

MANAUS 10AD

A02 Build

2010.03.17

INVENTEC

TITLE
Manaus10AD

SIZE A3	CODE CS	DOC. NUMBER I310A2357401	REV X01
-------------------	-------------------	------------------------------------	-------------------

CHANGE by **Eddy, Chen** 17-Mar-2010

SHEET 1 OF 43

TABLE OF CONTENTS

PAGE

1. COVER PAGE
2. INDEX
3. BLOCK DIAGRAM
4. POWER SEQUENCE BLOCK
5. PCB
6. SYSTEM POWER
7. SYSTEM POWER
8. SYSTEM POWER
9. SYSTEM POWER
10. SYSTEM POWER
11. SYSTEM POWER
12. SYSTEM POWER
13. SUPER I/O(KBC)
14. K/B & TP/B CONN
15. FAN & THERMAL
16. LAN
17. RJ45 & TRANSFORMER
18. AUDIO CODEC
19. SPDIF & MIC & HP
20. CARD READER
21. LCM
22. RGB CONN
23. SATA HDD & ODD
24. USB
25. WLAN
26. LID SW
27. LED
28. DDR2 DIMM0
29. DDR2 DIMM1
30. CPU 1

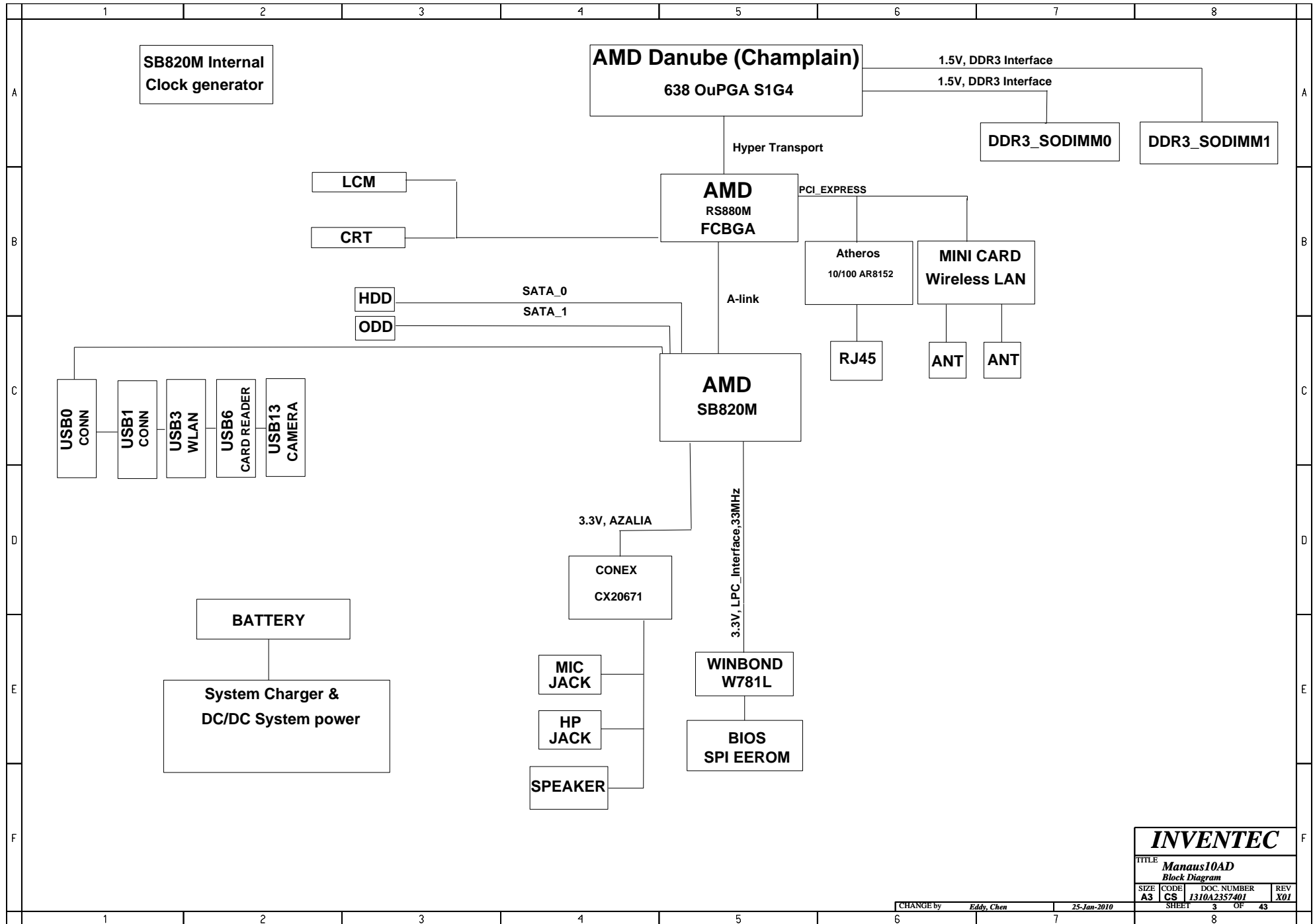
PAGE

31. CPU 2
32. CPU 3
33. CPU 4
34. N/B 1
35. N/B 2
36. N/B 3
37. N/B 4
38. S/B 1
39. S/B 2
40. S/B 3
41. S/B 4
42. EMI
43. POWER BOARD (DB)

INVENTEC

TITLE			
Manaus10AD Index			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
SHEET		2	OF 43

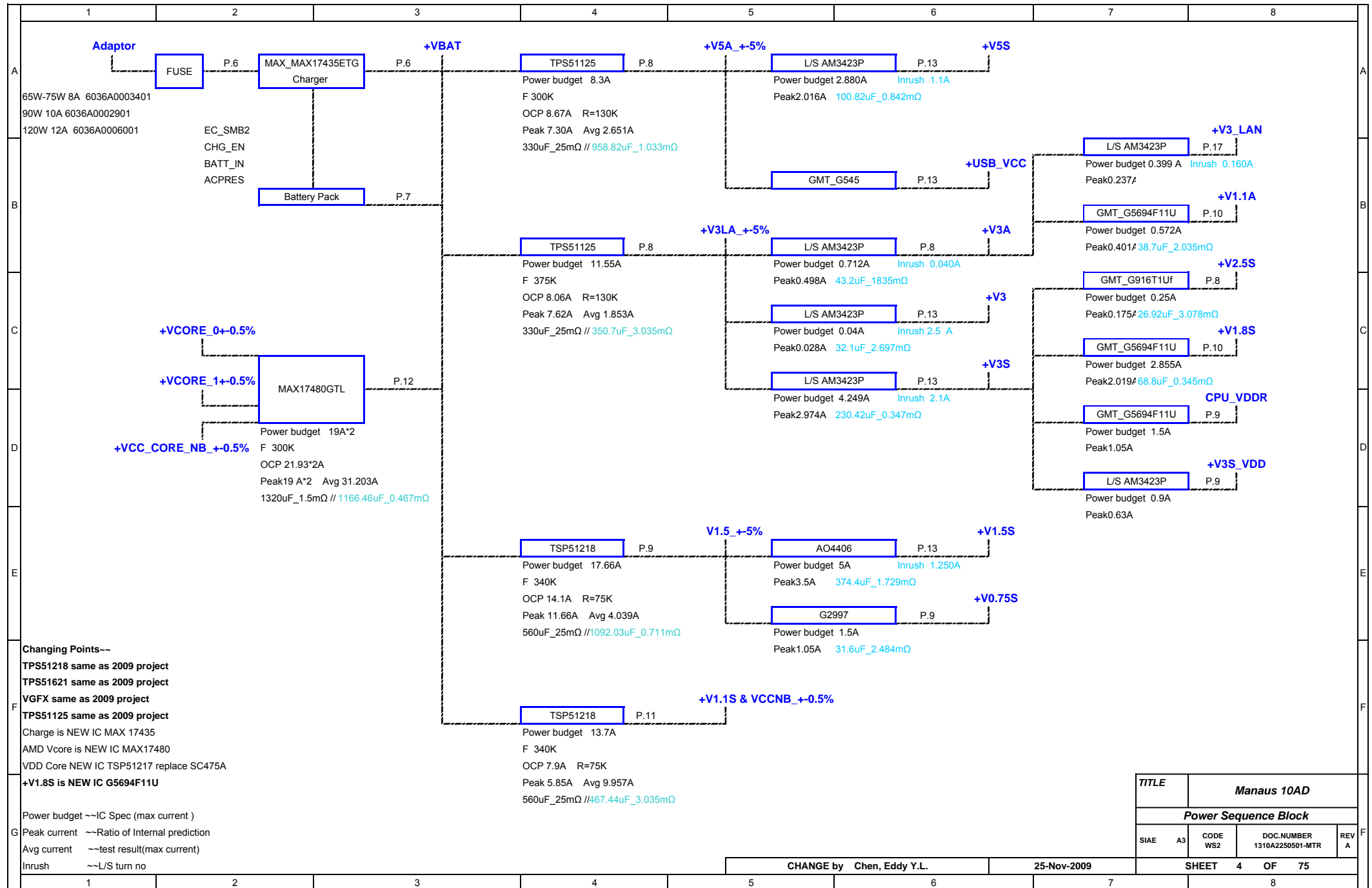
CHANGE by Eddy, Chen 25-Jan-2010

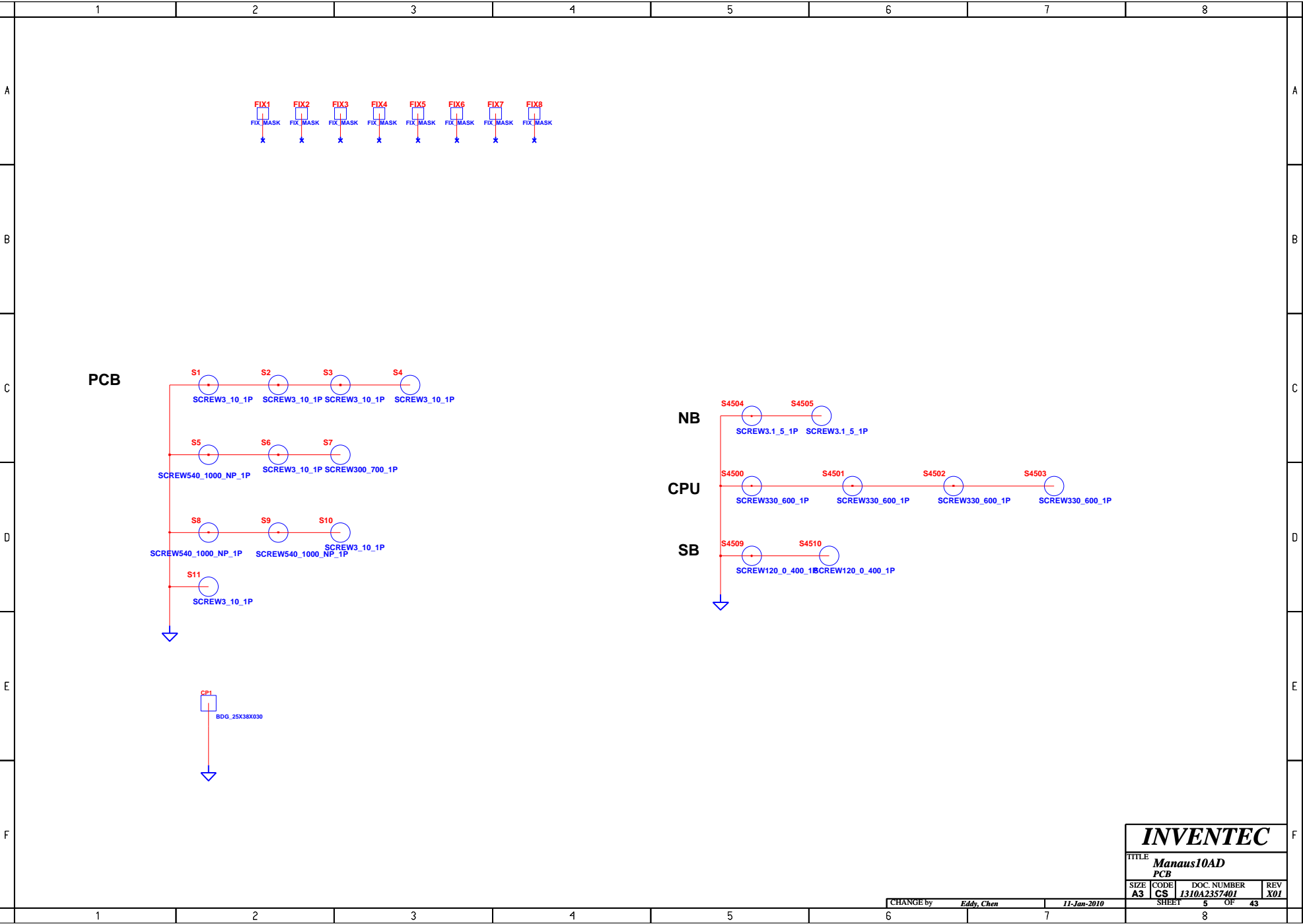


INVENTEC

TITLE			
Manaus10AD			
Block Diagram			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
SHEET		3	OF 43

CHANGE by Eddy, Chen 25-Jan-2010





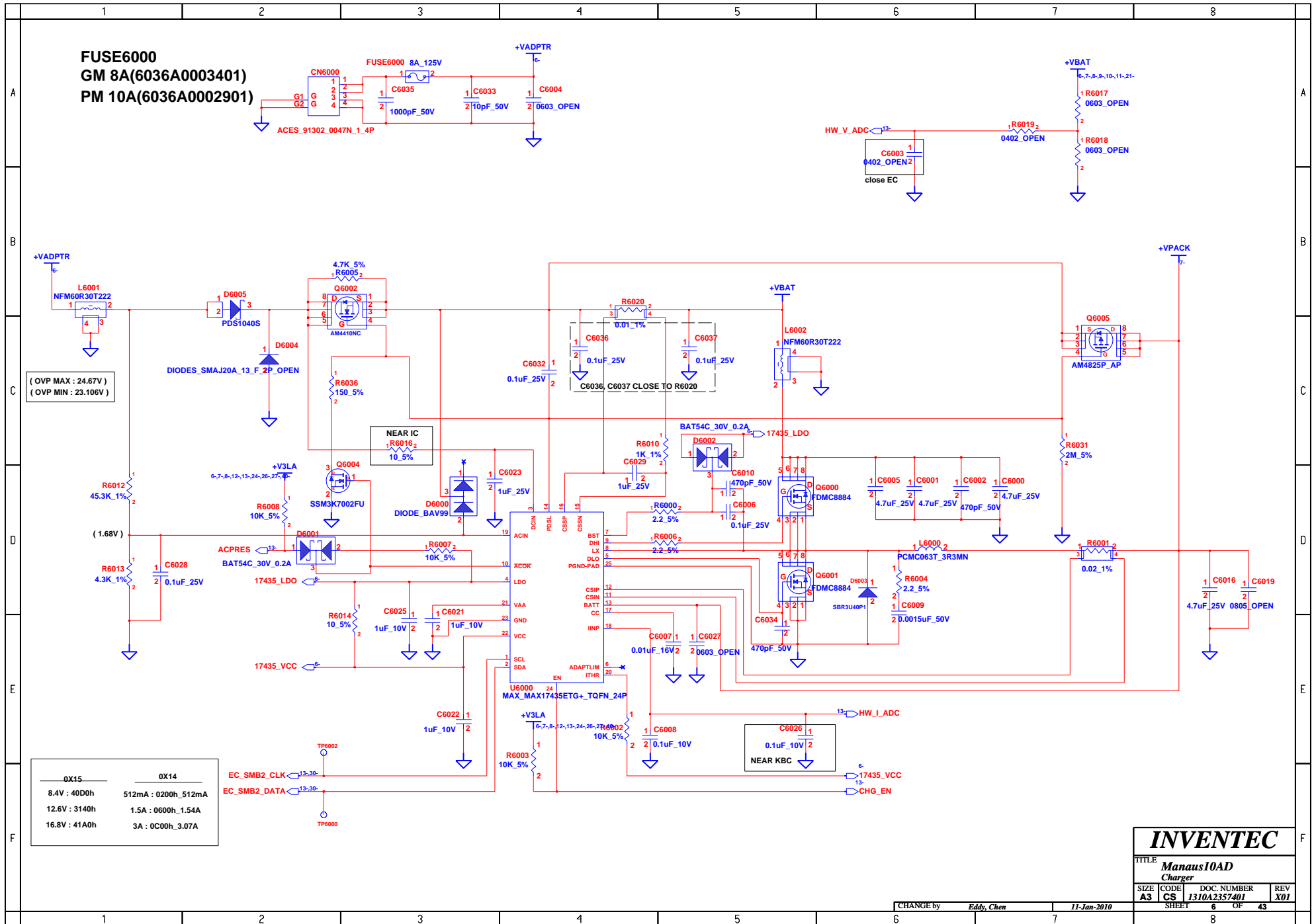
INVENTEC

TITLE
Manaus10AD
PCB

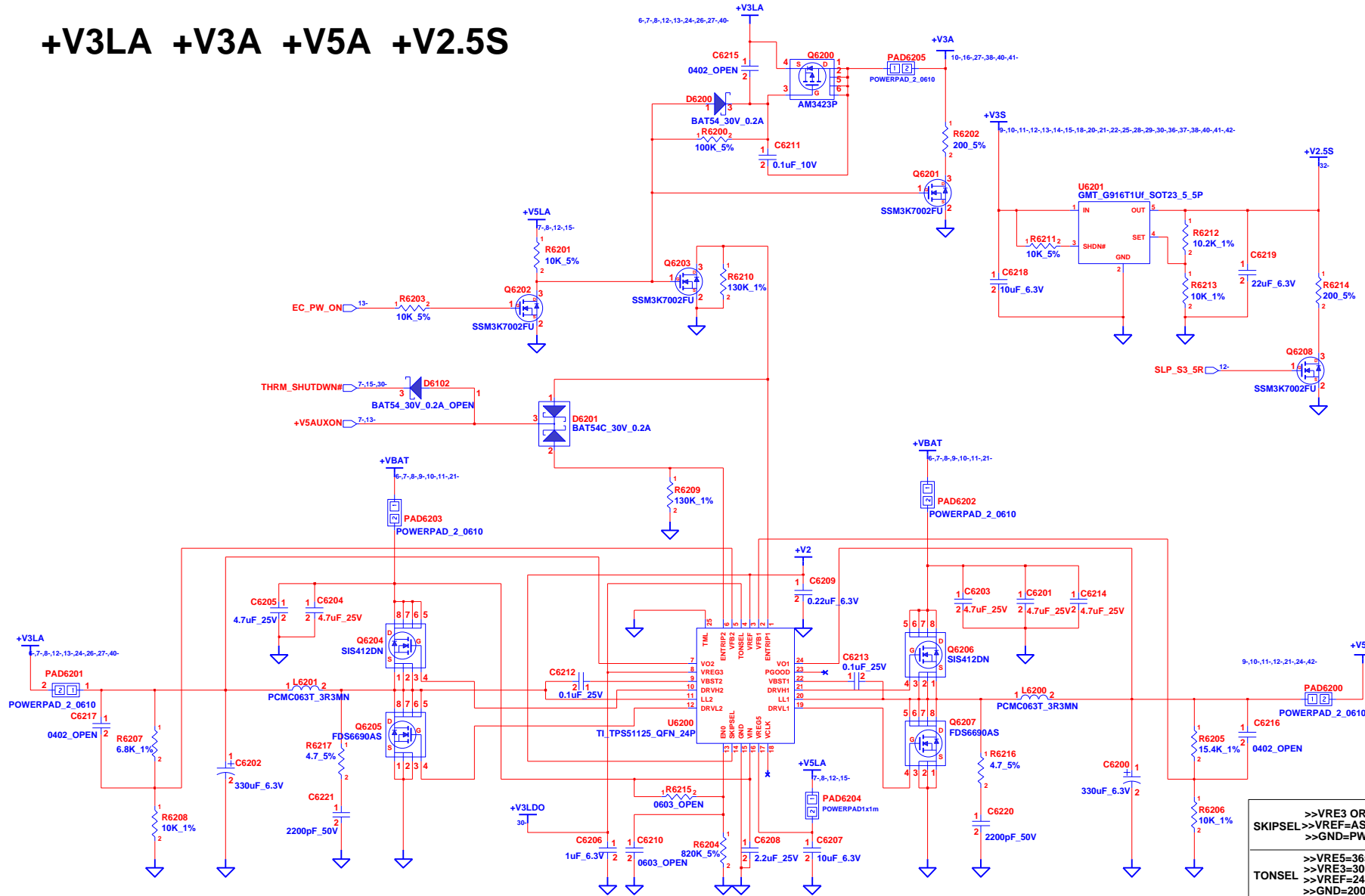
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by *Eddy, Chen* 11-Jan-2010

SHEET 5 OF 43



+V3LA +V3A +V5A +V2.5S

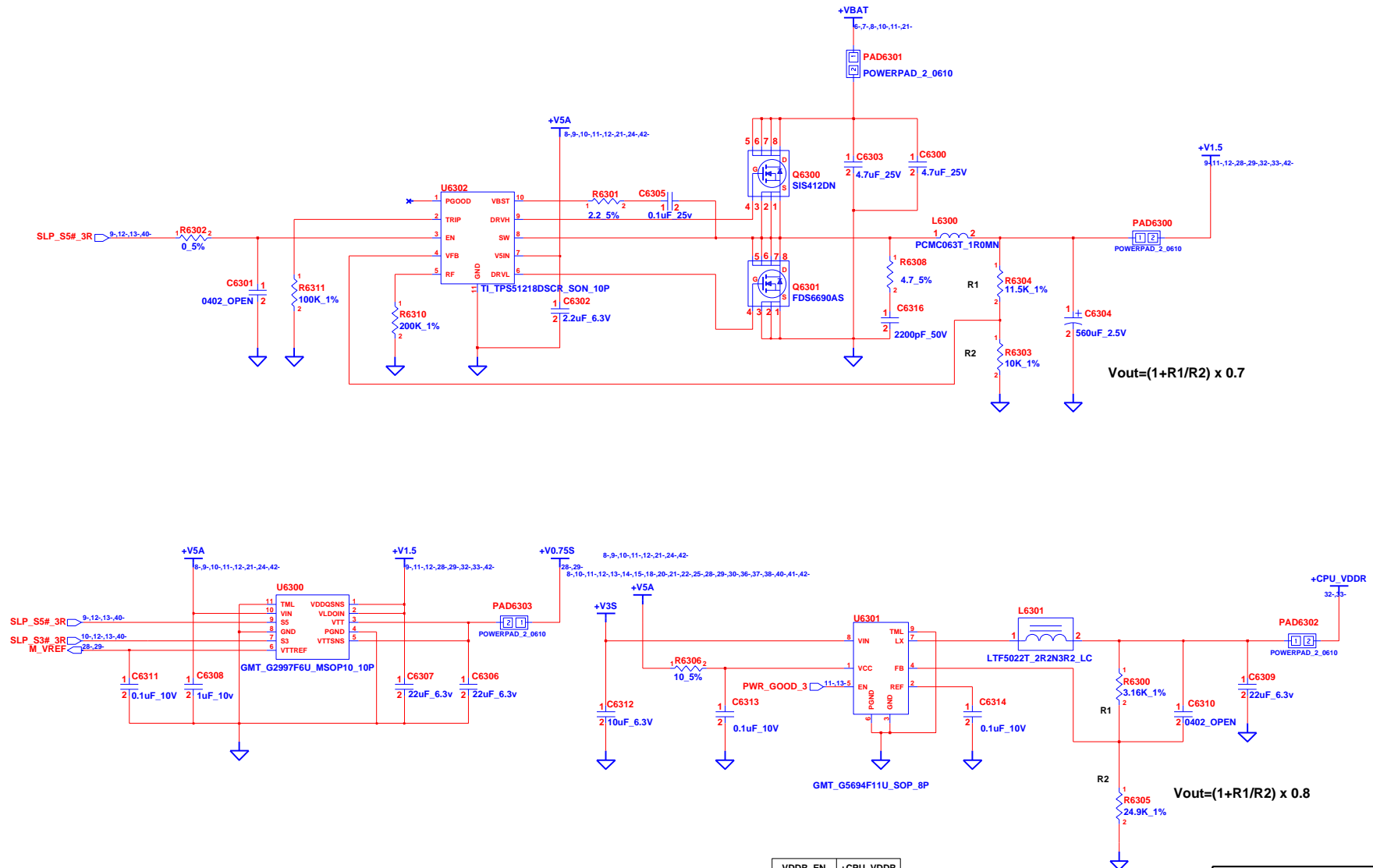


>>VRE3 OR VRE5=OOA
 SKIPSEL>>VREF=ASKIP
 >>GND=PWM
 >>VRE5=365/460
 >>VRE3=300/375
 TONSEL
 >>VREF=245/305
 >>GND=200/250

INVENTEC			
TITLE			
Manaus10AD			
+V3LA, +V3A, +V5A, +V2.5S			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
SHEET		8	OF 43

CHANGE by Eddy, Chen 11-Jan-2010

+CPU_VDDR +V0.75 +V1.5



VDDR_EN	+CPU_VDDR
0	0.9V
1	1.05V

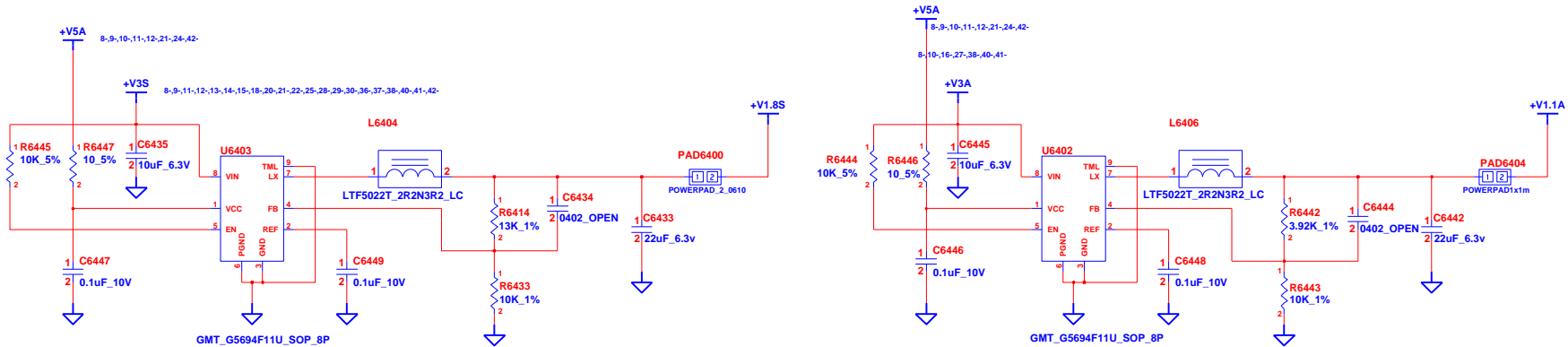
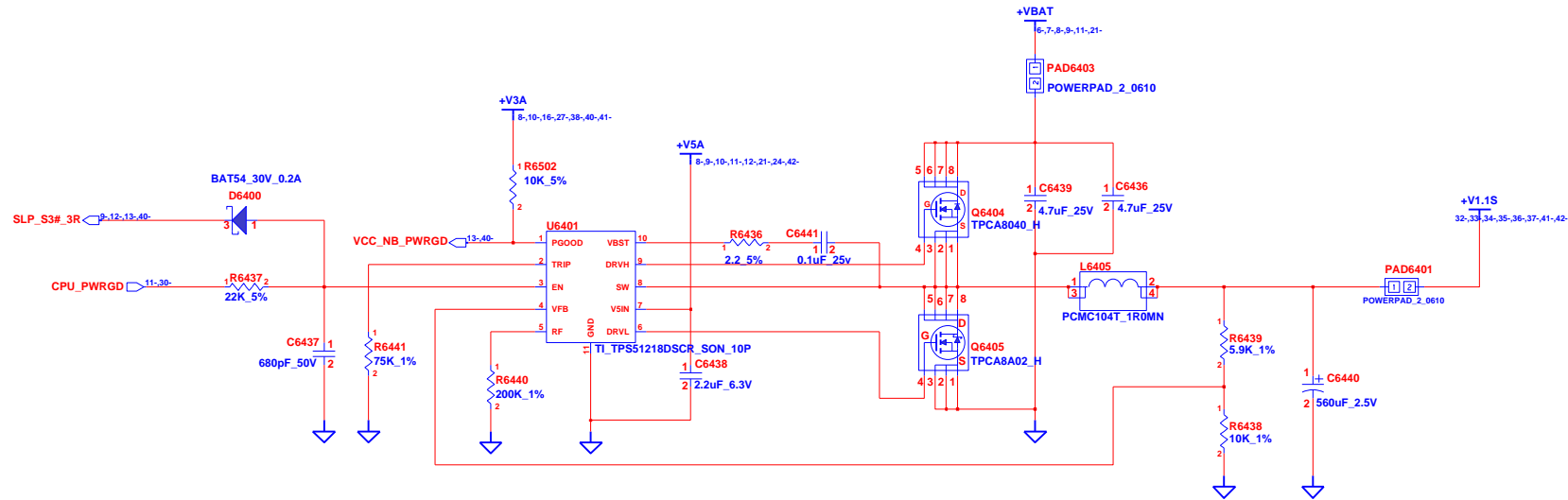
INVENTEC

TITLE			
Manaus10AD			
+CPU_VDDR, +V0.75, +V1.5			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 9 OF 43

+V1.1A +V1.1S +V1.8S



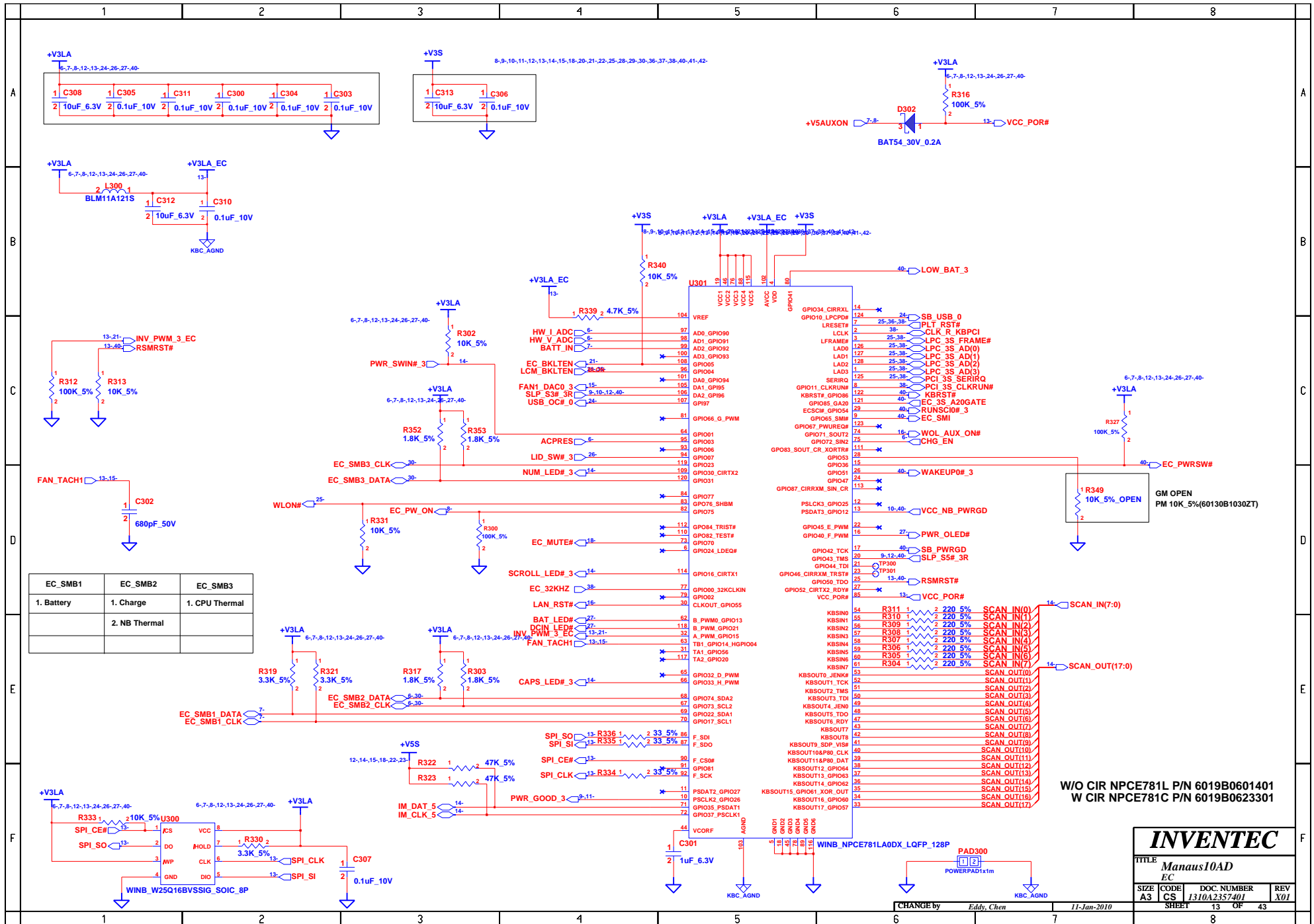
INVENTEC

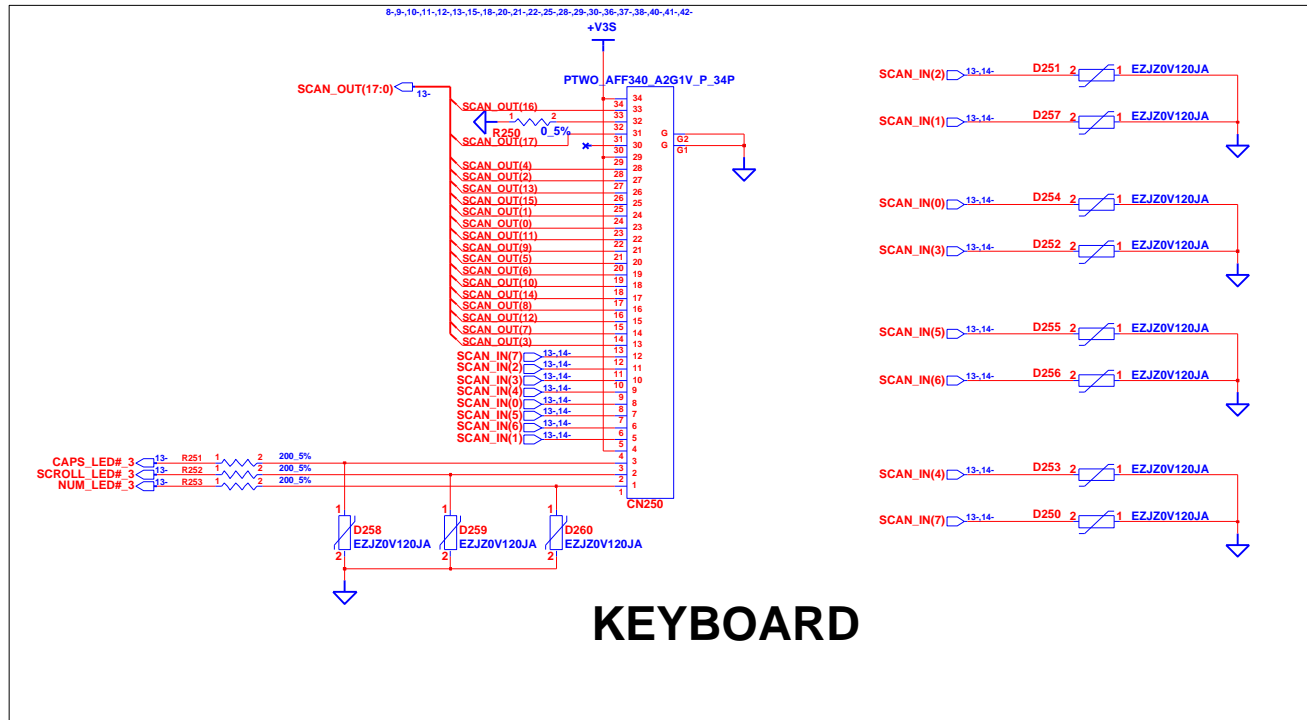
TITLE
Manaus10AD
+V1.1A, +V1.1S, +V1.8S

SIZE A3	CODE CS	DOC. NUMBER 1310A2337401	REV X01
-------------------	-------------------	------------------------------------	-------------------

CHANGE by **Eddy, Chen** 11-Jan-2010

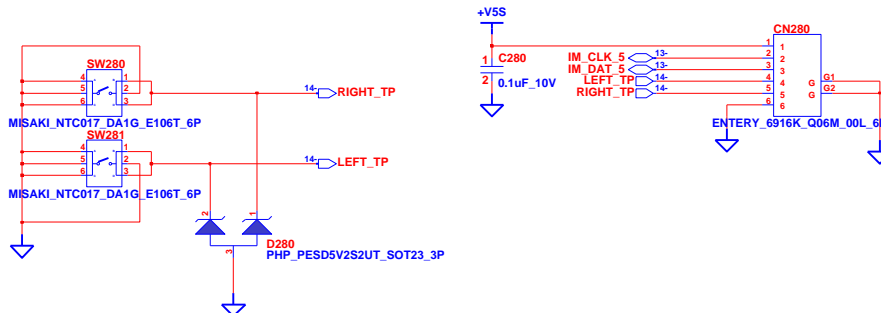
SHEET 10 OF 43



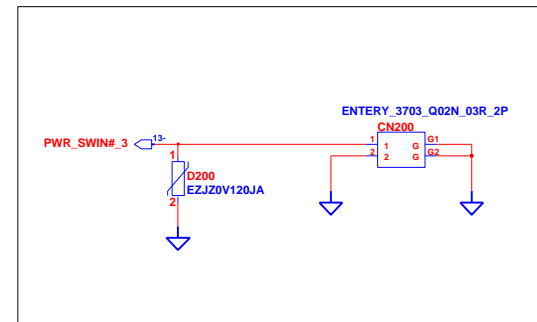


KEYBOARD

Touchpad



POWER BOARD CONNECTOR



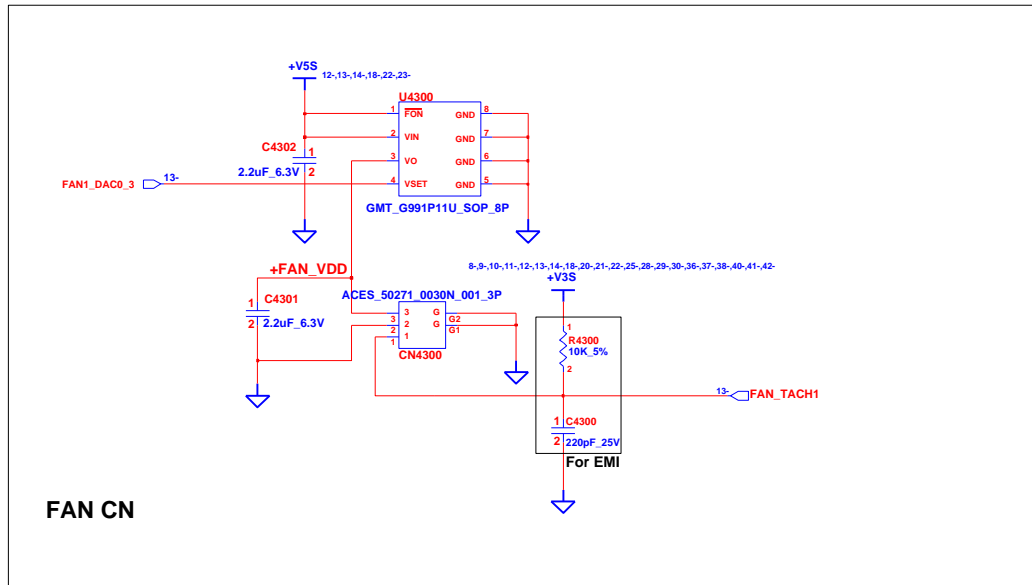
INVENTEC

TITLE
Manaus10AD
Keyboard, Touch PAD

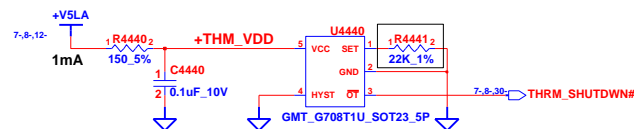
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2337401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 14 OF 43



Board Thermal Sensor

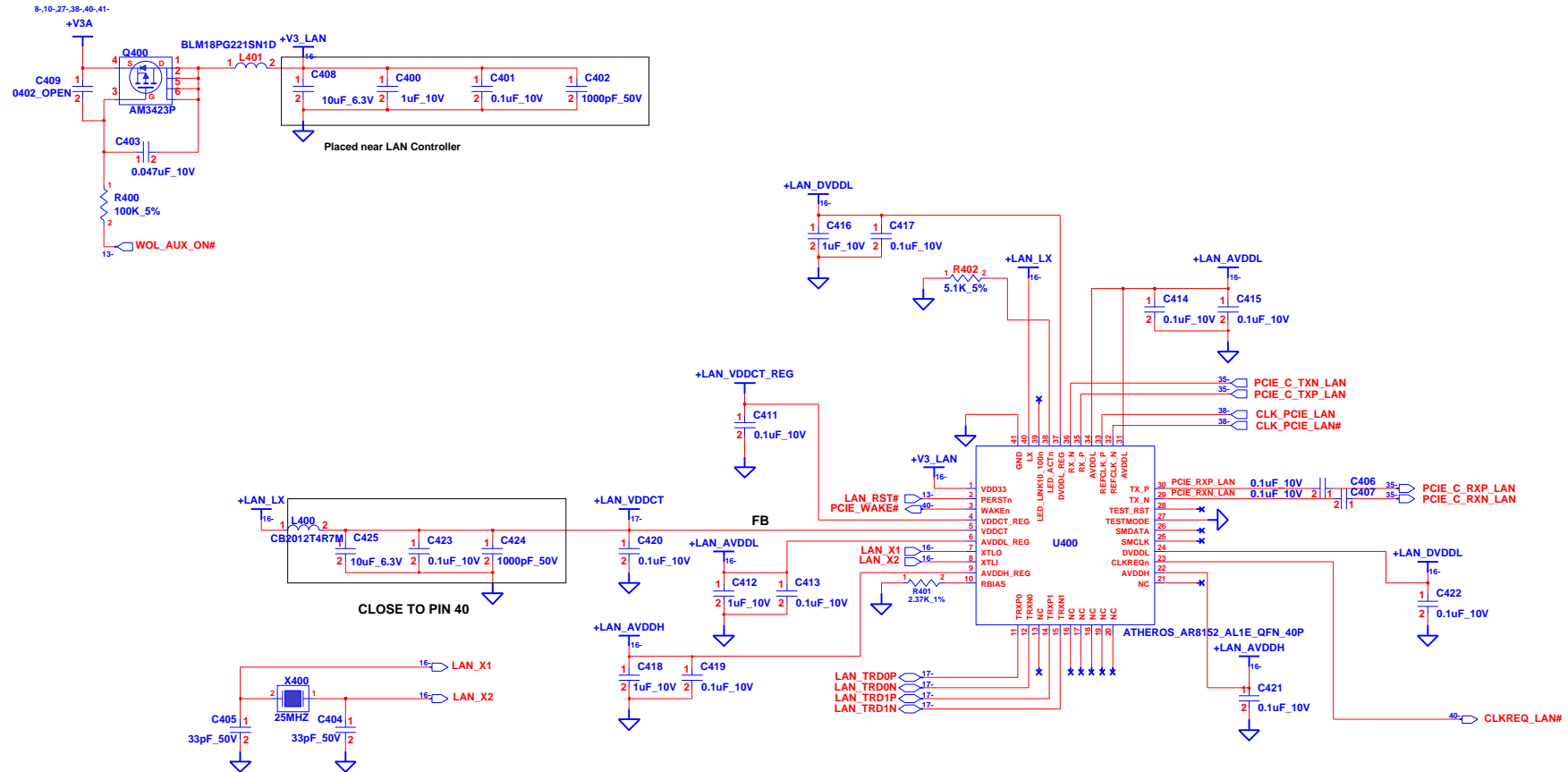


Thermal shutdown at 90 C° +/- 3 C° from 60 C° to 100 C°

$$RSET = 0.0012 * T^2 - 0.9308 * T + 96.147$$

Hysteresis is 30C

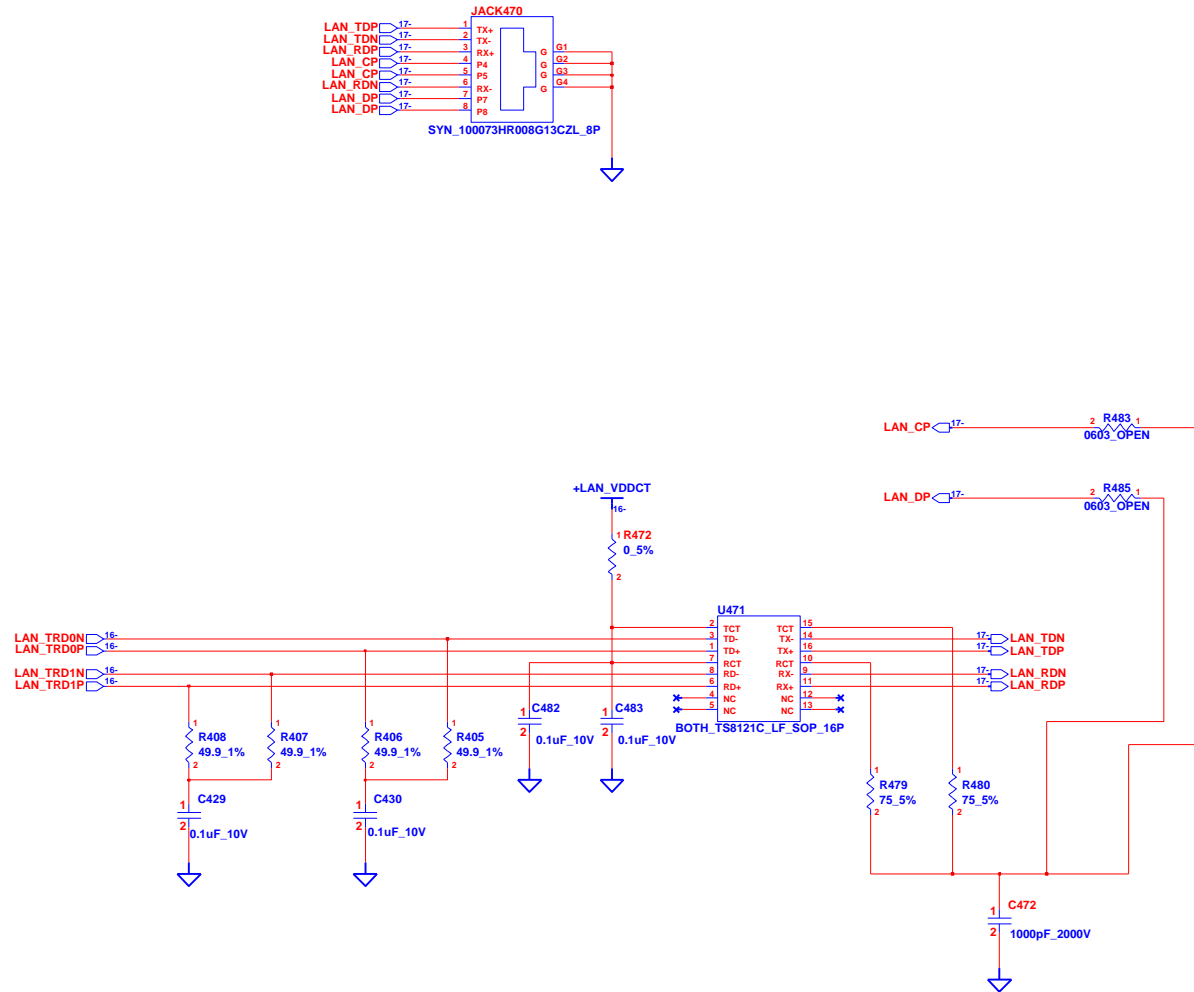
INVENTEC			
TITLE			
Manaus10AD			
FAN, Thermal controller			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
CHANGE by		11-Jan-2010	
Eddy, Chen			
SHEET		15	OF 43



INVENTEC

TITLE			
Mana10AD			
LAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by	Eddy, Chen	11-Jan-2010	SHEET	16	OF	43
-----------	------------	-------------	-------	----	----	----



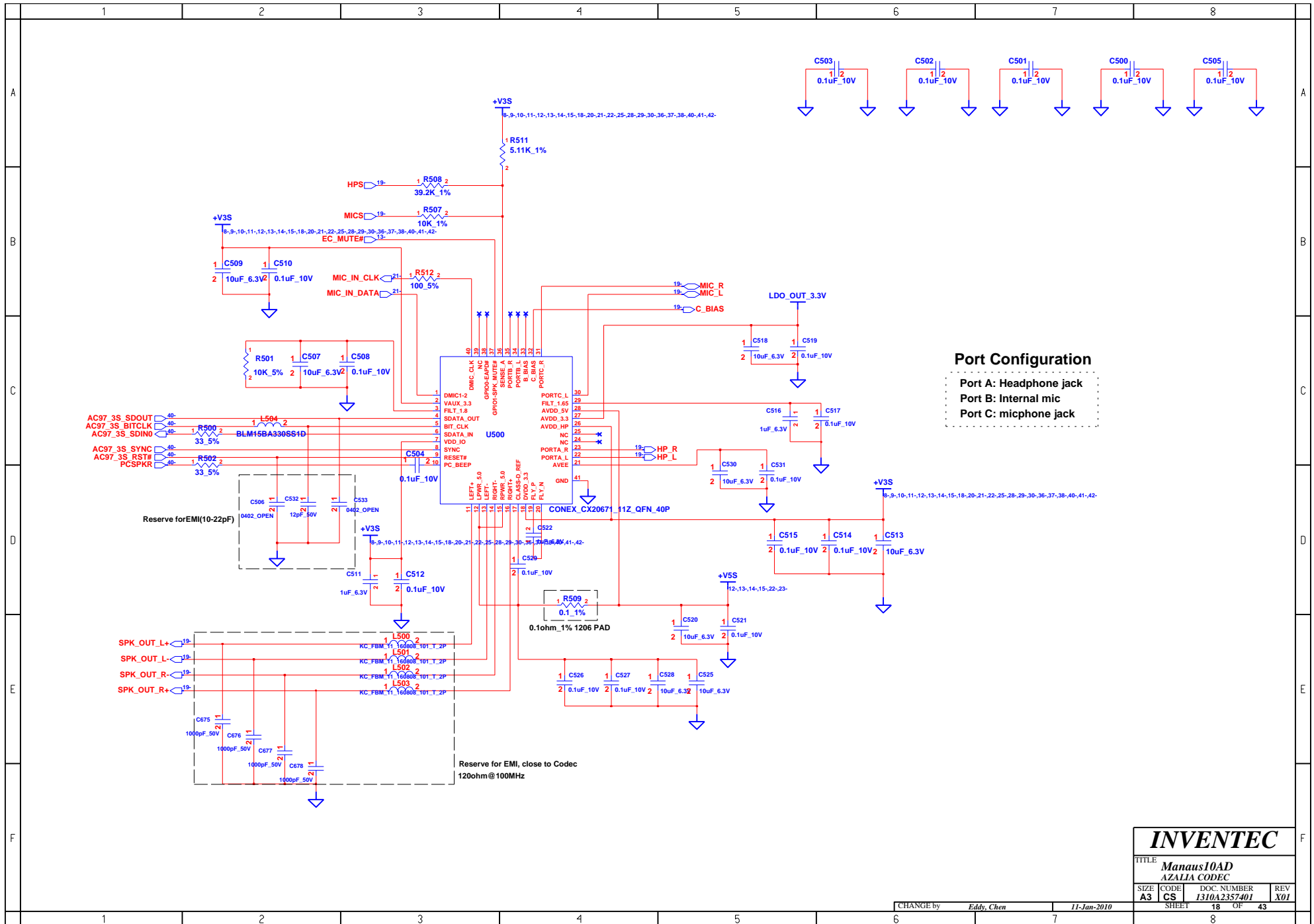
INVENTEC

TITLE
Manaus10AD
Transformer, RJ45

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 17 OF 43

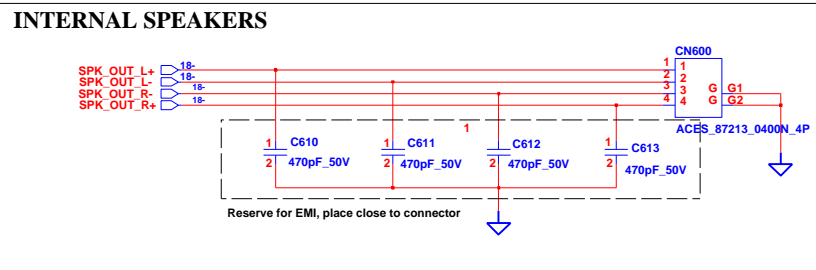


INVENTEC

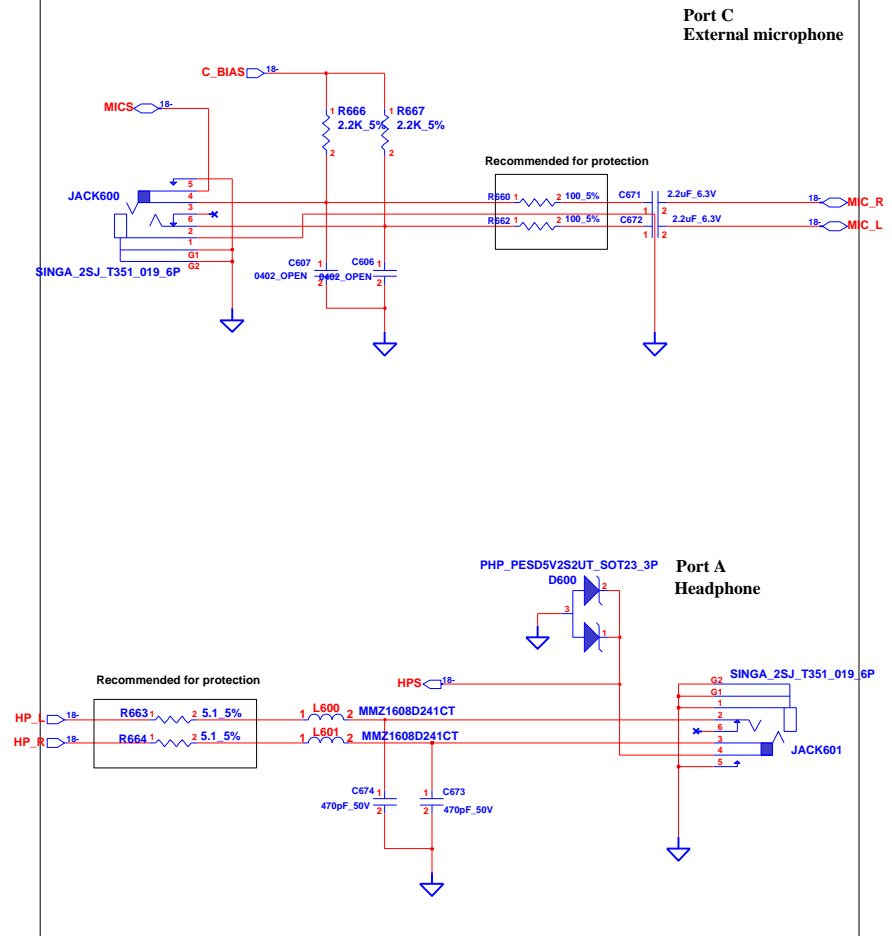
TITLE			
Mana10AD AZALIA CODEC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 18 OF 43



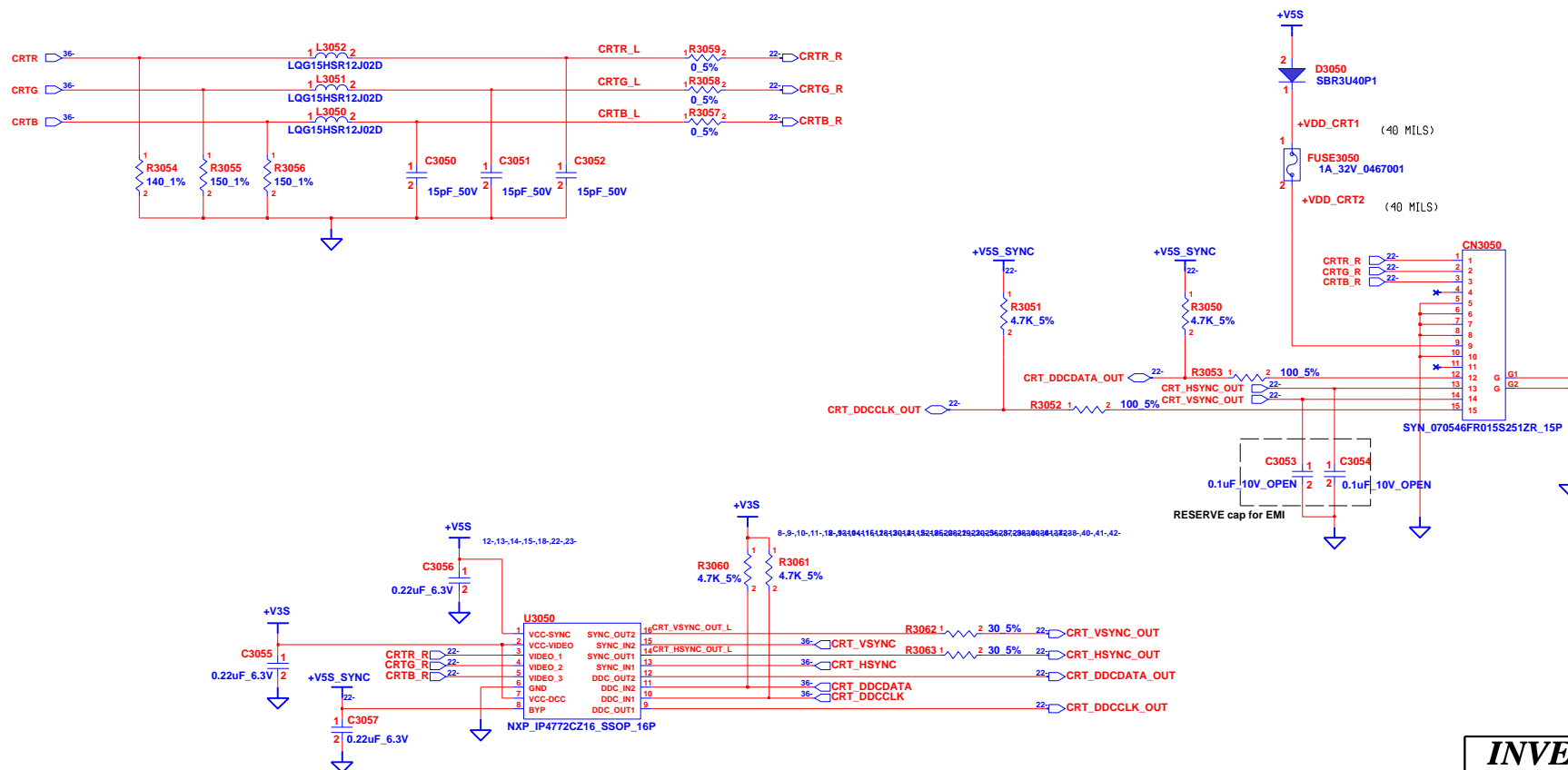
AUDIO JACKS



INVENTEC			
TITLE			
Manaus10AD			
MIC & SPEAKER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 19 OF 43



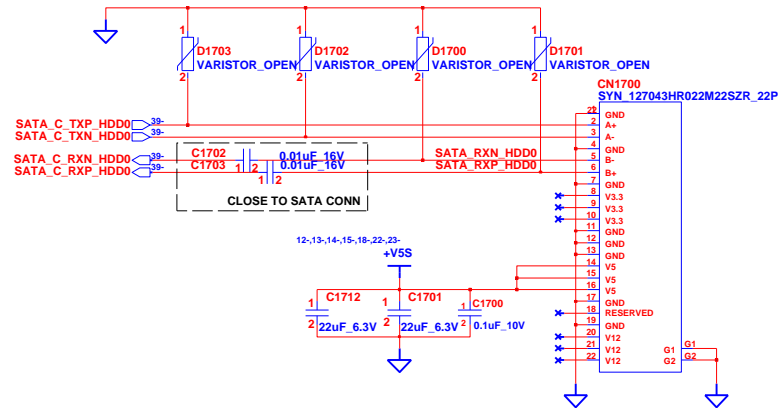
INVENTEC

TITLE
Mana10AD
CRT

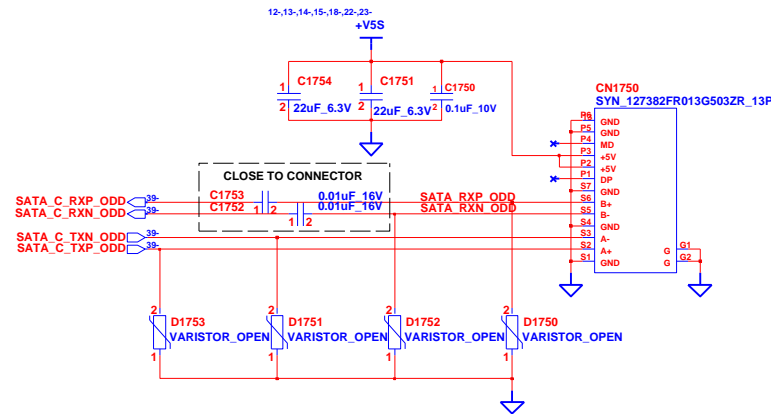
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2337401	X01

CHANGE by *Eddy, Chen* 11-Jan-2010

SHEET 22 OF 43



SATA HDD0



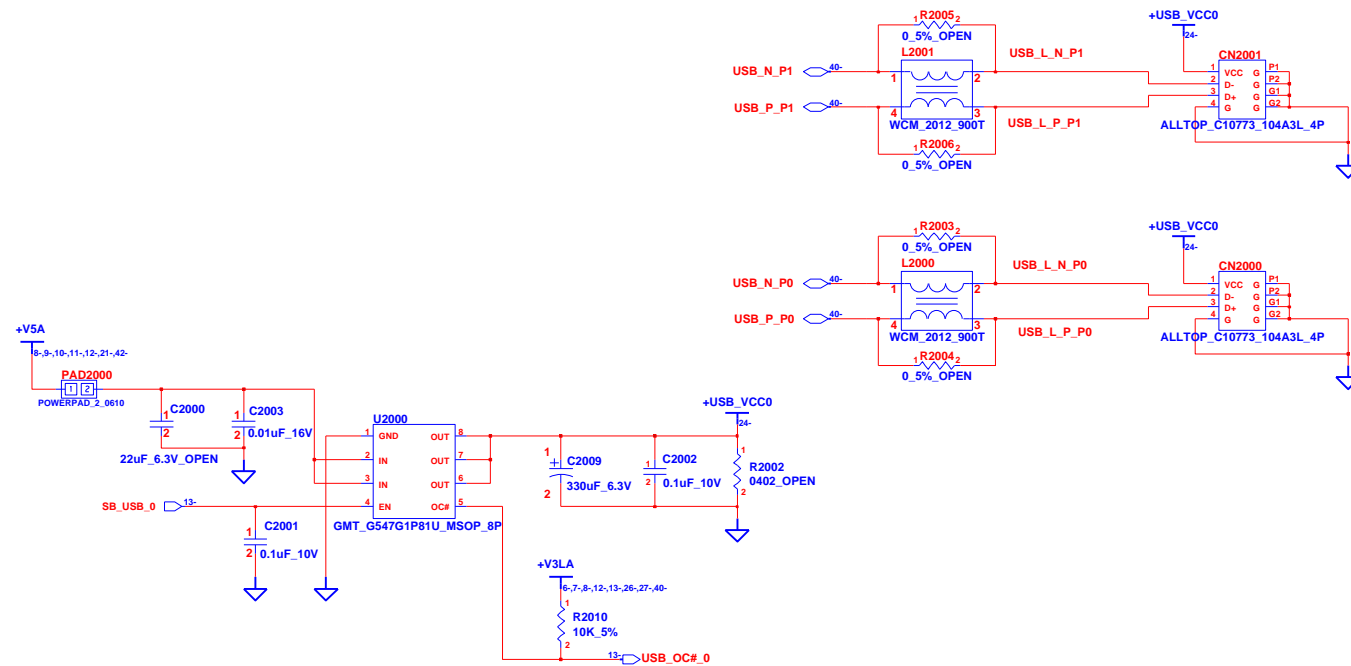
SATA ODD

INVENTEC

TITLE			
Manaus10AD			
SATA HDD, SATA ODD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 23 OF 43



INVENTEC

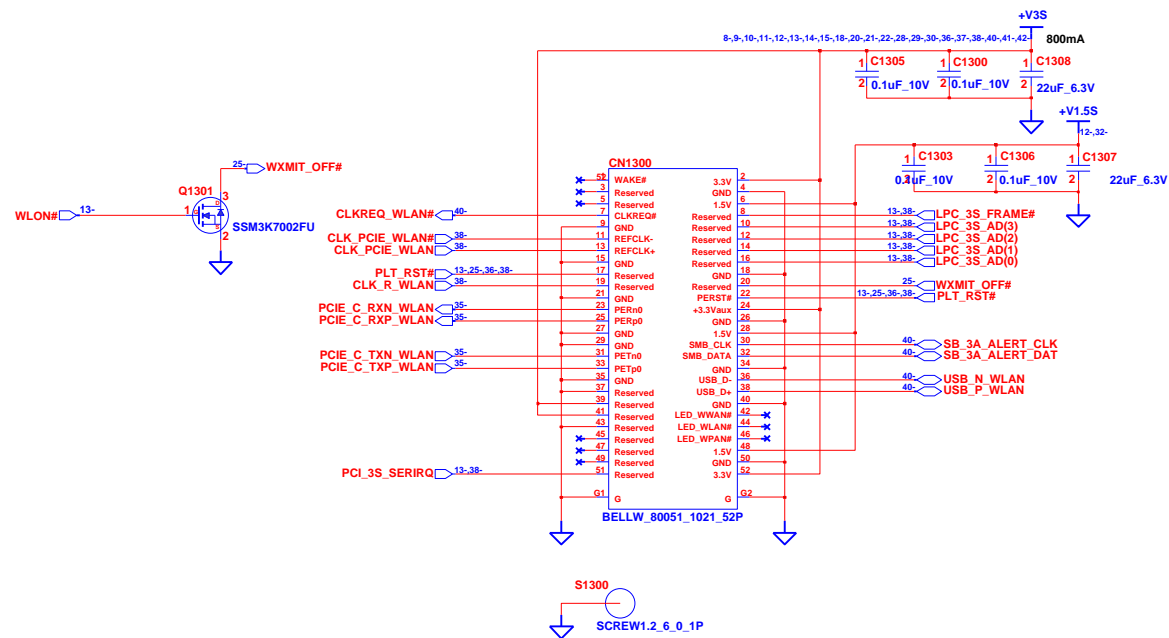
TITLE
Manaus10AD
e-SATA

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 11-Jan-2010

SHEET 24 OF 43

Wireless & Debug card

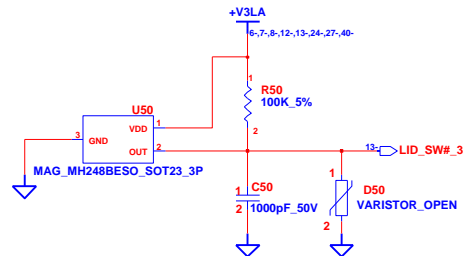


INVENTEC

TITLE			
Manaus10AD			
WLAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
SHEET		25	OF 43

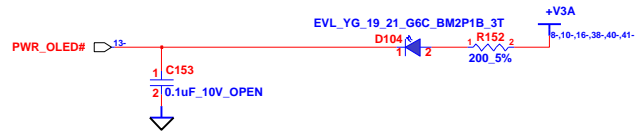
CHANGE by Eddy, Chen 11-Jan-2010

HALL SENSOR

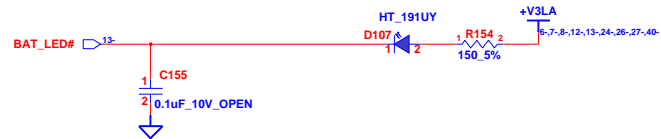
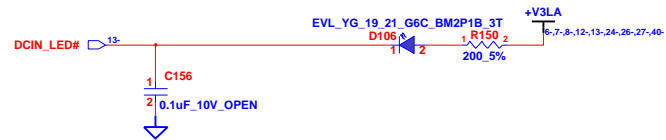


INVENTEC			
TITLE			
Manaus10AD			
HALL SENSOR			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01
CHANGE by		11-Jan-2010	
Eddy, Chen			
SHEET		26	OF 43

POWER LED



BATTERY LED

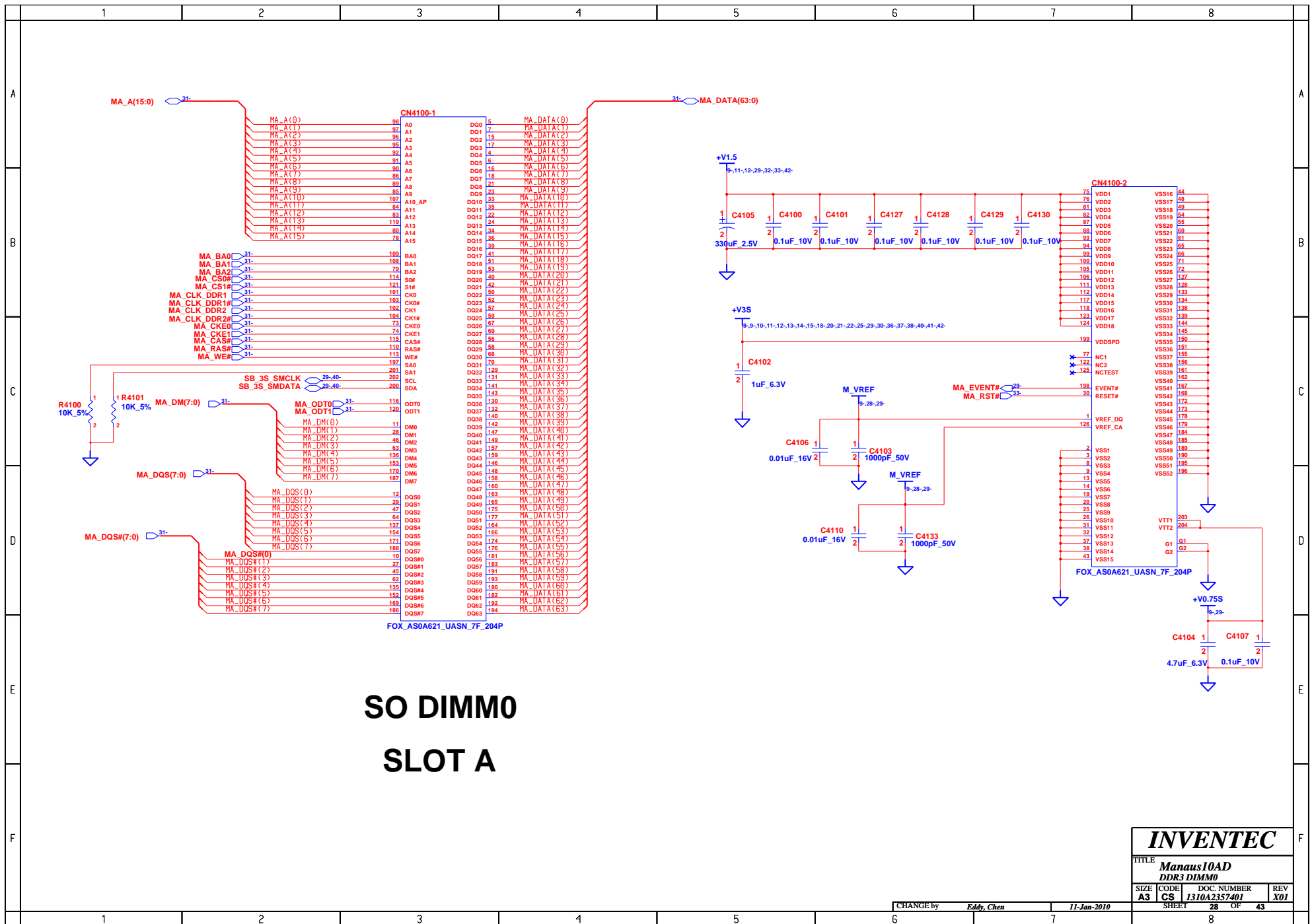


INVENTEC

TITLE
**Manaus10AD
LED**

SIZE A3	CODE CS	DOC. NUMBER 1310A2337401	REV X01
SHEET		27	OF 43

CHANGE by **Eddy, Chen** 11-Jan-2010

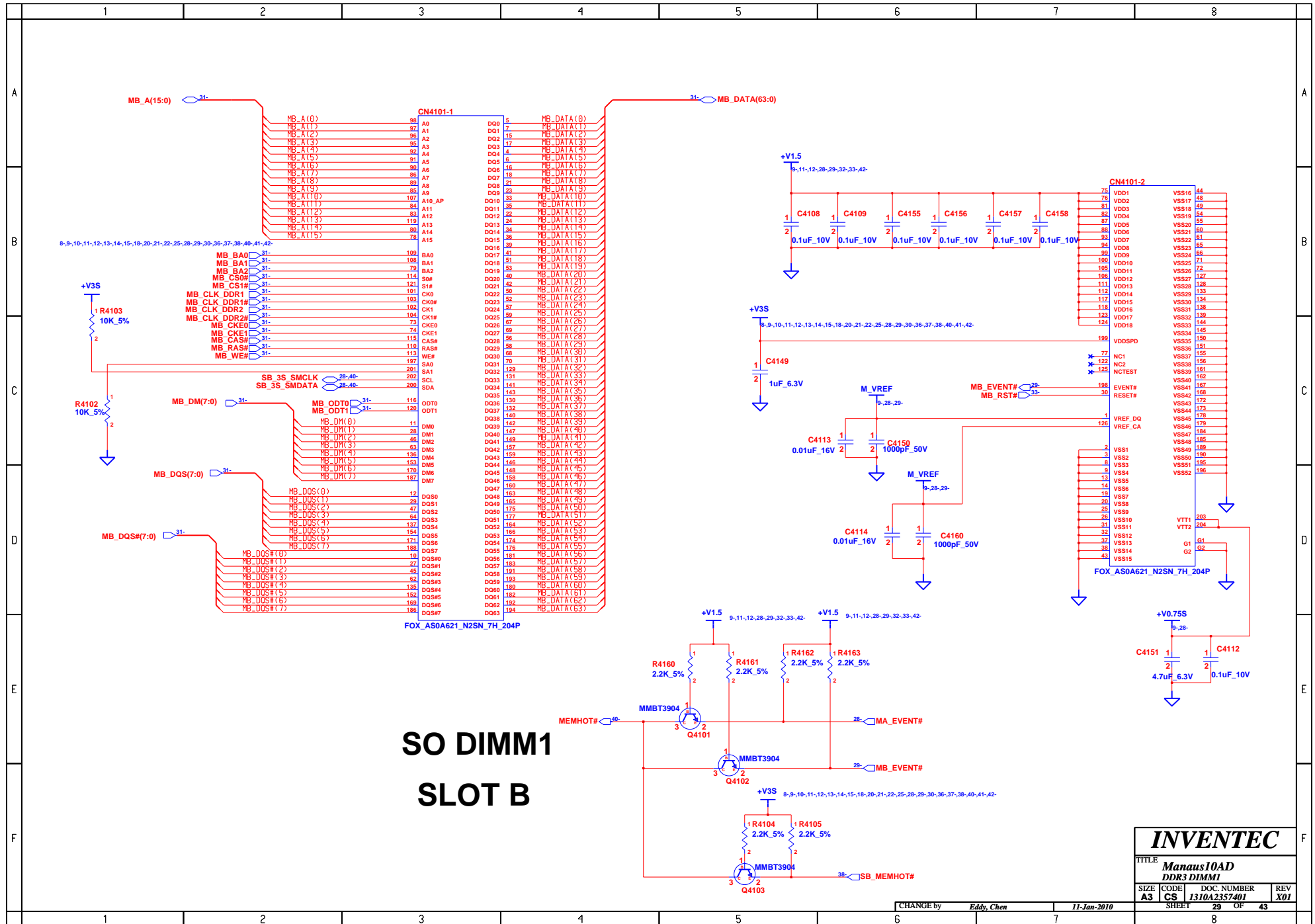


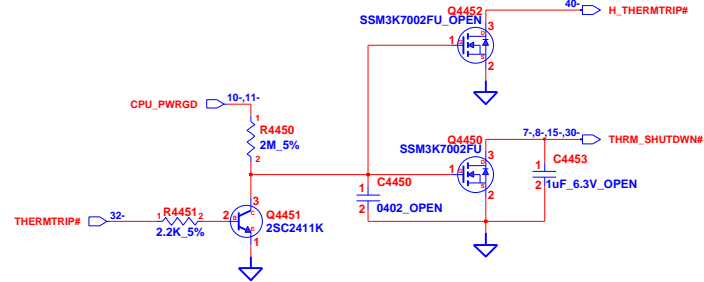
INVENTEC

TITLE
**Manaus10AD
DDR3 DIMM0**

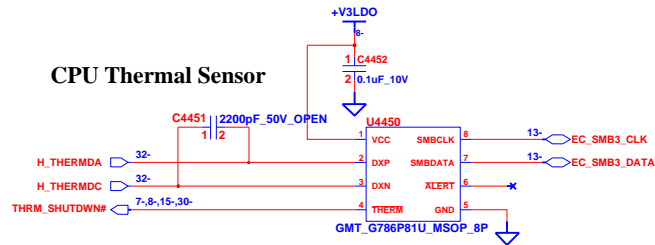
DOC. NUMBER
1310A2357401

REV
X01

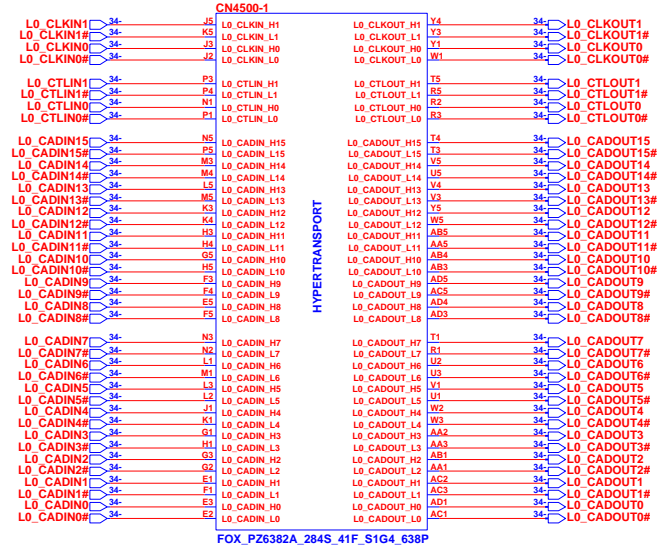
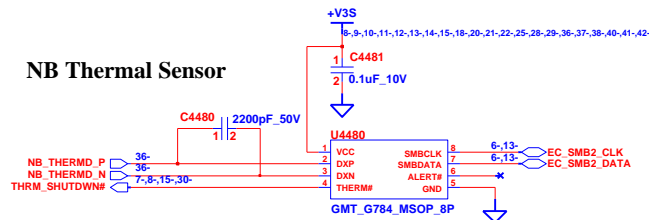




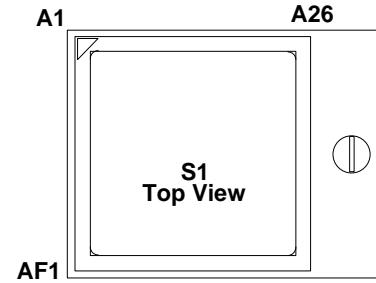
CPU Thermal Sensor



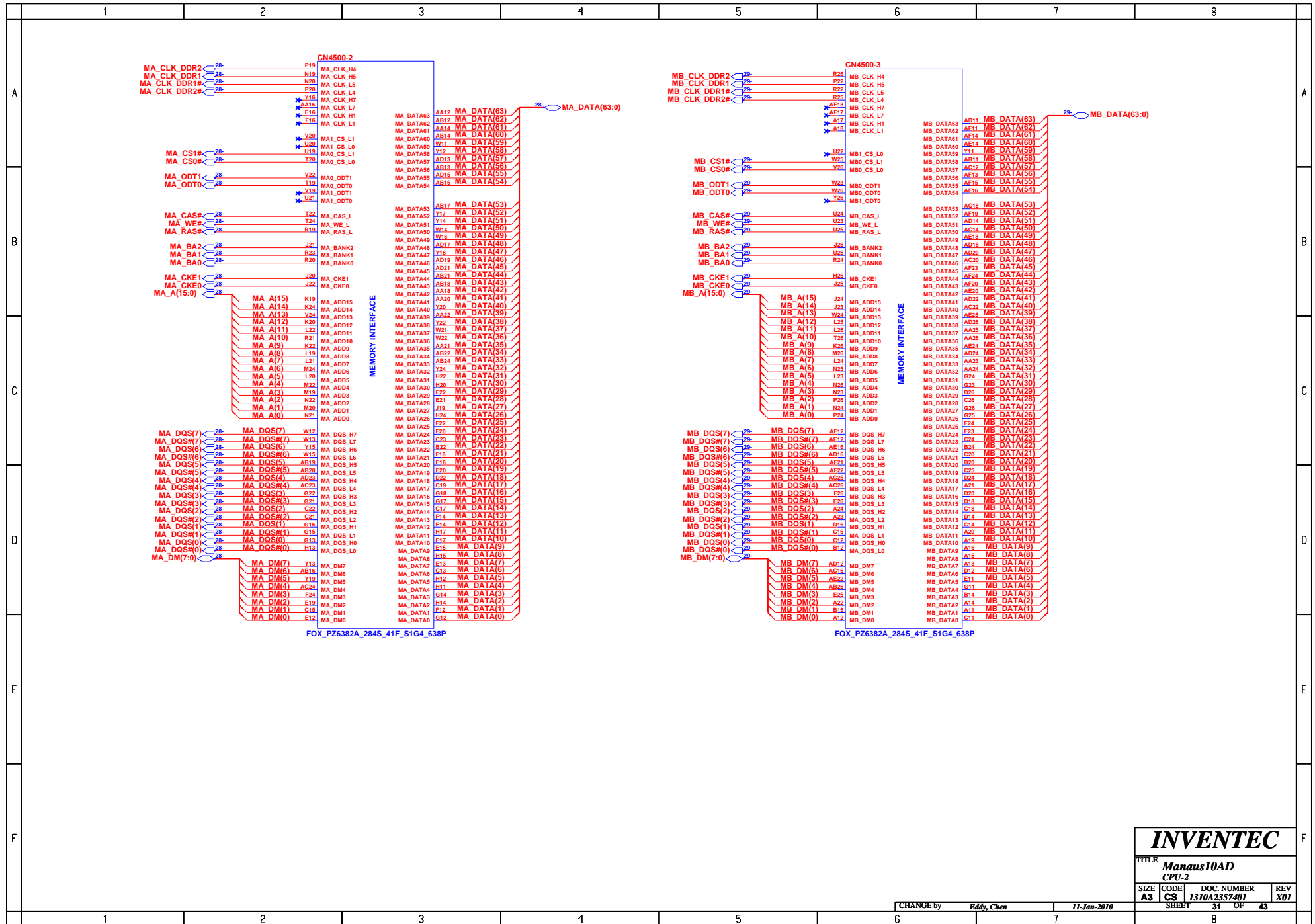
NB Thermal Sensor



Layout: Add stitching caps if crossing plane split.



INVENTEC				
TITLE				
Manaus10AD				
CPU-1				
SIZE	CODE	DOC. NUMBER	REV	
A3	CS	1310A2337401	X01	
CHANGE by		Eddy, Chen		11-Jan-2010
SHEET		30		OF 43



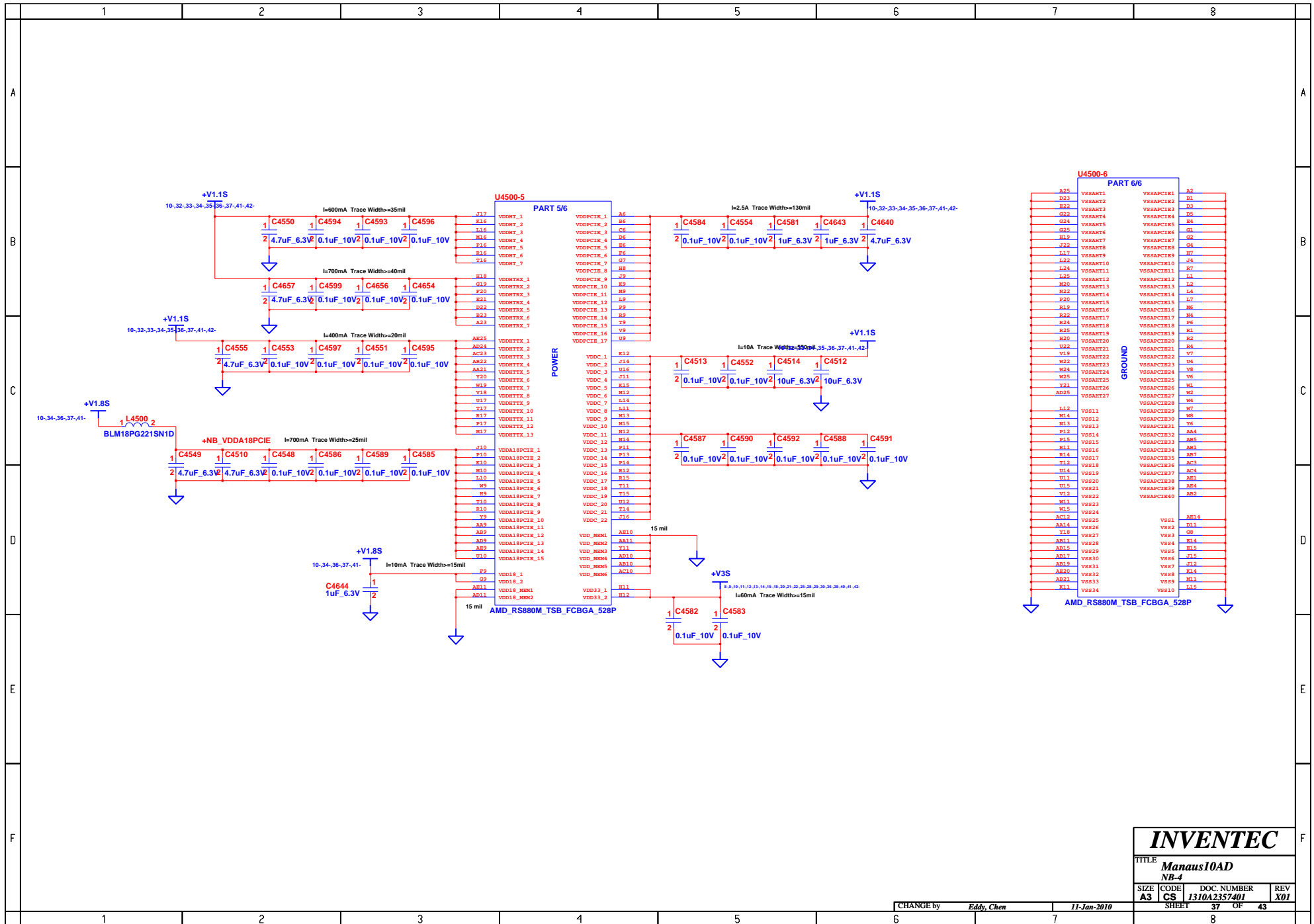
INVENTEC

TITLE
**Manaus10AD
CPU-2**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2337401	X01

CHANGE by **Eddy, Chen** 11-Jan-2010

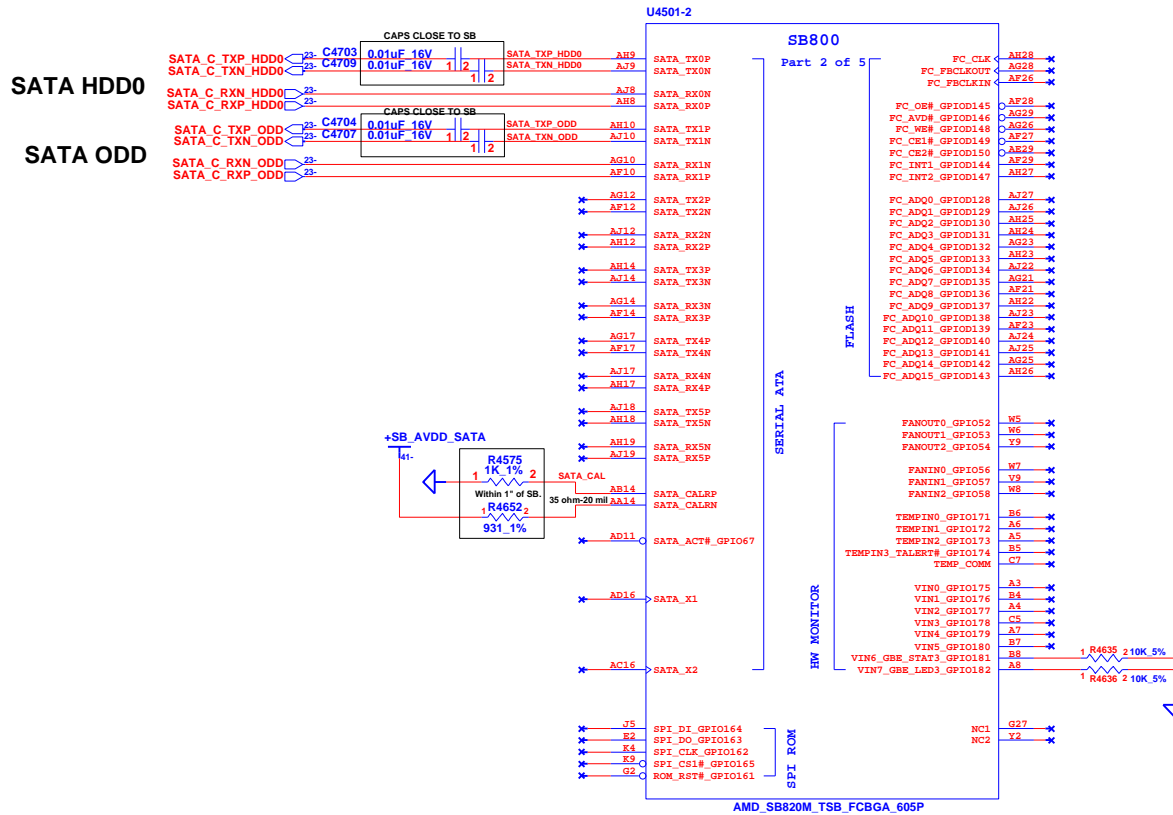
SHEET 31 OF 43



INVENTEC

TITLE			
Manaus10AD			
NB-4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2337401	X01
SHEET		37	OF 43

CHANGE by Eddy, Chen 11-Jan-2010



INVENTEC

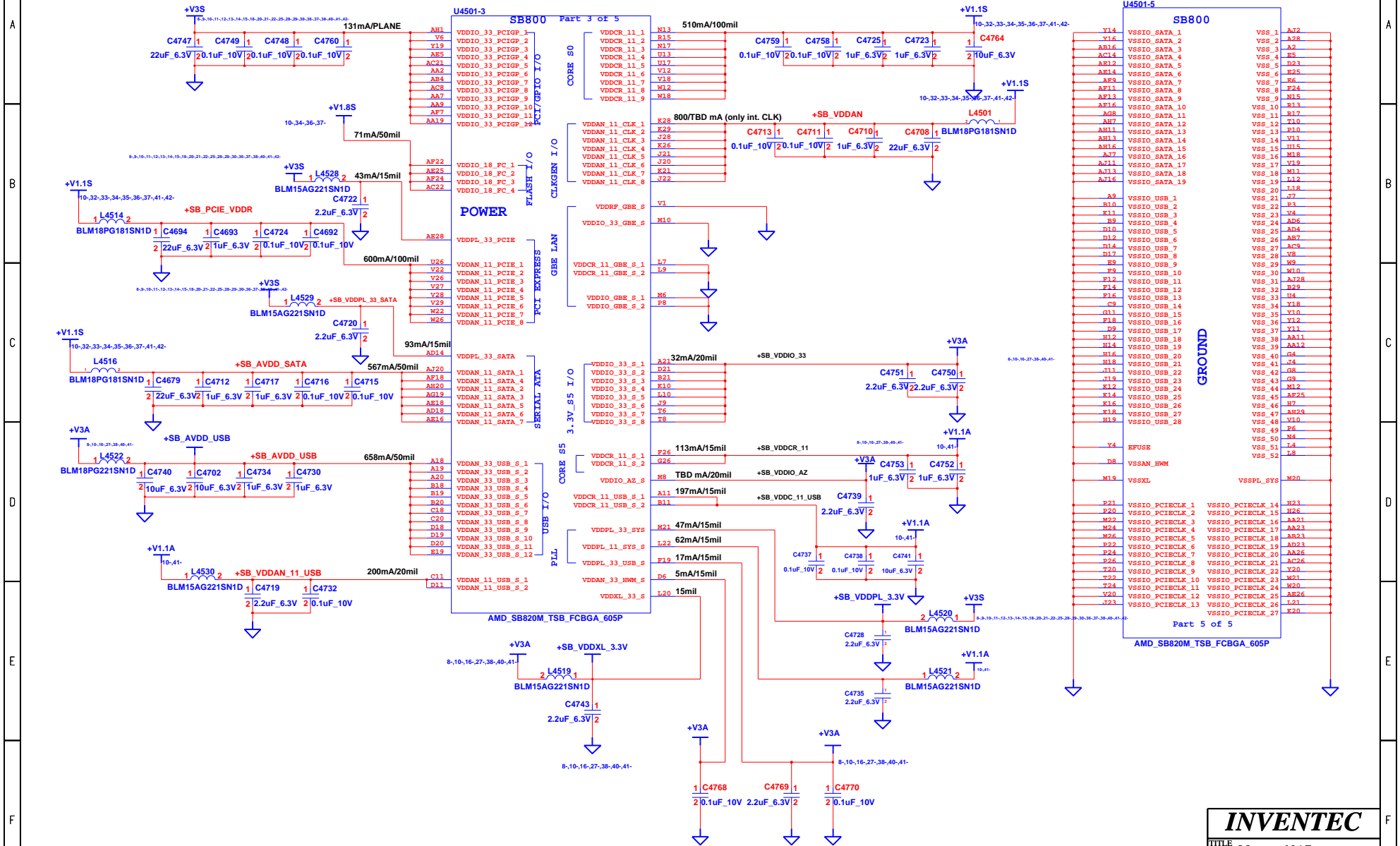
TITLE
Manaus10AD
SB-2

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by **Eddy, Chen** 11-Jan-2010

SHEET 39 OF 43

PLACE ALL THE DECOUPLING CAPS ON
THIS SHEET CLOSE TO SB AS POSSIBLE



INVENTEC

TITLE: **Manaus10AD**

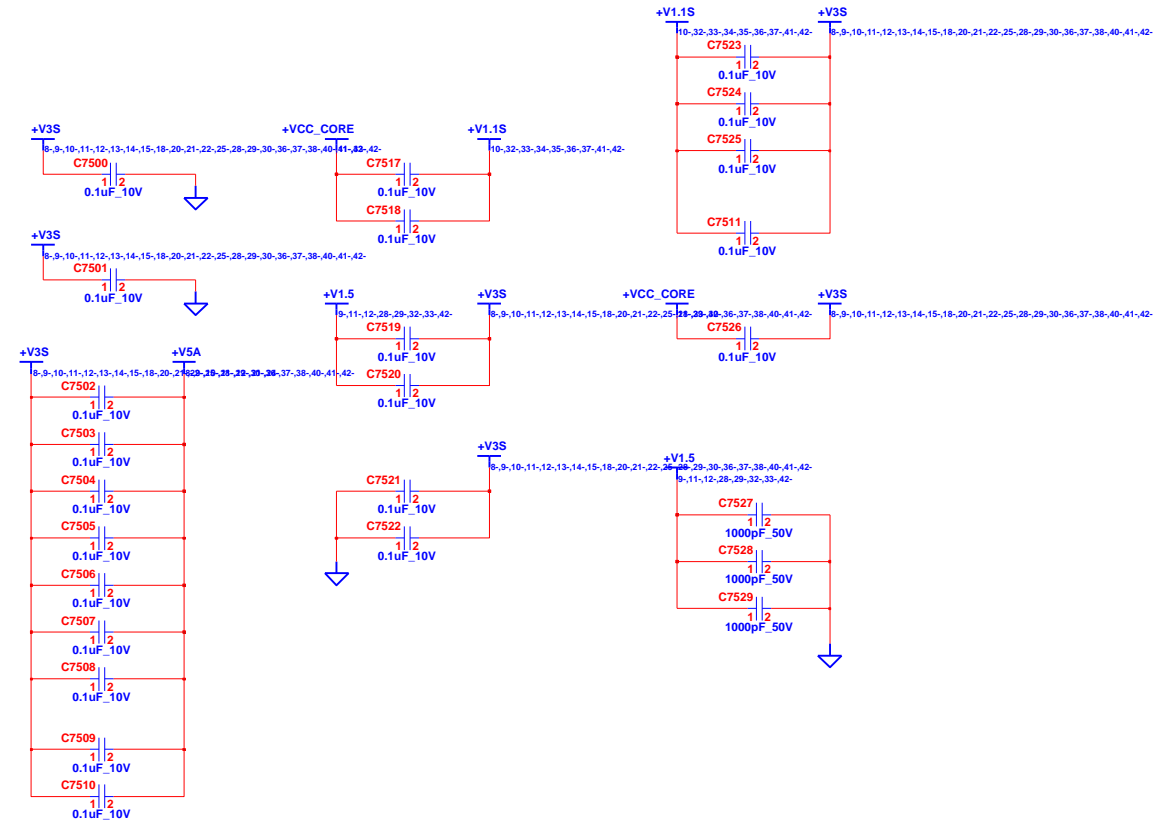
SIZE: **A3** CODE: **CS** DOC. NUMBER: **1310A2357401** REV: **X01**

CHANGE by: **Eddy, Chen**

11-Jan-2010

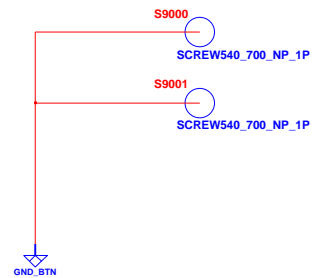
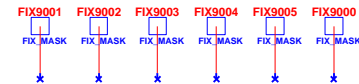
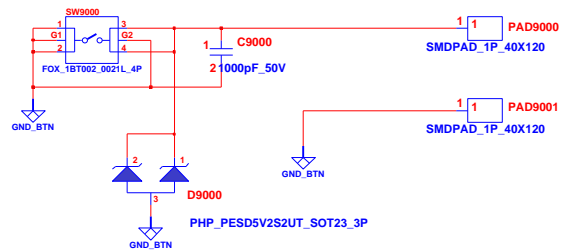
SHEET: **41** OF **43**

EMI



INVENTEC			
TITLE Manaus10AD EMI			
SIZE A3	CODE CS	DOC NUMBER 1310A2357401	REV X01
CHANGE by Eddy, Chen		11-Jan-2010	SHEET 42 OF 43

POWER BUTTON



INVENTEC

TITLE
Manaus10AD
Pick Button Board

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2357401	X01

CHANGE by Eddy, Chen 16-Mar-2010

SHEET 43 OF 43