

MAINZ 10G

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CS Build (A01)

2009.10.08

INVENTEC			
TITLE MAINZ10G			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by		7-Oct-2009	
CHRIS HUA		SHEET 1 OF 69	

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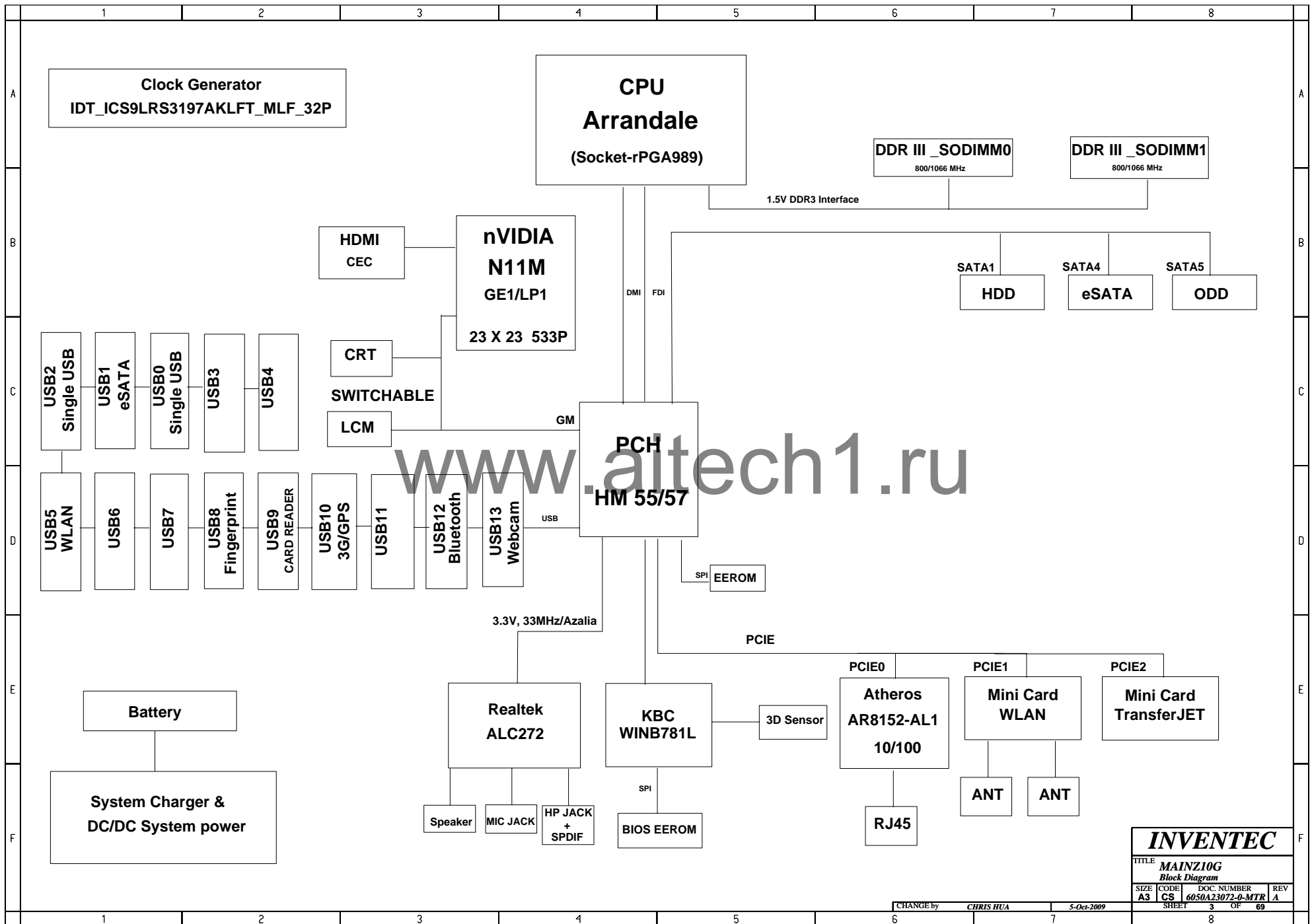
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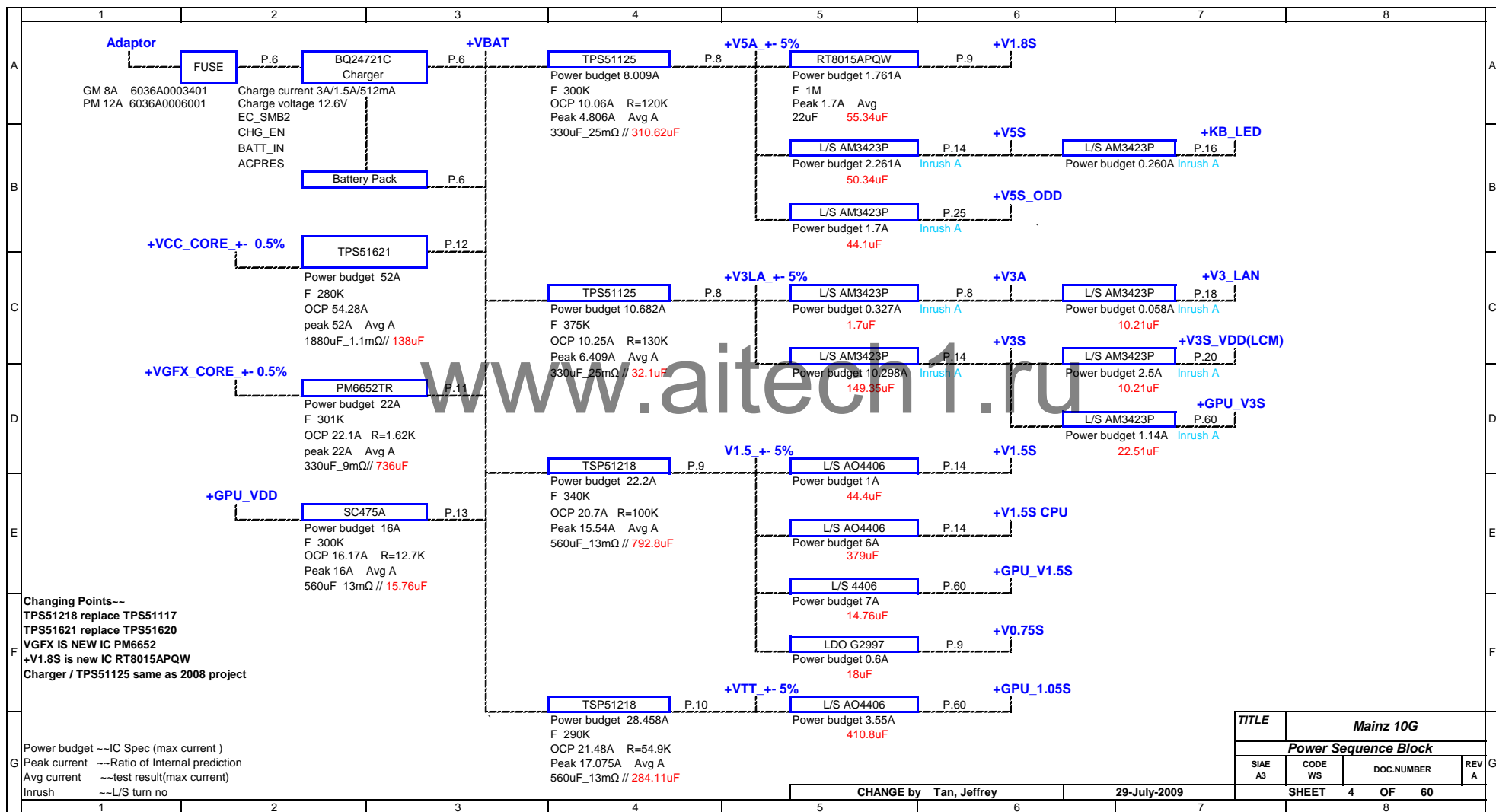
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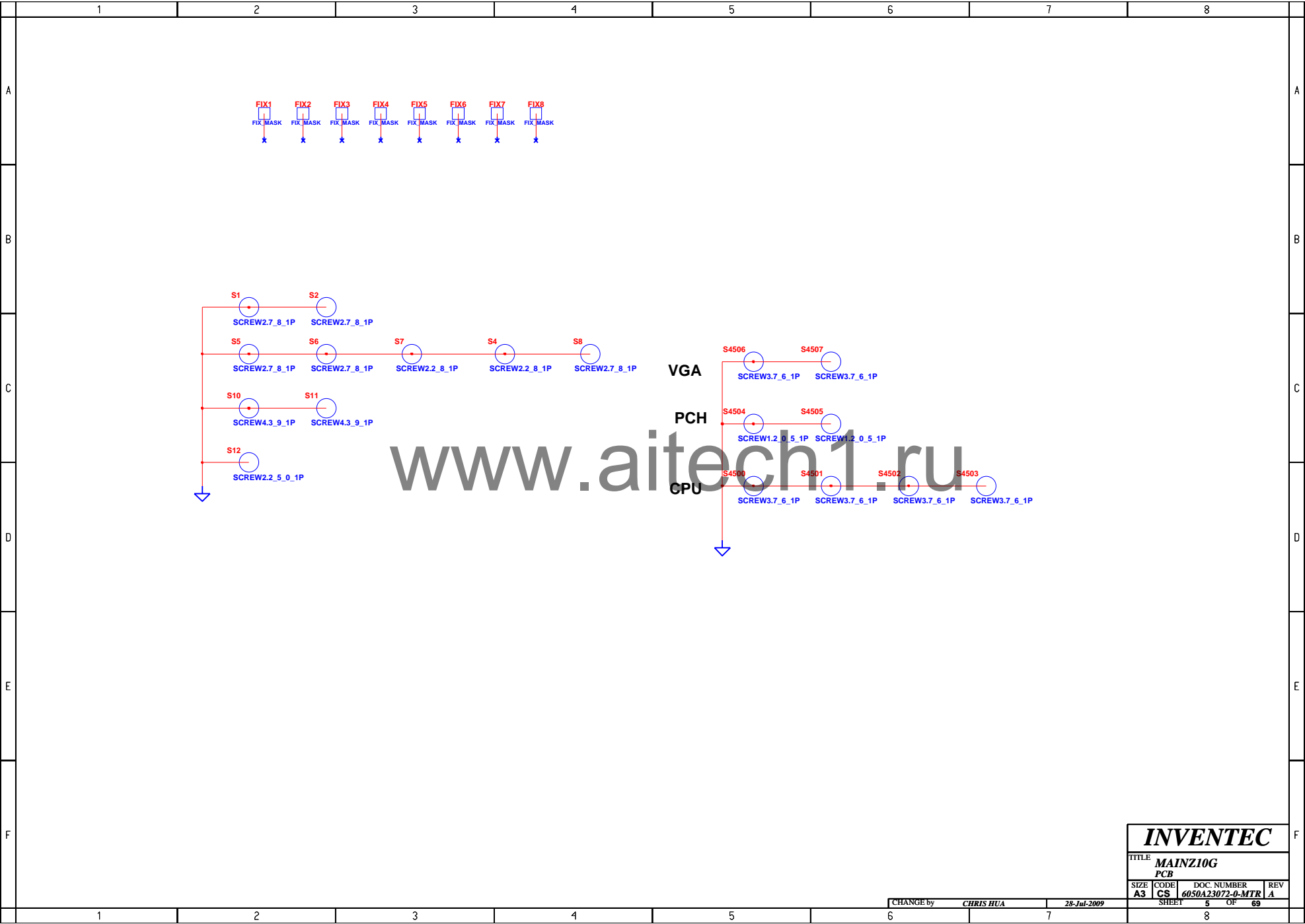
TITLE MAINZ10G			
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CHANGE by **CHRIS HUA** 28-Aug-2009



INVENTEC			
TITLE MAINZ10G Block Diagram			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by CHRIS HUA		5-Oct-2009	
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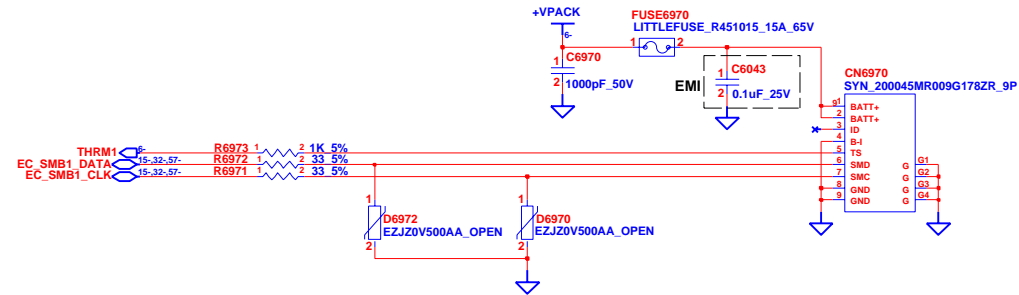
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TITLE **MAINZ10G**
PCB

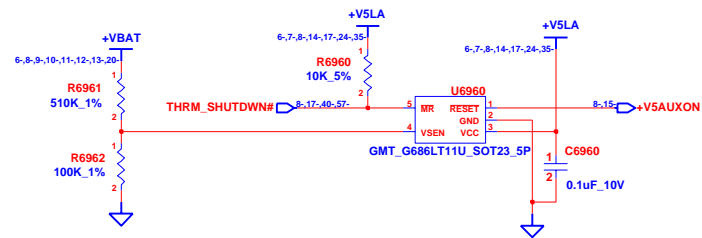
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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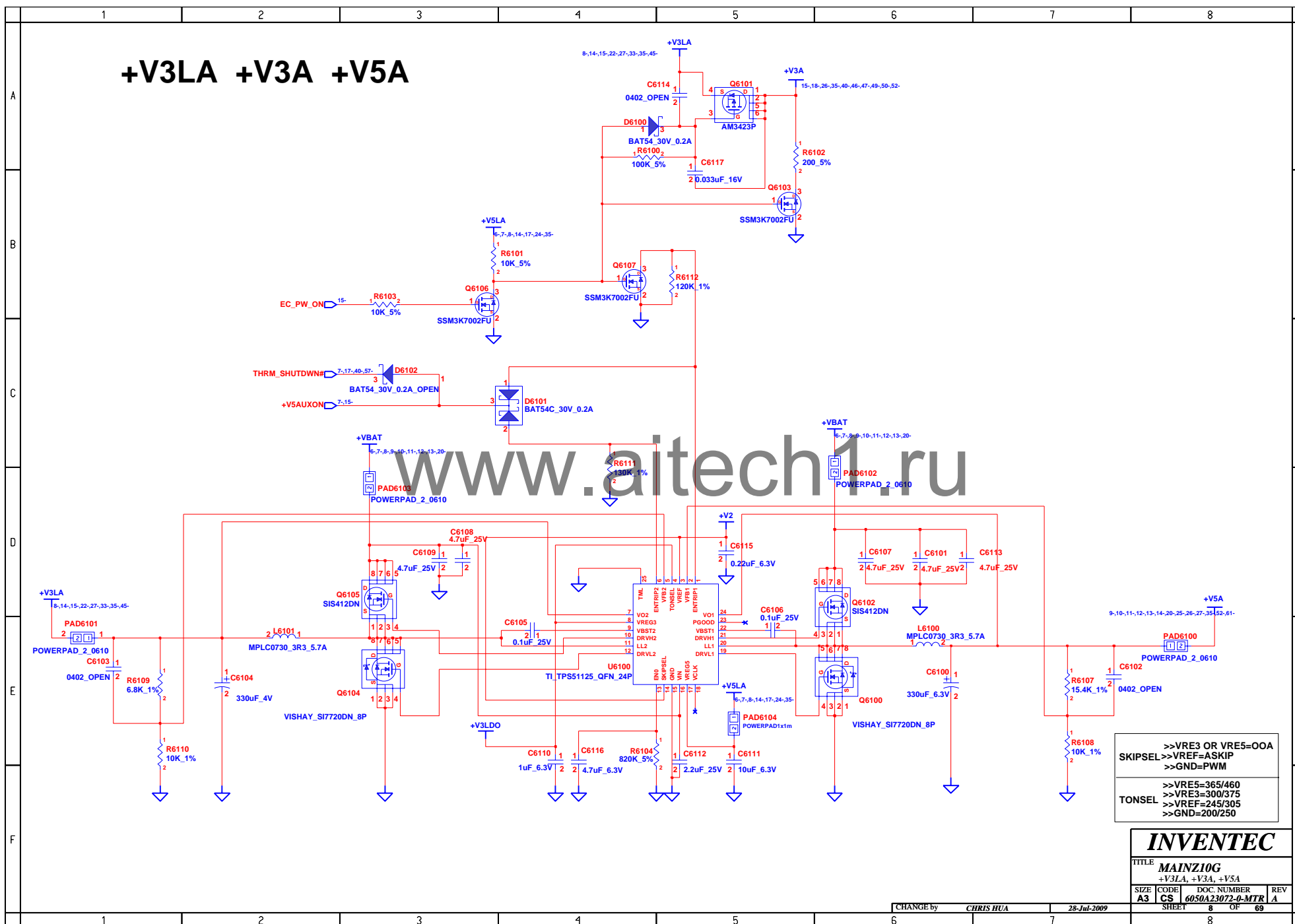
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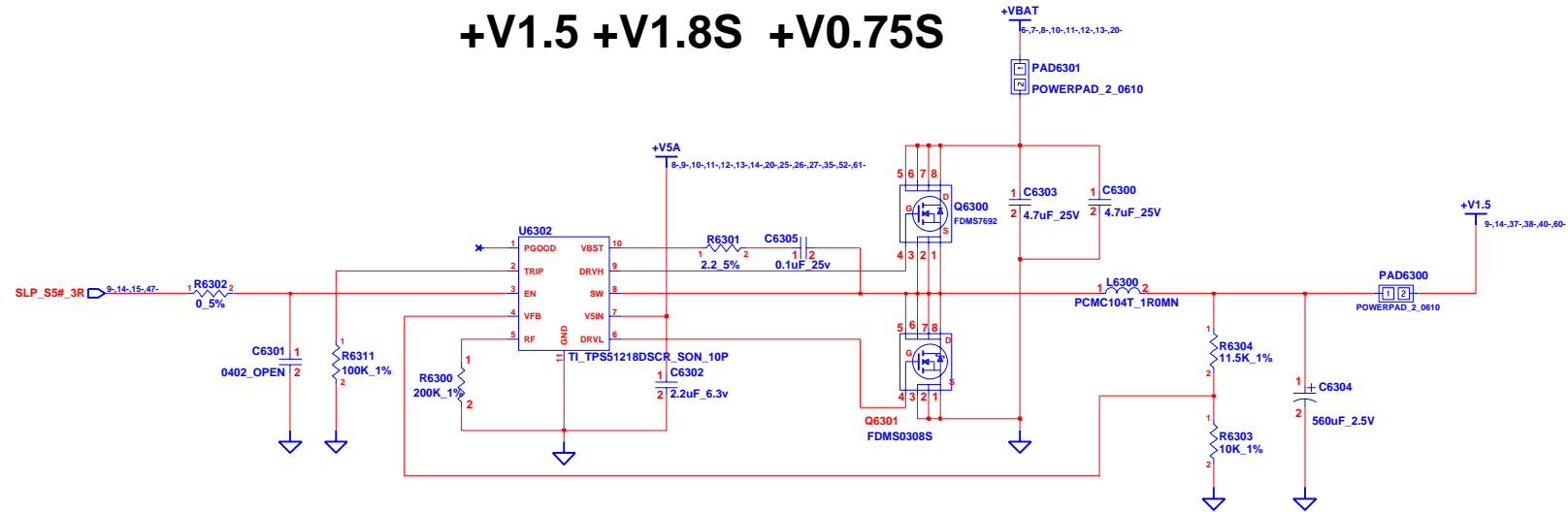
INVENTEC

TITLE			
MAINZ10G			
Battery, Reset IC			
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CHANGE by CHRIS HUA 28-Jul-2009

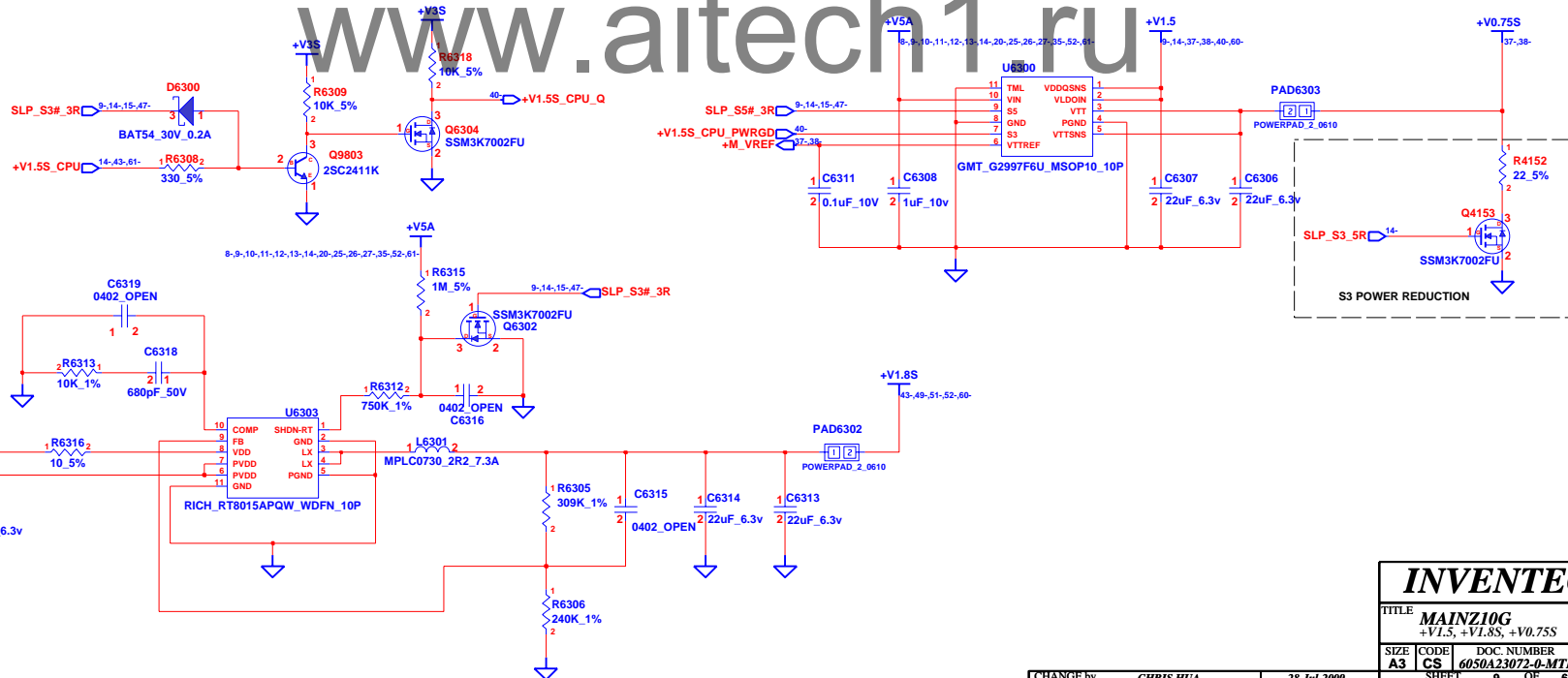


+V1.5 +V1.8S +V0.75S



10-16,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61

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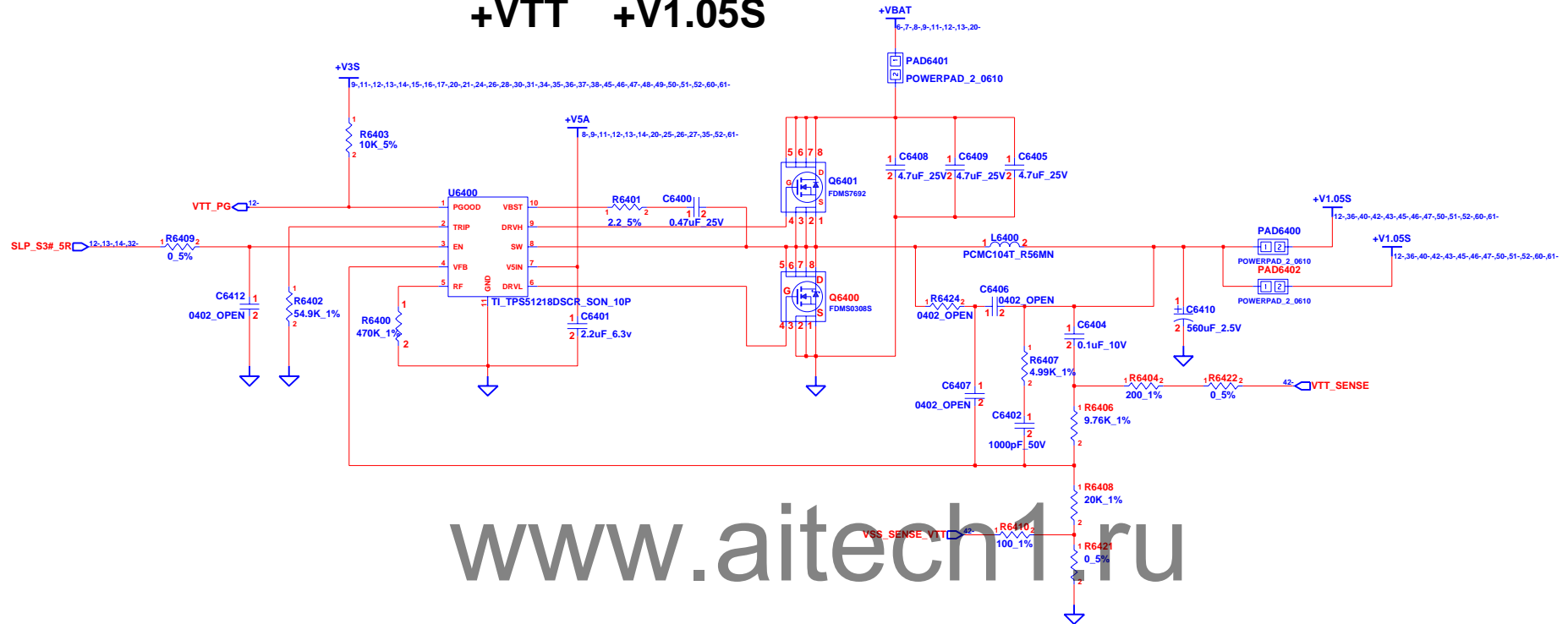
INVENTEC

TITLE
MAINZ10G
+V1.5, +V1.8S, +V0.75S

SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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+VTT +V1.05S



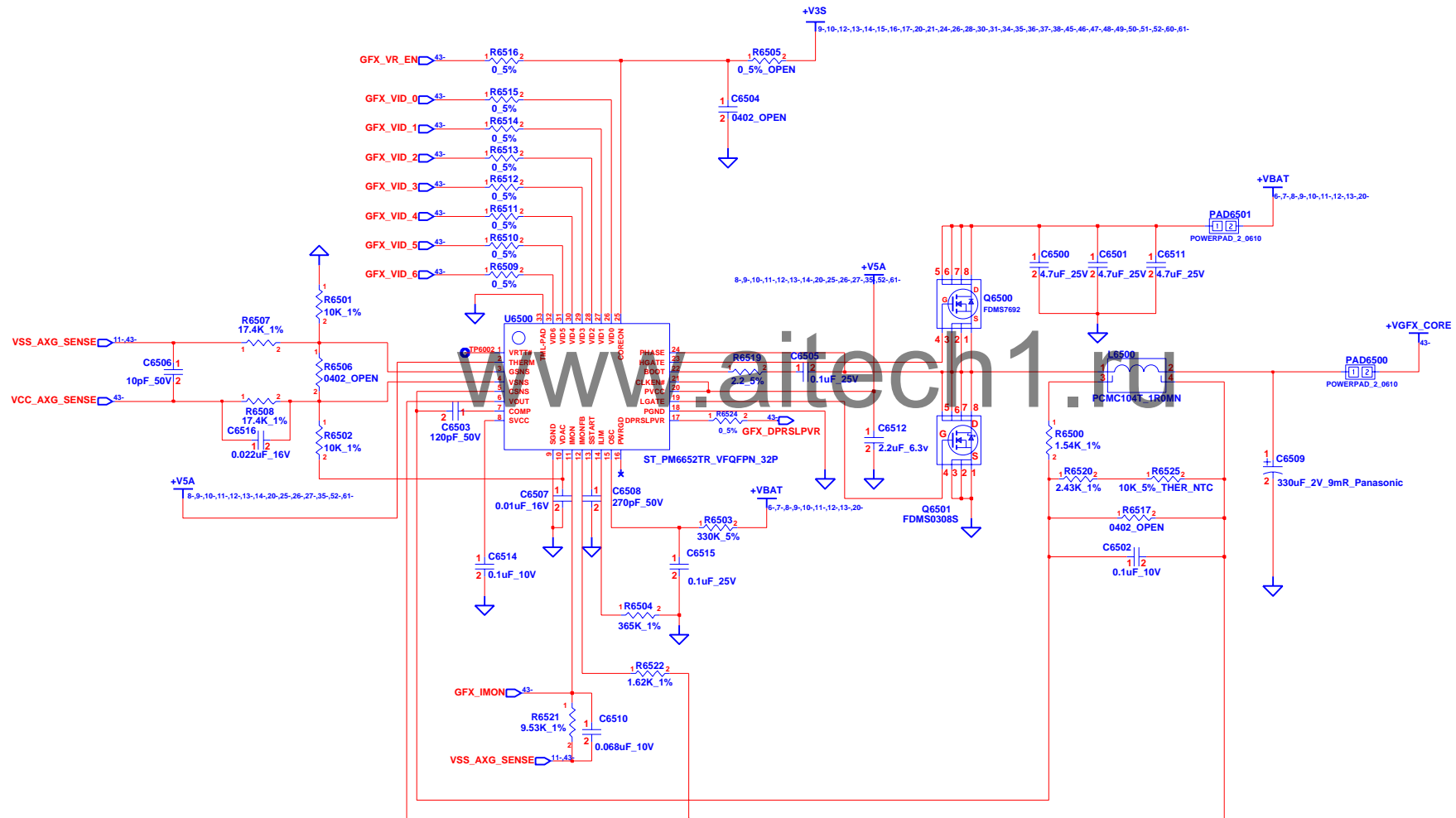
www.aitech1.ru

INVENTEC

TITLE			
MAINZ10G			
+VTT, +V1.05S			
SIZE	CODE	DOC. NUMBER	REV
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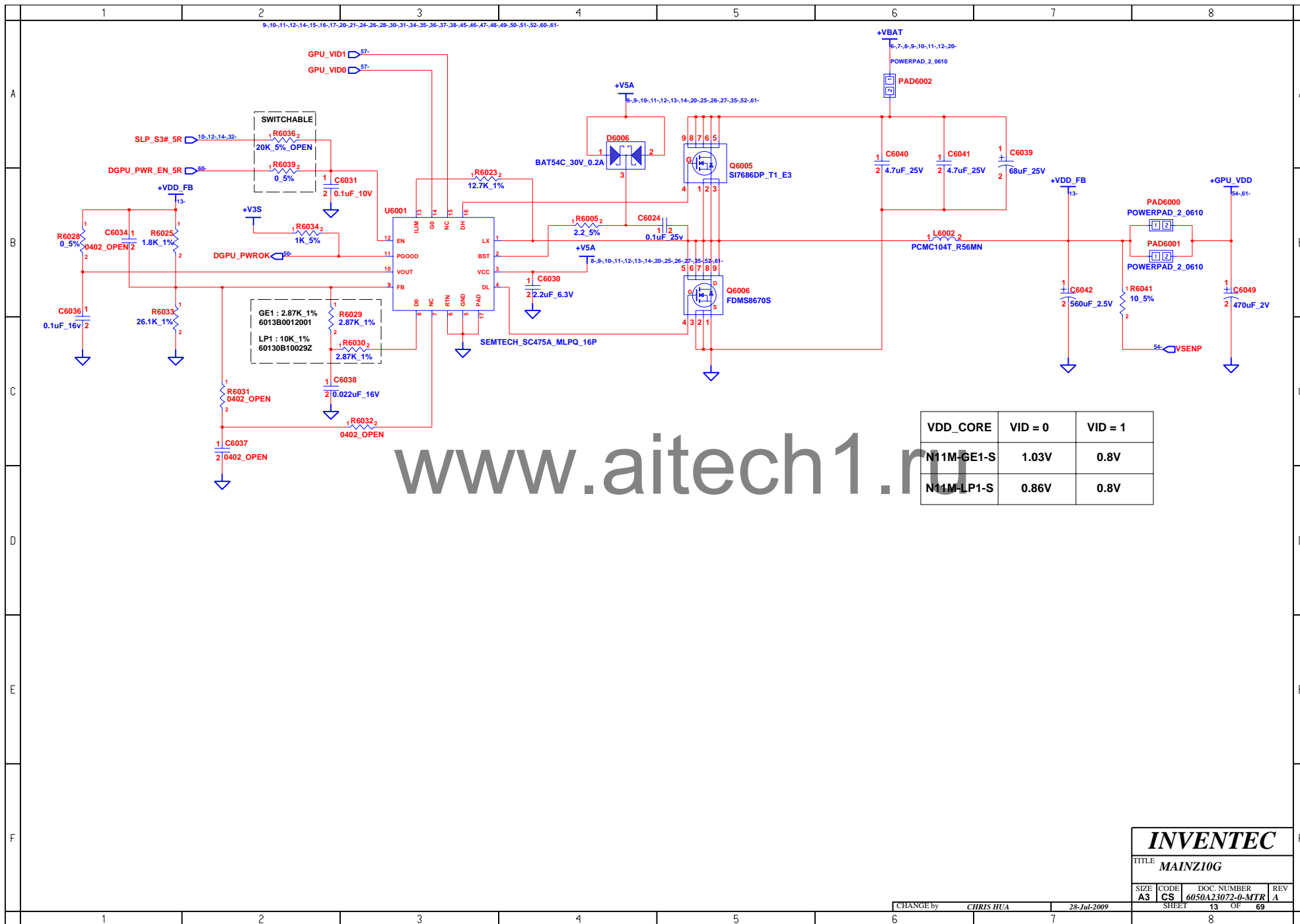
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SWITCHABLE : STUFF
DISCRETE : OPEN

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TITLE			
MAINZ10G +VGFX_CORE			
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INVENTEC

TITLE
MAINZ10G

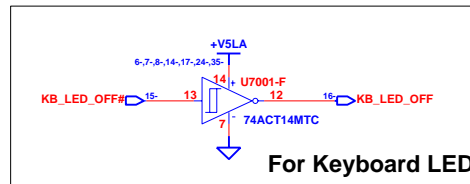
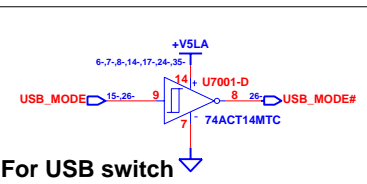
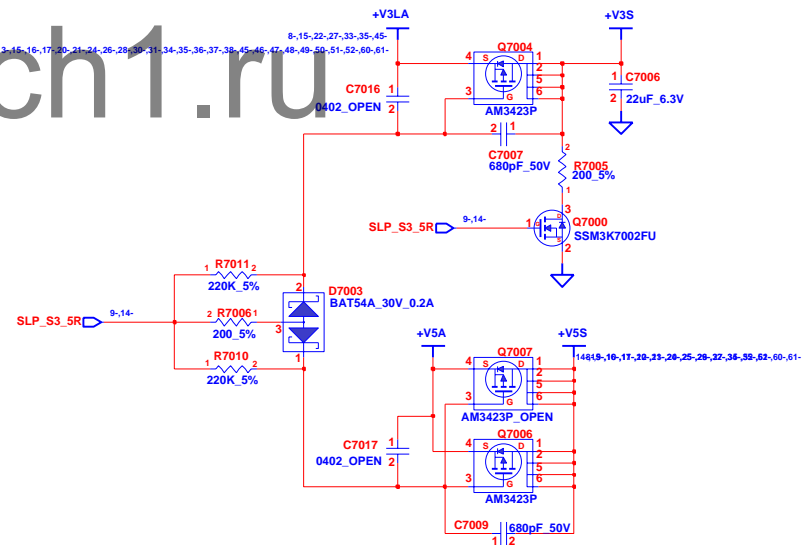
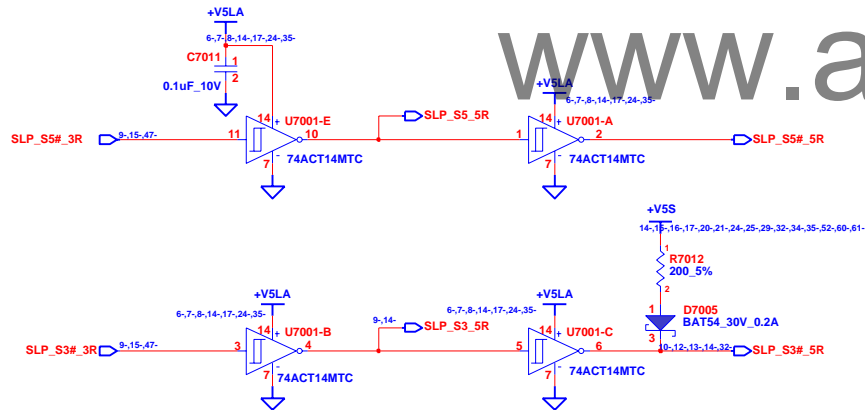
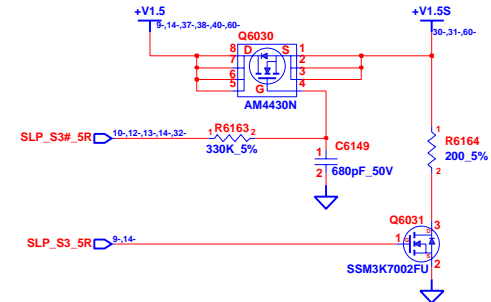
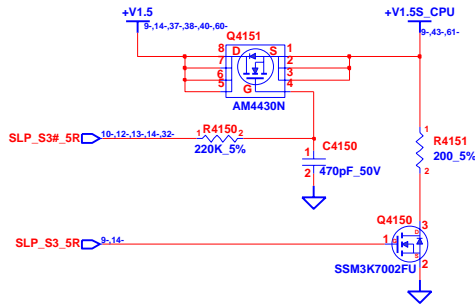
SIZE	CODE	DOC. NUMBER	REV
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+V5S +V3S +V1.5S +V1.5S_CPU

S3 POWER REDUCTION

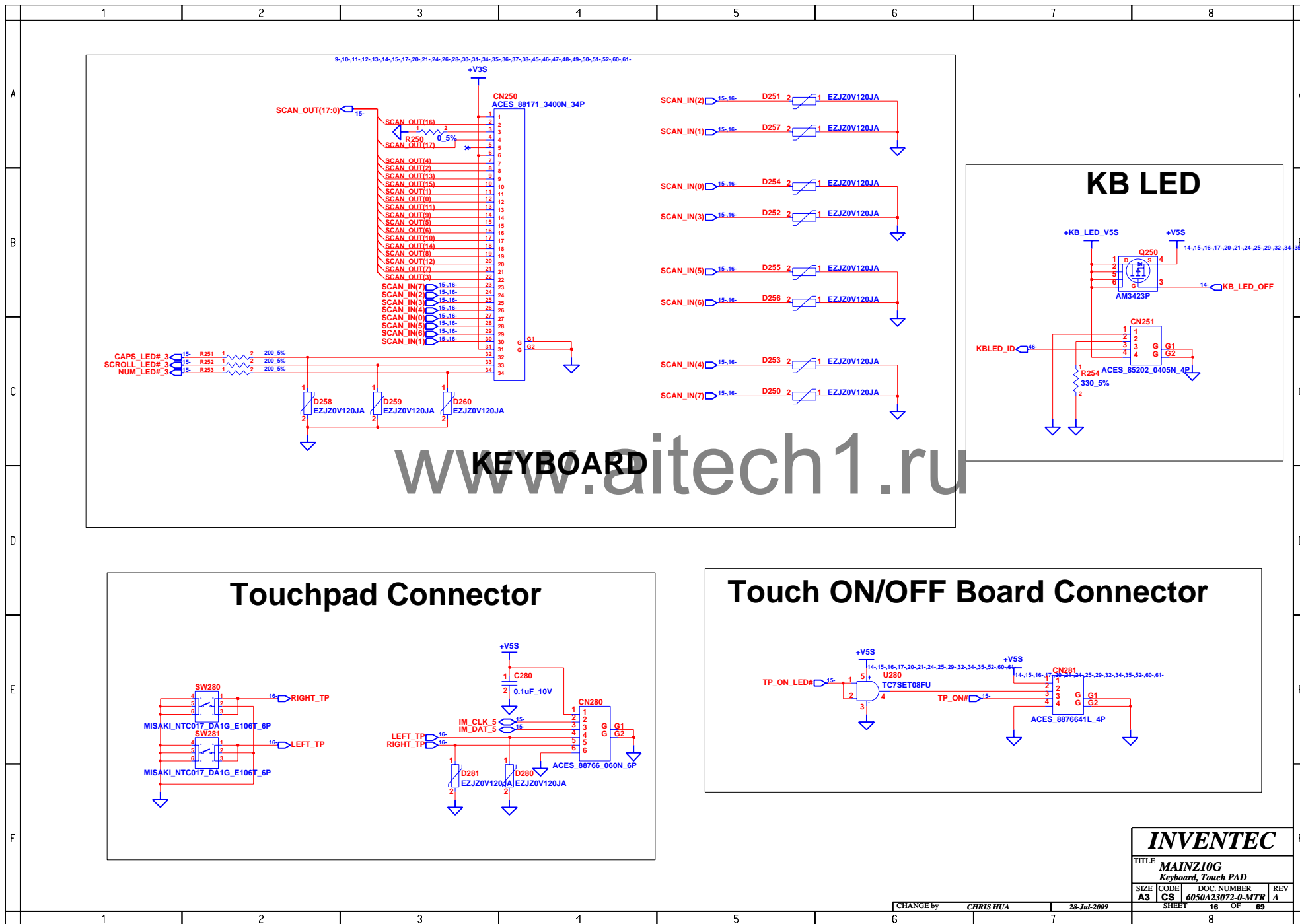


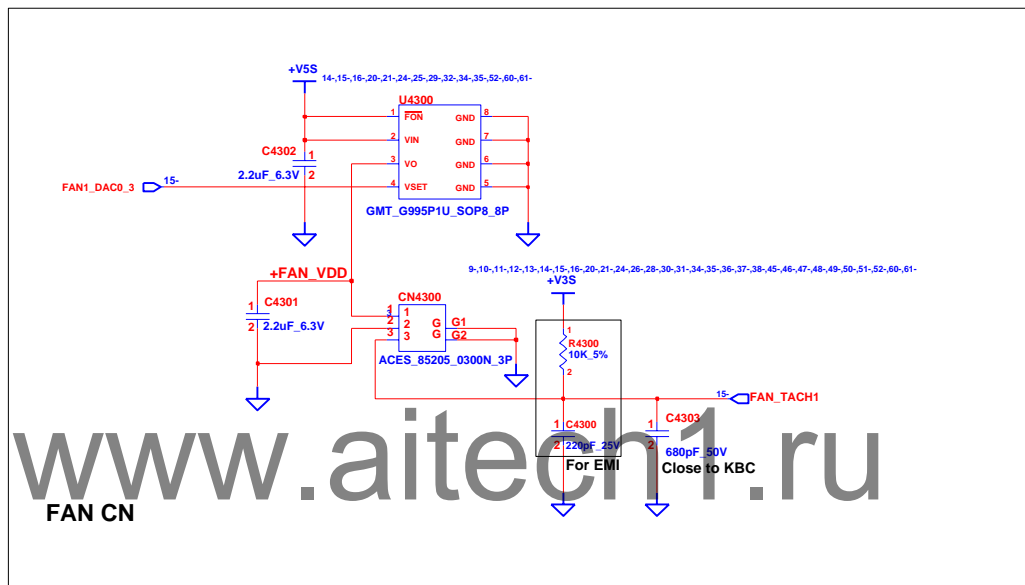
INVENTEC

TITLE			
MAINZ10G			
+V5S +V3S +V1.5S			
SIZE	CODE	DOC. NUMBER	REV
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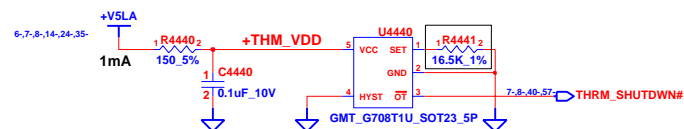
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Board Thermal Sensor



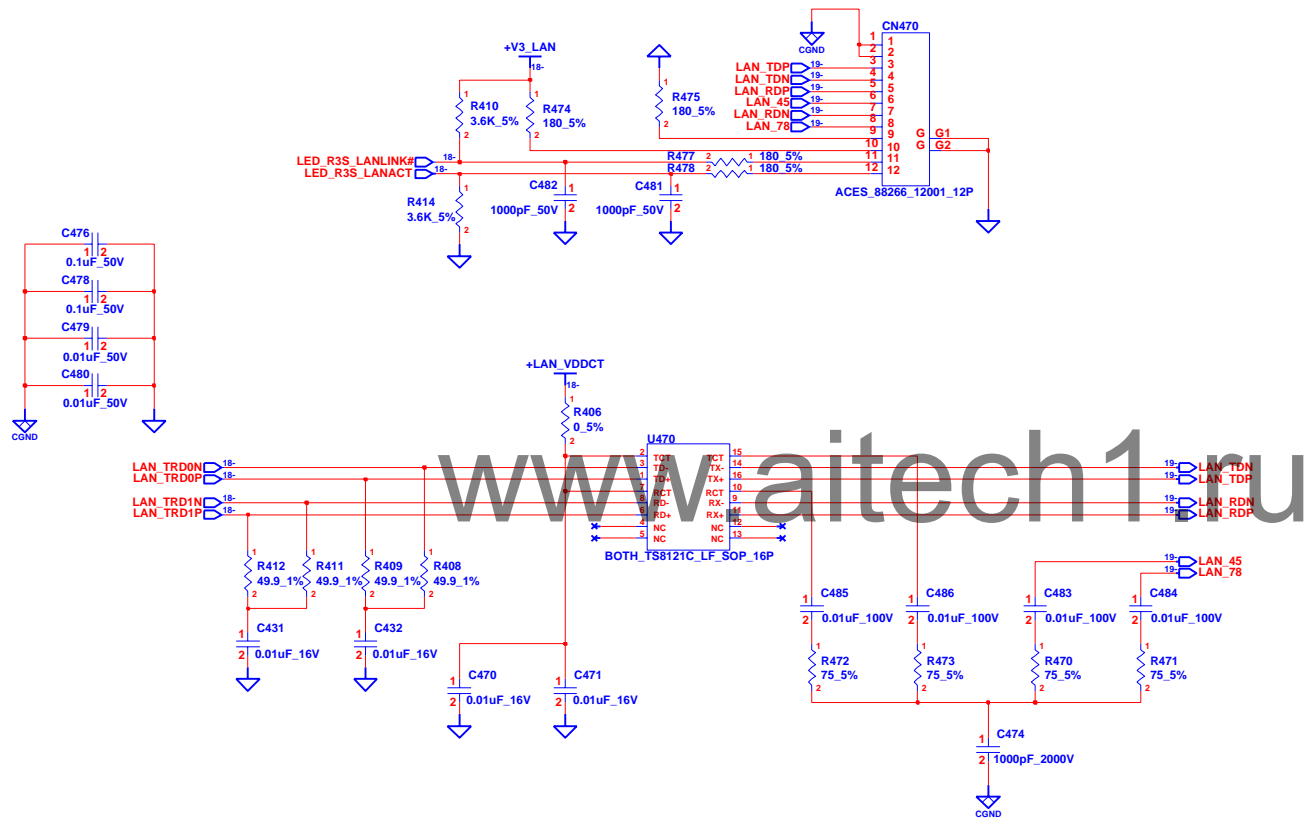
Thermal shutdown at 98 C° +/- 3 C° from 60 C° to 100 C°

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

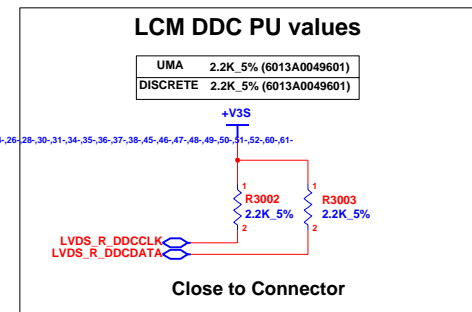
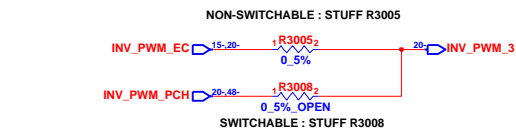
Hysteresis is 30C

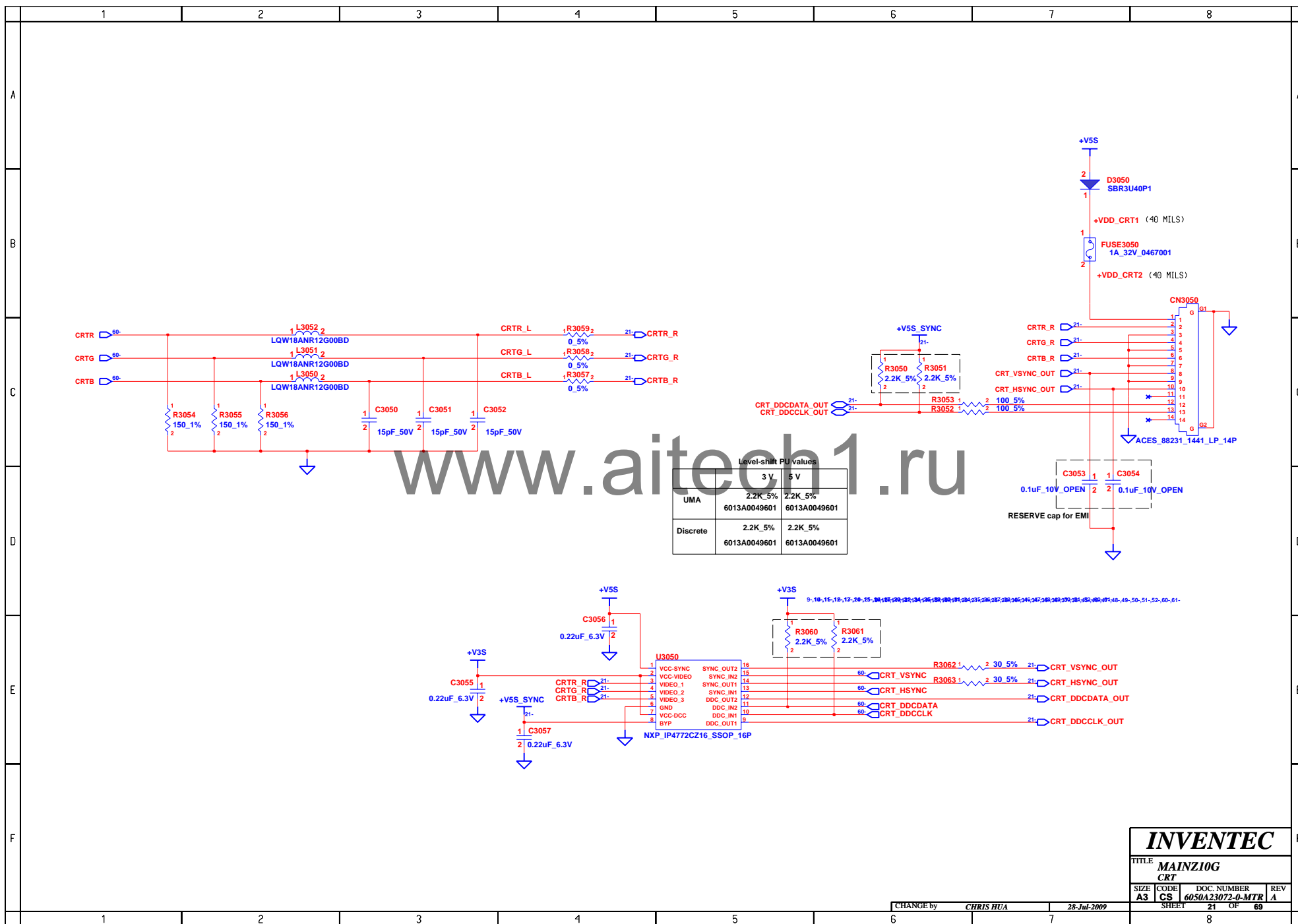
INVENTEC			
TITLE MAINZ10G			
FAN, Thermal controller			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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INVENTEC			
TITLE MAINZ10G			
Transformer, RJ45			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by CHRIS HUA		28-Jul-2009	
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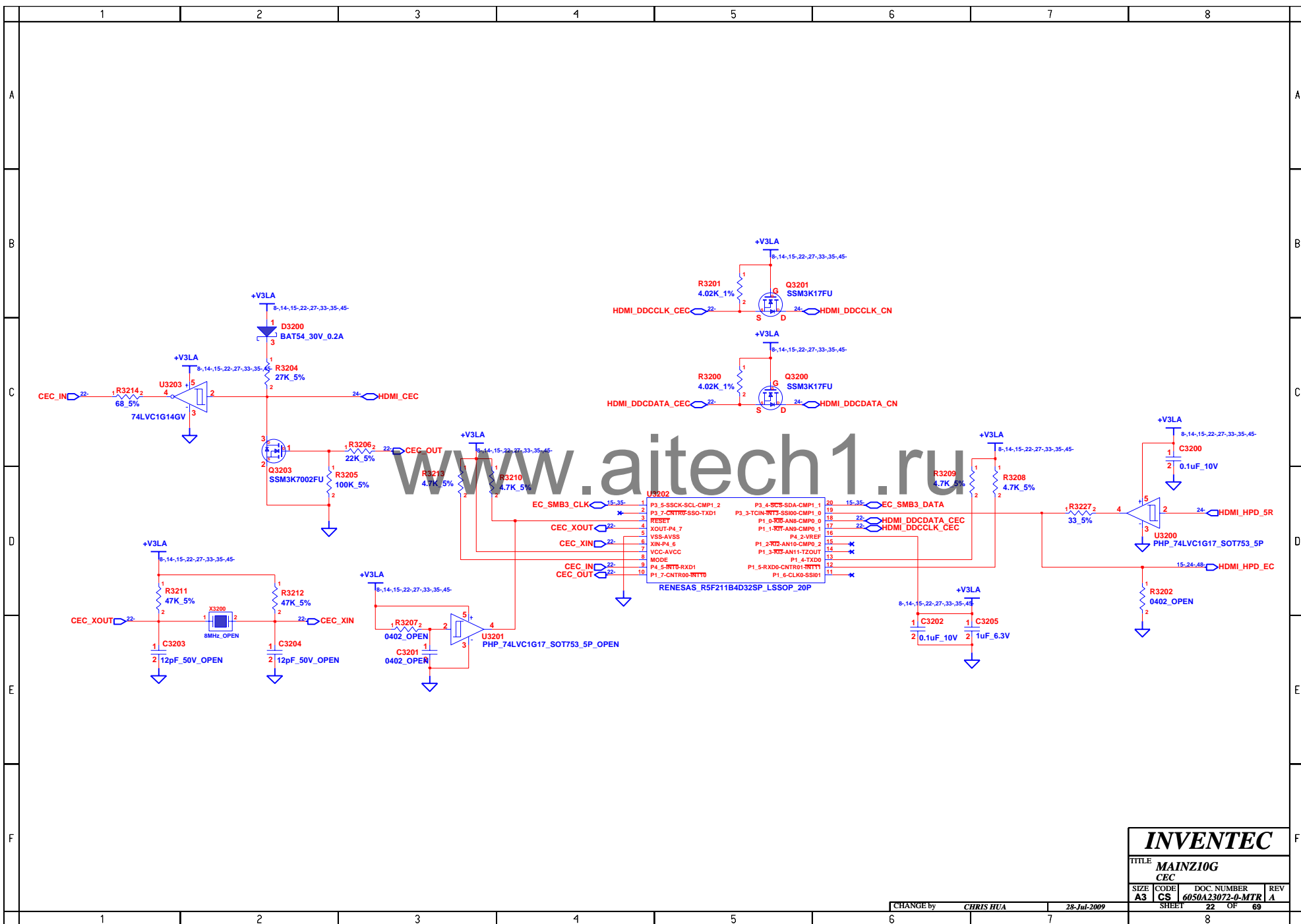
INVENTEC

TITLE
**MAINZ10G
CRT**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

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	1	2	3	4	5	6	7	8	
A									A
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

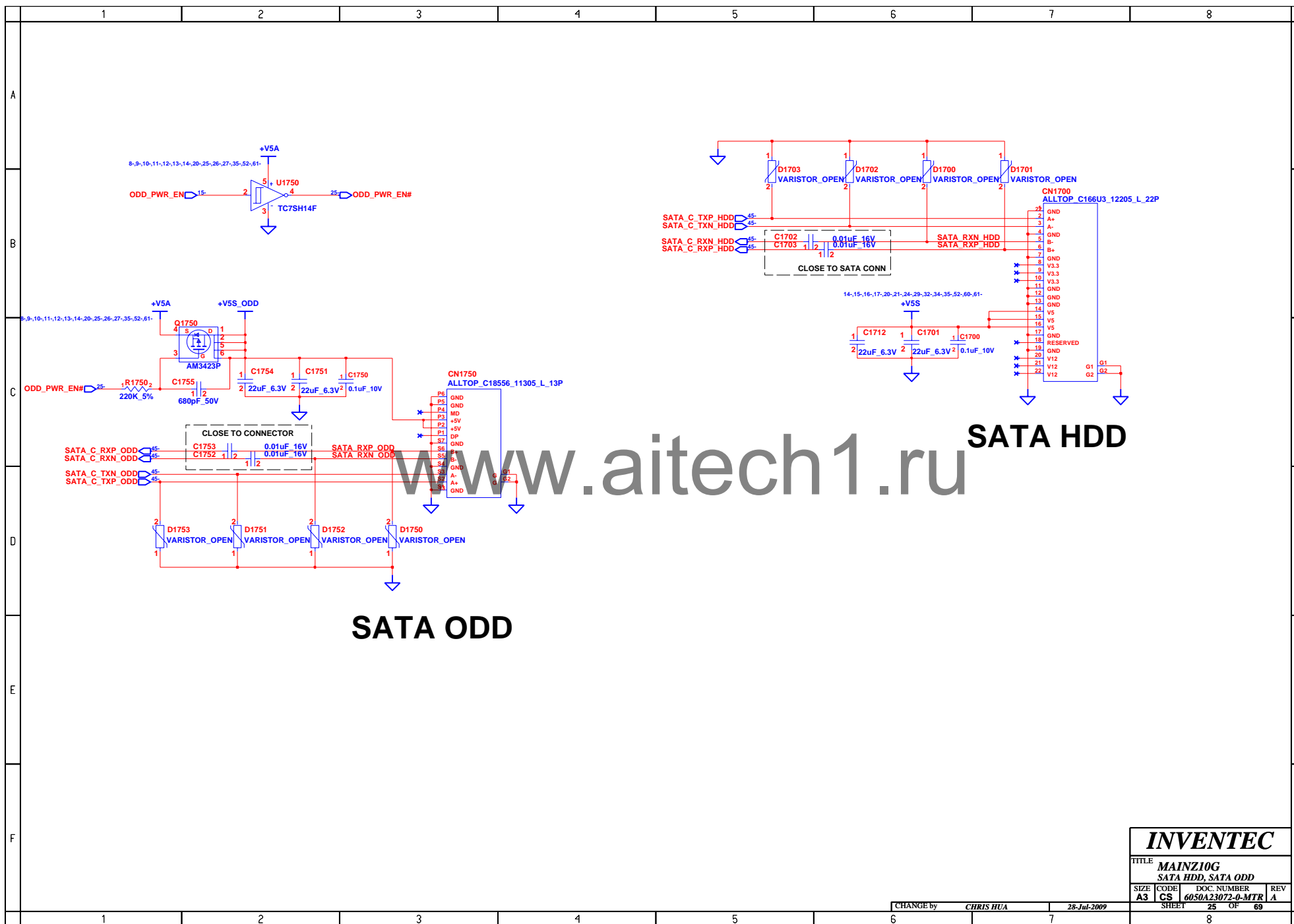
BLANK

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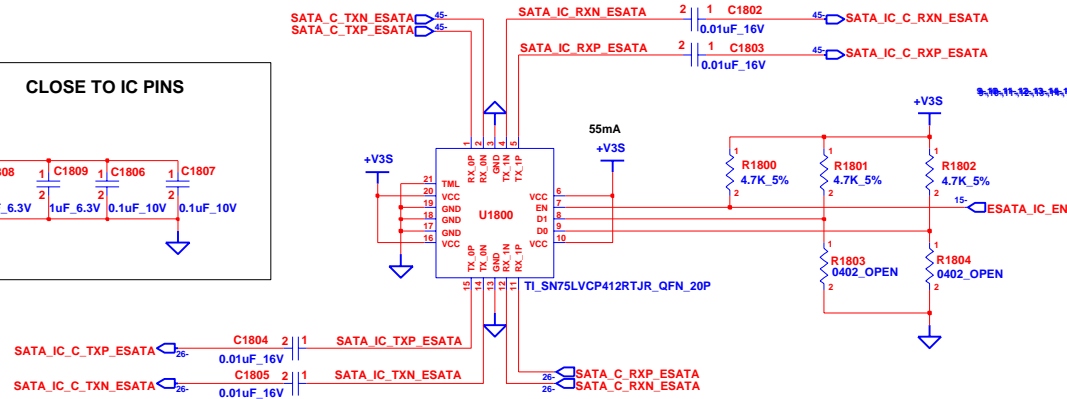
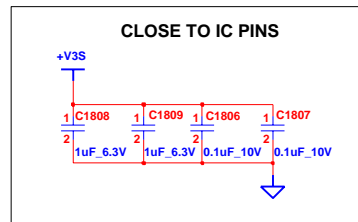
INVENTEC			
TITLE MAINZ10G <i>HDMI Level Shifter</i>			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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[illegible]

INVENTEC			
TITLE MAINZ10G HDMI			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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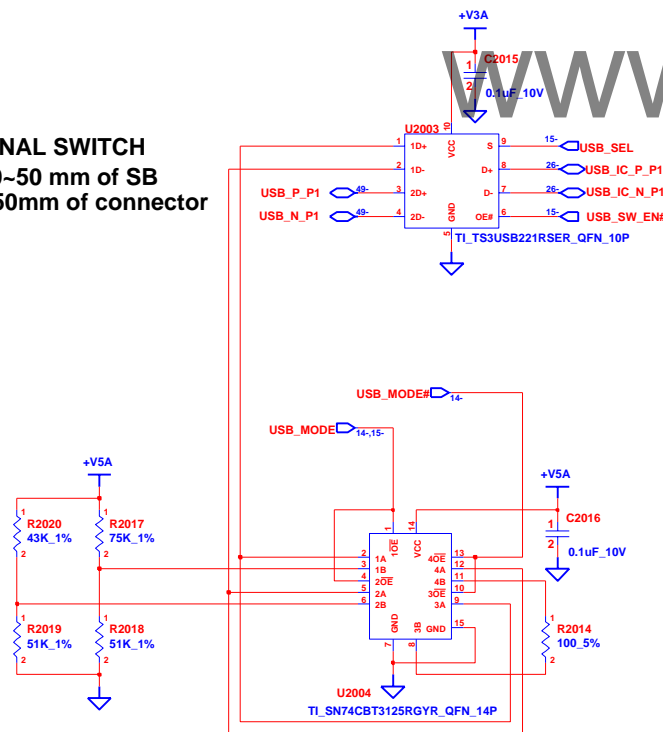


E-SATA

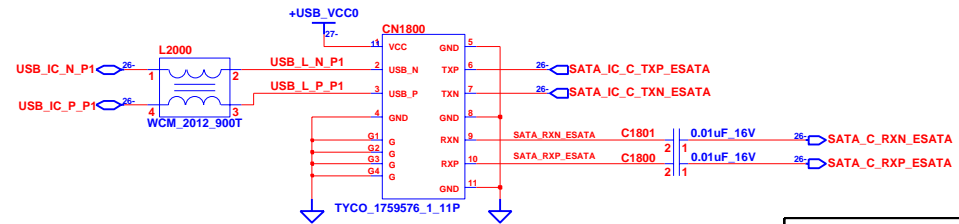


EN	D0	D1	FUNCTION
0	X	X	STANDBY
1	0	0	DEFAULT
1	1	0	CH0->5DB
1	0	1	CH1->5DB
1	1	1	CH0,1->5DB

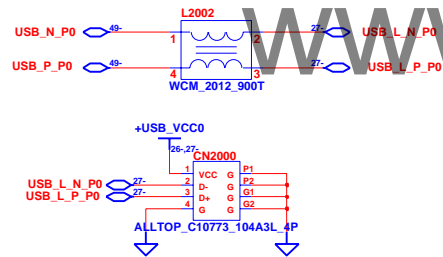
USB SIGNAL SWITCH
Within 40~50 mm of SB
Within 150mm of connector



S	OE#	Function
L	L	D=1D
H	L	D=2D



INVENTEC			
TITLE MAINZ10G e-SATA			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by CHRIS HUA		28-Jul-2009	
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[illegible]

INVENTEC			
TITLE MAINZ10G USB			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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BLUEBOOTH

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61-
+V3S

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61-
+V3S

Always stuff

R2155 100K_5% R2153 10K_5%

USB_P_BT 49-
USB_N_BT 49-
CH_CLK 30-
BTMDL# 49-
BT_RESET# 50-
CH_DATA 30-
BTIFON# 15-34

L2150 BLM15AG221SN1D

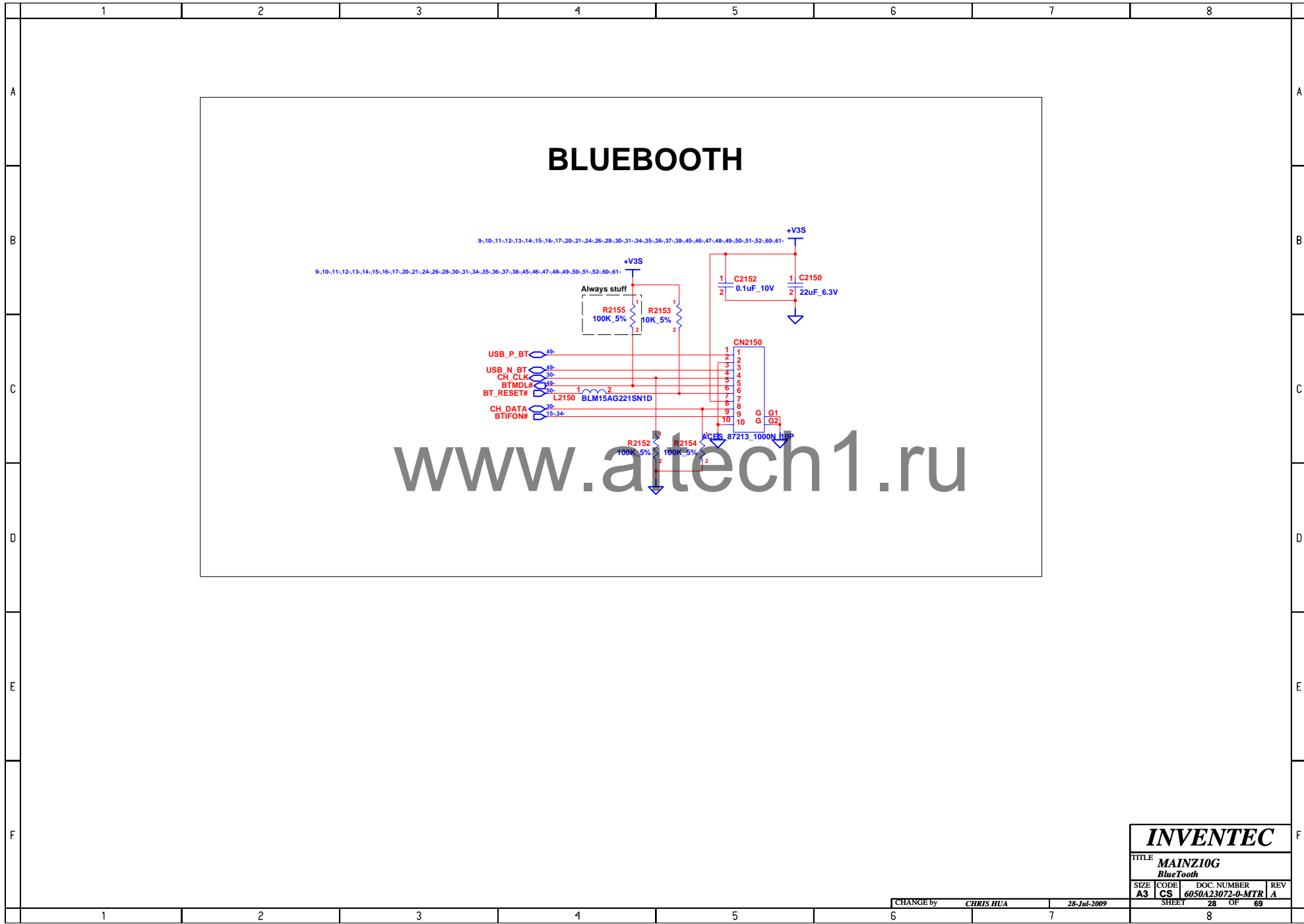
R2152 100K_5% R2154 100K_5%

C2152 0.1uF_10V C2150 22uF_6.3V

CN2150

X1CES 87213 1000N 10P

INVENTEC			
TITLE MAINZ10G BlueTooth			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A
CHANGE by CHRIS HUA		28-Jul-2009	SHEET 28 OF 69



1 2 3 4 5 6 7 8

A

B

C

D

E

F

BLUEBOOTH

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61- +V3S

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61- +V3S

Always stuff

R2155 100K_5%

R2153 10K_5%

USB_P_BT 49-

USB_N_BT 49-

CH_CLK 30-

BTMDL# 49-

BT_RESET# 50-

CH_DATA 30-

BTIFON# 15-34-

L2150 BLM15AG221SN1D

R2152 100K_5%

R2154 100K_5%

CN2150

1 1

2 2

3 3

4 4

5 5

6 6

7 7

8 8

9 9

10 10

G1

G2

C2152 0.1uF_10V

C2150 22uF_6.3V

R2153 87213_1000N_HOP

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INVENTEC

TITLE MAINZ10G
BlueTooth

SIZE A3 CODE CS DOC. NUMBER 6050A23072-0-MTR REV A

CHANGE by CHRIS HUA 28-Jul-2009

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1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

A

B

C

D

E

F

BLUEBOOTH

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61- +V3S

9-10-11-12-13-14-15-16-17-20-21-24-26-28-30-31-34-35-36-37-38-45-46-47-48-49-50-51-52-60-61- +V3S

Always stuff

R2155 100K_5%

R2153 10K_5%

USB_P_BT 49-

USB_N_BT 49-

CH_CLK 30-

BTMDL# 49-

BT_RESET# 50-

CH_DATA 30-

BTIFON# 15-34-

L2150 BLM15AG221SN1D

R2152 100K_5%

R2154 100K_5%

CN2150

1 1

2 2

3 3

4 4

5 5

6 6

7 7

8 8

9 9

10 10

G1

G2

C2152 0.1uF_10V

C2150 22uF_6.3V

R2153 87213_1000N_HOP

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INVENTEC

TITLE MAINZ10G
BlueTooth

SIZE A3 CODE CS DOC. NUMBER 6050A23072-0-MTR REV A

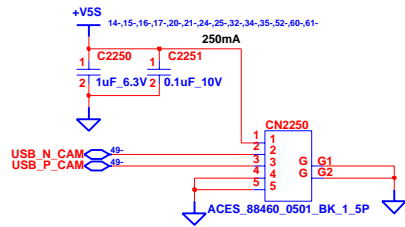
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1 2 3 4 5 6 7 8

[illegible]

WEBCAM



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INVENTEC

TITLE **MAINZ10G**
Camera

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by **CHRIS HUA** 28-Jul-2009

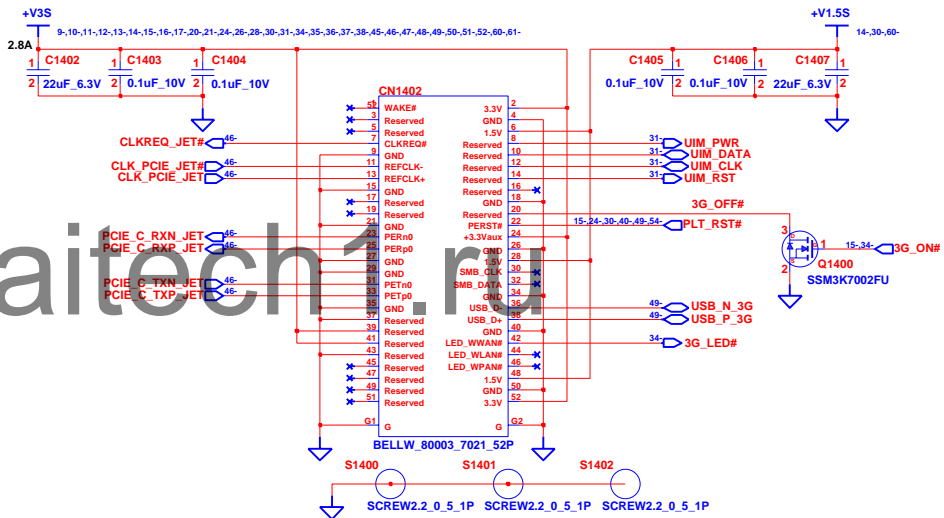
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[illegible]

TITLE			
MAINZ10G WLAN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A
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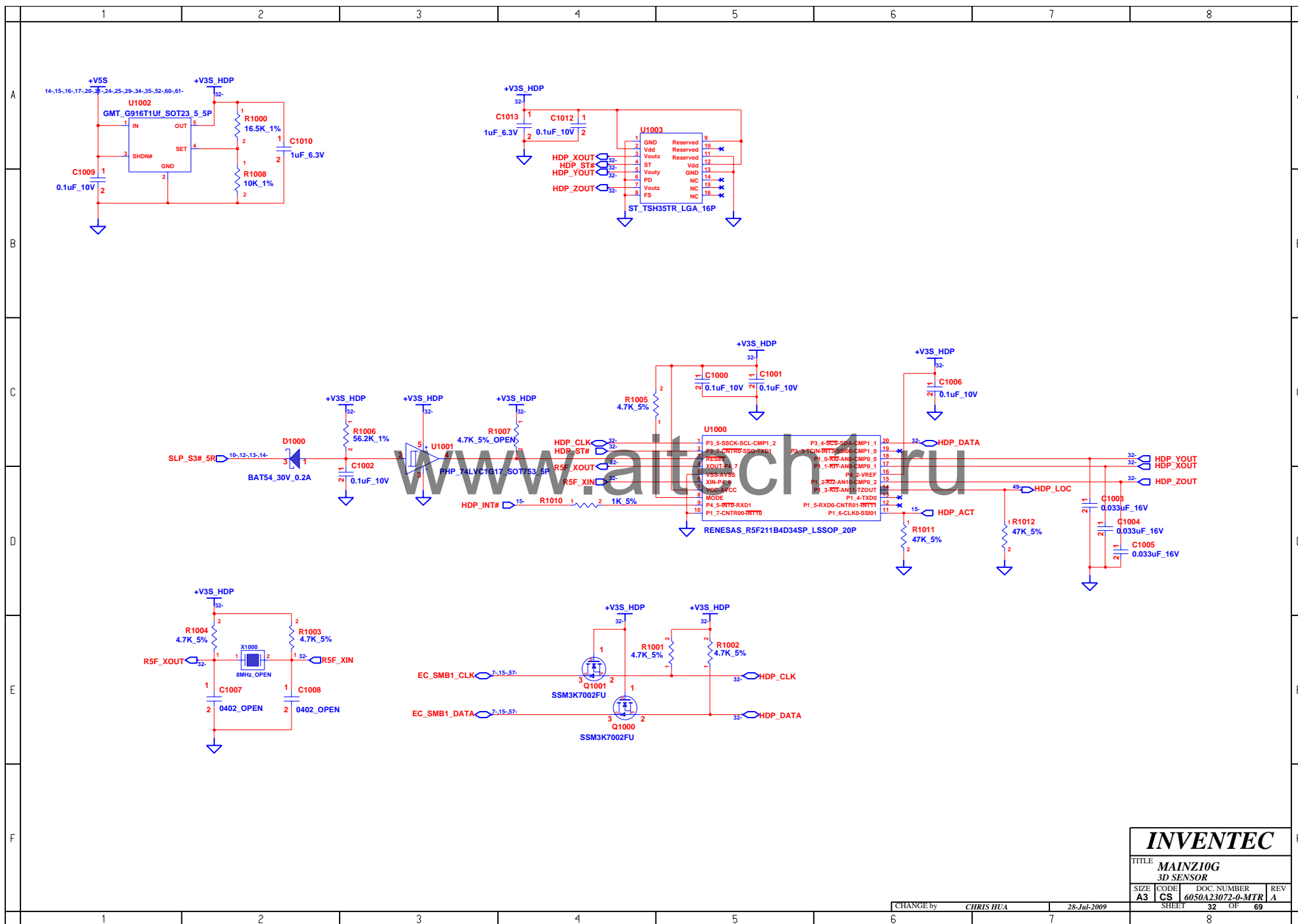
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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PCIE	Signal	Pin	Signal	Pin
PCIE_C_RXN_JET	46-	24	GND	24
PCIE_C_RXP_JET	46-	22	PERn0	22
		26	PERp0	26
		27	GND	27
		29	GND	29
PCIE_C_TXN_JET	46-	31	GND	31
PCIE_C_TXP_JET	46-	33	PETn0	33
		35	PETp0	35
		37	GND	37



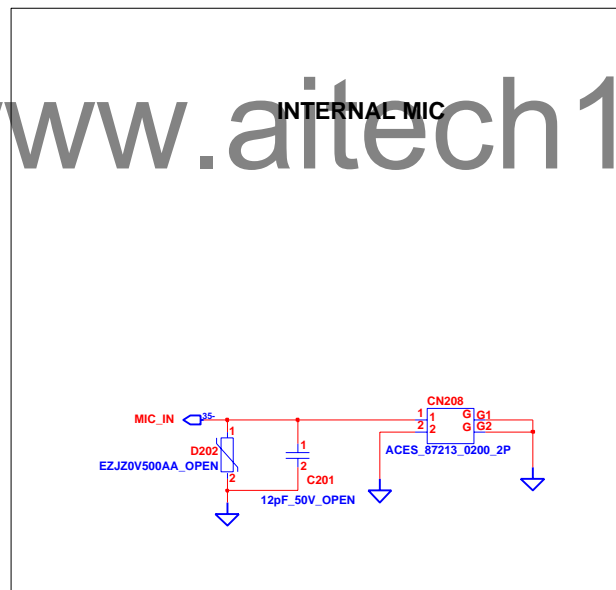
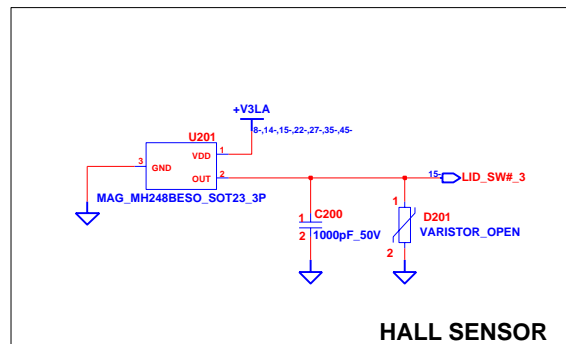
TITLE			
MAINZ10G			
3G			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A
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INVENTEC			
TITLE: MAINZ10G 3D SENSOR			
SIZE: A3	CODE: CS	DOC. NUMBER: 6050A23072-0-MTR	REV: A
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CHANGE by: CHRIS HUA 28-Jul-2009

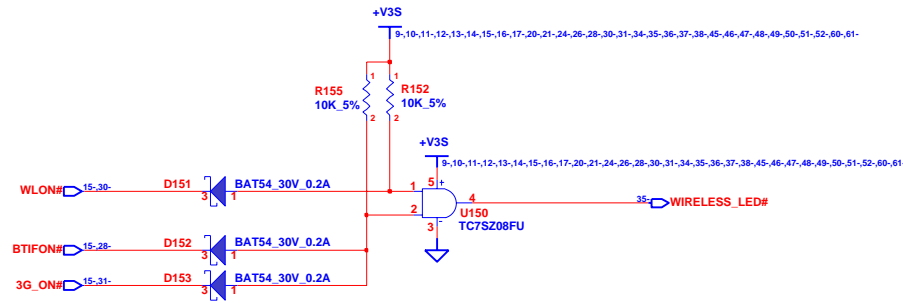


INVENTEC			
TITLE MAINZ10G Hall Sensor			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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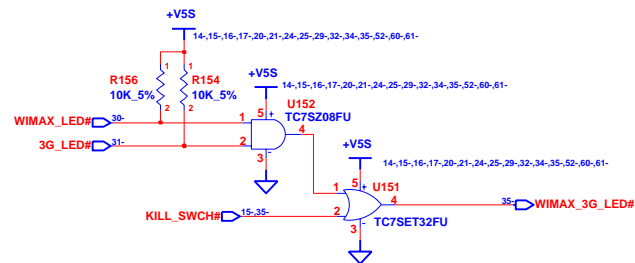
WLAN/WIMAX/3G/BT FUNCTION LED

PU / BUFFER / LED ALWAYS STUFF
UNLESS ALL DEVICES NOT SUPPORTED



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3G/WIMAX LED

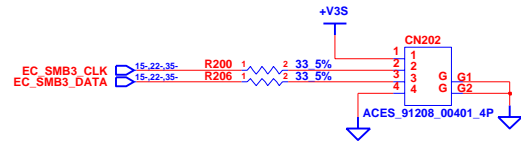


INVENTEC

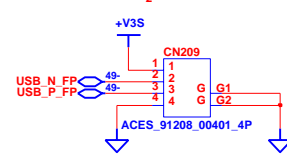
TITLE MAINZ10G LED			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
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CHANGE by **CHRIS HUA** 28-Jul-2009

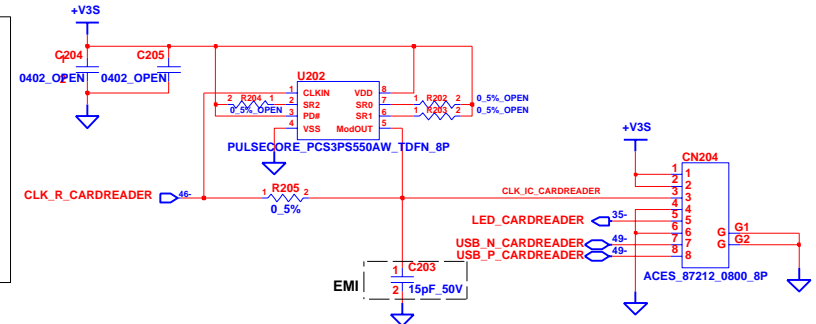
AMBIENT LIGHT SENSOR BOARD CONNECTOR



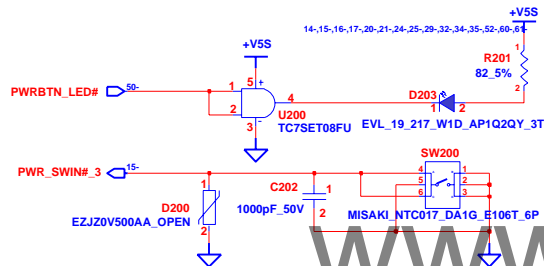
FINGER PRINT BOARD CONNECTOR



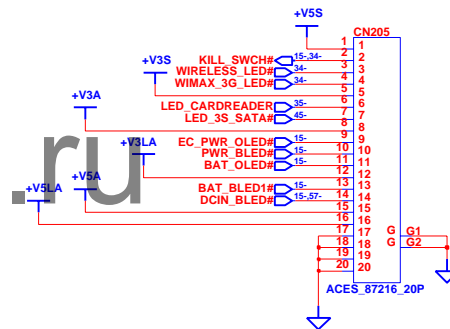
CARD READER BOARD CONNECTOR



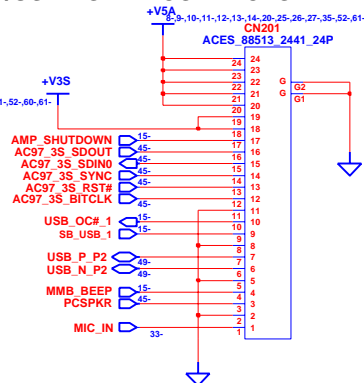
POWER BUTTON & LED



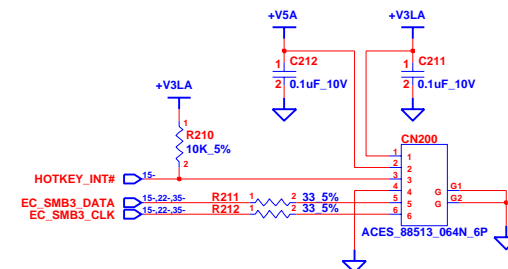
LED & KILL SWITCH BOARD CONNECTOR



CODEC/AMP/USB BOARD CONNECTOR



MMB BOARD CONNECTOR

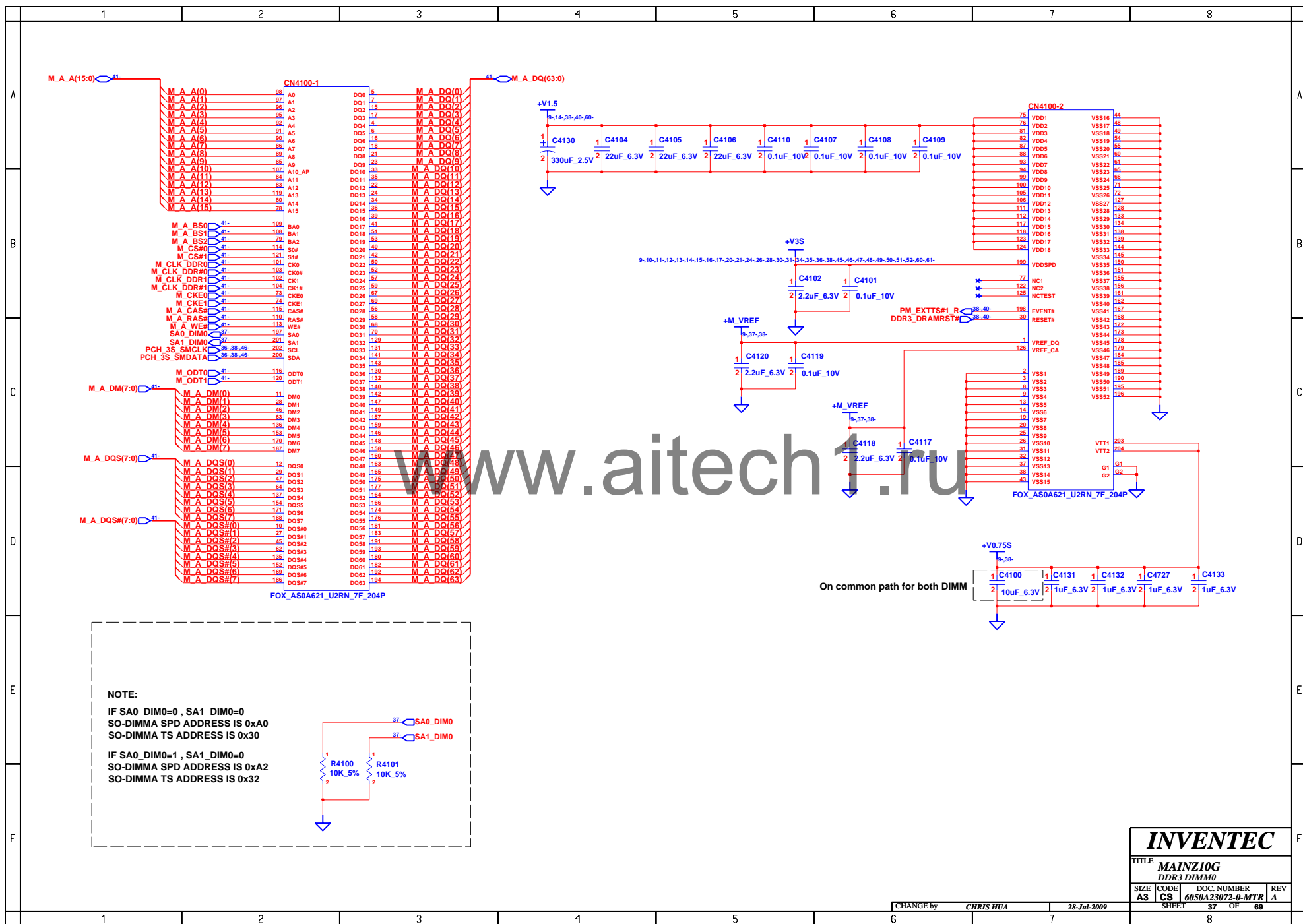


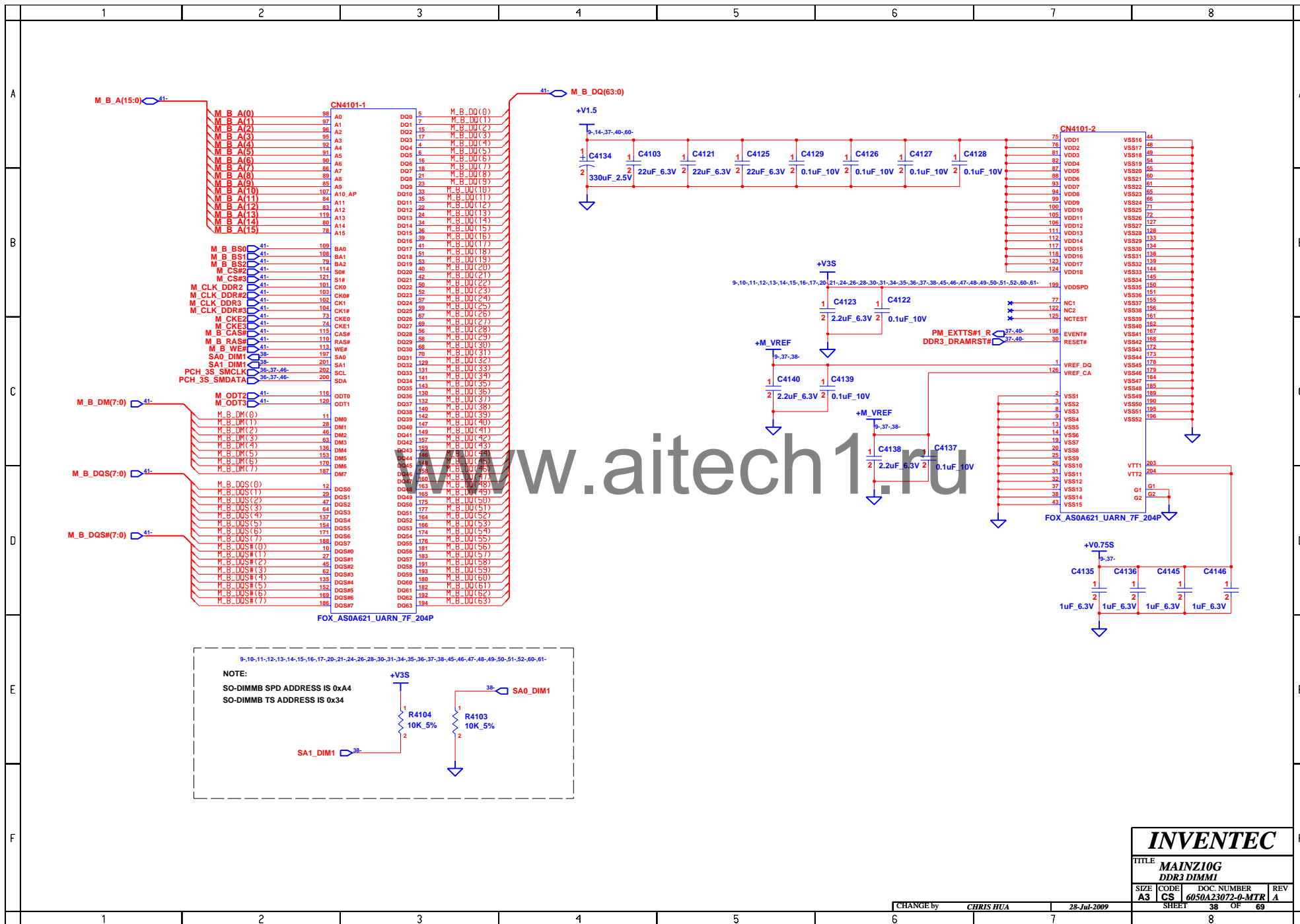
INVENTEC

TITLE: MAINZ10G
Connector

SIZE: A3 CODE: CS DOC. NUMBER: 6050A23072-0-MTR REV: A
SHEET: 35 OF 69

CHANGE by: CHRIS HUA 28-Jul-2009





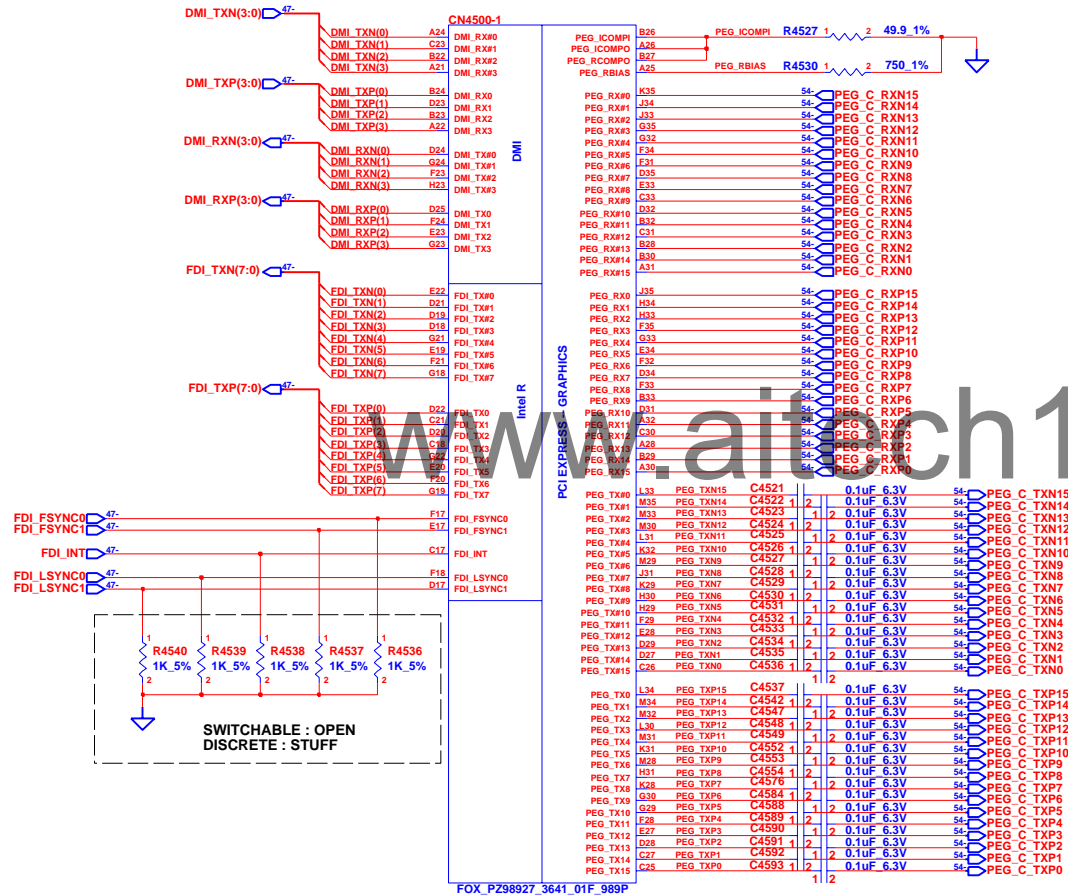
INVENTEC

TITLE
MAINZI0G
DDR3 DIMM1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by **CHRIS HUA** 28-Jul-2009

SHEET 38 OF 69



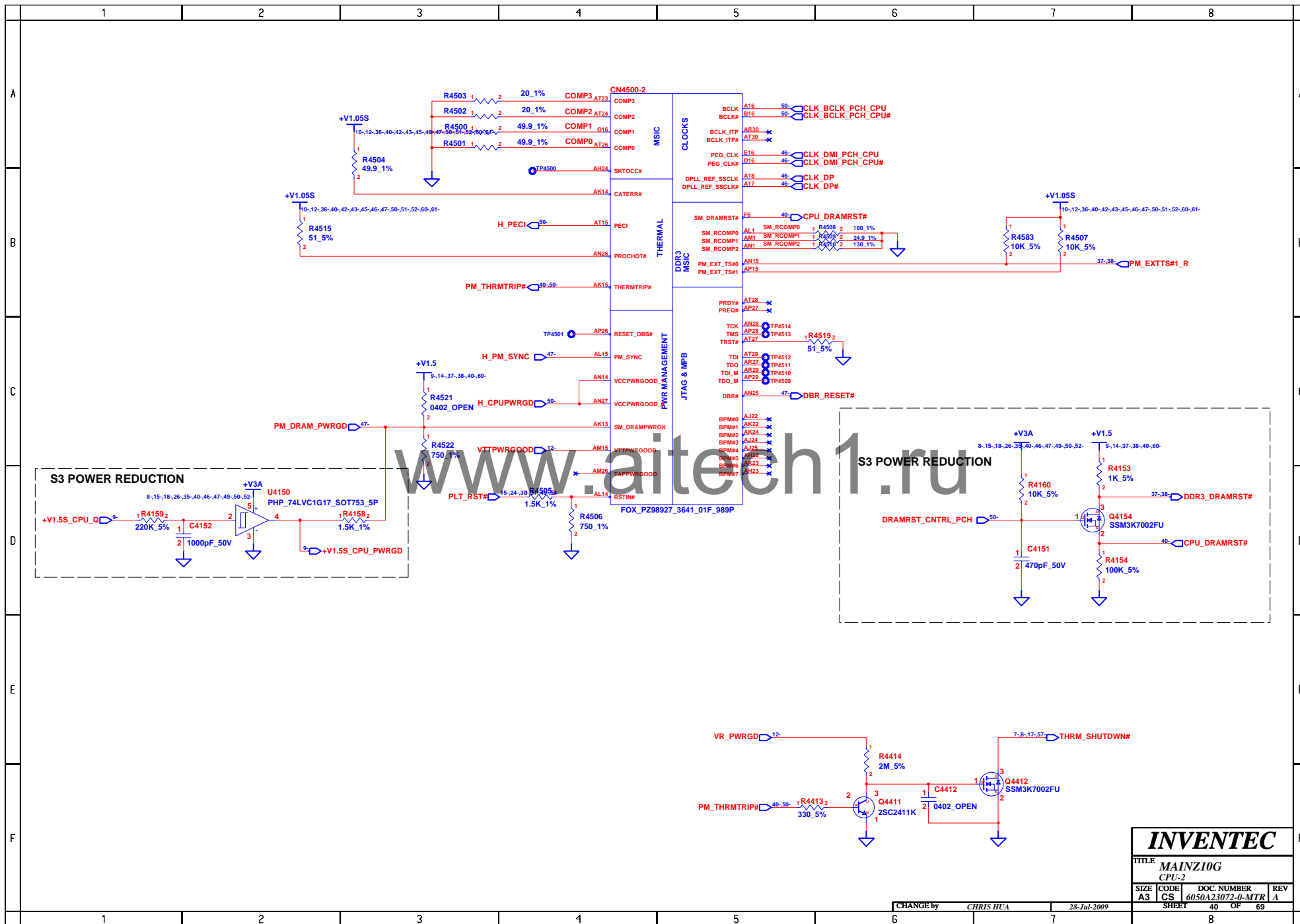
INVENTEC

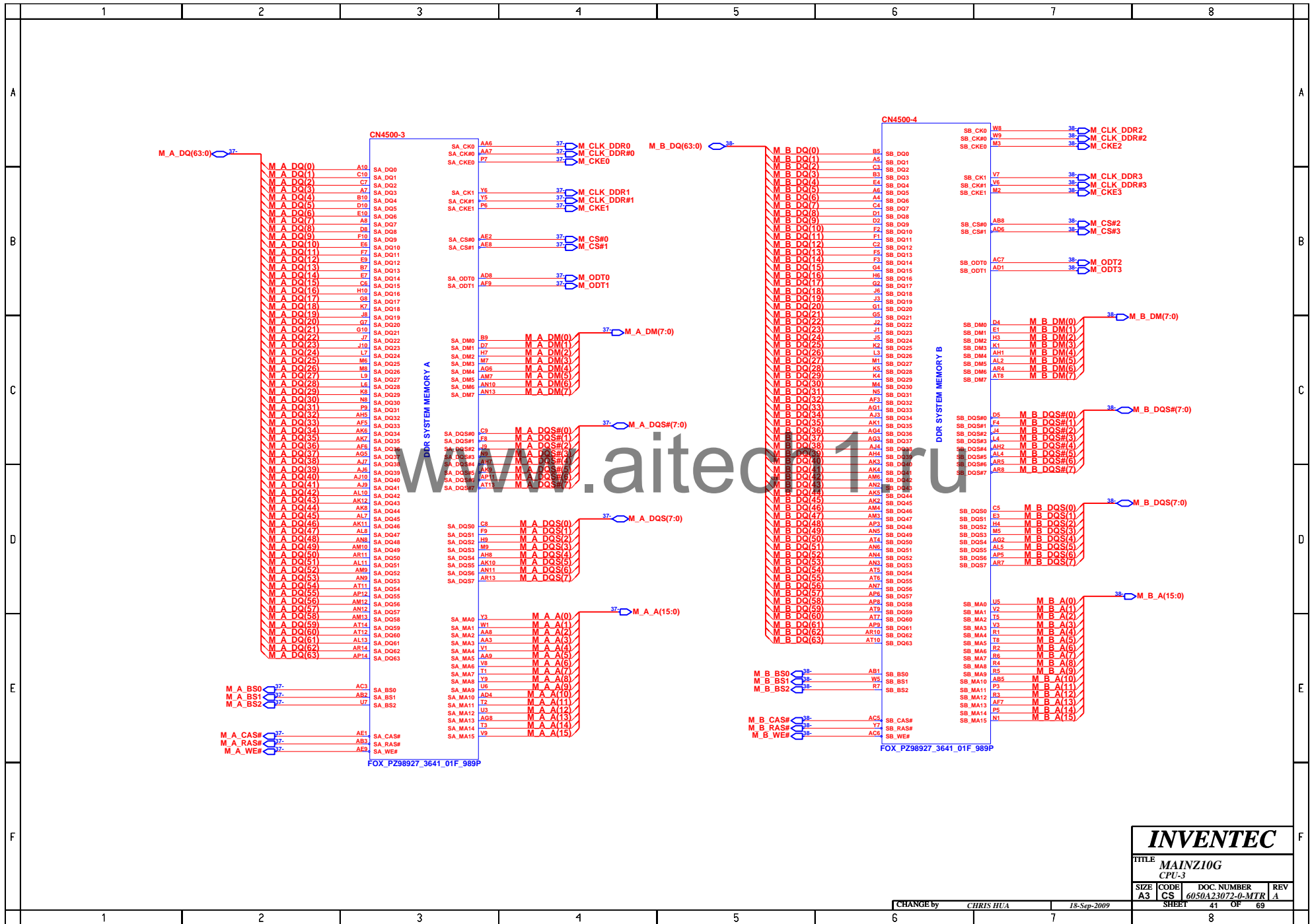
TITLE
MAINZ10G
CPU-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by **CHRIS HUA** 28-Jul-2009

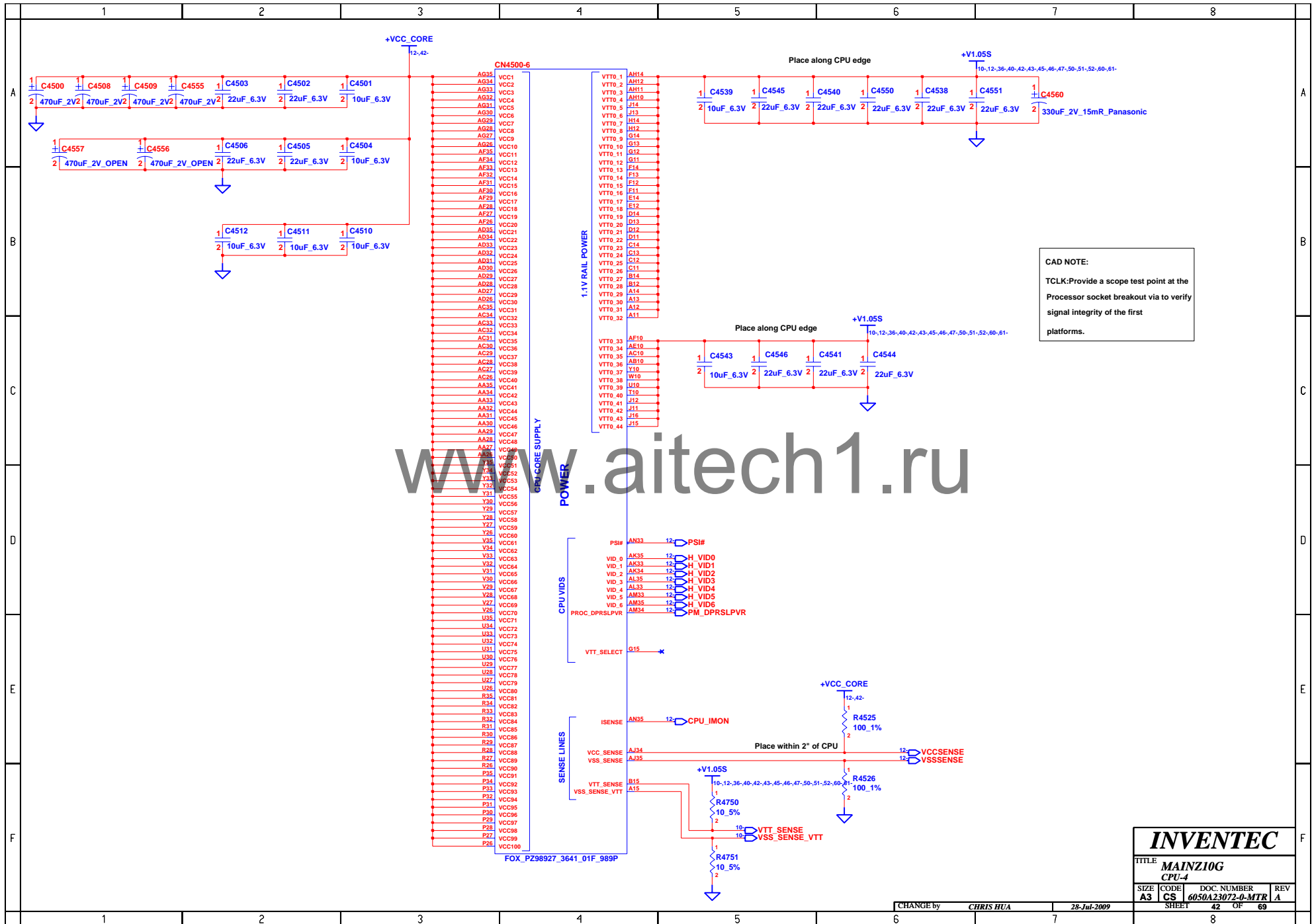
SHEET 39 OF 69





INVENTEC

TITLE MAINZ10G CPU-3			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by CHRIS HUA		18-Sep-2009	
SHEET		41 OF 69	

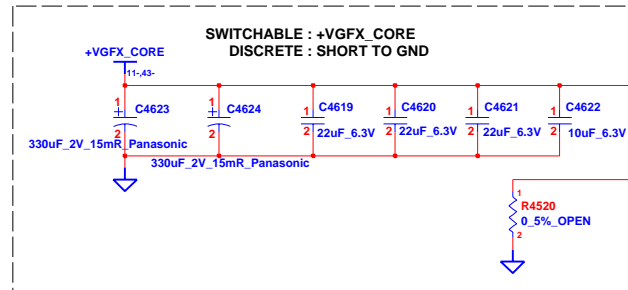


INVENTEC

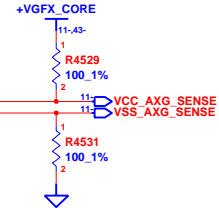
TITLE
**MAINZ10G
CPU-4**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

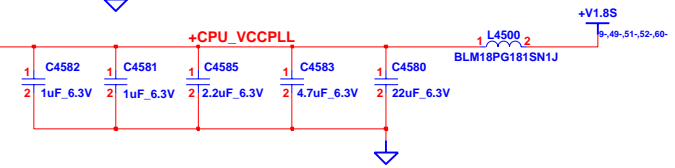
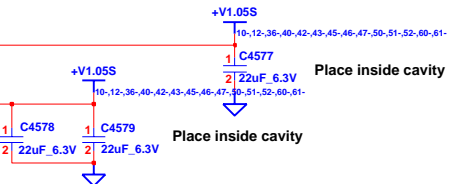
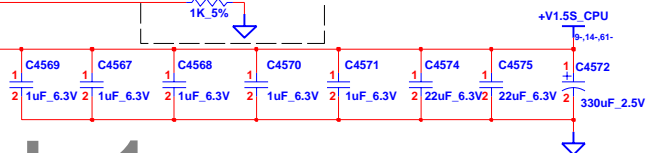
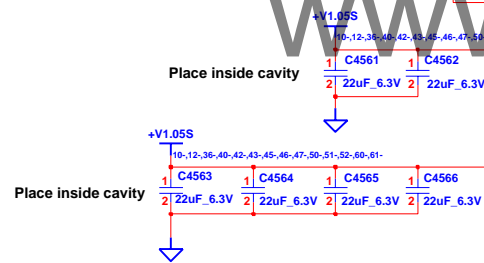
SHEET 42 OF 69



Route VCC_AXG_SENSE and
VSS_AXG_SENSE
differentially



**SWITCHABLE : OPEN
DISCRETE : STUFF**



CN4500-7

VAXG1
VAXG2
VAXG3
VAXG4
VAXG5
VAXG6
VAXG7
VAXG8
VAXG9
VAXG10
VAXG11
VAXG12
VAXG13
VAXG14
VAXG15
VAXG16
VAXG17
VAXG18
VAXG19
VAXG20
VAXG21
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VAXG23
VAXG24
VAXG25
VAXG26
VAXG27
VAXG28
VAXG29
VAXG30
VAXG31
VAXG32
VAXG33
VAXG34
VAXG35
VAXG36

SENSELINES
GFX_VID_0
GFX_VID_1
GFX_VID_2
GFX_VID_3
GFX_VID_4
GFX_VID_5
GFX_VID_6

GRAPHICS_VIDS
GFX_VR_EN
GFX_DPRS_LVR
GFX_IMON

POWER
VDD01
VDD02
VDD03
VDD04
VDD05
VDD06
VDD07
VDD08
VDD09
VDD10
VDD11
VDD12
VDD13
VDD14
VDD15
VDD16
VDD17
VDD18

PEG & DIM
VTT1_48
VTT1_49
VTT1_50
VTT1_51
VTT1_52
VTT1_53
VTT1_54
VTT1_55
VTT1_56
VTT1_57
VTT1_58

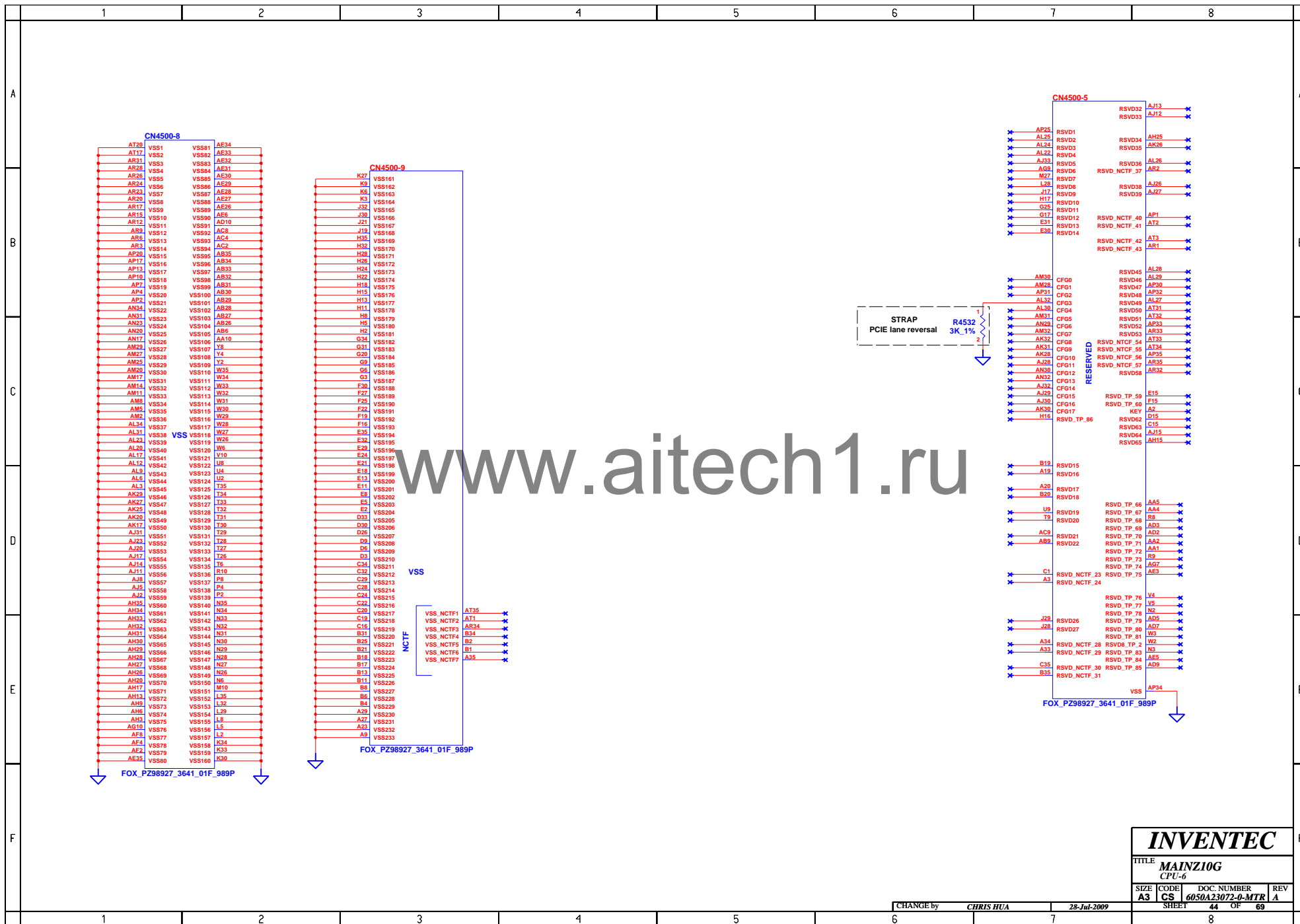
FOX_P298927_3641_01F_989P

www.altech1.ru

INVENTEC

TITLE MAINZ10G CPU-5			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
SHEET 43		OF 69	

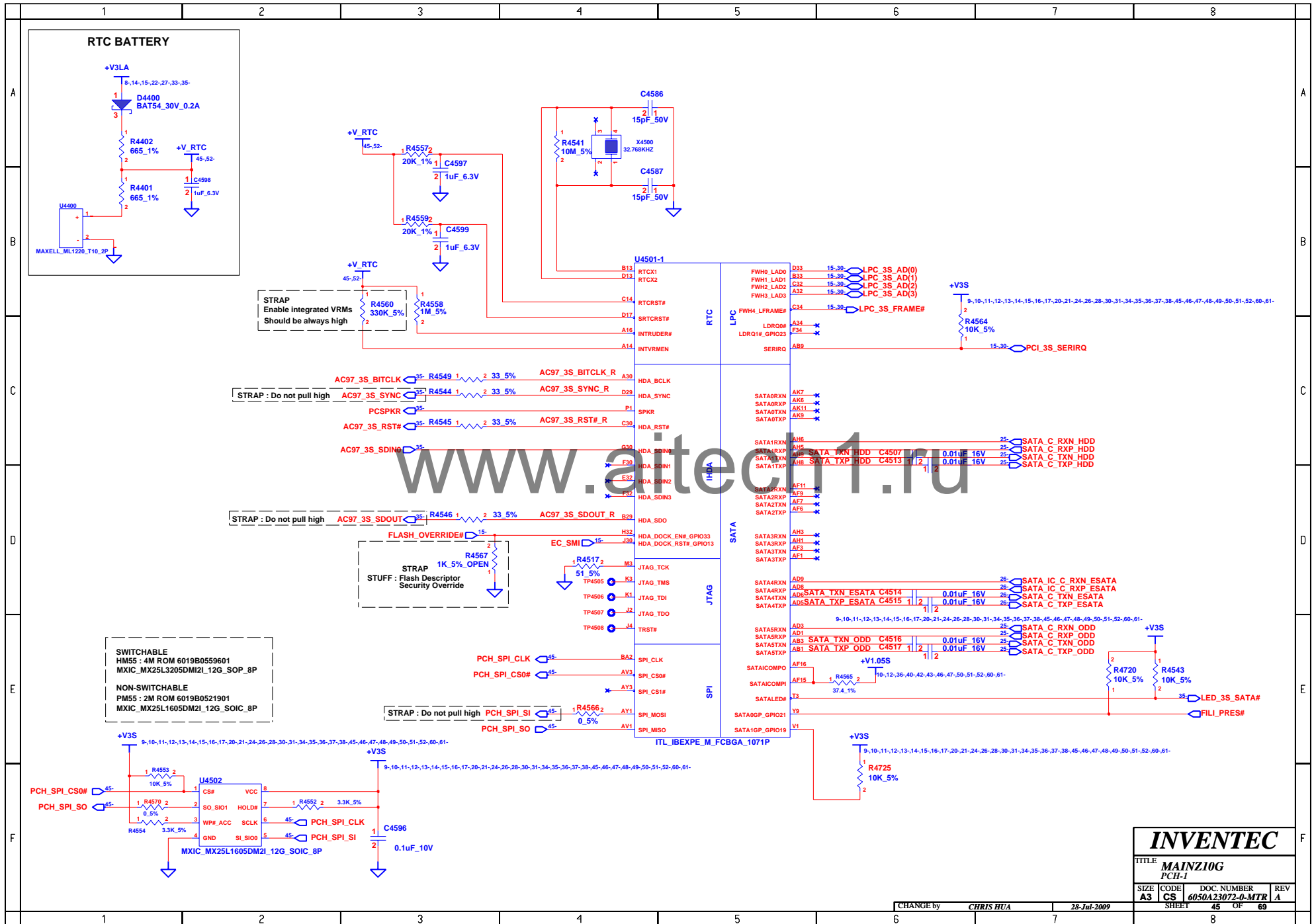
CHANGE by CHRIS HUA 28-Jul-2009

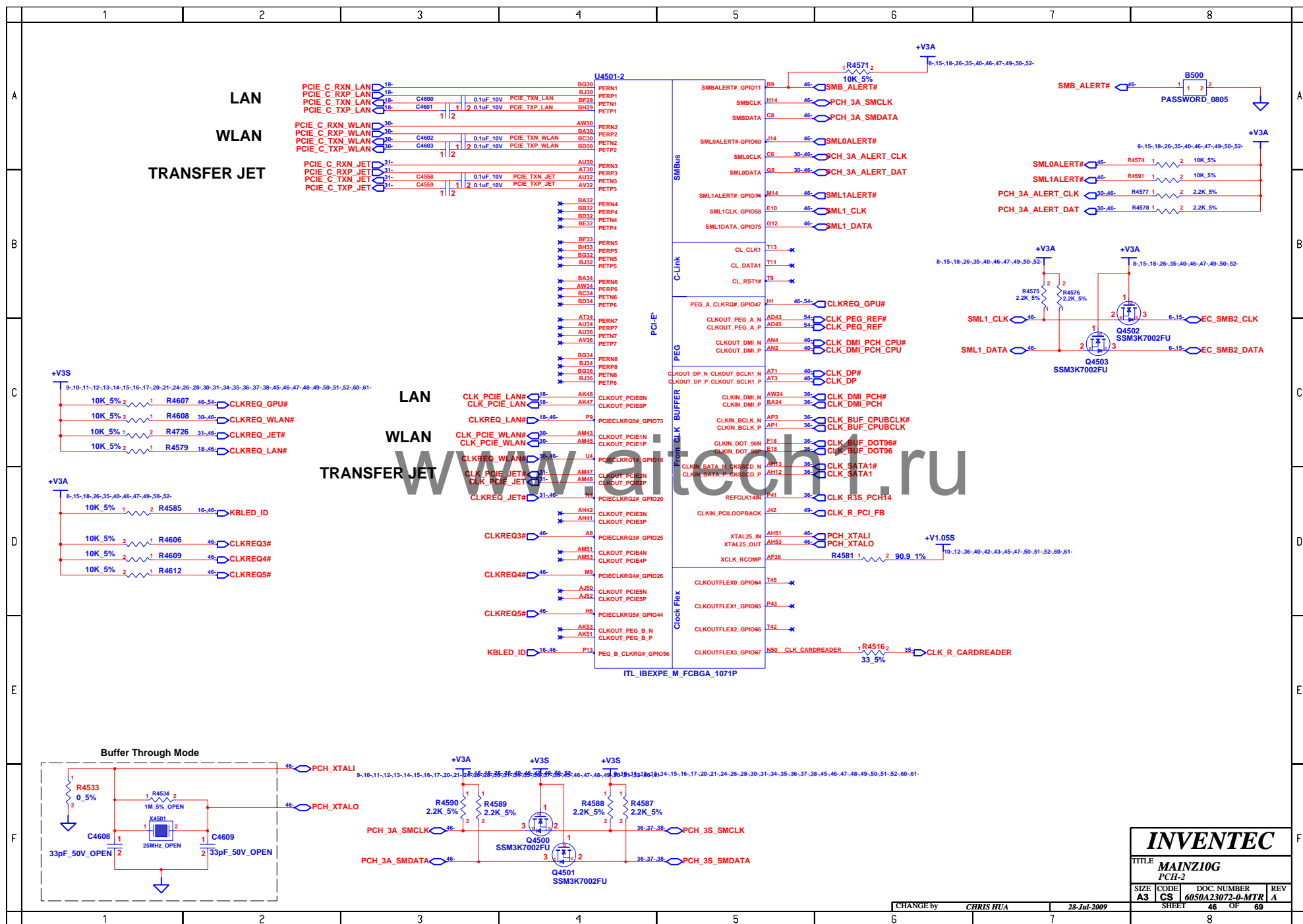


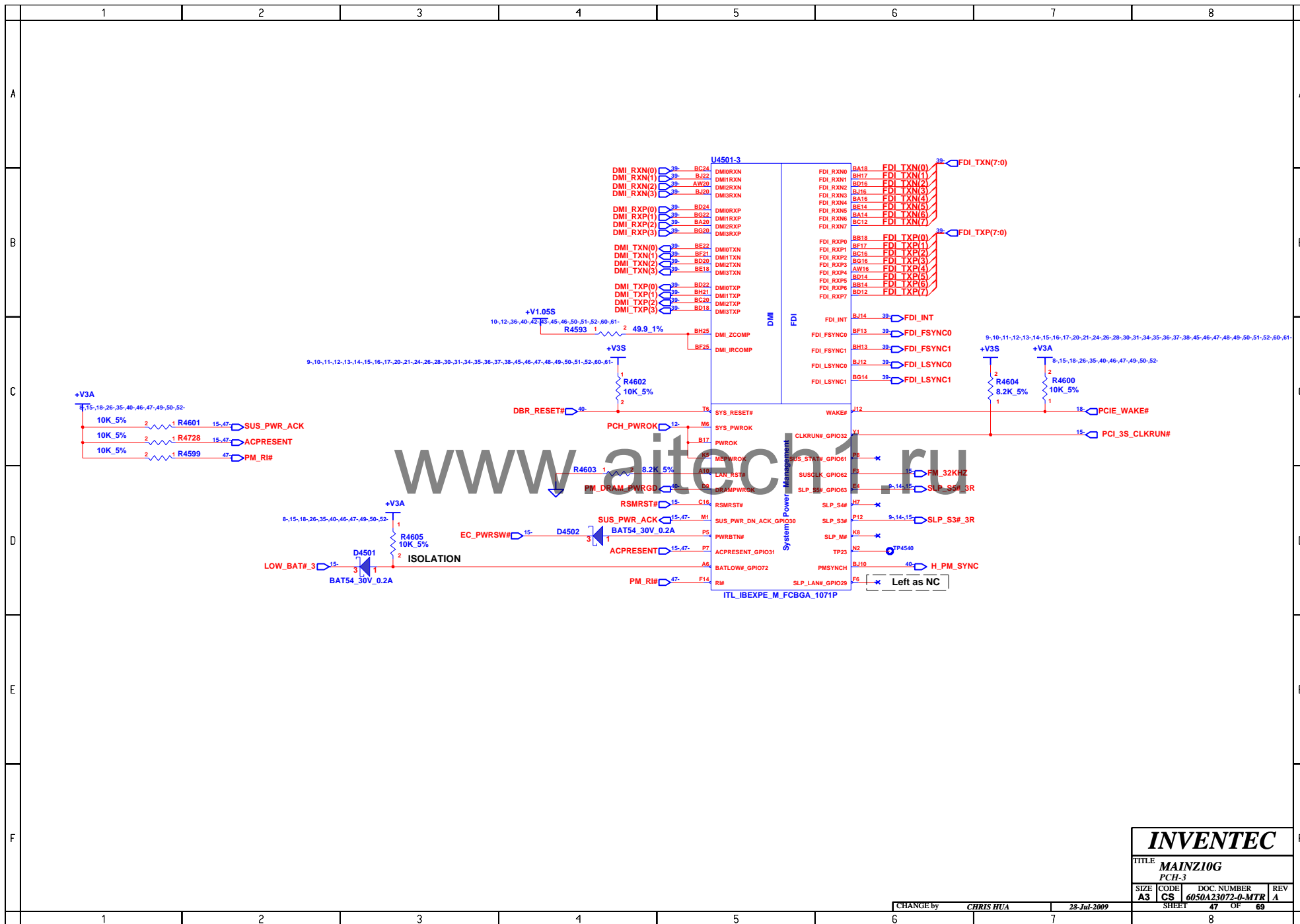
INVENTEC

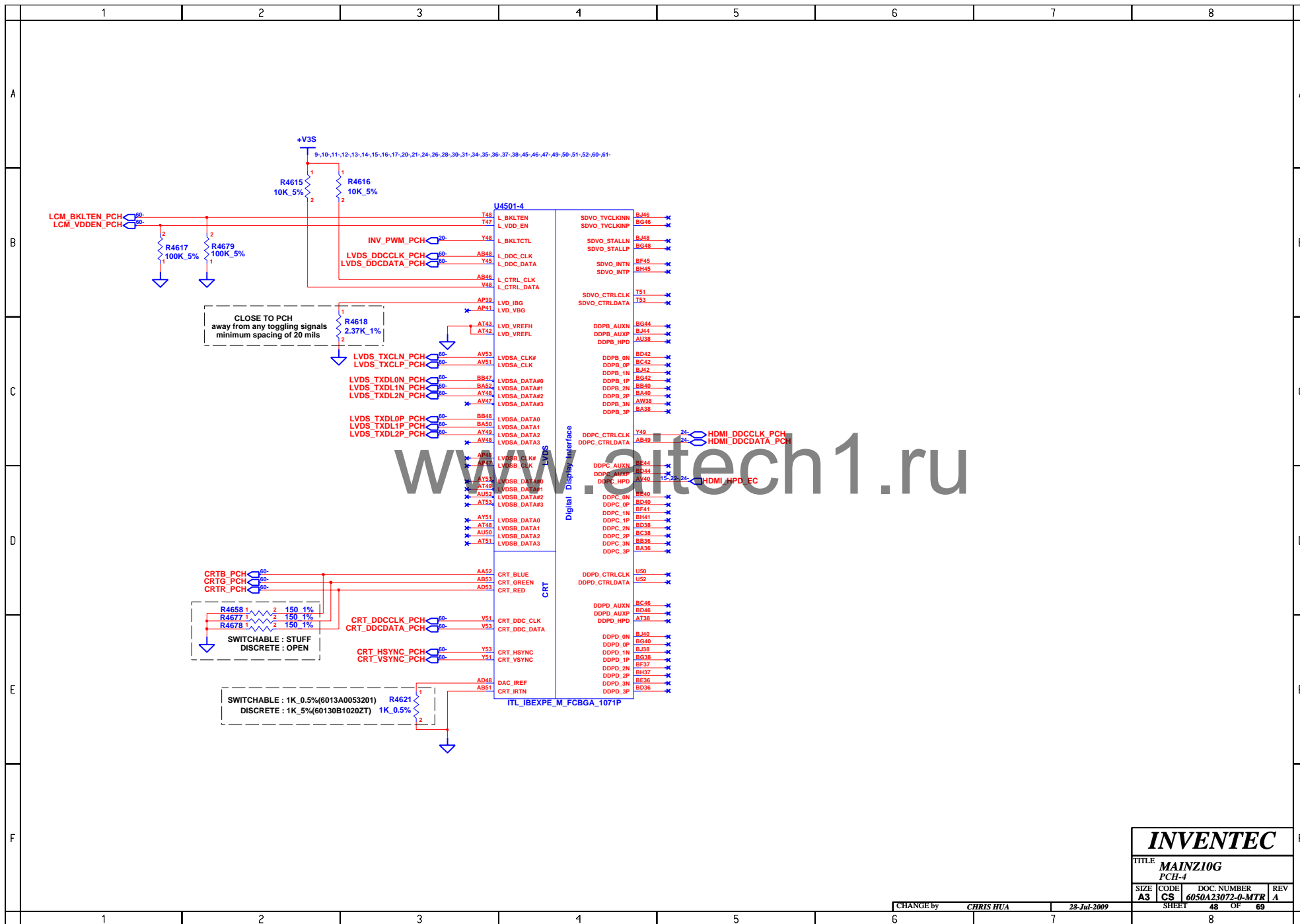
TITLE			
MAINZ10G			
CPU-6			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A
SHEET		44	OF 69

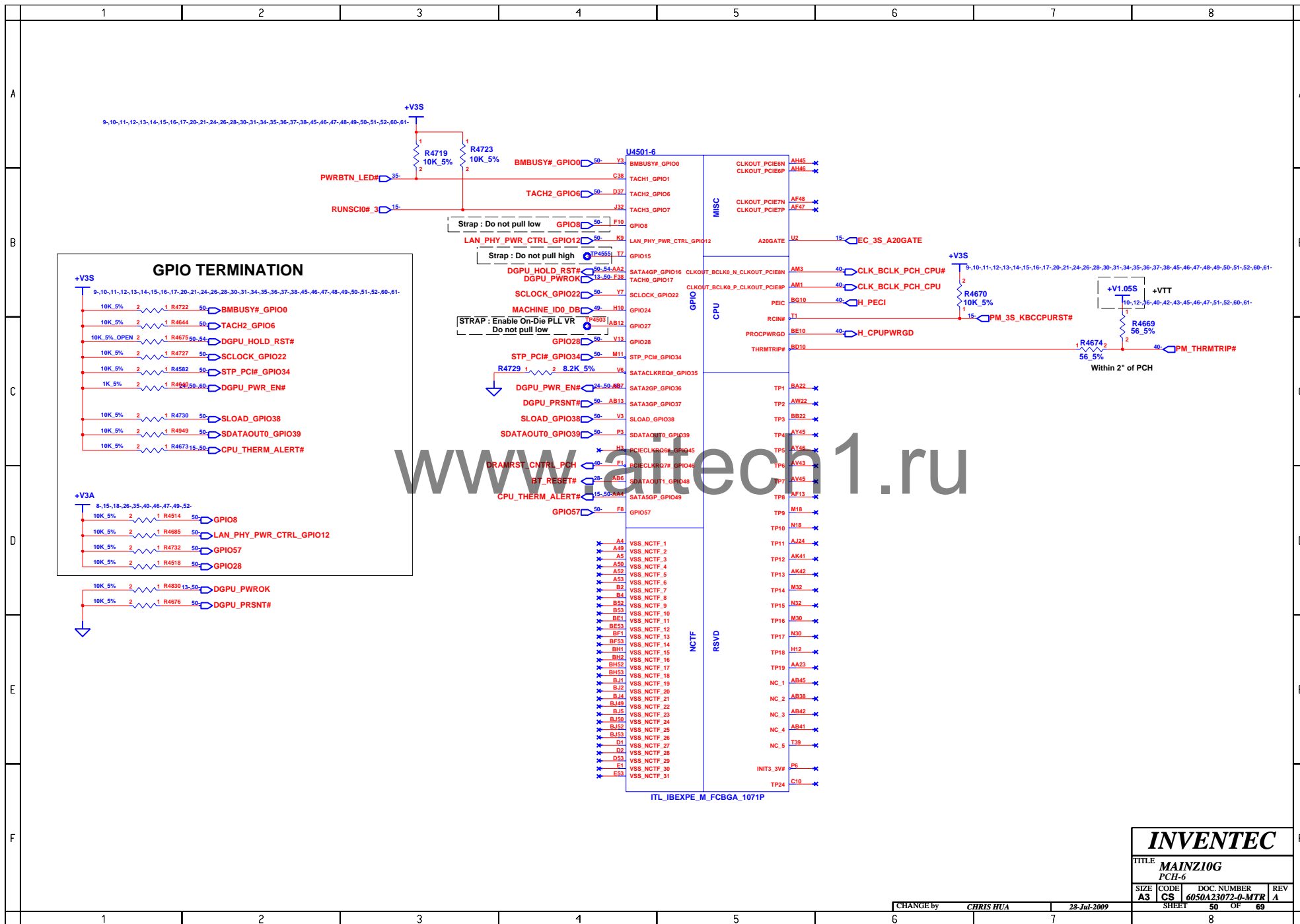
CHANGE by CHRIS HUA 28-Jul-2009











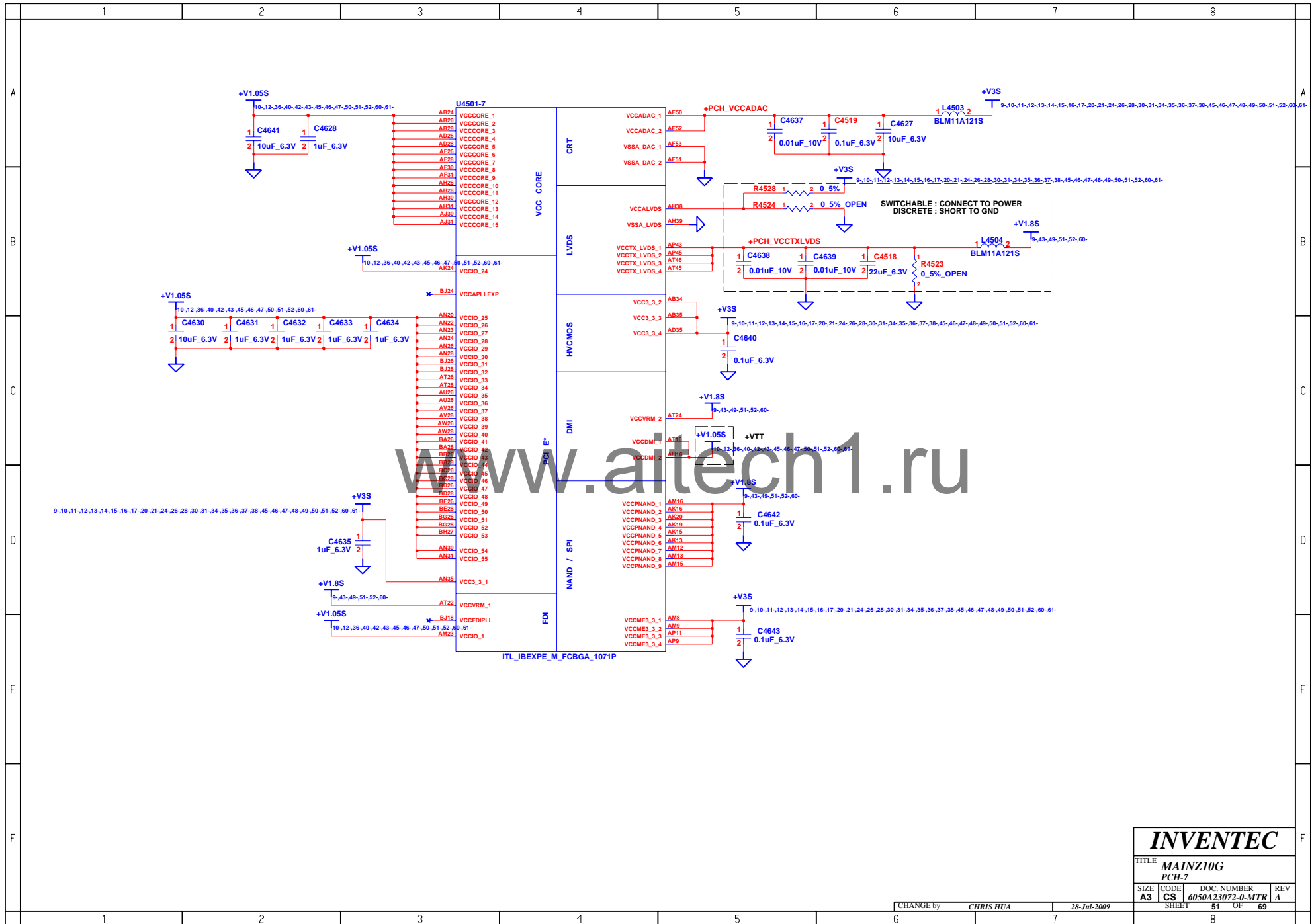
INVENTEC

TITLE **MAINZ10G**
PCH-6

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by **CHRIS HUA** 28-Jul-2009

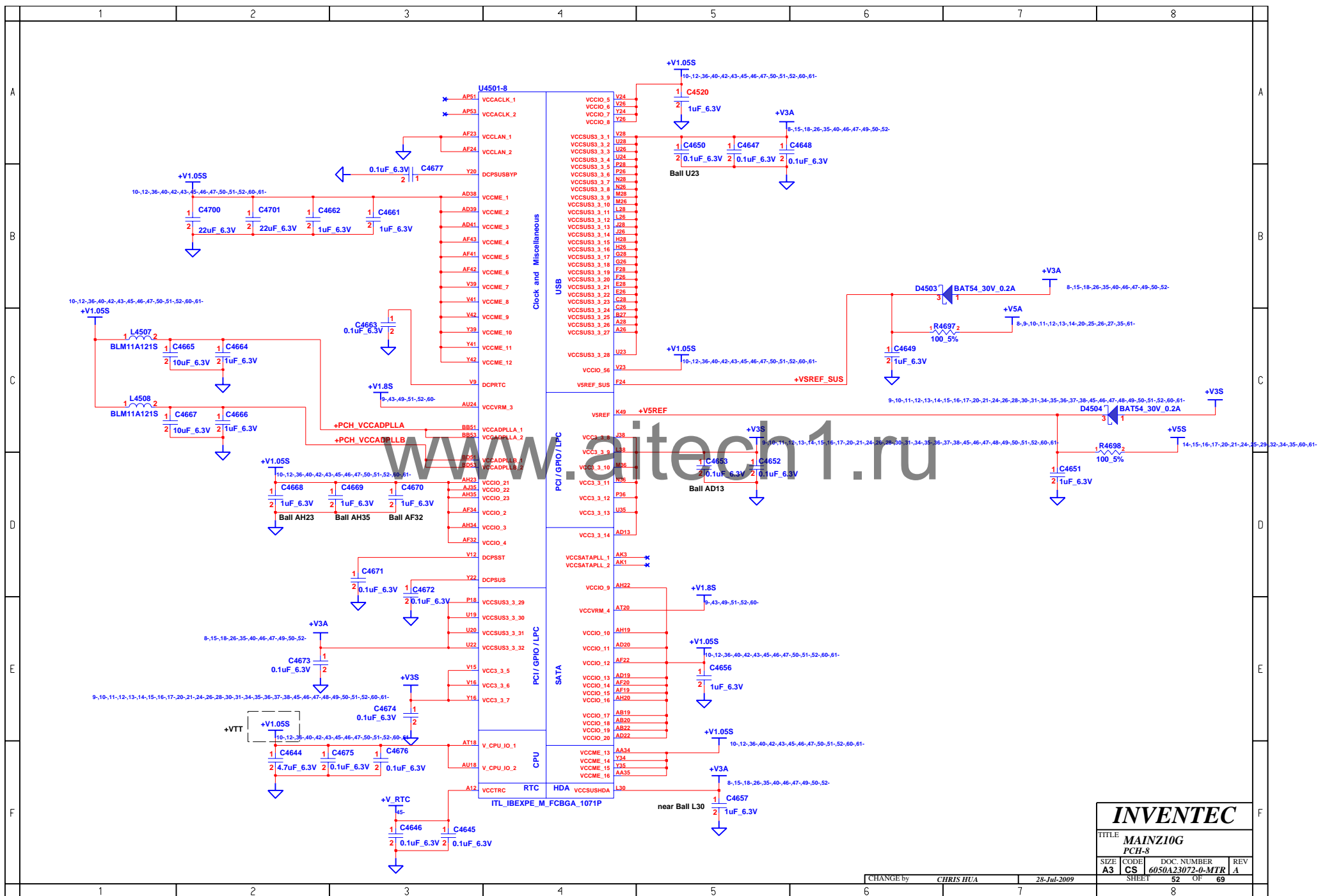
SHEET 50 OF 69

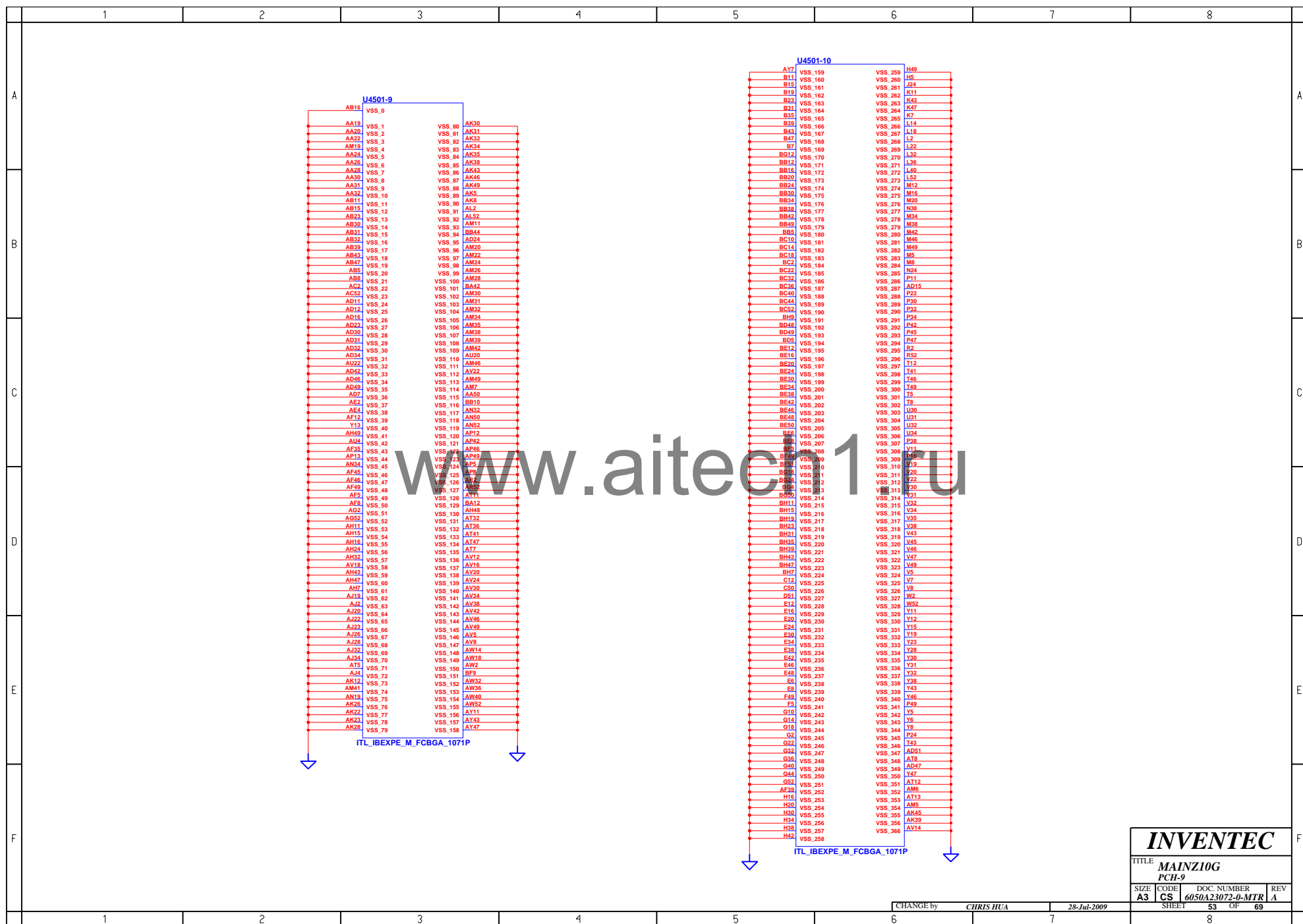


INVENTEC

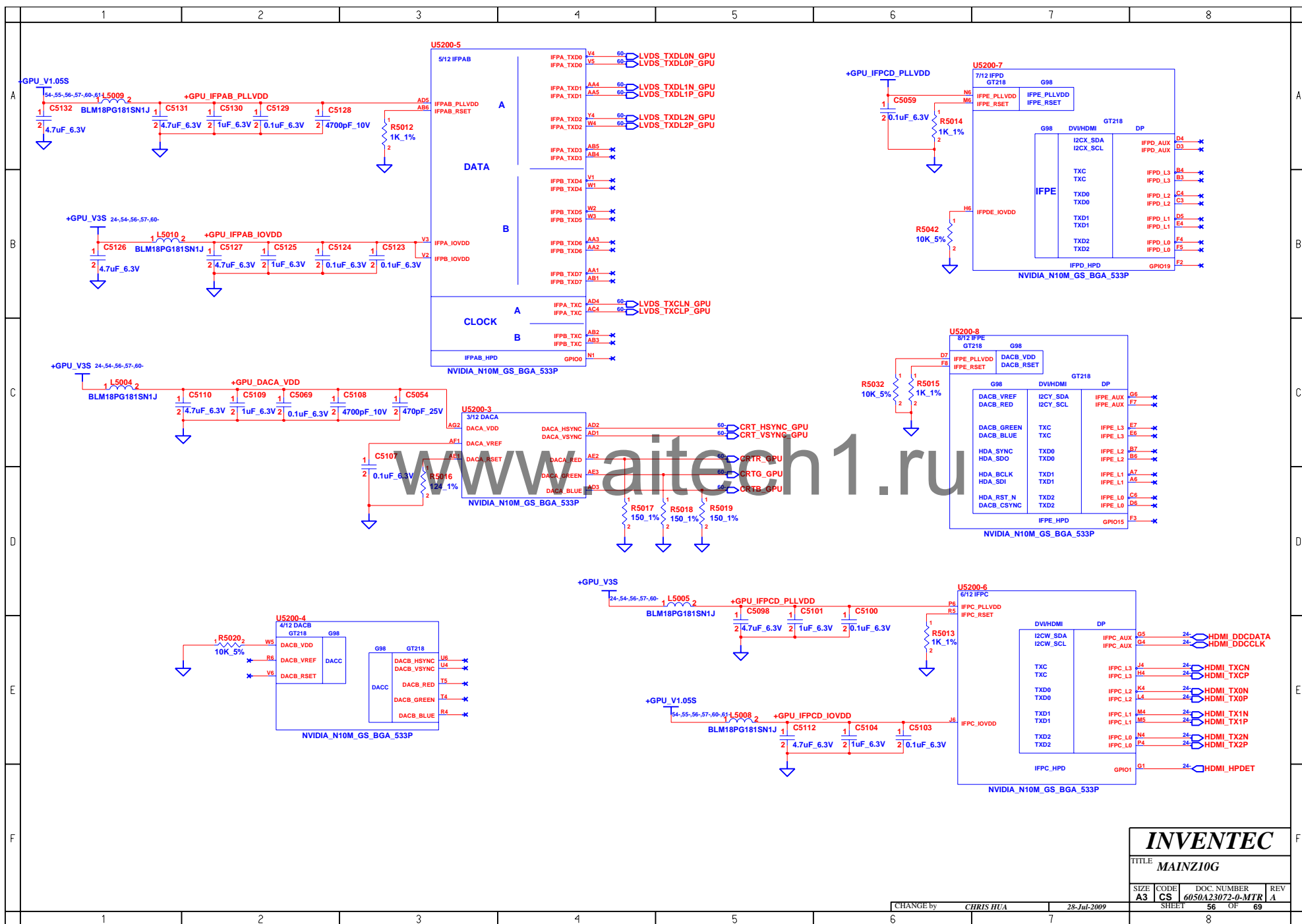
TITLE MAINZ10G PCH-7				
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A	
SHEET		51	OF	69

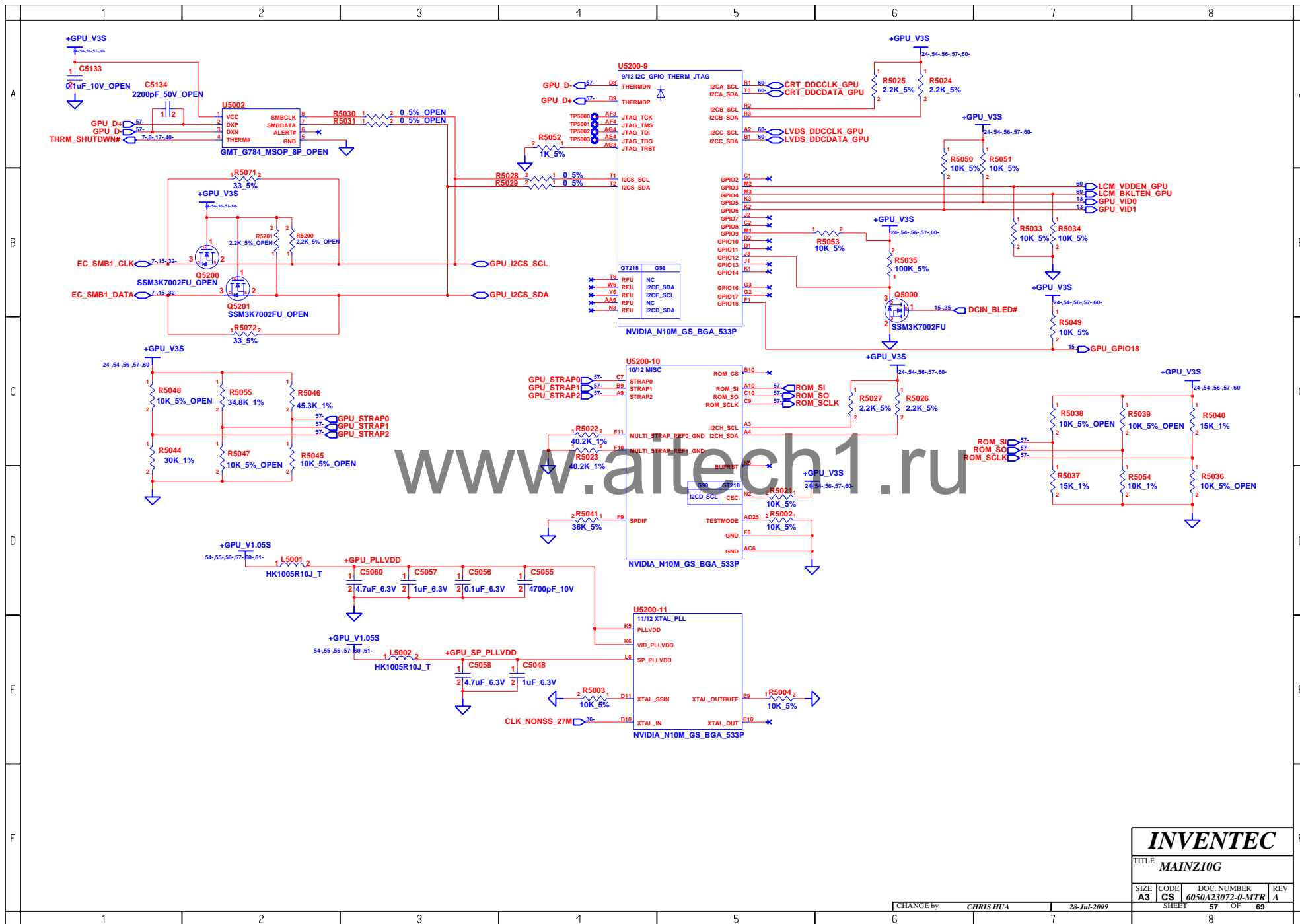
CHANGE by CHRIS HUA 28-Jul-2009

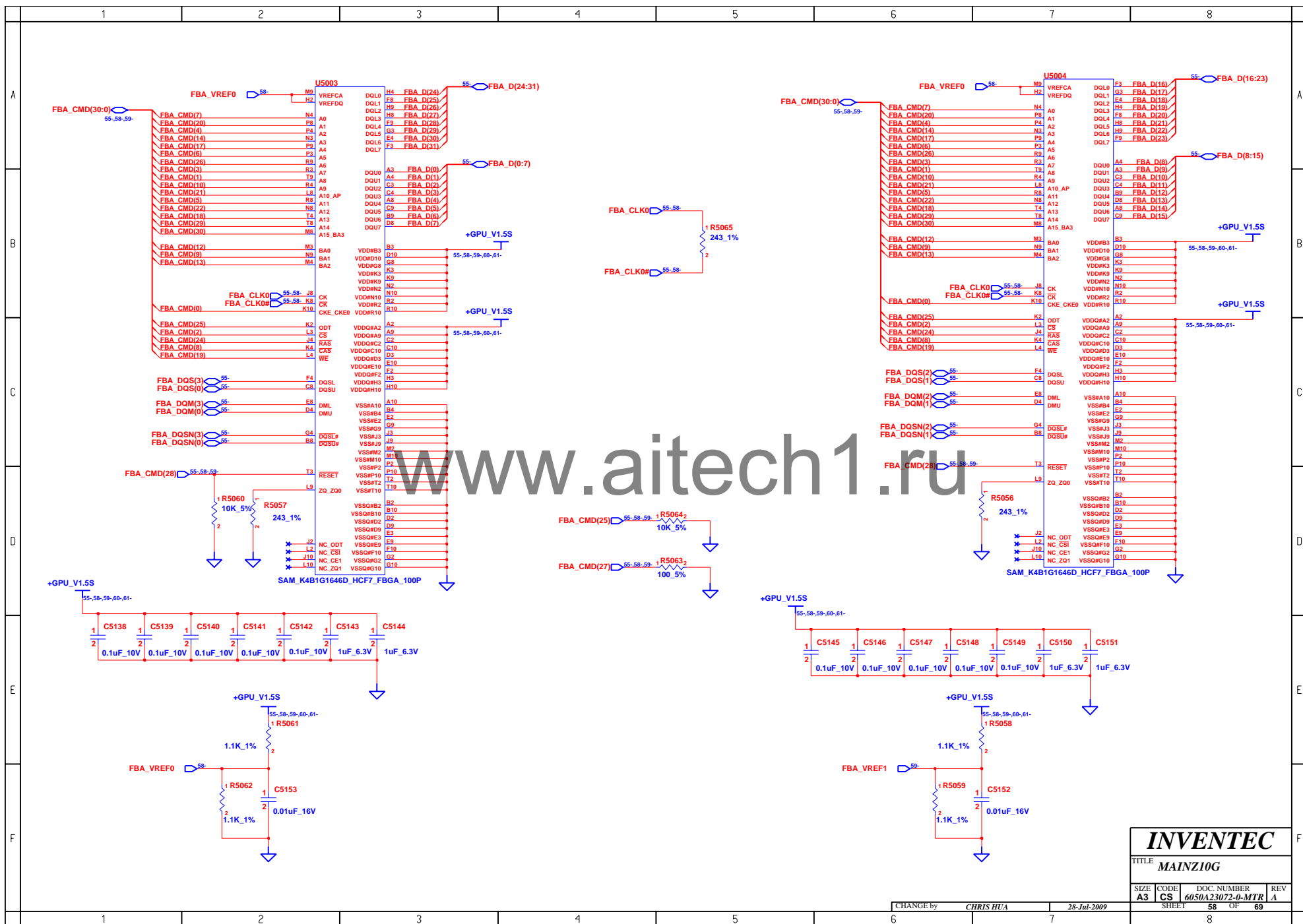


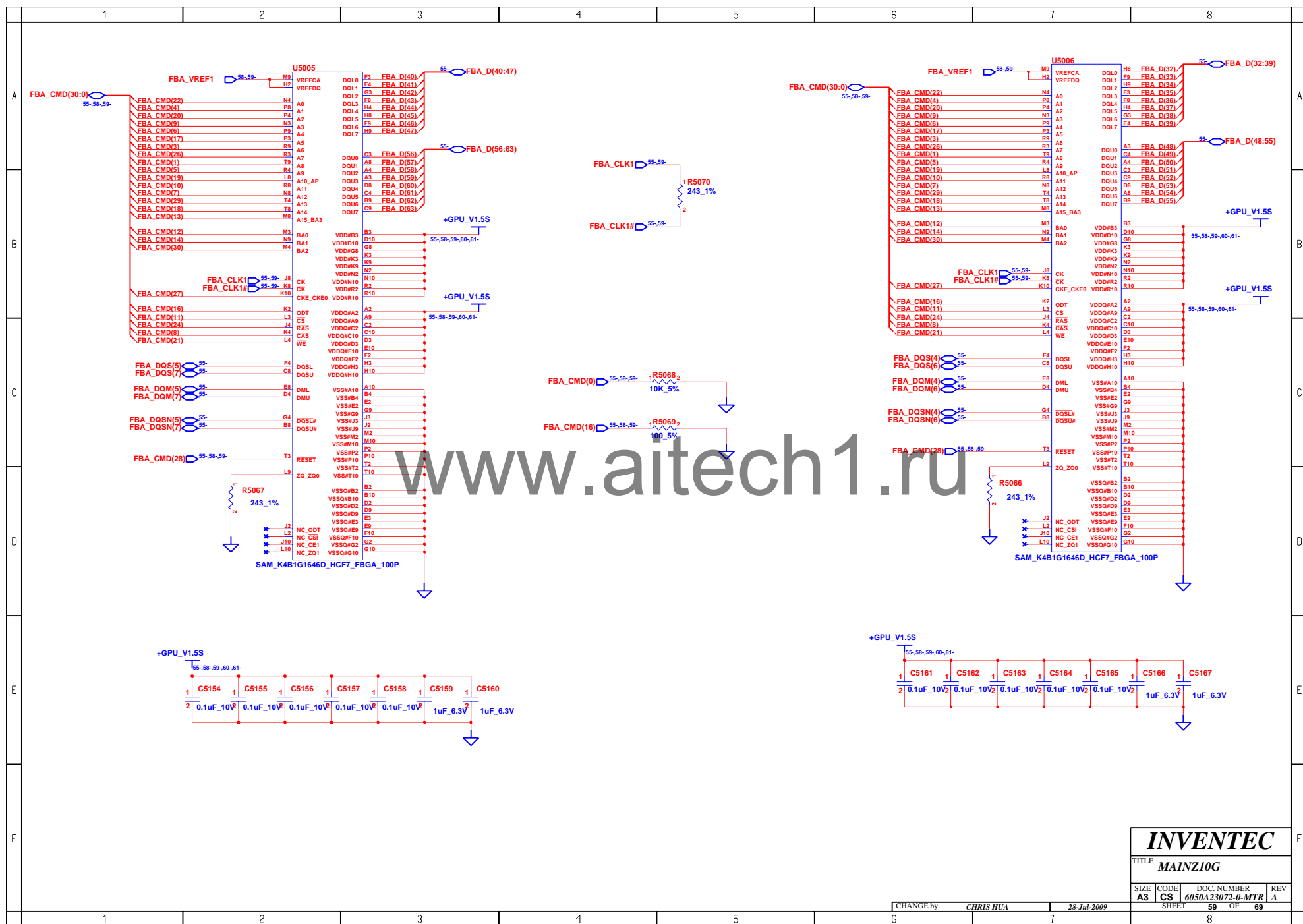


Changed by	Date Changed	Time Changed	REV	Drawing Number	Sheet 54 of 69
MAJN200	28-Jul-2009	4:57:56 on	0A CHK	A	

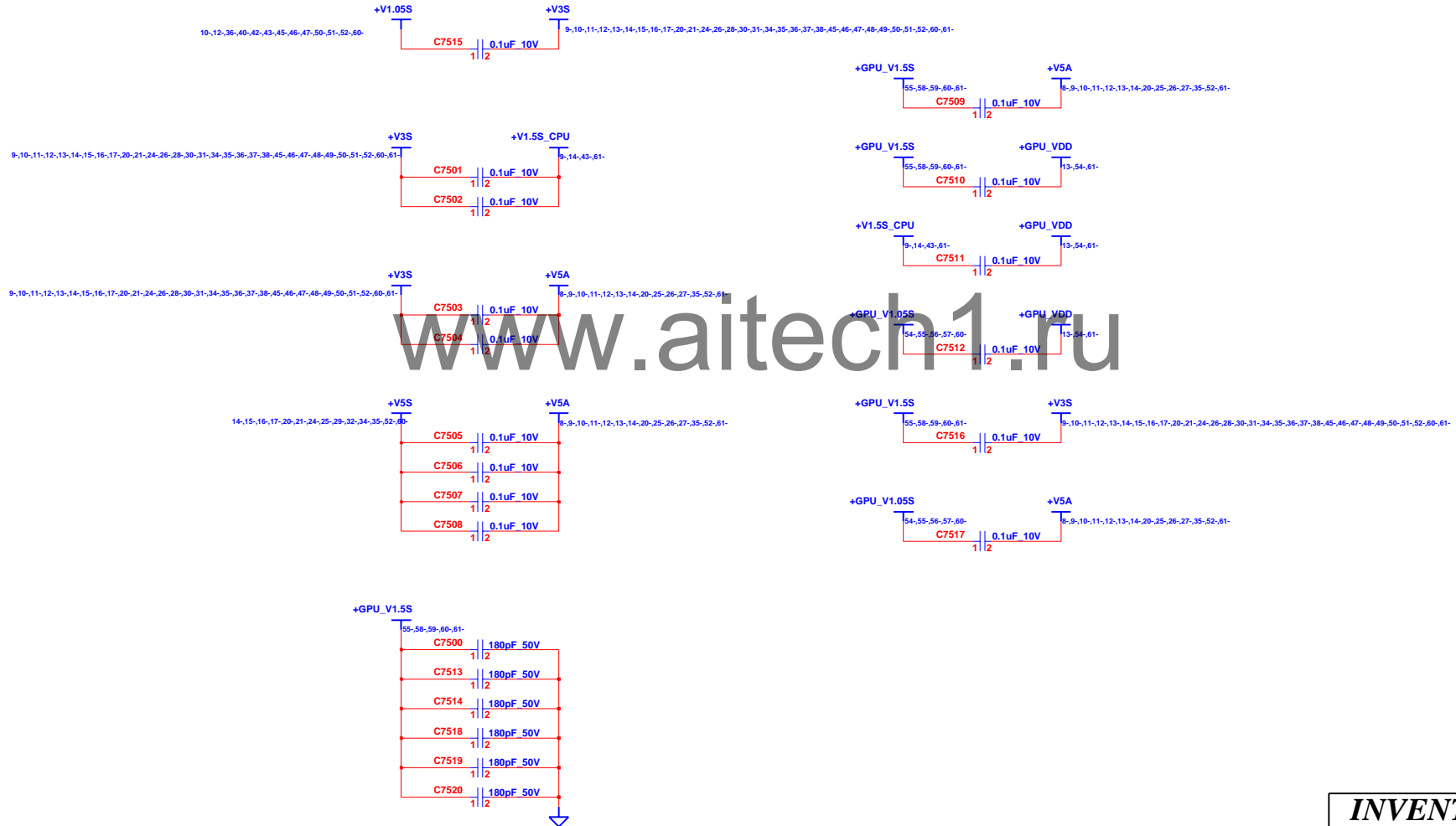








EMI



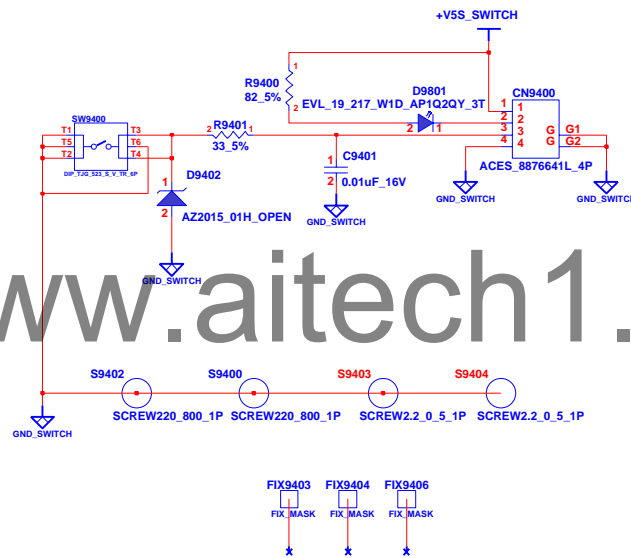
INVENTEC

TITLE			
MAINZ10G			
EMI			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A
SHEET		61	OF 69

CHANGE by CHRIS HUA 28-Jul-2009

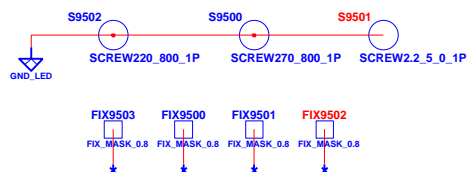
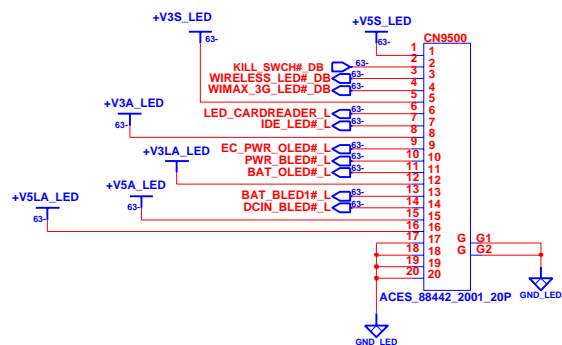
TOUCHPAD ON/OFF BOARD

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INVENTEC			
TITLE: MAINZ10G Touchpad Switch Board			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by		CHRIS HUA	1-Oct-2009
SHEET		62	OF 69

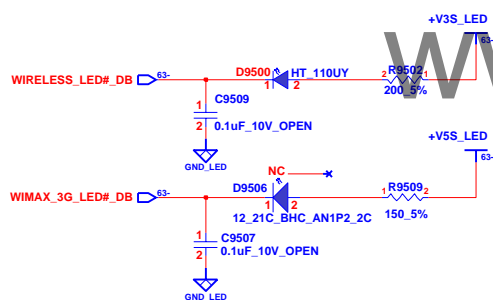
LED & KILL SWITCH BOARD



CARDREADER LED

HDD LED

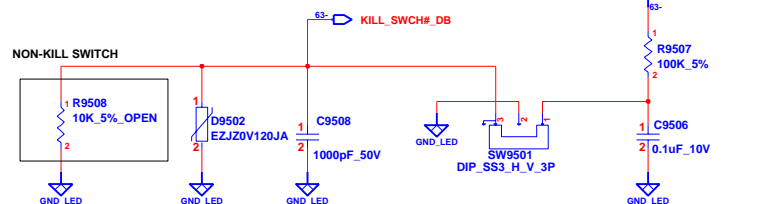
POWER LED



BATTERY LED

DC LED

KILL SWITCH



INVENTEC

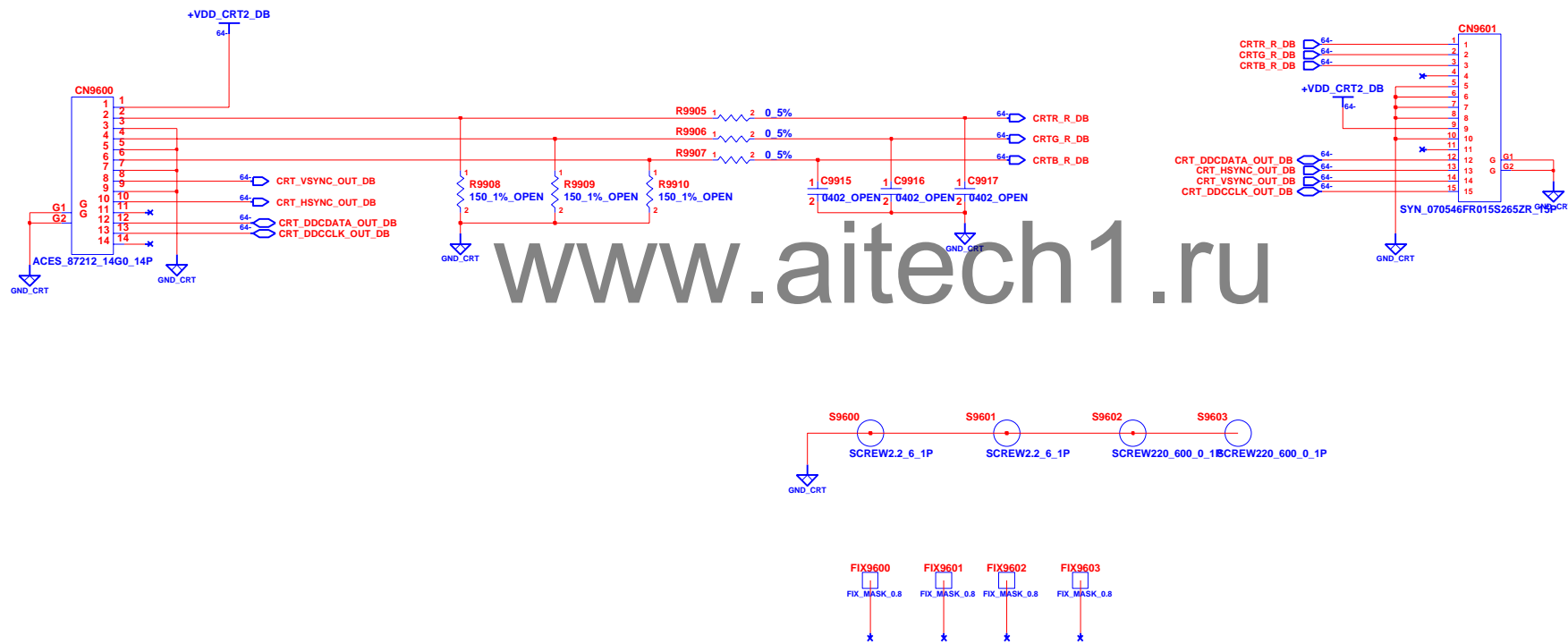
TITLE: **MAINZ10G**
LED & Kill Switch Board

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by: **CHRIS HUA** 28-Jul-2009

SHEET 63 OF 69

CRT BOARD

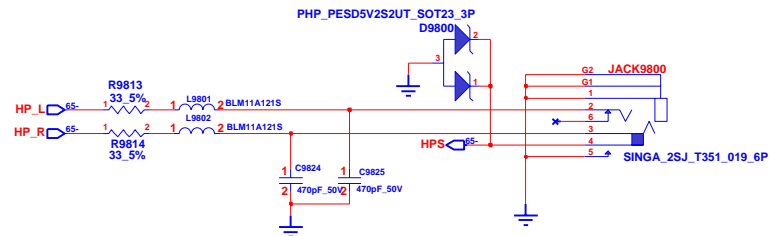
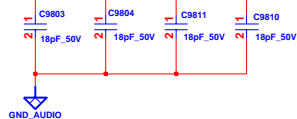
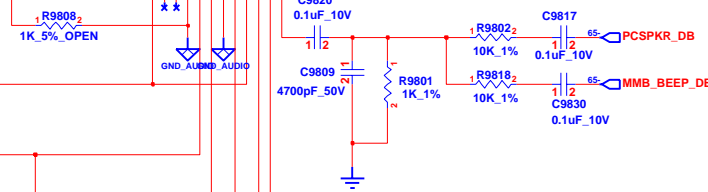
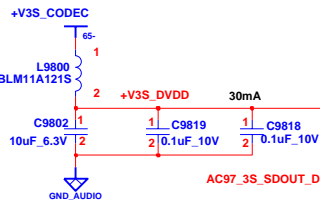
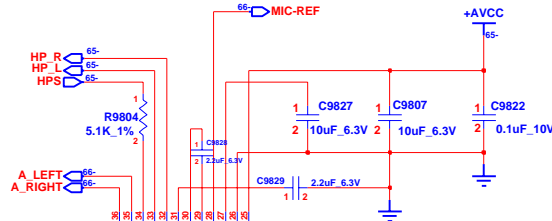
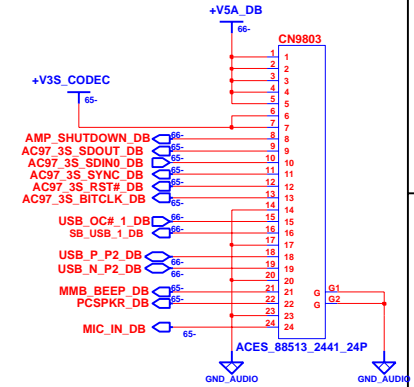
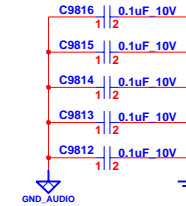
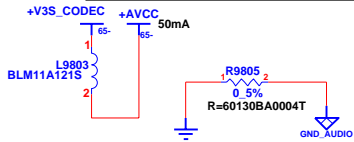


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INVENTEC			
TITLE: MAINZ10G Power Button Board			
SIZE: A3	CODE: CS	DOC. NUMBER: 6050A23072-0-MTR	REV: A
CHANGE by: CHRIS HUA		24-Aug-2009	
SHEET: 64		OF: 69	

CODEC/AMP/USB BOARD 1-2

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



INVENTEC

TITLE: MAINZ10G
AZALIA CODEC

SIZE: A3
CODE: CS
DOC. NUMBER: 6050A23072-0-MTR
REV: 65 OF 69

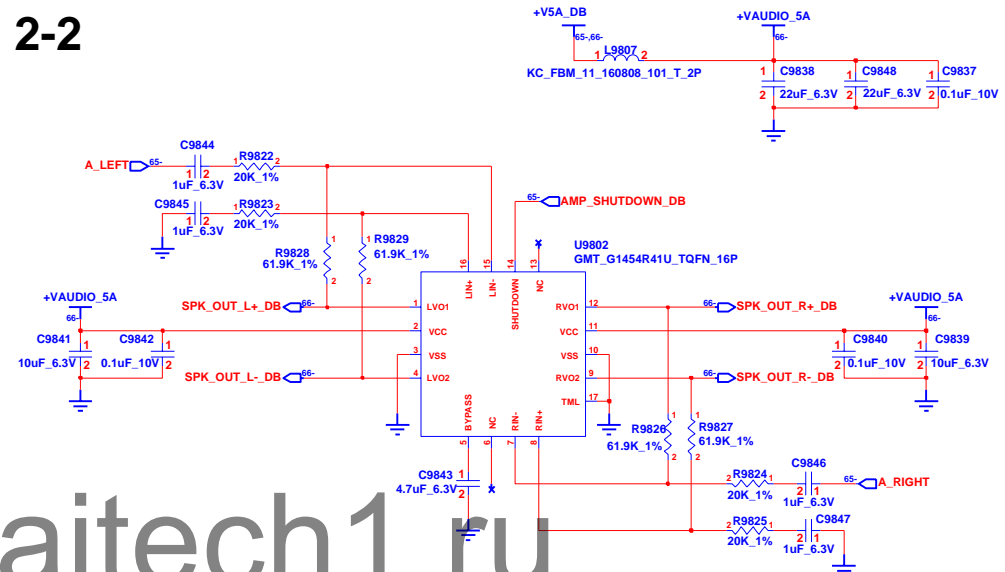
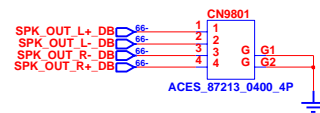
CHANGE by: CHRIS HUA 28-Jul-2009

SHEET 65 OF 69

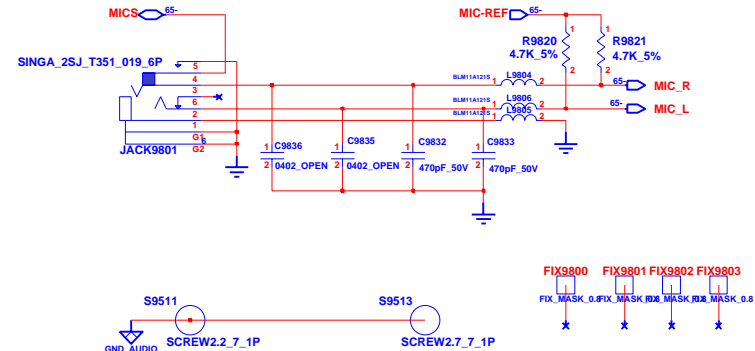
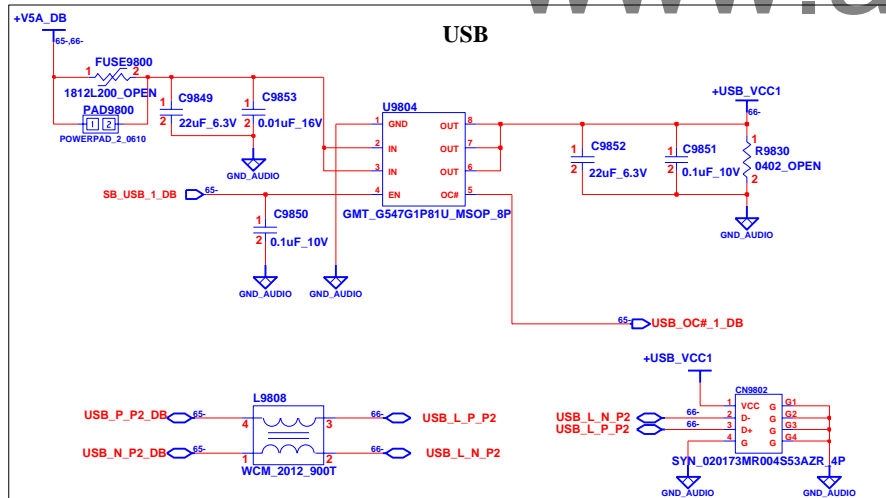
CODEC/AMP/USB BOARD

2-2

SPEAKER CONNECTOR



USB



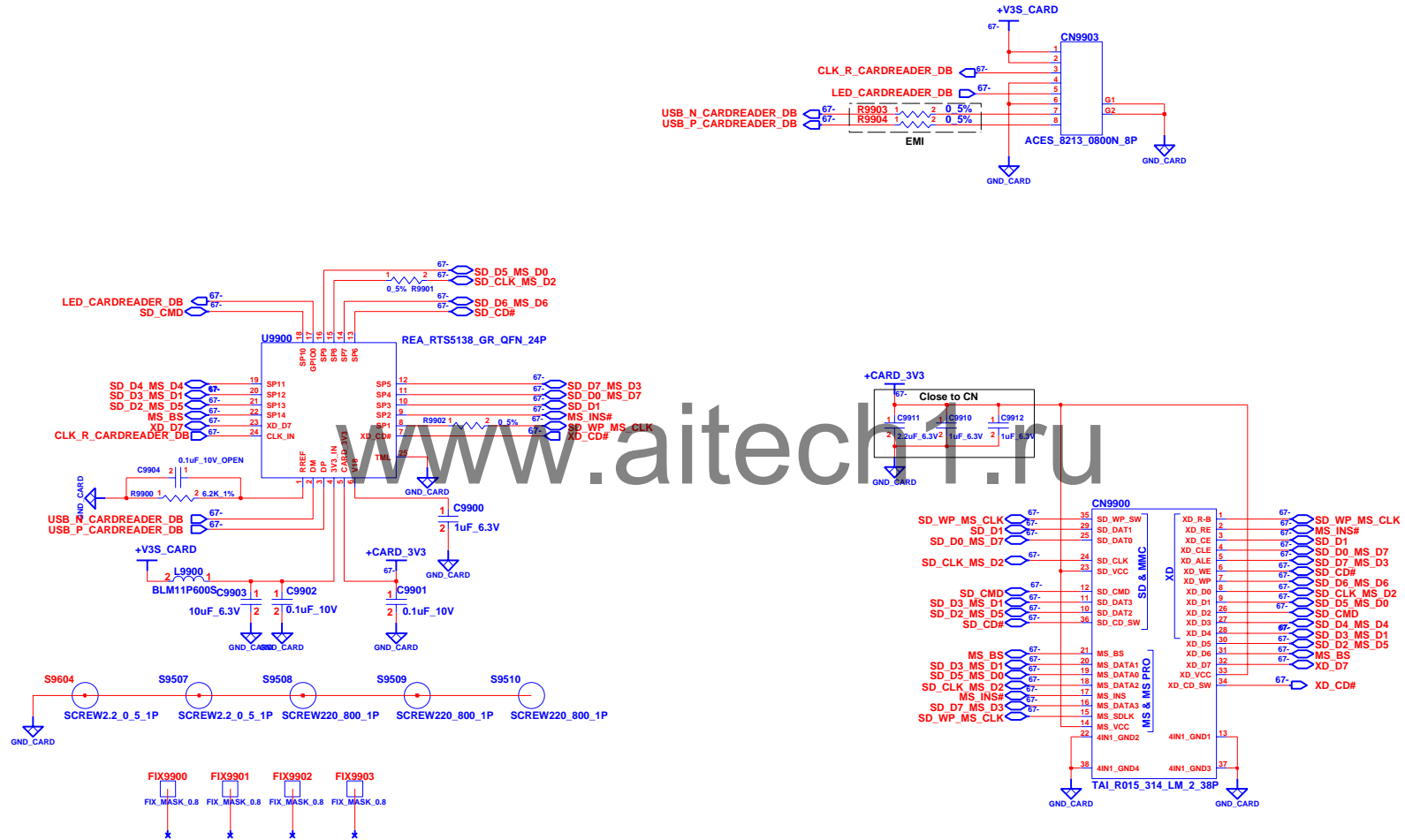
INVENTEC

TITLE			
MAINZ10G			
AUDIO AMP & MIC & SPEAKER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MT	RA

CHANGE by CHRIS HUA 28-Jul-2009

SHEET 66 OF 69

CARD READER BOARD



INVENTEC

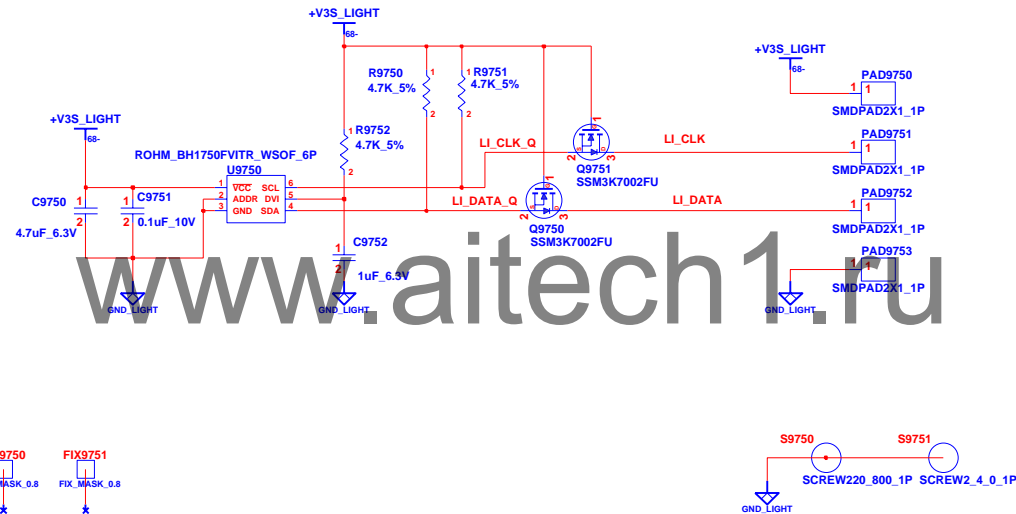
TITLE: **MAINZ10G**
CardReader

SIZE	CODE	DOC. NUMBER	REV
A3	CS	6050A23072-0-MTR	A

CHANGE by: **CHRIS HUA** 28-Jul-2009

SHEET 67 OF 69

AMBIENT LIGHT SENSOR BOARD



INVENTEC			
TITLE MAINZ10G Ambient Light Sensor Board			
SIZE A3	CODE CS	DOC. NUMBER 6050A23072-0-MTR	REV A
CHANGE by CHRIS HUA		25-Aug-2009	
SHEET 68		OF 69	

