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HSF Property: ROHS or Halogen-Free

CALVIN DIS

MV BUILD

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2012.04.23

06/07/2012	2012-ECO-008893	D
08/23/2012	2012-ECO-007890	D
08/16/2012	2012-ECO-007325	B
02-APR-2012	2012-ECO-006245	A
DATE	CHANGE NO.	REV

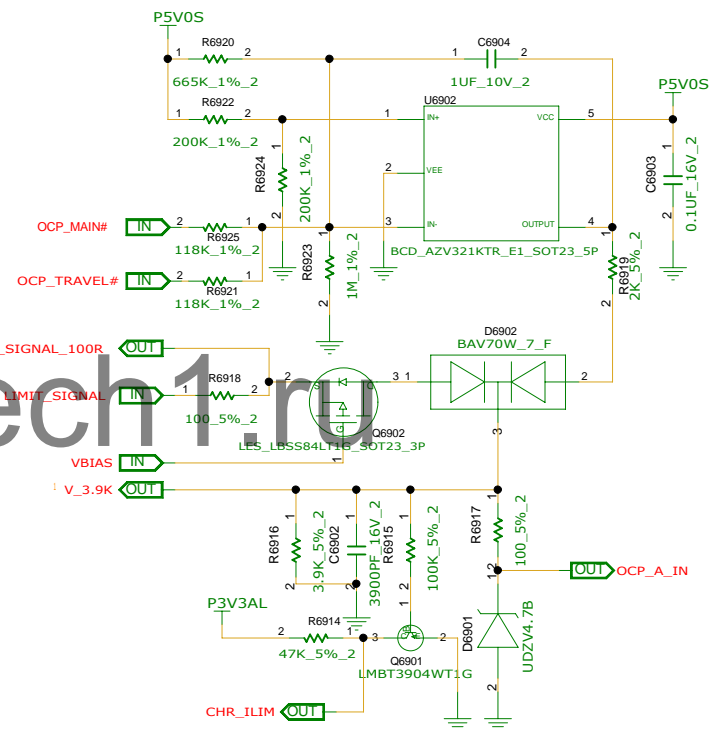
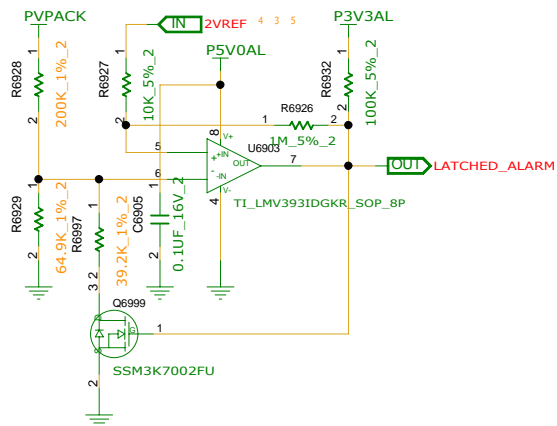
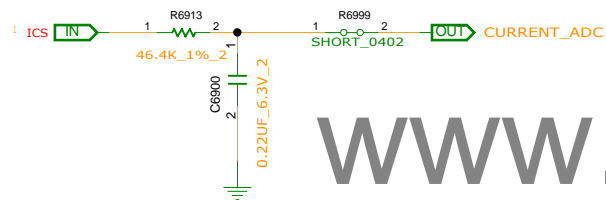
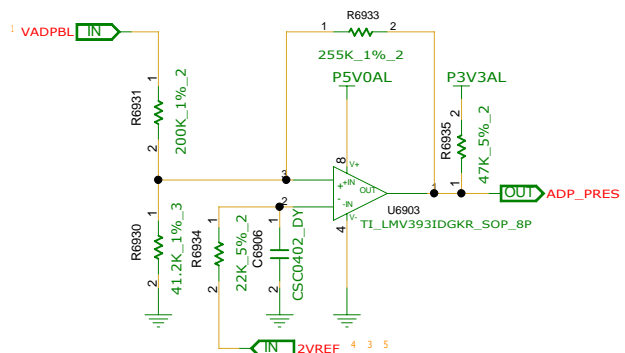
INVENTEC									
DRAWER	EE	DATE	POWER	DATE	TITLE				
DESIGN	FTD CHEN	01.APR.2012	ALAN USHER	01.APR.2012	CLAVIN DIS				
CHECK	FTD CHEN	03.APR.2012	ALAN USHER	03.APR.2012	CALVIN DIS MAIN BOARD				
RESPONSIBLE	FTD CHEN	03.APR.2012	ALAN USHER	03.APR.2012					
SIZE	A3		VER. A02		SIZE	CODE	CS		REV 9
FILE NAME	CALVIN-DIS-MB-1310A247001				DOC NUMBER		1310A24700-0-ALG		
PIN	R050A247001				SHEET		1 of 01		

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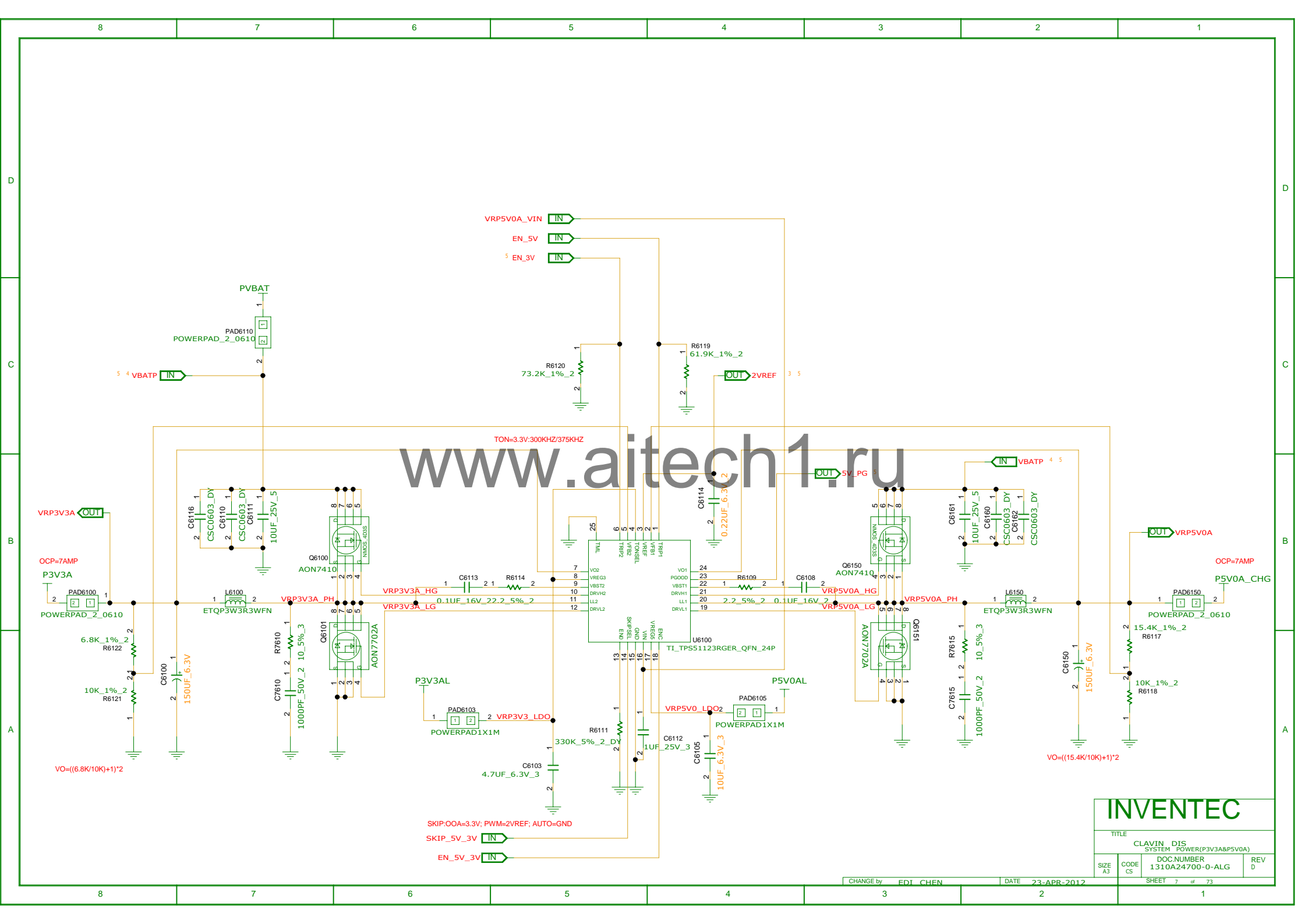
1. PROJECT NAME	28. IVY BRIDGE_5 (GRAPHICS POWER)	55. WWAN & WLAN & SIM
2. TABLE OF CONTENTS	29. IVY BRIDGE_6 (GND,RESERVED)	56. DOCKING CONN
3. BLOCK DIAGRAM	30. DDR3_SO-DIMM0	57. POWER & WLAN_LED
4. BATTERY CHARGER	31. DDR3_SO-DIMM1	58. SCREW
5. SELECTOR & BATTERY CONN	32. PANTER POINT_1 (HDA,JTAG,SPI,SATA)	59. WIRELESS / QUICK WEB / MUTE LED
6. OCP	33. PANTER POINT_2 (PCI-E,SMBUS,CLK)	60. SMART CARD
7. SYSTEM POWER (P3V3 / P5V0)	34. PANTER POINT_3 (DMI,FDI,GPIO)	61. EXPRESS CARD CONN
8. SYSTEM POWER (P3V3 / P5V0_PORT)	35. PANTER POINT_4 (LVDS,DDI)	62. EXPRESS CARD/POINT STICH/TOUCH PAD
9. SYSTEM POWER (P1V5)	36. PANTER POINT_5 (PCI,USB,NVRAM)	63. AUDIO
10. SYSTEM POWER (P1V05_LAN_M)	37. PANTER POINT_6 (GPIO,VSS_NCFT,RSVD)	64. EXT. MIC / MIC / HP
11. SYSTEM POWER (P1V0_VCCP)	38. PANTER POINT_7 (POWER)	65. CARD READER CTRL/1394 CONN/SD CONN
12. SYSTEM POWER (P1V8S)	39. PANTER POINT_8 (POWER)	66. LID SWITCH
13. CPU POWER(PVSA)	40. PANTER POINT_9 (GND)	67. EMI & RF SOLUTION
14. PVCORE_1(PV_CORE / PV_AXG)	41. VGA SWITCH / CRT CONN	68. GPU-1
15. PVCORE_2(PV_CORE / PV_AXG)	42. DISPLAY PORT CONN	69. GPU-2
16. PVCORE_DGPU	43. LCM & WEBCAM	60. GPU-3
17. P1V35_DGPU	44. BLANK	71. GPU-4
18. PVDDCI	45. SATA HDD & ODD CONN	72. VRAM-1
19. HP_OCP	46. USB & ESATA COMBO / USB CHARGER	73. VRAM-2
20. POWER(SLEEP)	47. USB CONN	
21. POWER(SEQUENCE)	48. BLUE TOOTH & FINGER PRINTER CONN	
22. FAN & THERMAL	49. ACCELEMETOR	
23. XDP CONN	50. KBC & SPI	
24. IVY BRIDGE_1 (CLK,MISC,JTAG)	51. KEYBOARD	
25. IVY BRIDGE_2 (POWER)	52. SUPER I/O	
26. IVY BRIDGE_3 (DMI,DP,PEG,FDI)	53. TPM & MDC	
27. IVY BRIDGE_4 (DDR3)	54. LAN (NIC,TRANSFORMER,RJ45)	

INVENTEC

TITLE			
CLAVIN DIS TABLE OF CONTENTS			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D
SHEET 2 of 73			

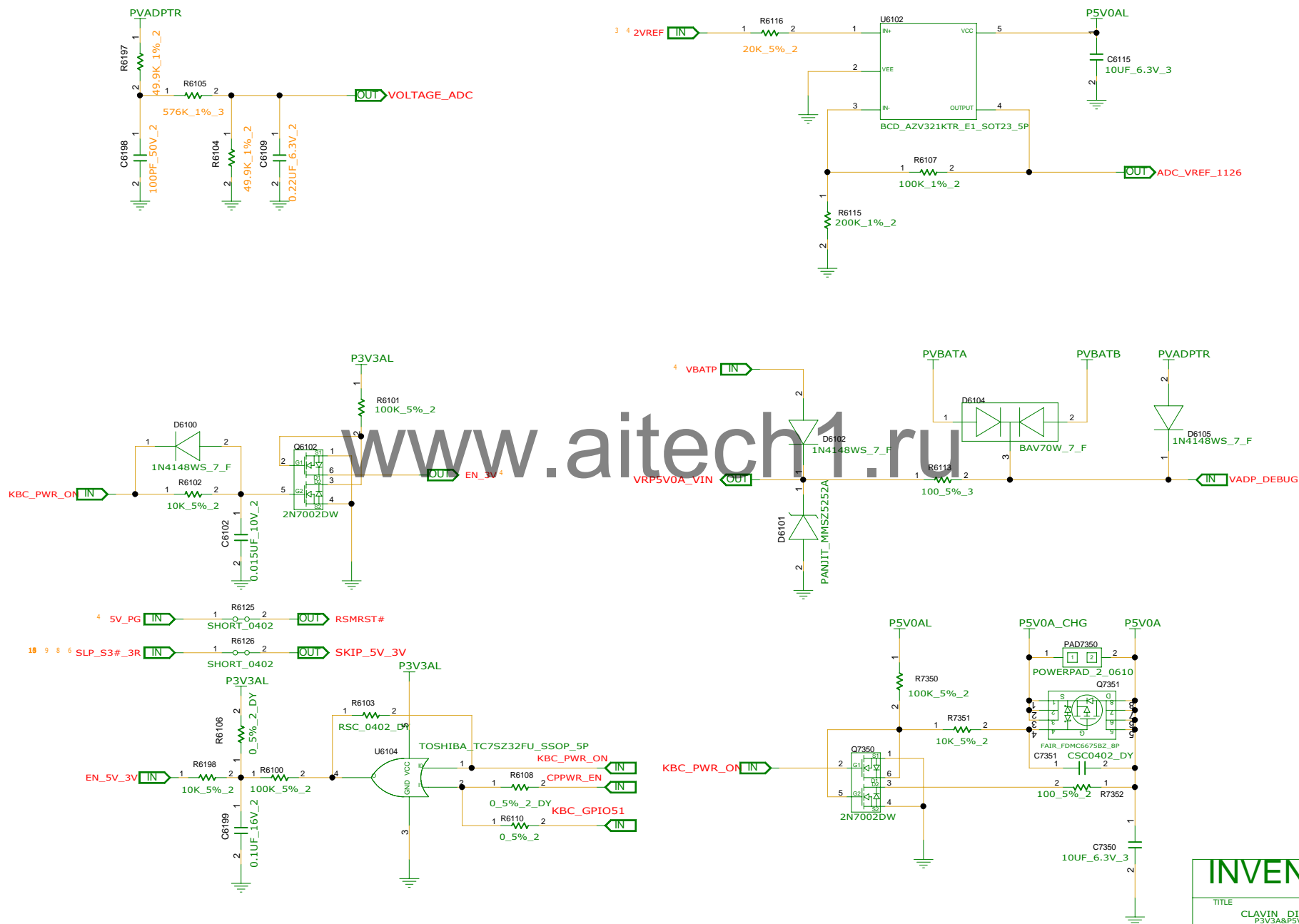


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CLAVIN DIS SYSTEM POWER(OCP)			
DOC NUMBER			
1310A24700-0-ALG			
REV			
D			
SIZE	CODE	SHEET	
A3	CS	6 of 73	



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INVENTEC			
TITLE			
CLAVIN DIS SYSTEM POWER(P3V3A&P5V0A)			
DOC NUMBER			
1310A24700-0-ALG			
REV D			
SIZE A3	CODE CS	SHEET 7 of 73	



INVENTEC

TITLE			
CLAVIN_DIS			
P3V3AB&P5V0A_CHG_PORT			
DOCNUMBER			
1310A24700-0-ALG			
REV			
D			

CHANGE by EDI_CHEN DATE 23-APR-2012

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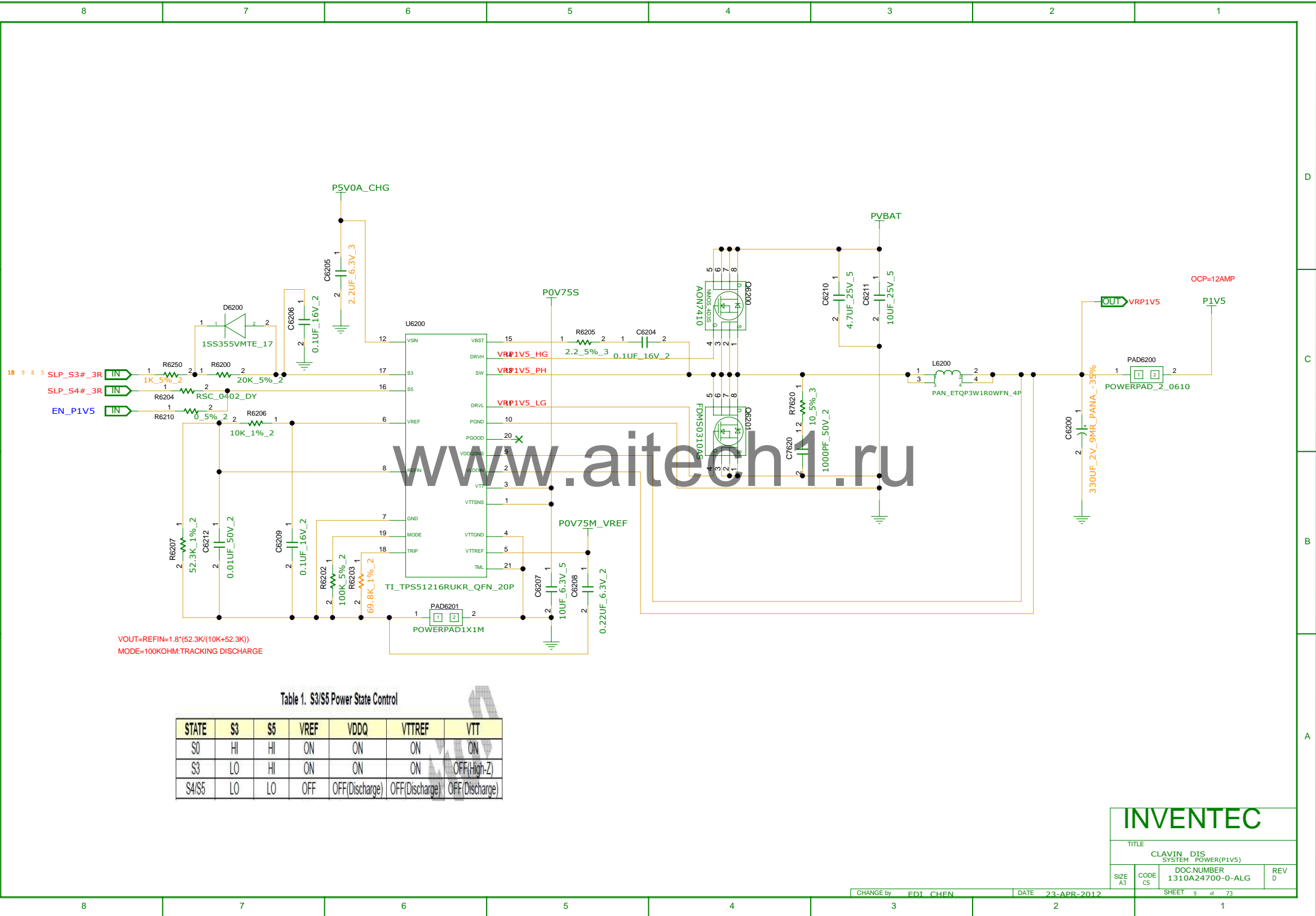


Table 1. S3/S5 Power State Control

STATE	S3	S5	VREF	VDDQ	VTTREF	VTT
S0	HI	HI	ON	ON	ON	ON
S3	LO	HI	ON	ON	ON	OFF(High-Z)
S4/S5	LO	LO	OFF	OFF(Discharge)	OFF(Discharge)	OFF(Discharge)

INVENTEC

TITLE
CLAVIN DIS
SYSTEM POWER(P1V5)

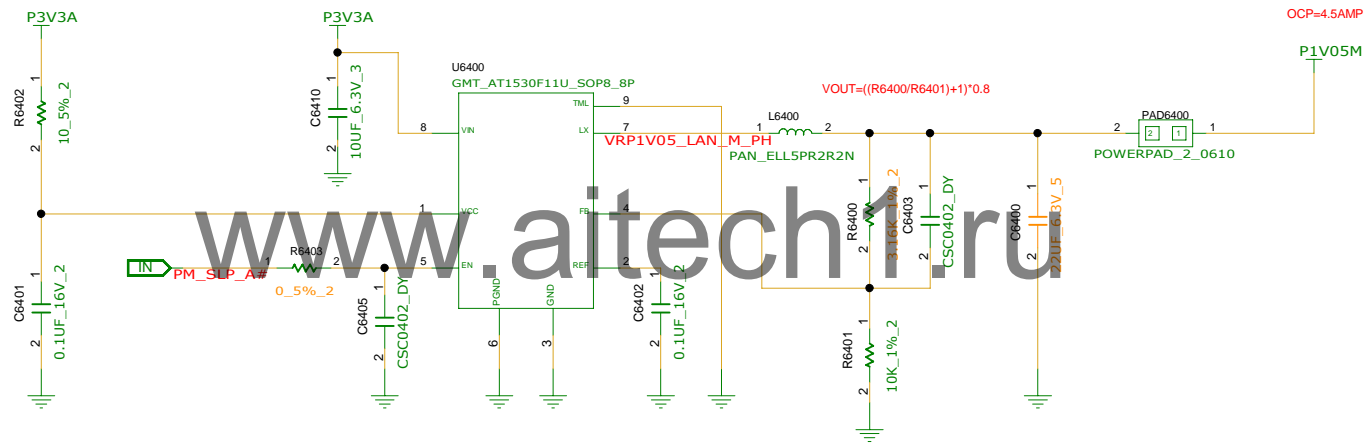
DOCNUMBER
1310A24700-0-ALG

REV
D

CHANGE by
EDT_CHEN

DATE
23-APR-2012

SHEET
9 of 73

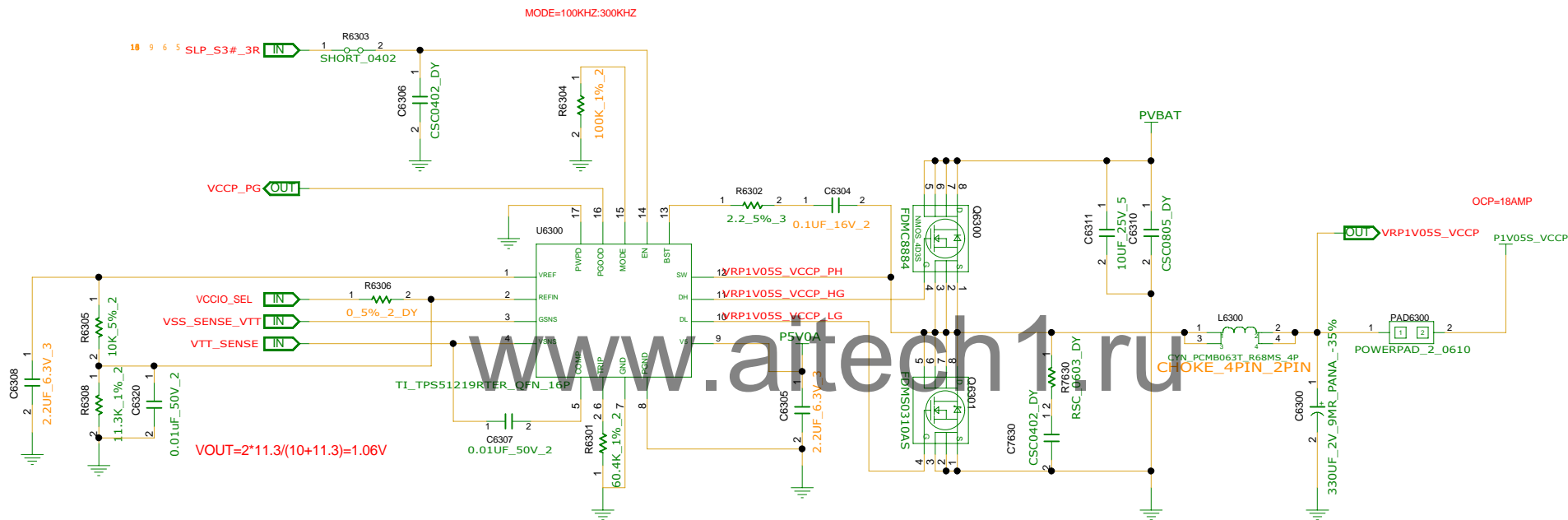


INVENTEC

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CLAVIN_DIS SYSTEM_POWER(P1V05_LAN_M)			
DOCNUMBER		REV	
1310A24700-0-ALG		D	

CHANGE by EDI_CHEN DATE 23-APR-2012

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INVENTEC

TITLE
CLAVIN_DIS
SYSTEM POWER(P1V05S_VCCP)

DOCNUMBER
1310A24700-0-ALG

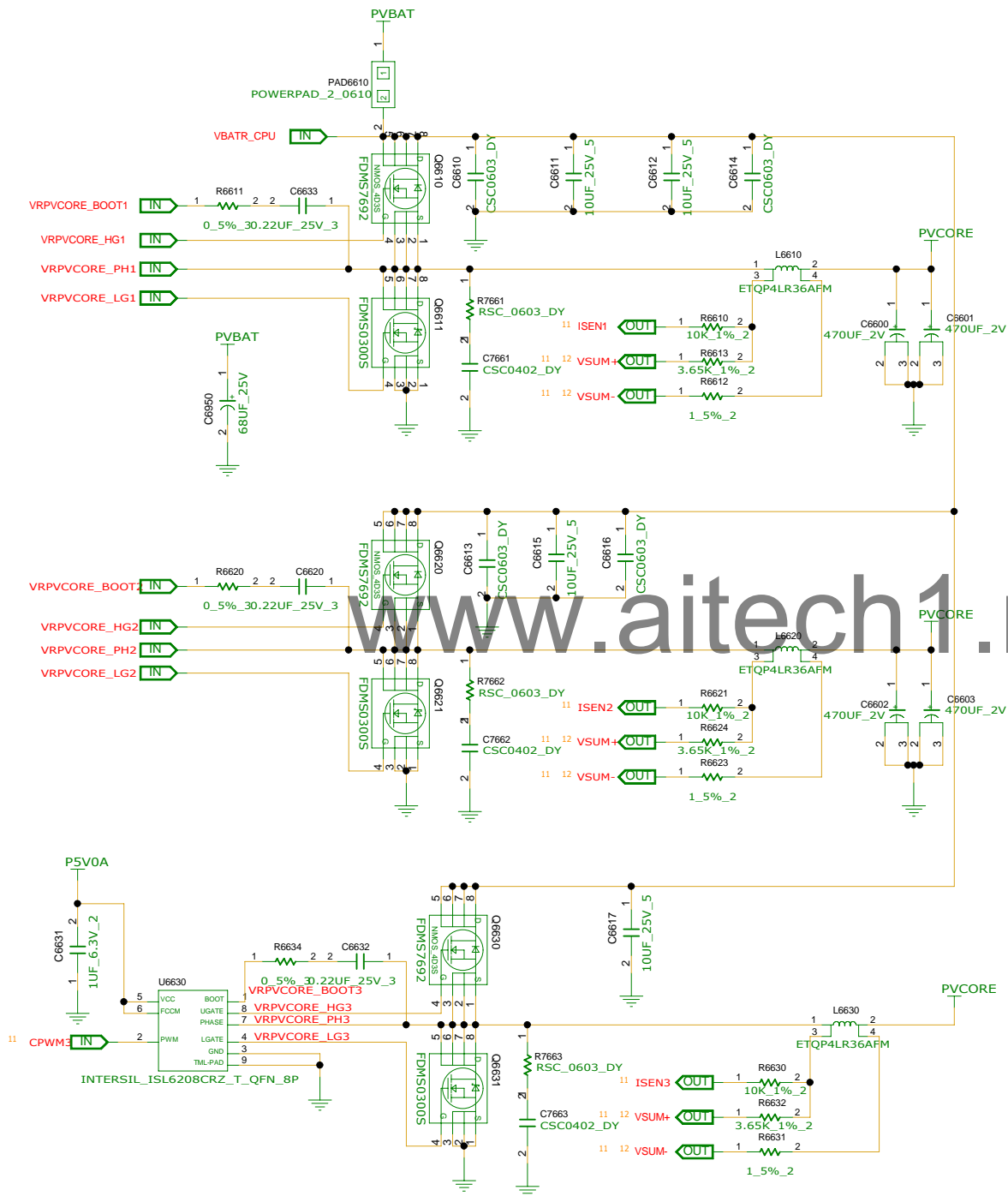
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D

CHANGE by EDI_CHEN DATE 23-APR-2012

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1

RE
D



PVCORE OCP=112A

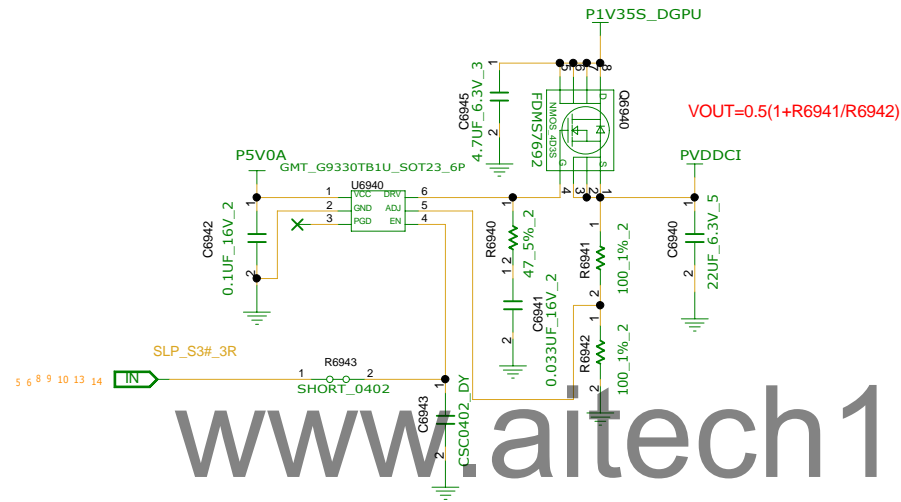
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TITLE CLAVIN DIS
SYSTEM POWER(PVCORE)

SIZE A3 CODE CS DOC NUMBER 1310A24700-0-ALG REV D

CHANGE by EDI CHEN DATE 23-APR-2012

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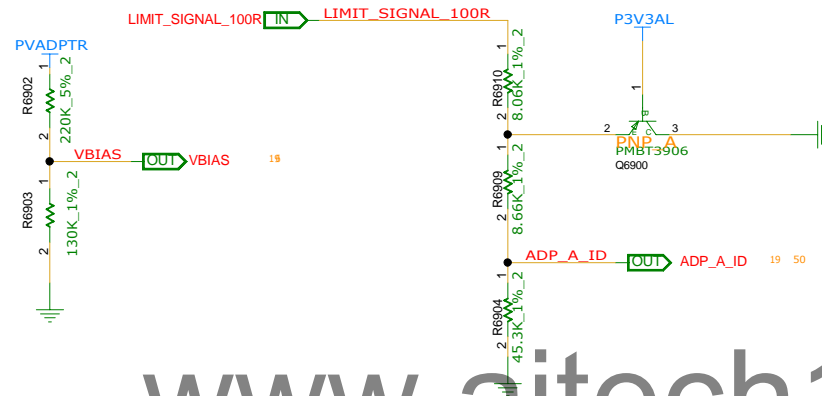
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TITLE			
CLAVIN DIS Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24700-0-ALG	D

CHANGE by EDI CHEN DATE 23-APR-2012

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REFERENCE NUMBER : 6900~6999



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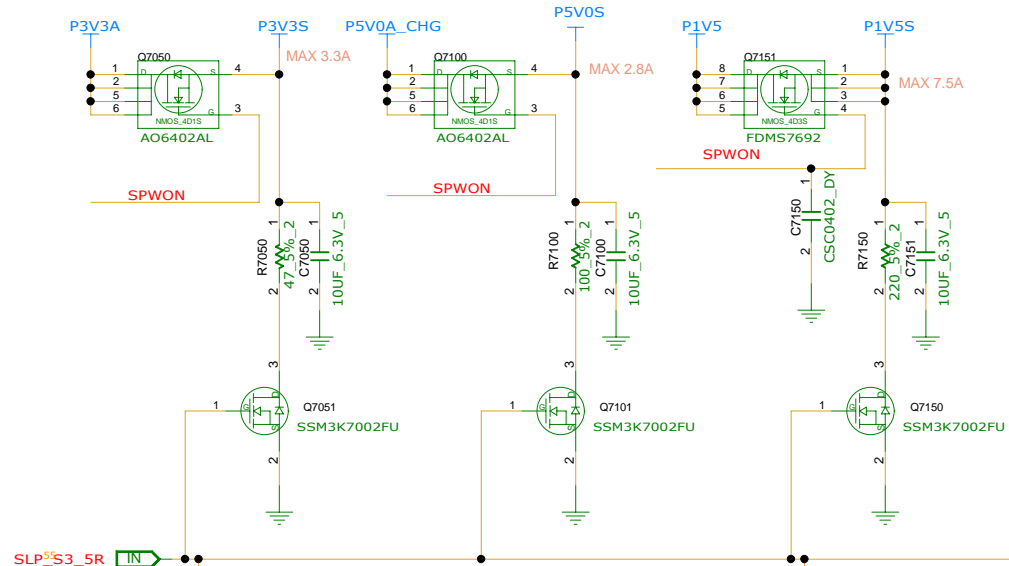
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TITLE			
CLAVIN_DIS HP_OCP			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D

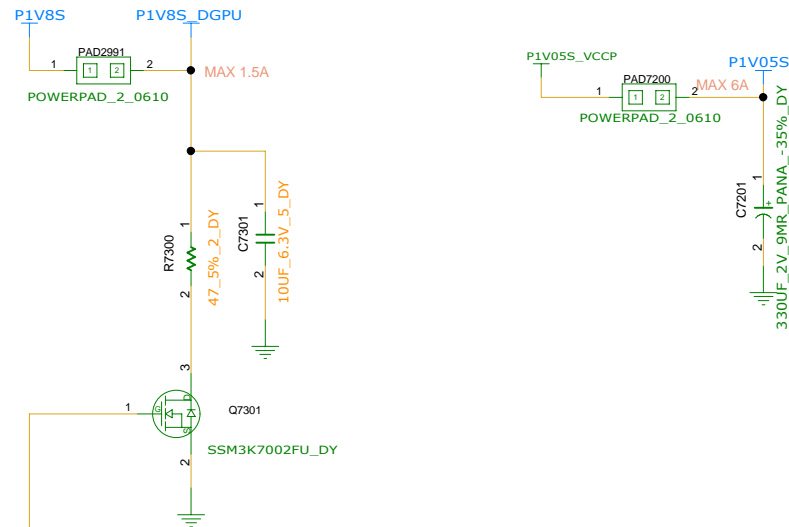
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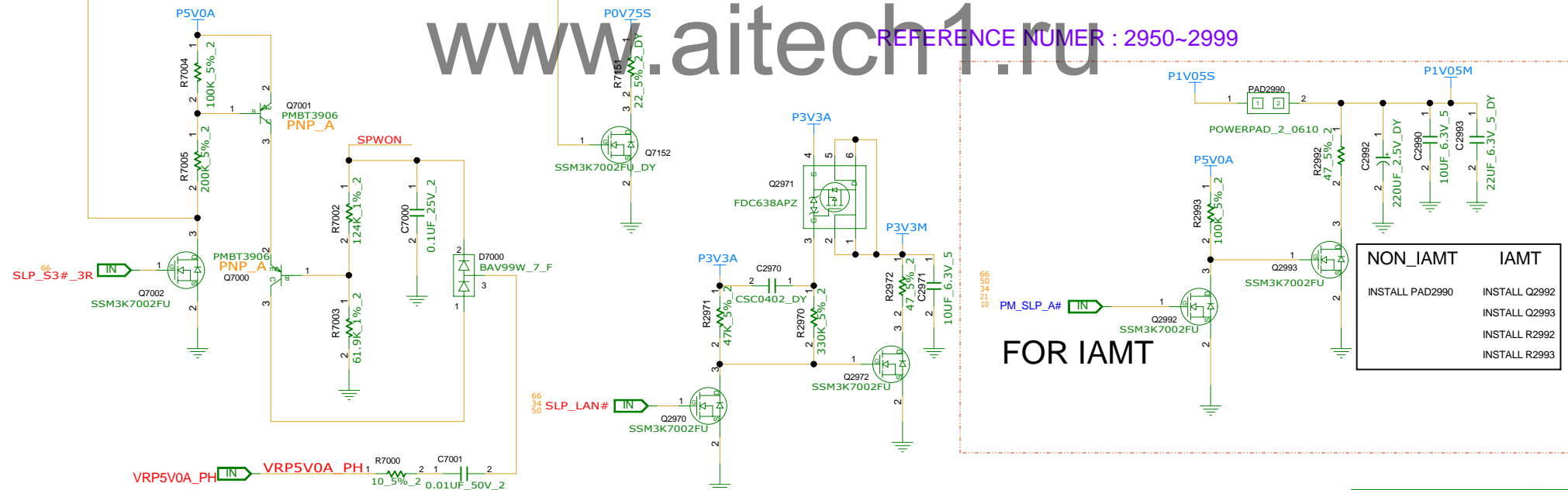


FOR DGPU



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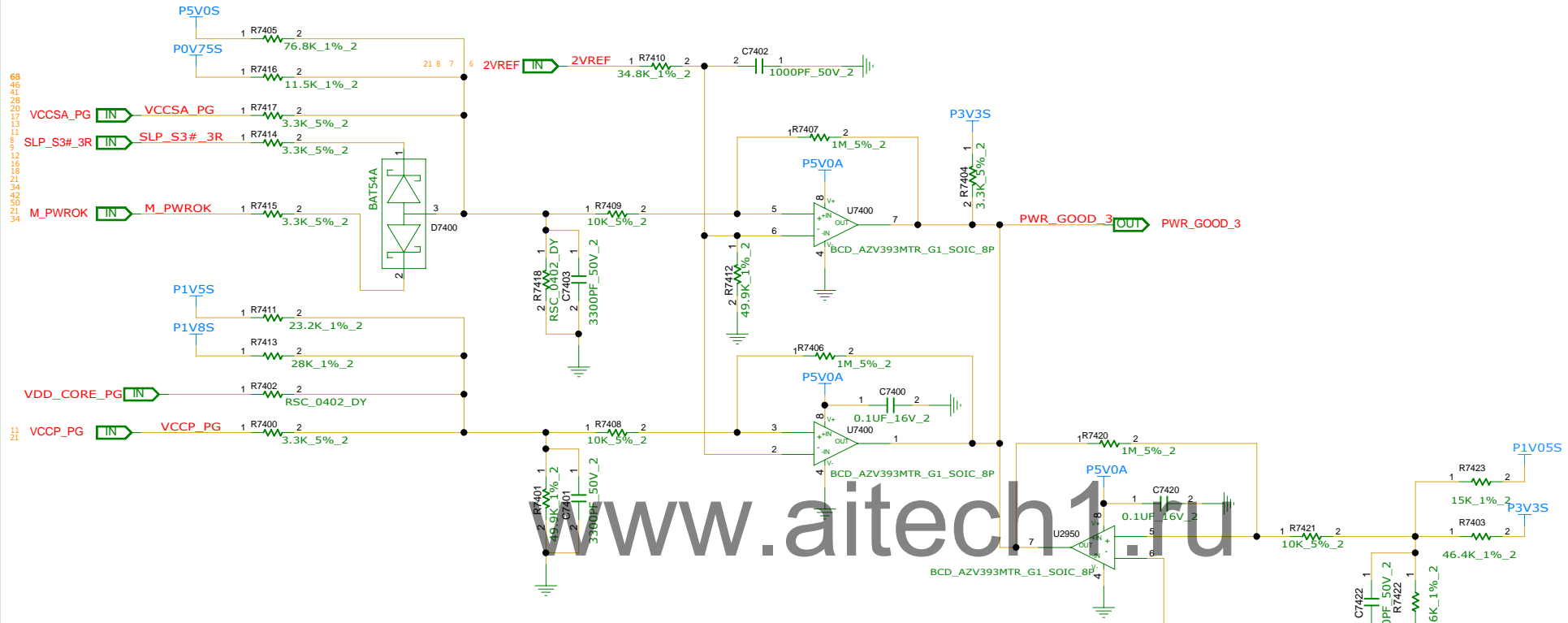


FOR IAMT

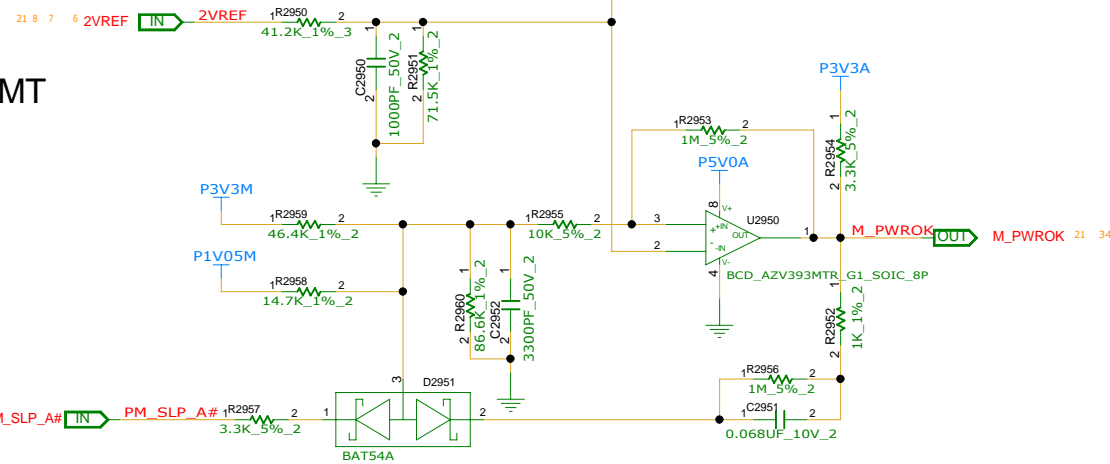
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TITLE			
CLAVIN DIS POWER(SLEEP)			
SIZE A3	CODE CS	DOC.NUMBER 1310A24700-0-ALG	REV D
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REFERENCE NUMER : 7400~7450



FOR IAMT



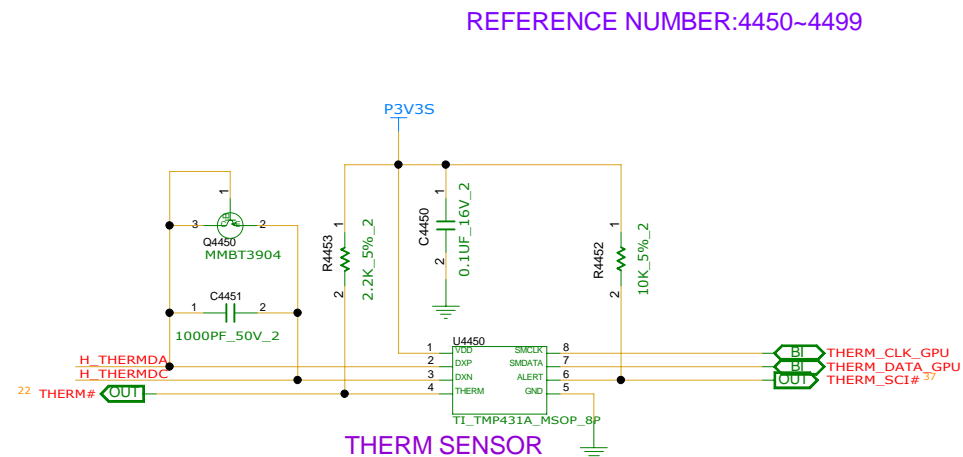
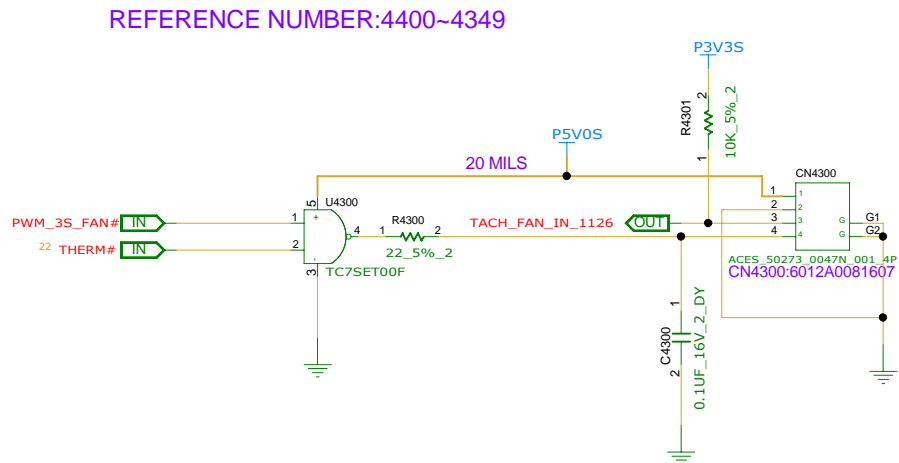
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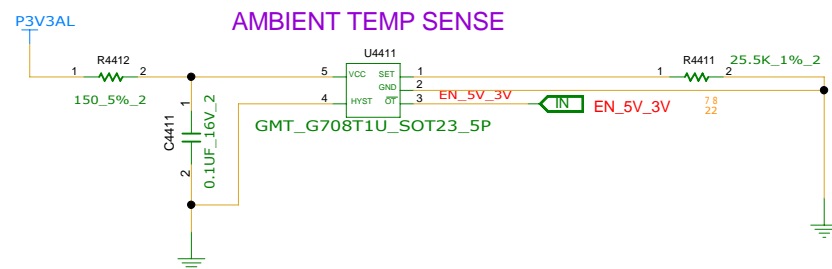
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CLAVIN DIS POWER(SEQUENCE)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24700-0-ALG	D

CHANGE by EDI CHEN DATE 23-APR-2012

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Fan speeds (RPM) :	2500	3300	3800	4300	5000	0	0	0
CPU temperature trip points:	45	57	68	80	91	0	0	0



RSET (K OHM) = 0.0012T^2 - 0.9308T + 96.147
THERMAL SHUTDOWN AT 77 DEG. FOR B SERIES

REFERENCE NUMBER:4411~4449

INVENTEC			
TITLE CLAVIN DIS FAN & THERMAL			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D
SHEET 22 of 73			

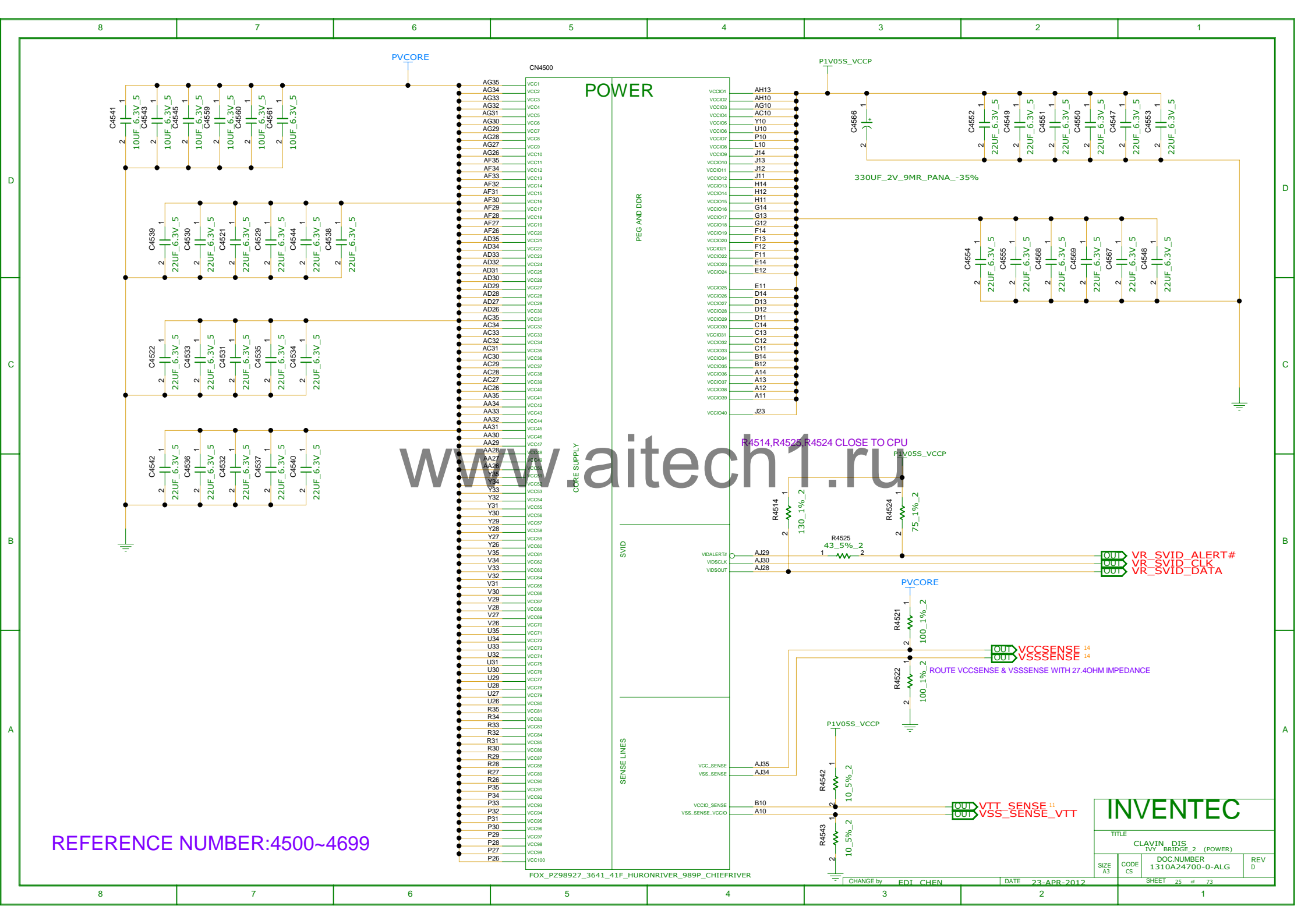
CHANGE by EDI CHEN DATE 23-APR-2012



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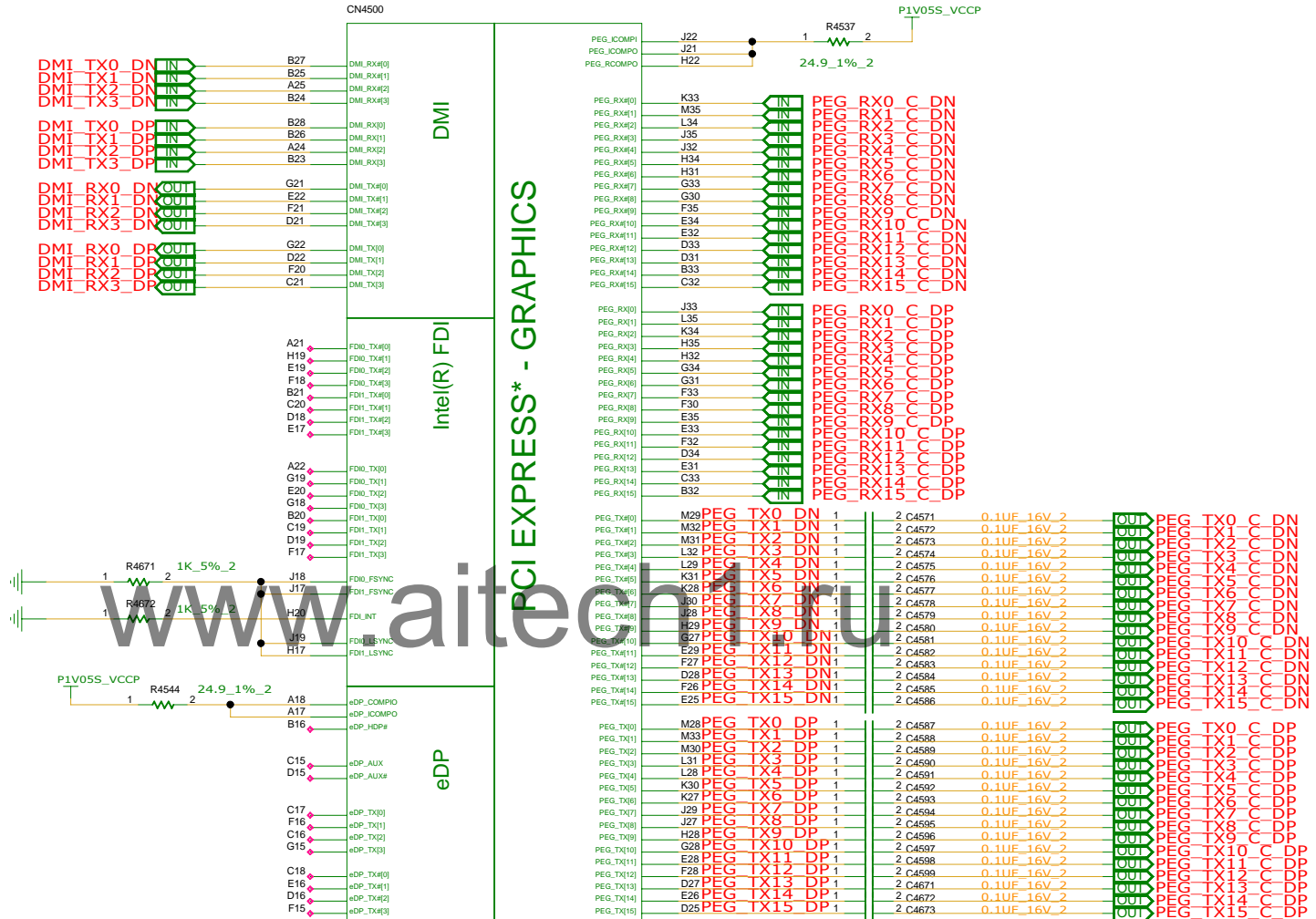
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INVENTEC			
TITLE CLAVIN_DIS I_VY BRIDGE 2 (POWER)			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D
CHANGE by EDT_CHEN		DATE 23-APR-2012	SHEET 25 of 73



REFERENCE NUMBER:4500~4699

PCI EXPRESS* - GRAPHICS

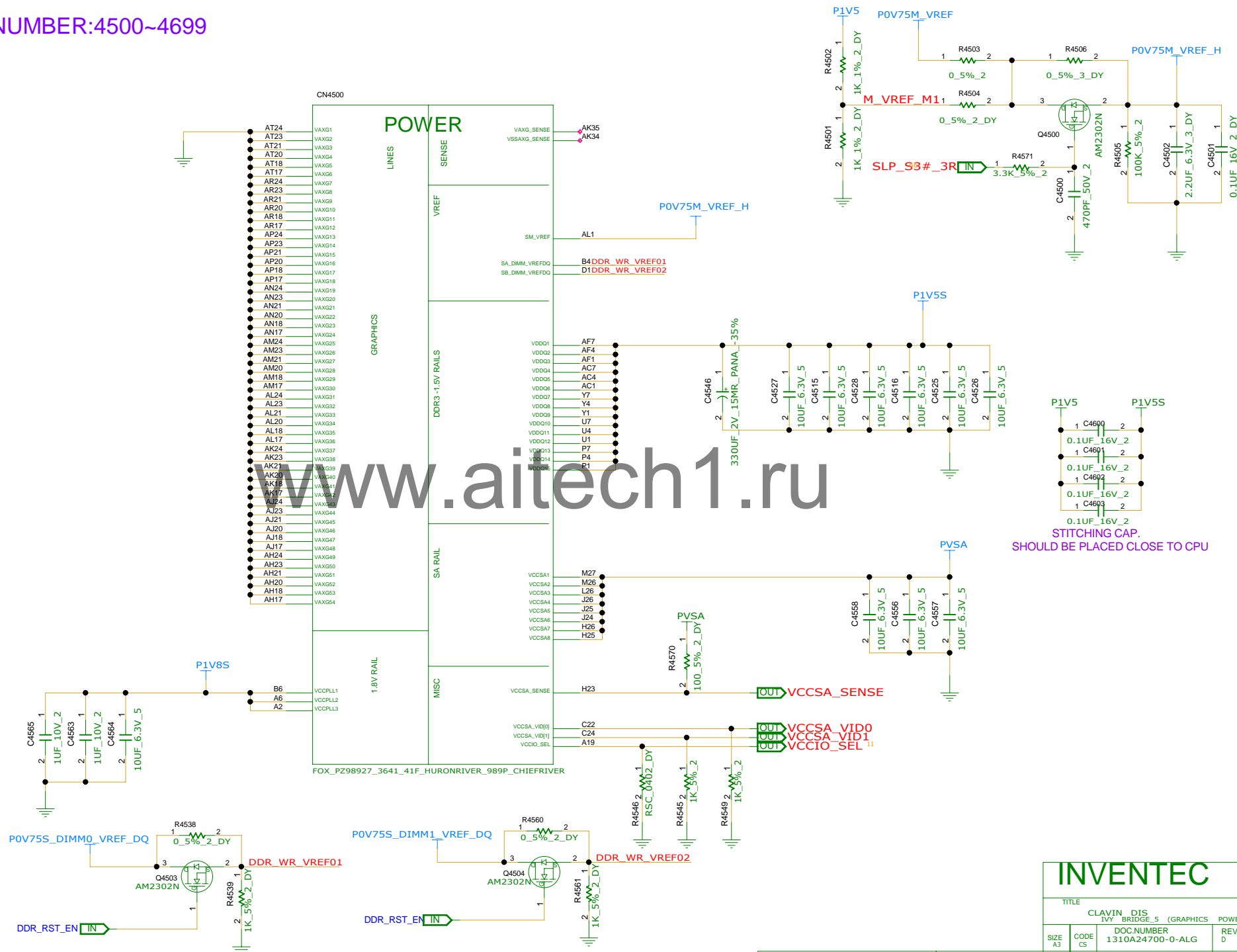


ALL CLOSED TO CPU

INVENTEC

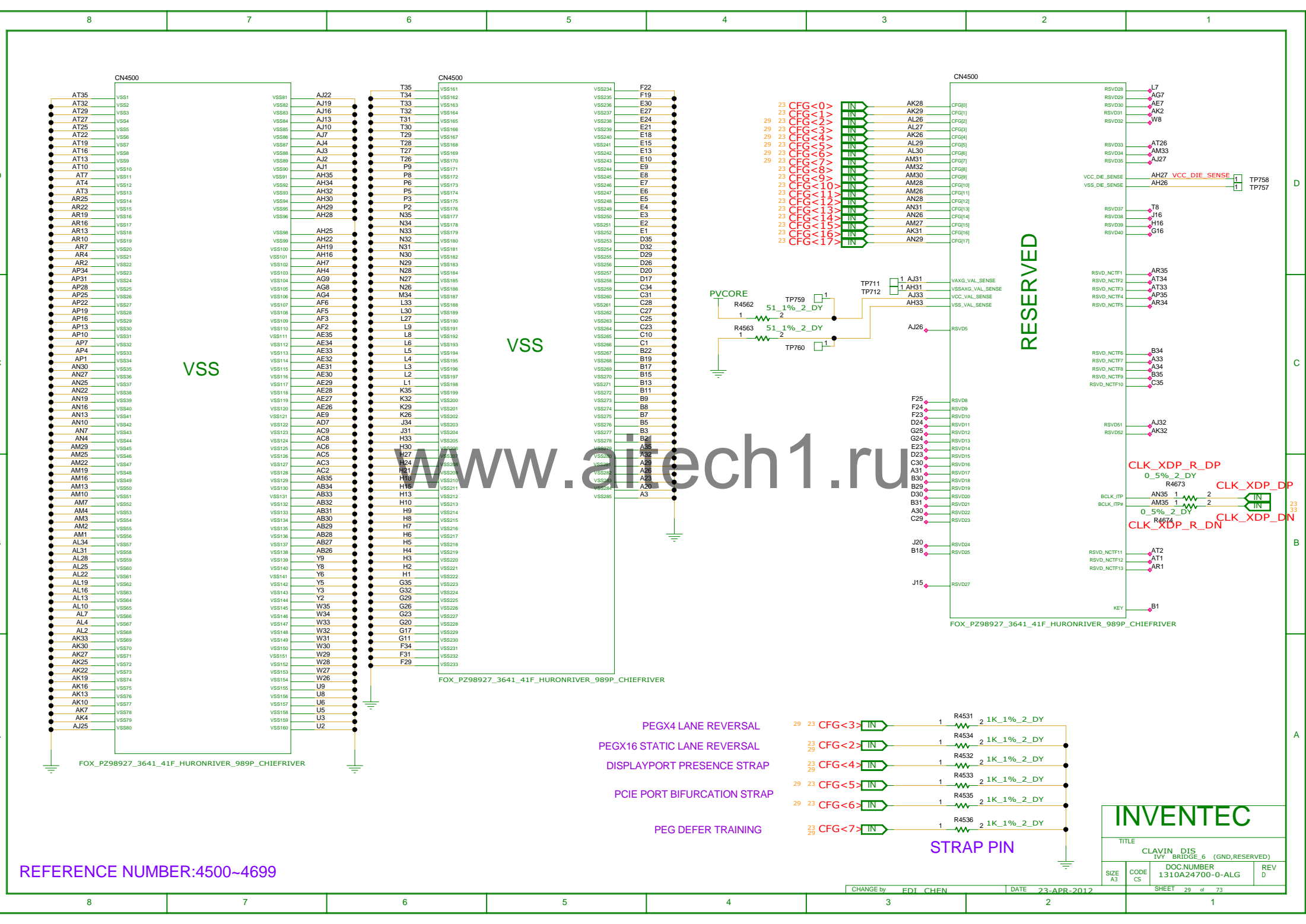
TITLE			
CLAVIN_DJS IVY BRIDGE_3 (DMI,DP,PEG,FDI)			
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REFERENCE NUMBER:4500~4699



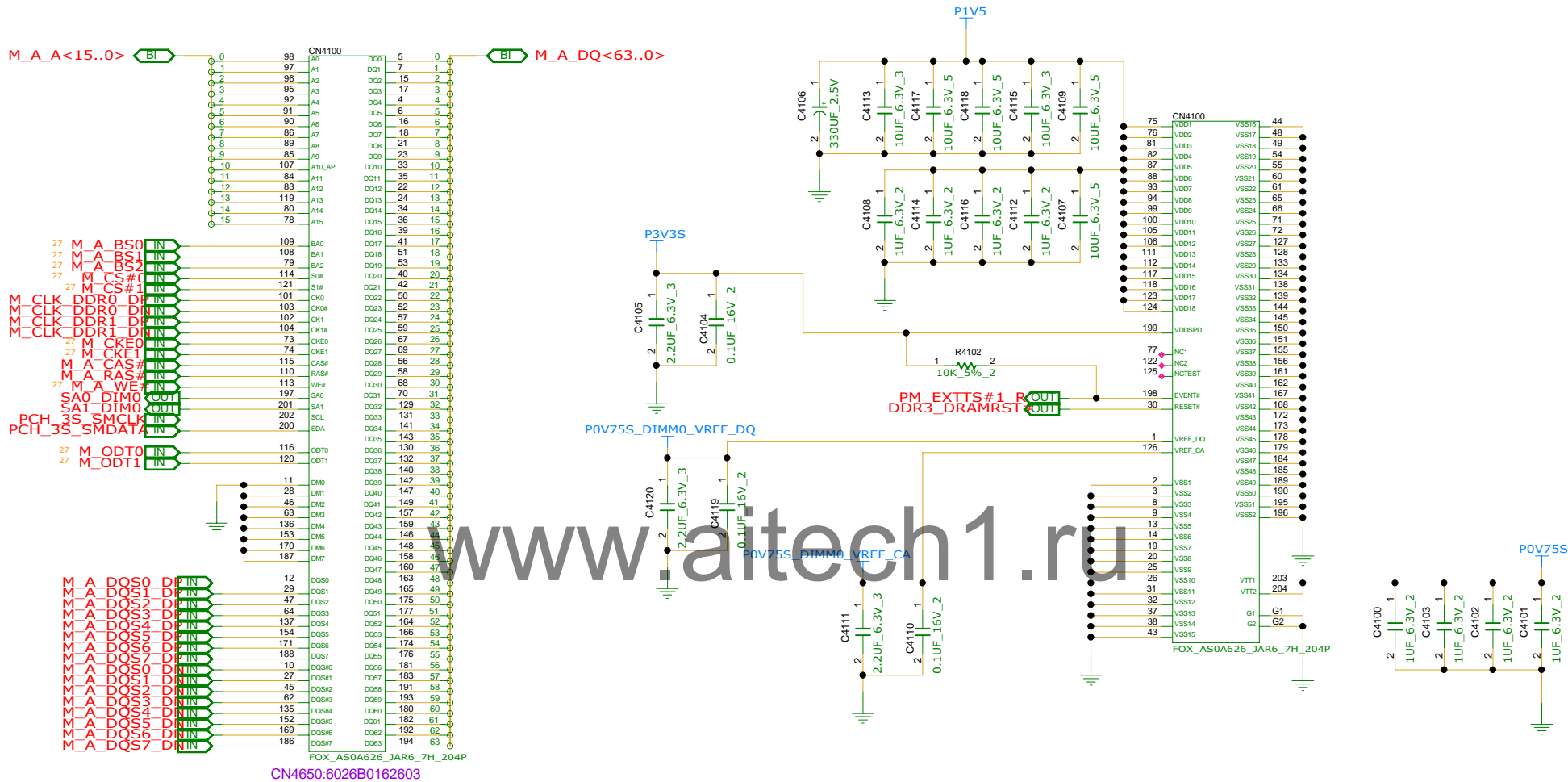
INVENTEC

TITLE			
CLAVIN DIS IVY BRIDGE_5 (GRAPHICS POWER			
SIZE A3	CODE CS	DOC.NUMBER 1310A24700-0-ALG	REV D



REFERENCE NUMBER:4500~4699

INVENTEC			
TITLE			
CLAVIN_DIS IVY BRIDGE 6 (GND, RESERVED)			
CODE NUMBER			
1310A24700-0-ALG			
REV D			
SIZE A3	CODE CS	SHEET 29 of 73	



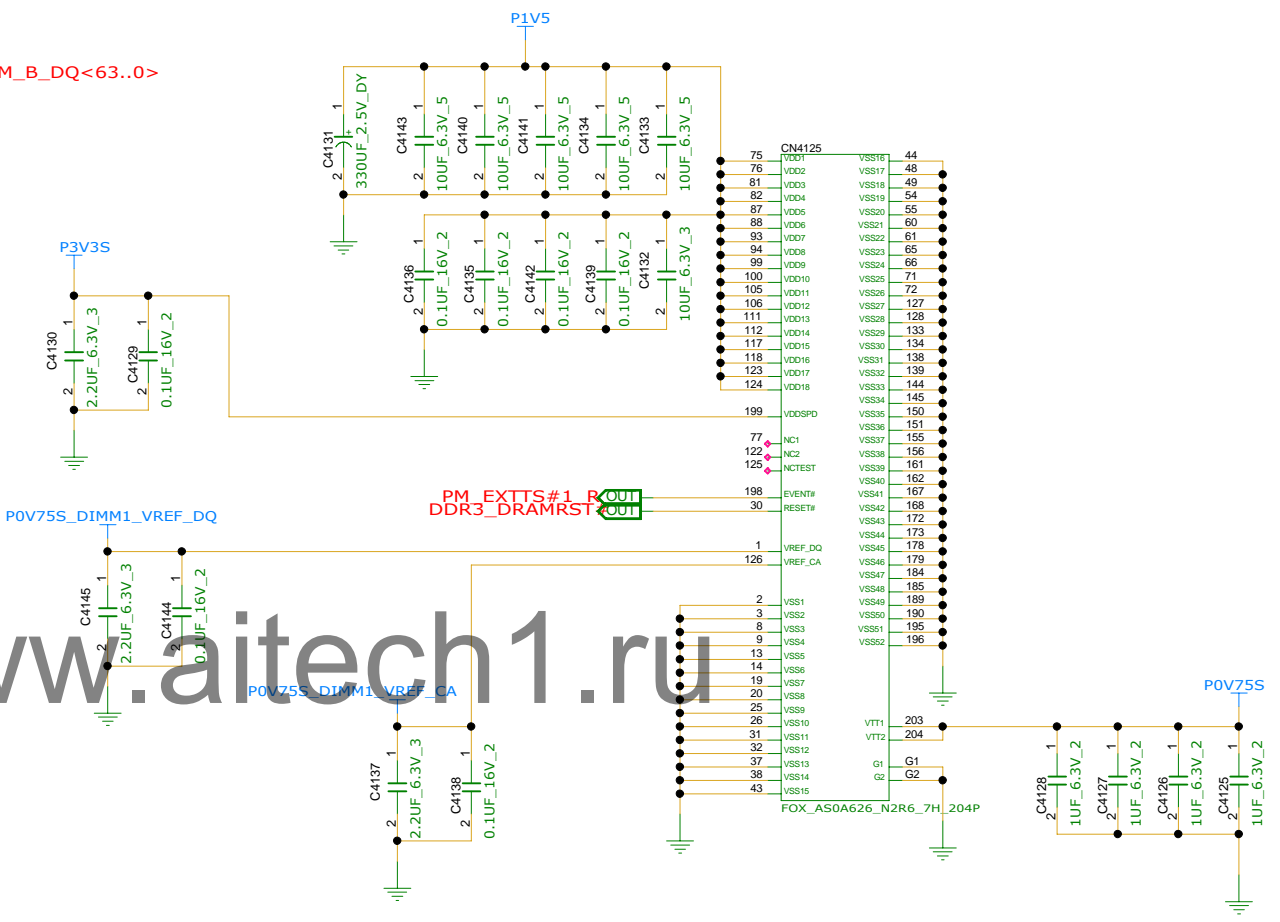
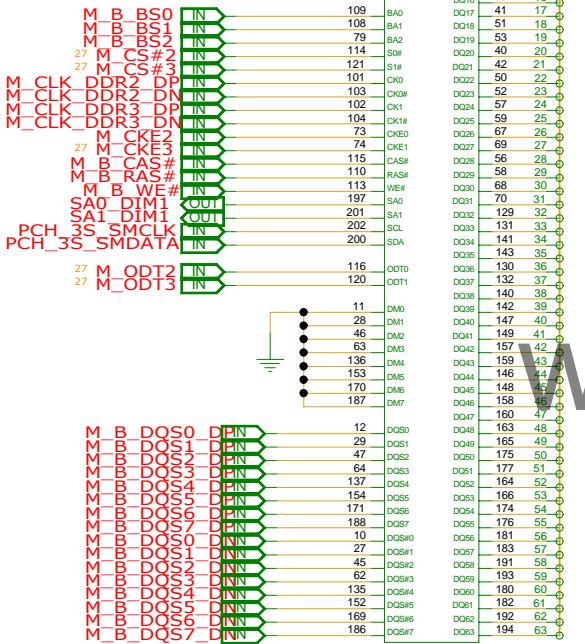
NOTE:
IF SA0_DIM0=0 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA0
SO-DIMMA TS ADDRESS IS 0X30

IF SA0_DIM0=1 , SA1_DIM0=0
SO-DIMMA SPD ADDRESS IS 0XA2
SO-DIMMA TS ADDRESS IS 0X32

REFERENCE NUMBER:4100~4299

INVENTEC			
TITLE			
CLAVIN_DIS			
DDR3_SO_DIMM0			
DOC NUMBER			
1310A24700-0-ALG			
REV			
D			
SIZE	CODE	SHEET	
A3	CS	30	of 73

M_B_A<15..0> BI M_B_DQ<63..0> BI

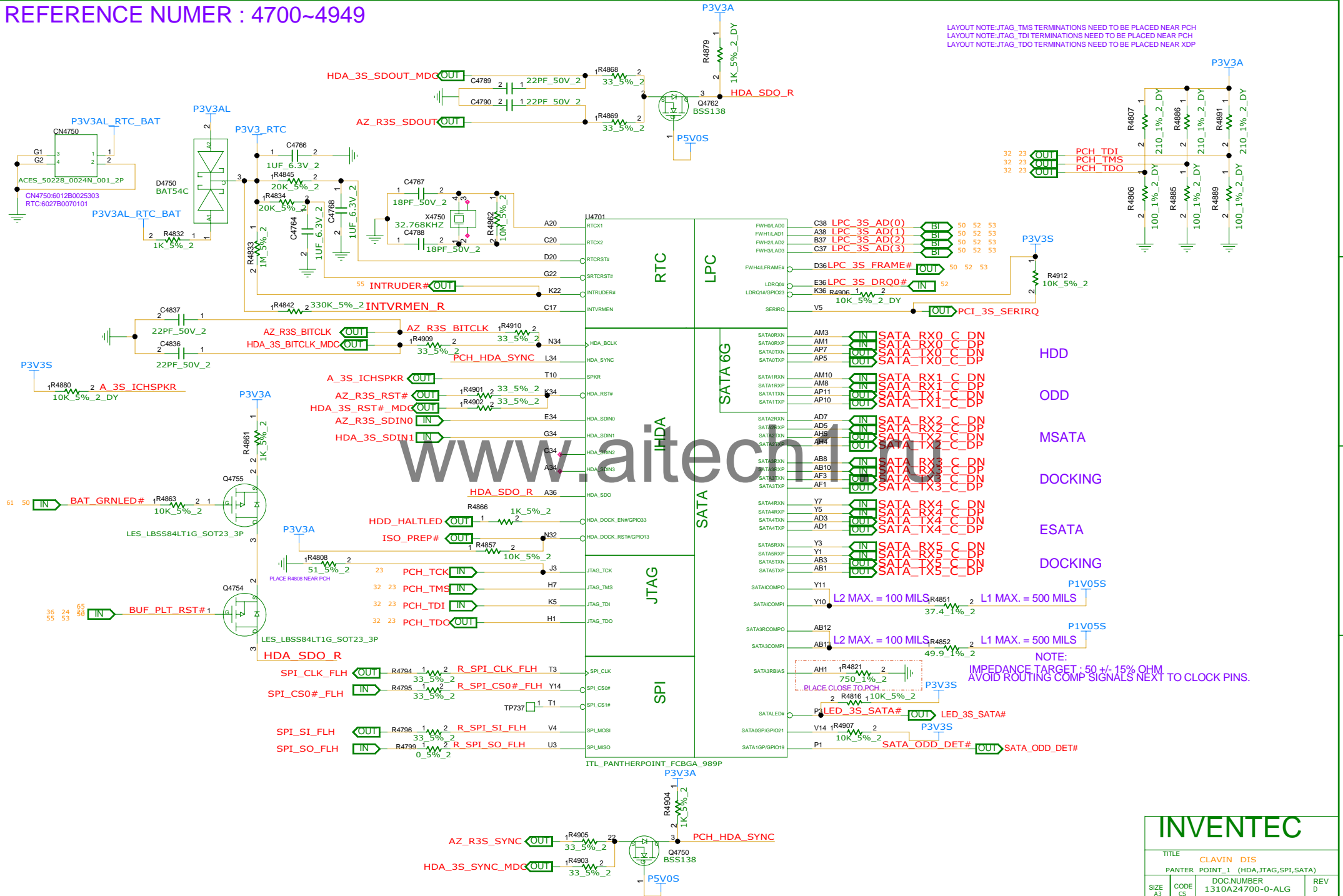


NOTE:
SO-DIMMB SPD ADDRESS IS 0XA4
SO-DIMMB TS ADDRESS IS 0X34

REFERENCE NUMBER:4100~4299

INVENTEC			
TITLE			
CLAVIN_DIS			
DDR3_SO_DIMM1			
DOC NUMBER			
1310A24700-0-ALG			
REV D			
SIZE	CODE	SHEET	
A3	CS	31	of 73

REFERENCE NUMBER : 4700~4949

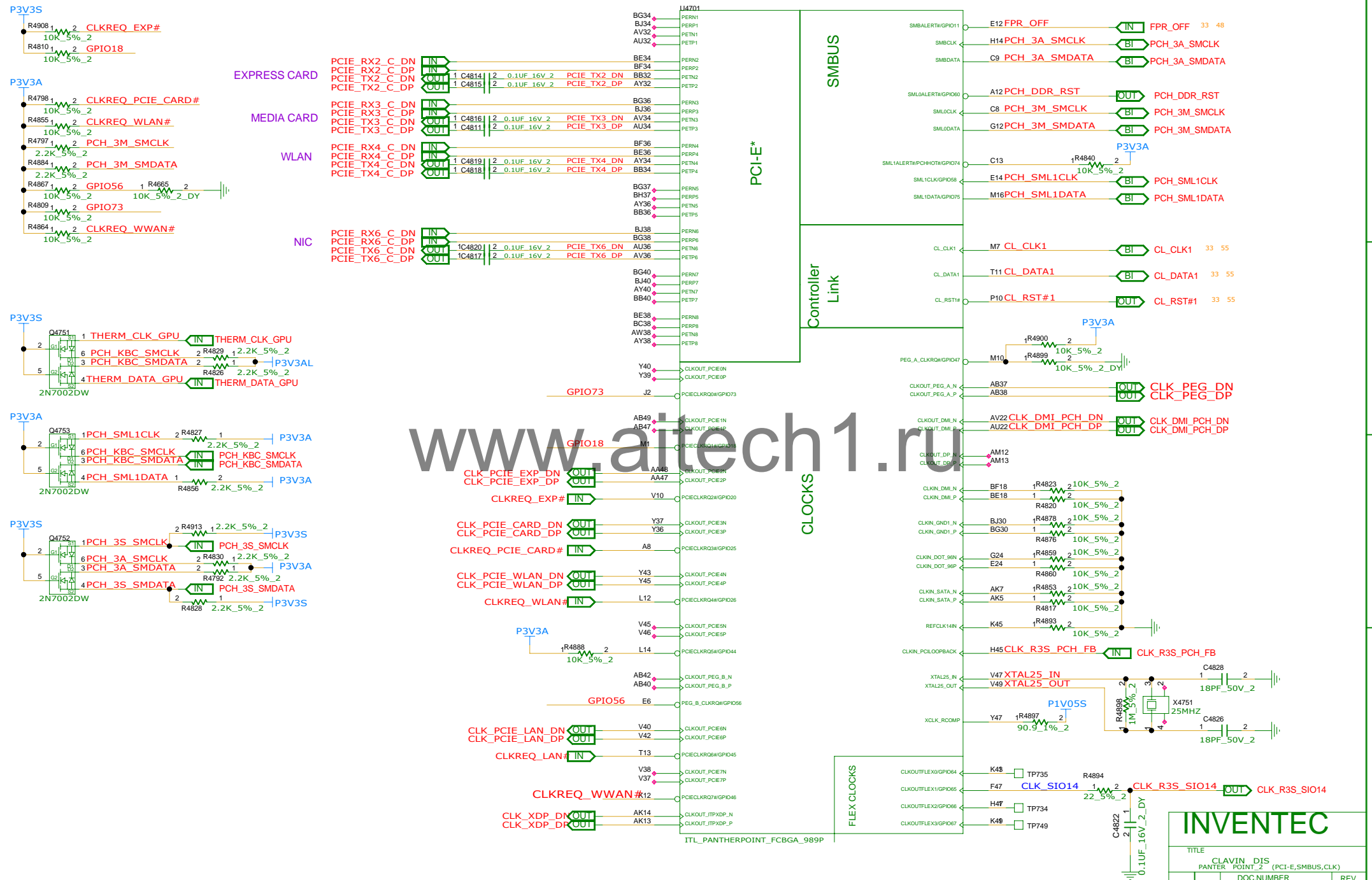


INVENTEC

TITLE			
CLAVIN DIS			
PANTER POINT_1 (HDA,JTAG,SPI,SATA)			
SIZE A3	CODE CS	DOC.NUMBER 1310A24700-0-ALG	REV D
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CHANGE by	EDI CHEN	DATE	23-APR-2012
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REFERENCE NUMBER : 4700~4949



CHANGE by EDI CHEN

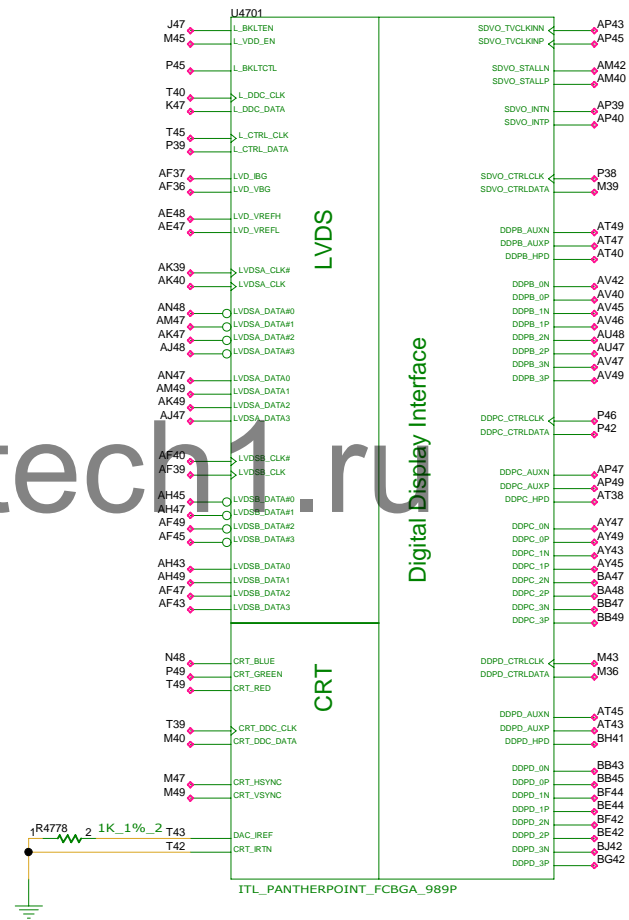
DATE 23-APR-2012

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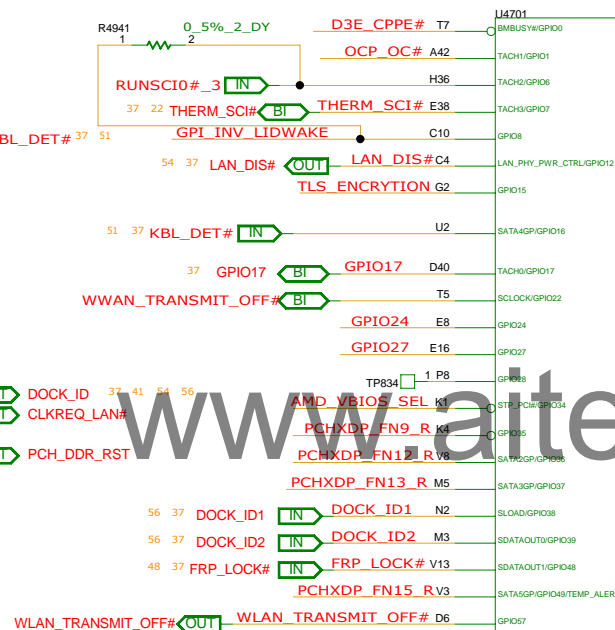
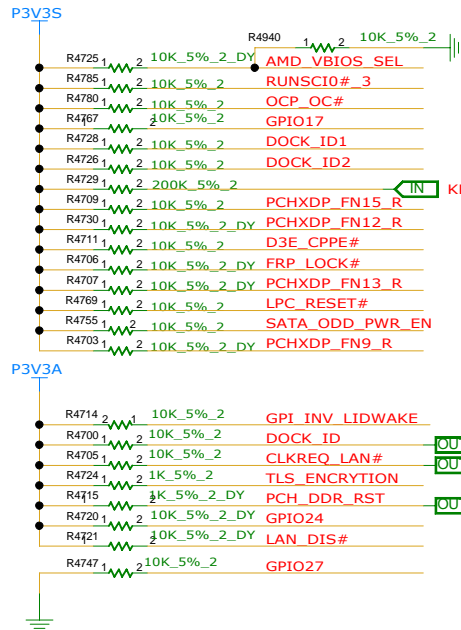
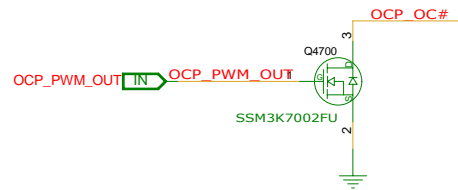
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INVENTEC			
TITLE			
CLAVIN DIS PANTHER POINT 4 (LVDS,DDI)			
DOC NUMBER		REV	
1310A24700-0-ALG		D	
SIZE	CODE	SHEET	
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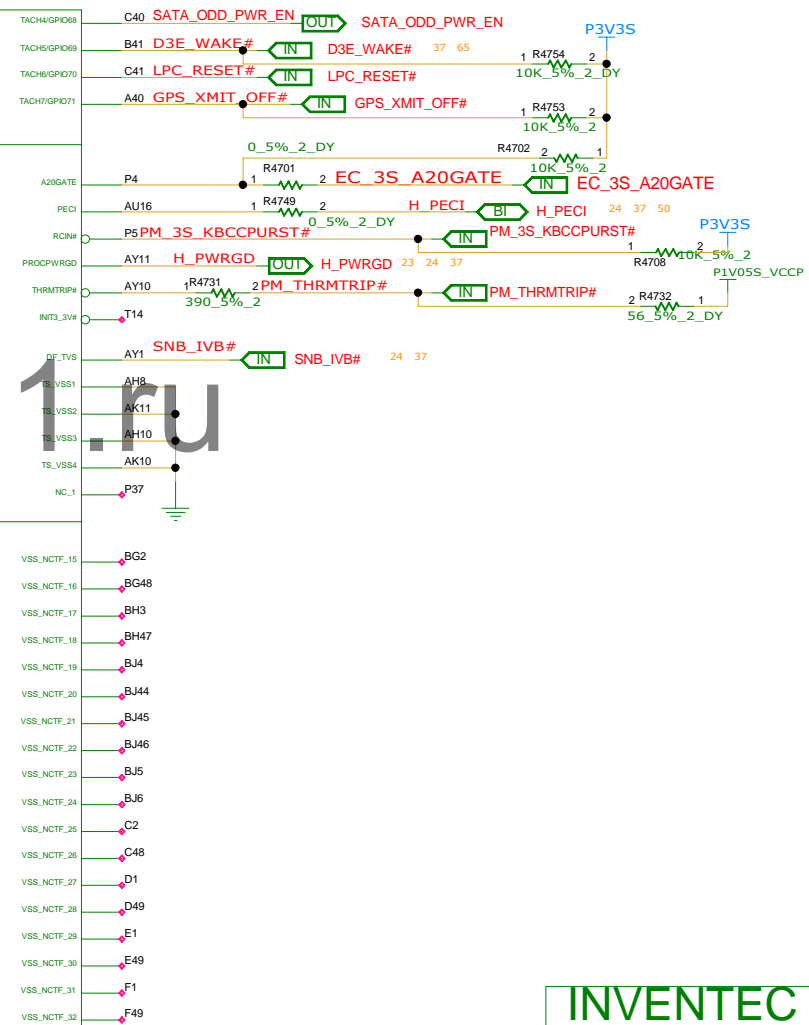
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Hynix	install	un-install
New die	R4725	R4940
Old Die	R4940	R4725



GPIO

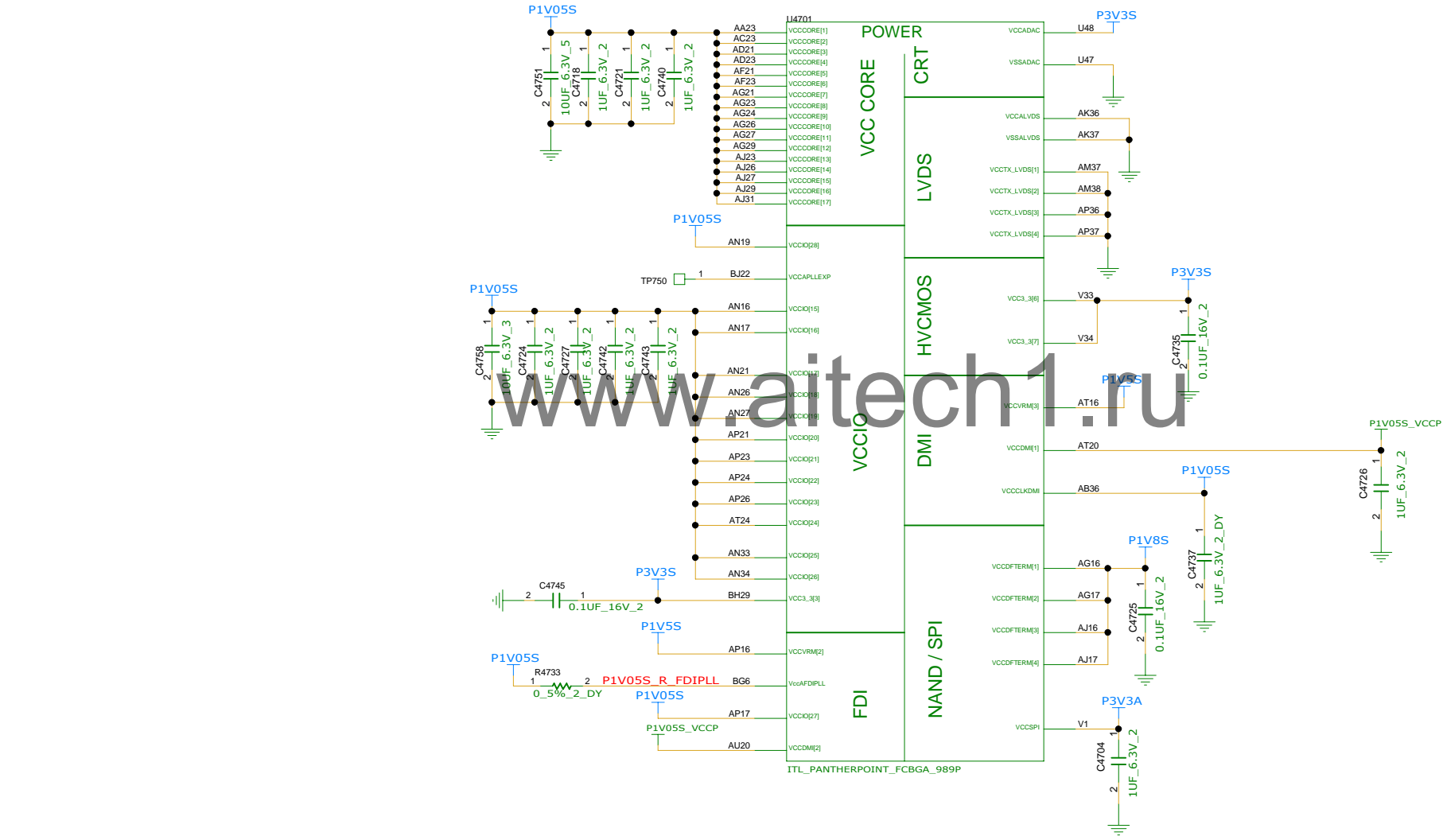
CPU/MISC



NCTF

ITL_PANTHERPOINT_FCBGA_989P

INVENTEC			
TITLE CLAVIN DIS PANTHER POINT_6 (GPIO,VSS_NCTF,RSVD)			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D

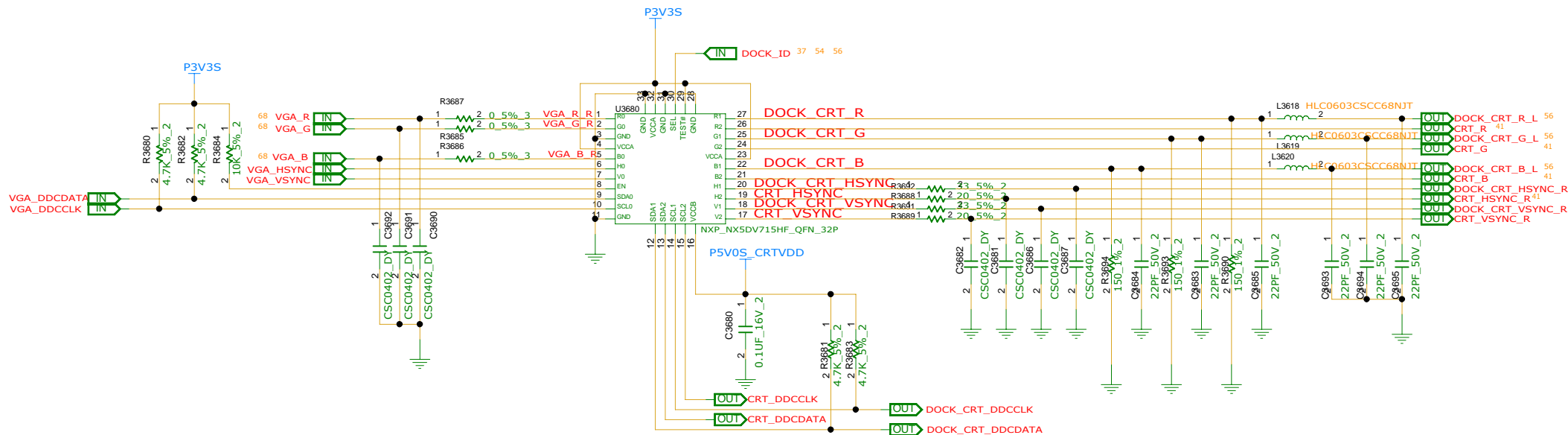




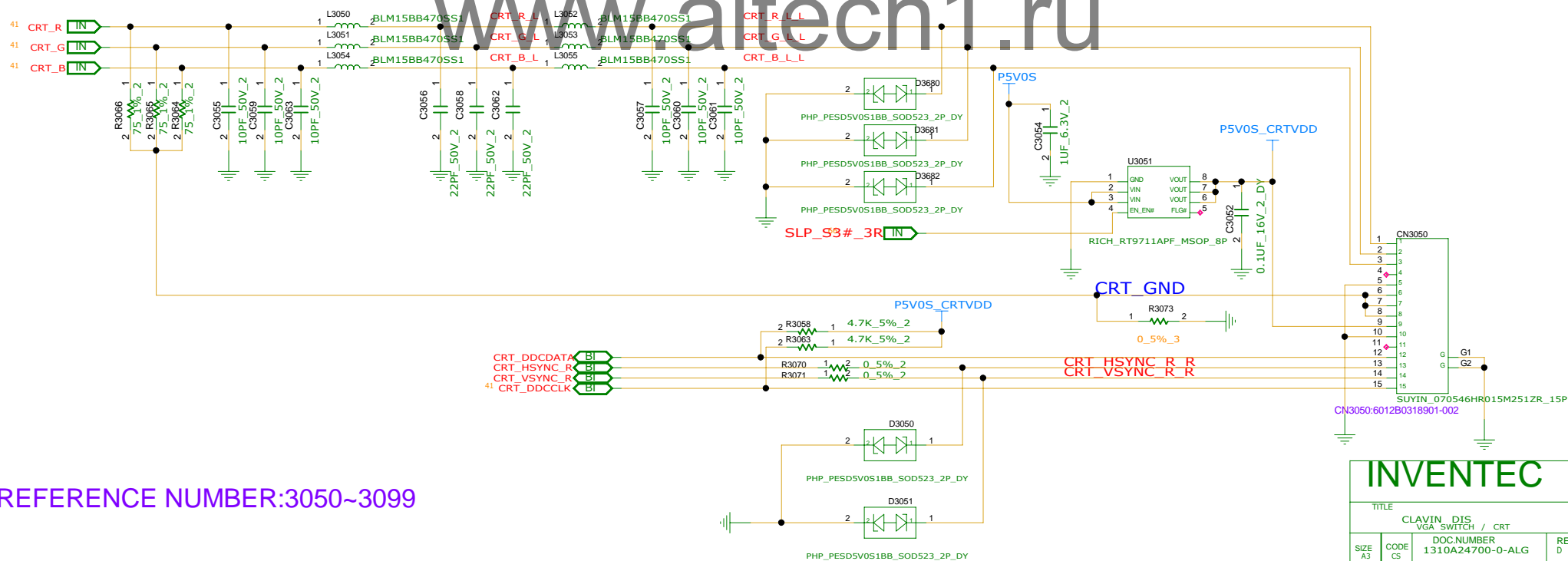
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INVENTEC			
TITLE			
CLAVIN DIS			
PANTER POINT 9 (GND)			
DOC NUMBER			
1310A24700-0-ALG			
SIZE	CODE	REV	D
A3	CS		
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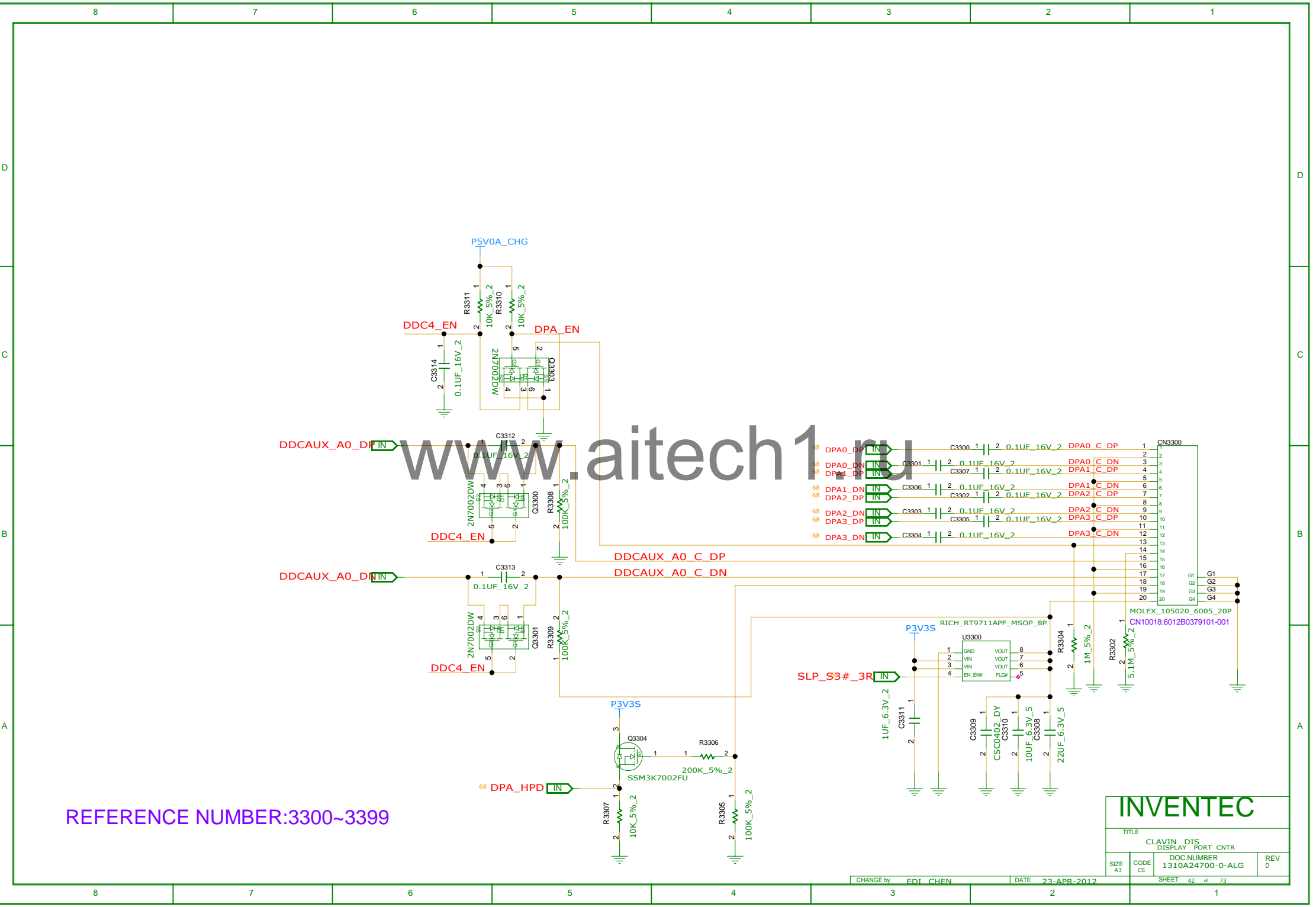
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REFERENCE NUMBER:3050~3099

INVENTEC

TITLE			
CLAVIN_DIS VGA SWITCH / CRT			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24700-0-ALG	D



REFERENCE NUMBER:3300~3399

INVENTEC			
TITLE			
CLAVIN_DISPLAY PORT CNTR			
DOC NUMBER			
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REV			
D			
SIZE	CODE	SHEET	
A3	CS	42 of 73	

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REFERENCE NUMBER:3000~3049

REFERENCE NUMBER:2250~2299

CAMERA CONN.

LCM CONN.

INVENTEC

TITLE			
CLAVIN' DIS LCM & WEBCAM			
DOC NUMBER 1310A24700-0-ALG			
SIZE A3	CODE CS	REV D	

CHANGE by EDI_CHEN DATE 23-APR-2012

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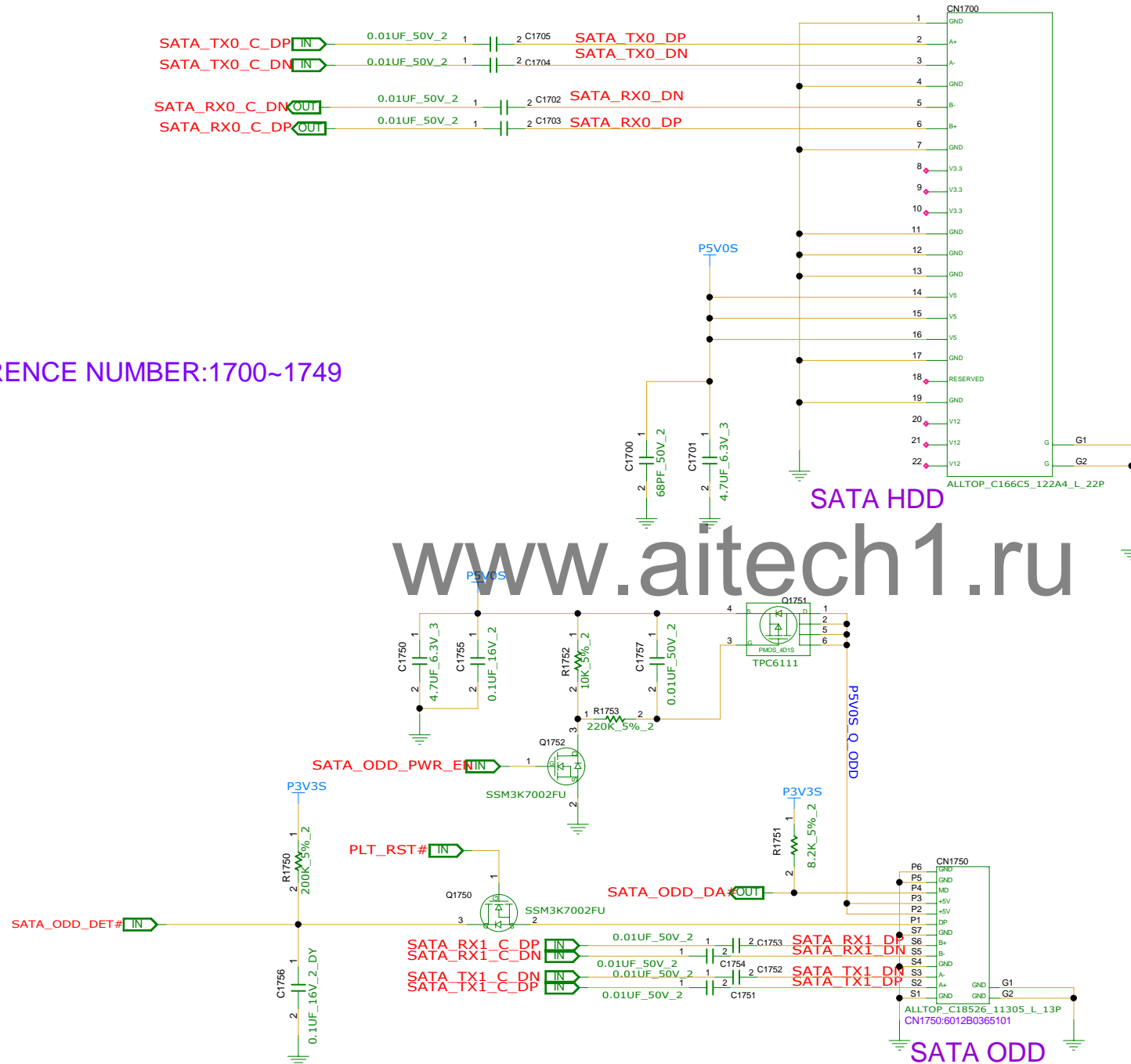
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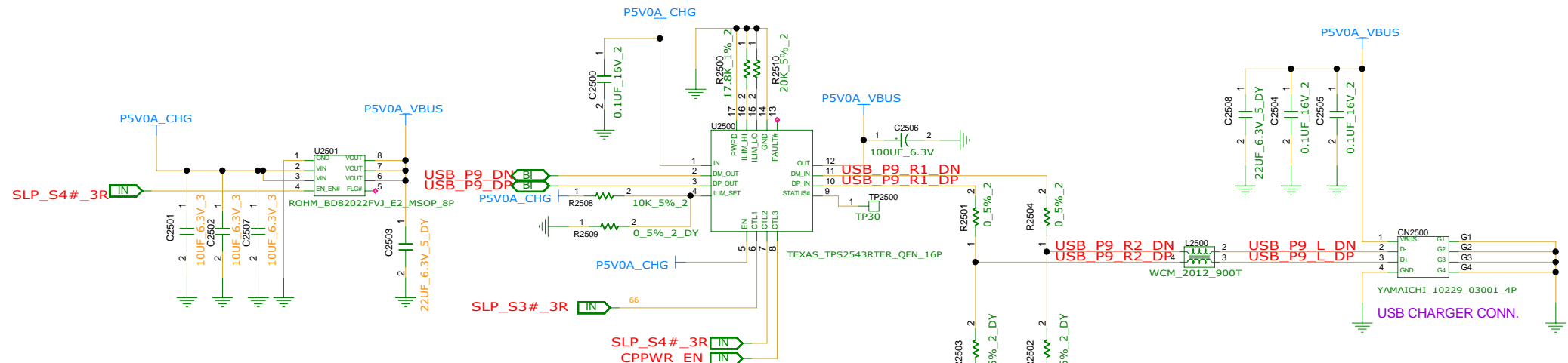
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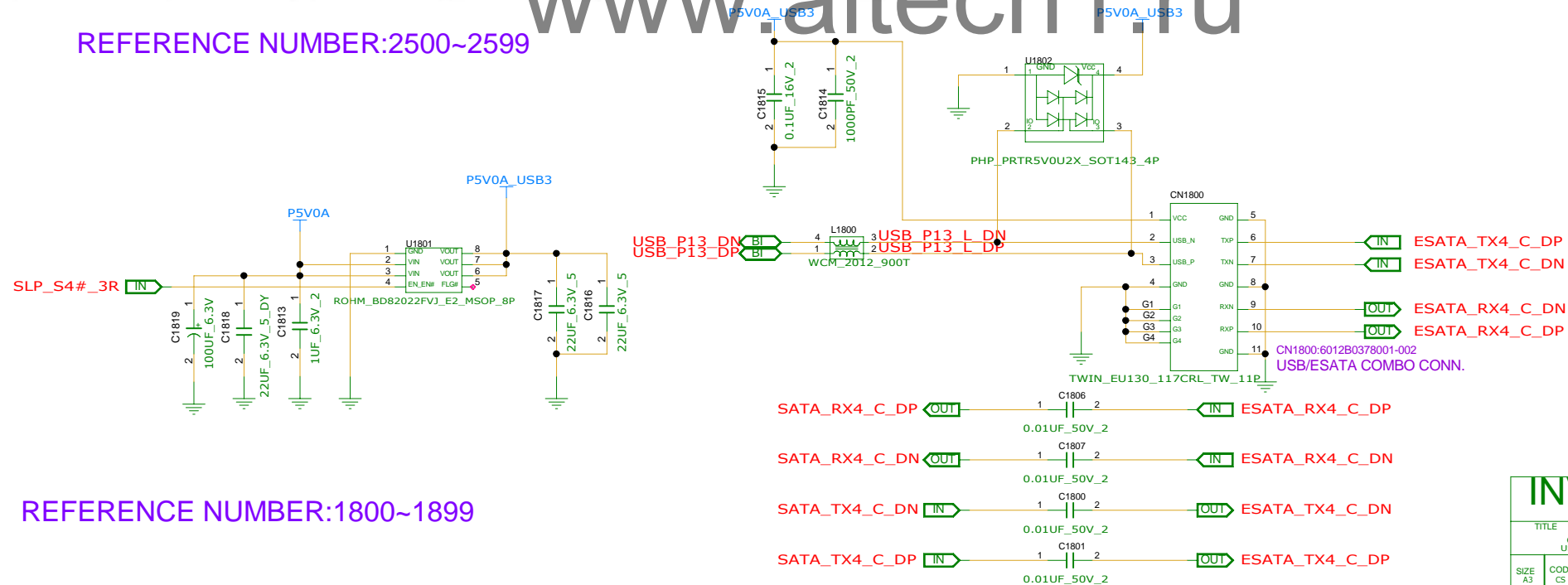


INVENTEC			
TITLE CLAVIN DIS SATA HDD & ODD CNTR			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D
SHEET 45 of 73			



	R2510	R2508	R2509	R2511	R2512
TPS2543	20K	10K	NI	0	NI
TPS2540/A	NI	NI	0	0	NI
PI5USB2543	NI	NI	0	NI	0

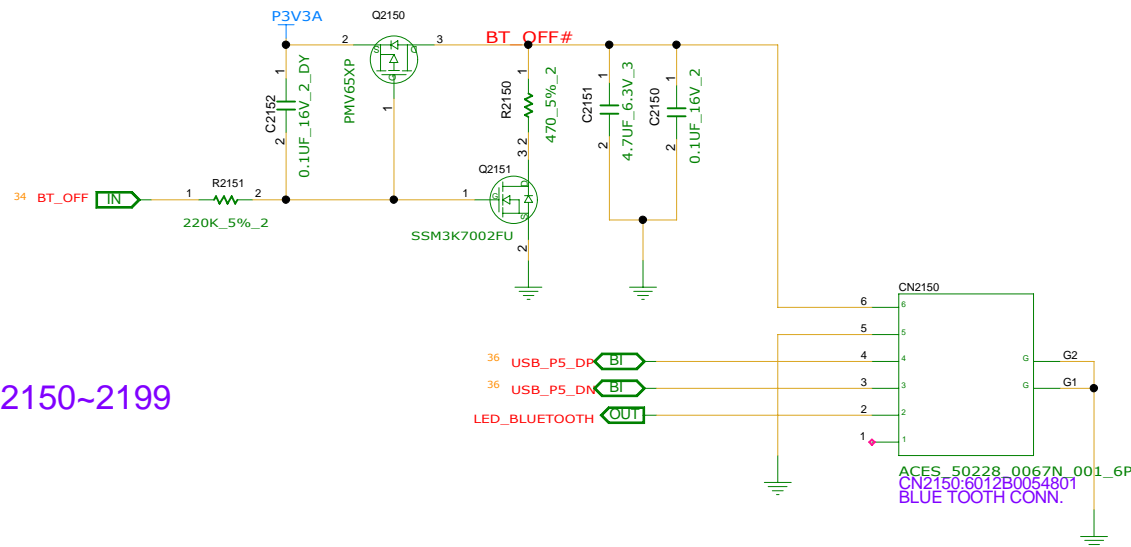
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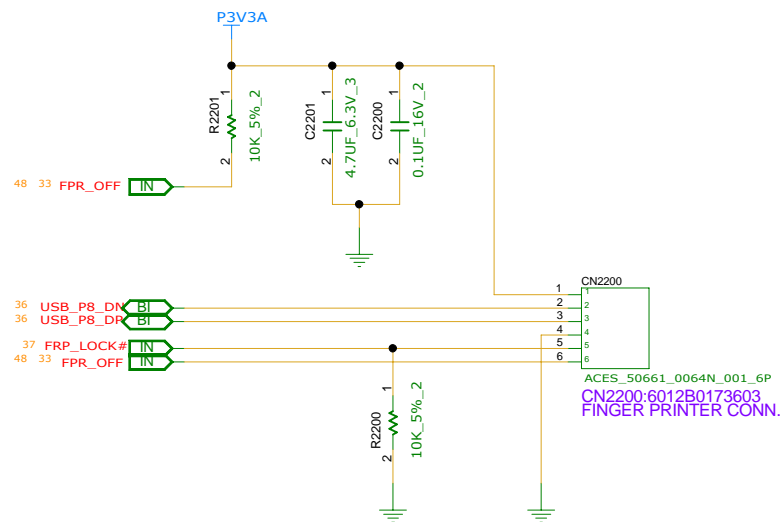
INVENTEC				
TITLE CLAVIN DIS USB & ESATA COMBO / USB CHARGER				
DOC NUMBER 1310A24700-0-ALG				
REV D				
SIZE A3	CODE CS	SHEET 46 of 73		

REFERENCE:2150~2199



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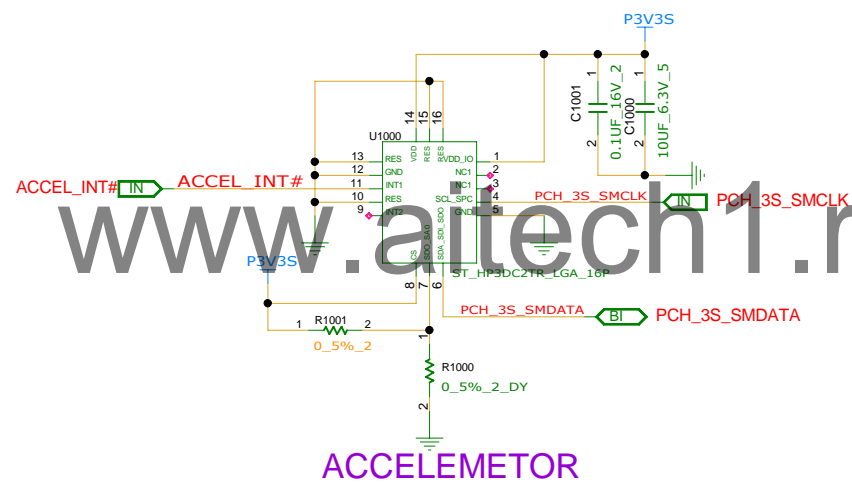
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INVENTEC

TITLE			
BLUE TOOTH & FINGER PRINTER CNTR			
DOC NUMBER			
1310A24700-0-ALG			
REV			
D			

REFERENCE NUMER : 1000~1099



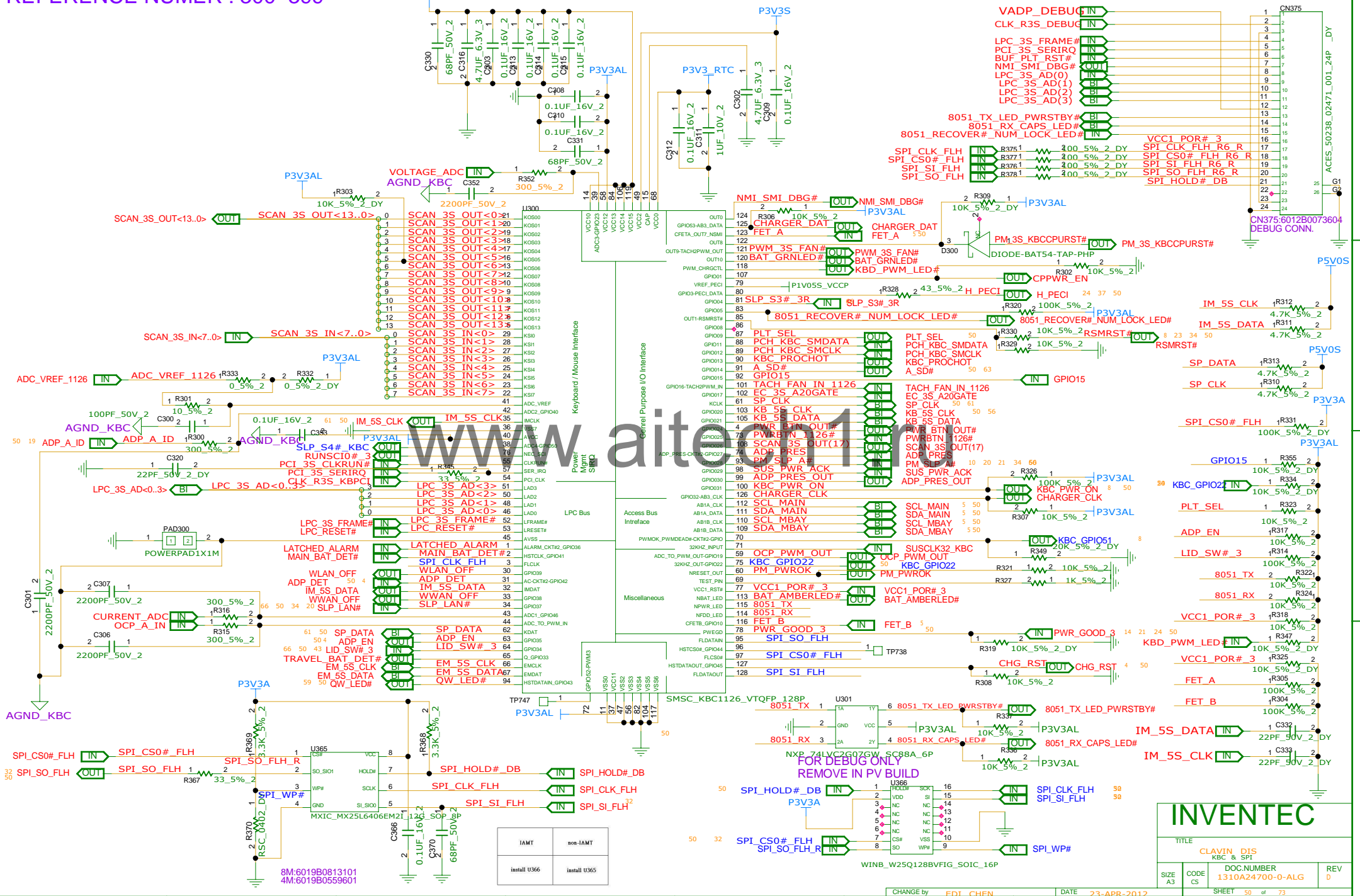
INVENTEC

TITLE			
CLAVIN_DIS ACCELEMATOR			
SIZE A3	CODE CS	DOCNUMBER 1310A24700-0-ALG	REV D

CHANGE by EDI CHEN DATE 23-APR-2012

SHEET 49 of 73

REFERENCE NUMBER : 300~399



INVENTEC

TITLE
CLAVIN DIS
KBC & SPI

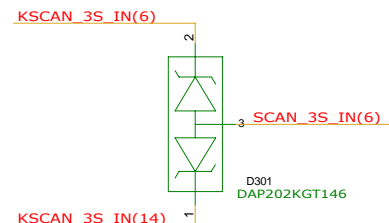
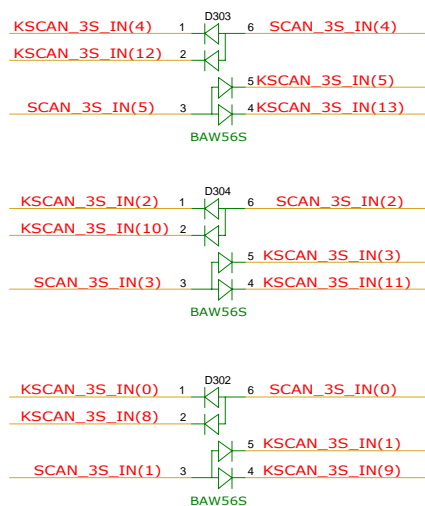
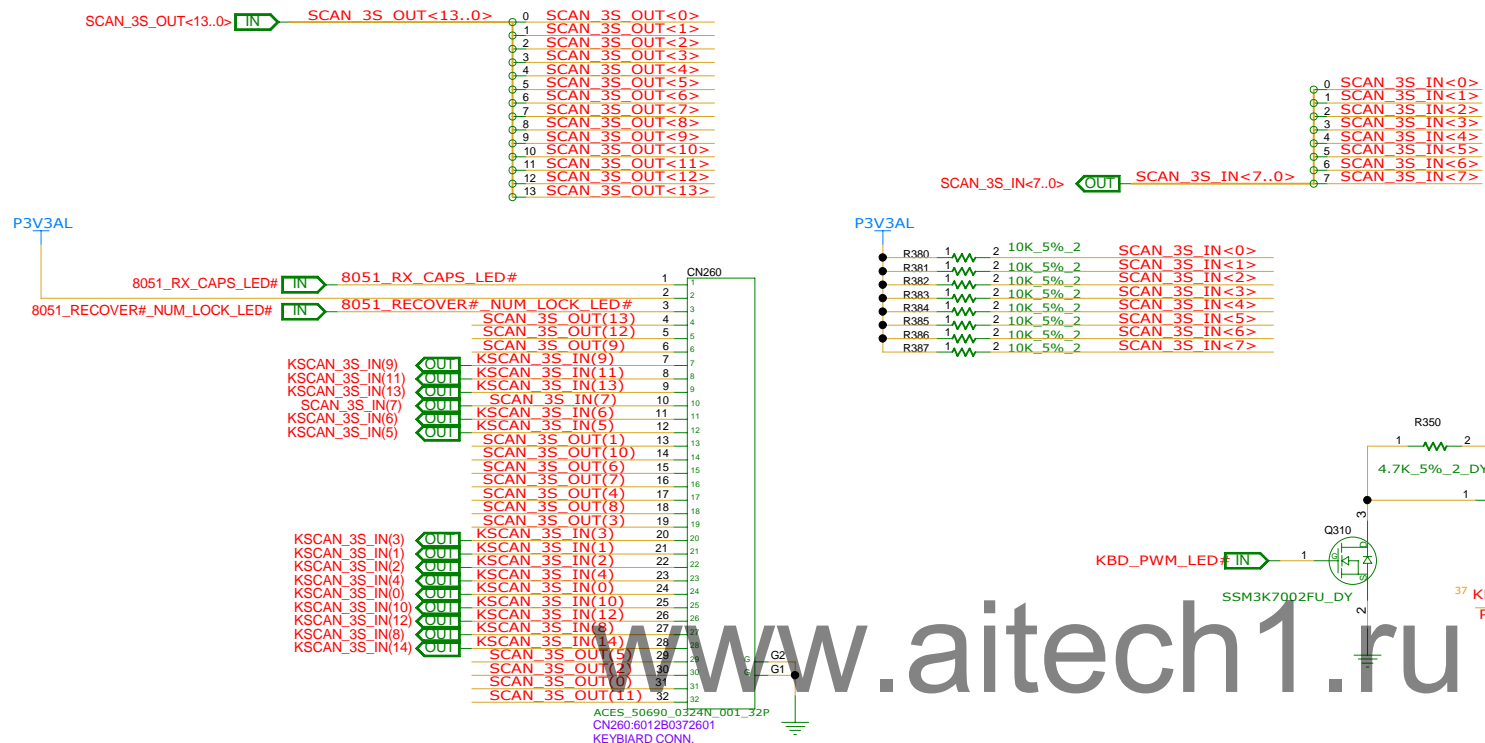
DOC NUMBER
1310A24700-0-ALG

REV
D

CHANGE by FDI CHEN DATE 23-APR-2012

SHEET 50 of 73

REFERENCE NUMER : 300~389



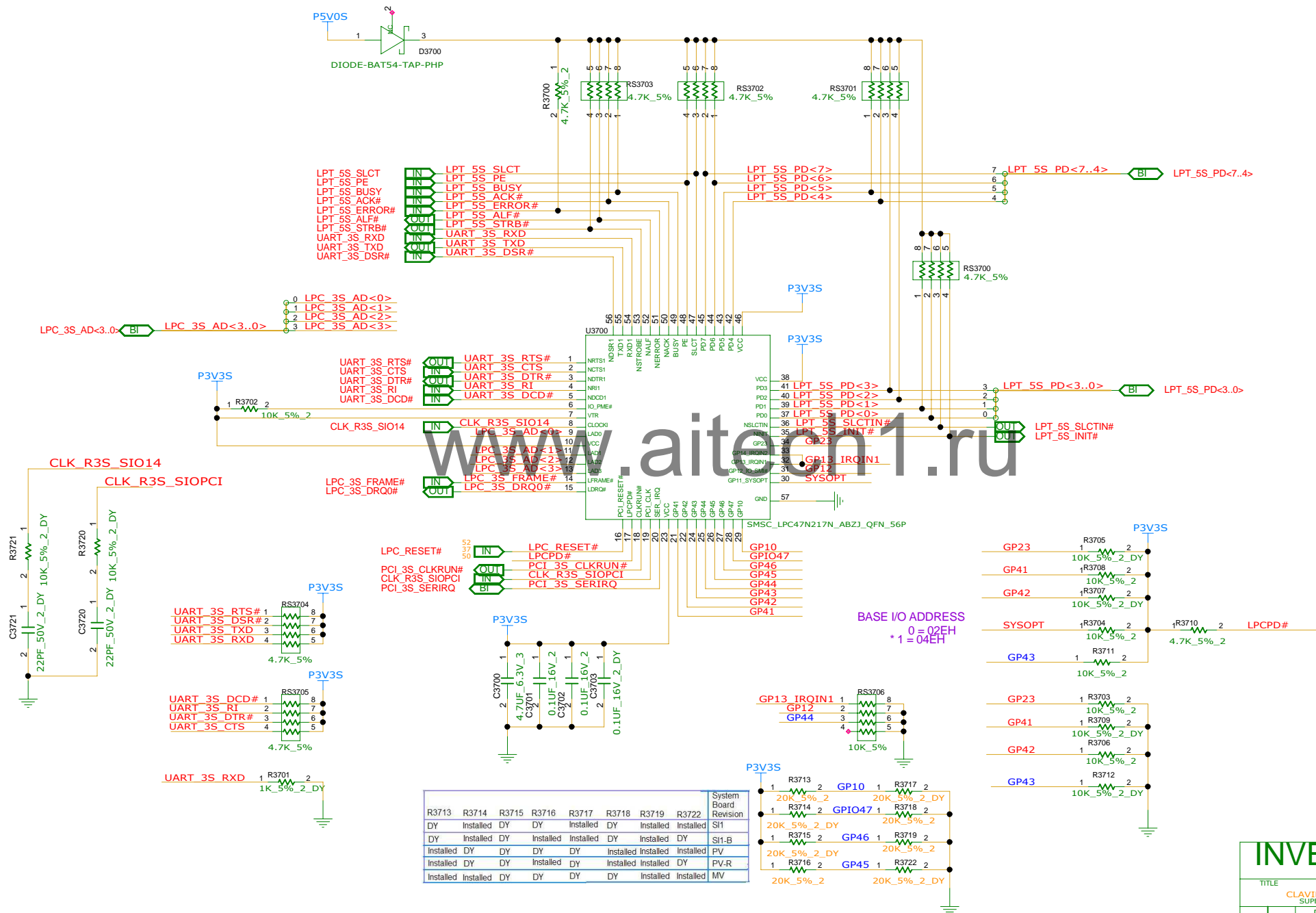
INVENTEC

TITLE			
CLAVIN_DJS KEYBOARD			
SIZE	CODE	DOCNUMBER	REV
A3	CS	1310A24700-0-ALG	D

CHANGE by EDI_CHEN DATE 23-APR-2012

SHEET 51 of 73

REFERENCE NUMER : 3700~3799



INVENTEC

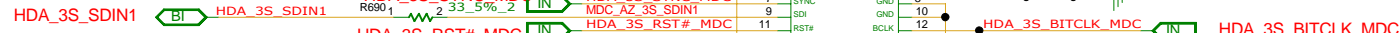
TITLE			
CLAVIN DIS SUPER I/O			
DOCNUMBER 1310A24700-0-ALG			
SIZE A3	CODE CS	REV D	

8	7	6
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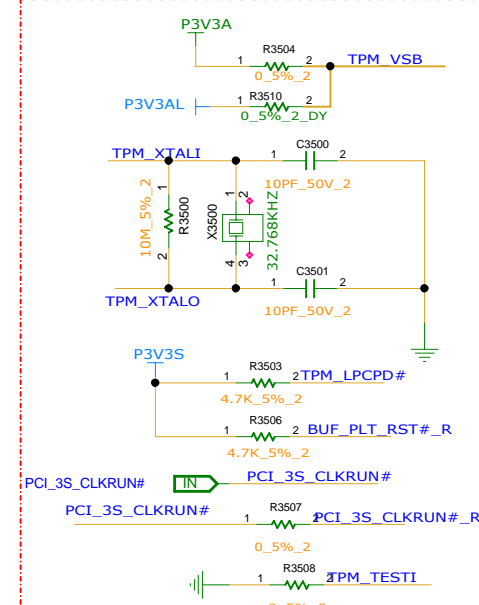
TPM1.2

REFERENCE NUMBER : 650~699



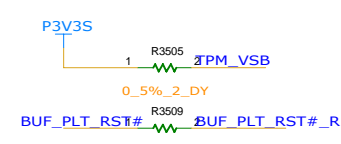
MDC CONN.
CN690:6012B0126901

	SLB9635	SLB9656
R3504	INSTALL	OPEN
R3503	INSTALL	OPEN
R3506	INSTALL	OPEN
R3507	INSTALL	OPEN
R3508	INSTALL	OPEN
R3500	INSTALL	OPEN
X3500	INSTALL	OPEN
C3500	INSTALL	OPEN
C3501	INSTALL	OPEN
R3505	OPEN	INSTALL
R3509	OPEN	INSTALL
R3510	OPTION	OPEN



INSTALL FOR SLB9635
NON-INSTALL FOR SLB9656

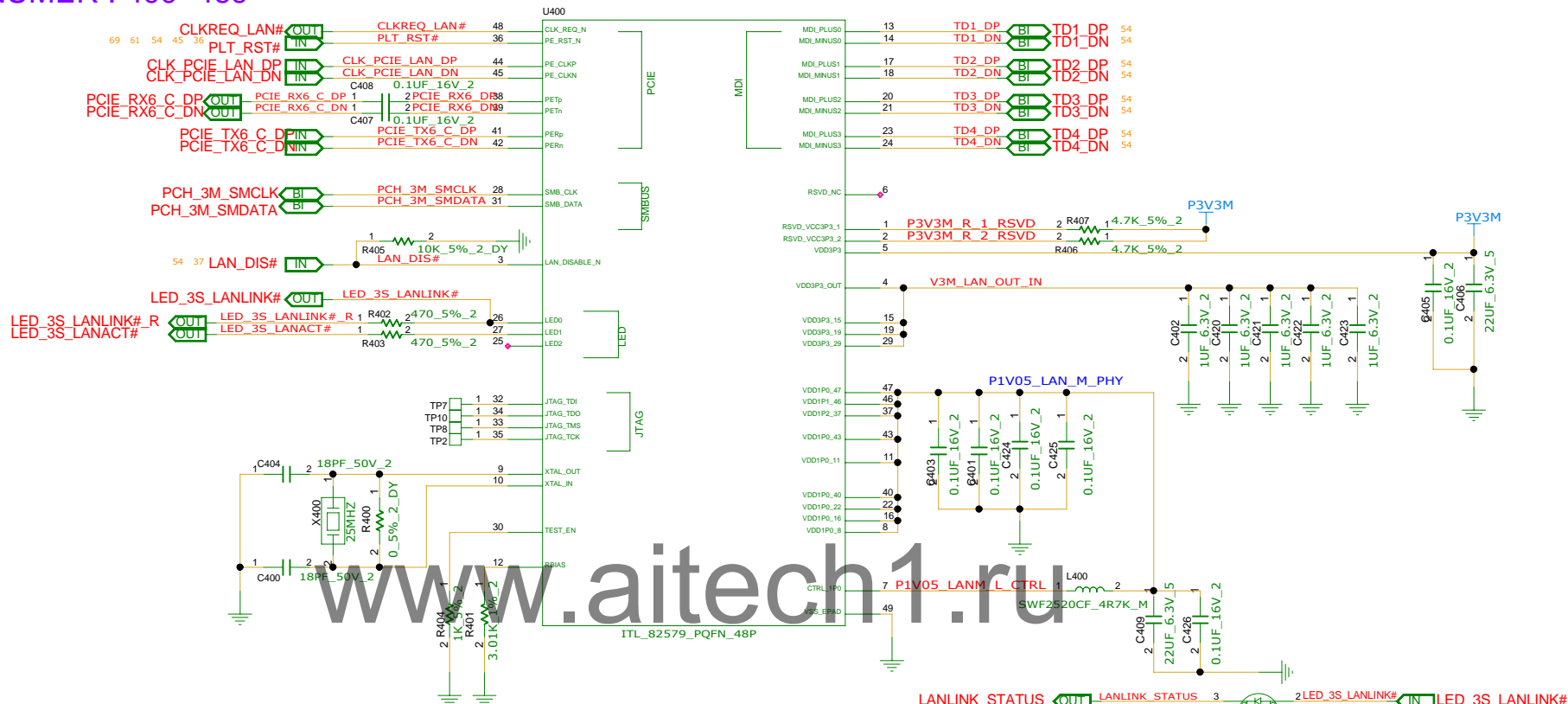
P3V3S RAIL FOR SLB9656



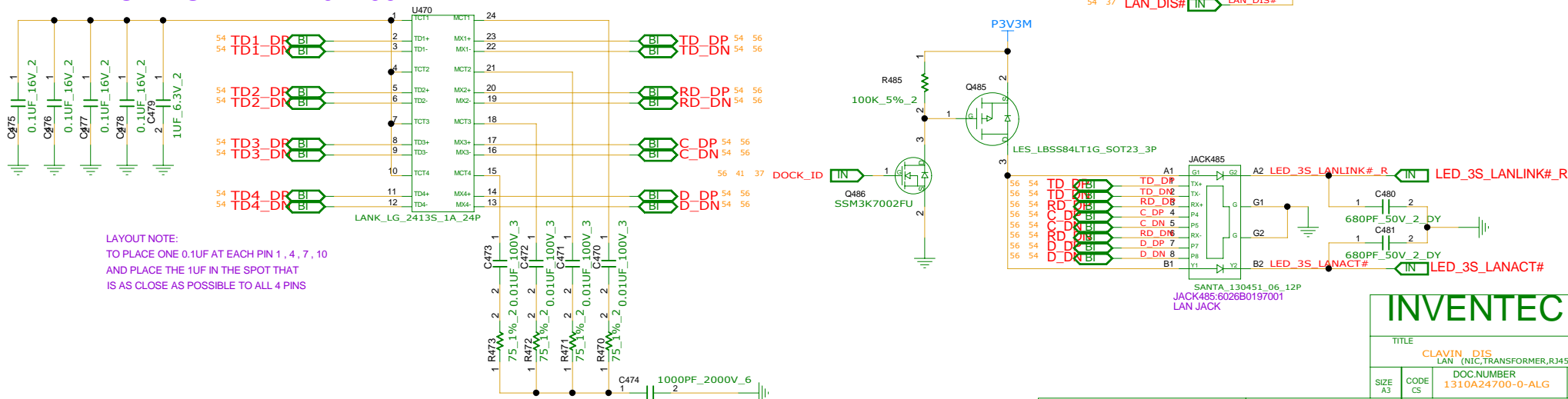
NON-INSTALL FOR SLB9635
INSTALL FOR SLB9656

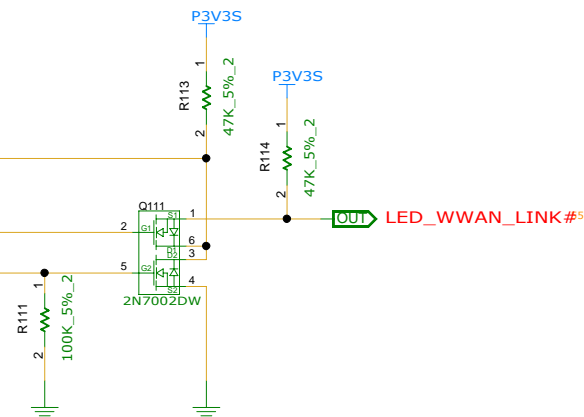
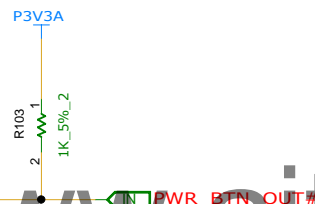
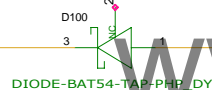
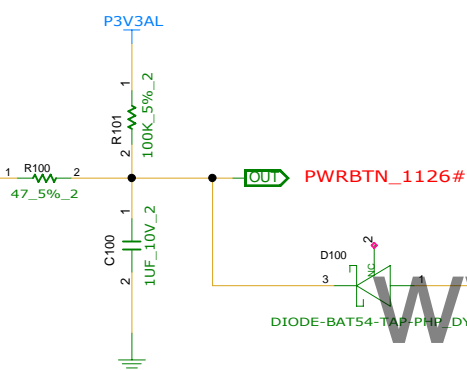
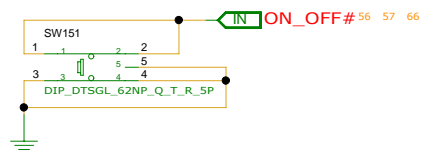


REFERENCE NUMBER : 400~469



REFERENCE NUMER : 470~499





POWER / STANDBY LED

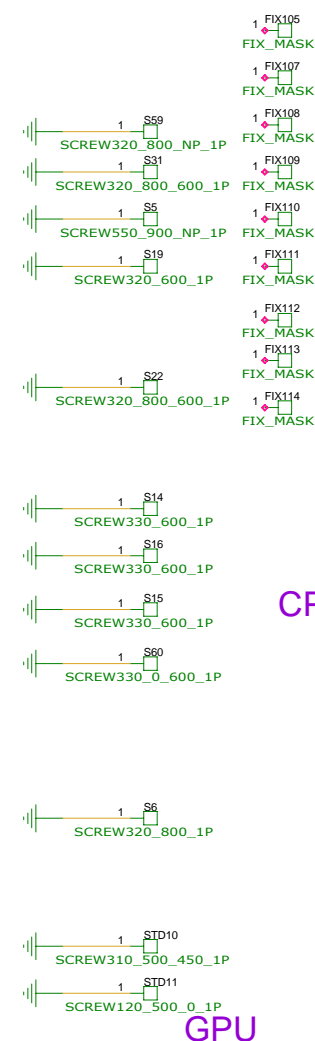
WLAN_WWAN_BLUETOOTH_LED

REFERENCE NUMBER:100~199

INVENTEC			
TITLE			
CLAVIN DIS POWER & WLAN_LED			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24700-0-ALG	D
SHEET 57 of 73			

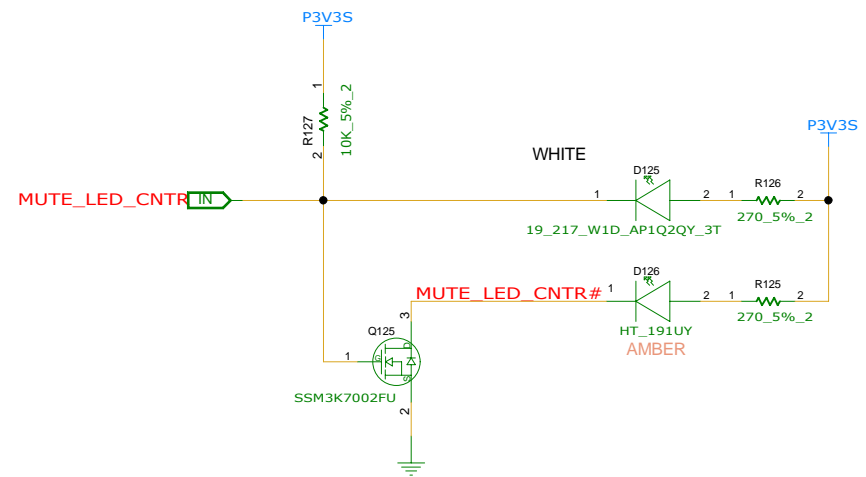
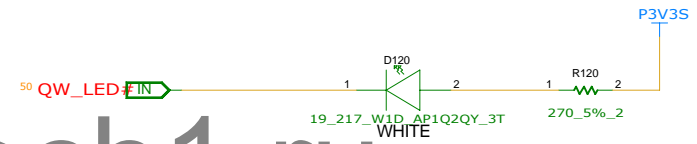
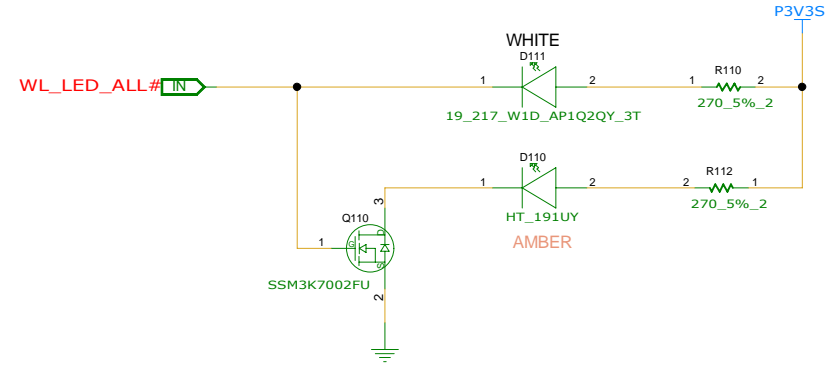
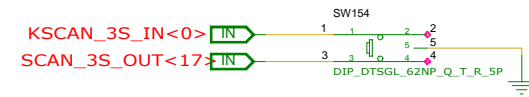
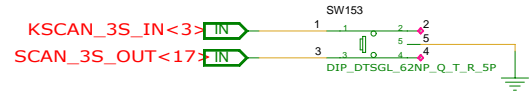
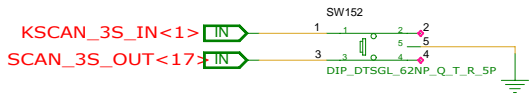
CHANGE by EDI CHEN DATE 23-APR-2012

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MDC

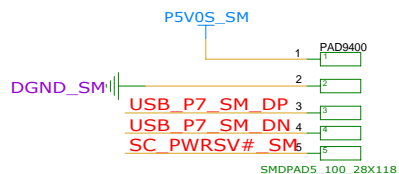
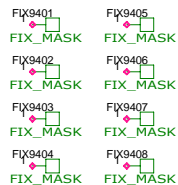
TITLE			
CLAVIN DIS SCREW			
SIZE A3	CODE CS	DOC.NUMBER 1310A24700-0-ALG	R D



REFERENCE NUMBER:100~199

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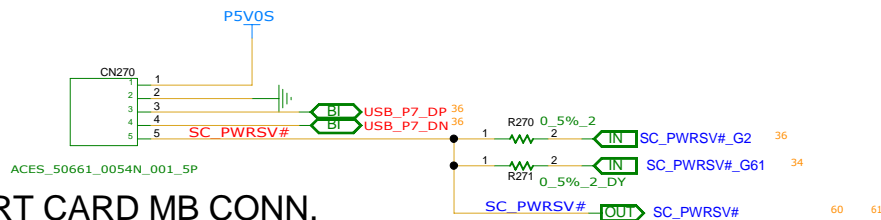
INVENTEC			
TITLE			
CLAVIN / DIS WIRELESS / QUICK WEB / MUTE LED			
DOC NUMBER		REV D	
1310A24700-0-ALG			
SIZE A3	CODE CS	SHEET 59 of 73	



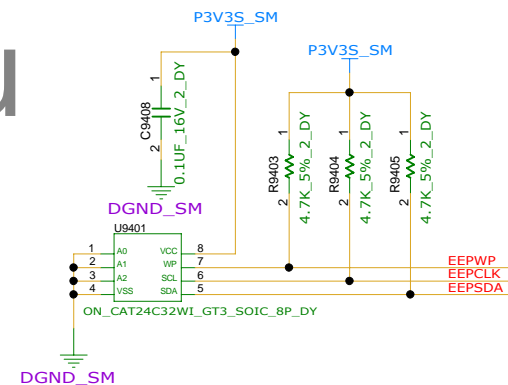
SMART CARD DB

REFERENCE NUMBER:9400~9499

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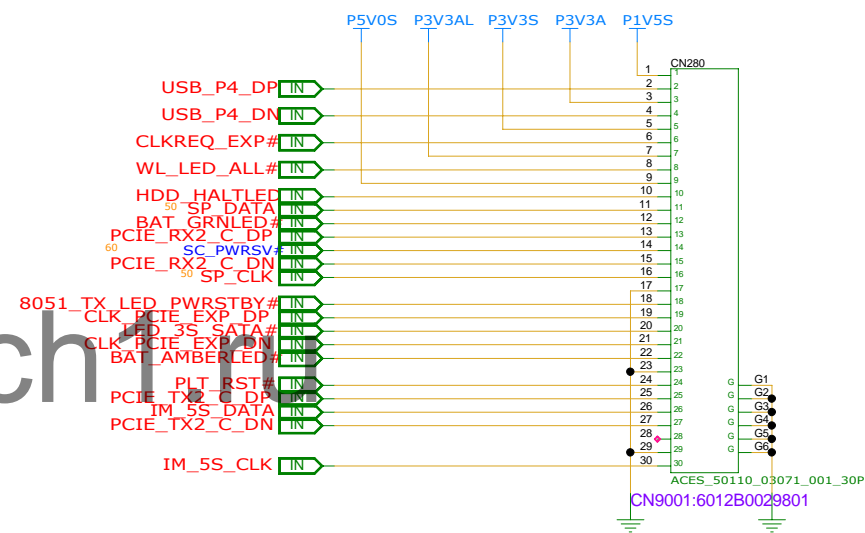
SMART CARD MB CONN.



INVENTEC

TITLE CLAVIN_D1S SMART CARD			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D

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EXPRESS CARD MB CONN.

INVENTEC			
TITLE			
CLAVIN_D1S EXPRESS CARD CNTR			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D
SHEET 61 of 73			

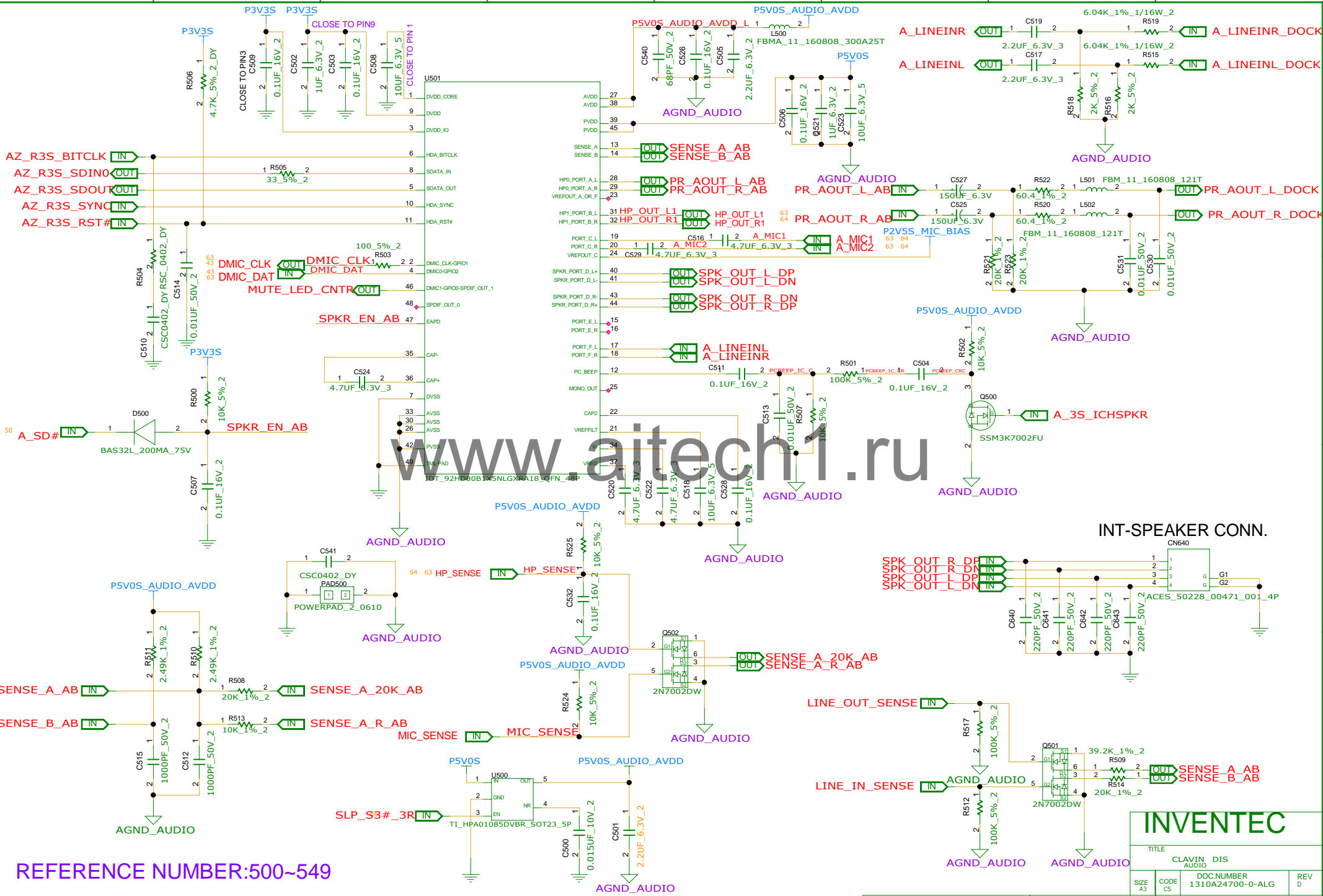
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www.aitech1.ru

INVENTEC

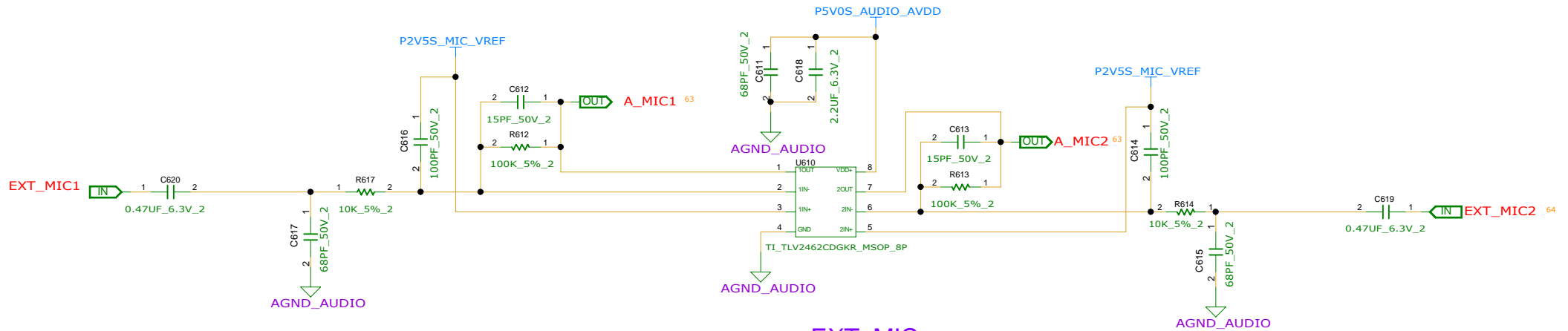
TITLE			
CLAVIN DIS BLANK			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	REV D

CHANGE by	EDT CHEN	DATE	23-APR-2012	SHEET	62	of	73
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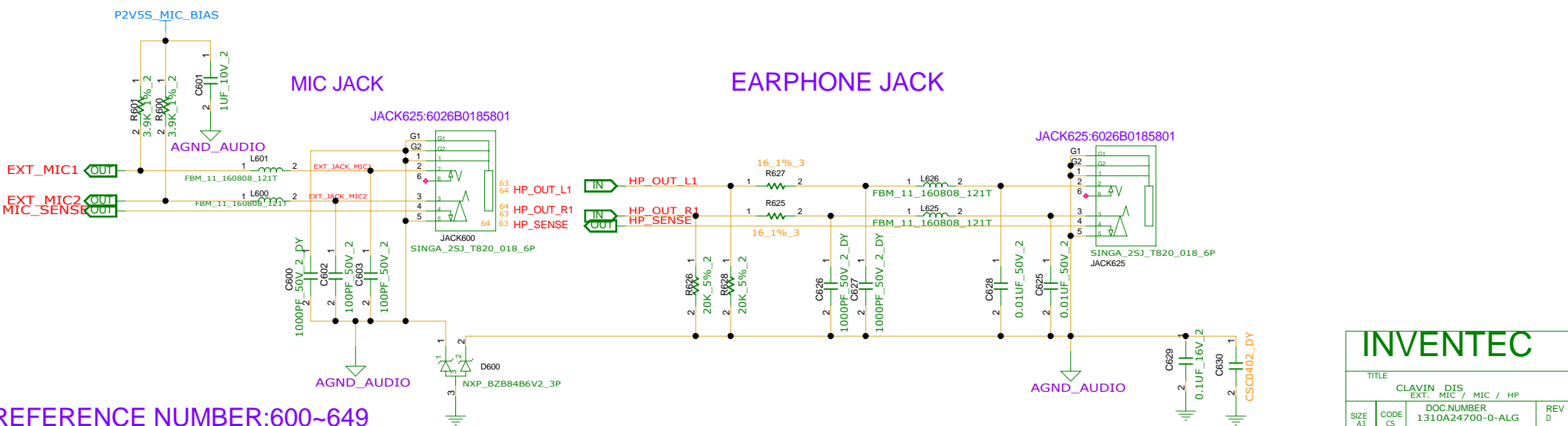


REFERENCE NUMBER:500~549

INVENTEC			
TITLE			
CLAVIN DIS			
DOC NUMBER			
1310A24700-0-ALG			
REV D			
SIZE	CODE	DATE	
A3	CS	23-APR-2012	
SHEET 63 of 73			1



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INVENTEC			
TITLE CLAVIN_DIS EXT. MIC / MIC / HP			
SIZE A3	CODE CS	DOC NUMBER 1310A24700-0-ALG	
SHEET 64 of 73		REV D	

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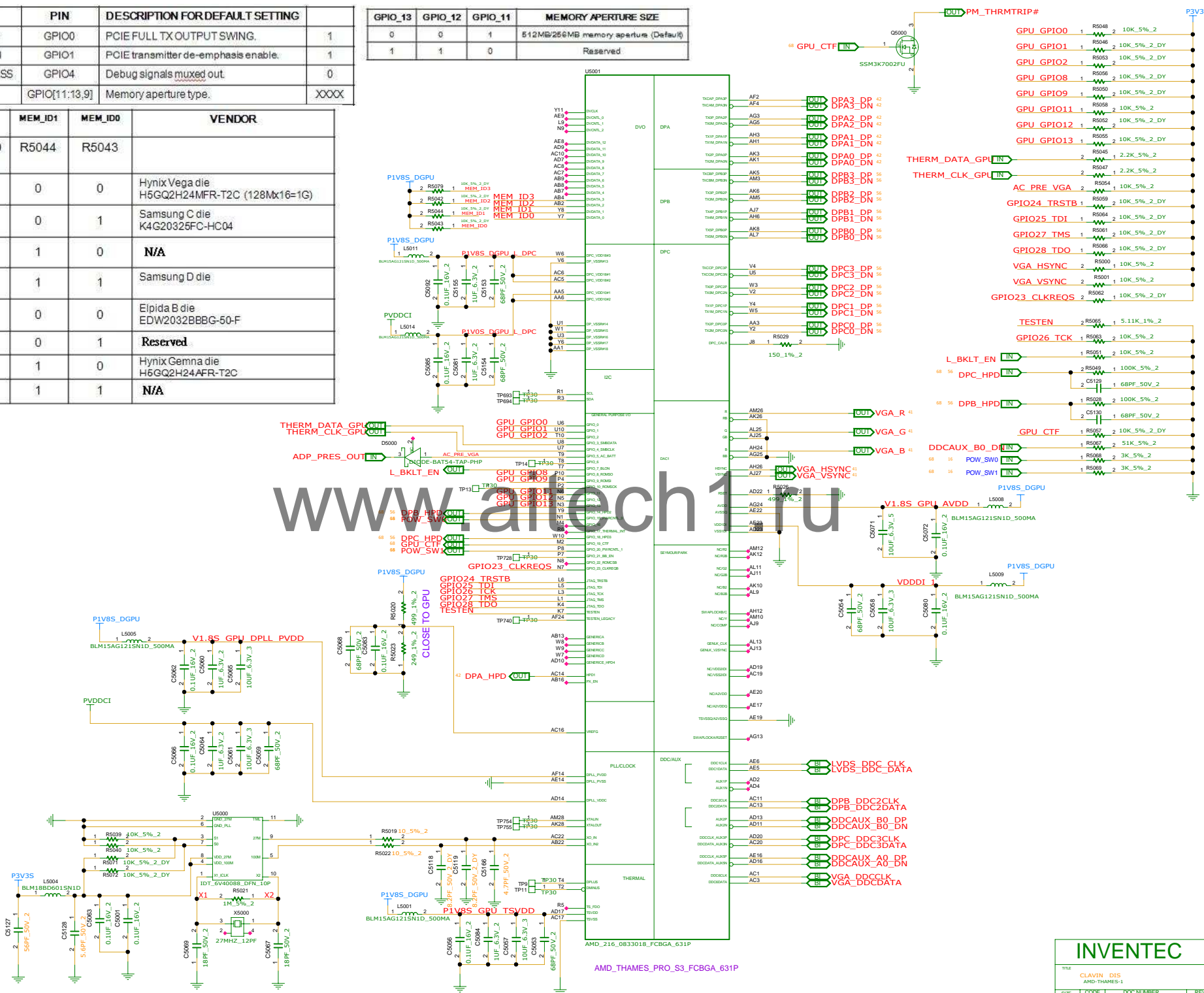
REFERENCE NUMBER:800~899

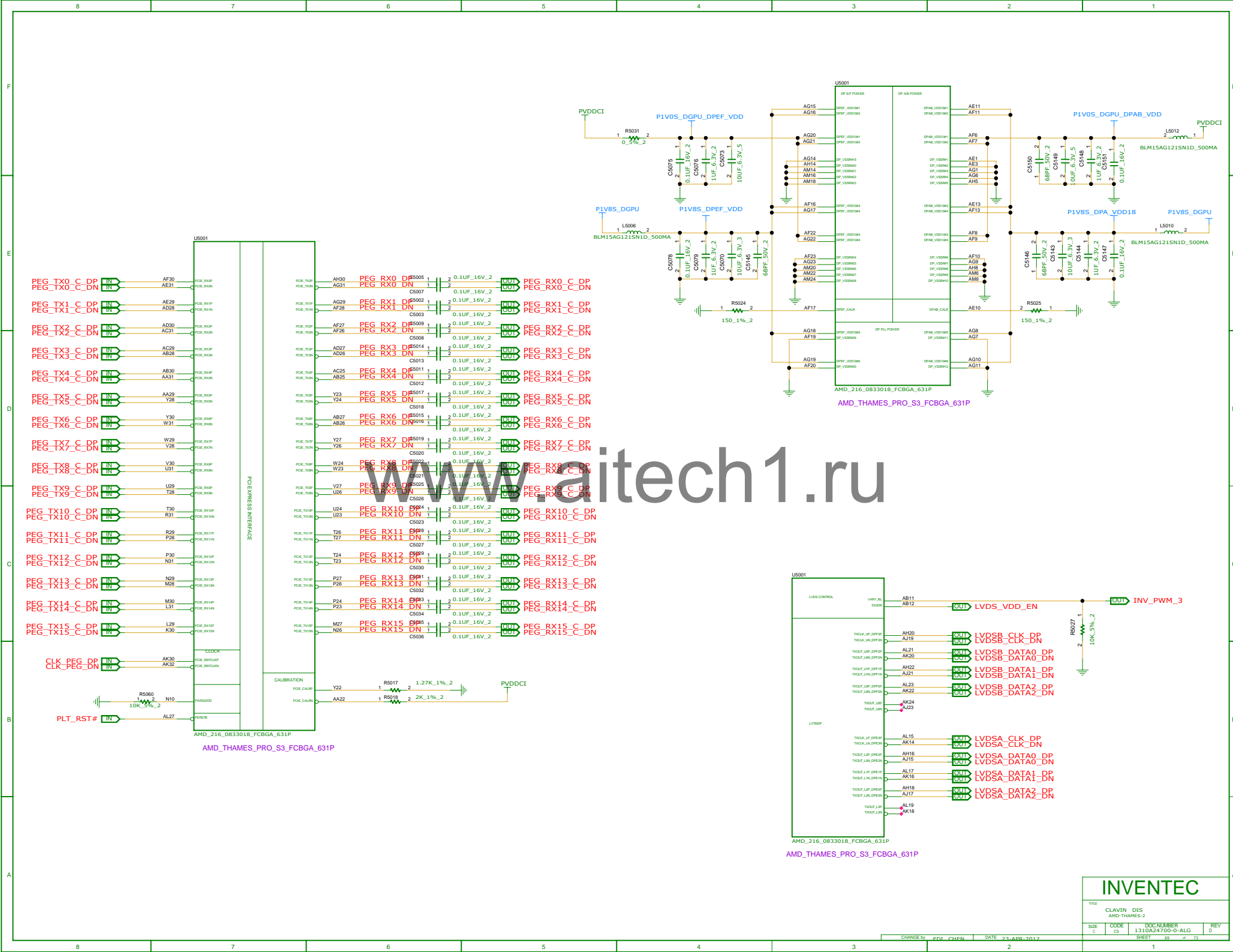
SD/MMC CONN

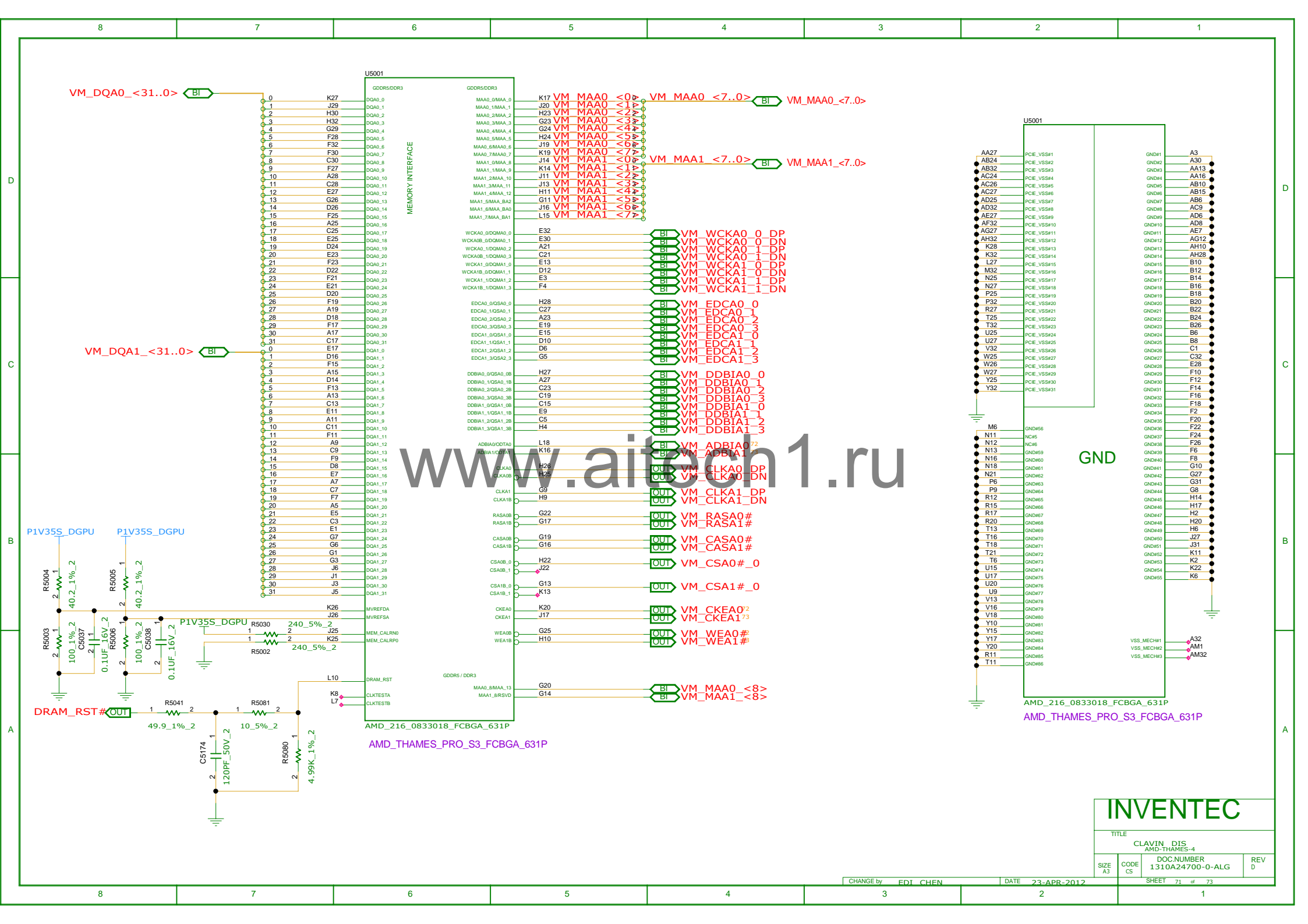
1394 CONN.

INVENTEC			
TITLE			
CARD READER CTRL / 1394 CONN / SD CONN			
DOC NUMBER			
1310A24700-0-ALG			
REV D			
SIZE A3	CODE CS	SHEET 65 of 73	

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

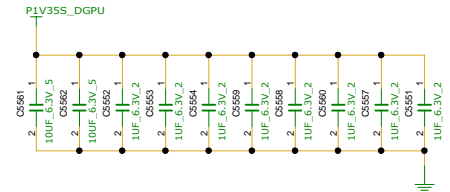
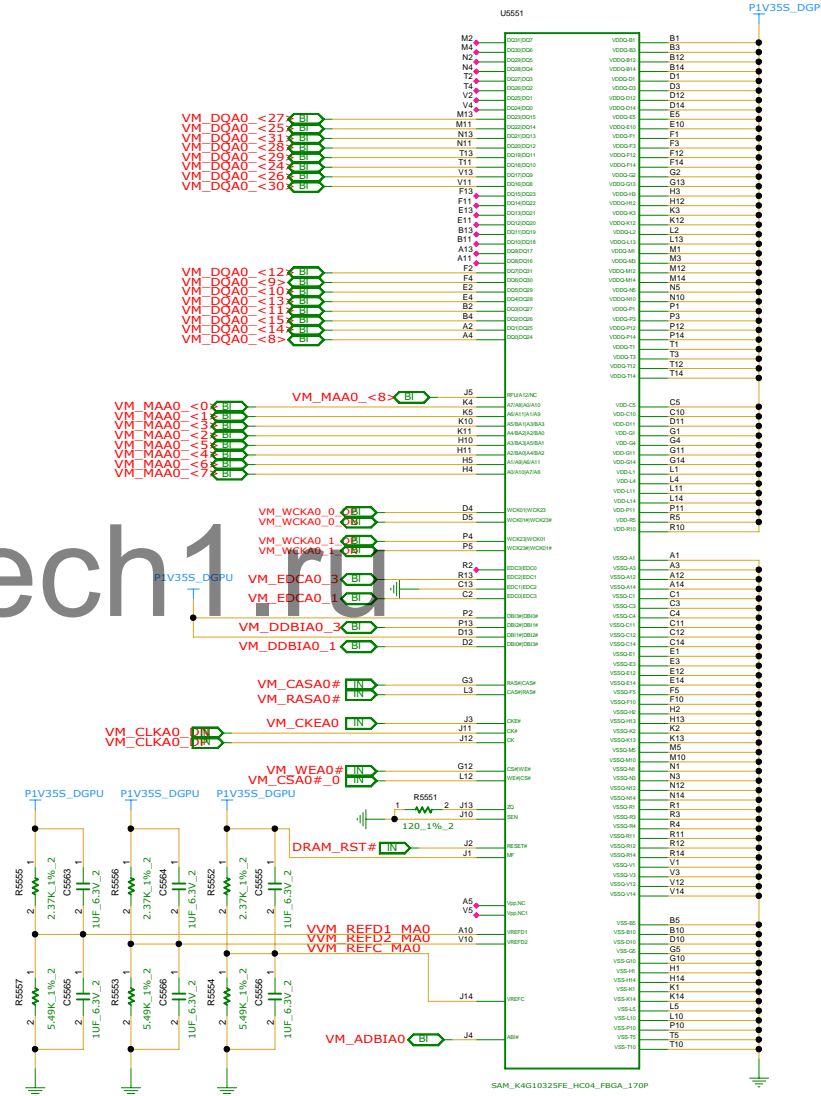
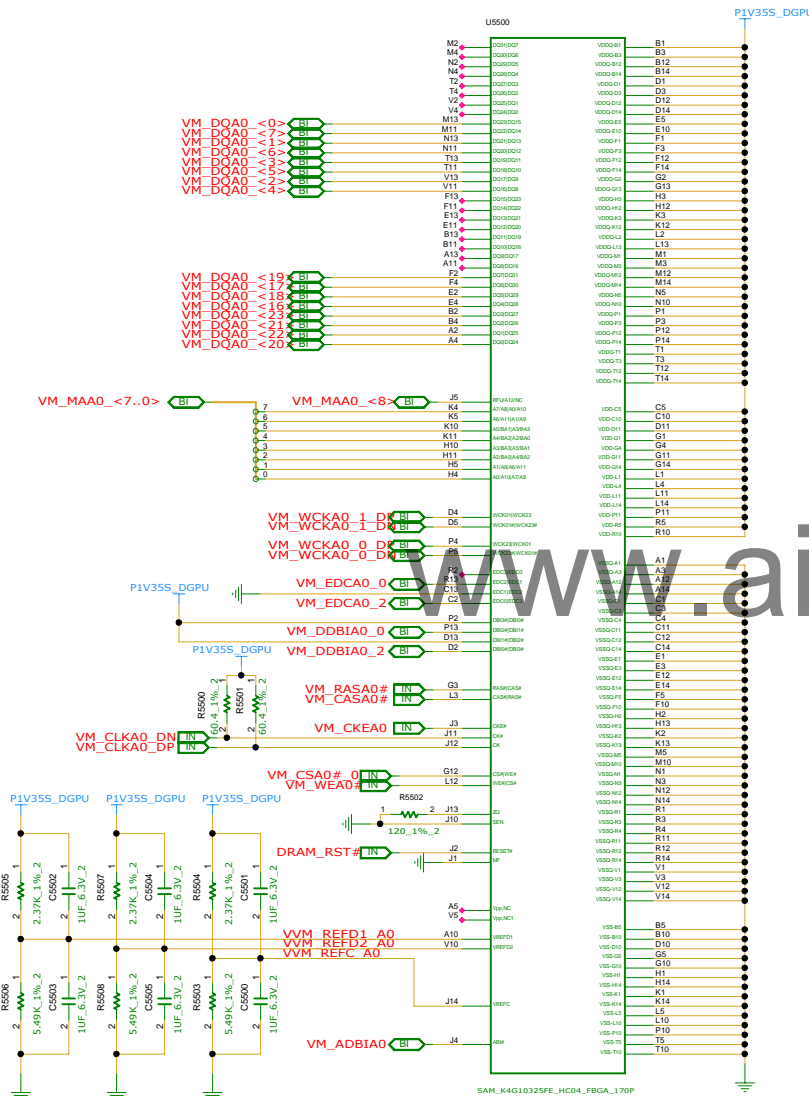
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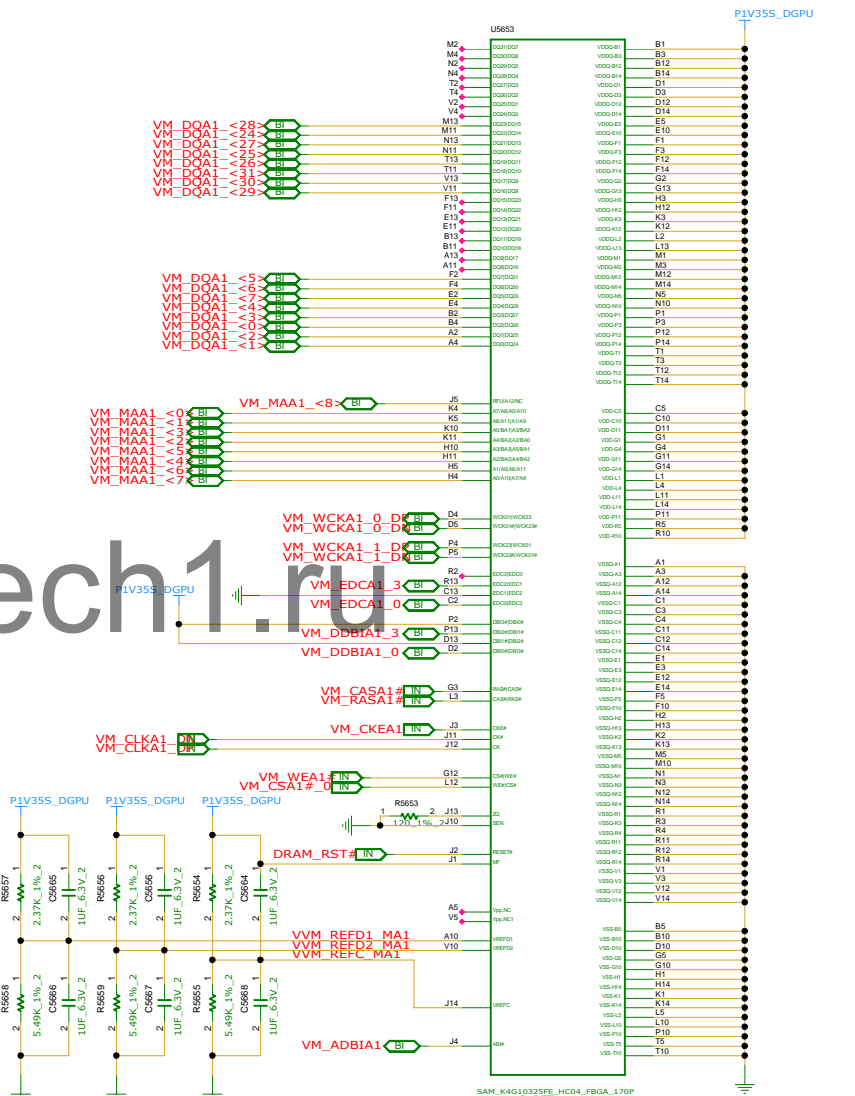
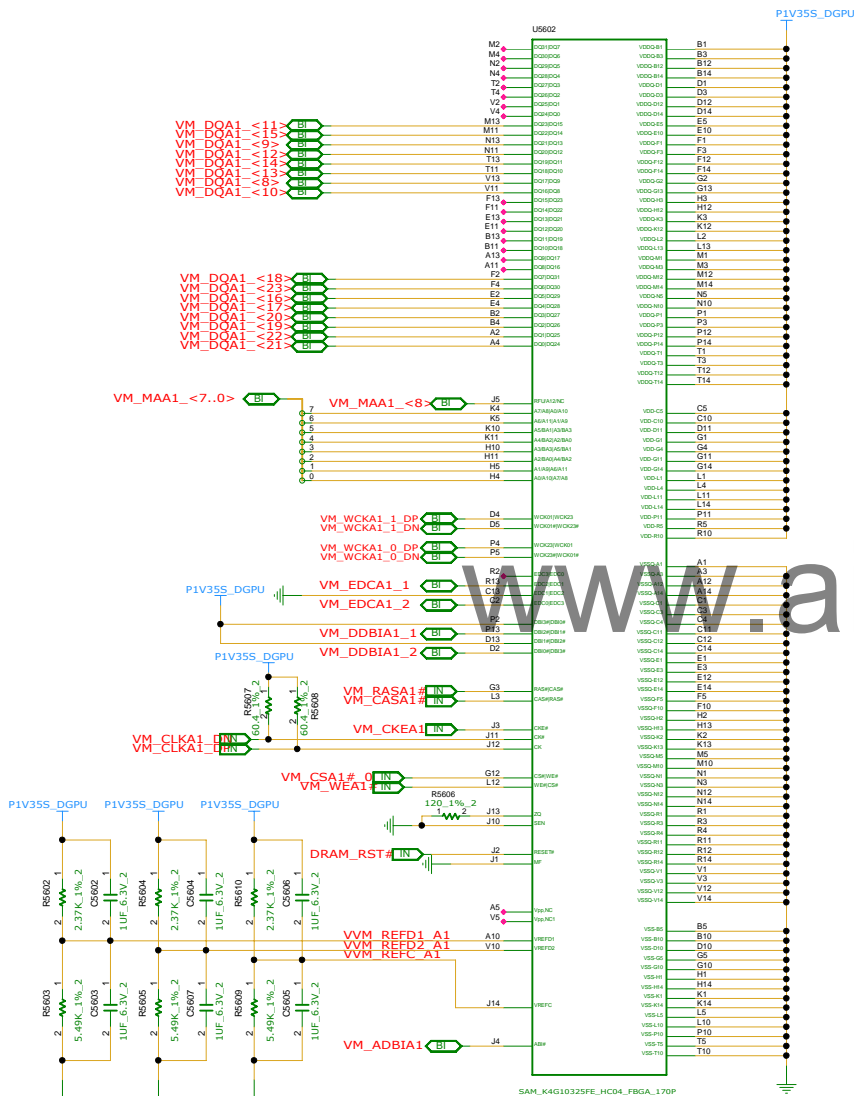
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INVENTEC			
TITLE			
CLAVIN_D1S			
AMD_THAMES-4			
DOCNUMBER			
1310A24700-0-ALG			
REV			
D			
SIZE	CODE	SHEET	
A3	CS	71	of 73



MF=1
MIRROR

INVENTEC				
TITLE CLAVIN DIS				
VRAM-1				
SIZE	CODE	DOC NUMBER	REV	D
E	CS	1310A24700-0-ALG	22	22
SHEET 22 of 22				



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MF=1
MIRROR

INVENTEC				
TITLE				
CLAVIN DIS				
VRAN-2				
SIZE	CODE	DOC NUMBER	REV	D
E	CS	1310A24700-0-ALG	23	23
SHEET				