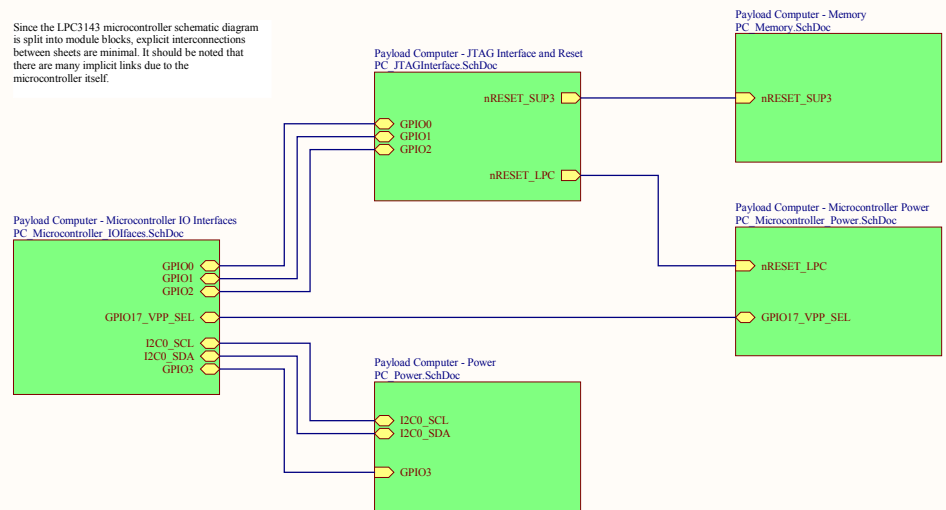
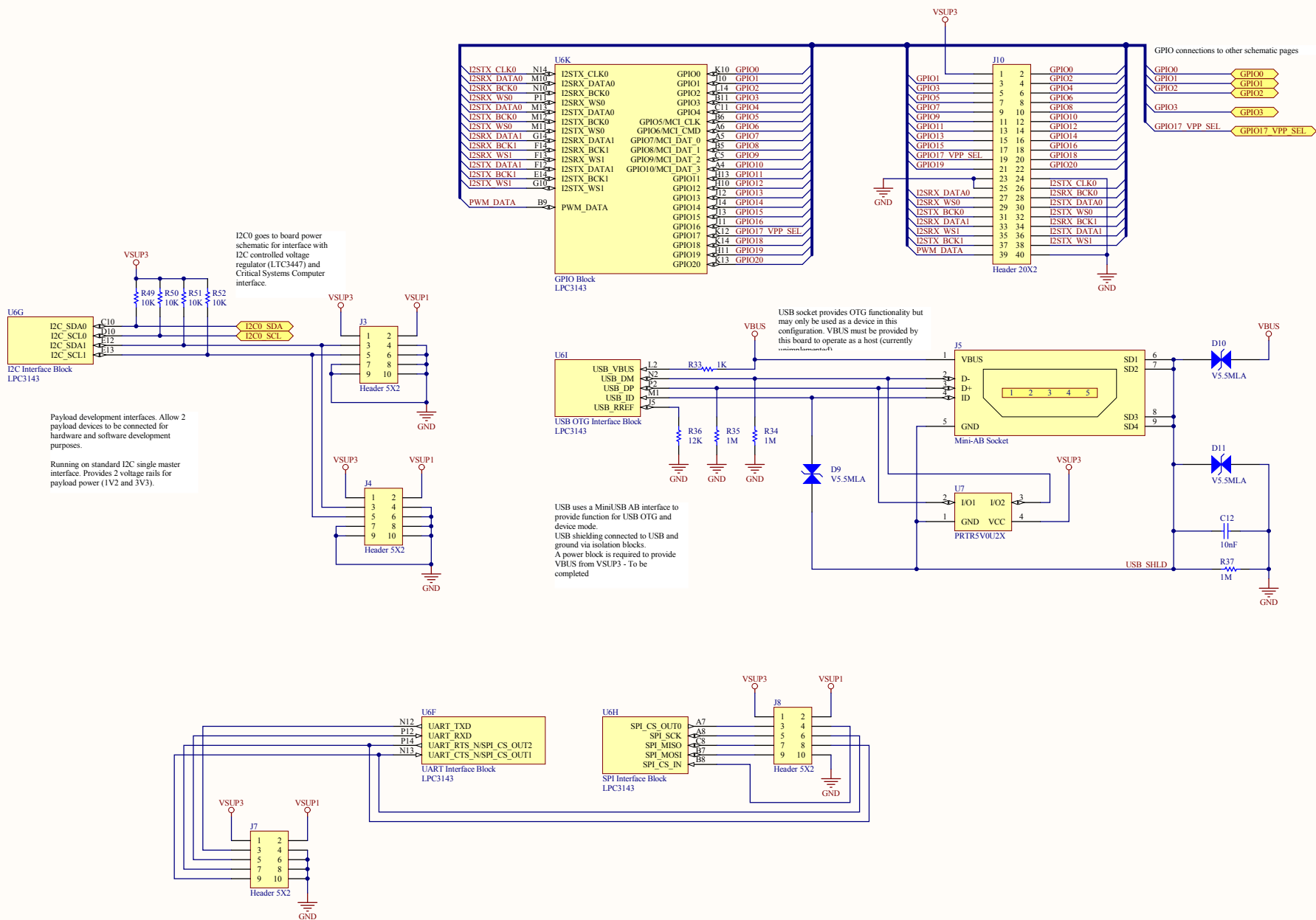


Since the LPC3143 microcontroller schematic diagram is split into module blocks, explicit interconnections between sheets are minimal. It should be noted that there are many implicit links due to the microcontroller itself.





Manual boot mode selection is used on this board. An automated way to do this will need to be prototyped in future revisions.

Boot device - Mode 2 - Mode 1 - Mode 0

NAND - Low - Low - Low

SPI - High - Low - Low

DFU (USB) - Low - High - Low

SD/MMC - High - High - Low

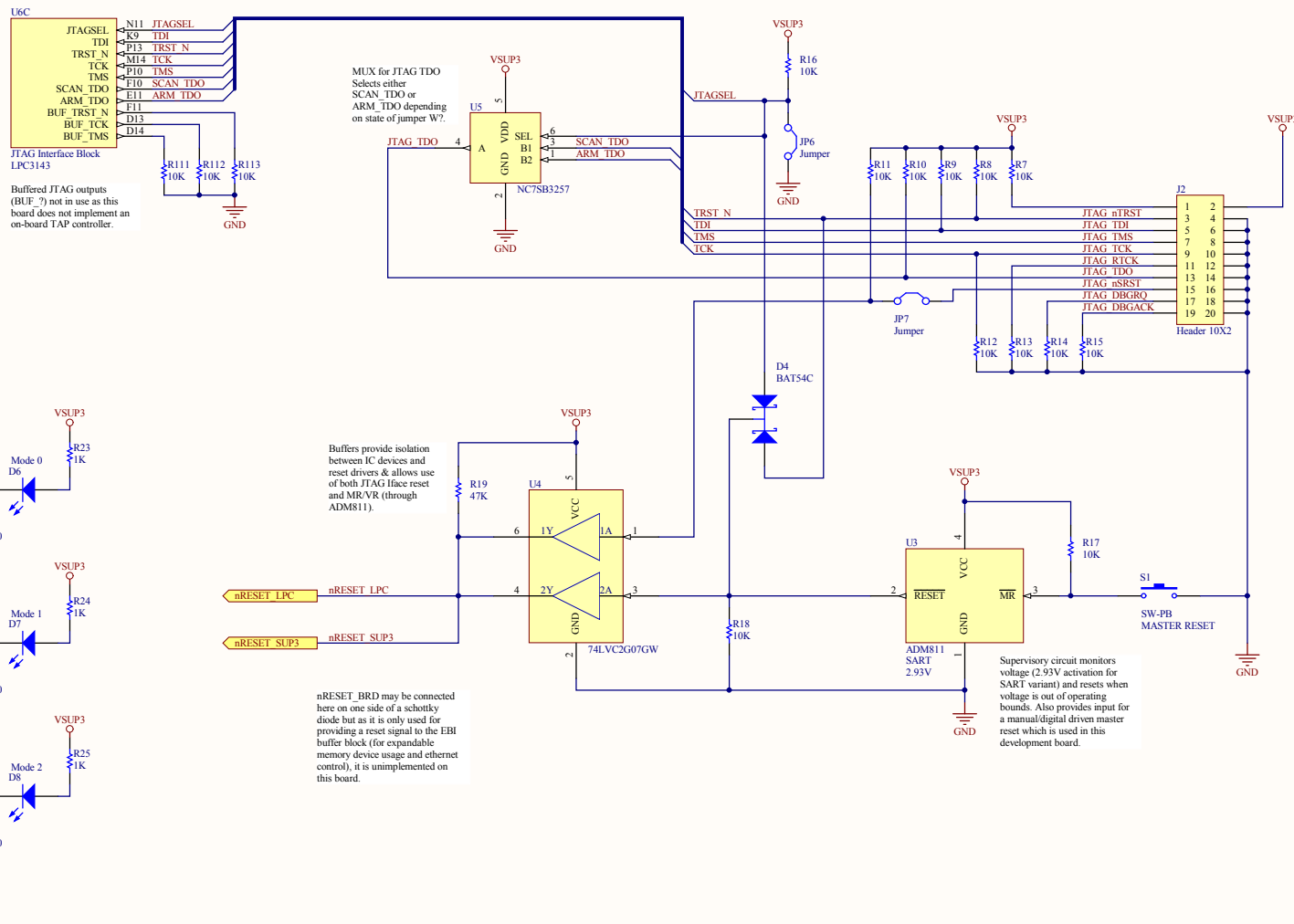
N/A - Low - Low - High

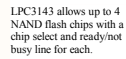
EBI NSTCS (Static device) - High - Low - High

UART - Low - High - High

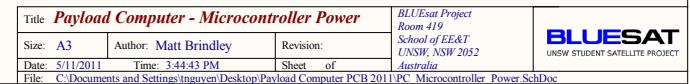
Test Mode - High - High - High

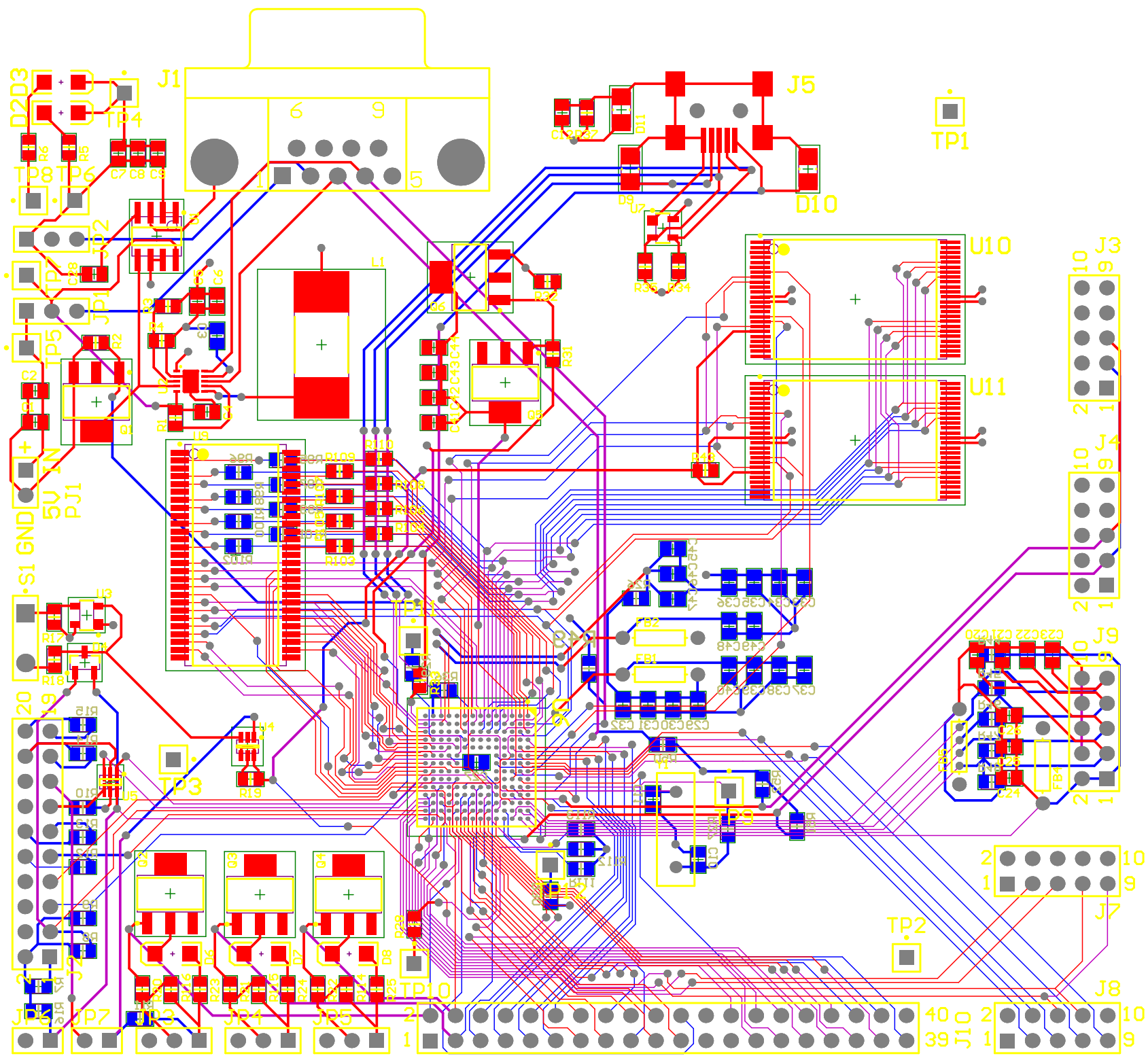
Pull up resistors set Test Mode as the default boot option





High Z state is for power on modes. $V_{PP} > 2.3V$ cause spontaneous burning/corruption if VDDI has not yet reached minimum nominal V.





Component list

Payload Computer - Overview

Source Data From:

PC PCB 2011.PrjPcb

Project:

PC PCB 2011.PrjPcb

Variant:

None



Report Date:

5/11/2011

3:44:59 PM

Print Date:

11-May-11

3:45:07 PM

#	Designator	LibRef	Plum Name Error:Manufa	Description	Footprint	#Column Name Error:Library Name	Comment	Quantity
1	C1	Cap Pol3		Polarized Capacitor (Surface Mount)	C0805		Cap Pol3	1
2	C2	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	1
3	C3, C4, C5, C6, C7, C8, C9, C25, C26	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	9
4	C10, C11	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	2
5	C12, C31, C32, C35, C36, C39, C40, C44	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	9
6	C20, C21, C22, C23, C46	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	5
7	C24, C27, C30, C34, C38, C42	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	6
8	C28	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	1
9	C29, C33, C37, C41, C45, C48	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	6
10	C47	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	1
11	C49	Cap Semi		Capacitor (Semiconductor SIM Model)	C0805		Cap Semi	1
12	D2, D3, D6, D7, D8	LED2		Typical RED, GREEN, YELLOW, AMBER GaAs LED	DSO-F2/D6.1		LED2	5
13	D4	BAT54C		Schottky Barrier Double Diode	SOT23_N		BAT54C	1
14	D9, D10, D11	V5.5MLA0603		Multilayer varistor - Transient voltage protection device	MLA-1206		V5.5MLA	3
15	FB1	Ferrite Bead		Standard Ferrite Bead	AXIAL-0.3		Ferrite Bead	1
16	FB2, FB4, FB5	Ferrite Bead		Standard Ferrite Bead	AXIAL-0.3		Ferrite Bead	3
17	J1	D Connector 9		Receptacle Assembly, 9 Position, Right Ang	DSUB1.385-2H9		D Connector 9	1
18	J2	Header 10X2		Header, 10-Pin, Dual row	HDR2X10		Header 10X2	1
19	J3, J4, J7, J8, J9	Header 5X2		Header, 5-Pin, Dual row	HDR2X5		Header 5X2	5
20	J5	miniUSB-AB		MiniUSB AB type socket	miniUSB-AB		Mini-AB Socket	1
21	J10	Header 20X2		Header, 20-Pin, Dual row	HDR2X20		Header 20X2	1
22	JP1, JP2, JP3, JP4, JP5	2 position jumper		3 pin jumper for selection	HDR1X3		Jumper	5
23	JP6, JP7	Jumper		Jumper Wire	HDR1X2		Jumper	2
24	L1	Inductor		Inductor	INDC13855X60N		Inductor	1
25	PJ1	Header 2		Header, 2-Pin	HDR1X2		5V Input Pins (Lab Supply)	1
26	Q1, Q2, Q3, Q4, Q5	BSP100		N-channel Enhancement Mode MOSFET	SOT223_N		BSP100	5
27	Q6	BSP225		P-channel Enhancement Mode Vertical D-MOSFET	SOT223_N		BSP225	1
28	R1, R2, R3, R4	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	4
29	R5, R6, R23, R24, R25, R33	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	6
30	R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R49, R50, R51, R52, R111, R112, R113, R114, R115, R116	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	22
31	R19, R43	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	2
32	R20, R21, R22, R32	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	4
33	R26	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	1
34	R27, R31	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	2
35	R28, R29, R30	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	3
36	R34, R35, R37	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	3
37	R36	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	1
38	R44, R45, R46, R47, R48	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	5
39	R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110	Res Semi		Semiconductor Resistor	6-0805_L		Res Semi	16
40	S1	SW-PB		Switch	SPST-2		SW-PB	1
41	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12	Test Point		Test point	PIN1		Test Point	12
42	U1	LT1763		Linear Technology Voltage Regulator	SOIC127P600X175-8N		LT1763	1
43	U2	LTC3447EDD		I2C Controlled VReg	LTC3447_DFP11		LTC3447EDD	1
44	U3	ADM811		Supervisory Circuit	SOT190P230X102-4N		ADM811	1
45	U4	74LVC2G07GW		Non-inverting buffers with open-drain output	SOT65P210X110-6M		74LVC2G07GW	1
46	U5	NC7SB3257		2:1 Mux, Fairchild	TSOP65P210X110-6N		NC7SB3257	1
47	U6	LPC3143		NXP ARM9 based microcontroller	BGA180C80P14X14_1200X1200X120		LPC3143	1
48	U7	PRTR5V0U2X		Electrostatic discharge protection diode IC	SOT190P230X110-4N		PRTR5V0U2X	1
49	U9	IS42S16160B		16Mb x 16 (256Mb) Parallel Interface SDRAM	TSOP80P1180X120-54M		IS42S16160B	1
50	U10, U11	NAND128W3A		128Mb 8b wide NAND Flash	TSSOP50P2000X120-48M		NAND128W3A	2
51	Y1	XTAL		Crystal Oscillator	RAD-0.3		XTAL	1

Approved

Notes

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