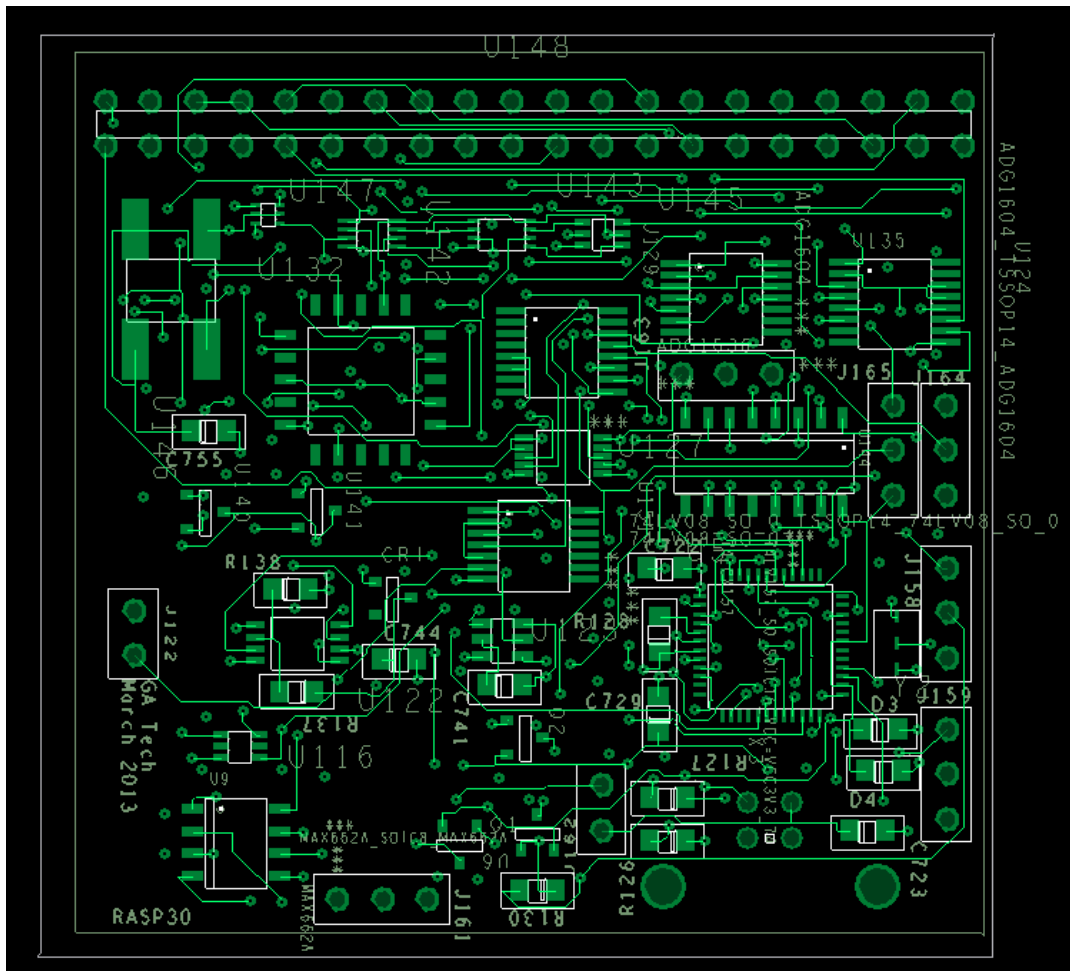


RASP30 Control Board (Rev1)



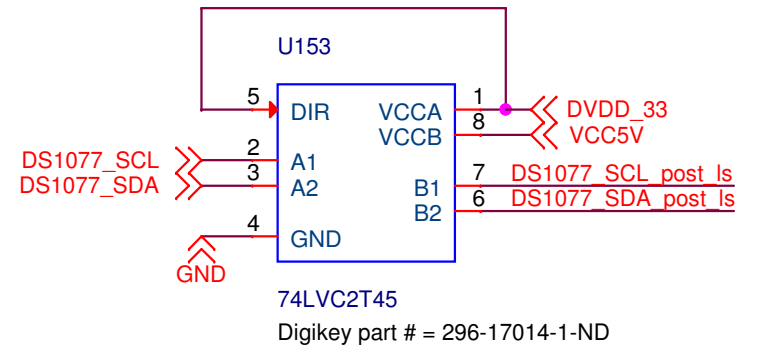
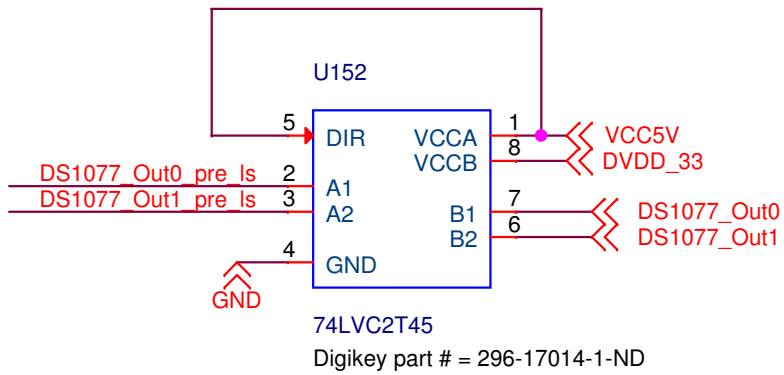
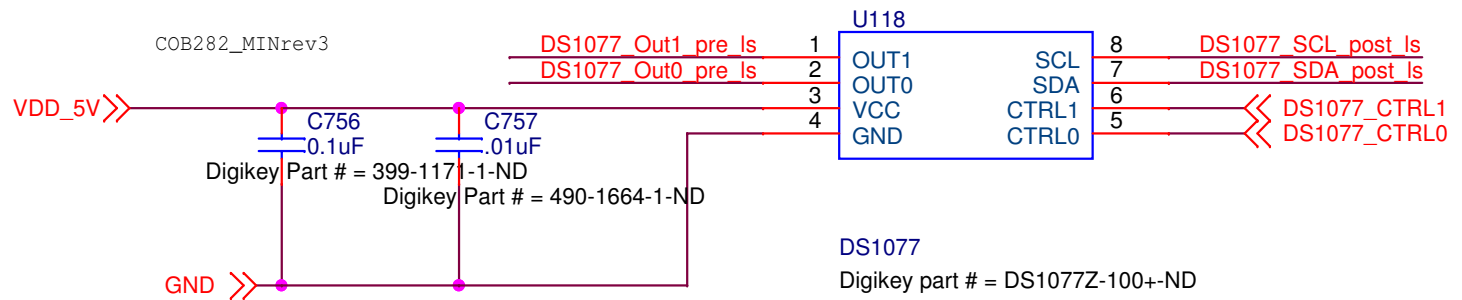
Allegro Schematic:

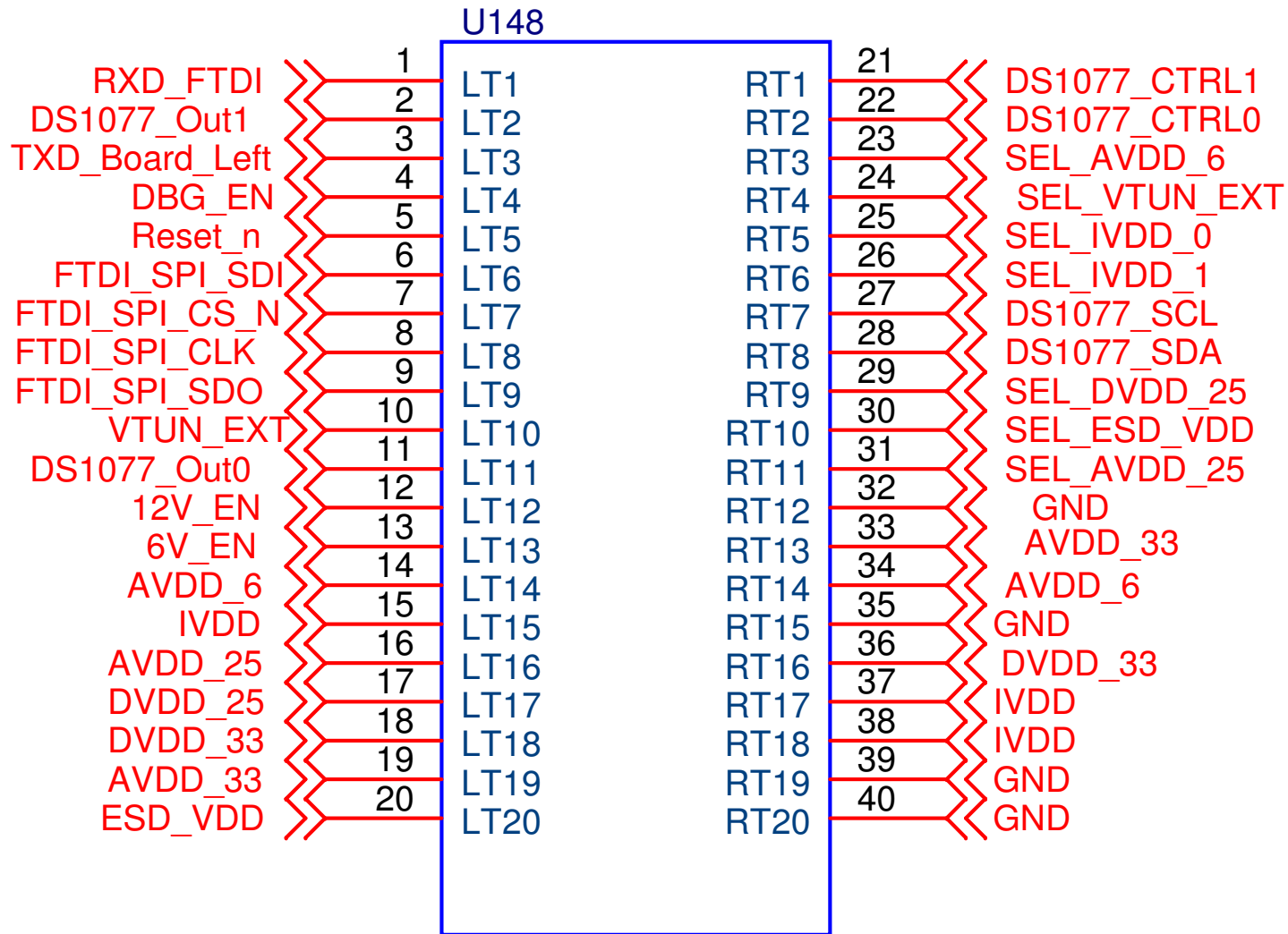
rasp30_control_board.opj

Allegro PCB:

rasp30_control_board_rev27_route1.brd

(technically, the panelized version: rasp30_control_board_rev27_route1_db12.brd)



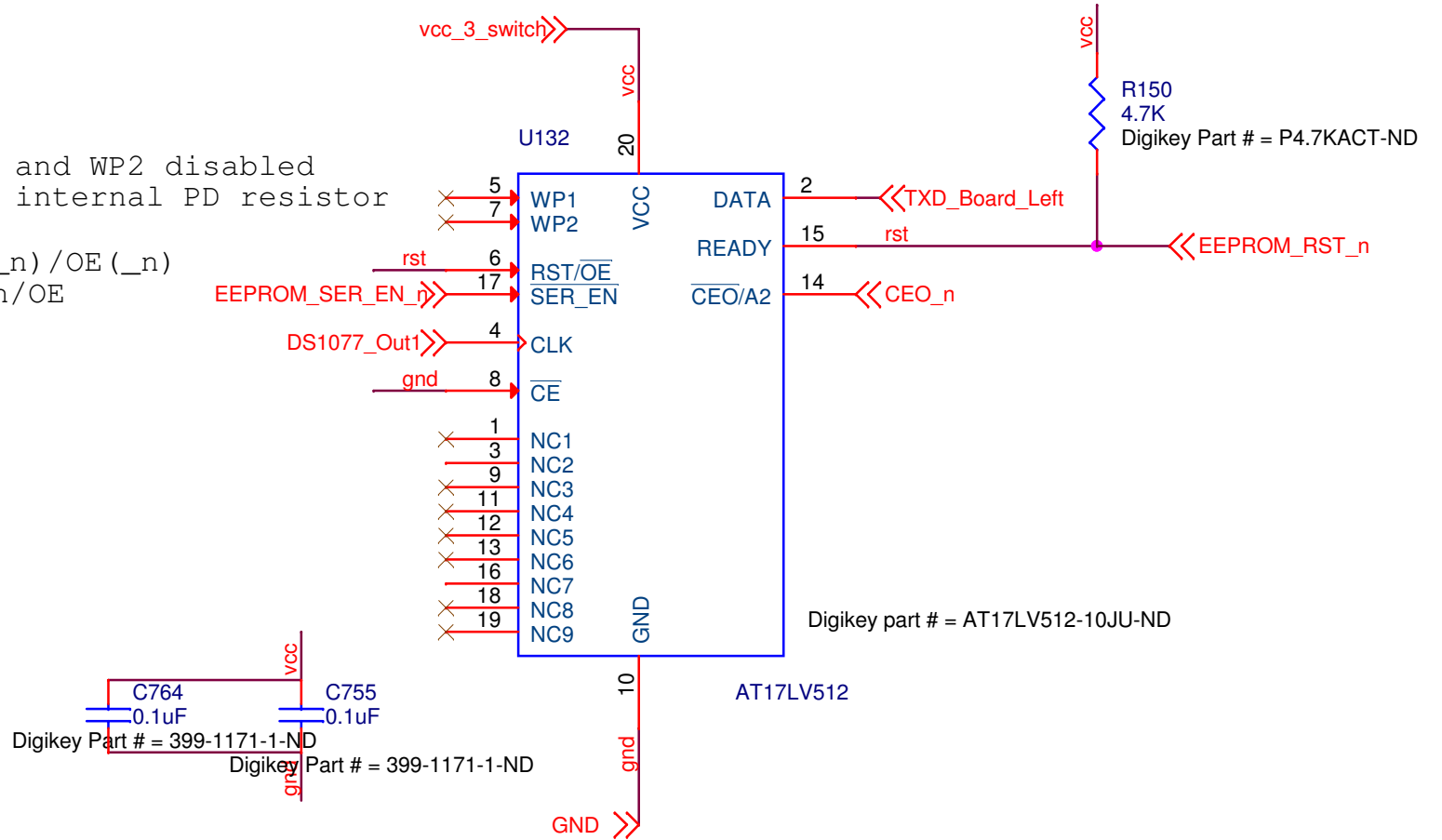


Connector

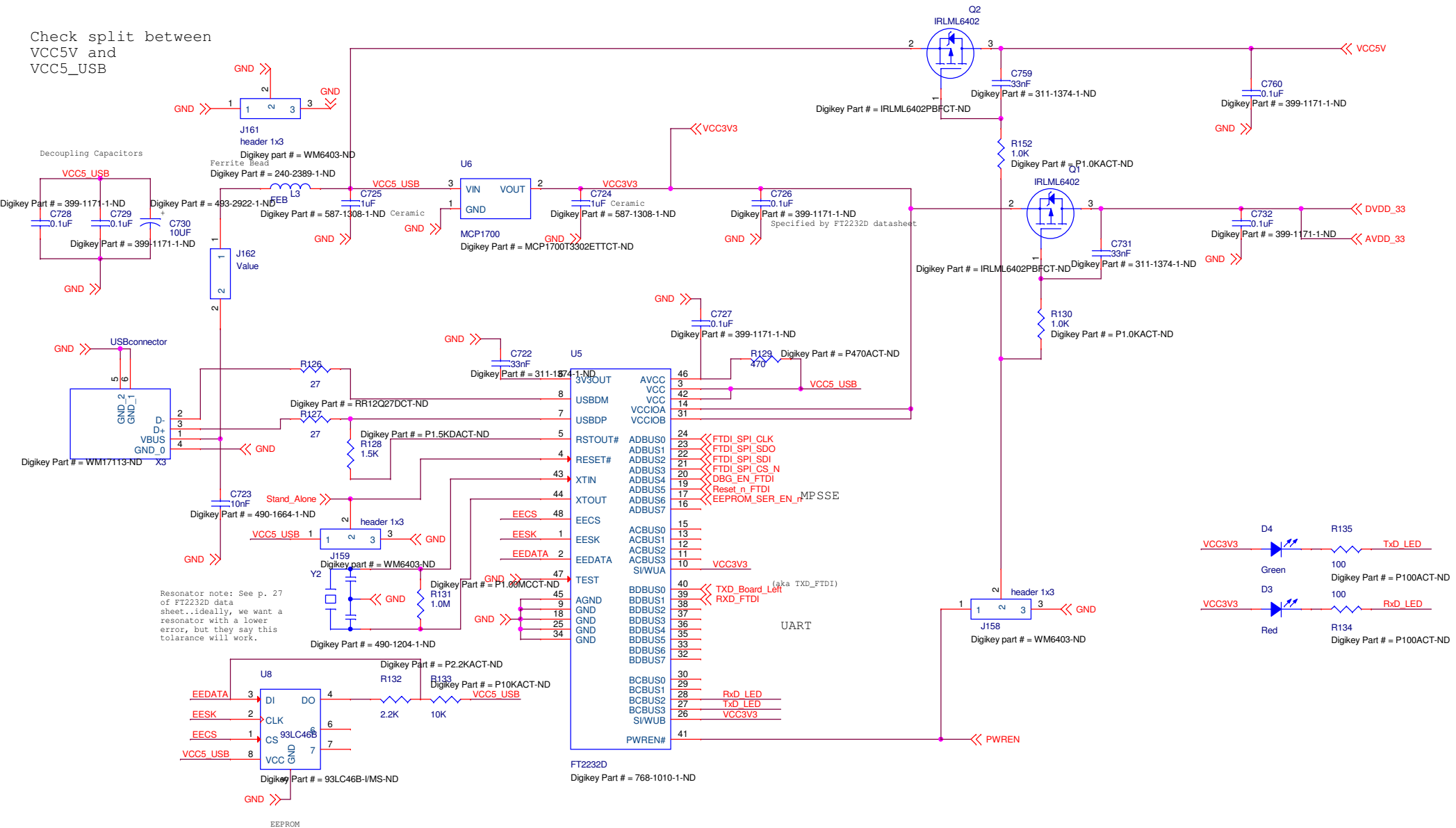
Digikey part # = S5573-ND

WP1 and WP2 disabled
via internal PD resistor

Need to configure RST(_n)/OE(_n)
with the polarity RST_n/OE

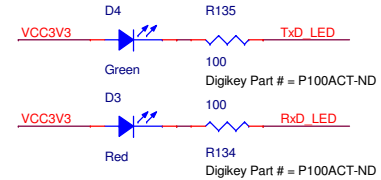


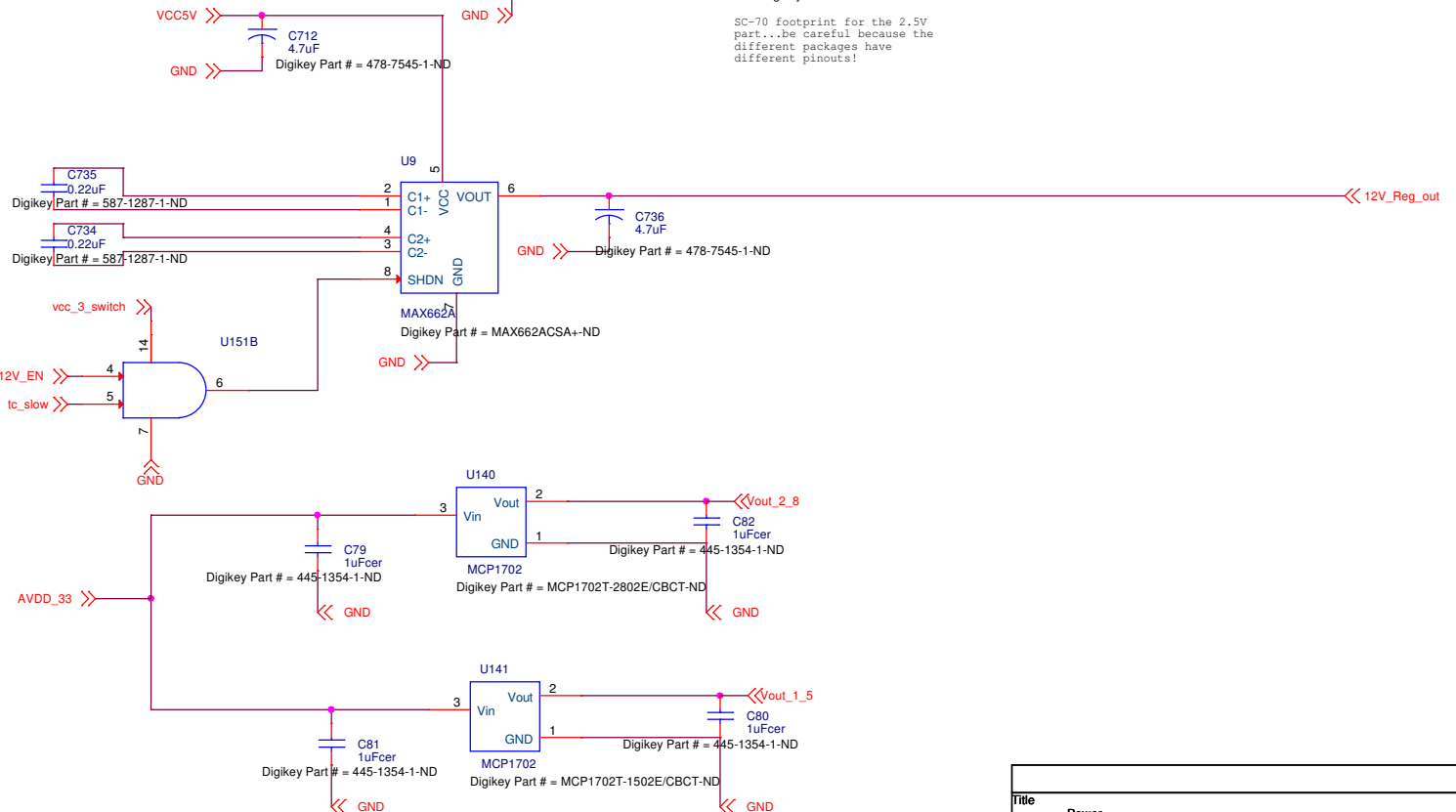
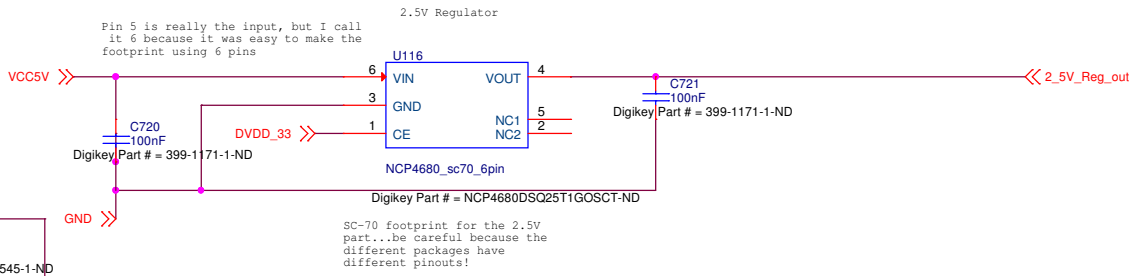
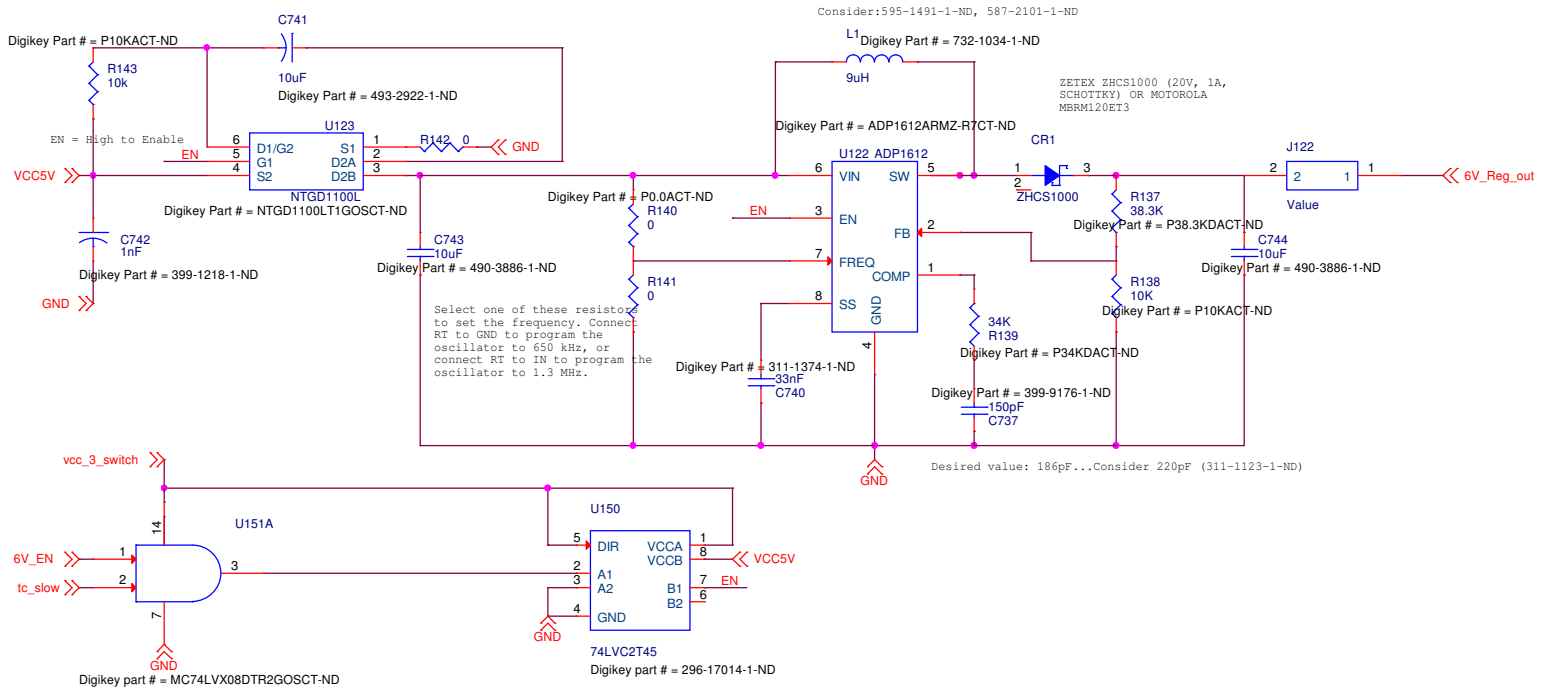
Check split between VCC5V and VCC5_USB



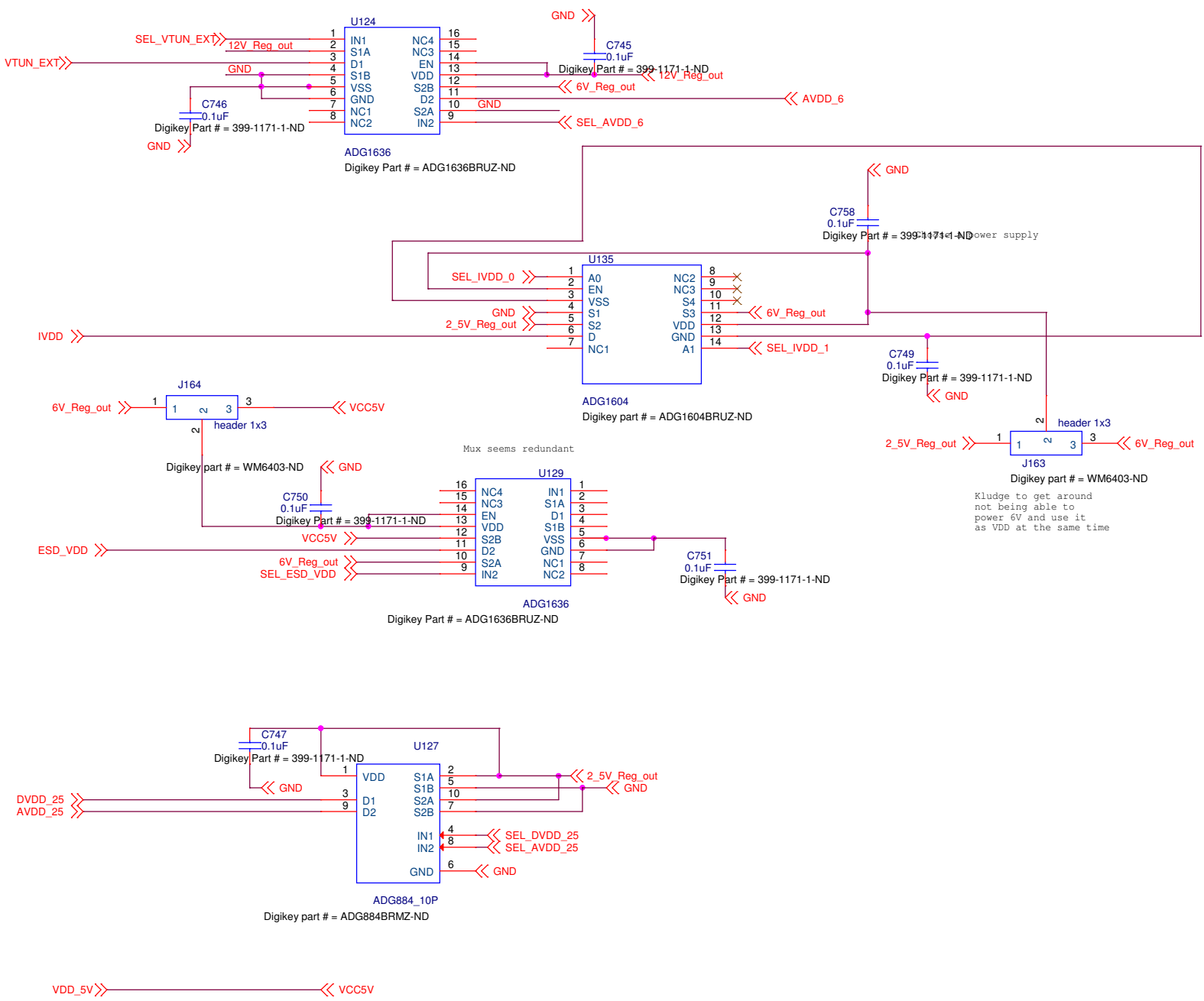
Resonator note: See p. 27 of FT232D data sheet...ideally, we want a resonator with a lower error, but they say this tolerance will work.

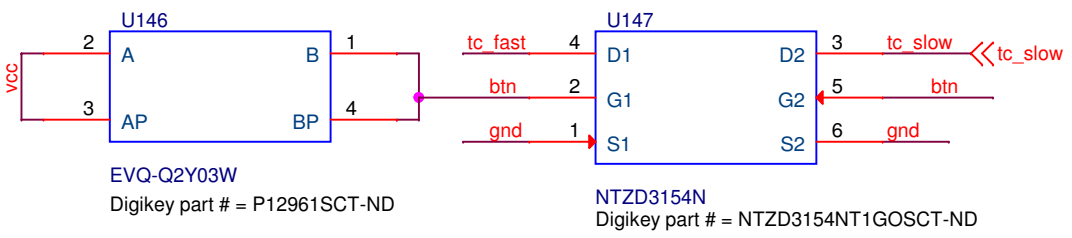
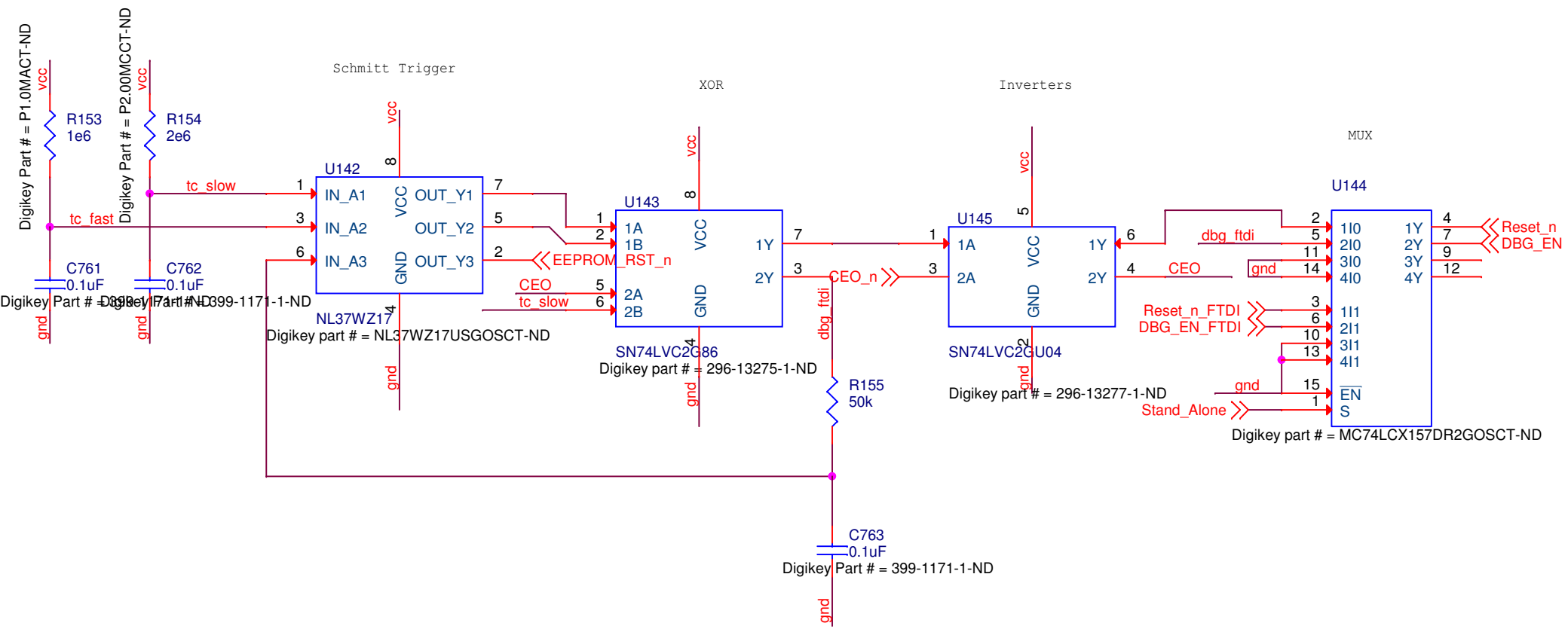
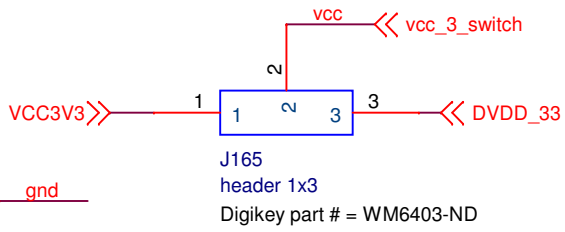
EEPROM





Title	Power





	Reference	Value	Digikey Part #
SCHEMATIC1 : Clock : C756	C756	0.1uF	399-1171-1-ND
SCHEMATIC1 : Clock : C757	C757	.01uF	490-1664-1-ND
SCHEMATIC1 : Clock : U118	U118	DS1077	DS1077Z-100+-ND
SCHEMATIC1 : Clock : U152	U152	74LVC2T45	296-17014-1-ND
SCHEMATIC1 : Clock : U153	U153	74LVC2T45	296-17014-1-ND
SCHEMATIC1 : Connections : U148	U148	Connector	S5573-ND
SCHEMATIC1 : EEPROM : C755	C755	0.1uF	399-1171-1-ND
SCHEMATIC1 : EEPROM : C764	C764	0.1uF	399-1171-1-ND
SCHEMATIC1 : EEPROM : R150	R150	4.7K	P4.7KACT-ND
SCHEMATIC1 : EEPROM : U132	U132	AT17LV512	AT17LV512-10JU-ND
SCHEMATIC1 : FTDI_FT2232D : C722	C722	33nF	311-1374-1-ND
SCHEMATIC1 : FTDI_FT2232D : C723	C723	10nF	490-1664-1-ND
SCHEMATIC1 : FTDI_FT2232D : C724	C724	1uF	587-1308-1-ND
SCHEMATIC1 : FTDI_FT2232D : C725	C725	1uF	587-1308-1-ND
SCHEMATIC1 : FTDI_FT2232D : C726	C726	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : C727	C727	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : C728	C728	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : C729	C729	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : C730	C730	10UF	493-2922-1-ND
SCHEMATIC1 : FTDI_FT2232D : C731	C731	33nF	311-1374-1-ND
SCHEMATIC1 : FTDI_FT2232D : C732	C732	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : C759	C759	33nF	311-1374-1-ND
SCHEMATIC1 : FTDI_FT2232D : C760	C760	0.1uF	399-1171-1-ND
SCHEMATIC1 : FTDI_FT2232D : D3	D3	Red	475-1415-1-ND
SCHEMATIC1 : FTDI_FT2232D : D4	D4	Green	475-1410-1-ND
SCHEMATIC1 : FTDI_FT2232D : J158	J158	header 1x3	WM6403-ND
SCHEMATIC1 : FTDI_FT2232D : J159	J159	header 1x3	WM6403-ND
SCHEMATIC1 : FTDI_FT2232D : J161	J161	header 1x3	WM6403-ND
SCHEMATIC1 : FTDI_FT2232D : J162	J162	header 1x2	WM6402-ND
SCHEMATIC1 : FTDI_FT2232D : L3	L3	FEB	240-2389-1-ND
SCHEMATIC1 : FTDI_FT2232D : Q1	Q1	IRLML6402	IRLML6402PBFCT-ND
SCHEMATIC1 : FTDI_FT2232D : Q2	Q2	IRLML6402	IRLML6402PBFCT-ND
SCHEMATIC1 : FTDI_FT2232D : R126	R126	27	RR12Q27DCT-ND

SCHEMATIC1 : FTDI_FT2232D : R127	R127	27	RR12Q27DCT-ND
SCHEMATIC1 : FTDI_FT2232D : R128	R128	1.5K	P1.5KDACT-ND
SCHEMATIC1 : FTDI_FT2232D : R129	R129	470	P470ACT-ND
SCHEMATIC1 : FTDI_FT2232D : R130	R130	1.0K	P1.0KACT-ND
SCHEMATIC1 : FTDI_FT2232D : R131	R131	1.0M	P1.00MCCT-ND
SCHEMATIC1 : FTDI_FT2232D : R132	R132	2.2K	P2.2KACT-ND
SCHEMATIC1 : FTDI_FT2232D : R133	R133	10K	P10KACT-ND
SCHEMATIC1 : FTDI_FT2232D : R134	R134	100	P100ACT-ND
SCHEMATIC1 : FTDI_FT2232D : R135	R135	100	P100ACT-ND
SCHEMATIC1 : FTDI_FT2232D : R152	R152	1.0K	P1.0KACT-ND
SCHEMATIC1 : FTDI_FT2232D : U5	U5	FT2232D	768-1010-1-ND
SCHEMATIC1 : FTDI_FT2232D : U6	U6	MCP1700	MCP1700T3302ETTCT-ND
SCHEMATIC1 : FTDI_FT2232D : U8	U8	93LC46B	93LC46B-I/MS-ND
SCHEMATIC1 : FTDI_FT2232D : X3	X3	USBconnector	WM17113-ND
SCHEMATIC1 : FTDI_FT2232D : Y2	Y2	CST6.00MGW	490-1204-1-ND
SCHEMATIC1 : Power : C79	C79	1uFcer	445-1354-1-ND
SCHEMATIC1 : Power : C80	C80	1uFcer	445-1354-1-ND
SCHEMATIC1 : Power : C81	C81	1uFcer	445-1354-1-ND
SCHEMATIC1 : Power : C82	C82	1uFcer	445-1354-1-ND
SCHEMATIC1 : Power : C712	C712	4.7uF	478-7545-1-ND
SCHEMATIC1 : Power : C720	C720	100nF	399-1171-1-ND
SCHEMATIC1 : Power : C721	C721	100nF	399-1171-1-ND
SCHEMATIC1 : Power : C734	C734	0.22uF	587-1287-1-ND
SCHEMATIC1 : Power : C735	C735	0.22uF	587-1287-1-ND
SCHEMATIC1 : Power : C736	C736	4.7uF	478-7545-1-ND
SCHEMATIC1 : Power : C737	C737	150pF	399-9176-1-ND
SCHEMATIC1 : Power : C740	C740	33nF	311-1374-1-ND
SCHEMATIC1 : Power : C741	C741	10uF	493-2922-1-ND
SCHEMATIC1 : Power : C742	C742	1nF	399-1218-1-ND
SCHEMATIC1 : Power : C743	C743	10uF	490-3886-1-ND
SCHEMATIC1 : Power : C744	C744	10uF	490-3886-1-ND
SCHEMATIC1 : Power : CR1	CR1	ZHCS1000	ZHCS1000CT-ND
SCHEMATIC1 : Power : J122	J122	header 1x2	WM6402-ND
SCHEMATIC1 : Power : L1	L1	9uH	732-1034-1-ND

SCHEMATIC1 : Power : R137	R137	38.3K	P38.3KDACT-ND
SCHEMATIC1 : Power : R138	R138	10K	P10KACT-ND
SCHEMATIC1 : Power : R139	R139	34K	P34KDACT-ND
SCHEMATIC1 : Power : R140	R140	0	P0.0ACT-ND
SCHEMATIC1 : Power : R141	R141	0	P0.0ACT-ND
SCHEMATIC1 : Power : R142	R142	0	P0.0ACT-ND
SCHEMATIC1 : Power : R143	R143	10k	P10KACT-ND
SCHEMATIC1 : Power : U9	U9	MAX662A	MAX662ACSA+-ND
SCHEMATIC1 : Power : U116	U116	NCP4680_sc70_6pi	NCP4680DSQ25T1GOSCT-ND
SCHEMATIC1 : Power : U122	U122	ADP1612	ADP1612ARMZ-R7CT-ND
SCHEMATIC1 : Power : U123	U123	NTGD1100L	NTGD1100LT1GOSCT-ND
SCHEMATIC1 : Power : U140	U140	MCP1702	MCP1702T-2802E/CBCT-ND
SCHEMATIC1 : Power : U141	U141	MCP1702	MCP1702T-1502E/CBCT-ND
SCHEMATIC1 : Power : U150	U150	74LVC2T45	296-17014-1-ND
SCHEMATIC1 : Power : U151	U151	74LV08_SO_0	MC74LVX08DTR2GOSCT-ND
SCHEMATIC1 : Power_Switching : C745	C745	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C746	C746	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C747	C747	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C749	C749	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C750	C750	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C751	C751	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : C758	C758	0.1uF	399-1171-1-ND
SCHEMATIC1 : Power_Switching : J163	J163	header 1x3	WM6403-ND
SCHEMATIC1 : Power_Switching : J164	J164	header 1x3	WM6403-ND
SCHEMATIC1 : Power_Switching : U124	U124	ADG1636	ADG1636BRUZ-ND
SCHEMATIC1 : Power_Switching : U127	U127	ADG884_10P	ADG884BRMZ-ND
SCHEMATIC1 : Power_Switching : U129	U129	ADG1636	ADG1636BRUZ-ND
SCHEMATIC1 : Power_Switching : U135	U135	ADG1604	ADG1604BRUZ-ND
SCHEMATIC1 : Startup_Circuitry : C761	C761	0.1uF	399-1171-1-ND
SCHEMATIC1 : Startup_Circuitry : C762	C762	0.1uF	399-1171-1-ND
SCHEMATIC1 : Startup_Circuitry : C763	C763	0.1uF	399-1171-1-ND
SCHEMATIC1 : Startup_Circuitry : J165	J165	header 1x3	WM6403-ND
SCHEMATIC1 : Startup_Circuitry : R153	R153	1.00E+06	P1.0MACT-ND
SCHEMATIC1 : Startup_Circuitry : R154	R154	2.00E+06	P2.00MCCT-ND

SCHEMATIC1 : Startup_Circuitry : R155	R155	50k	P49.9KCCT-ND
SCHEMATIC1 : Startup_Circuitry : U142	U142	NL37WZ17	NL37WZ17USGOSCT-ND
SCHEMATIC1 : Startup_Circuitry : U143	U143	SN74LVC2G86	296-13275-1-ND
SCHEMATIC1 : Startup_Circuitry : U144	U144	74LCX157	MC74LCX157DR2GOSCT-ND
SCHEMATIC1 : Startup_Circuitry : U145	U145	SN74LVC2GU04	296-13277-1-ND
SCHEMATIC1 : Startup_Circuitry : U146	U146	EVQ-Q2Y03W	P12961SCT-ND
SCHEMATIC1 : Startup_Circuitry : U147	U147	NTZD3154N	NTZD3154NT1GOSCT-ND
SCHEMATIC1 : Power : C737b	C737b	220pF	311-1123-1-ND
SCHEMATIC1 : Power : L1b	L1b	6uH	587-2101-1-ND
SCHEMATIC1 : Power : L1c	L1c	6uH	595-1491-1-ND





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Click on the **Part Number** to **MODIFY** or **DELETE** an item from your order.

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Index	Quantity	Part Number	Description	Customer Reference	Available Quantity	Backorder Quantity	Unit Price	Extended Price
1	63	WM6402-ND	CONN HEADER 2POS .100 VERT TIN	['J162', 'J122']	0 Immediate	63 Value Add	0.25100	\$15.81
2	32	MC74LVX08DTR2GOSCT-ND	IC GATE AND QUAD 2INPUT 14-TSSOP	['U151']	32 Immediate	0	0.33200	\$10.62
3	32	93LC46B-1/MS-ND	IC EEPROM 1KBIT 2MHZ 8MSOP	['U8']	32 Immediate	0	0.25000	\$8.00
4	32	P49.9KCCT-ND	RES 49.9K OHM 1/8W 1% 0805 SMD	['R155']	32 Immediate	0	0.10000	\$3.20
5	63	P1.0KACT-ND	RES 1.0K OHM 1/8W 5% 0805 SMD	['R152', 'R130']	63 Immediate	0	0.01620	\$1.02
6	32	MAX662ACSA+-ND	IC REG BST SWITCHD CAP 12V 8SOIC	['U9']	32 Immediate	0	3.70000	\$118.40
7	31	768-1010-1-ND	IC USB FS DUAL UART/FIFO 48-LQFP	['U5']	31 Immediate	0	6.28000	\$194.68
8	70	P100ACT-ND	RES 100 OHM 1/8W 5% 0805 SMD	['R135', 'R134']	70 Immediate	0	0.01620	\$1.13
9	32	S5573-ND	CONN FEMALE 40POS DL .1" R/A GOLD	['U148']	32 Immediate	0	2.30360	\$73.72
10	32	P1.0MACT-ND	RES 1.0M OHM 1/8W 5% 0805 SMD	['R153']	32 Immediate	0	0.10000	\$3.20
11	100	P0.0ACT-ND	RES 0.0 OHM 1/8W 0805 SMD	['R142', 'R140', 'R141']	100 Immediate	0	0.01310	\$1.31
12	40	P1.5KDACT-ND	RES 1.5K OHM 1/8W .1% 0805 SMD	['R128']	40 Immediate	0	0.63000	\$25.20
13	32	ADP1612ARMZ-R7CT-ND	IC REG BST SEPIC ADJ 1.4A 8MSOP	['U122']	32 Immediate	0	1.81120	\$57.96
14	32	NCP4680DSQ25T1GOSCT-ND	IC REG LDO 2.5V .15A SC-70	['U116']	32 Immediate	0	0.55040	\$17.61
15	32	DS1077Z-100+-ND	IC ECONOSCILLATOR 100MHZ 8SOIC	['U118']	32 Immediate	0	2.31000	\$73.92
16	94	296-17014-1-ND	IC BUS TRANSCVR 2B N-INV 8VSSOP	['U153', 'U152', 'U150']	94 Immediate	0	0.57440	\$53.99
17	63	IRLML6402PBFCT-ND	MOSFET P-CH 20V 3.7A SOT-23	['Q2', 'Q1']	63 Immediate	0	0.24040	\$15.15

All prices are in US dollars.

Index	Quantity	Part Number	Description	Customer Reference	Available Quantity	Backorder Quantity	Unit Price	Extended Price
18	32	MCP1702T-1502E/CBCT-ND	IC REG LDO 1.5V 50MA SOT23A-3	['U141']	32 Immediate	0	0.40000	\$12.80
19	63	587-1287-1-ND	CAP CER 0.22UF 50V 10% X7R 0805	['C734', 'C735']	63 Immediate	0	0.04780	\$3.01
20	32	475-1410-1-ND	LED CHIPLD 570NM GREEN 0805 SMD	['D4']	32 Immediate	0	0.06800	\$2.18
21	32	NTZD3154NT1GOSCT-ND	MOSFET 2N-CH 20V 540MA SOT-563	['U147']	32 Immediate	0	0.28840	\$9.23
22	189	WM6403-ND	CONN HEADER 3POS .100 VERT TIN	['J161', 'J158', 'J159', 'J163', 'J164', 'J165']	0 Immediate	189 Value Add	0.22100	\$41.77
23	31	ADG1604BRUZ-ND	IC MULTIPLEXER 4X1 14TSSOP	['U135']	31 Immediate	0	4.36500	\$135.32
24	63	493-2922-1-ND	CAP TANT 10UF 10V 20% 0805	['C741', 'C730']	63 Immediate	0	0.94900	\$59.79
25	63	478-7545-1-ND	CAP TANT 4.7UF 16V 10% 0805	['C712', 'C736']	63 Immediate	0	0.95900	\$60.42
26	126	311-1374-1-ND	CAP CER 0.033UF 50V 10% X7R 0805	['C759', 'C740', 'C731', 'C722']	126 Immediate	0	0.03180	\$4.01
27	32	490-1204-1-ND	CER RESONATOR 6.00MHZ SMD	['Y2']	32 Immediate	0	0.33700	\$10.78
28	63	490-3886-1-ND	CAP CER 10UF 16V 10% X5R 0805	['C744', 'C743']	63 Immediate	0	0.14080	\$8.87
29	32	MCP1700T3302ETTCT-ND	IC REG LDO 3.3V .25A SOT23-3	['U6']	32 Immediate	0	0.31000	\$9.92
30	63	587-1308-1-ND	CAP CER 1UF 50V Y5V 0805	['C725', 'C724']	63 Immediate	0	0.04480	\$2.82
31	32	MC74LCX157DR2GOSCT-ND	IC MUX QUAD 2INPUT LV 16-SOIC	['U144']	32 Immediate	0	0.32120	\$10.28
32	32	P2.00MCCT-ND	RES 2.00M OHM 1/8W 1% 0805 SMD	['R154']	32 Immediate	0	0.10000	\$3.20
33	32	P470ACT-ND	RES 470 OHM 1/8W 5% 0805 SMD	['R129']	32 Immediate	0	0.10000	\$3.20
34	32	311-1123-1-ND	CAP CER 220PF 50V 10% X7R 0805	['C737b']	32 Immediate	0	0.03560	\$1.14
35	3	587-2101-1-ND	INDUCTOR 6.0UH 2.5A 20% SMD	['L1b']	3 Immediate	0	0.34000	\$1.02
36	70	RR12Q27DCT-ND	RES 27 OHM 1/10W .5% 0805 SMD	['R127', 'R126']	70 Immediate	0	0.06240	\$4.37
37	32	296-13275-1-ND	IC DUAL 2-IN EX-OR GATE US8	['U143']	32 Immediate	0	0.54240	\$17.36
38	40	399-1218-1-ND	CAP CER 1000PF 50V 5% NP0 1206	['C742']	40 Immediate	0	0.13600	\$5.44
39	32	296-13277-1-ND	IC DUAL INVERTER GATE SC-70-6	['U145']	32 Immediate	0	0.46920	\$15.01
40	63	490-1664-1-ND	CAP CER 10000PF 50V 10% X7R 0805	['C757', 'C723']	63 Immediate	0	0.01680	\$1.06
41	32	WM17113-ND	CONN USB RT ANG RECPT TYPE B BLK	['X3']	32 Immediate	0	1.12840	\$36.11
42	32	240-2389-1-ND	FERRITE 1.5A 40 OHM 0805 SMD	['L3']	32 Immediate	0	0.07000	\$2.24
43	32	MCP1702T-2802E/CBCT-ND	IC REG LDO 2.8V .25A SOT23A-3	['U140']	32 Immediate	0	0.40000	\$12.80
44	32	475-1415-1-ND	LED CHIPLD 645NM RED DIFF 0805	['D3']	32 Immediate	0	0.06800	\$2.18
45	3	595-1491-1-ND	INDUCTOR SMD 6.0UH 2.25A 10KHZ	['L1c']	3 Immediate	0	0.89000	\$2.67

All prices are in US dollars.

Index	Quantity	Part Number	Description	Customer Reference	Available Quantity	Backorder Quantity	Unit Price	Extended Price
46	662	399-1171-1-ND	CAP CER 0.1UF 50V 5% X7R 0805	['C721', 'C720', 'C764', 'C749', 'C746', 'C745']	662 Immediate	0	0.03686	\$24.40
47	130	445-1354-1-ND	CAP CER 1UF 25V 10% X7R 0805	['C79', 'C81', 'C80', 'C82']	130 Immediate	0	0.05230	\$6.80
48	32	P4.7KACT-ND	RES 4.7K OHM 1/8W 5% 0805 SMD	['R150']	32 Immediate	0	0.10000	\$3.20
49	32	732-1034-1-ND	INDUCTOR POWER 9.0UH 1.25A SMD	['L1']	32 Immediate	0	1.79000	\$57.28
50	32	P34KDACT-ND	RES 34K OHM 1/8W .1% 0805 SMD	['R139']	32 Immediate	0	0.63000	\$20.16
51	32	ADG884BRMZ-ND	IC SWITCH DUAL SPDT 10MSOP	['U127']	32 Immediate	0	2.18240	\$69.84
52	32	NL37WZ17USGOSCT-ND	IC BUFF SCHM TRG TRPL N-INV US8	['U142']	32 Immediate	0	0.34040	\$10.89
53	32	ZHCS1000CT-ND	DIODE SCHOTTKY 40V 1A SOT23	['CR1']	32 Immediate	0	0.45120	\$14.44
54	32	P38.3KDACT-ND	RES 38.3K OHM 1/8W .1% 0805 SMD	['R137']	32 Immediate	0	0.63000	\$20.16
55	61	ADG1636BRUZ-ND	IC SWITCH DUAL SPDT 16TSSOP	['U129', 'U124']	61 Immediate	0	4.36500	\$266.27
56	32	P12961SCT-ND	SWITCH TACTILE SPST-NO 0.02A 15V	['U146']	32 Immediate	0	0.32080	\$10.27
57	32	399-9176-1-ND	CAP CER 150PF 50V 10% X7R 0805	['C737']	32 Immediate	0	0.17300	\$5.54
58	32	P1.00MCCT-ND	RES 1.00M OHM 1/8W 1% 0805 SMD	['R131']	32 Immediate	0	0.10000	\$3.20
59	31	AT17LV512-10JU-ND	IC SRL CONFG EEPROM 512K 20-PLCC	['U132']	31 Immediate	0	11.38800	\$353.03
60	32	P2.2KACT-ND	RES 2.2K OHM 1/8W 5% 0805 SMD	['R132']	32 Immediate	0	0.10000	\$3.20
61	94	P10KACT-ND	RES 10K OHM 1/8W 5% 0805 SMD	['R133', 'R138', 'R143']	94 Immediate	0	0.01620	\$1.52
62	32	NTGD1100LT1GOSCT-ND	MOSFET N/P-CH 8V 3.3A 6-TSOP	['U123']	32 Immediate	0	0.48720	\$15.59
							Subtotal	\$2,039.71
							Shipping	Estimate
							Sales Tax	unknown
							Total	unknown

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701 Brooks Avenue South, Thief River Falls, MN 56701 USA
Phone: 1-800-344-4539 or 218-681-6674 or Fax: 218-681-3380