

THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF INVENTEC CORPORATION AND SHALL NOT BE REPRODUCED, COPIED, OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION, INVENTEC CORPORATION, 2009 ALL RIGHT RESERVED.

HSF Property: ROHS or Halogen-Free(5L3?)

# DAKAR10F/FG

2011.09.02

DATE	CHANGE NO.	REV
21-OCT-2002		

DRAWER		EE	DATE	POWER	DATE	<b>INVENTEC</b> <small>TITLE MODEL PROJECT, FUNCTION Everest Main Board</small>			
DESIGN									
CHECK									
RESPONSIBLE									
SIZE=		VER:		SIZE	CODE	DOC NUMBER	REV		
FILE NAME:		PIN		CS	CS	1310xxxx-0-0	X01	SHEET 1 of 68	

# TABLE OF CONTENTS

PAGE	PAGE	PAGE
1. COVER PAGE	26. CARDREADER	51. PCH 5 USB
2. INDEX	27. MINI1 WLAN/DEBUG CARD	52. PCH 6 MISC
3. BLOCK DIAGRAM	28. MINI2 3G/LTE	53. PCH 7 POWER
4. POWER MAP	29. SATA HDD/ODD CONN	54. PCH 8 POWER
5. POWER CHARGER	30. USB 2.0 CONN	55. PCH 9 GND
6. POWER +V3LA/+V3A/+5A	31. USB 3.0 CONTROLLER	56. VGA 1
7. POWER +V1.5/+V0.75	32. USB 3.0 CONN W/ S&C	57. VGA 2
8. POWER +V1.8S	33. USB 3.0 CONN	58. VGA 3
9. POWER VCCIO	34. LCM CONN	59. VGA 4
10. POWER VCCSA	35. CRT CONN	60. VGA 5
11. POWER VCORE	36. HDMI CONN	61. VGA 6
12. POWER VGFX	37. HDMI CEC	62. VRAM 1
13. POWER VCORE_DGPU	38. DDR3 DIMM0	63. VRAM 2
14. ENABLE PIN	39. DDR3 DIMM1	64. VRAM 3
15. LOAD SWITCH-1	40. FAN & THERMAL SENSOR	65. VRAM 4
16. LOAD SWITCH-2	41. CPU 1	66. POWER BUTTON BOARD
17. PCB SCREW	42. CPU 2	67. EMI
18. HALL SENSOR	43. CPU 3 DRAM	
19. LED	44. CPU 4 POWER	
20. K/B & TP/B CONN	45. CPU 5 POWER	
21. EC	46. CPU 6 GND	
22. LAN	47. PCH 1	
23. RJ45 & TRANSFORMER	48. PCH 2	
24. AUDIO CODEC	49. PCH 3	
25. SPEAKER/HP JACK/MIC JACK	50. PCH 4 AXG	

**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3 CODE CS DOC.NUMBER 1310xxxx-0-0 REV X01

CHANGE by XXX DATE 21-OCT-2002 SHEET 2 of 68

**AMD**  
W/ POWER EXPRESS  
THAMES  
29X 29 MM

**IVY BRIDGE**  
DC 35W  
SOCKET-RPGA989  
37.5 X 37.5 X 5 mm

DDR3@1.5/0.75V  
(1333/1600 MHZ)  
204-PIN SODIMM0

DDR3@1.5/0.75V  
(1333/1600 MHZ)  
204-PIN SODIMM1

HDMI

CRT

LCM  
LVDS

RJ45

PCIE\_1:LAN  
ATHEROS\_AR8161/8162  
PCIE

PCIE\_2:WLAN  
PCIE

PCIE\_3:USB3.0  
PCIE

**PCH**  
PANTHER POINT  
25 X 25 X 2.3 mm

AUDIO CODEC  
REA\_ALC269Q\_VB6  
HDA

INTERNAL MIC IN  
EXT MIC IN  
HEADPHONE

USB\_0: USB CONN  
USB\_2: USB CONN  
USB\_8: CARD READER  
USB\_9: MINICARD WLAN  
USB\_10:WEBCAM

SLEEP & CHARGE

USB\_1: USB3.0 CONN

USB\_8: CARD READER  
REA\_RTS5129

SATA0:ESATA  
SATA1: HDD  
SATA6: ODD

ENE-P2809A  
THERMAL SENSOR

BATTERY CHARGER &  
DC/DC & IMVP 7

LI-ION BATTERY  
6-Cell

EC WINDBOND  
NPCE885LA0DX  
SPI

KEYBOARD

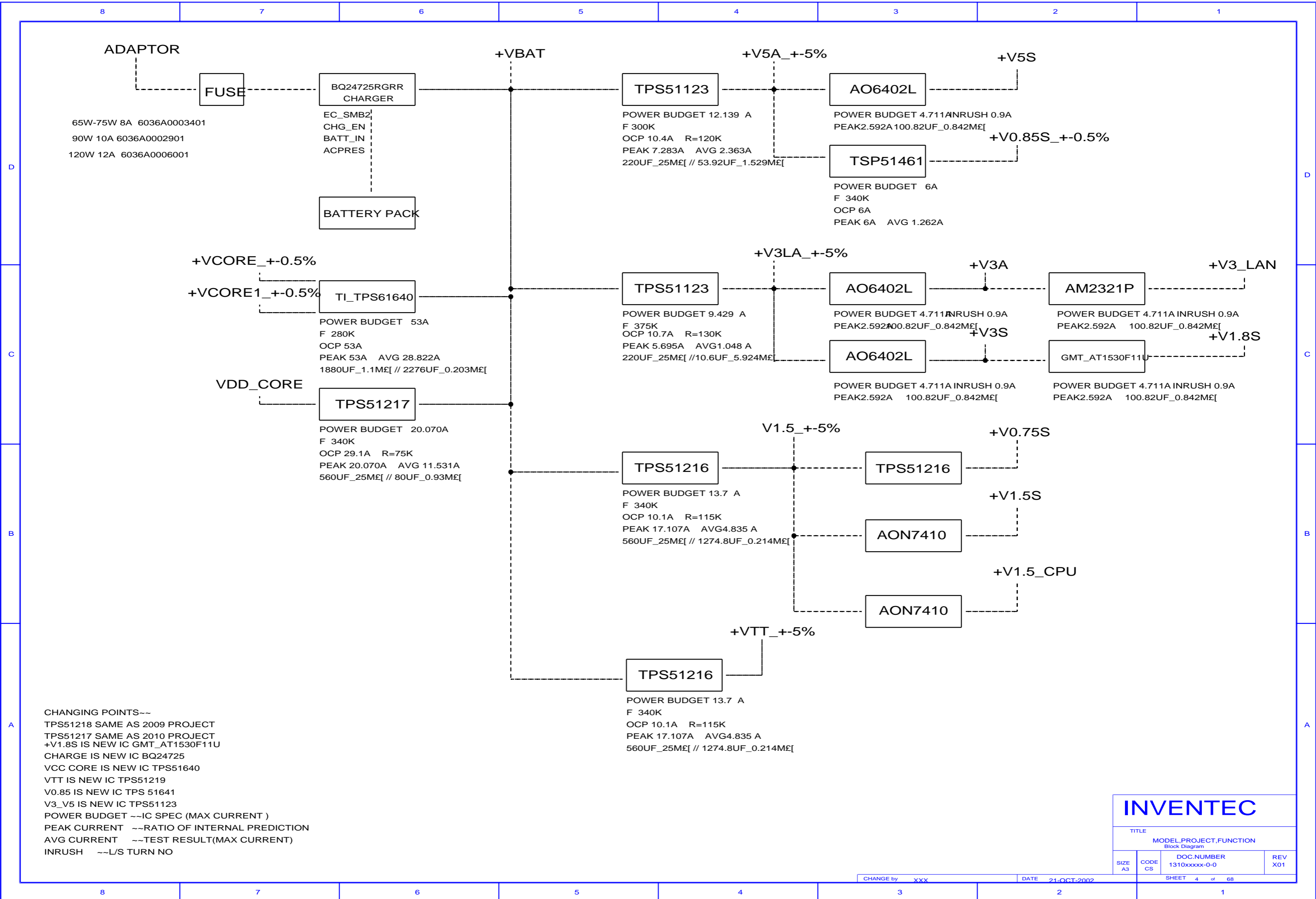
TOUCH PAD

SPI FLASH 8MB  
MXIC\_MX25L3206EM21

**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------



ADAPTOR  
 65W-75W 8A 6036A0003401  
 90W 10A 6036A0002901  
 120W 12A 6036A0006001

BQ24725RGR  
 CHARGER  
 EC\_SMB2  
 CHG\_EN  
 BATT\_IN  
 ACPRES

BATTERY PACK

+VCORE\_+-0.5%

+VCORE1\_+-0.5%

VDD\_CORE

CHANGING POINTS--  
 TPS51218 SAME AS 2009 PROJECT  
 TPS51217 SAME AS 2010 PROJECT  
 +V1.8S IS NEW IC GMT\_AT1530F11U  
 CHARGE IS NEW IC BQ24725  
 VCC CORE IS NEW IC TPS51640  
 VTT IS NEW IC TPS51219  
 V0.85 IS NEW IC TPS 51641  
 V3\_V5 IS NEW IC TPS51123  
 POWER BUDGET --IC SPEC (MAX CURRENT)  
 PEAK CURRENT --RATIO OF INTERNAL PREDICTION  
 AVG CURRENT --TEST RESULT(MAX CURRENT)  
 INRUSH --L/S TURN NO

<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	SHEET 4 of 68

FUSE6000  
 65W-75W 8A(6036A0003401)  
 90W 10A(6036A0002901)  
 120W 12A(6036A0006001)

D

C

B

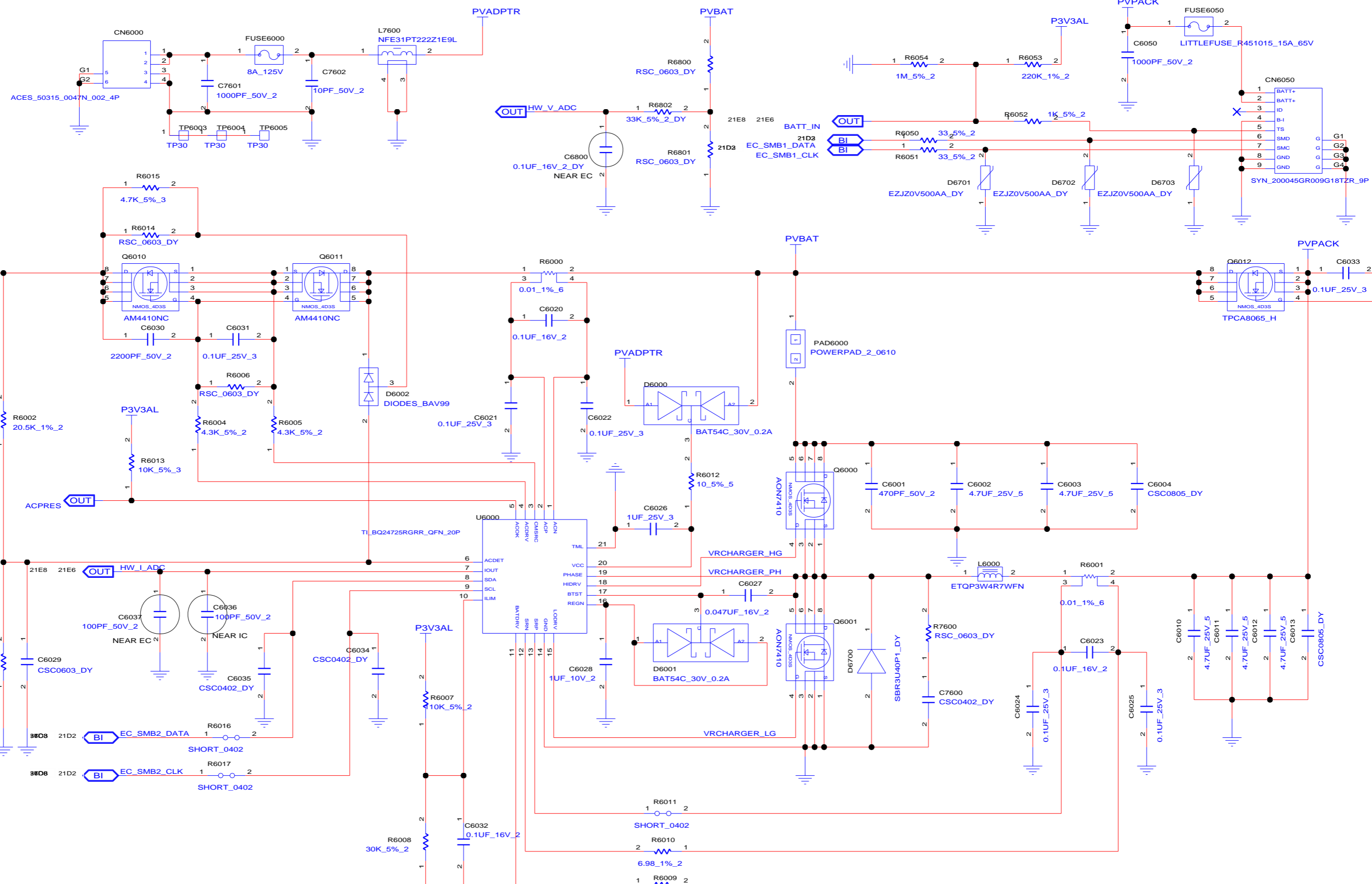
A

D

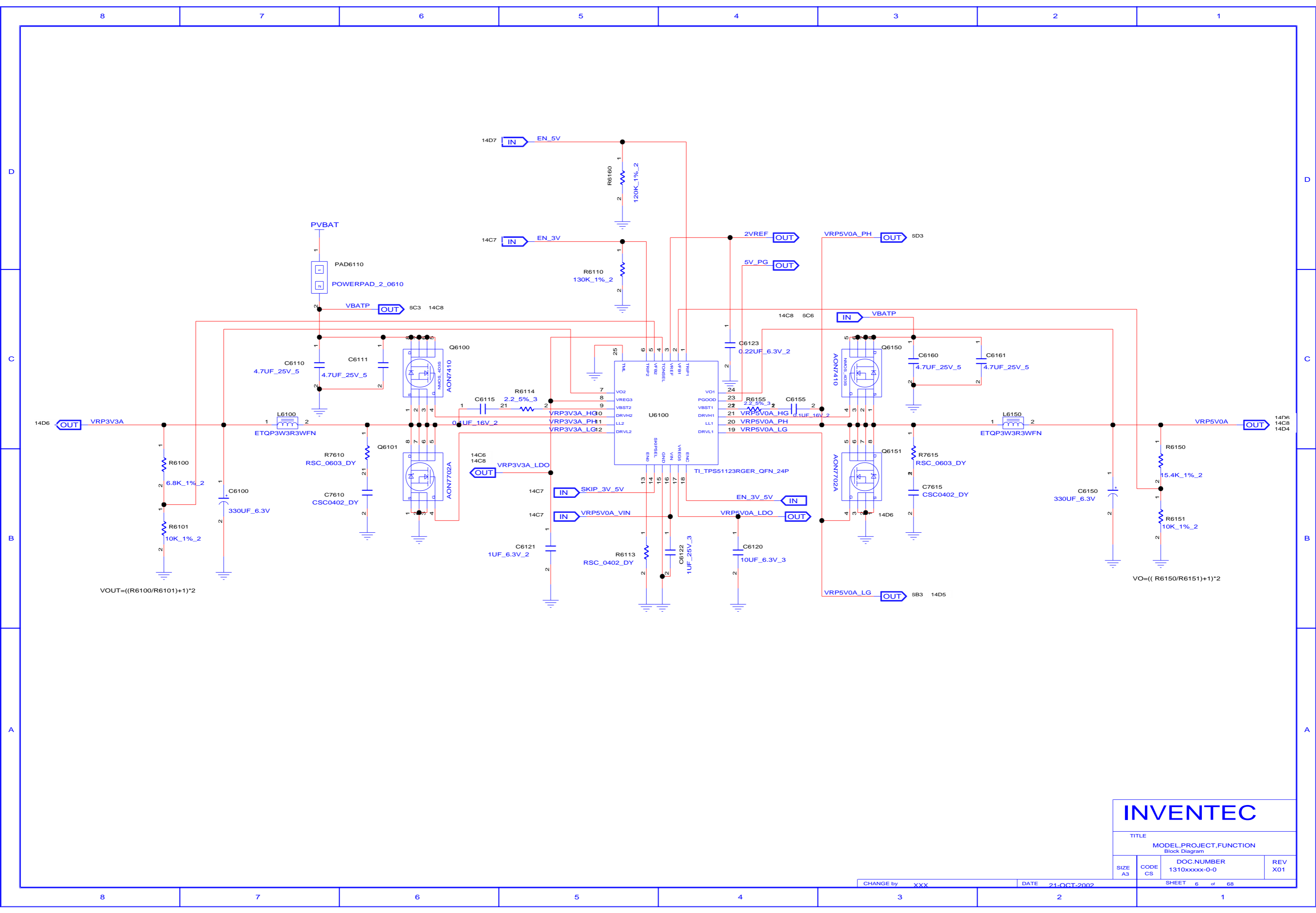
C

B

A



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	
SHEET 5 of 68			

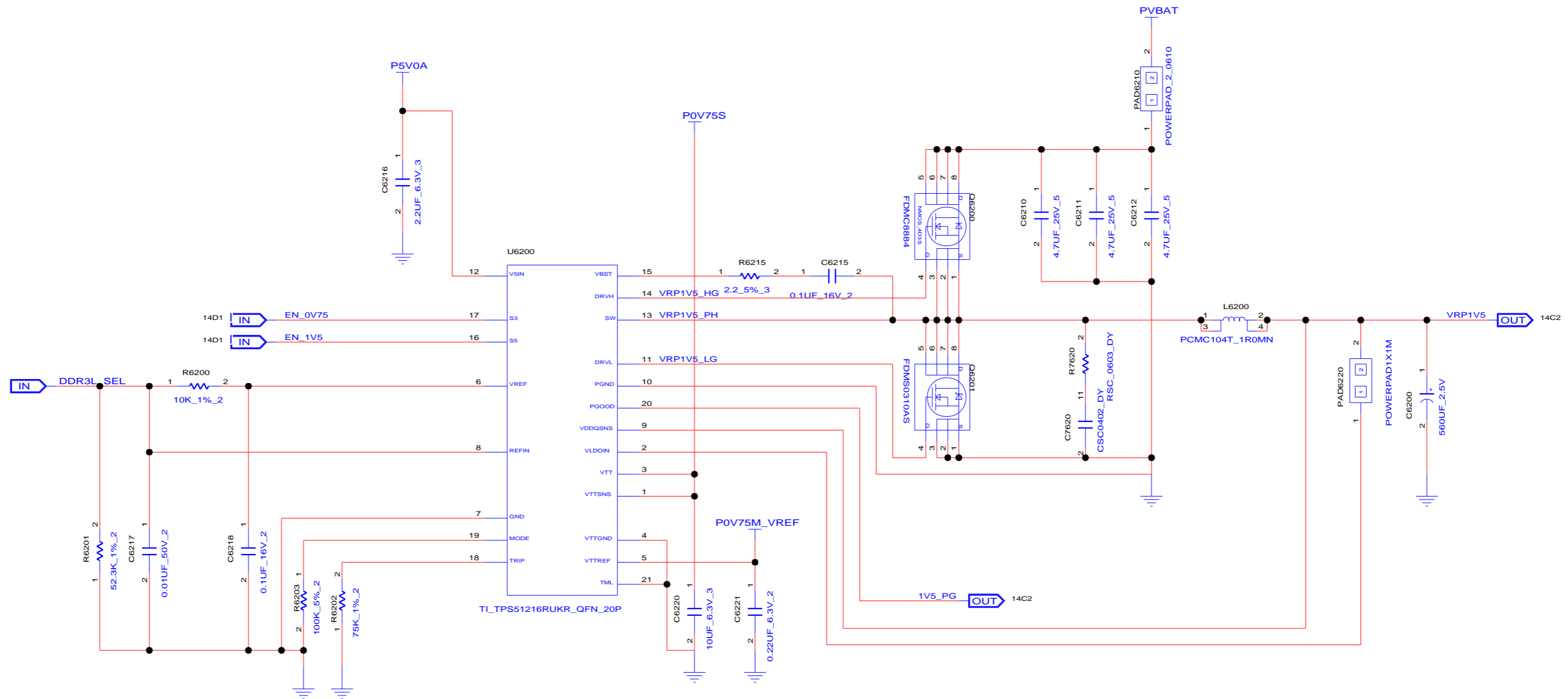


# INVENTEC

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 6 of 68

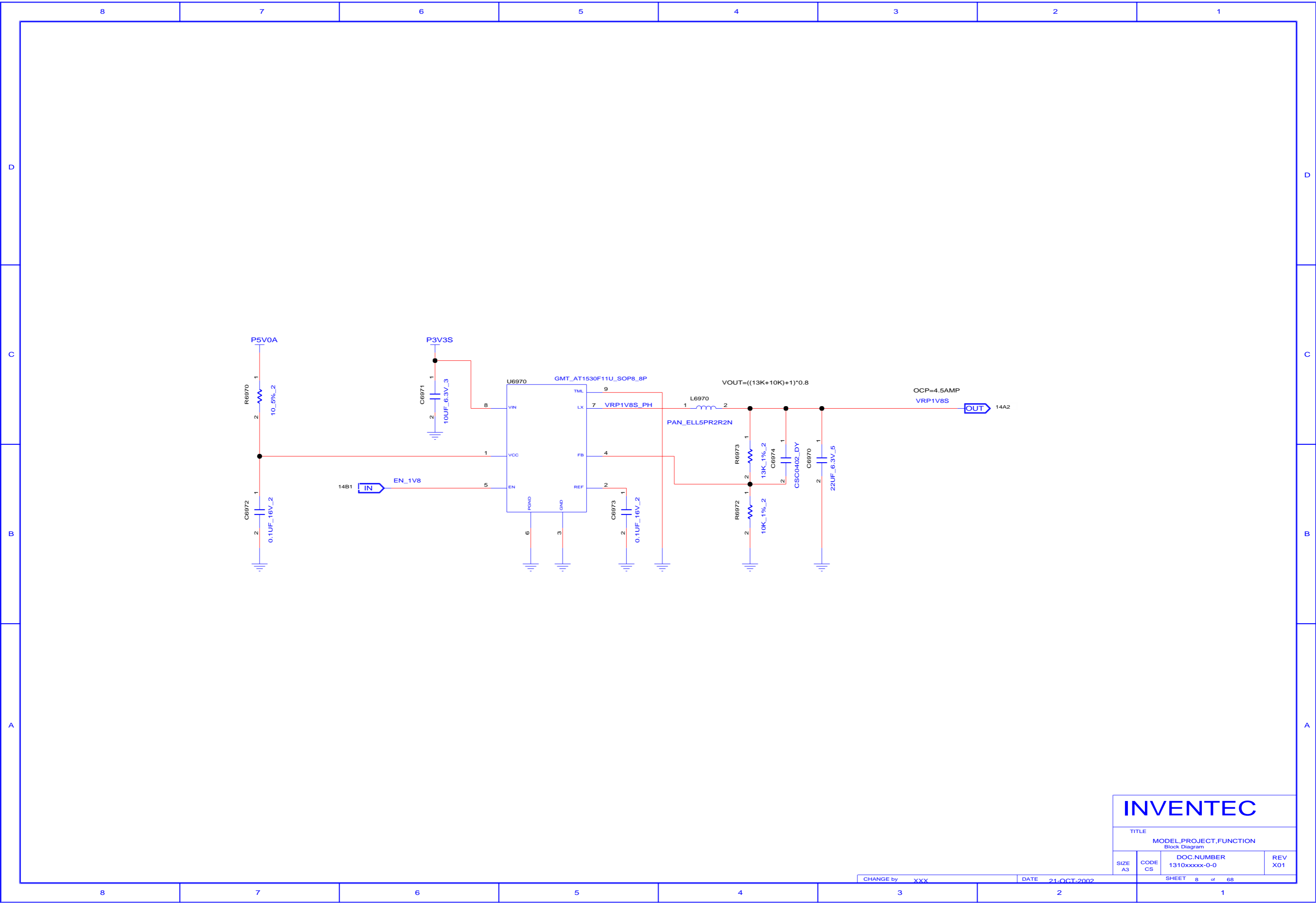


$$V_{OUT} = V_{REFIN} = 1.8 * (R_{6201} / (R_{6200} + R_{6201}))$$
 MODE=100KOHM:TRACKING DISCHARGE

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			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01



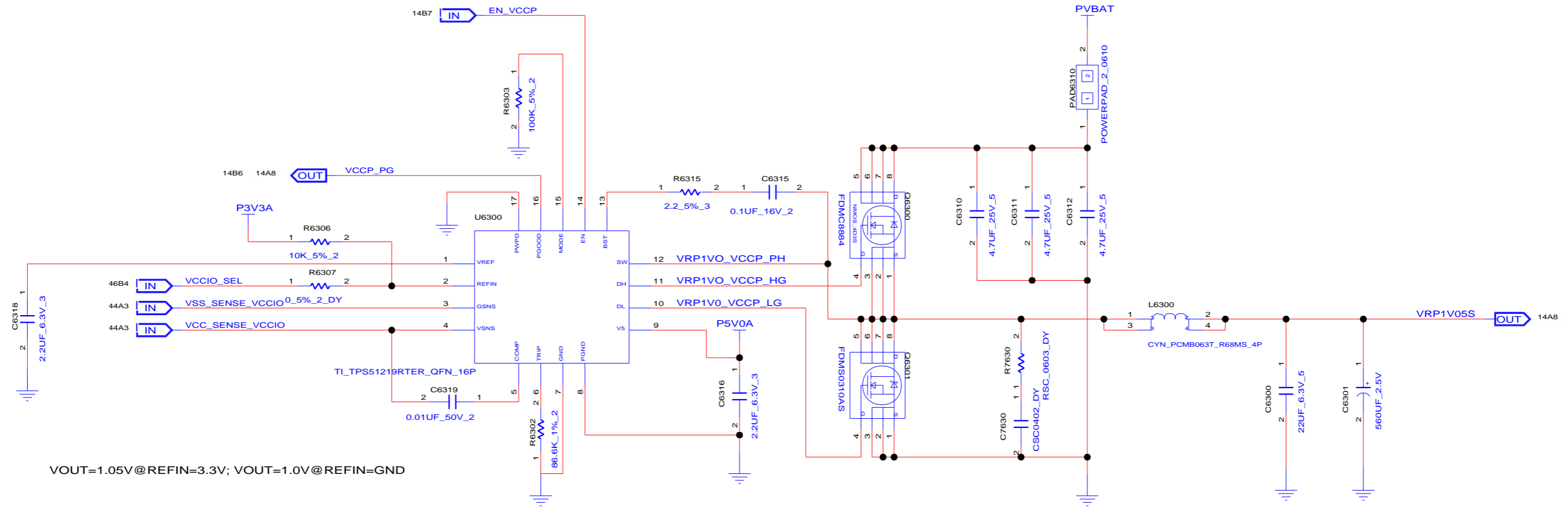
# INVENTEC

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

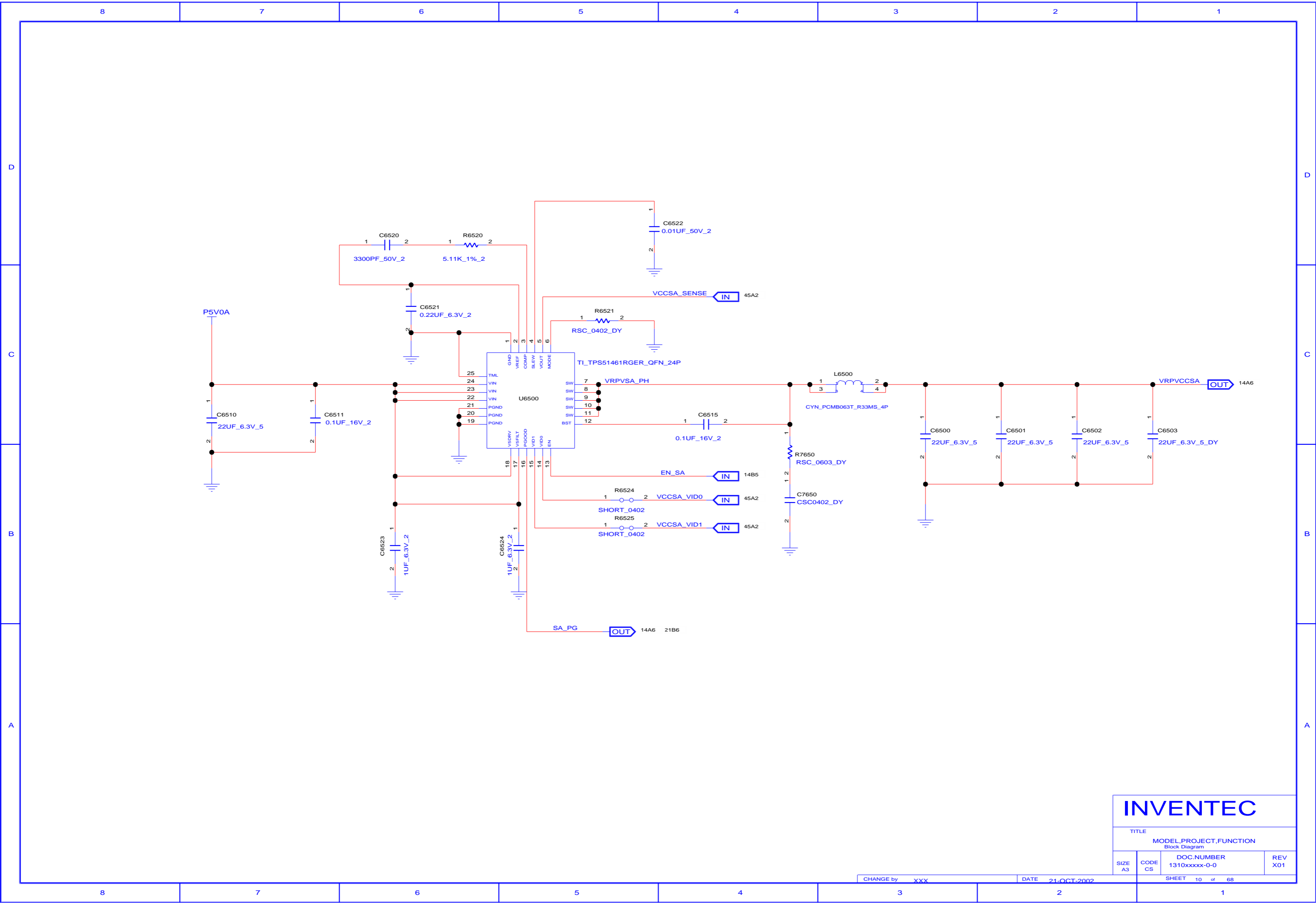
CHANGE by XXX DATE 21-OCT-2002 SHEET 8 of 68





**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

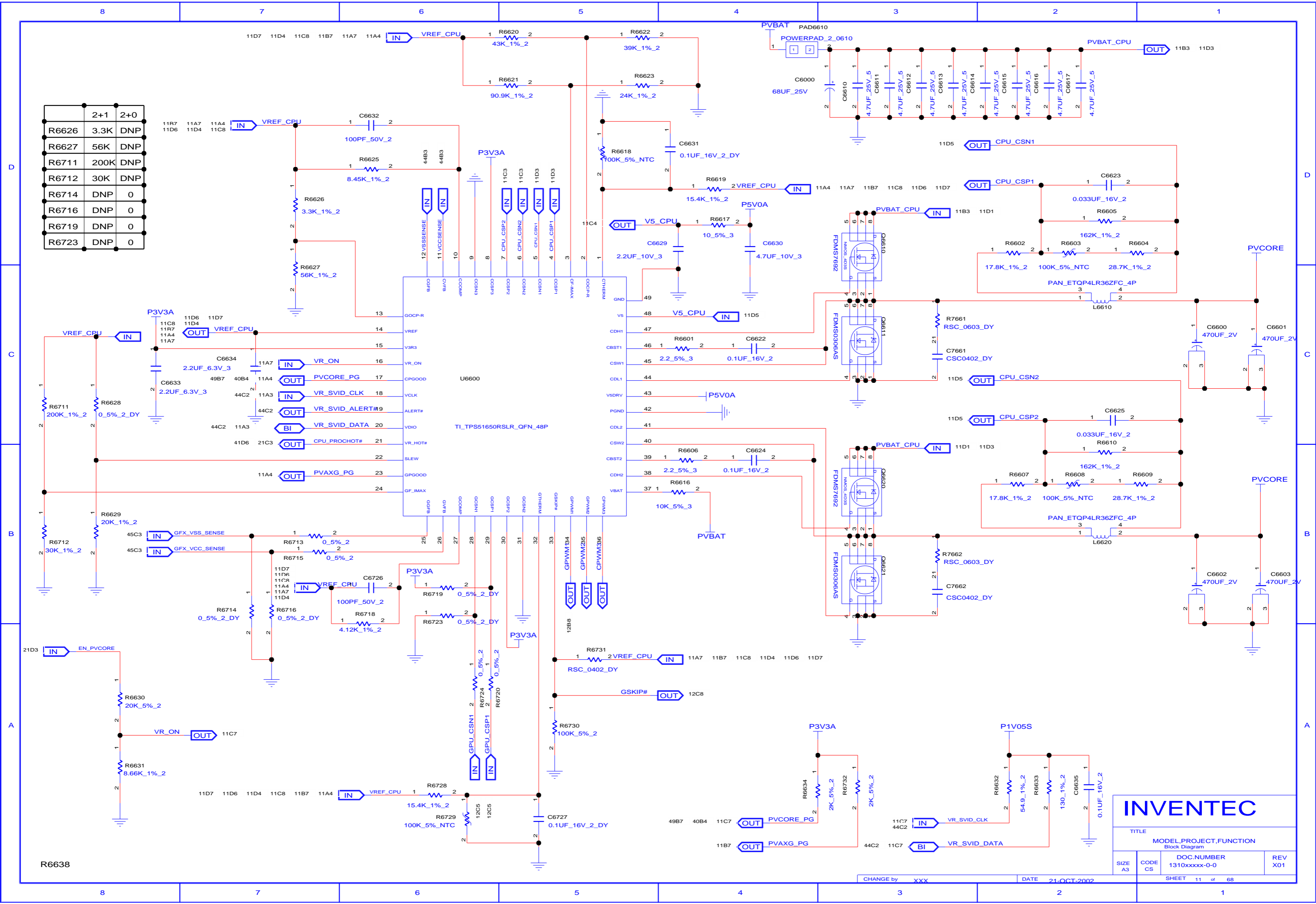


# INVENTEC

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

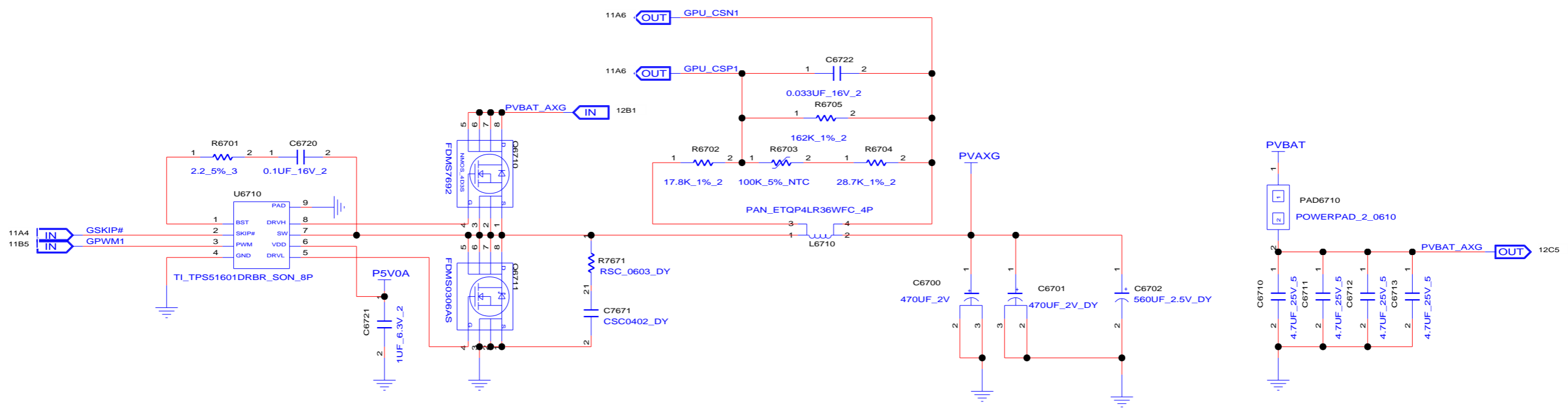
	2+1	2+0
R6626	3.3K	DNP
R6627	56K	DNP
R6711	200K	DNP
R6712	30K	DNP
R6714	DNP	0
R6716	DNP	0
R6719	DNP	0
R6723	DNP	0



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	11 of 68

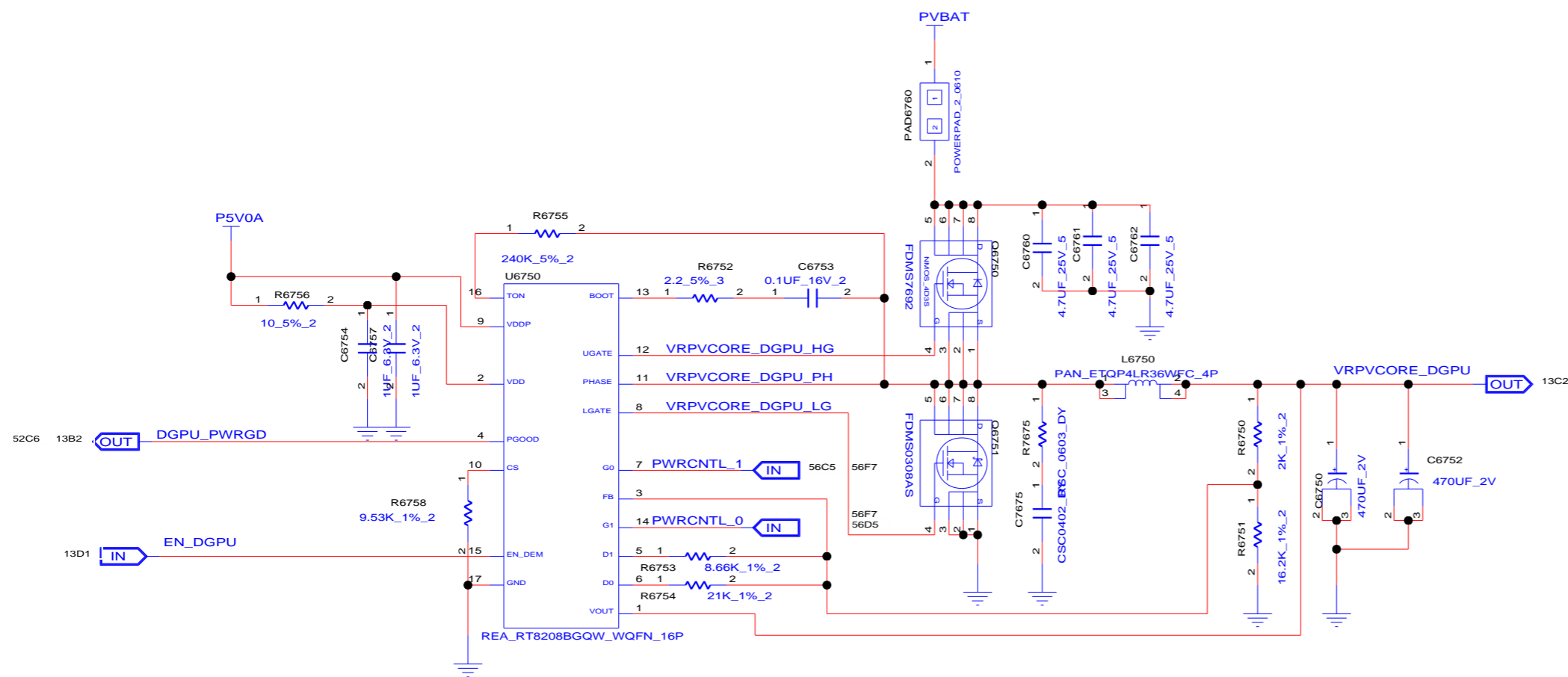
R6638

CHANGE by XXX DATE 21-OCT-2002 SHEET 11 of 68



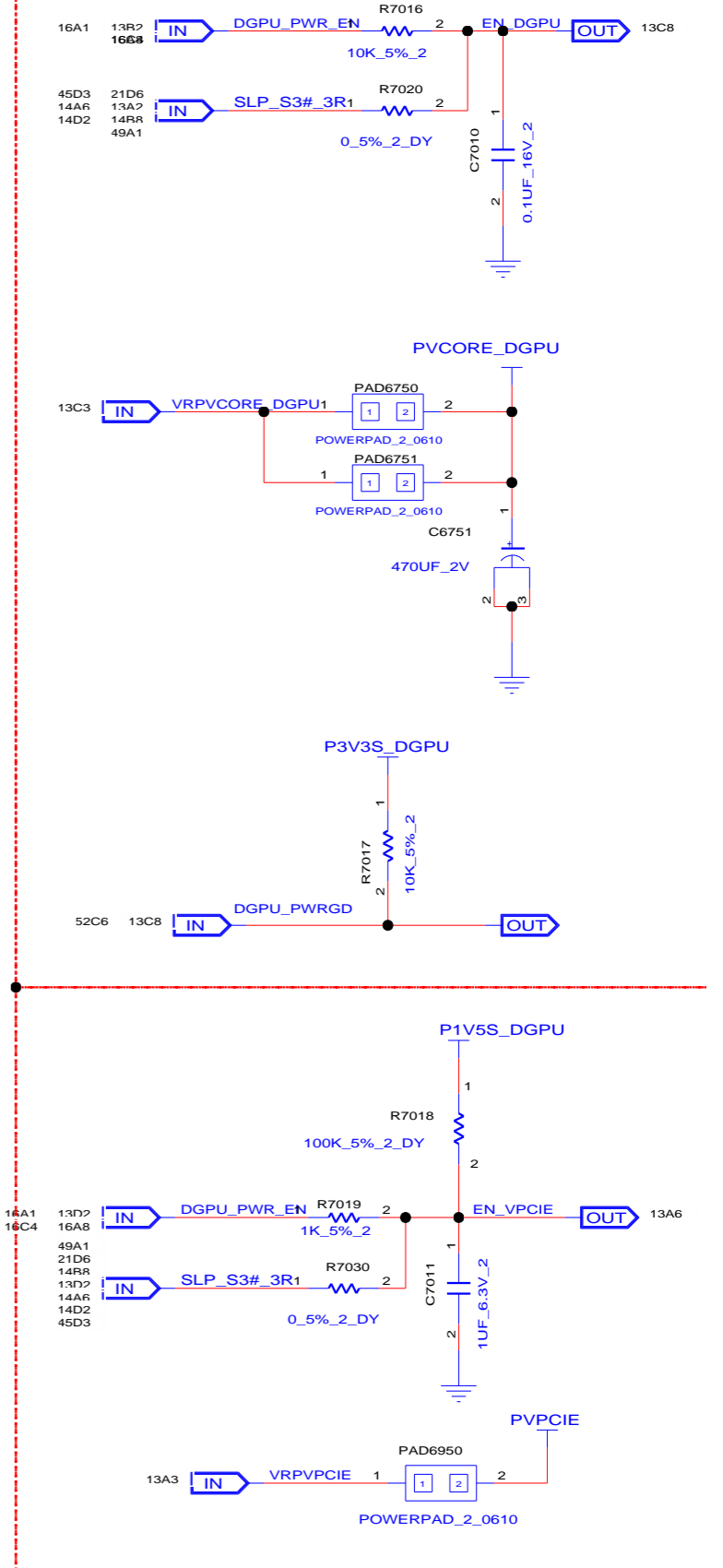
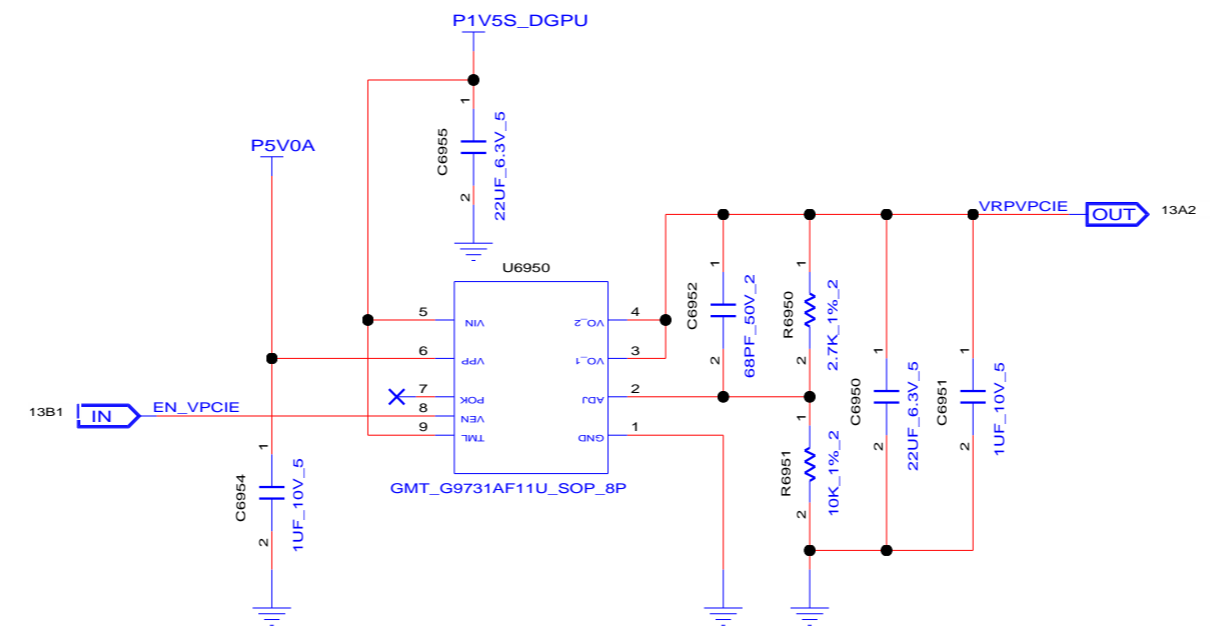
# INVENTEC

TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01



P.S. R6750(R1) R6751(R2) R6753(R3) R6754(R4)

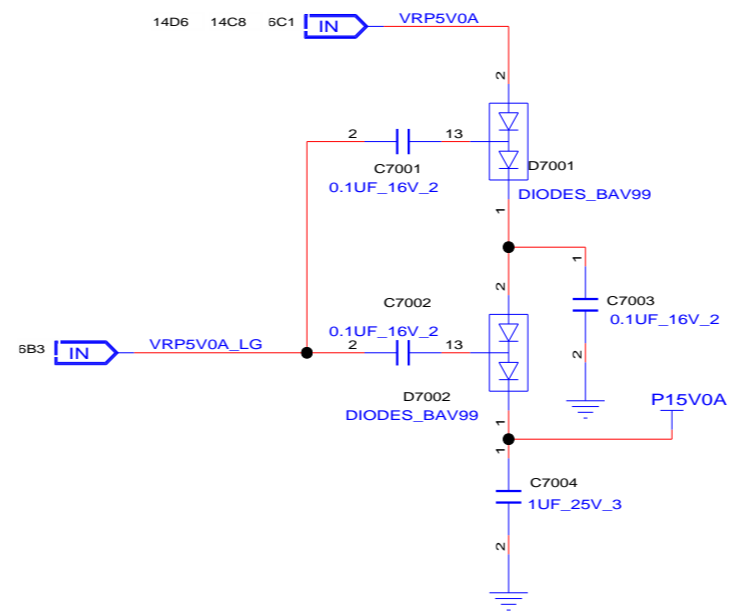
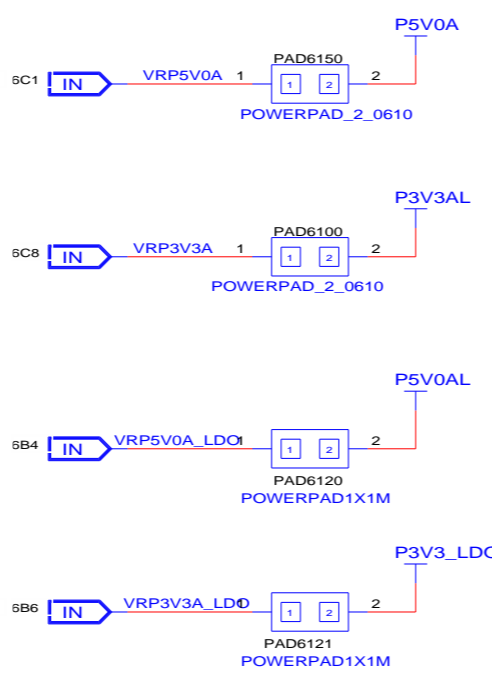
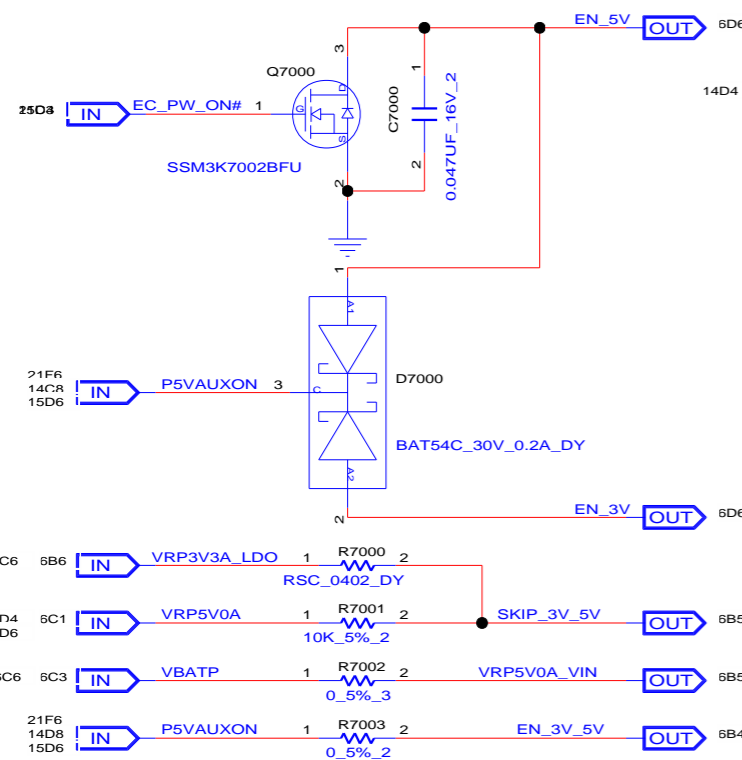
RT8208A	RT8208B	Output Voltage Equation			
G0	G1	G0	G1		
0	0	1	1	$V_{OUT} = \frac{R1+R2}{R2} \times 0.75$	
1	0	0	1	$V_{OUT} = \frac{R1+(R2//R3)}{(R2//R3)} \times 0.75$	
0	1	1	0	$V_{OUT} = \frac{R1+(R2//R4)}{(R2//R4)} \times 0.75$	
1	1	0	0	$V_{OUT} = \frac{R1+(R2//R3//R4)}{(R2//R3//R4)} \times 0.75$	



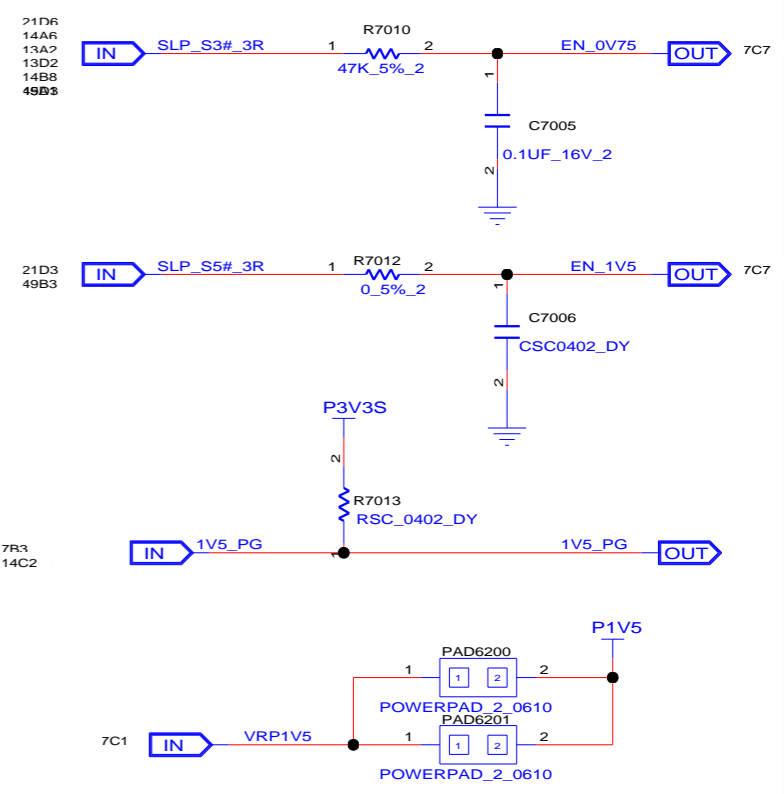
**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01

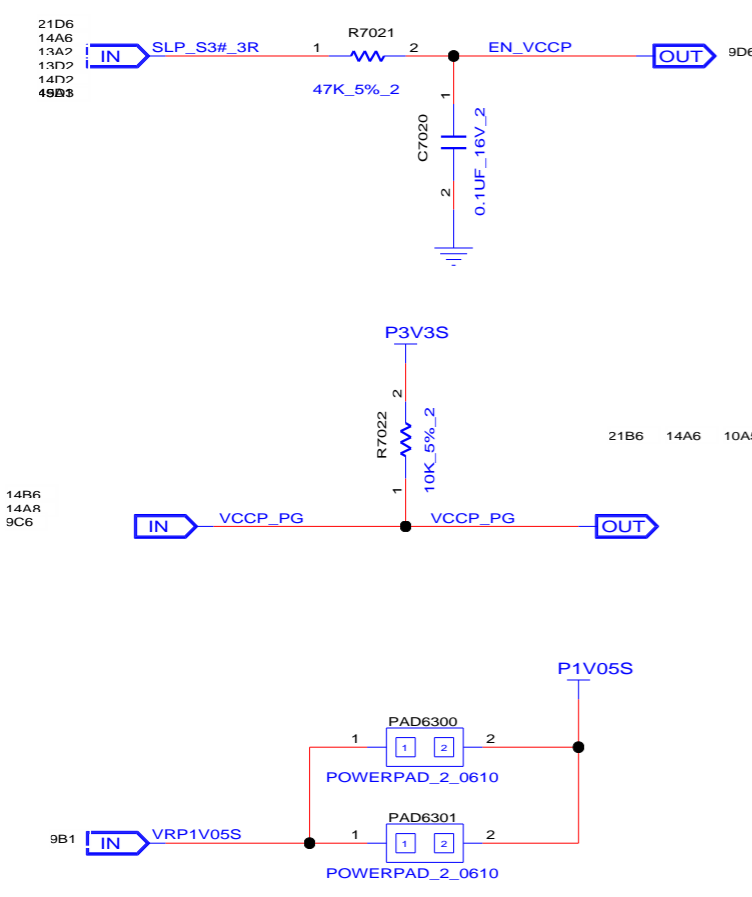
### 3V & 5V



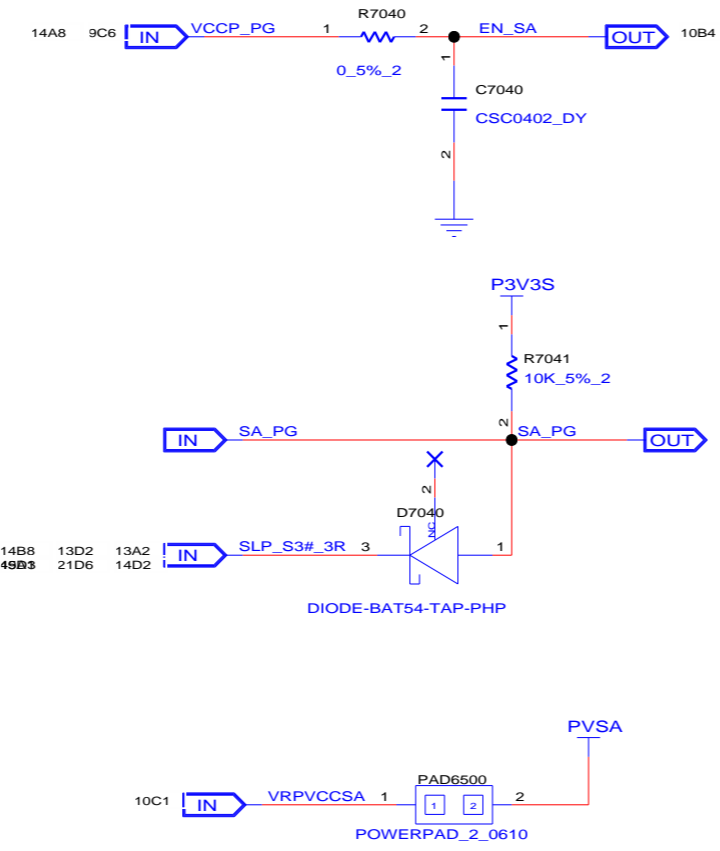
### DDR\_P1V5



### VCCIO

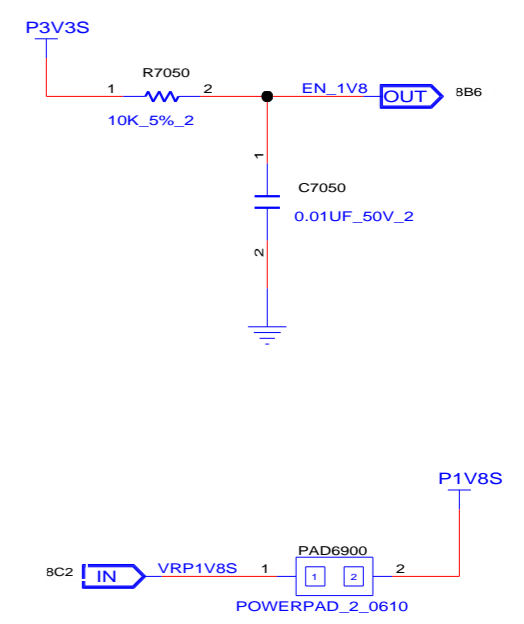


### VCCSA



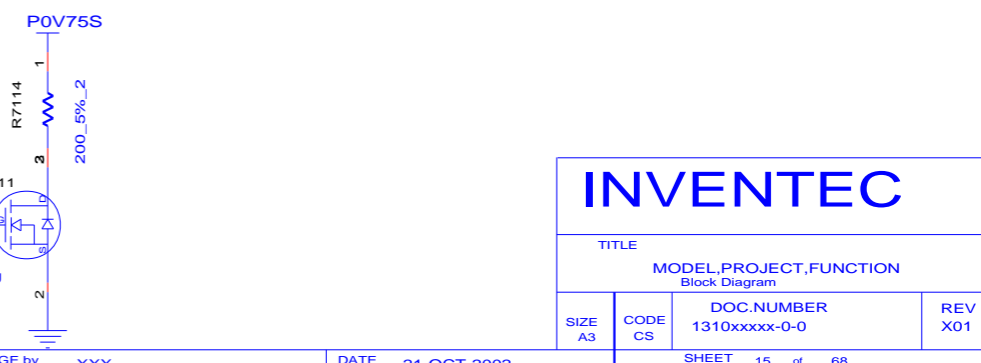
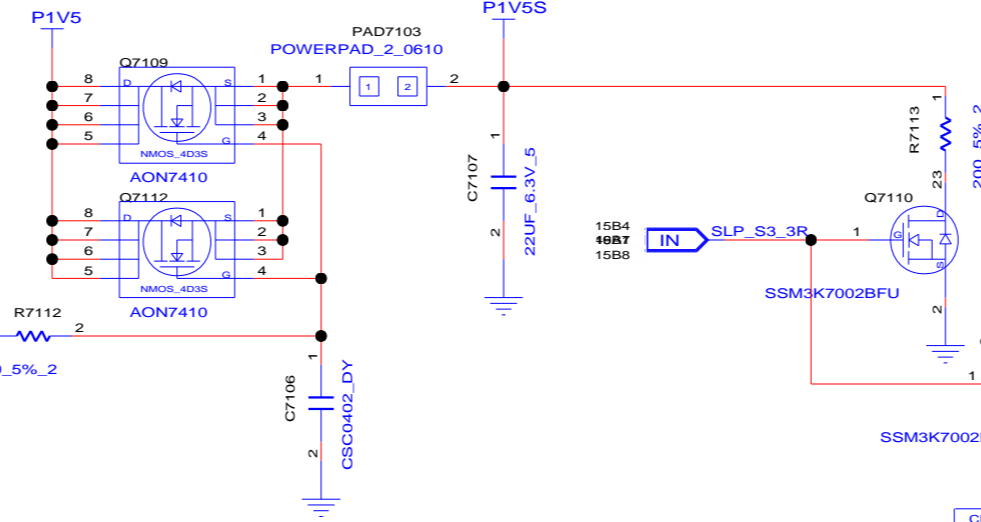
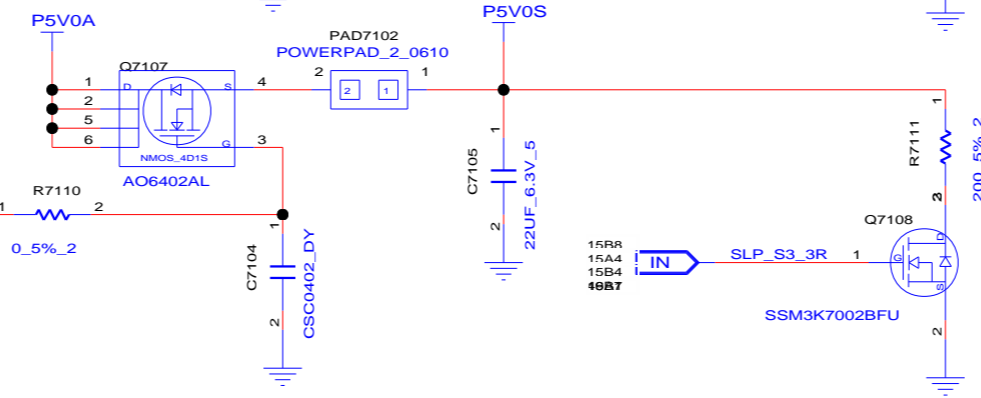
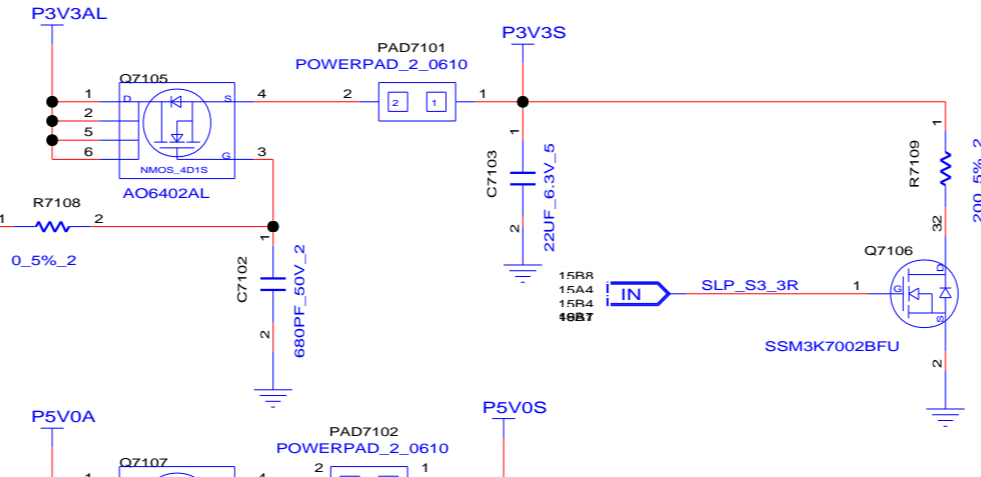
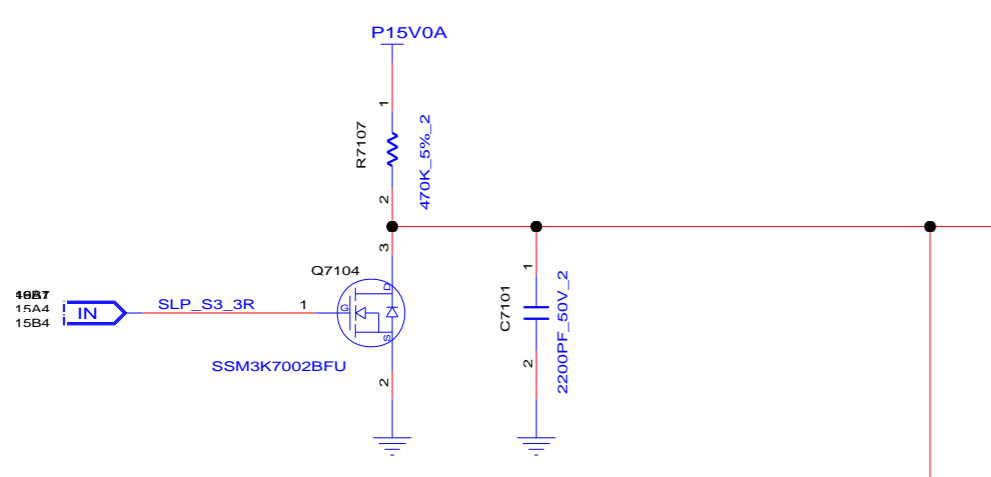
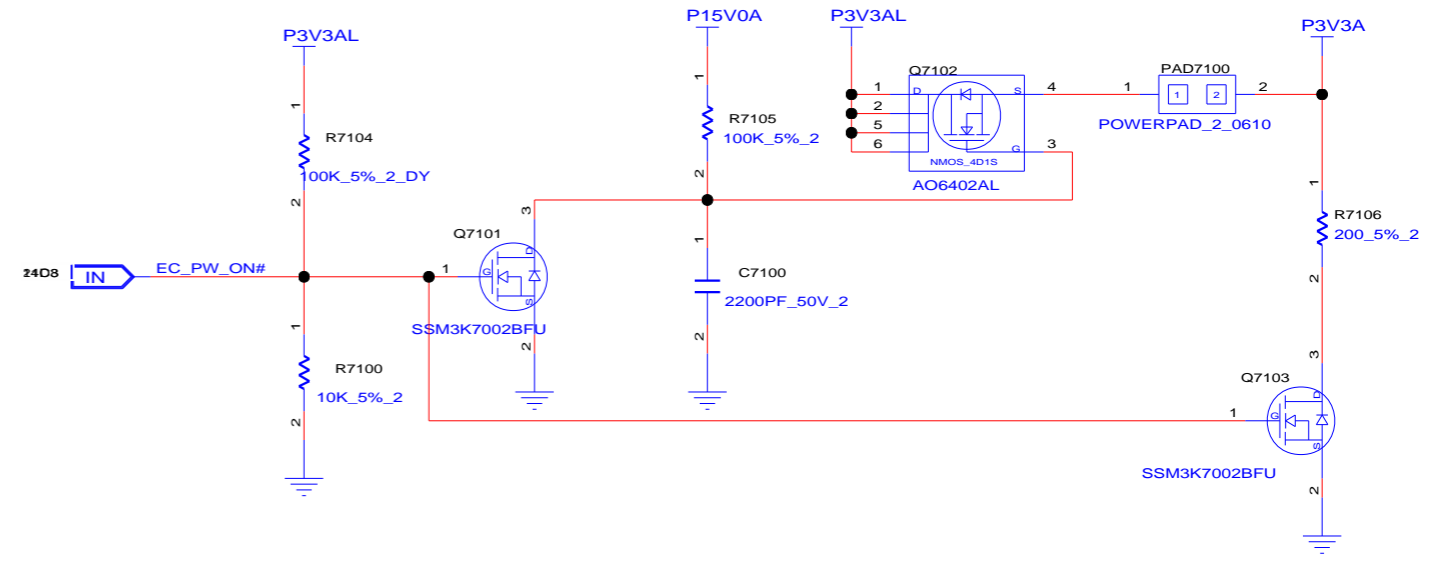
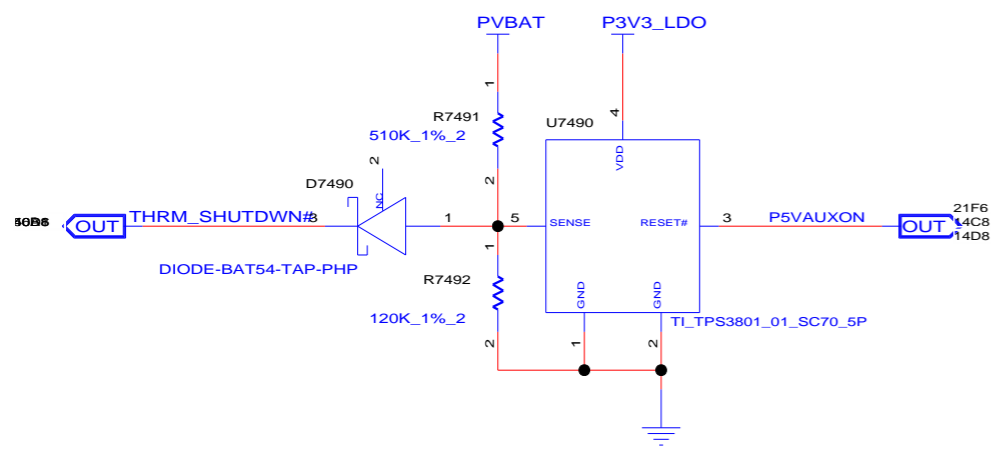
### DGPU

### P1V8S

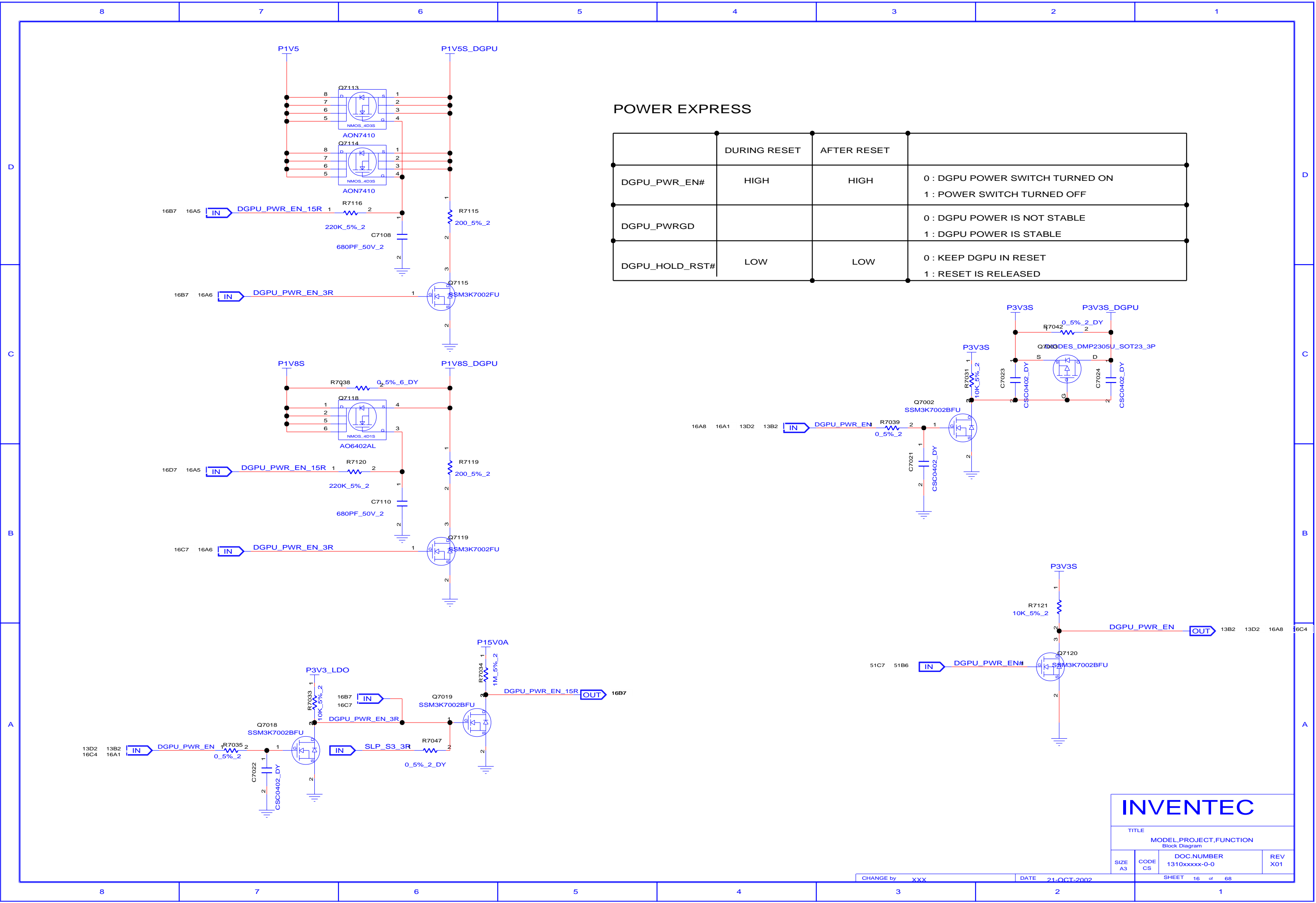


**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
SHEET		14 of 68	



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	15 of 68



**POWER EXPRESS**

	DURING RESET	AFTER RESET	
DGPU_PWR_EN#	HIGH	HIGH	0 : DGPU POWER SWITCH TURNED ON 1 : POWER SWITCH TURNED OFF
DGPU_PWRGD			0 : DGPU POWER IS NOT STABLE 1 : DGPU POWER IS STABLE
DGPU_HOLD_RST#	LOW	LOW	0 : KEEP DGPU IN RESET 1 : RESET IS RELEASED

**INVENTEC**

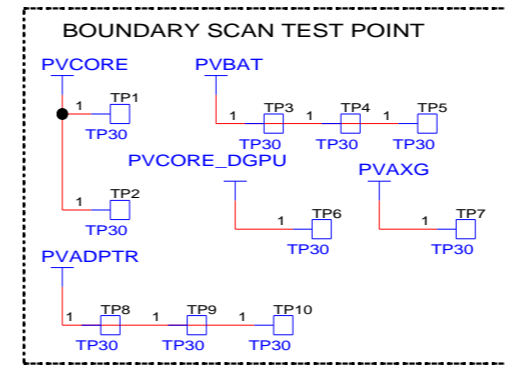
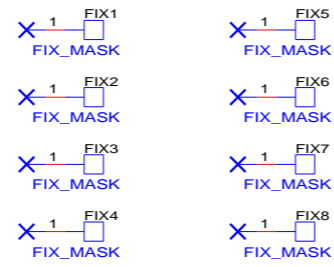
TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 16 of 68



REFERENCE 0~49(PCB SCREW)



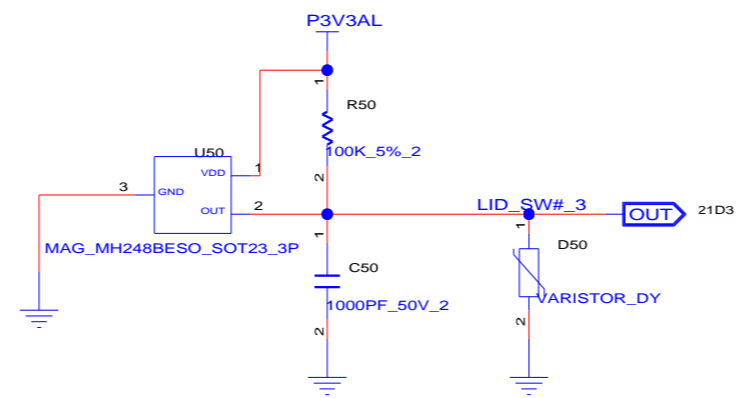
**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

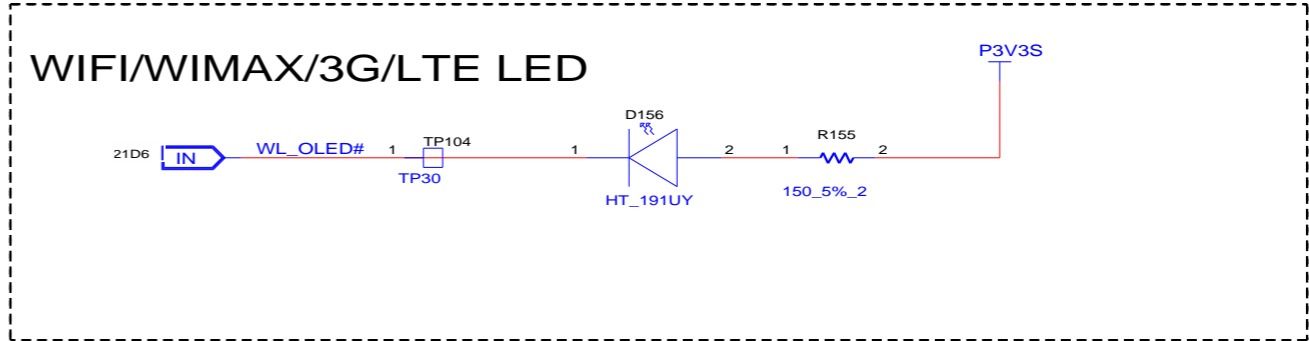
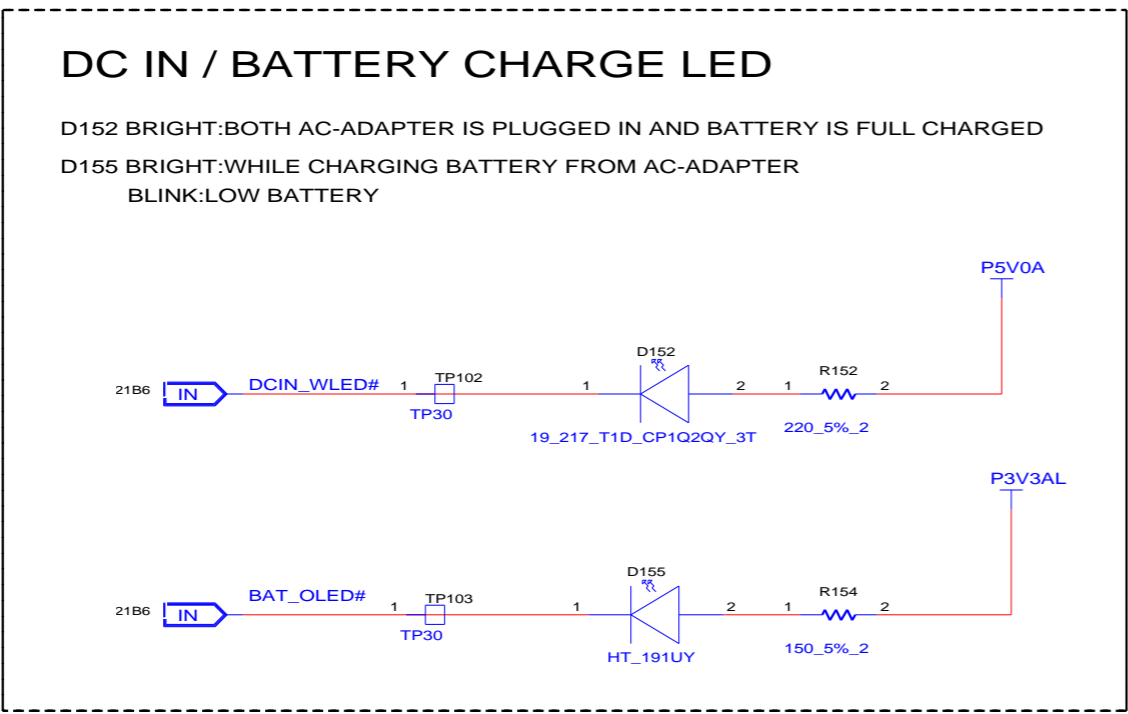
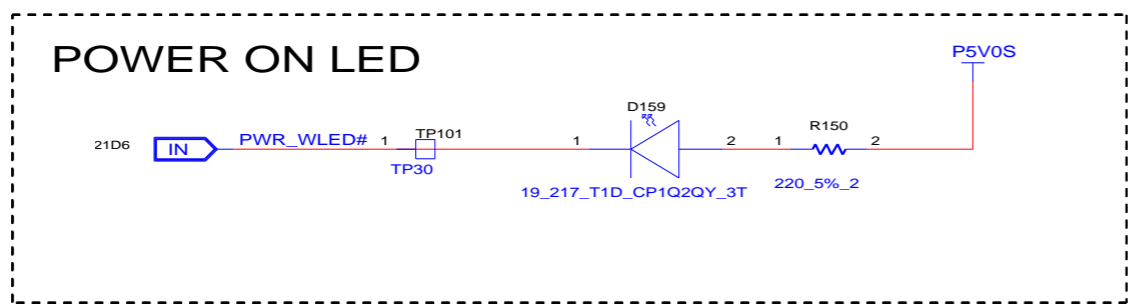
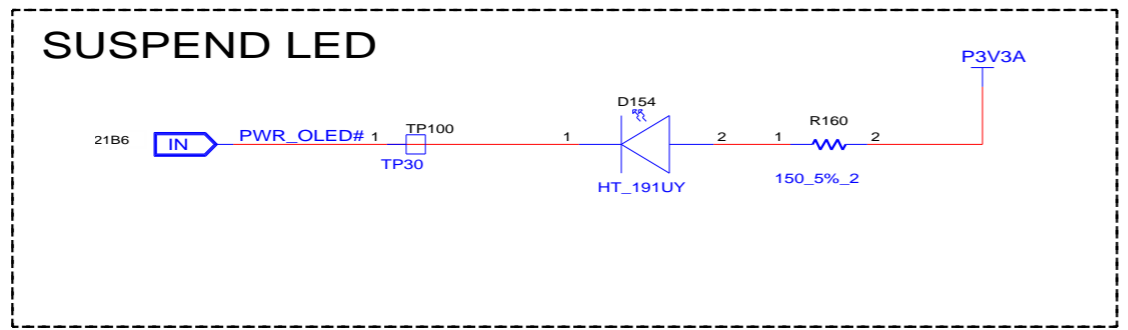
CHANGE by XXX DATE 21-OCT-2002 SHEET 17 of 68

REFERENCE 50-99(HALL SENSOR)



<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01

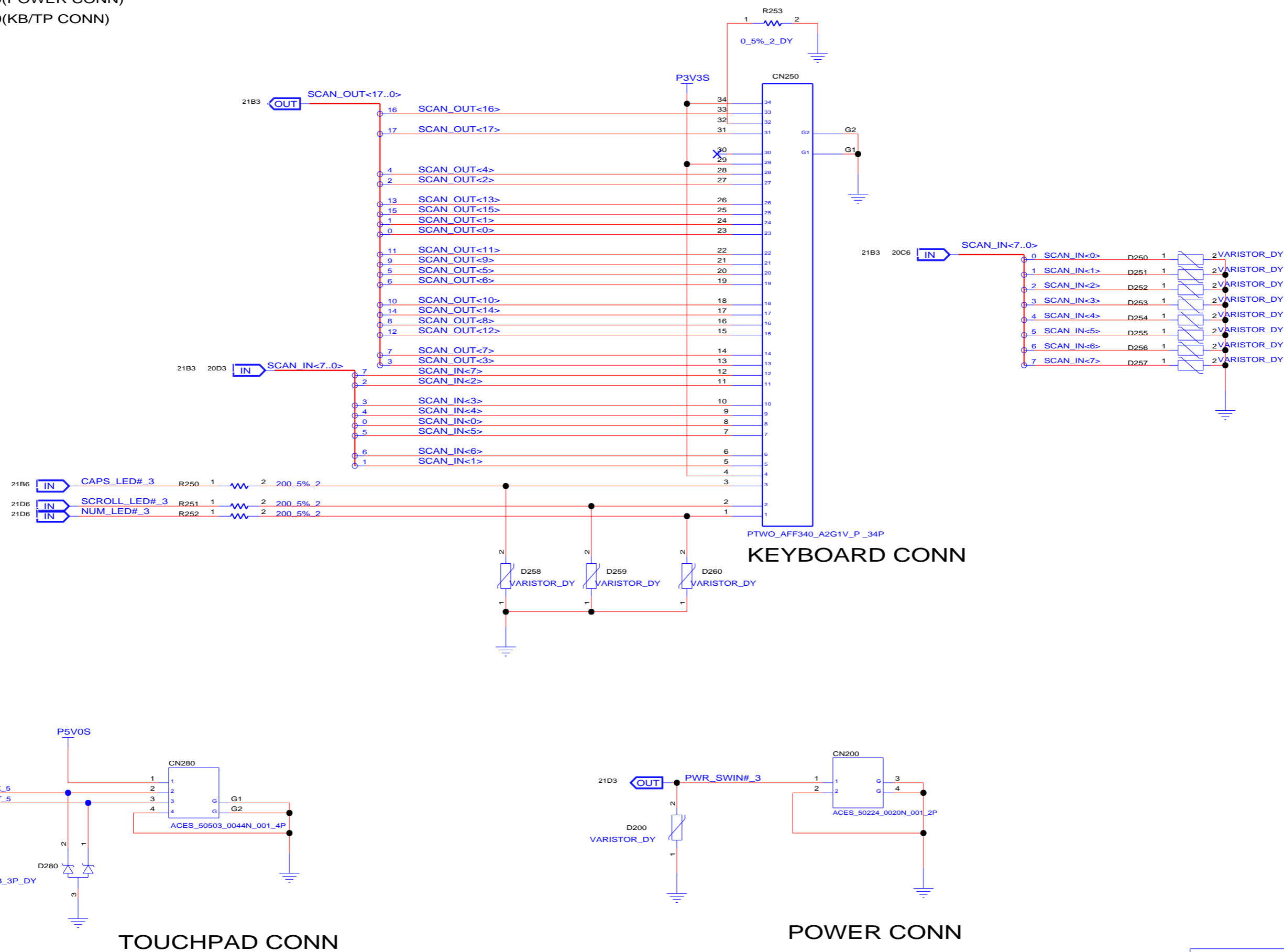
REFERENCE 100~199(LED)



<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

REFERENCE 200~249(POWER CONN)

REFERENCE 250~299(KB/TP CONN)



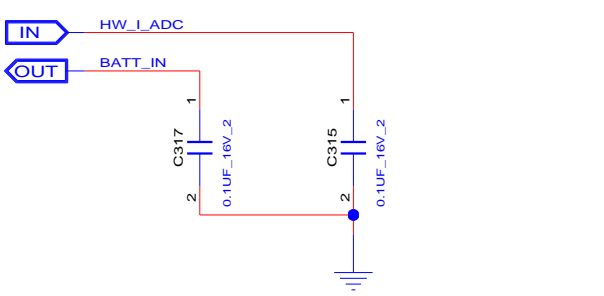
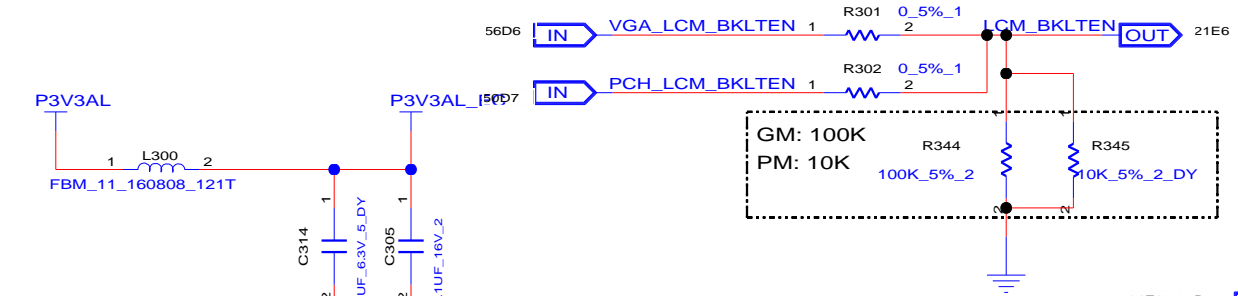
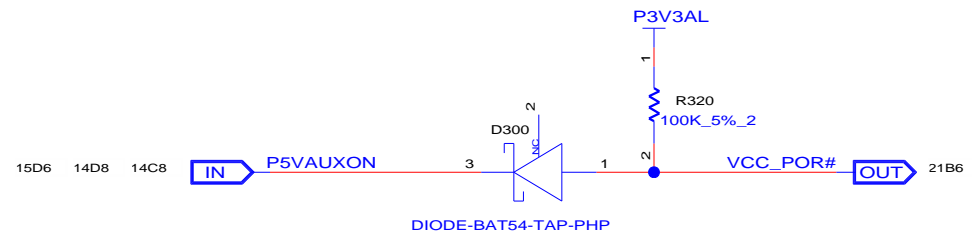
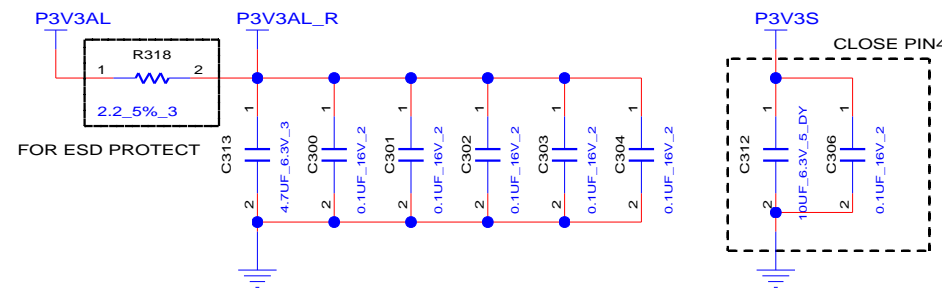
KEYBOARD CONN

TOUCHPAD CONN

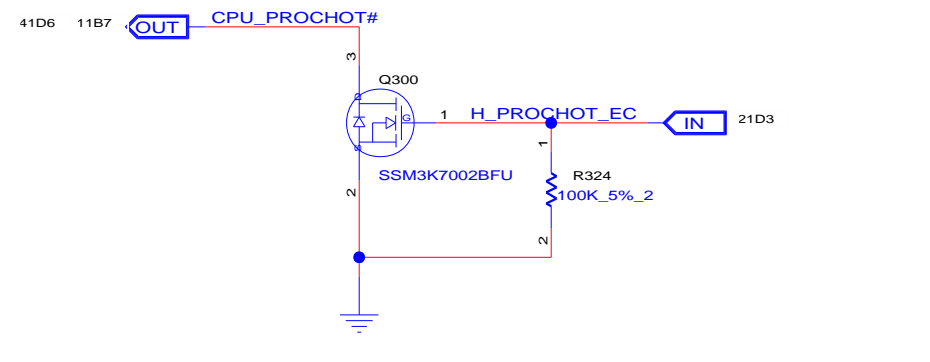
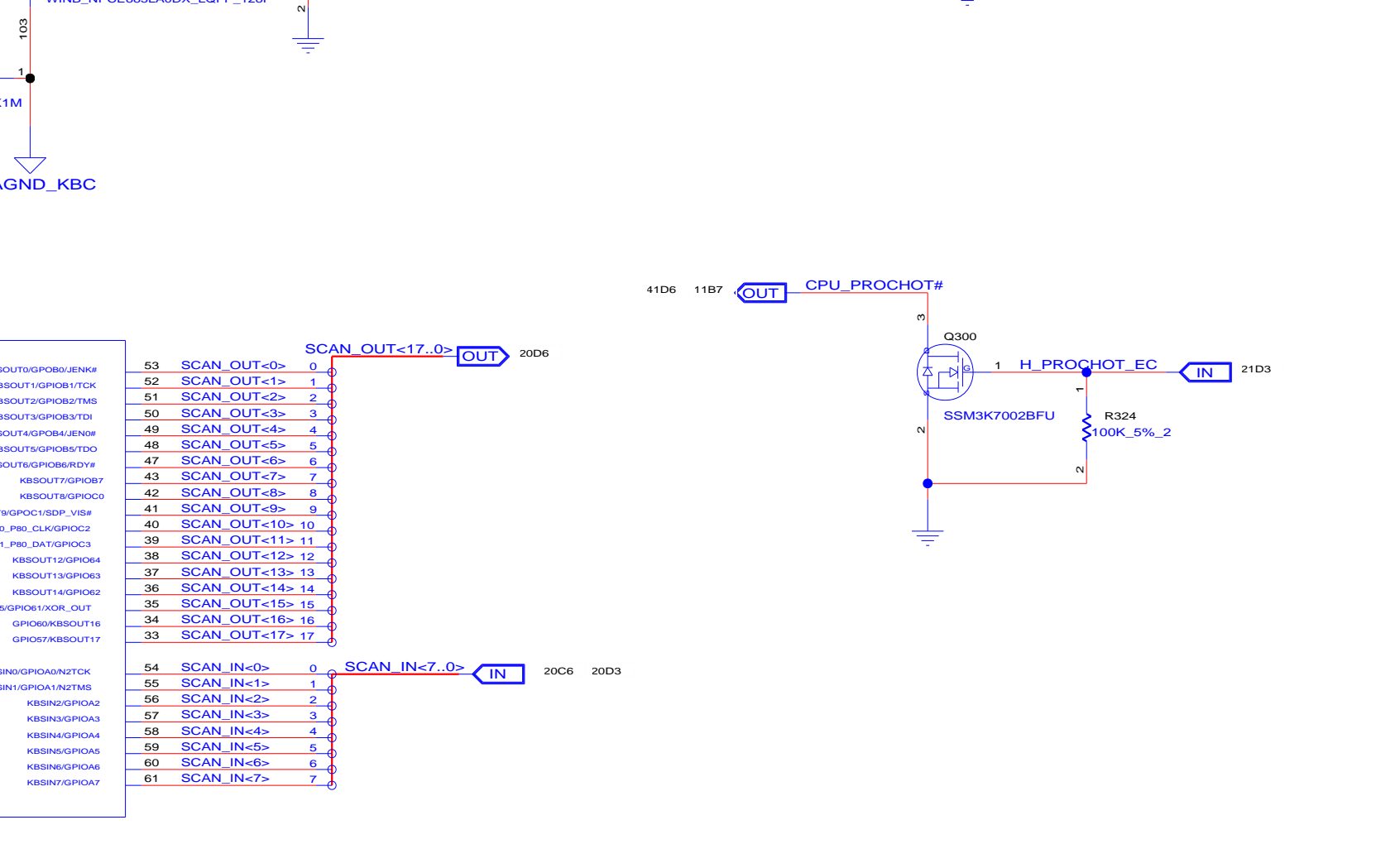
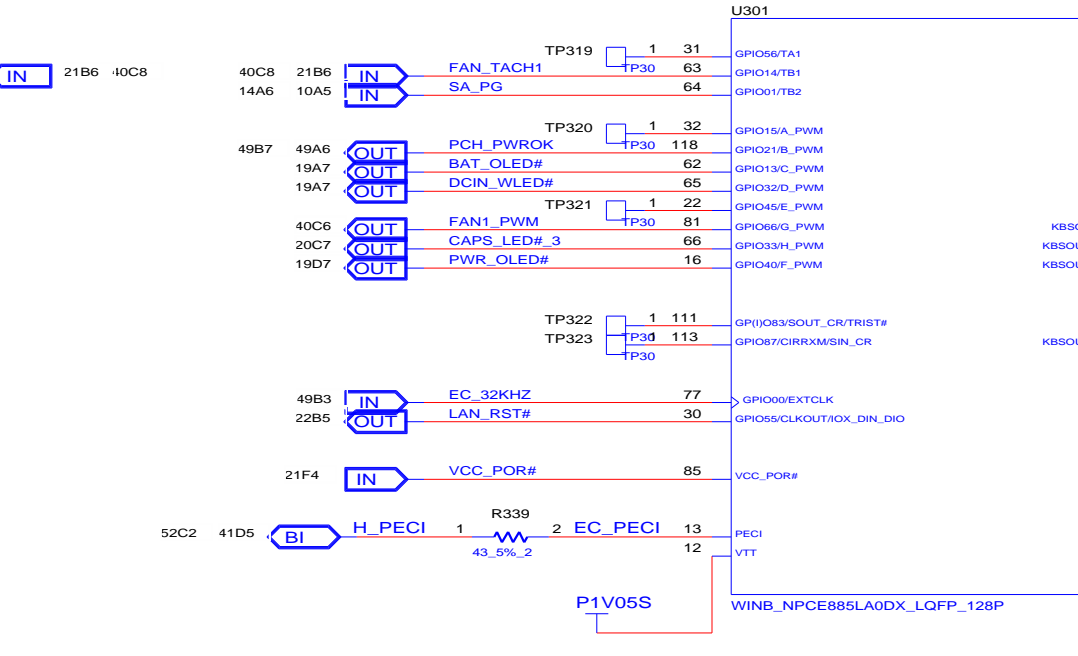
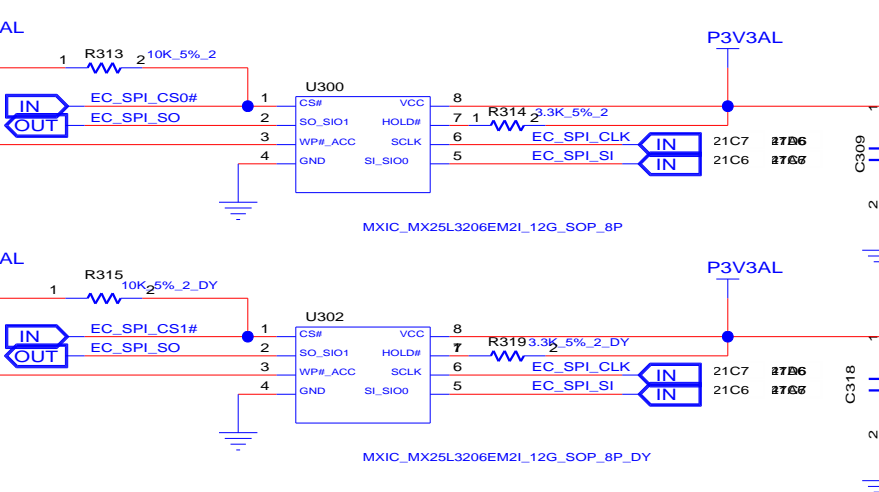
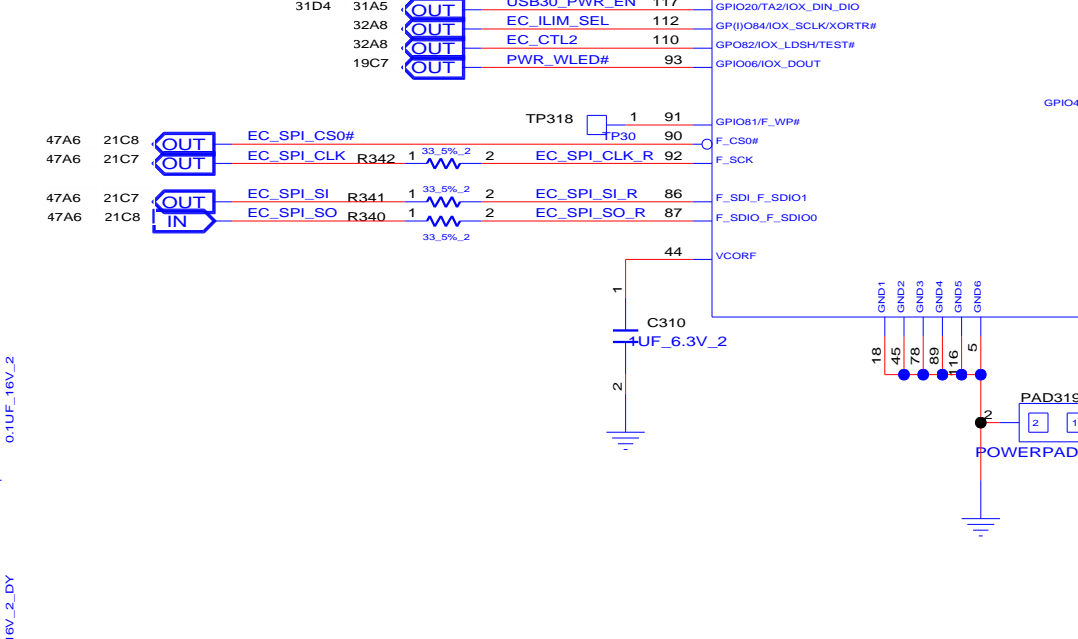
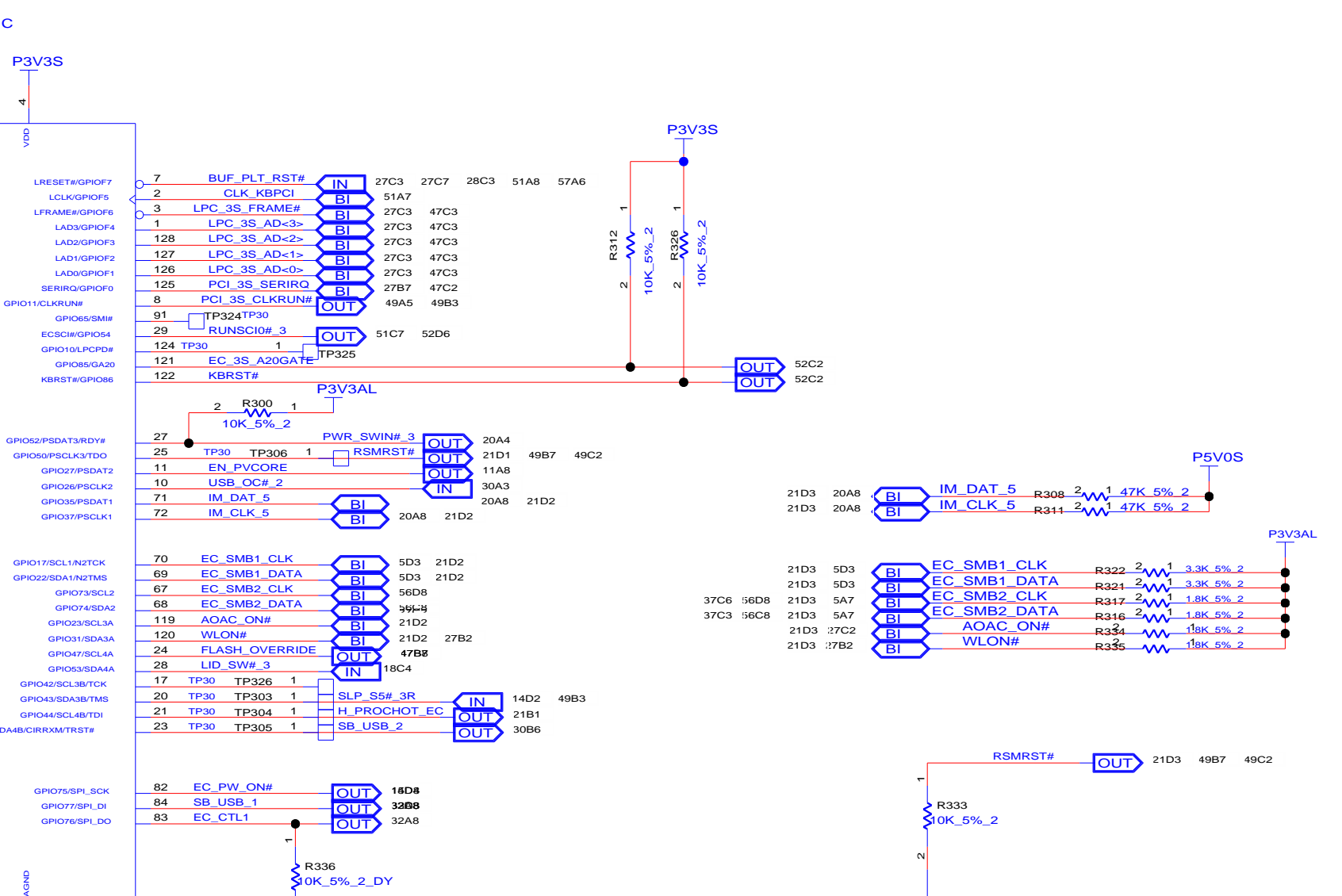
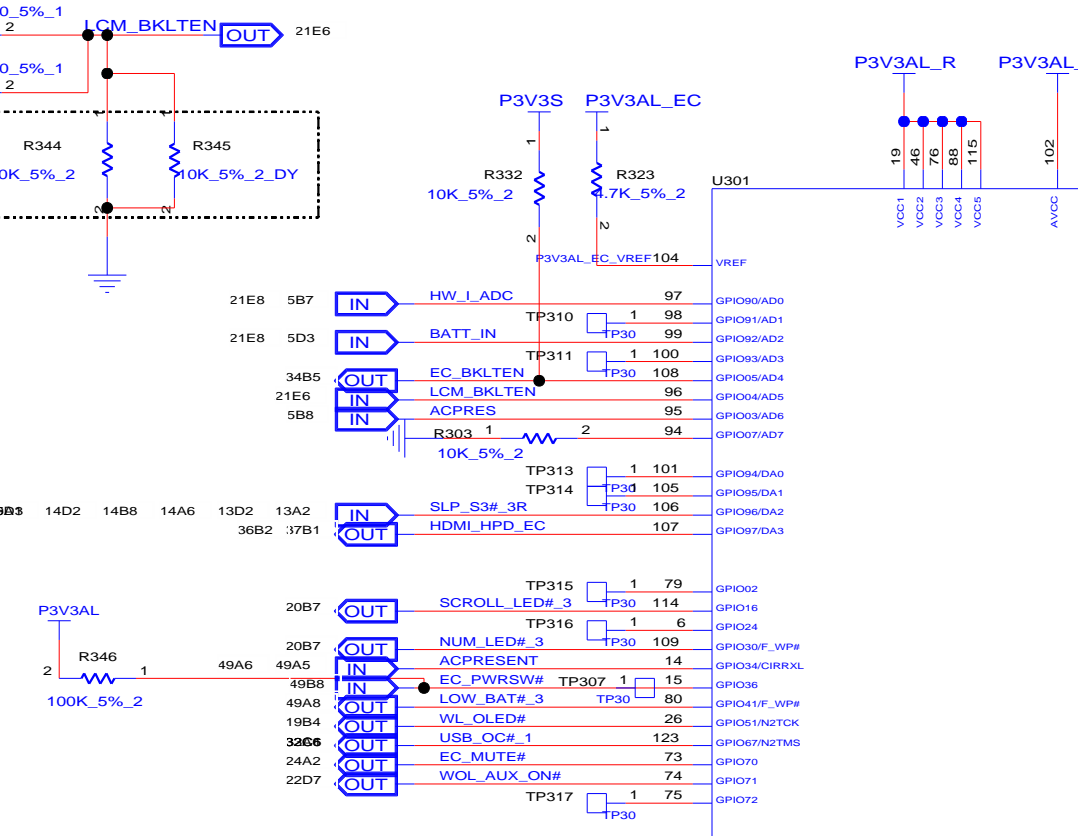
POWER CONN

<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

REFERENCE 300~389(KBC)



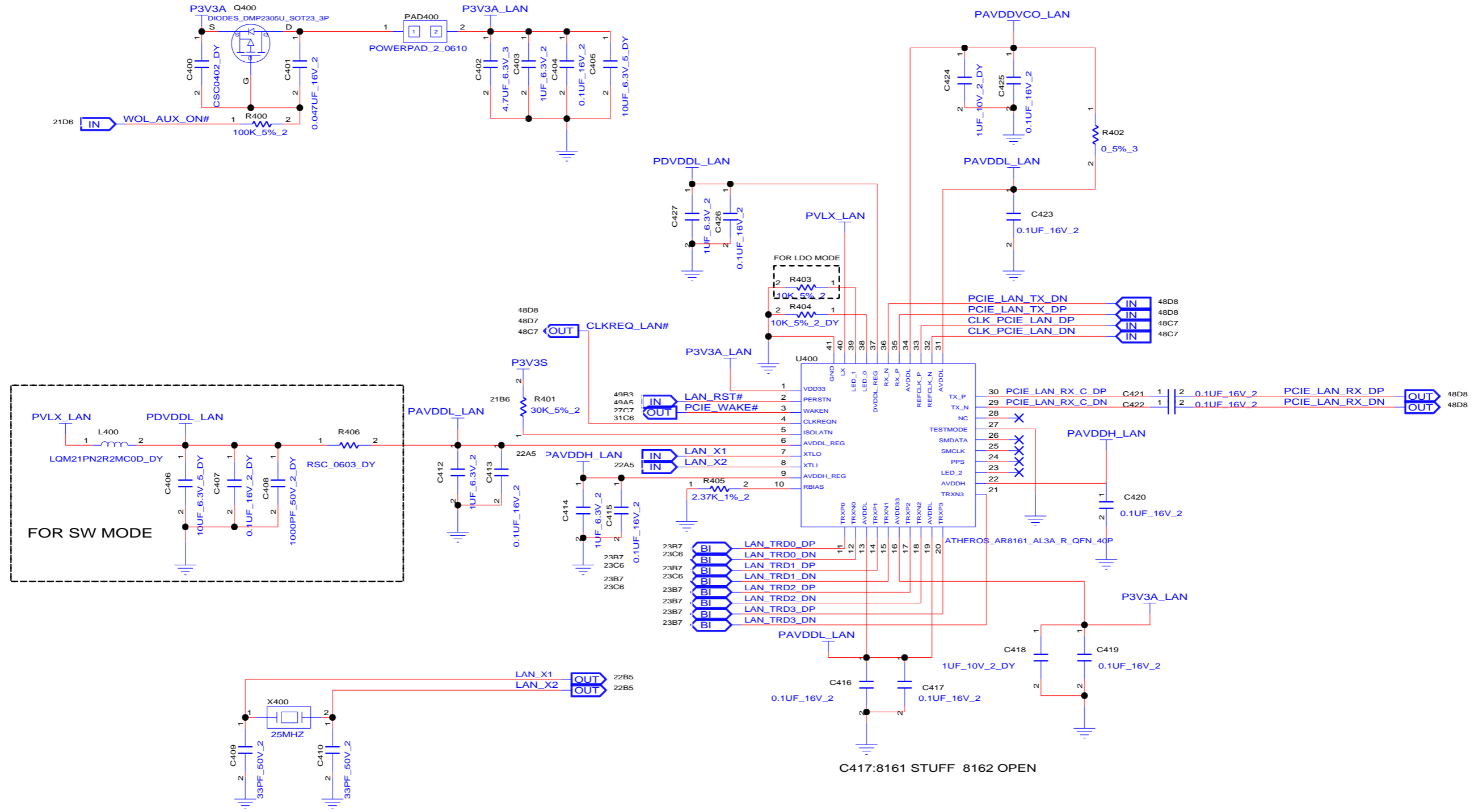
EC_SMB1	EC_SMB2	EC_SMB3
1.BATTERY	1.CHARGE	
	2.GPU THERMAL	
	3.CEC	



INVENTEC

TITLE			
MODEL_PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
C	C5	1310xxxx-0-0	X01
SHEET		21	of 68

CHANGE by xxx DATE 21.OCT.2002

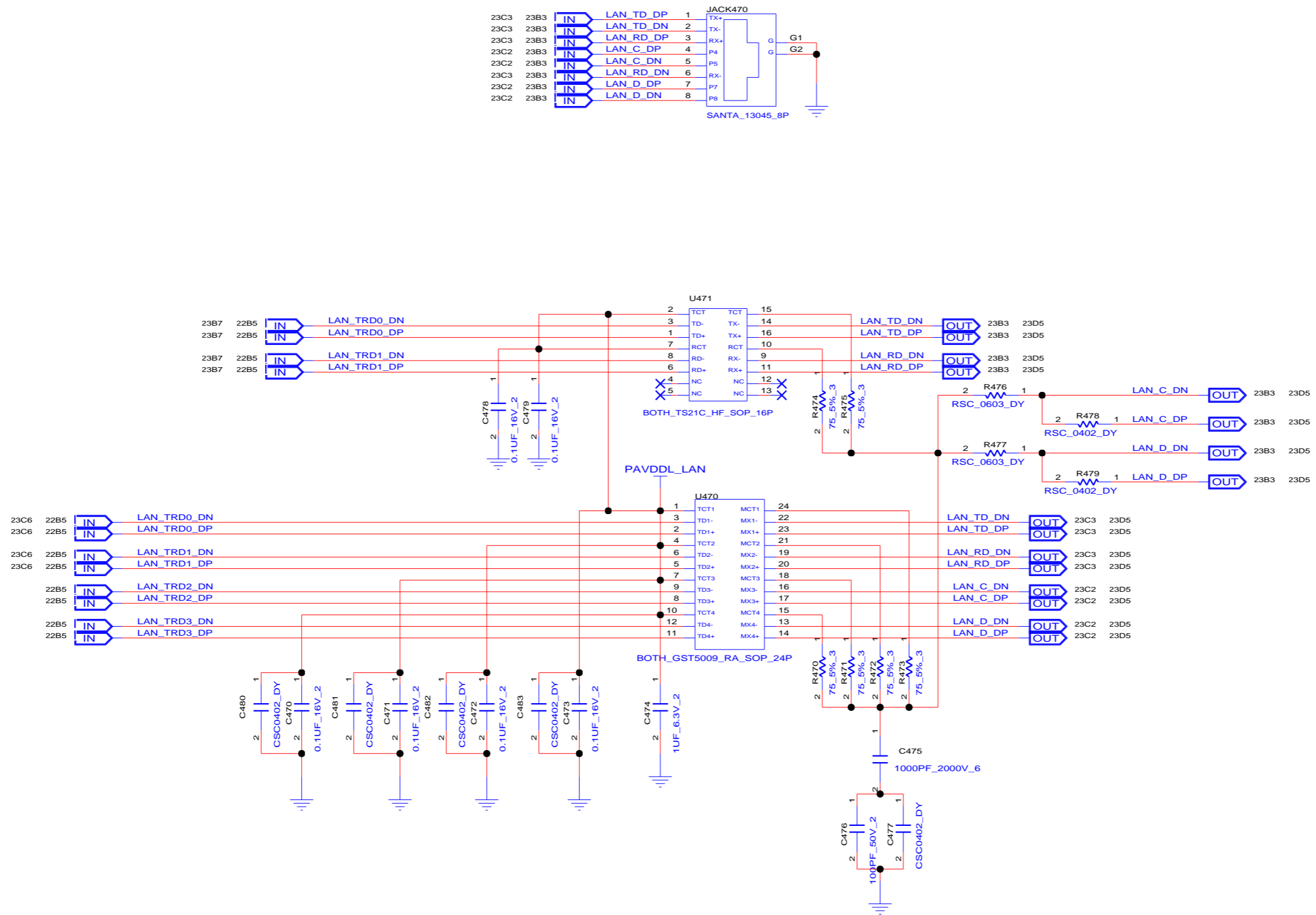


**INVENTEC**

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

REFERENCE 400~499(LAN)



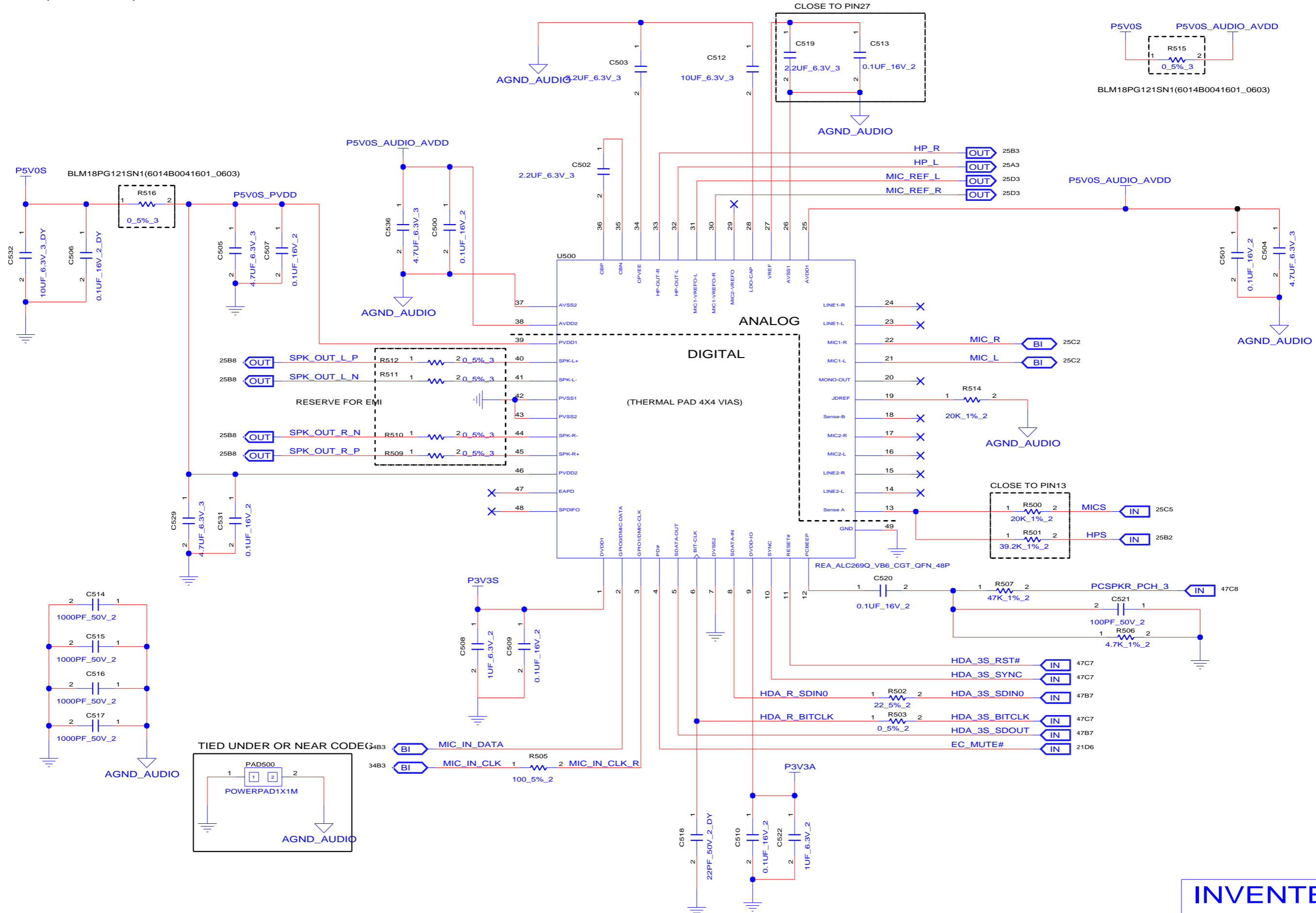
**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 23 of 68

REFERENCE 500~549(AUDIO CODEC)

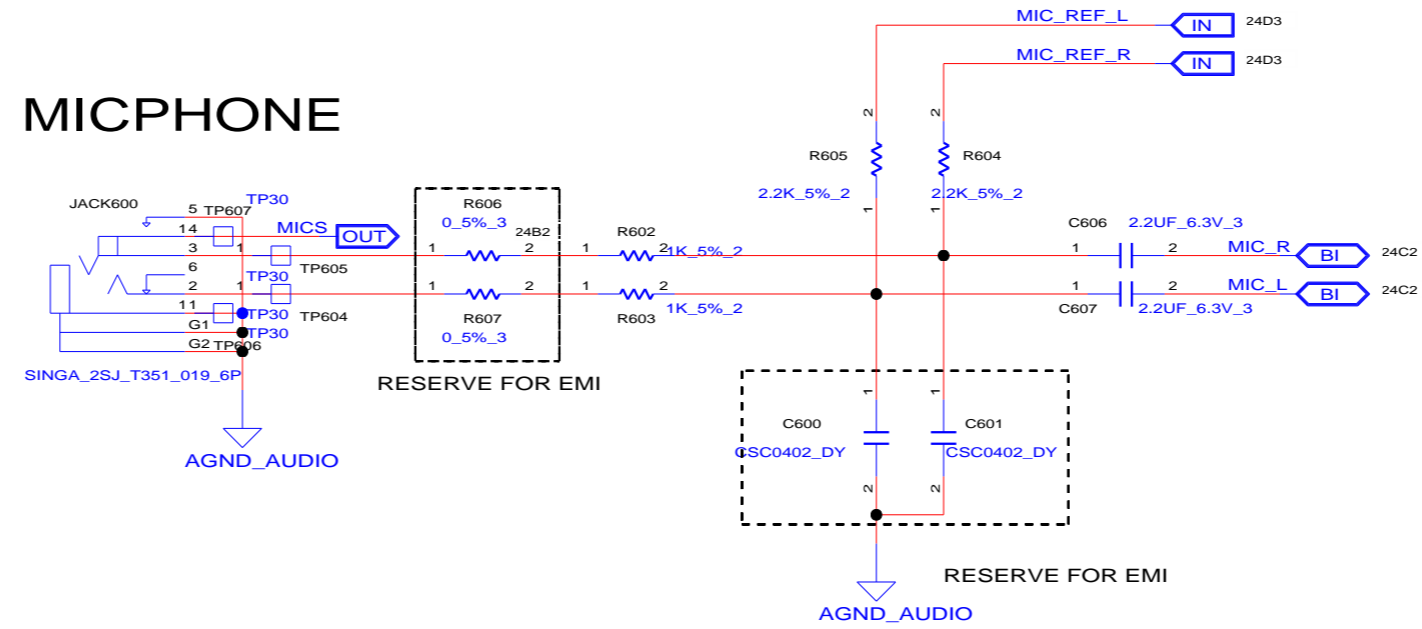


<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	24 of 68

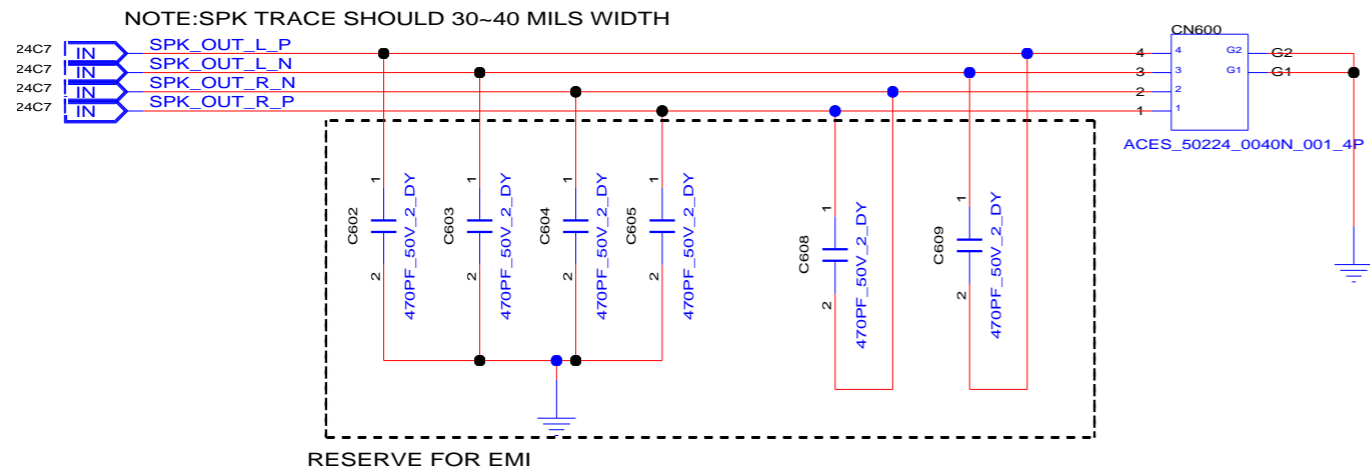


# AUDIO JACKS

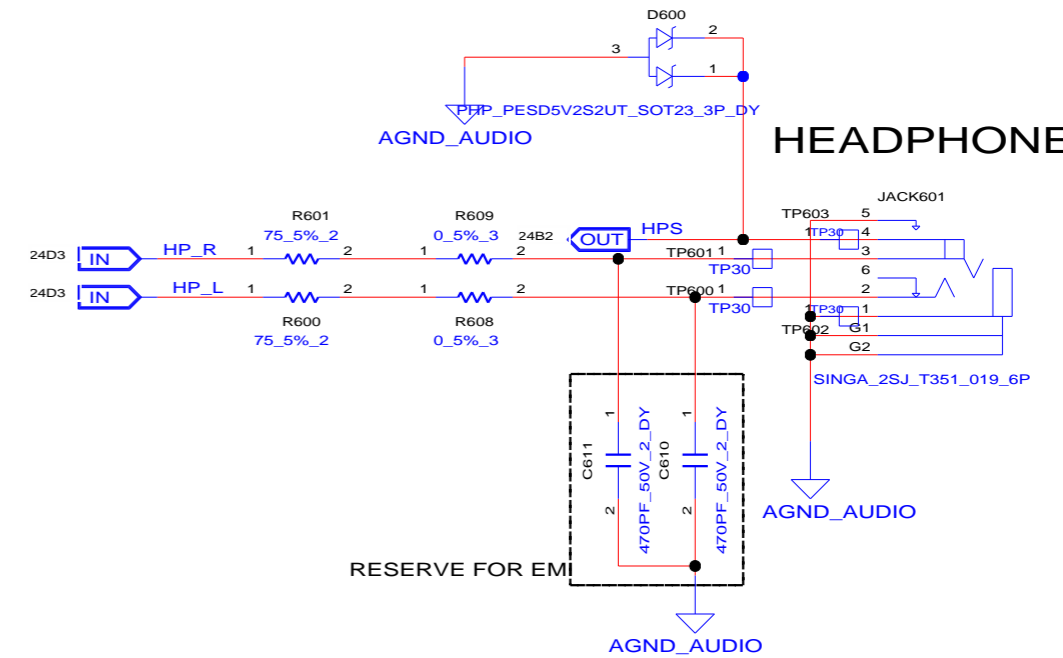
## MICPHONE



## INTERNAL SPEAKERS



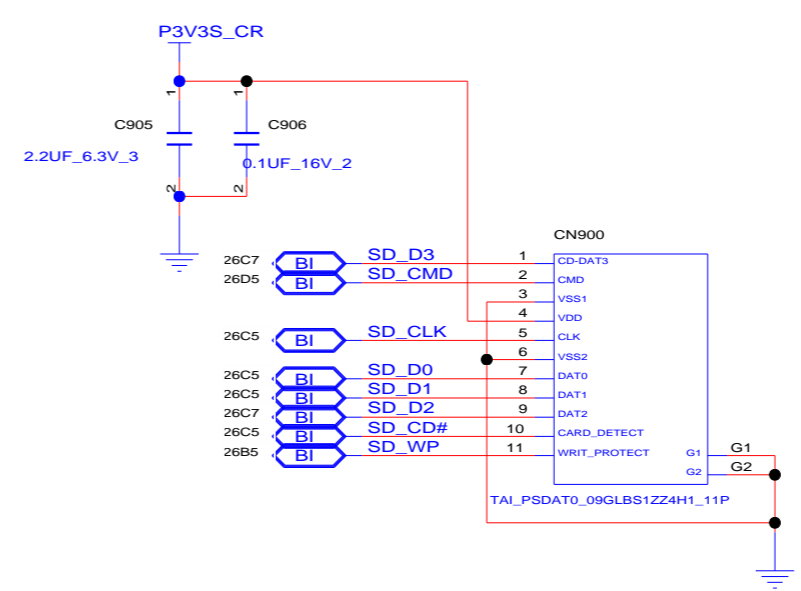
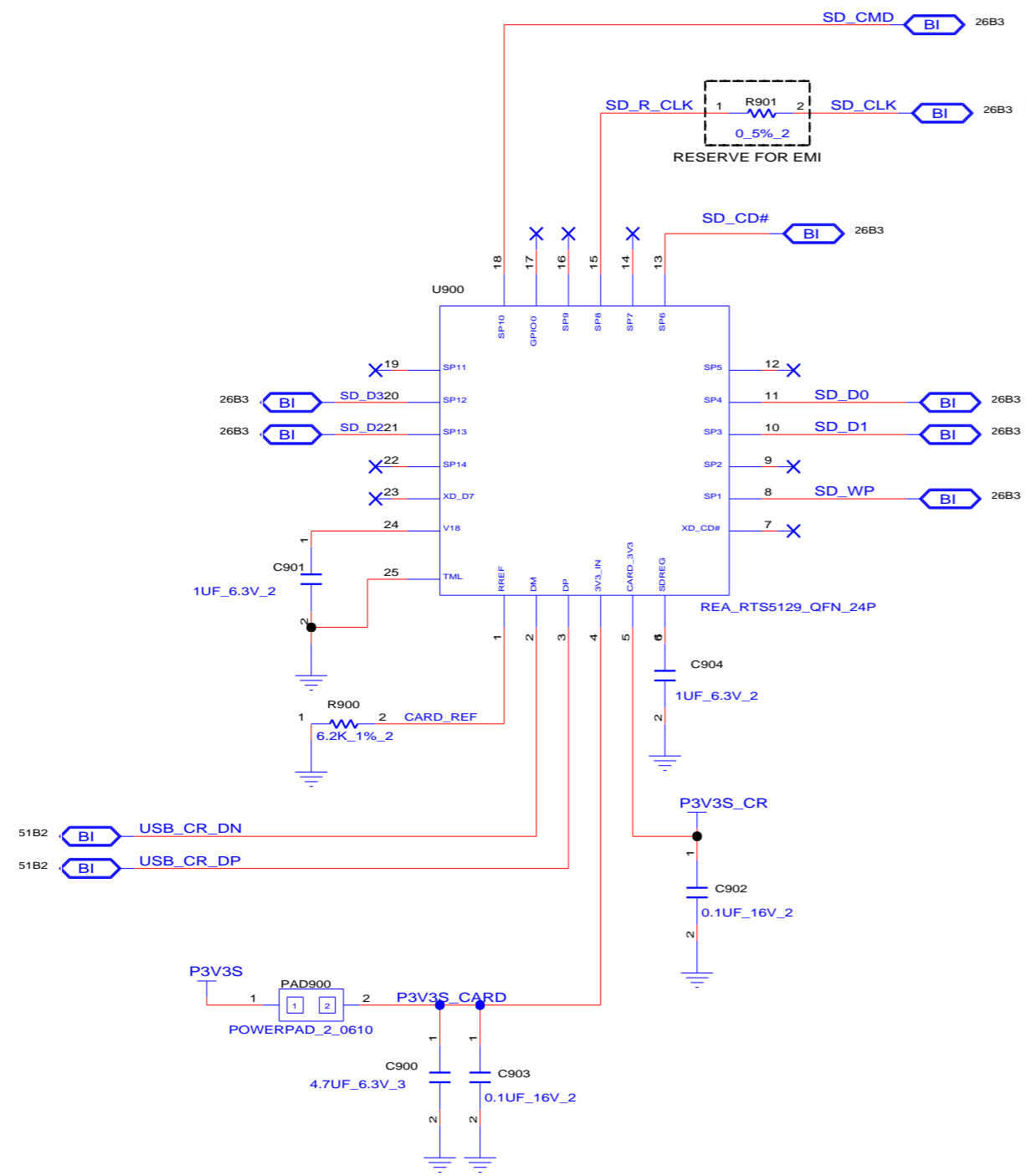
## HEADPHONE



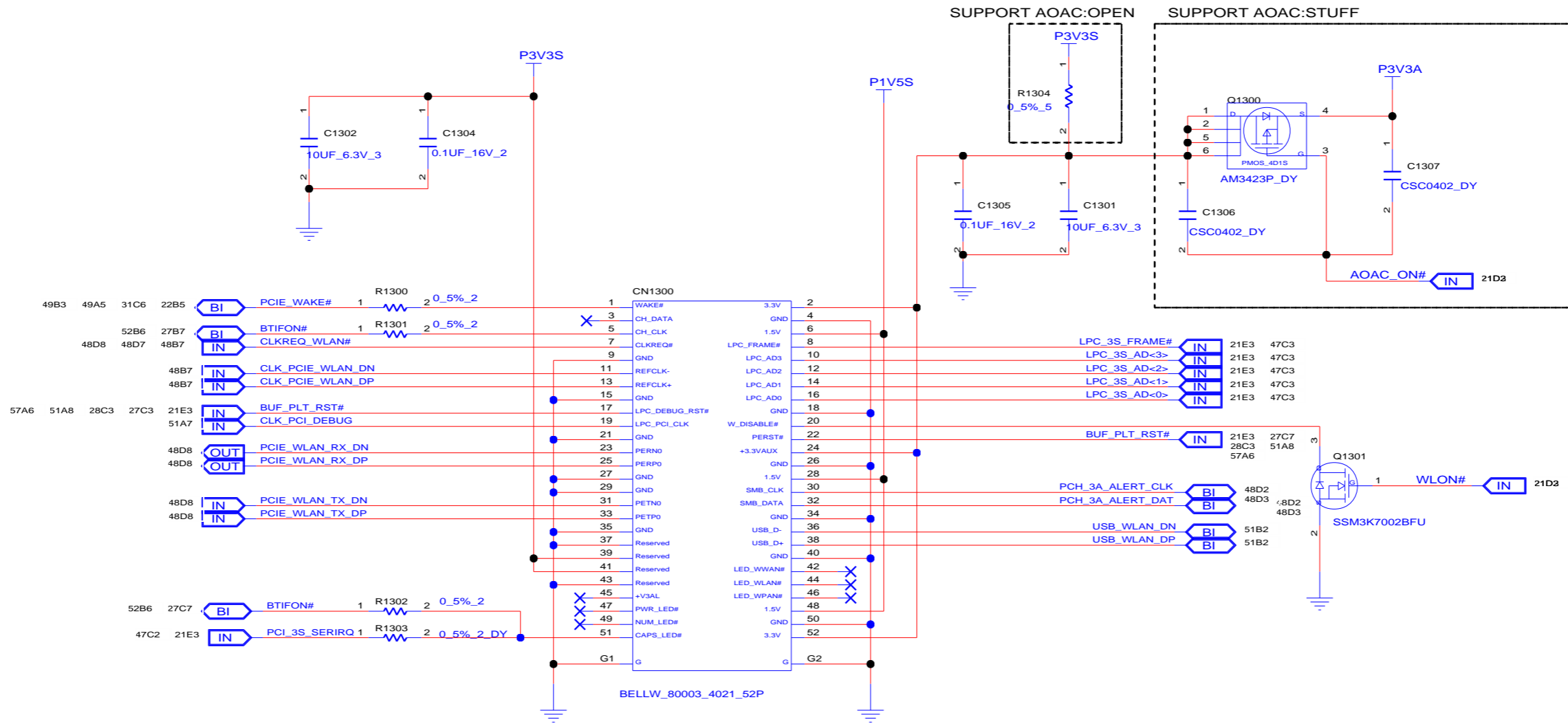
**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

REFERNCE 900~999(CARDREADER)



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

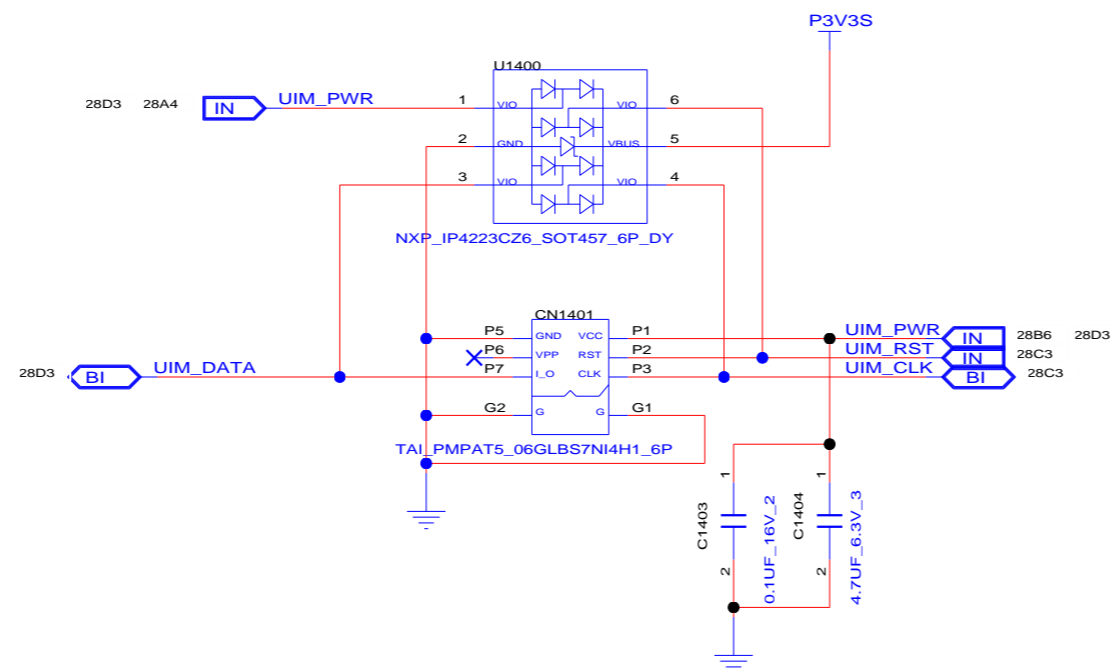
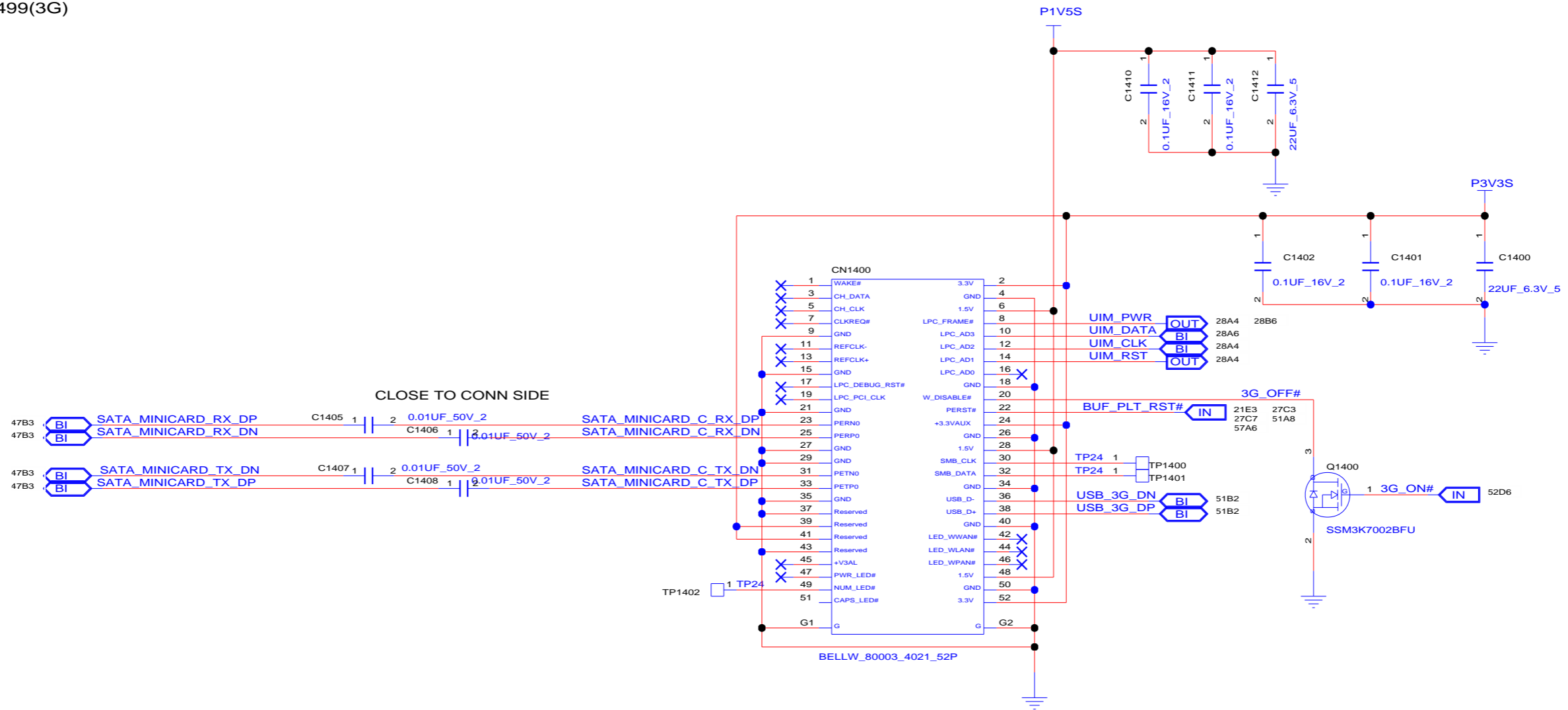


# MINI CARD 1(WLAN)

**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01

REFERENCE 1400-1499(3G)



**INVENTEC**

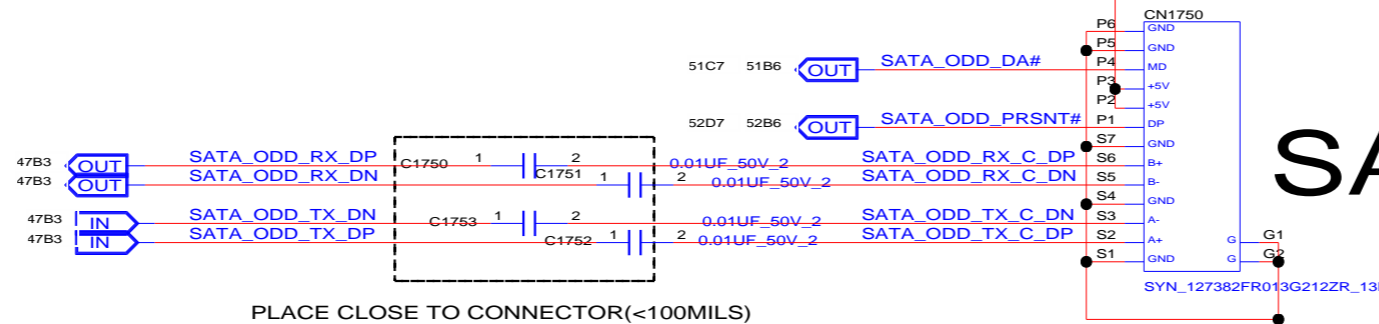
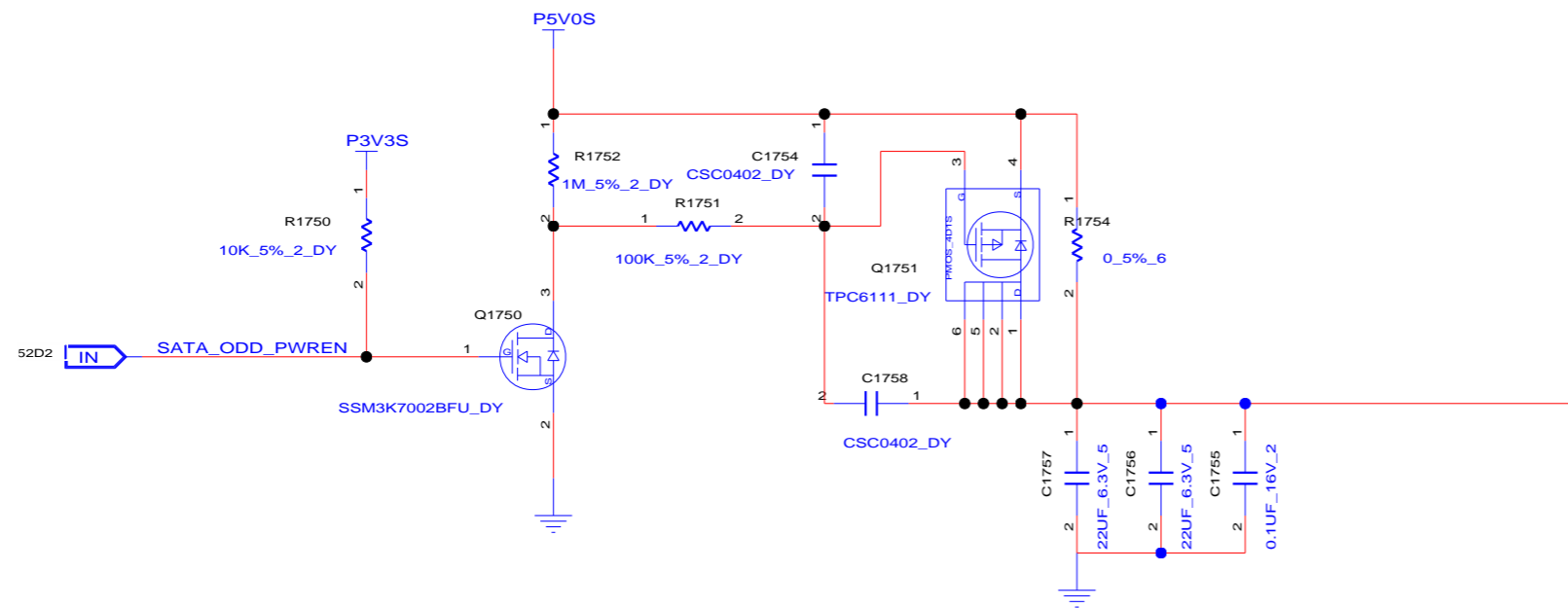
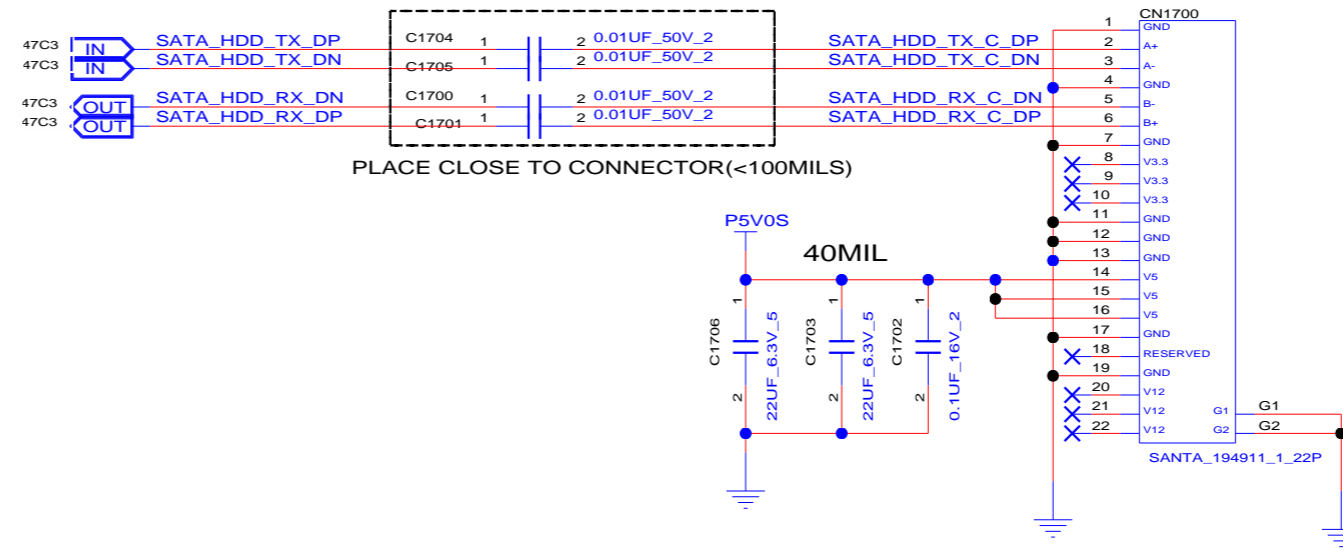
TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 28 of 68

REFERENCE 1700~1749(HDD)  
 REFERENCE 1750~1799(ODD)

# SATA HDD

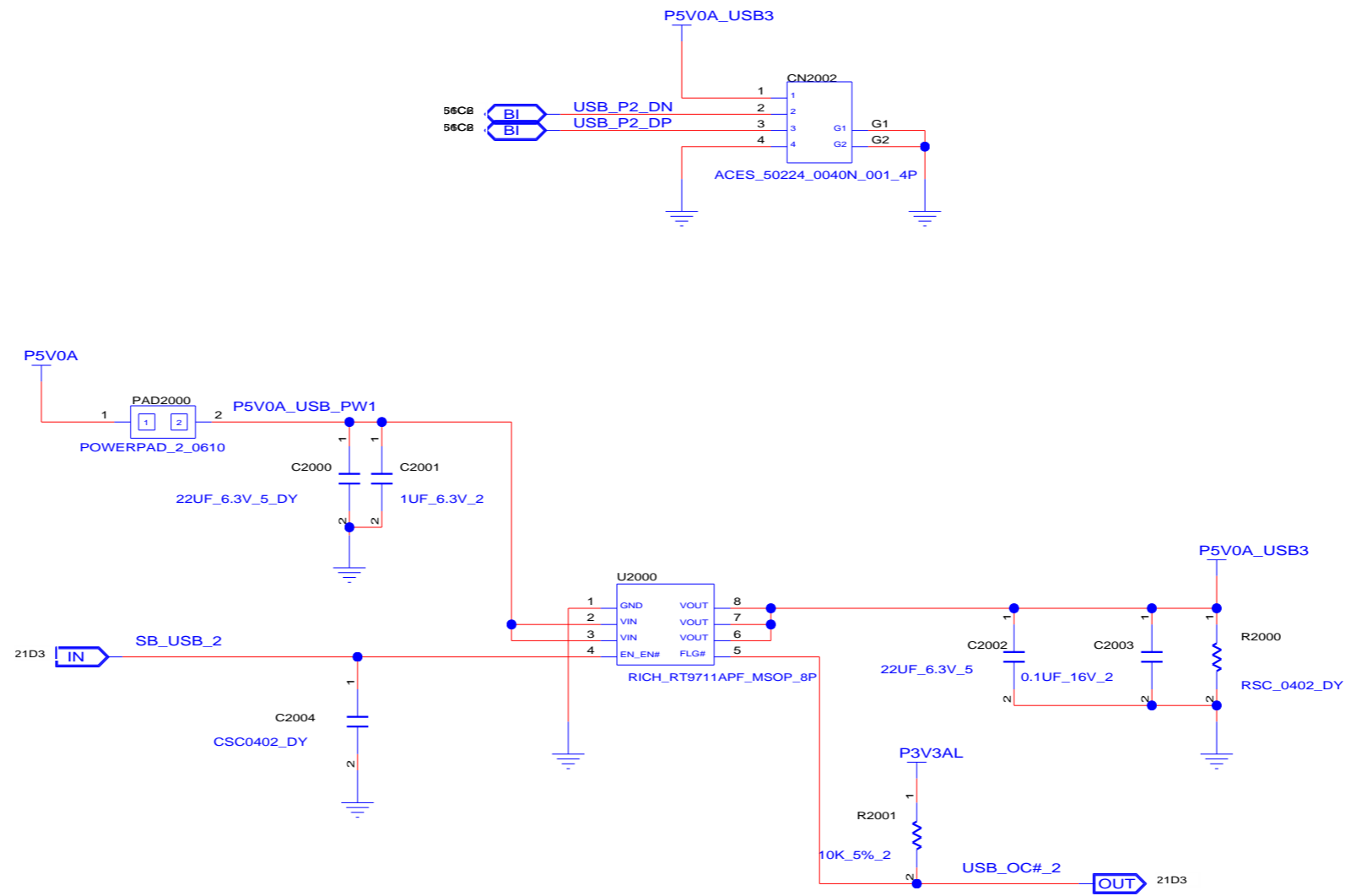


# SATA ODD

**INVENTEC**

TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01

REFERENCE 2000~2099(USB)



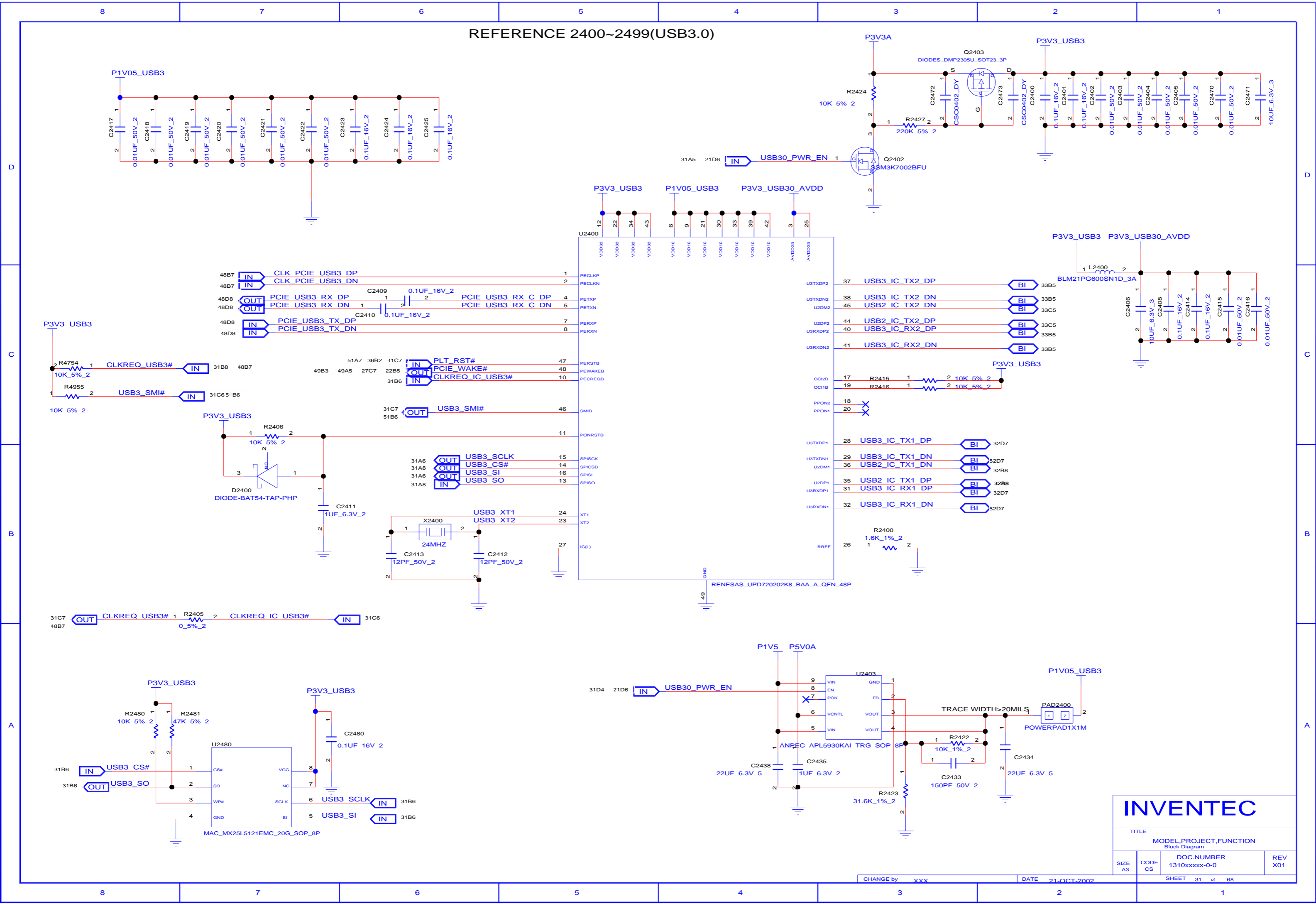
**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

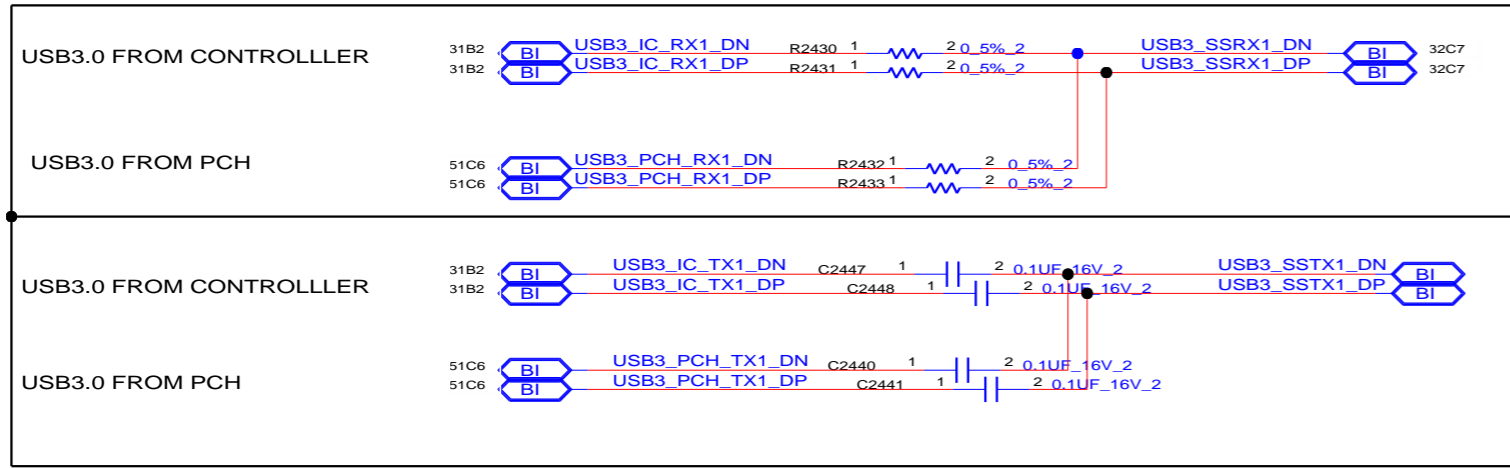
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 30 of 68

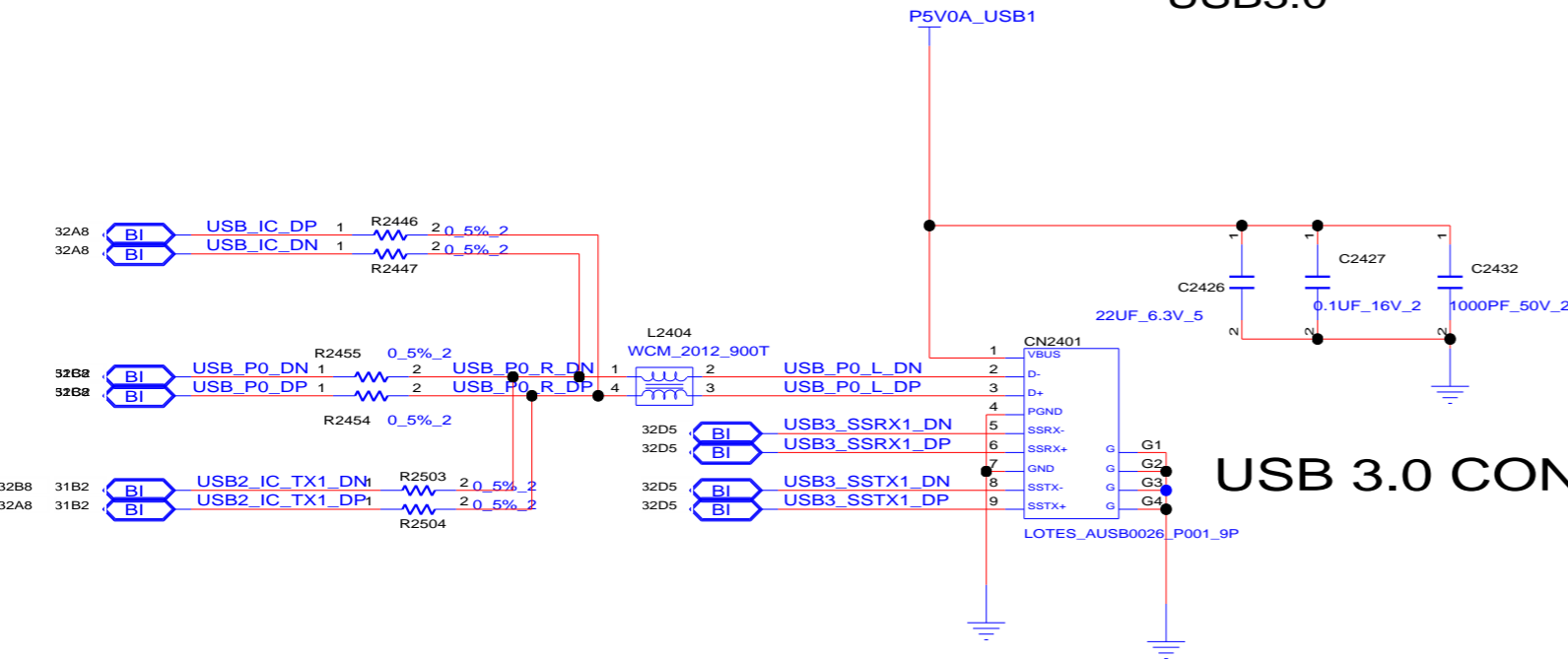
REFERENCE 2400~2499(USB3.0)



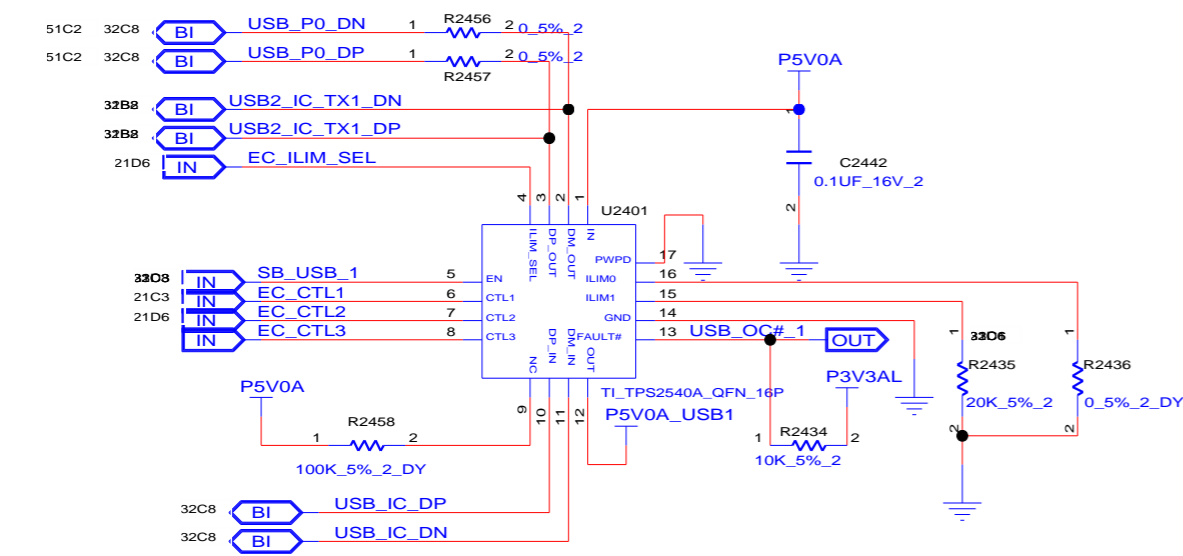
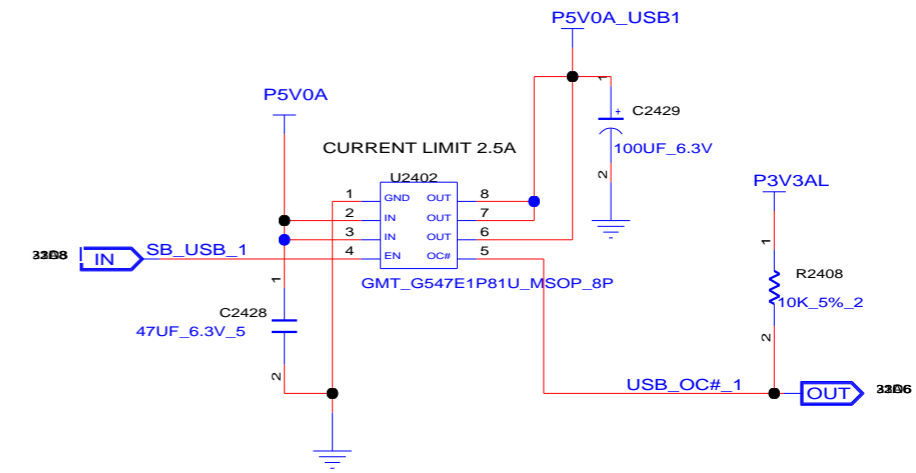
<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	31 of 68



USB3.0



USB 3.0 CONNECTOR



CTL1	CTL2	CTL3	Mode
0	0	X	Dedicated Charging Port, Auto-detect
0	1	X	Dedicated Charging Port, BC Specification 1.1 Only
1	0	X	Dedicated Charging Port, Apple Only
1	1	0	Standard Downstream Port, USB 2.0 Mode
1	1	1	Charging Downstream Port, BC Specification 1.1

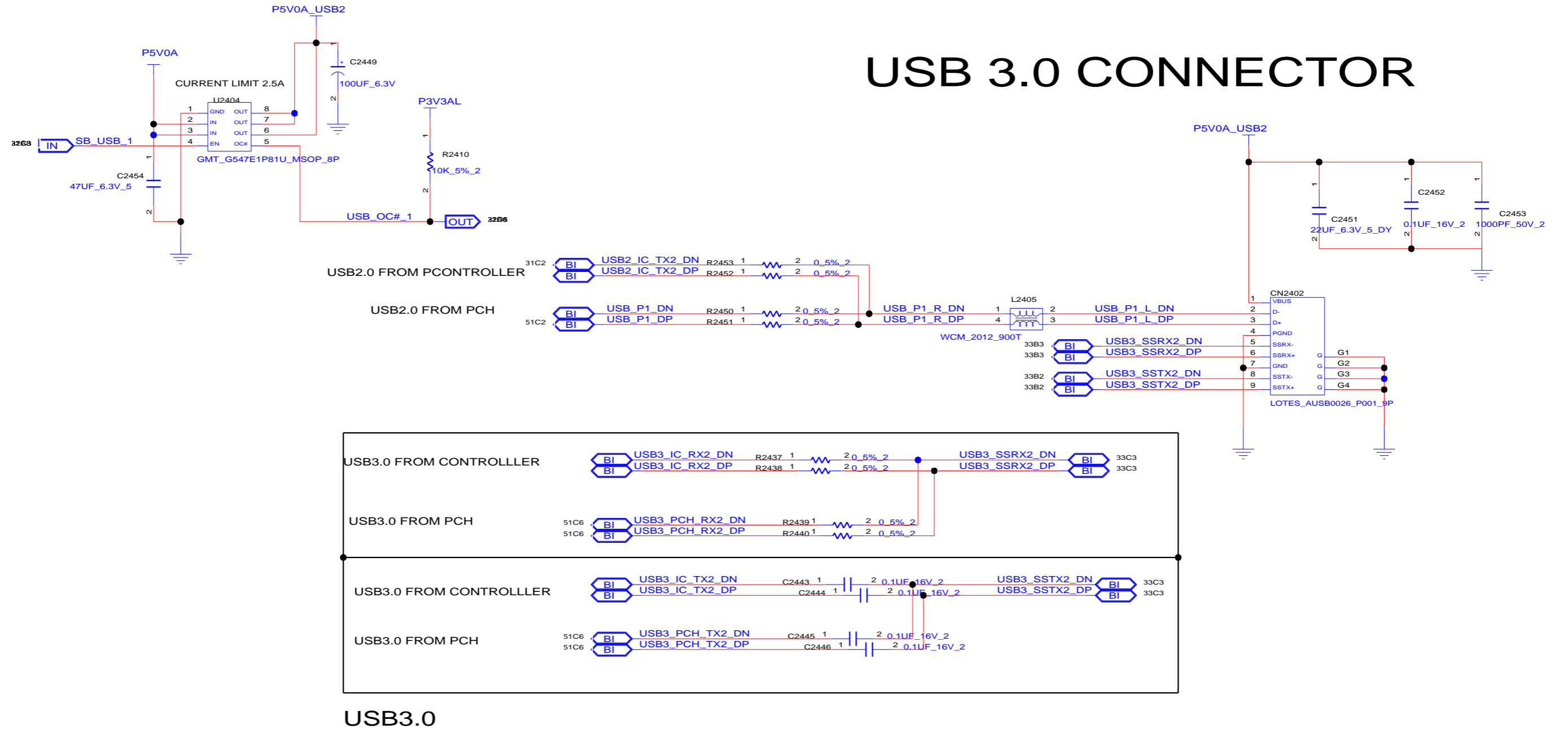
Table 3 – TPS2541 Control Truth Table

**INVENTEC**

TITLE			
MODEL,PROJECT,FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01



# USB 3.0 CONNECTOR



**INVENTEC**

TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01

REFERENCE 3000~3049(LCM)

D

C

B

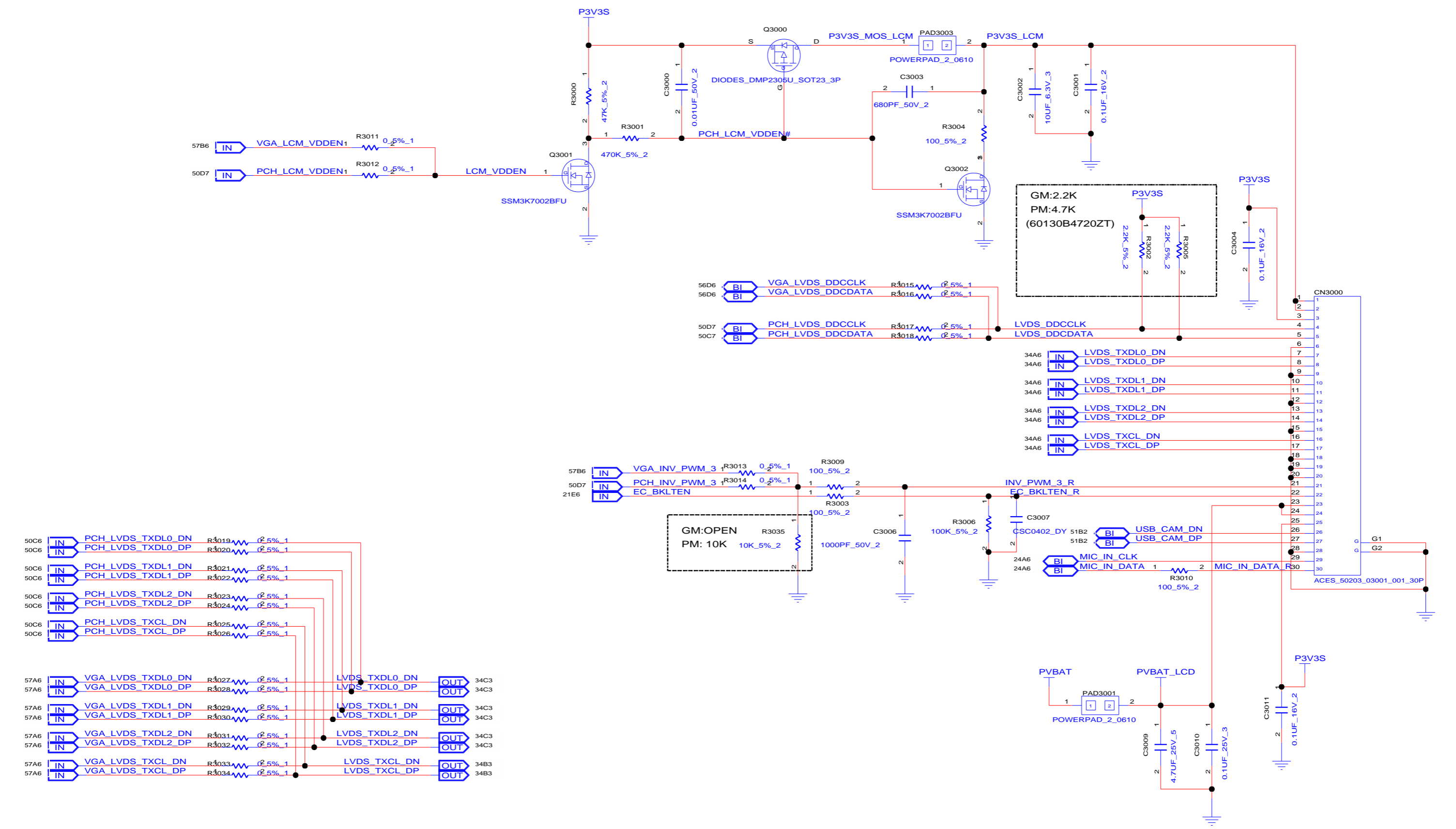
A

D

C

B

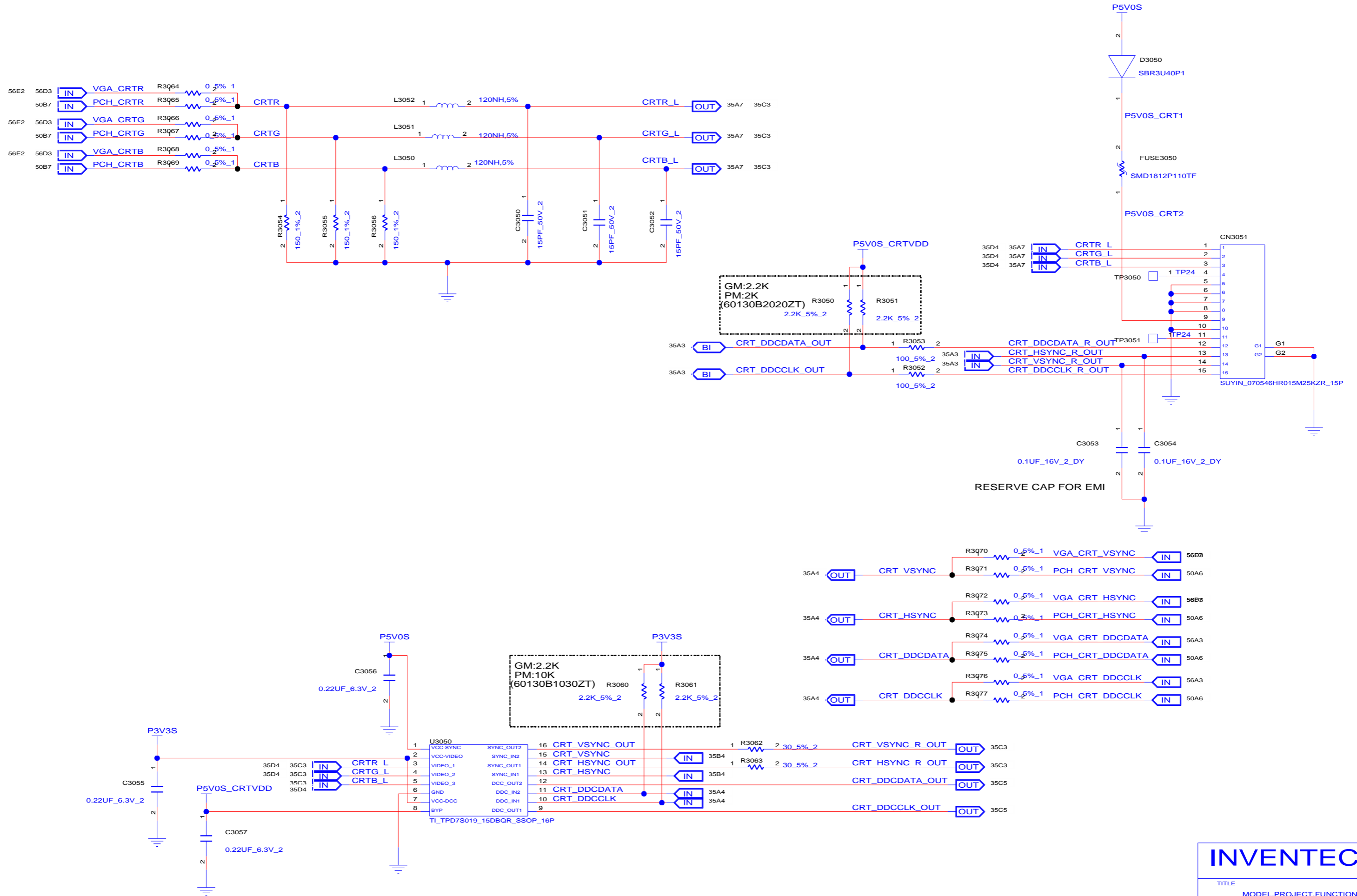
A



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01

CHANGE by XXX DATE 21-OCT-2002 SHEET 34 of 68

REFERENCE 3050~3099(CRT)



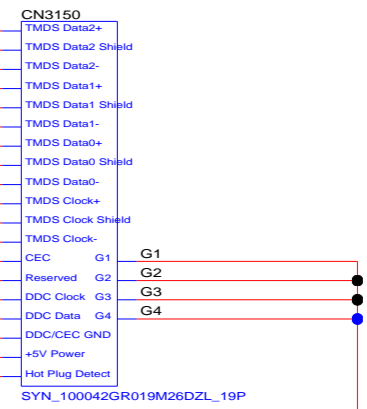
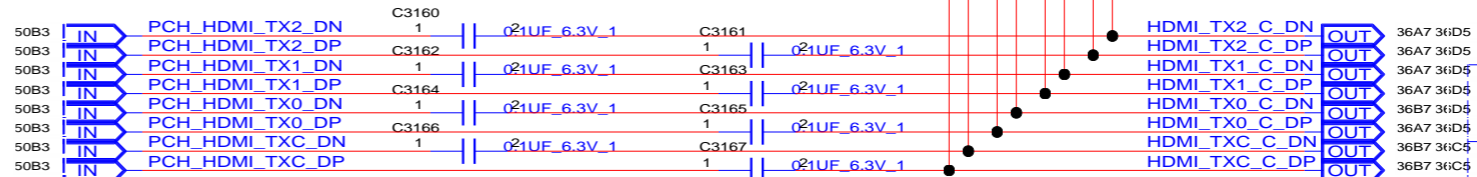
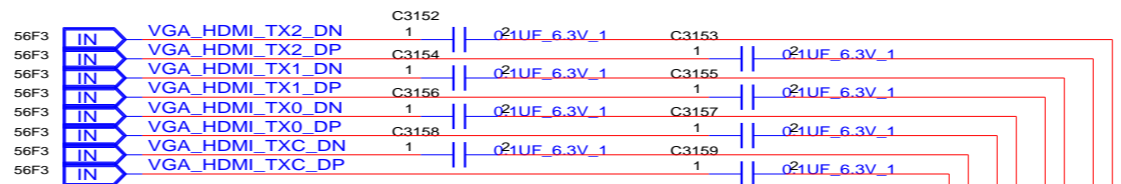
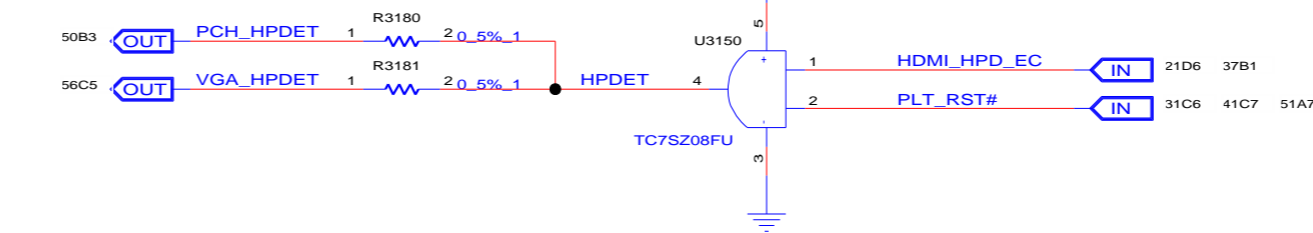
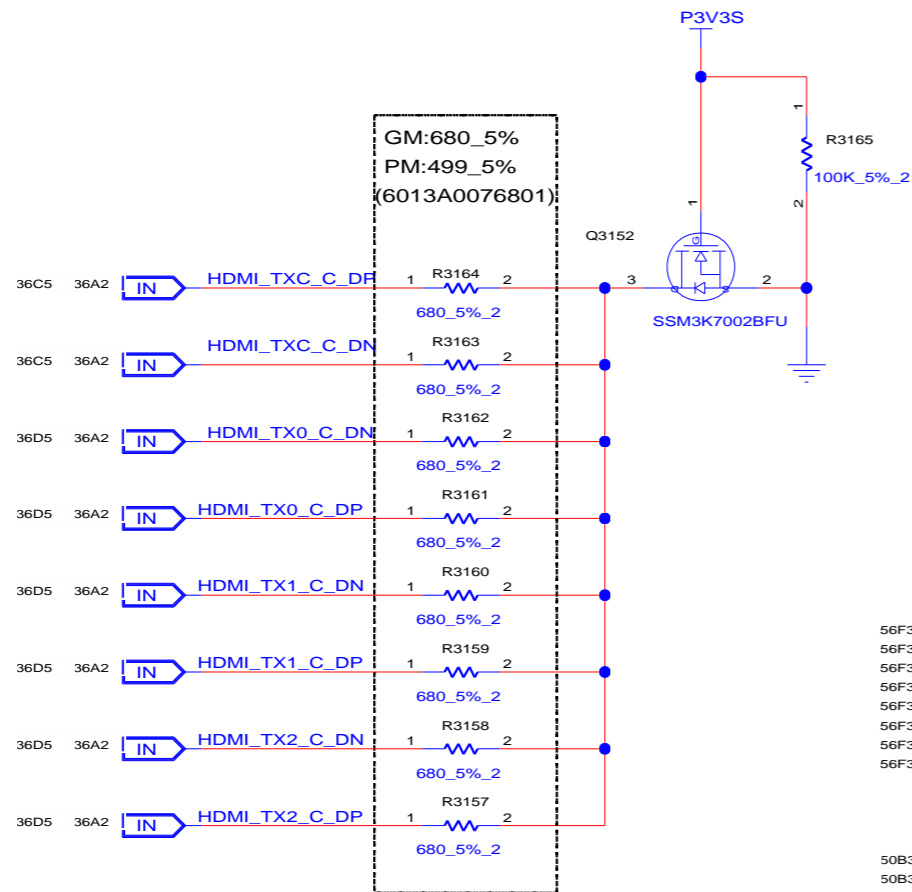
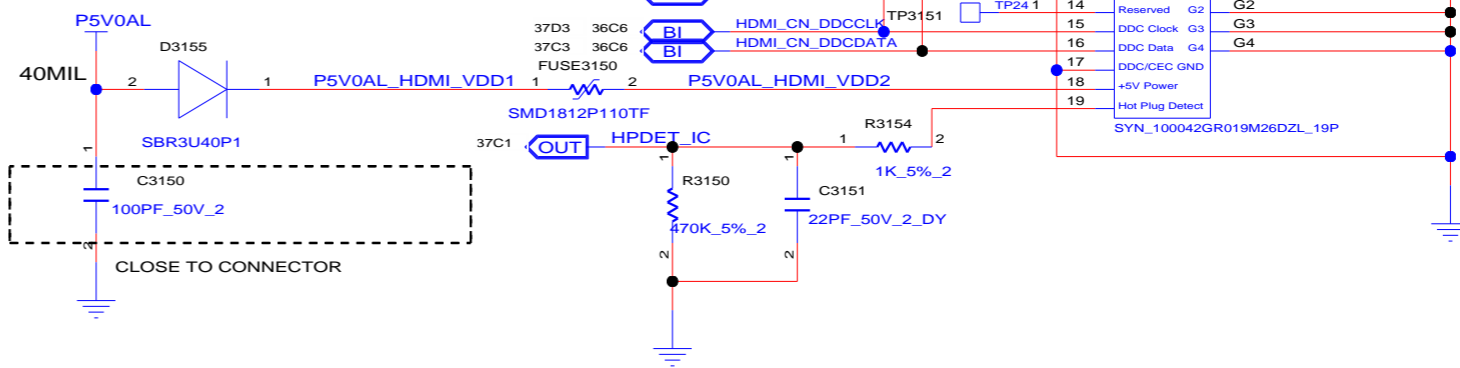
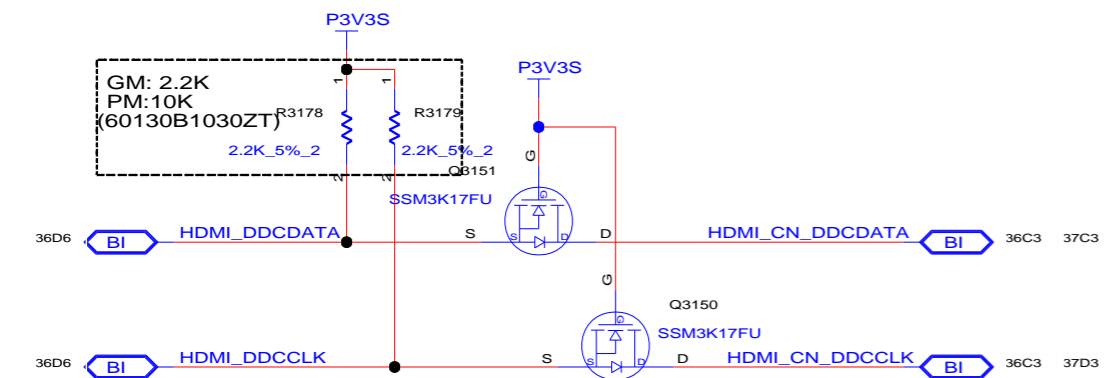
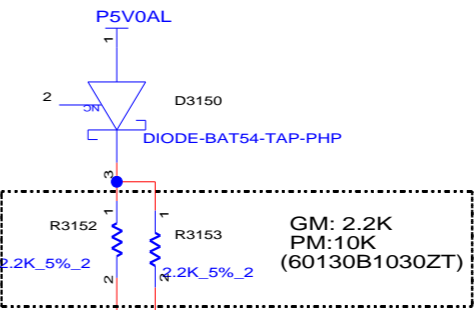
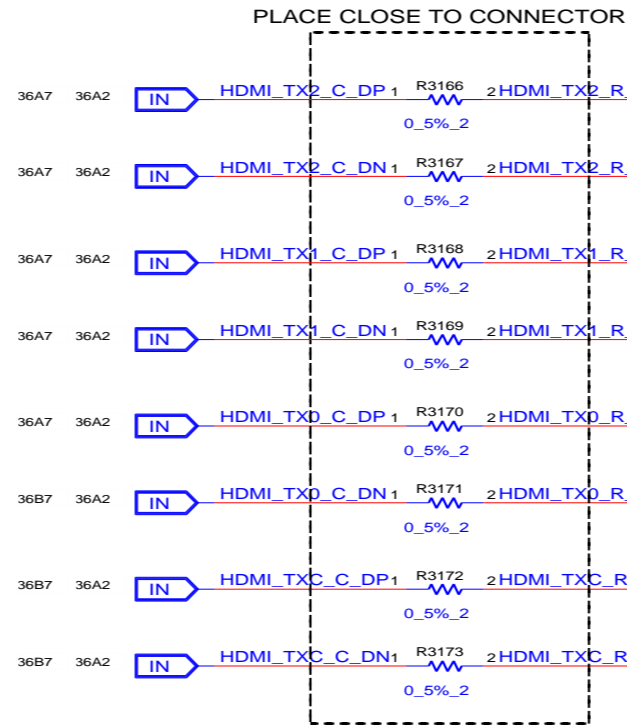
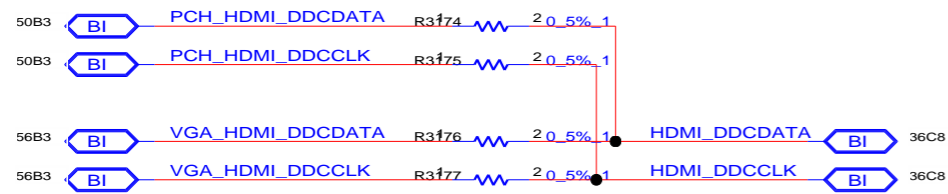
**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 35 of 68

REFERENCE 3150~3199(HDMI)

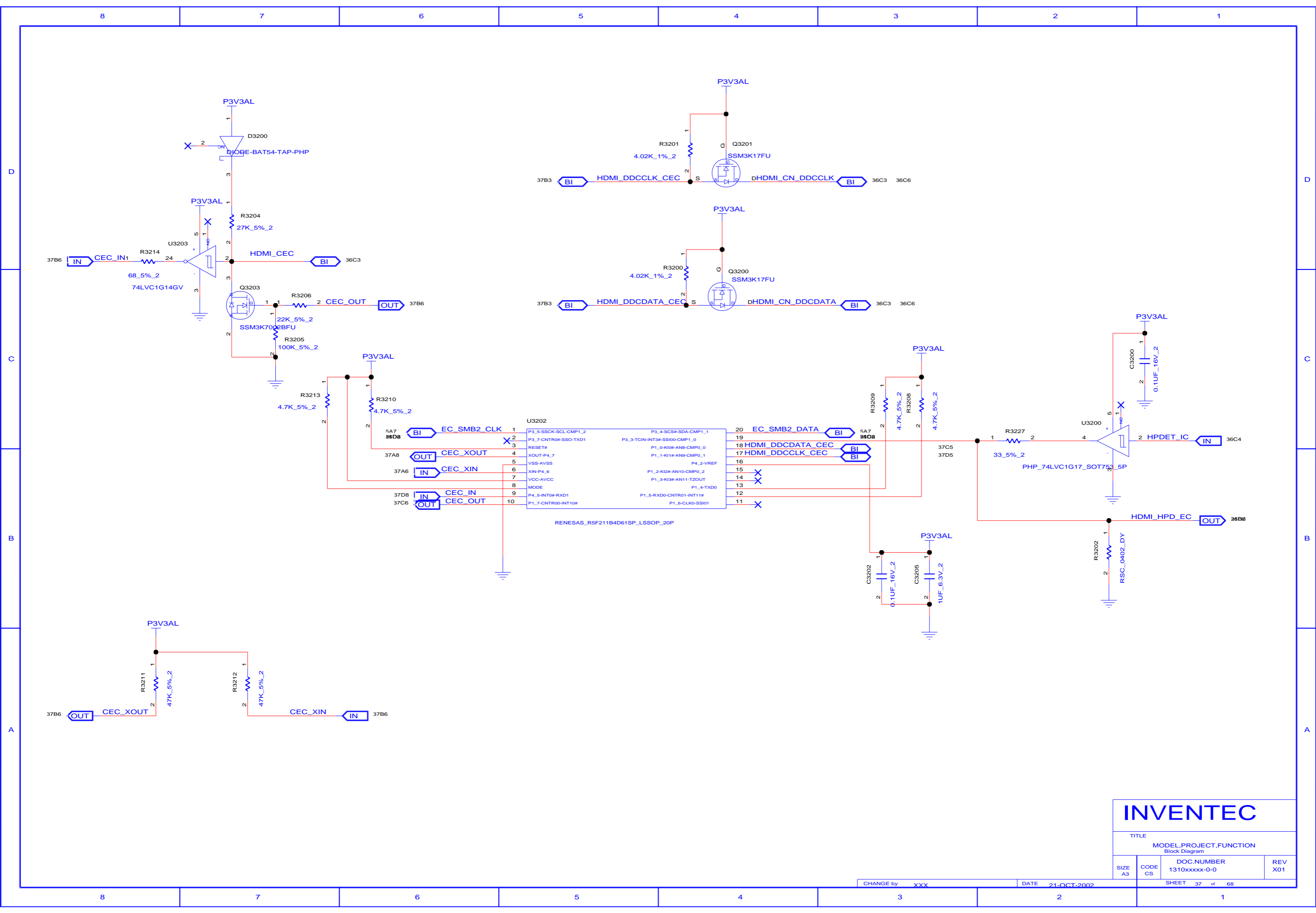


**INVENTEC**

TITLE MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
---------	---------	-------------------------	---------

CHANGE by XXX DATE 21-OCT-2002 SHEET 36 of 68



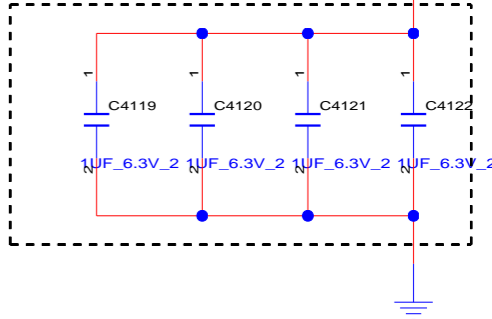
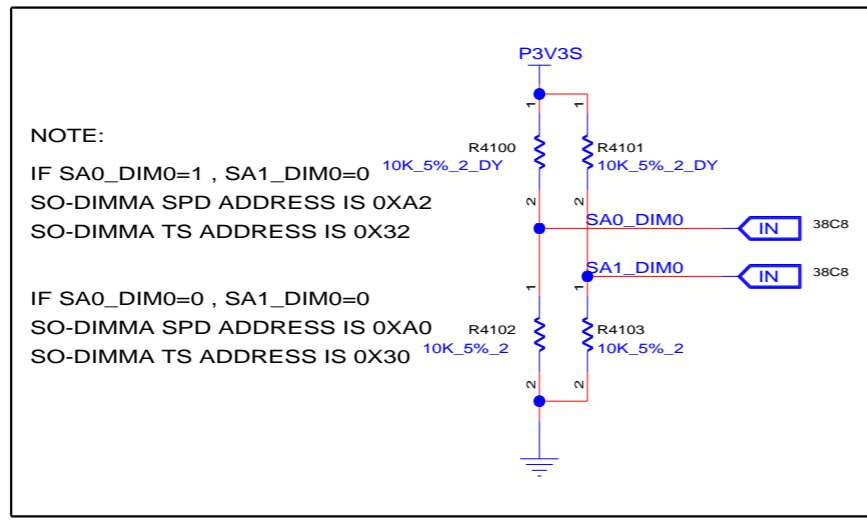
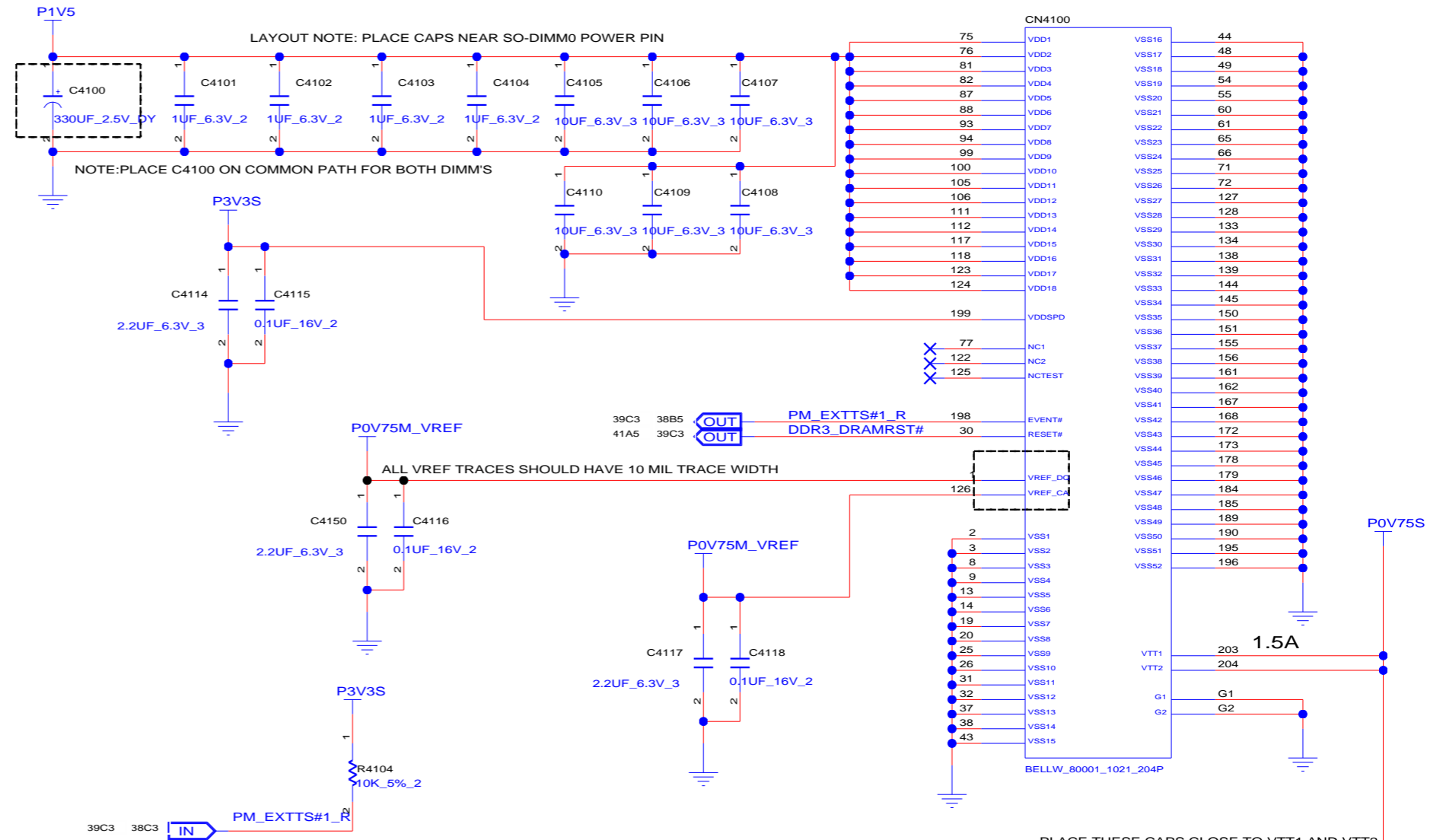
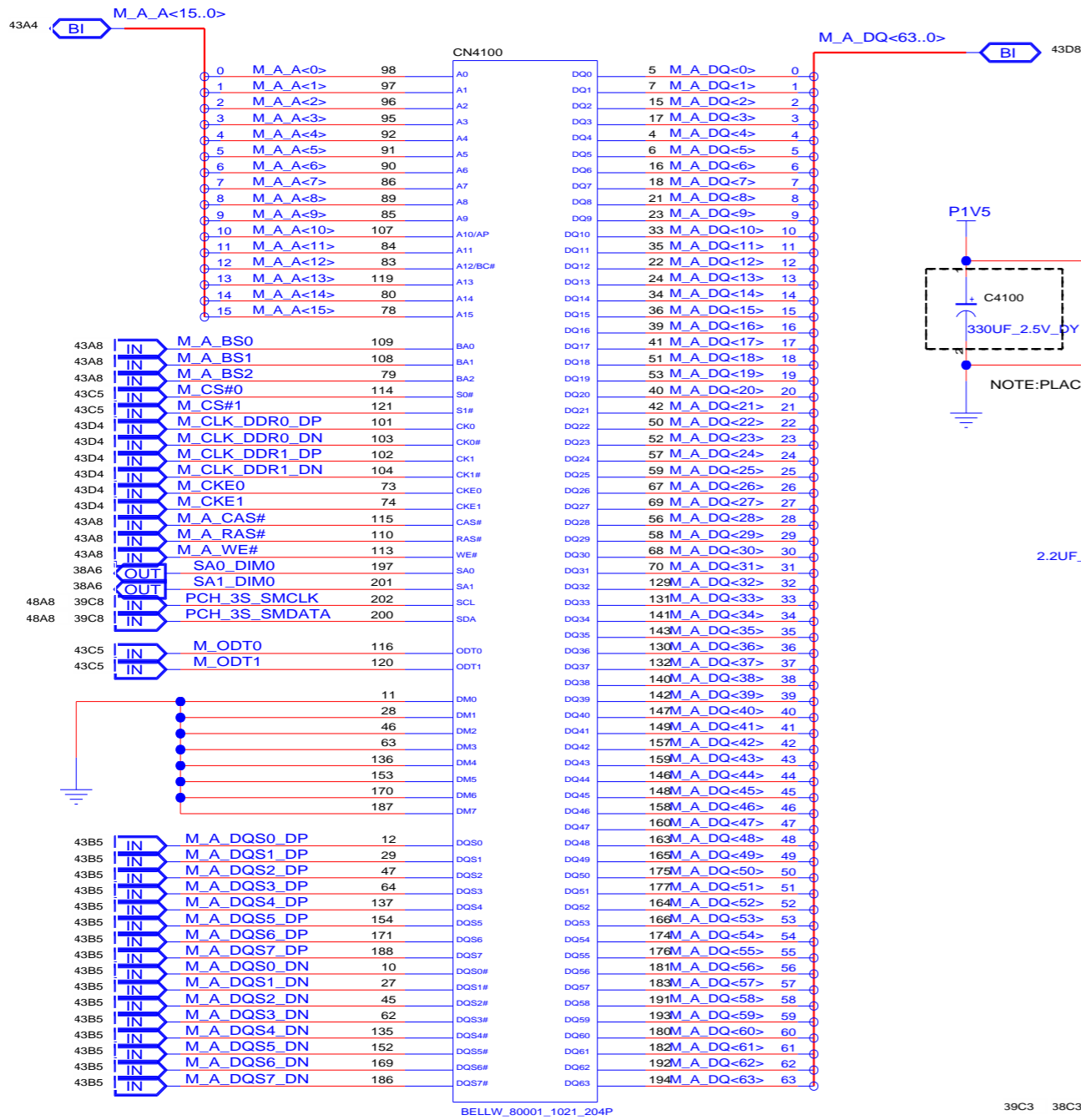
# INVENTEC

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

# CHA

REFERENCE 4100-4299(DDR)



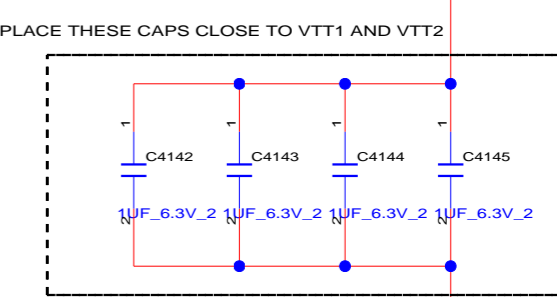
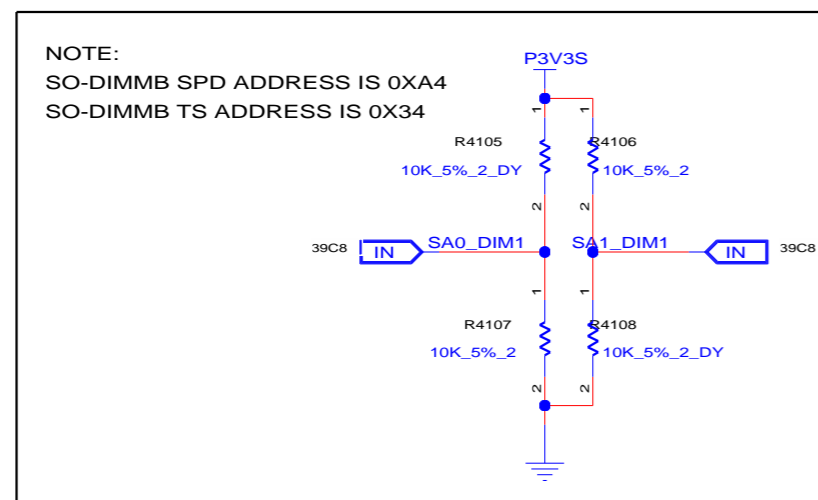
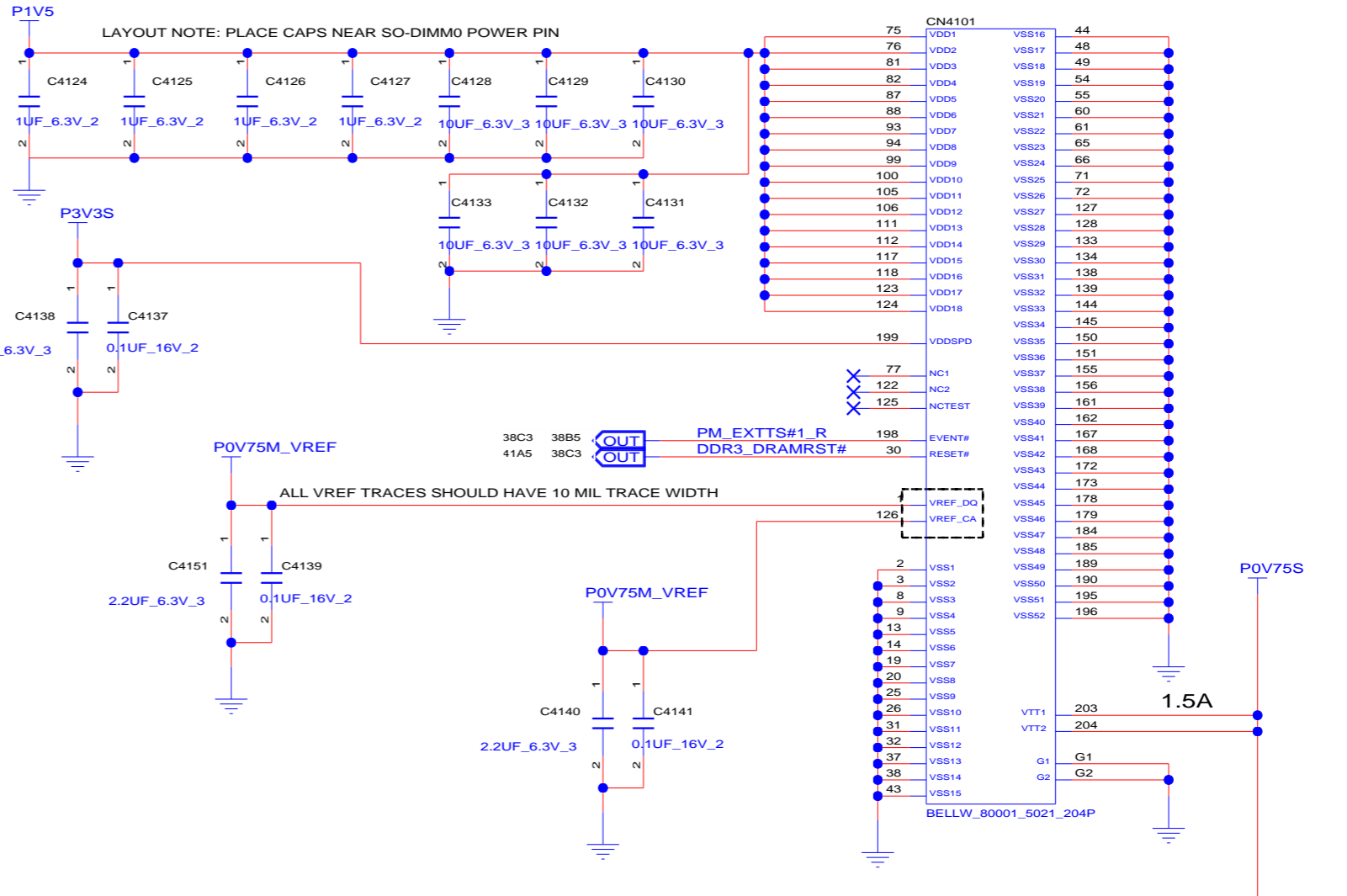
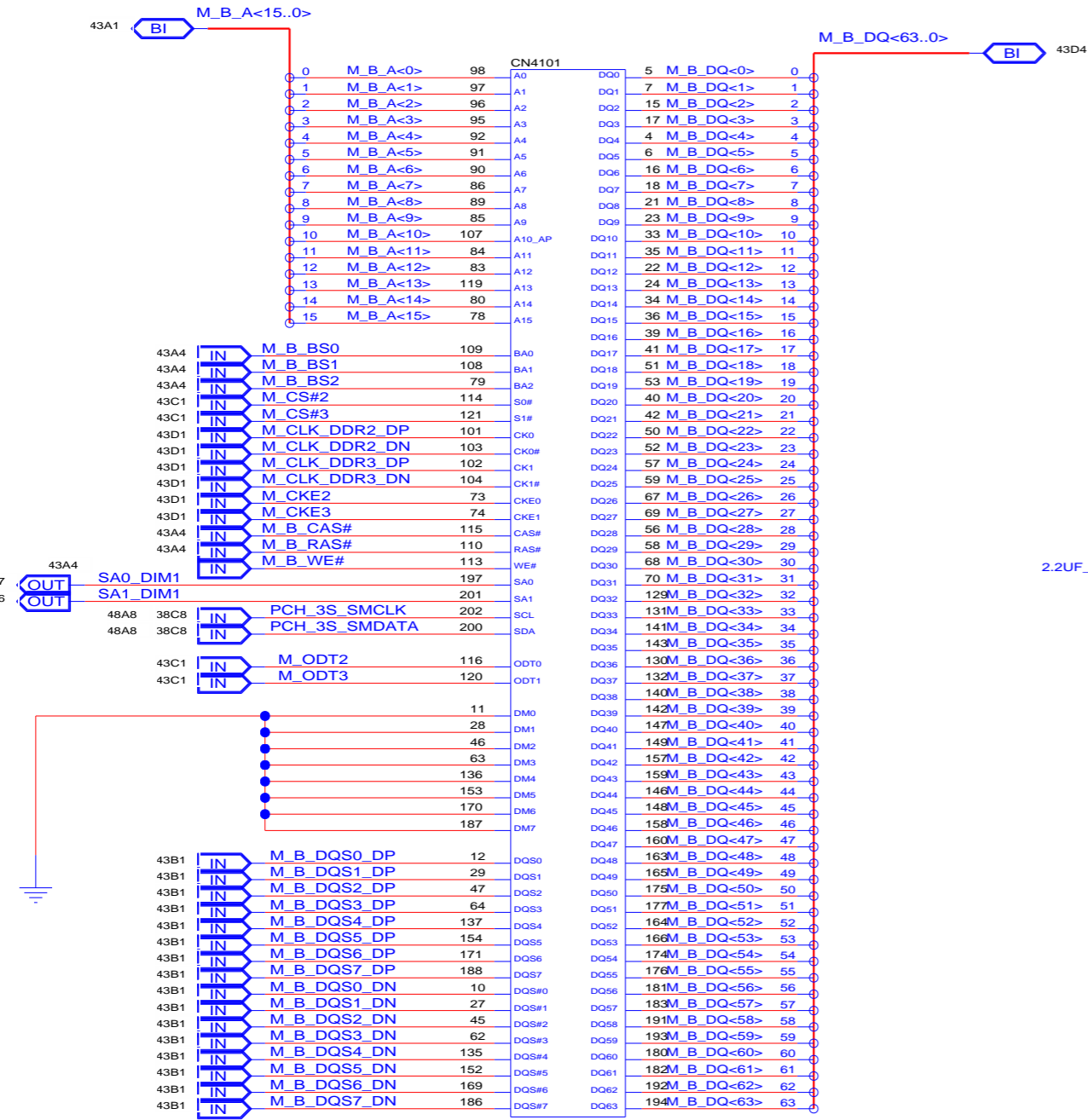
**INVENTEC**

TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	SHEET 38 of 68

REFERENCE 4100~4299(DDR)

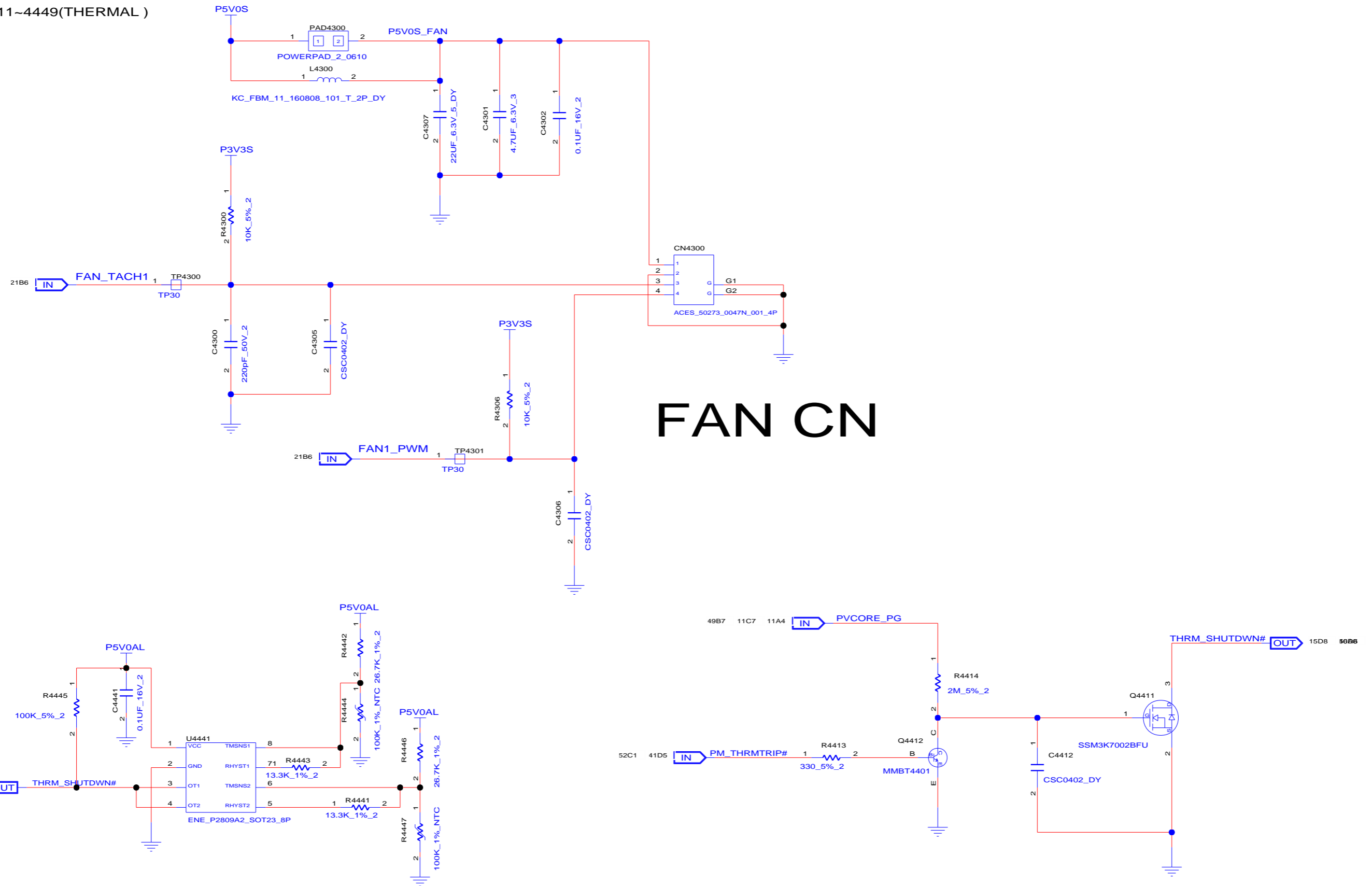
# CHB

D  
C  
B  
A



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	39 of 68

REFERENCE 4300~4349(FAN)  
 REFERENCE 4411~4449(THERMAL)



# FAN CN

**INVENTEC**

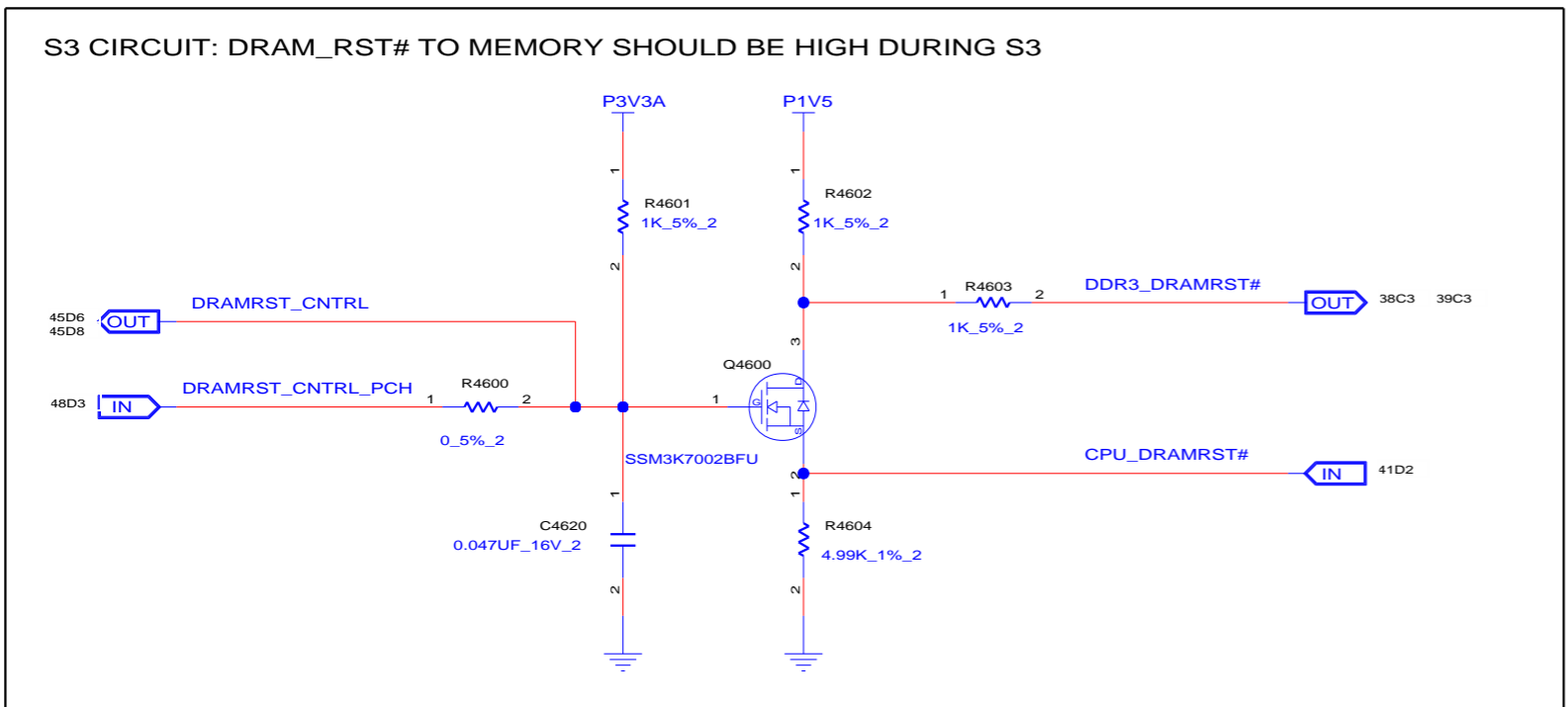
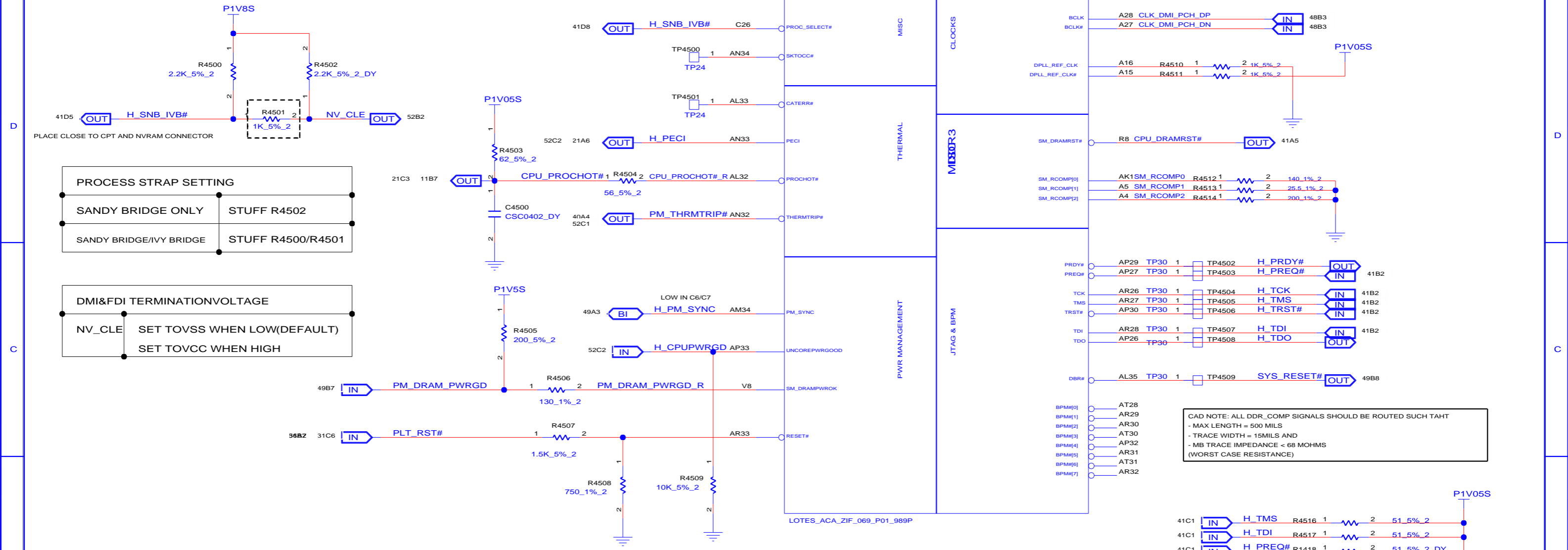
TITLE  
 MODEL\_PROJECT\_FUNCTION  
 Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 40 of 68

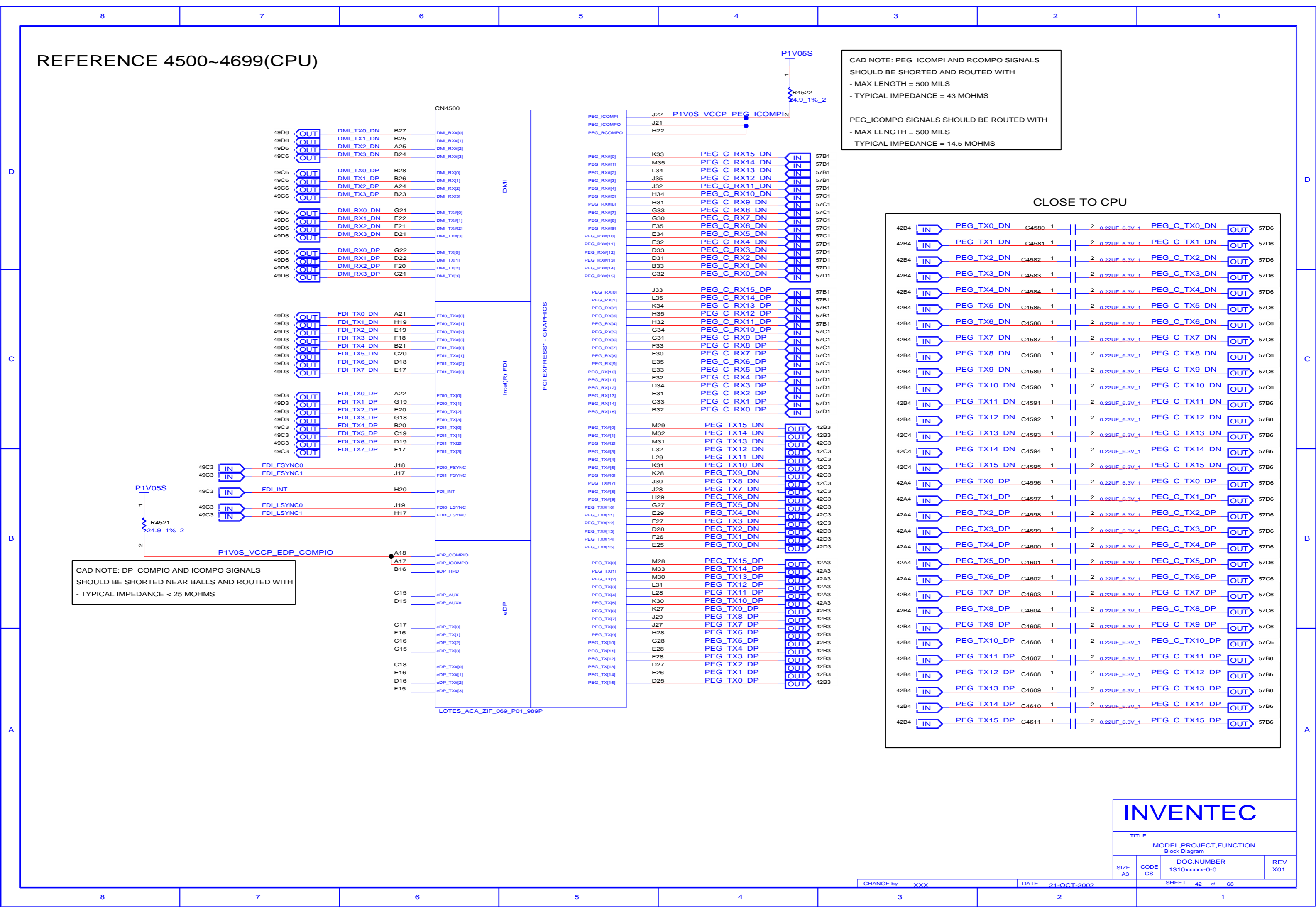


REFERENCE 4500~4699(CPU)



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	41 of 68

# REFERENCE 4500~4699(CPU)

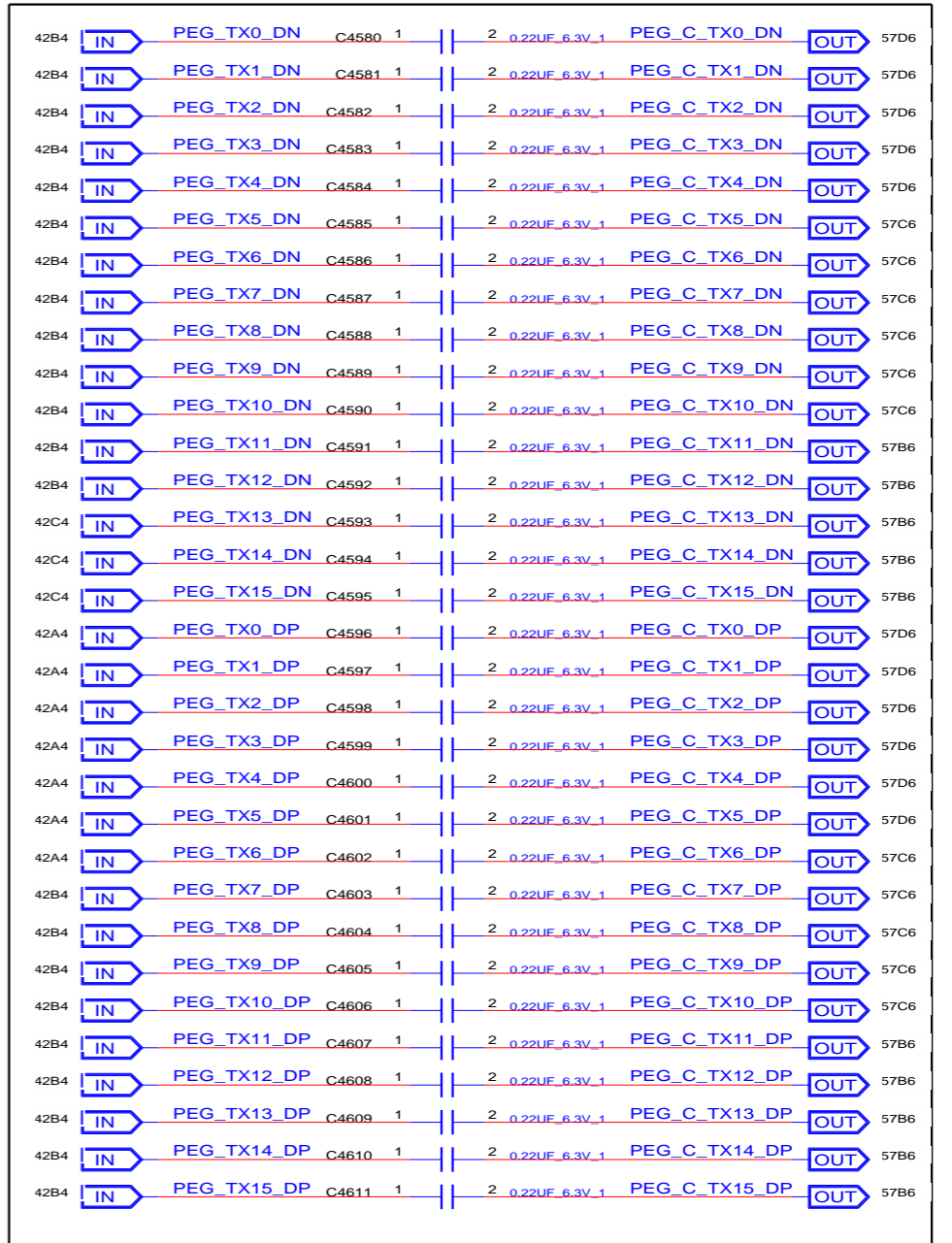


CAD NOTE: PEG\_ICOMPI AND RCOMPO SIGNALS SHOULD BE SHORTED AND ROUTED WITH  
 - MAX LENGTH = 500 MILS  
 - TYPICAL IMPEDANCE = 43 MOHMS

PEG\_ICOMPO SIGNALS SHOULD BE ROUTED WITH  
 - MAX LENGTH = 500 MILS  
 - TYPICAL IMPEDANCE = 14.5 MOHMS

CAD NOTE: DP\_COMPIO AND ICOMPO SIGNALS SHOULD BE SHORTED NEAR BALLS AND ROUTED WITH  
 - TYPICAL IMPEDANCE < 25 MOHMS

### CLOSE TO CPU



## INVENTEC

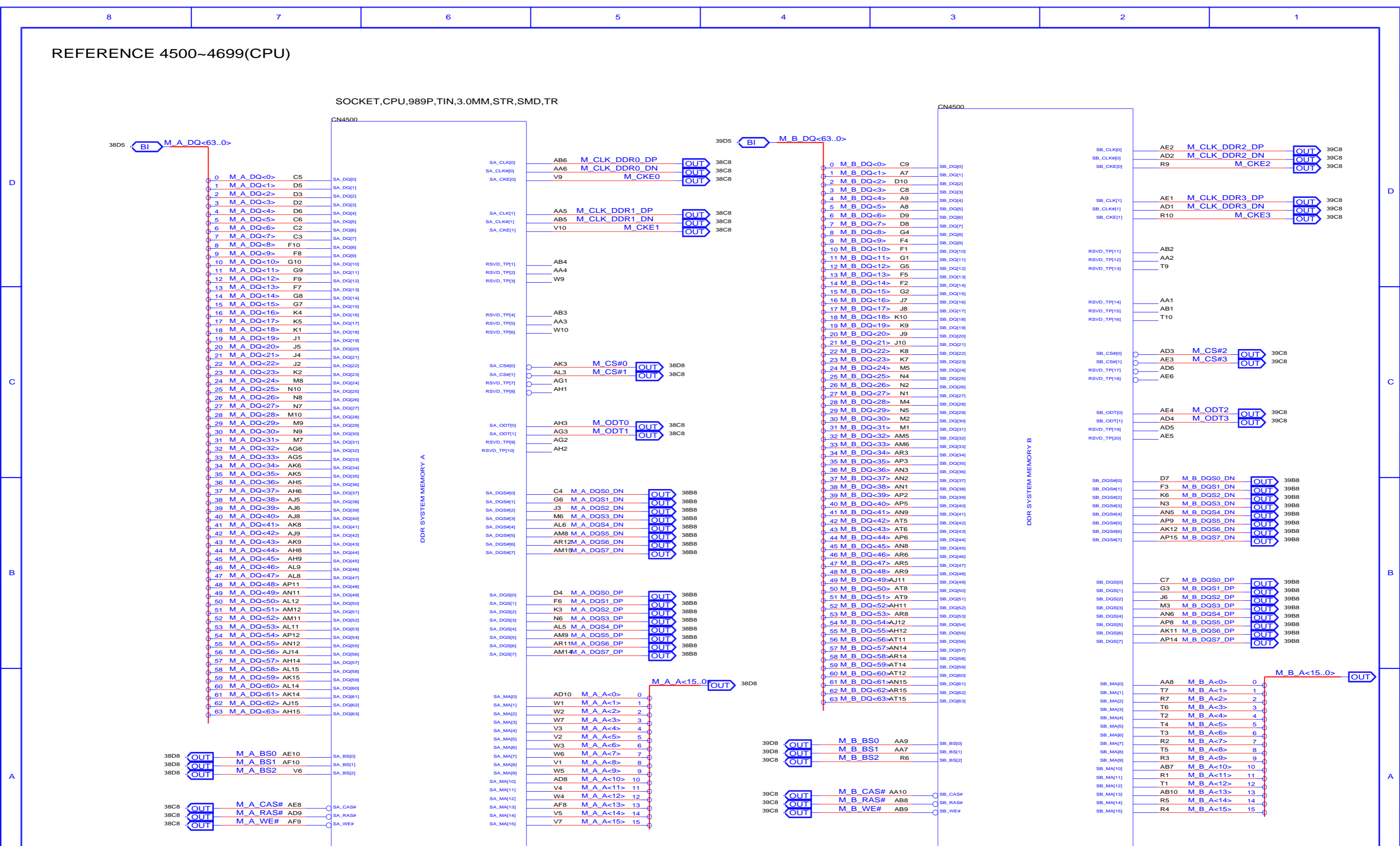
TITLE  
 MODEL,PROJECT,FUNCTION  
 Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 42 of 68

REFERENCE 4500~4699(CPU)

SOCKET,CPU,989P,TIN,3.0MM,STR,SMD,TR



LOTES\_ACA\_ZIF\_069\_P01\_989P

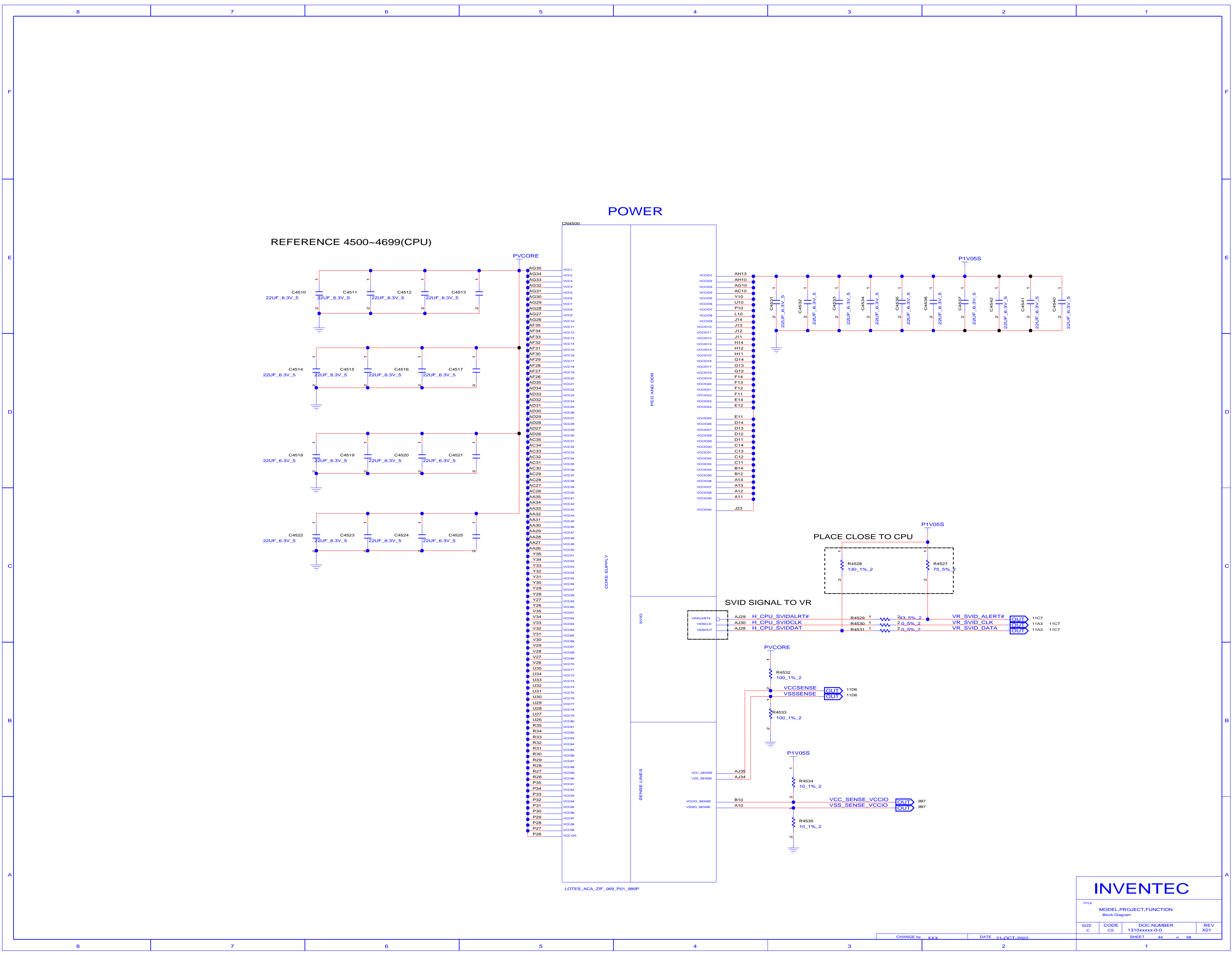
LOTES\_ACA\_ZIF\_069\_P01\_989P

**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxxx-0-0	X01

CHANGE by XXX DATE 21-OCT-2002 SHEET 43 of 68



**POWER**

**REFERENCE 4500~4699(CPU)**

CN4500

PV CORE

P1V05S

PLACE CLOSE TO CPU

SVID SIGNAL TO VR

LOTES\_ACA\_ZIF\_069\_P01\_989P

**INVENTEC**

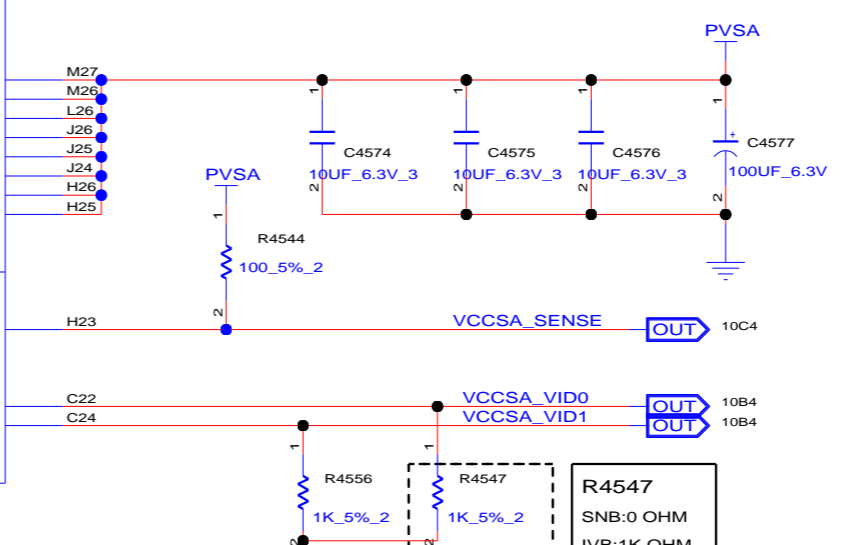
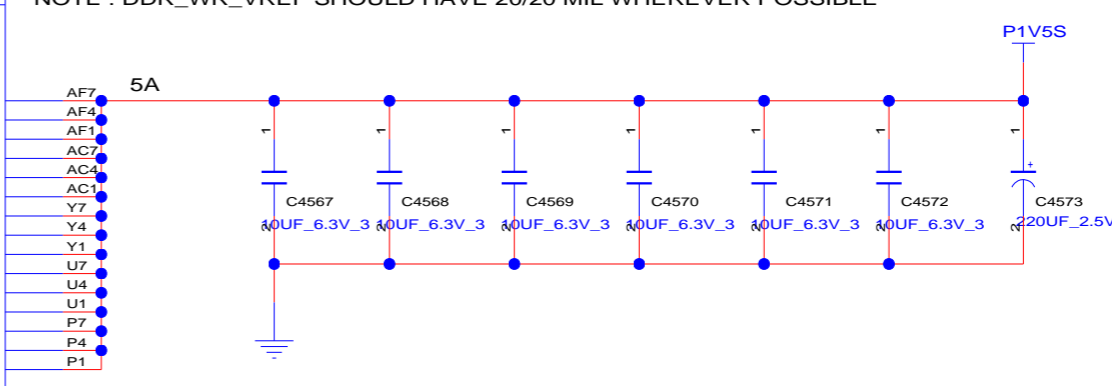
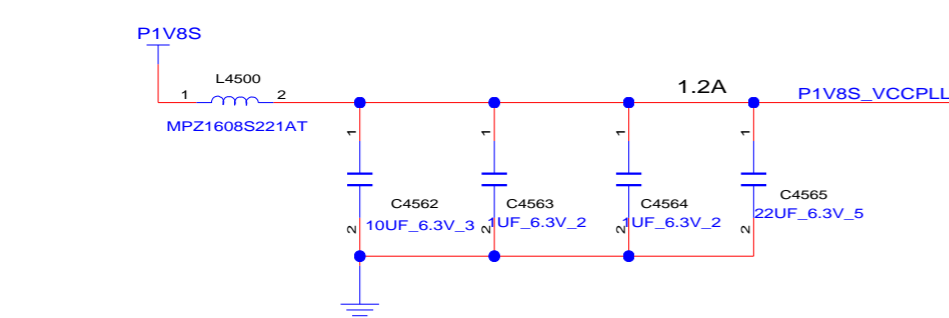
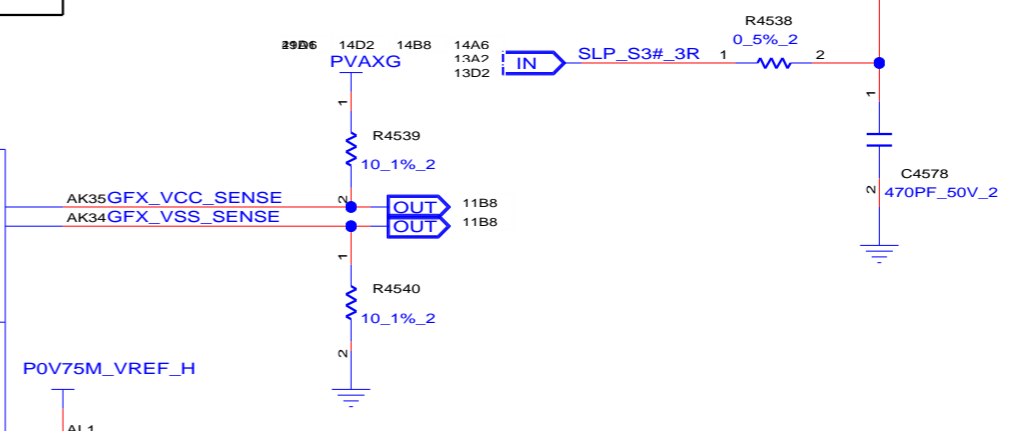
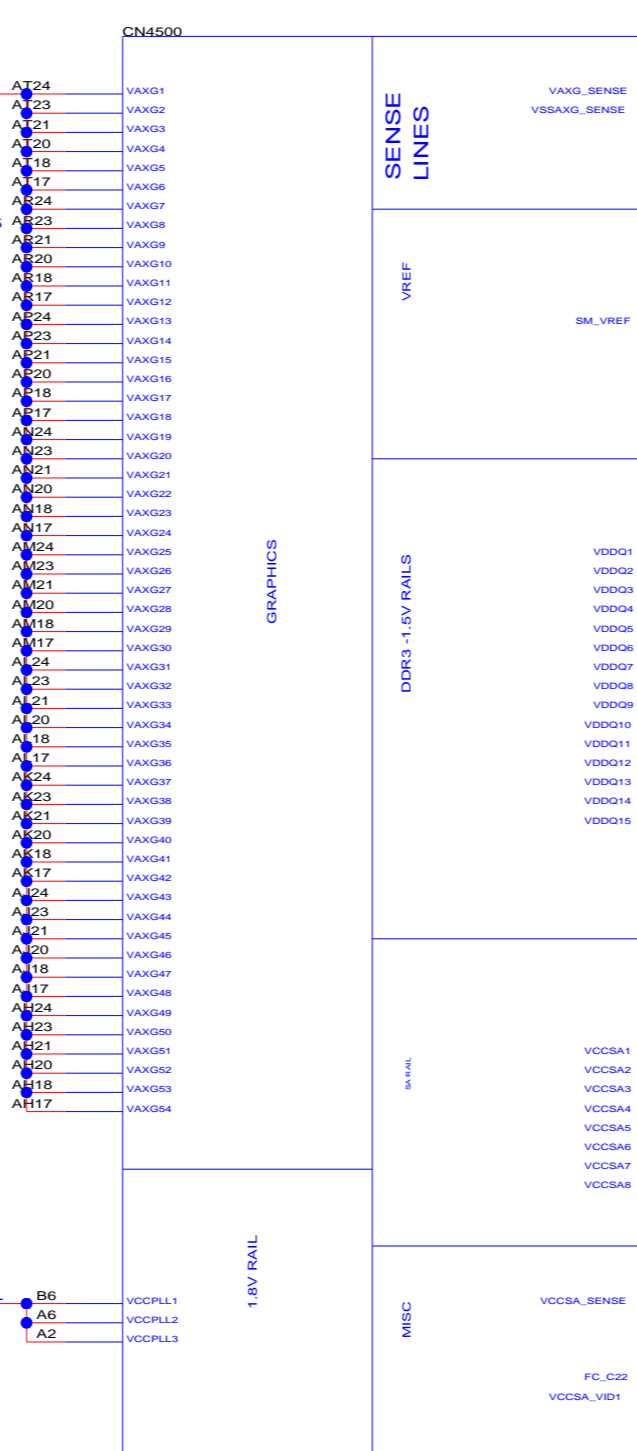
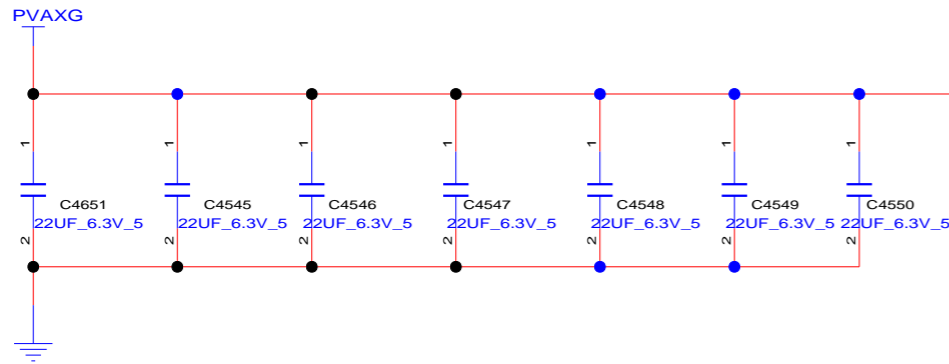
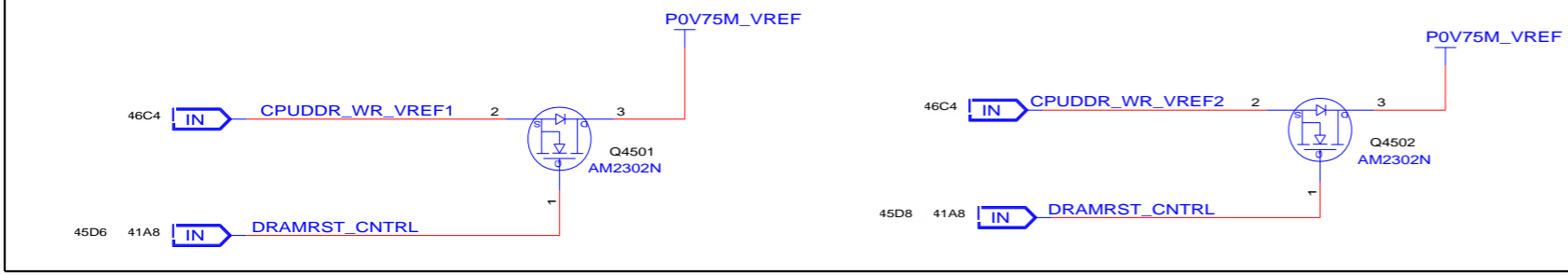
TITLE			
MODEL_PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
C	CS	1310xxxxx-0-0	X01
SHEET 44 of 68			

CHANGE by: xxx DATE: 21.OCT.2002

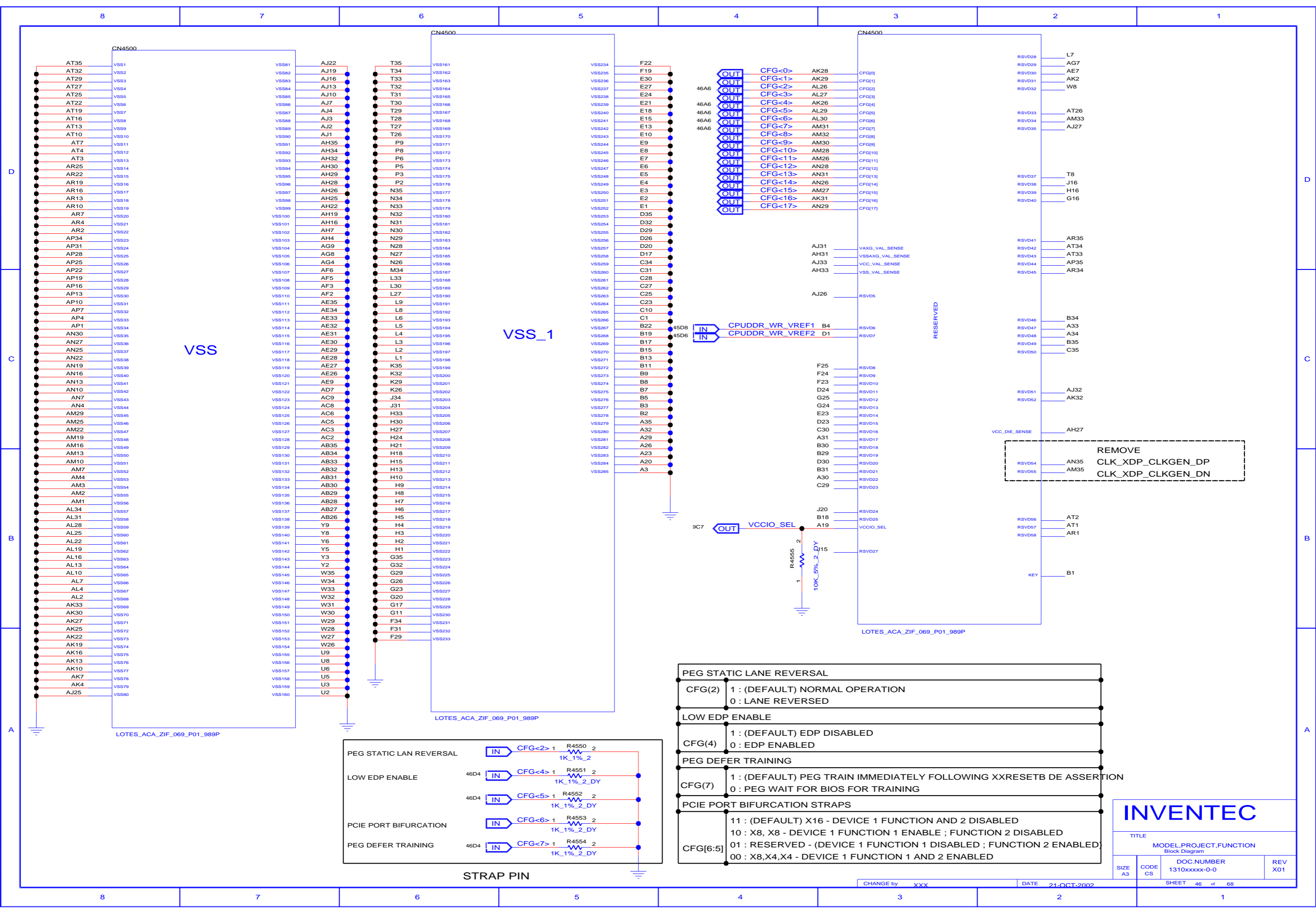
# POWER

PROCESSOR DRIVEN VREF PATH WAS STUFFED BY DEFAULT:

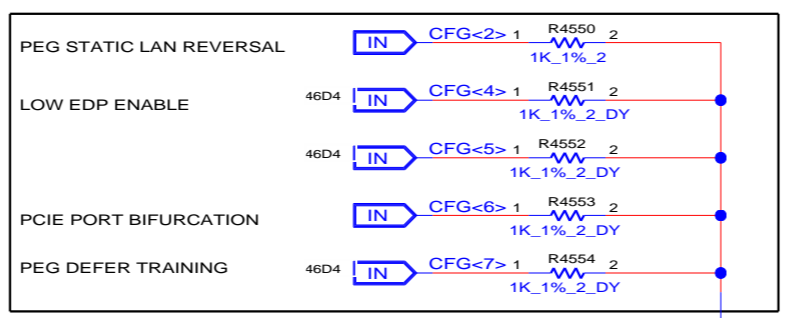
ROUTE WITH MIN. TRACE WIDTH OF 10 MILS



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
SHEET		45	of 68

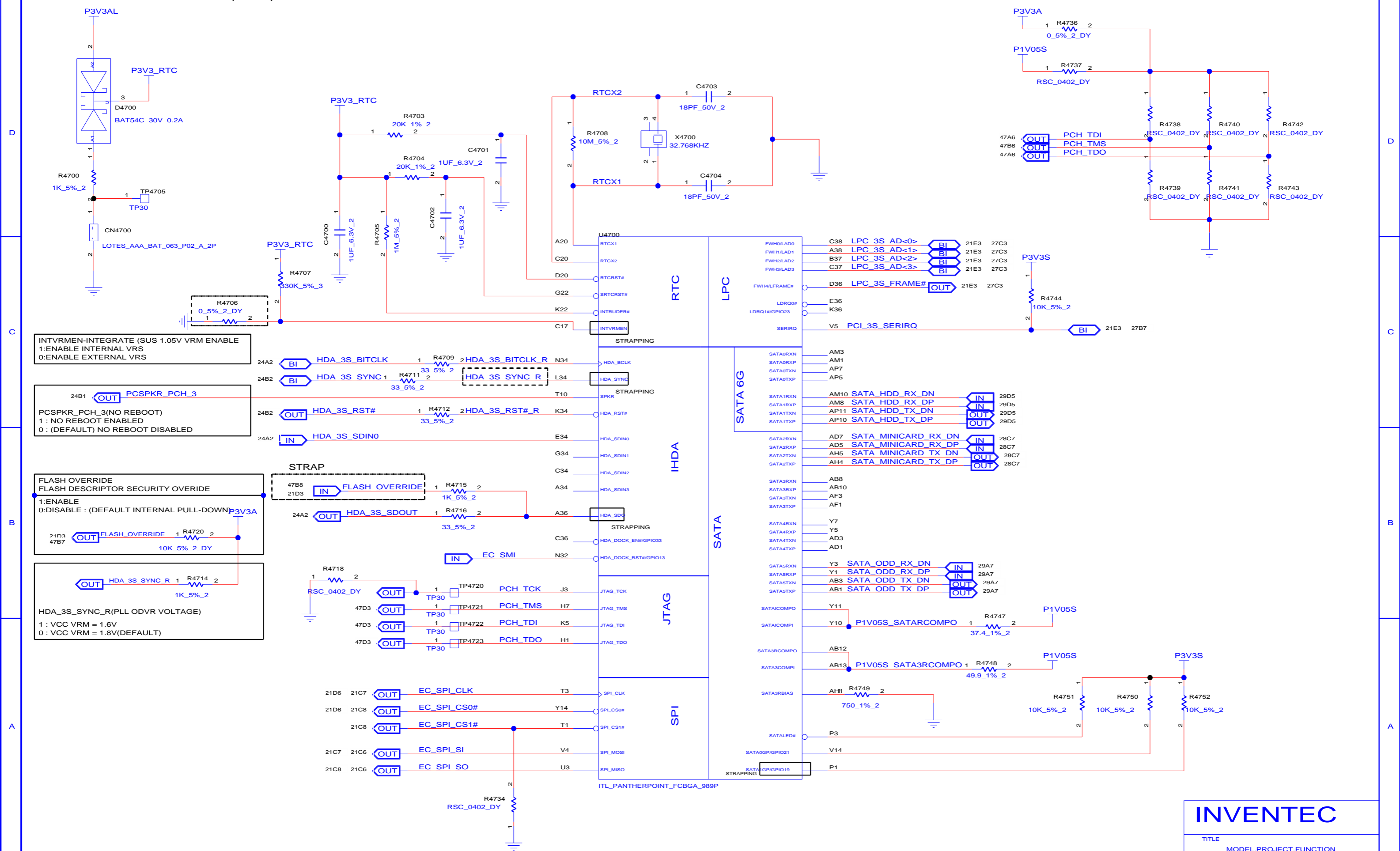


- PEG STATIC LANE REVERSAL
  - CFG(2) 1 : (DEFAULT) NORMAL OPERATION
  - 0 : LANE REVERSED
- LOW EDP ENABLE
  - 1 : (DEFAULT) EDP DISABLED
  - 0 : EDP ENABLED
- PEG DEFER TRAINING
  - 1 : (DEFAULT) PEG TRAIN IMMEDIATELY FOLLOWING XXRESETB DE ASSERTION
  - 0 : PEG WAIT FOR BIOS FOR TRAINING
- PCIE PORT BIFURCATION STRAPS
  - 11 : (DEFAULT) X16 - DEVICE 1 FUNCTION AND 2 DISABLED
  - 10 : X8, X8 - DEVICE 1 FUNCTION 1 ENABLE ; FUNCTION 2 DISABLED
  - 01 : RESERVED - (DEVICE 1 FUNCTION 1 DISABLED ; FUNCTION 2 ENABLED)
  - 00 : X8,X4,X4 - DEVICE 1 FUNCTION 1 AND 2 ENABLED



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
CHANGE by		DATE	SHEET
xxx		21-OCT-2002	46 of 68

REFERENCE 4700~4949(PCH)



INTVRMEN-INTEGRATE (SUS 1.05V VRM ENABLE)  
 1:ENABLE INTERNAL VRS  
 0:ENABLE EXTERNAL VRS

PCSPKR\_PCH\_3(NO REBOOT)  
 1 : NO REBOOT ENABLED  
 0 : (DEFAULT) NO REBOOT DISABLED

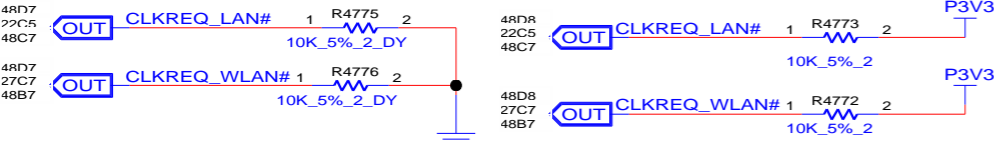
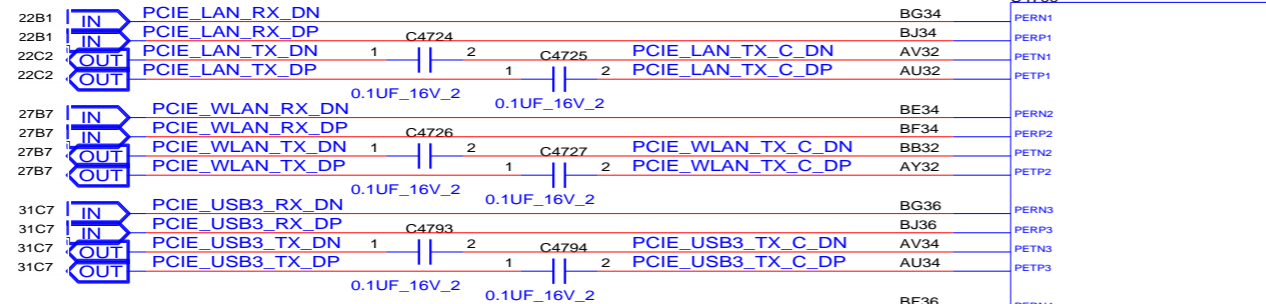
FLASH OVERRIDE  
 FLASH DESCRIPTOR SECURITY OVERRIDE  
 1:ENABLE  
 0:DISABLE : (DEFAULT INTERNAL PULL-DOWN)

HDA\_3S\_SYNC\_R(PLL ODVR VOLTAGE)  
 1 : VCC VRM = 1.6V  
 0 : VCC VRM = 1.8V(DEFAULT)

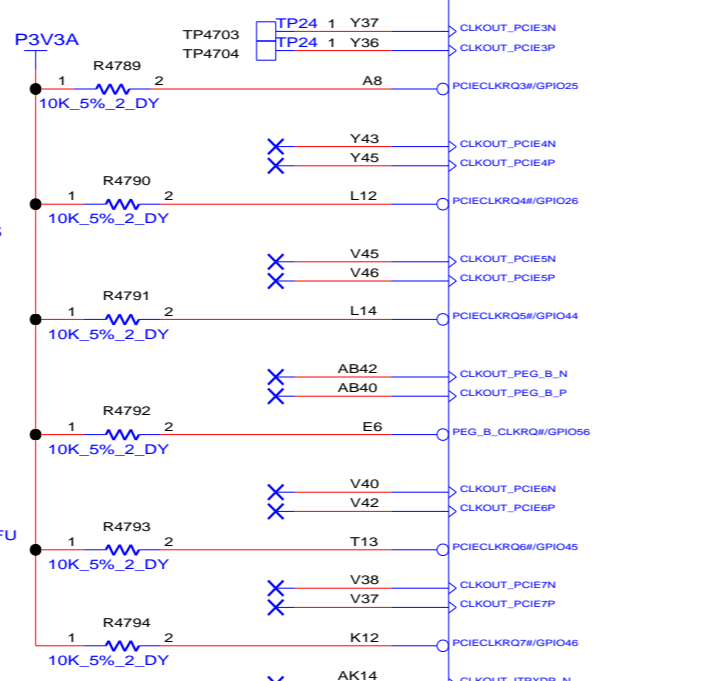
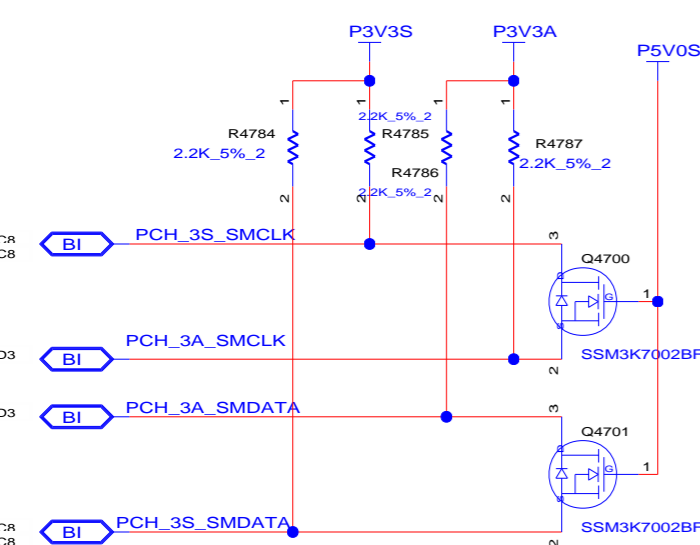
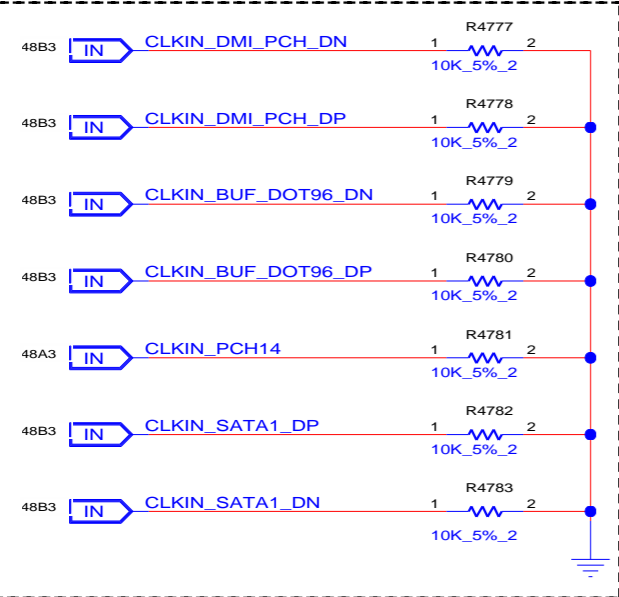
<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

REFERENCE 4700-4949(PCH)

8 7 6 5 4 3 2 1



CLOCK TERMINATION FOR FICM STUFF FOR INTEGRATED CLK

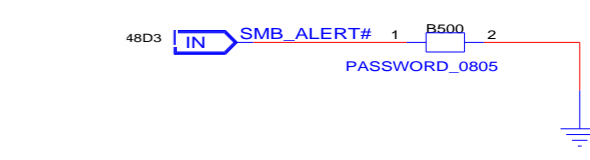
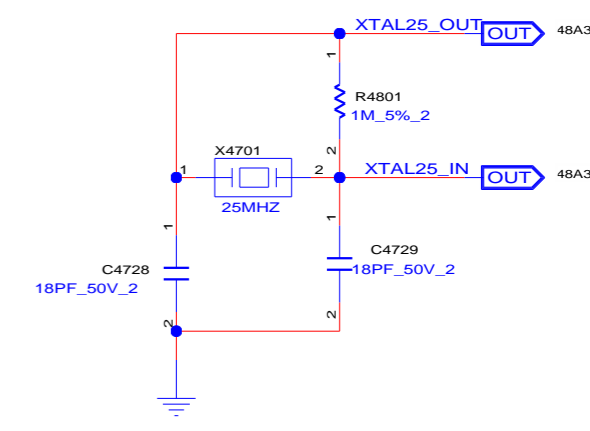
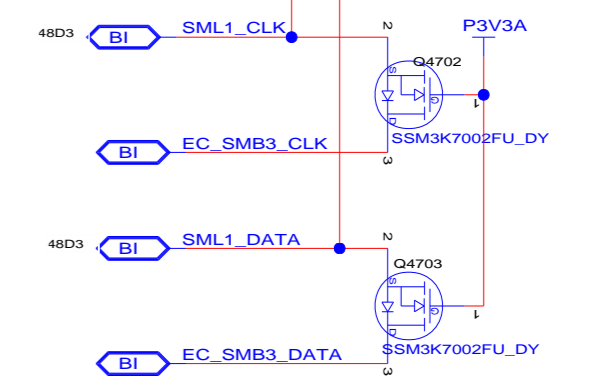
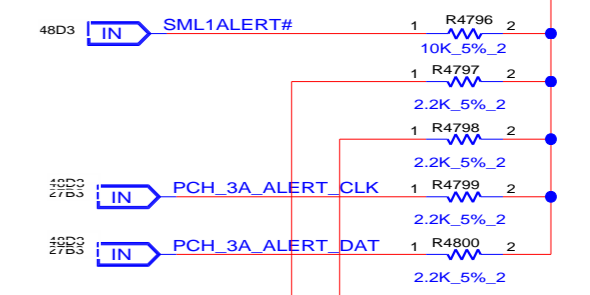
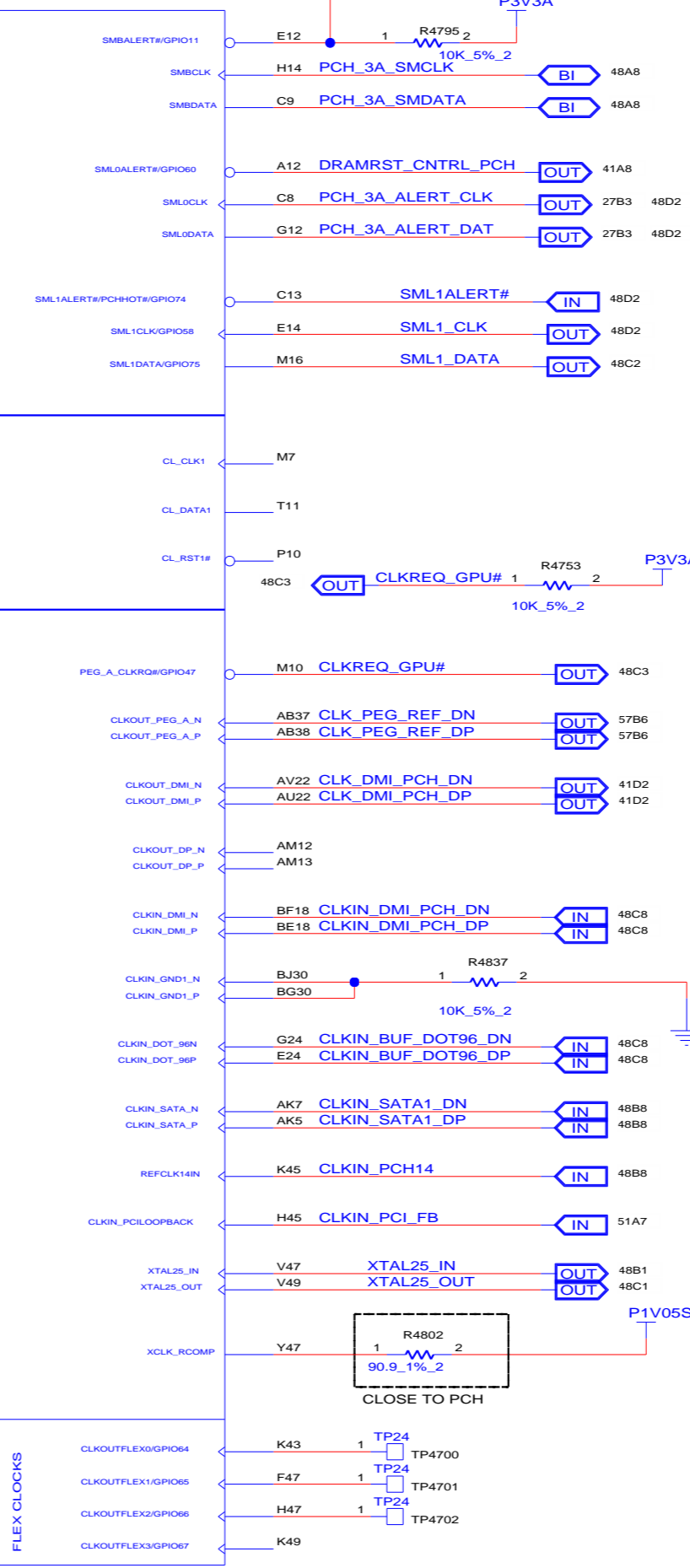


SMBUS

Controller Link

CLOCKS

FLEX CLOCKS

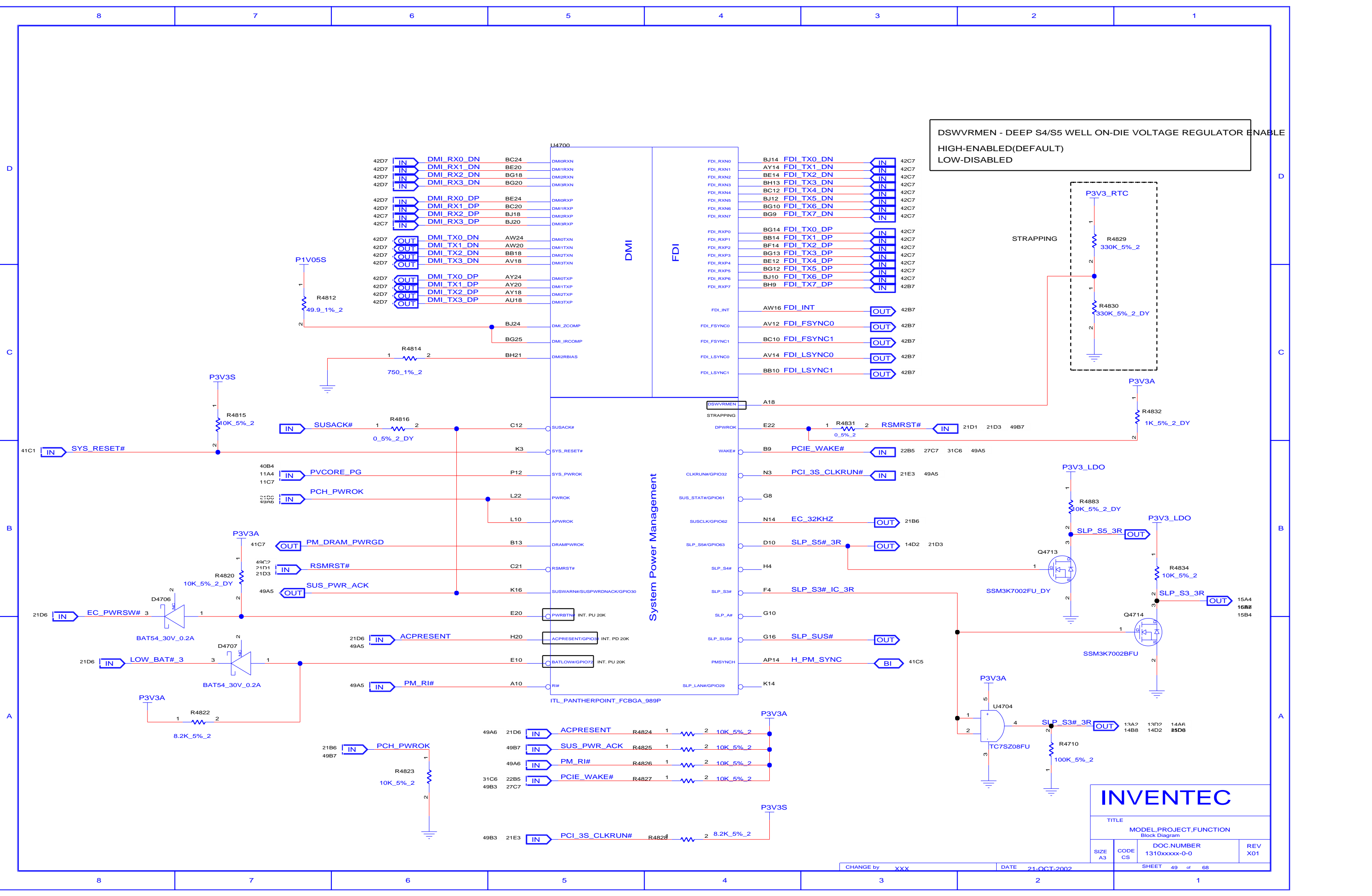


INVENTEC			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
xxx		21-OCT-2002	48 of 68

8 7 6 5 4 3 2 1

ITL\_PANTHERPOINT\_FCBGA\_989P

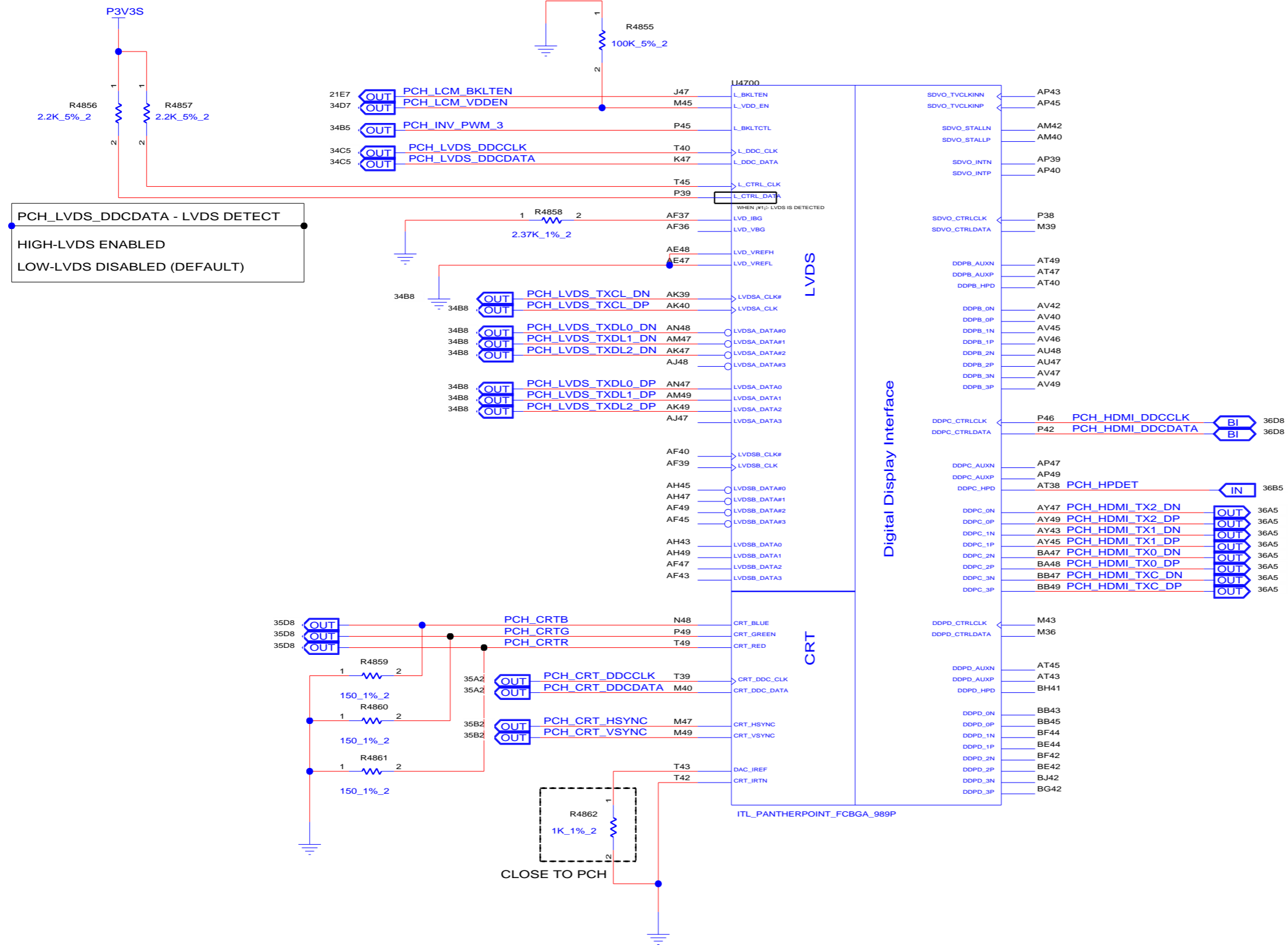




DSWVRMEN - DEEP S4/S5 WELL ON-DIE VOLTAGE REGULATOR ENABLE  
HIGH-ENABLED(DEFAULT)  
LOW-DISABLED

System Power Management

<b>INVENTEC</b>			
TITLE MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01



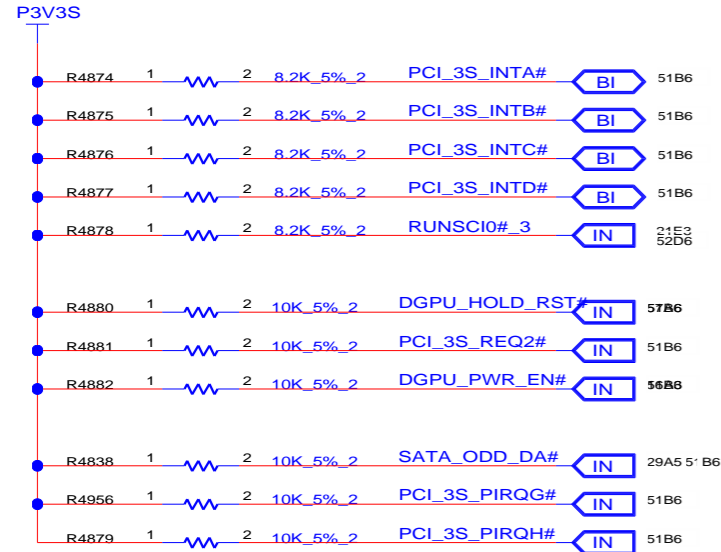
**INVENTEC**

TITLE  
 MODEL\_PROJECT\_FUNCTION  
 Block Diagram

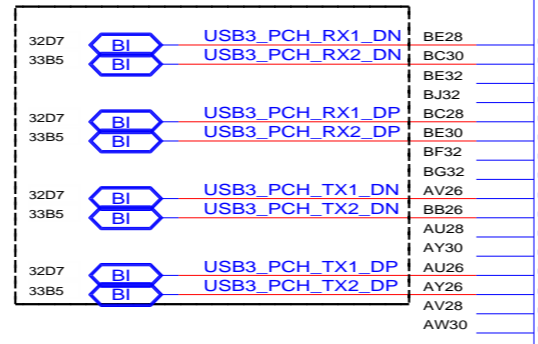
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

REFERENCE 4700~4949(PCH)

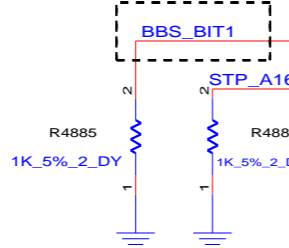
GPIO51 BBS_BIT1	GPIO19 BBS_BIT0	BOOT BIOS DESTINATION
0	1	RESERVED(NAND)
1	0	-----
1	1	SPI (DEFAULT)
0	0	LPC



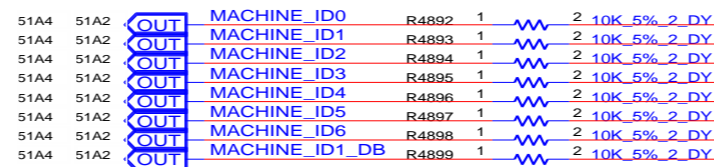
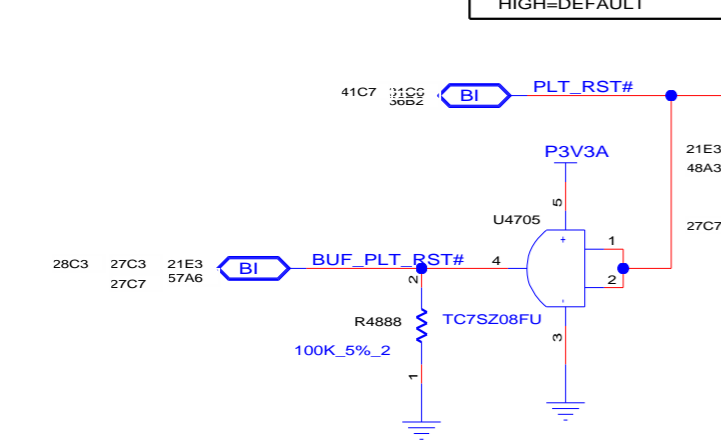
ROUTE WITH 90 OHMS IMPEDANCE  
TOTAL LENGTH NO LONGER THAN 11 INCHES



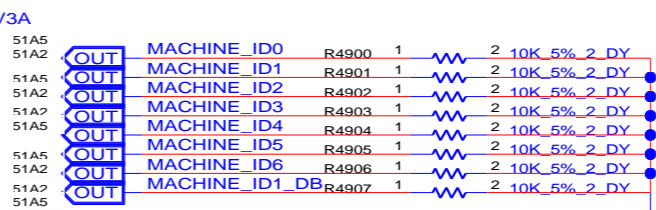
BBS STRAPING



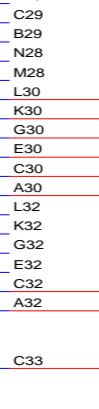
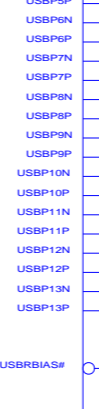
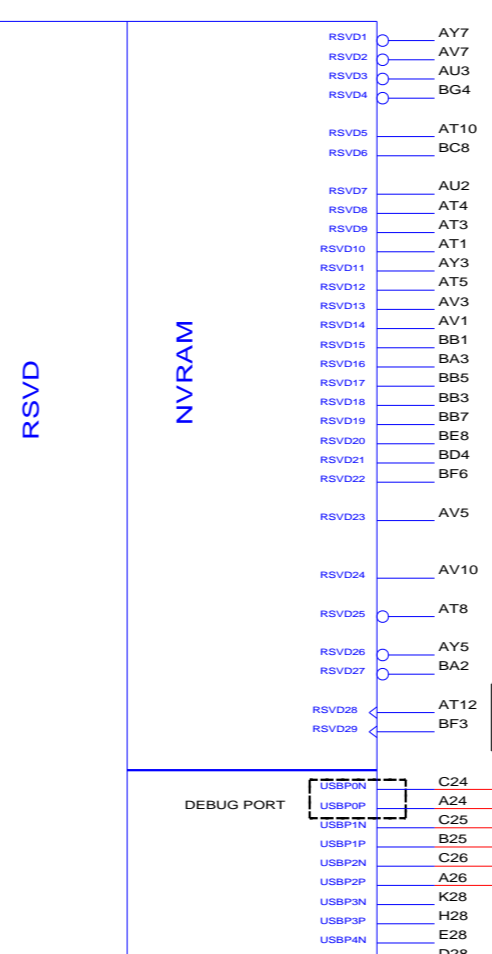
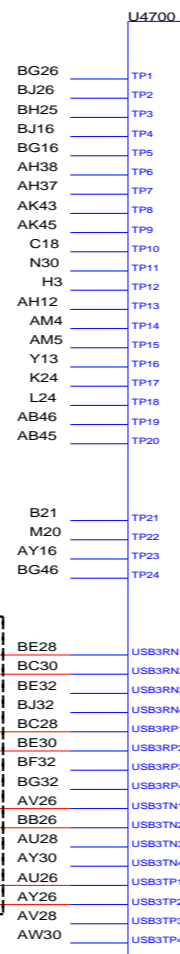
LOW=A16 SWAP OVERRIDE  
STP\_A16OVR  
TOP-BLOCK SWAP OVERRIDE  
HIGH=DEFAULT



NOTE:10K\_5%(60130B1030ZT)



NOTE:10K\_5%(60130B1030ZT)



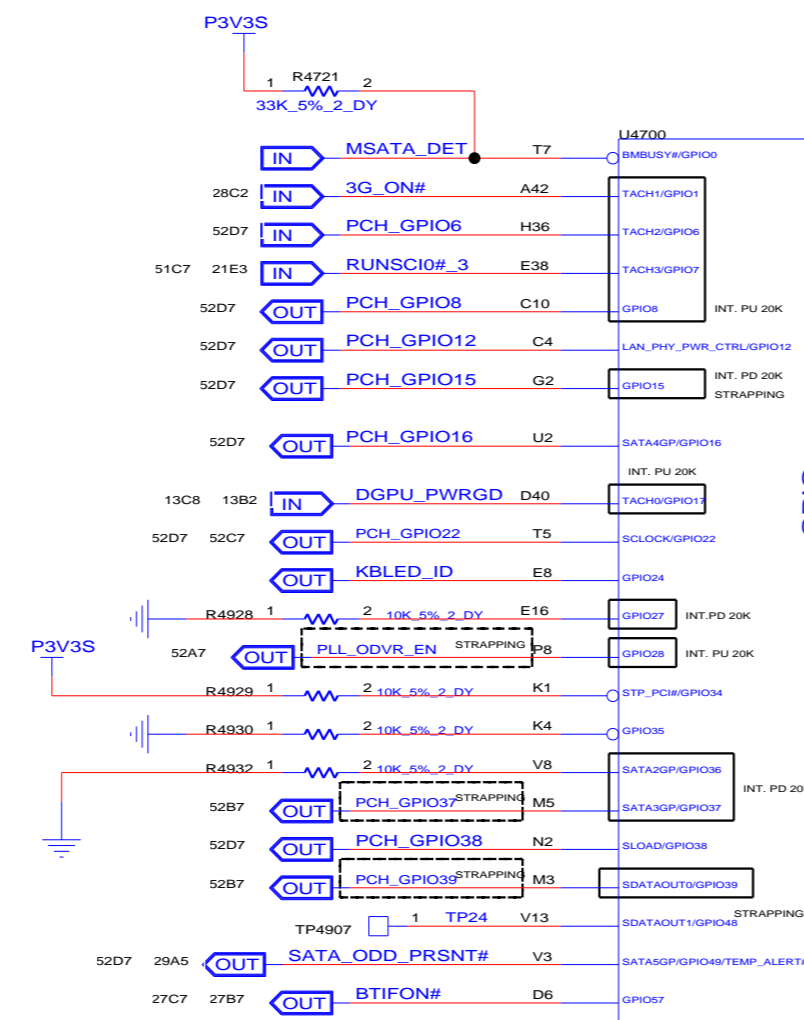
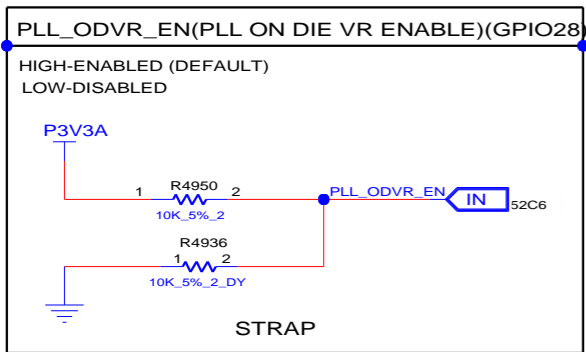
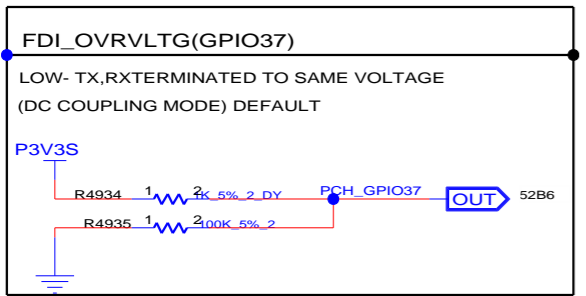
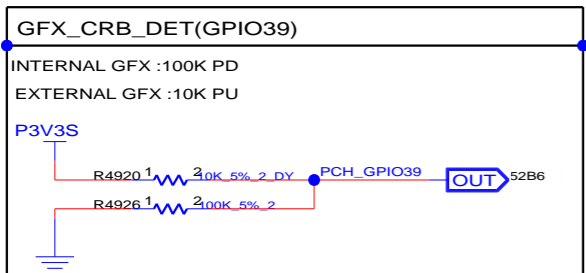
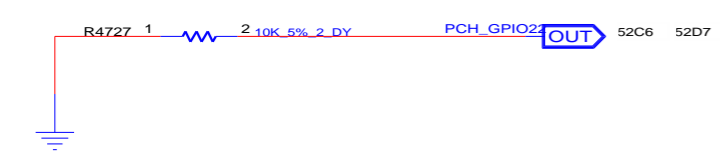
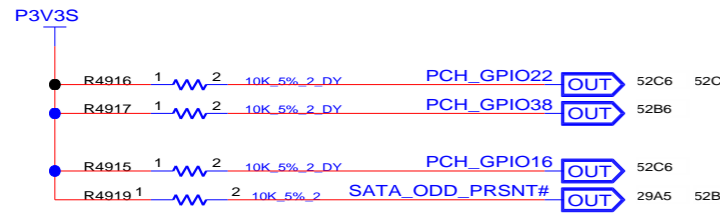
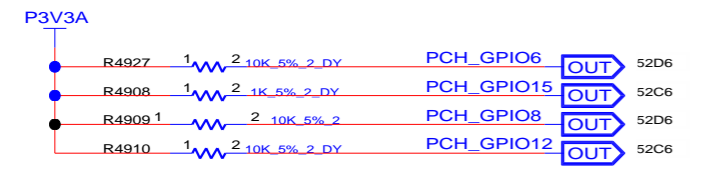
NOTE:  
USB2.0/3.0 COMBO-USB2.0 PORT 0,1 MAPPED USB3.0 PORT 1,2

P0,P1 RESERVER FOR USB3.0

INVENTEC

TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01

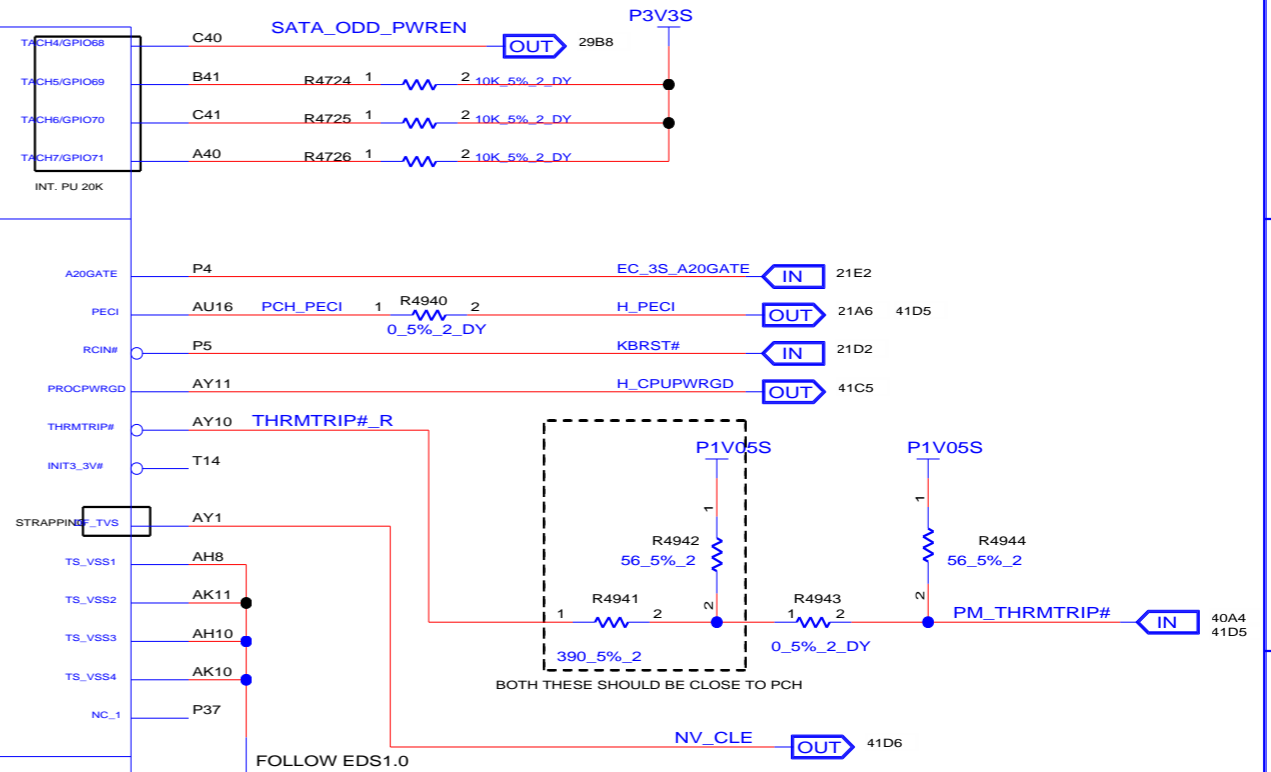
CHANGE by xxx DATE 21-OCT-2002 SHEET 51 of 68



GPIO

CPU/MISC

NCTF

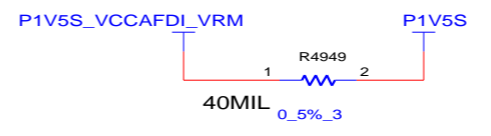
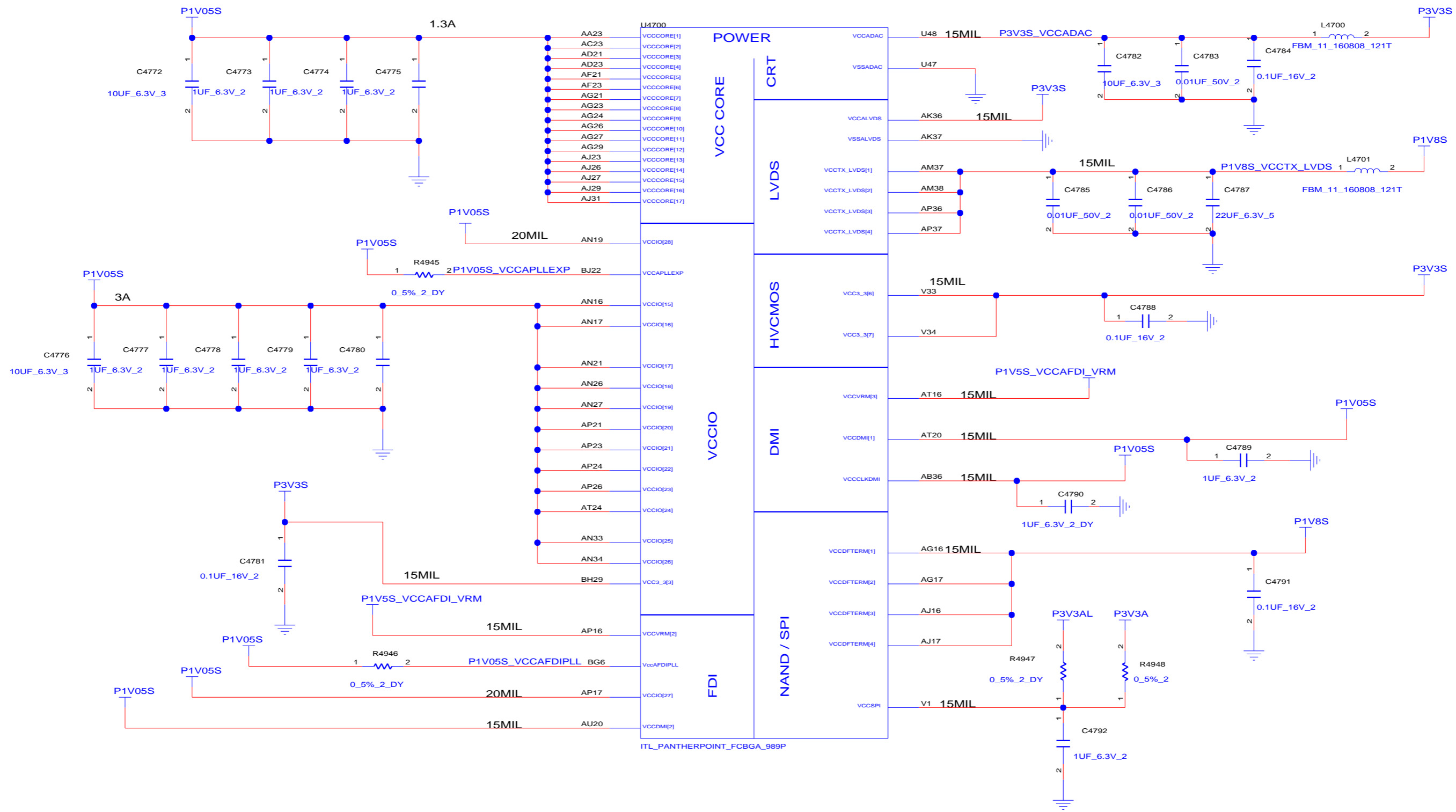


- A4 VSS\_NCTF\_1
- A44 VSS\_NCTF\_2
- A45 VSS\_NCTF\_3
- A46 VSS\_NCTF\_4
- A5 VSS\_NCTF\_5
- A6 VSS\_NCTF\_6
- B3 VSS\_NCTF\_7
- B47 VSS\_NCTF\_8
- BD1 VSS\_NCTF\_9
- BD49 VSS\_NCTF\_10
- BE1 VSS\_NCTF\_11
- BE49 VSS\_NCTF\_12
- BF1 VSS\_NCTF\_13
- BF49 VSS\_NCTF\_14
- BG2 VSS\_NCTF\_15
- BG48 VSS\_NCTF\_16
- BH3 VSS\_NCTF\_17
- BH47 VSS\_NCTF\_18
- BJ4 VSS\_NCTF\_19
- BJ44 VSS\_NCTF\_20
- BJ45 VSS\_NCTF\_21
- BJ46 VSS\_NCTF\_22
- BJ5 VSS\_NCTF\_23
- BJ6 VSS\_NCTF\_24
- C2 VSS\_NCTF\_25
- C48 VSS\_NCTF\_26
- D1 VSS\_NCTF\_27
- D49 VSS\_NCTF\_28
- E1 VSS\_NCTF\_29
- E49 VSS\_NCTF\_30
- F1 VSS\_NCTF\_31
- F49 VSS\_NCTF\_32

ITL\_PANTHERPOINT\_FCBGA\_989P

<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	SHEET 52 of 68

REFERENCE 4700~4949(PCH)

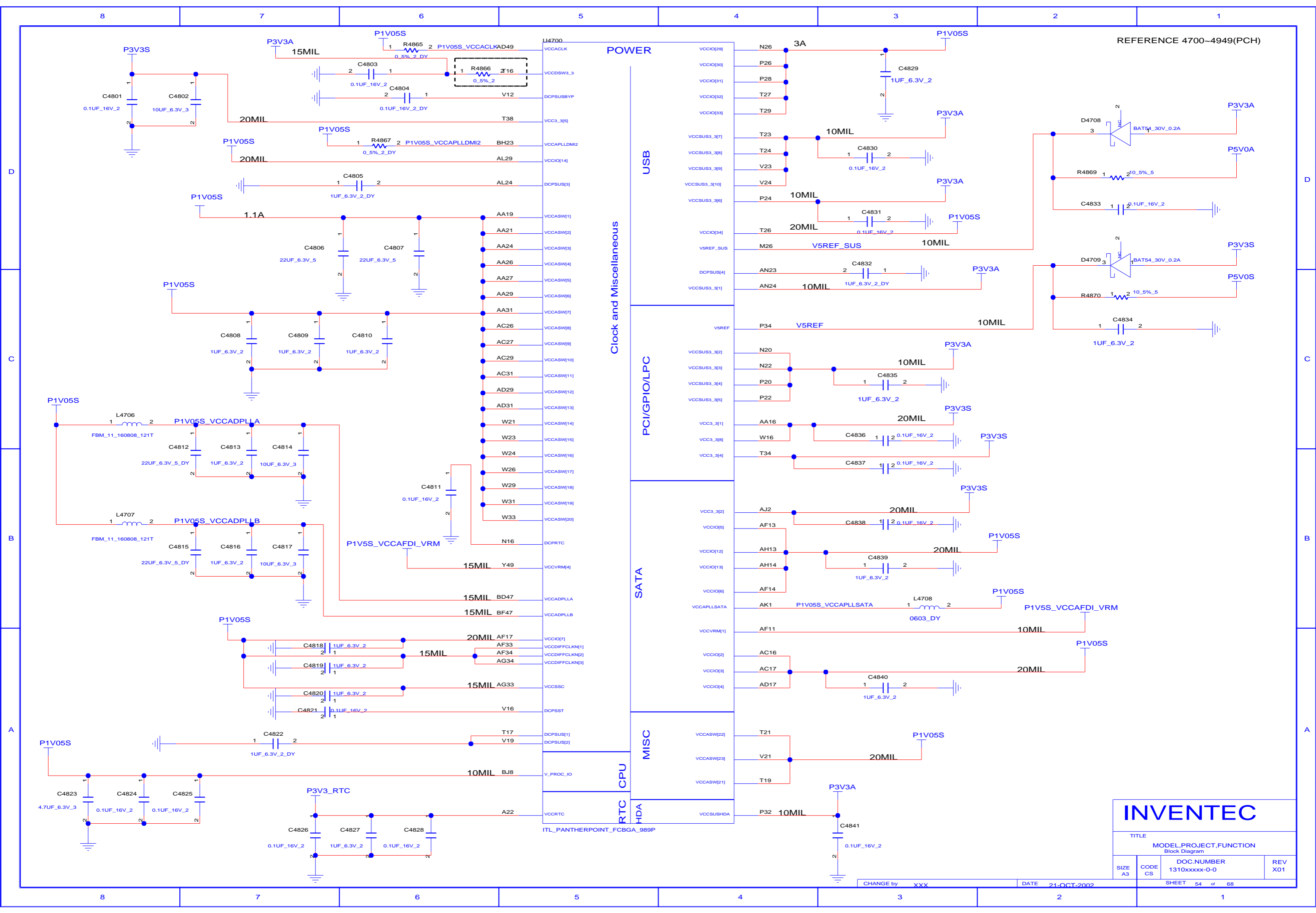


**INVENTEC**

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

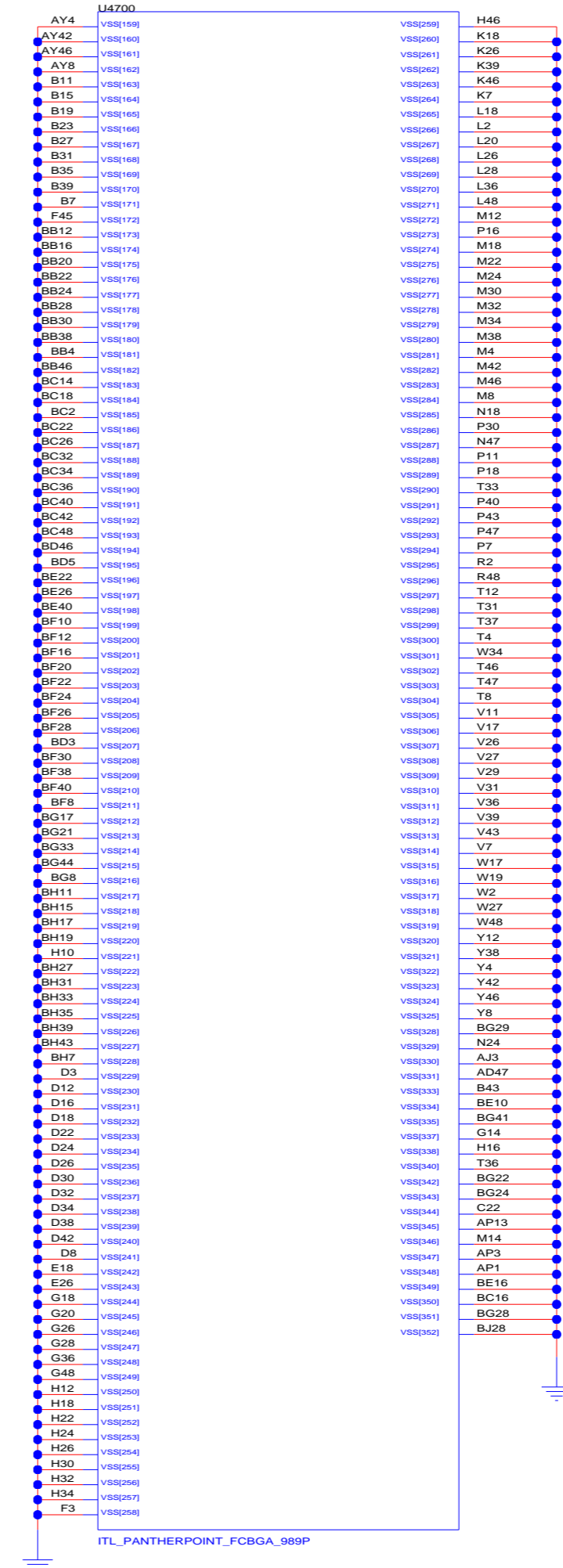
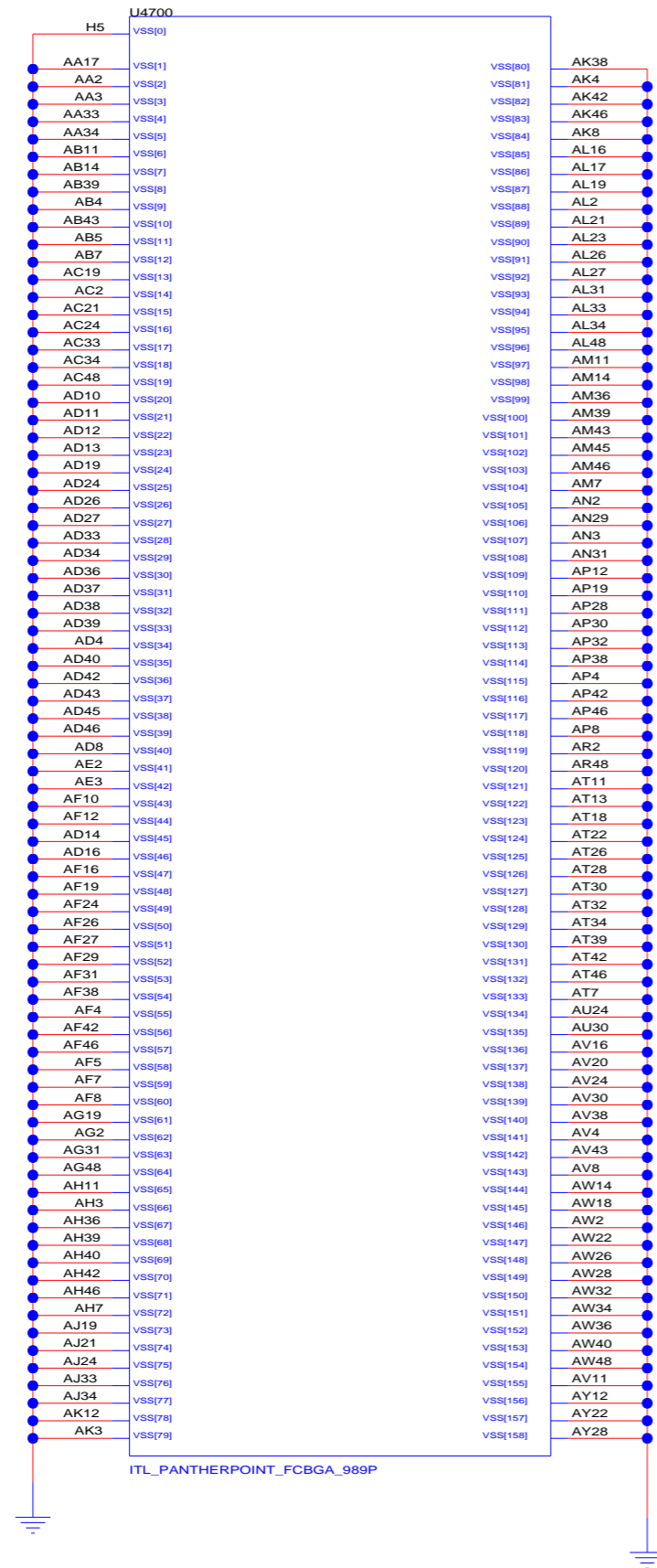
SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 53 of 68



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
CHANGE by XXX		DATE 21-OCT-2002	SHEET 54 of 68

REFERENCE 4700-4949(PCH)



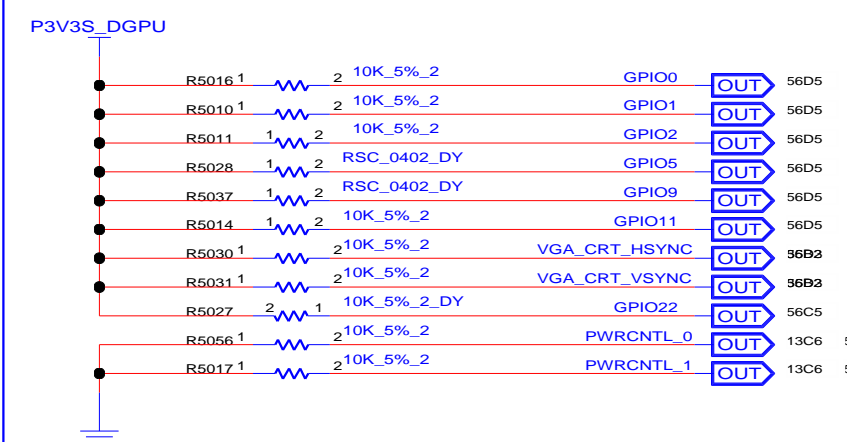
**INVENTEC**

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 55 of 68

THAMES (6019B0917601)

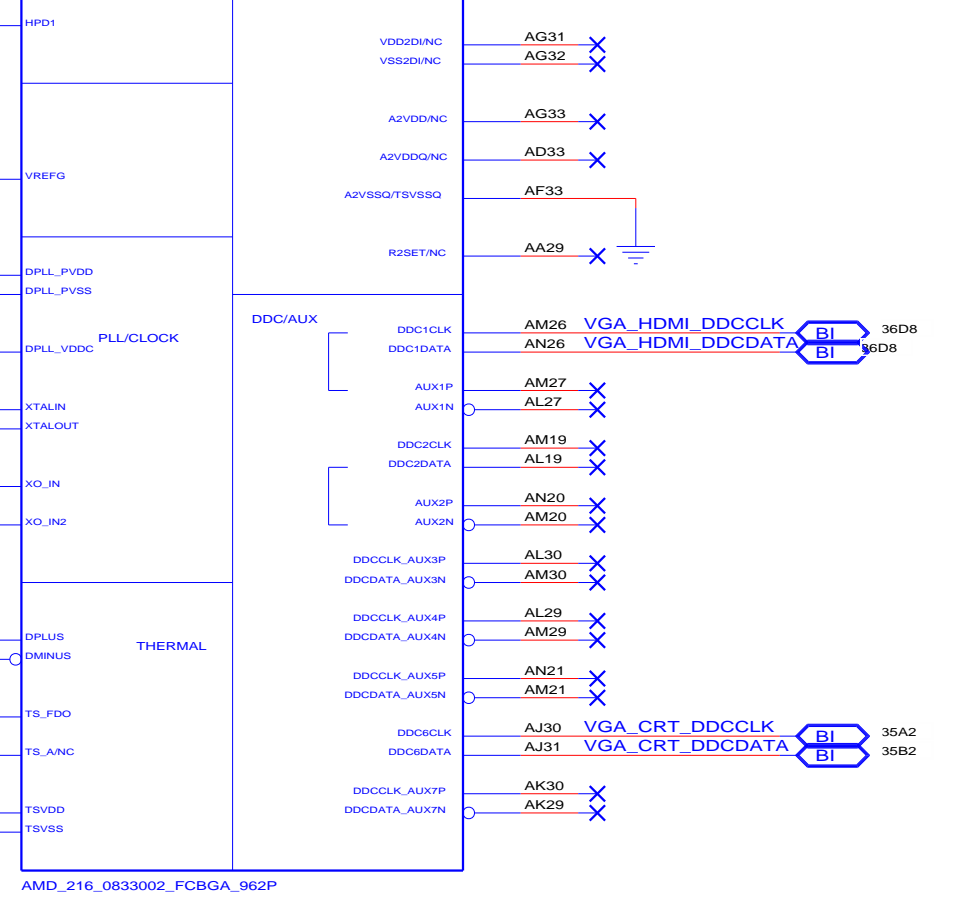
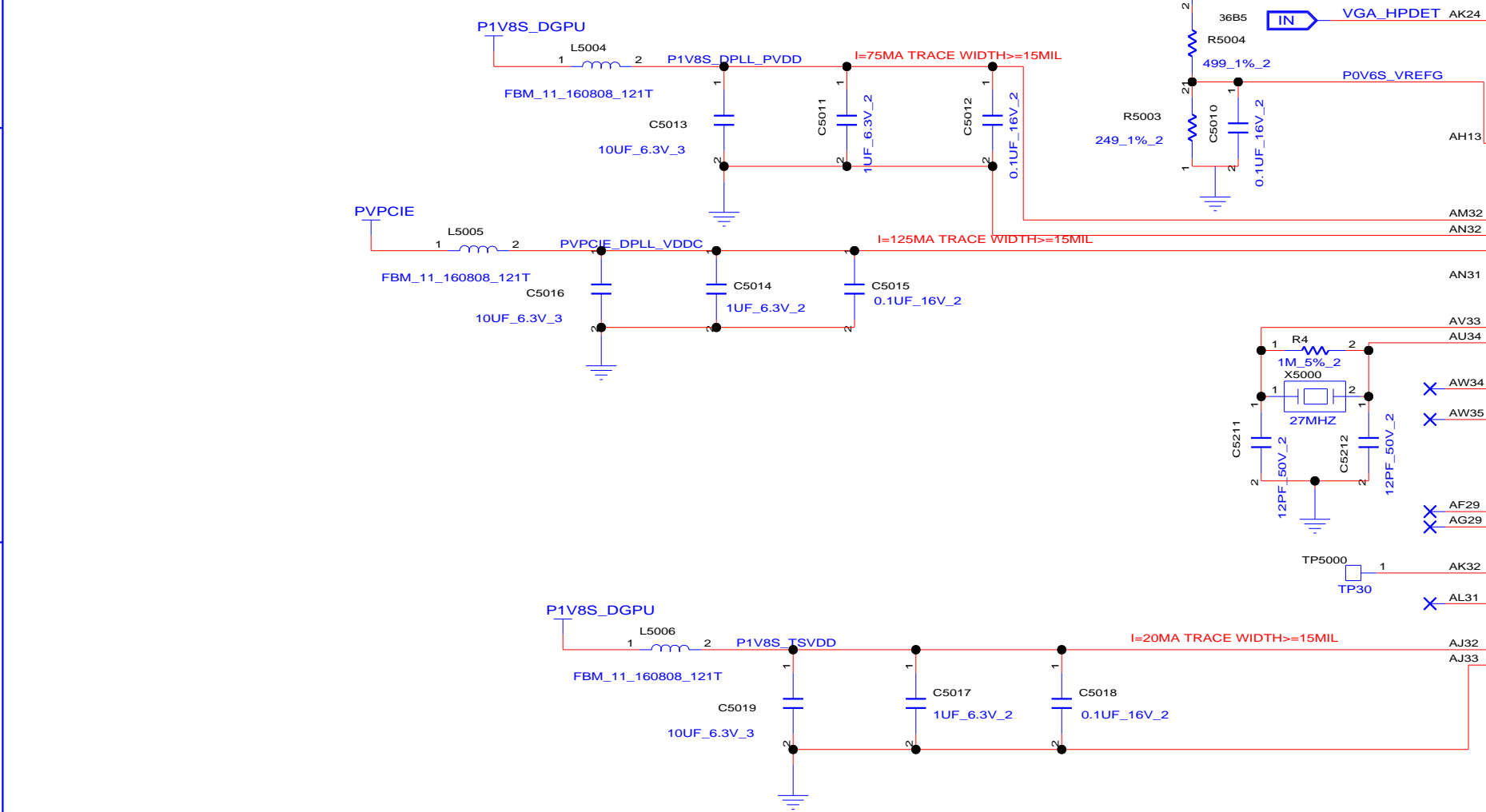
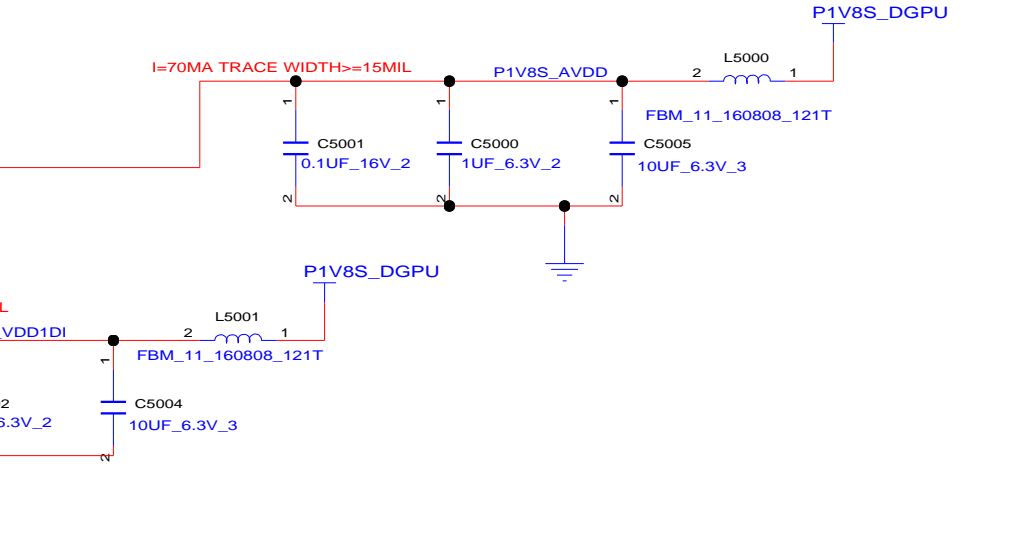
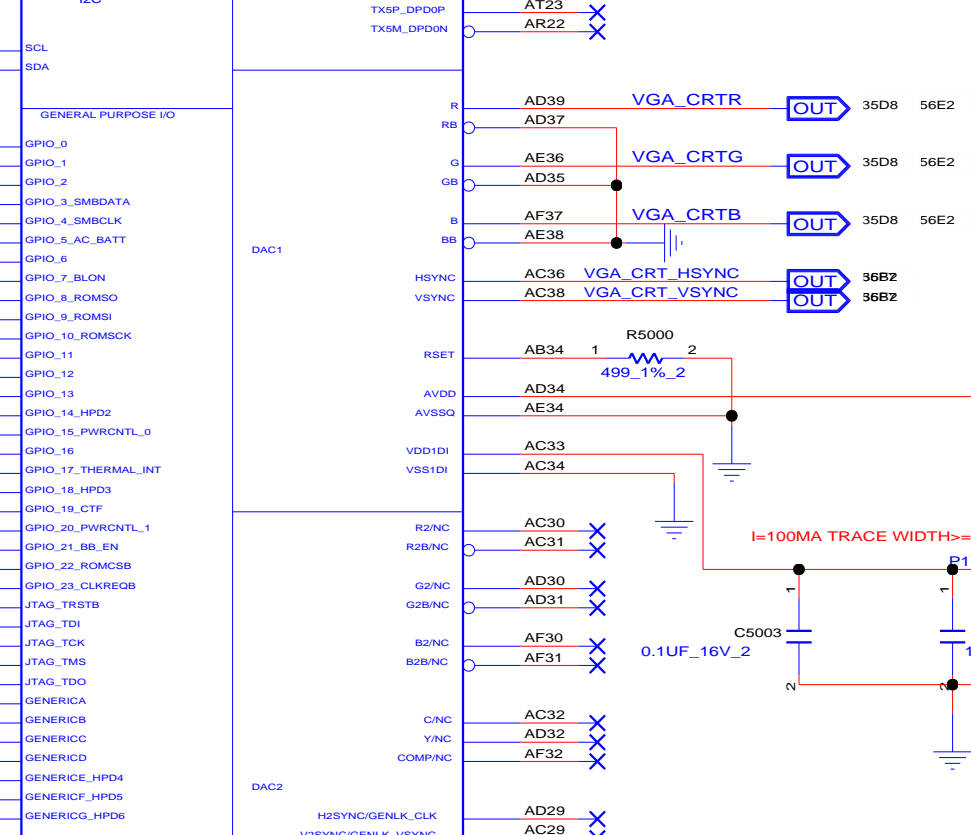
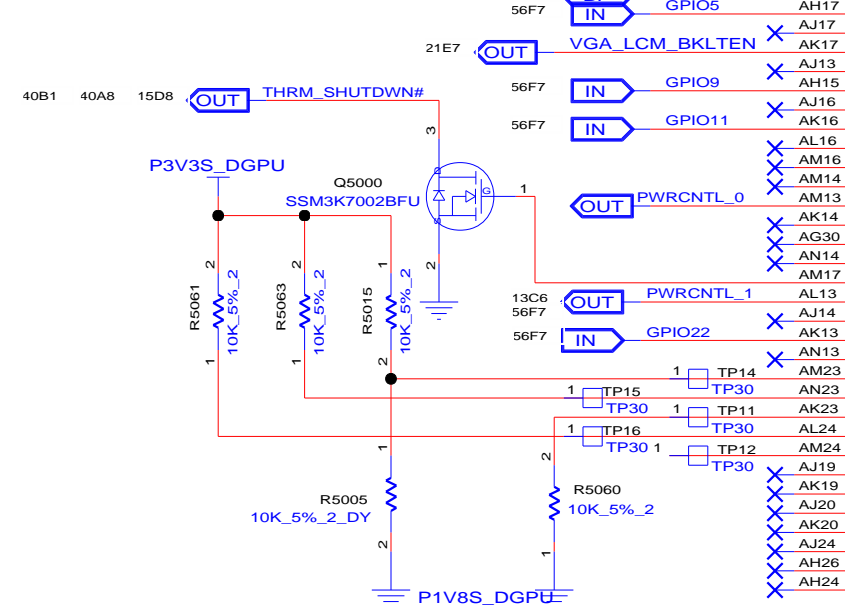
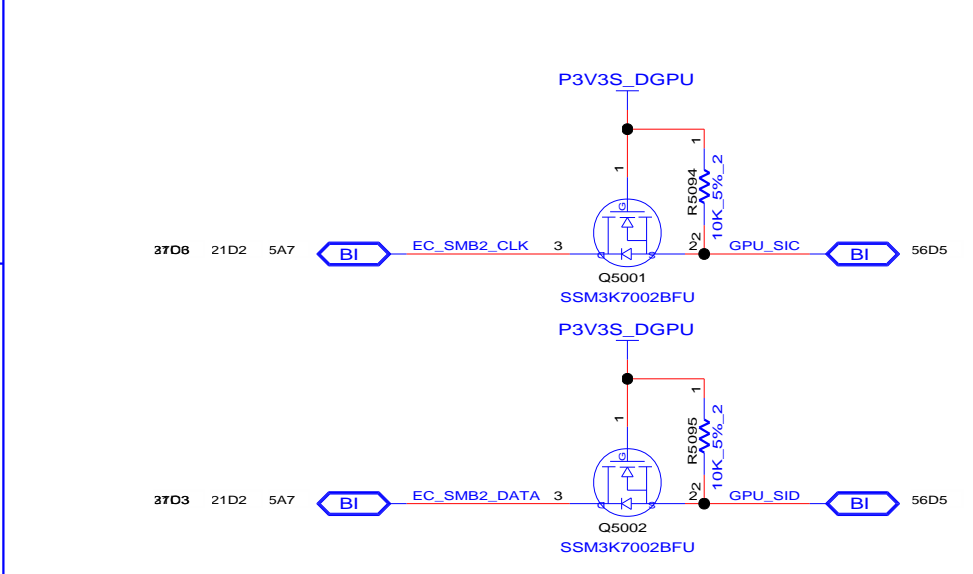
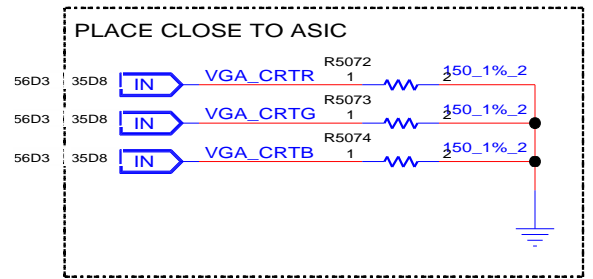
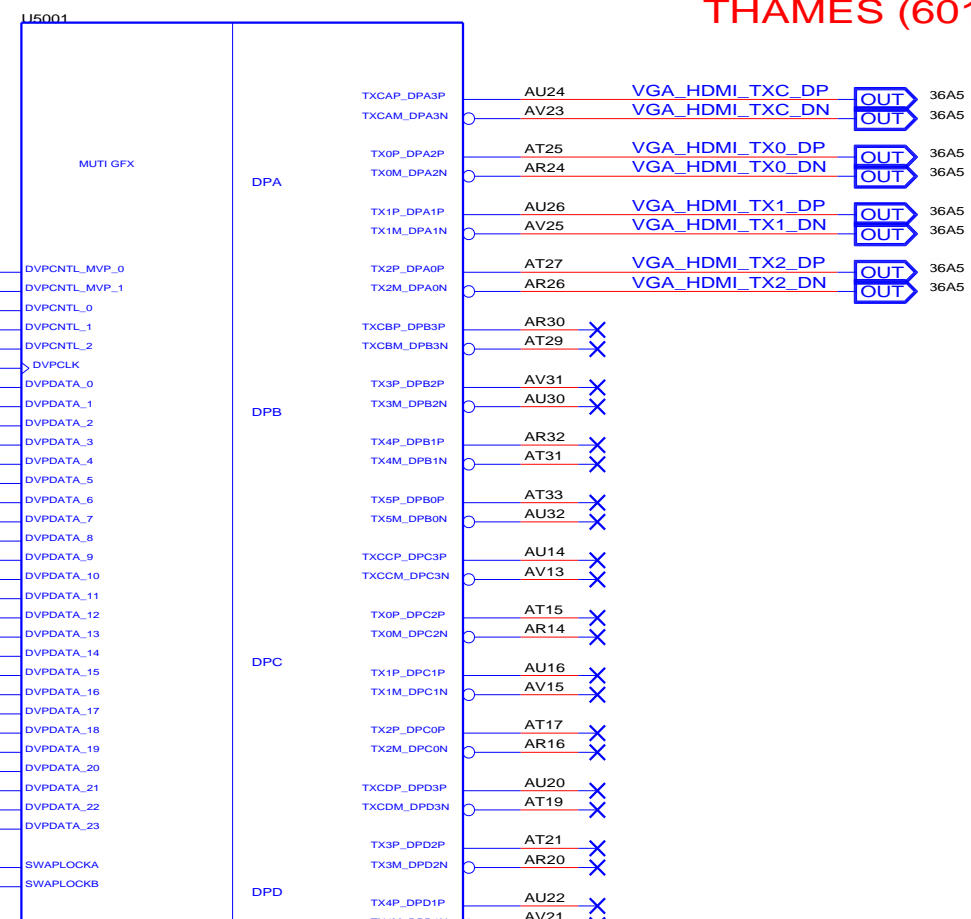


GPIO11:MEMORY APERTURE SIZE 256M

MEM_ID3	MEM_ID2	MEM_ID1	MEM_ID0	HYNIX	SAMSUNG
0	0	0	0	0	0
0	1	0	0	0	0



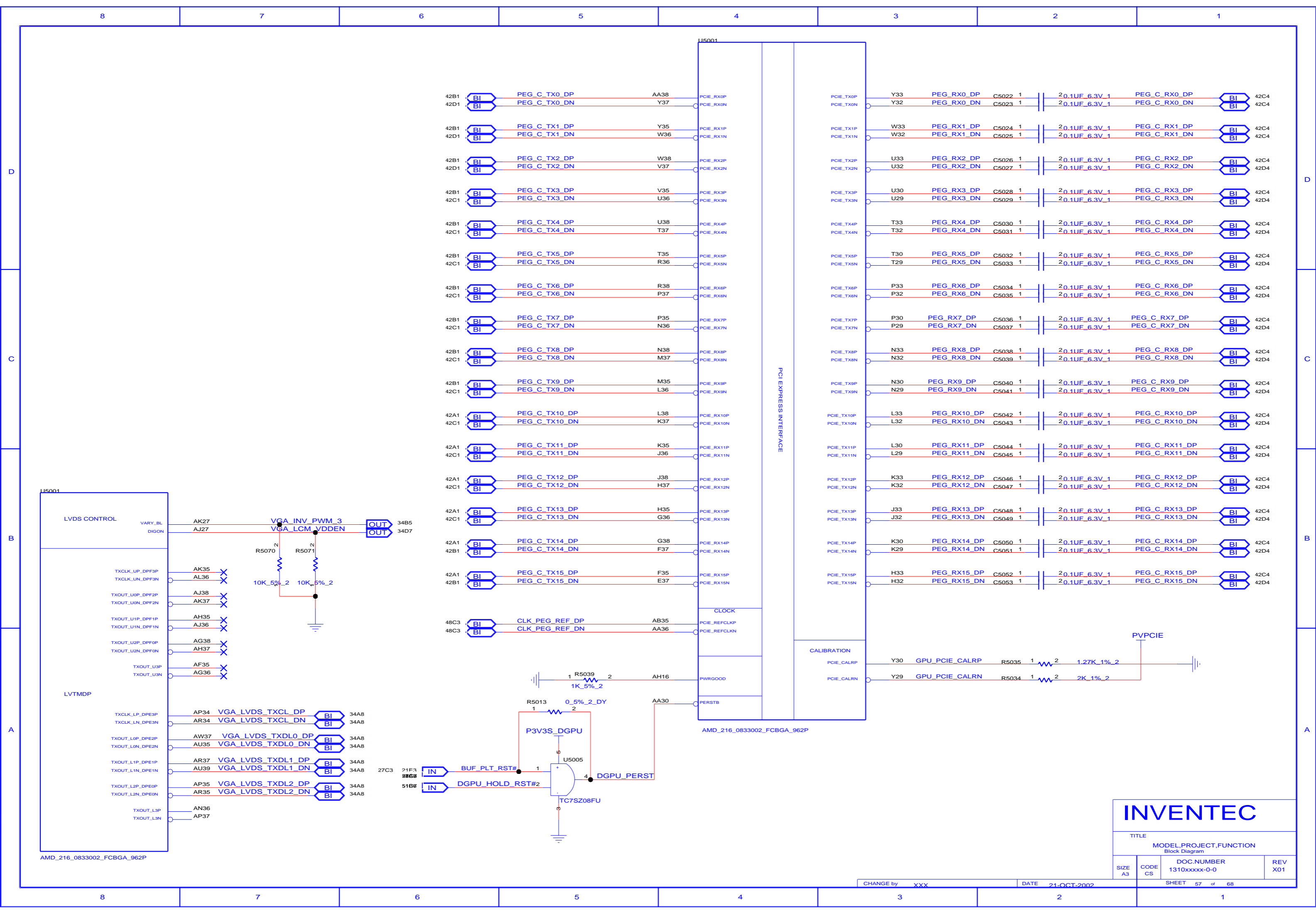
PIN BASE STRAPS																					
GPIO_0	TRANSMITTER POWER SAVING ENABLE 0 : 50% TX OUTPUT SWING (DEFAULT) 1 : FULL TX OUTPUT SWING																				
GPIO_1	PCIE TRANSMITTER DE-EMPHASIS 0 : DE-EMPHASIS DISABLED (DEFAULT) 1 : DE-EMPHASIS ENABLED																				
GPIO_2	GEN1/GEN2 ENABLE 0 : GEN1 (DEFAULT) 1 : GEN2																				
GPIO_8 GPIO_21	MUST BE LOW DURING RESET LEFT UNCONNECTED																				
GPIO_9	VGA DISABLE 0 : ENABLE (DEFAULT) 1 : DISABLE																				
GPIO_[11:13]	MEMORY APERTURE SIZE																				
	<table border="1"> <tr> <th>GPIO_13</th> <th>GPIO_12</th> <th>GPIO_11</th> <th>MEMORY APERTURE SIZE</th> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> <td>128M</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>256M</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>64M</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>32M</td> </tr> </table>	GPIO_13	GPIO_12	GPIO_11	MEMORY APERTURE SIZE	0	0	0	128M	0	0	1	256M	0	1	0	64M	0	1	1	32M
GPIO_13	GPIO_12	GPIO_11	MEMORY APERTURE SIZE																		
0	0	0	128M																		
0	0	1	256M																		
0	1	0	64M																		
0	1	1	32M																		
GPIO_22	ENABLE EXTERNAL BIOS ROM DEVICE 0 : DISABLE (DEFAULT) 1 : ENABLE																				
HSYNC[1] VSYNC[0]	AUDIO[1:0] 00 : NO AUDIO FUNCTION 01 : AUDIO FOR DP ONLY 10 : AUDIO FOR DP AND HDMI IF DONGLE IS DETECTED 11 : AUDIO FOR BOTH DP AND HDMI																				



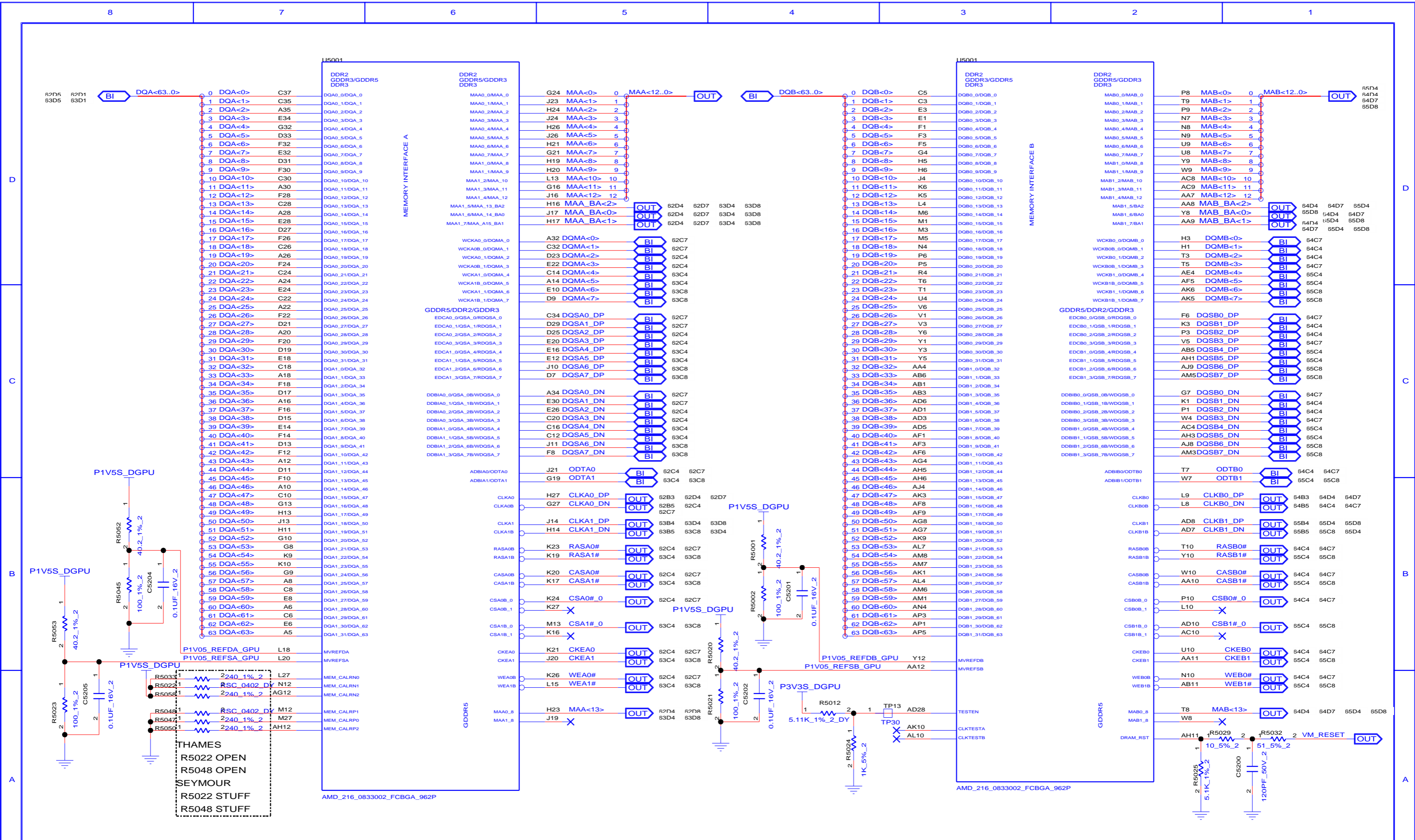
INVENTEC

TITLE			
MODEL_PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC NUMBER	REV
C	C5	1310xxxx-0-0	X01
SHEET		56	of 68



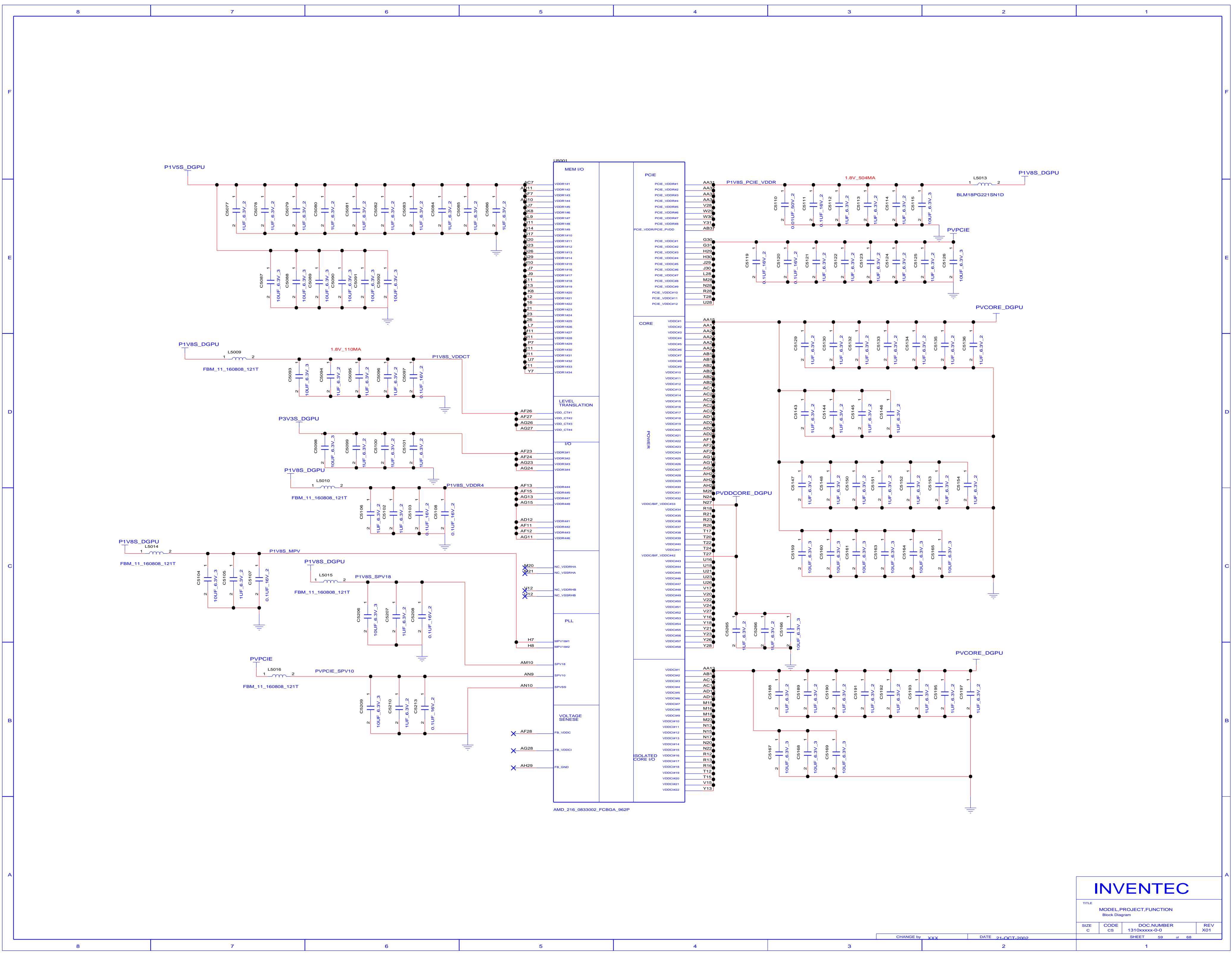


<b>INVENTEC</b>			
TITLE			
MODEL,PROJECT,FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	57 of 68

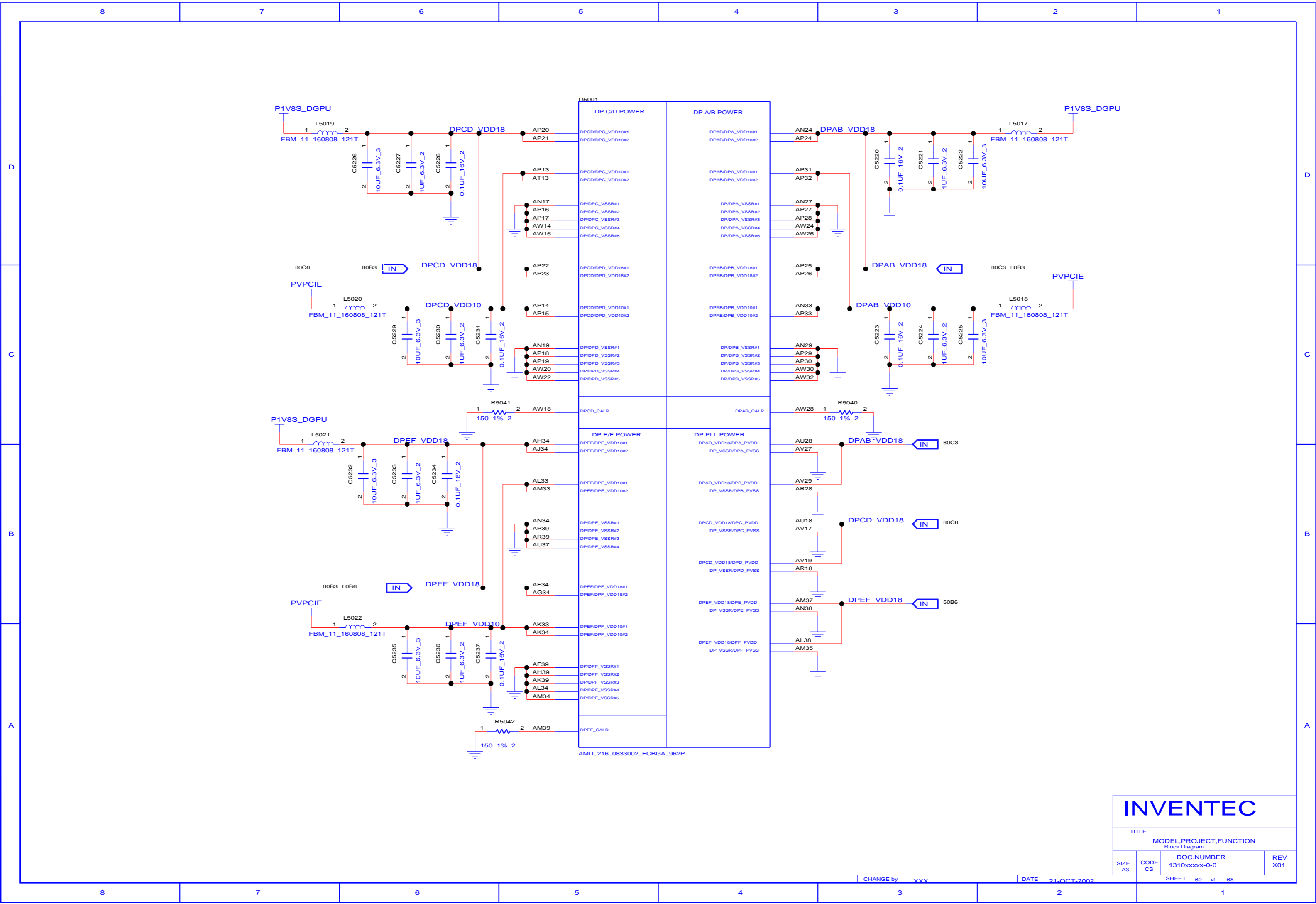


THAMES  
R5022 OPEN  
R5048 OPEN  
SEYMOUR  
R5022 STUFF  
R5048 STUFF

<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01



<b>INVENTEC</b>			
TITLE MODEL_PROJECT,FUNCTION Block Diagram			
SIZE C	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
CHANGE by XXX		DATE 21.OCT.2002	
SHEET 59		of 68	

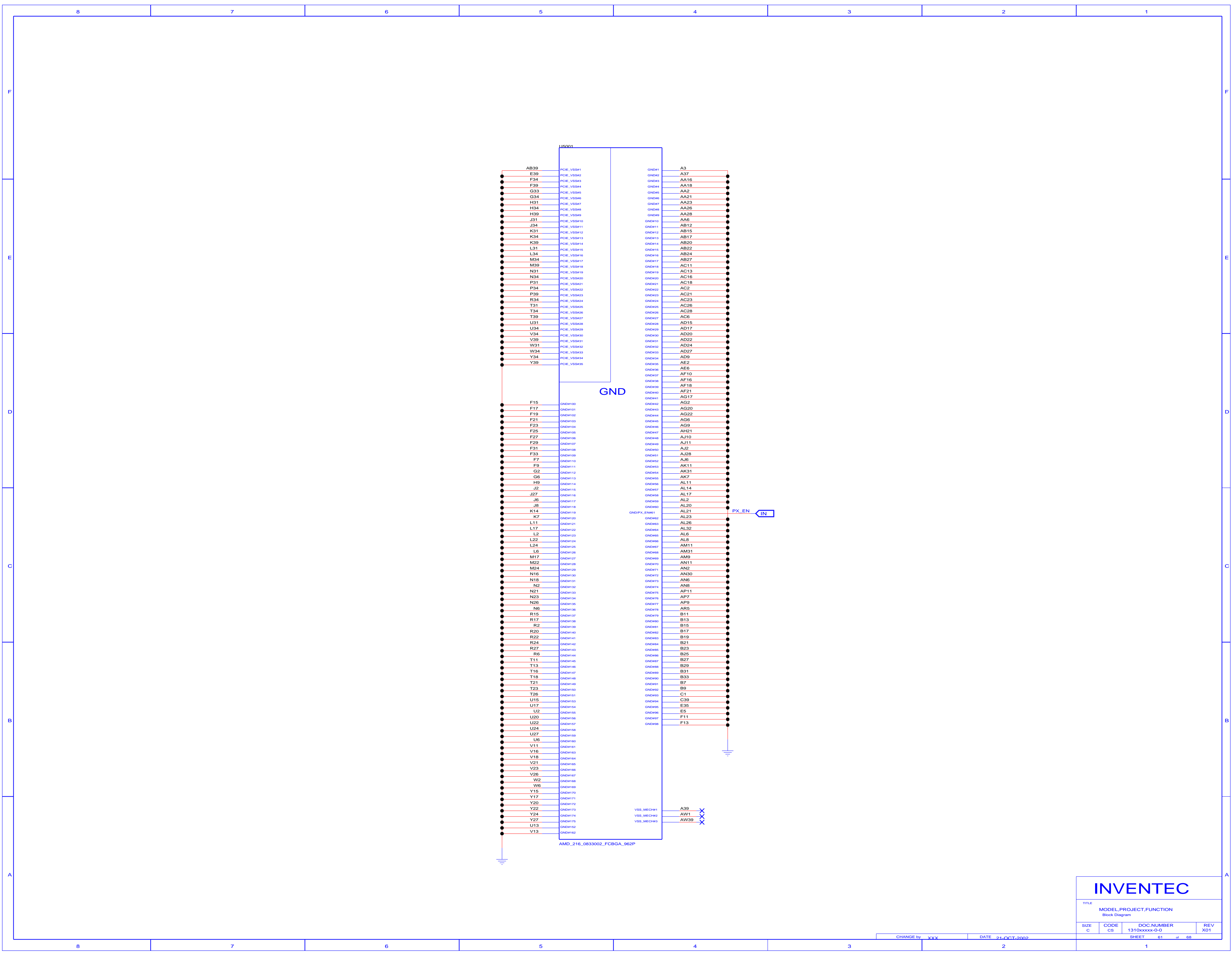


**INVENTEC**

TITLE  
MODEL\_PROJECT\_FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxx-0-0	REV X01
------------	------------	----------------------------	------------

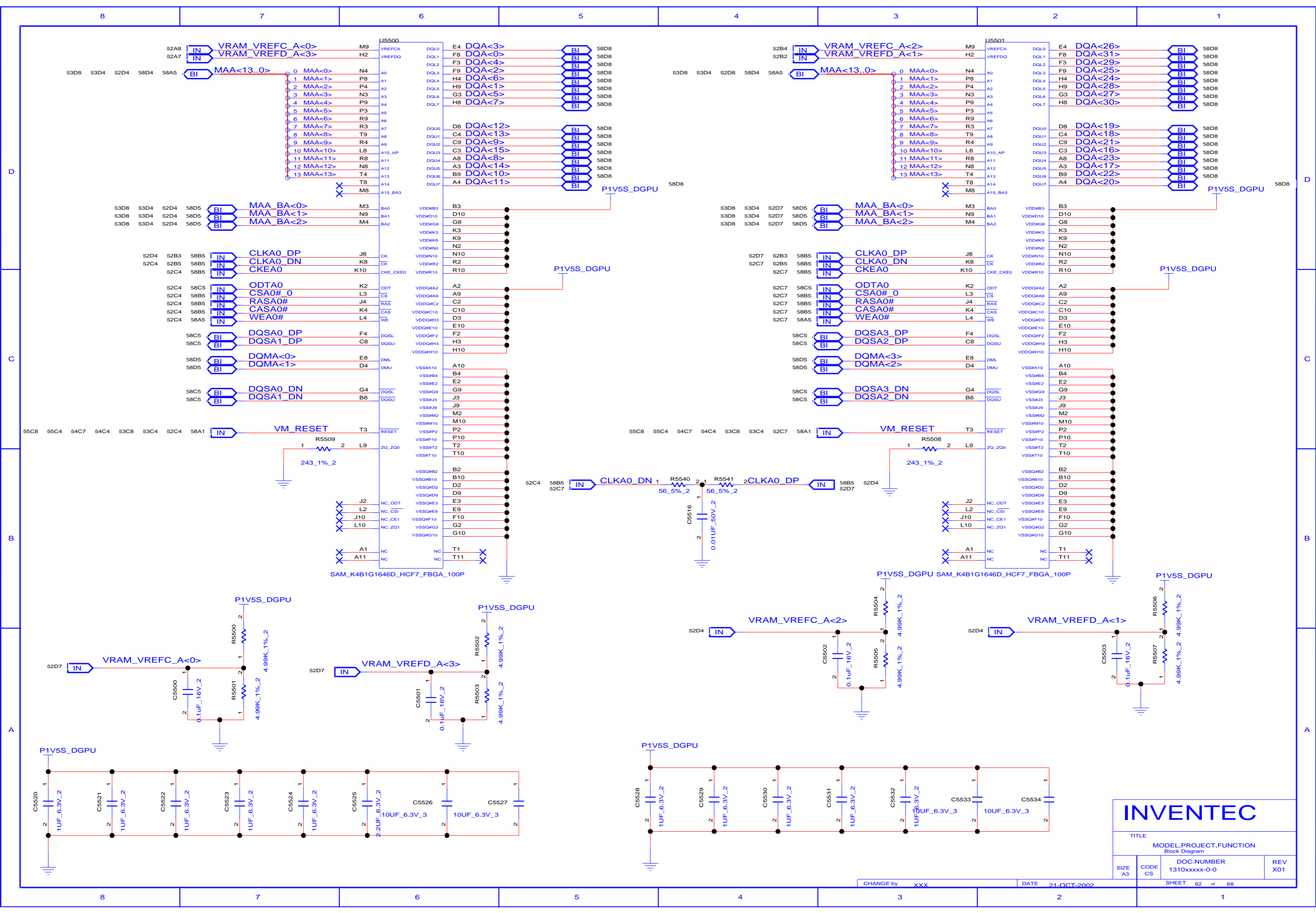
CHANGE by XXX DATE 21-OCT-2002 SHEET 60 of 68



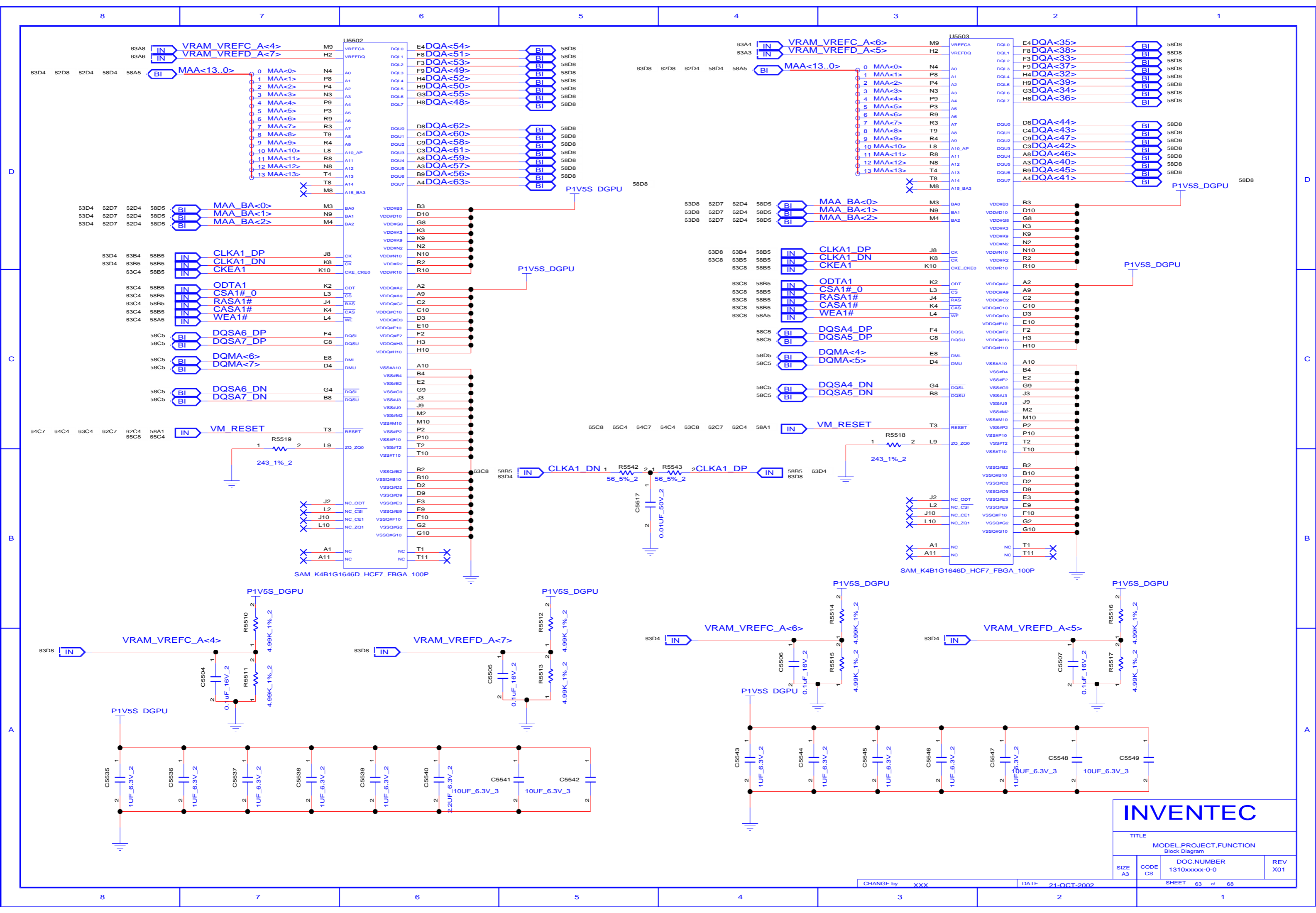
**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

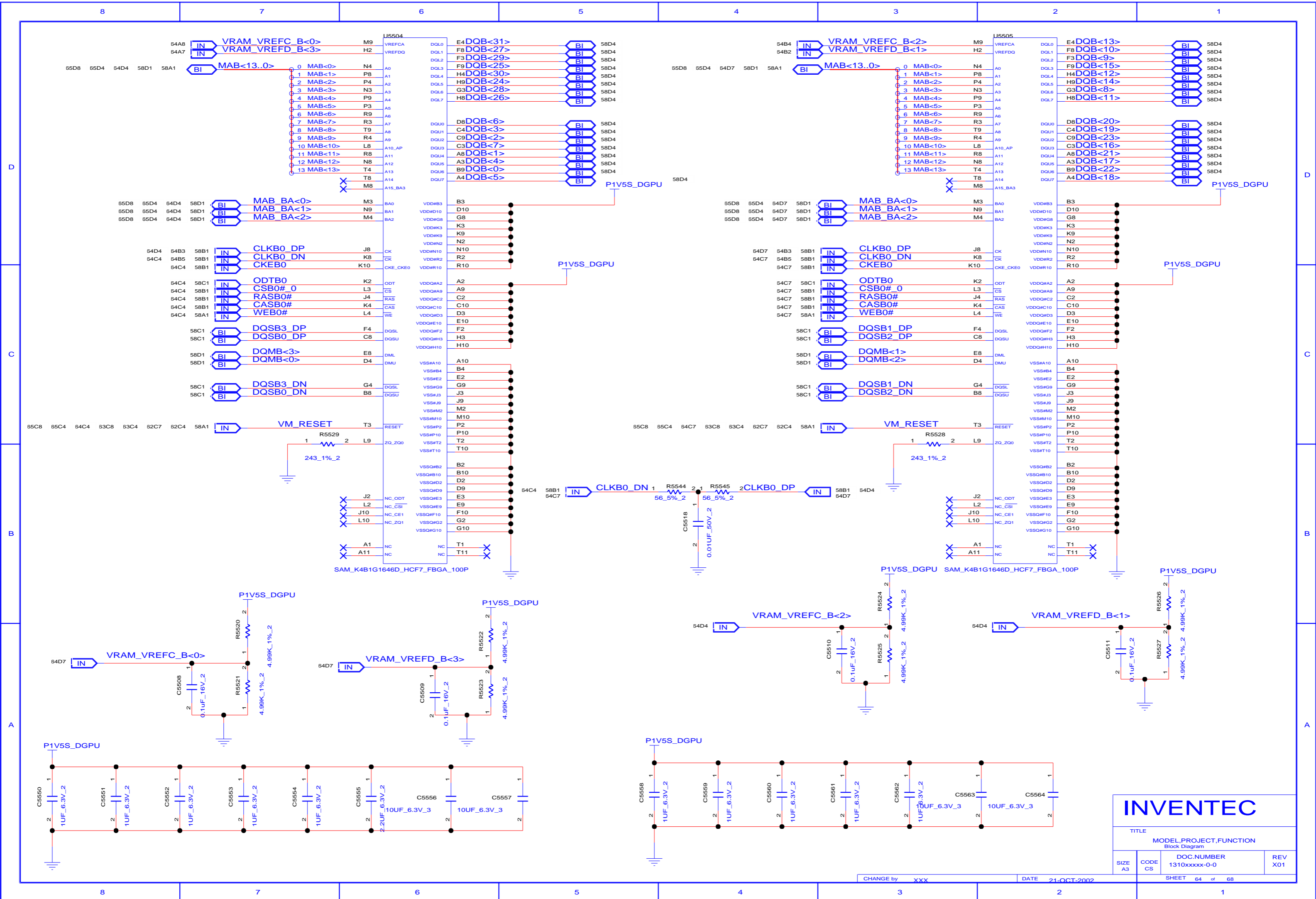
SIZE C	CODE CS	DOC NUMBER 1310xxxx-0-0	REV X01
CHANGE by xxx		DATE 21.OCT.2002	
SHEET 61 of 68			1



<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	62 of 68

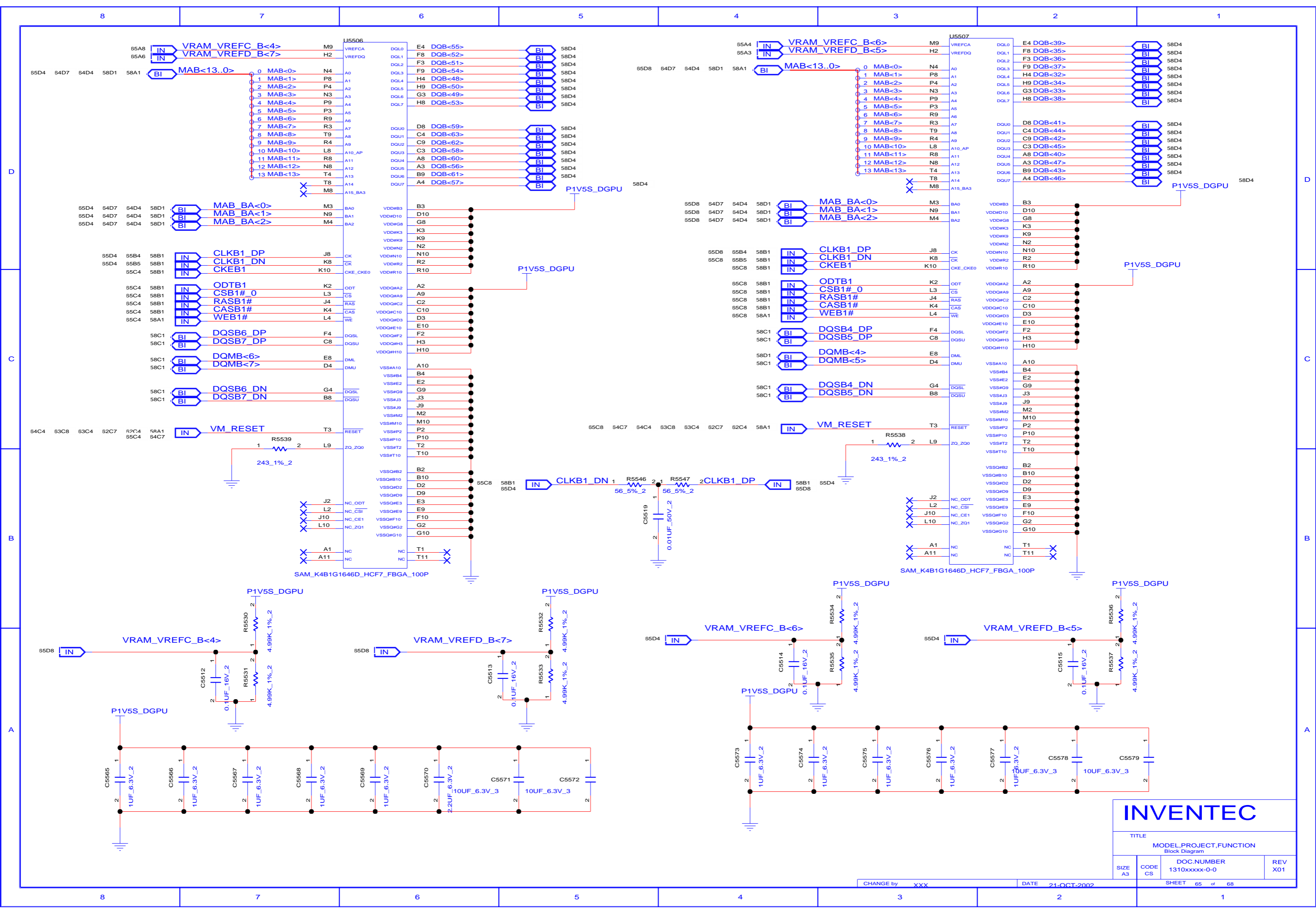


<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	63 of 68

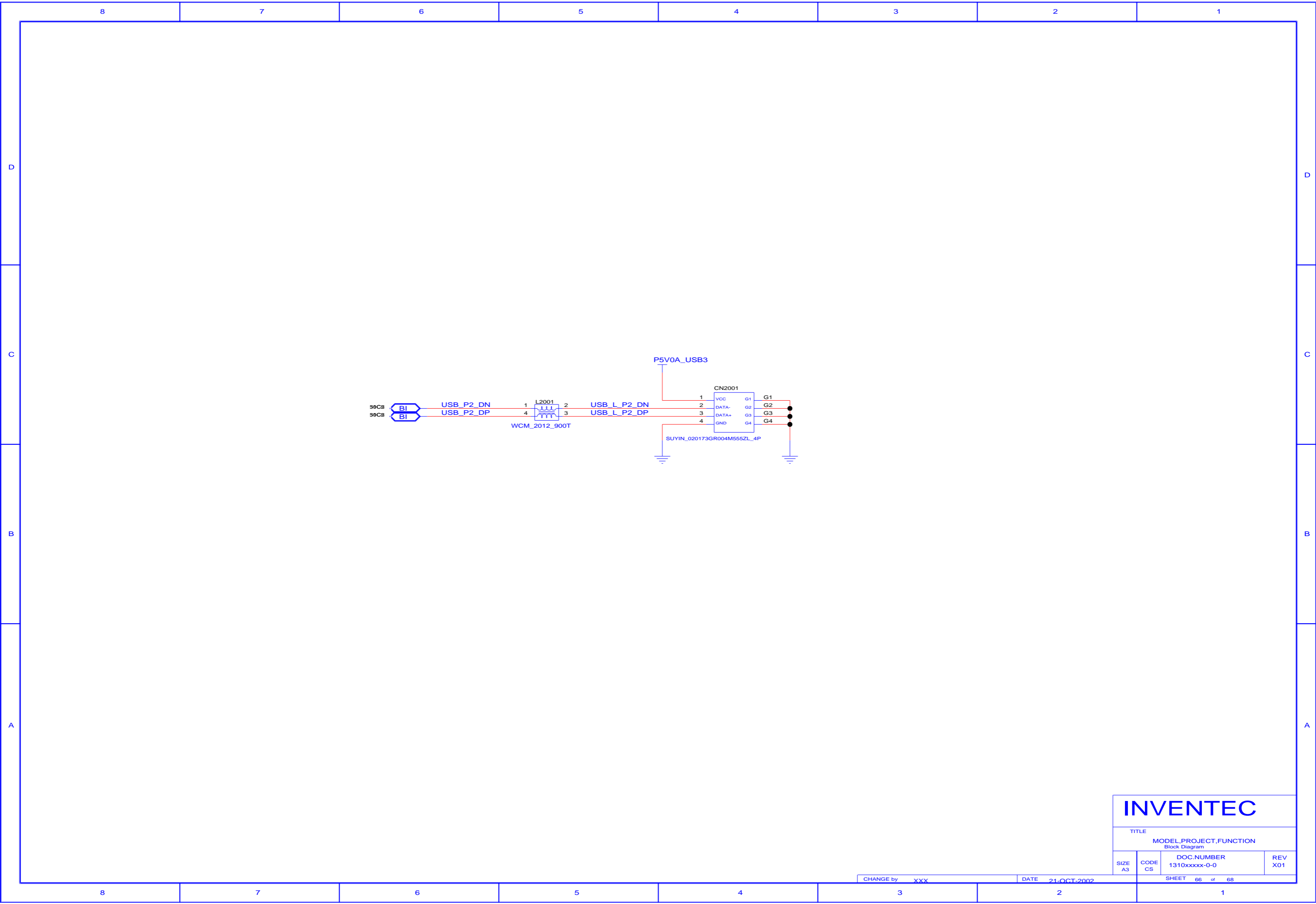


<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	64 of 68





<b>INVENTEC</b>			
TITLE			
MODEL_PROJECT_FUNCTION			
Block Diagram			
SIZE	CODE	DOC.NUMBER	REV
A3	CS	1310xxxx-0-0	X01
CHANGE by		DATE	SHEET
XXX		21-OCT-2002	65 of 68



# INVENTEC

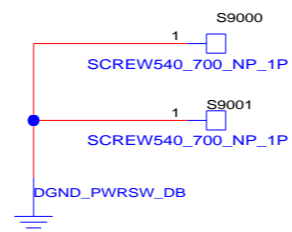
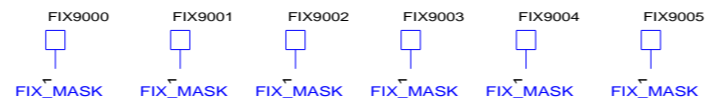
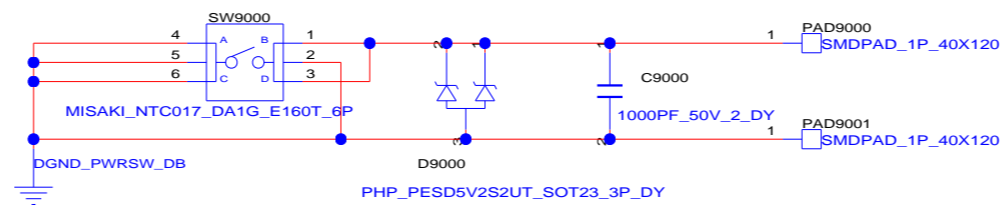
TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002 SHEET 66 of 68

REFERENCE 9000~9999(SMALL BOARD)

# POWER BUTTON



**INVENTEC**

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

8 7 6 5 4 3 2 1

D

D

C

C

B

B

A

A

# INVENTEC

TITLE  
MODEL,PROJECT,FUNCTION  
Block Diagram

SIZE A3	CODE CS	DOC.NUMBER 1310xxxxx-0-0	REV X01
------------	------------	-----------------------------	------------

CHANGE by XXX DATE 21-OCT-2002

SHEET 68 of 68

8 7 6 5 4 3 2 1

[www.s-manuals.com](http://www.s-manuals.com)