

THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF INVENTEC CORPORATION AND SHALL NOT BE REPRODUCED, COPIED, OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION, INVENTEC CORPORATION 2010 ALL RIGHT RESERVED

HSF Property : Halogen free

ONTARIO SL

MB

WS BUILD

2011.10.17

DATE	CHANGE NO.	REV
2011-Jan-18	2011-ECO-00687	A

	EE	DATE	POWER	DATE
DRAWER	Lin,Beck	2011-Jan-20	Lan,CF	2011-Jan-20
DESIGN	Lin,Beck	2011-Jan-20	Lan,CF	2011-Jan-20
CHECK	Lin,Beck	2011-Jan-20	Lan,CF	2011-Jan-20
RESPONSIBLE	Liu,Ricky	2011-Jan-20	Liang,S.F.	2011-Jan-20
SIZE =		3		VER : A01
FILE NAME : ONTARIO				
P/N	6050A2498201			

TITLE			
ONTARIO-SL			
COVER PAGE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		1	OF 46

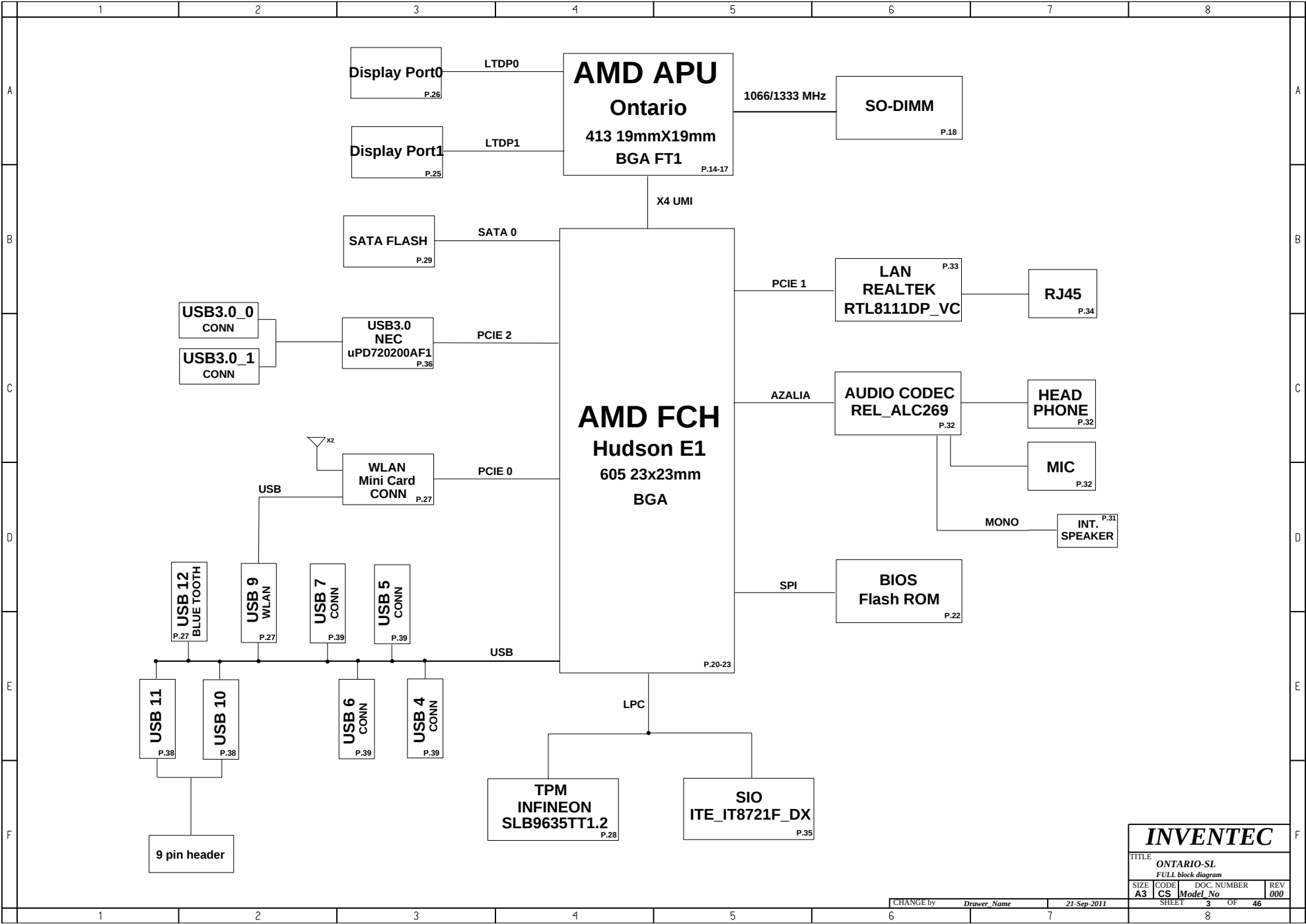
TABLE OF CONTENTS

PAGE		PAGE
1. COVER PAGE		24. DP0
2. INDEX		25. DP1
3. BLOCK DIAGRAM		26. WLAN/BT
4. POWER BLOCK DIAGRAM		27. TPM
5. POWER ON SEQUENCE		28. SATA FLASH
6. POWER ON SEQUENCE		29. LAN_RTL8111DP-VC
7. POWER DC-IN		30. RJ45
8. POWER P5V0AL		31. SIO_IT8721
9. POWER P3V3A/P5V0A		32. FAN CONTROLLER_IT8500E
10. POWER P1V8S/P0V75S/P1V5S		33. USB3.0 CONTROLLER
11. POWER P1V1A/P1V0A/P1V1S		34. USB3.0 CONN
12. POWER PVCORE/PVCORE_NB		35. PIN HEADER
13. POWER P5V0S/P3V3S/P1V5S		36. USB CONN
14. APU FT1 1		37. TO I/O BOARD CONN
15. APU FT1 2		38. LLDP
16. APU FT1 3		39. SCREW
17. APU FT1 4		40. EMI
18. DDR3-SODIMM		41. IO BOARD COVER PAGE
19. FCH1		42. CODEC REL_ALC269
20. FCH2		43. AUDIO JACK / POWER SW
21. FCH3		44. INT. SPEAKER
22. FCH4		45. USB CONN
23. STRAP OPTION / THERMAL / RTC		46. TO M/B CONN

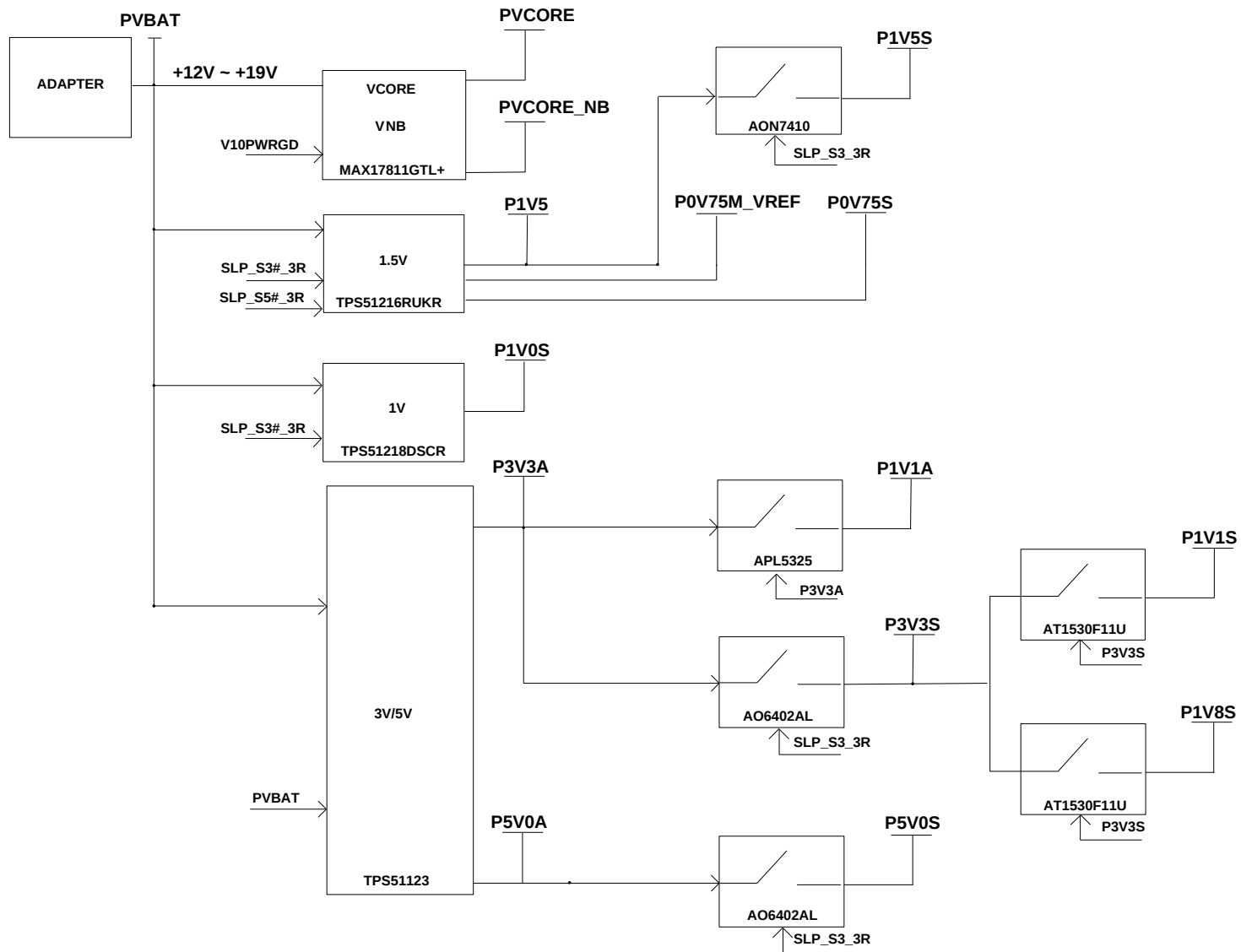
INVENTEC

TITLE ONTARIO-SL			
index			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		2	OF 46

CHANGE by *Drawn Name* 19-Oct-2011



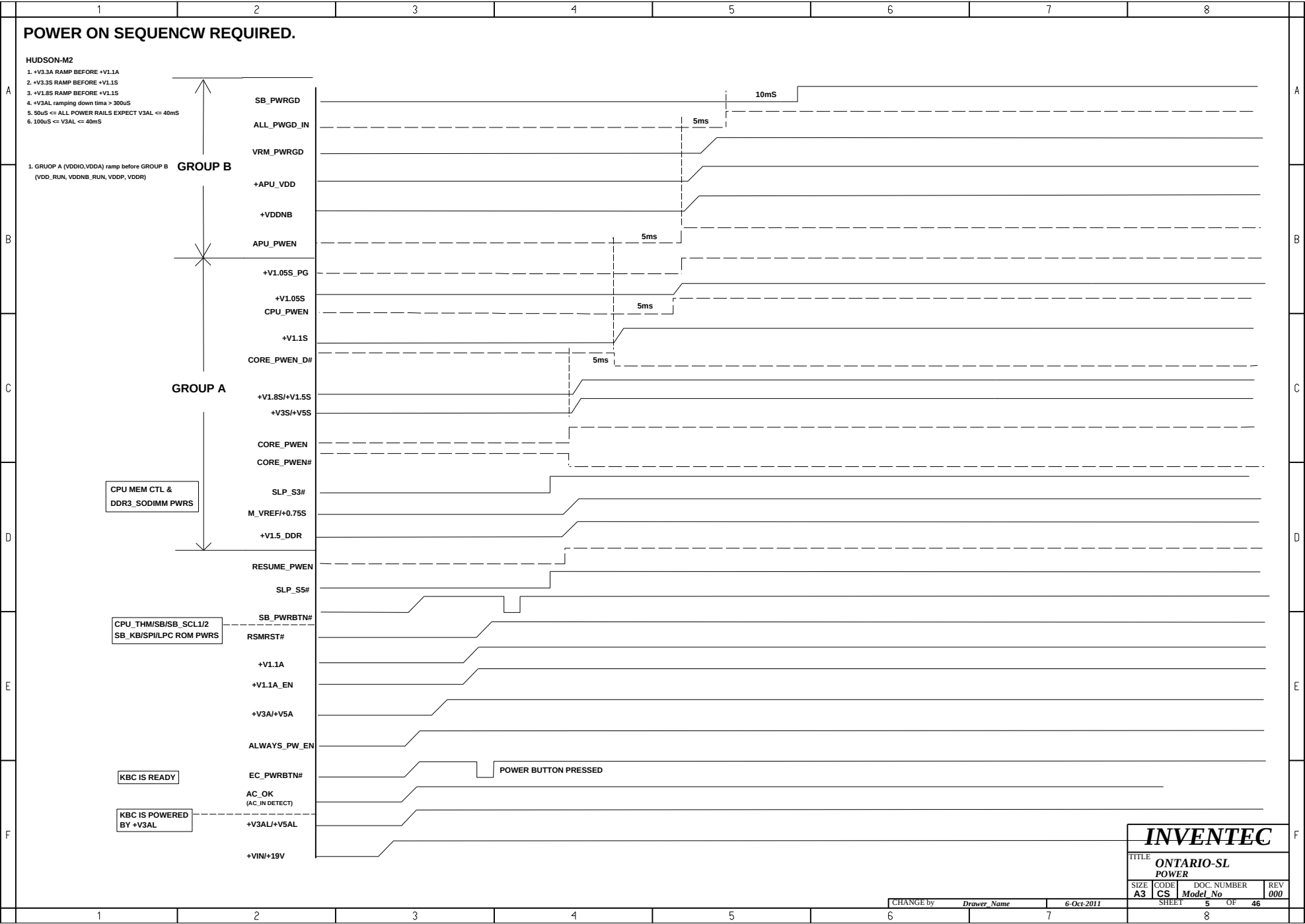
Power Block Diagram

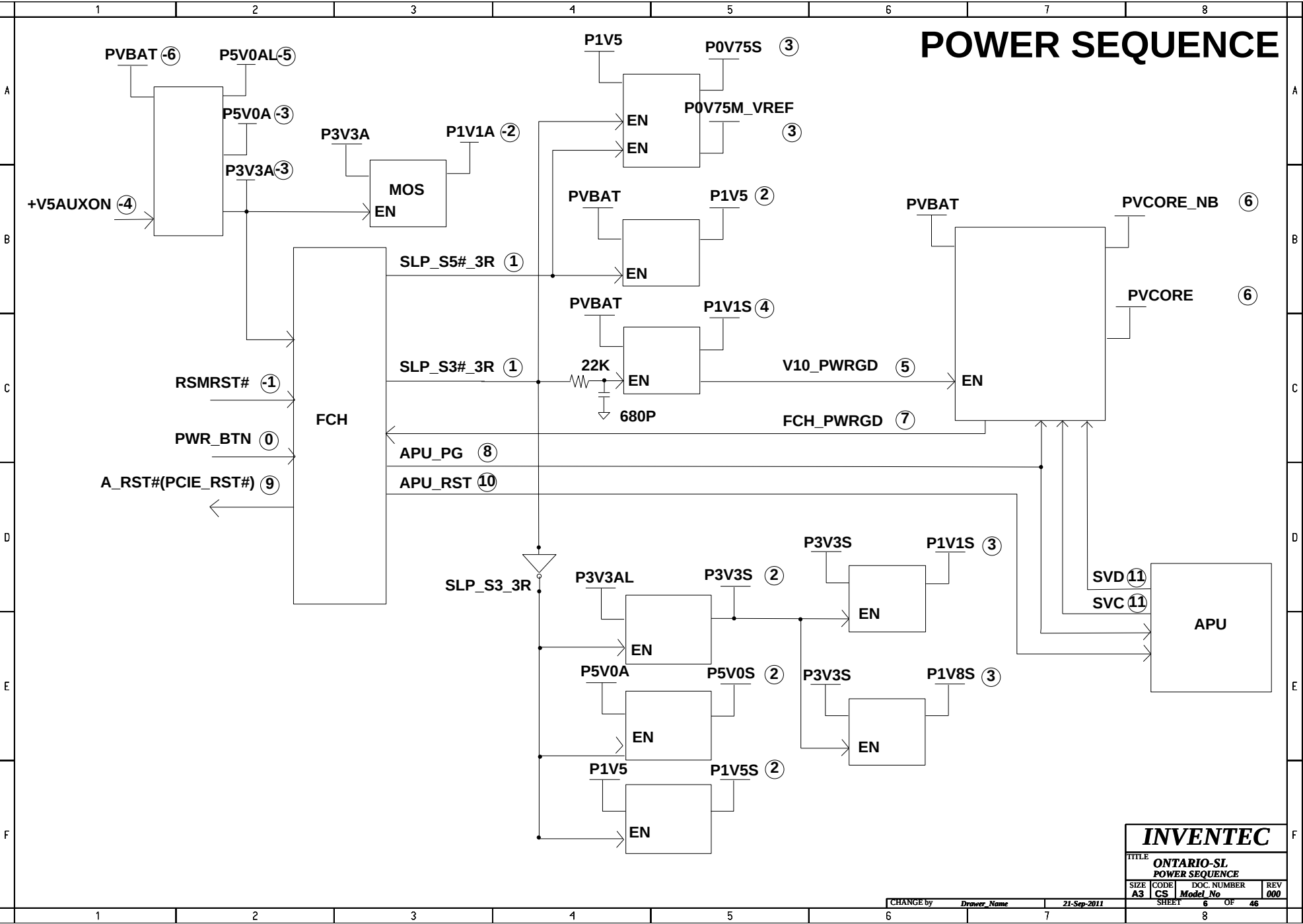


INVENTEC

TITLE			
ONTARIO-SL			
POWER ON SEQUENCE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		4	OF 46

CHANGE by *Drawn Name* 21-Sep-2011

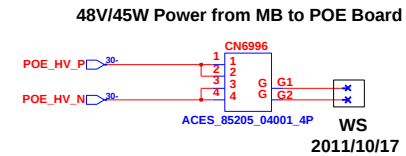
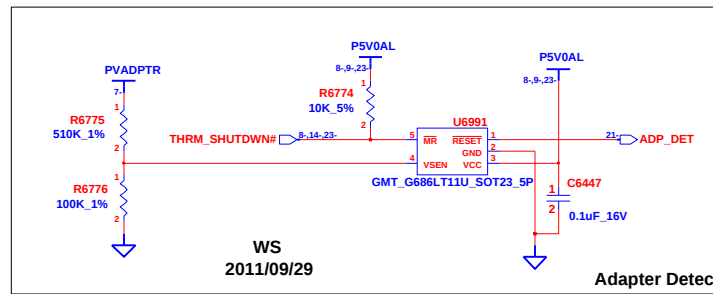
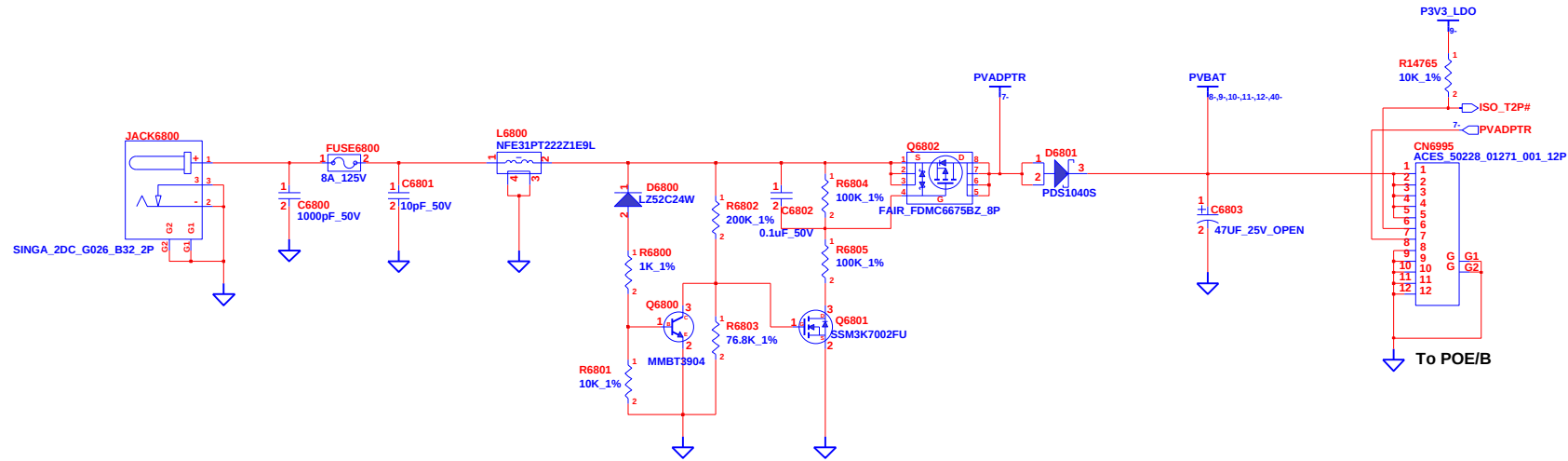




INVENTEC

TITLE			
ONTARIO-SL POWER SEQUENCE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		6	OF 46

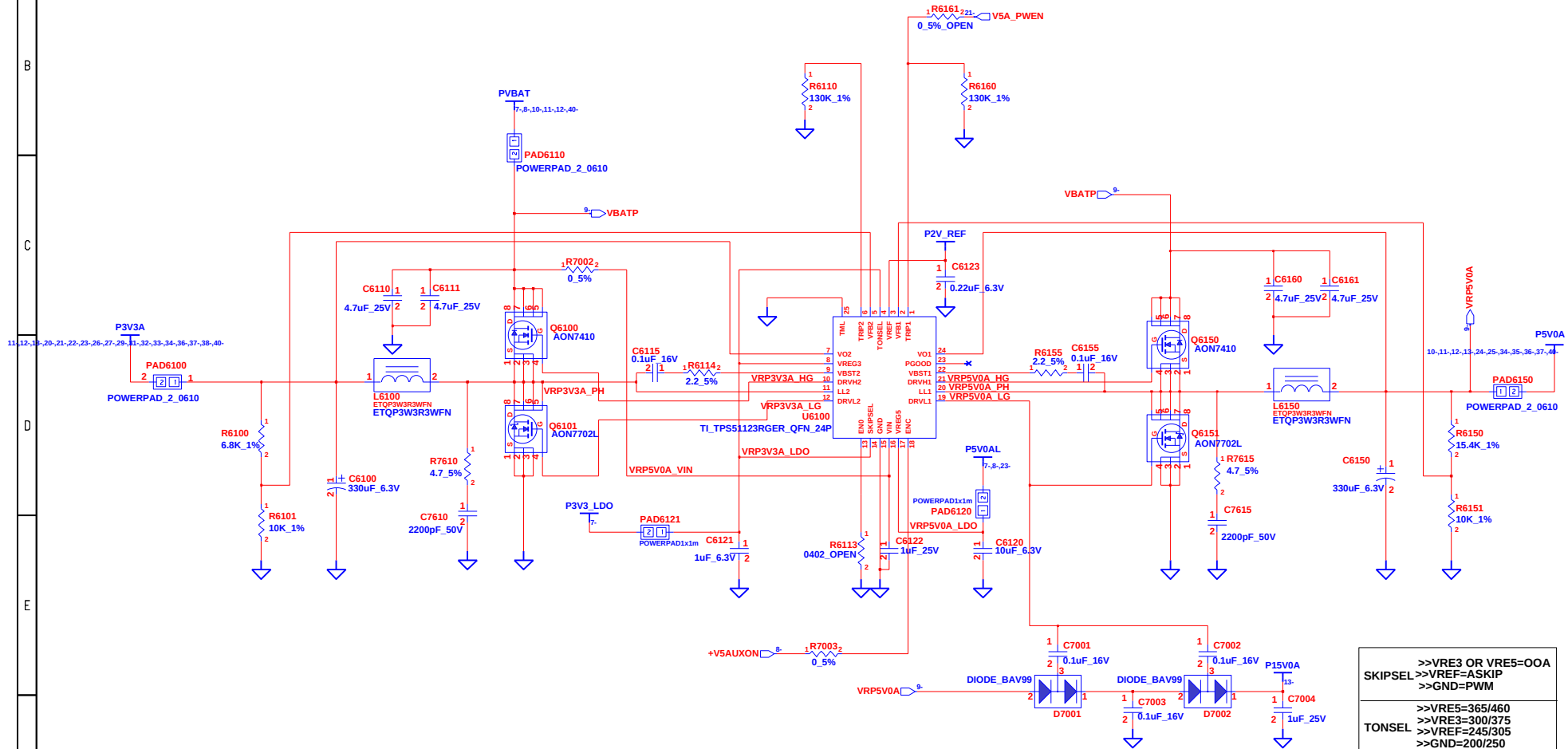
AC IN



INVENTEC			
TITLE			
ONTARIO-SL			
POWER AC IN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
CHANGE by		Drawn Name	21-Sep-2011
SHEET		7	OF 46

INVENTEC			
TITLE ONTARIO-SL			
POWER +V12S			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV 000
SHEET		8 OF	46

P3V3A P5V0A



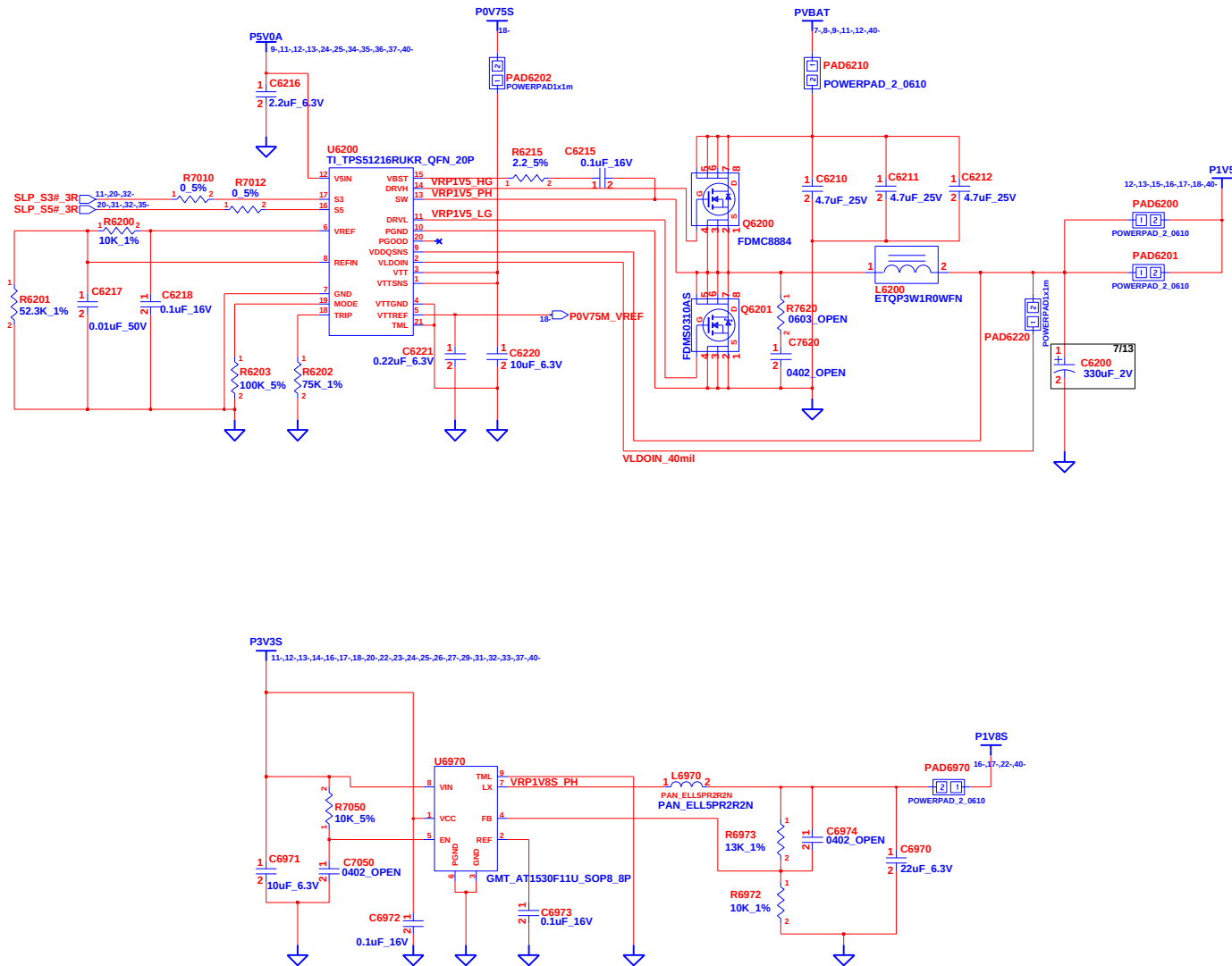
>>VRE3 OR VRE5=00A
 SKIPSEL >>VREF=ASKIP
 >>GND=PWM
 >>VRE5=365/460
 >>VRE3=300/375
 TONSEL >>VREF=245/305
 >>GND=200/250

INVENTEC

TITLE ONTARIO-SL			
POWER +V3A/+V5A			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV 000
SHEET 9		OF 46	

CHANGE by *Drower Name* 21-Sep-2011

P1V8S P0V75S P1V5



INVENTEC

TITLE			
ONTARIO-SL			
POWER +V1.8S/+V0.75S/+V1.5			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		10 OF	46

CHANGE by *Drawer Name* 21-Sep-2011

P1V1A P1V0S P1V1S

INVENTEC

ONTARIO-SL
POWER +V1.1A/+V1S/+V1.1S

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000

SHEET 11 OF 46

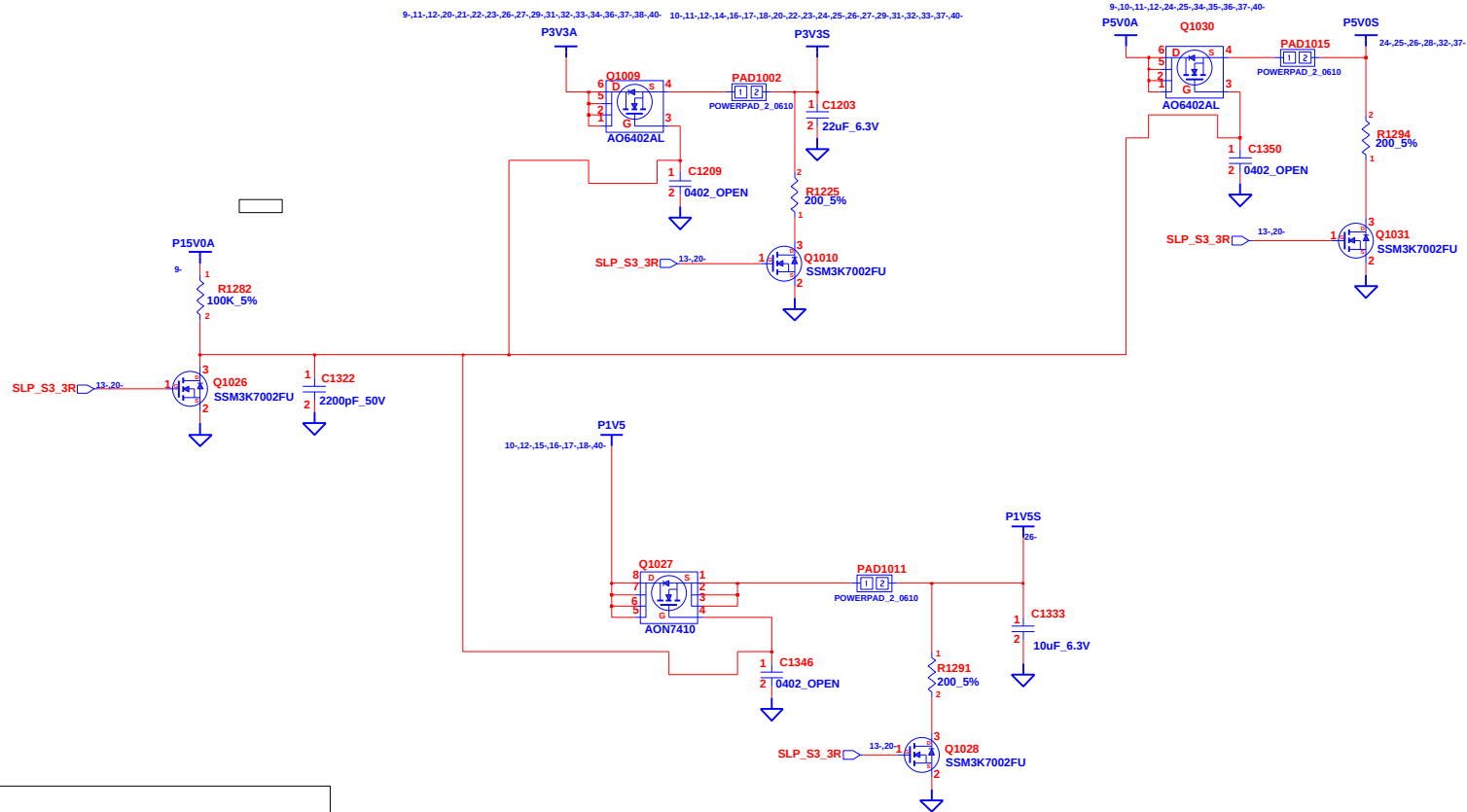
CHANGE by: *Drawer_Name* 21-Sep-2011

TITLE			
ONTARIO-SL POWER +V1.1A/+V1S/+V1.1S			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		11	OF 46

CHANGE by	<i>Drawer_Name</i>	21-Sep-2011
-----------	--------------------	-------------

SHEET 11 OF 46

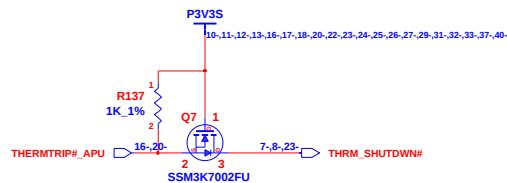
P5V0S P3V3S P1V5S



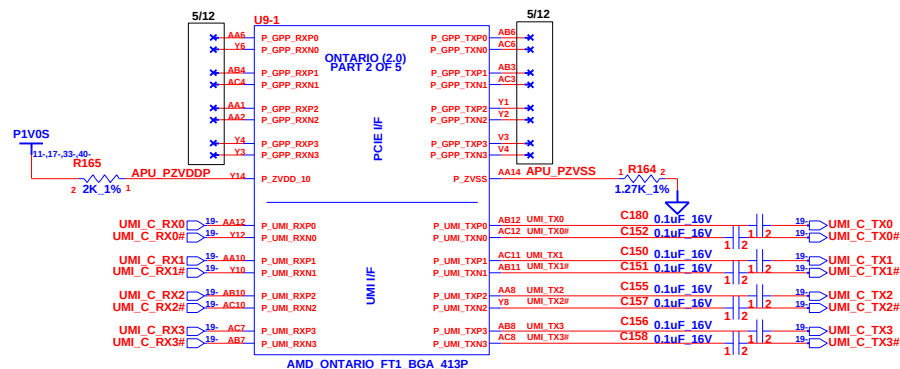
Del V1.05s 6/1

INVENTEC			
TITLE			
ONTARIO-SL			
POWER +VSS/+V3S/+V1.5S/+VAUDIO			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		13	OF 46

CHANGE by *Drawer Name* 21-Sep-2011

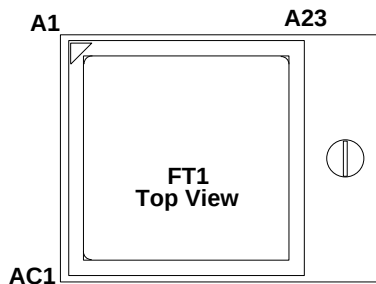


PEG & UMI BUS



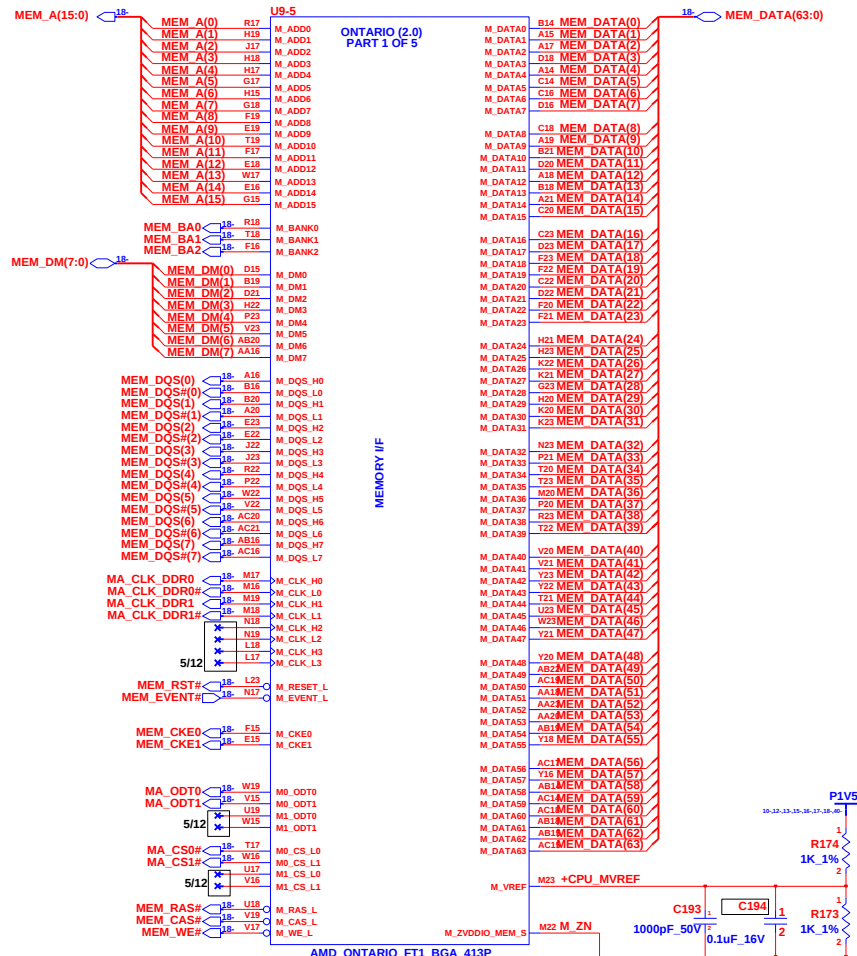
Route A-LINK DIFF PAIR @85 OHM+/- 10%

Layout: Add stitching caps if crossing plane split.



INVENTEC			
TITLE			
ONTARIO-SL			
APU-1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
CHANGE by		21-Sep-2011	
SHEET		14	OF 46

MEMORY



SO-DIMM Routing Rules for H = 0.1mm Stripline

Net Name	Target Impedance	Routing Dimensions	Spacing to Other	Self Spacing
CLK	72 ohm	0.2 / 0.1 / 0.2	0.5	0.5
ADD	40 ohm	0.2	0.2	0.3
DQS	90 ohm	0.1 / 0.1 / 0.1	0.4	0.4
Data/DM	40 ohm	0.2	0.3	0.3

R connection to +V1.5 should be directly to the plane without a long trace.

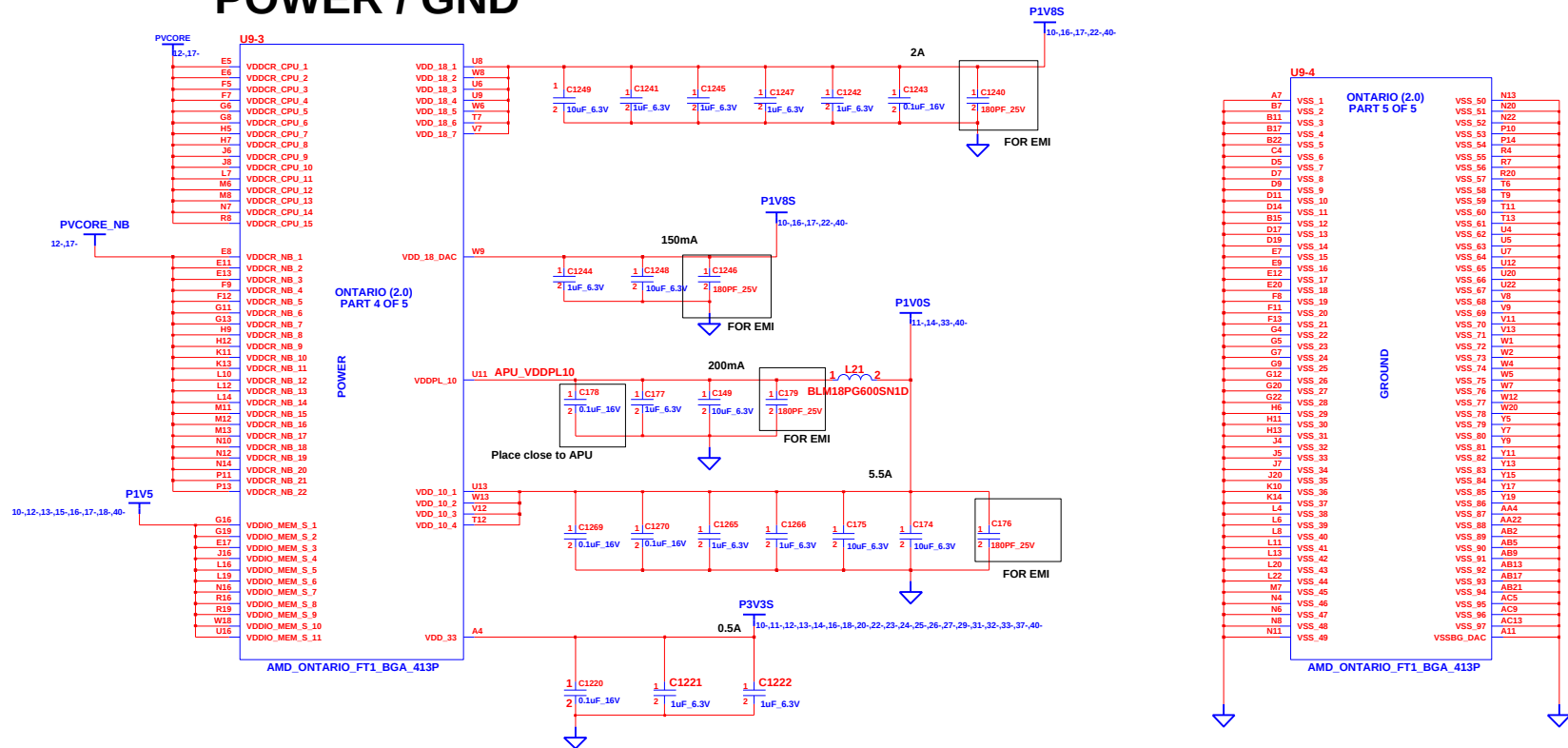
INVENTEC

TITLE
ONTARIO-SL
APU-2

SIZE CODE DOC. NUMBER REV
A3 CS Model No 15 OF 46 000

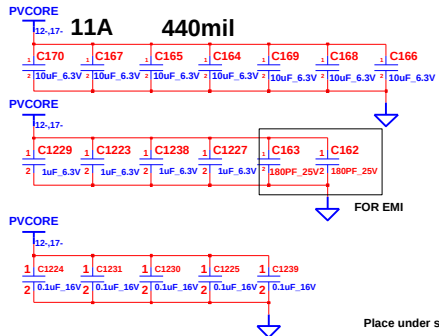
CHANGE by Drawn Name 21-Sep-2011

POWER / GND



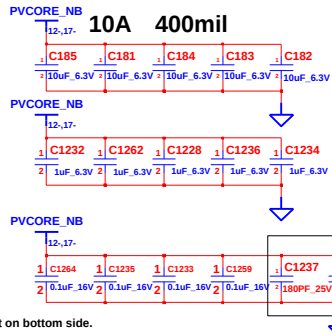
+VCC_CORE

10uF x 7 ; 1uF x 4 ; 0.1uF x 5 ; 180pF x 2



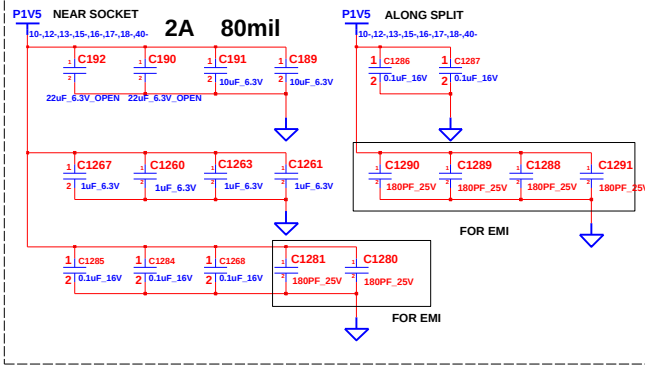
+VCC_CORE_NB

10uF x 5 ; 1uF x 5 ; 0.1uF x 4 ; 180pF x 2



+V1.5

22uF_OPEN X 2 ; 10uF x 2 ; 1uF x 4 ; 0.1uF x 5 ; 180pF x 6



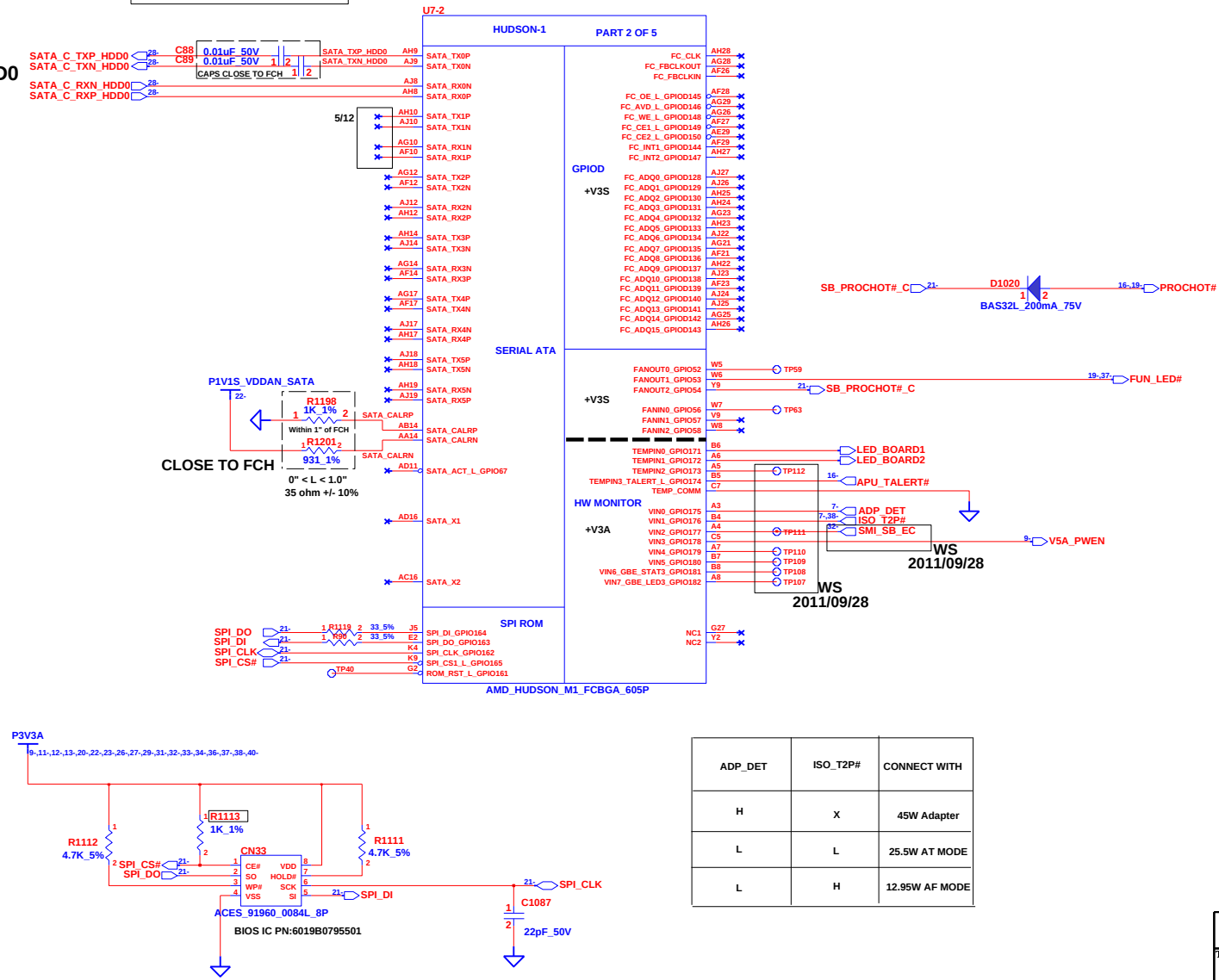
INVENTEC

TITLE			
ONTARIO-SL			
APU-4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		17	OF 46
		8	

CHANGE by *Drawn Name* 21-Sep-2011

SATA HDD0

SATA TX : 95 ~100 ohm +/- 10%
SATA RX : 90 ohm +/- 10%



ADP_DET	ISO_T2P#	CONNECT WITH
H	X	45W Adapter
L	L	25.5W AT MODE
L	H	12.95W AF MODE

INVENTEC

TITLE

ONTARIO-SL

FCH-3

SIZE CODE DOC. NUMBER REV

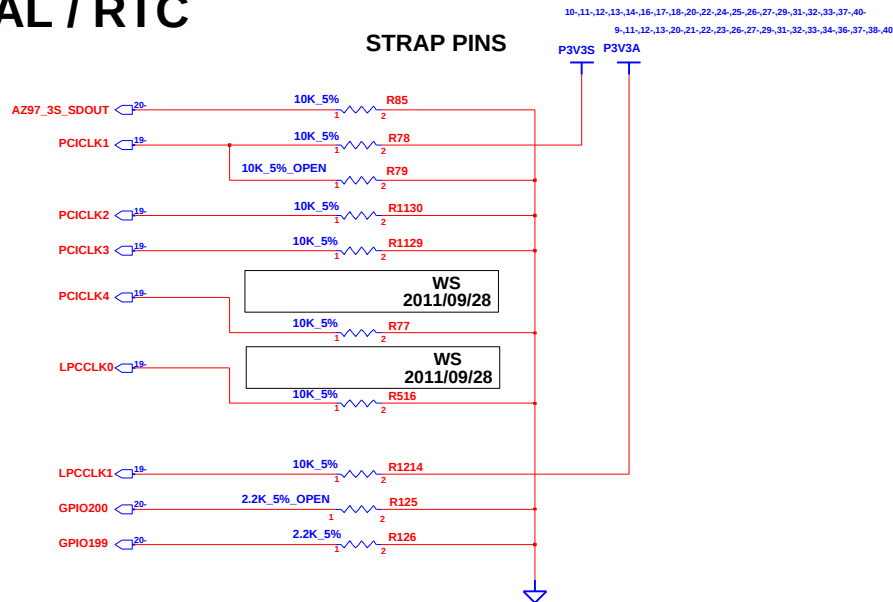
A3 CS Model No 21 OF 46

000

CHANGE by *Drawn Name* 21-Sep-2011

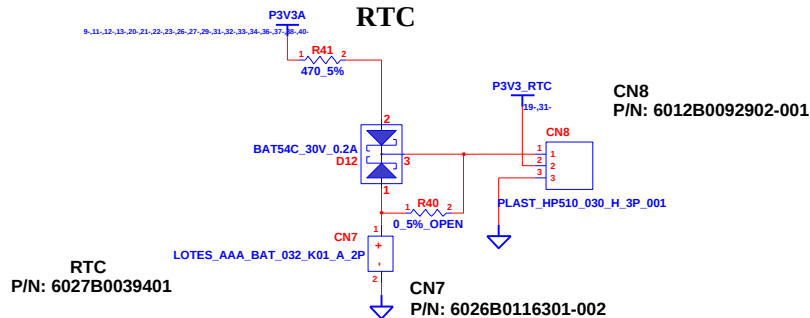
STRAP OPTION / THERMAL / RTC

STRAP PINS

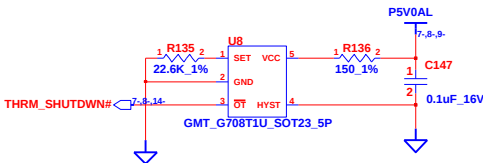


	AZ97_3S_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPCCLK0	LPCCLK1	GPIO200 EC_PWM3	GPIO199 EC_PWM2
PULL HIGH	Low Power Mode (Not Supported)	Allow PCIE Gen2 (Default)	Watchdog Timer Enabled (Not Supported)	Debug STRAP Enabled	Non-FUSION CLOCK Mode	Integrated Micro-Controller Enabled (Default)	Internal 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	

RTC



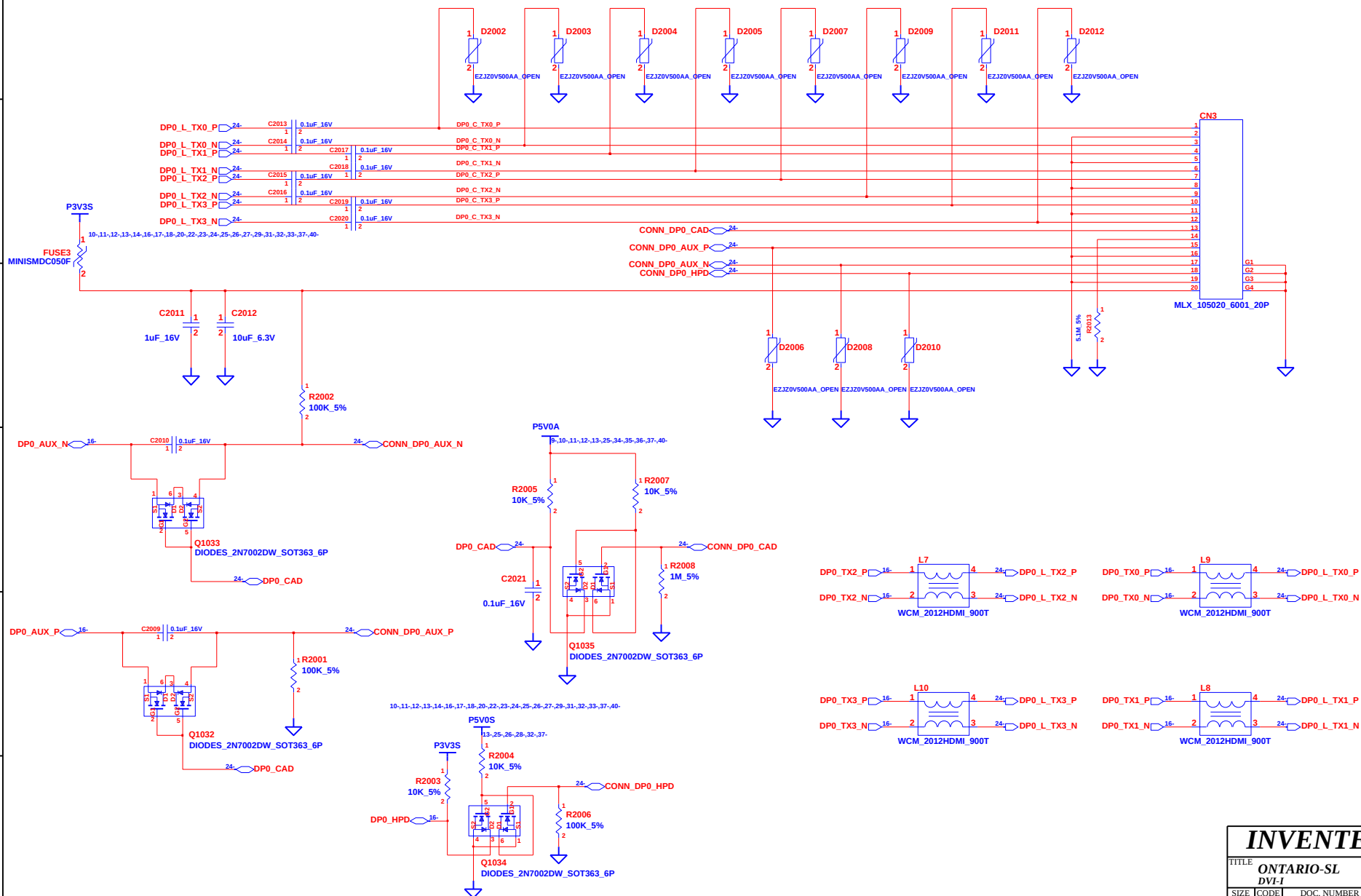
Thermal Sensor



INVENTEC

TITLE ONTARIO-SL STRAP OPTION / THERMAL / RTC			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV 000
CHANGE by Drafter Name		21-Sep-2011	
SHEET		23	OF 46

DP0

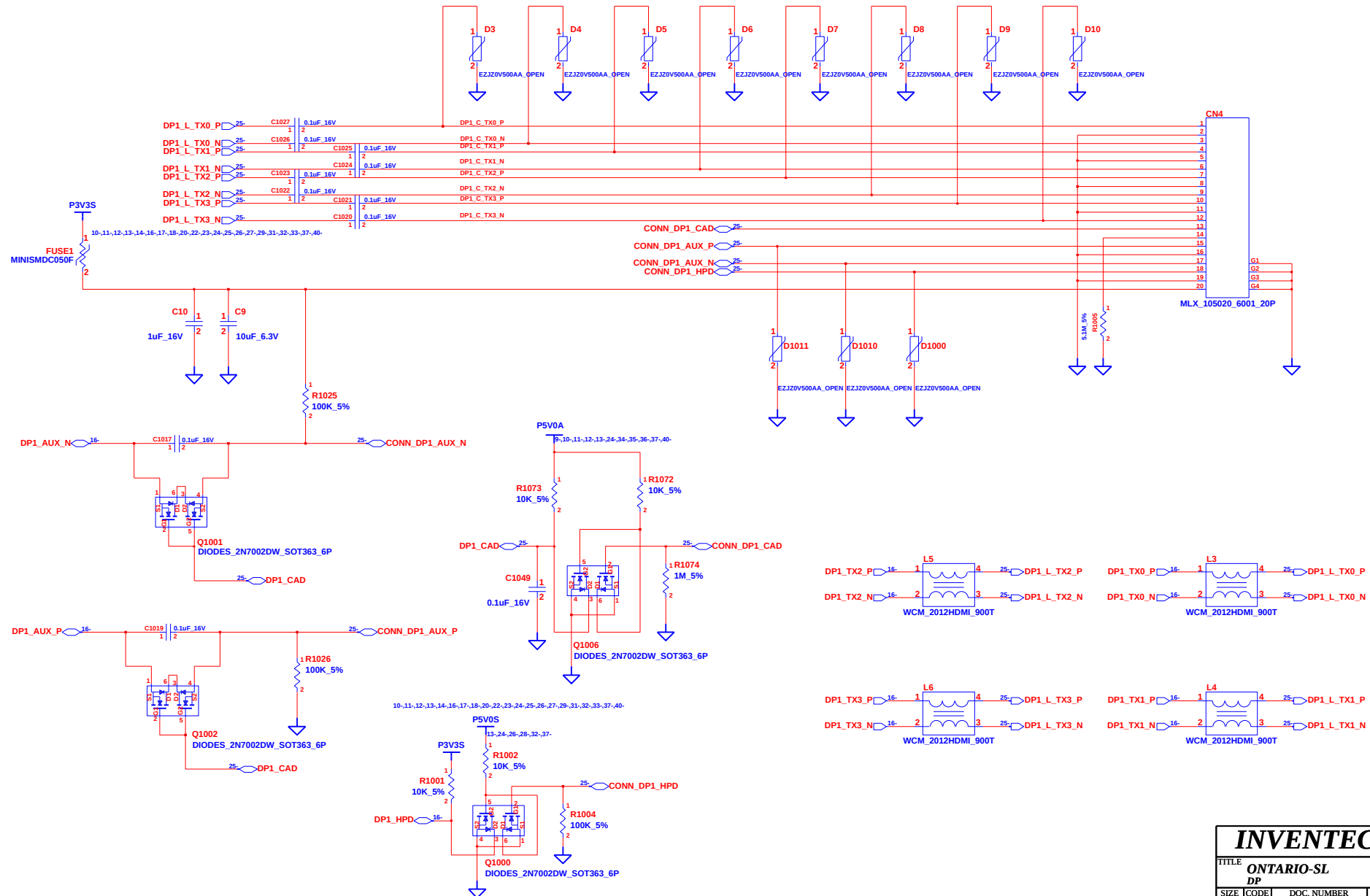


INVENTEC

TITLE			
ONTARIO-SL			
DVI-I			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		24	OF 46

CHANGE by *Drawer Name* 21-Sep-2011

DP1



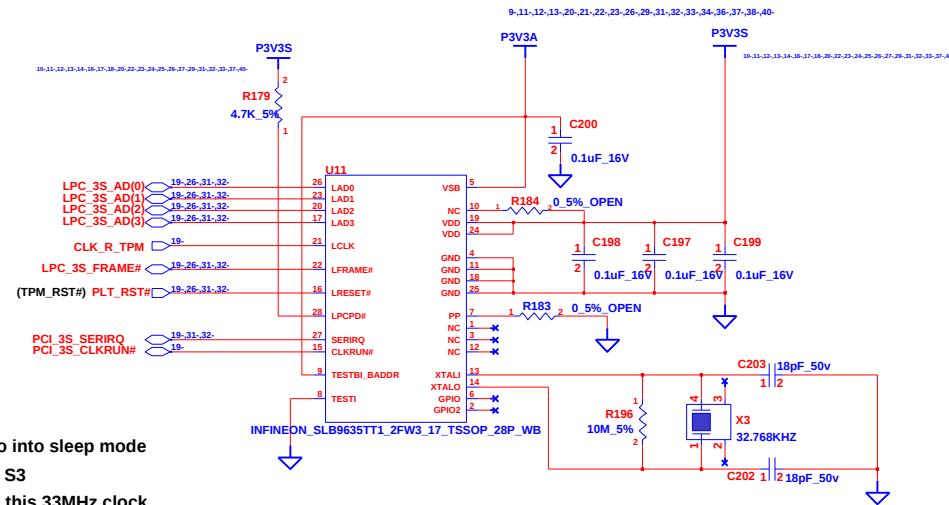
INVENTEC

TITLE			
ONTARIO-SL			
DP			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		25	OF 46

CHANGE by *Drawn Name* 21-Sep-2011

TPM

WS
2011/09/28



LPC_PWRDWN_L is used to force LPC peripherals to go into sleep mode
Device may require that this be asserted before enteing S3
Device may require that this be asserted before stoping this 33MHz clock

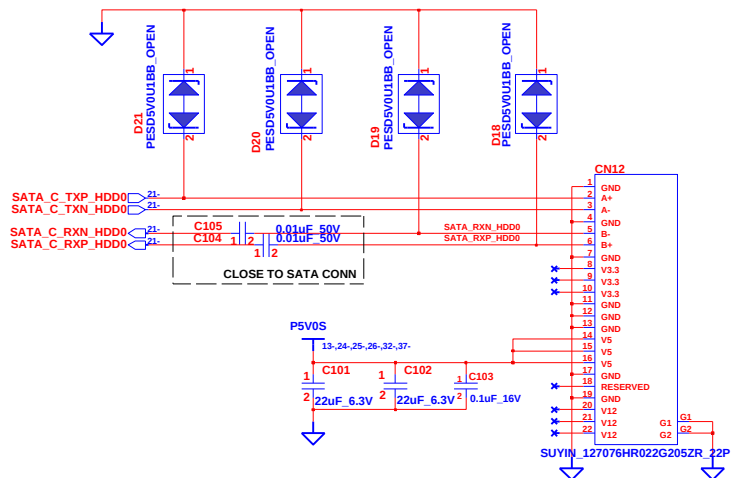
INVENTEC

TITLE			
ONTARIO-SL			
TPM			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		27	OF 46

CHANGE by *Drawn Name* 21-Sep-2011

8

SATA FLASH



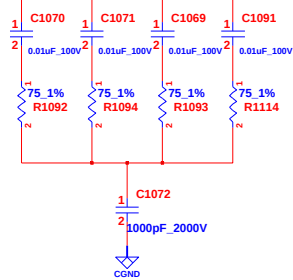
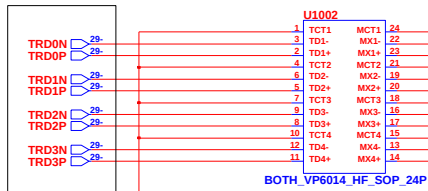
Del SSD/HDD 5/12

INVENTEC			
TITLE			
ONTARIO-SL			
SATA FLASH / SSD / HDD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		28	OF 46

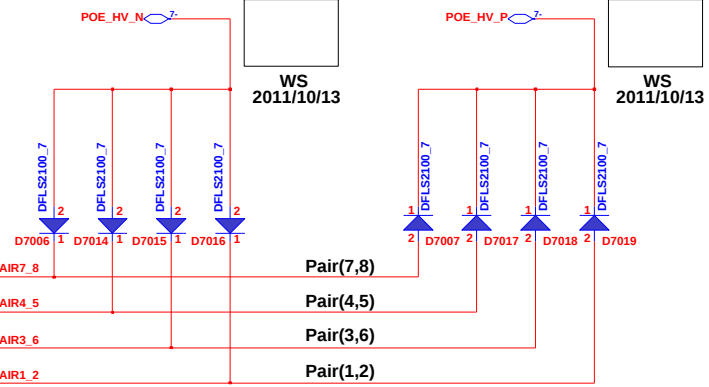
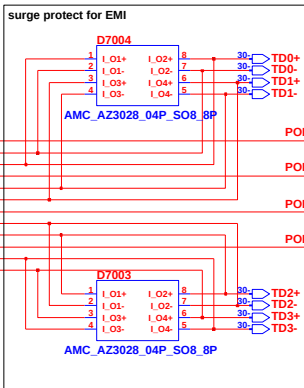
CHANGE by *Drawn Name* 21-Sep-2011

RJ45

WS
2011/10/14



WS
2011/10/14



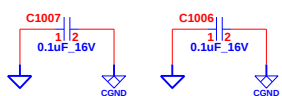
Pair(7,8)

Pair(4,5)

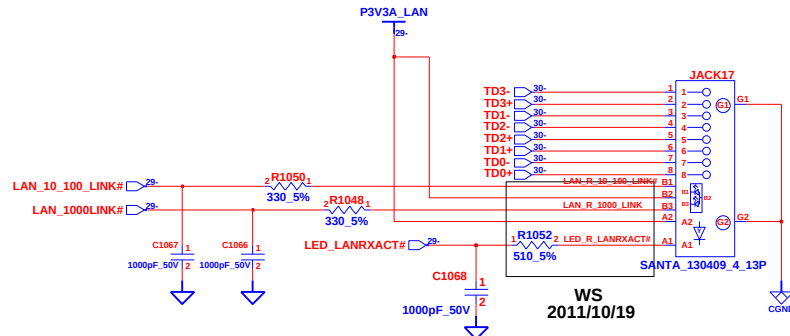
Pair(3,6)

Pair(1,2)

WS
2011/10/14



FOR EMI



WS
2011/10/19

INVENTEC

TITLE
ONTARIO-SL

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000

CHANGE by *Drawer Name* 21-Sep-2011

SHEET 30 OF 46

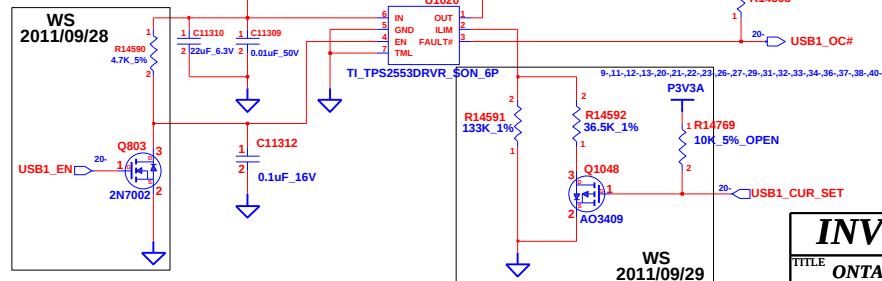
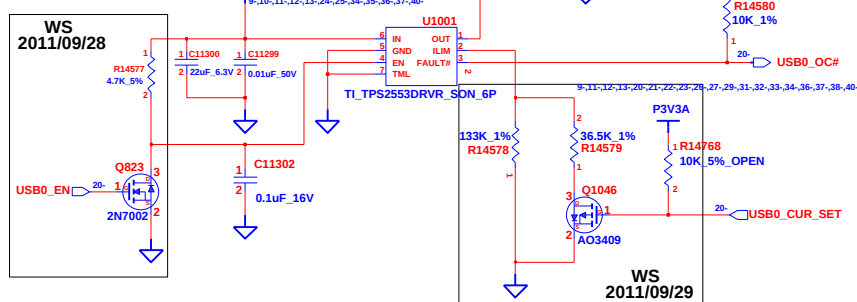
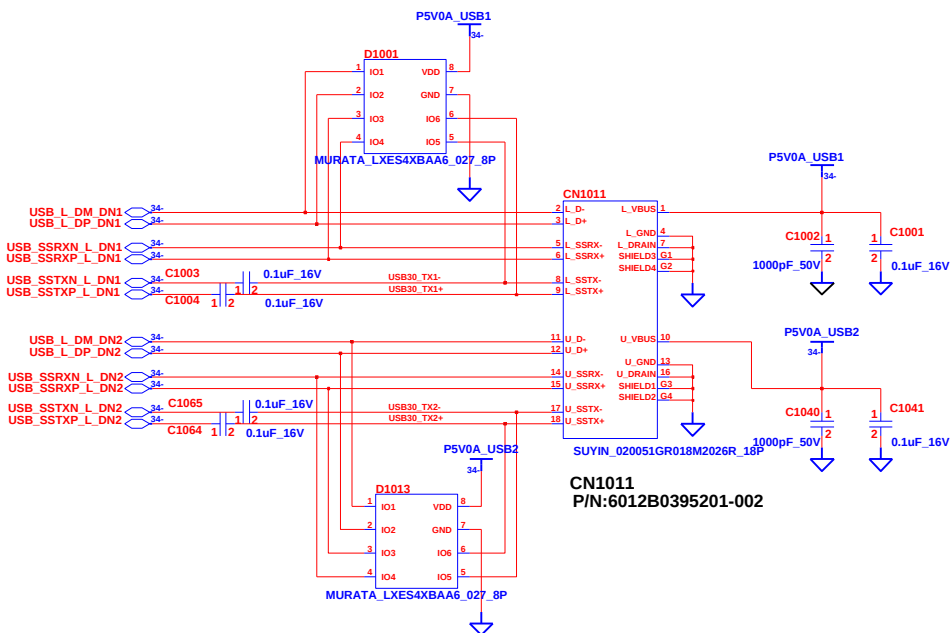
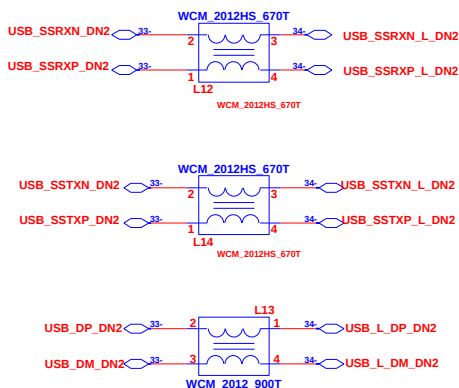
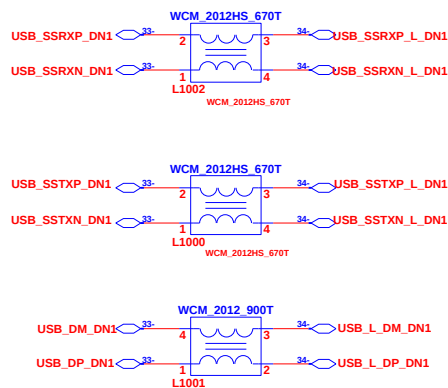
[illegible]

	SHEET	32	OF	46
		8		

CHANGE by	ONTARIOS	21-Sep-2011
-----------	----------	-------------

DUAL USB3.0 CONN

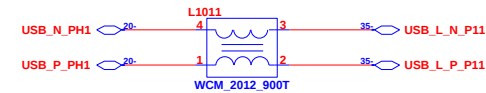
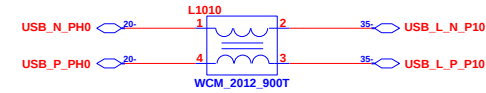
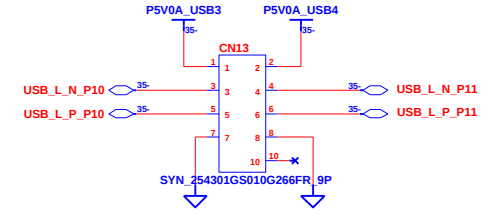
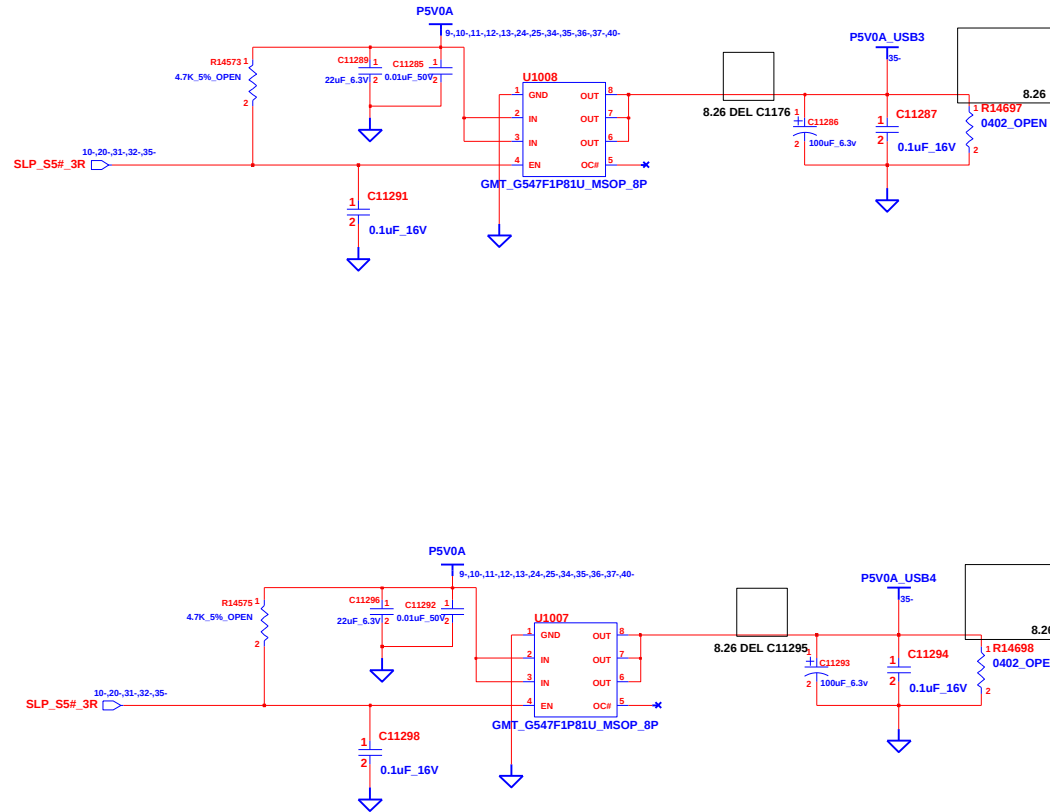
WS
2011/10/04



INVENTEC			
TITLE: ONTARIO-SL DUAL USB3.0 CONN.			
SIZE: A3	CODE: CS	DOC. NUMBER: Model No	REV: 000
SHEET: 34 OF 46			

CHANGE by: Drawer Name 21-Sep-2011

USB HEADER



INVENTEC

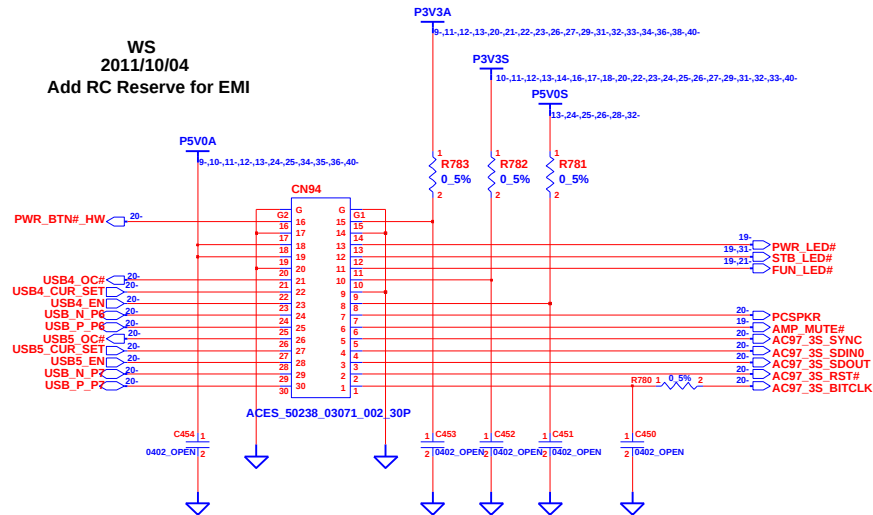
TITLE
**ONTARIO-SL
USB HEADER**

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV 000
-------------------	-------------------	--------------------------------	-------------------

CHANGE by *Drawer Name* 21-Sep-2011

SHEET 35 OF 46

TO AUDIO BOARD CONN

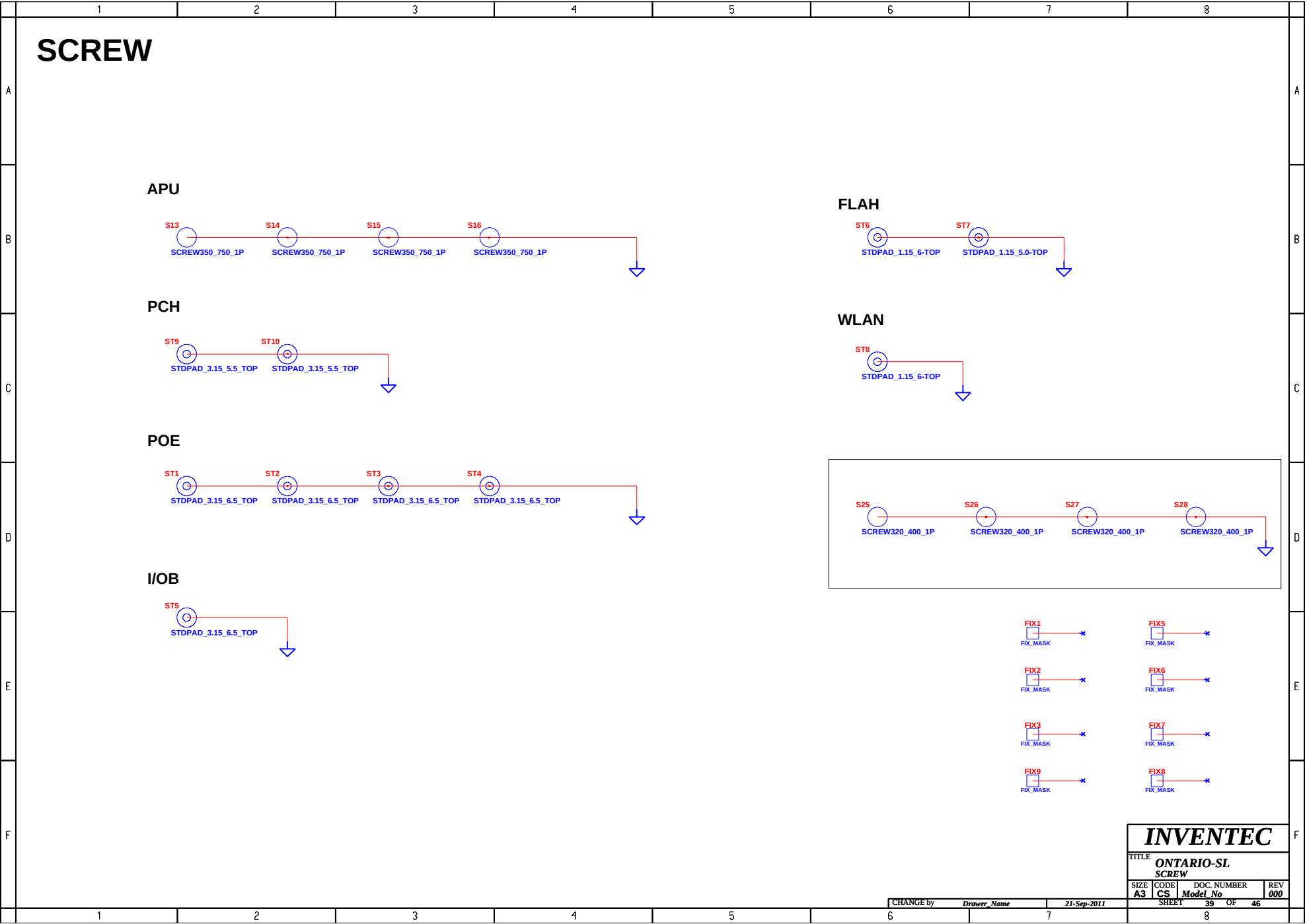


INVENTEC			
TITLE			
ONTARIO-SL			
RJ45			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		37	OF 46

CHANGE by *Drawn Name* 21-Sep-2011



CS	Model No		
SHEET	38	OF	46

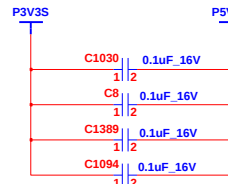


INVENTEC

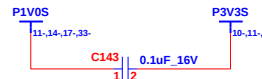
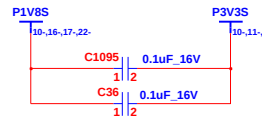
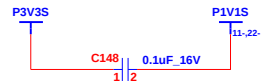
TITLE			
ONTARIO-SL			
SCREW			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		39	OF 46

EMI

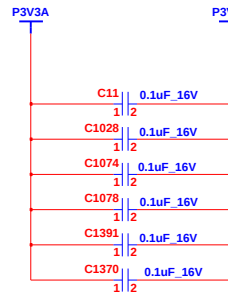
10,11,12,13,14,16,17,18,20,22,23,24,25,26,27,29,31,32,33,37,40



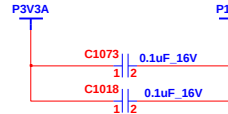
10,11,12,13,14,16,17,18,20,22,23,24,25,26,27,29,31,32,33,37,40



9,11,12,13,20,21,22,23,26,27,29,31,32,33,34,36,37,38,40

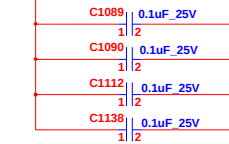


9,11,12,13,20,21,22,23,26,27,29,31,32,33,34,36,37,38,40



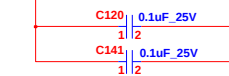
P5V0A

9,10,11,12,13,24,25,34,35,36,37,40



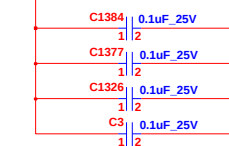
P3V3S

10,11,12,13,14,16,17,18,20,22,23,24,25,26,27,29,31,32,33,37,40



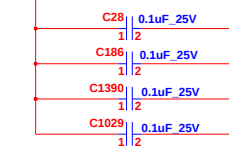
P3V3S

10,11,12,13,14,16,17,18,20,22,23,24,25,26,27,29,31,32,33,37,40



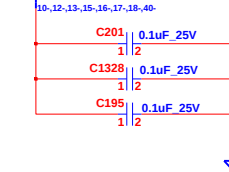
P5V0A

9,10,11,12,13,24,25,34,35,36,37,40



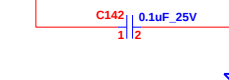
P1V5

10,12,13,15,16,17,18,40



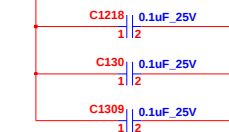
P3V3A

9,11,12,13,20,21,22,23,26,27,29,31,32,33,34,36,37,38,40



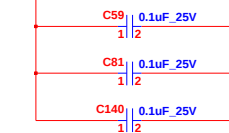
P3V3S

10,11,12,13,14,16,17,18,20,22,23,24,25,26,27,29,31,32,33,37,40



PVBAT

7,8,9,10,11,12



INVENTEC

TITLE **ONTARIO-SL**
EMI

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV 000
-------------------	-------------------	--------------------------------	-------------------

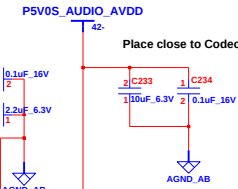
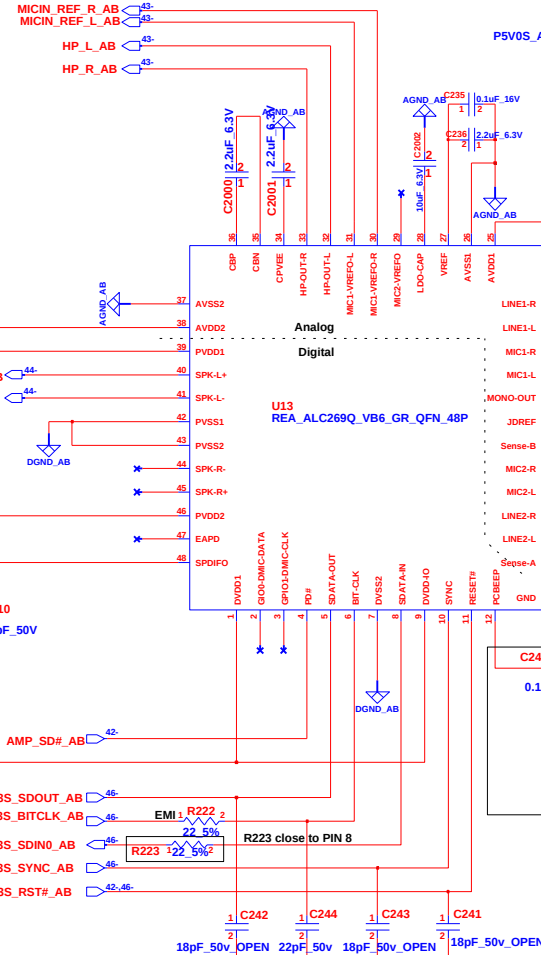
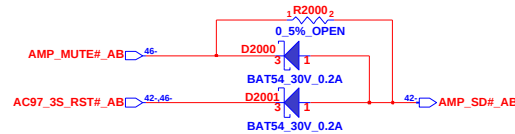
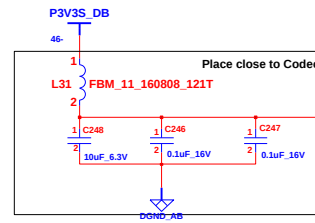
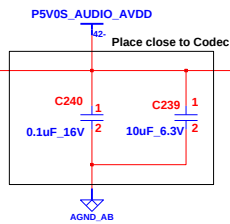
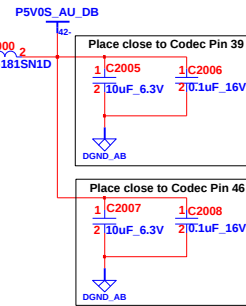
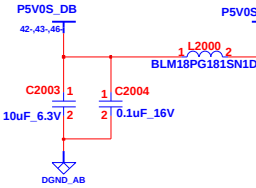
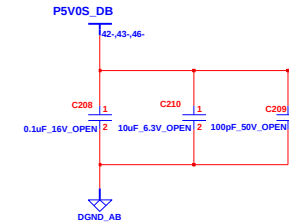
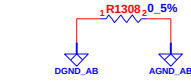
CHANGE by *Drawer Name* 21-Sep-2011

SHEET 40 OF 46

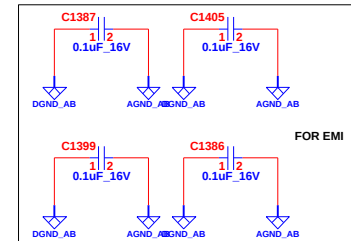
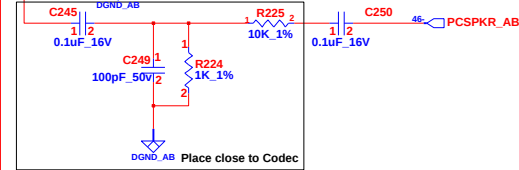
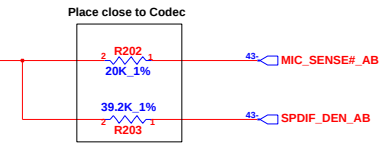
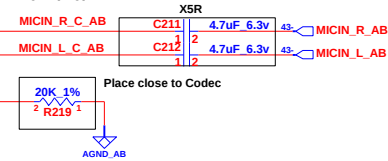
[illegible]

CODEC

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



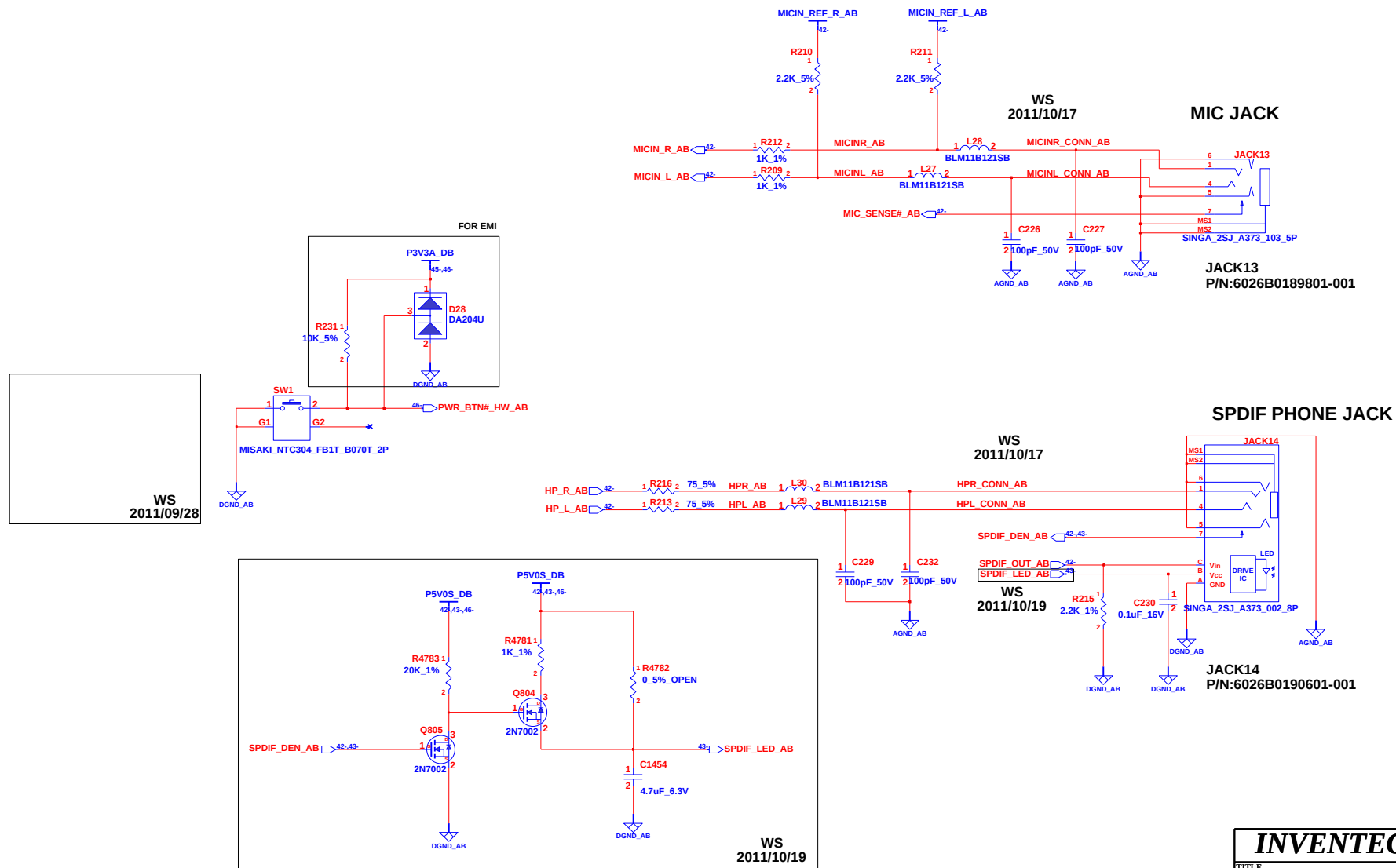
WS
2011/10/17



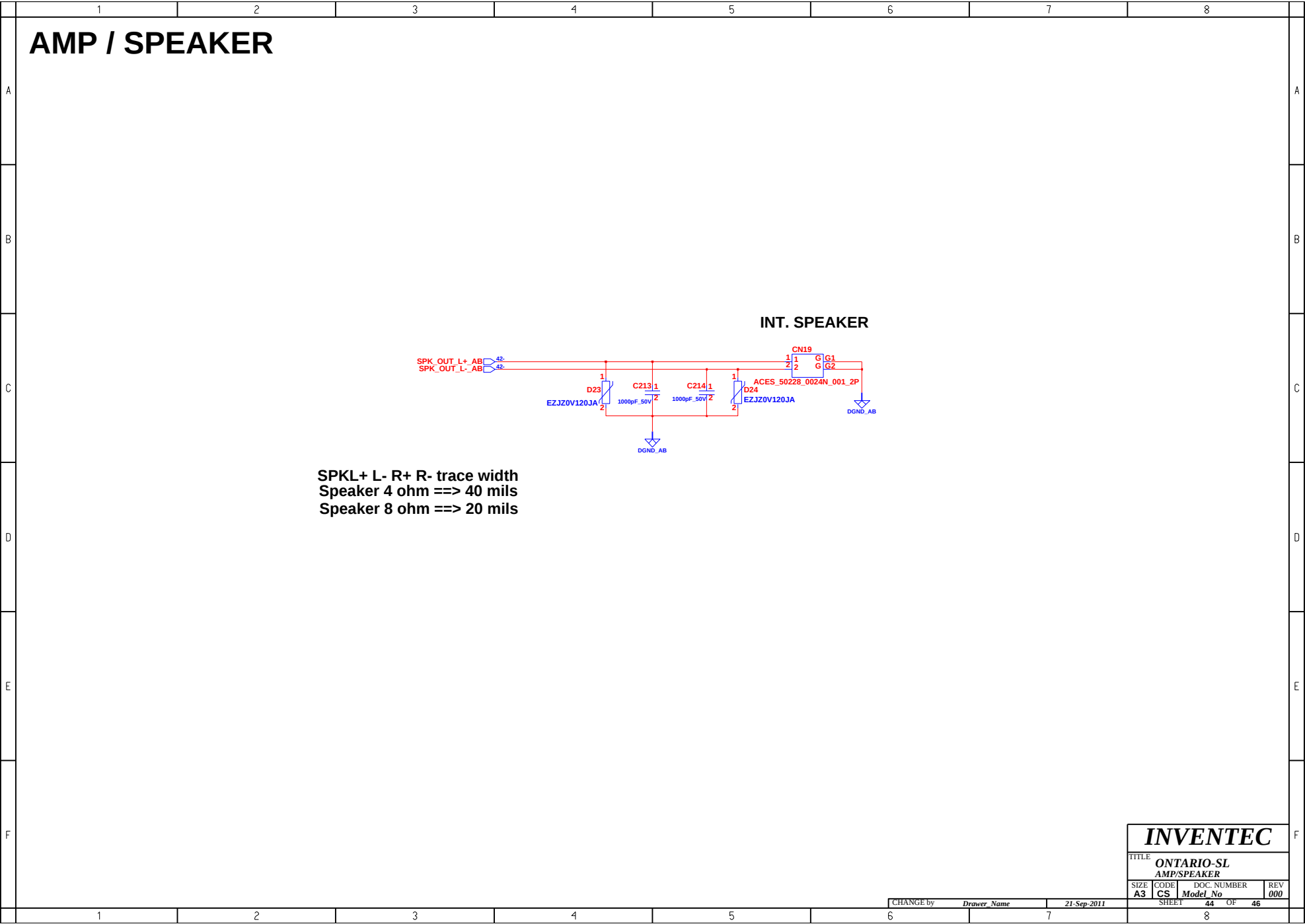
INVENTEC			
TITLE			
ONTARIO-SL			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET			
42 OF 46			

CHANGE by *Drawn Name* 21-Sep-2011

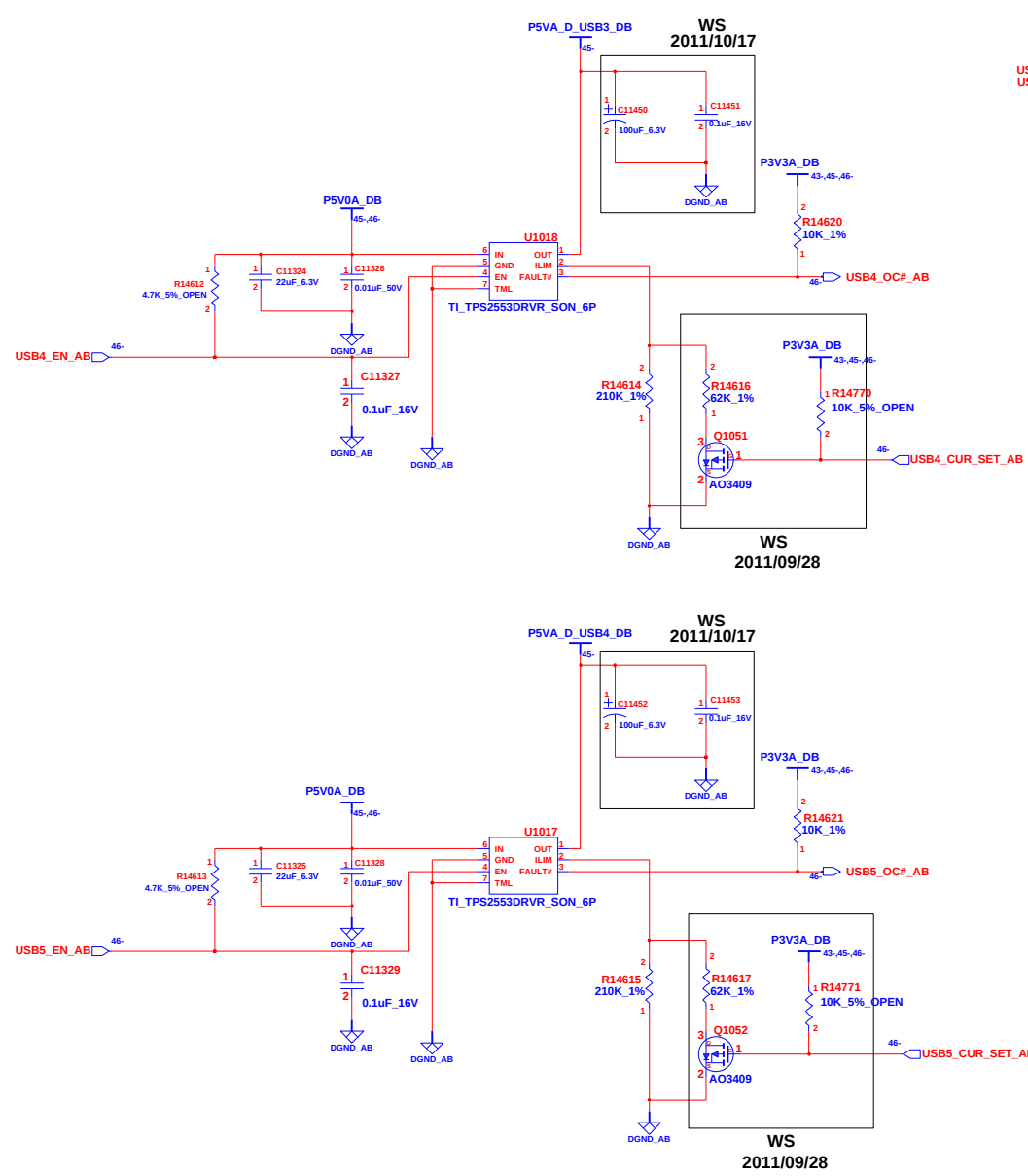
AUDIO JACK / POWER SW



INVENTEC			
TITLE: ONTARIO-SL AUDIO JACK / POWER SW			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV 000
CHANGE by		21-Sep-2011	
SHEET		43	OF 46



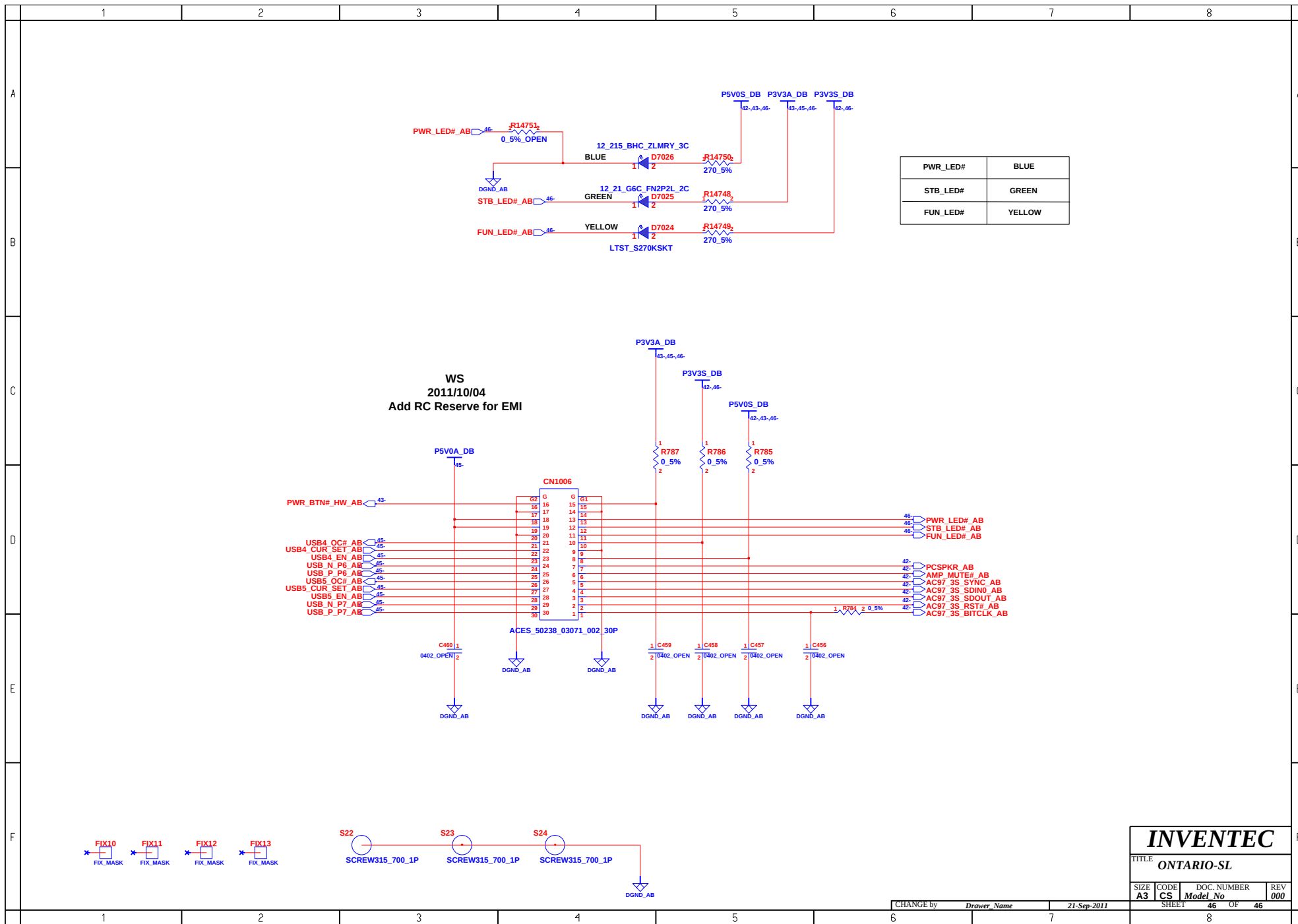
USB CONN



INVENTEC

TITLE			
ONTARIO-SL			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000
SHEET		45	OF 46

CHANGE by *Drawer Name* 21-Sep-2011



INVENTEC

TITLE ONTARIO-SL

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	000

CHANGE by Drawer Name 21-Sep-2011

SHEET 46 OF 46