POWER Page 28~ 35

- AC/BATT CONNECTOR
- BATT CHARGER
- CPU CORE
- +5V_SUS +3.3V_ALW
- +1.5V_SUS / +0.75V_VTT
- +1.1V_RUN
- +0.9V_RUN LDO
- +1.8V_RUN LDO
- +2.5V_RUN LDO
- +1.1V_ALW_SB LDO

DDR3-SODIMM Page 7 — DDR III 800 MHZ

DDR3-SODIMM Page 8 — DDR III 800 MHZ

Dual/ Single Core CPU
AMD
Nile
Single: 12W/ Dual:15W
Page 4, 5, 6

1066 MHz FSB

Side Port with 128M (MAX) Page 11 — DDR III

North Bridge
ATI
RS880M
Page 9, 10, 11, 12

- LVDS → Panel Page 13
- HDMI → HDMI Conn Page 14
- DP → Mini DP Conn Page 14

PCI-E → PCI-E x 1 / USB2.0 x 1 → WLAN Half MINI-CARD Page 22

PCI-E x 1 / USB2.0 x 1 → WWAN MINI-CARD Page 22 → SIM Card Conn

A-link (PCIE x 4)

USB2.0 x 1 → USB 2.0 Page 20

USB2.0 x 1 → USB 2.0 Page 20

USB2.0 x 1 / SATA2 → eSATA/ USB Conn Page 20

USB2.0 x 1 → Blue Tooth Conn Page 24

Analog MIC

Audio Jack

Audio Jack

AUDIO Codec
IDT 92HD79 Page 23

HDA

Int. CLK

USB2.0

South Bridge
ATI
SB820M
Page 15, 16, 17, 18

Digital MIC Reserved

WebCam+Digital MIC Page 13 — USB2.0

SATA - HDD Page 20 — SATA2

FPC

Crystal 25M

PCI-E x 1 → **LAN Controller (10/100M)& Card Reader**
Realtek RTL8401
Page 21

- CardReader CONN
- Magnetic → RJ45

Crystal 32.768K

LPC

Crystal 25M / 32.768K

SIO
ITE
ITE8502E Page 25

SPI

THERMAL
SMSC
EMC1423 Page 26

- CPU Thermal Diode
- OTP Sensor

FLASH Memory 2MB (8 Pin SO8W) Page 19

Keyboard Page 24

PS/2 → **Touchpad** Page 24 — T/P Board

LED/ Hall sensor Page 24 — Indicator Board

Power SW Page 24 — Power SW Board

Dell/ Flex Confidential

Title: Cover Sheet		
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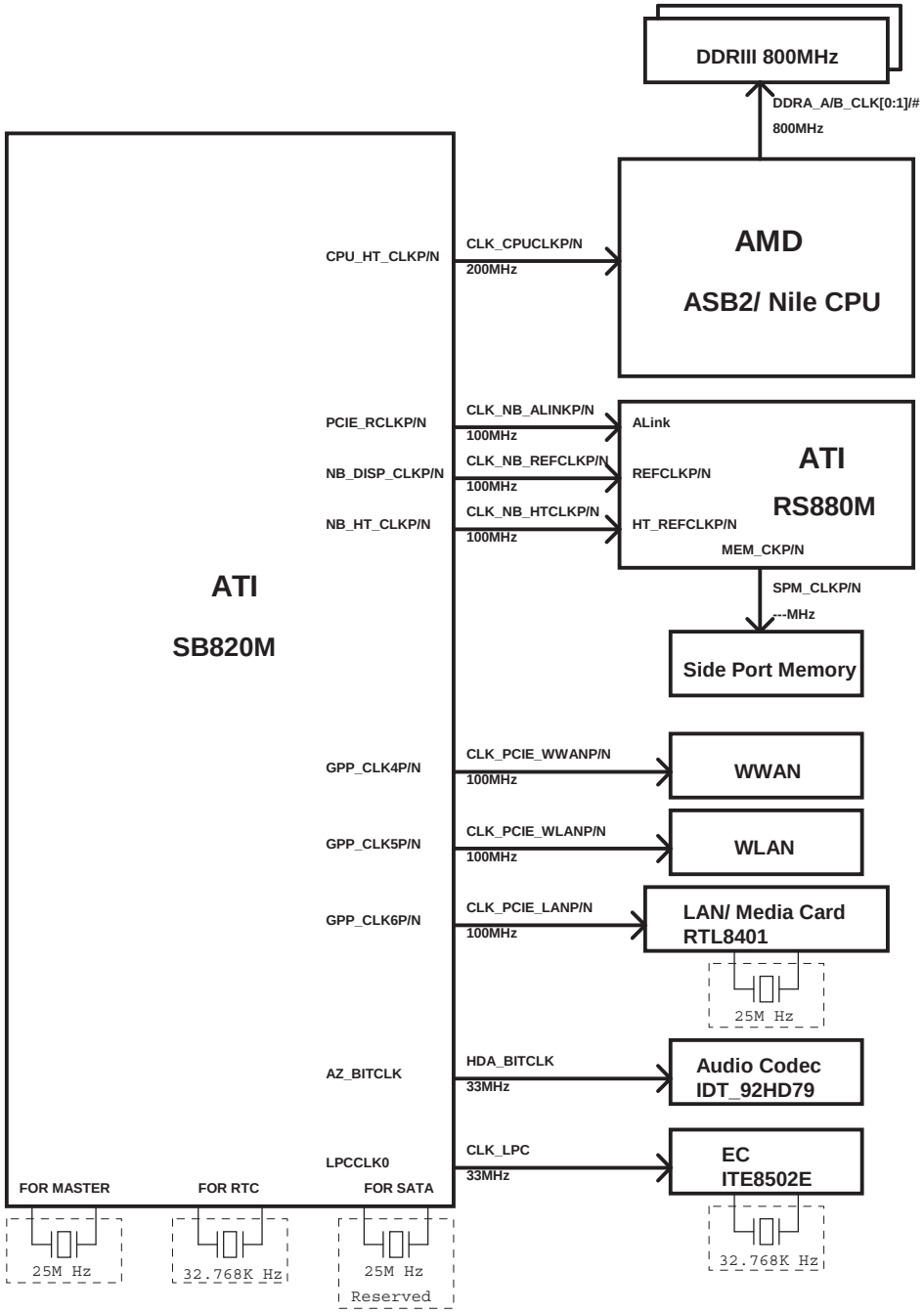
Clock Mapping



Power State

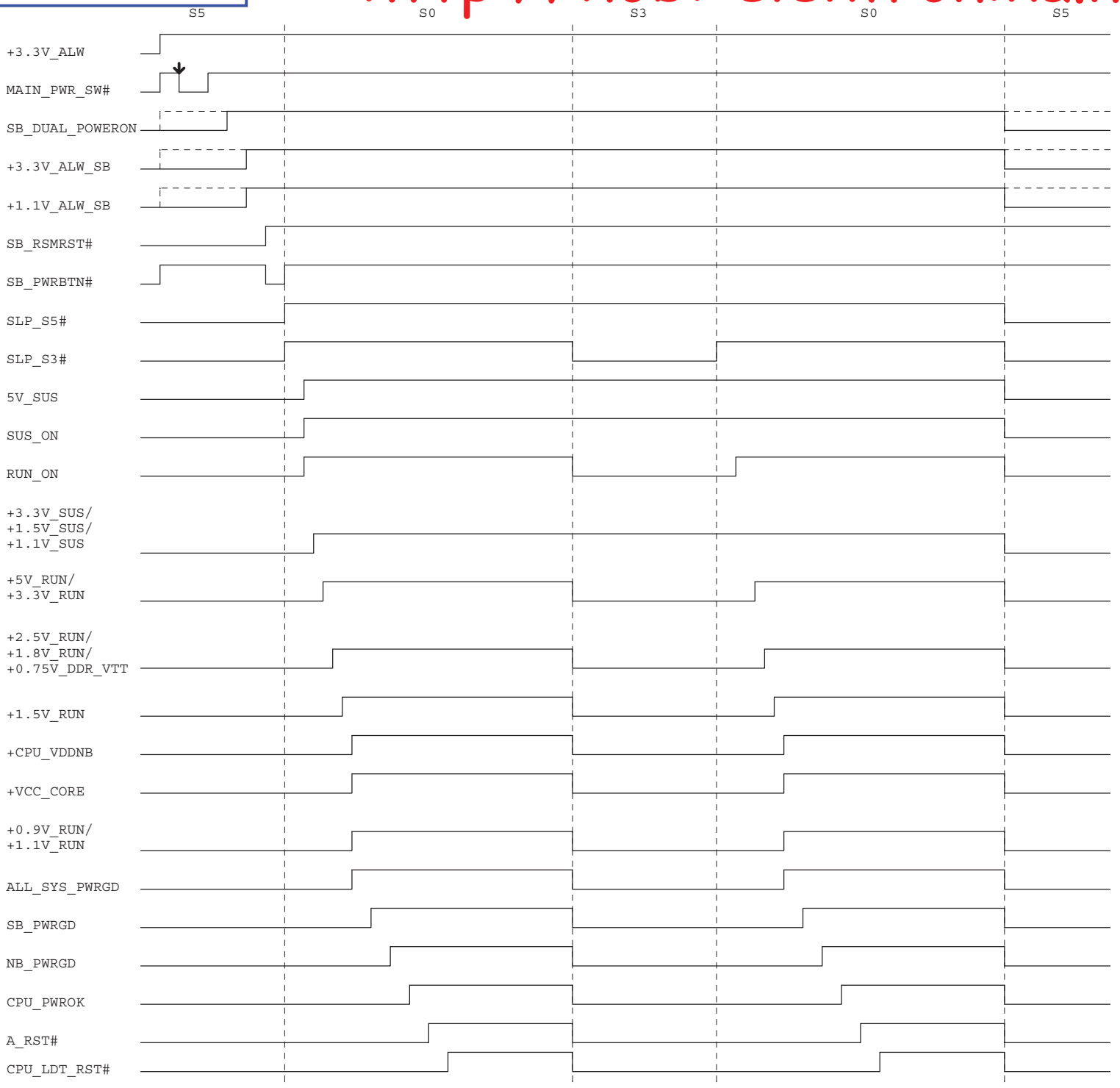
Power States							
Power Rail	Control Signal	S0	S3	S4	S5	G3/ AC-in	G3/ Battery Only
+PWR_SRC	N/A	V	V	V	V		
+0.75V_DDR_VTT	RUN_ON	V					
+0.9V_RUN	RUN_ON	V					
+1.1V_ALW_SB	SB_DUAL_PWRON	V	V	V	V		
+1.1V_SUS	SUS_ON	V	V				
+1.1V_RUN	RUN_ON	V					
+1.5V_SUS	SUS_ON	V	V				
+1.5V_RUN	RUN_ON	V					
+1.8V_RUN	RUN_ON	V					
+2.5V_RUN	RUN_ON	V					
+3.3V_ALW	+3.3V_EN2	V	V	V	V		
+3.3V_ALW_SB	SB_DUAL_PWRON	V	V	V			
+3.3V_SUS	SUS_ON	V	V				
+3.3V_RUN	RUN_ON	V					
+3.3V_KBVCC	N/A	V	V	V	V		
+5V_LDO	N/A	V	V	V	V		
+5V_SUS	5V_SUS_ON	V	V				
+5V_RUN	RUN_ON	V					
+GFX_PWR_SRC	N/A	V					
+LCDVCC	LCD_DIGON	V					
+CPU_VDDNB	2.5V_PWRGD	V					
+VCC_CORE	2.5V_PWRGD	V					
+RTC_CELL	N/A	V	V	V	V	V	V
+USB_RIGHT_PWR	USB_EN#	V	V				
+USB_LEFT_PWR	USB_EN#	V	V				

Title: CLK Mapping/ Power States

Size | Document Number: Inspiron Z -- AMD | Rev: A00

Date: Monday, November 02, 2009 | Sheet 2 of 37

Power On Sequence



Dell/ Flex Confidential

Title: Power Sequence		
Size	Document Number: Inspiron Z -- AMD	Rev: A00
Date: Monday, November 02, 2009	Sheet 3 of 37	

AMD Debug Termination

Signal Name		Type - Struct[1]	Header	Termination	Level Shift[4]	Term Voltage
TEST2	DRAIN0	-	Unconnected	-	-	-
TEST3	GATE0	-	Unconnected	-	-	-
TEST6	DIECRACKMON		Unconnected			
TEST7	ANALOG_T		Unconnected			
TEST8	DIG_T	-	Unconnected	-	-	-
TEST9	ANALOGIN			Tie to VSS		
TEST10	ANALOGOUT		Unconnected			
TEST14	BP0	O P/P	BP, Pin 1 or TP	-		-
TEST15	BP1	O P/P	BP, Pin 3 or TP	-		-
TEST16	BP2	O P/P	BP, Pin 5 or TP	-		-
TEST17	BP3	O P/P	BP, Pin 7 or TP	-		-
TEST18	PLLTEST1		SCAN, pin 7 and HDT+, pin 20	1 K Ω		VSS
TEST19	PLLTEST0		SCAN, pin 9 and HDT+, pin 18	1 K Ω		VSS
TEST20	SCANCLK2	I	SCAN, pin 19	1 K Ω		VSS
TEST21	SCANEN	I	SCAN, pin 11	1 K Ω		VSS
TEST22	SCANSHIFTEN	I	SCAN, pin 13	1 K Ω		VSS
TEST23	TSTUPD		TP	1 K Ω		VSS
TEST24	SCANCLK1	I	SCAN, pin 17	1 K Ω		VSS
TEST25_H	BYPASSCLK_H	I	TP	510 Ω		VDDIO
TEST25_L	BYPASSCLK_L	I	TP	510 Ω		VSS
TEST26	BURNIN_L	-	Termination only	1 K Ω		VDDIO
TEST27	SINGLECHAIN	I		1 K Ω		VDDIO
TEST28_H	H_PLLCHRZ_P		Unconnected			
TEST28_L	L_PLLCHRZ_N		Unconnected			
TEST29_H	H_FBCLKOUT_P			80.6 Ω (differential)		
TEST29_L	L_FBCLKOUT_N					

CPU Sku-able

DELH-40GAB4900-X000	Athlon Single Core 1.7G AMK125DBV13GM	DELH-11D0020000003G IC CPU AMK125DBV13GM 1G7 BGA-812
DELH-40GAB4900-X001	Athlon Dual Core 1.3G AMK325DBV23GM	DELH-11D0020000002G IC CPU AMK325DBV23GM 1G3 BGA-812
DELH-40GAB4900-X002	Turion Dual Core 1.5G TMK625DBV23GM	DELH-11D0020000001G IC CPU TMK625DBV23GM 1G5 BGA-812

Keep trace from resister to CPU within 0.6"
Keep trace from capacity to CPU within 1.2"

0.25A

+CPU_VDDA
+2.5V_RUN
L604 BLM18PG300SN1D
C672 180p/50V
C669 4.7u/6.3V/0603
C675 220n/10V
C673 3300p/50V
(15) CLK_CPUCLKP
C667 3900p/50V
R642 169_F
(15) CLK_CPUCLKN
C666 3900p/50V
CPU_CLKP
CPU_CLKN

U14D
MISC
VDDA_1
VDDA_2
CLKIN_H
CLKIN_L
RSVD|CORE_TYPE
M31 CPU_CORE_TYPE 1
T605PAD

(15,29) CPU_PWRGD
(10,15) LDT_STP#
(15) LDT_RST#
PAD T19
PWROK
LDTSTOP_L
RESET_L

+1.5V_SUS
R635 *1K_F_NC
+CPU_MVREF
R636 *1K_F_NC
C655 *0.01u/16V_NC
C654 *1000p/50V_NC

SVC
SVD
C1
B2
CPU_SVC (29)
CPU_SVD (29)
CPU_THRMDC (26)
C132 *100p/50V_NC

(26) CPU_THRM_ALERT#
CPU_SIC
CPU_SID
SIC
SID
RSVD_SA0
ALERT_L
THERMDC
THERMDA
THERMTRIP_L
PROCHOT_L
CPU_THRMDA (26)
CPU_THRMTRIP# (26)
CPU_PROCHOT# (15,29)

CPU_TDI
CPU_TRST#
CPU_TCK
CPU_TMS
TDI
TRST_L
TCK
TMS
TDO
AN7 CPU_TDO

+1.5V_SUS
R197 300
CPU_DBREQ#
DBREQ_L
DBRDY
H9 CPU_DBRDY
R198 *300_NC

(29) CPU_VSS_SENSE
(29) CPU_VDD_SENSE
(29) CPU_VDDNB_SENSE
(31) CPU_VDDIO_SENSE
(33) CPU_VDDR_SENSE
VSS_SENSE
VLDT_SENSE
VDD_SENSE
VDDNB_SENSE
VDDIO_SENSE
VDDR_SENSE
RSVD3
AM6
+1.1V_RUN
AJ9 CPU_PRESENT# 1
T606PAD
CPU_PRESENT_L
Place near by CPU within 1.5"

+CPU_MVREF
+0.75V_VTT_REF
R634 0
M_VREF
M_ZN_H
M_ZN_L
CPU_M_ZN_H
CPU_M_ZN_L
HTREF1
HTREF0
V10 CPU_HTREF1
V9 CPU_HTREF0
R645 44.2 F
R644 44.2 F
Route as 80 ohm, diff

R204 39.2
Place near by CPU within 1"
C128 *0.1u/10V_NC
+1.5V_SUS
R210 510 CPU_BYPASSCLK_H
R212 510 CPU_BYPASSCLK_L
R213 1K CPU_PLLTEST0
R211 1K CPU_PLLTEST1
R643 0 CPU_ANALOGIN
BYPASSCLK_H
BYPASSCLK_L
PLLTEST0
PLLTEST1
ANALOGIN
FBCLKOUT_H
FBCLKOUT_L
B10 CPU_FBCLKOUT_H
A10 CPU_FBCLKOUT_L
R209 80.6 F

PAD T603 CPU_BP3
PAD T20 CPU_BP2
PAD T21 CPU_BP1
PAD T604 CPU_BP0
BP3
BP2
BP1
BP0

ANALOG_T
DIECRACKMON
GATE0
DRAIN0
DIG_T
BURNIN_L
ANALOGOUT
SCANCLK1
TSTUPD
SCANSHIFTEN
SCANEN
SCANCLK2
PLLCHRZ_H
PLLCHRZ_L
SINGLECHAIN
AK7 CPU_SCANCLK1
AG8 CPU_TSTUPD
AK9 CPU_SCANSHFTEN
AH9 CPU_SCANEN
AM7 CPU_SCANCLK2
AJ8 CPU_SINGLECHAIN
AM4 CPU_BURNIN_L
R660 2K
R655 2K
R203 2K
R657 2K
R192 2K
R658 2K
R199 2K
+1.5V_SUS
M_TEST

AMD_CPU_GENEVA

(9) HT_IN[0..15]
(9) HT_IN#[0..15]
HT_OUT[0..15] (9)
HT_OUT#[0..15] (9)

U14A
HT LINK
HT_IN15 W7
HT_IN#15 W6
HT_IN14 U6
HT_IN#14 U5
HT_IN13 R7
HT_IN#13 R6
HT_IN12 P6
HT_IN#12 P5
HT_IN11 L6
HT_IN#11 L5
HT_IN10 J6
HT_IN#10 J5
HT_IN9 H4
HT_IN#9 H3
HT_IN8 G6
HT_IN#8 G5
HT_IN7 T3
HT_IN#7 T4
HT_IN6 T2
HT_IN#6 T1
HT_IN5 P3
HT_IN#5 P4
HT_IN4 P2
HT_IN#4 P1
HT_IN3 M2
HT_IN#3 M1
HT_IN2 K3
HT_IN#2 K4
HT_IN1 K2
HT_IN#1 K1
HT_IN0 H2
HT_IN#0 H1
L0_CADIN_H15 ... L0_CADIN_L0
L0_CADOUT_H15 ... L0_CADOUT_L0
AB6 HT_OUT15
AB5 HT_OUT#15
AB9 HT_OUT14
AB8 HT_OUT#14
AC7 HT_OUT13
AC6 HT_OUT#13
AE6 HT_OUT12
AE5 HT_OUT#12
AE9 HT_OUT11
AE8 HT_OUT#11
AH3 HT_OUT10
AH4 HT_OUT#10
AK3 HT_OUT9
AK4 HT_OUT#9
AH1 HT_OUT8
AH2 HT_OUT#8
Y1 HT_OUT7
Y2 HT_OUT#7
Y4 HT_OUT6
Y3 HT_OUT#6
AB1 HT_OUT5
AB2 HT_OUT#5
AB4 HT_OUT4
AB3 HT_OUT#4
AD4 HT_OUT3
AD3 HT_OUT#3
AF1 HT_OUT2
AF2 HT_OUT#2
AF4 HT_OUT1
AF3 HT_OUT#1
AK1 HT_OUT0
AK2 HT_OUT#0

(9) HT_CLKIN1
(9) HT_CLKIN#1
M8
M7
L0_CLKIN_H1
L0_CLKIN_L1
L0_CLKOUT_H1
L0_CLKOUT_L1
AF6
AF5
HT_CLKOUT1 (9)
HT_CLKOUT#1 (9)

(9) HT_CLKIN0
(9) HT_CLKIN#0
M3
M4
L0_CLKIN_H0
L0_CLKIN_L0
L0_CLKOUT_H0
L0_CLKOUT_L0
AD1
AD2
HT_CLKOUT0 (9)
HT_CLKOUT#0 (9)

(9) HT_CTLIN1
(9) HT_CTLIN#1
Y6
Y5
L0_CTLIN_H1
L0_CTLIN_L1
L0_CTLOUT_H1
L0_CTLOUT_L1
Y8
Y9
HT_CTLOUT1 (9)
HT_CTLOUT#1 (9)

(9) HT_CTLIN0
(9) HT_CTLIN#0
V2
V1
L0_CTLIN_H0
L0_CTLIN_L0
L0_CTLOUT_H0
L0_CTLOUT_L0
V4
V3
HT_CTLOUT0 (9)
HT_CTLOUT#0 (9)

AMD_CPU_GENEVA

AMD Debug Port

+1.5V_SUS
CN7
CPU_DBREQ#
CPU_DBRDY
CPU_TCK
CPU_TMS
CPU_TDI
CPU_TRST#
CPU_TDO
+3.3V_RUN
R667 4.7K
+1.5V_RUN
R665 4.7K
Q614 MMBT3904
LDT_RST#
*SAMTEC_ASP-68200-07_NC

+1.5V_RUN
CPU_PWRGD R195 300
LDT_RST# R196 300
LDT_STP# R189 300
+1.5V_SUS
CPU_THRMTRIP# R659 1K
CPU_PROCHOT# R200 300
CPU_THRM_ALERT# R663 1K
CPU_SIC R202 1K
CPU_SID R201 1K

+3.3V_SUS
Q17 ME2N7002W
(25) SMBCLK2
CPU_SIC
Q16 ME2N7002W
(25) SMBDAT2
CPU_SID

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Title	CPU - HT/ MISC	
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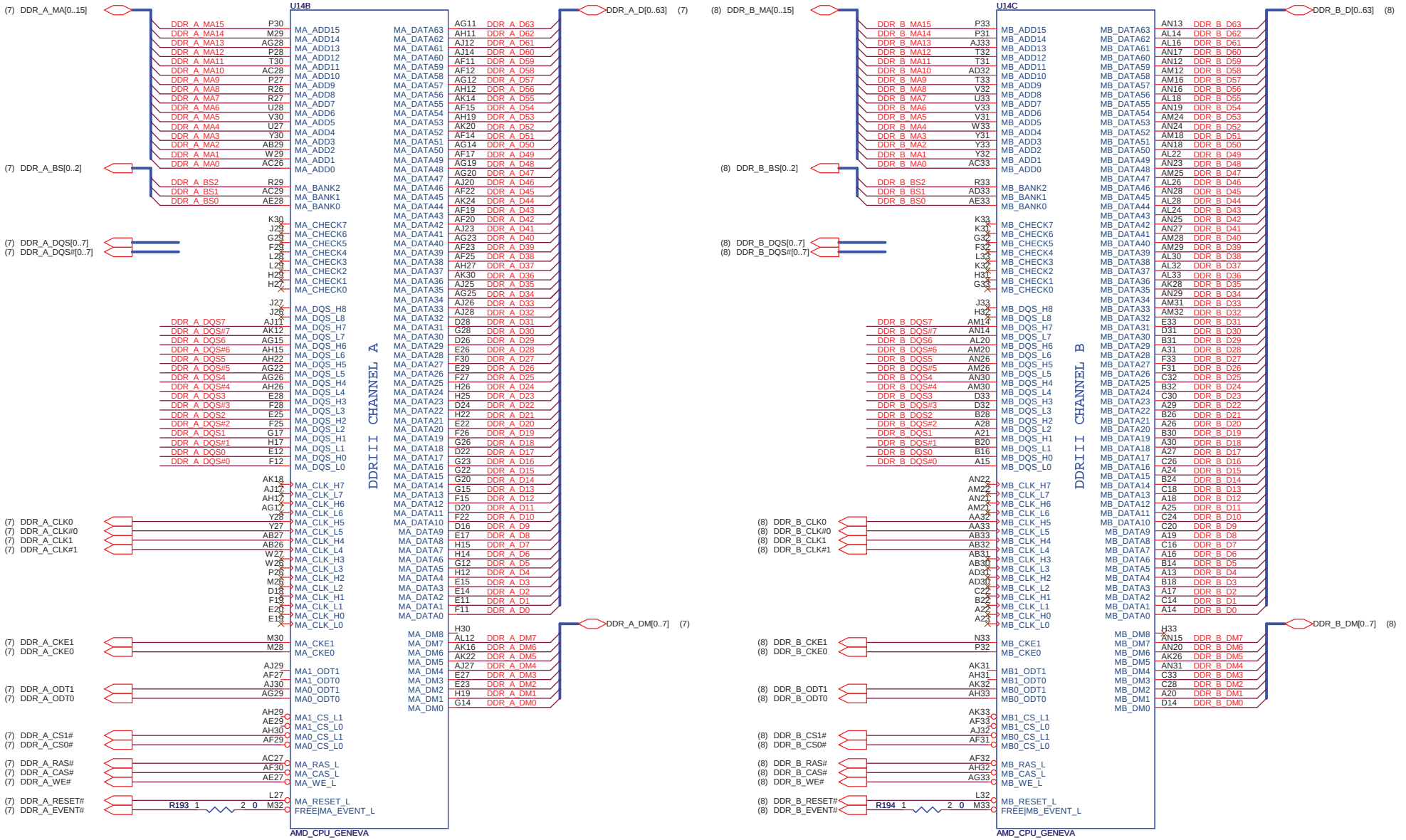
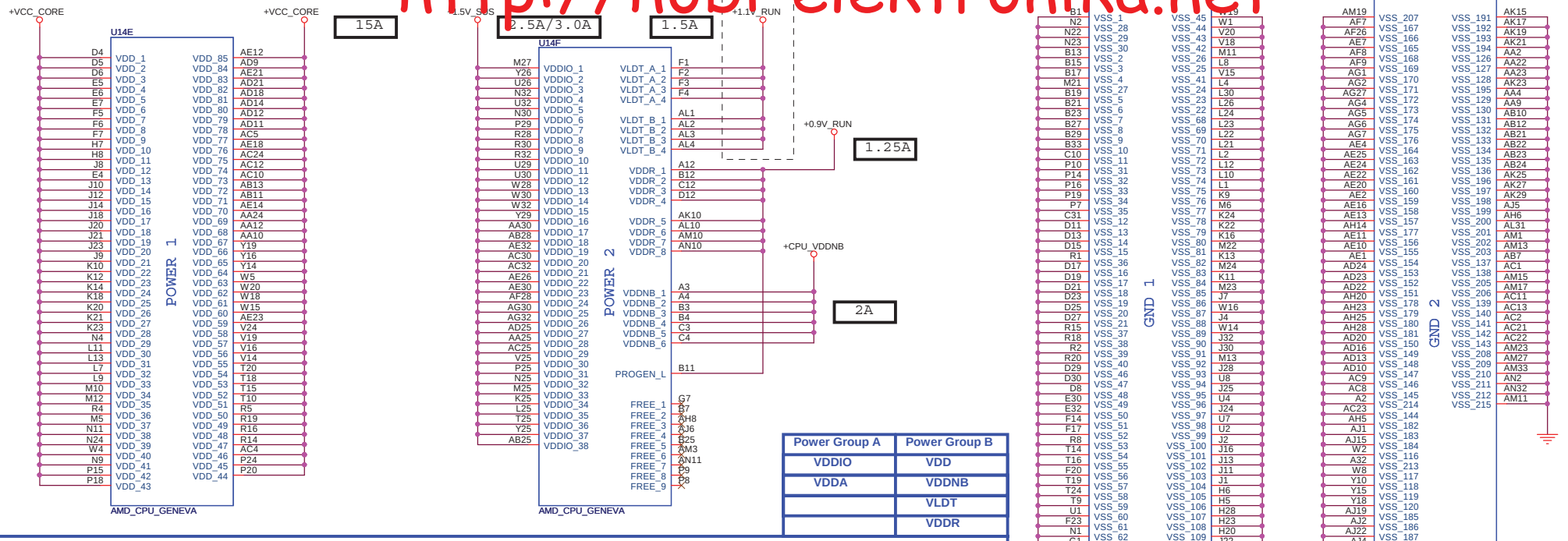
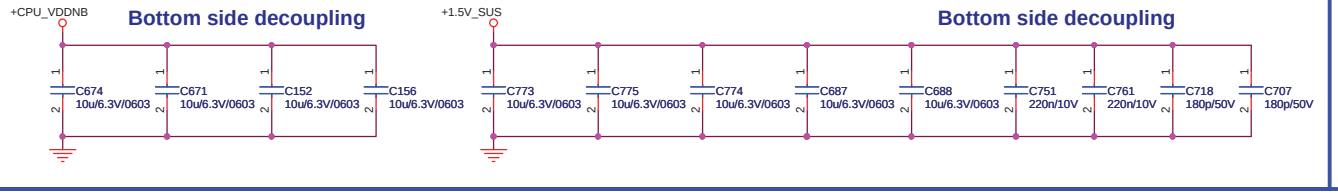
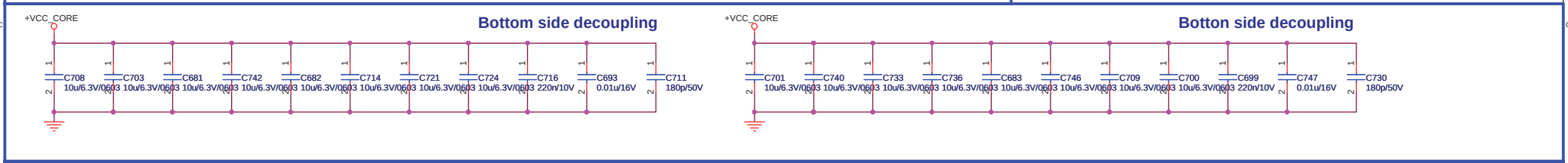
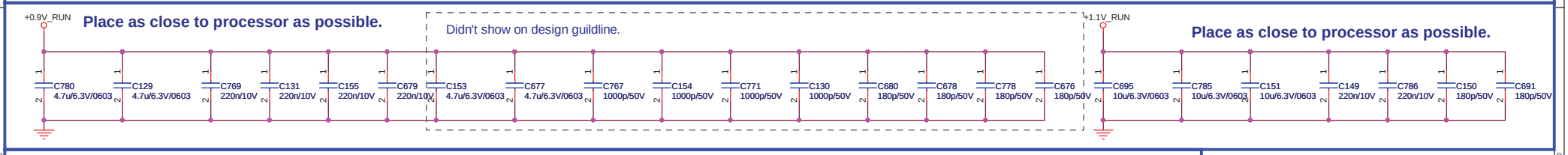


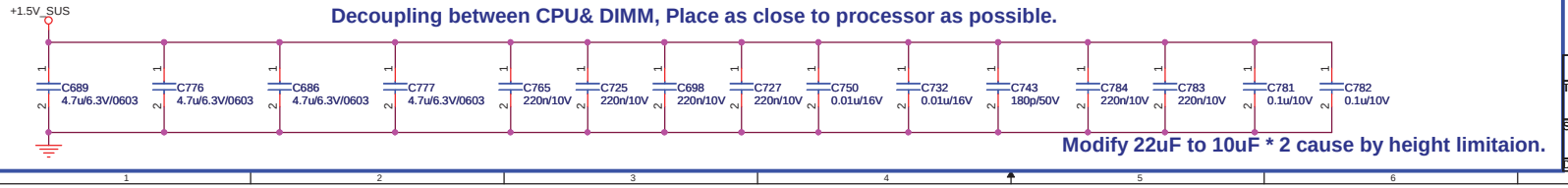
Dell/ Flex Confidential			
Title: CPU - DDR I/F			
Size	Document Number: Inspiron Z -- AMD		Rev: A00
Date: Monday, November 02, 2009	Sheet 5 of 37		











Dell/ Flex Confidential

Title	CPU - PWR/ GND	
Size	Document Number: Inspiron Z -- AMD	Rev: A00
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DDRIII DIMM A

CN10A

(5) DDR_A_MA[0..15]
DDR_A_MA0 98
DDR_A_MA1 97
DDR_A_MA2 96
DDR_A_MA3 95
DDR_A_MA4 92
DDR_A_MA5 91
DDR_A_MA6 90
DDR_A_MA7 86
DDR_A_MA8 89
DDR_A_MA9 85
DDR_A_MA10 107
DDR_A_MA11 84
DDR_A_MA12 83
DDR_A_MA13 119
DDR_A_MA14 80
DDR_A_MA15 78

DDR_A_BS0 109
DDR_A_BS1 108
DDR_A_BS2 79

(5) DDR_A_BS[0..2]
(5) DDR_A_CS0# 114
(5) DDR_A_CS1# 121
(5) DDR_A_CLK0 101
(5) DDR_A_CLK#0 103
(5) DDR_A_CLK1 102
(5) DDR_A_CLK#1 104
(5) DDR_A_CKE0 73
(5) DDR_A_CKE1 74
(5) DDR_A_CAS# 115
(5) DDR_A_RAS# 110
(5) DDR_A_WE# 113
197
201
202
(8,17,22) SB_SMB_SCL0 200
(8,17,22) SB_SMB_SDA0
116
(5) DDR_A_ODT0 120
(5) DDR_A_ODT1

(5) DDR_A_DM[0..7]
DDR_A_DM0 11
DDR_A_DM1 28
DDR_A_DM2 46
DDR_A_DM3 63
DDR_A_DM4 136
DDR_A_DM5 153
DDR_A_DM6 170
DDR_A_DM7 187

(5) DDR_A_DQS[0..7]
(5) DDR_A_DQS#[0..7]
DDR_A_DQS0 12
DDR_A_DQS1 29
DDR_A_DQS2 47
DDR_A_DQS3 64
DDR_A_DQS4 137
DDR_A_DQS5 154
DDR_A_DQS6 171
DDR_A_DQS7 188
DDR_A_DQS#0 10
DDR_A_DQS#1 27
DDR_A_DQS#2 45
DDR_A_DQS#3 62
DDR_A_DQS#4 135
DDR_A_DQS#5 152
DDR_A_DQS#6 169
DDR_A_DQS#7 186

A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10/AP A11 A12 A13 A14 A15
BA0 BA1 BA2
S0# S1#
CK0 CK0# CK1 CK1#
CKE0 CKE1
CAS# RAS# WE#
SA0 SA1
SCL SDA
ODT0 ODT1
DM0 DM1 DM2 DM3 DM4 DM5 DM6 DM7
DQS0 DQS1 DQS2 DQS3 DQS4 DQS5 DQS6 DQS7
DQS0# DQS1# DQS2# DQS3# DQS4# DQS5# DQS6# DQS7#

DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15 DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23 DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31 DQ32 DQ33 DQ34 DQ35 DQ36 DQ37 DQ38 DQ39 DQ40 DQ41 DQ42 DQ43 DQ44 DQ45 DQ46 DQ47 DQ48 DQ49 DQ50 DQ51 DQ52 DQ53 DQ54 DQ55 DQ56 DQ57 DQ58 DQ59 DQ60 DQ61 DQ62 DQ63

5 DDR_A_D0
7 DDR_A_D1
15 DDR_A_D2
17 DDR_A_D3
4 DDR_A_D4
6 DDR_A_D5
16 DDR_A_D6
18 DDR_A_D7
21 DDR_A_D8
23 DDR_A_D9
33 DDR_A_D10
35 DDR_A_D11
22 DDR_A_D12
24 DDR_A_D13
34 DDR_A_D14
36 DDR_A_D15
39 DDR_A_D16
41 DDR_A_D17
51 DDR_A_D18
53 DDR_A_D19
40 DDR_A_D20
42 DDR_A_D21
50 DDR_A_D22
52 DDR_A_D23
57 DDR_A_D24
59 DDR_A_D25
67 DDR_A_D26
69 DDR_A_D27
56 DDR_A_D28
58 DDR_A_D29
68 DDR_A_D30
70 DDR_A_D31
129 DDR_A_D32
131 DDR_A_D33
141 DDR_A_D34
143 DDR_A_D35
130 DDR_A_D36
132 DDR_A_D37
140 DDR_A_D38
142 DDR_A_D39
147 DDR_A_D40
149 DDR_A_D41
157 DDR_A_D42
159 DDR_A_D43
146 DDR_A_D44
148 DDR_A_D45
158 DDR_A_D46
160 DDR_A_D47
163 DDR_A_D48
165 DDR_A_D49
175 DDR_A_D50
177 DDR_A_D51
164 DDR_A_D52
166 DDR_A_D53
174 DDR_A_D54
176 DDR_A_D55
181 DDR_A_D56
183 DDR_A_D57
191 DDR_A_D58
193 DDR_A_D59
180 DDR_A_D60
182 DDR_A_D61
192 DDR_A_D62
194 DDR_A_D63

LINKTEK_DDRRK-20401-TP4B

DDR_A_D[0..63] (5)

CN10B

+1.5V_SUS
VDD1 75
VDD2 76
VDD3 81
VDD4 82
VDD5 87
VDD6 88
VDD7 93
VDD8 94
VDD9 99
VDD10 100
VDD11 105
VDD12 106
VDD13 111
VDD14 112
VDD15 117
VDD16 118
VDD17 123
VDD18 124

+3.3V_RUN
C796 0.1u/10V
VDDSPD 199

+1.5V_SUS
R662 1 2 2.2K
PAD T608 1
NC1 77
NC2 122
TEST 125

(5) DDR_A_EVENT# 198
(5) DDR_A_RESET# 30
EVENT#
RESET#

+0.75V_VTT_REF
R648 1 2 0_0603
+MEM_VTT_REF
C659 0.1u/10V
VREF-DQ 1
VREF-CA 126

VSS1 2
VSS2 3
VSS3 8
VSS4 9
VSS5 13
VSS6 14
VSS7 19
VSS8 20
VSS9 25
VSS10 26
VSS11 31
VSS12 32
VSS13 37
VSS14 38
VSS15 43

VSS16 44
VSS17 48
VSS18 49
VSS19 54
VSS20 55
VSS21 60
VSS22 61
VSS23 65
VSS24 66
VSS25 71
VSS26 72
VSS27 127
VSS28 128
VSS29 133
VSS30 134
VSS31 138
VSS32 139
VSS33 144
VSS34 145
VSS35 150
VSS36 151
VSS37 155
VSS38 156
VSS39 161
VSS40 162
VSS41 167
VSS42 168
VSS43 172
VSS44 173
VSS45 178
VSS46 179
VSS47 184
VSS48 185
VSS49 189
VSS50 190
VSS51 195
VSS52 196

VTT1 203
VTT2 204
GND1 m1
GND2 m2

+0.75V_DDR_VTT
C794 10u/6.3V/0603
C798 0.1u/10V
C790 0.22u/25V/0603

LINKTEK_DDRRK-20401-TP4B

SM_MEM BUS ADDRESS	
SO-DIMM0	1010 000
SO-DIMM1	1010 001

For EMI Reserved

DDR_A_CLK1 R650 1 2 *200_F_NC DDR_A_CLK#1
DDR_A_CLK0 R649 1 2 *200_F_NC DDR_A_CLK#0

+1.5V_SUS
C772 4.7u/6.3V/0603
C684 4.7u/6.3V/0603
C762 1u/10V/0603
C764 1u/10V/0603
C697 1u/10V/0603
C694 *330u/6.3V_NC
C720 2200p/50V

+1.5V_SUS
C756 10u/6.3V/0603
C696 0.1u/10V
C752 0.1u/10V
C739 0.1u/10V
C745 0.1u/10V
C757 0.1u/10V
C729 0.1u/10V

Place ESD Protection diodes.

SB_SMB_SDA0
SB_SMB_SCL0
ESD603
*IP4220CZ6_NC
+3.3V_RUN

Dell/ Flex Confidential

Title	SO-DIMM1	
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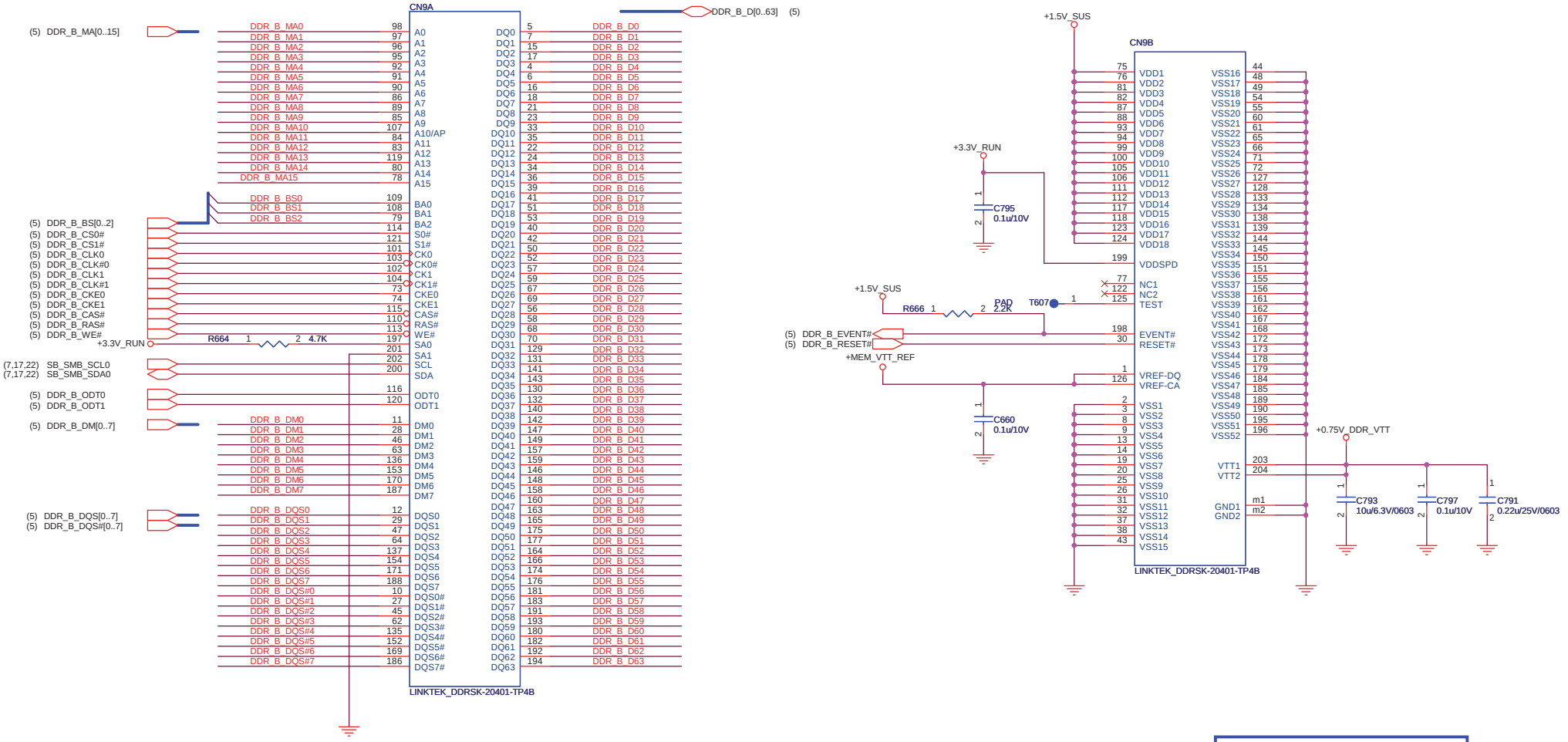
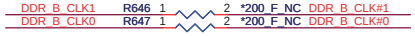
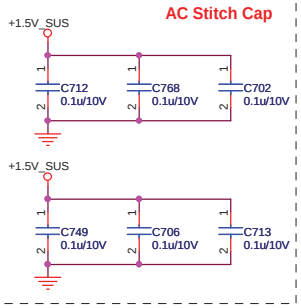
DDRIII DIMM B

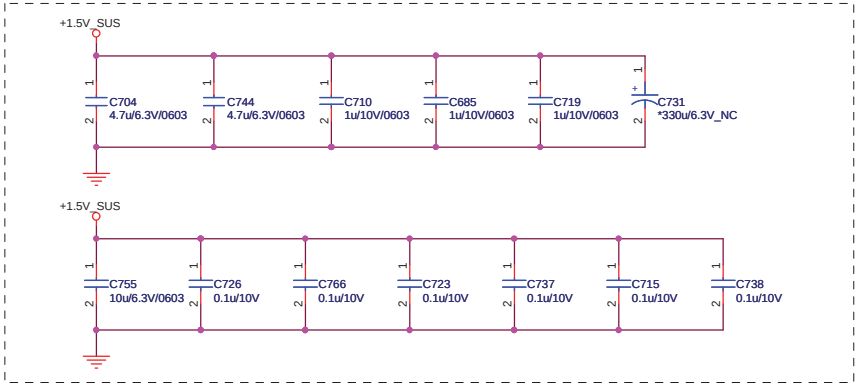


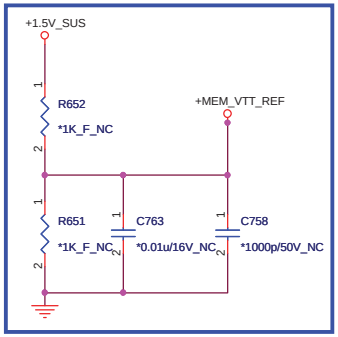
For EMI Reserved



AC Stitch Cap







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Title	SO-DIMM2	
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NB HT/ PCIE

U10A

PART 1 OF 6

HYPER TRANSPORT CPU I/F

ATI_RS880M

U10B

PART 2 OF 6

PCIE I/F GFX

PCIE I/F GPP

PCIE I/F SB

ATI_RS880M

C263, C264, C260, C261, C265, C266, C208, C262: Near by HDMI Conn -- CN6

C258, C259, C256, C257, C254, C255, C206, C253: Near by DP Conn -- CN7

Near by HDMI Conn CN6

WWAN

WLAN

LAN/ Media Card

WWAN

WLAN

LAN/ Media Card

Title	NB - HT/ PCIE/ HDMI	
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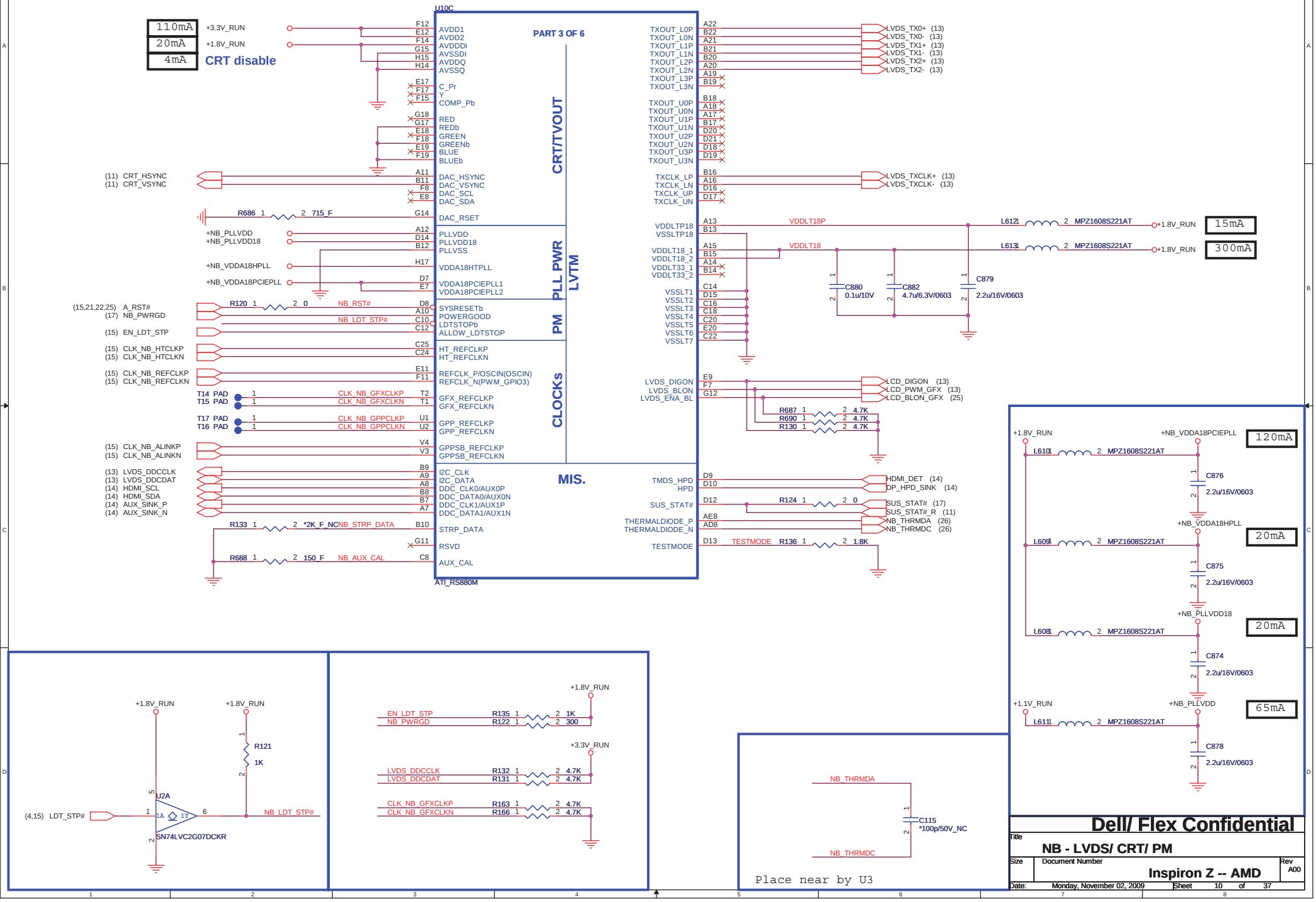
NB LVDS/ PM



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Title	NB - LVDS/ CRT/ PM	
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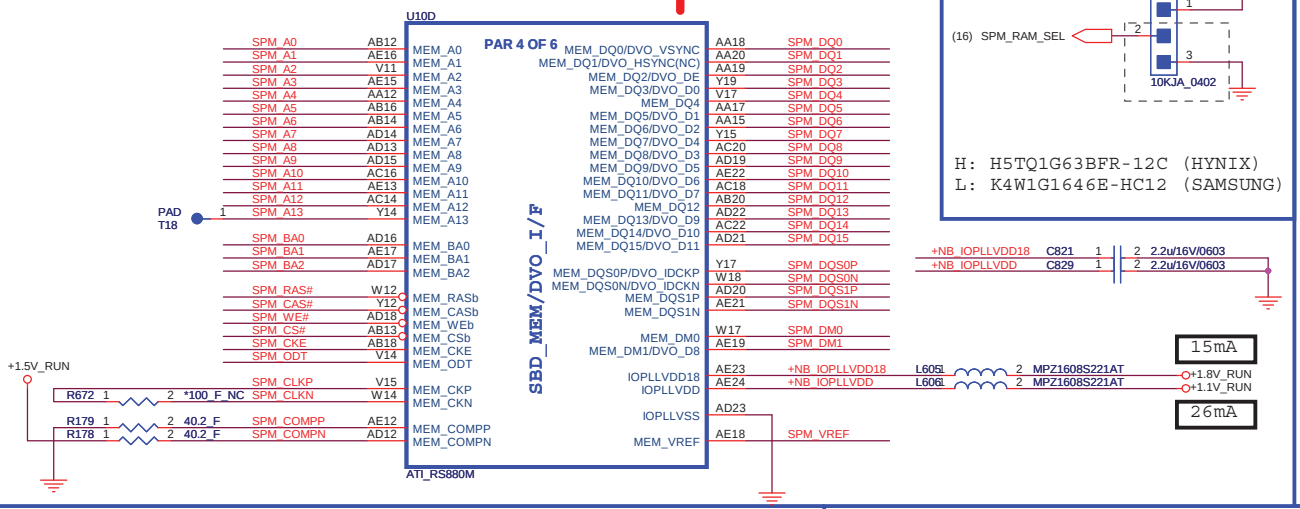
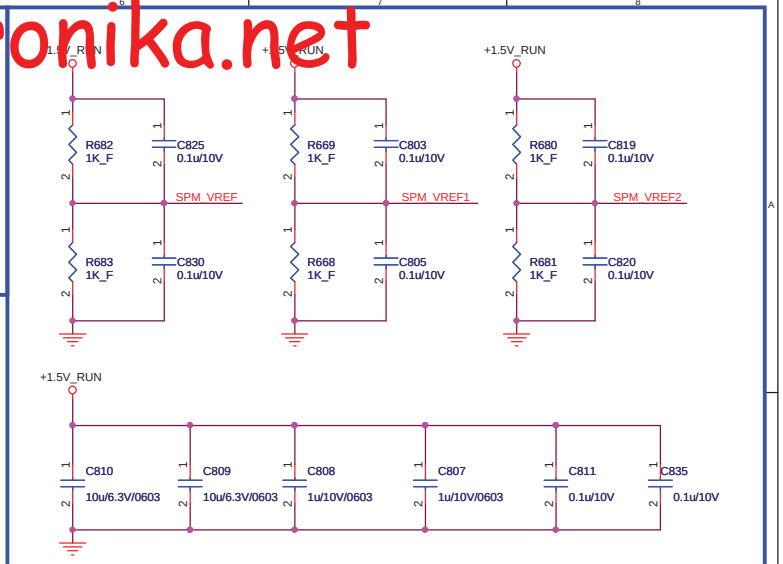
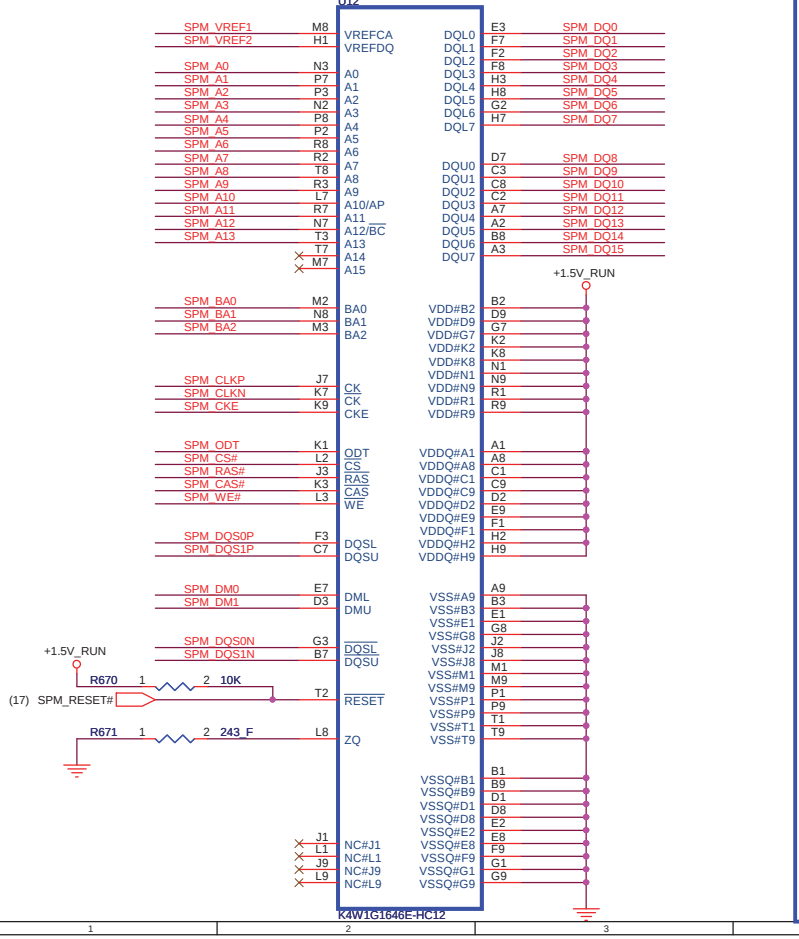
Side Port/ Strapping





2'nd source:
DELH-14D00A0000003G -- IC DDR3 H5TQ1G63BFR-12C 1Gbits FBGA-96



RS880M H/W STRAPS

STRAP_DEBUG_BUS_GPIO_ENABLEb

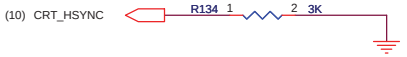
Enables the Test Debug Bus using GPIO.
DAC_VSYNC (RS880.Pin B11)
1 = Disable (default)
0 = Ensable

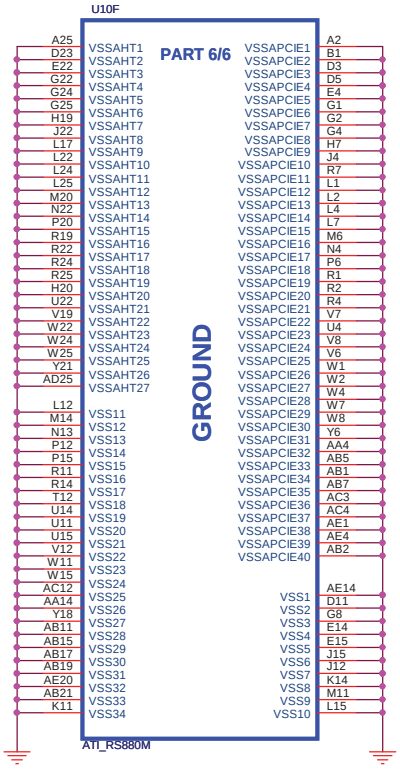
DFT_GPIO1: LOAD_EEPROM_STRAPS

Selects Loading of STRAPS from EPROM.
SUS_STAT# (RS880.Pin D12)
1 = Bypass the loading of EEPROM straps and use Hardware Default Values
0 = I2C Master can load strap values from EEPROM if connected, or use default values if not connected

RS880: Enable Side Port Memory

Selects if Memory SIDE PORT is available or not
DAC_HSYNC (RS880.Pin A11)
1 : Disable (default)
0 : Enable
Register Readback of strap: NB_CLKCFG:CLK_TOP_SPARE_D[1]





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Title	NB - STRAP/ SIDE PORT	
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RS880M POWER TABLE

PIN NAME	RS880M	PIN NAME	RS880M
VDDHT	+1.1V	IOPLLVDD	+1.1V
VDDHTRX	+1.1V	AVDD	+3.3V
VDDHTTX	+1.1V	AVDDDI	+1.8V
VDDA18PCIE	+1.8V	AVDDQ	+1.8V
VDDG18	+1.8V	PLLVDD	+1.1V
VDD18_MEM	+1.8V	PLLVDD18	+1.8V
VDDPCIE	+1.1V	VDDA18PCIEPLL	+1.8V
VDDC	+1.1V	VDDA18HTPLL	+1.8V
VDD_MEM	+1.8V/1.5V	VDDLTP18	+1.8V
VDDG33	+3.3V	VDDLT18	+1.8V
IOPLLVDD18	+1.8V	VDDLT33	NC

600mA
+1.1V_RUN
C854 4.7u/6.3V/0603
C846 0.1u/10V
C850 0.1u/10V
C849 0.1u/10V

700mA
+1.1V_RUN
C866 4.7u/6.3V/0603
C844 0.1u/10V
C860 0.1u/10V
C841 0.1u/10V

400mA
+1.1V_RUN
C865 4.7u/6.3V/0603
C861 0.1u/10V
C863 0.1u/10V
C868 0.1u/10V
C838 0.1u/10V

700mA
+NB_VDDA18PCIE
C859 4.7u/6.3V/0603
C853 4.7u/6.3V/0603
C839 0.1u/10V
C843 0.1u/10V
C845 0.1u/10V
C855 0.1u/10V

10mA
+1.8V_RUN
C867 1u/10V

25mA
+1.8V_RUN
C827 1u/10V

+1.8V_RUN
L607 MPZ1608S221AT
+NB_VDDA18PCIE

U10E
PART 5/6
POWER
ATI_RS880M

J17	VDDHT_1	VDDPCIE_1	A6
K16	VDDHT_2	VDDPCIE_2	B6
L16	VDDHT_3	VDDPCIE_3	C6
M16	VDDHT_4	VDDPCIE_4	D6
P16	VDDHT_5	VDDPCIE_5	E6
R16	VDDHT_6	VDDPCIE_6	F6
T16	VDDHT_7	VDDPCIE_7	G7
		VDDPCIE_8	H8
H18	VDDHTRX_1	VDDPCIE_9	J9
G19	VDDHTRX_2	VDDPCIE_10	K9
F20	VDDHTRX_3	VDDPCIE_11	M9
E21	VDDHTRX_4	VDDPCIE_12	L9
D22	VDDHTRX_5	VDDPCIE_13	P9
B23	VDDHTRX_6	VDDPCIE_14	R9
A23	VDDHTRX_7	VDDPCIE_15	T9
		VDDPCIE_16	V9
AE25	VDDHTTX_1	VDDPCIE_17	U9
AD24	VDDHTTX_2		
AC23	VDDHTTX_3	VDDC_1	K12
AB22	VDDHTTX_4	VDDC_2	J14
AA21	VDDHTTX_5	VDDC_3	U16
Y20	VDDHTTX_6	VDDC_4	J11
W19	VDDHTTX_7	VDDC_5	K15
V18	VDDHTTX_8	VDDC_6	M12
U17	VDDHTTX_9	VDDC_7	L14
T17	VDDHTTX_10	VDDC_8	L11
R17	VDDHTTX_11	VDDC_9	M13
P17	VDDHTTX_12	VDDC_10	M15
M17	VDDHTTX_13	VDDC_11	N12
		VDDC_12	N14
J10	VDDA18PCIE_1	VDDC_13	P11
P10	VDDA18PCIE_2	VDDC_14	P13
K10	VDDA18PCIE_3	VDDC_15	P14
M10	VDDA18PCIE_4	VDDC_16	R12
L10	VDDA18PCIE_5	VDDC_17	R15
W9	VDDA18PCIE_6	VDDC_18	T11
H9	VDDA18PCIE_7	VDDC_19	T15
T10	VDDA18PCIE_8	VDDC_20	U12
R10	VDDA18PCIE_9	VDDC_21	T14
Y9	VDDA18PCIE_10	VDDC_22	J16
AA9	VDDA18PCIE_11		
AB9	VDDA18PCIE_12	VDD_MEM1	AE10
AD9	VDDA18PCIE_13	VDD_MEM2	AA11
AE9	VDDA18PCIE_14	VDD_MEM3	Y11
U10	VDDA18PCIE_15	VDD_MEM4	AD10
		VDD_MEM5	AB10
F9	VDD18_1	VDD_MEM6	AC10
G9	VDD18_2		
AE11	VDD18_MEM1	VDD33_1	H11
AD11	VDD18_MEM2	VDD33_2	H12

2.5A
+1.1V_RUN
C847 0.1u/10V
C871 0.1u/10V
C873 1u/10V/0603
C881 1u/10V/0603
C877 4.7u/6.3V/0603

12A
+1.1V_RUN
C857 0.1u/10V
C851 0.1u/10V
C840 0.1u/10V
C856 0.1u/10V
C858 0.1u/10V
C848 0.1u/10V
C842 0.1u/10V
C872 10u/6.3V/0603
C869 10u/6.3V/0603

100mA
+1.5V_RUN
C837 0.1u/10V
C831 0.1u/10V
C823 1u/10V/0603
C832 1u/10V/0603
C804 10u/6.3V/0603
C126 10u/6.3V/0603

60mA
+3.3V_RUN
C862 0.1u/10V
C870 0.1u/10V

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Title	NB - PWR	
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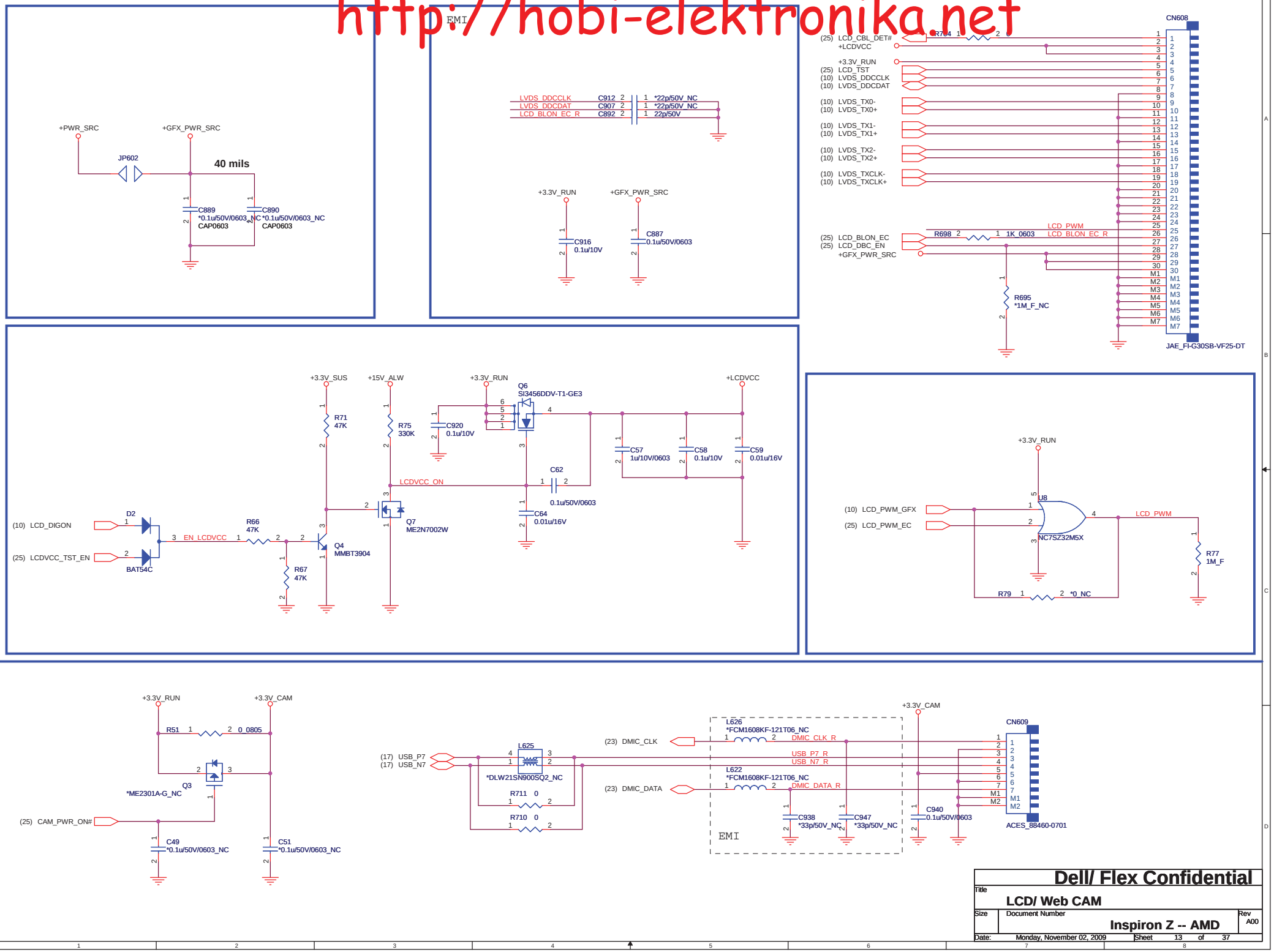

Reserve For EMI

(9) HDMI_CLK_P
(9) HDMI_CLK_N
L11 *DLW21SN900SQ2_NC
R85 0
R87 0
HDMI_CLK_P_R
HDMI_CLK_N_R

(9) HDMI_TX0_P
(9) HDMI_TX0_N
L10 *DLW21SN900SQ2_NC
R81 0
R83 0
HDMI_TX0_P_R
HDMI_TX0_N_R

(9) HDMI_TX1_P
(9) HDMI_TX1_N
L12 *DLW21SN900SQ2_NC
R89 0
R105 0
HDMI_TX1_P_R
HDMI_TX1_N_R

(9) HDMI_TX2_P
(9) HDMI_TX2_N
L13 *DLW21SN900SQ2_NC
R108 0
R111 0
HDMI_TX2_P_R
HDMI_TX2_N_R

HDMI CONNECTOR

CN5 Singatron_2HE1503-000111
D2+ D2_Shield D2- D1+ D1_Shield D1- D0+ D0_Shield D0- CK+ CK_Shield CK- CE_Remote NC DDC_CLK DDC_DATA GND +5V HP_DET
M1 M2 M3 M4

+5V_RUN
R78 4.7K
R76 4.7K
T613 PAD
T612 PAD
(10) HDMI_SCL
(10) HDMI_SDA
F601 1.1A-POLYSW
1.1A / 5V
L9 BLM18PG181SN1D
HDMI_PWR
C61 180p/50V
C63 0.1u/10V
EMI

+3.3V_RUN
Q5 MMBT3904
R69 200K_F
(10) HDMI_DET
R72 10K
R70 *330K_NC

HDMI_SCL C901 *180p/50V_NC
HDMI_SDA C897 *180p/50V_NC
EMI

Reserve For EMI

(9) DP_LANE3_N
(9) DP_LANE3_P
L17 *DLW21SN900SQ2_NC
R145 0
R139 0
DP_LANE3_N_R
DP_LANE3_P_R

(9) DP_LANE2_N
(9) DP_LANE2_P
L14 *DLW21SN900SQ2_NC
R119 0
R118 0
DP_LANE2_N_R
DP_LANE2_P_R

(9) DP_LANE1_N
(9) DP_LANE1_P
L16 *DLW21SN900SQ2_NC
R138 0
R137 0
DP_LANE1_N_R
DP_LANE1_P_R

(9) DP_LANE0_N
(9) DP_LANE0_P
L18 *DLW21SN900SQ2_NC
R147 0
R146 0
DP_LANE0_N_R
DP_LANE0_P_R

Mini DISPLAY PORT CONNECTOR

+3.3V_RUN
Q15 MMBT3904
R150 200K_F
(10) DP_HPD_SINK
R153 10K
R151 *330K_NC
L19 BLM18PG181SN1D
C97 220p/50V
EMI
DP_HPD_SINK_R

1.1A / 5V
+3.3V_RUN F6 1.1A-POLYSW +3.3V_DP_PWR
C90 0.1u/10V

CN6 FOXCONN_3V112M3-RH3HH7-7H
GND5 LANE2N LANE2P GND3 LANE1N LANE1P GND1 LANE0N LANE0P GND0
PWR AUXN AUXP GND4 LANE3N LANE3P GND2 CFG2 CFG1 HPD
M1 M2 M3 M4

DP_LANE2_N_R
DP_LANE2_P_R
DP_LANE1_N_R
DP_LANE1_P_R
DP_LANE0_N_R
DP_LANE0_P_R
AUX_SINK_N_R
AUX_SINK_P_R
DP_LANE3_N_R
DP_LANE3_P_R
DP_HPD_SINK_R
R689 0
R691 0
DP_CAD_SINK
R148 1M_F

+15V_ALW
R152 100K
R149 100K
DP_CAD_SINK#
DP_CAD_SINK
Q11 ME2N7002W
Q9 ME2N7002W

(10) AUX_SINK_N
(10) AUX_SINK_P
Q14 ME2N7002W
Q13 ME2N7002W
Q12 ME2N7002W
Q10 ME2N7002W
DP_DDC_EN
R126 0
R127 0
C89 0.1u/10V
C88 0.1u/10V
L15 *DLW21SN900SQ2_NC
AUX_SINK_N_R
AUX_SINK_P_R
R692 100K
R693 100K
+3.3V_DP_PWR

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Title	HDMI/ mini DP	
Size	Document Number: Inspiron Z -- AMD	Rev A00
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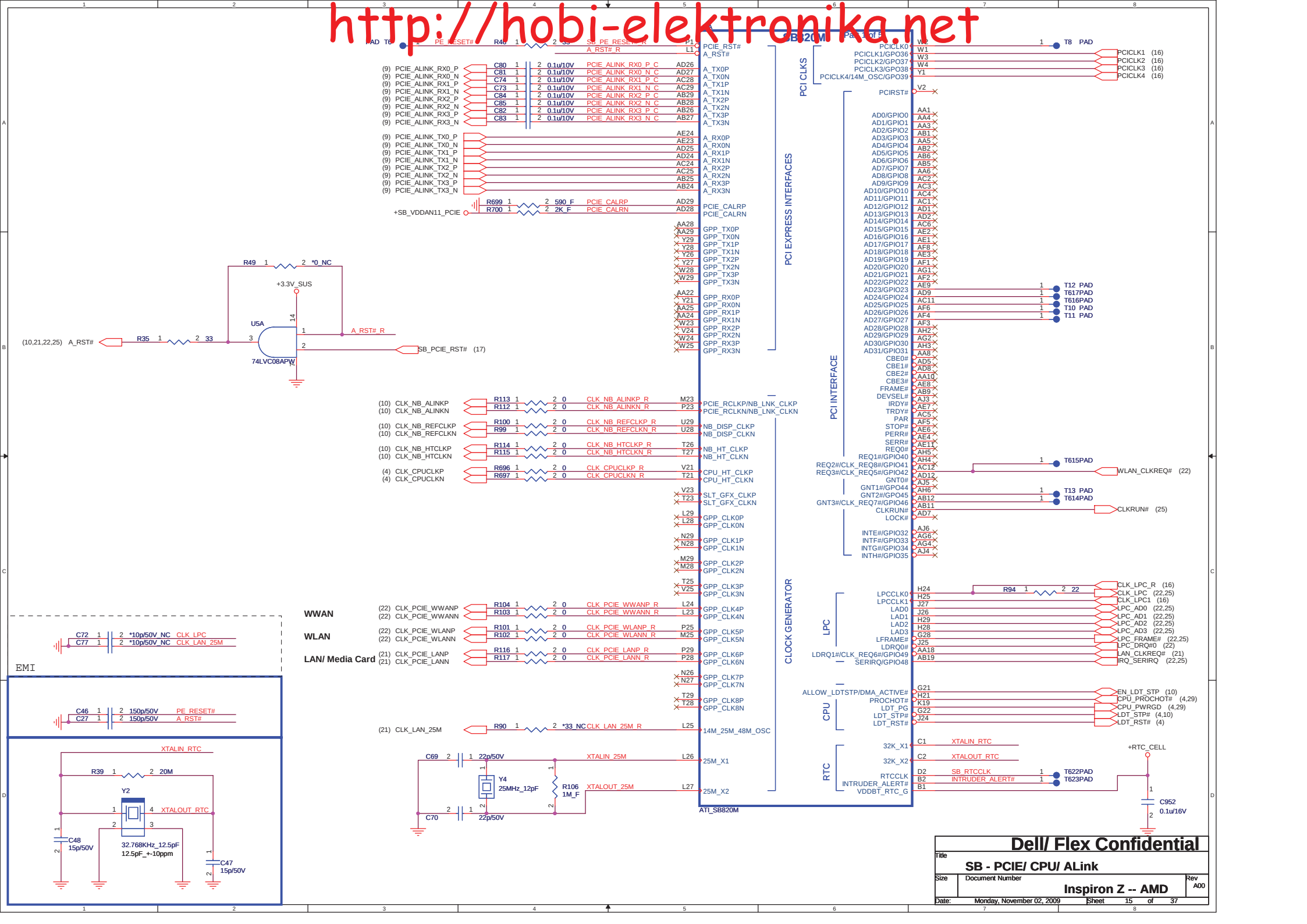

SB820M H/A STRAPS

SB820M Debug Straps

PciPllByp (PCI AD27)

Bypass PCI PLL
(Used in funcitonal test at tester):

L: Bypass internal PLL clock
H: Use internal PLL generated PLL CLK
(Internal Pull-Up of 15Kohm)

ILAAutorunEnB (PCI AD26)

ILA Auto run Enable

L: ILA Auto run enable
H: ILA Auto run disable
(Internal Pull-Up of 15Kohm)

FCClkByP (PCI AD25)

Bypass FC CLK

L: Bypass internal FC CLK
(Used in funcitonal test at tester)
H: Use internal FC CLK

I2CROMEn (PCI AD24)

I2C ROM Enable. Load the setting for A-Link Express/ PLL/ music control from I2C ROM

L: Getting the value from I2C EPROM
H: Disable I2C ROM
(Internal Pull-Up of 15Kohm)

PCI_ROM_BOOT (PCI AD23)

Booting from PCI memory

L: Route ROM fetch tp PCI bus on the very first boot. Use ROMTYPE to determine the ROM type on the subsequent boots.
H: Use ROMTYPE straps to determine the ROM type
(Internal Pull-Up of 15Kohm)

PCIe EEPROM Data/ Clock (PCI_REQ3/ PCI_GNT3)

PCIe EEPROM Data/ Clock

Connected to PCIe EEPROM SDA/ SCL pin or provided test point access for lad use.

ECEnableStrap (LPCCLK0)

Embedded Controller (EC):

L: Disable
H: Enable

(15) CLK_LPC_R — R93 10K

CLKGEN (LPCCLK1)

Define Clock Generator:

L: External clock mode
H: Internal clock mode

+3.3V_ALW_SB — (15) CLK_LPC1 — R91 10K

ROMTYPE_1&0 (EC_PWM3& EC_PWM2)

ROMTYPE_1 EC_PWM3	ROMTYPE_0 EC_PWM2	ROM type
0	0	FWH
0	1	LPC& PMC ROM
1	0	SPI
1	1	Reserve

(17) EC_PWM3 — RJ2 10KJB_0402 — +3.3V_ALW_SB
(17) EC_PWM2 — RJ3 10KJA_0402 — +3.3V_ALW_SB

BIF_GEN2_COMPLIANCE_Strap (PCI CLK1)

Set PCIe to Gen II mode:

SB820M: Omly provision for Pull down is required, not install by default.

(15) PCICLK1 — R40 *10K_NC

BootFailTmrEn (PCI CLK2)

Watchdog function:

L: Disable BootFailtmr function
H: Enable BootFailtmr function

(15) PCICLK2 — R42 10K

DefaulStrapMode (PCI CLK3)

Default Debug Straps:

L: Disable Debug Straps
H: Select external Debug Straps

(15) PCICLK3 — R41 10K

CPUClkSel (PCI CLK4)

CPU/ NB HT Clock Selection:

L: Reserved
H: Required setting for integrated clock mode

+3.3V_RUN — (15) PCICLK4 — R30 10K

32Mbit (4M Byte), SPI

+3.3V_RUN — R694 *10K_NC, R144 *10K_NC
U9 *SST25VF032B-66-4I-S2AF_NC
SPI_CS#, SPI_CLK, SPI_DI, SPI_DO
R109 *10K_NC
C888 *22p/50V_NC
C78 *0.1u/10V_NC

CoreSpeedMode (AZ_SDOUT)

Slow down core clock for low power mobile platform:

L: Performance Mode
H: Low Power Mode

(17) HDA_SDATA_OUT_R — R47 10K

R61, R60, R58, R59 — 10K — SB_TEMPIN0, SB_TEMPIN1, SB_TEMPIN2, SB_TEMPIN3

R55, R56, R57, R54, R63, R62, R64, R65 — 10K — SB_VIN0, SB_VIN1, SB_VIN2, SB_VIN3, SB_VIN4, SB_VIN5, SB_VIN6, SB_VIN7

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Title	SB - SATA/ SPI/ STAP	
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SB820M Debug Straps

+3.3V_ALW_SB

R53 1 2 *2.2K_NC SB_TEST0
R52 1 2 *2.2K_NC SB_TEST1
R716 1 2 *2.2K_NC SB_TEST2

EMI

C45 1 2 *10p/50V_NC HDA_BITCLK

R38 1 2 *10K_NC HDA_BITCLK
R36 1 2 *10K_NC HDA_SDATA_IN

+3.3V_ALW_SB

R32 1 2 10K GBE_COL
R43 1 2 10K GBE_PHY_INTR
R44 1 2 10K GBE_CRS
R50 1 2 10K GBE_MDIO
R31 1 2 10K GBE_RXERR
R714 1 2 10K SB_SMB_SCL1
R715 1 2 10K SB_SMB_SDA1
R96 1 2 10K SB_SMB_SCL2
R97 1 2 10K SB_SMB_SDA2
R95 1 2 10K SB_SMB_SCL3
R92 1 2 10K SB_SMB_SDA3
R37 1 2 10K SB_PWRBTN#

+3.3V_RUN

R74 1 2 2.2K SB_SMB_SCL0
R73 1 2 2.2K SB_SMB_SDA0
R713 1 2 4.7K SUS_STAT#

RUN PWR
DUAL PWR

DUAL PWR

DUAL PWR
DUAL PWR

(2) SB_PME#
PAD T7 1
(23,25) SLP_S3#
(25) SLP_S5#
(25) SB_PWRBTN#
(25) SB_PWRGD
(10) SUS_STAT#
SB_TEST0
SB_TEST1
SB_TEST2
(25) SB_A20GATE
(25) SB_KBRST#
(25) SB_EXT_SCI#
(25) SB_EXT_SMI#
PAD T9 1
(21,22) PCIE_WAKE#
PAD T626 1
(10) NB_PWRGD
(25) SB_RSMRST#
(22) WWAN_CLKREQ#
(15) SB_PCIE_RST#
(22) USB_WWAN_DET#
(24) BT_DET#
(23) SPKR
(7,8,22) SB_SMB_SCL0
(7,8,22) SB_SMB_SDA0
SB_SMB_SCL1
SB_SMB_SDA1
PAD T625 1
(11) SPM_RESET#
(21) LAN_ISOLATE#
(25) SIO_EXT_WAKE#
PAD T624 1
PAD T623 1
PAD T619 1
PAD T622 1
PAD T618 1
(20) USB_OC2_3#
(20) USB_OC0#
(23) HDA_BITCLK
(23) HDA_SDATA_OUT
(23) HDA_SDATA_IN
(16) HDA_SDATA_OUT_R
R48 1 2 33
R34 1 2 33
R33 1 2 33
R45 1 2 33
(23) HDA_SYNC
(23) HDA_RESET#
GBE_COL
GBE_CRS
GBE_MDIO
GBE_RXERR
GBE_PHY_INTR

SB820M
Part 4 of 5

PCI_PME#/GEVENT4#
RI#/GEVENT22#
SPI_CS3#/GBE_STAT1/GEVENT21#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
SUS_STAT#
TEST0
TEST1/TMS
TEST2
GA20IN/GEVENT0#
KBRST#/GEVENT1#
LPC_PME#/GEVENT3#
LPC_SMI#/GEVENT23#
GEVENT5#
SYS_RESET#/GEVENT19#
WAKE#/GEVENT8#
IR_RX1/GEVENT20#
THRMTRIP#/SMBALERT#/GEVENT2#
NB_PWRGD
RSMRST#
CLK_REQ4#/SATA_IS0#/GPIO64
CLK_REQ3#/SATA_IS1#/GPIO63
SMARTVOLT1/SATA_IS2#/GPIO50
CLK_REQ0#/SATA_IS3#/GPIO60
SATA_IS4#/FANOUT3/GPIO55
SATA_IS5#/FANIN3/GPIO59
SPKR/GPIO66
SCL0/GPIO43
SDA0/GPIO47
SCL1/GPIO227
SDA1/GPIO228
CLK_REQ2#/FANIN4/GPIO62
CLK_REQ1#/FANOUT4/GPIO61
IR_LED#/LLB#/GPIO184
SMARTVOLT2/SHUTDOWN#/GPIO51
DDR3_RST#/GEVENT7#
GBE_LED0/GPIO183
GBE_LED1/GEVENT9#
GBE_LED2/GEVENT10#
GBE_STAT0/GEVENT11#
CLK_REQG#/GPIO65/OSCIN
BLINK/USB_OC7#/GEVENT18#
USB_OC6#/IR_TX1/GEVENT6#
USB_OC5#/IR_TX0/GEVENT17#
USB_OC4#/IR_RX0/GEVENT16#
USB_OC3#/AC_PRES/TDO/GEVENT15#
USB_OC2#/TCK/GEVENT14#
USB_OC1#/TDI/GEVENT13#
USB_OC0#/TRST#/GEVENT12#
AZ_BITCLK
AZ_SDOUT
AZ_SDIN0/GPIO167
AZ_SDIN1/GPIO168
AZ_SDIN2/GPIO169
AZ_SDIN3/GPIO170
AZ_SYNC
AZ_RST#
GBE_COL
GBE_CRS
GBE_MDCK
GBE_MDIO
GBE_RXCLK
GBE_RXD3
GBE_RXD2
GBE_RXD1
GBE_RXD0
GBE_RXCTL/RXDV
GBE_RXERR
GBE_TXCLK
GBE_TXD3
GBE_TXD2
GBE_TXD1
GBE_TXD0
GBE_TXCTL/TXEN
GBE_PHY_PD
GBE_PHY_RST#
GBE_PHY_INTR
PS2_DAT/SDA4/GPIO187
PS2_CLK/SCL4/GPIO188
SPI_CS2#/GBE_STAT2/GPIO166
FC_RST#/GPO160
PS2KB_DAT/GPIO189
PS2KB_CLK/GPIO190
PS2M_DAT/GPIO191
PS2M_CLK/GPIO192
ATI_SB820M

ACPI / WAKE UP EVENTS
USB 1.1
USB MISC
GPIO
USB 2.0
USB OC
HD AUDIO
GBE LAN
EMBEDDED CTRL
EMBEDDED CTRL

USBCLK/14M_25M_48M_OSC
USB_RCOMP
R703 1 2 11.8K_F
USB_FSD1P/GPIO186
USB_FSD1N
USB_FSD0P/GPIO185
USB_FSD0N
USB_HSD13P
USB_HSD13N
USB_HSD12P
USB_HSD12N
USB_HSD11P
USB_HSD11N
USB_HSD10P
USB_HSD10N
USB_HSD9P
USB_HSD9N
USB_HSD8P
USB_HSD8N
USB_HSD7P
USB_HSD7N
USB_HSD6P
USB_HSD6N
USB_HSD5P
USB_HSD5N
USB_HSD4P
USB_HSD4N
USB_HSD3P
USB_HSD3N
USB_HSD2P
USB_HSD2N
USB_HSD1P
USB_HSD1N
USB_HSD0P
USB_HSD0N
USB_P7 (13)
USB_N7 (13)
USB_P6 (24)
USB_N6 (24)
USB_P5 (22)
USB_N5 (22)
USB_P4 (22)
USB_N4 (22)
USB_P3 (20)
USB_N3 (20)
USB_P2 (20)
USB_N2 (20)
USB_P0 (20)
USB_N0 (20)
SCL2/GPIO193
SDA2/GPIO194
SCL3_LV/GPIO195
SDA3_LV/GPIO196
SB_SMB_SCL2
SB_SMB_SDA2
SB_SMB_SCL3
SB_SMB_SDA3
EC_PWM0/EC_TIMER0/GPIO197
EC_PWM1/EC_TIMER1/GPIO198
EC_PWM2/EC_TIMER2/GPIO199
EC_PWM3/EC_TIMER3/GPIO200
EC_PWM2 (16)
EC_PWM3 (16)
KSI_0/GPIO201
KSI_1/GPIO202
KSI_2/GPIO203
KSI_3/GPIO204
KSI_4/GPIO205
KSI_5/GPIO206
KSI_6/GPIO207
KSI_7/GPIO208
KSO_0/GPIO209
KSO_1/GPIO210
KSO_2/GPIO211
KSO_3/GPIO212
KSO_4/GPIO213
KSO_5/GPIO214
KSO_6/GPIO215
KSO_7/GPIO216
KSO_8/GPIO217
KSO_9/GPIO218
KSO_10/GPIO219
KSO_11/GPIO220
KSO_12/GPIO221
KSO_13/GPIO222
KSO_14/GPIO223
KSO_15/GPIO224
KSO_16/GPIO225
KSO_17/GPIO226

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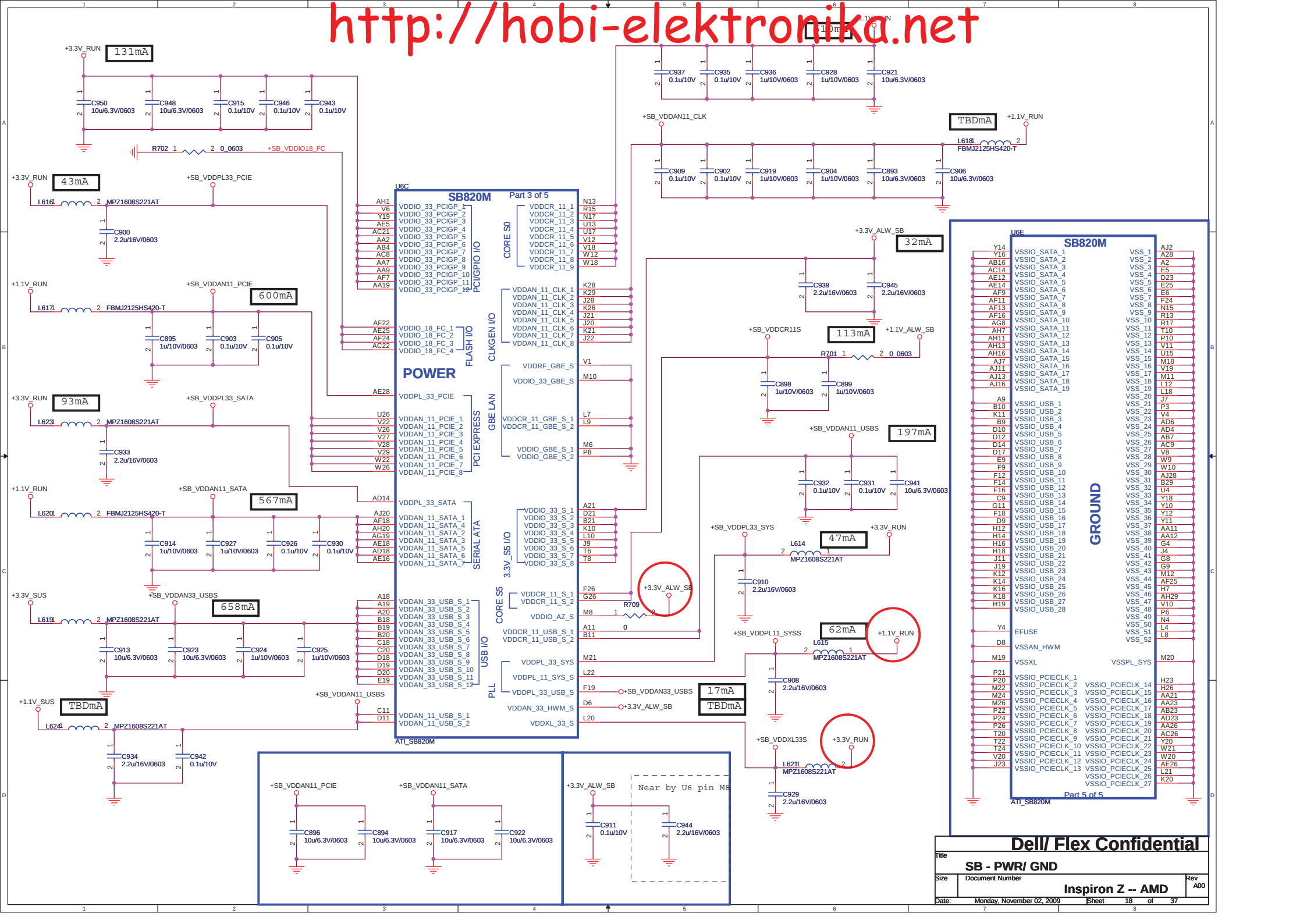
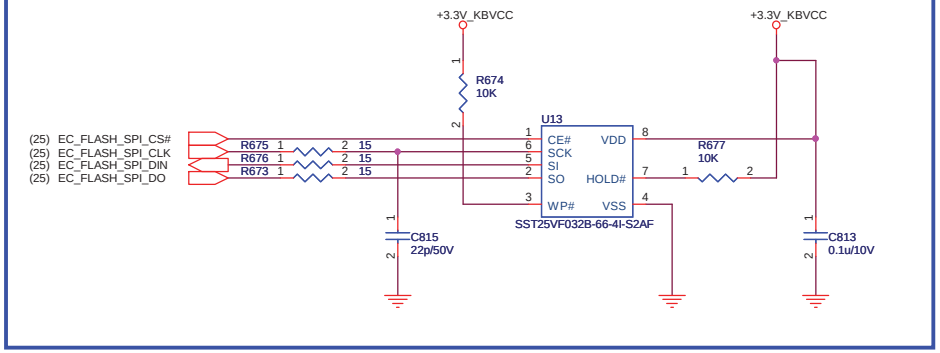
Title	SB - ACPI/ USB/ HDA	
Size	Document Number: Inspiron Z -- AMD	Rev: A00
Date: Monday, November 02, 2009	Sheet 17 of 37	



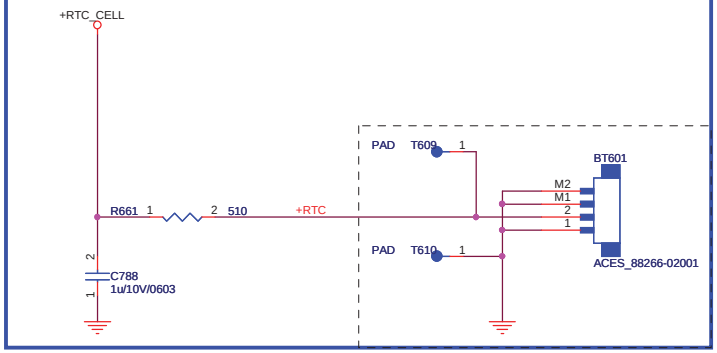
Title	SB - PWR/ GND
Size	Document Number: Inspiron Z -- AMD
Rev	A00
Date:	Monday, November 02, 2009
Sheet	18 of 37

RTC/ SPI

32Mbit (4M Byte), SPI



RTC BATTERY



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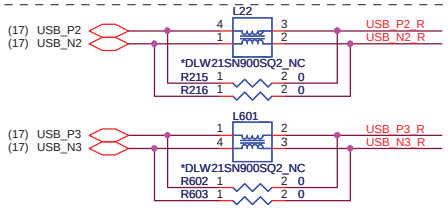
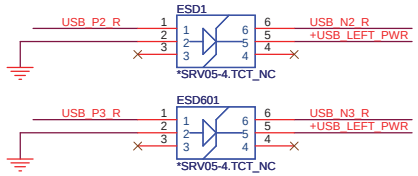
Title: RTC/ SPI		
Size	Document Number: Inspiron Z -- AMD	Rev: A00
Date: Monday, November 02, 2009	Sheet 19 of 37	

USB Jack x 2

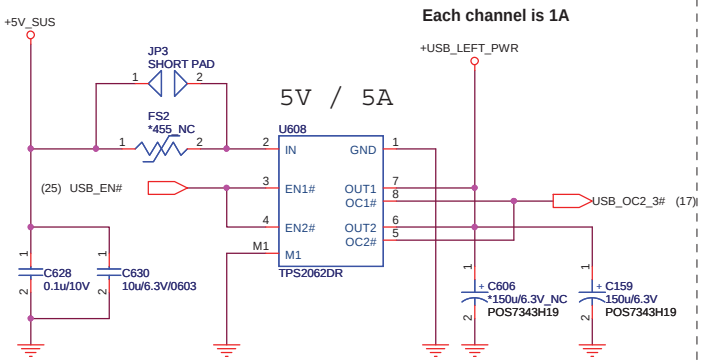


Platforms should put in PADS for the USB chokes if they have the room.
Chokes should be NOPOP.



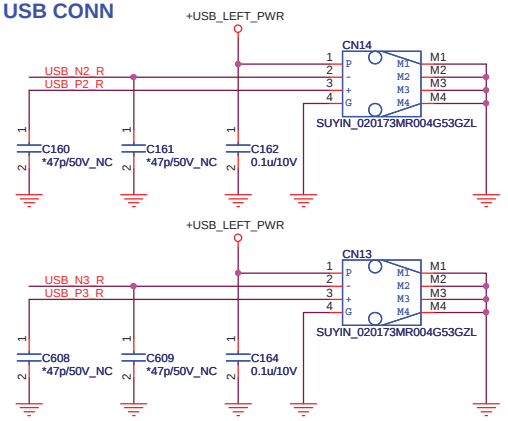
Place ESD diodes close as USB connector.

USB POWER SW



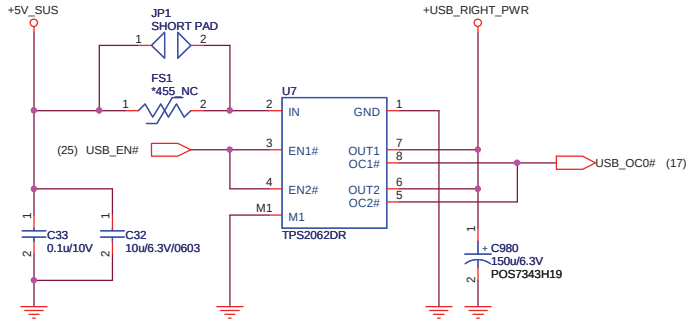
Place one 150uF cap by each USB connector.

USB CONN



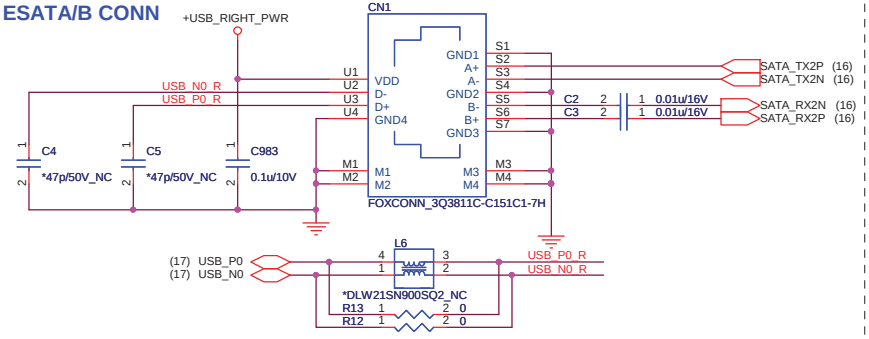
eSATA Connector

USB POWER SW



Place one 150uF cap by each USB connector.

ESATA/B CONN



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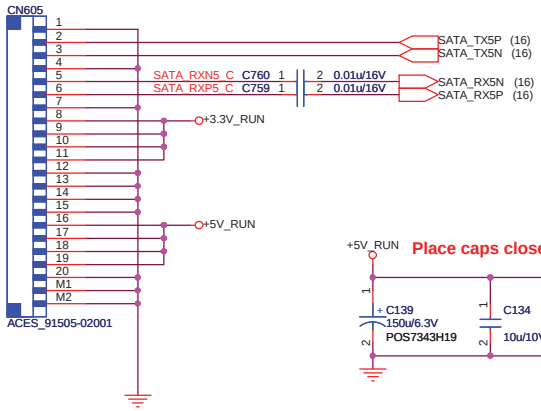
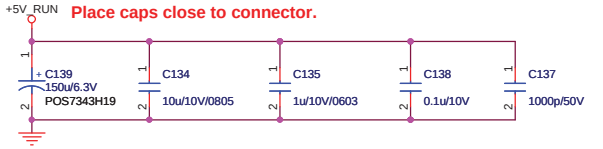
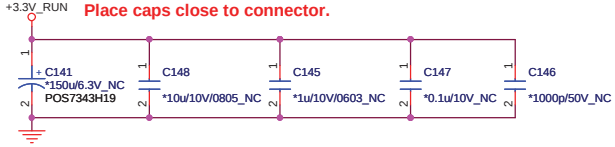
SATA HDD Connector







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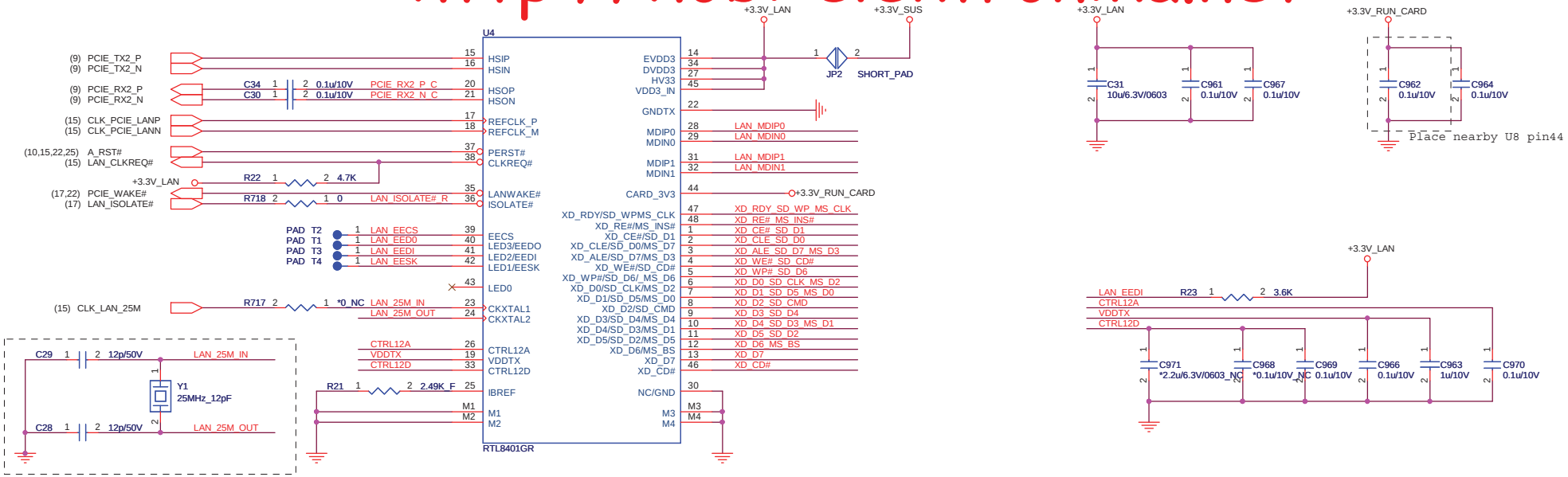
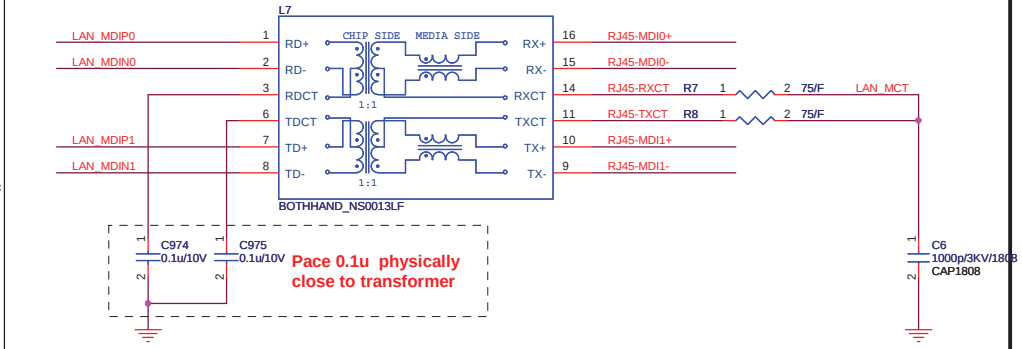
Title	USB/ eSATA/ HDD	
Size	Document Number: Inspiron Z -- AMD	Rev: A00
Date: Monday, November 02, 2009	Sheet 20 of 37	

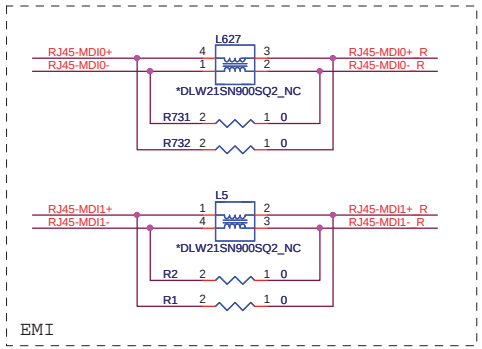
LAN/ Card Reader

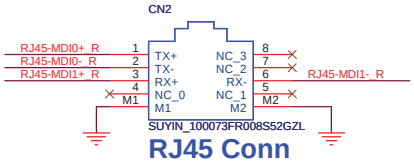


TRANSFORMER

Layout Note:
Route MDI+/- pairs with 100 ohm differential trace immpedance.



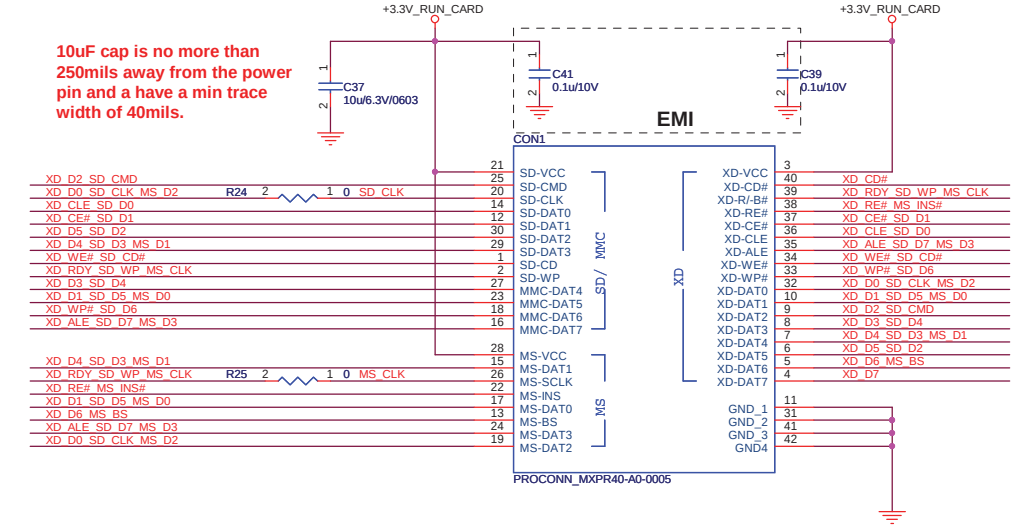


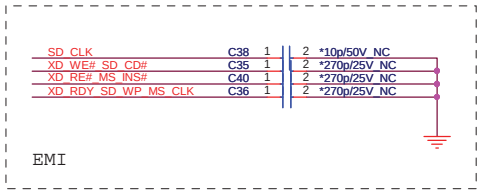


RJ45 Conn

Card Reader Conn

10uF cap is no more than 250mils away from the power pin and a have a min trace width of 40mils.





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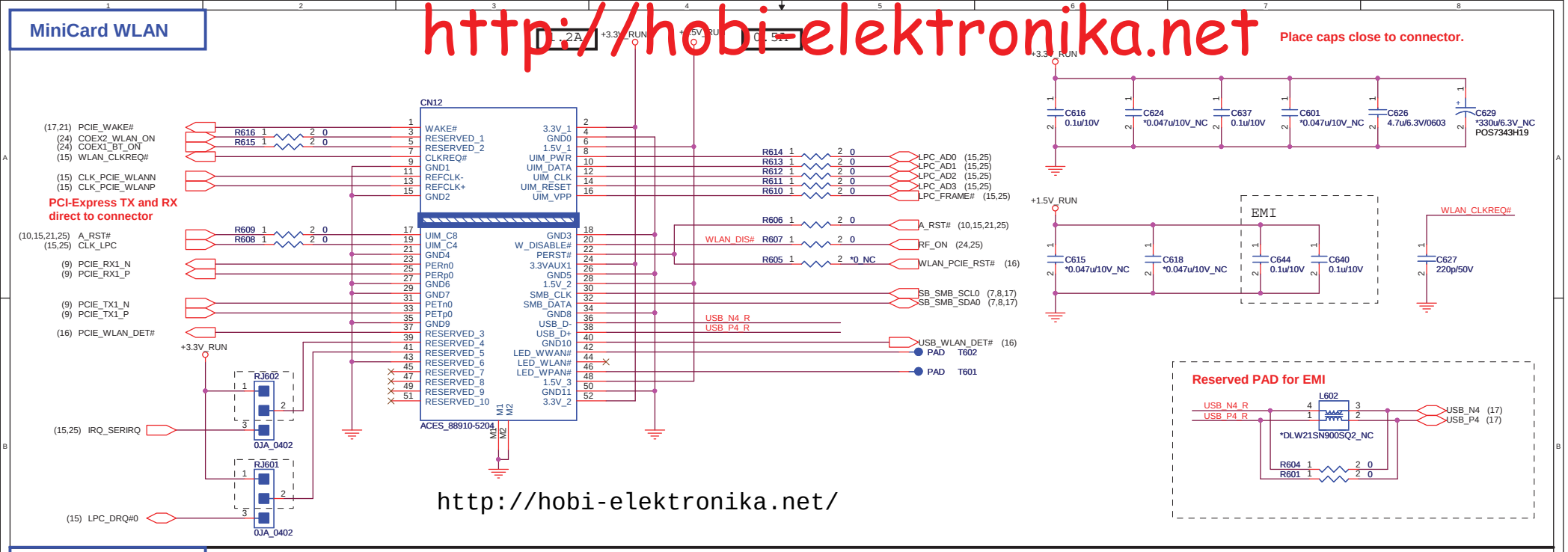
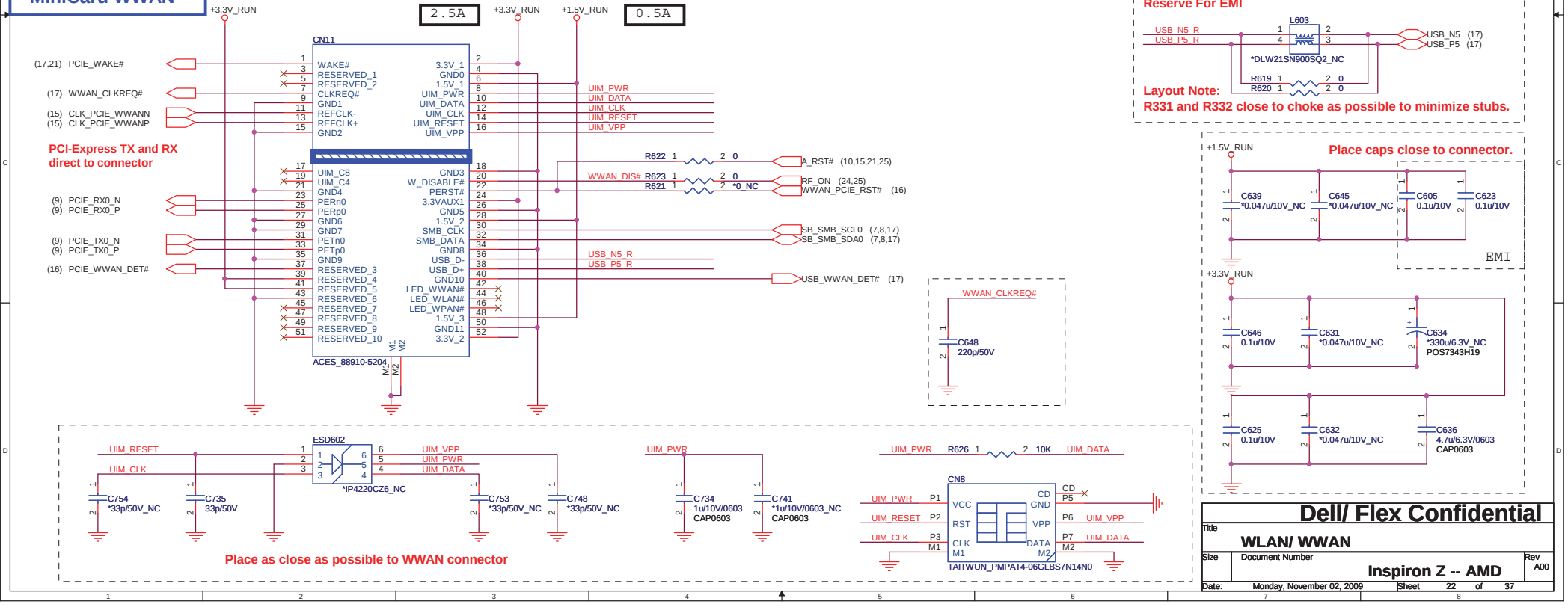
Title	LAN/ Card Reader -- RL8401	
Size	Document Number: Inspiron Z -- AMD	Rev A00
Date: Monday, November 02, 2009	Sheet 21 of 37	

MiniCard WLAN



MiniCard WWAN



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Title	WLAN/ WWAN	
Size	Document Number: Inspiron Z -- AMD	Rev: A00
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AZALIA (HD) CODEC
SPK & HP AMP

U3 92HD79B1A5NLGXTAX

Analog MIC connect please close to CODEC

CN610 ACES_88266-02001

Speaker=8ohm/1W
Driver Gain setting is 01111 = 9.18dB

CN604 ACES_88266-04001

Close to CODEC

U1 74LVC1G86GW

AMP_MUTE# : KBC default set HI

Jumper Trace width >= 80mil

CN3 SINGATRON_2SJ1012-000111 JACK 2 (MIC)

CN4 SINGATRON_2SJ1012-000111 JACK 1 (HP)

EMI Reserved

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Title	Audio -- ITD_92HD79B1A5NLGXTAX
Size	Document Number: Inspiron Z -- AMD
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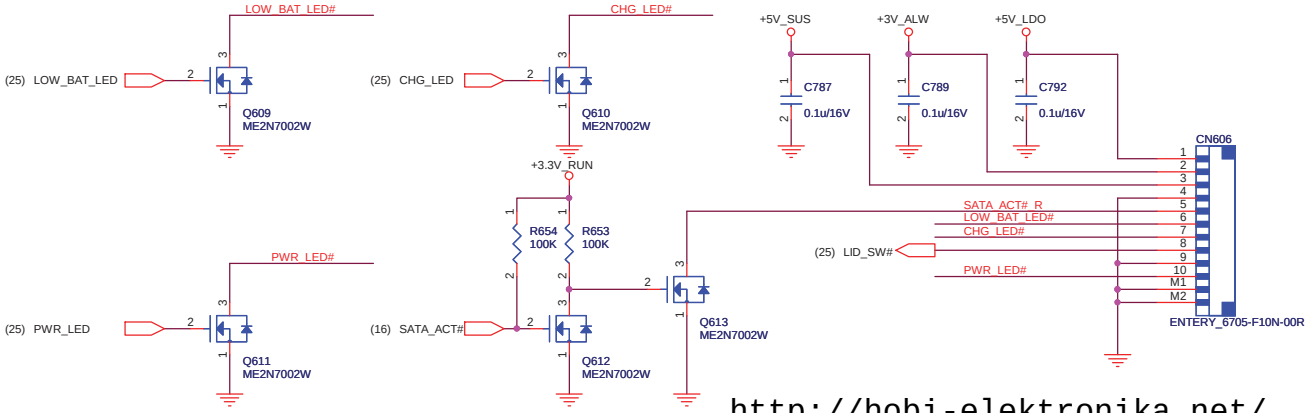
Hall Sensor | PWR LED | CHG LED | HDD LED

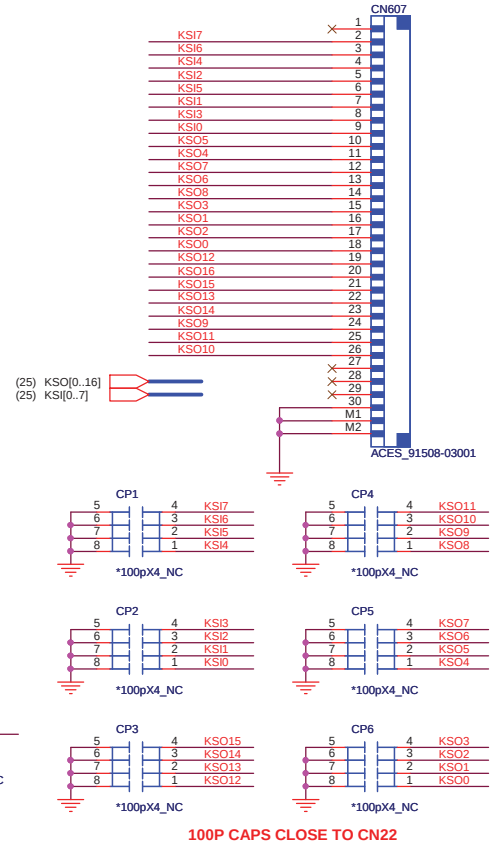
Indicator/ Hall sensor Boad

Indicator Board CONNECTOR

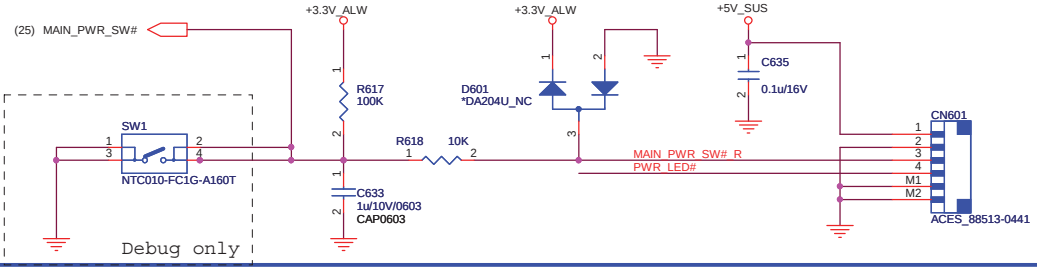


http://hobi-elektronika.net/

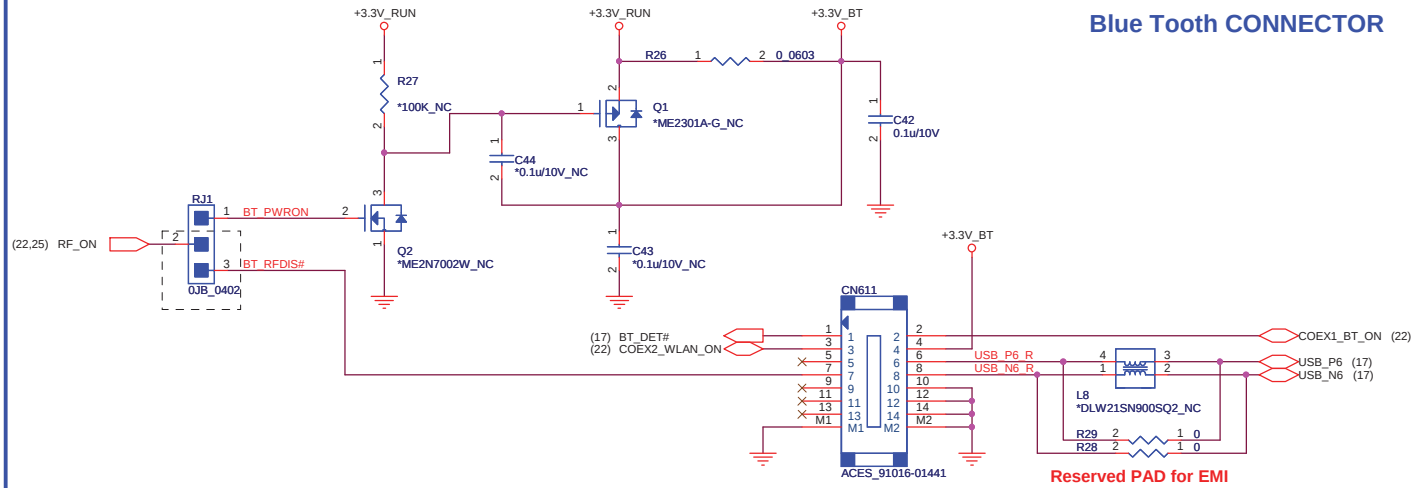
KEYBOARD CONNECTOR



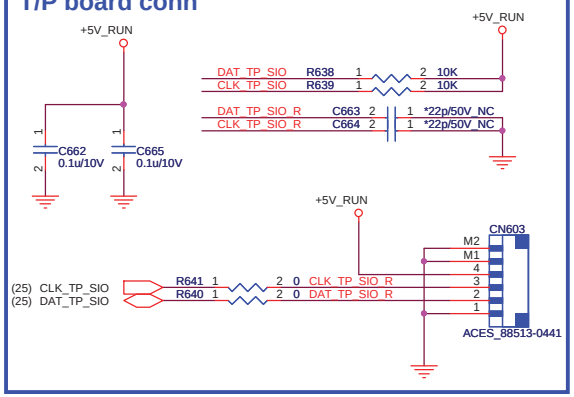
Power Button Board CONNECTOR



Blue Tooth CONNECTOR



T/P board conn



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Title	PWR SW/ T/P/ KB/ BT Conn	
Size	Document Number: Inspiron Z -- AMD	Rev A00
Date: Monday, November 02, 2009	Sheet 24 of 37	

ITE8502E LQFP-128L

(24) KSO[0..16]
(24) KSI[0..7]
(28) ADAPT_TRIP_SET

KEYBOARD

KSO16 KSO15 KSO14 KSO13 KSO12 KSO11 KSO10 KSO9 KSO8 KSO7 KSO6 KSO5 KSO4 KSO3 KSO2 KSO1 KSO0
KSI7 KSI6 KSI5 KSI4 KSI3 KSI2 KSI1 KSI0

SMBCLK1 SMBDAT1
D5 *RB500V-40_NC
D4 *RB500V-40_NC
Remove in next revision
SMBCLK2 SMBDAT2
D7 *RB500V-40_NC
D6 *RB500V-40_NC

LPC

(10,15,21,22) A_RST#
(15,22) CLK_LPC
(15,22) LPC_FRAME#
(15,22) LPC_AD0
(15,22) LPC_AD1
(15,22) LPC_AD2
(15,22) LPC_AD3
(15) CLKRUN#
(15,22) IRQ_SERIRQ

+3.3V_KBVCC
R182 100K
WRST#
C122 1u/10V/0603 CAP0603

R184 0
R181 0
LPCRST/WUI4/GPD2
LPCCLK
LFRAME
LAD0 LAD1 LAD2 LAD3
CLKRUN/WUI16/GPH0/ID0
SERIRQ

(13) LCD_TST
(26) WRST#
(13) LCD_BLON_EC
ECSMI# ECSCI# GA20 GPB6 WRST#

(24) CHG_LED
(17) SB_PME#
D10 1PS76SB40 SIO_PME#
L80HLAT/GPE0
L80LLAT/WUI7/GPE7

SMBUS

Charge and BAT
Thermal
CPU TSI

(28,34) SMBCLK0
(28,34) SMBDAT0
(26,29) SMBCLK1
(26,29) SMBDAT1
(4) SMBCLK2
(4) SMBDAT2

SMCLK0/GPB3 SMDAT0/GPB4
SMCLK1/GPC1 SMDAT1/GPC2
SMCLK2/WUI22/GPF6 SMDAT2/WUI23/GPF7

PS/2

(13) CAM_PWR_ON#
DELAY_VR_PWRGD
(22,24) RF_ON
(24) CLK_TP_SIO
(24) DAT_TP_SIO

PS2CLK0/GPF0 PS2DAT0/GPF1
PS2CLK1/GPF2 PS2DAT1/GPF3
PS2CLK2/WUI20/GPF4 PS2DAT2/WUI21/GPF5

(17) SB_EXT_SMI# D9 1PS76SB40 ECSMI#
(17) SB_EXT_SCI# D11 1PS76SB40 ECSCI#
(17) SB_A20GATE D8 1PS76SB40 GA20
(17) SB_KBRST# D12 1PS76SB40 GPB6

ITE8502_XTAL1 ITE8502_XTAL2
CK32K CK32KE
SIO_VSS
VSS1 VSS2 VSS3 VSS4 VSS5 VSS6 VSS7
SIO_AVCC SIO_AVSS
AVCC AVSS

R180 0 Y5 32.768KHz_12.5pF 12.5pF_+-10ppm
C123 10p/50V
C120 10p/50V

+3.3V_KBVCC
L21 BLM18AG121SN1D
L20 BLM18AG121SN1D
C101 0.1u/10V

C121 0.1u/10V

+3.3V_KBVCC
C100 10u/6.3V/0603
C110 0.1u/10V
C822 0.1u/10V
C826 0.1u/10V
C817 0.1u/10V
Place these caps close to ITE8502.

CLK_LPC
R188 0
C125 10p/50V

ADC/DAC

ADC0/GPI0 ADC1/GPI1 ADC2/GPI2 ADC3/GPI3 ADC4/GPI4 ADC5/GPI5 ADC6/GPI6 ADC7/GPI7
BID0 BID1 PID0
ADAPT_OC (28)
SLP_S5# (17)

DAC0/GPJ0 DAC1/GPJ1 DAC2/GPJ2 DAC3/GPJ3 DAC4/GPJ4 DAC5/GPJ5
SB_PWRGD (17)
SIO_EXT_WAKE# (17)
AMP_MUTE# (23)
SB_DUAL_PWRON (27)
SB_RSMRST# (17)
SB_PWRBTN# (17)
D3 1PS76SB40

PWM

PWM0/GPA0 PWM1/GPA1 PWM2/GPA2 PWM3/GPA3 PWM4/GPA4 PWM5/GPA5 PWM6/GPA6 PWM7/GPA7
PWR_LED (24)
LCD_DBC_EN (13)
FAN_PWM (26)
LCD_PWM_EC (13)
PID1
LCD_CBL_DET# (13)
BEEP (23)

TACH0/GPD6 TACH1/GPD7
FAN_TACH (26)
LCD_BLON_GFX (10)

TMRI0/WUI2/GPC4 TMRI1/WUI3/GPC6
LID_SW# (24)
PBAT_PRES# (34)

IR/UART

RXD/GPB0 TXD/GPB1 CRX0/GPC0 CTX0/GPB2 WUI17/GPH1/ID1 WUI18/GPH2/ID2
T611PAD
LOW_BAT_LED (24)
CHARGE_EN (28)
RUN_ON (27,30,31,33)
SLP_S3# (17,23)

LPC/FWH FLASH

FLFRAME/GPG2/LF FLRST/GPG0/TM FLAD3/GPG6
EC_FLRST#
EC_FLAD3
SUS_ON (27,31)

FLAD2/SO FLAD1/SI FLAD0/SCE FLCLK
EC_FLASH_SPI_DO (19)
EC_FLASH_SPI_DIN (19)
EC_FLASH_SPI_CS# (19)
EC_FLASH_SPI_CLK (19)

EGPC

EGAD/GPE1 EGCS/GPE2 EGCLK/GPE3
PS_ID (34)
5V_SUS_ON (32)
EC_EGCLK

WUI19/GPH3/ID3 GPH4/ID4 GPH5/ID5 GPH6/ID6 GPG1/ID7
EC_HSPI_CS# (16)
EC_HSPI_CLK (16)
EC_HSPI_SO (16)
EC_HSPI_SI (16)

Default is pull-up

RI1/WUI0/GPD0 RI2/WUI1/GPD1 WUI5/GPE5
THRM_ALERT# (26)
ACAV_IN (28)

RING/PWRFAIL/LPCRST/GPB7
USB_EN# (20)

PWRSW/GPE4
MAIN_PWR_SW# (24)

GINT/GPD5
LCDVCC_TST_EN (13)

VBAT VCC VSTBY

VBAT1 VCC
+3.3V_RUN
VSTBY1 VSTBY2 VSTBY3 VSTBY4 VSTBY5 VSTBY6
+3.3V_KBVCC
R190 *0_NC
C124 0.1u/10V
R187 0
+RTC_CELL

+3.3V_ALW +3.3V_KBVCC
JP601 SHORT_PAD

+3.3V_KBVCC
SMBDAT0 R172 4.7K
SMBCLK0 R171 4.7K
SMBDAT1 R174 4.7K
SMBCLK1 R173 4.7K
SMBDAT2 R176 4.7K
SMBCLK2 R175 4.7K
EC_EGCLK R165 10K
EC_FLRST# R170 10K
EC_FLAD3 R167 10K
DELAY_VR_PWRGD R164 10K

RFI
EC_FLASH_SPI_DO C828 *33p/50V_NC
EC_FLASH_SPI_DIN C833 *33p/50V_NC
EC_FLASH_SPI_CS# C834 *33p/50V_NC
EC_FLASH_SPI_CLK C836 *33p/50V_NC
EC_HSPI_CLK C102 *33p/50V_NC

SUS_ON R168 100K
+5V_SUS
LID_SW# R678 100K
+3.3V_RUN
LCD_BLON_EC R183 *10K_NC
LCD_CBL_DET# R177 100K

EC_FLASH_SPI_CLK
R169 *10_NC
C105 *2.2p/50V_NC

Platform ID Straps

+3.3V_KBVCC
PID1 PID0
R186 10K
R154 10K
PID0
PID1
R185 *10K_NC
R158 *10K_NC

Board ID Straps

+3.3V_KBVCC
BID1 BID0
R159 *10K_NC
R156 *10K_NC
BID0
BID1
R155 10K
R160 10K

PID1	PID0	Inspiron Z
0	0	Intel Discrete
0	1	Intel UMA
1	0	AMD Discrete
1	1	AMD UMA

BID1	BID0	Inspiron Z
0	0	SSI (X00)
0	1	PT (X01)
1	0	ST (X02)
1	1	MP(A0)

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Title: SIO -- ITE_8502E
Size:
Document Number: Inspiron Z -- AMD
Rev: A00
Date: Monday, November 02, 2009
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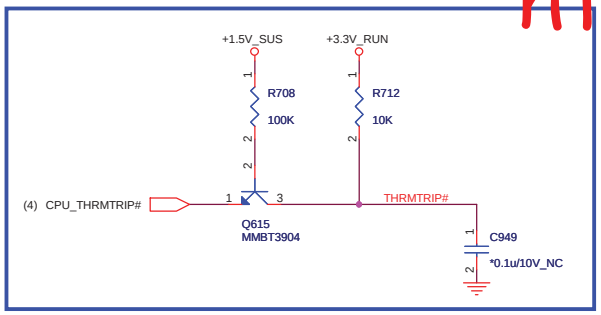
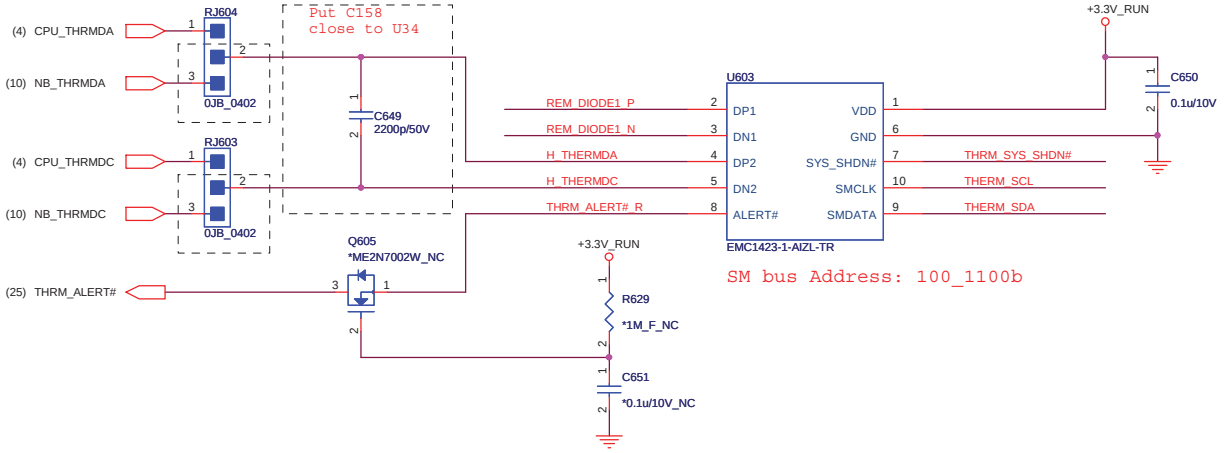




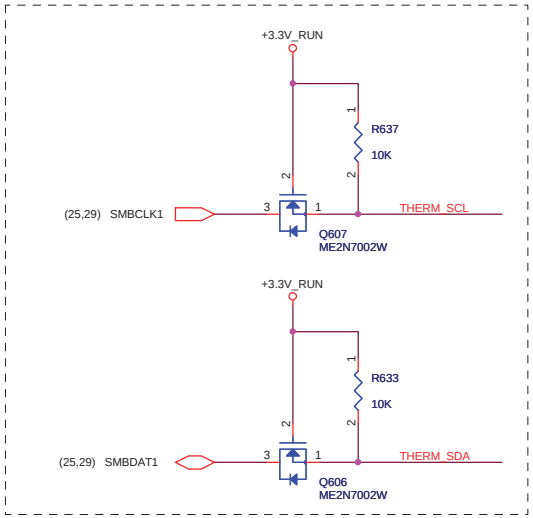
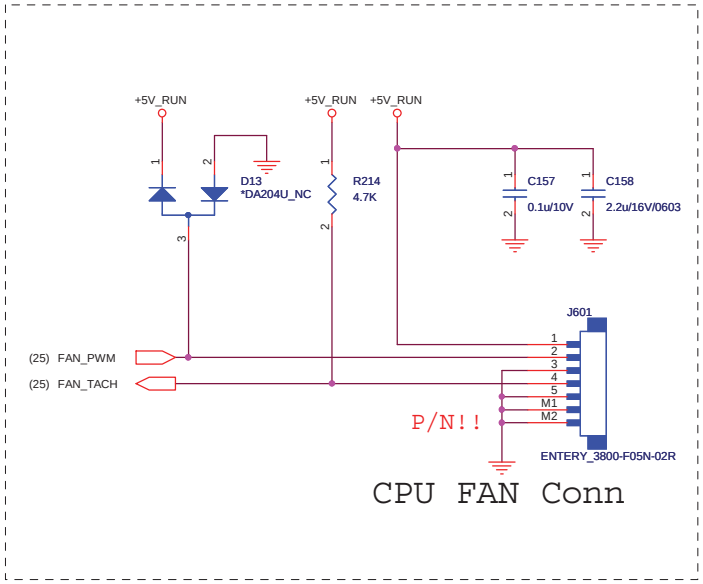
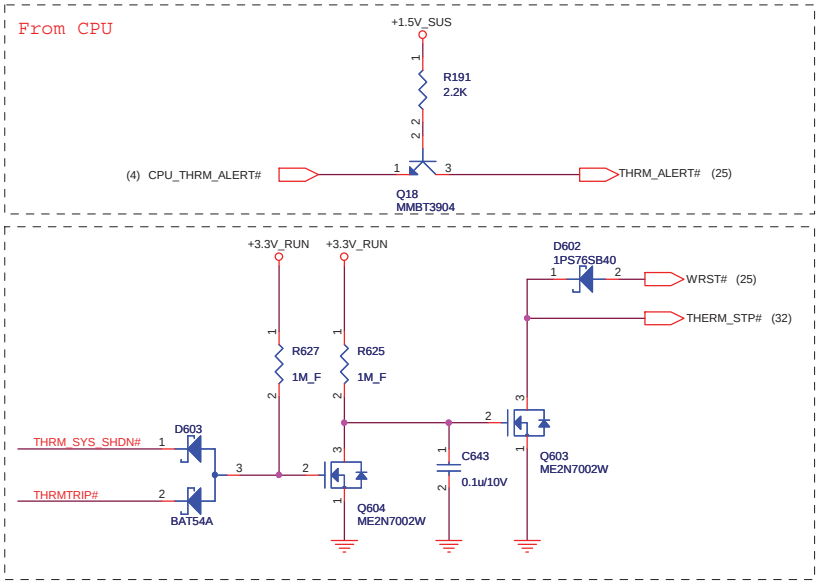
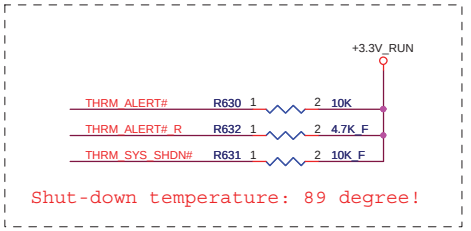


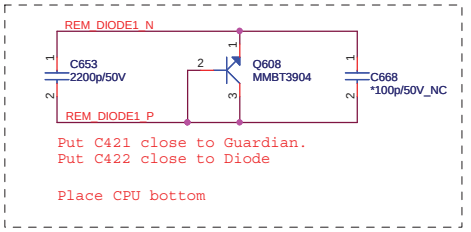
Table 5.2 $\overline{\text{SYS\_SHDN}}$ Threshold Temperature

$\overline{\text{SYS\_SHD}}$ PULL-UP / $\overline{\text{ALERT}}$ PULL-UP	4.7K OHM ±10%	6.8K OHM ±10%	10K OHM ±10%	15K OHM ±10%	22K OHM ±10%	33K OHM ±10%
4.7K OHM ±10%	77°C	83°C	89°C	95°C	101°C	107°C
6.8K OHM ±10%	78°C	84°C	90°C	96°C	102°C	108°C
10K OHM ±10%	79°C	85°C	91°C	97°C	103°C	109°C
15K OHM ±10%	80°C	86°C	92°C	98°C	104°C	110°C
22K OHM ±10%	81°C	87°C	93°C	99°C	105°C	111°C
33K OHM ±10%	82°C	88°C	94°C	100°C	106°C	112°C









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Title	THRM -- EMC2103-2	
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RUN/ SUS CKT

1.5A

+3.3V_ALW
+15V_ALW
+5V_SUS
+5V_RUN
PR55 100K
PR54 100K
PQ16 Si4134DY-T1-GE3
RUN_PWR_ENABLE
C136 0.1u/50V/0603
RUN_ON#
PQ18 ME2N7002W
(25,30,31,33) RUN_ON
PQ17 ME2N7002W
PC59 4700p/25V
PC60 0.1u/50V/0603

700mA

+3.3V_ALW
+15V_ALW
+3.3V_SUS
PR707 100K
PR710 100K
PQ2 Si4134DY-T1-GE3
SUS_PWR_ENABLE
C965 0.1u/50V/0603
SUS_ON#
PQ608 ME2N7002W
(25,31) SUS_ON
PQ605 ME2N7002W
PC681 4700p/25V
PC1 0.1u/50V/0603

4A

+3.3V_ALW
+3.3V_RUN
PQ8 Si4134DY-T1-GE3
RUN_PWR_ENABLE
C50 0.1u/50V/0603
PC28 *4700p/25V_NC
PC29 0.1u/50V/0603

+1.1V_ALW_SB
+1.1V_SUS
PQ11 ME2306D-G
SUS_PWR_ENABLE
PC42 0.1u/50V/0603

800mA

+1.5V_SUS
+1.5V_RUN
PQ15 Si4134DY-T1-GE3
RUN_PWR_ENABLE
C812 0.1u/50V/0603
PC648 *4700p/25V_NC
PC647 0.1u/50V/0603

300mA

+3.3V_ALW
+15V_ALW
+3.3V_ALW
+3.3V_ALW_SB
PQ1 ME2306D-G
PR708 100K
PR709 100K
3V_SB_DUAL_ENABLE
C959 0.1u/50V/0603
SB_DUAL_PWRON#
(25) SB_DUAL_PWRON
PQ604 ME2N7002W
PQ609 ME2N7002W
PC682 4700p/25V
PC677 0.1u/50V/0603

PWRGD

+3.3V_RUN
R656 100K
(33) 0.9V_RUN_PWRGD
(30) 1.1V_RUN_PWRGD
(31) 1.8V_RUN_PWRGD
(29) 2.5V_RUN_PWRGD
(29) VCORE_PWRGD
(32) 3.3V_5V_PWRGD
(31) 1.5V_DDR_PWRGD
D607
BAT54A
D605
BAT54A
D604 1PS76SB40
D606
BAT54A
ALL_SYS_PWRGD (25)

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Title	RUN/ SUS PWR	
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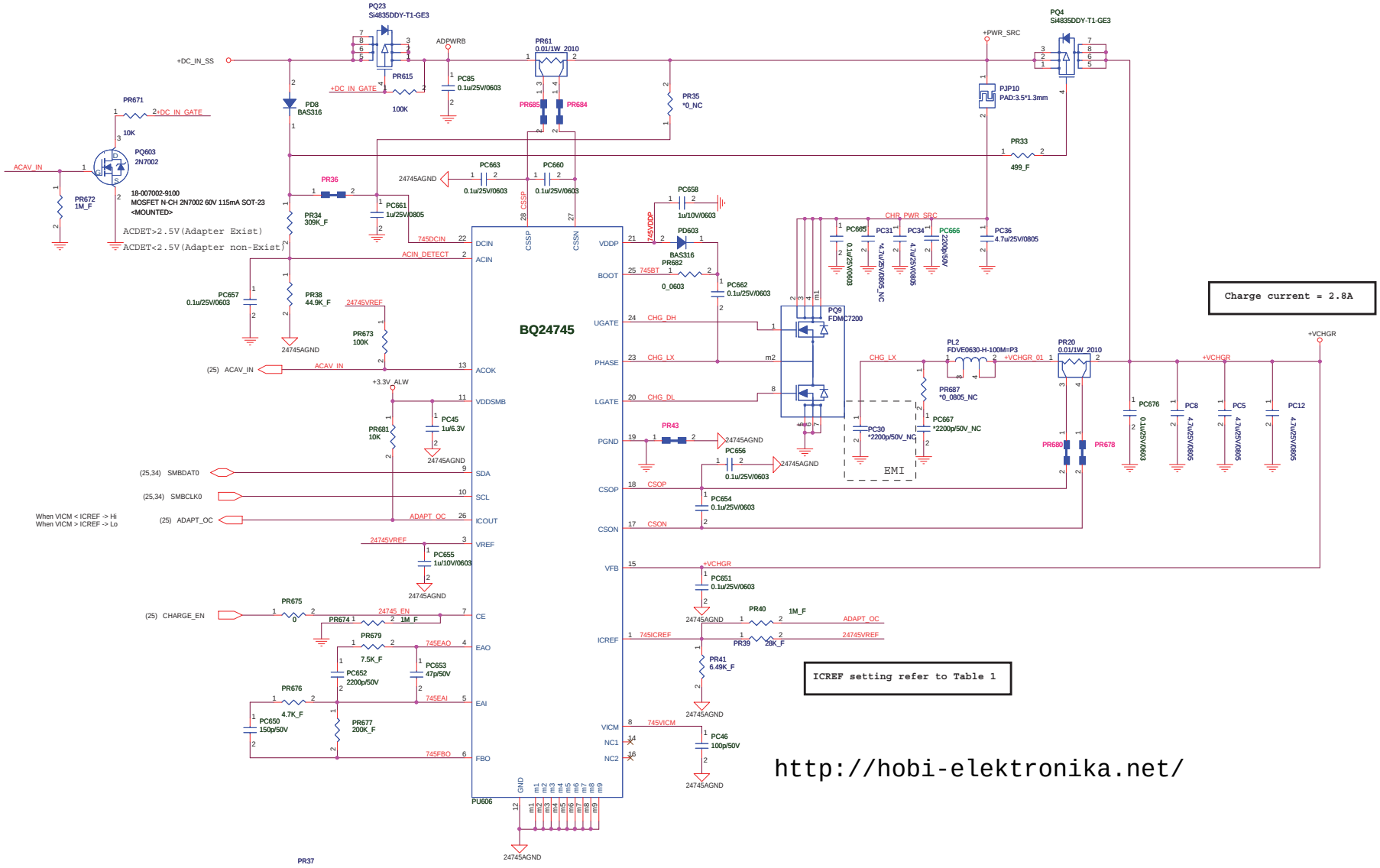

TABLE1				
ADAPTER(W)	TRIP CURRENT(A)	PQ6	PR28	PR25
65W	3.13	NA	NA	6.49K
90W	4.34	2N7002	19.1K	10K
Note 1 : PR28 is populated if ADAPT_TRIP_SET is used to program for the next lower adapter.				
ADAPT_TRIP_SET is floating for the higher adapter , grounded for the lower adapter.				

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Title: PWR -- Charger circuit		
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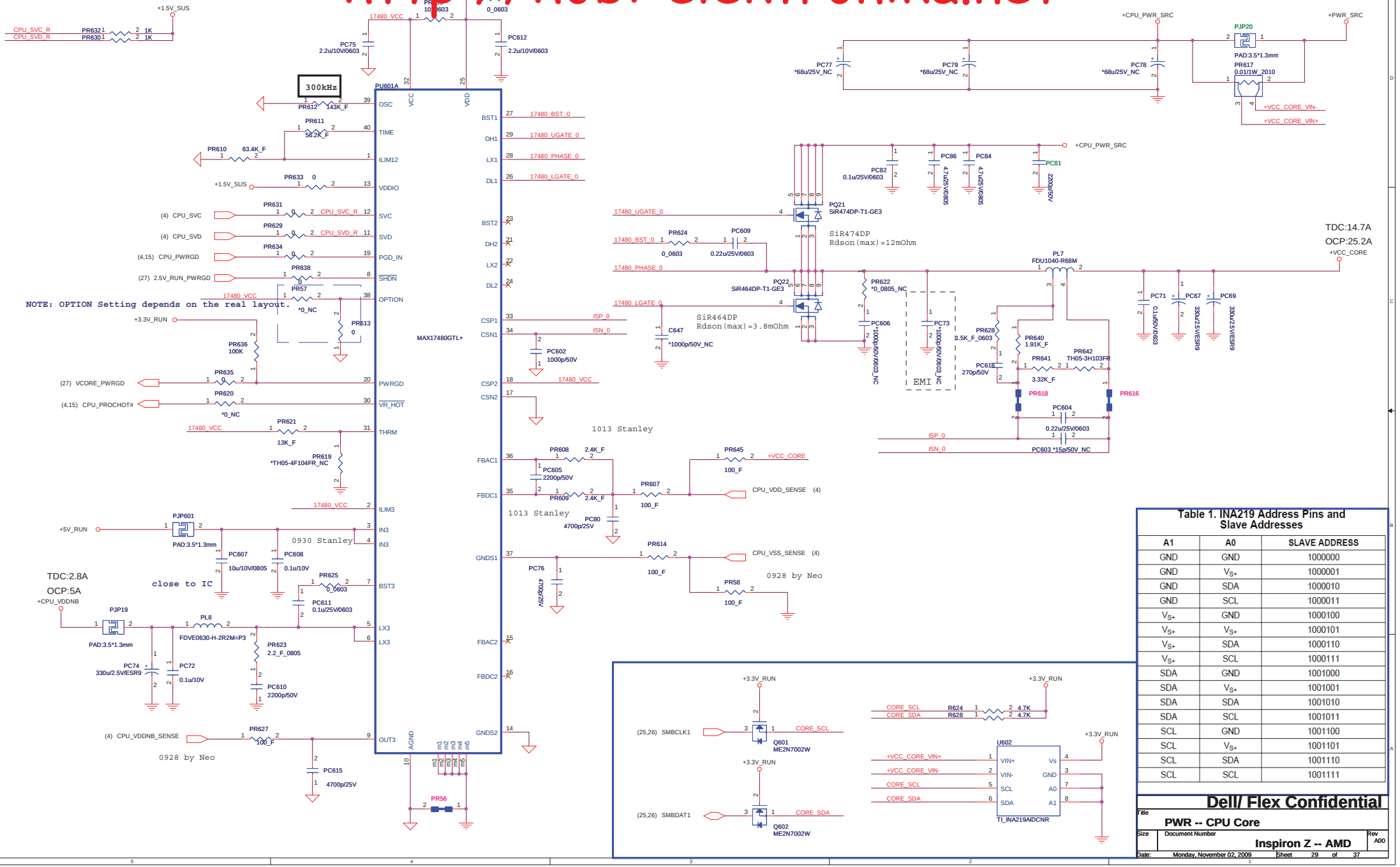

Table 1. INA219 Address Pins and Slave Addresses		
A1	A0	SLAVE ADDRESS
GND	GND	1000000
GND	V_{S+}	1000001
GND	SDA	1000010
GND	SCL	1000011
V_{S+}	GND	1000100
V_{S+}	V_{S+}	1000101
V_{S+}	SDA	1000110
V_{S+}	SCL	1000111
SDA	GND	1001000
SDA	V_{S+}	1001001
SDA	SDA	1001010
SDA	SCL	1001011
SCL	GND	1001100
SCL	V_{S+}	1001101
SCL	SDA	1001110
SCL	SCL	1001111

Title: PWR -- CPU Core

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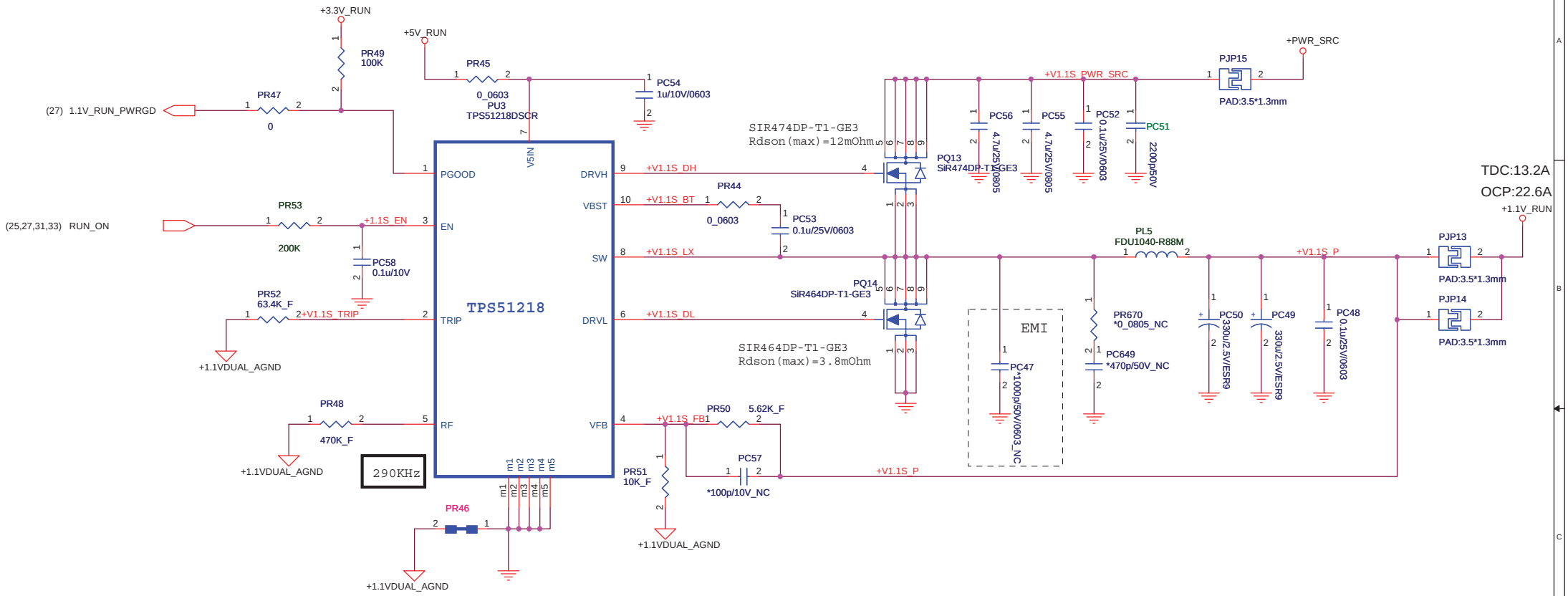
+V1.1V_RUN



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Title	PWR -- 1.1V_RUN	
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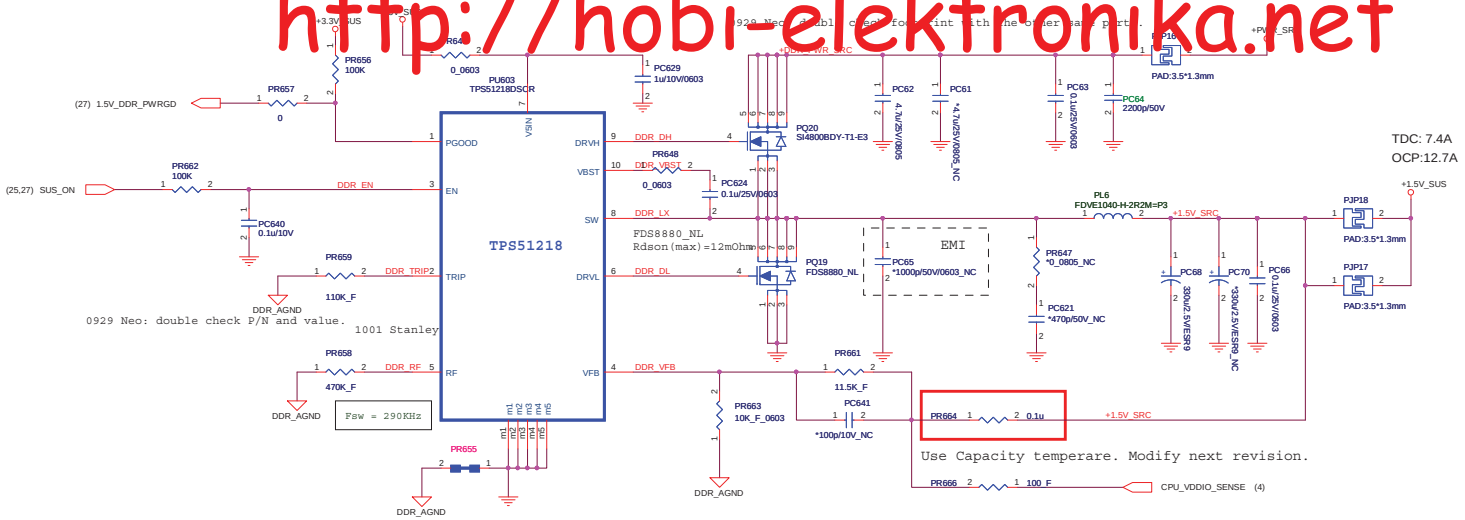
1.5VDDR



0.75VS

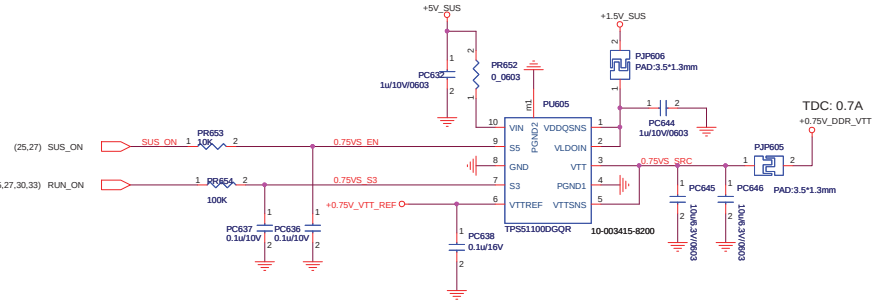
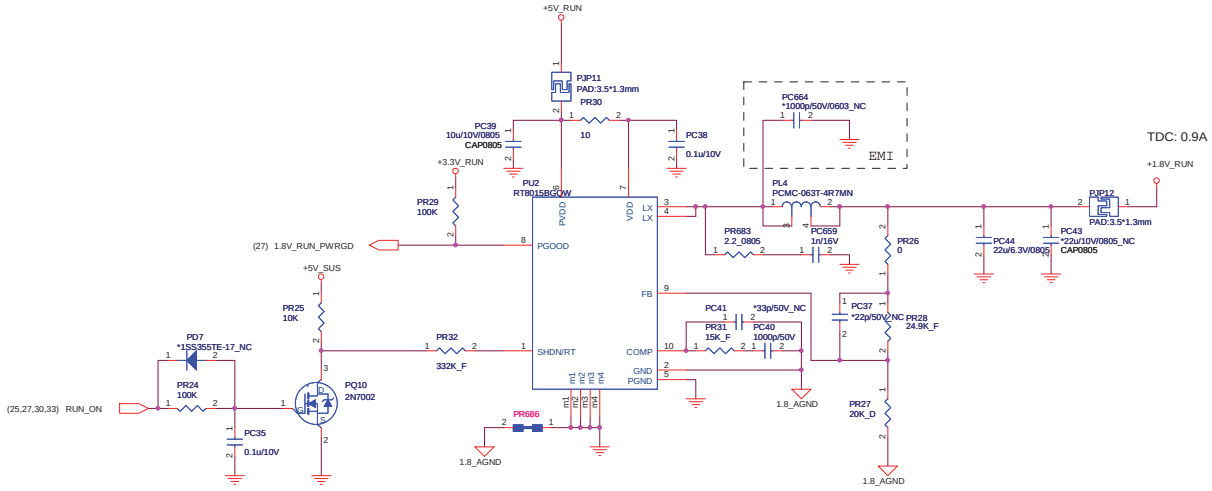


Table 1. S3 and S5 Control Table

STATE	S3	S5	VTT	VREF
Normal	Hi	Hi	1.25V/0.9V	1.25V/0.9V
Standby	Lo	Hi	12mV/6mV (High-Z)	1.25V/0.9V
Shutdown	Lo	Lo	0V (Discharge)	0V (Discharge)
Shutdown	Hi	Lo	0V (Discharge)	0V (Discharge)

1.8VS



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Title	PWR -- DDR PWR/ +1.8V_RUN
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100mA (Max)

TDC: 5A
OCP: 8.6A

Si4800DBY-T1-E3
Rdson(max)=30mOhm

Si4134DY
Rdson(max)=17.5mOhm

TDC: 5.6A
OCP: 9.6A

Si4800DBY-T1-E3
Rdson(max)=30mOhm

Si4134DY
Rdson(max)=17.5mOhm

MAX17020ETJ+

+15_ALW maby can be disable
on S3,S4,S5 ; saving 1mA
But the control signal need
to be separate

TON	Frequency
GND	OUT1@400K , OUT2@500K
VCC	OUT1@200K , OUT2@300K
OPEN	OUT1@400K , OUT2@300K

0930 Stanley

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Title	PWR -- SYS 5V/ 3V	
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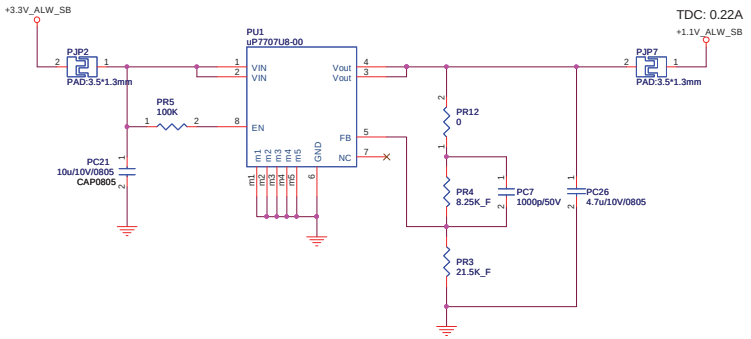
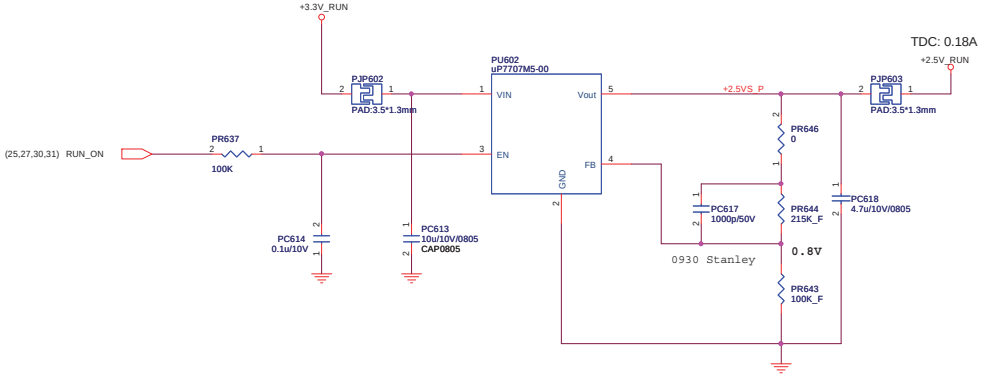
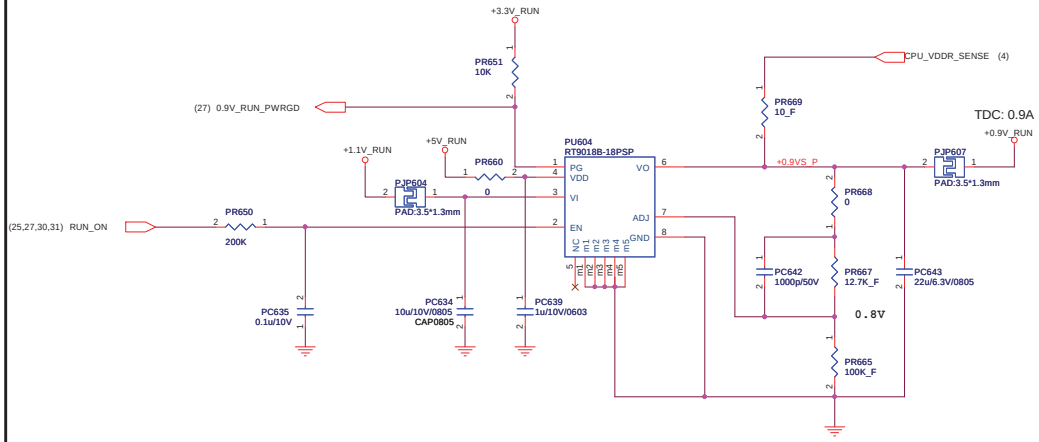
+1.1V_ALW_SB



+2.5V_RUN



+0.9V_RUN



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Title	PWR -- 1.1V_ALW/ 2.5V_RUN/ 0.9V_RUN	
Size	Document Number: Inspiron Z -- AMD	Rev: A00
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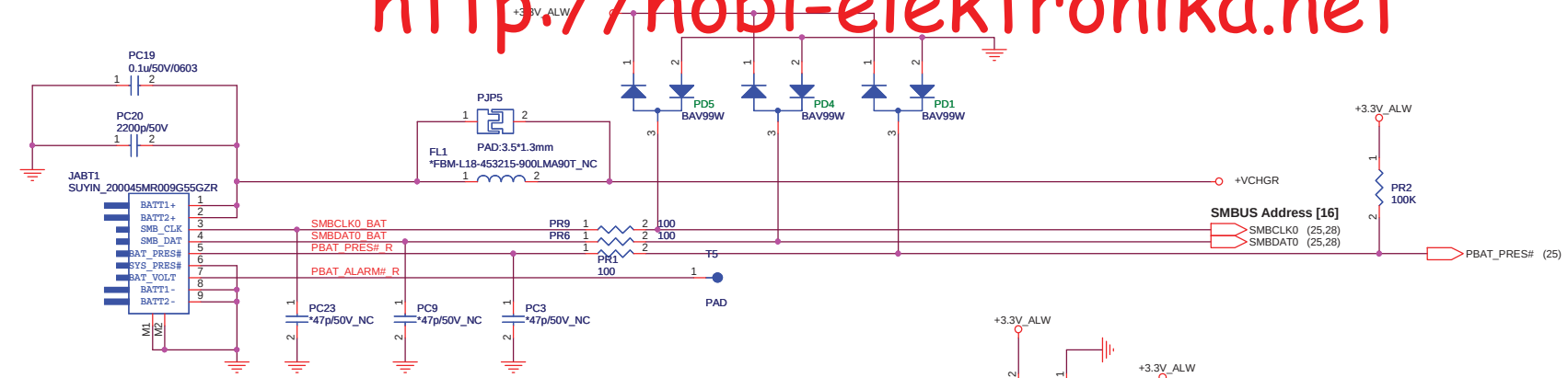
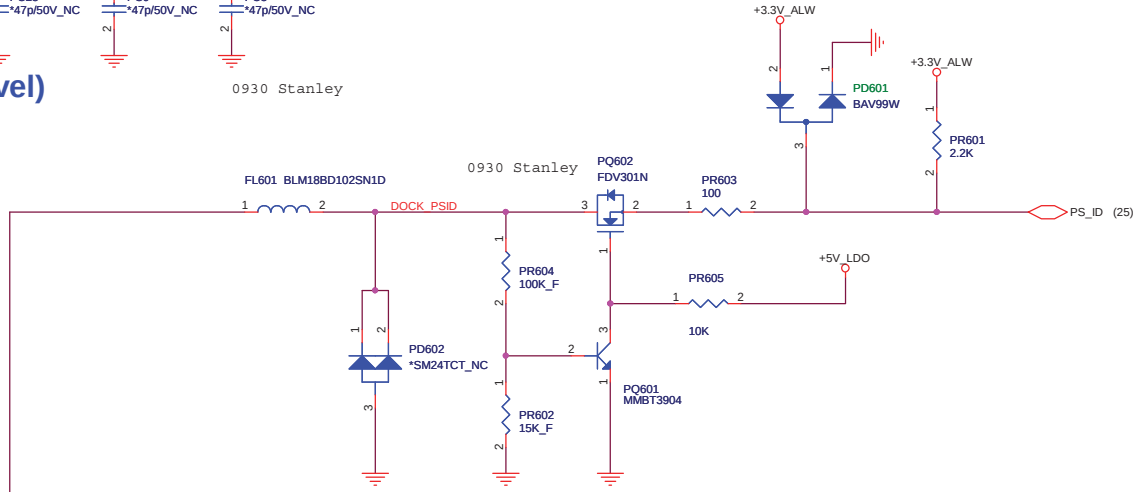
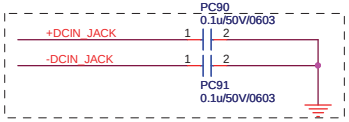


Battery Conn (030 Level)

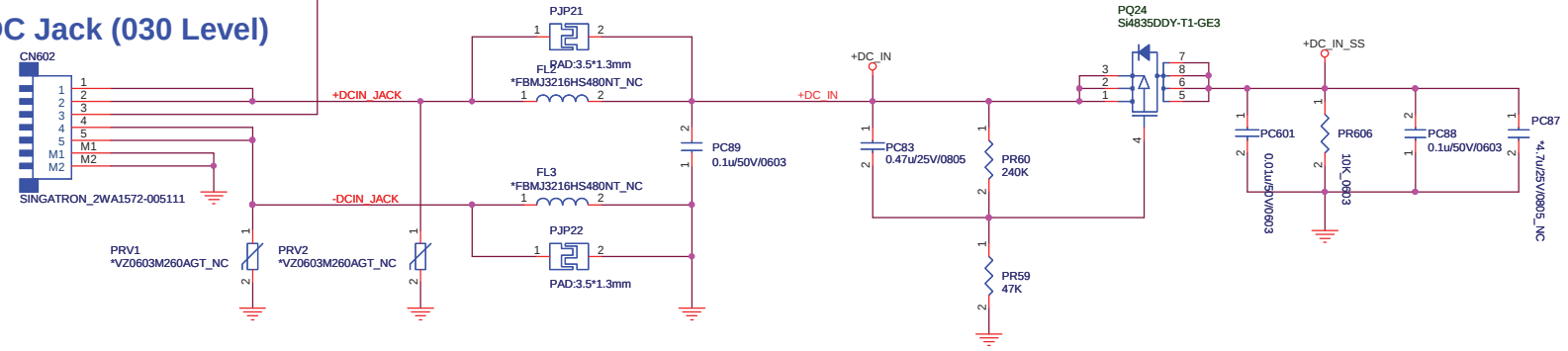
0930 Stanley



0930 Stanley



DC Jack (030 Level)



DELL/FLEX CONFIDENTIAL		
Title: Cover Sheet		
Size	Document Number: M11z	Rev: A00
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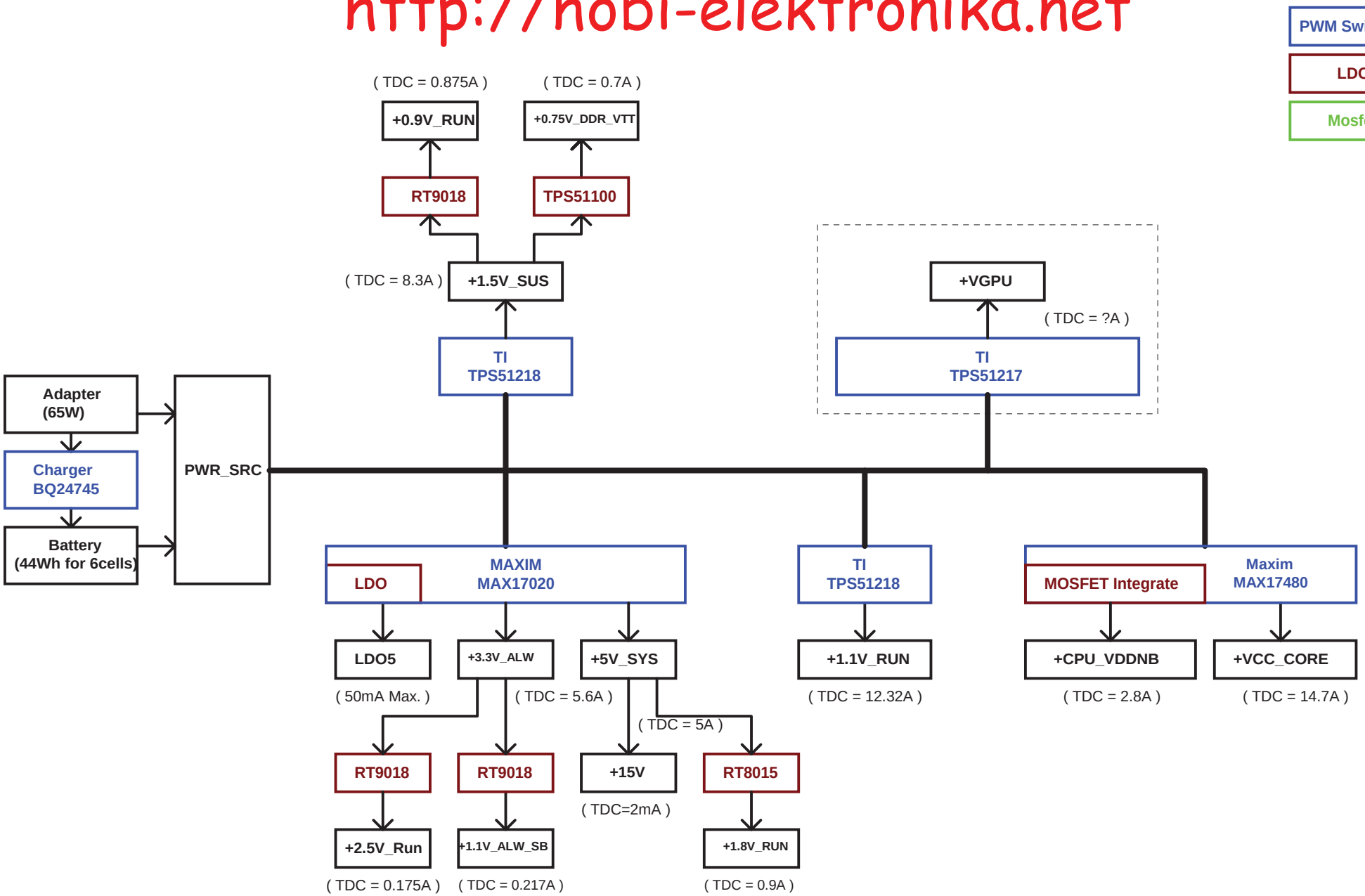

Title	Cover Sheet	
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Screw Hole

H620 PTH6_4.6 THR236_181
H622 PTH6_4.6 THR236_185
H623 PTH6_4.6 THR236_185
H613 PTH6_4.6 THR236_181
H617 PTH6_4.6 THR236_181
H626 PTH6_0_1.1 THR276B0_181
H621 PTH6_4.6 THR236_181
H610 PTH6_4.6 THR236_181
H611 PTH6_4.6 THR236_181
H612 PTH6_4.6 THR236_181
H618 PTH6_4.6 THR236_181
H605 PTH0_6_1.1 THR0B276_181
H604 PTH0_6_1.1 THR0B276_181
H608 PTH0_6_1.1 THR0B276_181
H603 PTH0_6_0.9 THR0B276_181
H615 PTH0_6_4.7 THR354B315_236
H619 PTH8B7_2.8 THR315B276_110

H629 MTH8B7_2.8
H624 MTH8B7_2.8
H602 MTH8B7_2.8
H609 MTH8B7_2.8
H628 MTH9_8B6
H614 MTH7B8_2.8
H625 MTH7B8_2.8
H601 MTH7B8_2.8
H606 MTH7B8_2.8
H616 MTH10B6
H627 MTH10B6
H607 MTH10B6

FID

FID602 NC, NO CONNECT TO ANY.
FID2 NC, NO CONNECT TO ANY.
FID601 NC, NO CONNECT TO ANY.
FID1 NC, NO CONNECT TO ANY.
FID604 NC, NO CONNECT TO ANY.
FID4 NC, NO CONNECT TO ANY.
FID603 NC, NO CONNECT TO ANY.
FID3 NC, NO CONNECT TO ANY.

Unused Gates

U5B 74LVC08APW
U5C 74LVC08APW
U5D 74LVC08APW
U2B SN74LVC2G07DCKR

EMI Solution

+VCC_CORE: C705 1 2 0.1u/16V
+1.5V_SUS: C770 1 2 0.1u/16V; C692 1 2 0.1u/16V; C779 1 2 0.1u/16V; C690 1 2 0.1u/16V
+3.3V_KBVCC / +1.1V_RUN: C98 1 2 0.1u/16V; C864 1 2 0.1u/16V
+3.3V_RUN: C886 1 2 0.1u/16V; C918 1 2 0.1u/16V; C954 1 2 0.1u/16V
+5V_SUS: C610 1 2 0.1u/16V; C617 1 2 0.1u/16V; C951 1 2 0.1u/16V; C133 1 2 0.1u/16V; C163 1 2 0.1u/16V
+1.1V_RUN: C885 1 2 0.1u/16V; C852 1 2 0.1u/16V; C884 1 2 0.1u/16V
+3.3V_KBVCC: C800 1 2 0.1u/16V
+5V_RUN: C728 1 2 0.1u/16V; C816 1 2 0.1u/16V
+0.9V_RUN: C127 1 2 0.1u/16V; C799 1 2 0.1u/16V

+CPU_PWR_SRC / +VCC_CORE: C657 1 2 0.1u/25V/0603
+CPU_PWR_SRC: C656 1 2 0.1u/25V/0603; C641 1 2 0.1u/25V/0603; C652 1 2 0.1u/25V/0603
+PWR_SRC / +5V_SUS: C883 1 2 0.1u/25V/0603; C818 1 2 0.1u/25V; C722 1 2 0.1u/25V/0603; C661 1 2 0.1u/25V/0603; C642 1 2 0.1u/25V/0603
+PWR_SRC / +3.3V_KBVCC: C814 1 2 0.1u/25V
+PWR_SRC / +1.1V_RUN: C891 1 2 0.1u/25V/0603
+PWR_SRC: C953 1 2 0.1u/25V/0603; C957 1 2 0.1u/25V/0603; C658 1 2 0.1u/25V/0603
+CPU_PWR_SRC / +5V_SUS: C638 1 2 0.1u/25V/0603
+3.3V_RUN: C717 1 2 0.1u/16V; C824 1 2 0.1u/16V; C806 1 2 0.1u/16V
+1.5V_RUN: C802 1 2 0.1u/16V; C801 1 2 0.1u/16V

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Title: Screw Hole/ EMI/ Unused Gates
Size: | Document Number: Inspiron Z -- AMD | Rev: A00
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Version change list (P.I.R. List)

Item	Fixed Issue	Reason for Change	Rev	PG#	Modify List	B Ver#	Phase
1			X00		X00 Schematic Official Release	X00	SSI

Title: History - 1

Size | Document Number: Inspiron Z -- AMD | Rev: A00

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