

1	2	3	4	5	6	7	8
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HSF Property : Halogen-Free

RAMONES

Dis/UMA MV

USB3.0/2.0 co-layout

2011.03.28

DATE	CHANGE NO.	REV

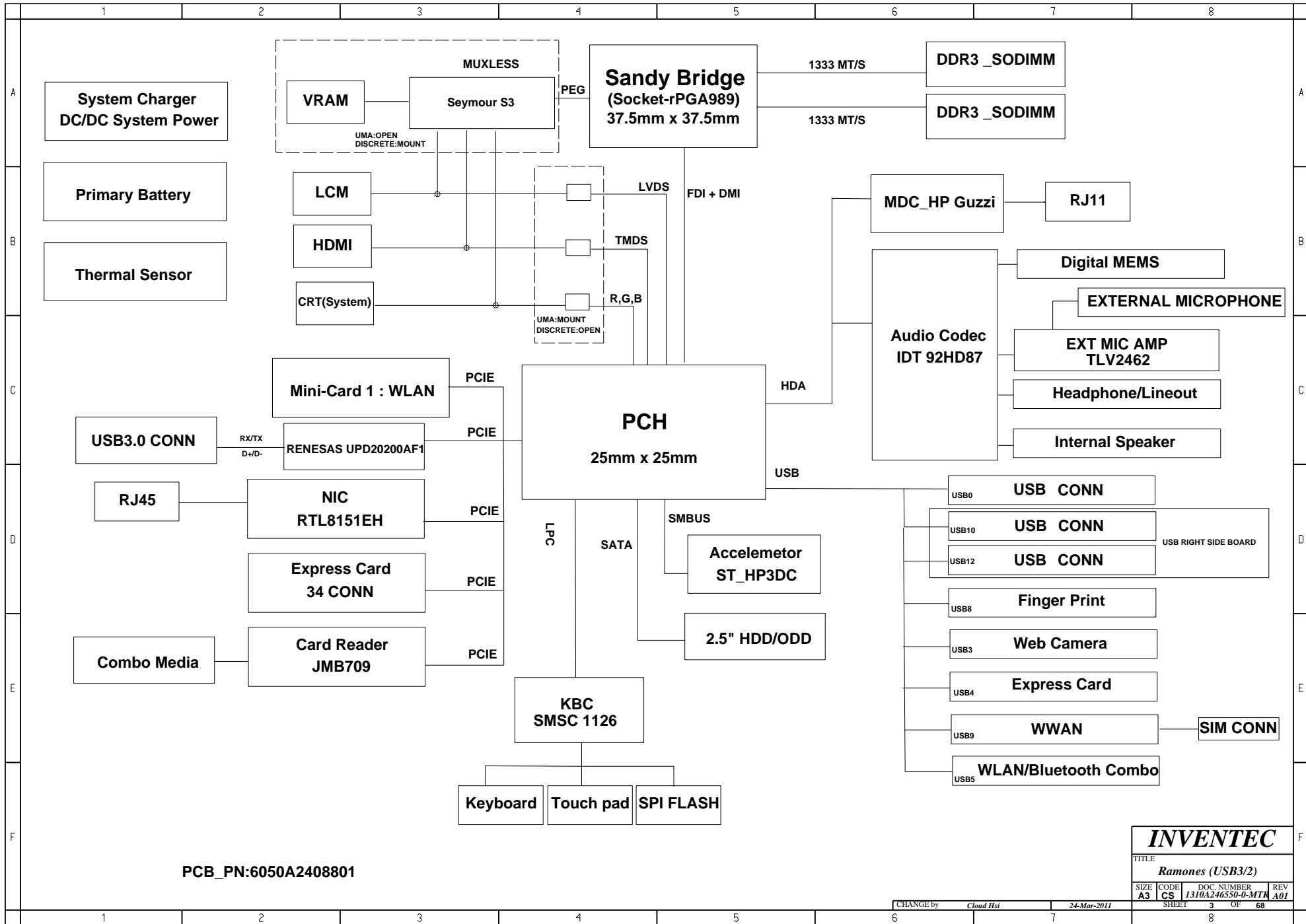
DRAWER	EE	DATE	POWER	DATE	INVENTEC
DESIGN					
CHECK					
RESPONSIBLE					
TITLE					RAMONES(USB3/2)
SIZE =	3	VER :			SIZE
FILE NAME :	XXXX-XXXXXX-XX				CODE
P/N	XXXXXXXXXXXX				A3 CS
					DOC NUMBER
					1310A246550-0-MTR
					REV
					A01
					SHEET
					1 OF 68

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INVENTEC			
TITLE <i>Ramones (USB3/2)</i>			
SIZE A3	CODE CS	DOC NUMBER <i>1310A246550-0-MTR</i>	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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PCB_PN:6050A2408801

INVENTEC

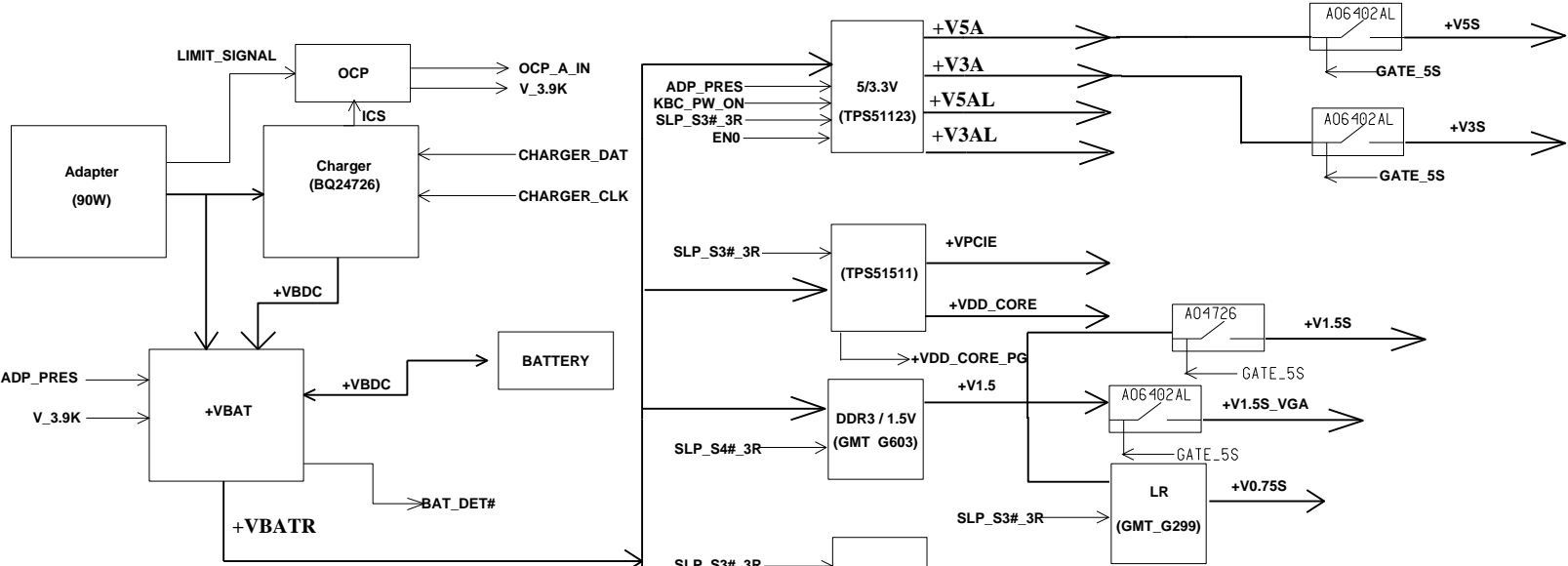
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Ramones (USB3/2)

SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
CHANGE by Cloud Hsi		24-Mar-2011	
SHEET 3		OF 68	

CHANGE by Cloud Hsi

24-Mar-2011

SHEET 3 OF 68

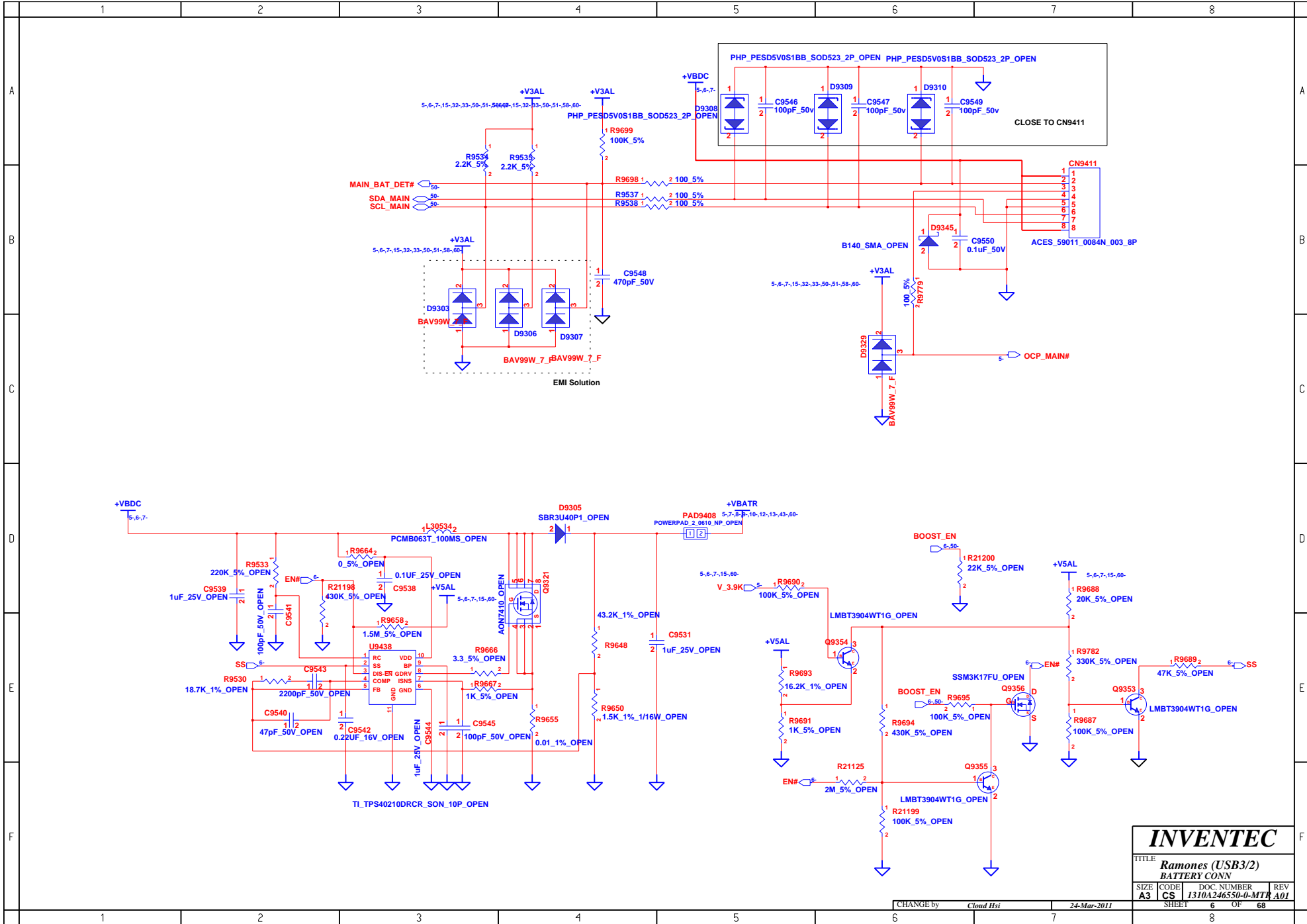


POWER PLANE	VOLTAGE	Voltage Rails ACTIVE IN	DESCRIPTION
+V5S +V3S +V1.8S +V1.5S +VCCP +V1.05S +V0.75S +VCC_CORE +VGFCORE	5V 3.3V 1.8V 1.5V 1.05V 1.05V 0.75V 0.35V-1.5V 0.4V-1.25V	S0	CPU Core Rail Graphics Core Rail
+V5A +V3A +V1.5A	5V 3.3V 1.5V	S3	
+VADP +VBATR +V5AL +V3AL	6V-14.1V 6V-14.1V 5V 3.3V	All S States	AC Brick Mode only
+V3_LAN	3.3V	WOL_EN	Legacy WOL
RTC	3.3V	G3, Sx	Power by Li Coin Cell in G3 and +V3AL in Sx

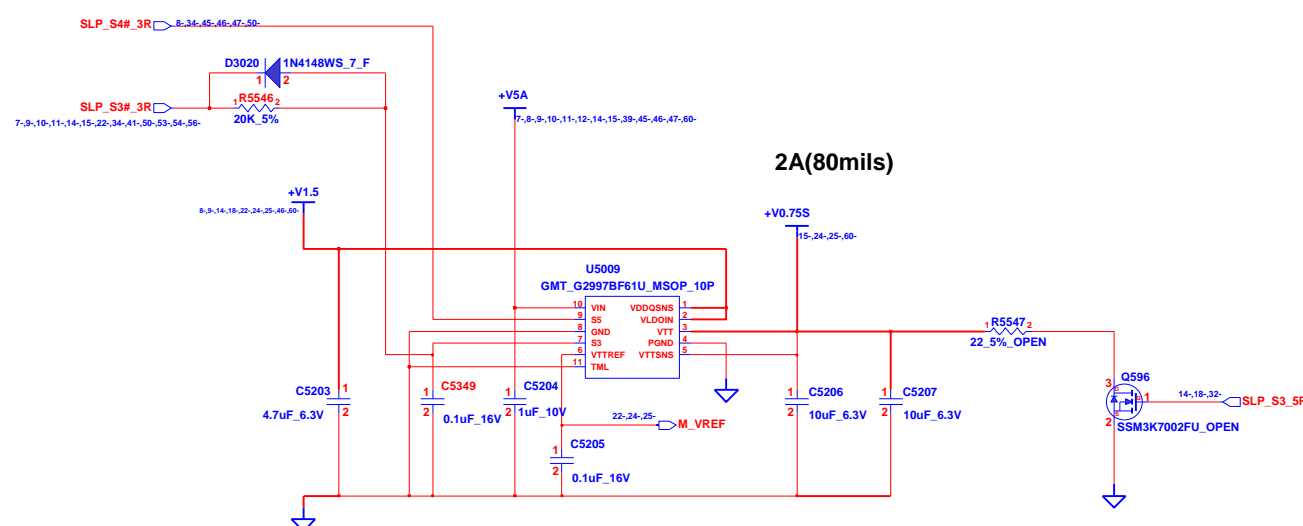
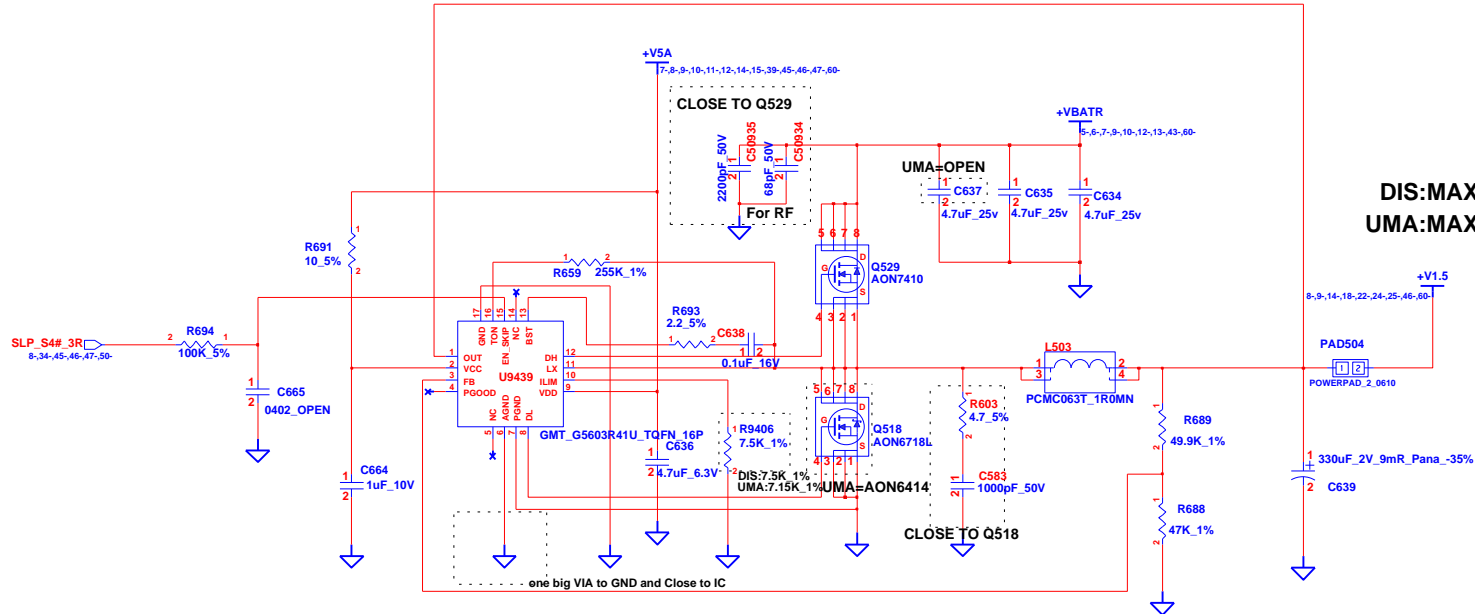
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TITLE
Ramones (USB3/2)

SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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INVENTEC			
TITLE Ramones (USB3/2) BATTERY CONN			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR A01	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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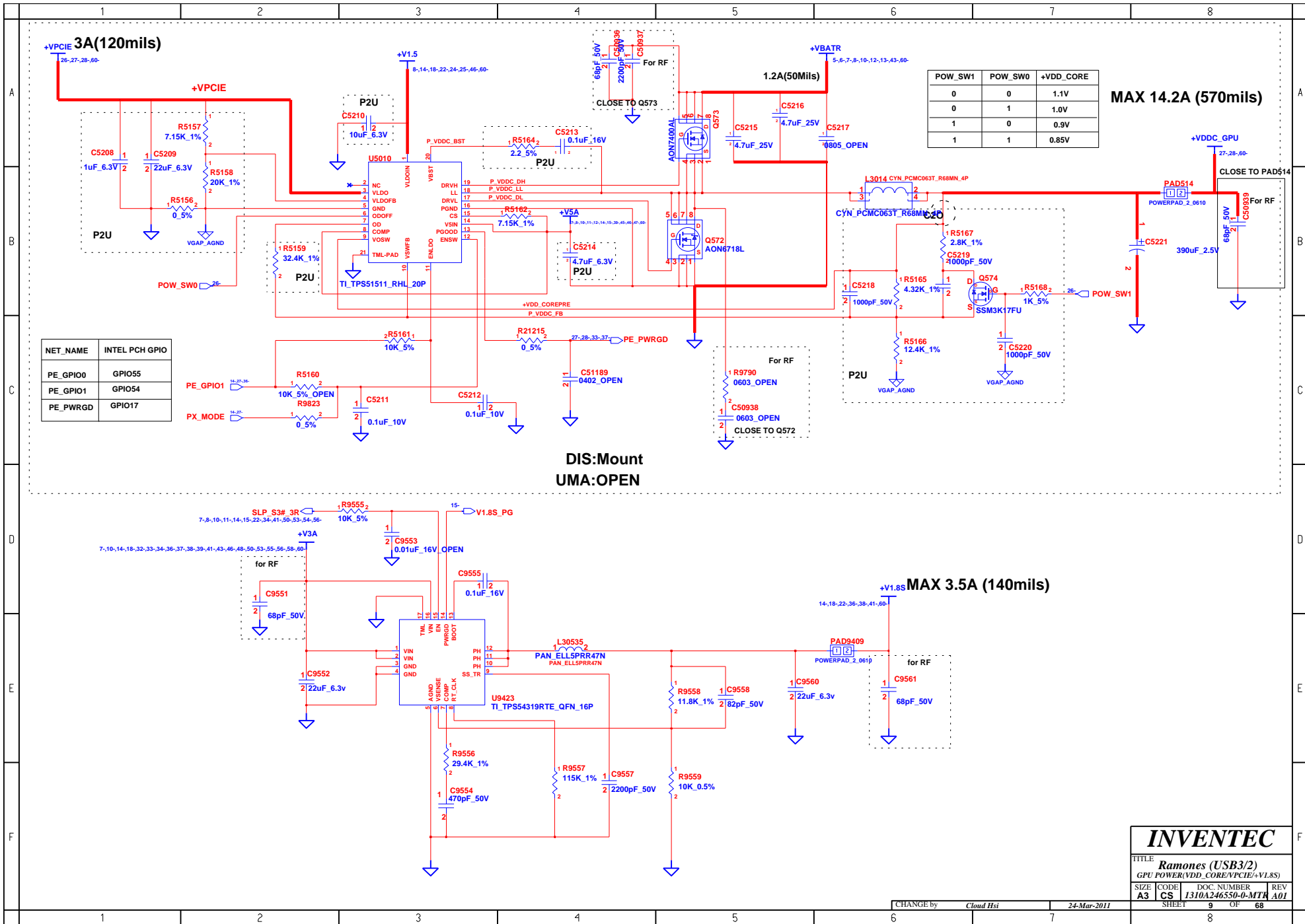


NOTE: DDR3 REGULATOR

DIS:MAX 22A(880mils)
UMA:MAX 12A

INVENTEC

TITLE			
Ramones (USB3/2)			
SYSTEM POWER(+V1.5/+V0.75S)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
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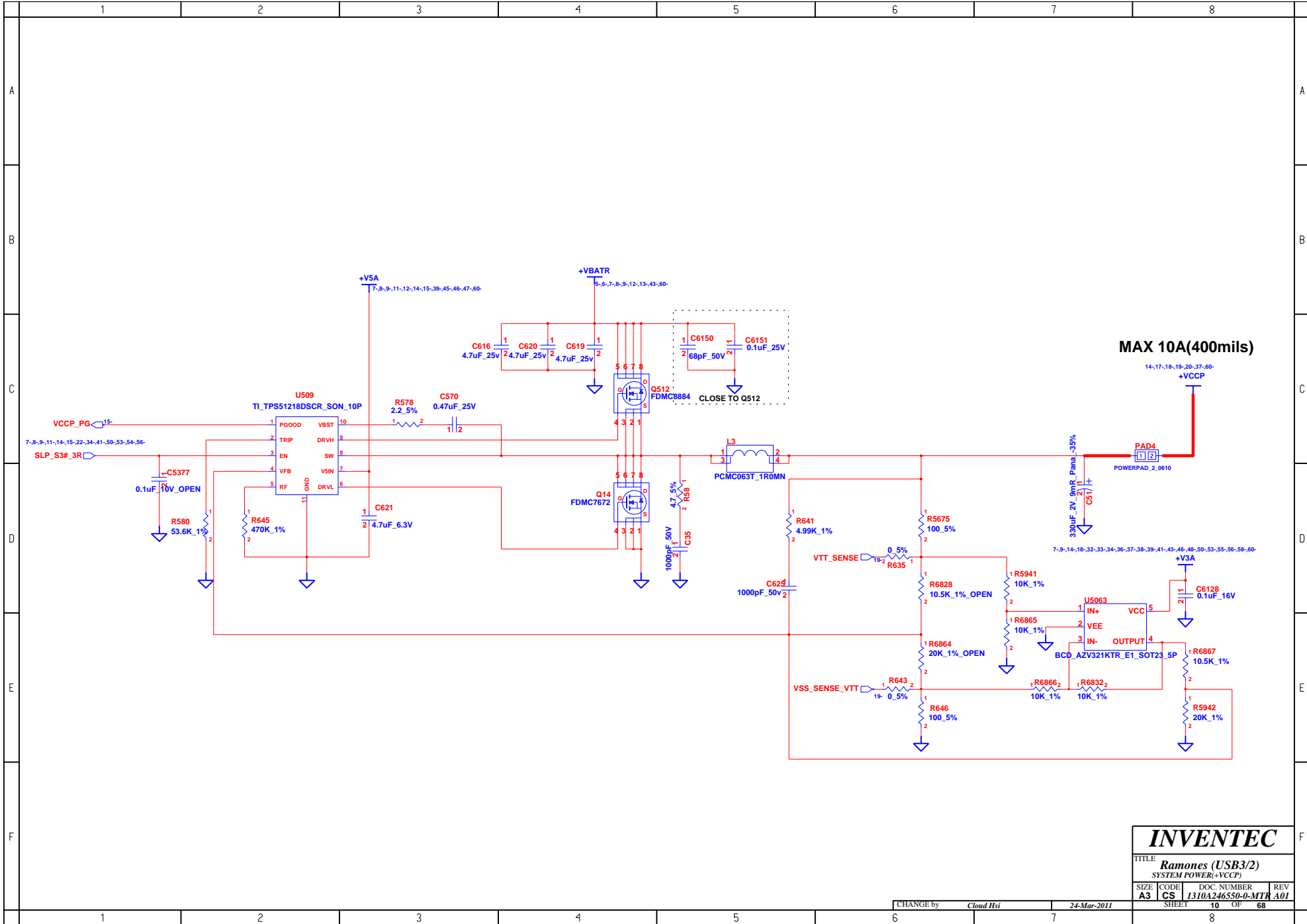
POW_SW1	POW_SW0	+VDD_CORE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.85V

MAX 14.2A (570mils)

NET_NAME	INTEL PCH GPIO
PE_GPIO0	GPIO55
PE_GPIO1	GPIO54
PE_PWRGD	GPIO17

DIS:Mount
UMA:OPEN

INVENTEC			
TITLE: Ramones (USB3/2)			
GPU POWER(VDD_CORE/PCIE/+V1.8S)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
CHANGE by		Cloud Hsi	24-Mar-2011
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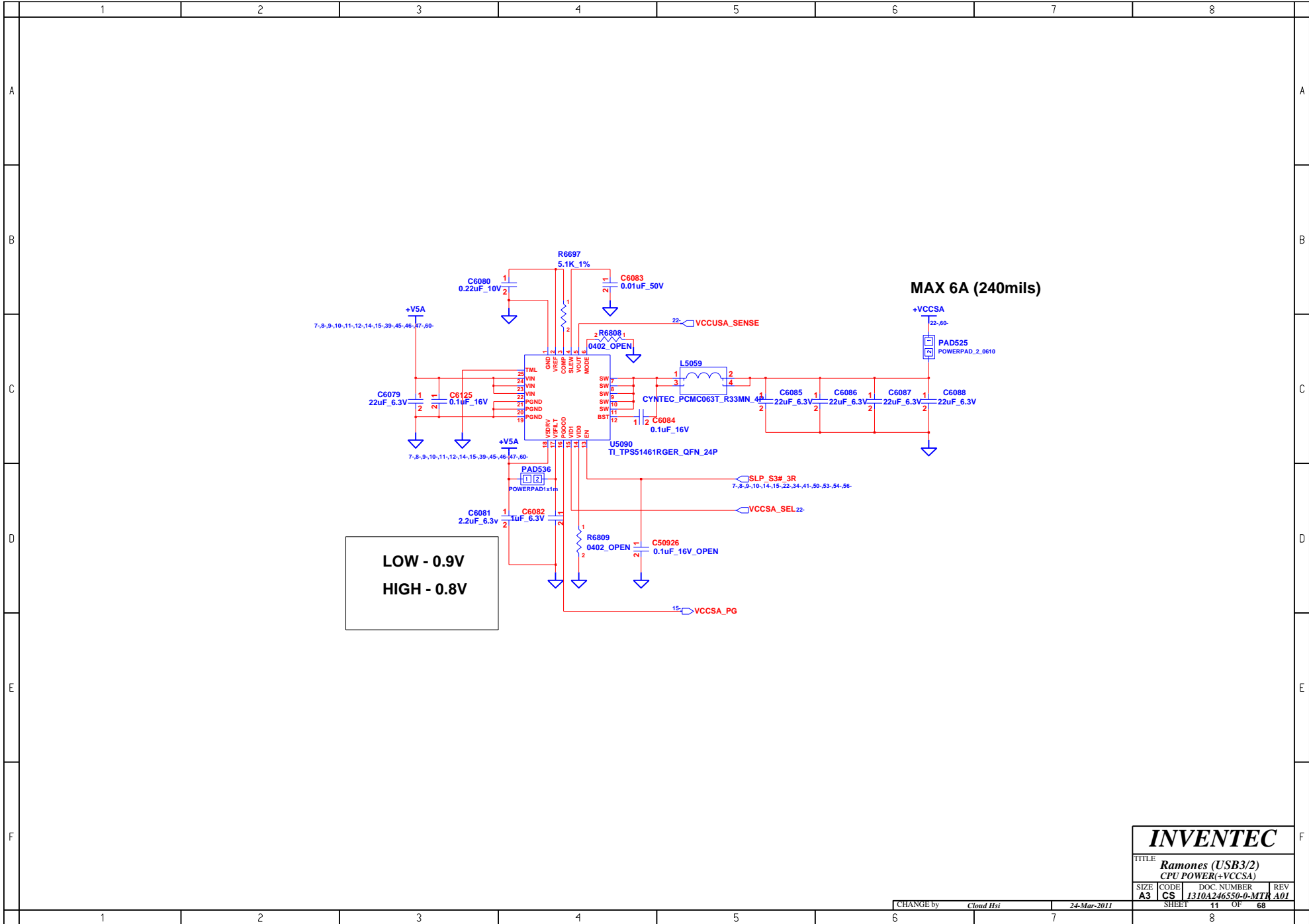
INVENTEC

TITLE
Ramones (USB3/2)
 SYSTEM POWER(+VCCP)

SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR A01	REV 10
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CHANGE by *Cloud Hsi* 24-Mar-2011

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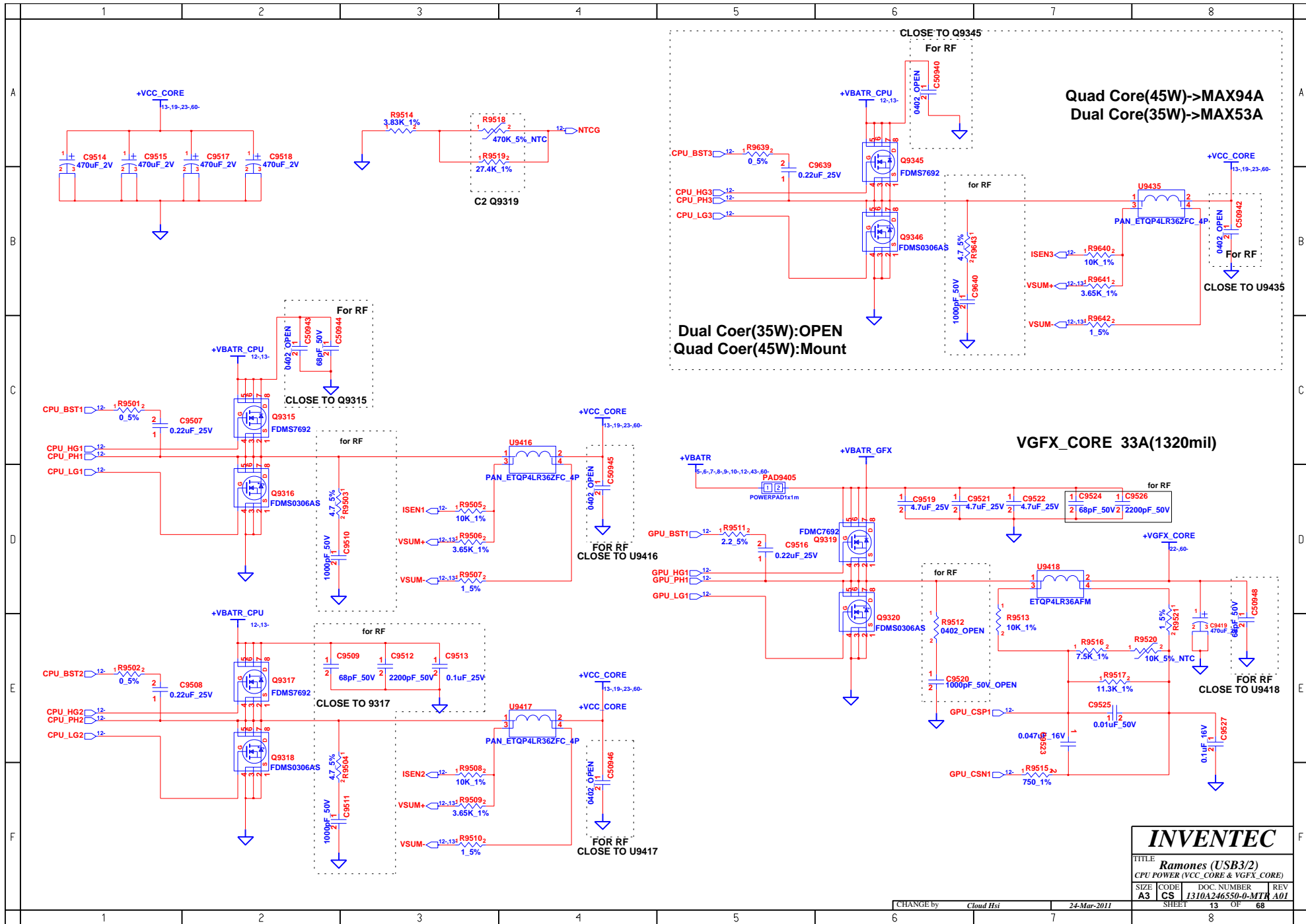
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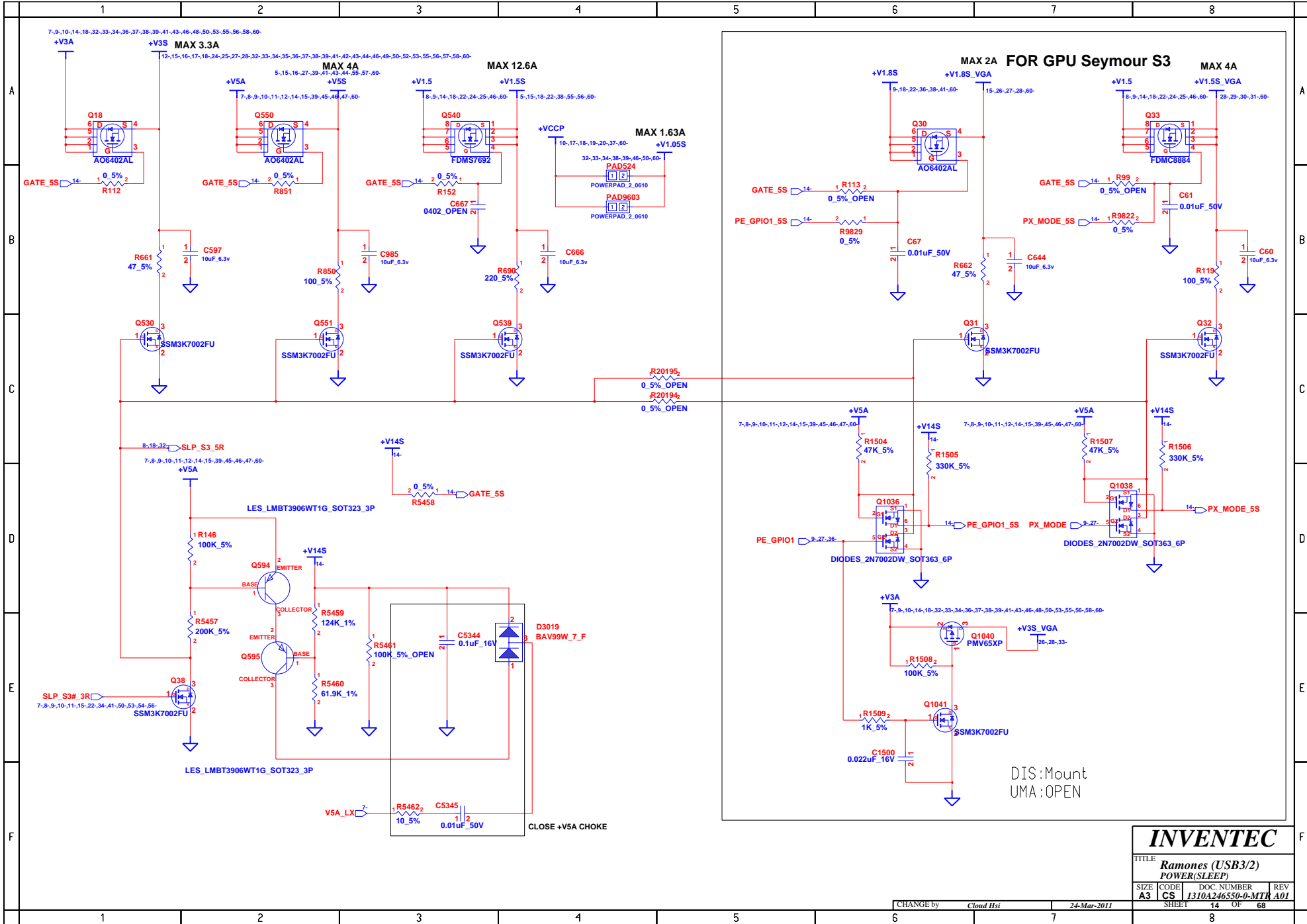
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SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01

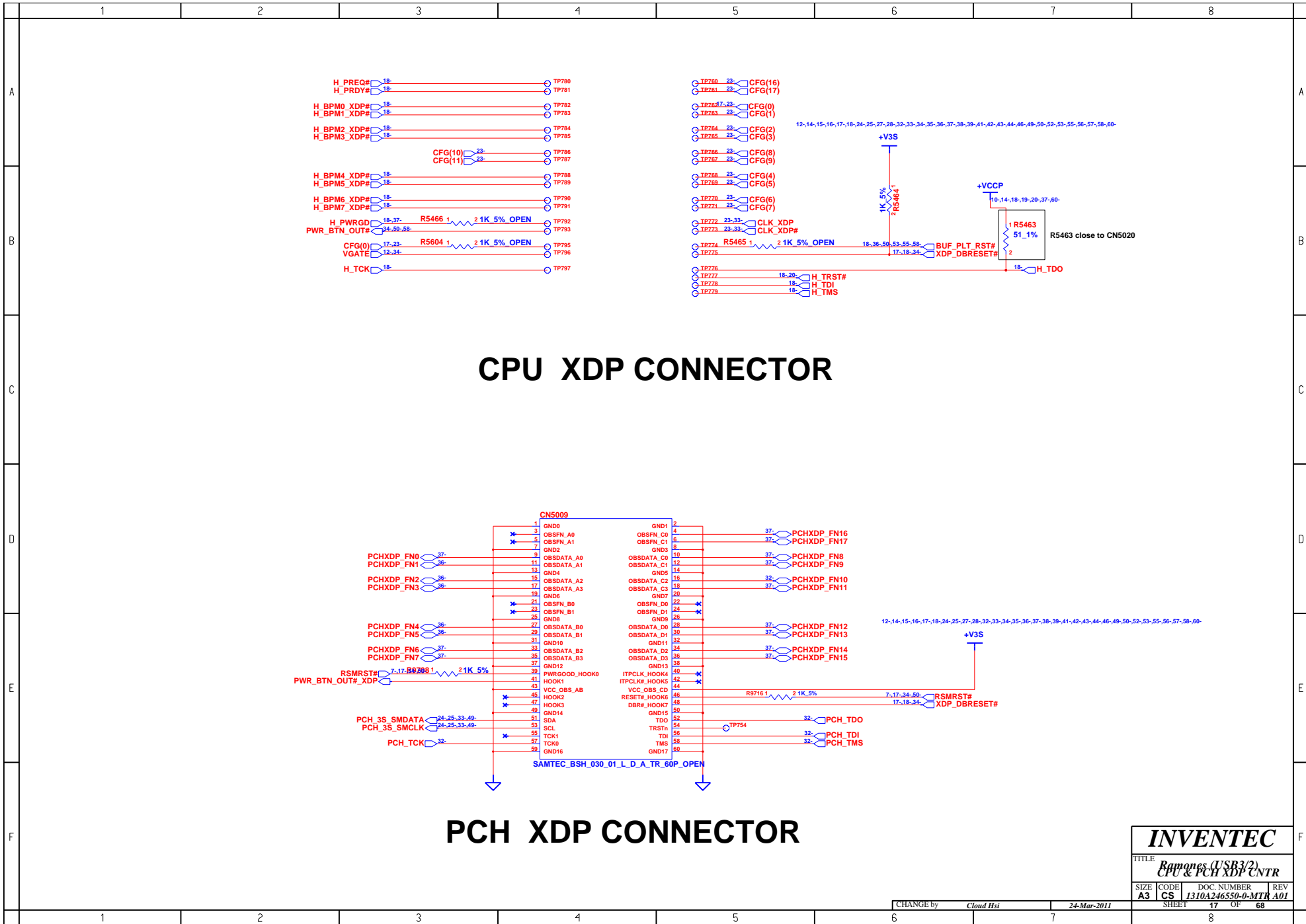
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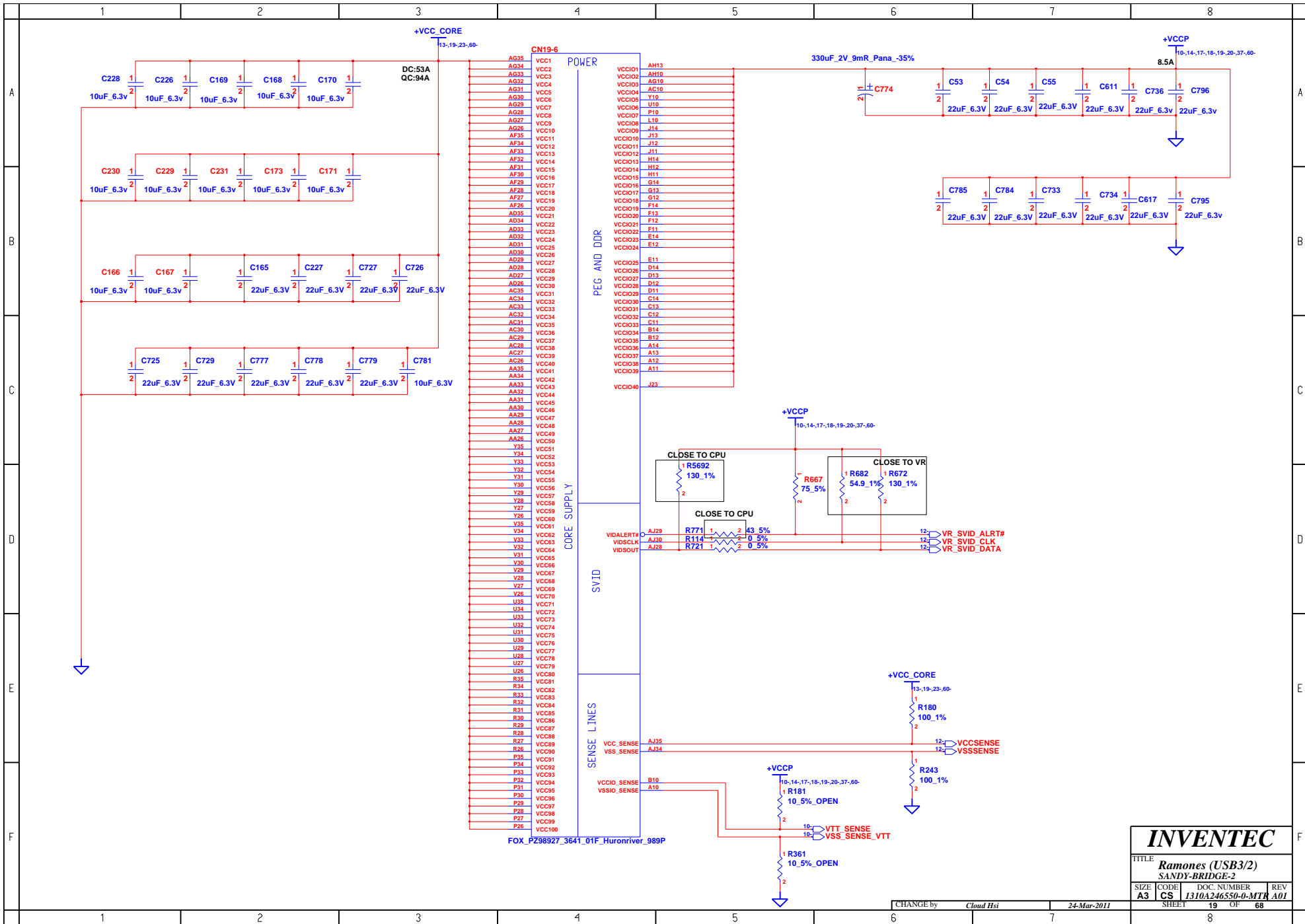
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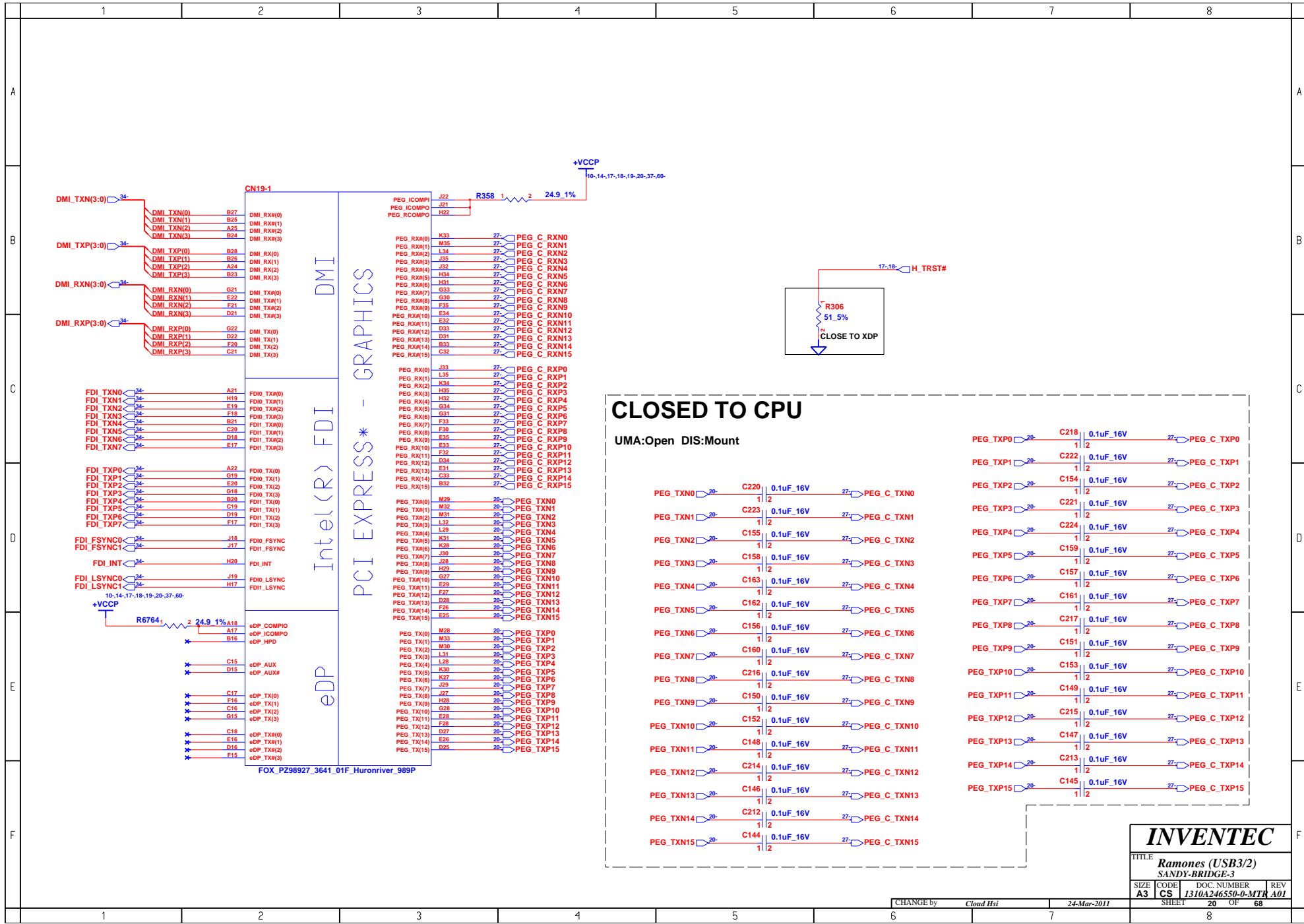


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SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR A01	
CHANGE by		24-Mar-2011	
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INVENTEC			
TITLE Ramones (USB3/2) SANDY-BRIDGE-2			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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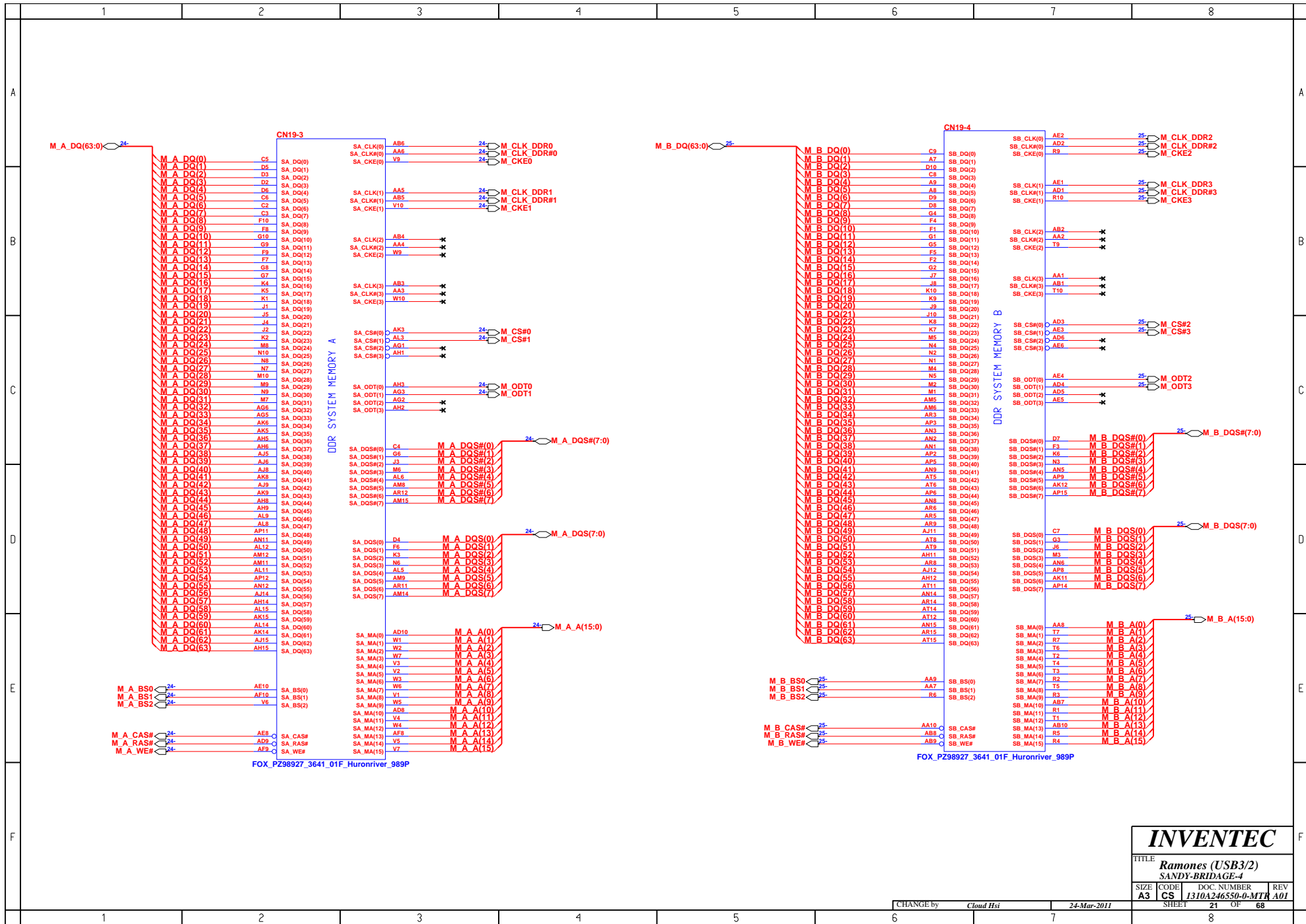


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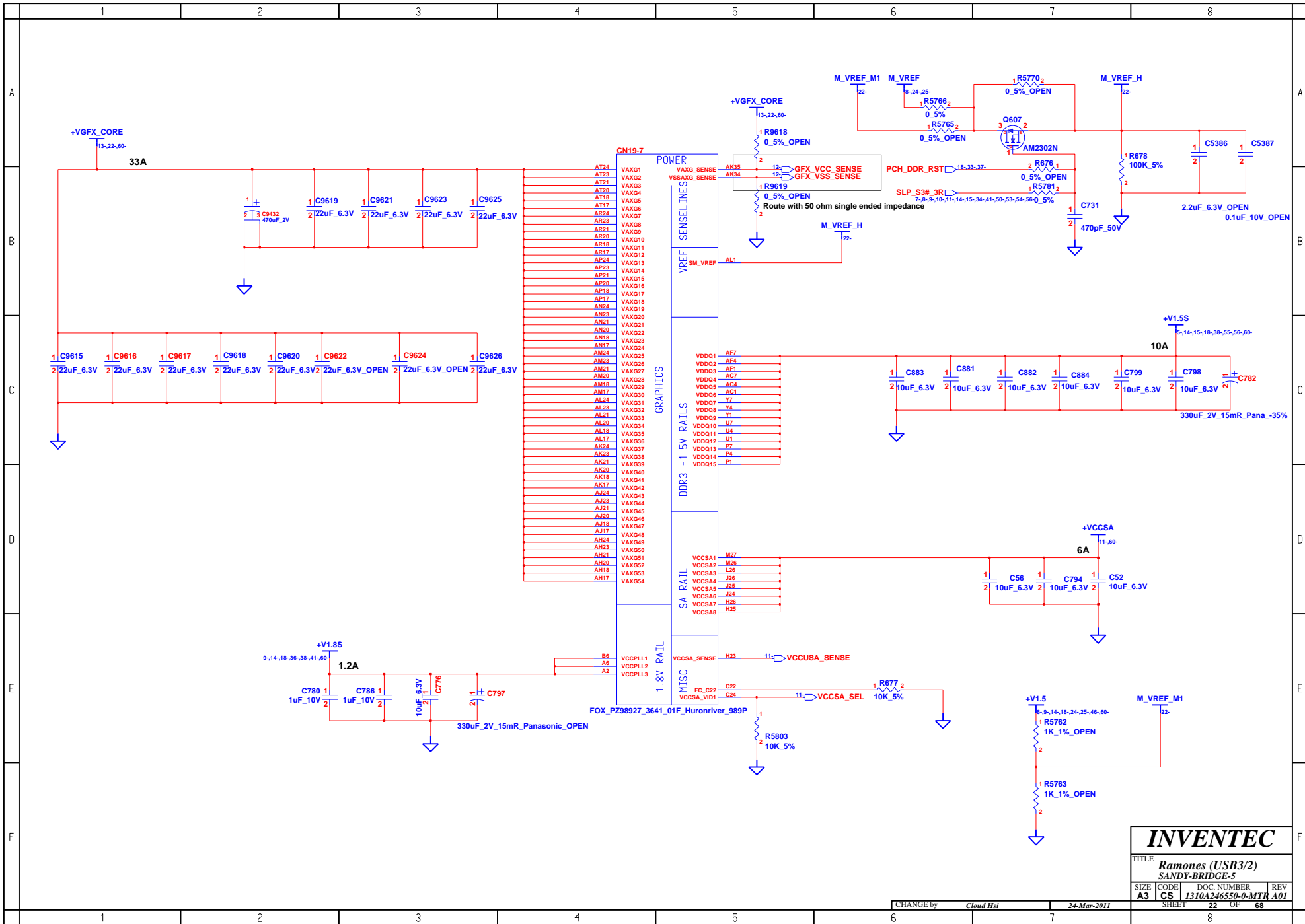
TITLE
Ramones (USB3/2)
SANDY-BRIDGE-3

SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
SHEET	20	OF	88

CHANGE by *Cloud Hsi* 24-Mar-2011



INVENTEC			
TITLE Ramones (USB3/2) SANDY-BRIDAGE-4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
CHANGE by		Cloud Hsi	24-Mar-2011
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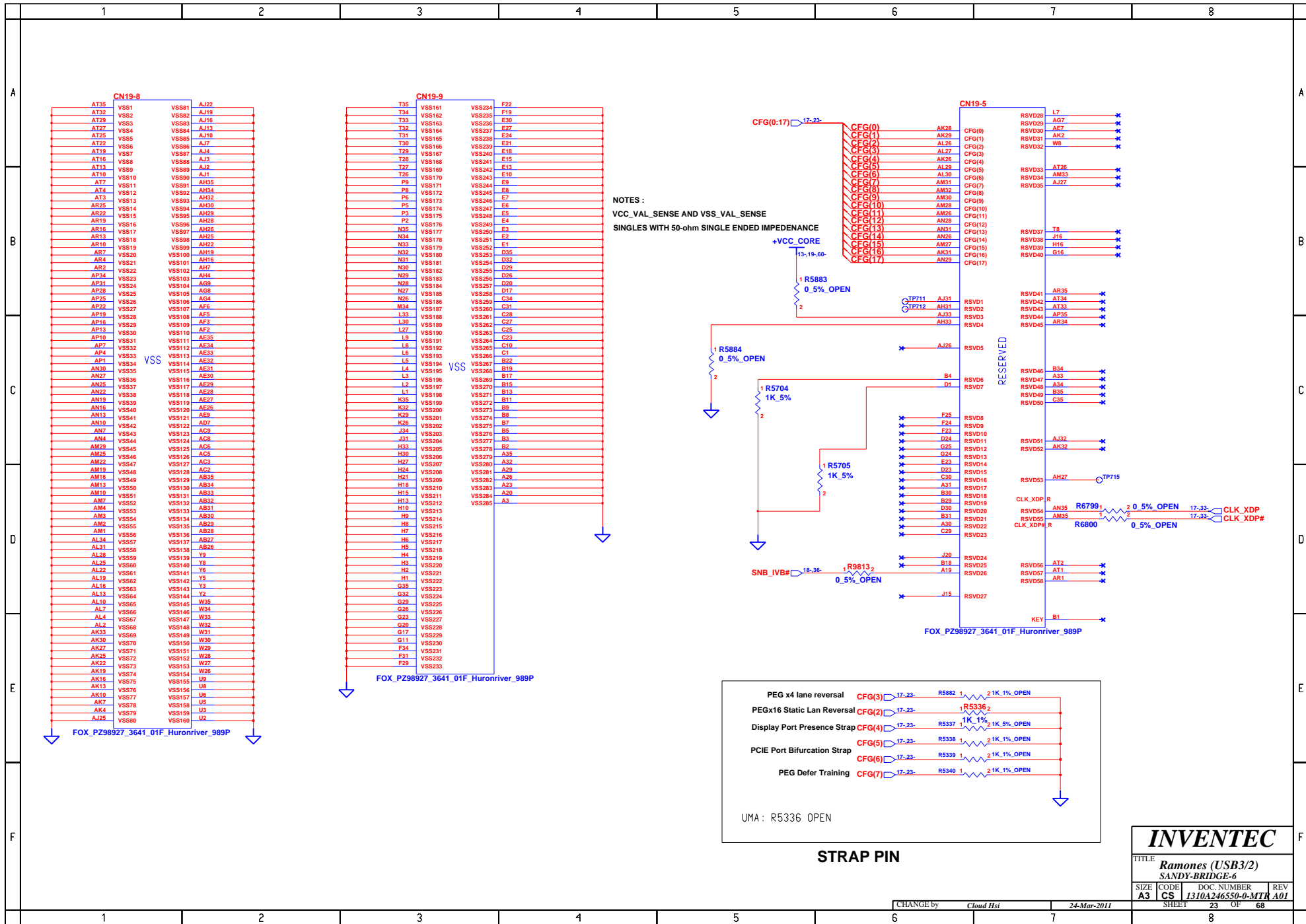
INVENTEC

TITLE: **Ramones (USB3/2)**
SANDY-BRIDGE-5

SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01

CHANGE by: Cloud Hsi 24-Mar-2011

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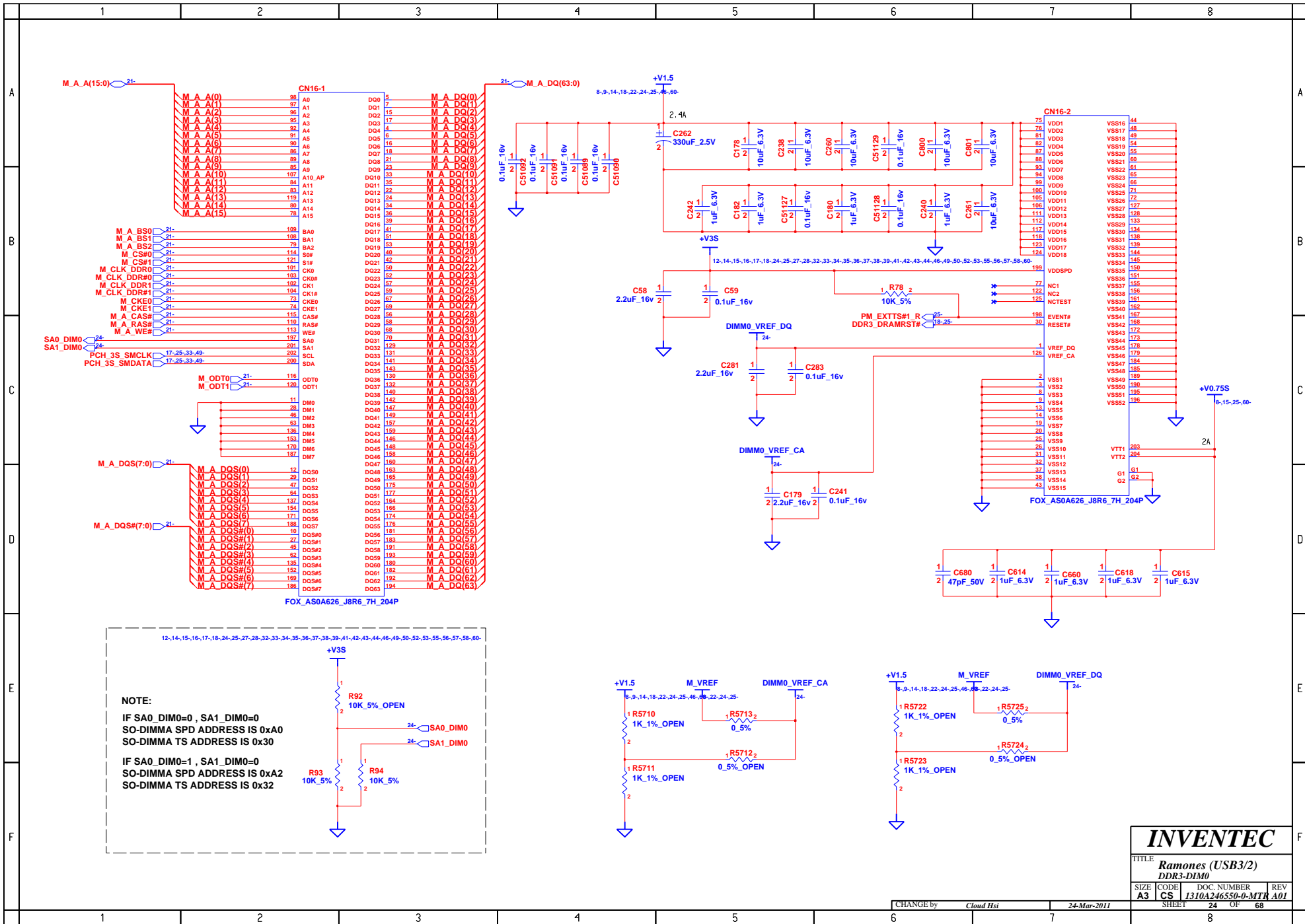


NOTES :
 VCC_VAL_SENSE AND VSS_VAL_SENSE
 SINGLES WITH 50-ohm SINGLE ENDED IMPEDANCE

UMA : R5336 OPEN

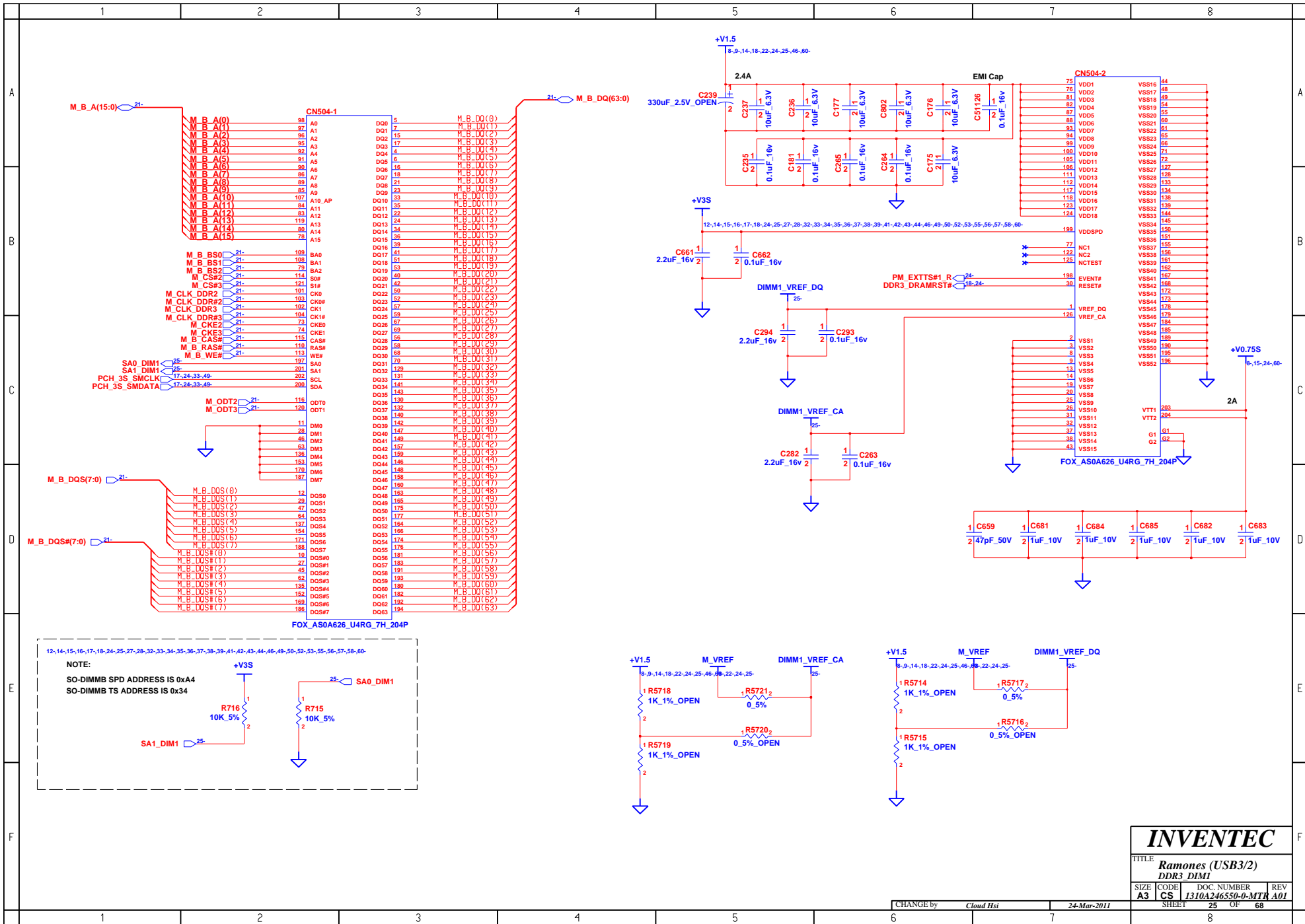
- PEG x4 lane reversal CFG(3) 17-23: R5882 1 2 1K 1% OPEN
- PEGx16 Static Lan Reversal CFG(2) 17-23: R5336 2 1 1K 1% OPEN
- Display Port Presence Strap CFG(4) 17-23: R5337 1 1K 1% 1K 5% OPEN
- PCIe Port Bifurcation Strap CFG(5) 17-23: R5338 1 2 1K 1% OPEN
- CFG(6) 17-23: R5339 1 2 1K 1% OPEN
- PEG Defer Training CFG(7) 17-23: R5340 1 2 1K 1% OPEN

INVENTEC			
TITLE Ramones (USB3/2) SANDY-BRIDGE-6			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR A01	REV 01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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NOTE:
 IF SA0_DIM0=0, SA1_DIM0=0
 SO-DIMMA SPD ADDRESS IS 0xA0
 SO-DIMMA TS ADDRESS IS 0x30
 IF SA0_DIM0=1, SA1_DIM0=0
 SO-DIMMA SPD ADDRESS IS 0xA2
 SO-DIMMA TS ADDRESS IS 0x32

INVENTEC			
TITLE Ramones (USB/2) DDR3-DIM0			
SIZE A3	CODE CS	DOC. NUMBER 1310A246550-0-MTR A01	REV 01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
SHEET 24		OF 88	



NOTE:
 SO-DIMM SPD ADDRESS IS 0x44
 SO-DIMM TS ADDRESS IS 0x34

SA0_DIM1

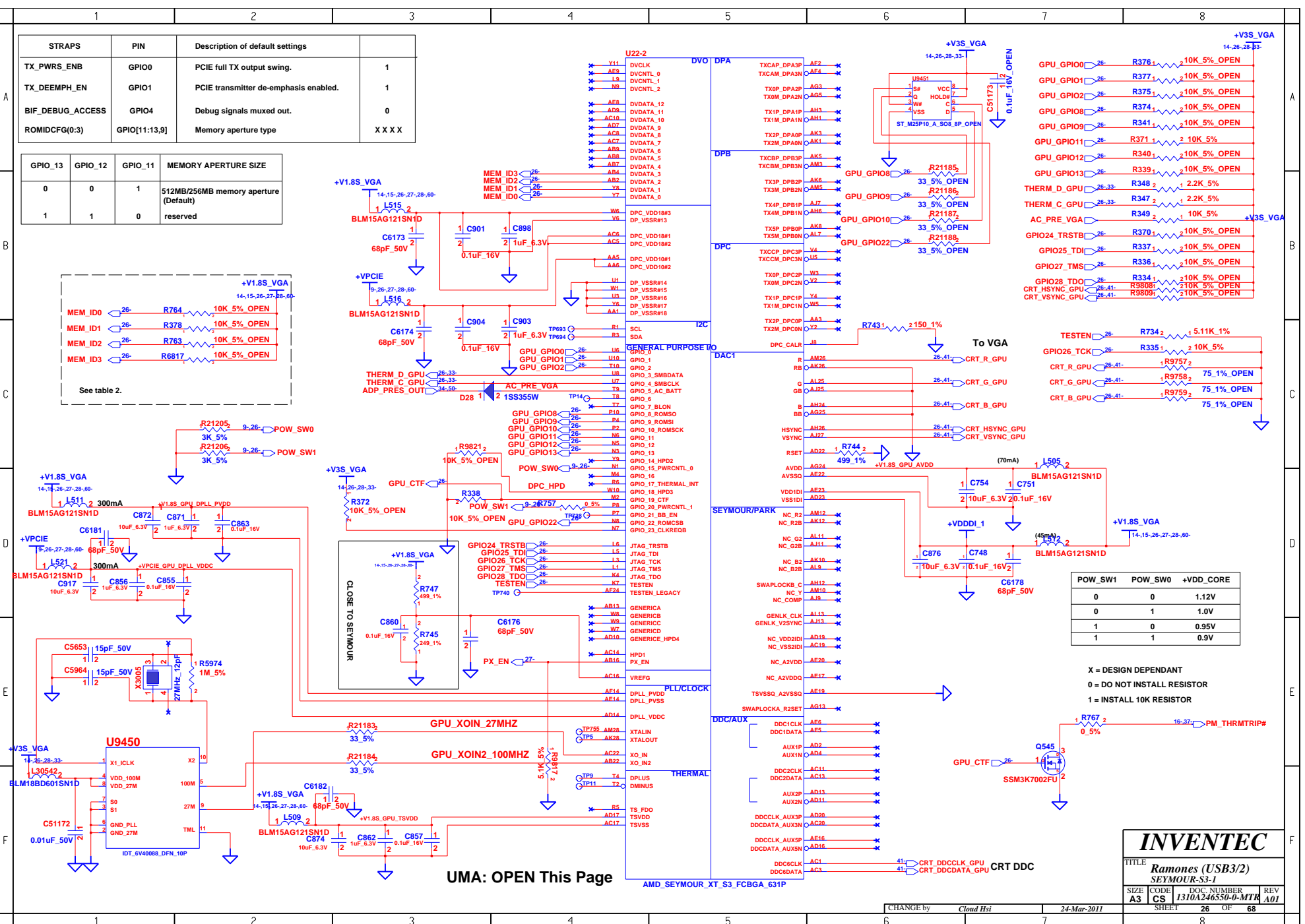
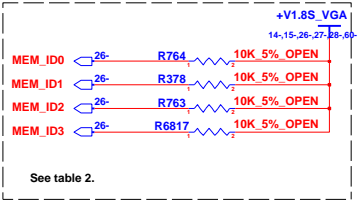
R716
10K_5%

R715
10K_5%

INVENTEC			
TITLE Ramones (USB3/2) DDR3_DIM1			
SIZE A3	CODE CS	DOC. NUMBER 1310A246550-0-MTR A01	REV A01
CHANGE by <i>Cloud Hsi</i>		DATE <i>24-Mar-2011</i>	
SHEET 25		OF 88	

STRAPS	PIN	Description of default settings	
TX_PWRS_ENB	GPIO0	PCIe full TX output swing.	1
TX_DEEMPH_EN	GPIO1	PCIe transmitter de-emphasis enabled.	1
BIF_DEBUG_ACCESS	GPIO4	Debug signals muxed out.	0
ROMIDCFG(0:3)	GPIO[11:13,9]	Memory aperture type	X X X X

GPIO_13	GPIO_12	GPIO_11	MEMORY APERTURE SIZE
0	0	1	512MB/256MB memory aperture (Default)
1	1	0	reserved



TESTEN	R734	5.11K 1%
GPIO26_TCK	R335	2 10K 5%
CRT_R_GPU	R9757	75 1% OPEN
CRT_G_GPU	R9758	75 1% OPEN
CRT_B_GPU	R9759	75 1% OPEN

POW_SW1	POW_SW0	+VDD_CORE
0	0	1.12V
0	1	1.0V
1	0	0.95V
1	1	0.9V

X = DESIGN DEPENDANT
 0 = DO NOT INSTALL RESISTOR
 1 = INSTALL 10K RESISTOR

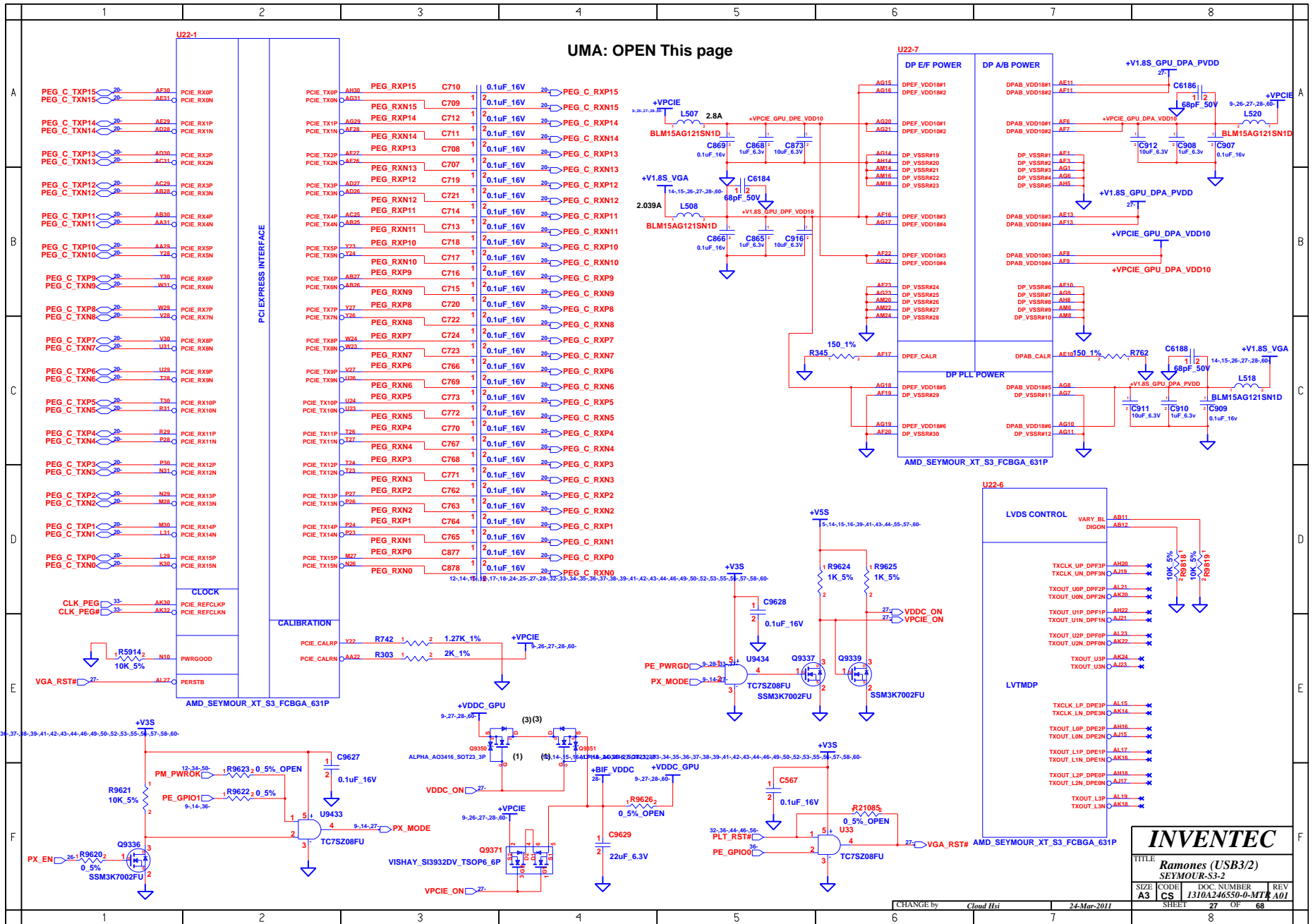
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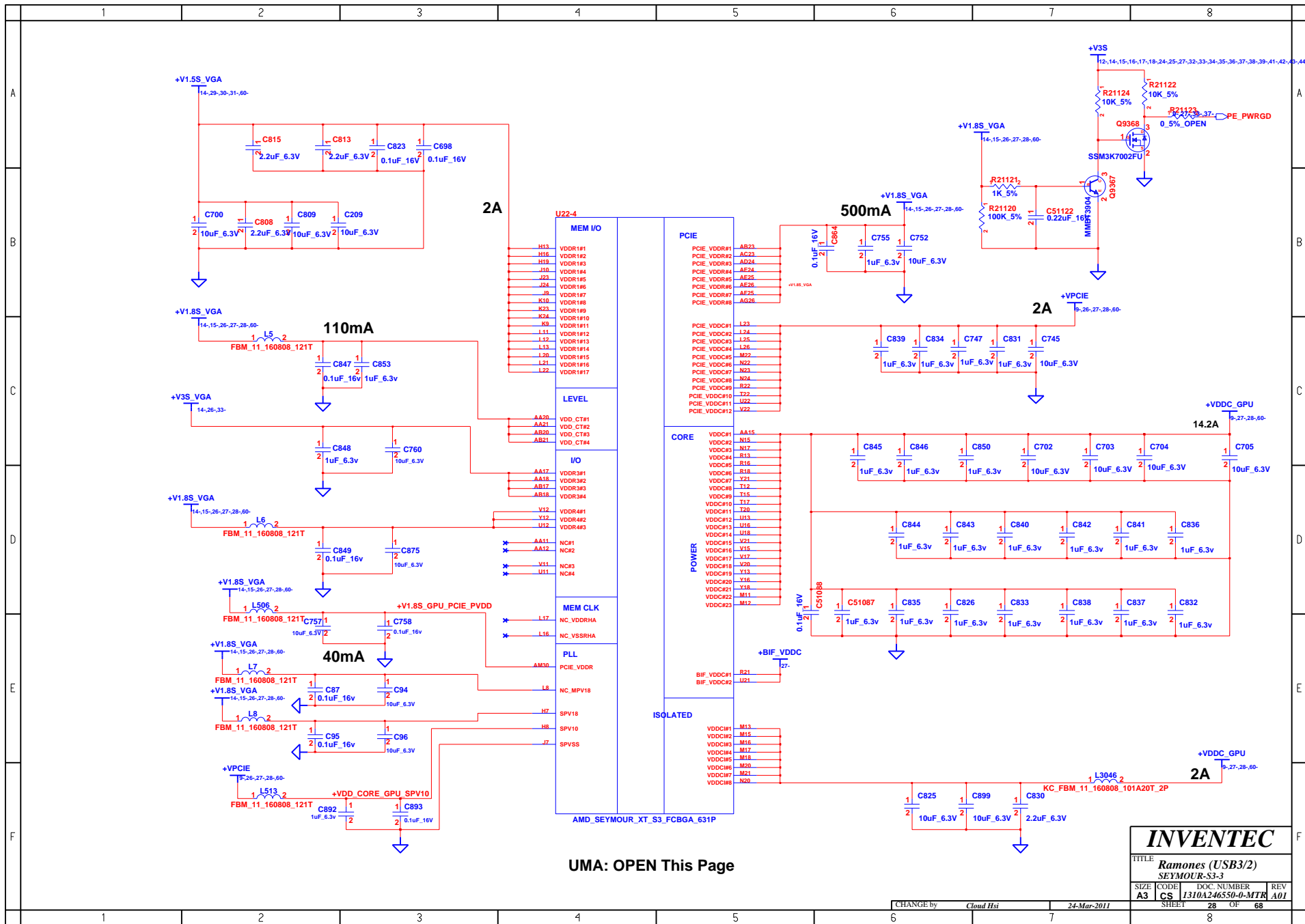
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TITLE: **Ramones (USB3/2) SEYMOUR-S3-1**

SIZE: A3 CODE: CS DOC NUMBER: 1310A246550-0-MTR REV: A01

CHANGE by: Cloud Hsi 24-Mar-2011 SHEET: 26 OF 68





UMA: OPEN This Page

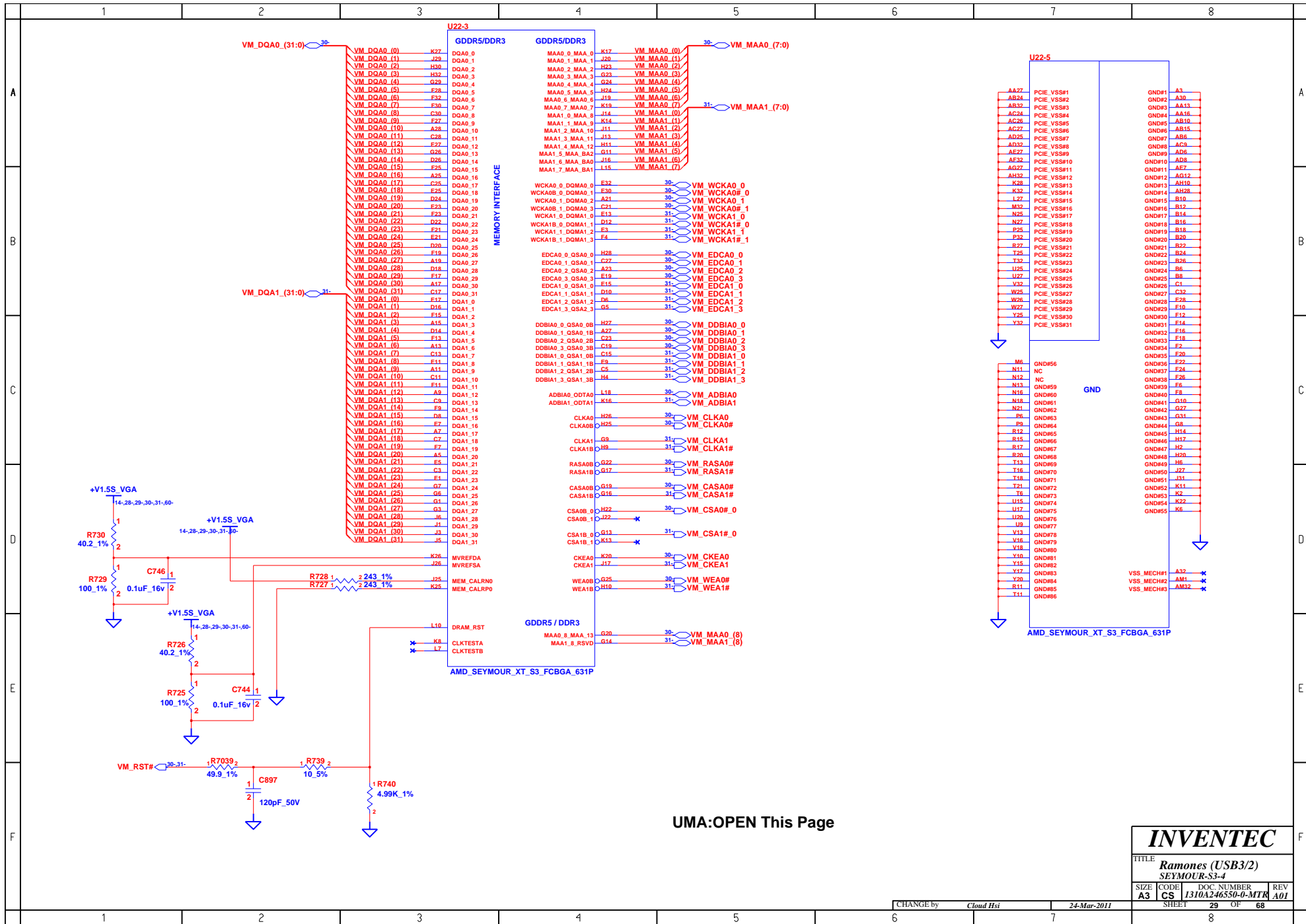
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TITLE: **Ramones (USB2)**
SEYMOUR-S3-3

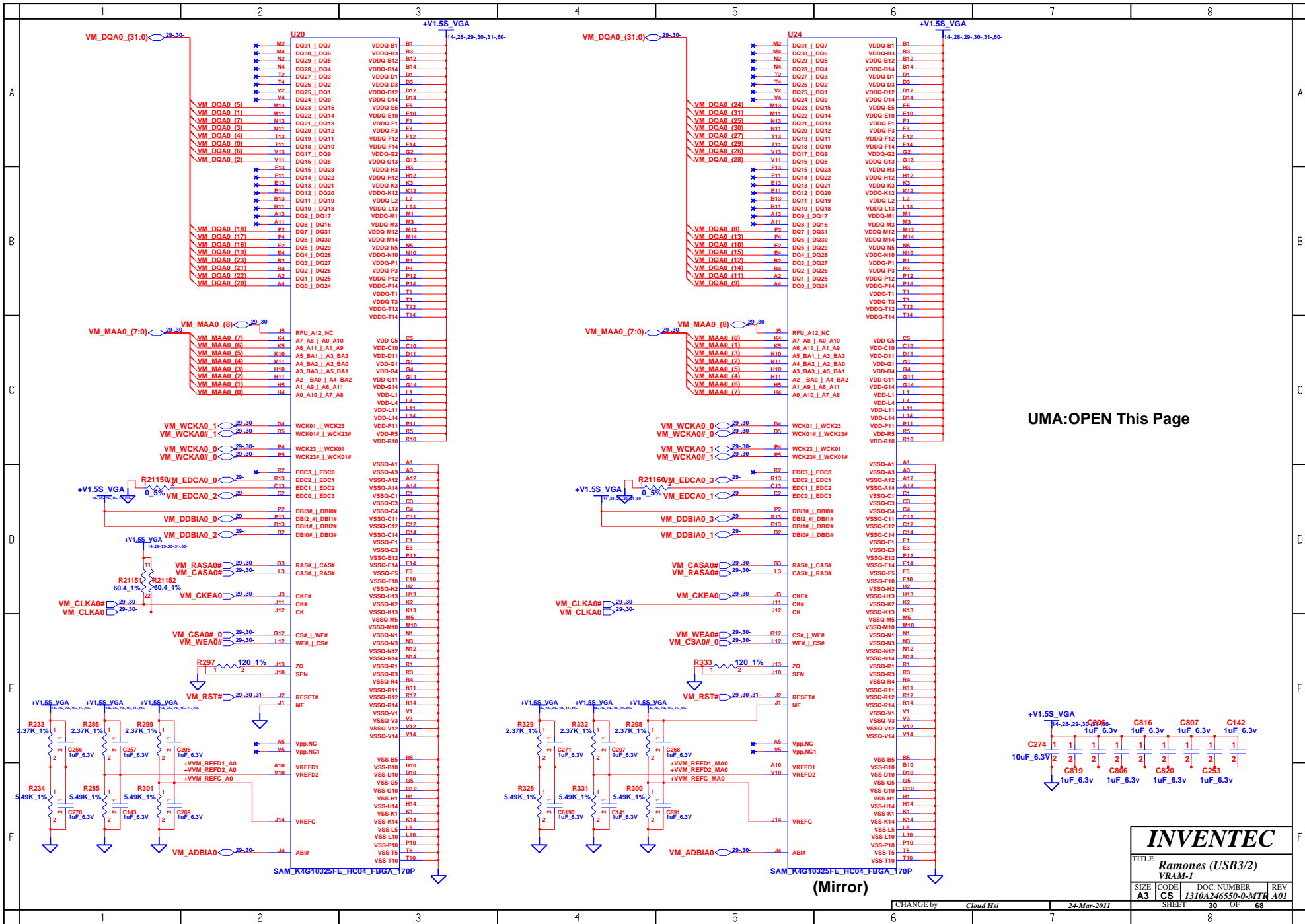
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A3	CS	1310A246550-0-MTR	A01

CHANGE by: Cloud Hsi 24-Mar-2011

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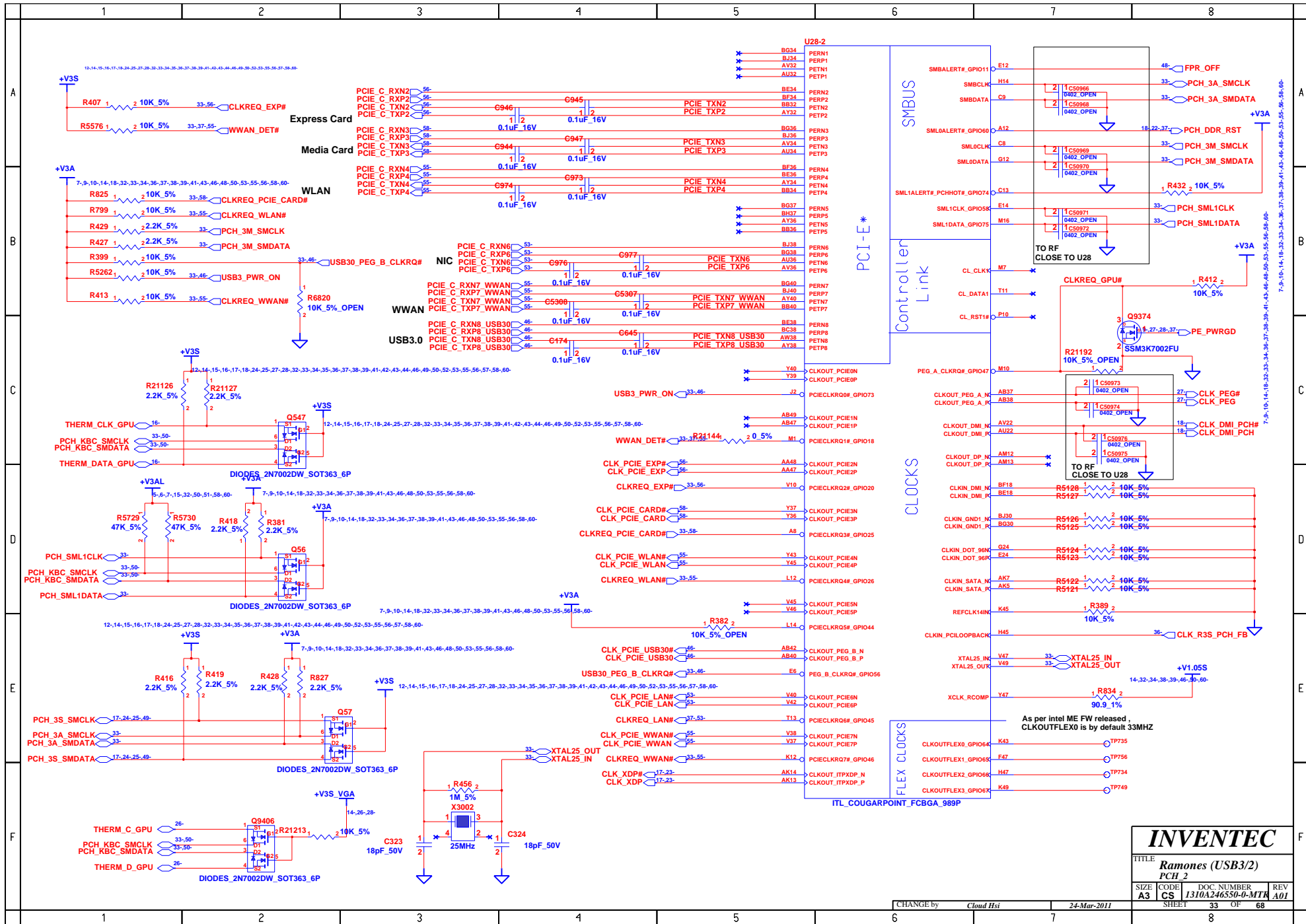
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SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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UMA:OPEN This Page

INVENTEC			
TITLE Ramones (USB3/2)			
VRAM-1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
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(Mirror)



INVENTEC			
TITLE Ramones (USB3/2)			
PCH 2			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
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CHANGE by Cloud Hsi 24-Mar-2011

Note: 1.SLP_SUS and SUSACK# are NC if DSW is not supported
 2.DPWROK should connect to RSMRST# if DSW not supported
 3.PCH_DPWRWK pull up to +V3S enables DSW support. No install R5261 to disable DSW

A

B

C

D

E

F

A

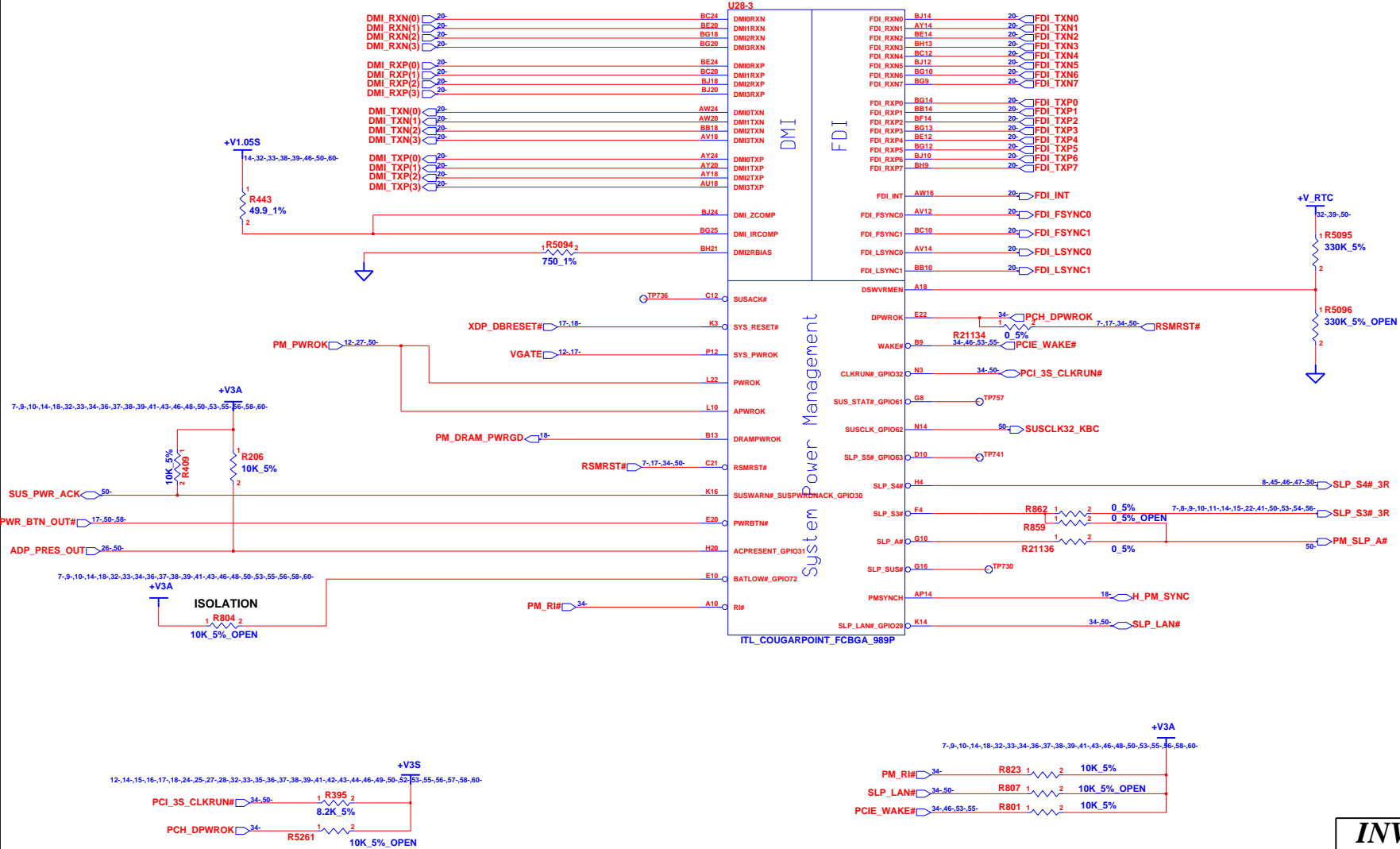
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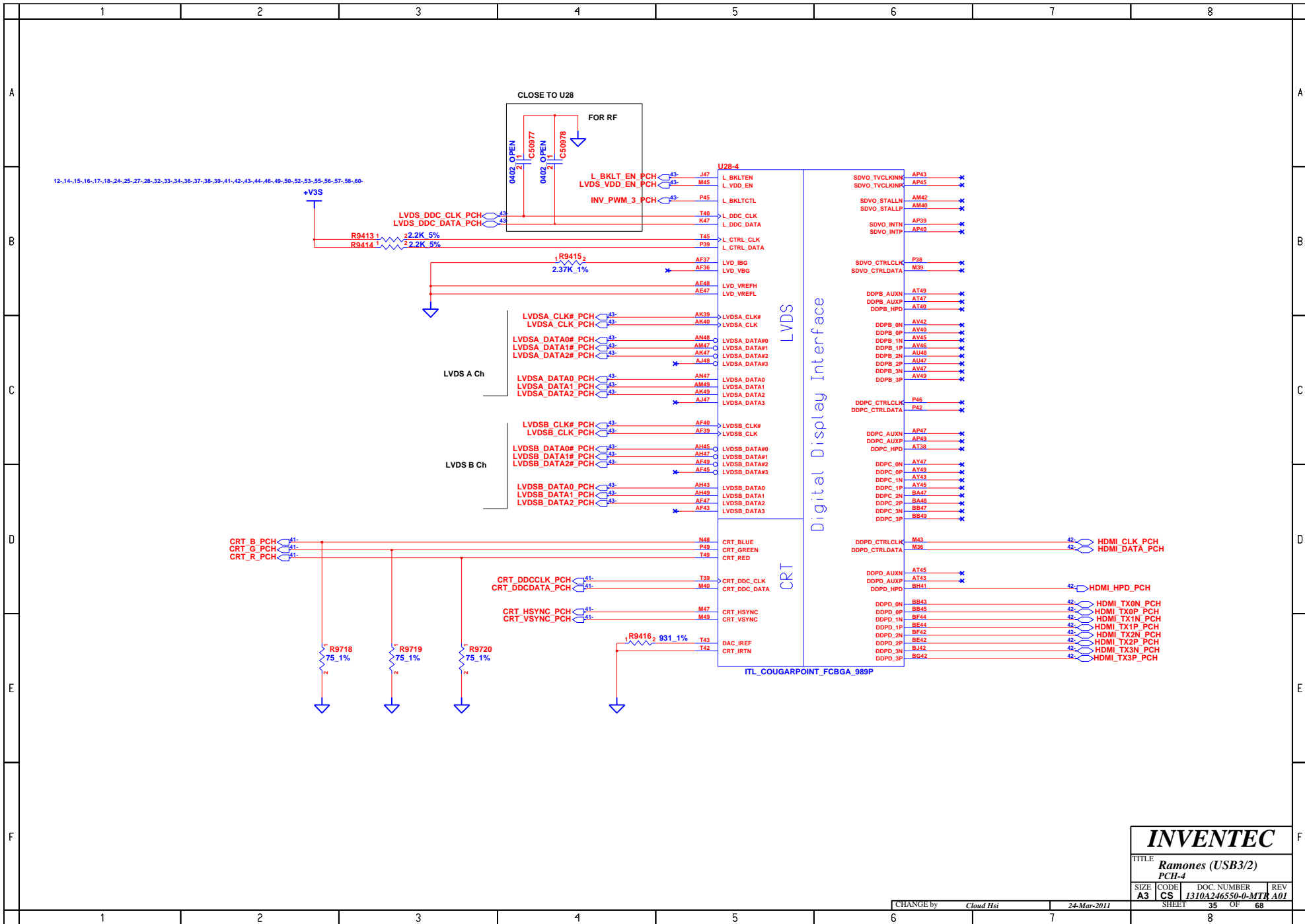
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E

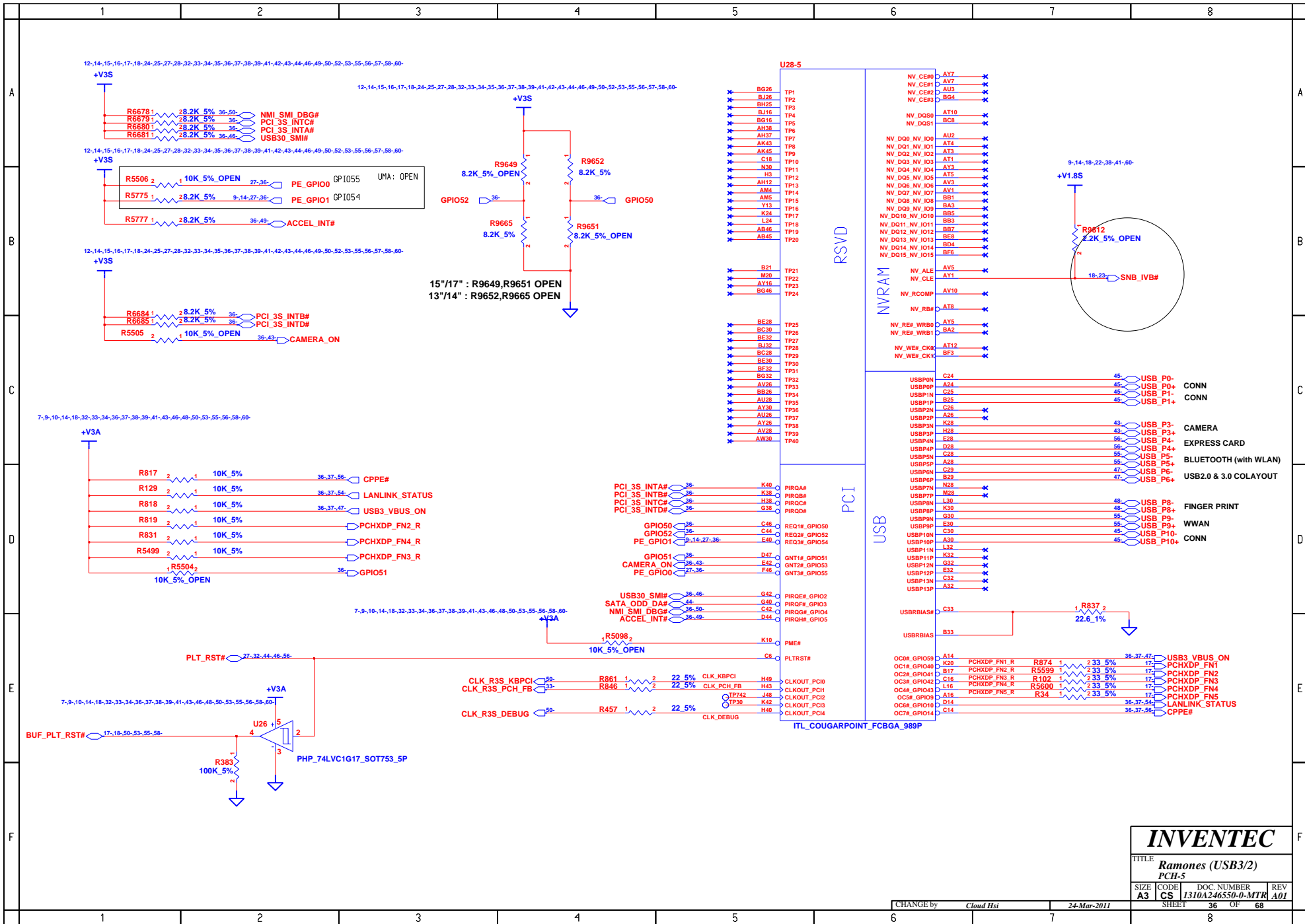
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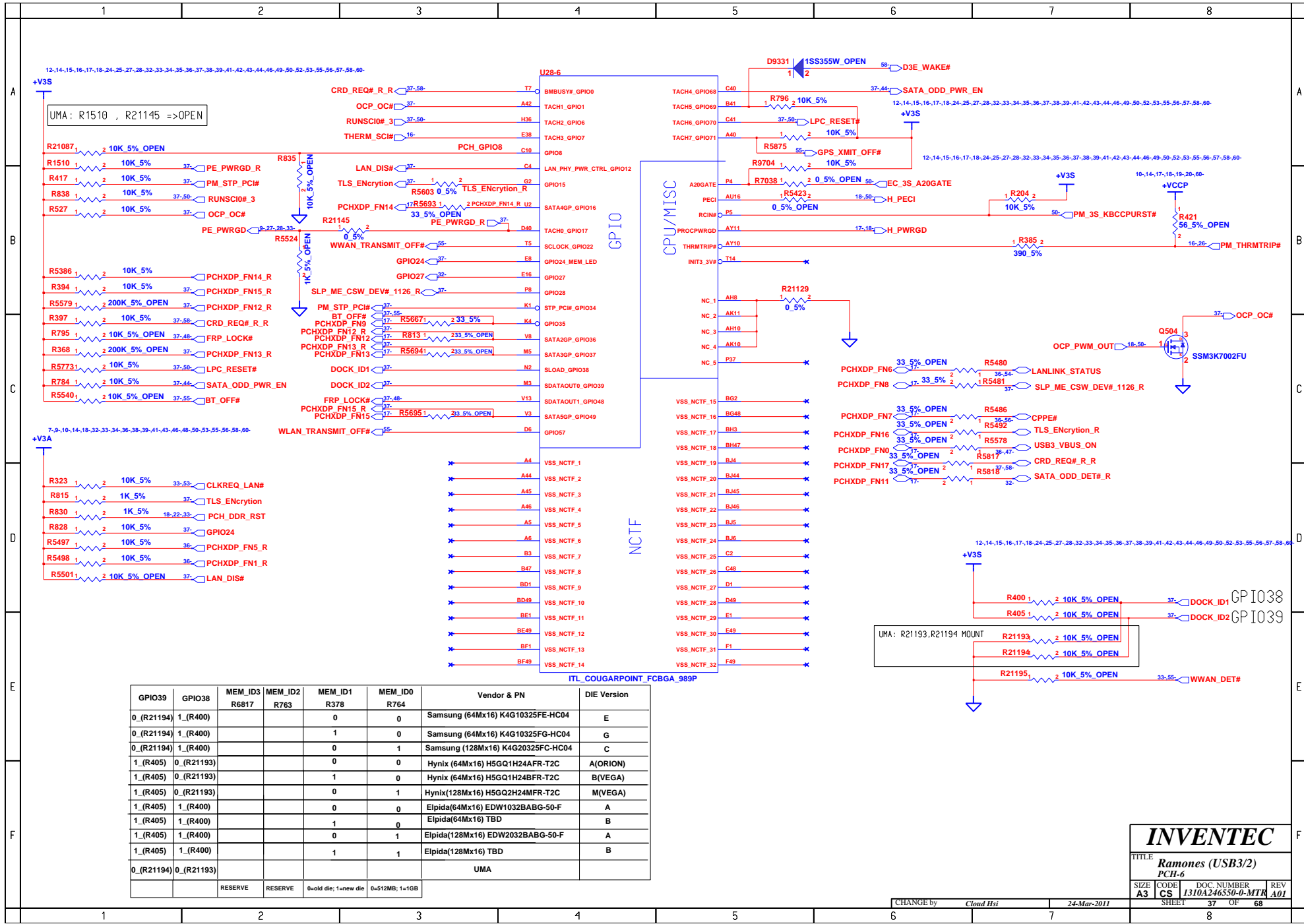
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PCH-3			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
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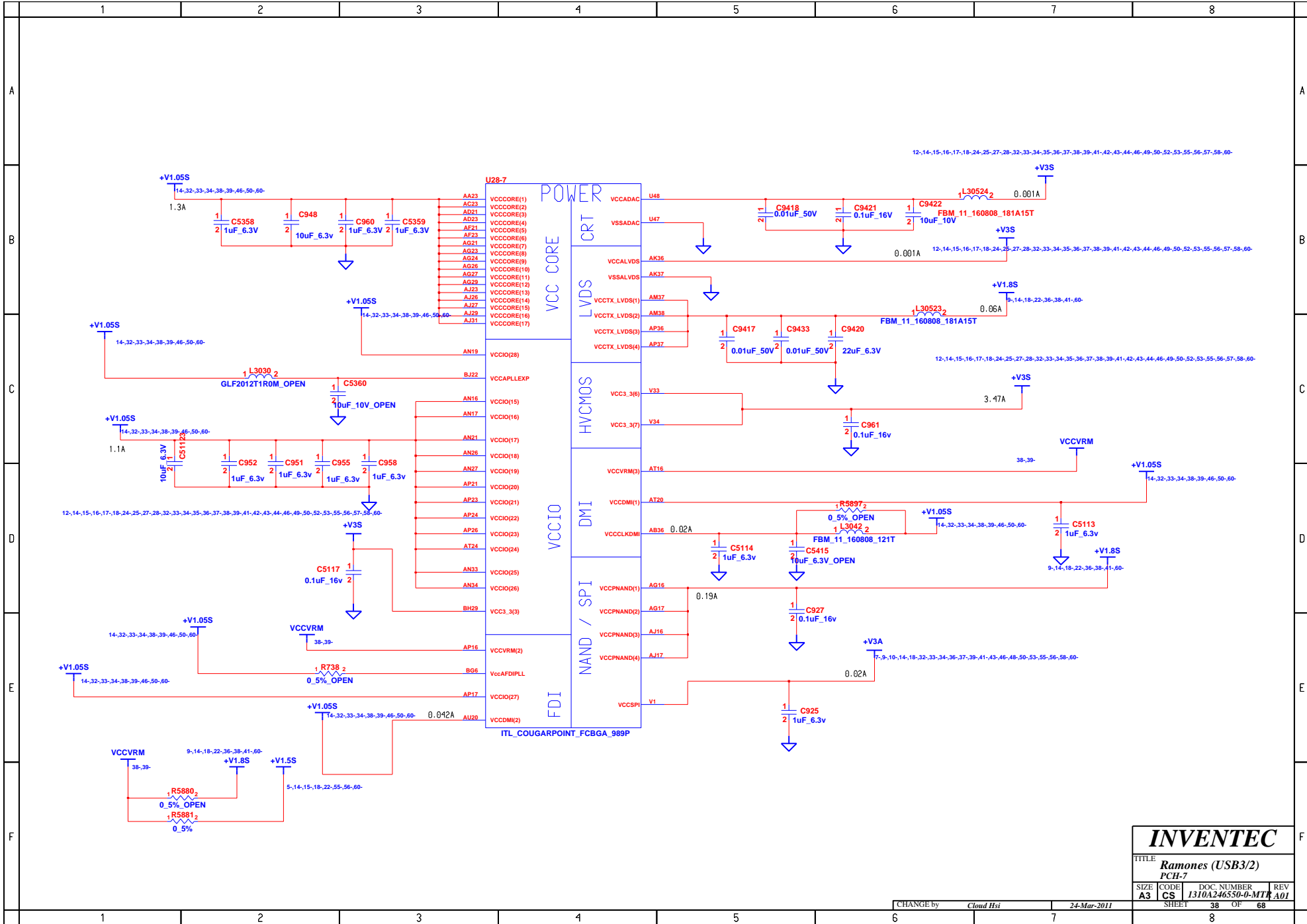
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PCH-4			
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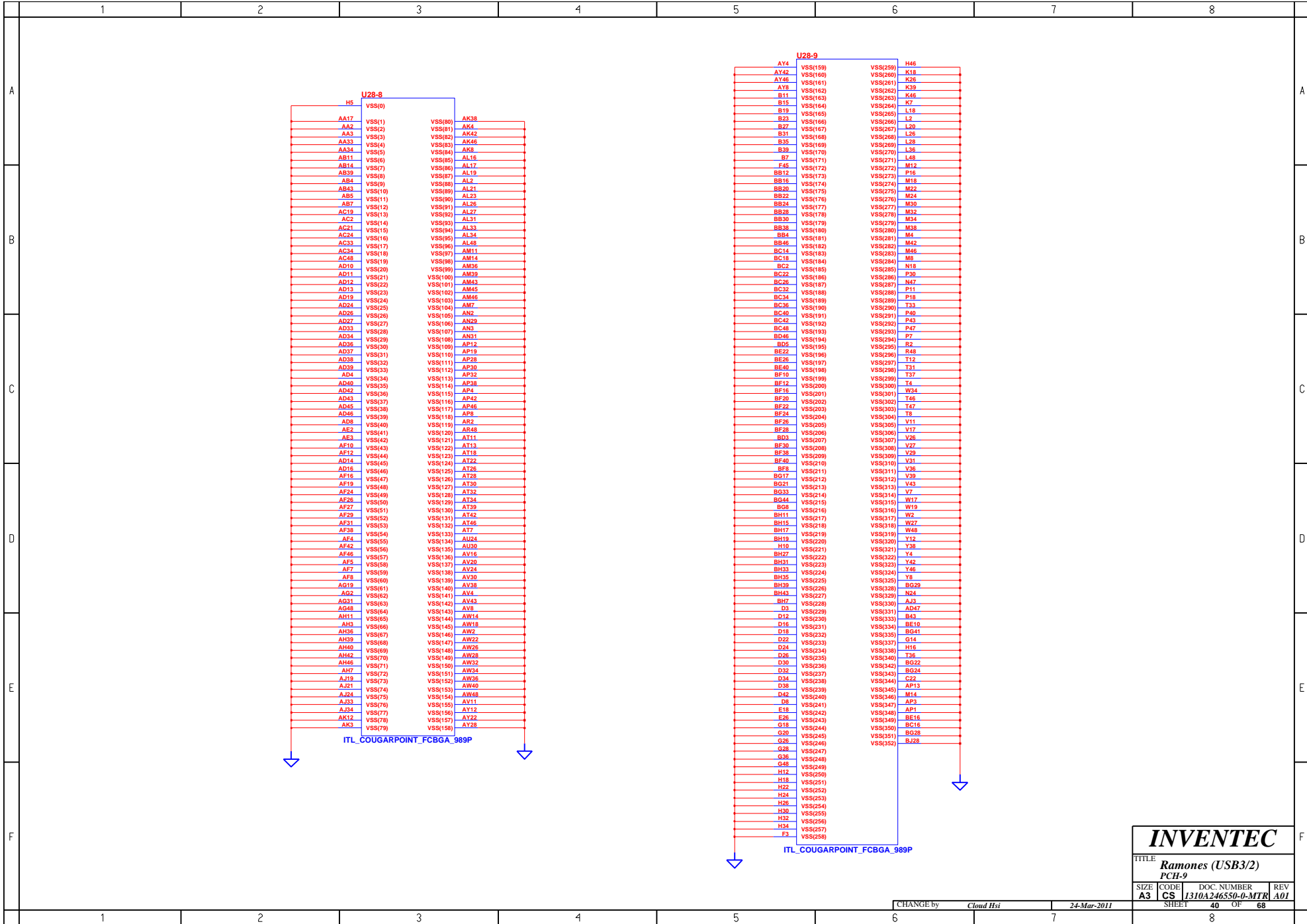
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SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01	
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011		
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CHANGE by Cloud Hsi 24-Mar-2011



INVENTEC			
TITLE Ramones (USB3/2)			
PCH-7			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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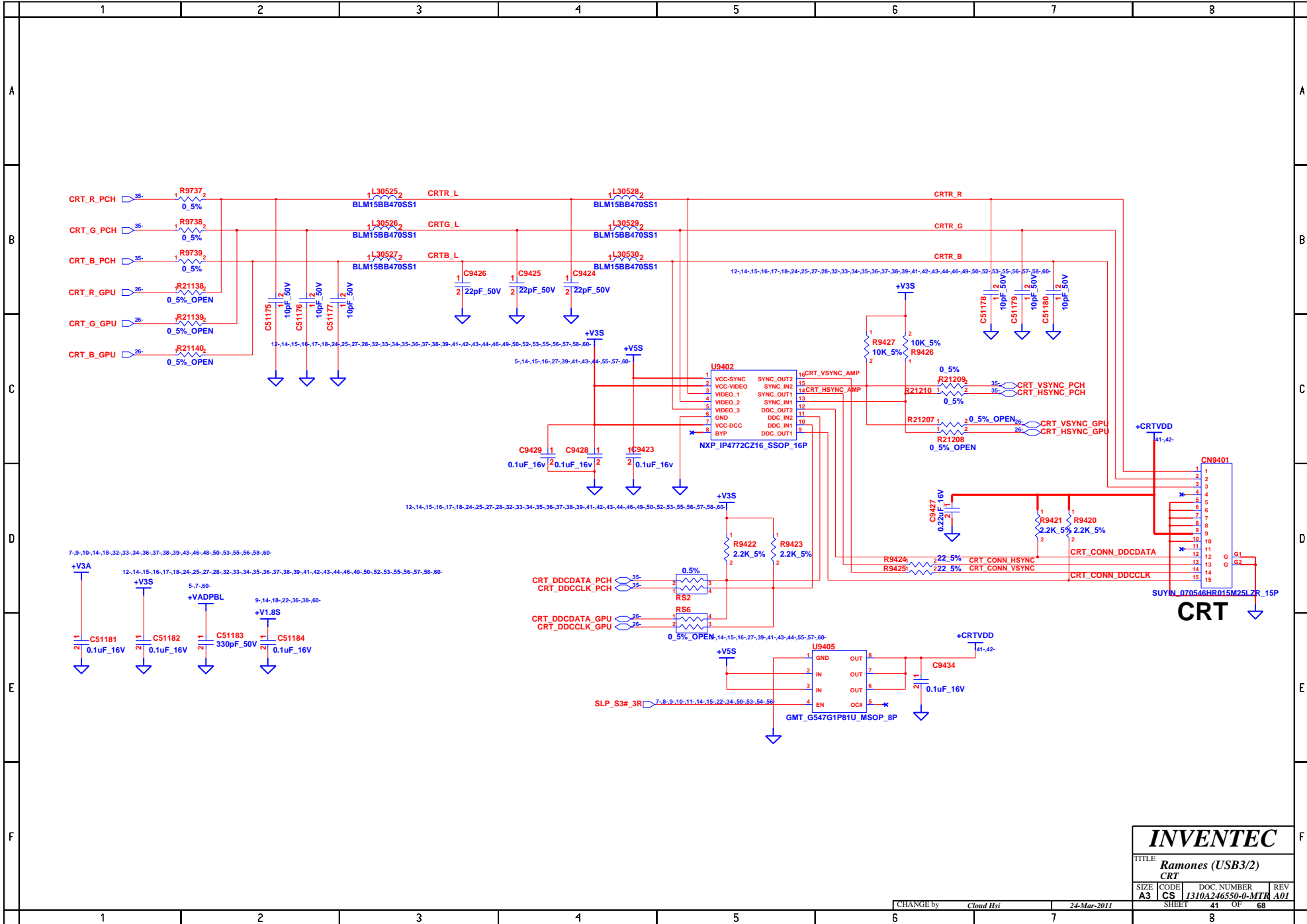


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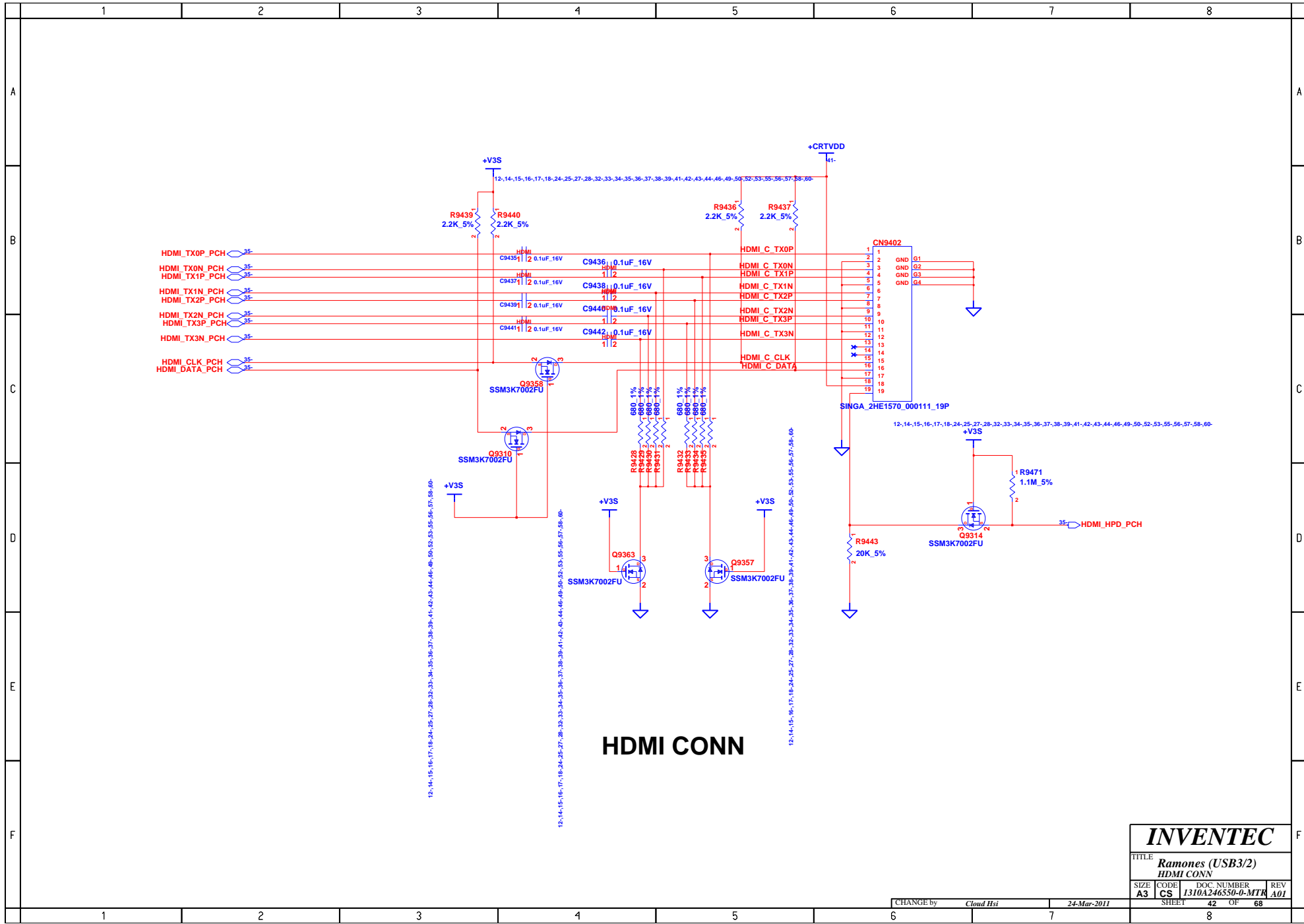
TITLE
Ramones (USB3/2)
PCH-9

SIZE A3	CODE CS	DOC. NUMBER 1310A246550-0-MTR	REV A01
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CHANGE by *Cloud Hsi* 24-Mar-2011

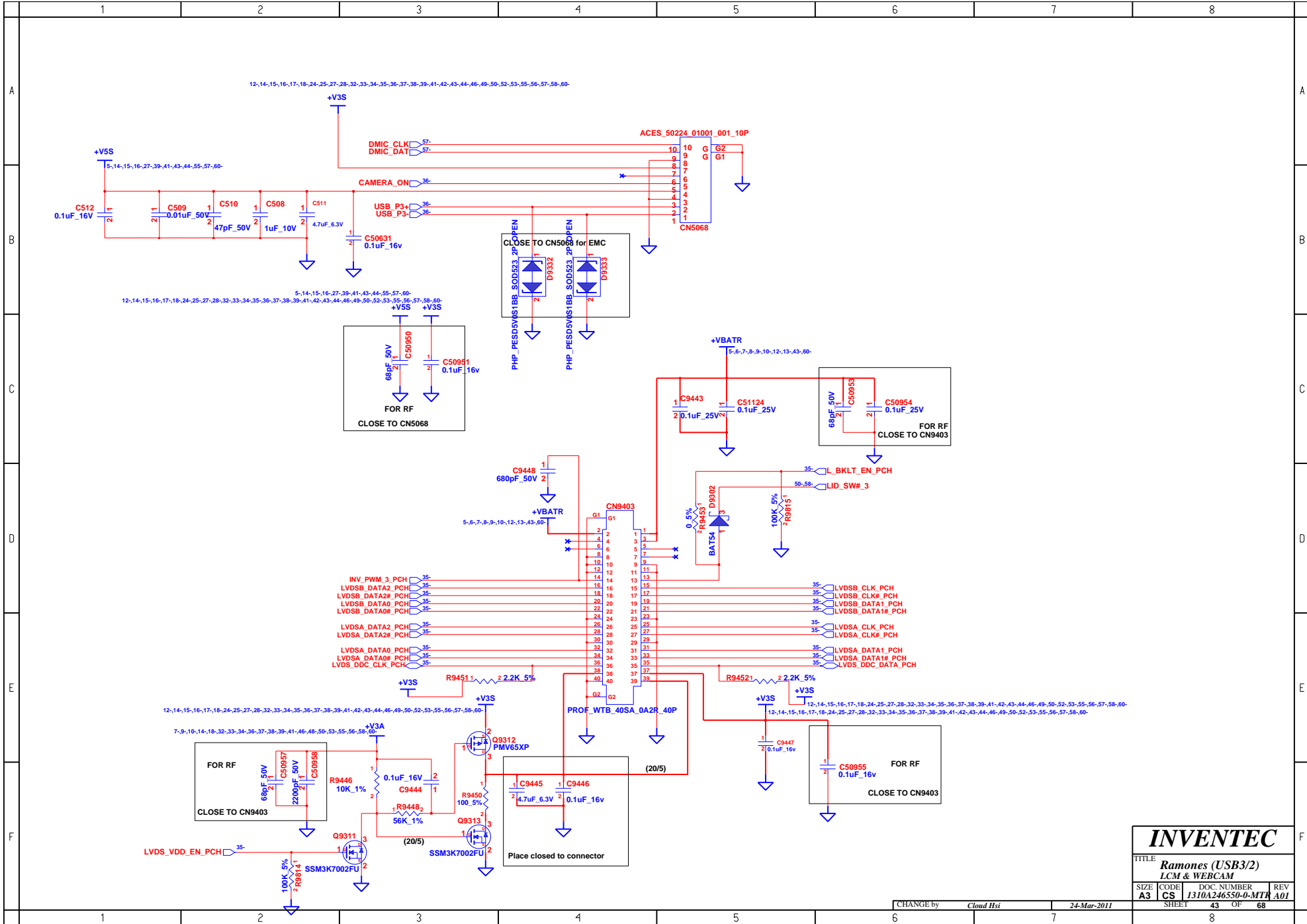


INVENTEC			
TITLE Ramones (USB2/2) CRT			
SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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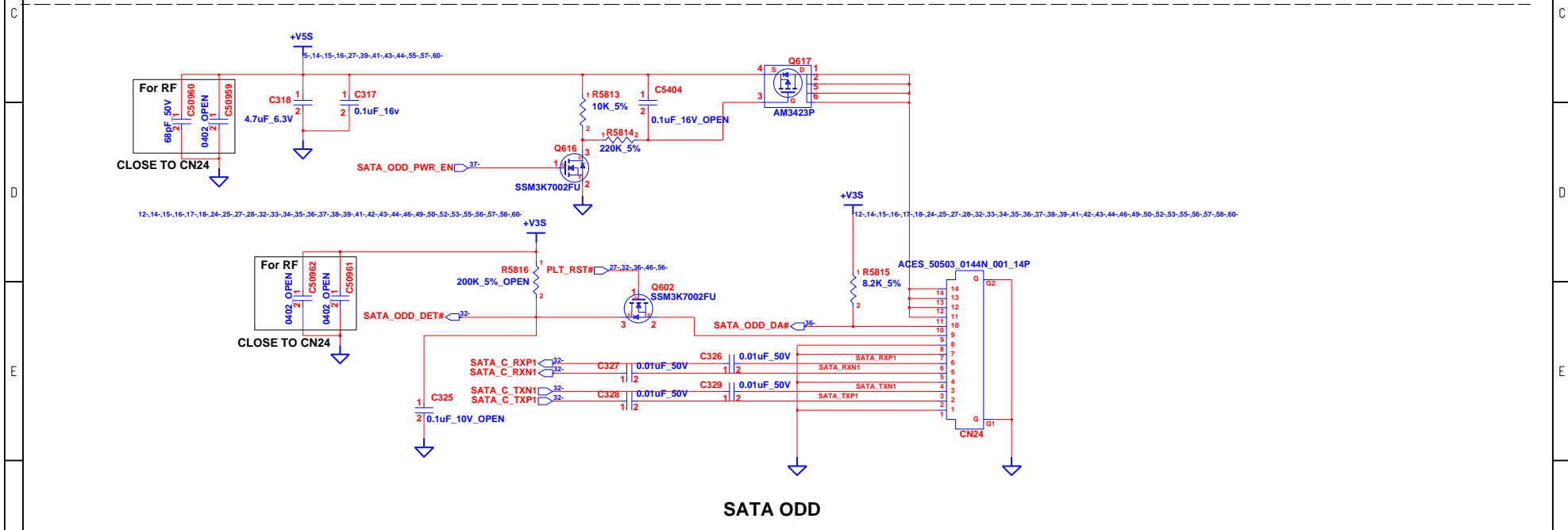
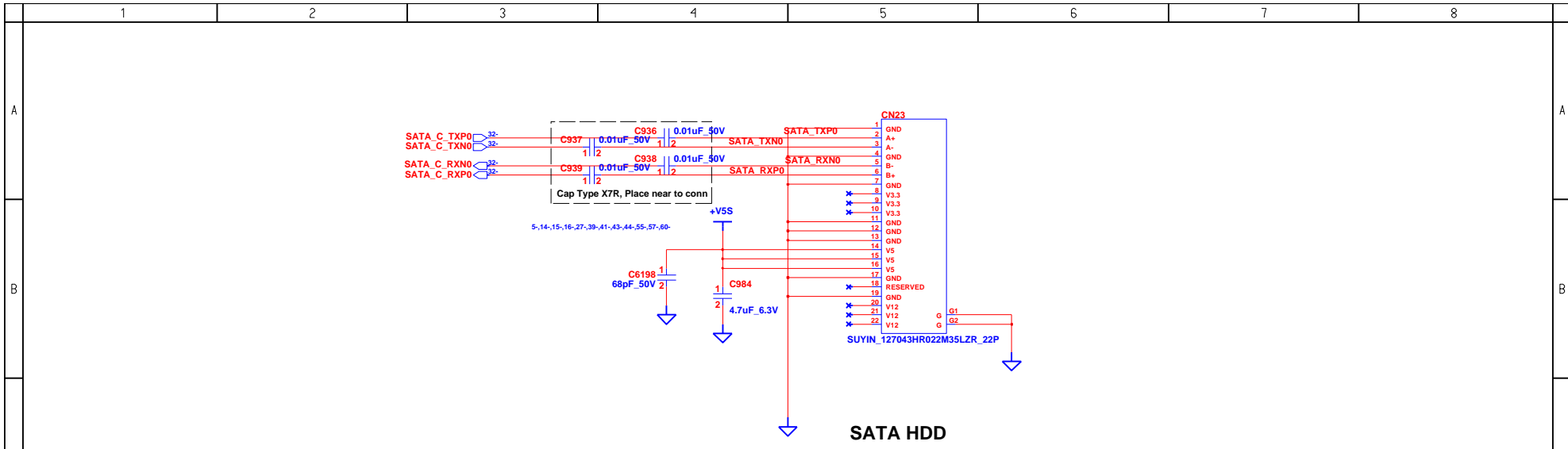


HDMI CONN

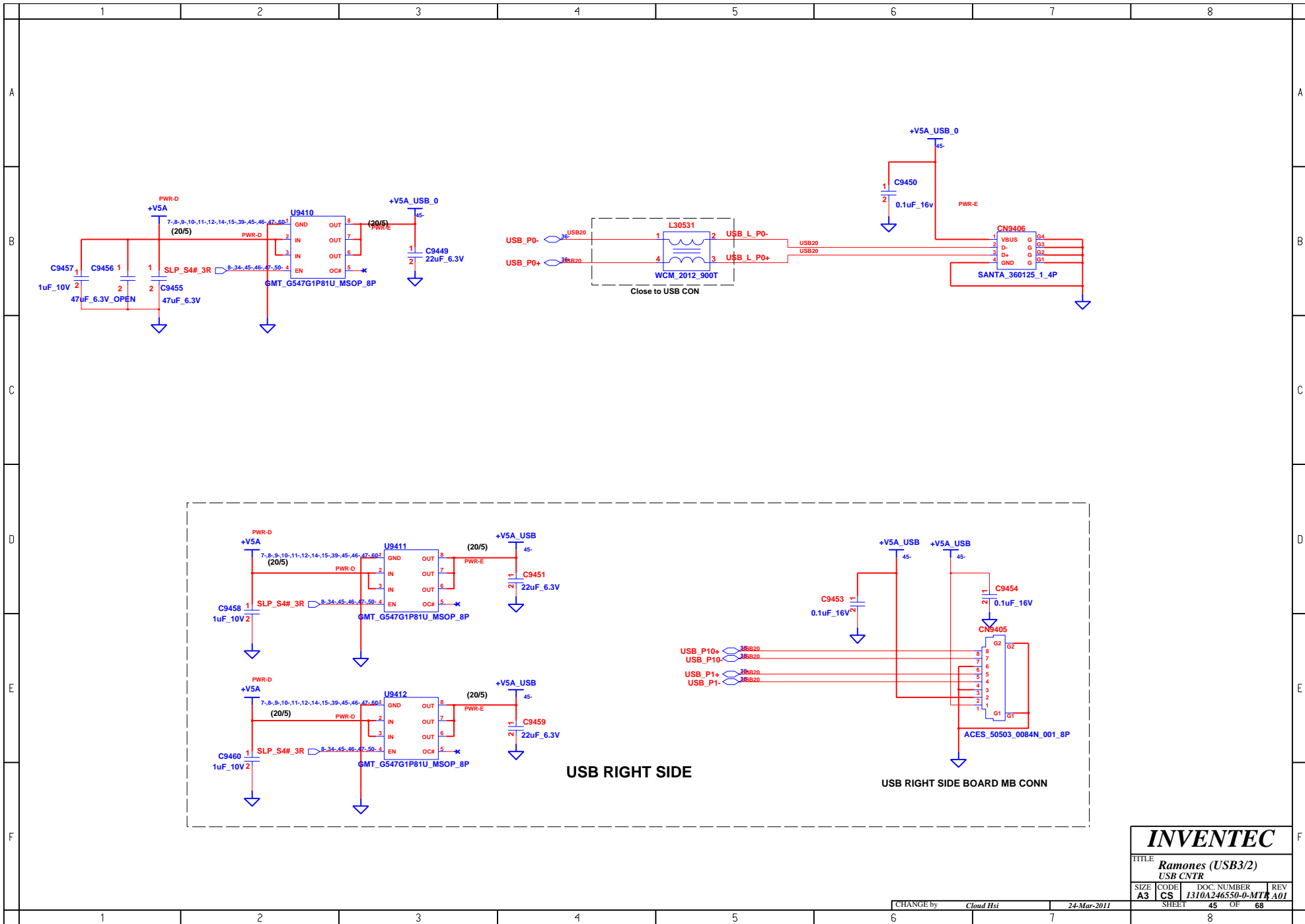
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SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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INVENTEC			
TITLE Ramones (USB3/2) LCM & WEBCAM			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		DATE 24-Mar-2011	
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INVENTEC			
TITLE Ramones (USB3/2) SATA HDD & ODD			
SIZE A3	CODE CS	DOC. NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
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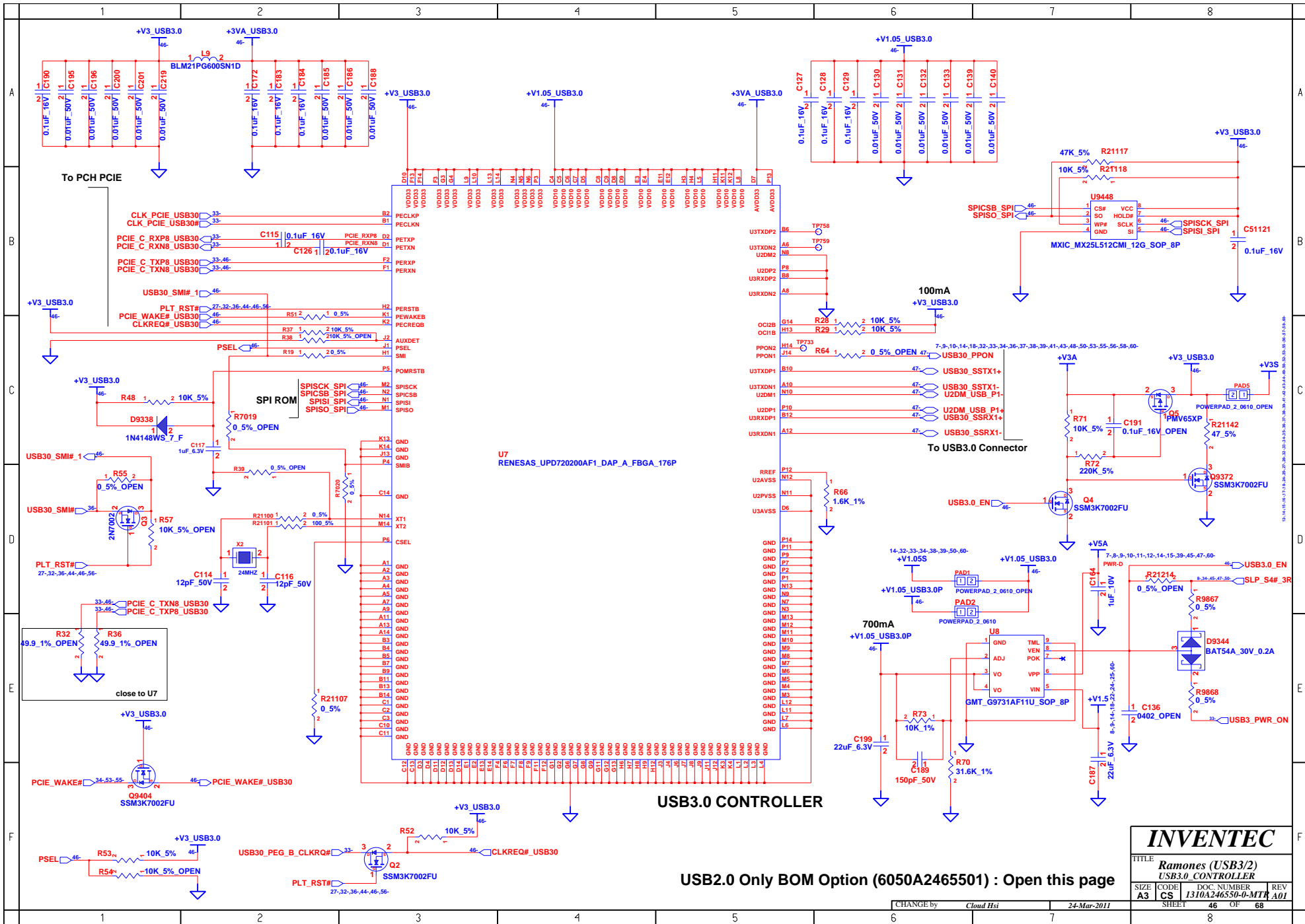
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TITLE
Ramones (USB3/2)
 USB CNTR

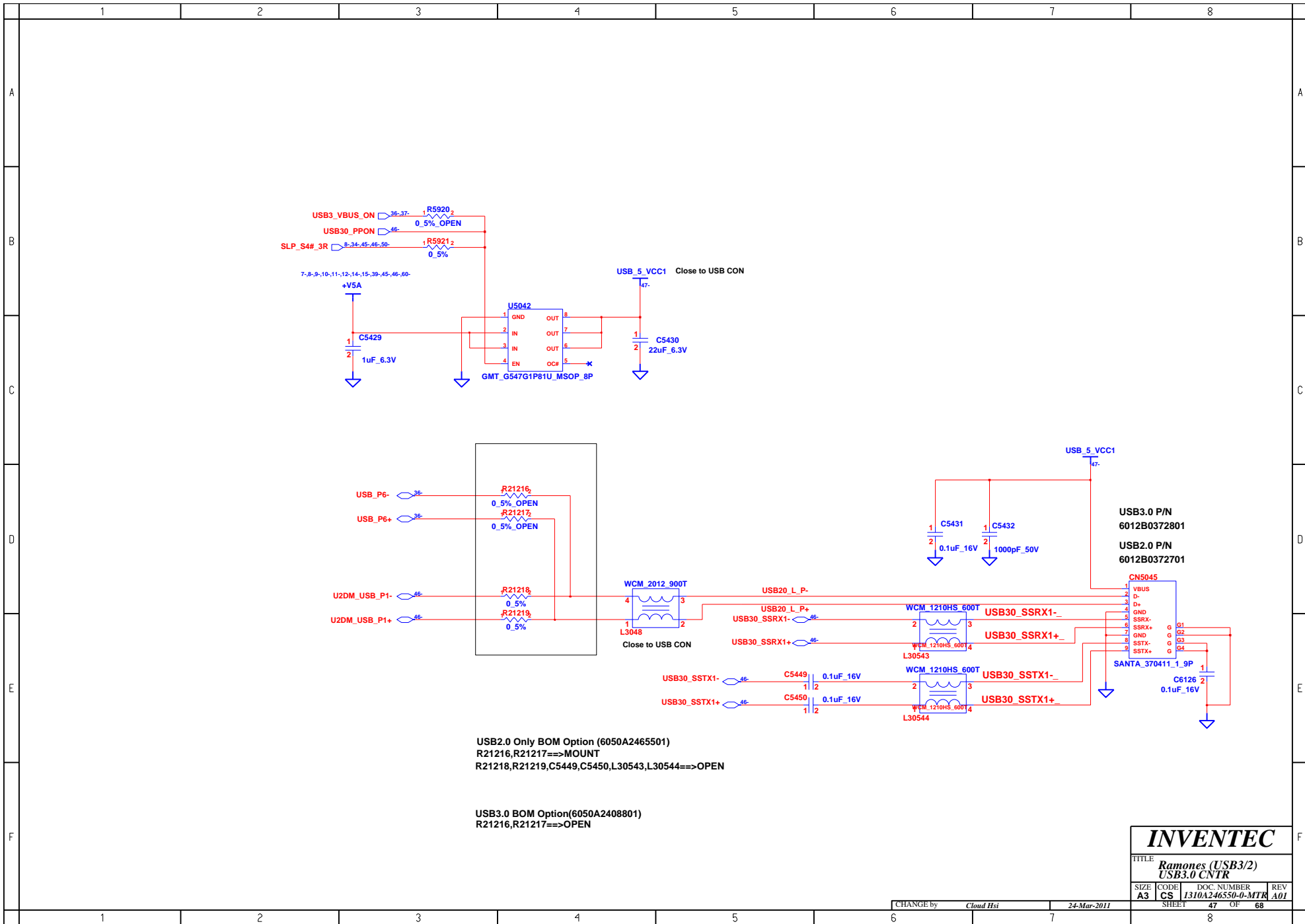
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01

CHANGE by *Cloud Hsi* 24-Mar-2011

SHEET 45 OF 68



INVENTEC			
TITLE: Ramones (USB3/2) USB3.0 CONTROLLER			
SIZE: A3	CODE: CS	DOC NUMBER: 1310A246550-0-MTR	REV: A01
CHANGE by: <i>Cloud Hsi</i>		24-Mar-2011	
SHEET: 46		OF: 88	

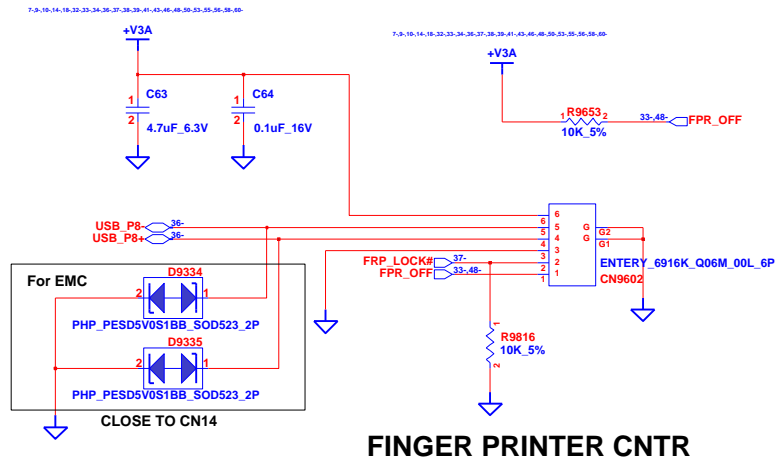


INVENTEC

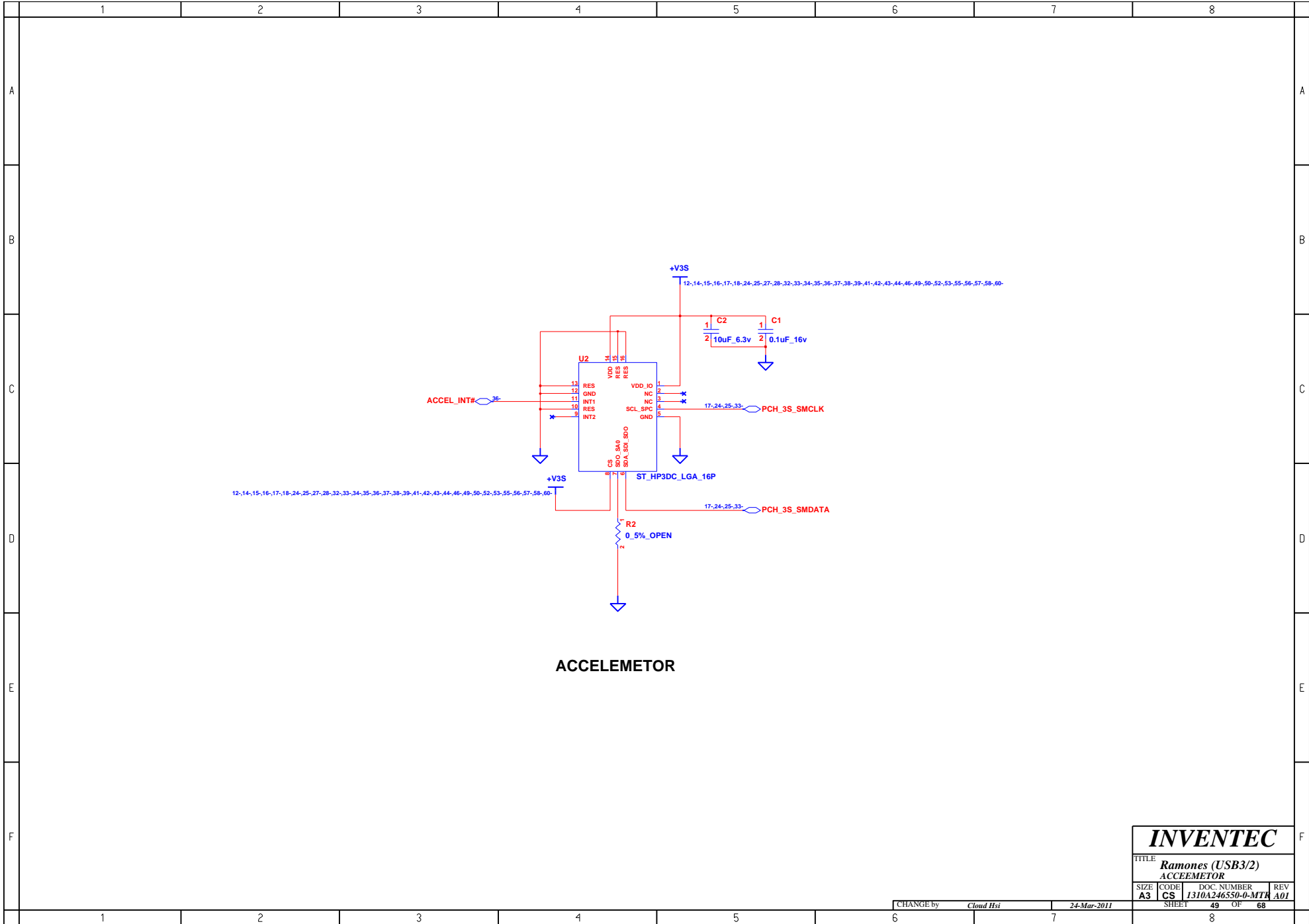
TITLE
Ramones (USB3/2)
USB3.0 CNTR

SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
SHEET 47		OF 68	

CHANGE by *Cloud Hsi* 24-Mar-2011



INVENTEC			
TITLE Ramones (USB3/2)			
FINGER PRINTER			
SIZE A3	CODE CS	DOC. NUMBER 1310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
SHEET 48		OF 68	



INVENTEC

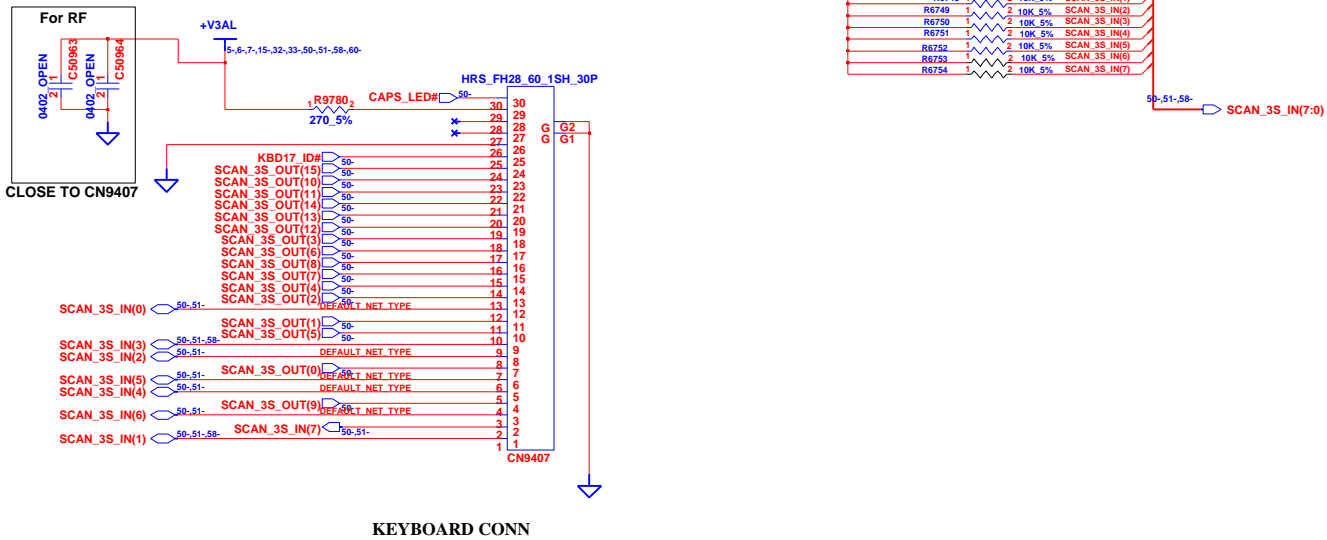
TITLE
**Ramones (USB3/2)
 ACCEMATOR**

SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
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CHANGE by *Cloud Hsi* 24-Mar-2011

SHEET 49 OF 68

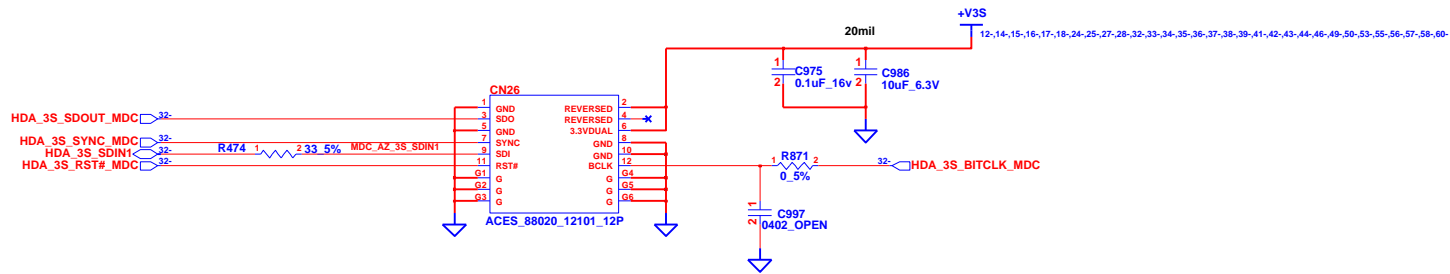
PIN NAME	LEVEL	PANEL SIZE
KBD17_1D#	HIGH	15
	LOW	17



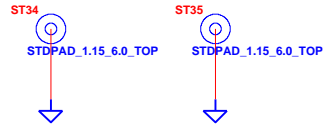
INVENTEC

TITLE			
Ramones (USB3/2)			
KEYBOARD & TOUCH PAD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
SHEET		51	OF 68

CHANGE by Cloud Hsi 24-Mar-2011



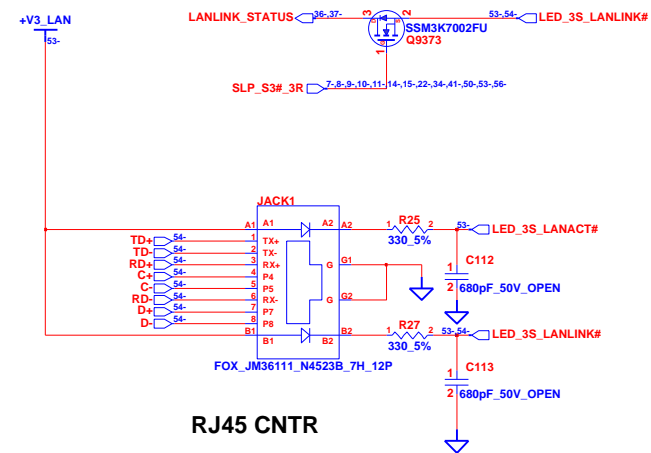
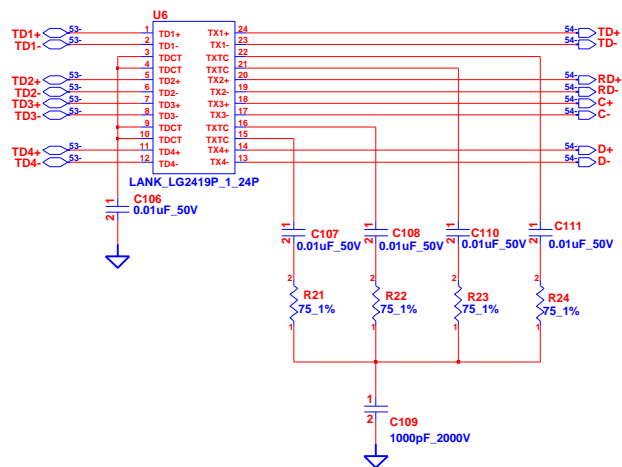
MDC CONN



INVENTEC			
TITLE Ramones (USB3/2)			
MDC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
CHANGE by		Cloud Hsi	24-Mar-2011
SHEET		52	OF 68

LAYOUT NOTE:

To place one 0.1uF at each pin 1, 4, 7, 10
and place the 1uF in the spot that
is as close as possible to all 4 pins



INVENTEC

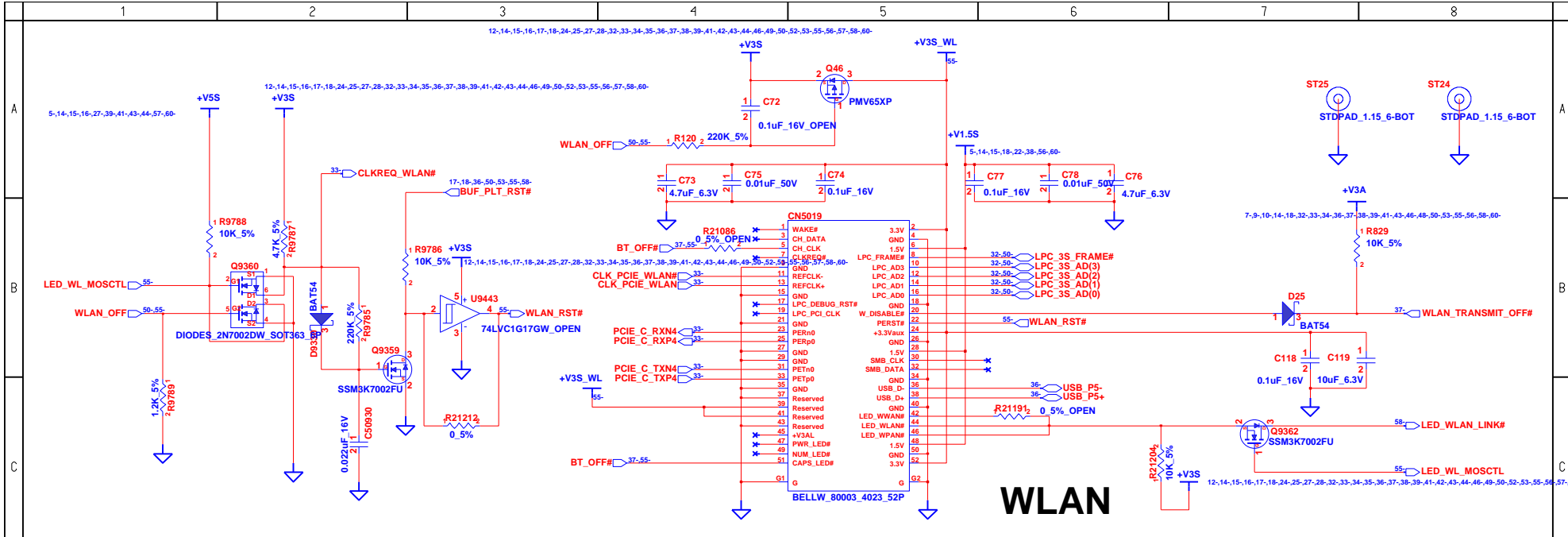
TITLE
Ramones (USB3/2)
LAN RJ45 CONN

SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTR	A01

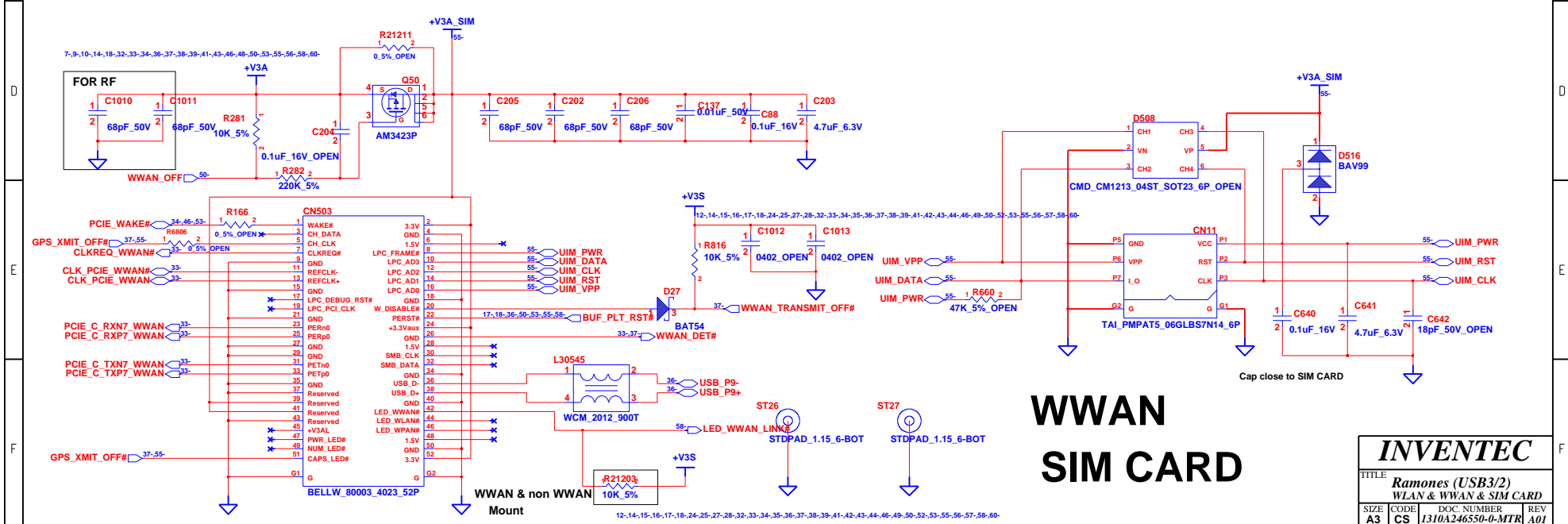
CHANGE by Cloud Hsi

24-Mar-2011

SHEET 54 OF 68

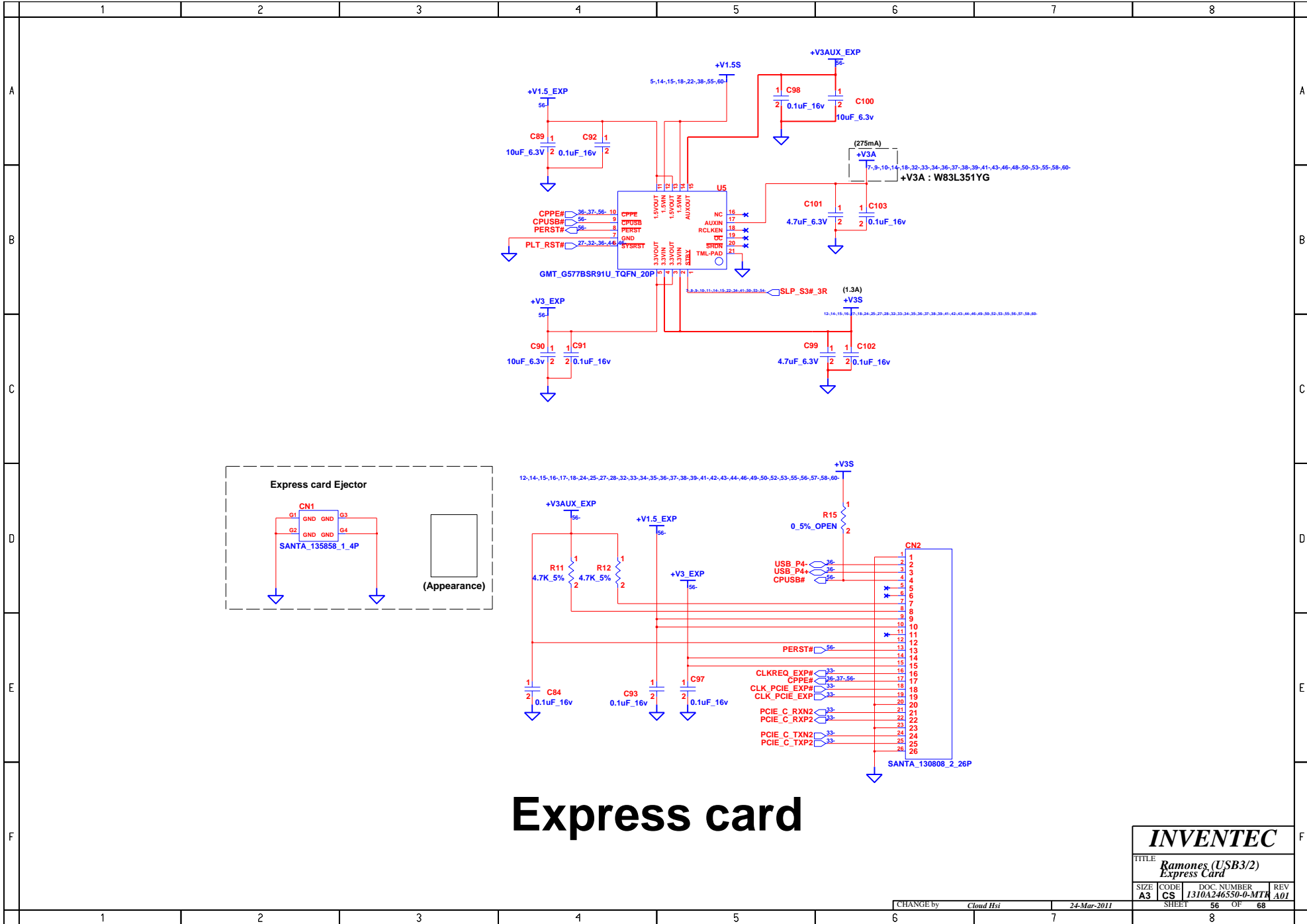


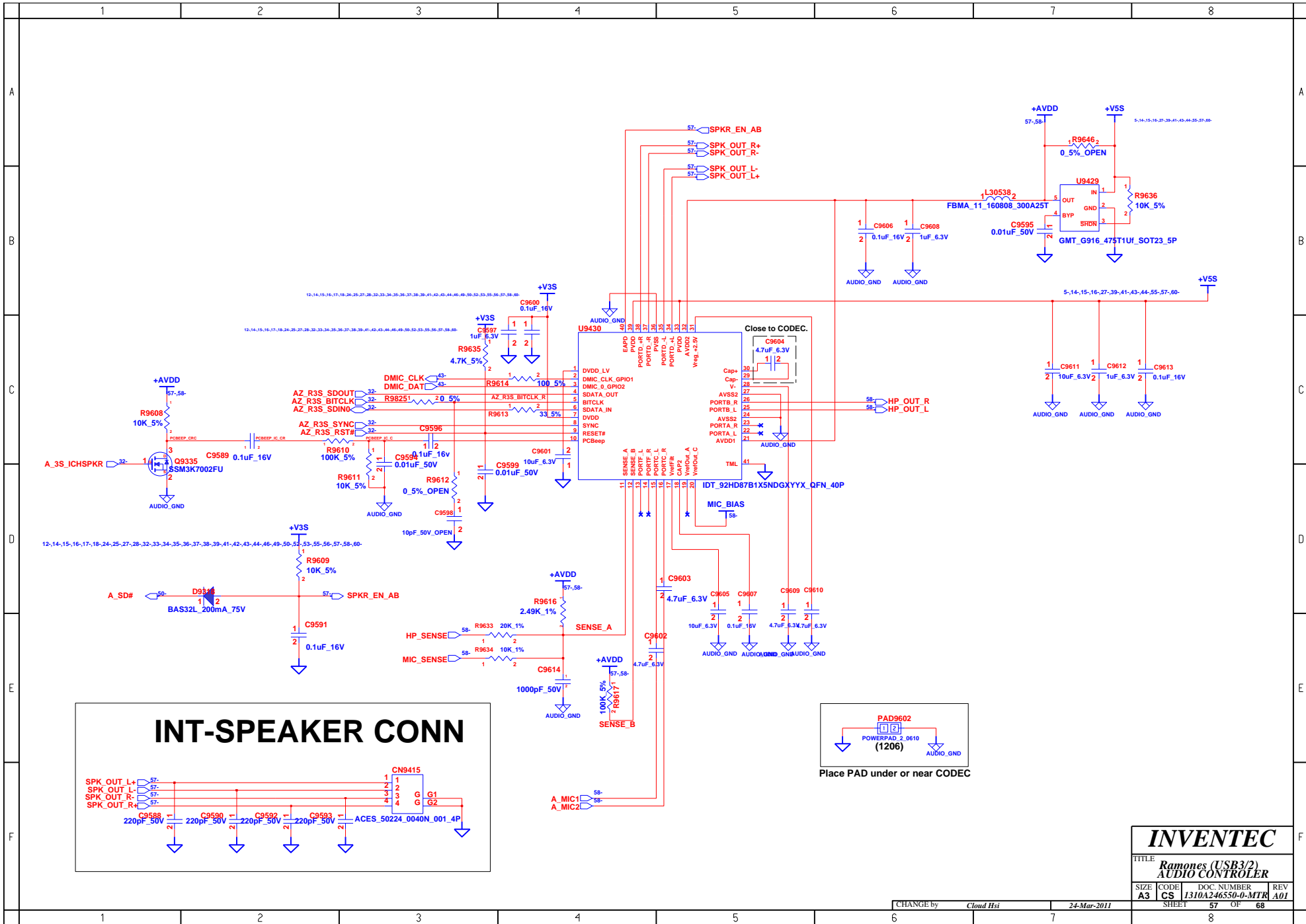
WLAN



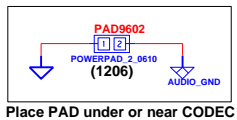
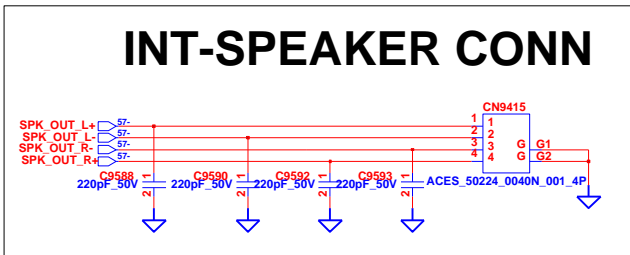
WWAN SIM CARD

INVENTEC			
TITLE: Ramones (USB/2) WLAN & WWAN & SIM CARD			
SIZE: A3	CODE: CS	DOC NUMBER: I310A246550-0-MTR	REV: A01
SHEET: 55		OF: 68	

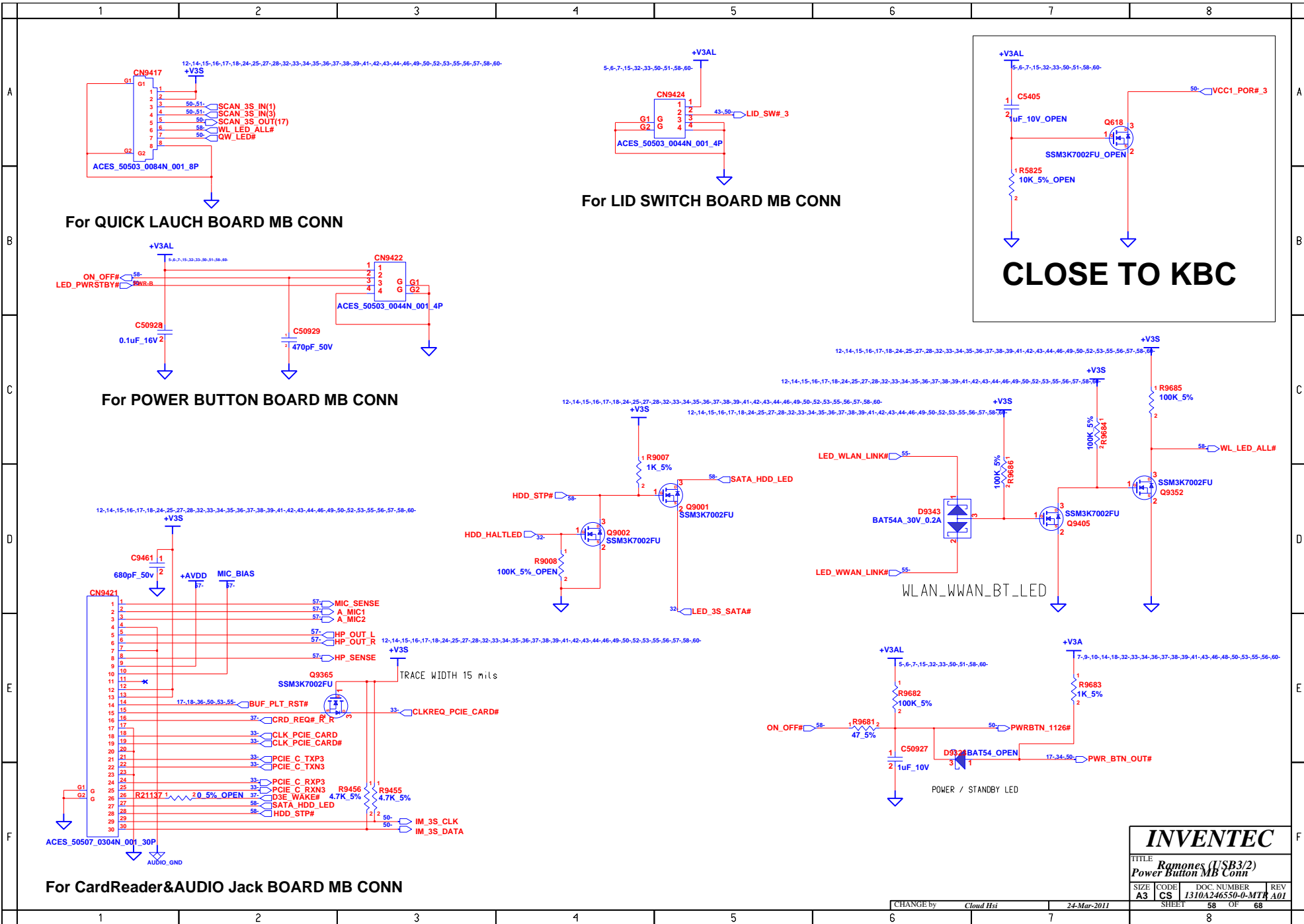


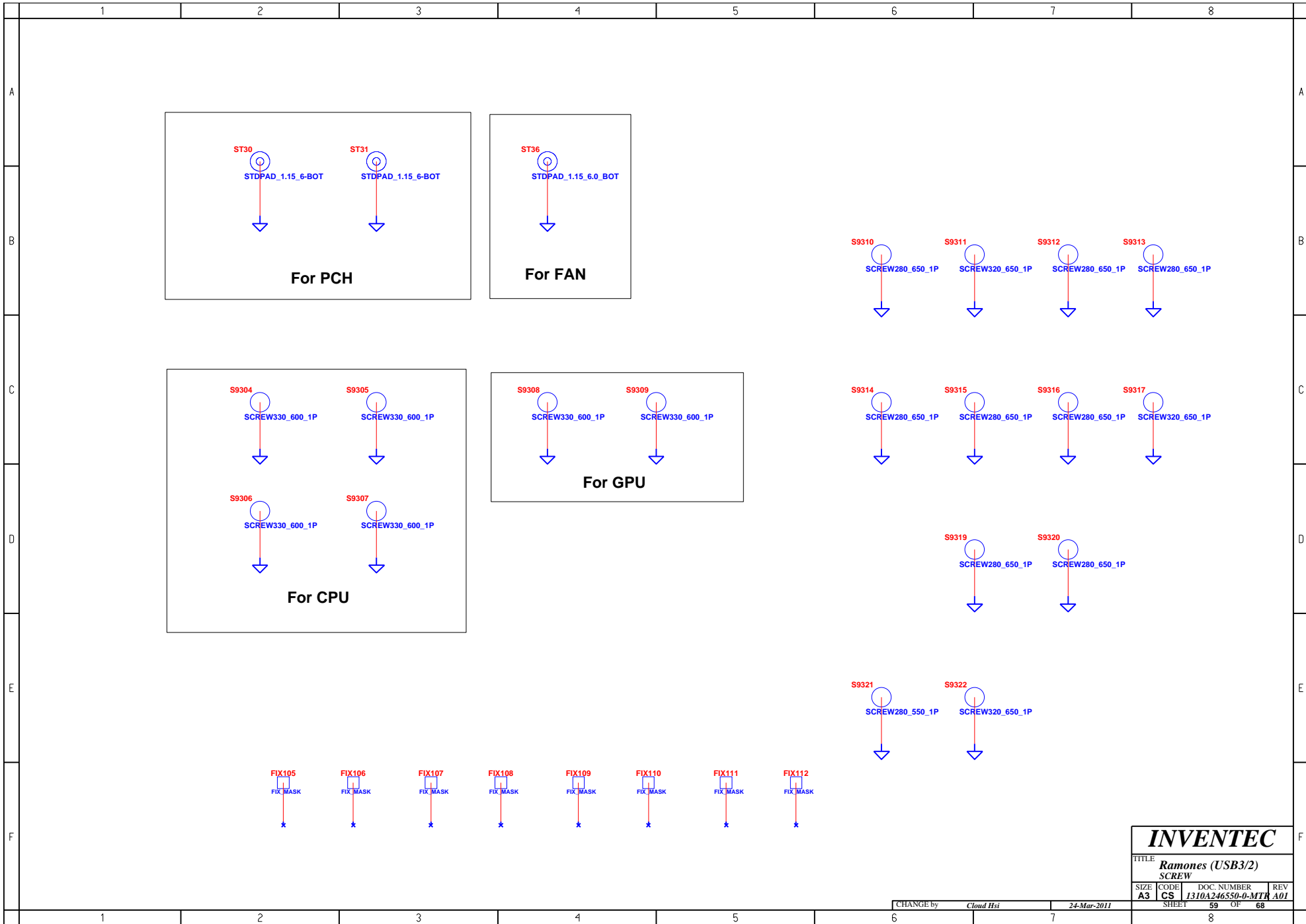


INT-SPEAKER CONN



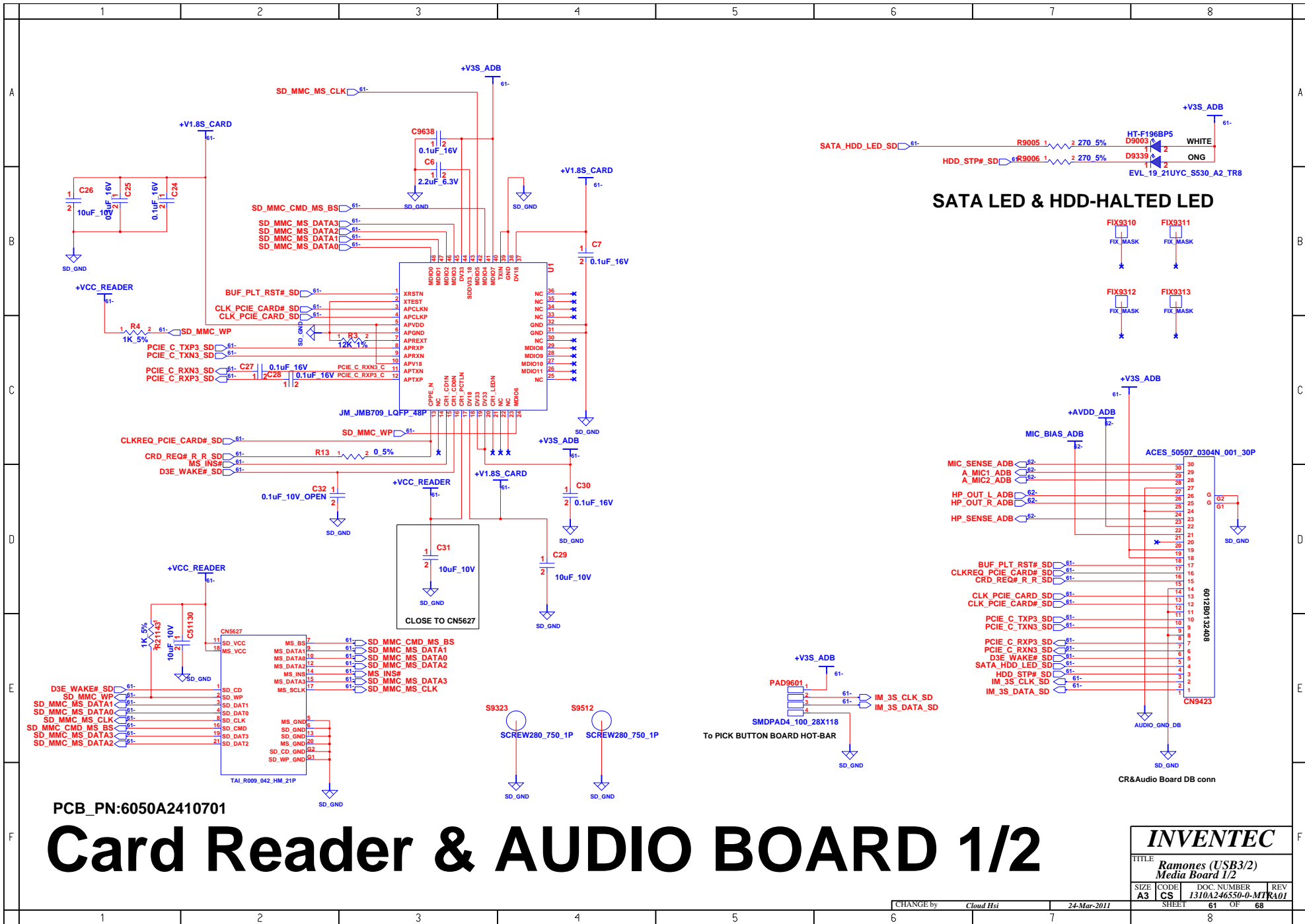
INVENTEC			
TITLE Ramones (USB3/2) AUDIO CONTROLLER			
SIZE A3	CODE CS	DOC NUMBER I310A246550-0-MTR	REV A01
CHANGE by <i>Cloud Hsi</i>		24-Mar-2011	
SHEET 57		OF 68	





INVENTEC			
TITLE Ramones (USB3/2)			
SCREW			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
CHANGE by		SHEET	
Cloud Hsi		59 OF 68	

24-Mar-2011



PCB_PN:6050A2410701

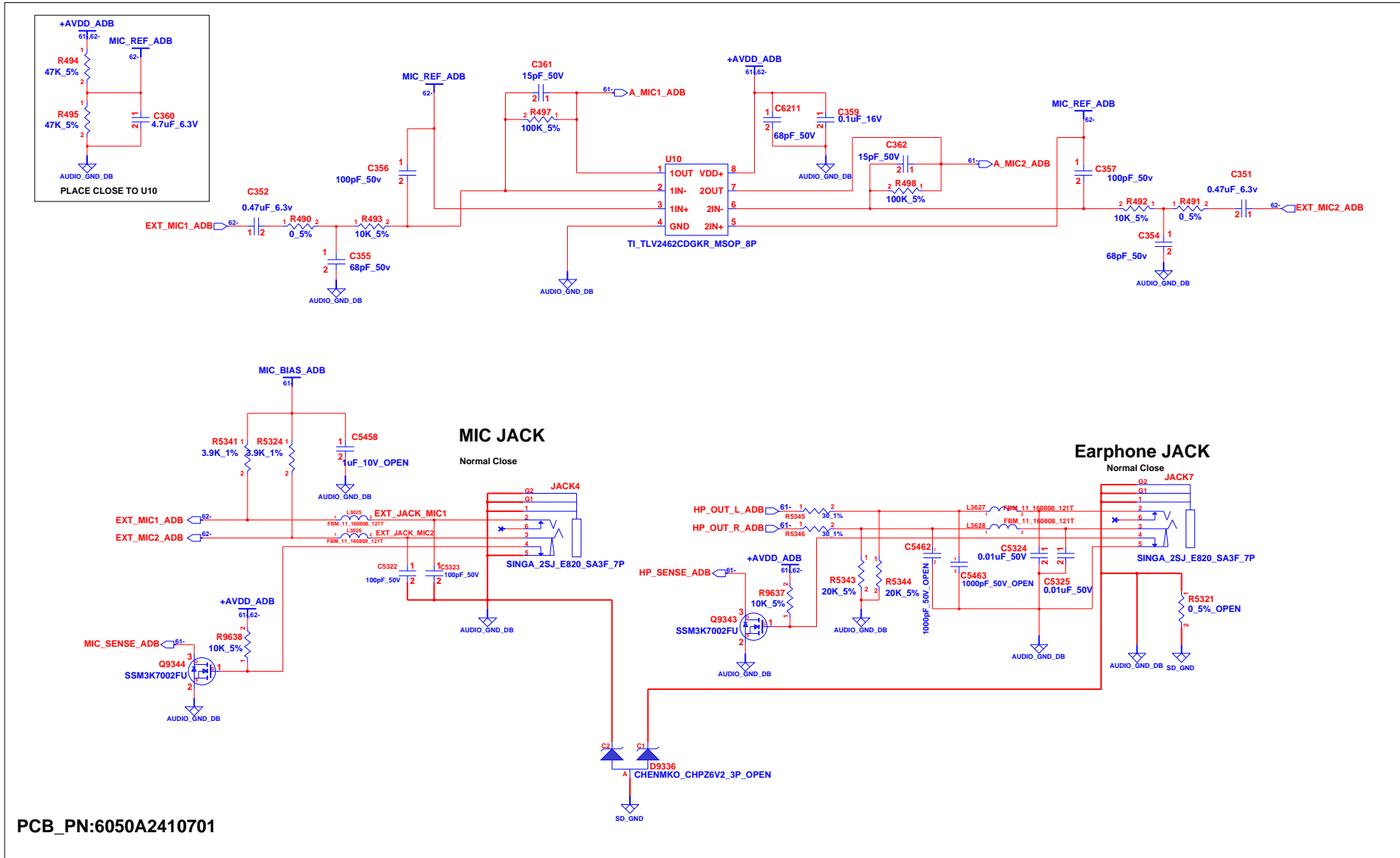
Card Reader & AUDIO BOARD 1/2

INVENTEC

TITLE
**Ramones (USB3/2)
 Media Board 1/2**

SIZE CODE DOC NUMBER REV
A3 CS 1310A246550-0-MTR A01

CHANGE by *Cloud Hsi* 24-Mar-2011 SHEET 61 OF 68



PCB_PN:6050A2410701

Card READER & AUDIO BOARD 2/2

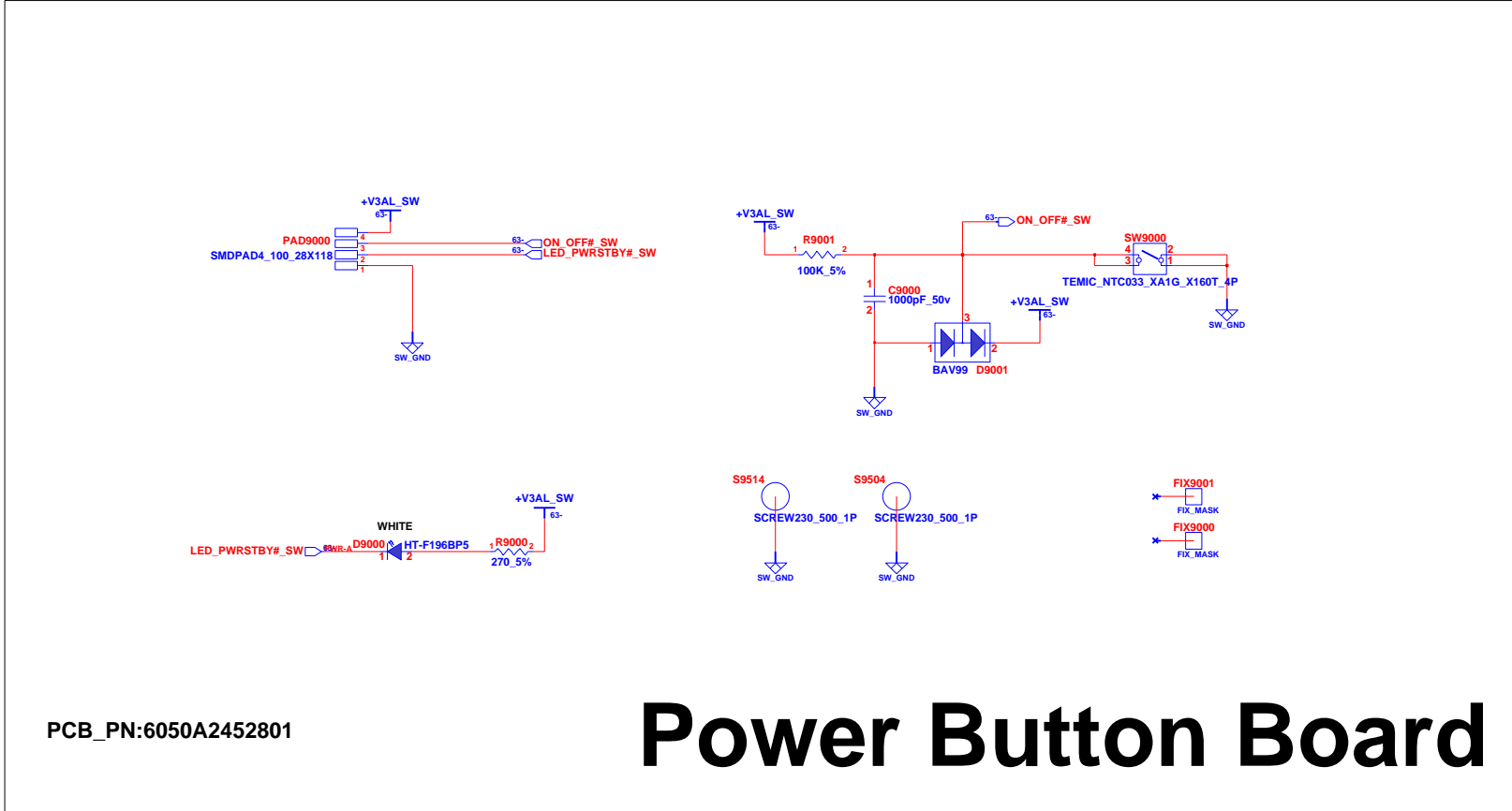
INVENTEC

TITLE: *Ramones (USB3/2) Media Board 2/2*

SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A246550-0-MTB	A01

CHANGE by: *Cloud Hsi* 24-Mar-2011

SHEET 62 OF 68



PCB_PN:6050A2452801

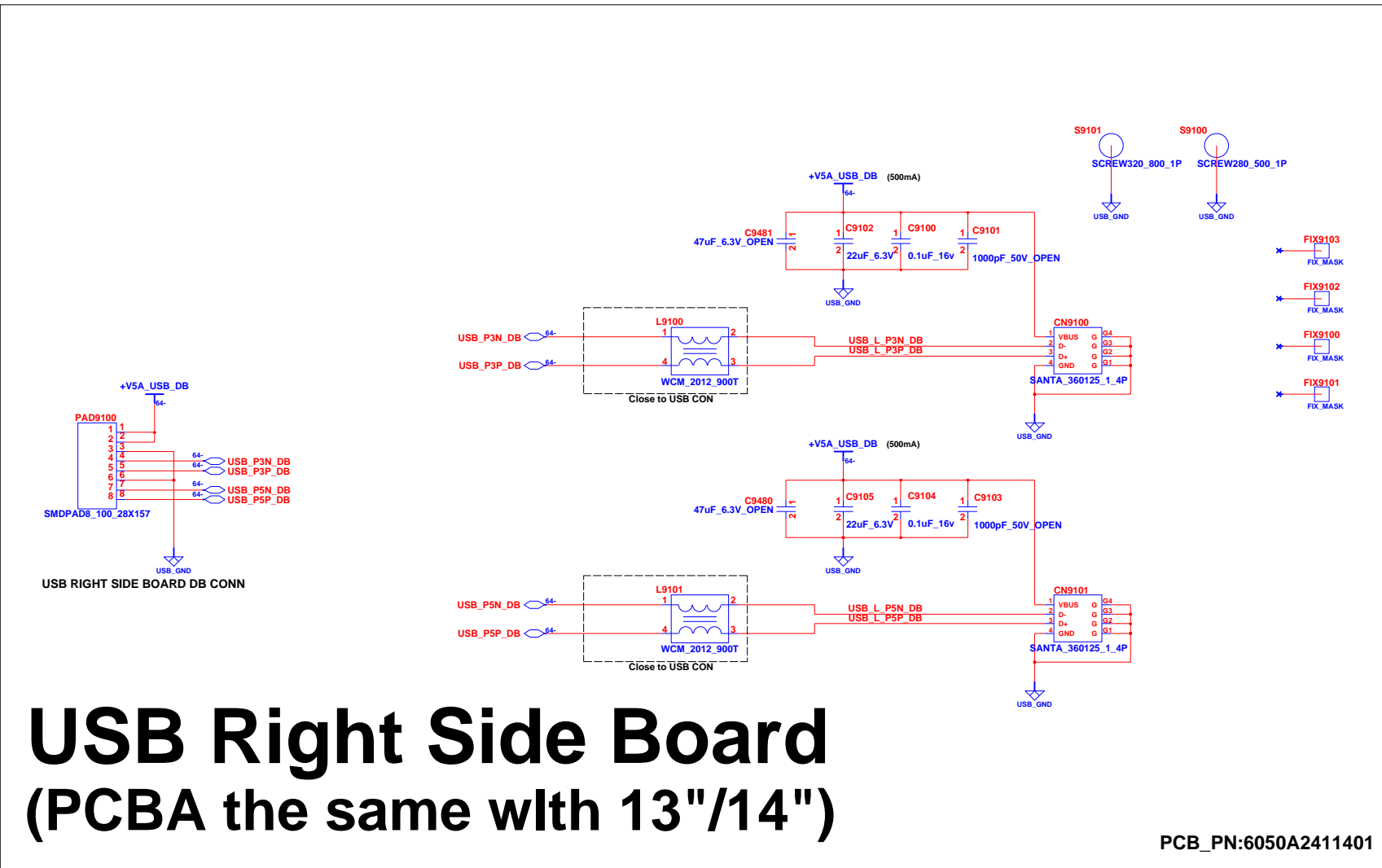
Power Button Board

INVENTEC

TITLE
**Ramones (USB3/2)
 Power Button Board**

SIZE CODE DOC NUMBER REV
A3 CS 1310A246550-0-MTR A01

CHANGE by *Cloud Hsi* 24-Mar-2011 SHEET 63 OF 68

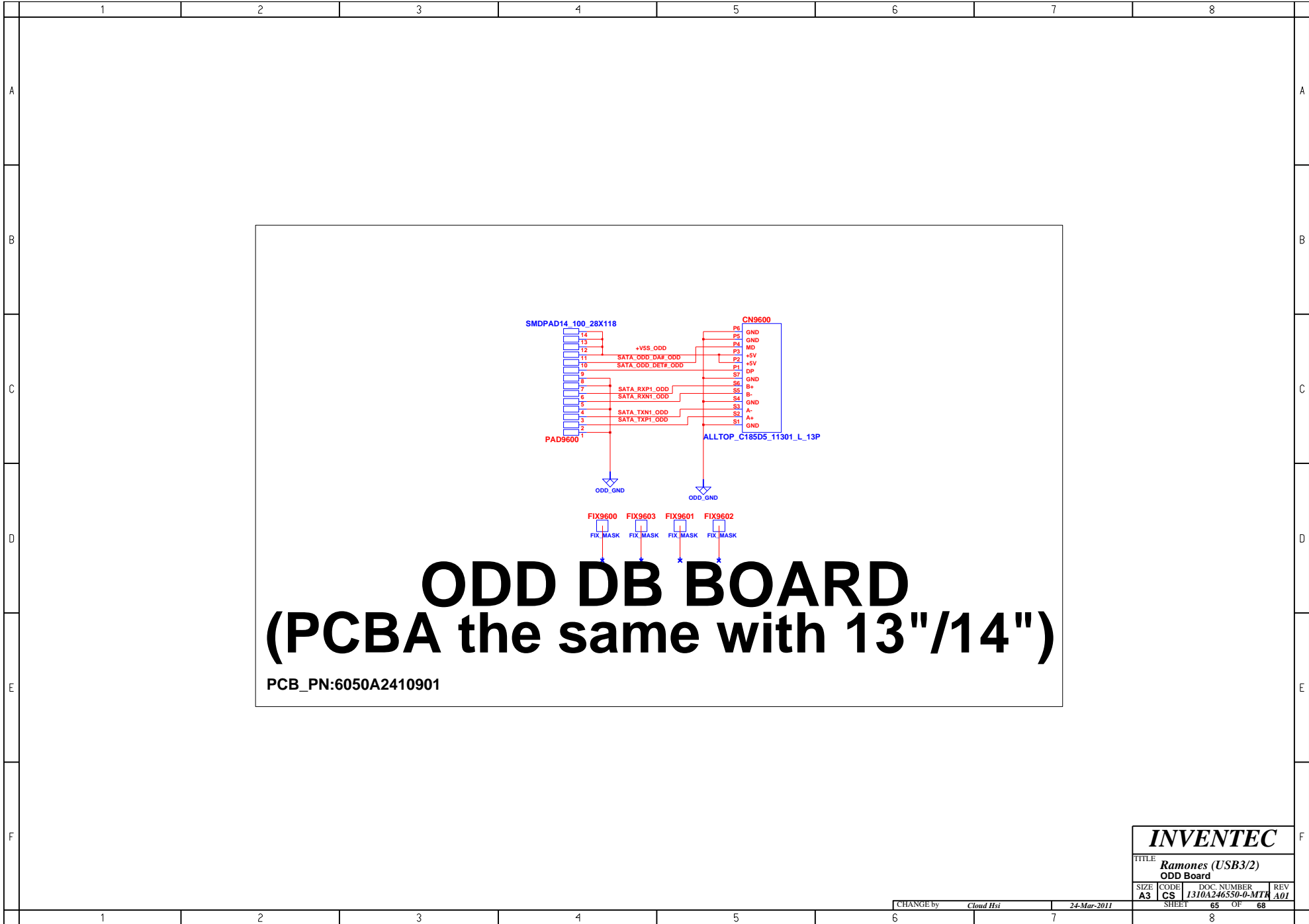


USB Right Side Board

(PCBA the same w/ 13"/14")

PCB_PN:6050A2411401

INVENTEC			
TITLE Ramones (USB3/2) USB RIGHT SIDE DB BOARD			
SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR A01	REV A01
CHANGE by <i>Cloud Hsi</i>		DATE 24-Mar-2011	
SHEET 64		OF 68	



INVENTEC

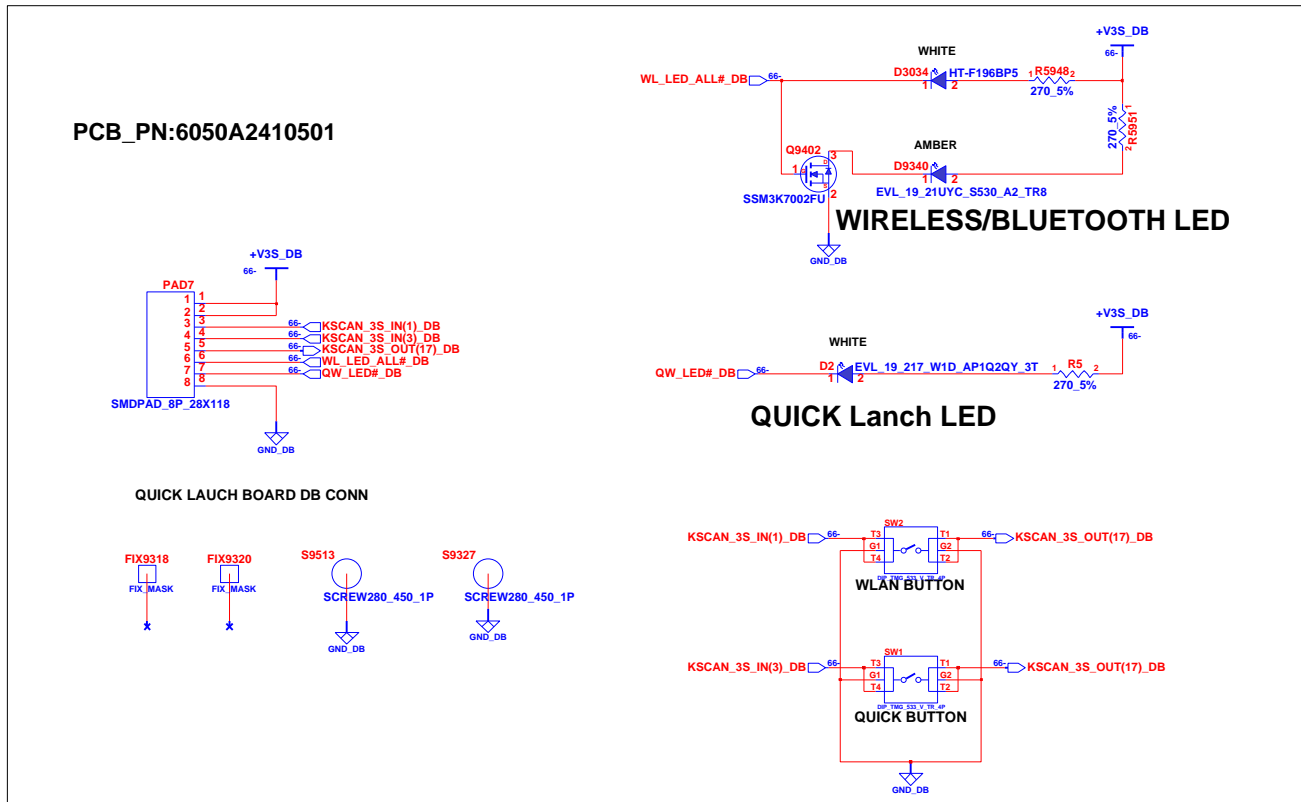
TITLE **Ramones (USB3/2)**
ODD Board

SIZE A3	CODE CS	DOC NUMBER 1310A246550-0-MTR	REV A01
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CHANGE by *Cloud Hsi* 24-Mar-2011

SHEET 65 OF 68

Quick Launch Board

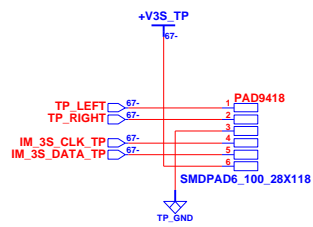


INVENTEC

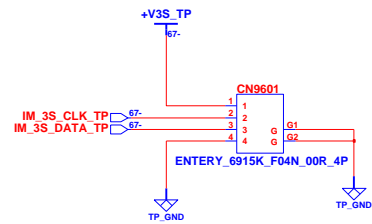
TITLE			
Ramones (USB3/2) QUICK LAUCH BOARD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
CHANGE by		SHEET	OF
Cloud Hsi		66	68

24-Mar-2011

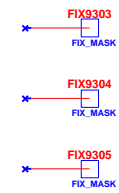
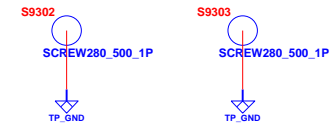
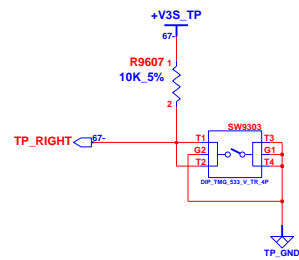
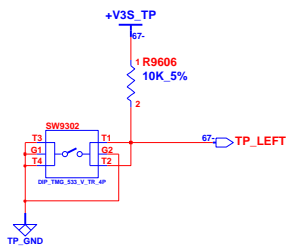
8



LEFT BUTTON



RIGHT BUTTON



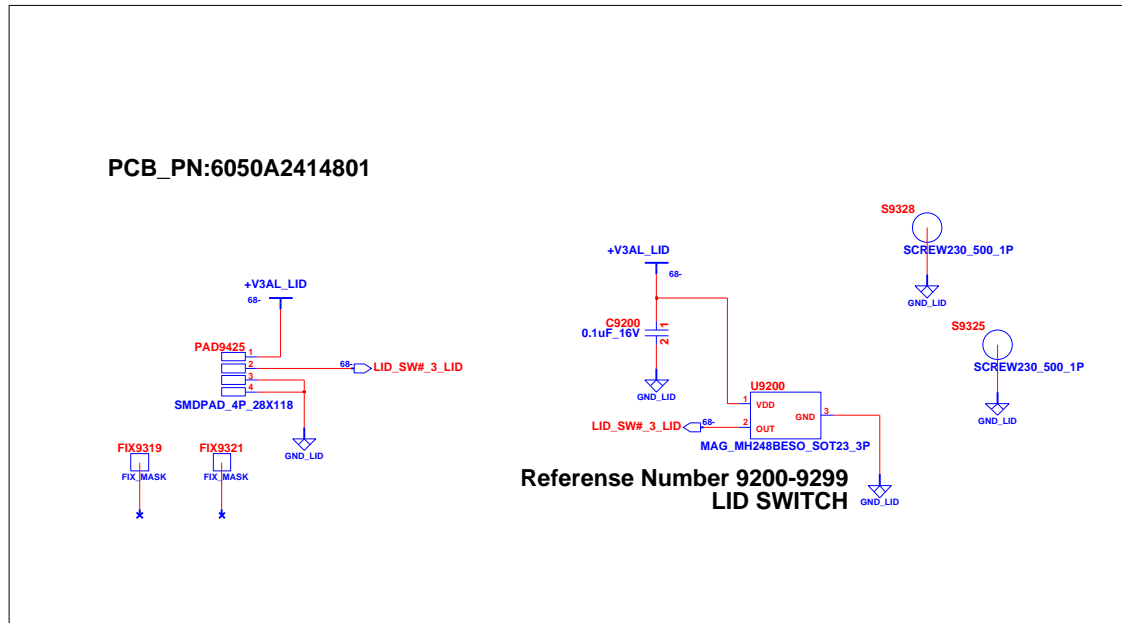
PICK Button Board

PCB_PN:6050A2410601

INVENTEC			
TITLE: <i>Ramones (USB3/2) Pick Button Board</i>			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A246550-0-MTR	REV: A01
CHANGE by: <i>Cloud Hsi</i>		24-Mar-2011	
SHEET: 67		OF: 68	

LID SWITCH BOARD Board

PCB_PN:6050A2414801



Reference Number 9200-9299
LID SWITCH

INVENTEC

TITLE			
Ramones (USB3/2) LID Switch Board			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A246550-0-MTR	A01
SHEET		68	OF 68

CHANGE by Cloud Hsi 24-Mar-2011