

	1	2	3	4	5	6	7	8																																																																													
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B	<div><div>MOBILE THREE</div><div>WS BUILD</div><div>2010.10.25</div></div>																																																																																				
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SHEET 1		OF 54																																																																																			

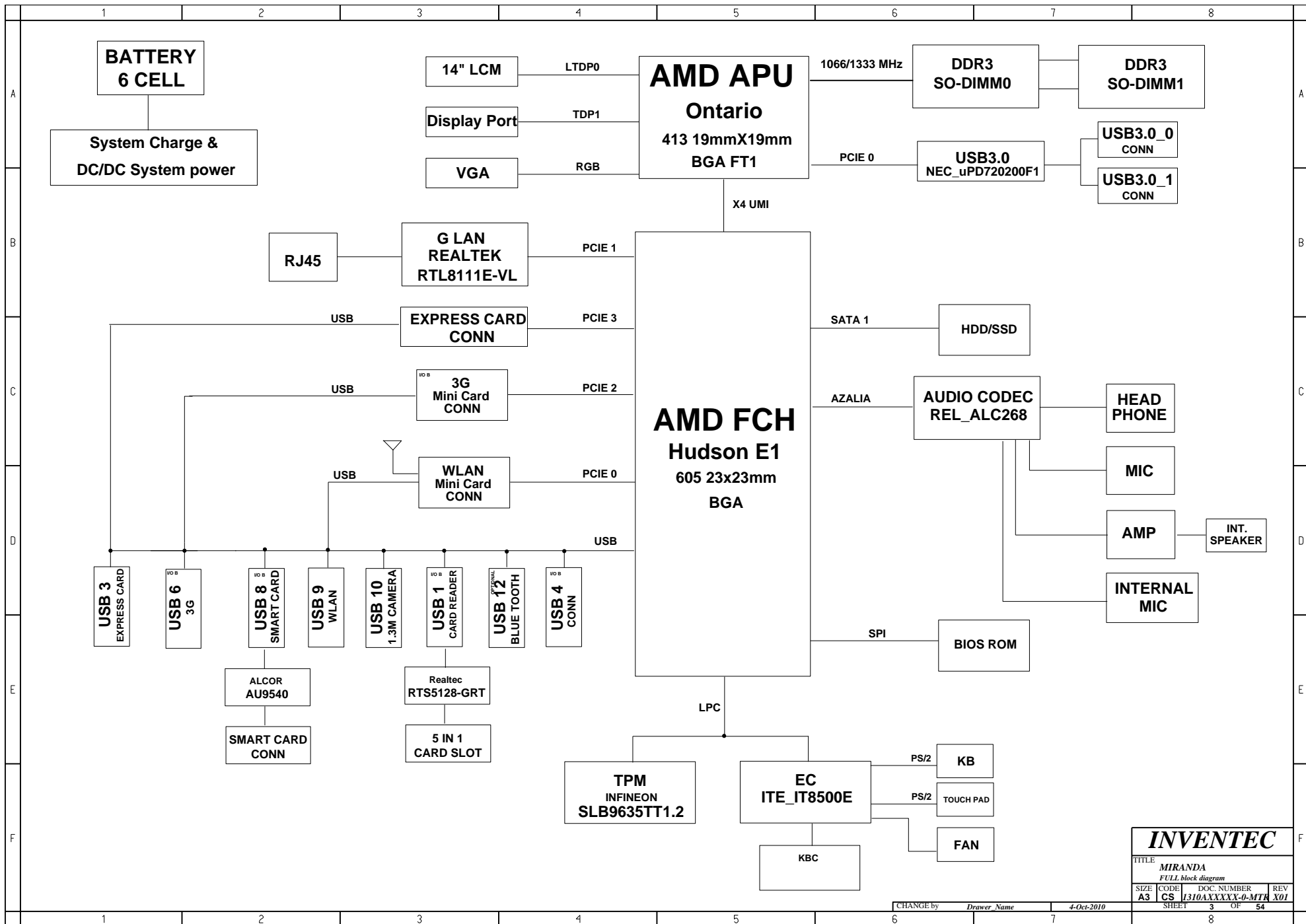
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14. APU FT1 1	33. USB3.0 CONTROLLER	POWER BOARD
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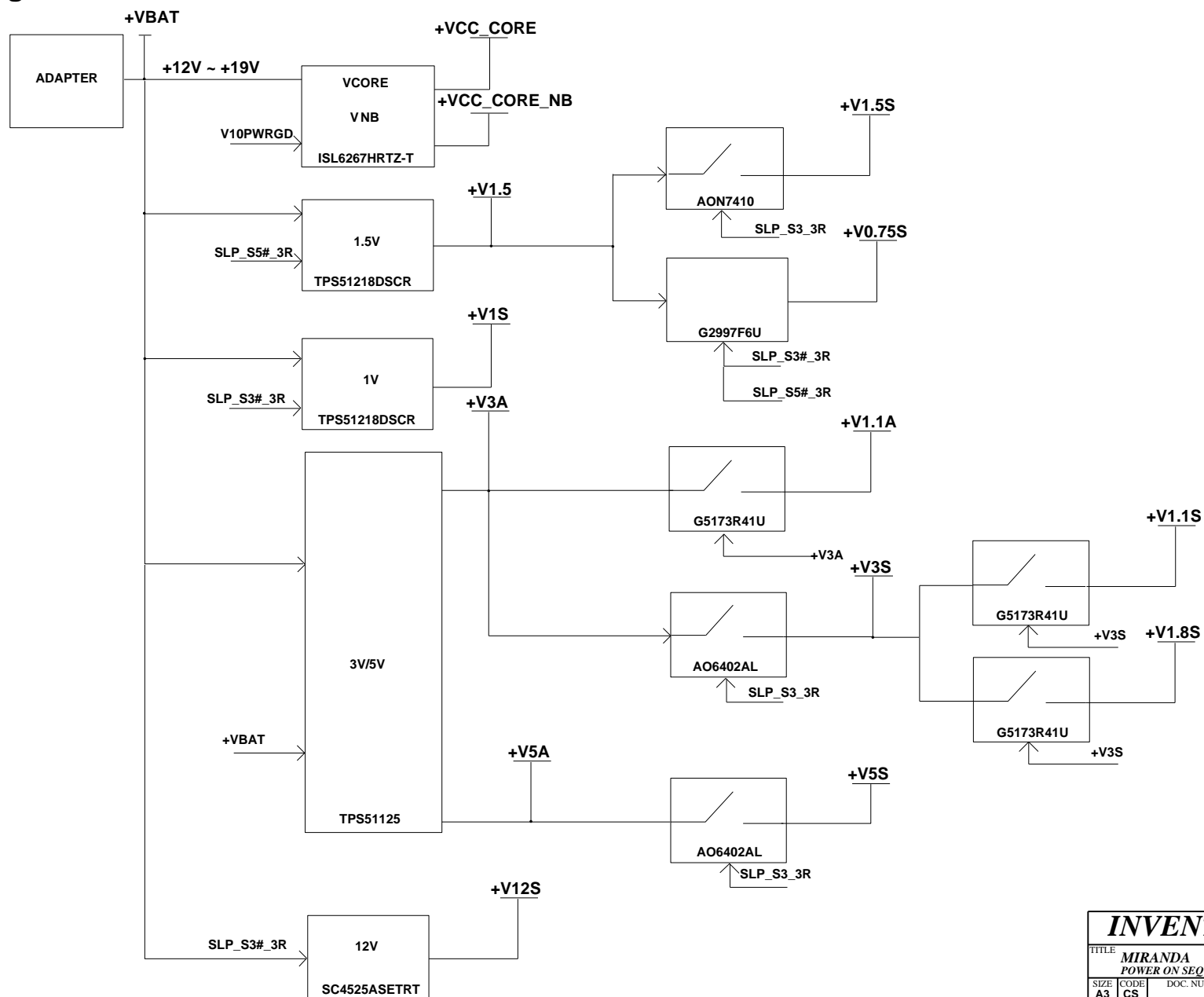
**INVENTEC**

TITLE			
MIRANDA			
index			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310AXXXX-0-MTRX01	
SHEET		2	OF 54

CHANGE by *Drawer Name* 11-Oct-2010



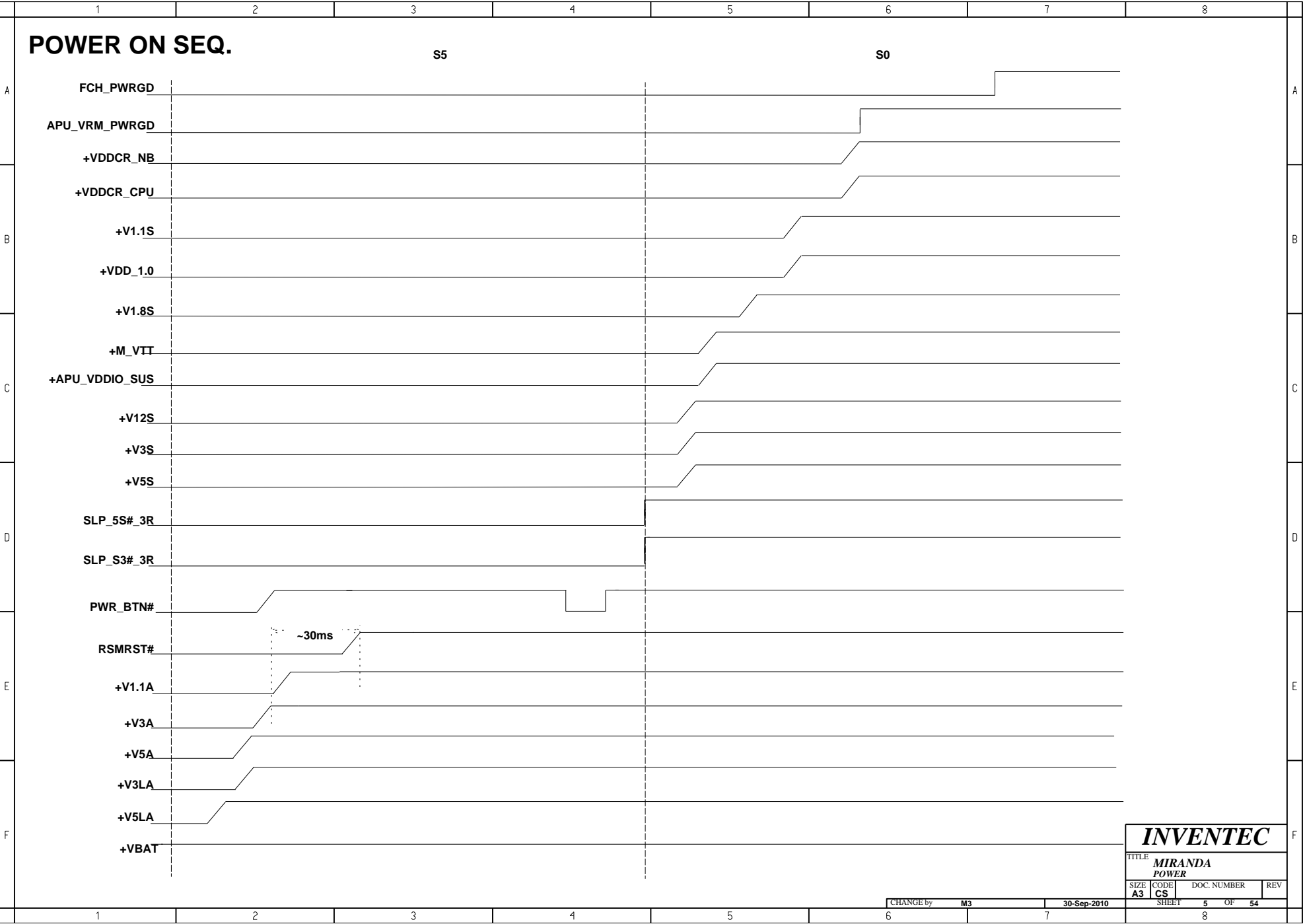
## Power Block Diagram

**INVENTEC**

TITLE	<b>MIRANDA</b> <b>POWER ON SEQUENCE</b>
-------	--

SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER	REV.
SHEET 4 OF 54			

CHANGE by	M3	28-Jul-2010
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**INVENTEC**

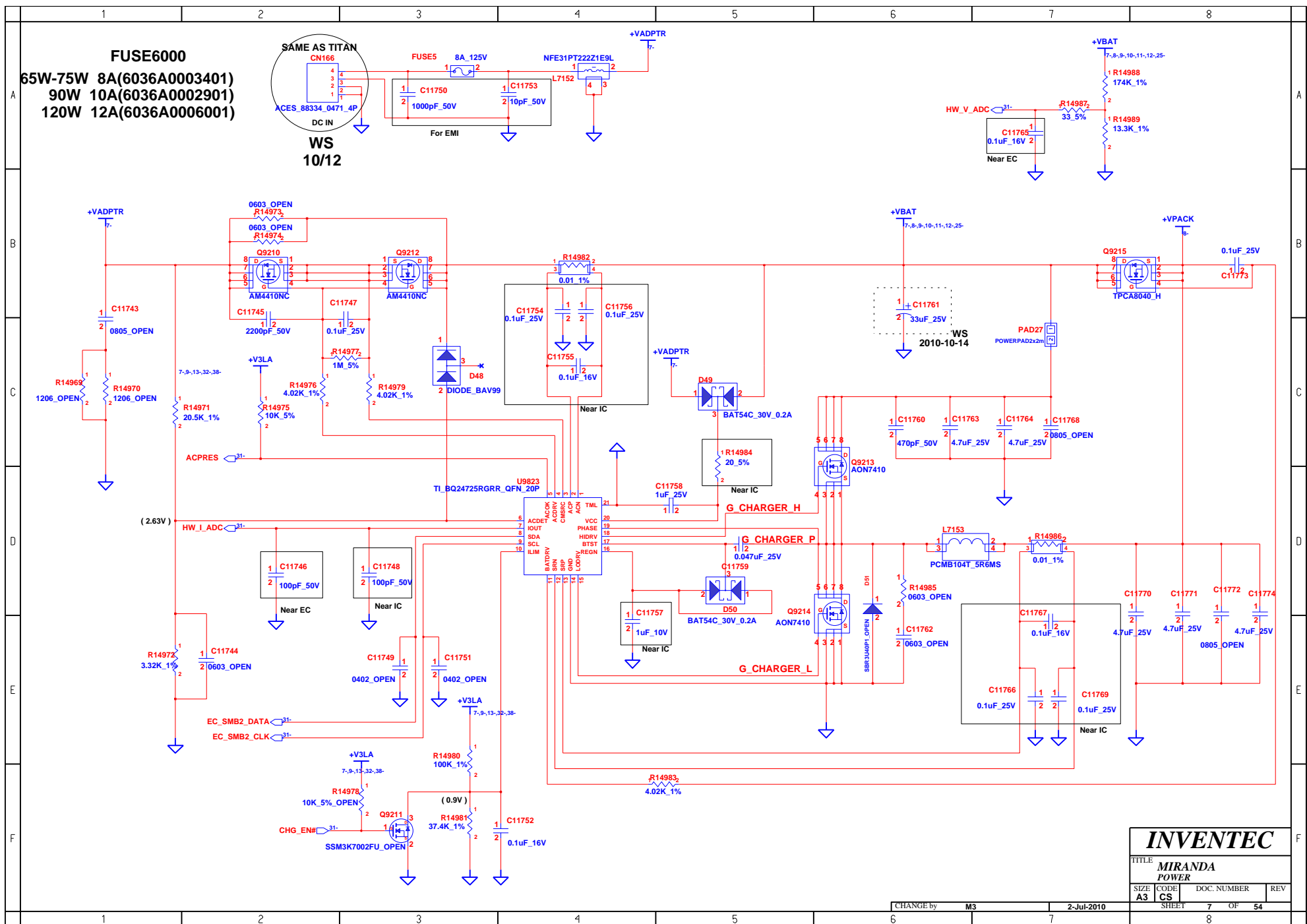
TITLE  
MIRANDA  
POWER

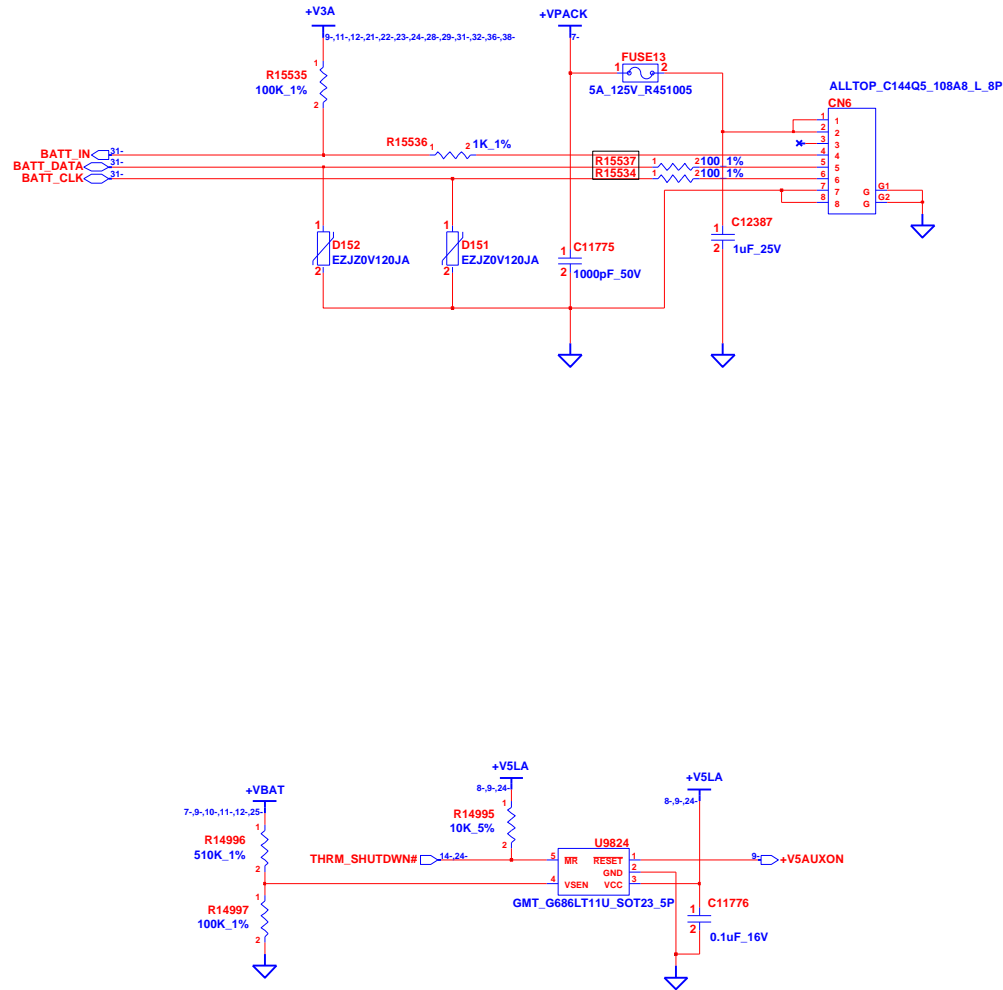
SIZE CODE DOC. NUMBER REV  
A3 CS

SHEET 5 OF 54

8







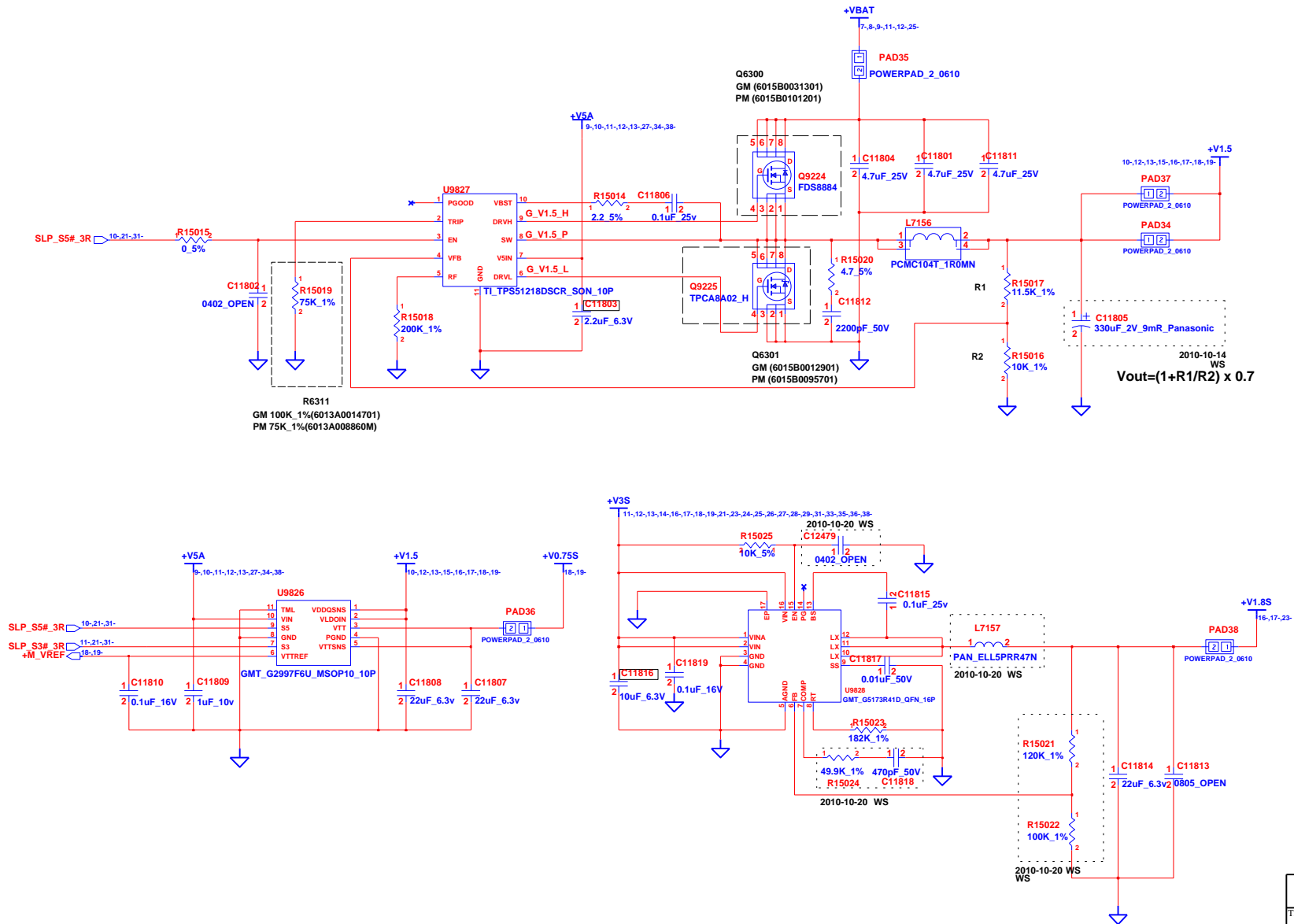
INVENTEC			
TITLE MIRANDA POWER			
SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET		8	OF 54

CHANGE by M3 2-Jul-2010





# +V1.8S +V0.75S +V1.5

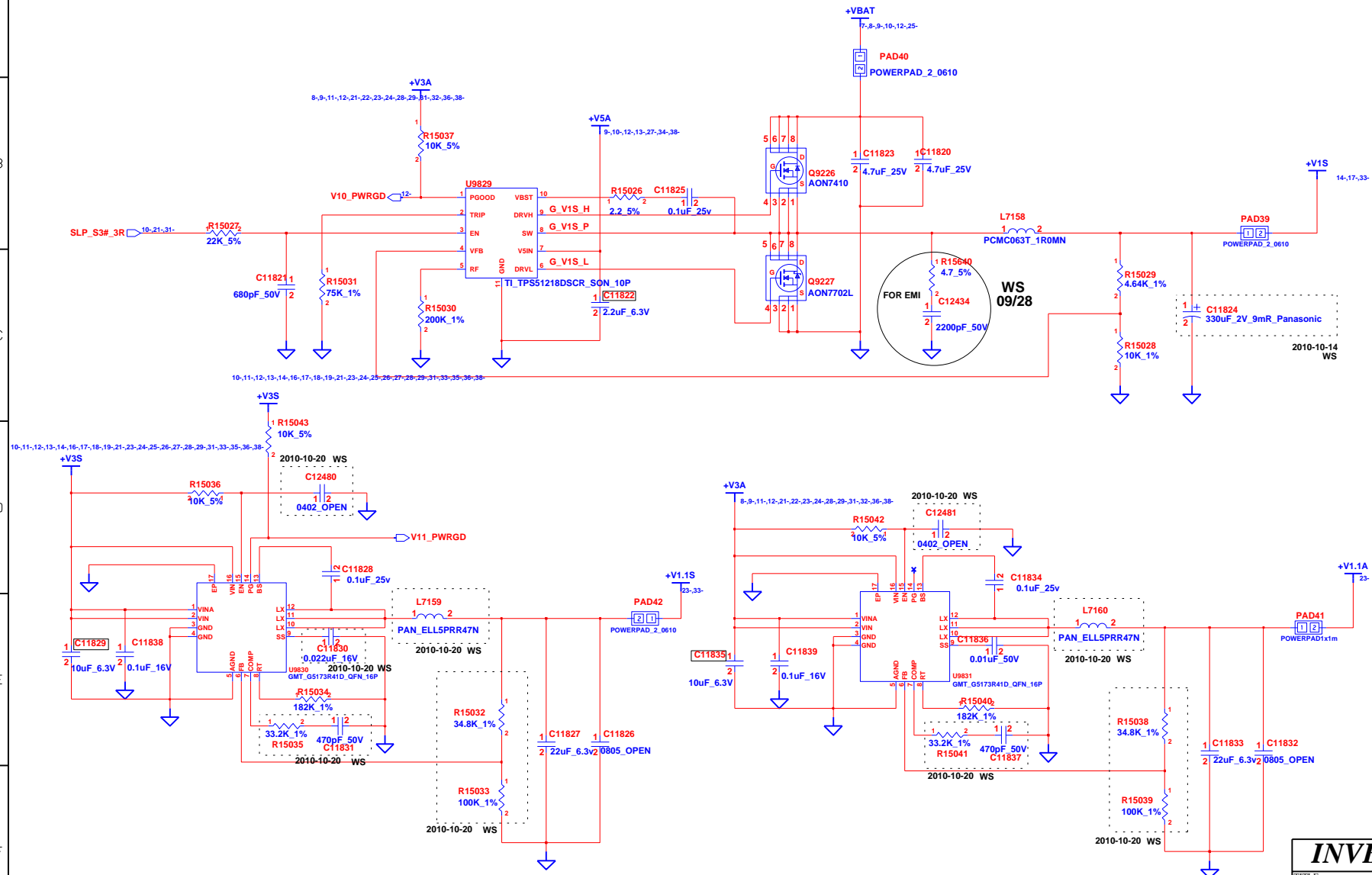


**INVENTEC**

TITLE MIRANDA POWER			
SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET 10		OF 54	

CHANGE by M3 2-Jul-2010

# +V1.1A +V1S +V1.1S

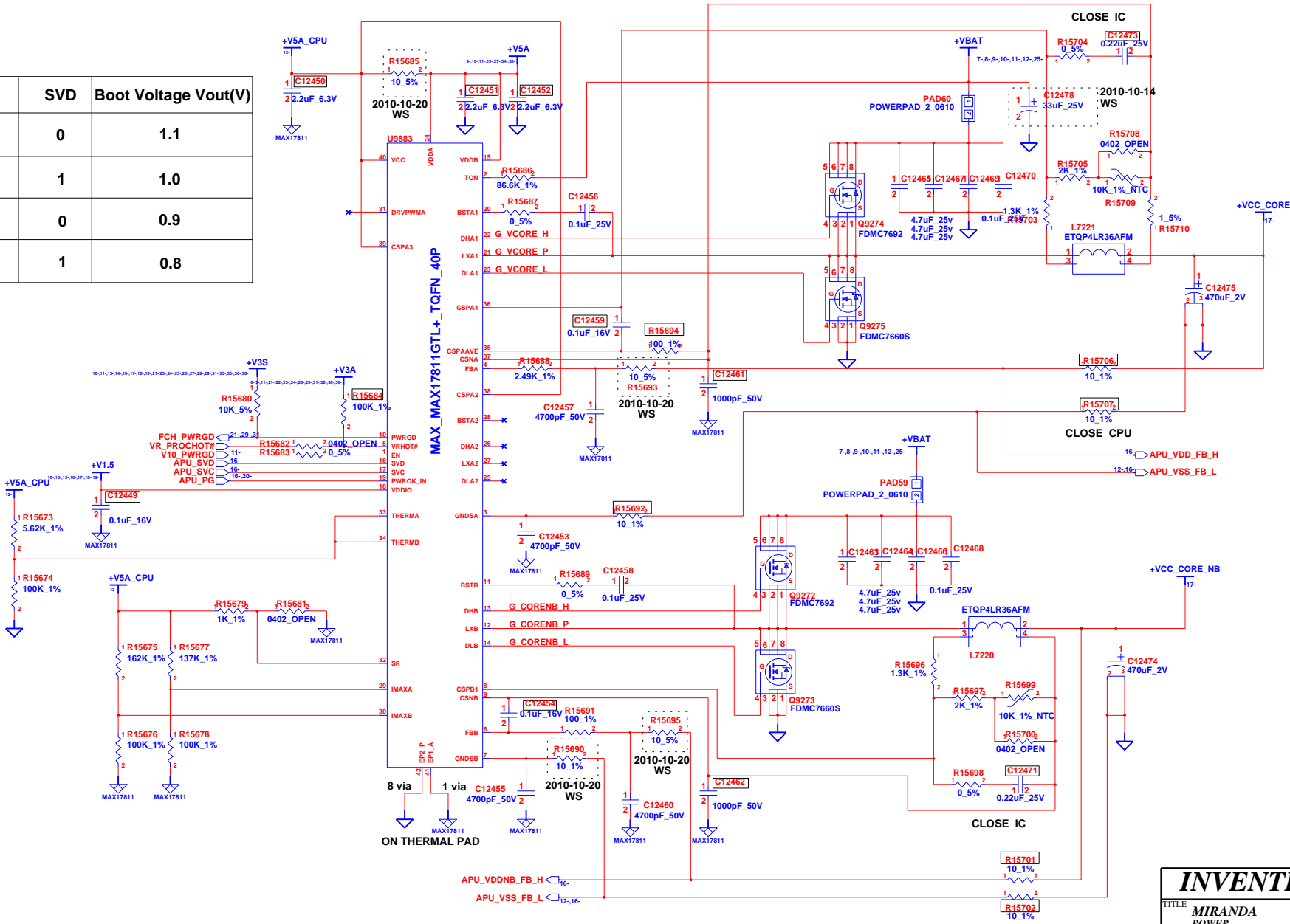


**INVENTEC**

TITLE MIRANDA POWER			
SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET		11	OF 54

CHANGE by M3 2-Jul-2010

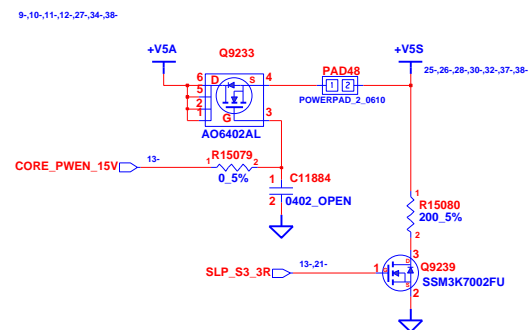
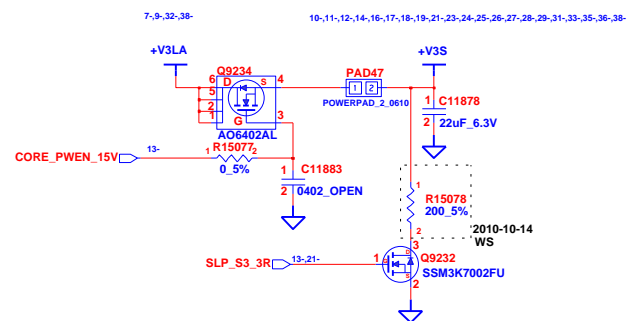
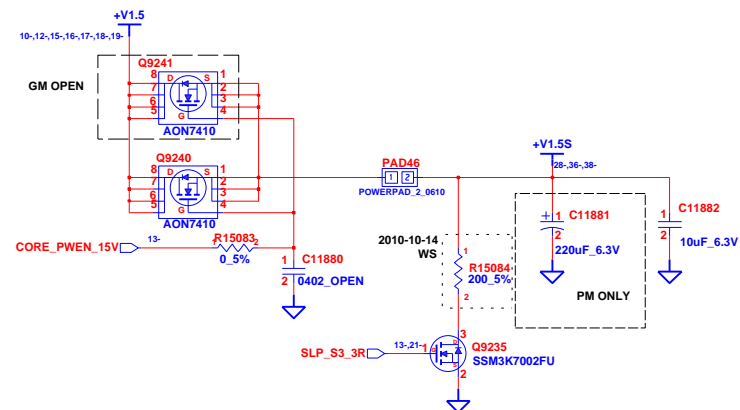
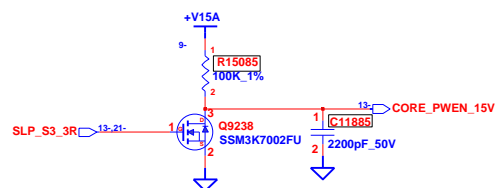
SVC	SVD	Boot Voltage Vout(V)
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8



**INVENTEC**

TITLE			
<b>MIRANDA POWER</b>			
SIZE	CODE	DOC. NUMBER	REV
<b>A3</b>	<b>CS</b>		
SHEET 12 OF 54			

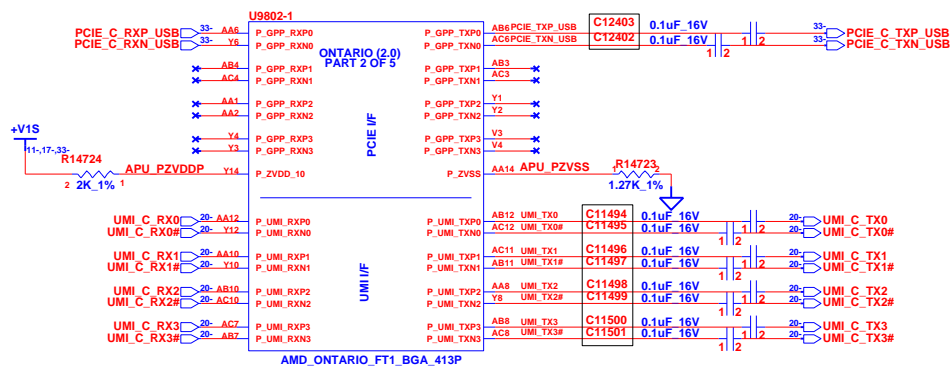
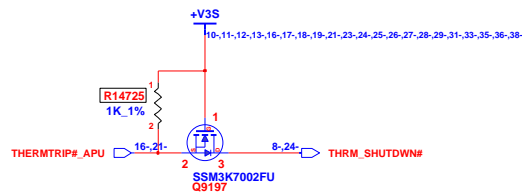
# +V5S +V3S +V1.5S



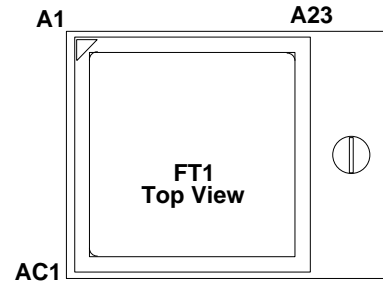
**INVENTEC**

TITLE <b>MIRANDA POWER</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER	REV
SHEET		13	OF 54

CHANGE by **M3** 2-Jul-2010

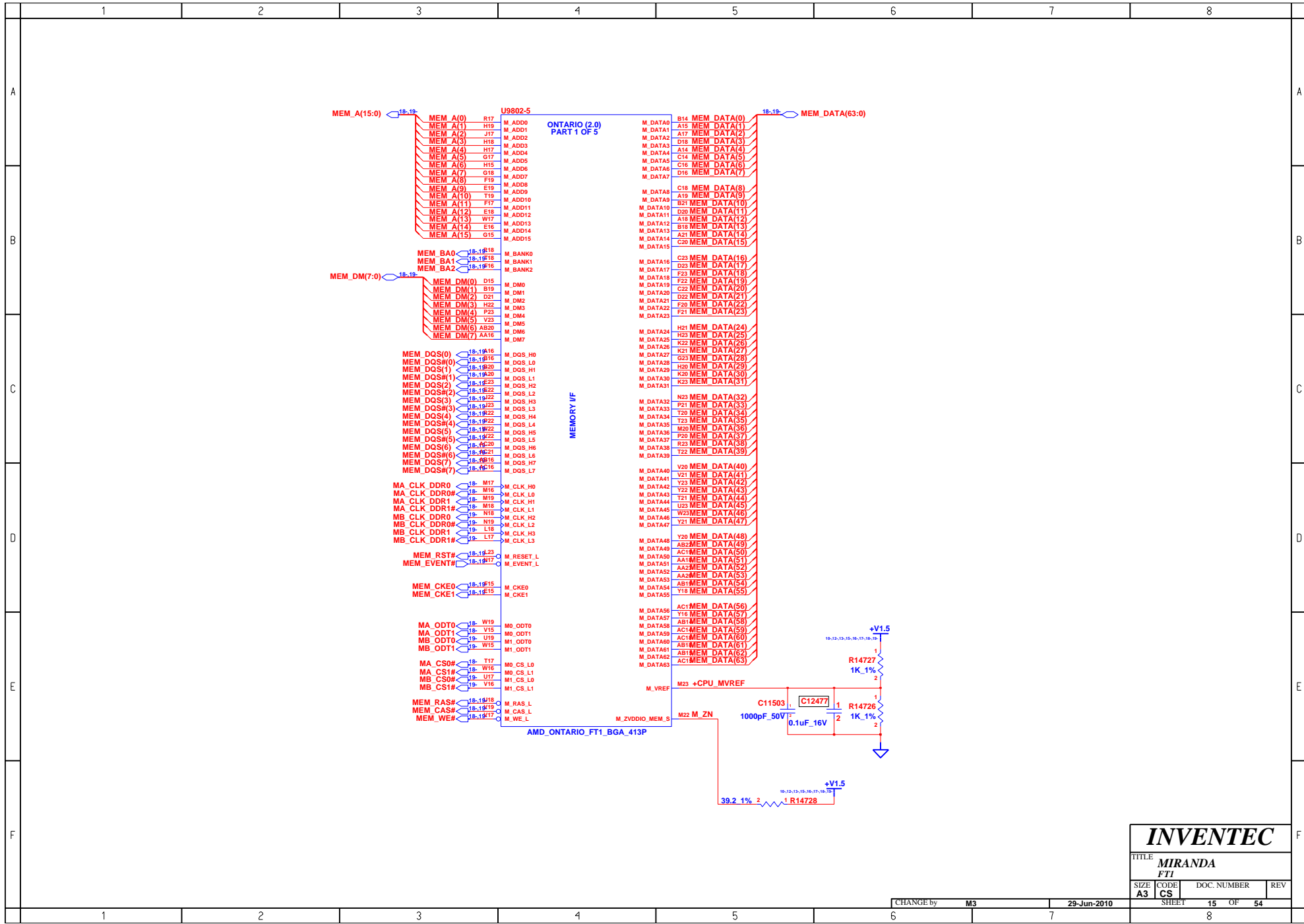


Layout: Add stitching caps if crossing plane split.



INVENTEC			
TITLE			
MIRANDA			
FT1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	SHEET 14 OF 54	

CHANGE by M3 2-Jul-2010

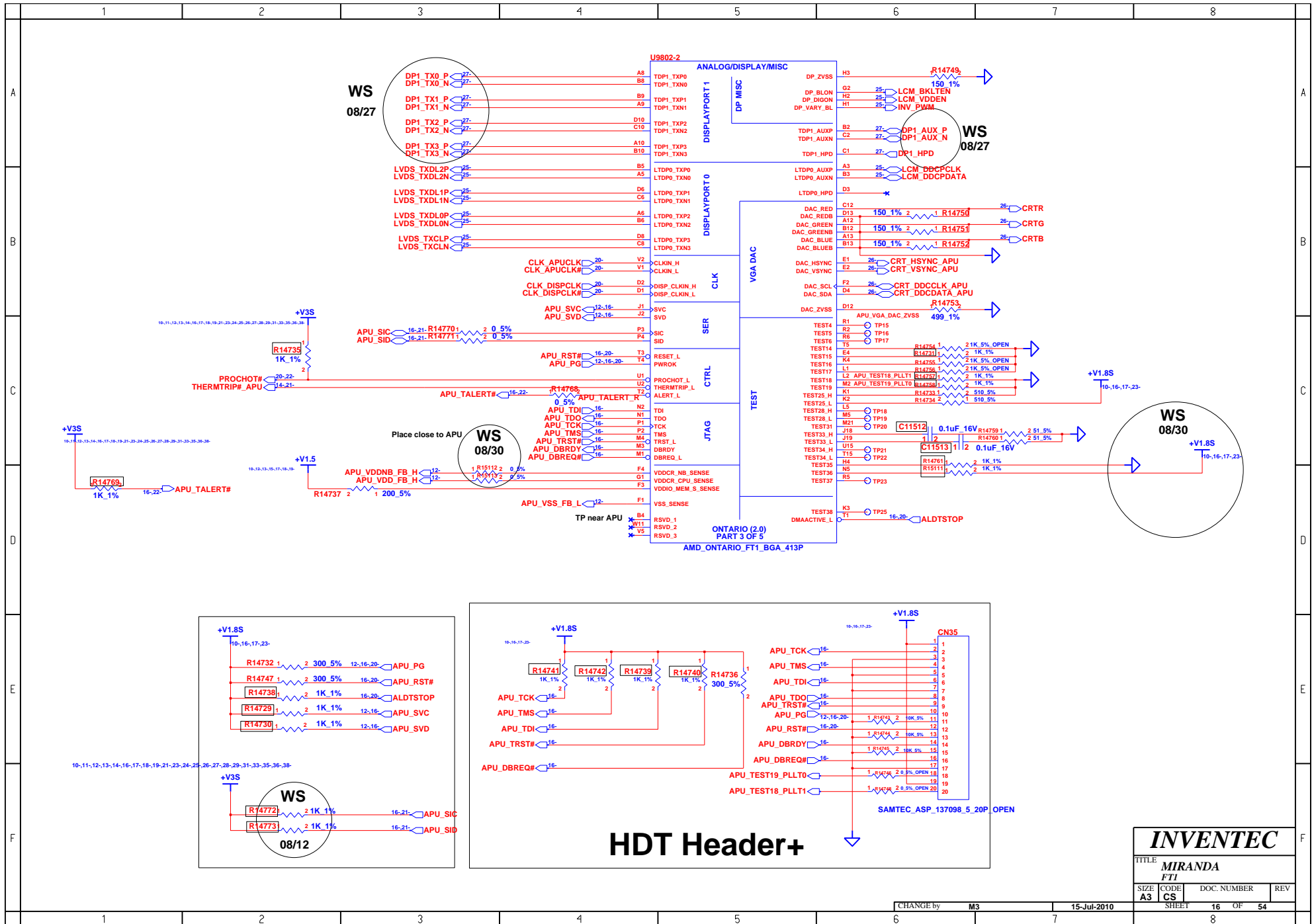


**INVENTEC**

TITLE  
**MIRANDA  
FT1**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	SHEET 15 OF 54	

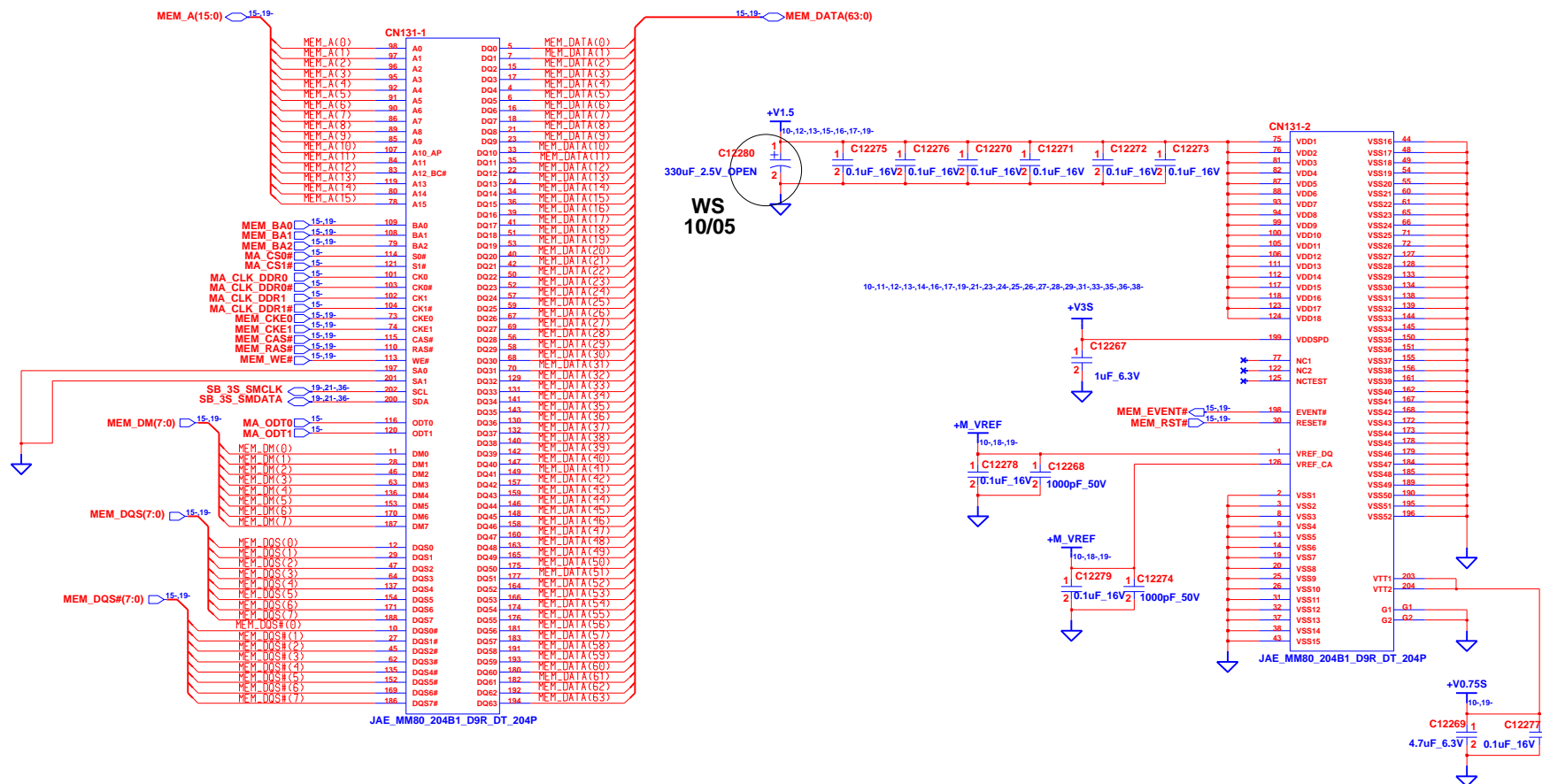
CHANGE by **M3** 29-Jun-2010







# DDR3



**SO DIMM0**  
**SLOT A(REVERSE)**

**INVENTEC**

TITLE  
**MIRANDA**  
**DDR3-1**

SIZE  
**A3**

CODE  
**CS**

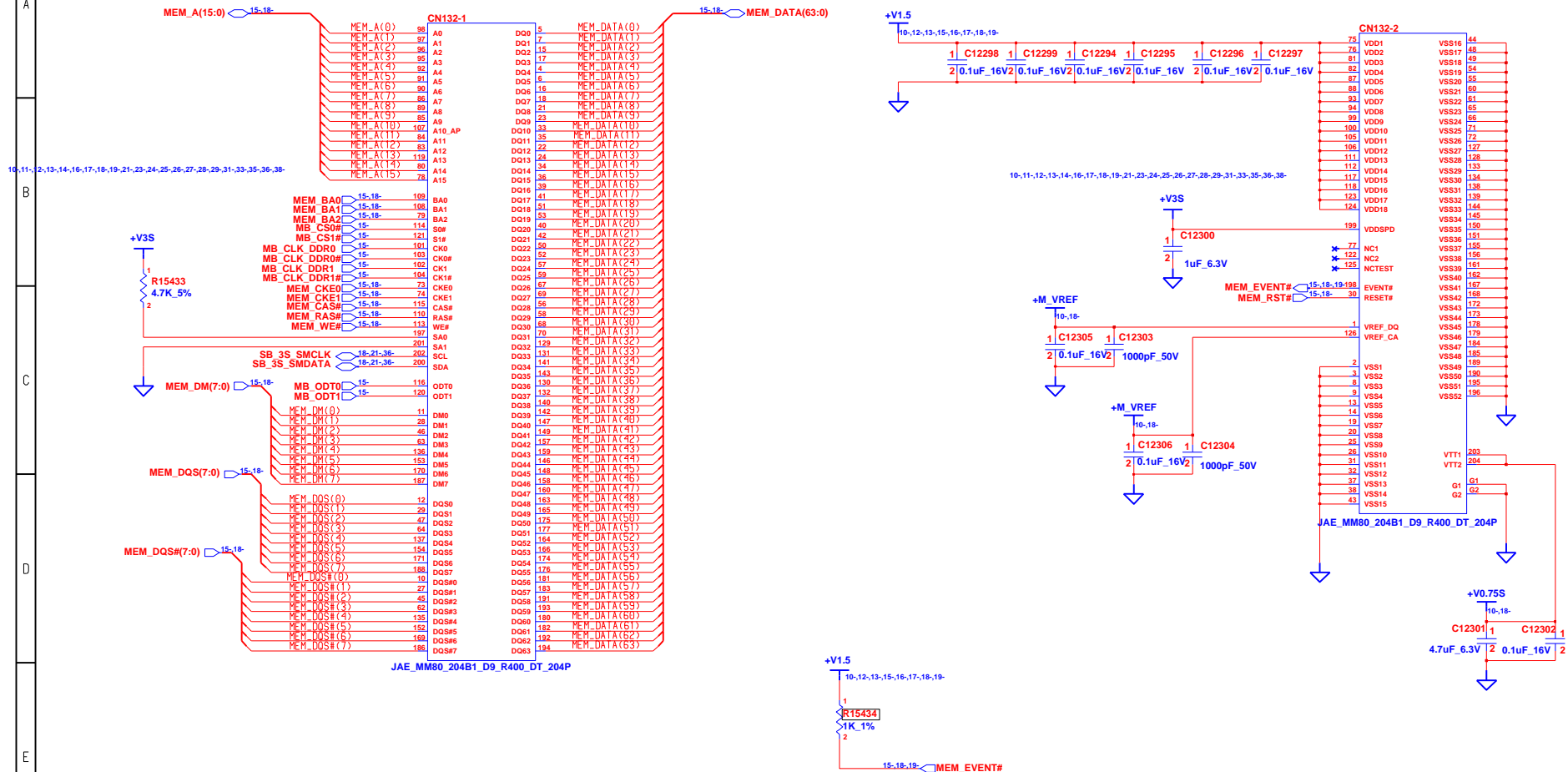
DOC. NUMBER  
**18**

REV  
**54**

CHANGE by **MIRANDA** **2-Sep-2010**

SHEET **18** OF **54**

# DDR3



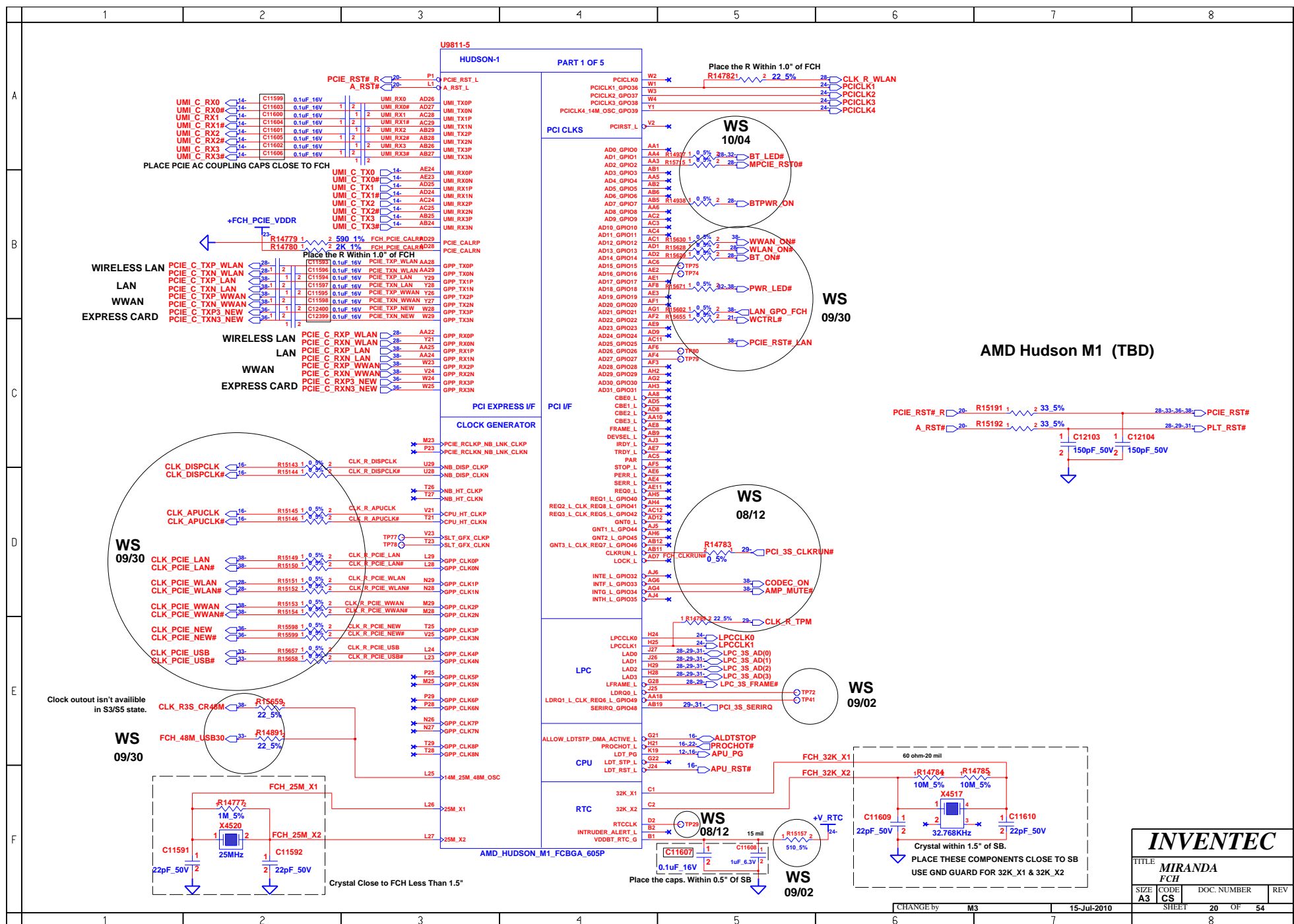
**SO DIMM1**  
**SLOT B(STANDARD)**

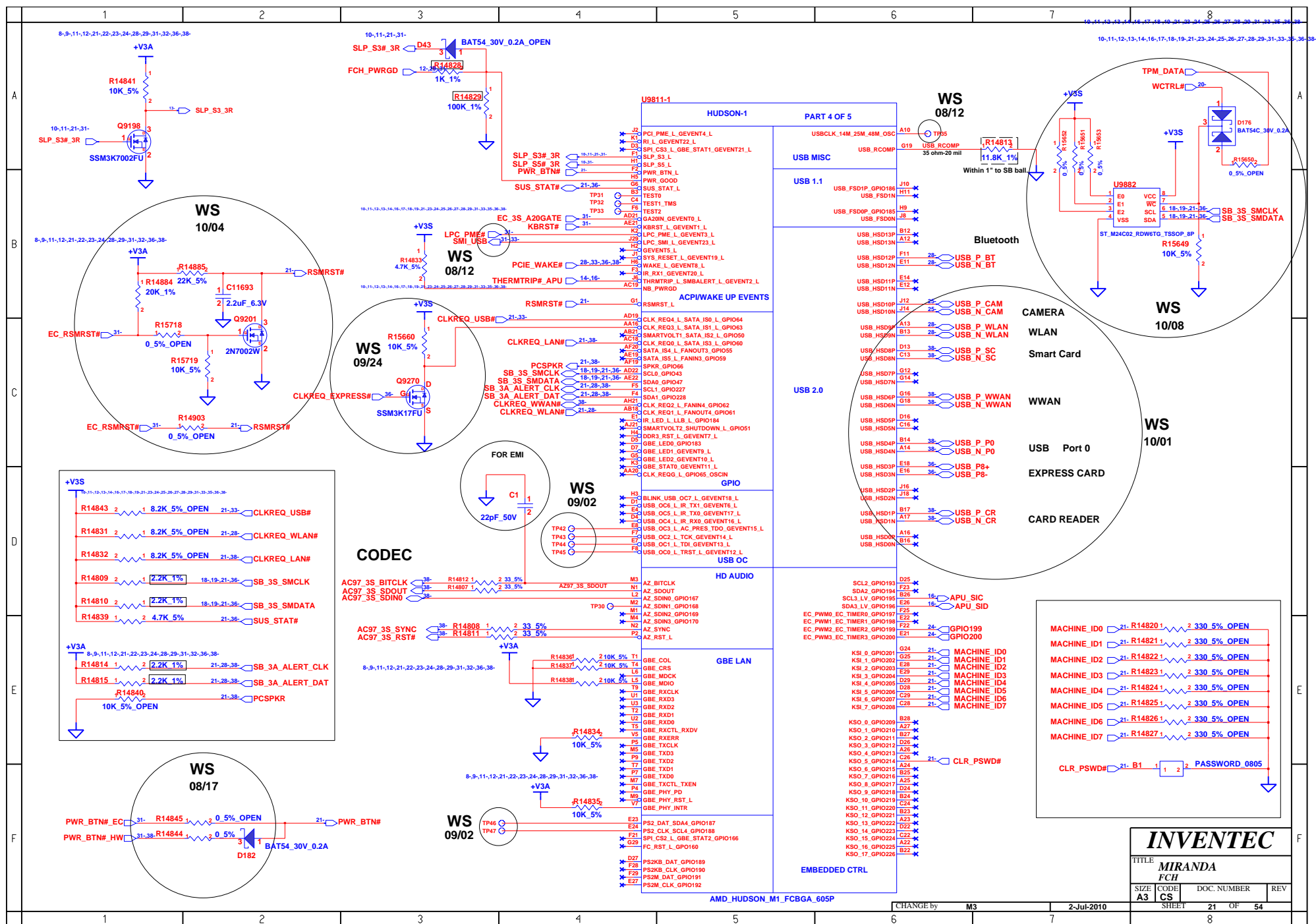
**INVENTEC**

TITLE			
MIRANDA			
DDR3-2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

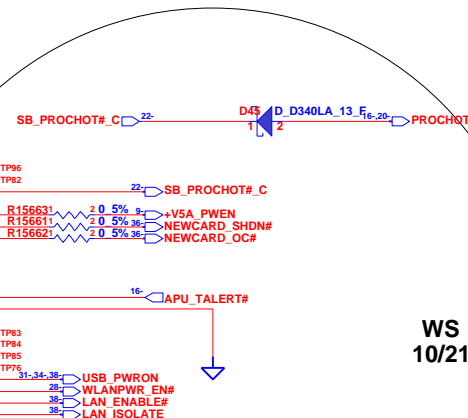
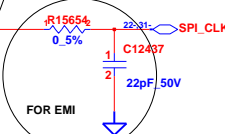
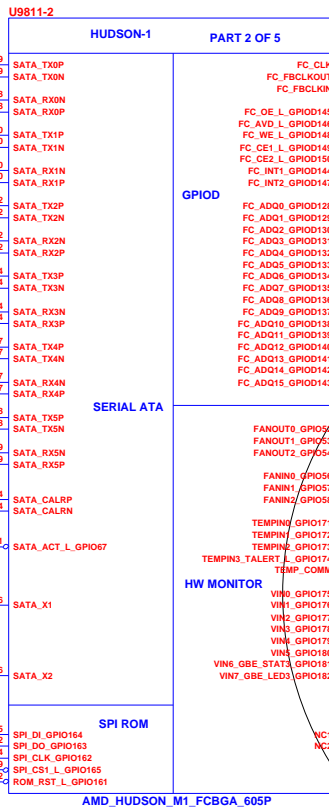
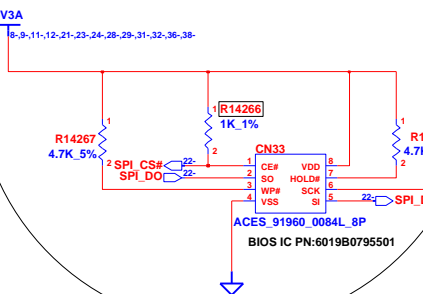
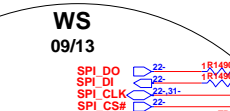
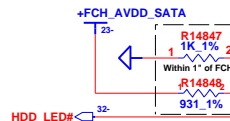
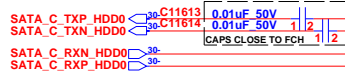
CHANGE by MIRANDA 26-Aug-2010

SHEET 19 OF 54



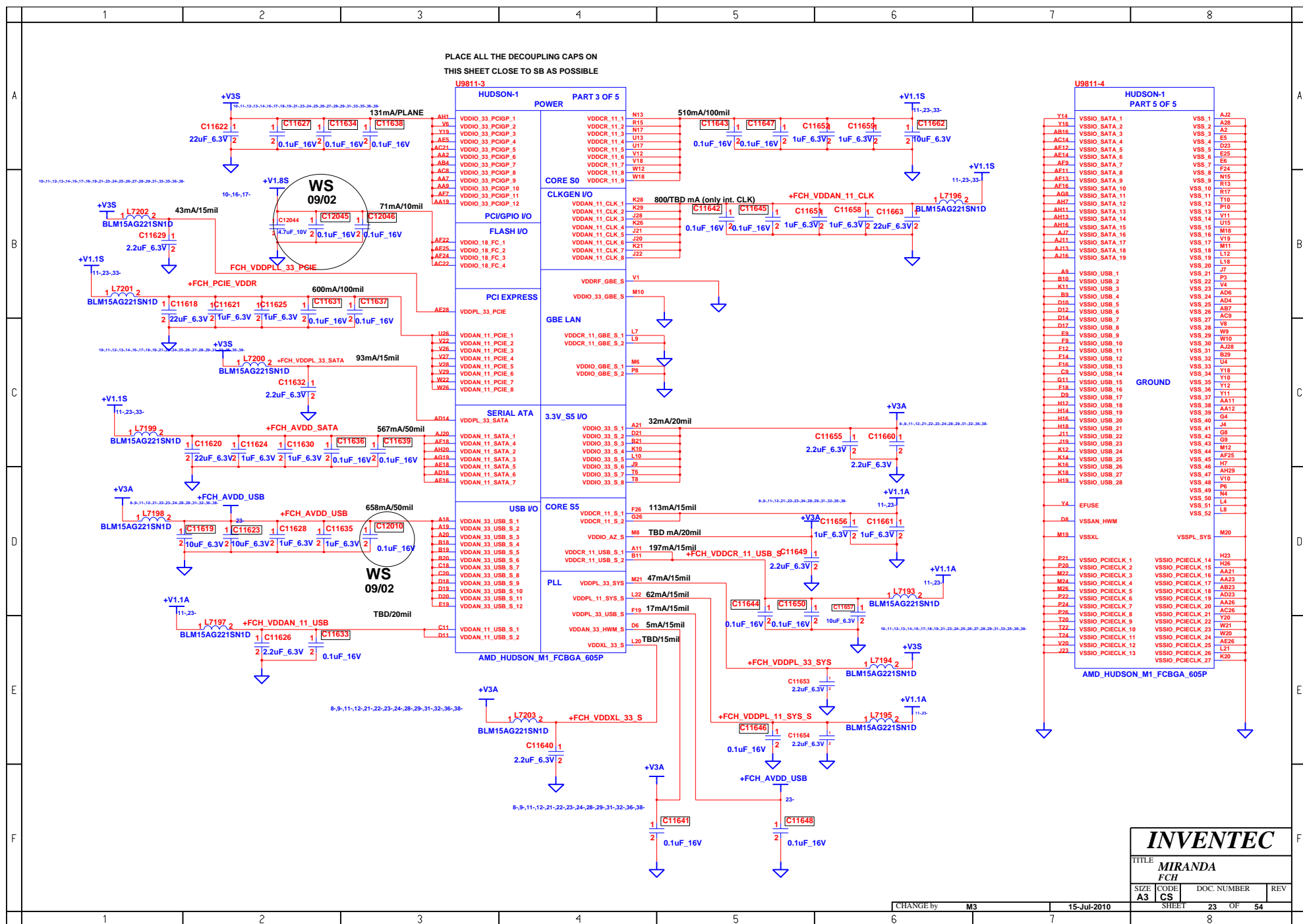


SATA HDD0

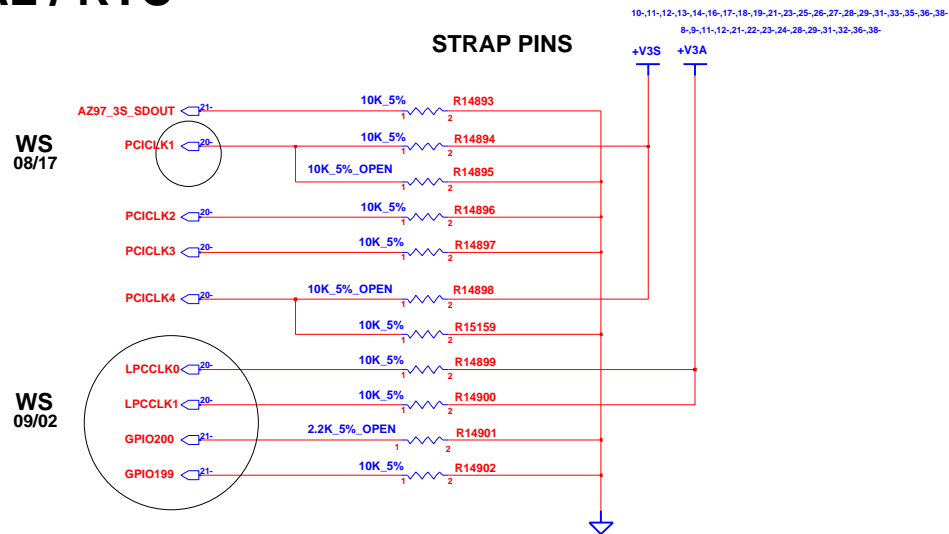


INVENTEC			
TITLE			
MIRANDA			
FCH			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	SHEET	22 OF 54

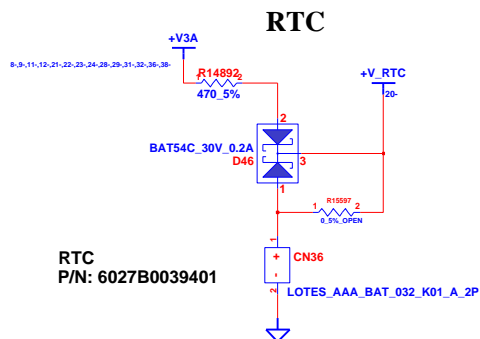
CHANGE by MIRANDA 2-Sep-2010



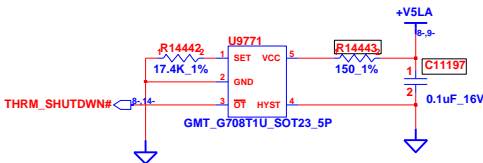
# STRAP OPTION / THERMAL / RTC



	AZ97_3S_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPCCLK0	LPCCLK1	GPIO200 EC_PWM3	GPIO199 EC_PWM2
PULL HIGH	Low Power Mode (Not Supported)	Allow PCIE Gen2 (Default)	Watchdog Timer Enabled (Not Supported)	Debug STRAP Enabled	Non-FUSION CLOCK Mode	Integrated Micro-Controller Enabled (Default)	Internal Clock Generator Enabled (Default)	H,H= Reserved H,L= SPI ROM (Default)	
PULL LOW	Performance Mode (Default)	Force PCIE Gen1	Watchdog Timer Disabled (Default)	Debug STRAP Disabled (Default)	FUSION CLOCK Mode (Default)	Integrated Micro-Controller Disabled	Internal Clock Generator Disabled	L,H= LPC ROM L,L= Reserved	



## Thermal Sensor



<b>INVENTEC</b>			
TITLE MIRANDA STRAP OPTION / THERMAL / RTC			
SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET		24 OF	54

CHANGE by MIRANDA 2-Sep-2010



# LCM

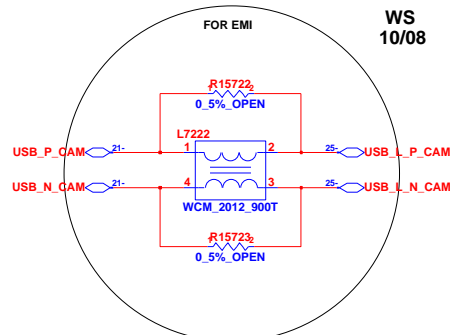
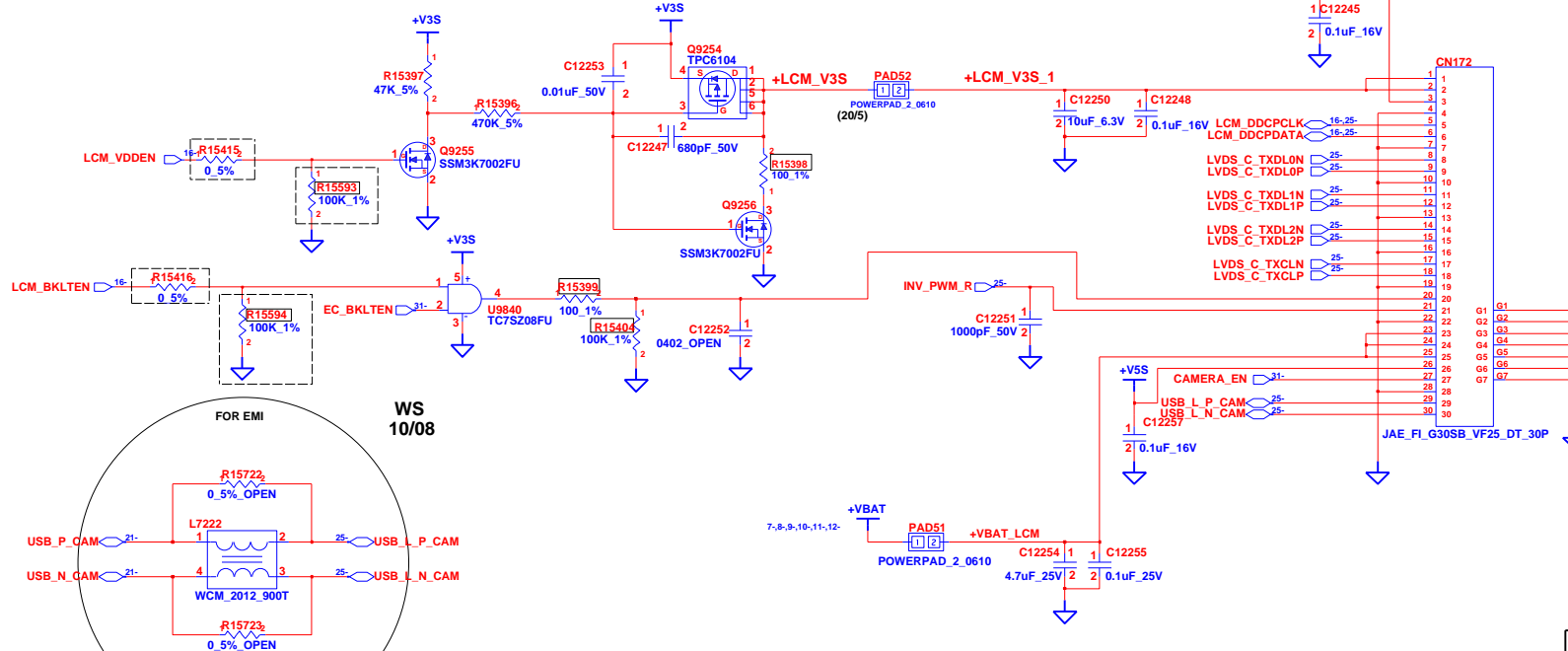
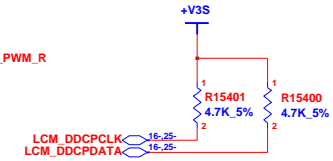
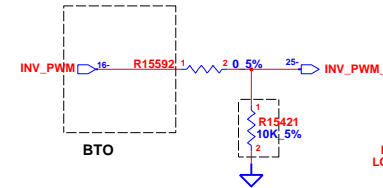
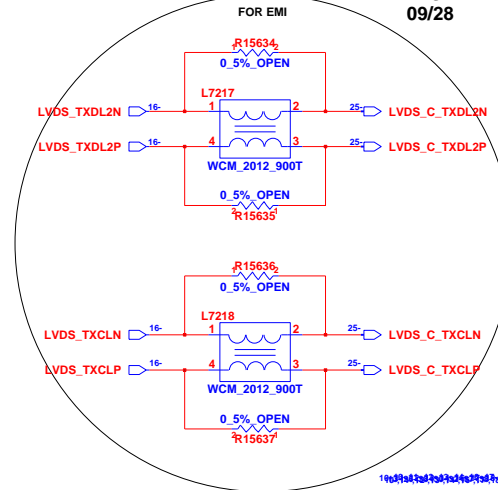
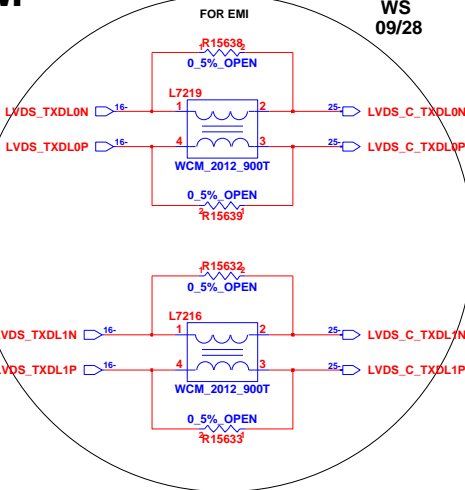
WS  
09/28

WS  
09/28

LCM DDC PU values

10-11-12-13-14-16-17-18-19-21-23-24-25-26-27-28-29-31-33-35-36-38-

Close to Connector



**INVENTEC**

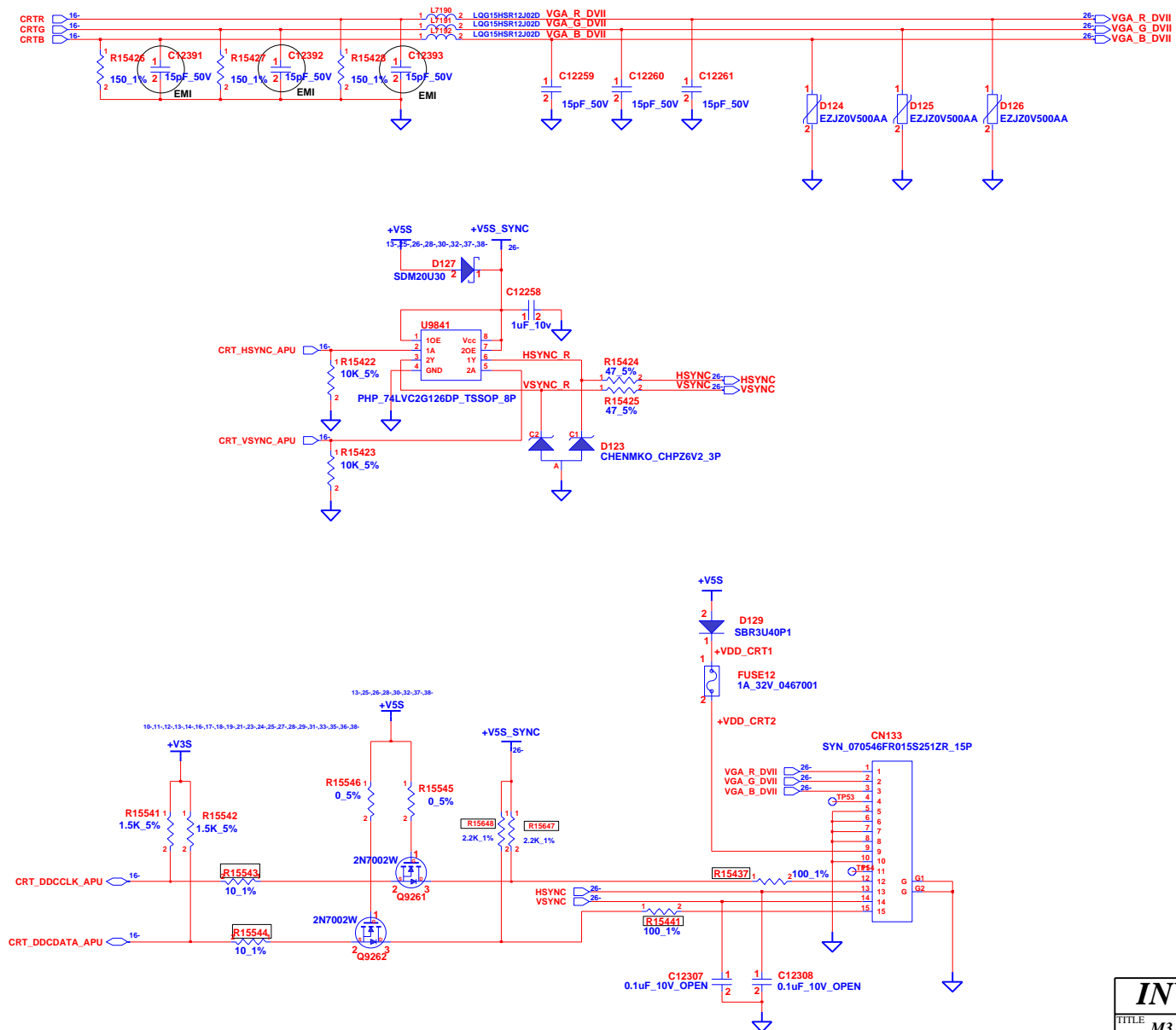
TITLE  
MIRANDA  
DVI-I

SIZE A3	CODE CS	DOC. NUMBER	REV
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CHANGE by M3 8-Jul-2010

SHEET 25 OF 54

# CRT

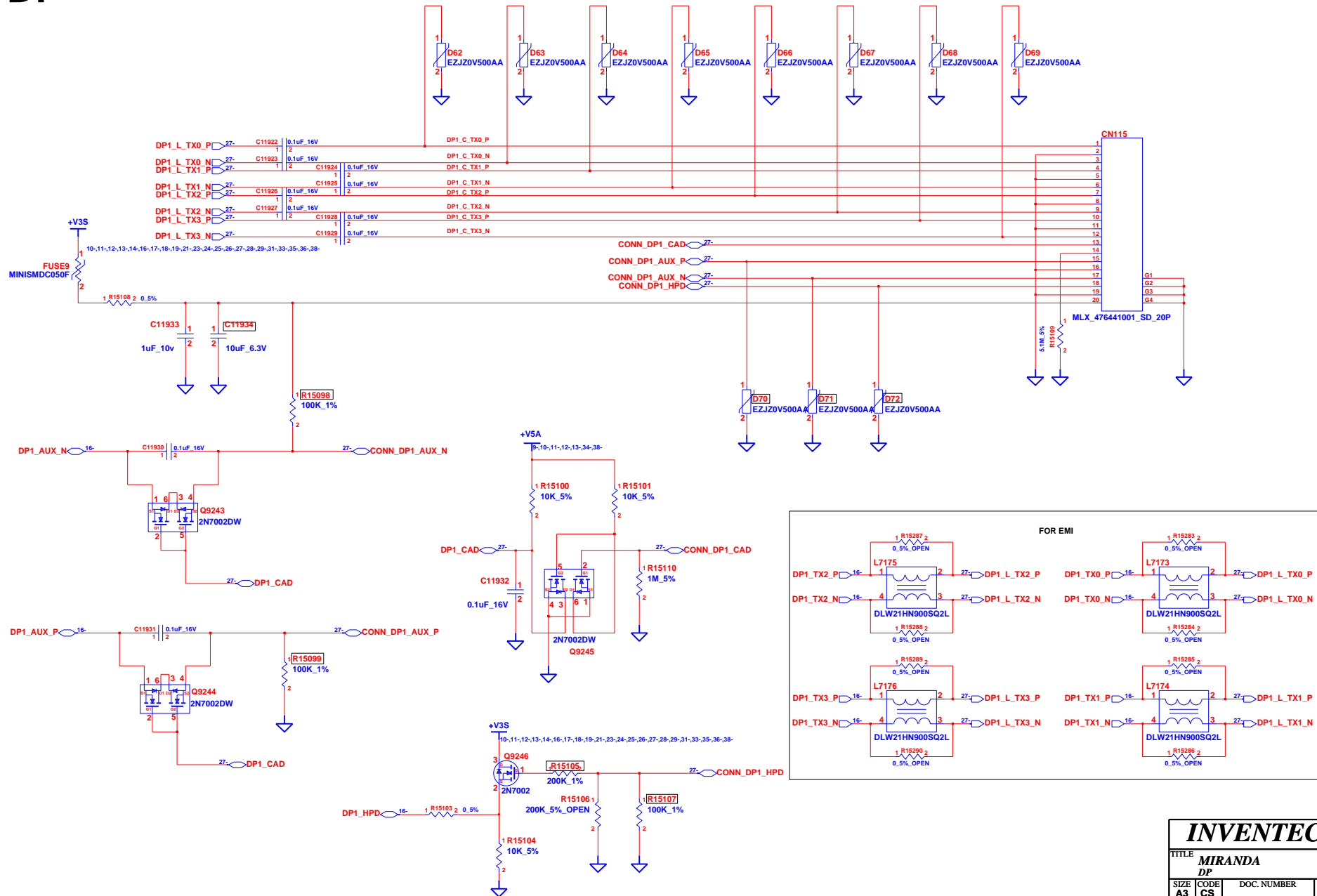


**INVENTEC**

TITLE		
M3		
VGA		
SIZE	CODE	DOC. NUMBER
A3	CS	
REV		
SHEET 26 OF 54		

CHANGE by MIRANDA 13-Sep-2010

# DP



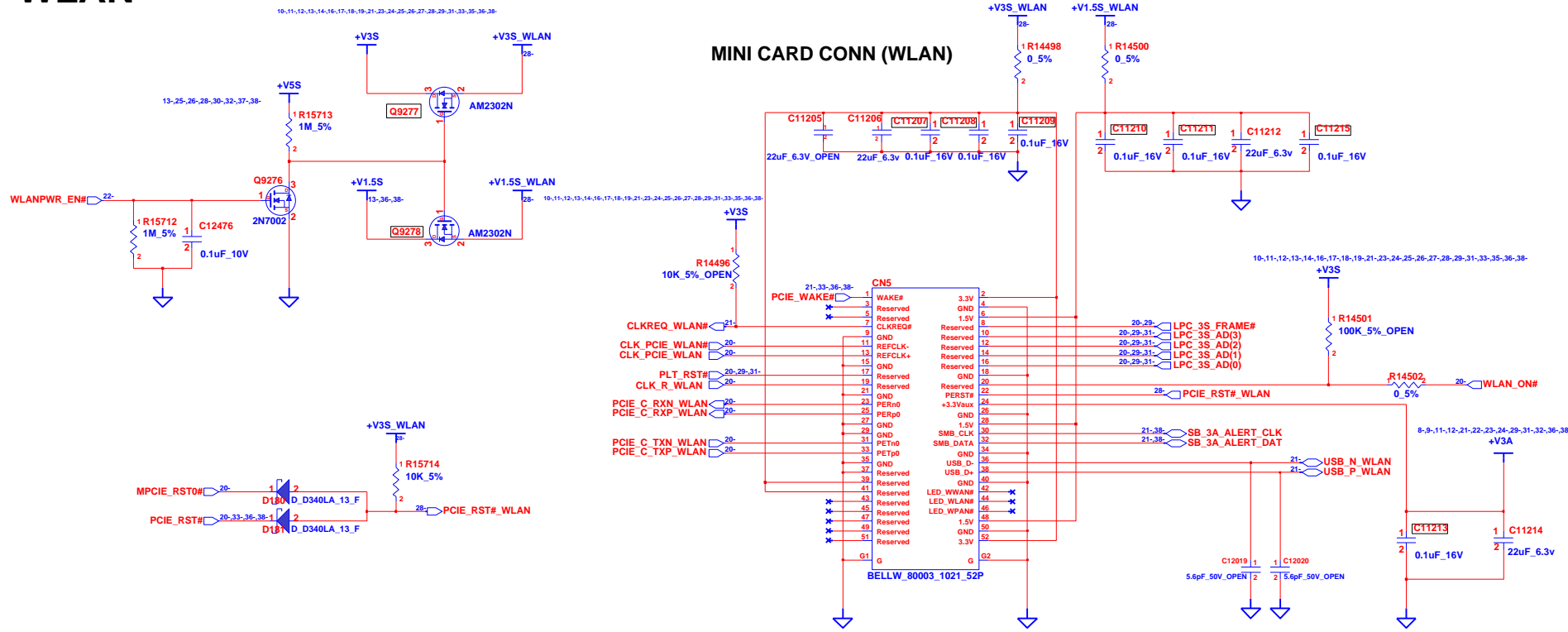
## INVENTEC

TITLE			
MIRANDA			
DP			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	SHEET	27 OF 54

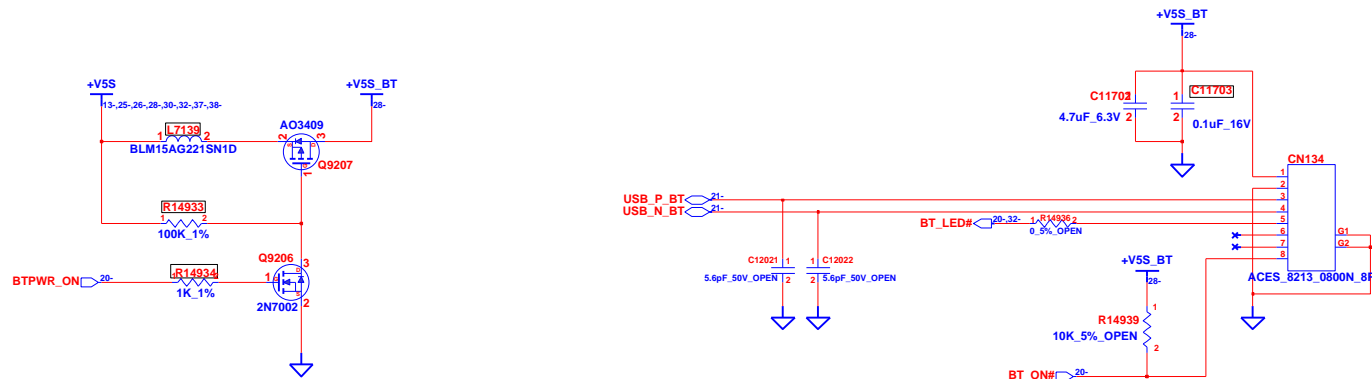
CHANGE by MIRANDA 2-Sep-2010

# WLAN

## MINI CARD CONN (WLAN)



# BT

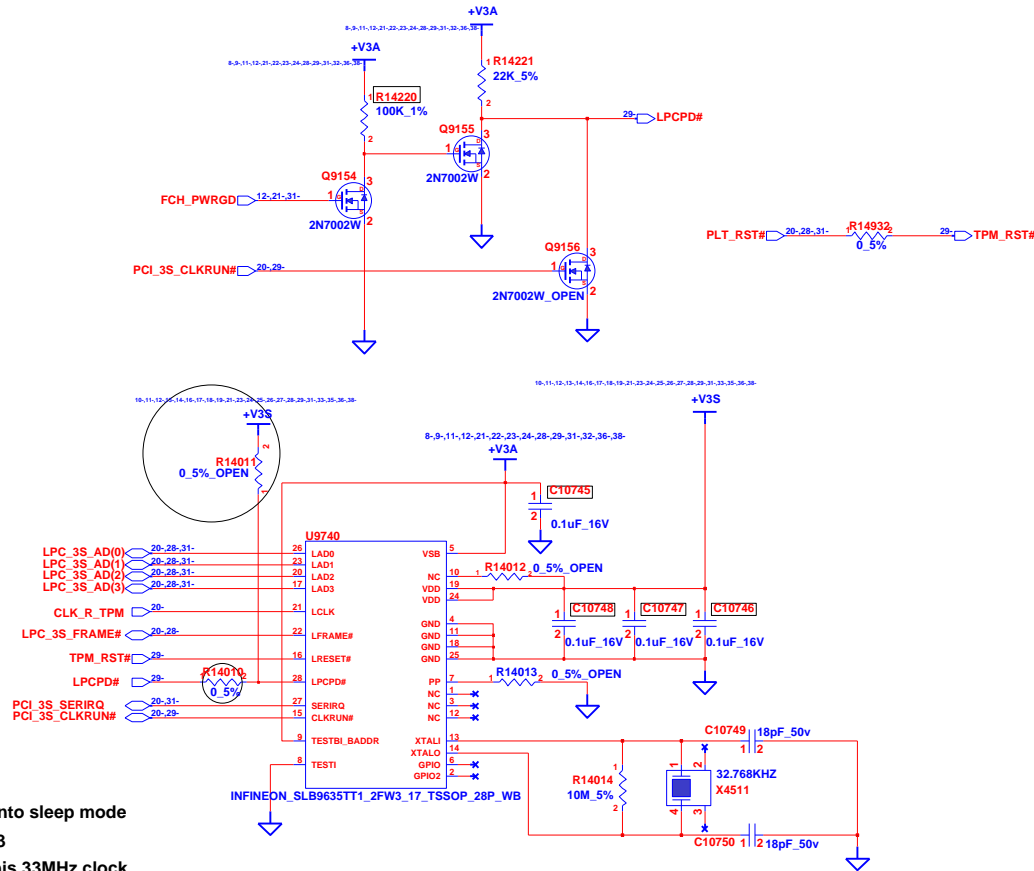


**INVENTEC**

TITLE MIRANDA WLAN/BT			
SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET		28	OF 54

CHANGE by M3 23-Jun-2010

# TPM



LPC\_PWRDWN\_L is used to force LPC peripherals to go into sleep mode  
 Device may require that this be asserted before entering S3  
 Device may require that this be asserted before stopping this 33MHz clock

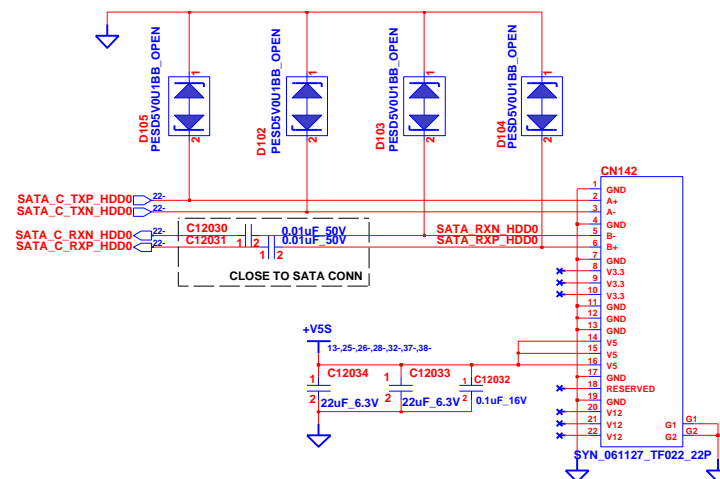
**INVENTEC**

TITLE			
MIRANDA			
TPM			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		
SHEET		29	OF 54

CHANGE by M3 2-Jul-2010

8

# SSD / HDD

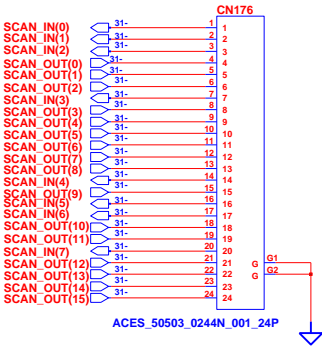


INVENTEC			
TITLE			
MIRANDA			
SATA FLASH / SSD / HDD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		
CHANGE by		2-Sep-2010	
MIRANDA			
SHEET		30	OF 54
		8	

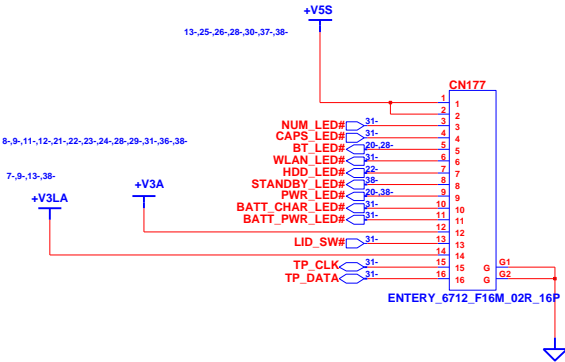


KB/TP CONN

Keyboard Conn.



TP/B Conn. M/B SIDE



INVENTEC

TITLE			
MIRANDA			
SIO			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

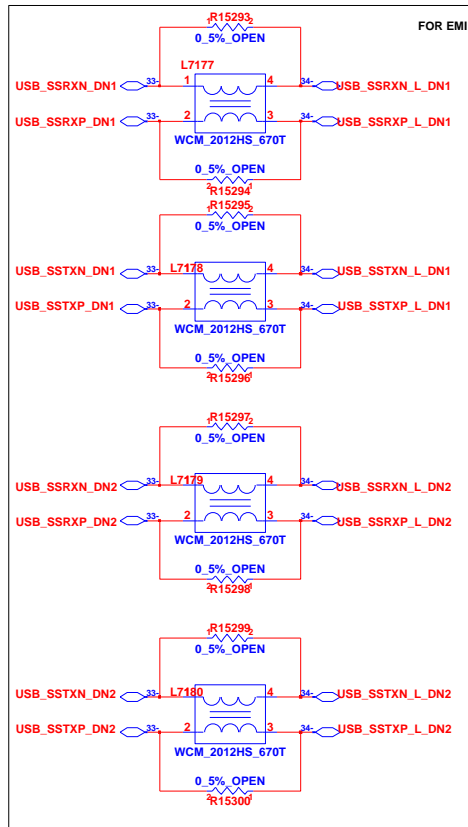
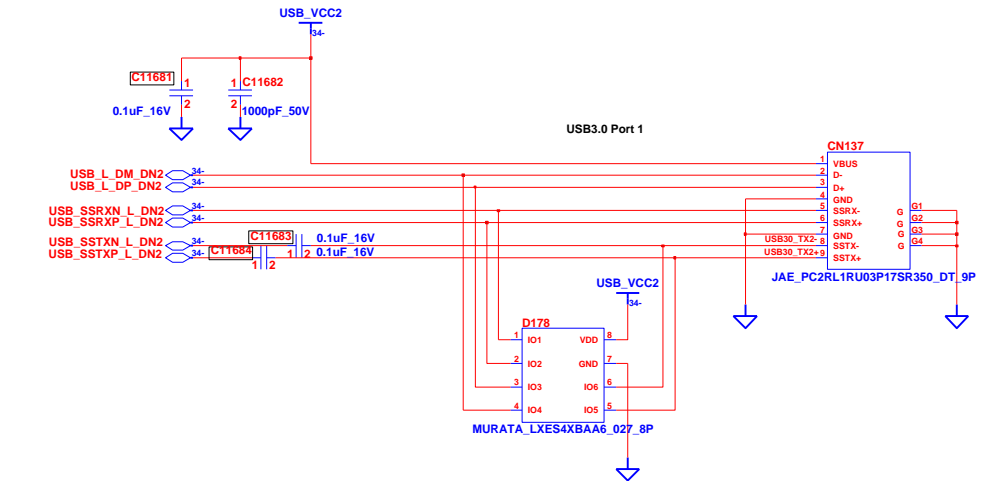
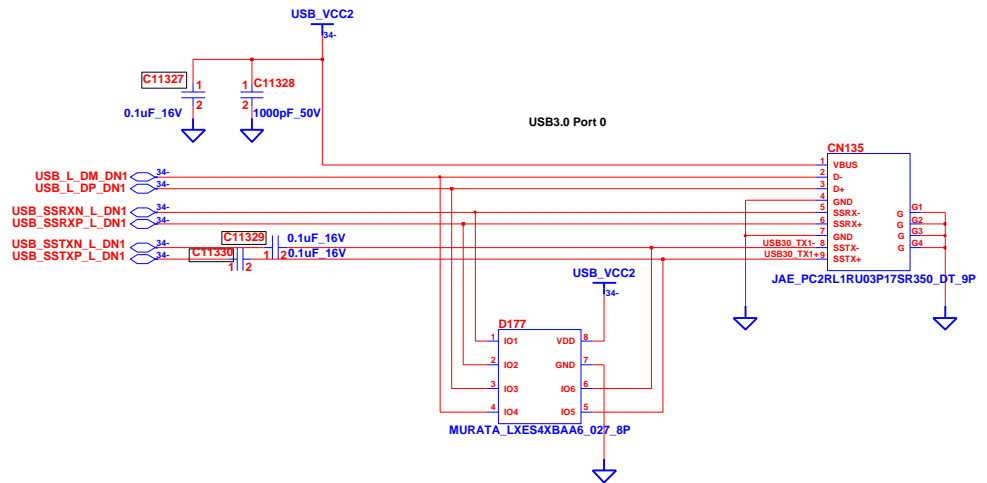
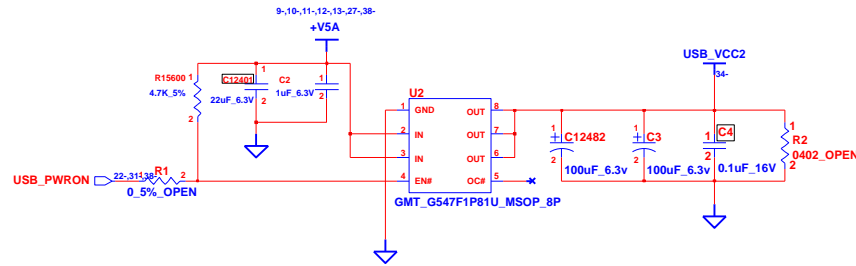
CHANGE by M3 14-Sep-2010

SHEET 32 OF 54





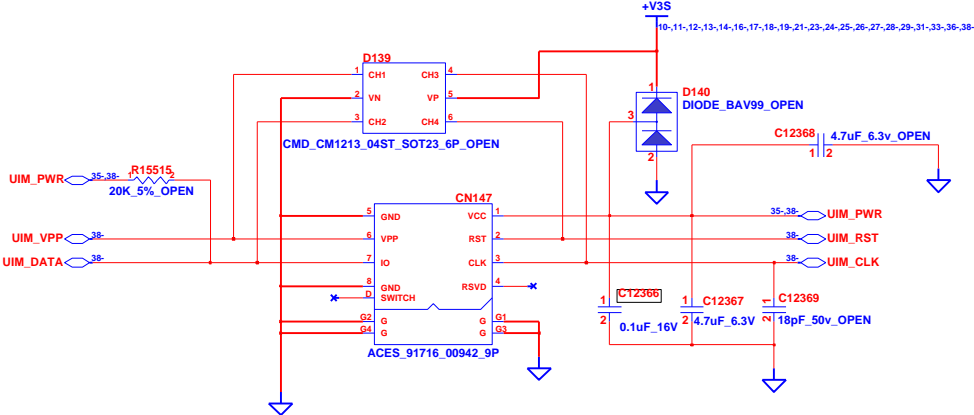
# DUAL USB 3.0 CONN



INVENTEC			
TITLE: MIRANDA			
DUAL USB3.0 CONN./ USB HEADER			
SIZE: A3	CODE: CS	DOC. NUMBER:	REV:
SHEET 34 OF 54			

CHANGE by M3 23-Jun-2010

SIM CARD



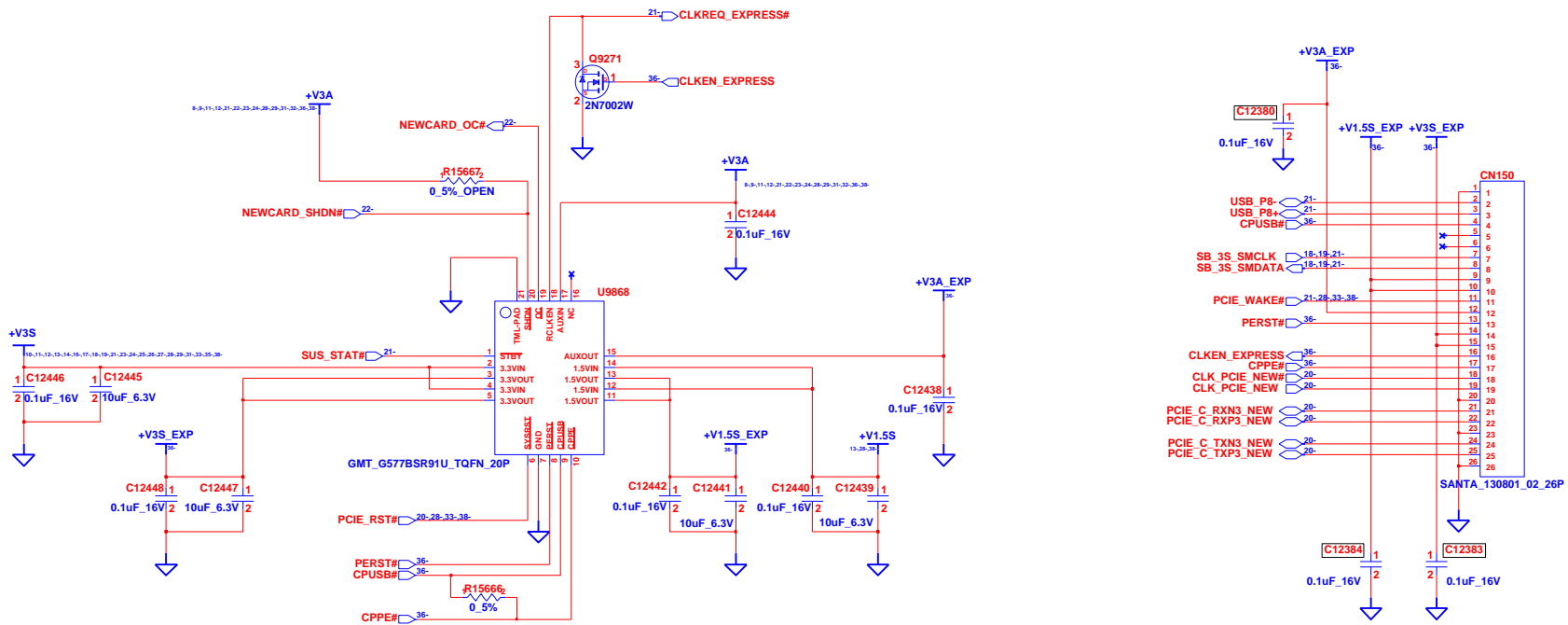
INVENTEC

TITLE  
MIRANDA

SIZE A3	CODE CS	DOC. NUMBER	REV
SHEET		35	OF 54

CHANGE by MIRANDA 11-Sep-2010

# EXPRESS CARD



**INVENTEC**

TITLE		
MIRANDA		
USB CONN		
SIZE	CODE	DOC. NUMBER
A3	CS	36 OF 54
SHEET		

CHANGE by MIRANDA 2-Sep-2010

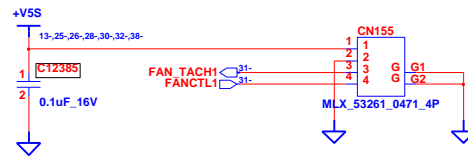
8

**FAN CONN**

The diagram illustrates the electrical connection for a fan. A +V5S supply is connected to a 0.1uF\_16V capacitor (C12385) and the FAN TACH1 pin of a fan tachometer (FANCTL1). The tachometer is connected to a 4-pin connector (CN155) labeled MLX\_53261\_0471\_4P. The connector pins are labeled 1, 2, 3, 4, G, G1, G2. The circuit is grounded at three points.

INVENTEC			
TITLE			
MIRANDA			
AUDIO JACK / POWER SW			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

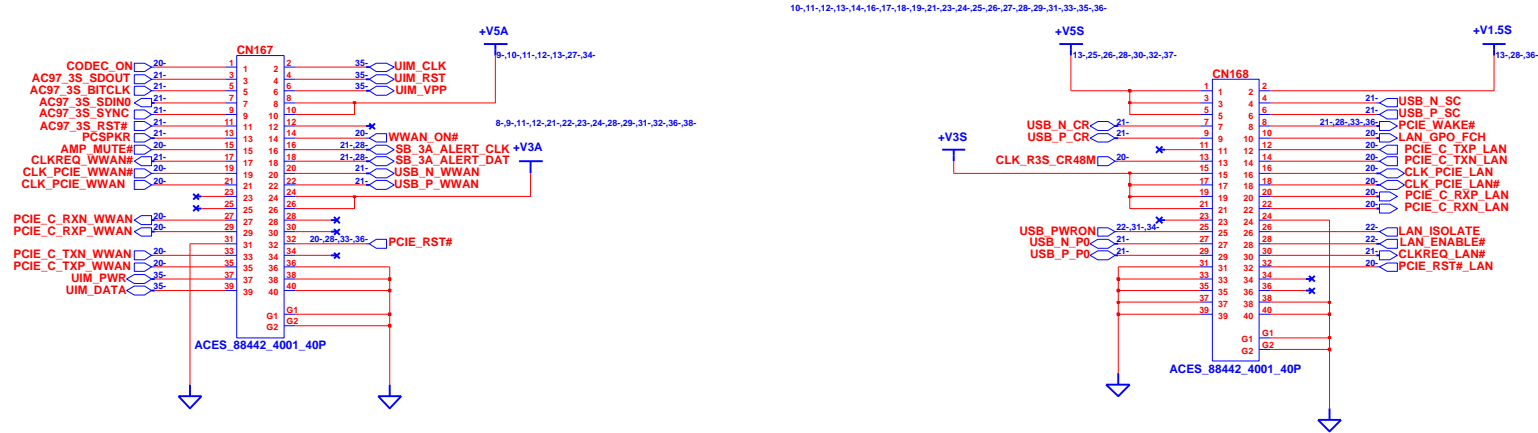
CHANGE by		2-Sep-2010		SHEET		37 OF 54	
MIRANDA				8			



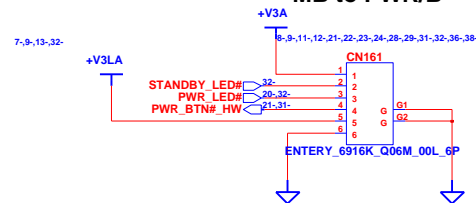
TITLE			
<b>MIRANDA</b>			
<b>AUDIO JACK / POWER SW</b>			
SIZE	CODE	DOC. NUMBER	REV
<b>A3</b>	<b>CS</b>		
SHEET		37	OF 54

# WIRE to BOARD CONN (MB SIDE)

## MB to I/O B



## MB to PWR/B



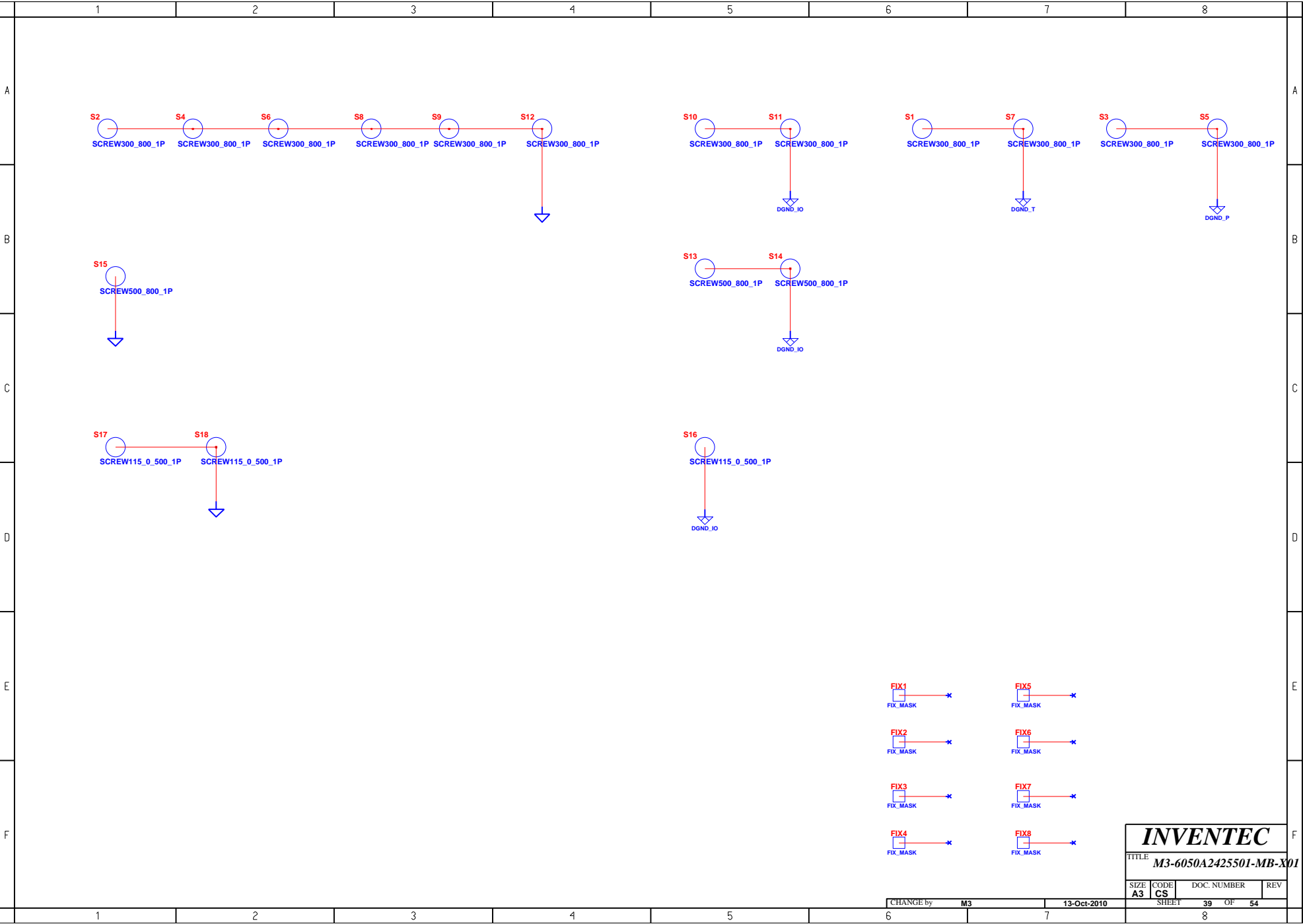
**INVENTEC**

TITLE  
**MIRANDA  
RISER CARD**

SIZE CODE DOC. NUMBER REV  
**A3 CS**

CHANGE by **MIRANDA** 16-Sep-2010

SHEET 38 OF 54

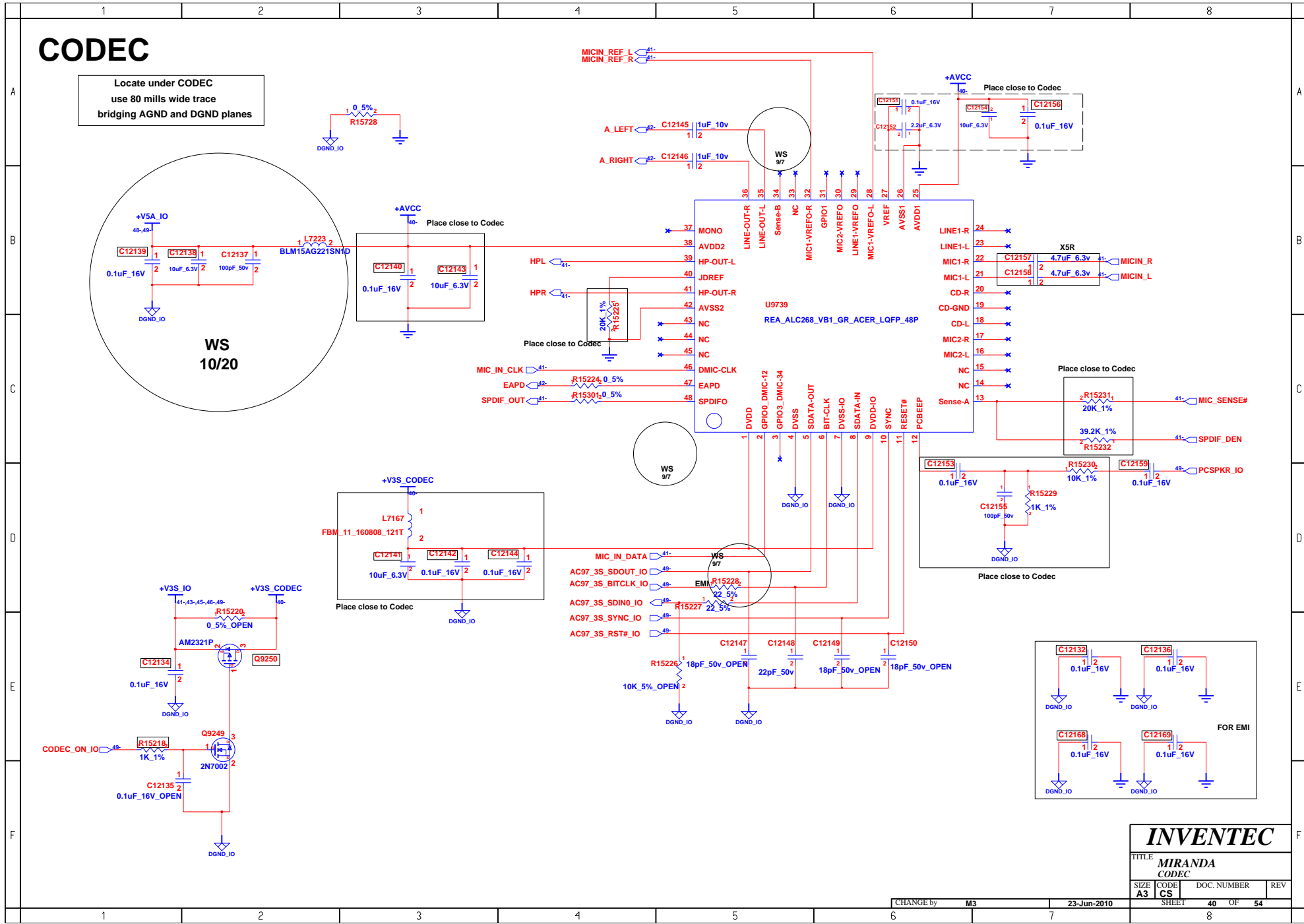


# CODEC

Locate under CODEC  
use 80 mills wide trace  
bridging AGND and DGND planes

# CODEC

Locate under CODEC  
use 80 mills wide trace  
bridging AGND and DGND planes



# CODEC

Locate under CODEC  
use 80 mills wide trace  
bridging AGND and DGND planes

# CODEC

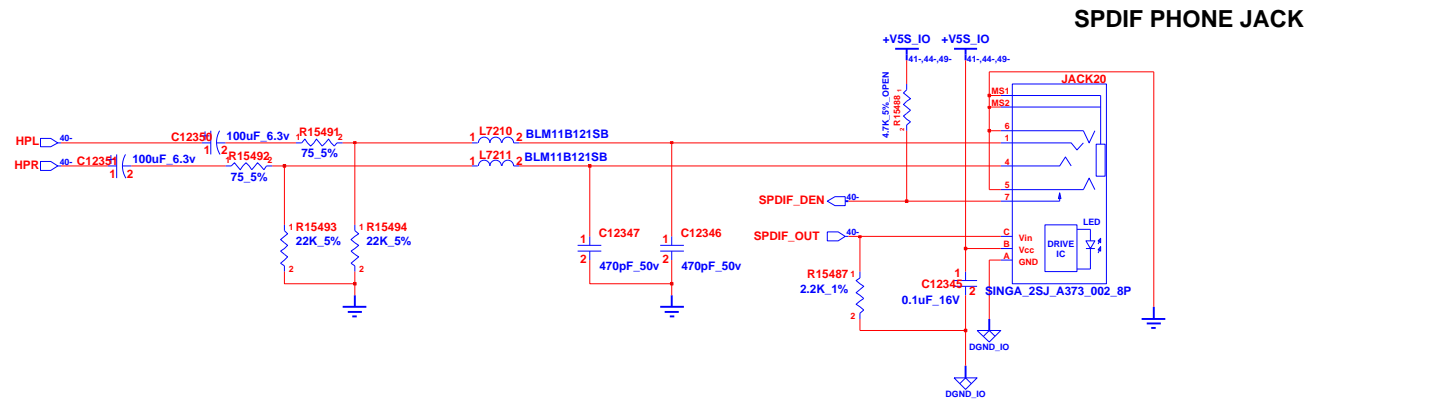
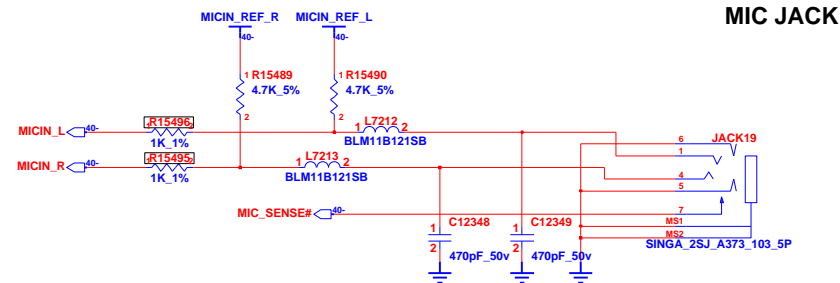
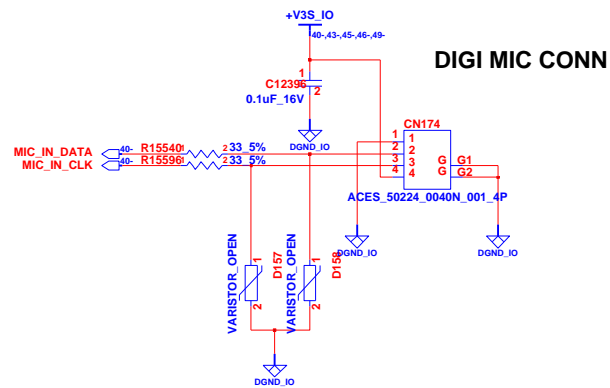
Locate under CODEC  
use 80 mills wide trace  
bridging AGND and DGND planes

# CODEC

Locate under CODEC  
use 80 mills wide trace  
bridging AGND and DGND planes



# AUDIO JACK



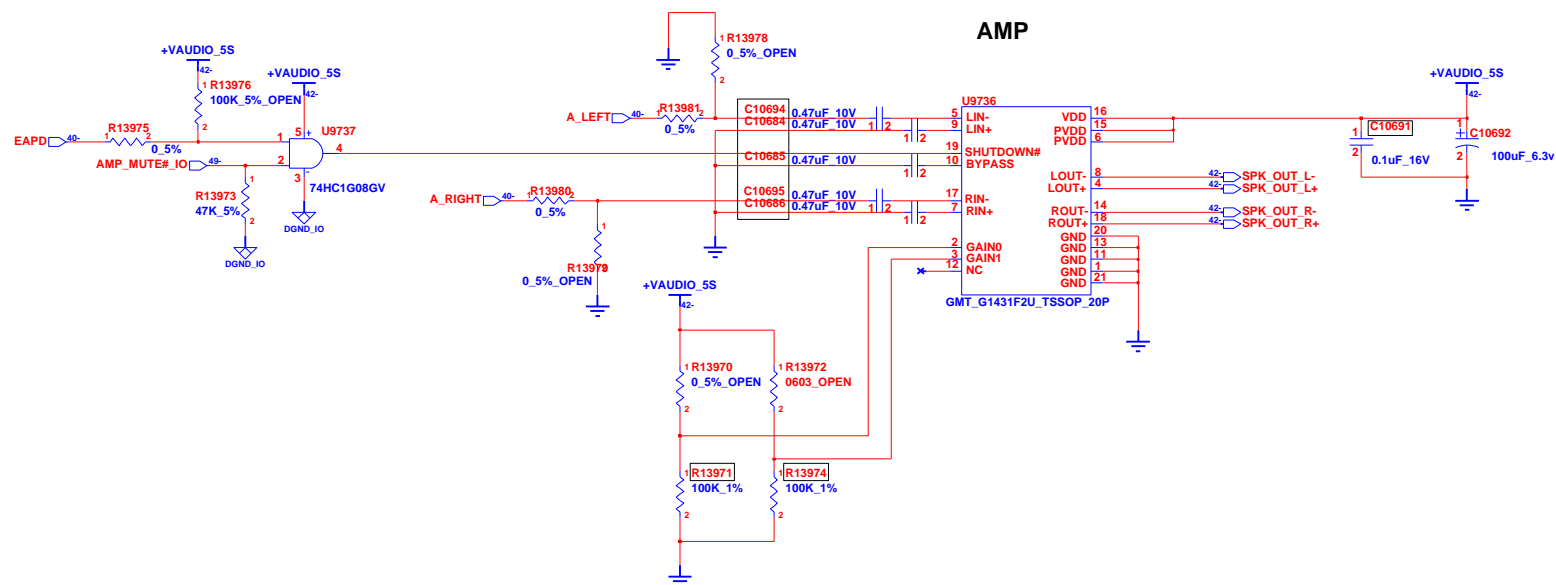
**INVENTEC**

TITLE			
M3 AUDIO JACK			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	SHEET 41 OF 54	

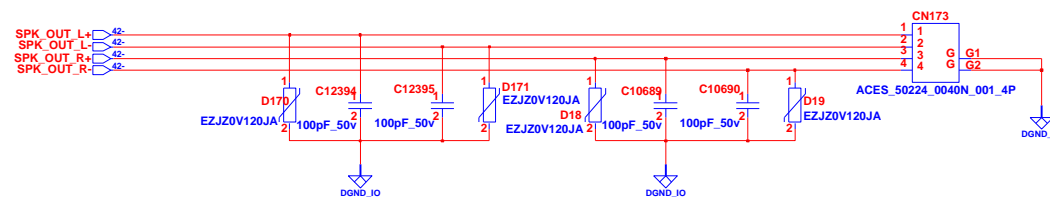
CHANGE by MIRANDA 16-Sep-2010

# AMP / SPEAKER

EAPD when output high, turn on OP  
EAPD when output low, turn off OP



## INT. SPEAKER



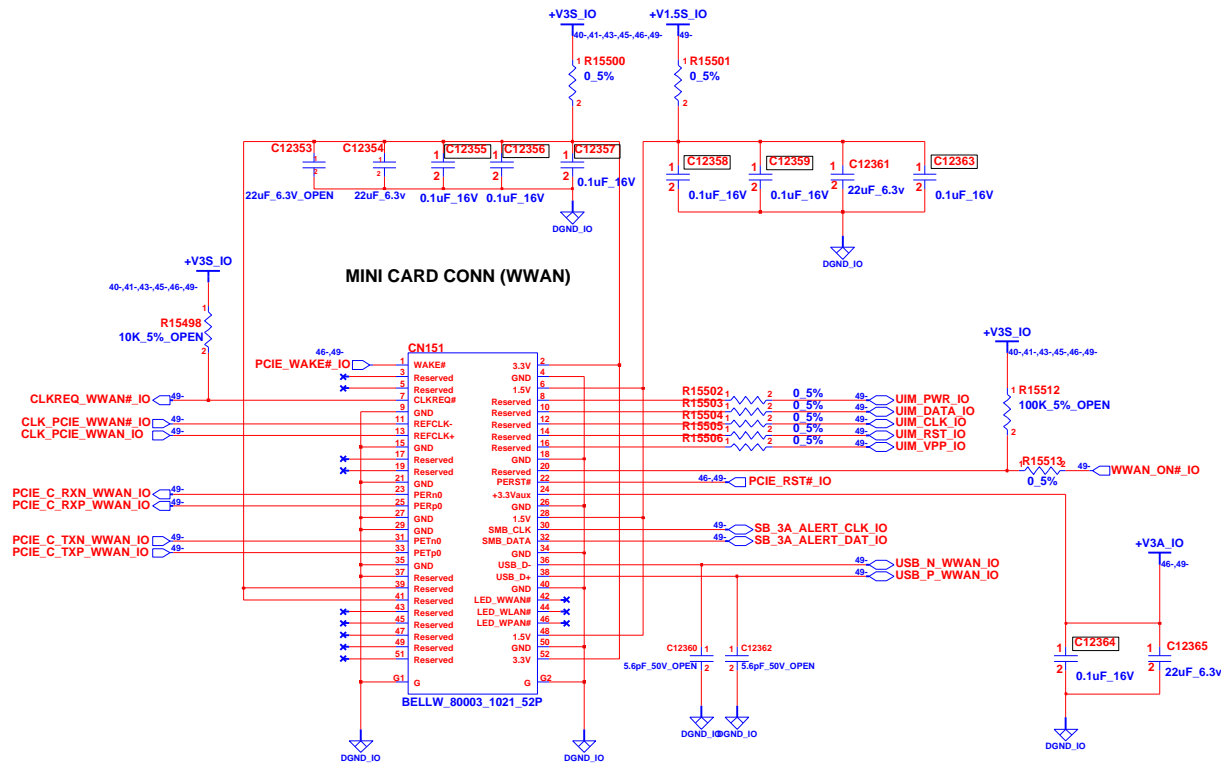
**INVENTEC**

TITLE			
MIRANDA			
AMP/SPEAKER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

CHANGE by M3 23-Jun-2010

SHEET 42 OF 54

# WWAN



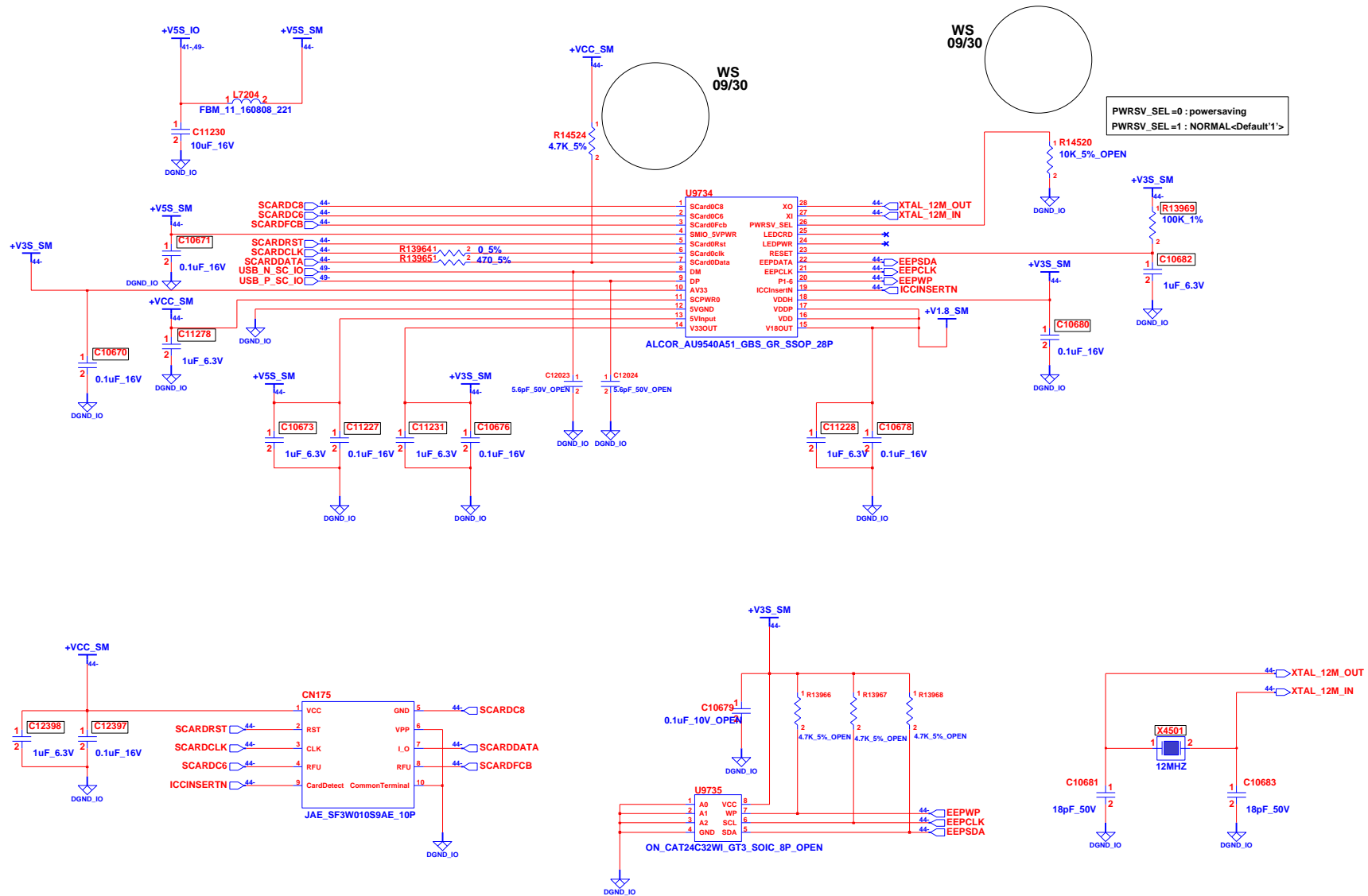
**INVENTEC**

TITLE			
M3			
WWAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

CHANGE by MIRANDA 16-Sep-2010

SHEET 43 OF 54

## SMART CARD



INVENTEC

TITLE	<b>MIRANDA</b> <b>SMART CARD AU9540</b>
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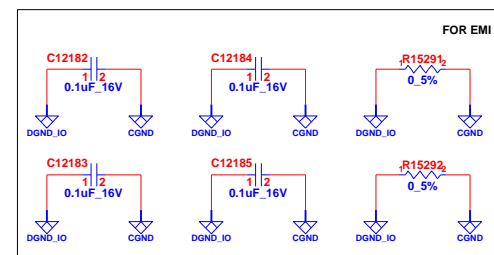
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER	REV
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CHANGE by	M3	23-Jun-2010
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SHEET 44 OF 54

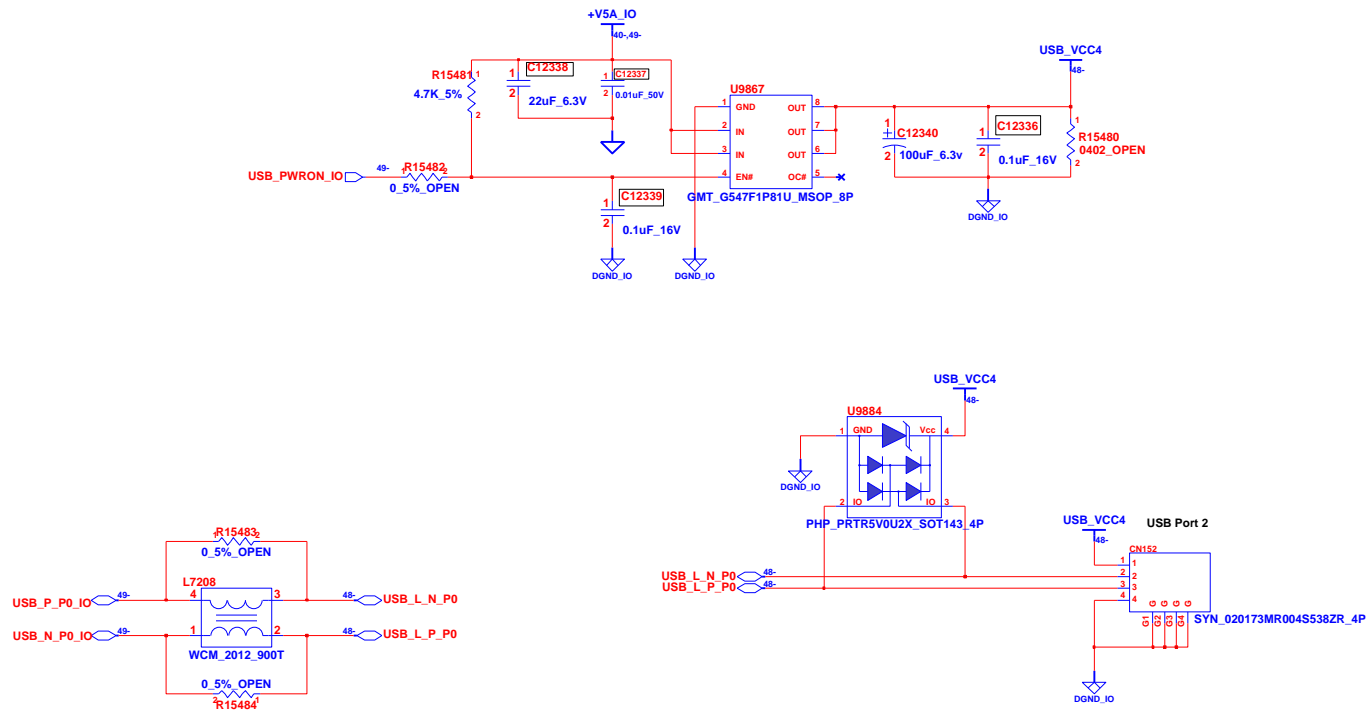






TITLE			
<b>MIRANDA</b> <b>RJ45/DUAL USB</b>			
SIZE	CODE	DOC. NUMBER	REV
<b>A3</b>	<b>CS</b>		
SHEET 47 OF 54			

# USB CONN

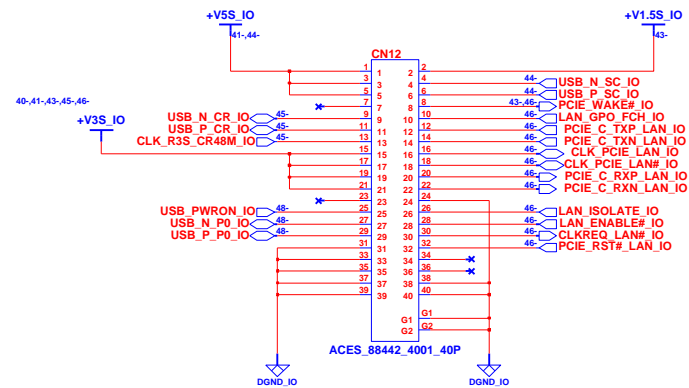
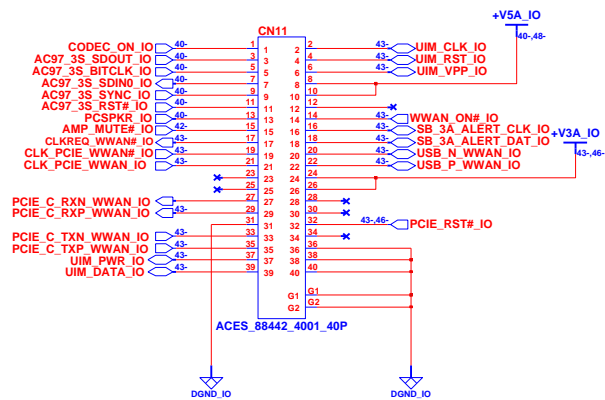


**INVENTEC**

TITLE <b>MIRANDA</b> LITE Block Diagram			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310AXXXX-0-MTRX01</b>	REV <b>01</b>
CHANGE by <i>Drawer Name</i>		10-Sep-2010	
SHEET <b>48</b>		OF <b>54</b>	



# WIRE TO BOARD CONN (IO/B SIDE)



**INVENTEC**

TITLE			
MIRANDA			
DIAGRAM			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		
SHEET 49 OF 54			

CHANGE by M3 16-Sep-2010

# TOUCH PAD BOARD

Touch Tad Right key

Touch Tad left key

TP/B CONN TP/B SIDE

WLAN_LED# & BT_LED#	PURPLE
WLAN_LED#	BLUE
BT_LED#	AMBER
NUM_LED#	BLUE
CAPS_LED#	BLUE
HDD_LED#	BLUE
PWR_LED#	BLUE
BATT_CHAR	AMBER
BATT_PWR	BLUE

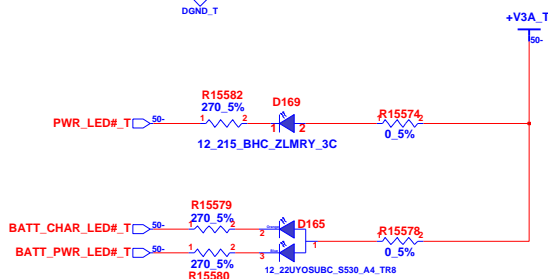
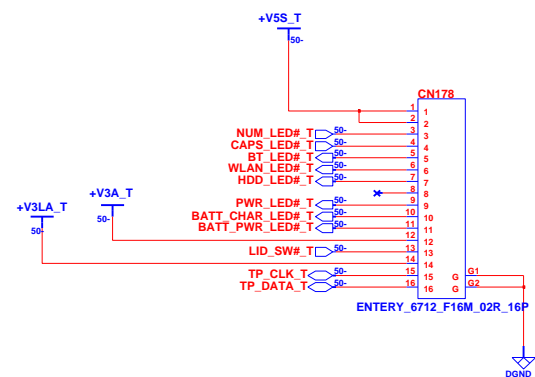
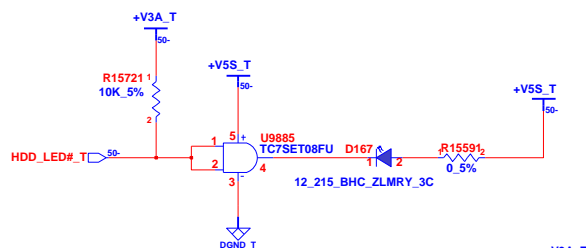
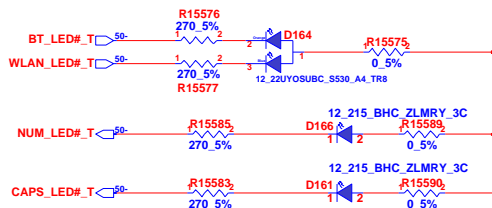
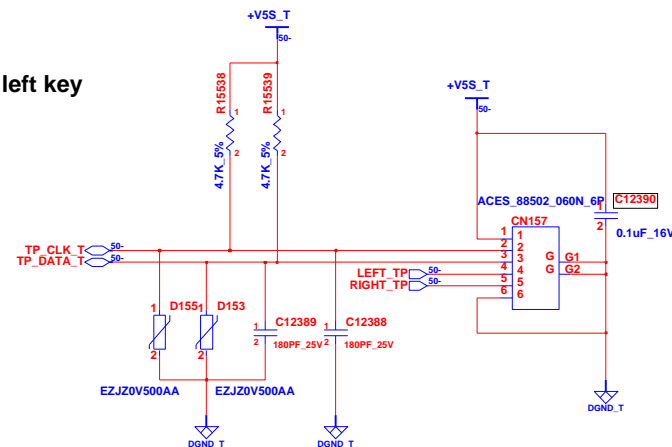
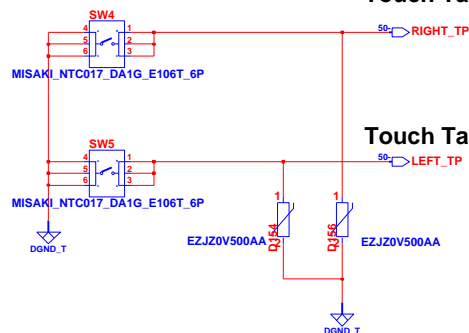
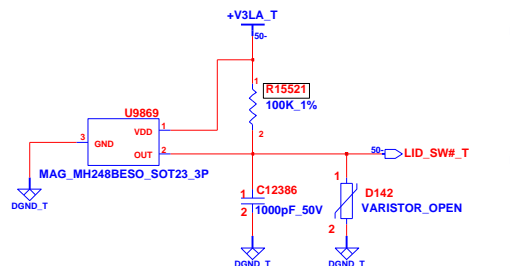
**INVENTEC**

TITLE  
MIRANDA  
AUDIO JACK/ PWR SW

SIZE CODE DOC. NUMBER REV  
A3 CS 50 OF 54

CHANGE by M3 13-Jul-2010

8



1 2 3 4 5 6 7 8

A

B

C

D

E

F

# POWER SWITCH BOARD

The schematic diagram illustrates the power switch board for the MIRANDA USB connector. The board is powered by +V3A\_P and +V3LA\_P. A power switch (SW6) is connected to +V3LA\_P and a thermal switch (MISAKI\_NTC017\_DA1G\_E106T\_6P) to +V3A\_P. A diode (D10) is connected to the power switch output. A resistor (R15587) is connected to the power switch output. A diode (D148) is connected to +V3LA\_P and a resistor (R15524) to +V3A\_P. A USB connector (CN159) is connected to +V3A\_P and +V3LA\_P. The USB connector is labeled ENTRY\_6916K\_Q06M\_00L\_6P. The board is labeled FOR EMI.

FOR EMI

+V3LA\_P

+V3A\_P

PWR\_LED#\_P

PWR\_BTN#\_HW\_P

ENTRY\_6916K\_Q06M\_00L\_6P

D10

R15587

R15724

R15524

D148

SW6

MISAKI\_NTC017\_DA1G\_E106T\_6P

CN159

SIZE A3

CODE CS

CHANGE by M3

13-Jul-2010

SHEET 51 OF 54

8

INVENTEC			
TITLE			
MIRANDA			
USB CONN.			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER	REV
SHEET		51	OF 54

CHANGE by	M3	13-Jul-2010
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