

Project Name : I30ILx

Platform :Montevina - SFF Penryn(CULV) + Cantiga (GS40) + ICH9M - SFF

PAGE CONTENT

1. INDEX
2. SYSTEM BLOCK DIAGRAM
3. POWER DIAGRAM & SEQUENCE
4. GPIO & Power Consumption
5. CPU Penryn - SFF 1/2
6. CPU Penryn - SFF 2/2
7. CLOCK GEN (ICS9LPRS365BG)
8. NB HOST / VSS 1/5
9. NB DDR BUS / LVDS / PCIE 2/5
10. NB DDR INTERFACE 3/5
11. NB I/O POWER 4/5
12. NB GFX/VCC/NCTF POWER 5/5
13. DDR2 SODIMM
14. LVDS/ Hole
15. ICH9M RTC/SATA/IHDA/LPC 1/3
16. ICH9M SYS/GPIO/PCIE/USB 2/3
17. ICH9M Power 3/3
18. SATA HDD
19. PWR SW/MMB/WEBCAM/LED
20. DaughterBoard conn
21. Mini Card
22. DC IN/FAN/HSCARP CAP
23. EC IT8502E-KX / BIOS
24. CPU CORE (OZ8291)
25. +3.3VA / +5VS (OZ815)
26. +1.8VS / 0.9V/ 1.5V(OZ8116)
27. +1.05V (OZ8116)
28. VCC SW / VIN_SW
29. BATT IN / CHARGER (OZ8618)
30. Appendix Ver.A History
- 31.
- 32.
- 33.
- 34.

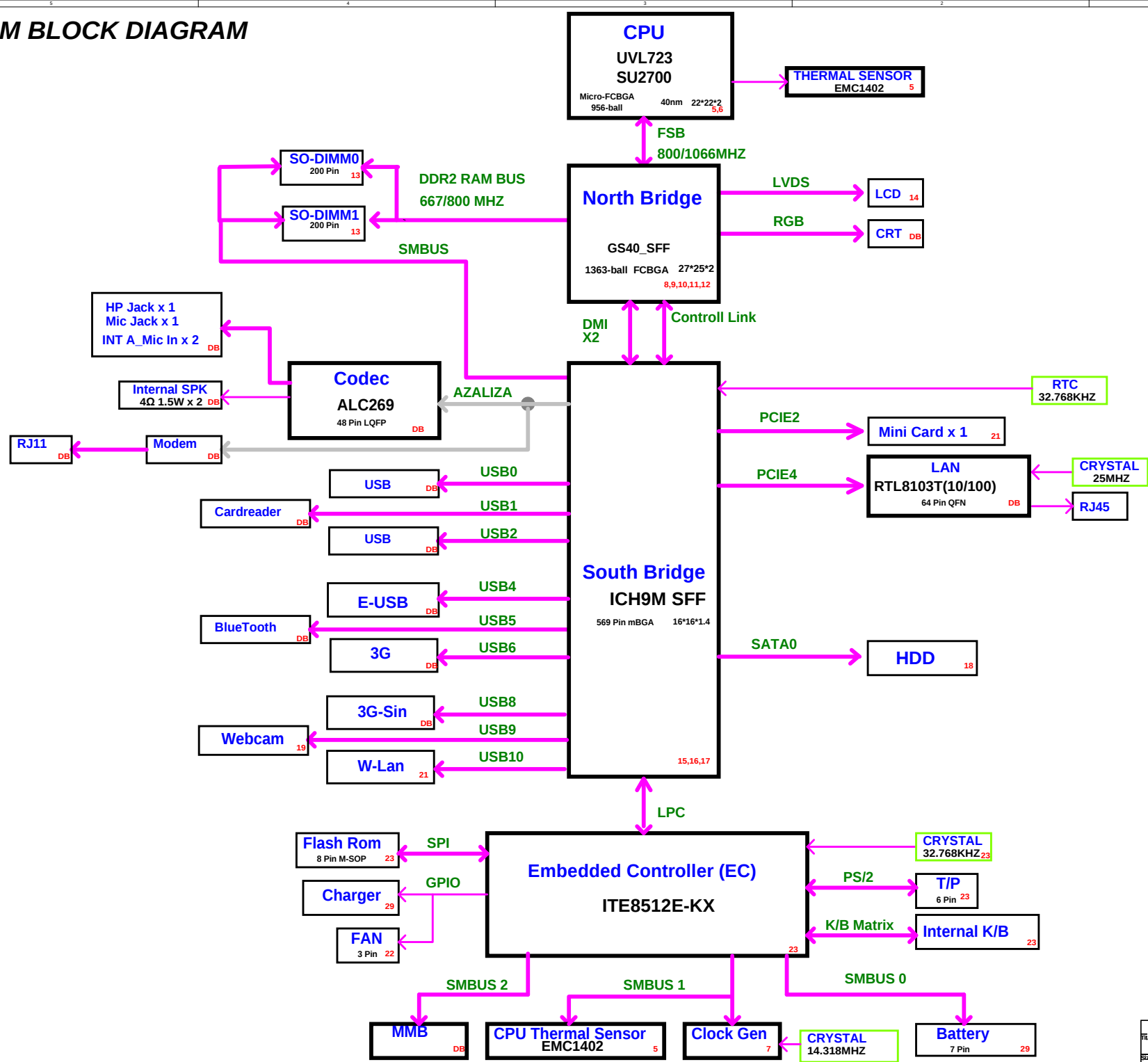
M/B Schematic Version Change List

Release Date	Version	PCB P/N	PCB Description	PCBA P/N	Note
2009-03-23	A	?	PCB MAIN BD FOR I30ILx REV:A	?	Initial

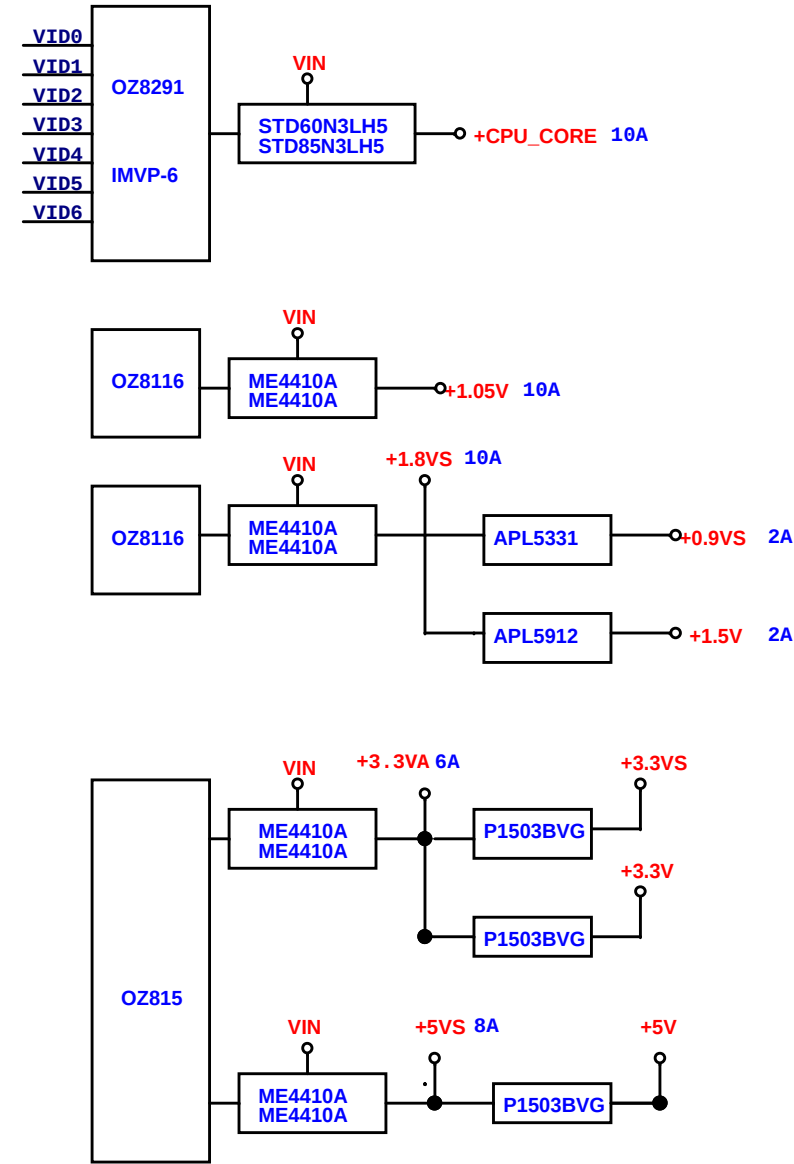
Daughter Board Schematic Version Change List

Release Date	Version	PCB P/N	PCB Description	PCBA P/N

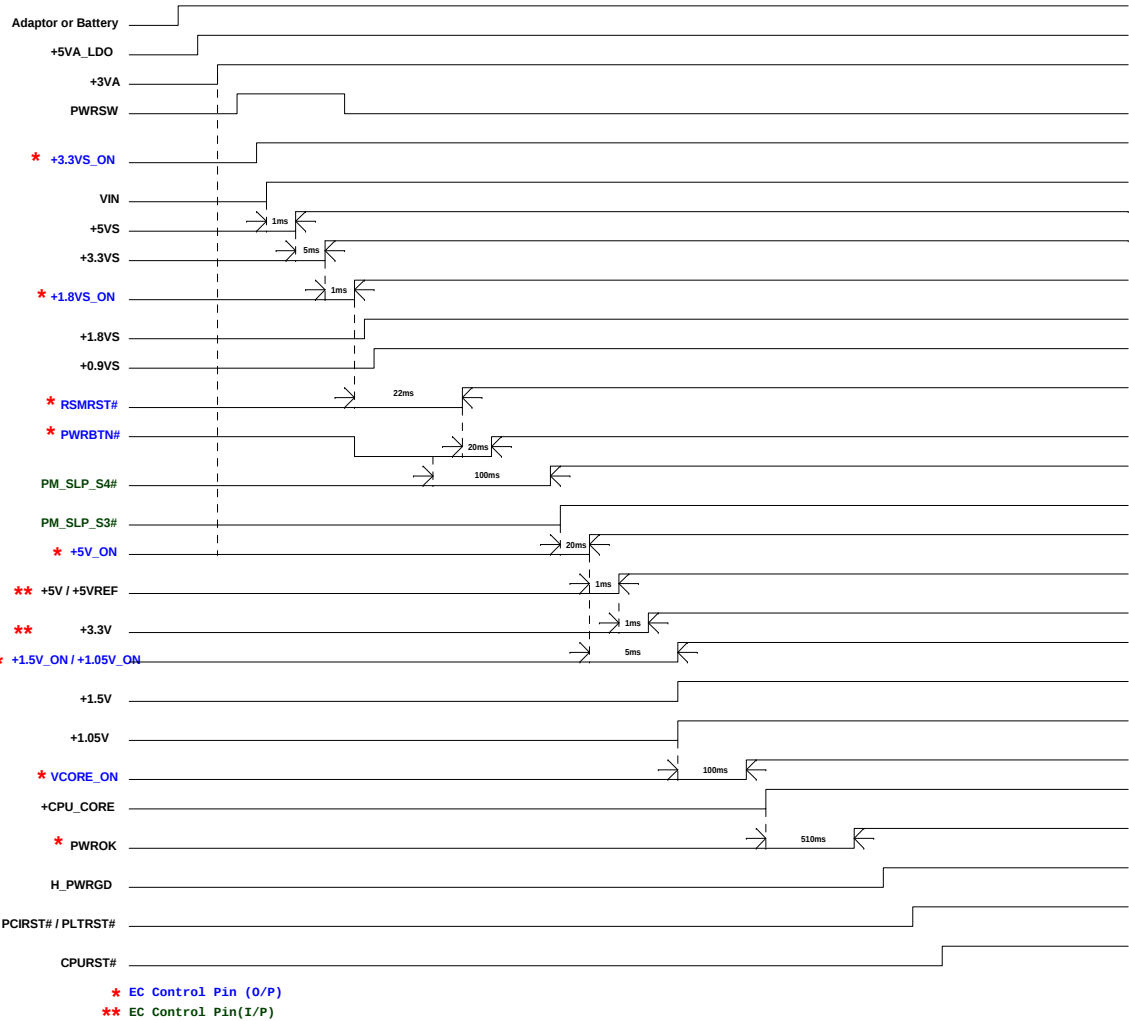
SYSTEM BLOCK DIAGRAM



POWER BLOCK DIAGRAM



System Power On Sequence



ICH9M	GPIO
GPIO0	PMSYNC#
GPIO1	EC_EXTSMI#
GPIO2	INT_PIRQ#
GPIO3	INT_PIRQ#
GPIO4	INT_PIRQ#
GPIO5	INT_PIRQ#
GPIO6	BIOS_REC
GPIO7	NC
GPIO8	NC
GPIO9	WOL_EN
GPIO10	ICH_GPIO10
GPIO11	SMB_ALERT#
GPIO12	NC
GPIO13	NC
GPIO14	ICH_GPIO14
GPIO15	PM_STPPCI_ICH#
GPIO16	ICH_DPRSLPVR
GPIO17	NC
GPIO18	NC
GPIO19	SATA16P
GPIO20	NC
GPIO21	SATA0GP
GPIO22	NC
GPIO23	LDRQ1#
GPIO24	NC
GPIO25	PM_STPCPU_ICH#
GPIO26	N35761884
GPIO27	NC
GPIO28	NC
GPIO29	USB_OC#5
GPIO30	USB_OC#6
GPIO31	USB_OC#7
GPIO32	PM_CLKRUN#
GPIO33	NC
GPIO34	NC
GPIO35	CLK_SATA_QE#
GPIO36	SATA26P
GPIO37	SATA36P
GPIO38	NC
GPIO39	NC
GPIO40	USB_OC#1
GPIO41	USB_OC#2
GPIO42	USB_OC#3
GPIO43	USB_OC#4
GPIO44	USB_OC#8
GPIO45	USB_OC#9
GPIO46	USB_OC#10
GPIO47	USB_OC#11
GPIO48	NC
GPIO49	NC
GPIO50	PCI_REQ#1
GPIO51	NC
GPIO52	PCI_REQ#2
GPIO53	NC
GPIO54	PCI_REQ#3
GPIO55	FP_PWR_ON#
GPIO56	N31172530
GPIO57	N46312881
GPIO58	NC
GPIO59	USB_OC#0
GPIO60	LINK_ALERT#

ITE8512E-CX	GPIO	Default Pull/Mode
GPA0	CHG_G_LED#	UP / GPI
GPA1	CHG_R_LED#	UP / GPI
GPA2	BTL_BEEP	UP / GPI
GPA3	WIRELAN_ON	UP / GPI
GPA4	KBLED_EN	UP / GPI
GPA5	BT_ON#	UP / GPI
GPA6	PM_RSMRST#	UP / GPI
GPA7	EC_BL_PWM	UP / GPI
GPB0	PM_SLP_S4#	UP / GPI
GPB1	PM_SLP_S3#	UP / GPI
GPB2	+1.05VS_ON	Dn / GPI
GPB3	DDR_BAT_SMBCLK	/ GPI
GPB4	DDR_BAT_SMBDAT	/ GPI
GPB5	H_A20GATE	/ GP0
GPB6	H_RCIN#	UP / Func1
GPB7	LAN_DETECT#	Dn / GPI
GPC0	+1.5V_on	Dn / GPI
GPC1	SMBCLK_EC	/ GPI
GPC2	SMBDAT_EC	/ GPI
GPC3	NC	Dn / GPI
GPC4	SBAT_DCH#	Dn / GPI
GPC5	MBAT_DCHG#	Dn / GPI
GPC6	LCDSW0	Dn / GPI
GPC7	LCDSW1	UP / GPI
GPD0	ADAP_IN	UP / GPI
GPD1	PWRBTN#	UP / GPI
GPD2	PLT_RST#	UP / Func1
GPD3	EC_EXTSMI#	UP / GPI
GPD4	NP	UP / GPI
GPD5	EC_PROCHOT#	UP / GPI
GPD6	EC_LAN_ON#	Dn / GPI
GPD7	EC_BL_EN	Dn / GPI
GPE0	LID#	Dn / GPI
GPE1	SET_V	Dn / GPI
GPE2	PWR0K	Dn / GPI
GPE3	Vcore_ON	Dn / GPI
GPE4	PWRSW	UP / GPI
GPE5	P_ID0	Dn / GPI
GPE6	P_ID1	Dn / GPI
GPE7	MUTE#	UP / GPI
GPFO	EC_BSEL1	UP / GPI
GPFI	MBAT_CHG	UP / GPI
GPFI	+5V_ON#	UP / GPI
GPFI	CHG_ON#	UP / GPI
GPFI	TP_CLK	UP / GPI
GPFI	TP_DATA	UP / GPI
GPFI	ALS_SMBCLK	UP / GPI
GPFI	ALS_SMBDAT	UP / GPI
GPFO	SBAT_CHG#	Dn/GP0/TM
GPFI	+5VS_ON	Dn/GP0/ID7
GPFI	FLFRAME#	
GPFI	WEBCAM_ON	
GPH0	SAFTY_PROTECT	Dn/GPI/ID0
GPH1	+1.8VS_ON	Dn/GPI/ID1
GPH2	SENBAT_V	Dn/GPI/ID2
GPH3	3G_ON#	Dn/GPI/ID3
GPH4	3G_LED_ON#	Dn/GPI/ID4
GPH5	BATTOFF	Dn/GPI/ID5
GPH6	RF_LED_ON#	Dn/GPI/ID6

ITE8512E-CX	GPIO	
GPIO	BATT_TEMP	/GPI/ADC
GPIO	ADAPTOR_I	/GPI/ADC
GPIO	BAT_V	/GPI/ADC
GPIO	BATT_TEMP_S	/GPI/ADC
GPIO	BAT_I	/GPI/ADC
GPIO	XOUT_EC	/GPI/ADC
GPIO	YOUT_EC	/GPI/ADC
GPIO	ZOUT_EC	/GPI/ADC
GPJ0	Fastcharge_EN	/GPI/DAC
GPJ1	CHG_I	/GPI/DAC
GPJ2	FAN_CTRL0	/GPI/DAC
GPJ3	CHG_REF	/GPI/DAC
GPJ4	PWR_LED	/GPI/DAC
GPJ5	PM_THROTTLING#	/GPI/DAC

Penryn_SFF				
	CPU CORE(V)	ICC(A)	W	TEMP(°C)
IMVP-6+	1.0	18	18	90

GS 45			
VCC	ICC(mA)	W	TEMP(°C)
+3.3V	262	0.87	105
+1.8VS	3320	5.98	
+1.5V	1499	2.25	
+1.05	7702.55	8.08	

ICH9M_SFF			
VCC	ICC(mA)	mW	TEMP(°C)
+5V	2	10	70
+5VS	2	10	
+3.3V	308	1016.4	
+3.3VS	212	699.6	
+1.5V	2188	3282	
+1.05V	1682	1766.1	

ITE8512E			
VCC	ICC(mA)	mW	TEMP(°C)
+3.3V	100	330	70

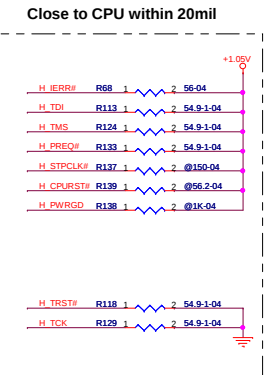
CLOCK GENERATOR			
VCC	ICC(mA)	mW	TEMP(°C)
+3.3V	250	825	70

ALC888_VC2			
VCC	ICC(mA)	mW	TEMP(°C)
+3.3V(DVDD)	36	118.8	70
+5V(AVDD)	51	255	

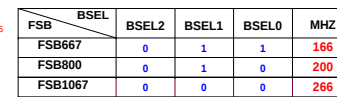
TPA6017A2			
VCC	ICC(mA)	mW	TEMP(°C)
+5V	10	50	85

EMC1402			
VCC	ICC	mW	TEMP(°C)
+3.3V	170uA	0.56	150

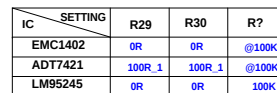
ITE8512E-CX			
VCC	ICC(mA)	mW	TEMP(°C)
+3.3VS	103	339.9	70
+1.8VS	198	356.4	
+1.5VS	367	550.5	



Close to CPU

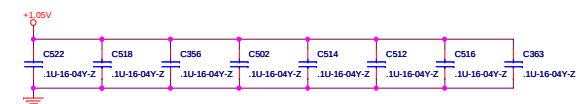


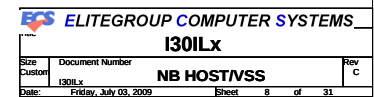
CPU Thermal Sensor

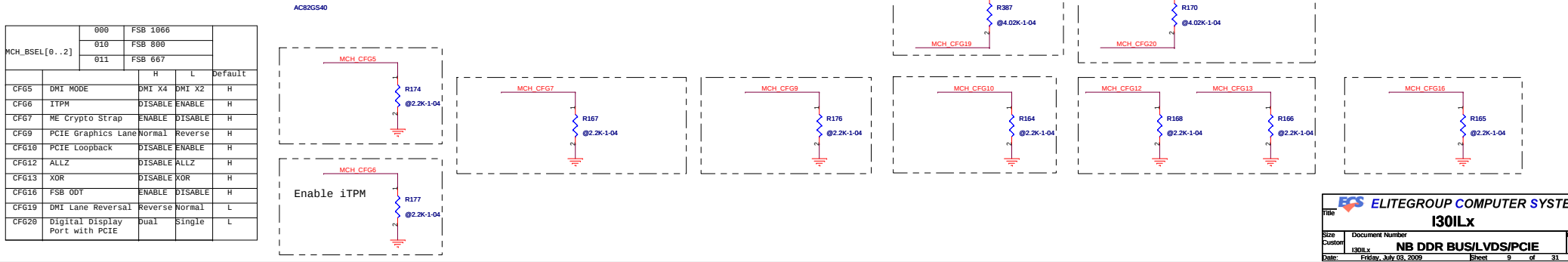


R37 can use 100K for 3 vender real application
R29,R31 can use 0-04 for ADT7421 real application

Used for Balance +1.05V & GND







13 MA_DQ[63:0]

MA DQ0	AP46	SA_DQ_0
MA DQ1	AU47	SA_DQ_1
MA DQ2	AT46	SA_DQ_2
MA DQ3	AU49	SA_DQ_3
MA DQ4	AR45	SA_DQ_4
MA DQ5	AN49	SA_DQ_5
MA DQ6	AV50	SA_DQ_6
MA DQ7	AP50	SA_DQ_7
MA DQ8	AW47	SA_DQ_8
MA DQ9	BD50	SA_DQ_9
MA DQ10	AW49	SA_DQ_10
MA DQ11	BA49	SA_DQ_11
MA DQ12	BC49	SA_DQ_12
MA DQ13	AV46	SA_DQ_13
MA DQ14	BA47	SA_DQ_14
MA DQ15	AY50	SA_DQ_15
MA DQ16	BF46	SA_DQ_16
MA DQ17	BC47	SA_DQ_17
MA DQ18	BE50	SA_DQ_18
MA DQ19	BF48	SA_DQ_19
MA DQ20	BC43	SA_DQ_20
MA DQ21	BE49	SA_DQ_21
MA DQ22	BA43	SA_DQ_22
MA DQ23	BE47	SA_DQ_23
MA DQ24	BF42	SA_DQ_24
MA DQ25	BC39	SA_DQ_25
MA DQ26	BF44	SA_DQ_26
MA DQ27	BF40	SA_DQ_27
MA DQ28	BB40	SA_DQ_28
MA DQ29	BE43	SA_DQ_29
MA DQ30	BF38	SA_DQ_30
MA DQ31	BE41	SA_DQ_31
MA DQ32	BA15	SA_DQ_32
MA DQ33	BE11	SA_DQ_33
MA DQ34	BE15	SA_DQ_34
MA DQ35	BE14	SA_DQ_35
MA DQ36	BB14	SA_DQ_36
MA DQ37	BC15	SA_DQ_37
MA DQ38	BE13	SA_DQ_38
MA DQ39	BF16	SA_DQ_39
MA DQ40	BE10	SA_DQ_40
MA DQ41	BC11	SA_DQ_41
MA DQ42	BF8	SA_DQ_42
MA DQ43	BG7	SA_DQ_43
MA DQ44	BC7	SA_DQ_44
MA DQ45	BC9	SA_DQ_45
MA DQ46	BD6	SA_DQ_46
MA DQ47	BE12	SA_DQ_47
MA DQ48	AV6	SA_DQ_48
MA DQ49	BB6	SA_DQ_49
MA DQ50	AW7	SA_DQ_50
MA DQ51	AY6	SA_DQ_51
MA DQ52	AT10	SA_DQ_52
MA DQ53	AW11	SA_DQ_53
MA DQ54	AU11	SA_DQ_54
MA DQ55	AW9	SA_DQ_55
MA DQ56	AR11	SA_DQ_56
MA DQ57	AT6	SA_DQ_57
MA DQ58	AP6	SA_DQ_58
MA DQ59	AL7	SA_DQ_59
MA DQ60	AR7	SA_DQ_60
MA DQ61	AT12	SA_DQ_61
MA DQ62	AM6	SA_DQ_62
MA DQ63	AU7	SA_DQ_63

U3D

SA_BS_0
SA_BS_1
SA_BS_2

SA_RAS#
SA_CAS#
SA_WE#

SA_DM_0
SA_DM_1
SA_DM_2
SA_DM_3
SA_DM_4
SA_DM_5
SA_DM_6
SA_DM_7

SA_DQS_0
SA_DQS_1
SA_DQS_2
SA_DQS_3
SA_DQS_4
SA_DQS_5
SA_DQS_6
SA_DQS_7
SA_DQS#_0
SA_DQS#_1
SA_DQS#_2
SA_DQS#_3
SA_DQS#_4
SA_DQS#_5
SA_DQS#_6
SA_DQS#_7

SA_MA_0
SA_MA_1
SA_MA_2
SA_MA_3
SA_MA_4
SA_MA_5
SA_MA_6
SA_MA_7
SA_MA_8
SA_MA_9
SA_MA_10
SA_MA_11
SA_MA_12
SA_MA_13
SA_MA_14

BC21 MA BA0
BJ21 MA BA1
BJ41 MA BA2
BH22
BK20
BL15

MA_BA[2:0] 13
MA_RAS# 13
MA_CAS# 13
MA_WE# 13

AT50 MA DM0
BB50 MA DM1
BB46 MA DM2
BE39 MA DM3
BB12 MA DM4
BE7 MA DM5
AV10 MA DM6
AR9 MA DM7

MA_DM[7:0] 13

AR47 MA DQS0
BA45 MA DQS1
BE45 MA DQS2
BC41 MA DQS3
RC13 MA DQS4
BB10 MA DQS5
BA7 MA DQS6
AN7 MA DQS7
AR49 MA DQS#0
AW45 MA DQS#1
BC45 MA DQS#2
BA41 MA DQS#3
BA13 MA DQS#4
BA11 MA DQS#5
BA9 MA DQS#6
AN9 MA DQS#7

MA_DQS[7:0] 13
MA_DQS# [7:0] 13

BC23 MAA A0
BF22 MAA A1
BE31 MAA A2
BC31 MAA A3
BH26 MAA A4
BJ35 MAA A5
BB34 MAA A6
BH32 MAA A7
BB26 MAA A8
BF32 MAA A9
BA21 MAA A10
BG25 MAA A11
BH34 MAA A12
BH18 MAA A13
BE25 MAA A14

MAA_A[14:0] 13

13 MB_DQ[63:0]

MB DQ0	AP54	SB_DQ_0
MB DQ1	AM52	SB_DQ_1
MB DQ2	AR55	SB_DQ_2
MB DQ3	AV54	SB_DQ_3
MB DQ4	AM54	SB_DQ_4
MB DQ5	AN53	SB_DQ_5
MB DQ6	AT52	SB_DQ_6
MB DQ7	AU53	SB_DQ_7
MB DQ8	AW53	SB_DQ_8
MB DQ9	AY52	SB_DQ_9
MB DQ10	BB52	SB_DQ_10
MB DQ11	BC53	SB_DQ_11
MB DQ12	AV52	SB_DQ_12
MB DQ13	AW55	SB_DQ_13
MB DQ14	BD52	SB_DQ_14
MB DQ15	RC55	SB_DQ_15
MB DQ16	BF54	SB_DQ_16
MB DQ17	BE51	SB_DQ_17
MB DQ18	BH48	SB_DQ_18
MB DQ19	BK48	SB_DQ_19
MB DQ20	BE53	SB_DQ_20
MB DQ21	BH52	SB_DQ_21
MB DQ22	BK46	SB_DQ_22
MB DQ23	BJ47	SB_DQ_23
MB DQ24	BL45	SB_DQ_24
MB DQ25	BJ45	SB_DQ_25
MB DQ26	BL41	SB_DQ_26
MB DQ27	BH44	SB_DQ_27
MB DQ28	BH46	SB_DQ_28
MB DQ29	BK44	SB_DQ_29
MB DQ30	BK40	SB_DQ_30
MB DQ31	BJ39	SB_DQ_31
MB DQ32	BK10	SB_DQ_32
MB DQ33	BH10	SB_DQ_33
MB DQ34	BK6	SB_DQ_34
MB DQ35	BH6	SB_DQ_35
MB DQ36	BJ9	SB_DQ_36
MB DQ37	BL11	SB_DQ_37
MB DQ38	BG5	SB_DQ_38
MB DQ39	BJ5	SB_DQ_39
MB DQ40	BG3	SB_DQ_40
MB DQ41	BF4	SB_DQ_41
MB DQ42	BD4	SB_DQ_42
MB DQ43	BA3	SB_DQ_43
MB DQ44	BE5	SB_DQ_44
MB DQ45	BF2	SB_DQ_45
MB DQ46	BF4	SB_DQ_46
MB DQ47	AY4	SB_DQ_47
MB DQ48	BA1	SB_DQ_48
MB DQ49	AP2	SB_DQ_49
MB DQ50	AU1	SB_DQ_50
MB DQ51	AT2	SB_DQ_51
MB DQ52	AT4	SB_DQ_52
MB DQ53	AV4	SB_DQ_53
MB DQ54	AU3	SB_DQ_54
MB DQ55	AR3	SB_DQ_55
MB DQ56	AN1	SB_DQ_56
MB DQ57	AP4	SB_DQ_57
MB DQ58	AL3	SB_DQ_58
MB DQ59	A11	SB_DQ_59
MB DQ60	AK4	SB_DQ_60
MB DQ61	AM4	SB_DQ_61
MB DQ62	AH2	SB_DQ_62
MB DQ63	AK2	SB_DQ_63

U3E

SB_BS_0
SB_BS_1
SB_BS_2

SB_RAS#
SB_CAS#
SB_WE#

SB_DM_0
SB_DM_1
SB_DM_2
SB_DM_3
SB_DM_4
SB_DM_5
SB_DM_6
SB_DM_7

SB_DQS_0
SB_DQS_1
SB_DQS_2
SB_DQS_3
SB_DQS_4
SB_DQS_5
SB_DQS_6
SB_DQS#_0
SB_DQS#_1
SB_DQS#_2
SB_DQS#_3
SB_DQS#_4
SB_DQS#_5
SB_DQS#_6
SB_DQS#_7

SB_MA_0
SB_MA_1
SB_MA_2
SB_MA_3
SB_MA_4
SB_MA_5
SB_MA_6
SB_MA_7
SB_MA_8
SB_MA_9
SB_MA_10
SB_MA_11
SB_MA_12
SB_MA_13
SB_MA_14

BJ13 MB BA0
BK12 MB BA1
BK38 MB BA2

MB_BA[2:0] 13

BE21
BH14
BK14

MB_RAS# 13
MB_CAS# 13
MB_WE# 13

AP52 MB DM0
AY54 MB DM1
BJ49 MB DM2
BJ43 MB DM3
BH12 MB DM4
BD2 MB DM5
AY2 MB DM6
AJ3 MB DM7

MB_DM[7:0] 13

AR53 MB DQS0
BA53 MB DQS1
BH50 MB DQS2
BK42 MB DQS3
BH8 MB DQS4
BB2 MB DQS5
AV2 MB DQS6
AM2 MB DQS7

MB_DQS[7:0] 13

AT54 MB DQS#0
BB54 MB DQS#1
BJ51 MB DQS#2
BH42 MB DQS#3
BK8 MB DQS#4
BC3 MB DQS#5
AW3 MB DQS#6
AN3 MB DQS#7

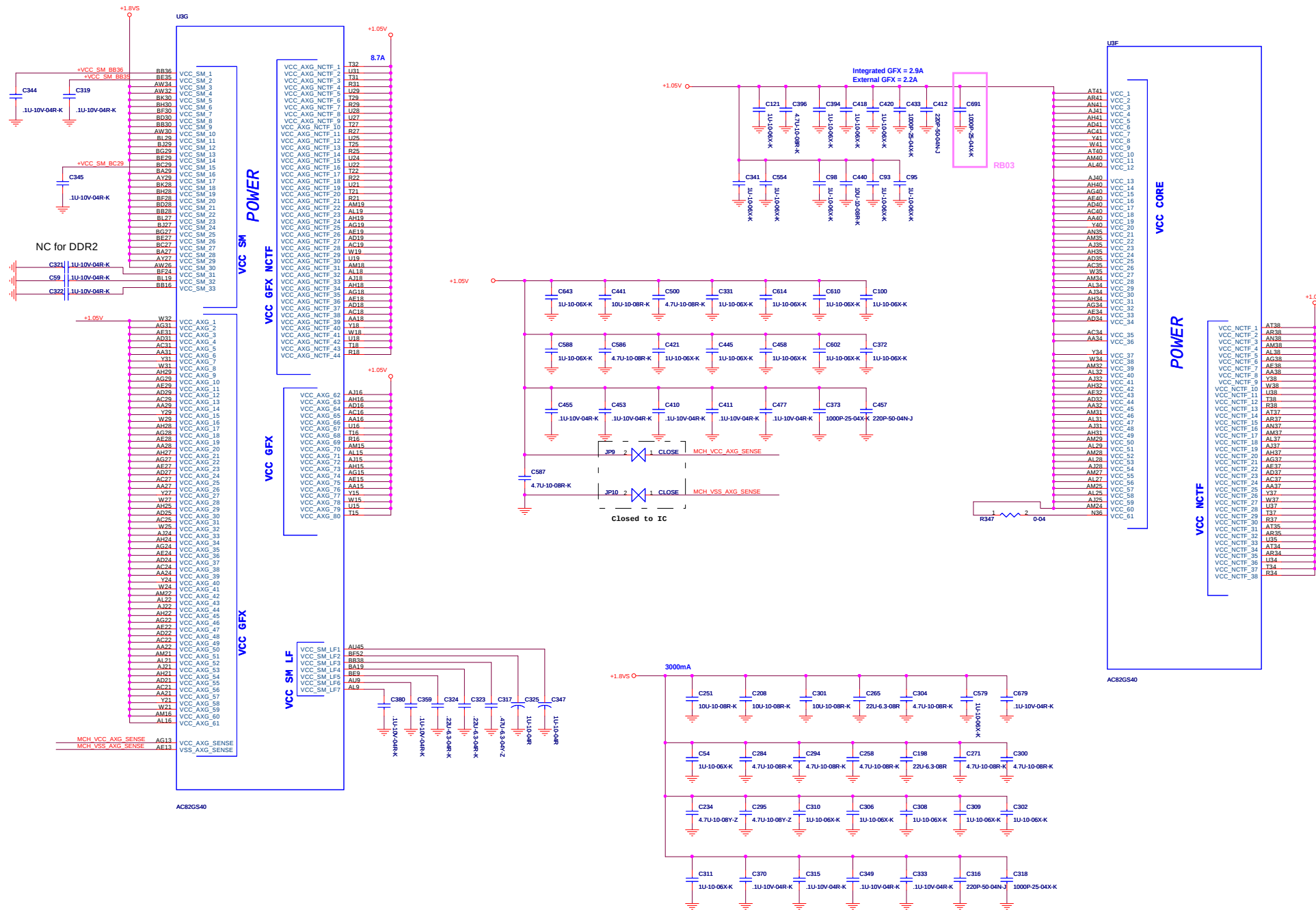
MB_DQS# [7:0] 13

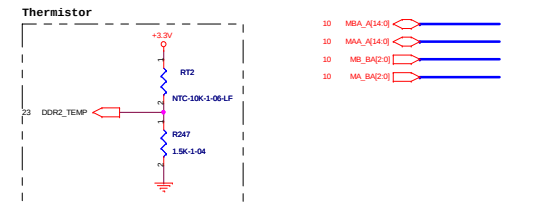
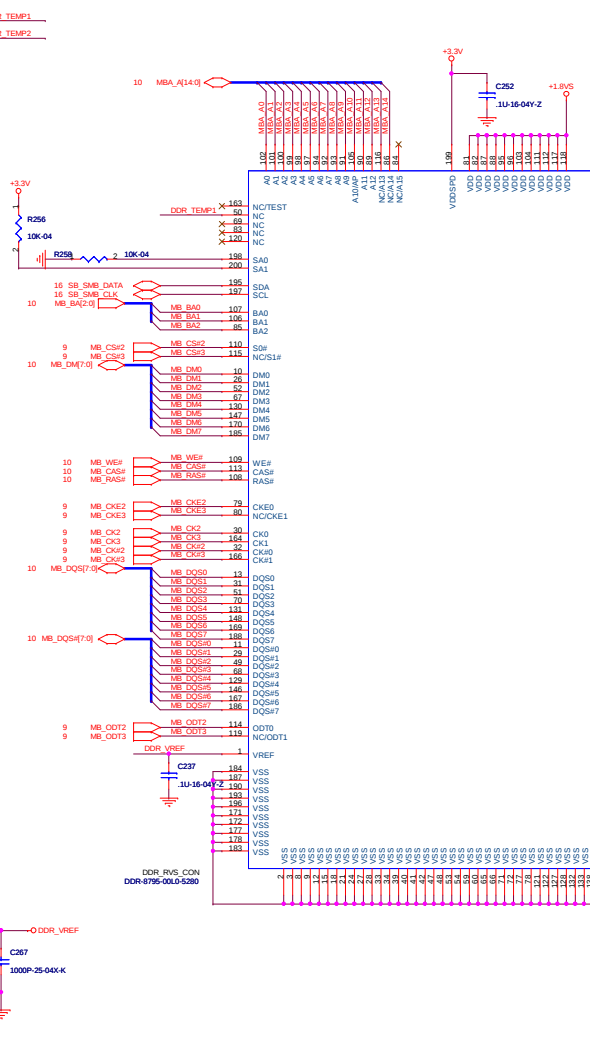
BJ15 MBA A0
BJ33 MBA A1
BH24 MBA A2
BA17 MBA A3
BF36 MBA A4
BH36 MBA A5
BE34 MBA A6
BK34 MBA A7
BJ37 MBA A8
BH40 MBA A9
BH16 MBA A10
BK36 MBA A11
BH38 MBA A12
BJ11 MBA A13
BL37 MBA A14

MBA_A[14:0] 13

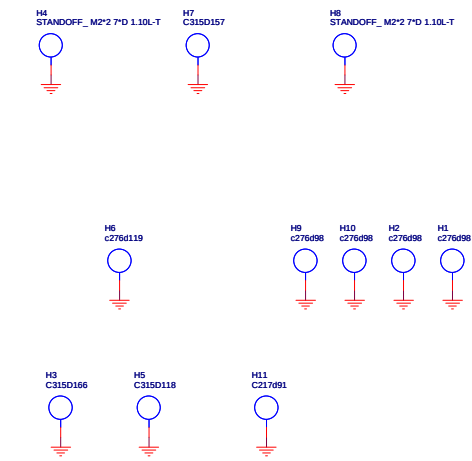
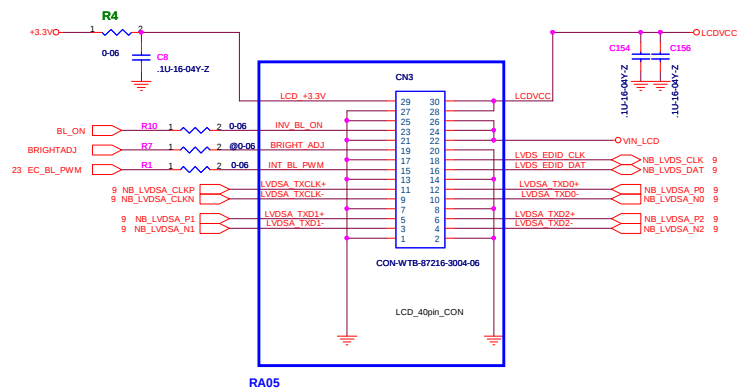
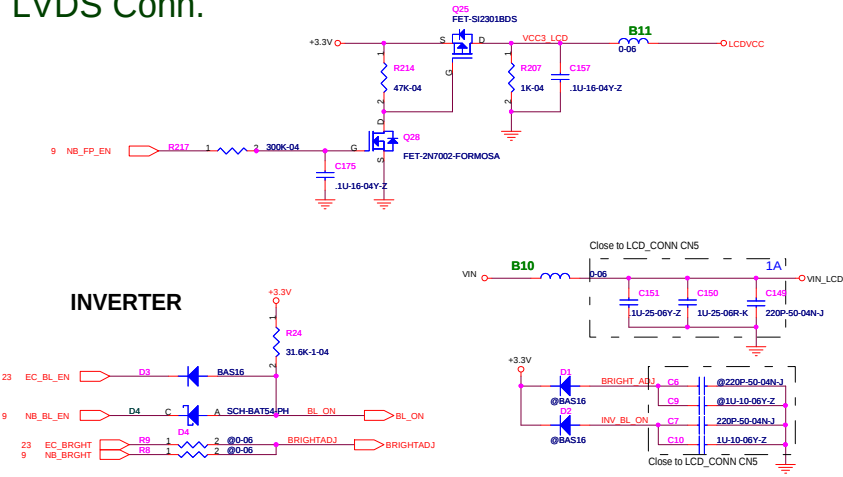
AC82GS40

AC82GS40

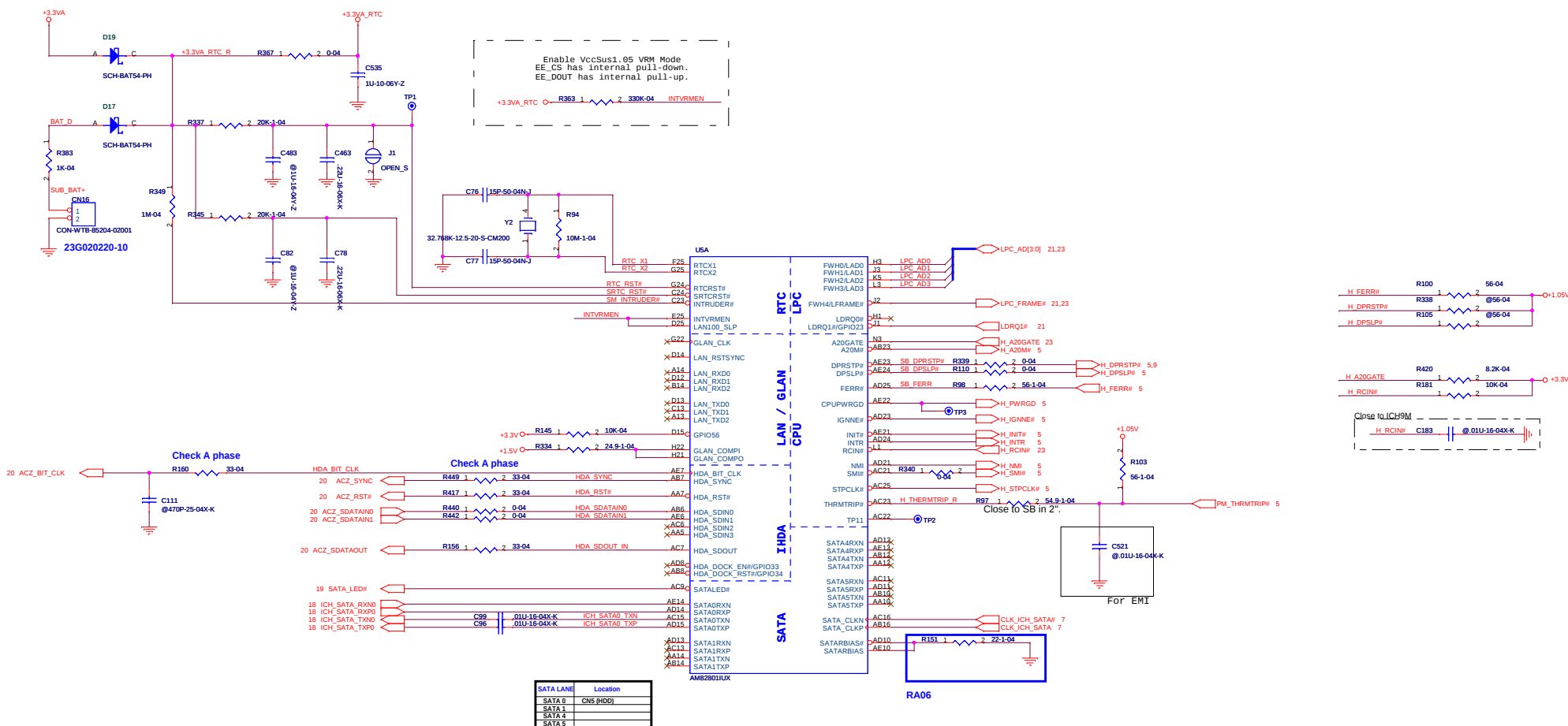




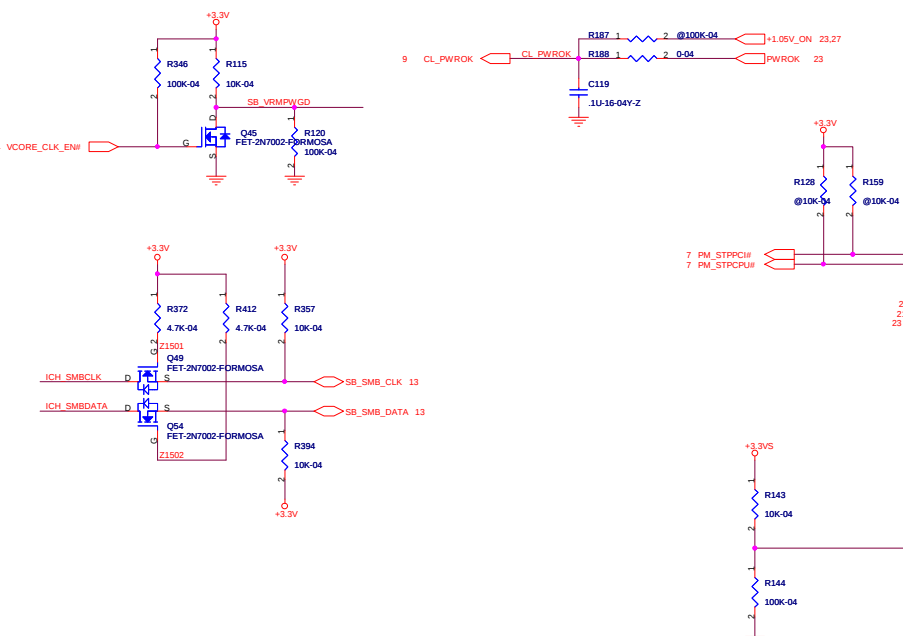
LVDS Conn.



Item	drill	Ring(TOP)	Ring(BOT)	Footprint Name
1				
2				
3				
4				
5				
6				
7				



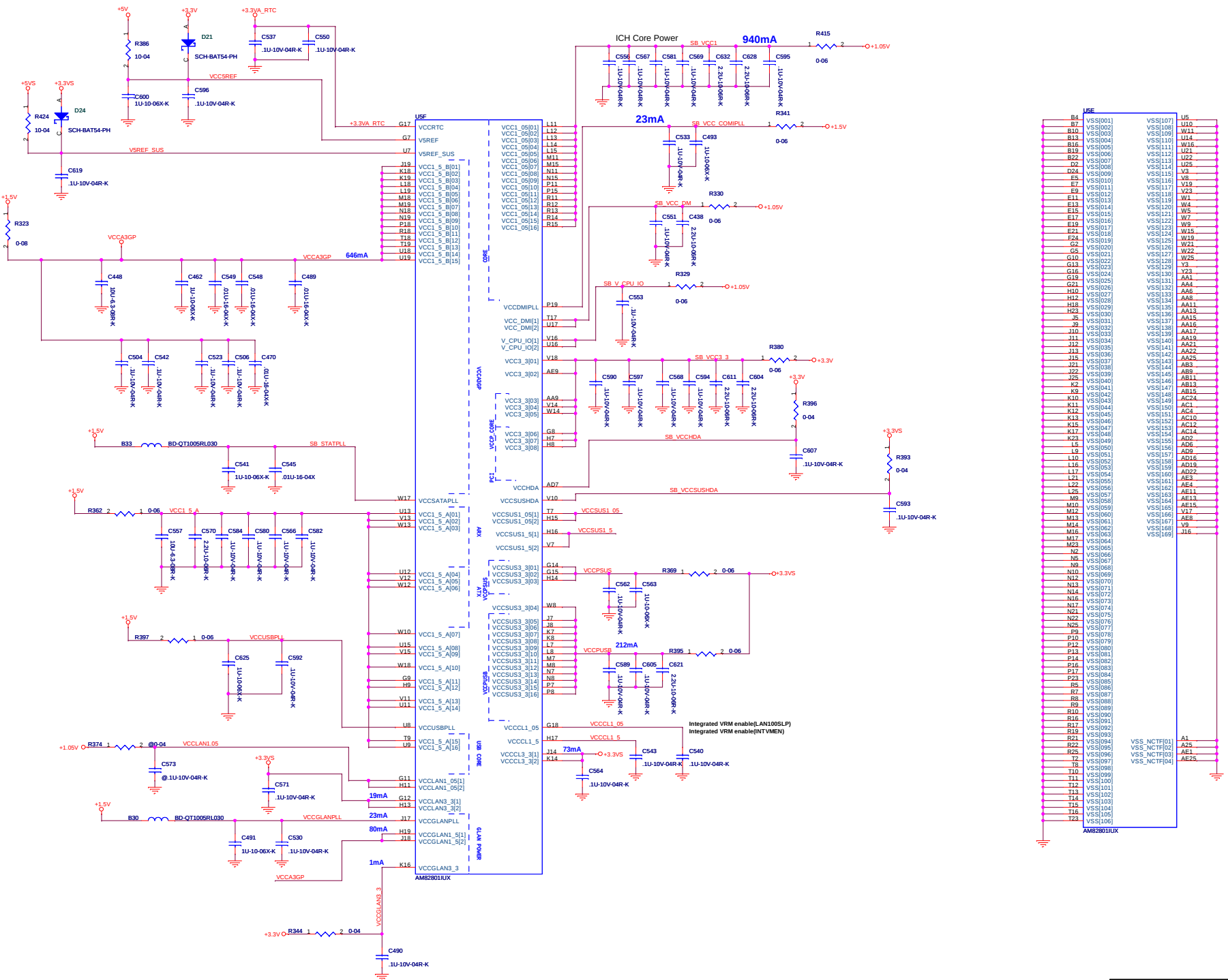
SATA LANE	Location
SATA 0	CN5 (IDD)
SATA 1	
SATA 4	
SATA 5	



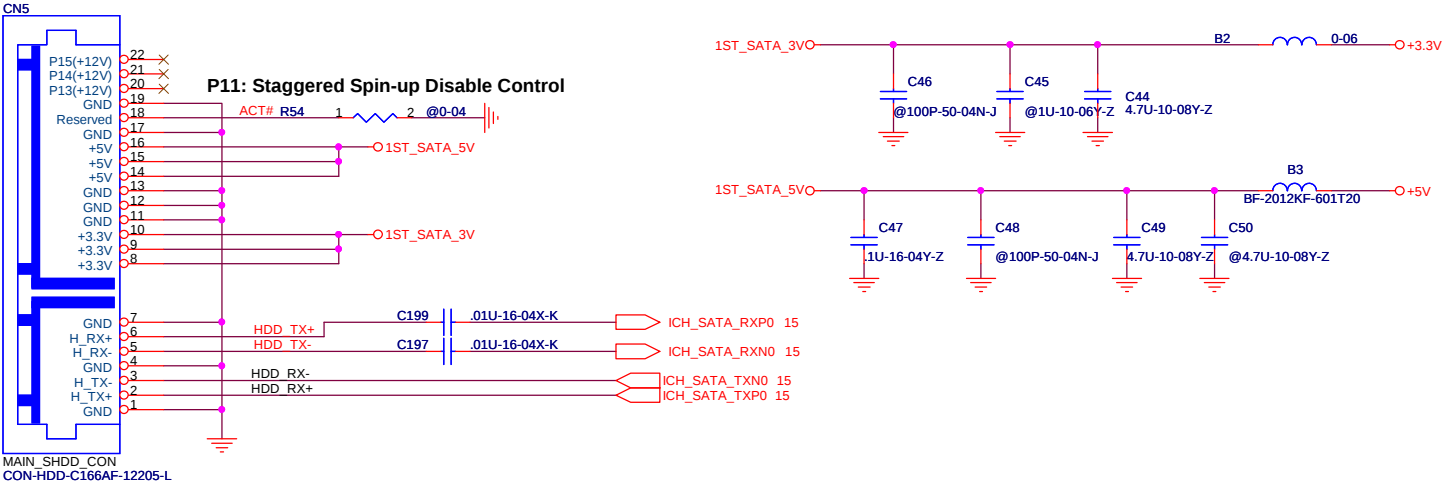
SBSPi_EN#, SB_GPIO48 , default
internal PU ,SBSPi_EN# is the MSB

MSB	LSB	Bios C/S
1	1	LPC
0	1	SPI

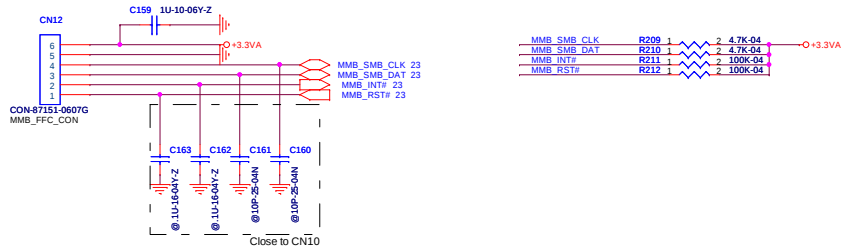




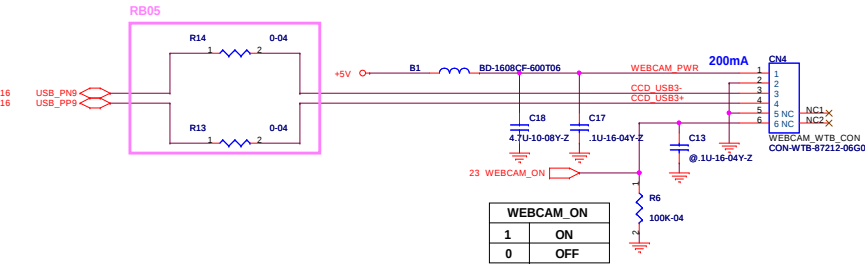
MASTER HDD CON



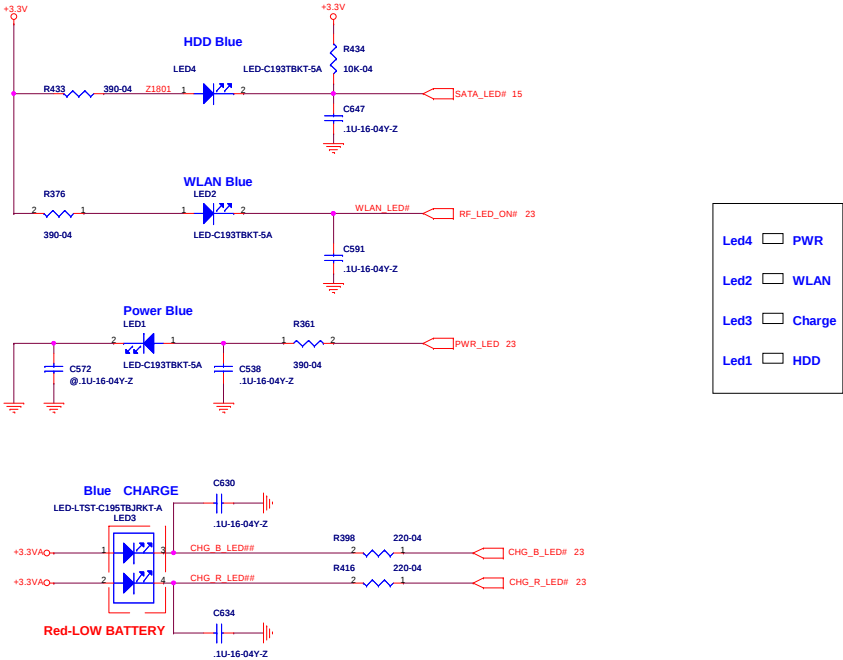
MMB



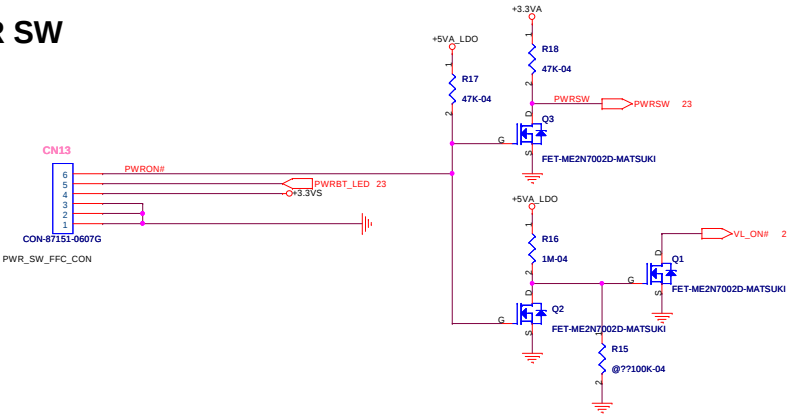
WEBCAM



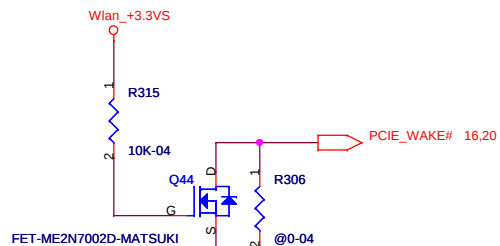
LED



PWR SW



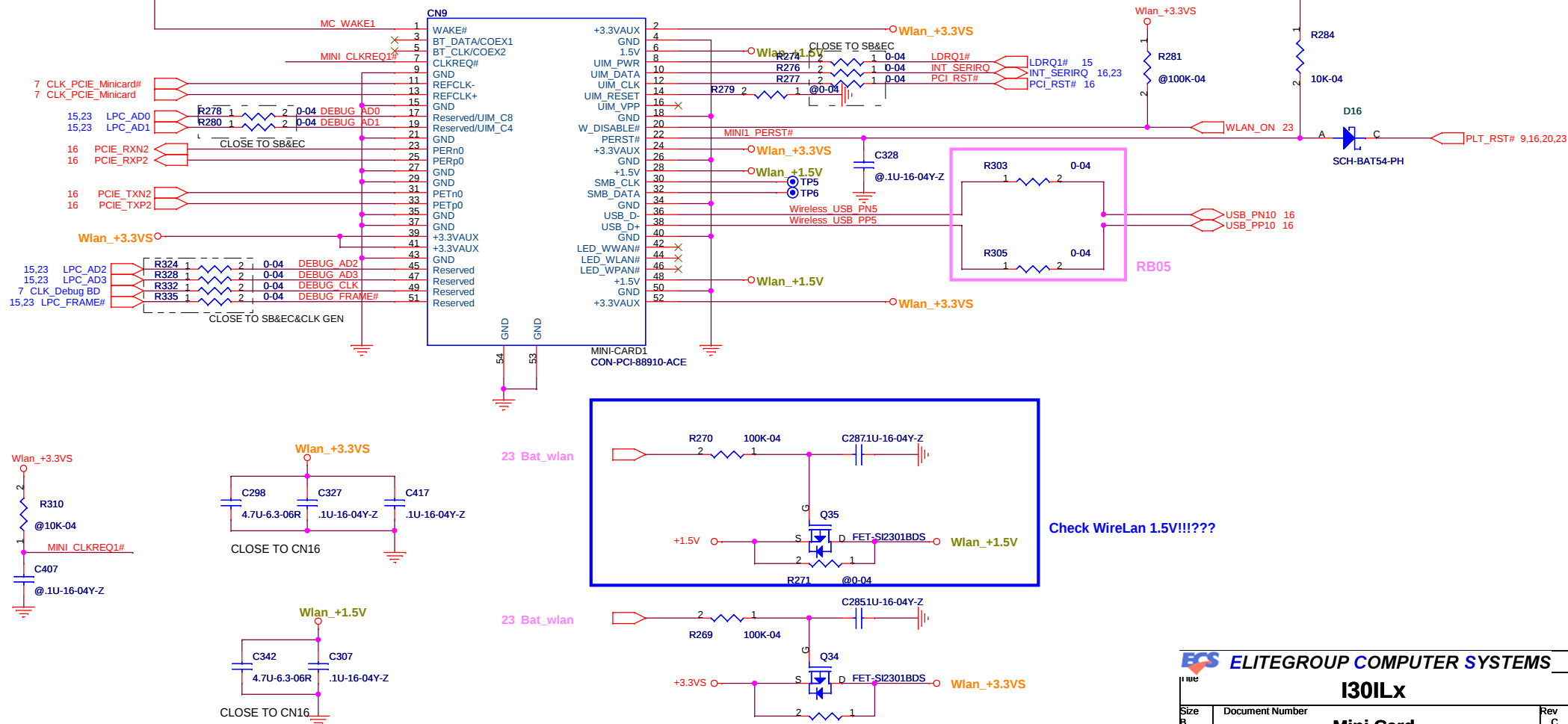
MINI CARD CON



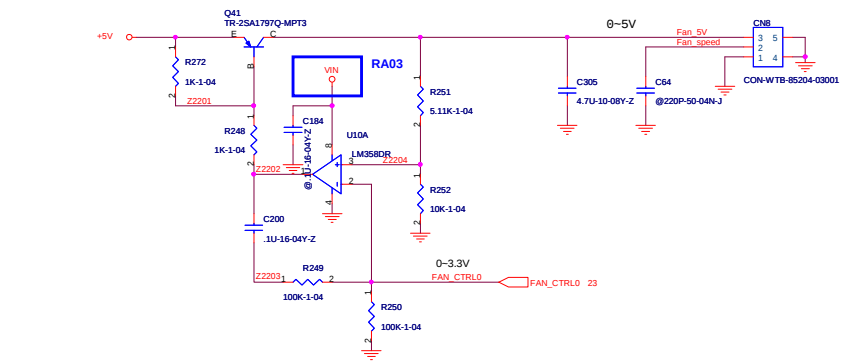
Intel PRO/Wireless 2100 LAN

PIN11	LED_WLAN_LINK	Hi(3.3V) Low(0V)	Solid ON 1 flash/3 sec LED OFF	Associated AP Not Associated with an AP Power OFF or RF_Kill active
PIN12	LED_WLAN_ACT	Hi(3.3V) Low(0V)	Rapid Blinking Slow Blinking LED OFF	Passing data traffic to AP Beacon traffic to AP Power OFF or not activity or RF_Kill active
PIN13	HW_RadioXMIT_OFF#	Hi(3.3V) Low(0V)	Enable Disable	Radio transmitter is ON Radio transmitter turn off

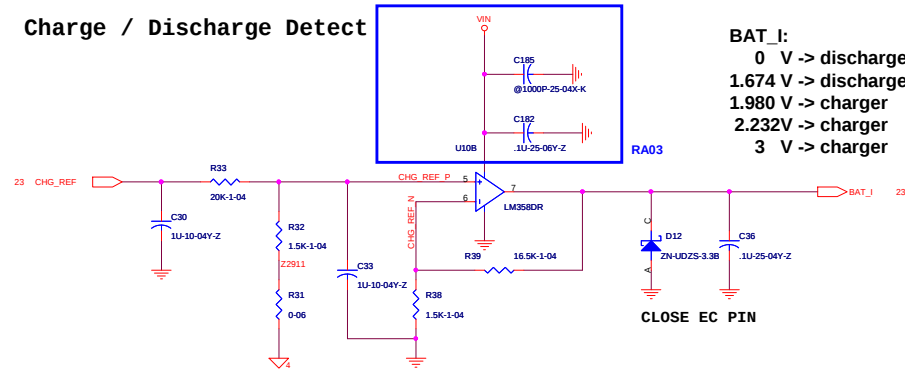
FOR Wireless LAN



CPU FAN CONTROL



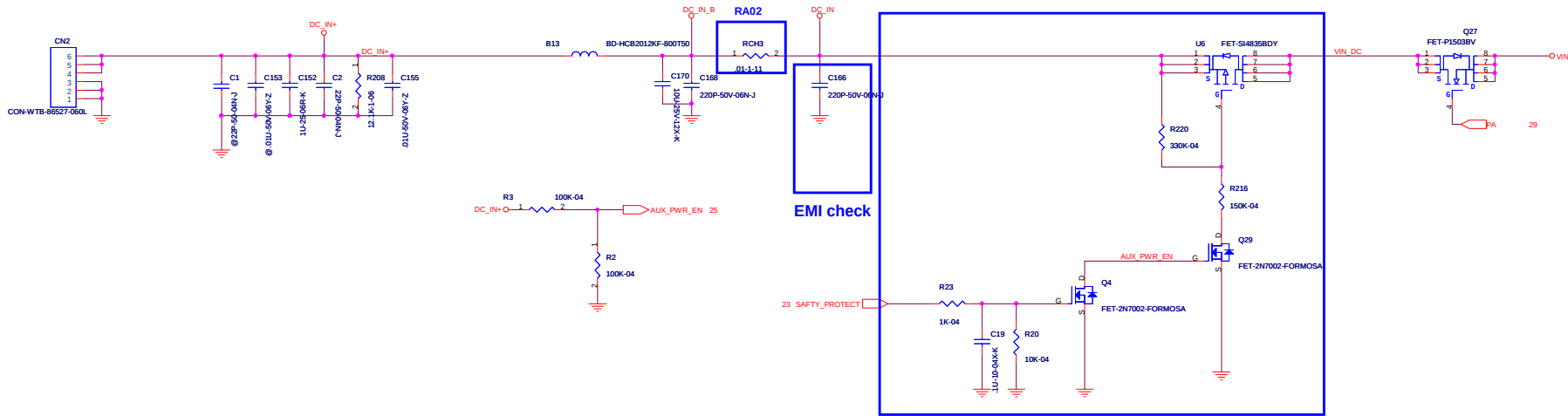
Charge / Discharge Detect



BAT_I:

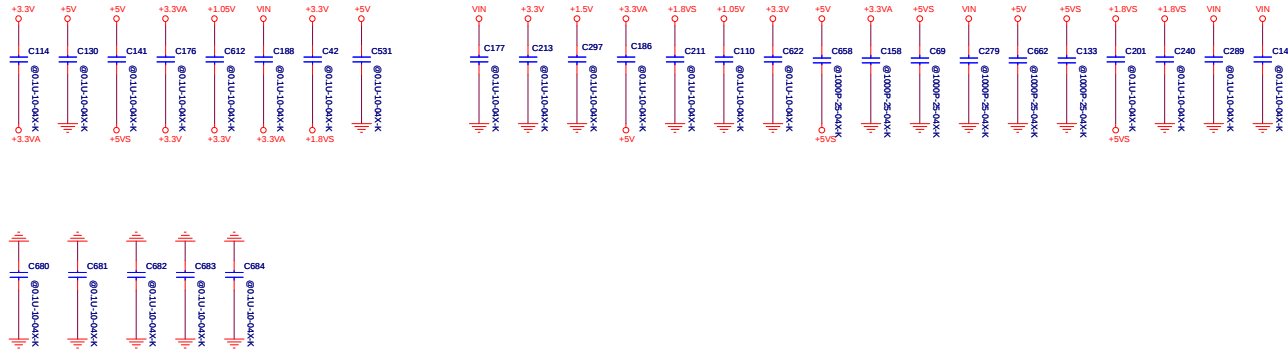
0 V ->	discharger	5.58A
1.674 V ->	discharger	0 A
1.980 V ->	charger	1.1 A
2.232V ->	charger	2 A
3 V ->	charger	6 A

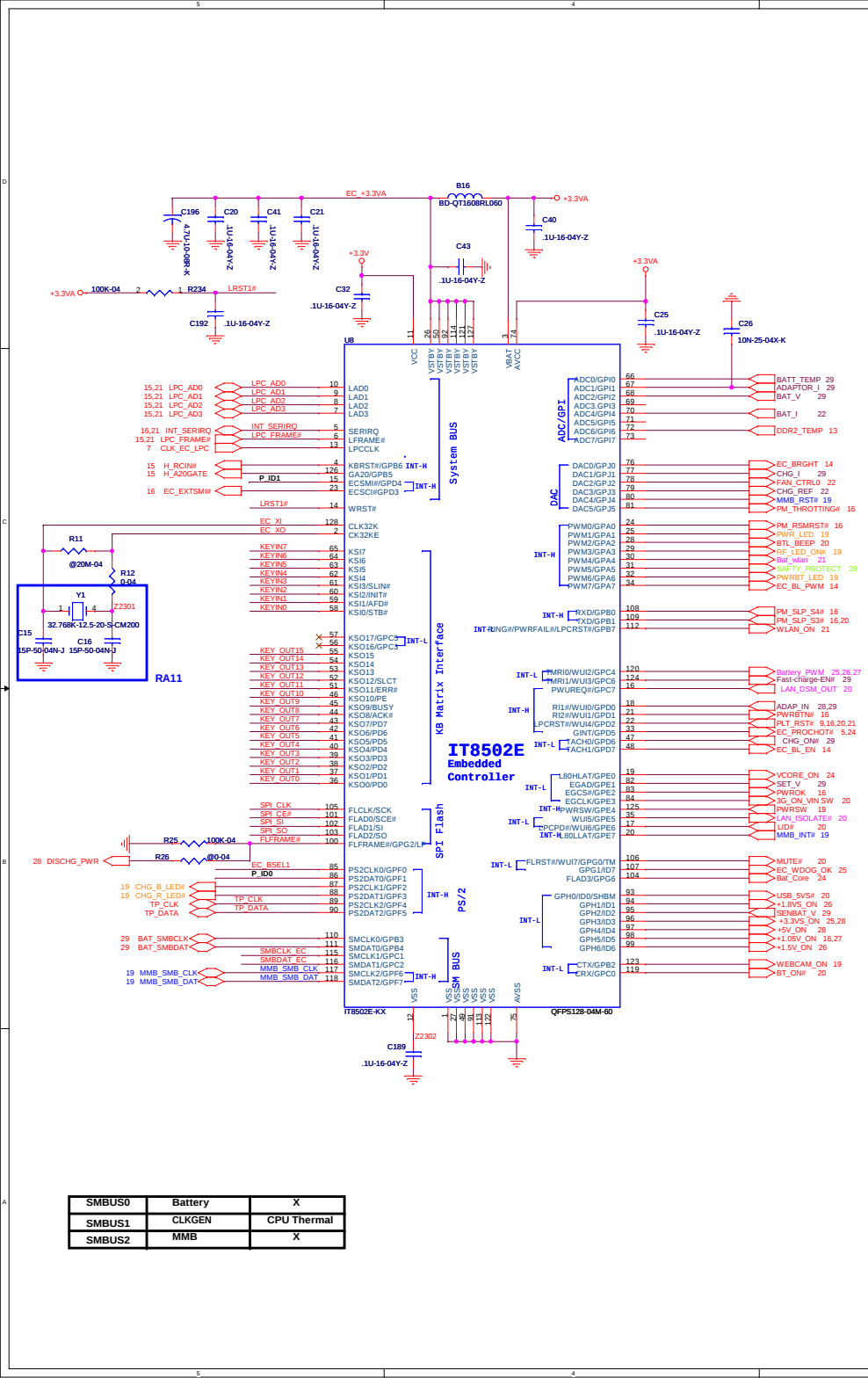
DC-IN



PROJECT	I411ix
Adaptor	65W
Rsense	33m Ohm
Stop Charger	60W

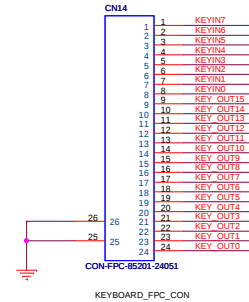
High speed current return path Capacitor



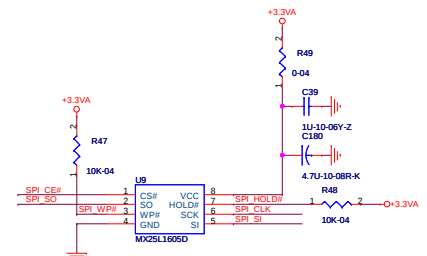


SMBUS0	Battery	X
SMBUS1	CLKGEN	CPU Thermal
SMBUS2	MMB	X

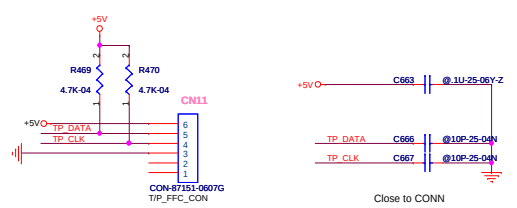
KEYBOARD CON



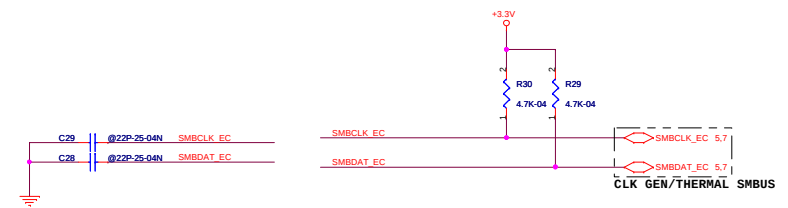
FLASH ROM(SPI)



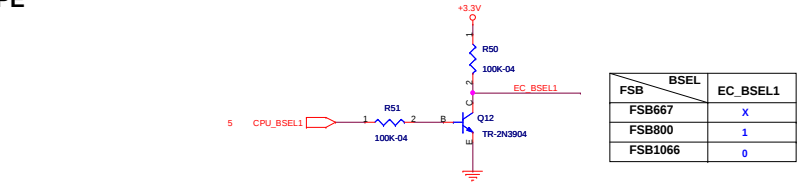
TP CON



SMBUS LEVEL SHIFT

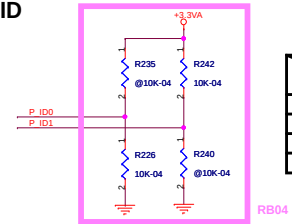


CPU TYPE



FSB	BSEL	EC_BSEL1
FSB667		X
FSB800		1
FSB1066		0

Platform ID

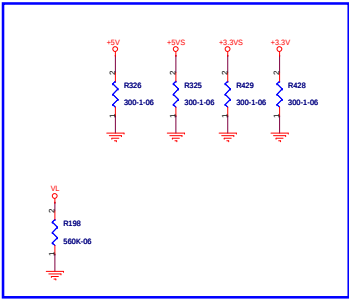
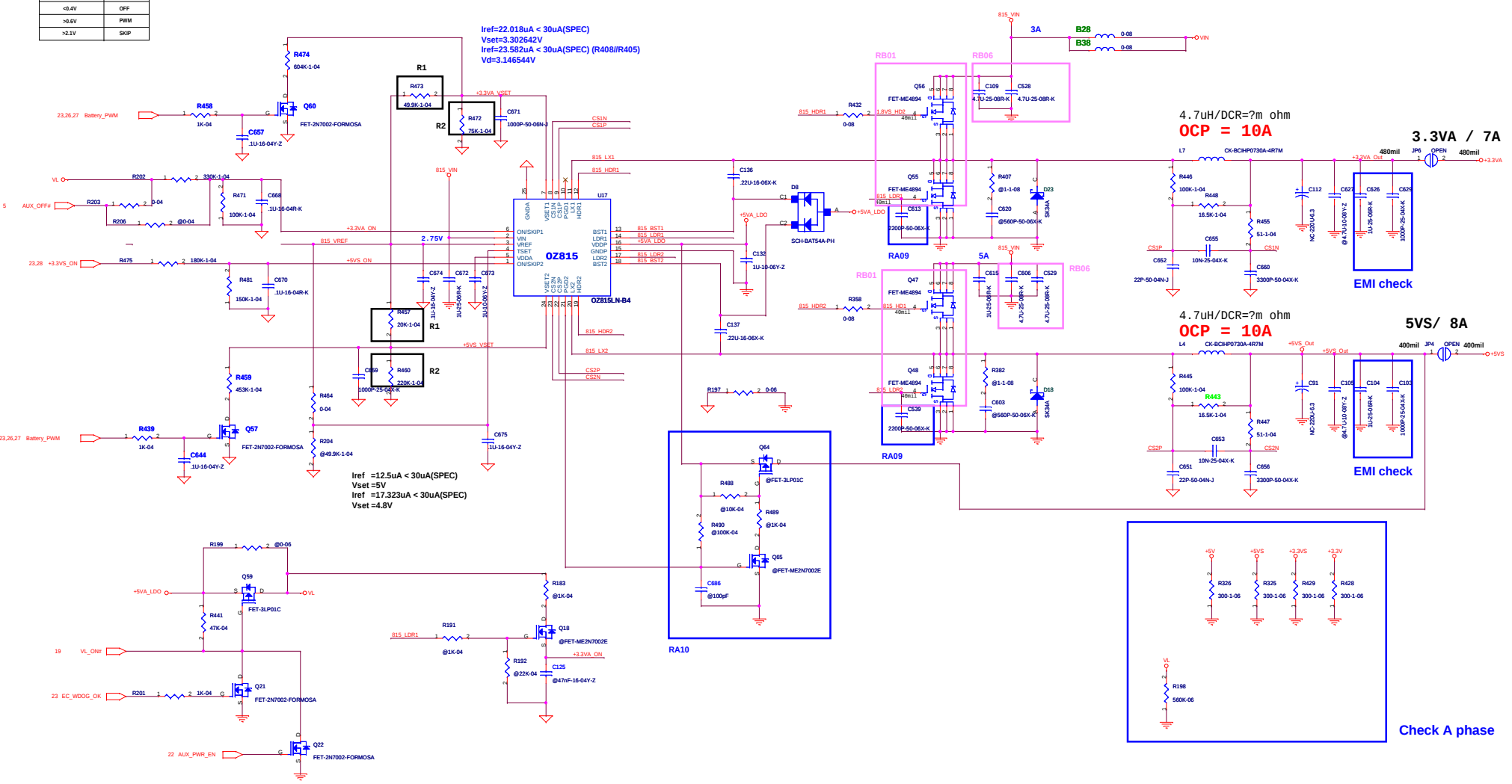


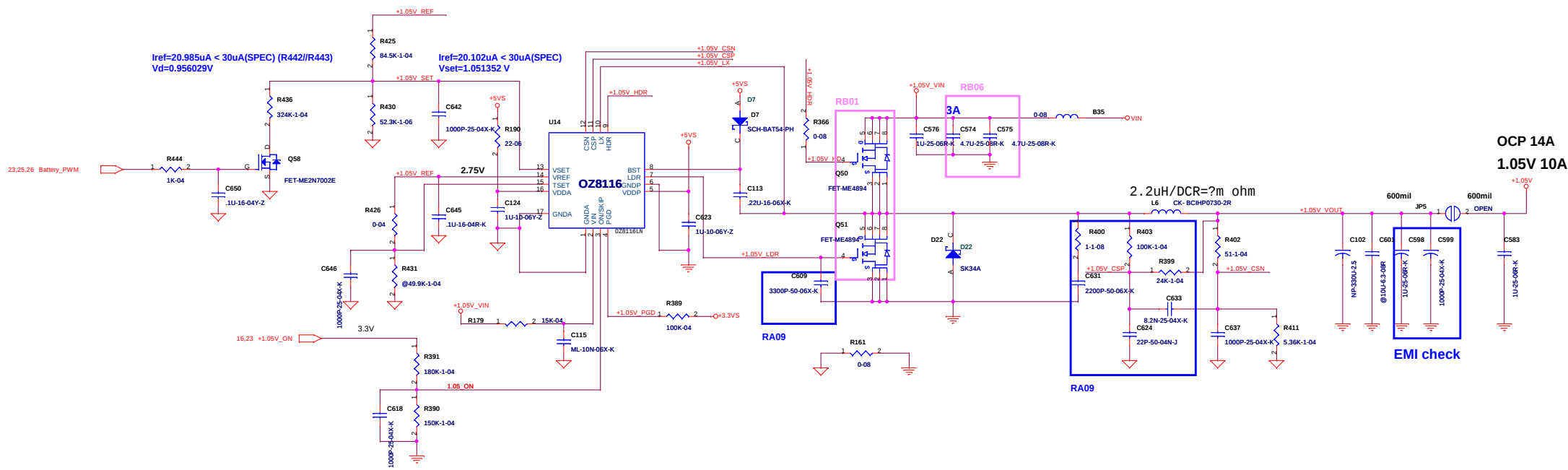
ID	(ID0)	(ID1)
MODEL		
I30IL1_RC	0	0
	1	0
	1	1

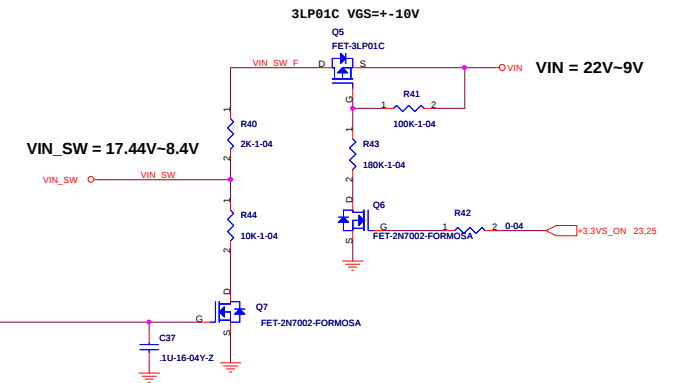
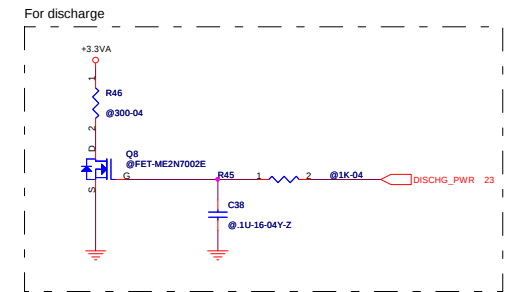
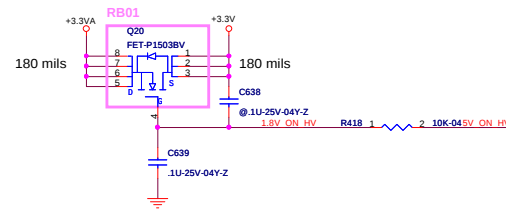
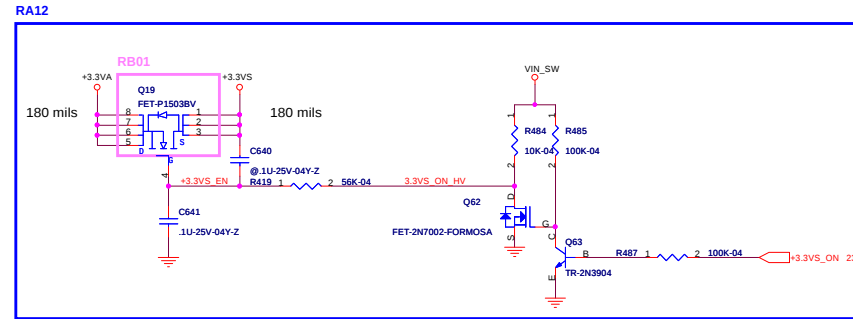
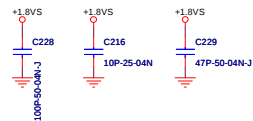
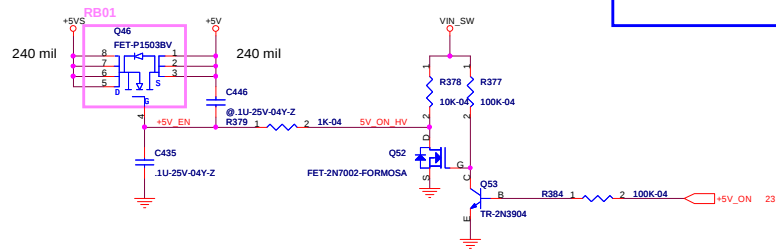
I30ILx	
Size	Document Number
Custom	EC IT8512-KX / BIOS
Date	Monday, July 13, 2009
Sheet	23 of 31

+1.8V/+5V_ON Voltage	Mode
<0.4V	OFF
>0.6V	PWM
>2.1V	SKIP

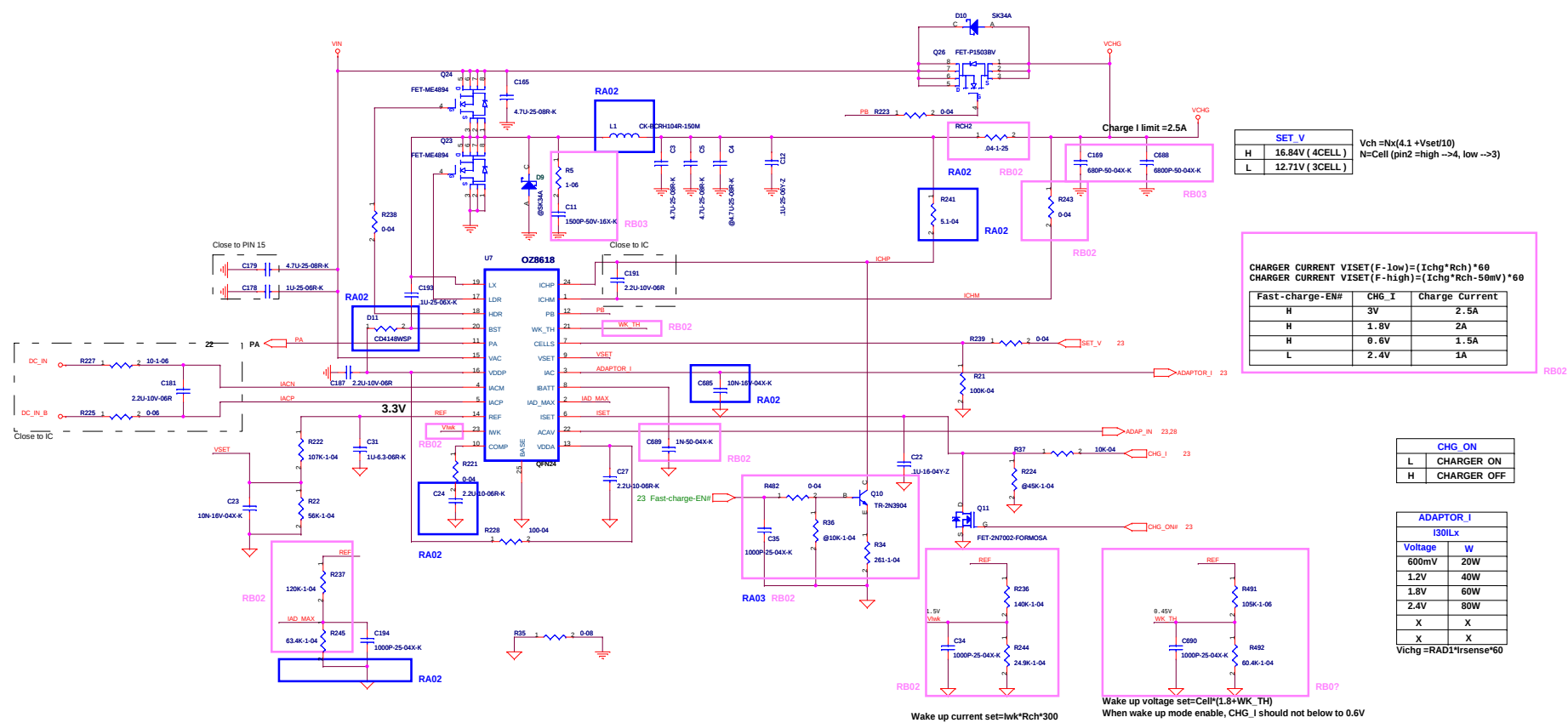
Output Voltage = [Vref x R2/(R1+R2)] x 2



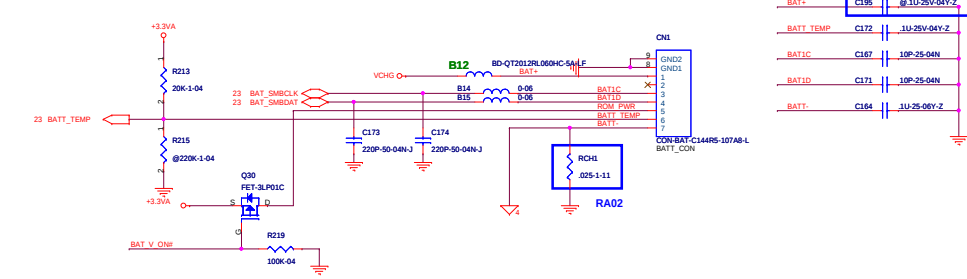




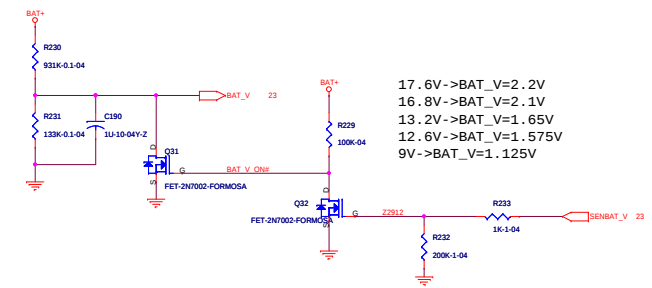
CHARGER



BATTERY CON



Battery Voltage Detect



RA to RB Modify list:

Symbol	Modify Reason	Modify Item	Page	Note
RA01	For Lan DSM mode	Modify R375 to 1Kohm, AR61 to 0ohm on I/O BD	20	N/A
RA02	Charger current unstable for OZ8618	Modify R245 , C194 to AGnd C24 to 2.2uF C685 to 10nF D11 to CD4148WSP R241 to 5.1ohm L1 to 15uH RCH1, RCH2 to 25 mohm 1206 RCH3 to 10 mohm	29 22	
RA03	Charger current unstable on Power OFF	Modify U10.7 for 5VS to Vin	22	
RA04	Solved it can't to sliend mode	Modify R67 from 68 to 750 ohm D11 to BAT54	5	
RA05	Del 2nd channel of LVDS	Del NB_LVDSB_N0/P0, NB_LVDSB_N1/P1, NB_LVDSB_N2/P2, NB_LVDSB_Clk/Dat of CN3 and U3	9 14	
RA06	Solved eye paytem of SATA signal is too big	Modify R151 to 22ohm	15	
RA07	Modify USB of layout for I/O BD layout smooth	Modify USB_PP6/USB_PN6 of layout trace	20	
RA08	Solved signal of RGB fail issue	Modify R370 to 27.4ohm	9	
RA09	Modify signal of PWM circuit (ex: Ripple Voltage, Indunce gate Voltage, OCP..)	Modify R89, R95, R107, C79, C85, C406, L5 C613, C539 R275, R285, C256, C292, C293, C296, L3 R399, R400, C609, C631 Del R67 C687	24 25 26 27 24 26	
RA10	Reserve solved Temp of OZ815 circuit too high for thermal issue	OP R488, R489, R490, Q64, Q65, C686	25	
RA11	Modify timing of crystal	Modify C15, C16 to 15pF	23	
RA12	Modify power sequence	Add R484, R485, R487, Q62, Q63	28	

RB to RC Modify list:

Symbol	Modify Reason	Modify Item	Page	Note
RB01	Modify power signal of OZ8291	Modifiy R89 to 1.05K for Loadline R95 to 2.37K for OCP L5 to 1R0 C85 to 2200P	24	N/A
	Modify PWM MOS of OZ815&OZ8116 Modify Switch MOS	Q47, Q48, Q55, Q56, Q37, Q38, Q50, Q51 to SI4134DY Q19, Q20, Q46 to P1203BV	25, 26, 27 28	
RB02	Modify charger current for OZ8618	Modifiy Rch2 to 0.04 ohm C689 to 1nF R236 to 140K R244 to 24.9K Remove R36 Add R491 to 105K R492 to 60.4K C690 to 1000P	29	
RB03	Modify Cap&Res for EMI request	Modifiy C169 to 680pF C11 to 1500pF R5 to 1ohm	29	
		Add C688 to 6800pF		
		Add C691to 1000pF	12	
RB04	Modify platform ID (01) for charger define (R:C) different with R:B	Add R242, R226 to 10kohm	23	
RB05	Del colay for SMT request	Del C687, L2, L8	26	
RB06	Modify 4.7uF 1206 to 4.7uF 0805 for Source request	Modify C109,C86,C87,C290,C303,C475,C528,C529,C574,C575,C606 from 4.7uF 1206 to 4.7uF 0805	24,25, 26, 27	