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

RALPH1.1

SI-2 BUILD

2012.1.3

12-12-2011		
DATE	CHANGE NO.	REV

	EE	DATE	POWER	DATE	INVENTEC			
DRAWER								
DESIGN								
CHECK								
RESPONSIBLE								
SIZE					VER	SIZE	CODE	DOC NUMBER
FILE NAME						C	CS	1310A24893-0
PIN	David Chang					SHEET	#	67

LV1.1_Lauren
Everest Main Board

REV
AX1

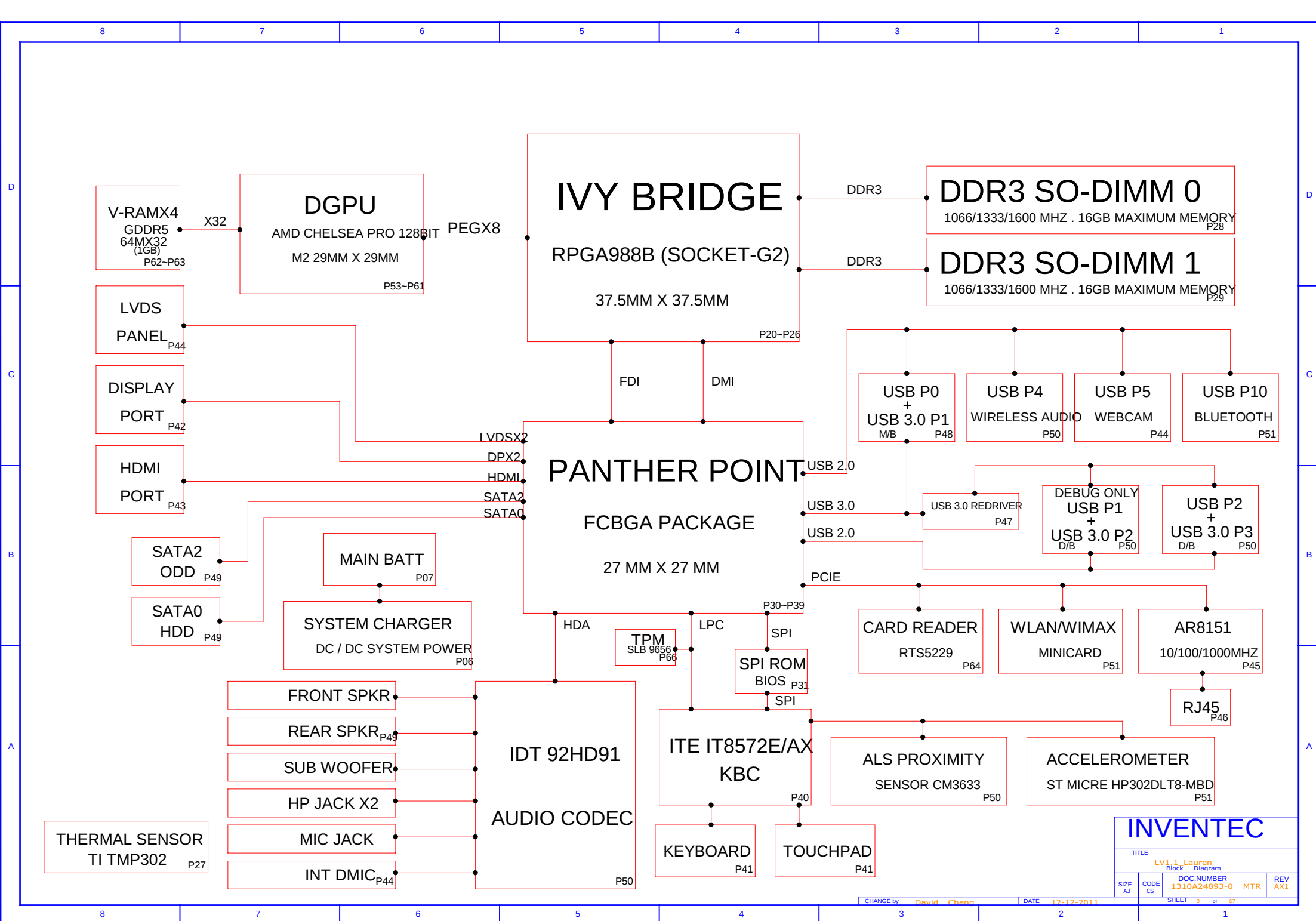
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17. PVPCIE	50. WIRELESS AUDIO/B CONN & MUTE BUTTON & LDPS/B CONN
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	67. EMI

INVENTEC

TITLE			
LV1.1 Lauren Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24893-0	AX1
CHANGE by		DATE	SHEET
David Cheng		12-12-2011	2 of 67



INVENTEC				
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LV1.1 Lauren Block Diagram				
SIZE	CODE	DOC NUMBER	MTR	REV
A3	CS	1310A24893-0		AX1
SHEET 3 of 67				

D

D

C

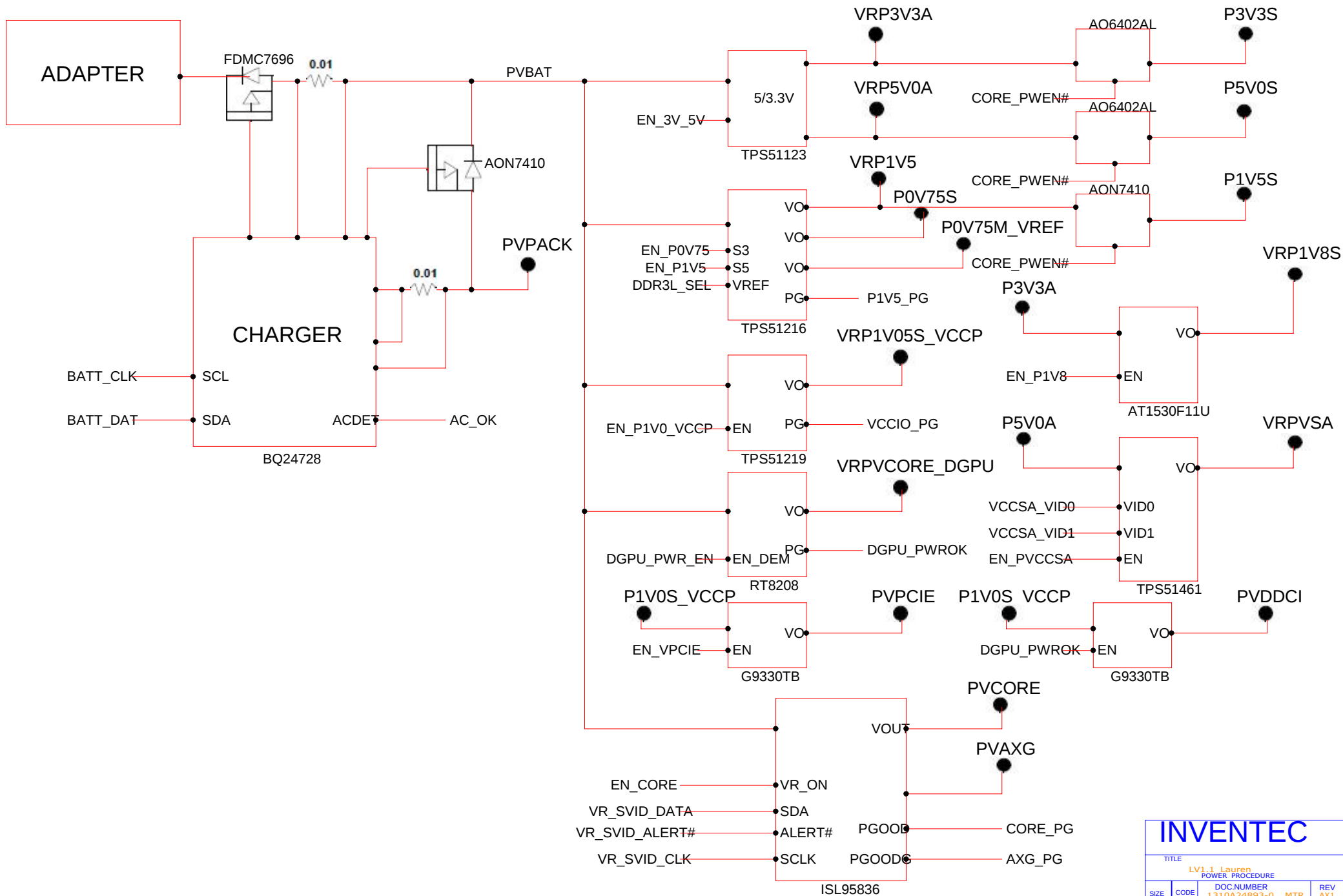
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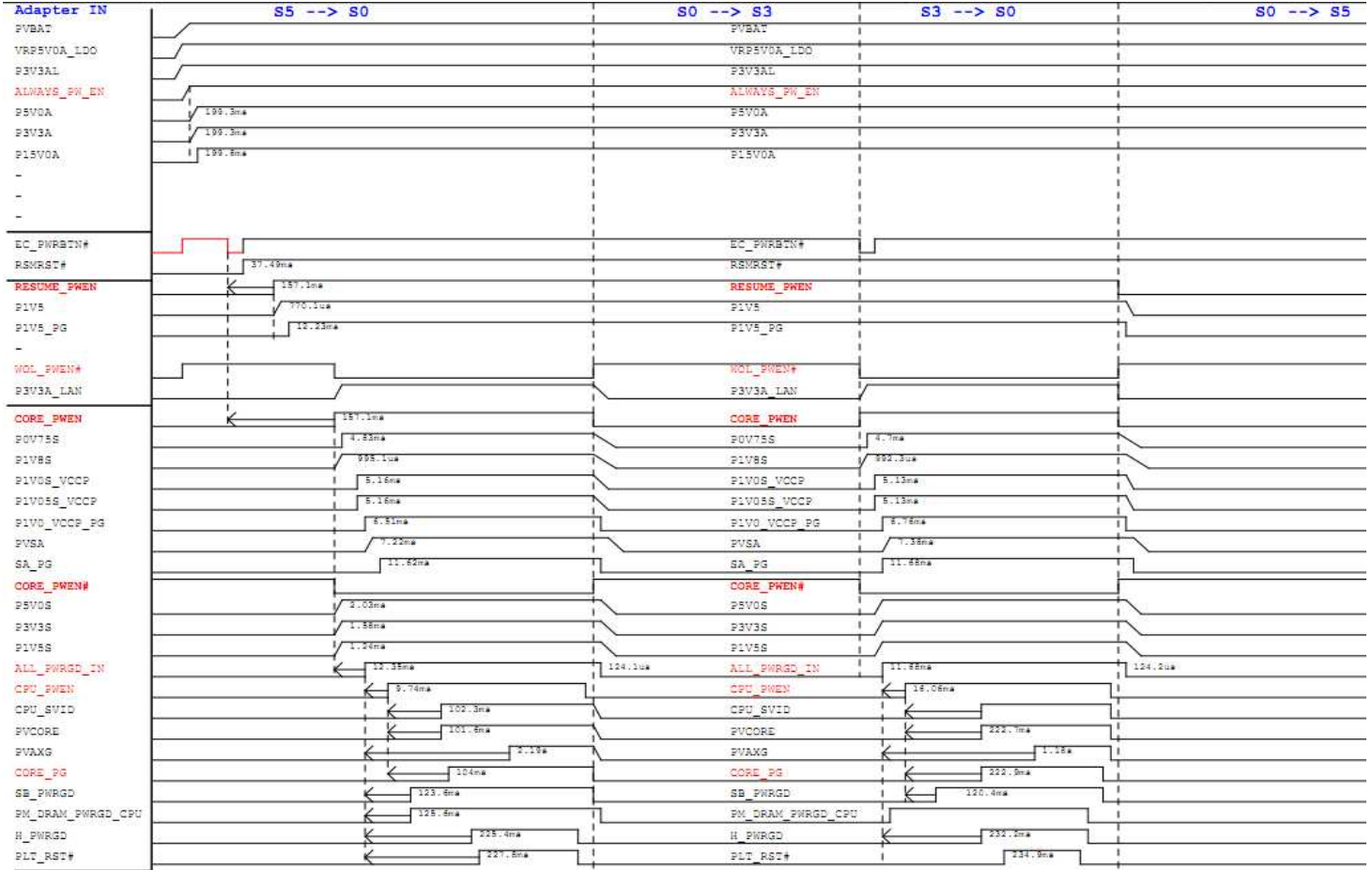
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SIZE A3 CODE CS DOC NUMBER 1310A24893-0 MTR REV AX1

CHANGE by David Cheng DATE 12-12-2011

SHEET 4 of 67

Power sequence

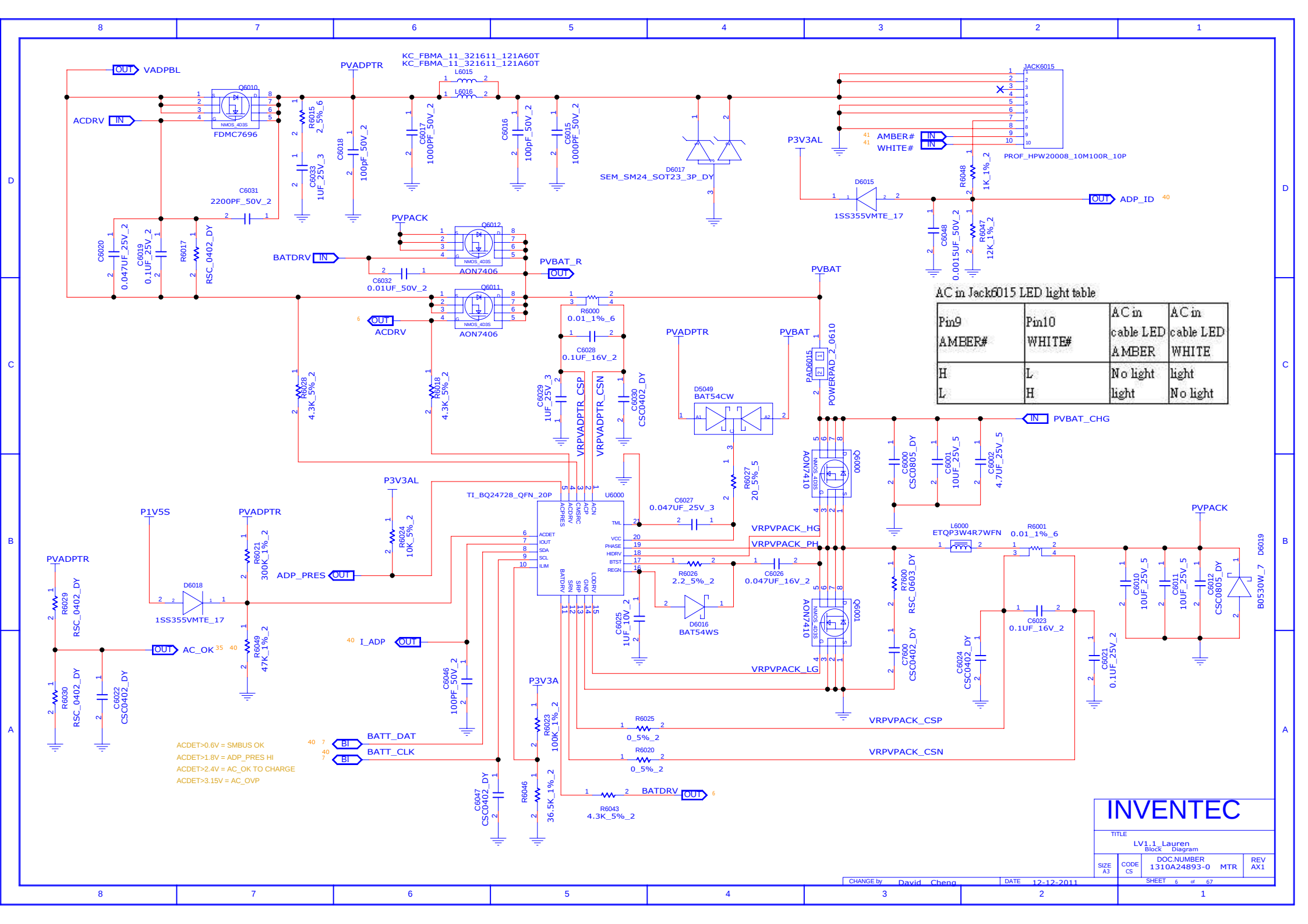


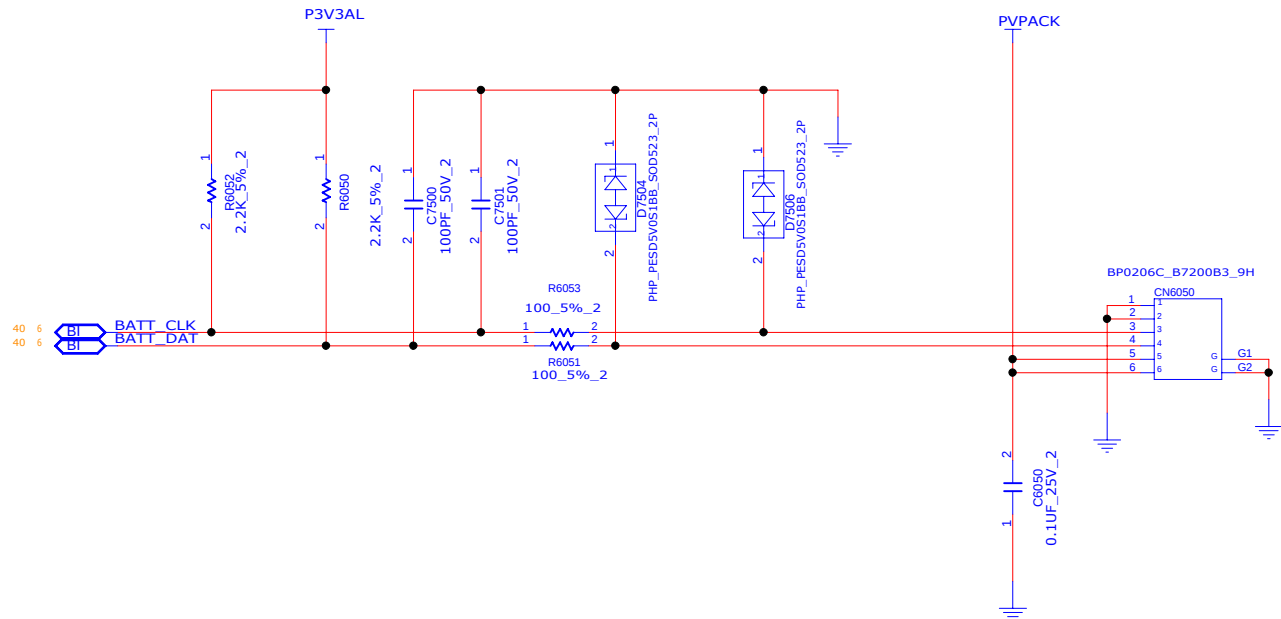
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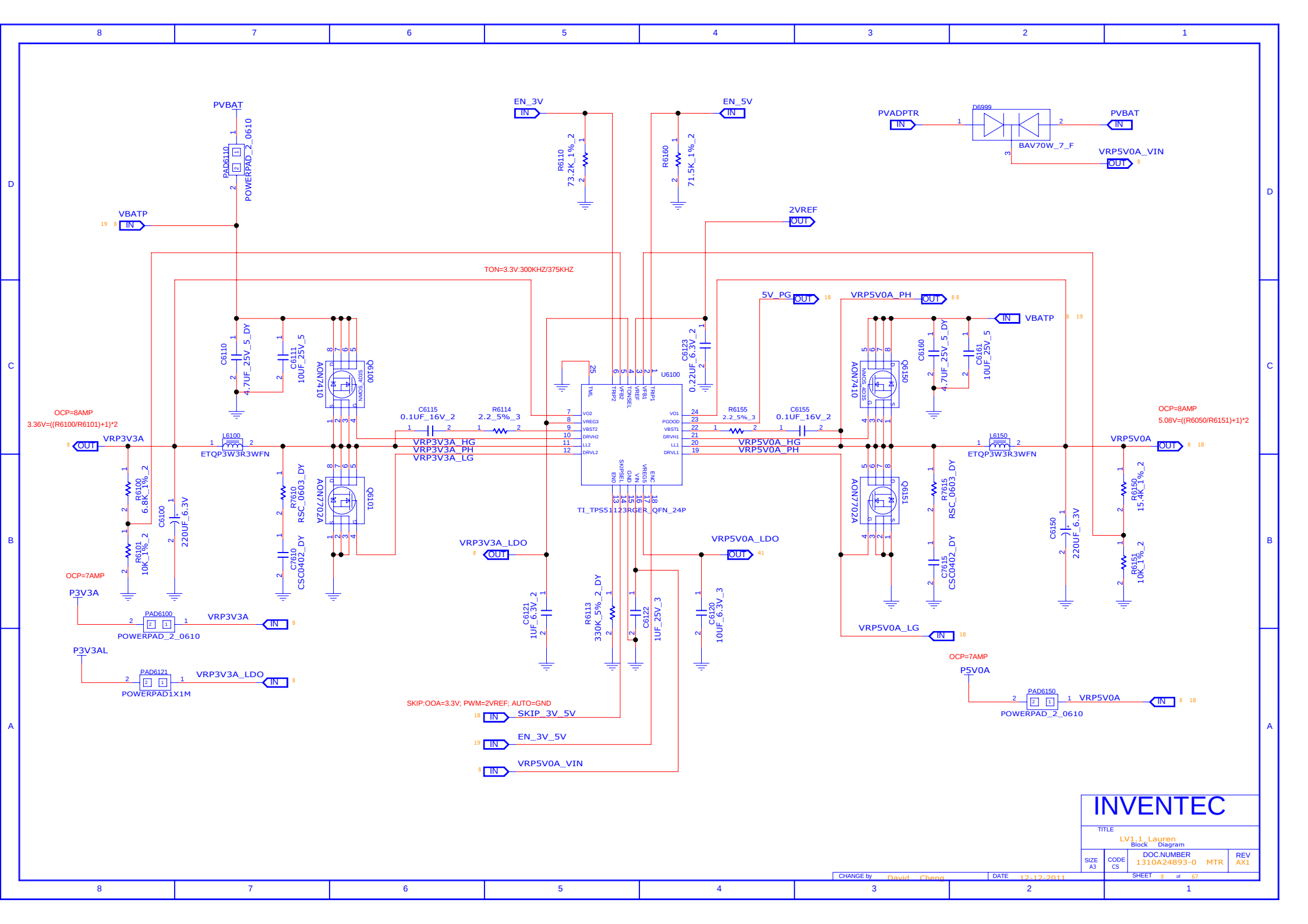
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Block Diagram
DOC NUMBER
1310A24893-0 MTR REV
AX1

CHANGE by David Cheng DATE 12-12-2011

SHEET 5 of 67







INVENTEC

TITLE
LV1.1 Lauren
Block Diagram

SIZE A3	CODE CS	DOC NUMBER 1310A24893-0	MTR	REV AX1
SHEET 8		of 67		

CHANGE by David Cheng DATE 12-12-2011

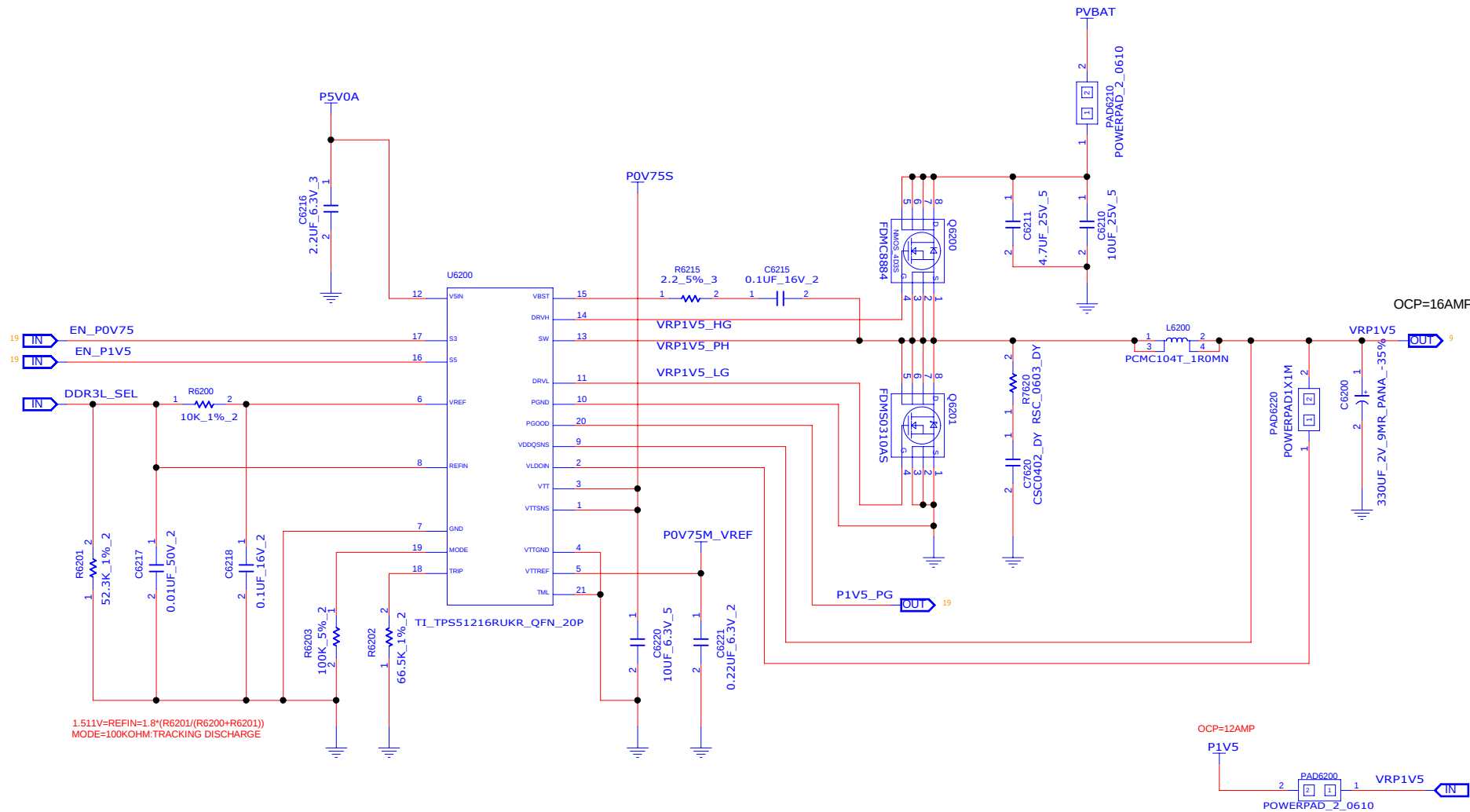
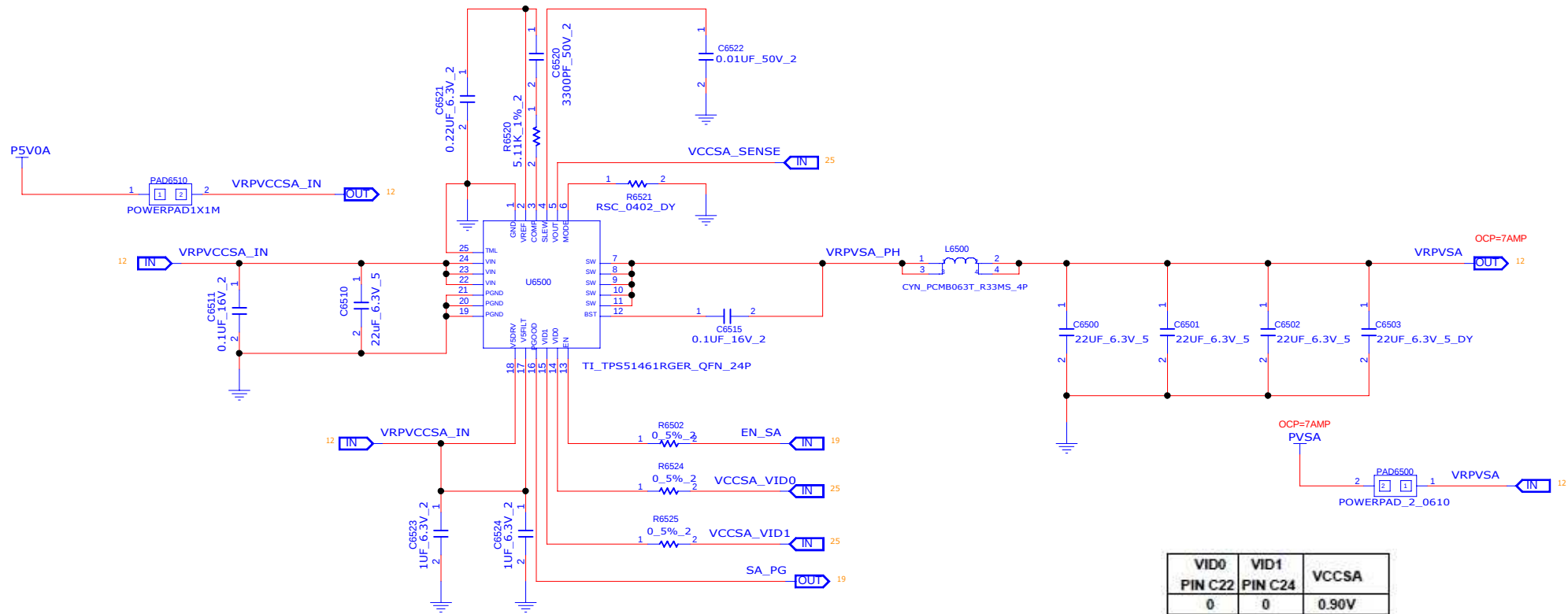


Table 1. S3/S5 Power State Control

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			
LV1.1 Lauren Block Diagram			
DOC NUMBER			
1310A24893-0 MTR			
REV			
AX1			



VID0 PIN C22	VID1 PIN C24	VCCSA
0	0	0.90V
0	1	0.80V
1	0	0.725V
1	1	0.675V

INVENTEC

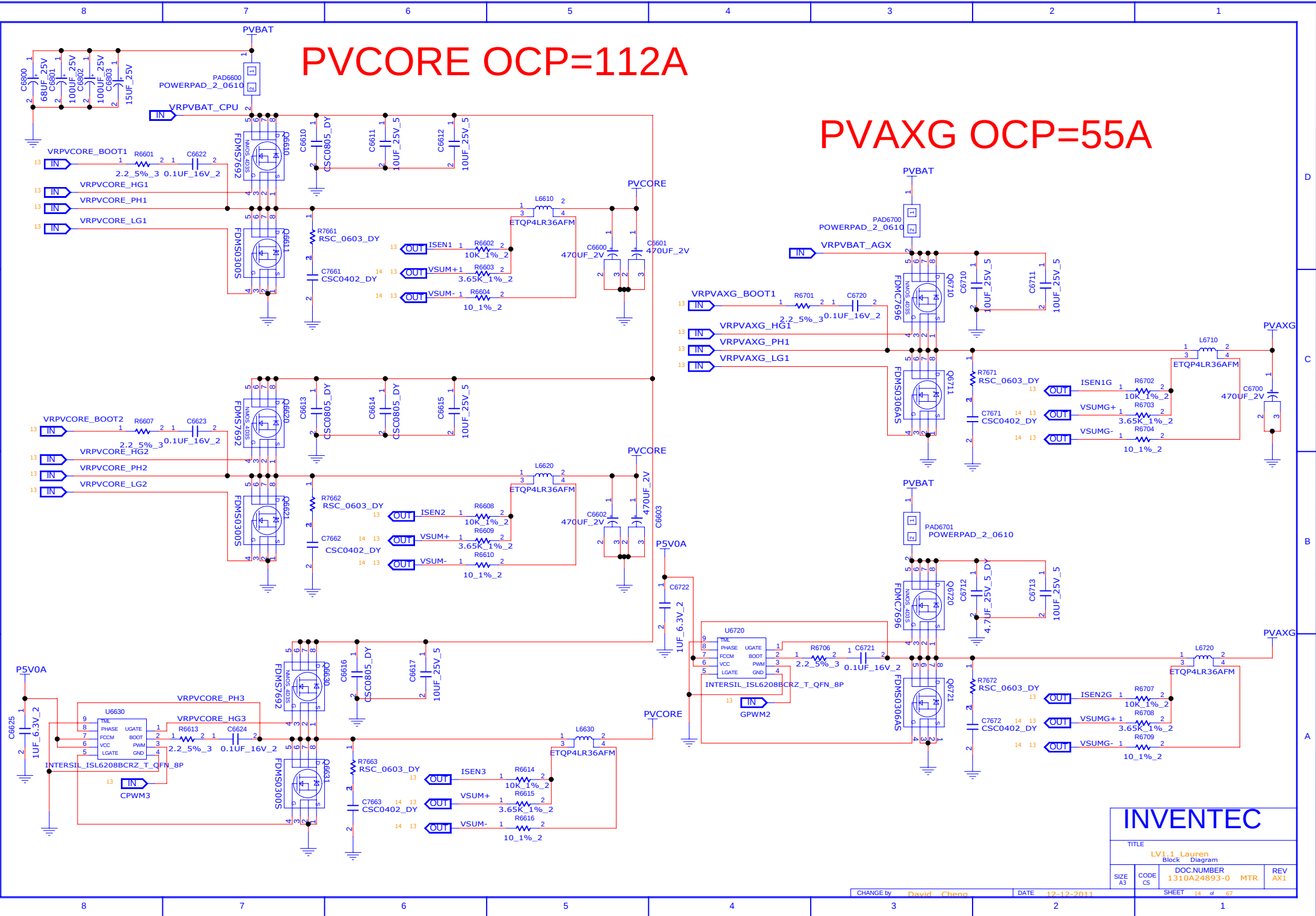
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SIZE A3	CODE CS	DOC NUMBER 1310A24893-0	MTR	REV AX1

CHANGE by David Cheng DATE 12-12-2011

SHEET 12 of 67

PVCORE OCP=112A

PVAXG OCP=55A

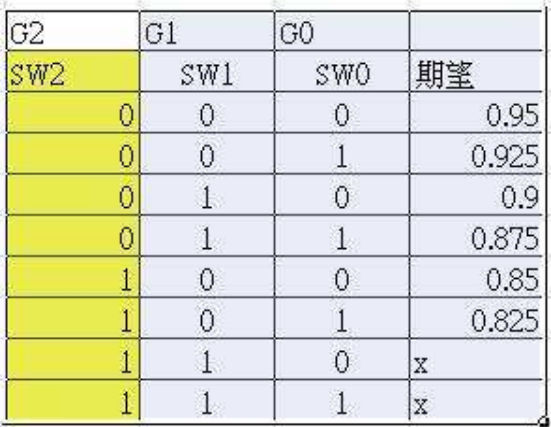


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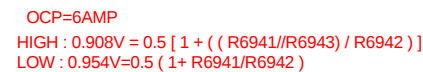
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DOC NUMBER
1310A24893-0 MTR
REV
AX1

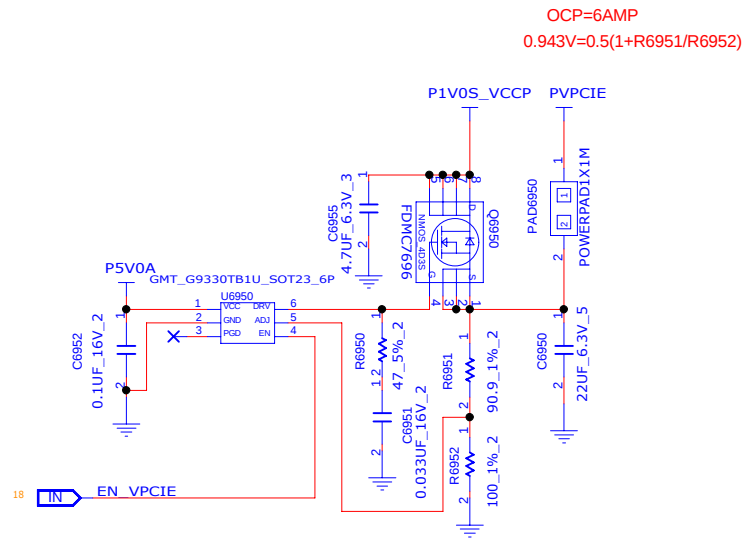
CHANGE by David Cheng DATE 12-12-2011

SHEET 14 of 67



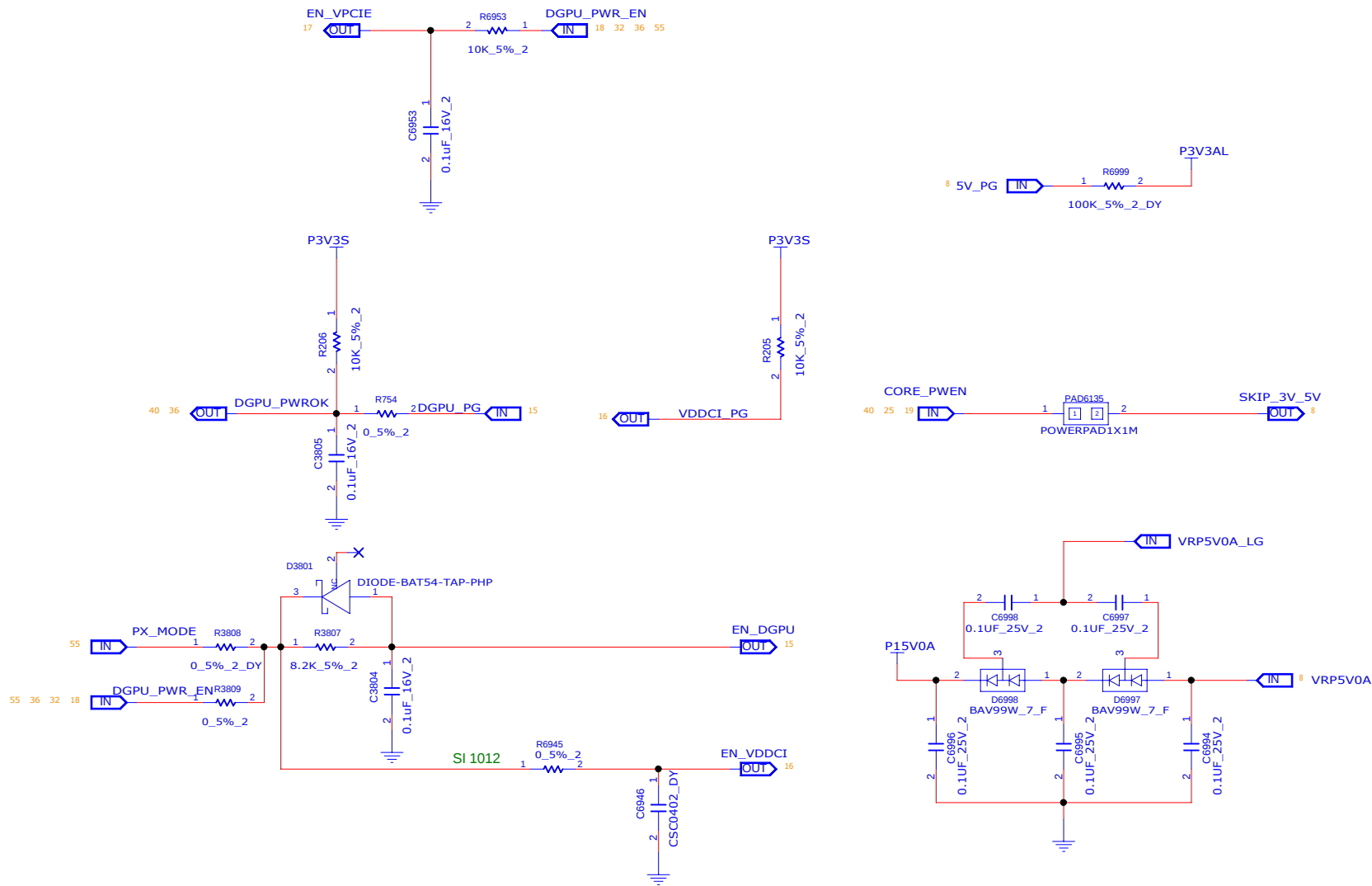
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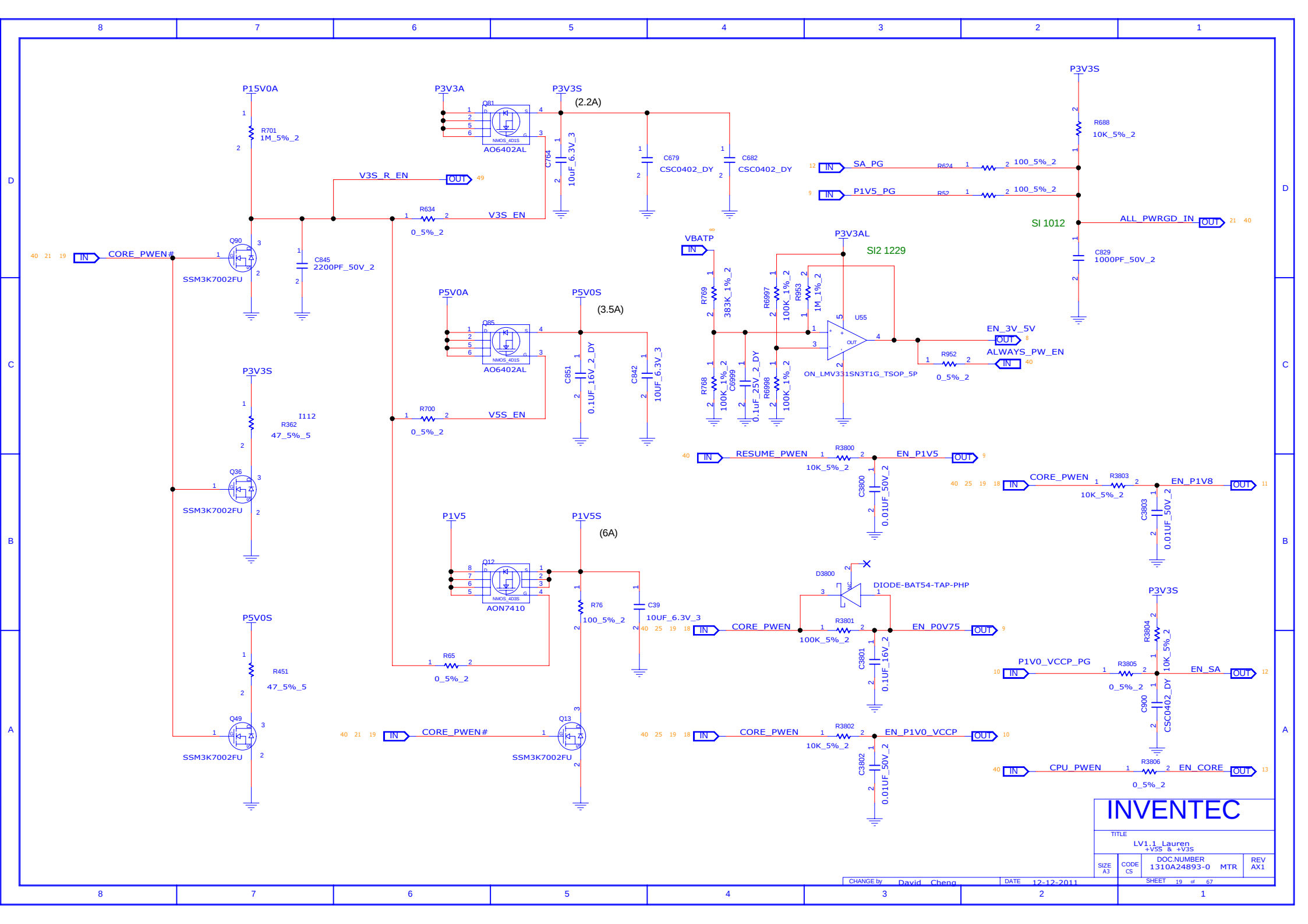


INVENTEC

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LV1.1_Lauren Block Diagram			
SIZE A3	CODE CS	DOC NUMBER 1310A24893-0 MTR	REV AX1



INVENTEC				
TITLE				
LV1.1_Lauren Block Diagram				
SIZE	CODE	DOC NUMBER		REV
A3	CS	1310A24893-0		AX1
CHANGE by		DATE	SHEET	
David Cheng		12-12-2011	18 of 67	



INVENTEC

TITLE				
LV11_Lauren +V5S & +V3S				
DOC NUMBER				
1310A24893-0				
SIZE	CODE	MTR		REV
A3	CS			AX1

CHANGE by David Cheng DATE 12-12-2011

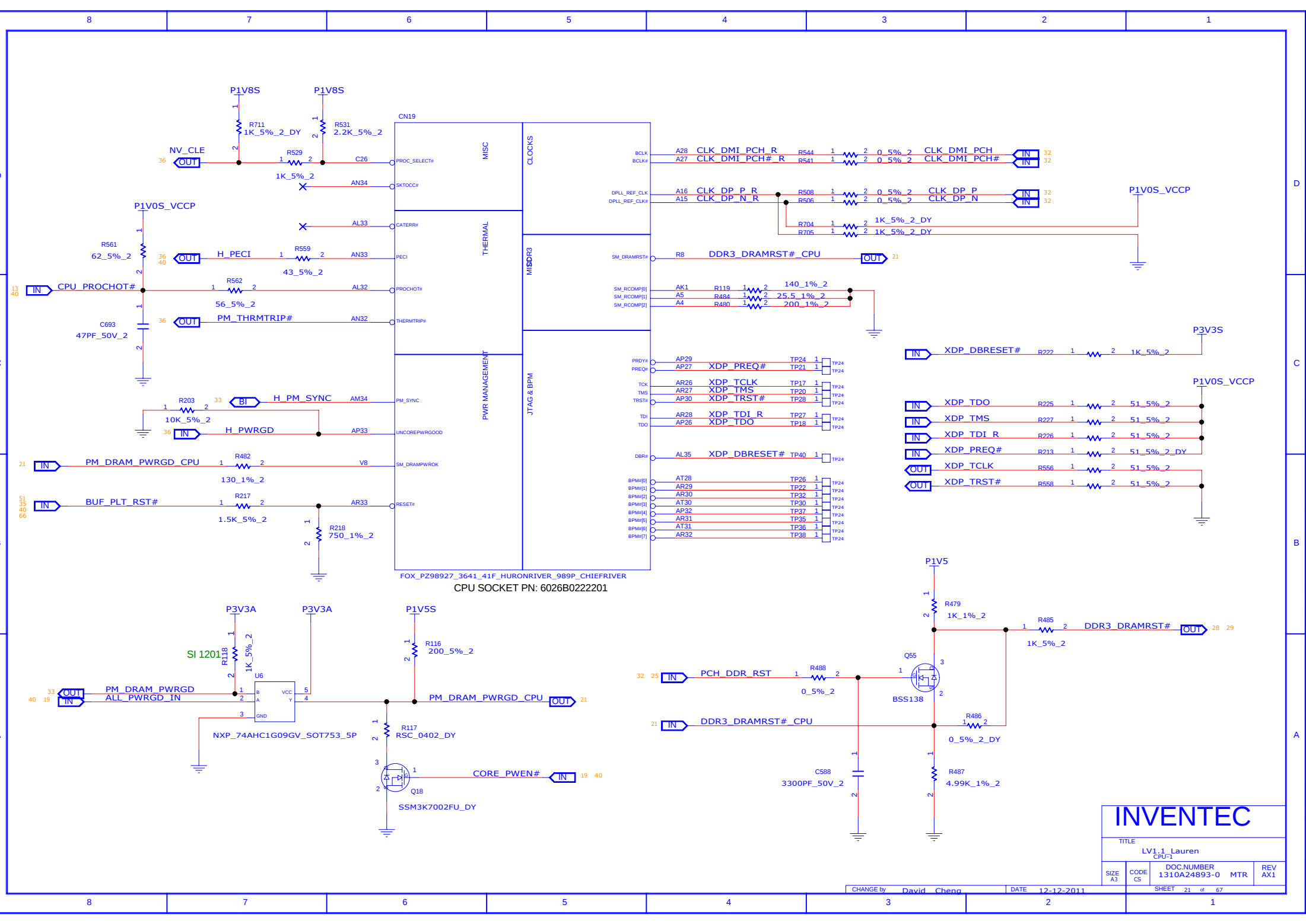
SHEET 19 of 67

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

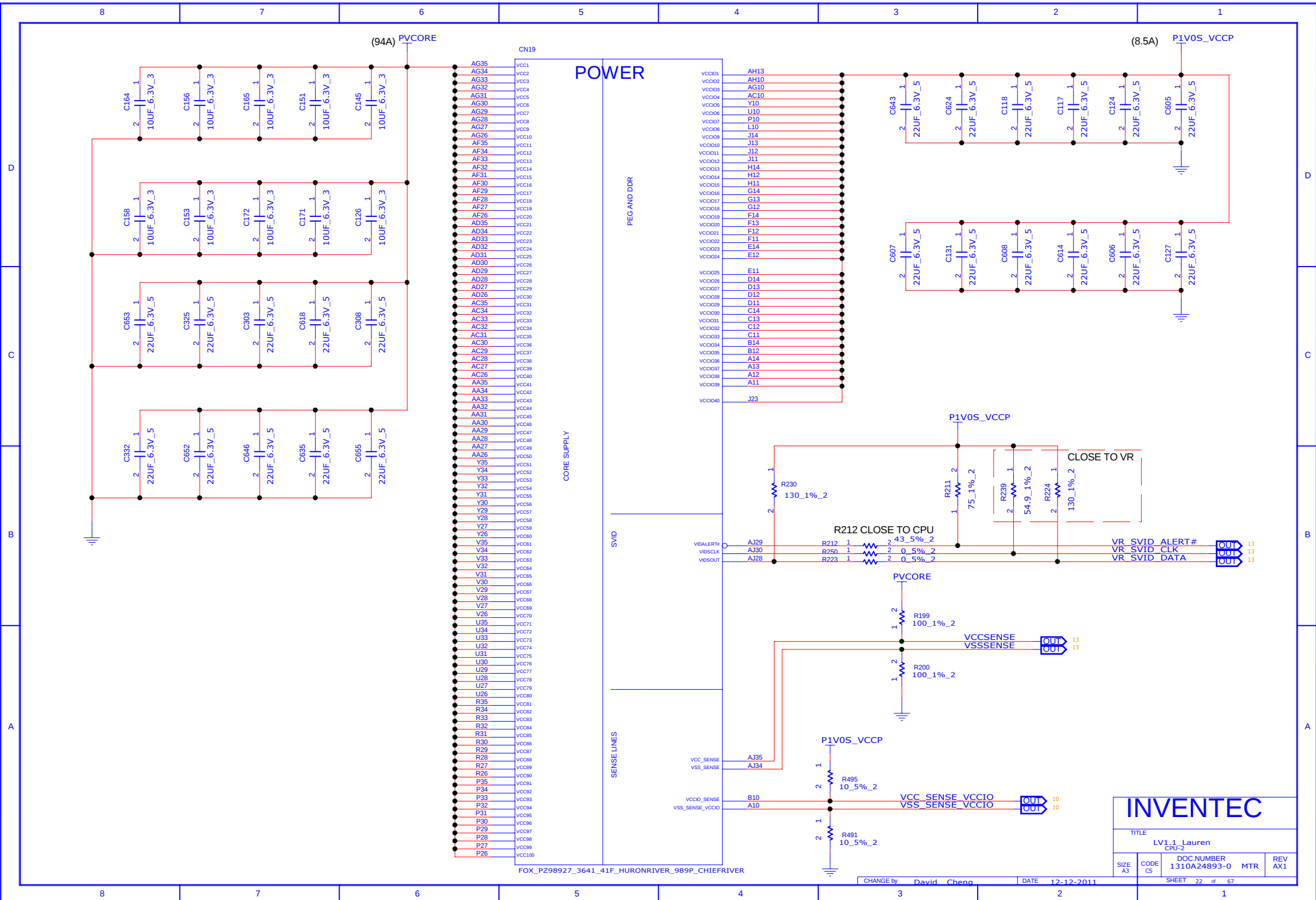
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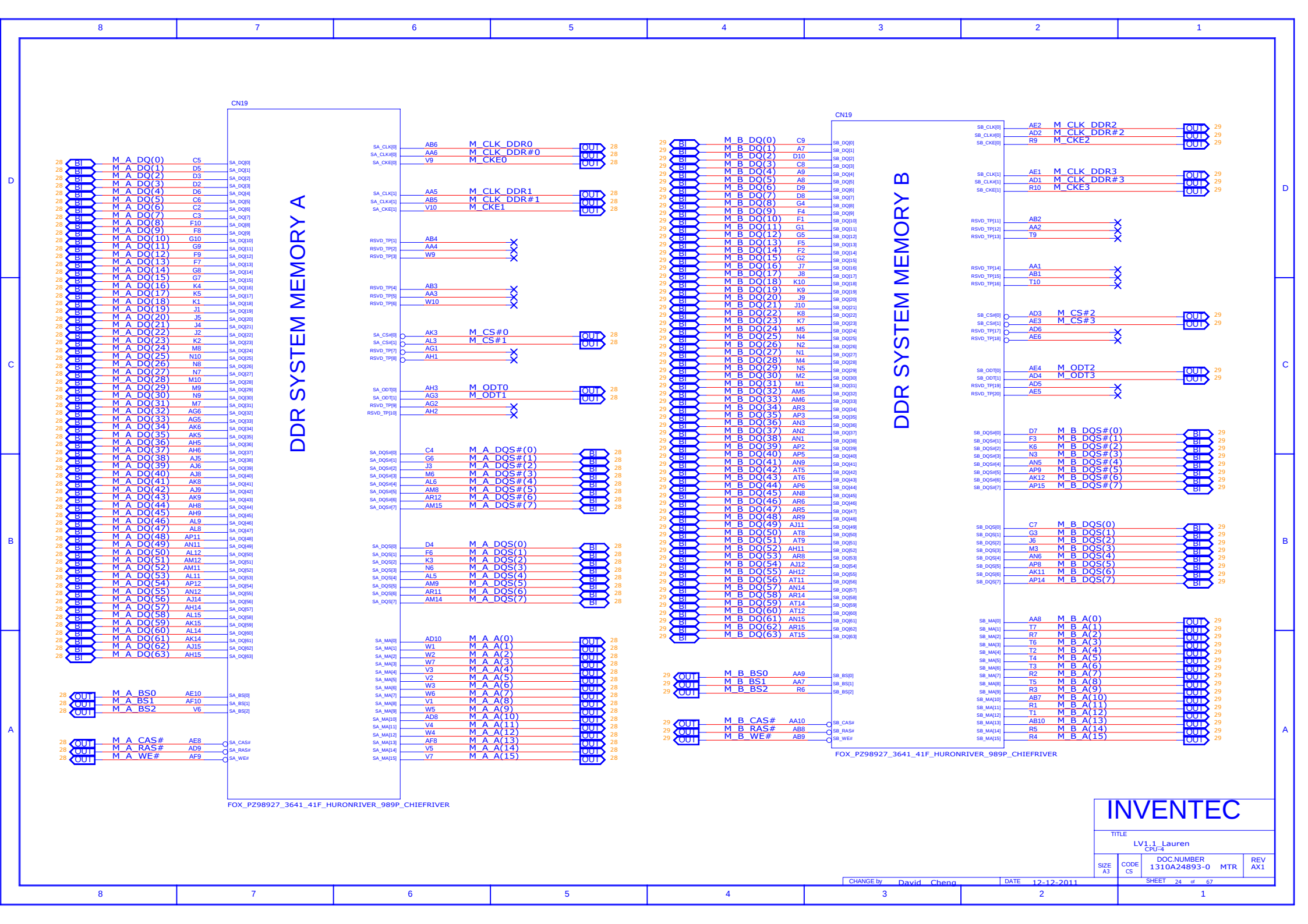
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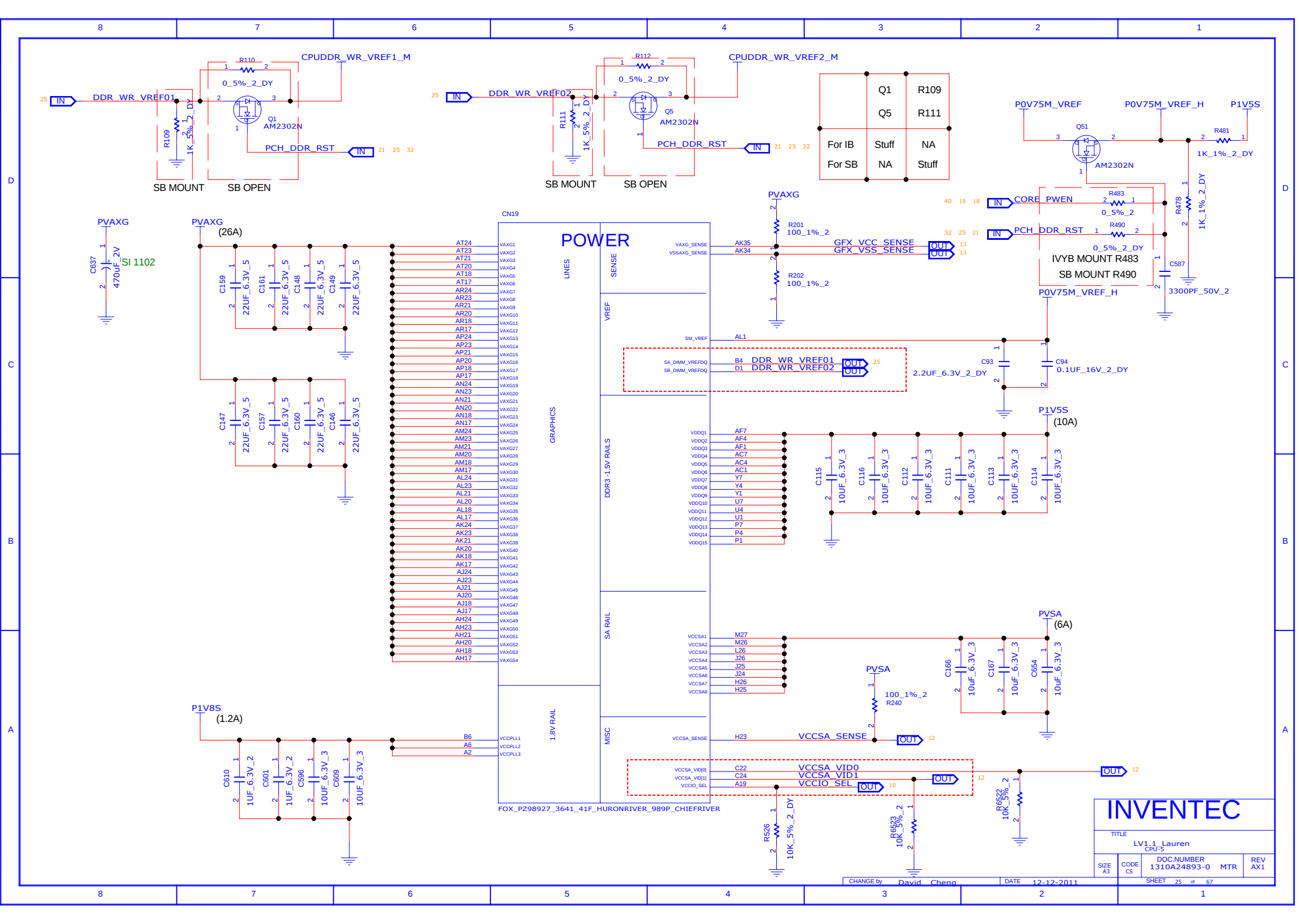
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LV1: J. Lauren BLANK			
SIZE A3	CODE CS	DOC NUMBER 1310A24893-0 MTR	REV AX1



INVENTEC				
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CPU1				
SIZE	CODE	DOC NUMBER	MTR	REV
A3	CS	1310A24893-0		AX1

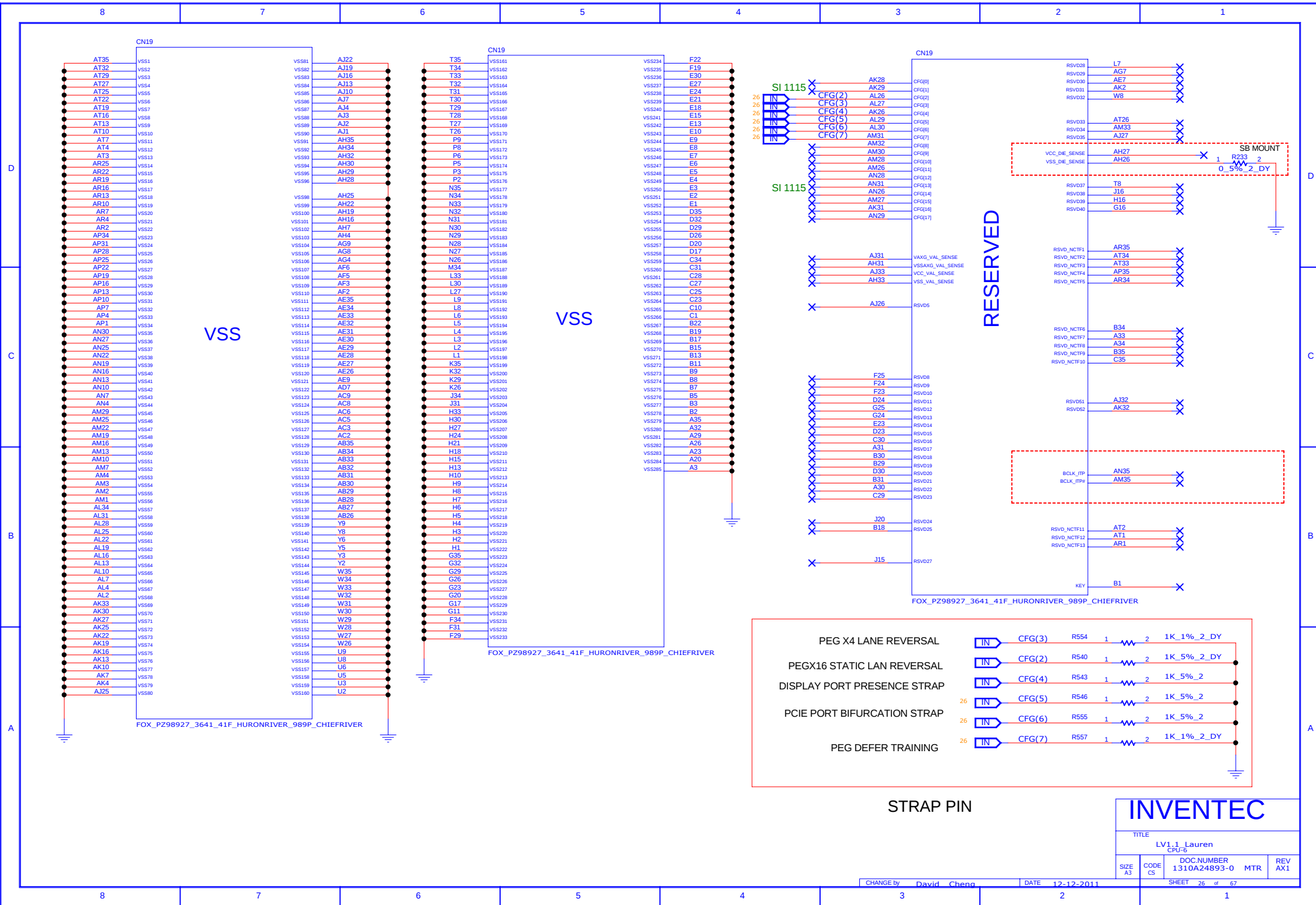




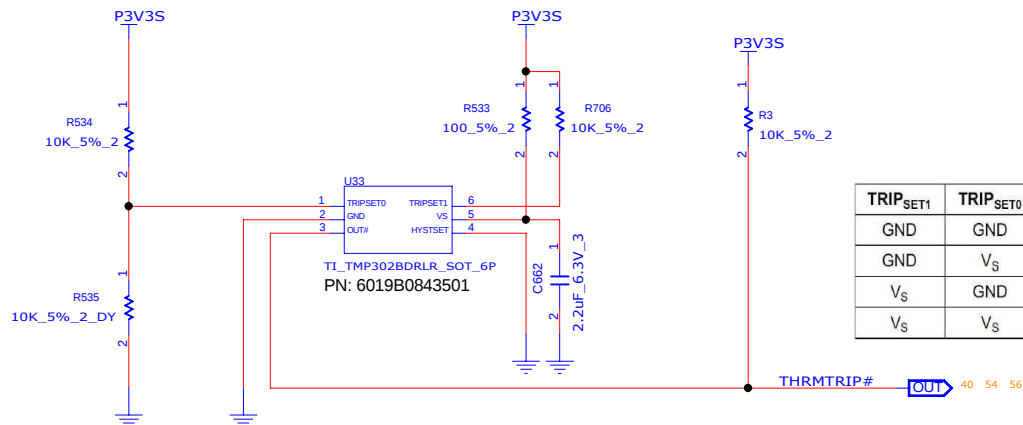
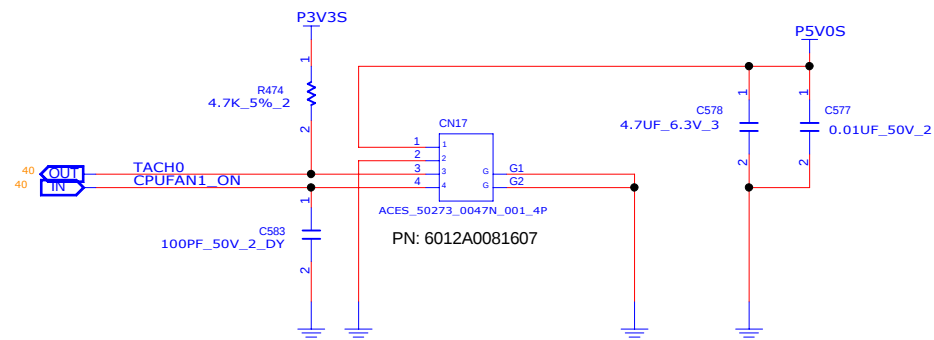


A

A



FAN CONN



TRIP _{SET1}	TRIP _{SET0}	TMP302B
GND	GND	+70°C
GND	V _S	+75°C
V _S	GND	+80°C
V _S	V _S	+85°C

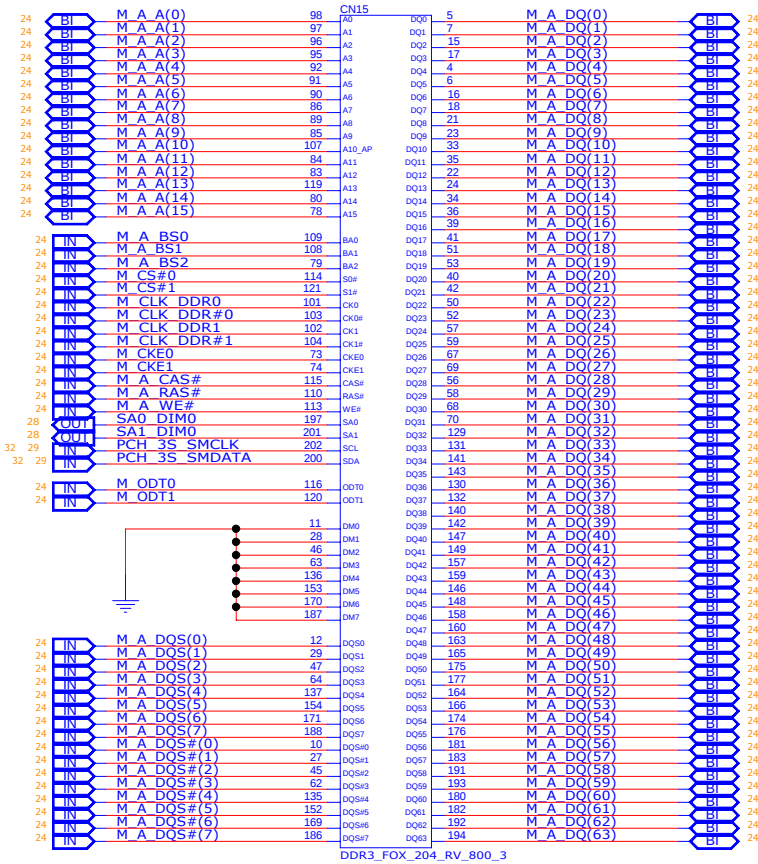
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LV1.1_Lauren			
FAN			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24893-0 MTR	AX1

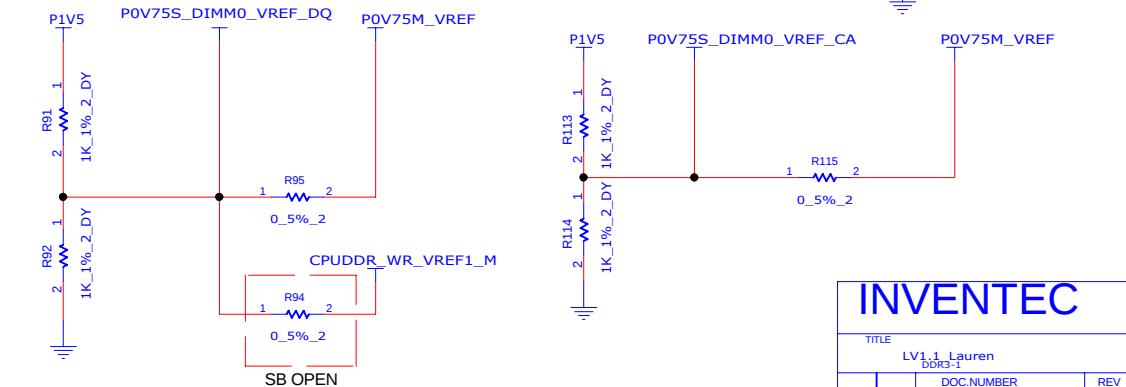
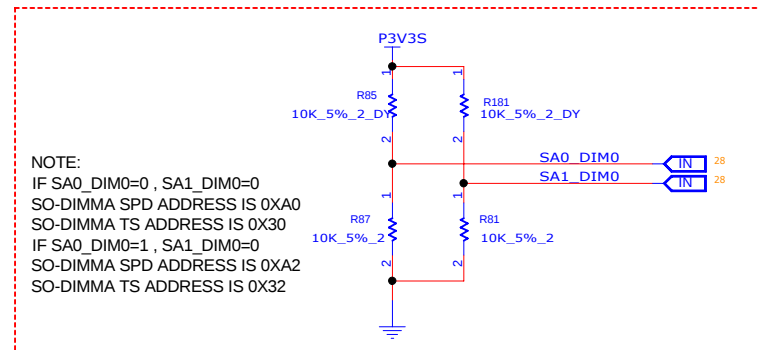
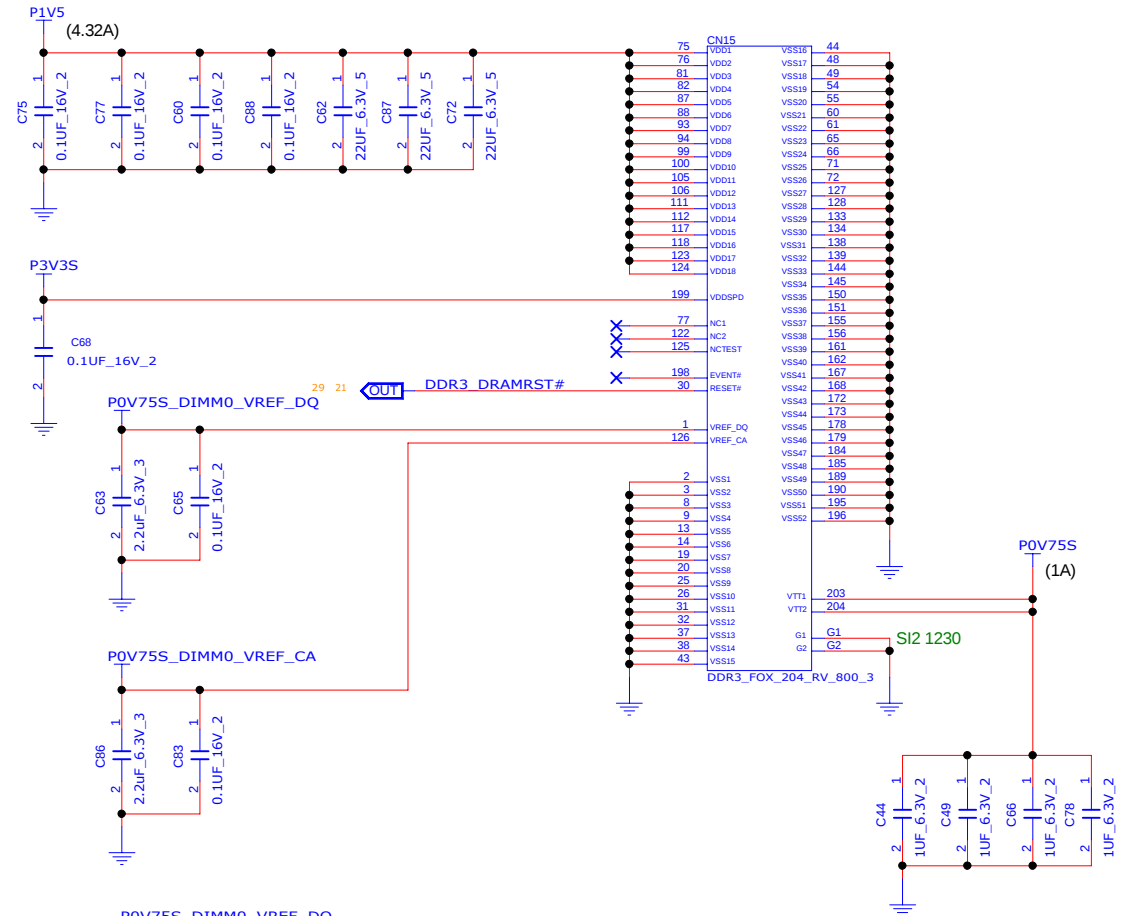
CHANGE by David Cheng DATE 12-12-2011

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DDR3 SO-DIMM 0



DDR3 SOCKET (RV_800) PN: 6026B0221101



INVENTEC

TITLE
LV1.1 Lauren
DDR3-1

SIZE
A3

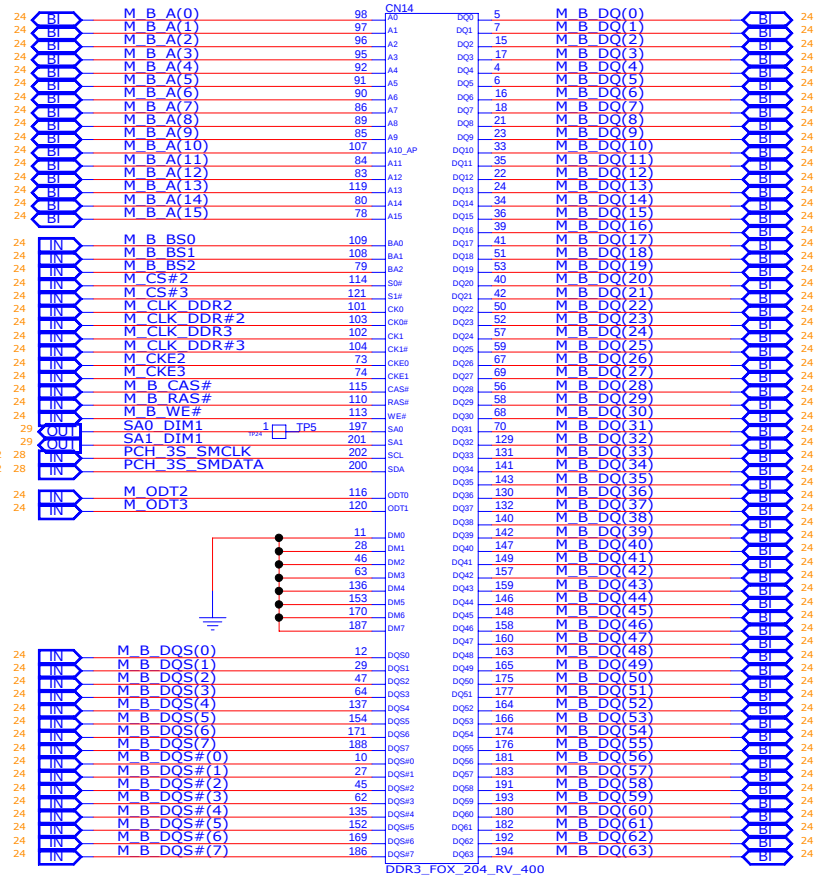
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CS

DOC NUMBER
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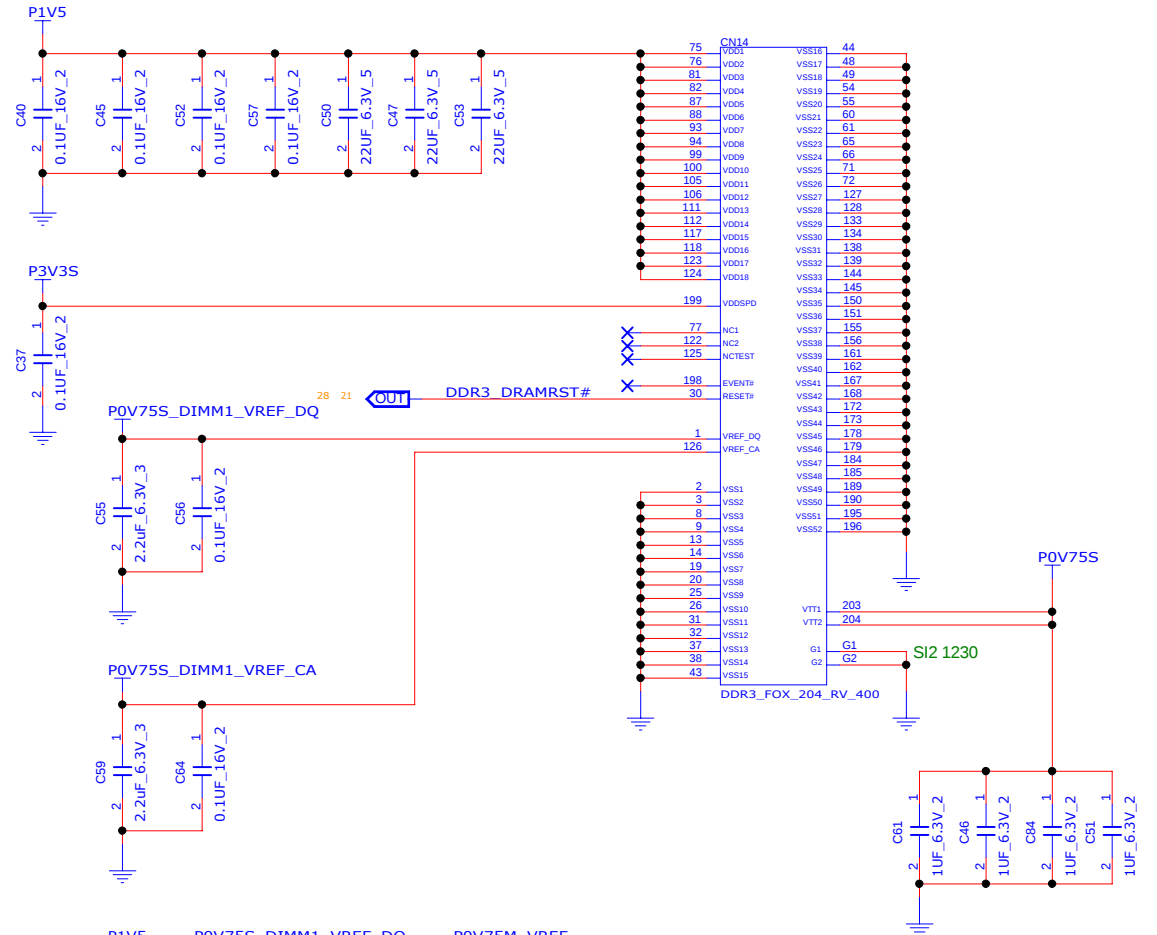
MTR

REV
AX1

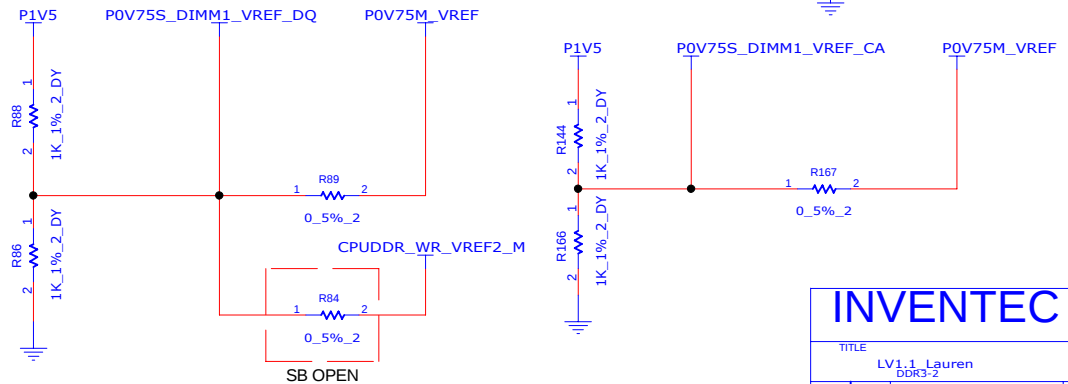
DDR3 SO-DIMM 1



DDR3 SOCKET (RV_400) PN: 6026B0221601



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



INVENTEC

TITLE
LV1.1 Lauren
DDR3-2

SIZE A3 CODE CS DOC.NUMBER 1310A24893-0 MTR REV AX1
SHEET 29 of 67

CHANGE by David Cheng DATE 12-12-2011

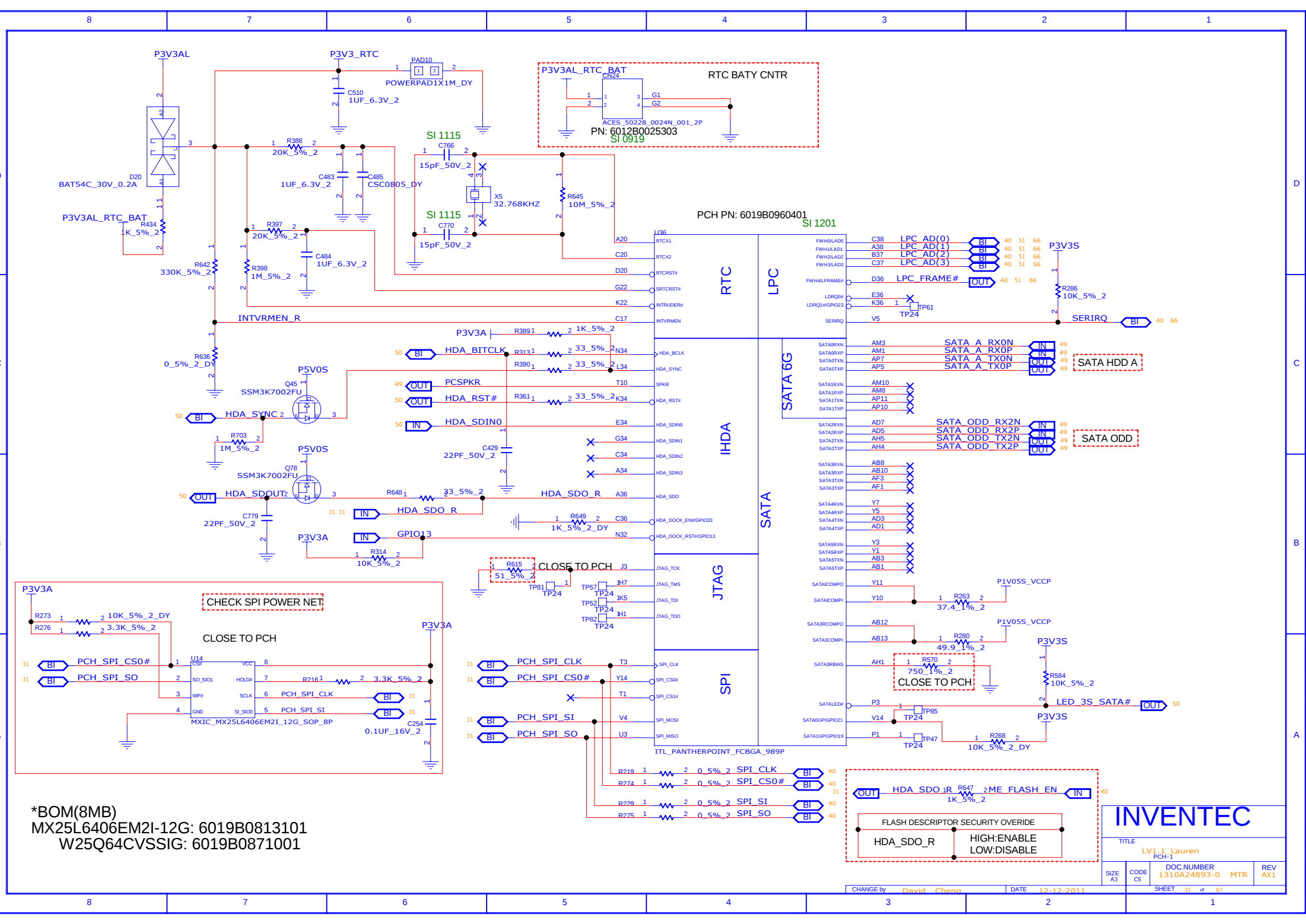
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C							
B							
A							
8	7	6	5	4	3	2	1

PCH

INVENTEC

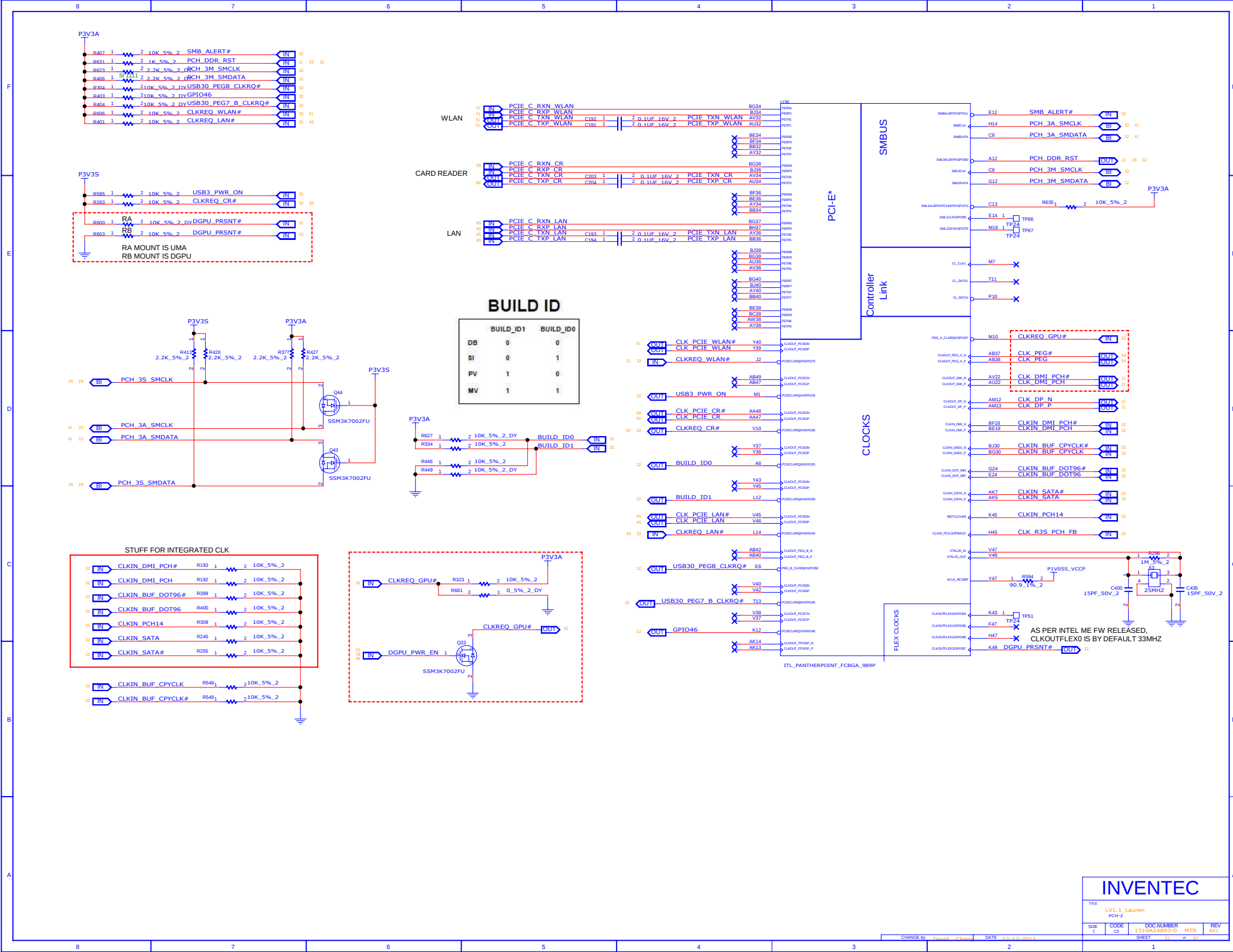
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LV1: J. Lauren BLANK			
SIZE A3	CODE CS	DOC NUMBER 1310A24893-0 MTR	REV AX1

CHANGE by	David. Cheng	DATE	12-12-2011	SHEET	30	of	67
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*BOM(8MB)
MX25L6406EM2I-12G: 6019B0813101
W25Q64CVSSIG: 6019B0871001

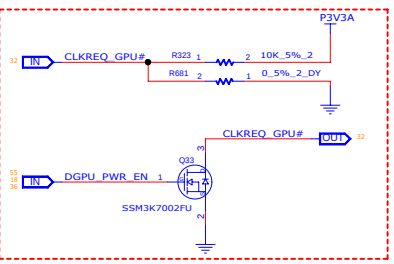
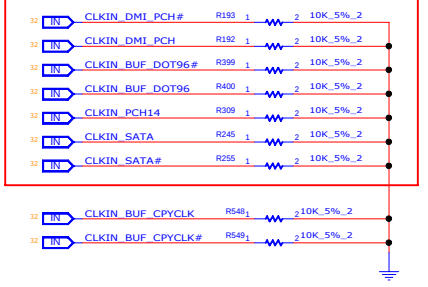
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LV1-L-Lauren				
PCH1				
SIZE	CODE	DOC NUMBER	MTR	REV
A3	CS	1310A24893-0		AX1
SHEET 31 of 67				



BUILD ID

	BUILD_ID1	BUILD_ID0
DB	0	0
SI	0	1
PV	1	0
MV	1	1

STUFF FOR INTEGRATED CLK



INVENTEC

TITLE				
LV1.1_Lauren				
PCH-2				
SIZE	CODE	DOC NUMBER	MTR	REV
C	CS	1310A2AB53-5		A01
SHEET			32	67

NOTE:1.SLP_SUS AND SUSACK# ARE NC IF DSW IS NOT SUPPORTED
2.DPWROK SHOULD CONNECT TO RSMRST# IF DSW NOT SUPPORTED

D

D

C

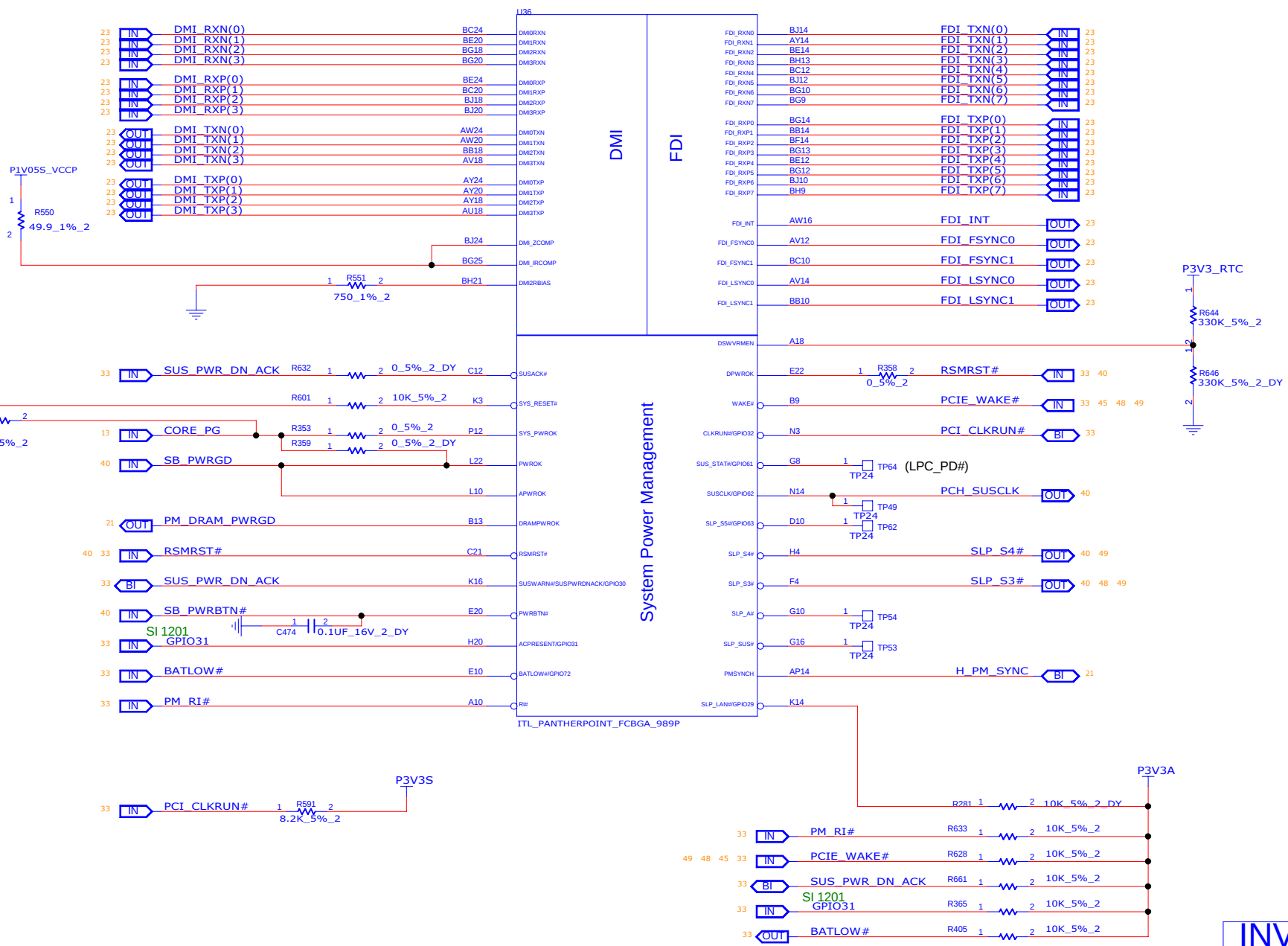
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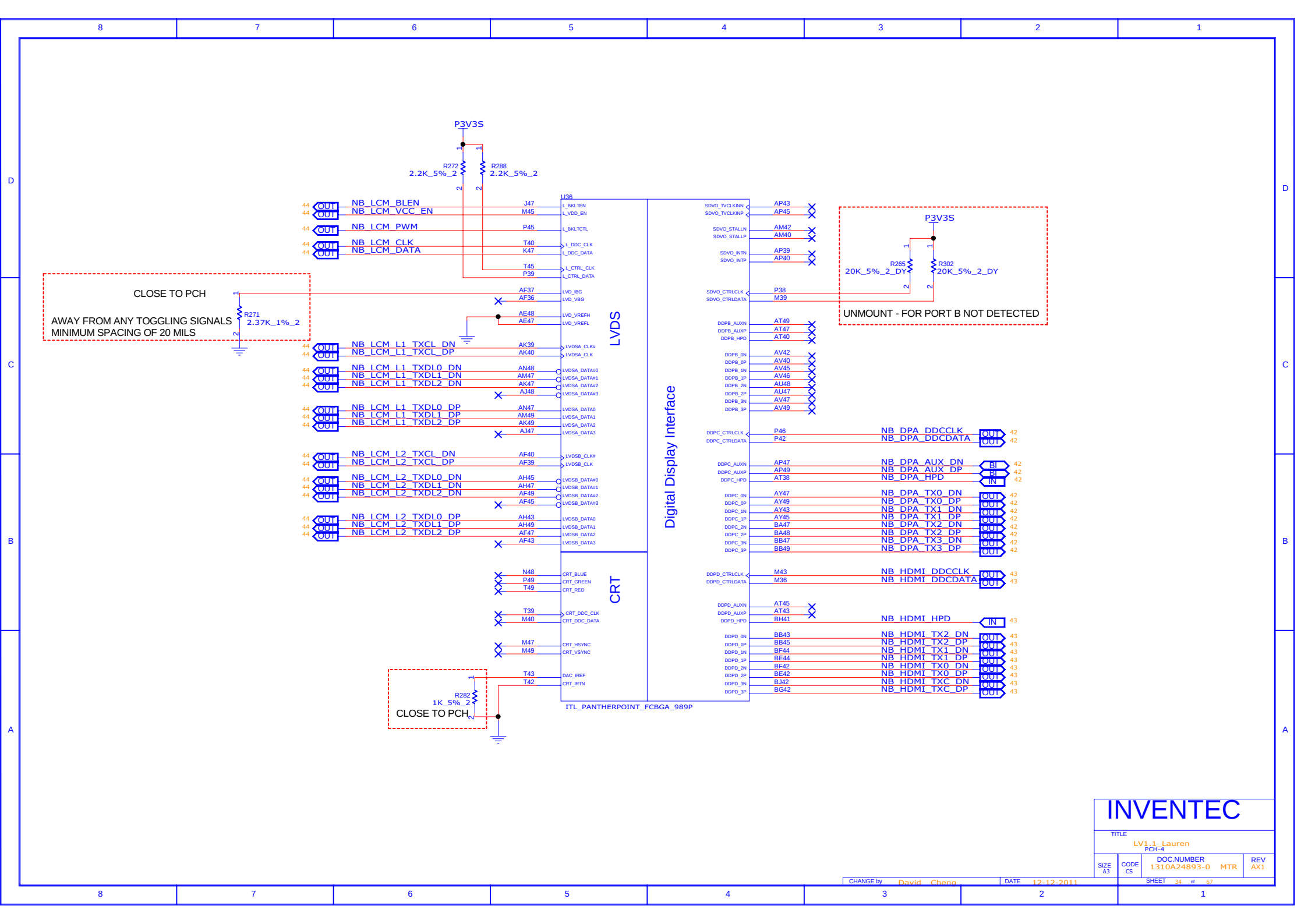
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A

A



INVENTEC				
TITLE				
LV1.1_Lauren				
PCH3				
SIZE	CODE	DOC NUMBER	MTR	REV
A3	CS	1310A24893-0		AX1



INVENTEC

TITLE
LV1-1-Lauren
PCH4

SIZE A3 CODE CS DOC NUMBER 1310A24893-0 MTR REV AX1

CHANGE by David Cheng DATE 12-12-2011

SHEET 34 of 67

D

D

C

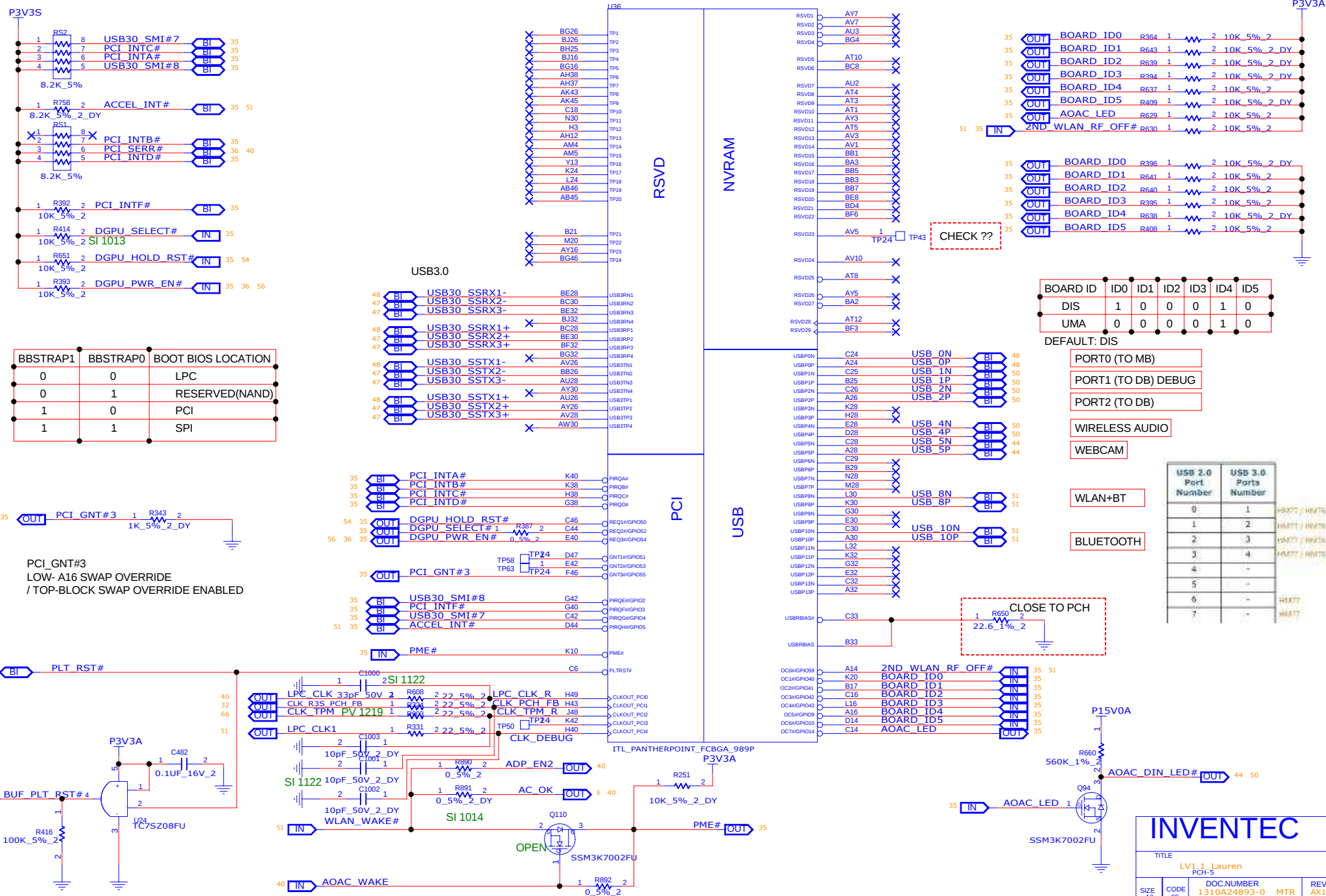
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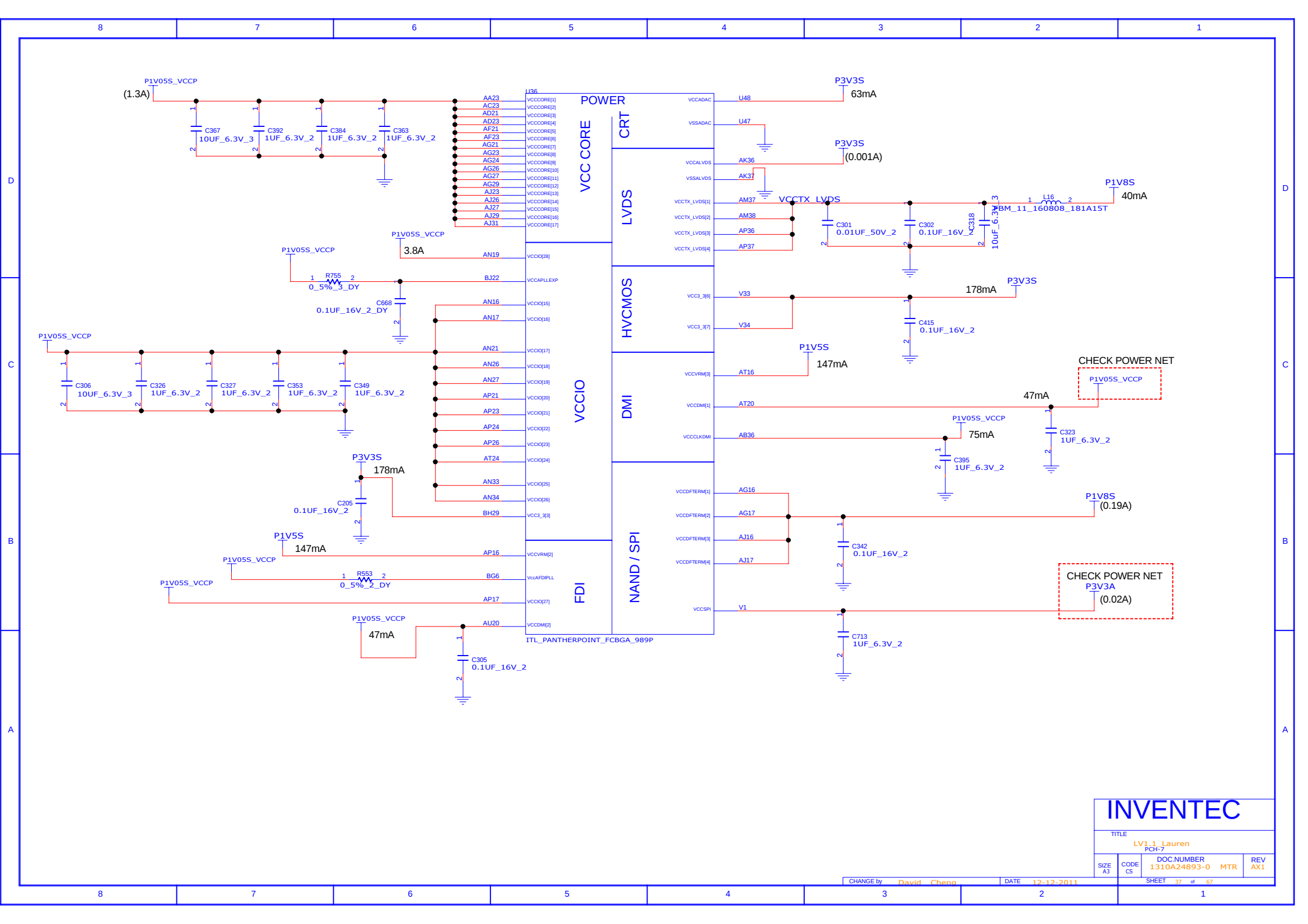
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INVENTEC

TITLE
LV1.1_Lauren
PCH7

SIZE A3 CODE CS DOC NUMBER 1310A24893-0 MTR REV AX1

CHANGE by David Cheng DATE 12-12-2011

SHEET 37 of 67

D

C

B

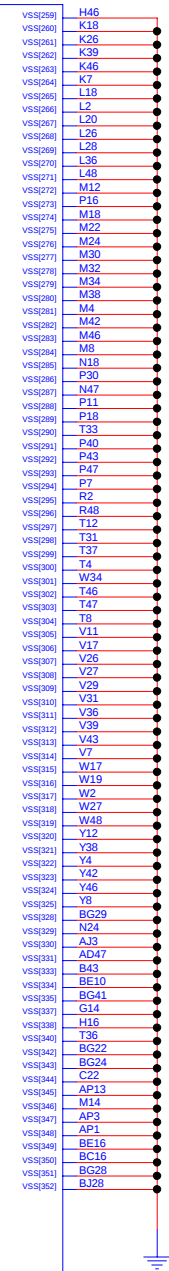
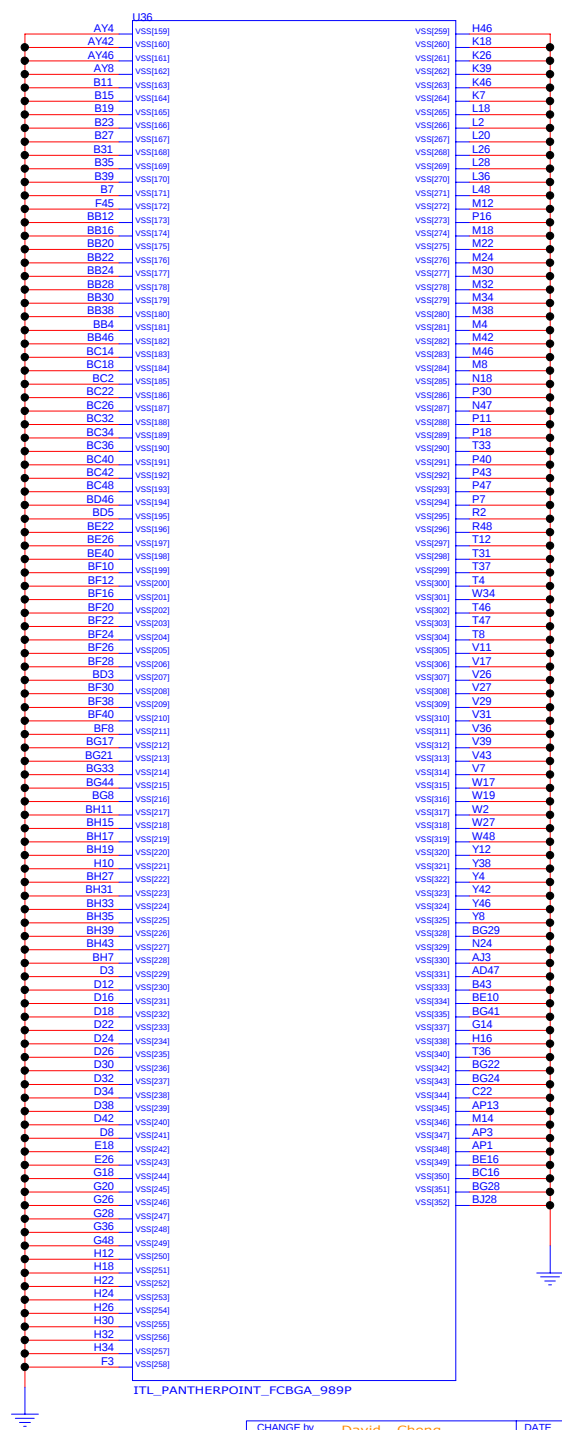
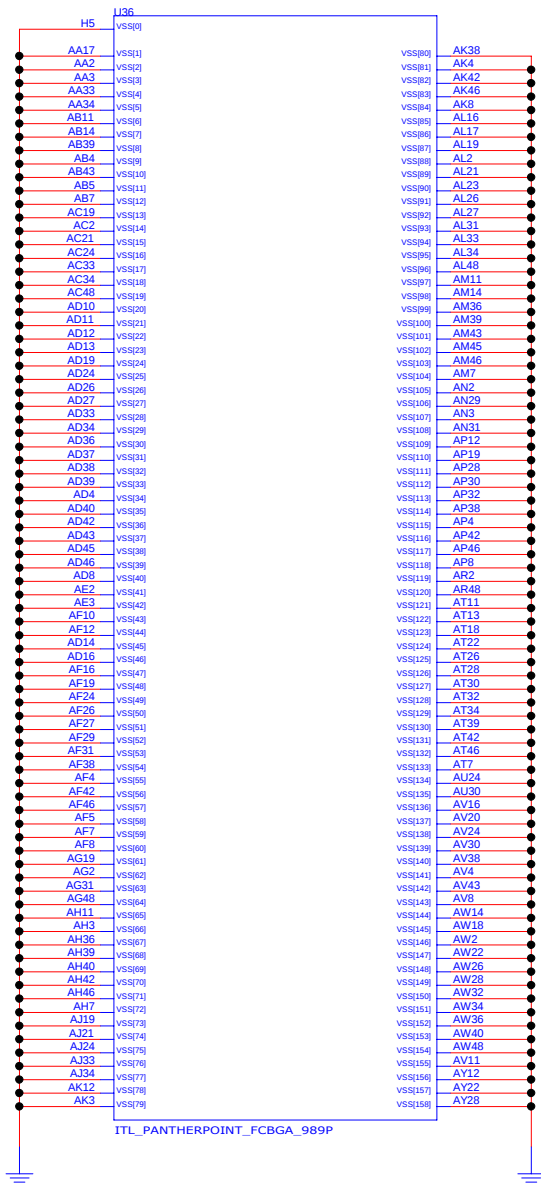
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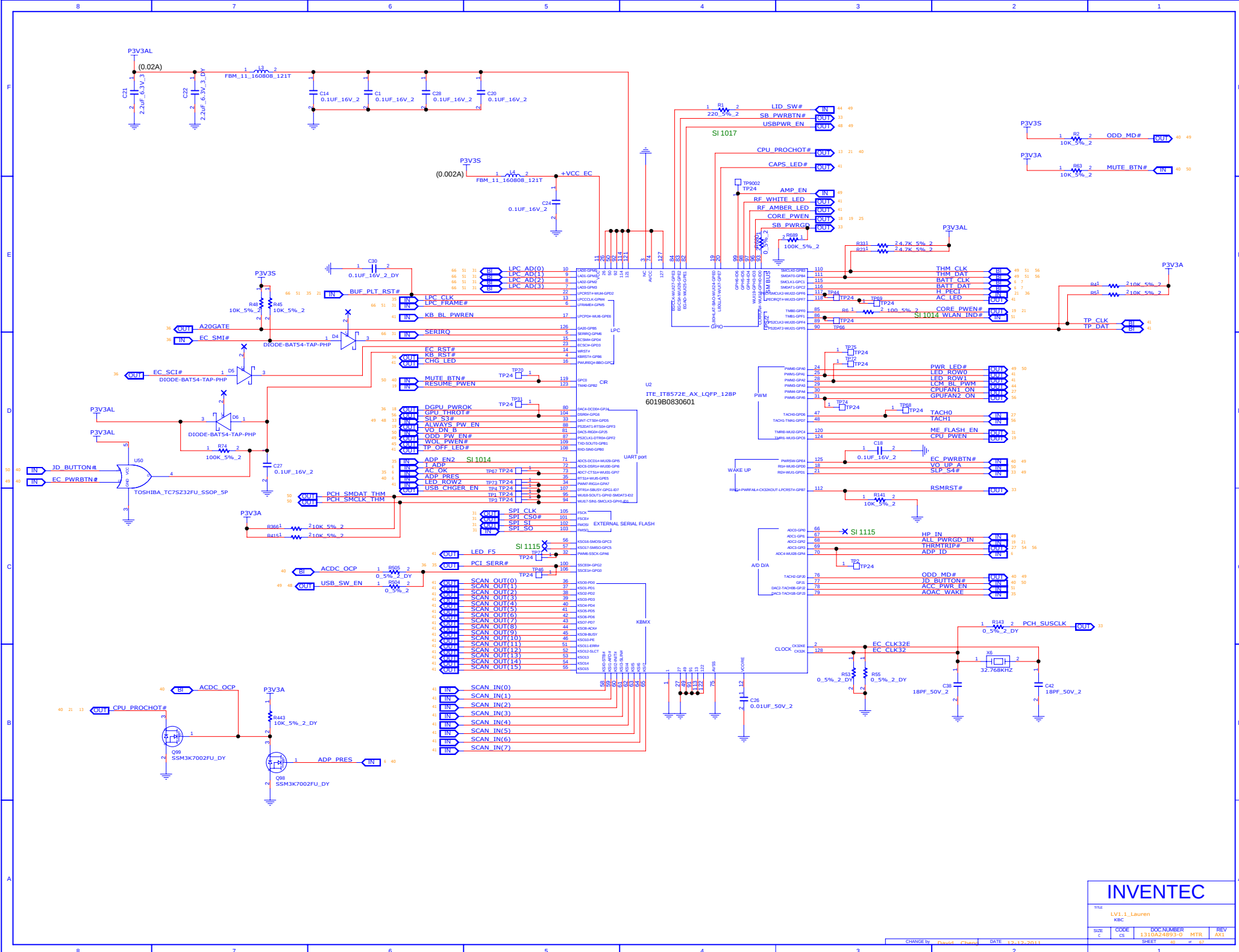
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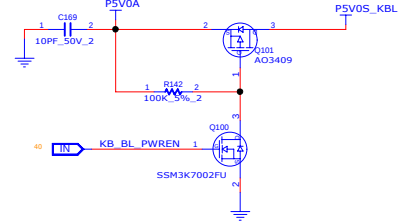
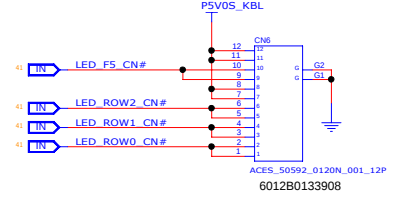
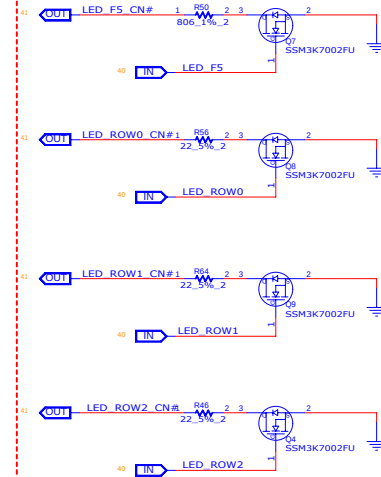
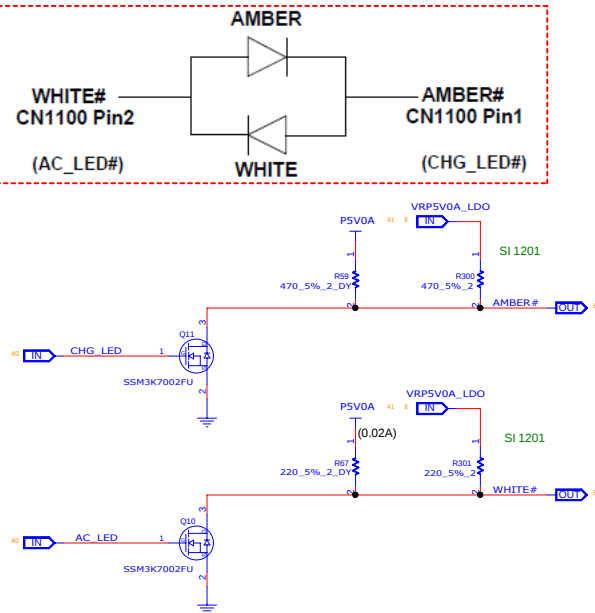
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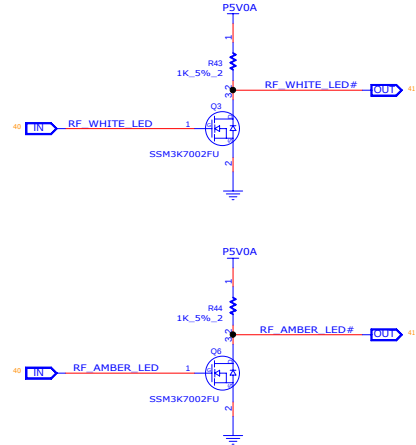
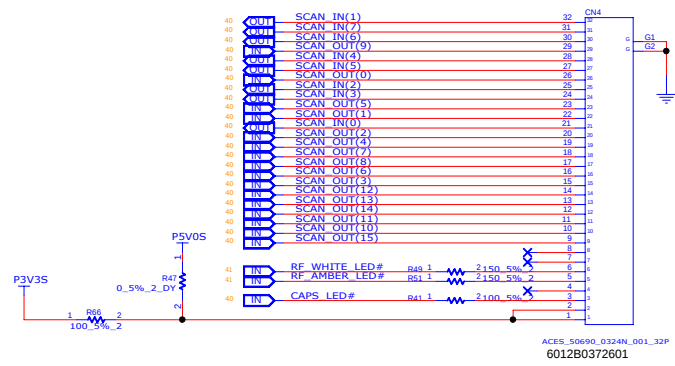
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SIZE A3	CODE CS	DOC NUMBER 1310A24893-0	MTR	REV AX1
SHEET 39 of 67				



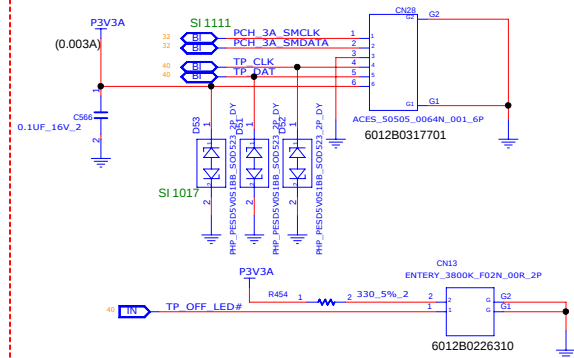
DC-JACK LED



KEYBOARD CONN



TOUCHPAD MODULE CONN

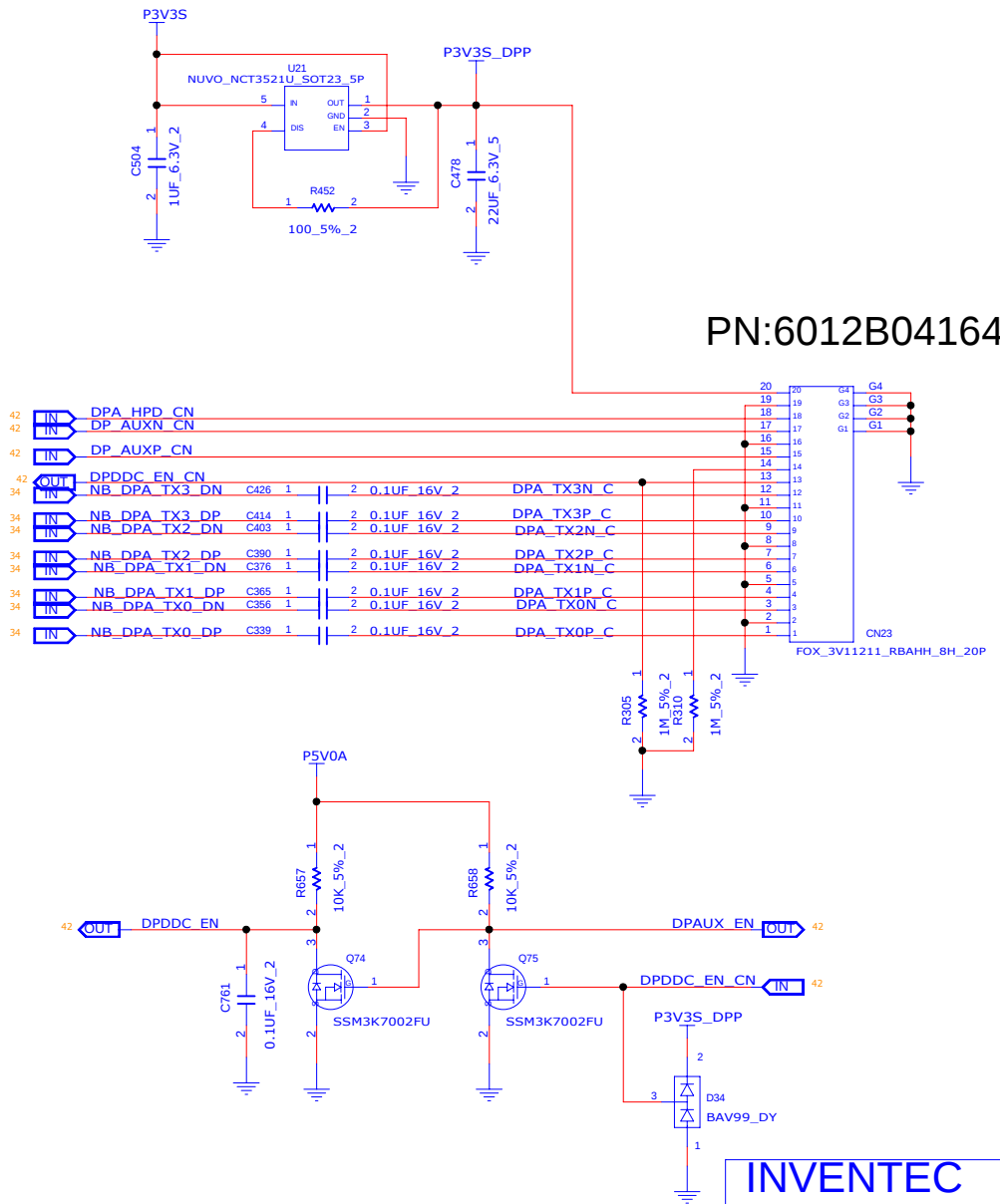
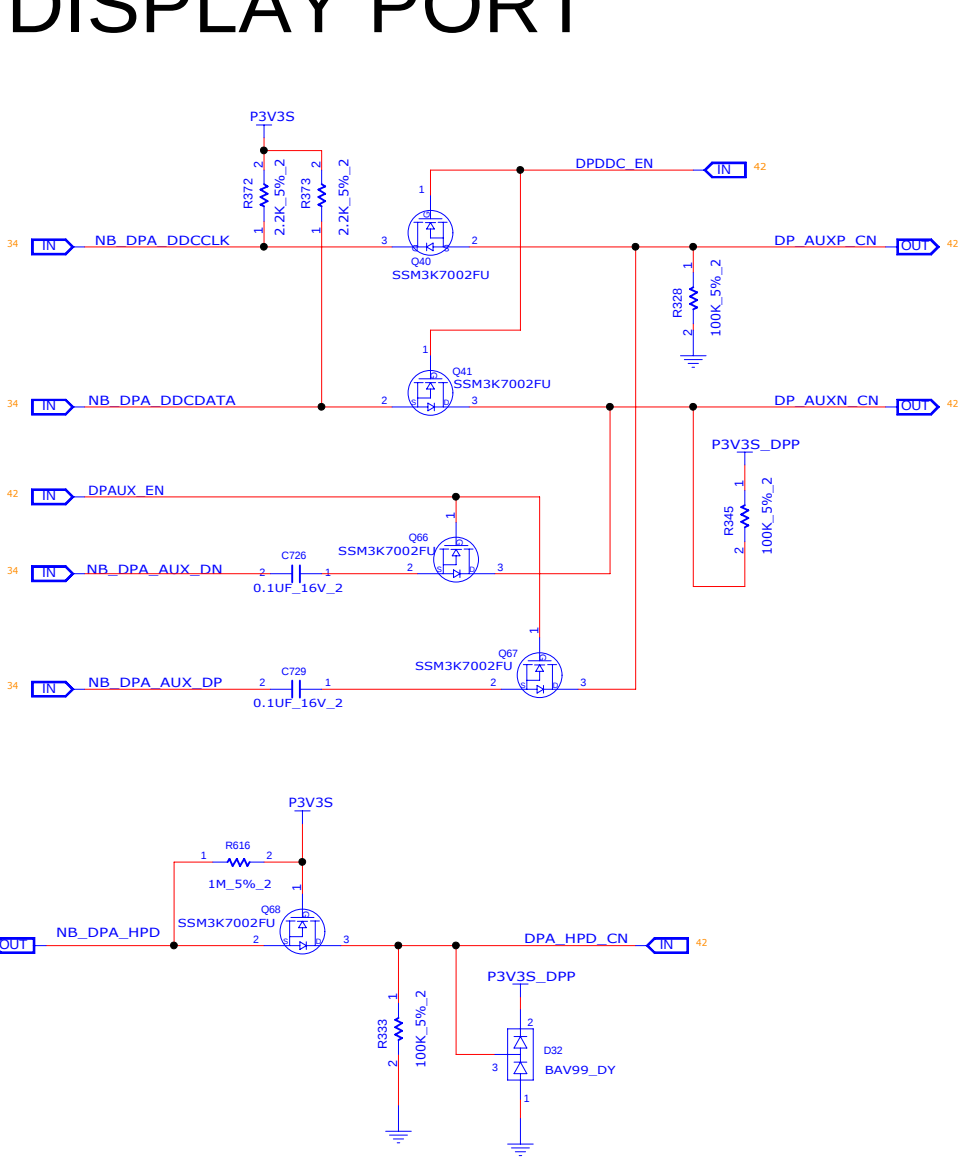


INVENTEC

Title			
LV1.1_Lauren			
KEYBOARD & TOUCHPAD			
SIZE	CODE	DOC NUMBER	REV
C	CS	1310A24853-5	MTR
SHEET		SI	6

CHANGE BY: David_Chen DATE: 12-12-2014

DISPLAY PORT



PN:6012B0416401

INVENTEC

TITLE			
LV1.1 Lauren DISPLAY PORT CONN			
SIZE A3	CODE CS	DOC.NUMBER 1310A24893-0 MTR	REV AX1
SHEET 42 of 67			

CHANGE by	David Cheng	DATE	12-12-2011
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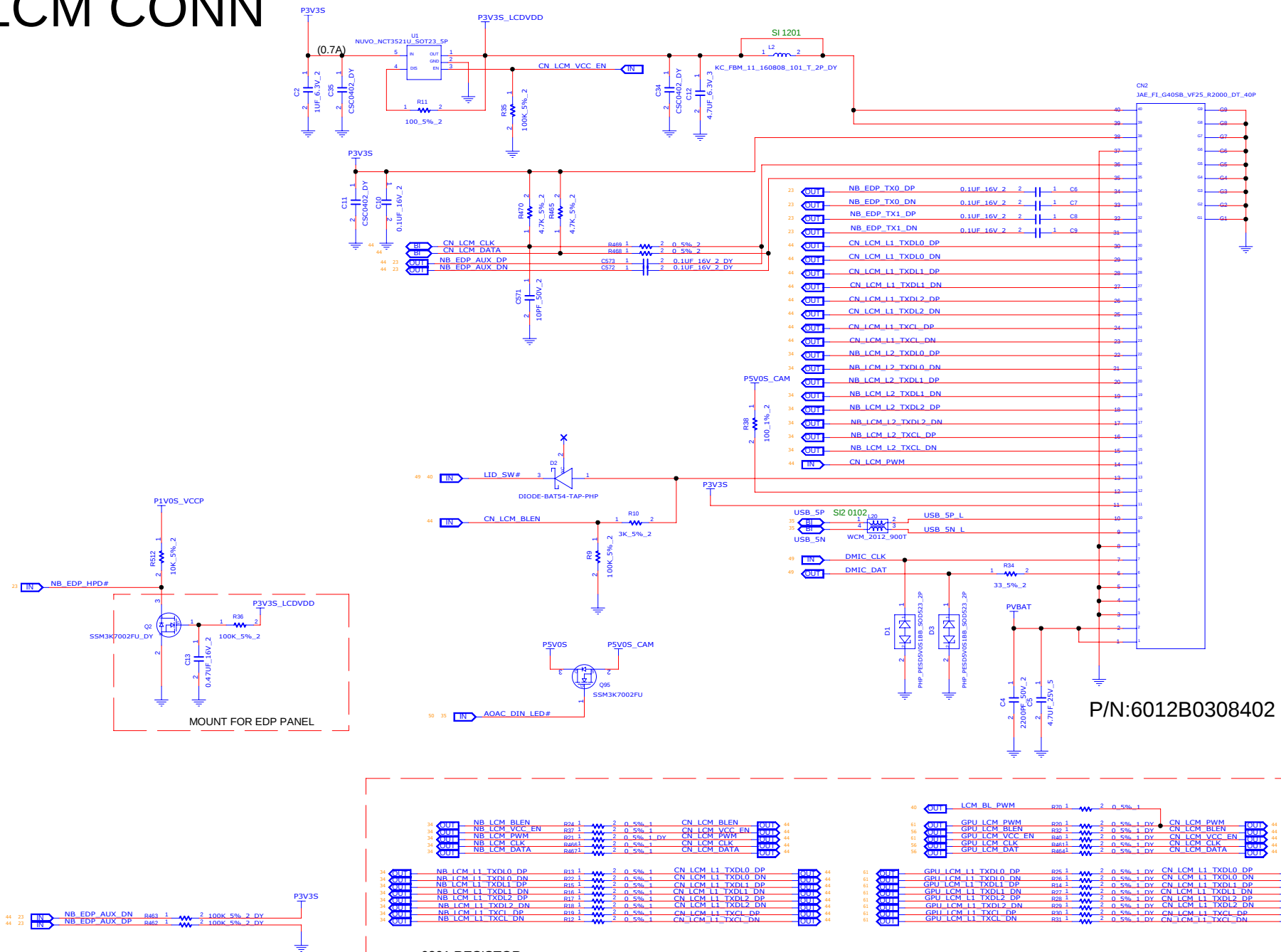
SHEET 42 of 67

A



SHEET 43 of 67

LCM CONN



P/N:6012B0308402

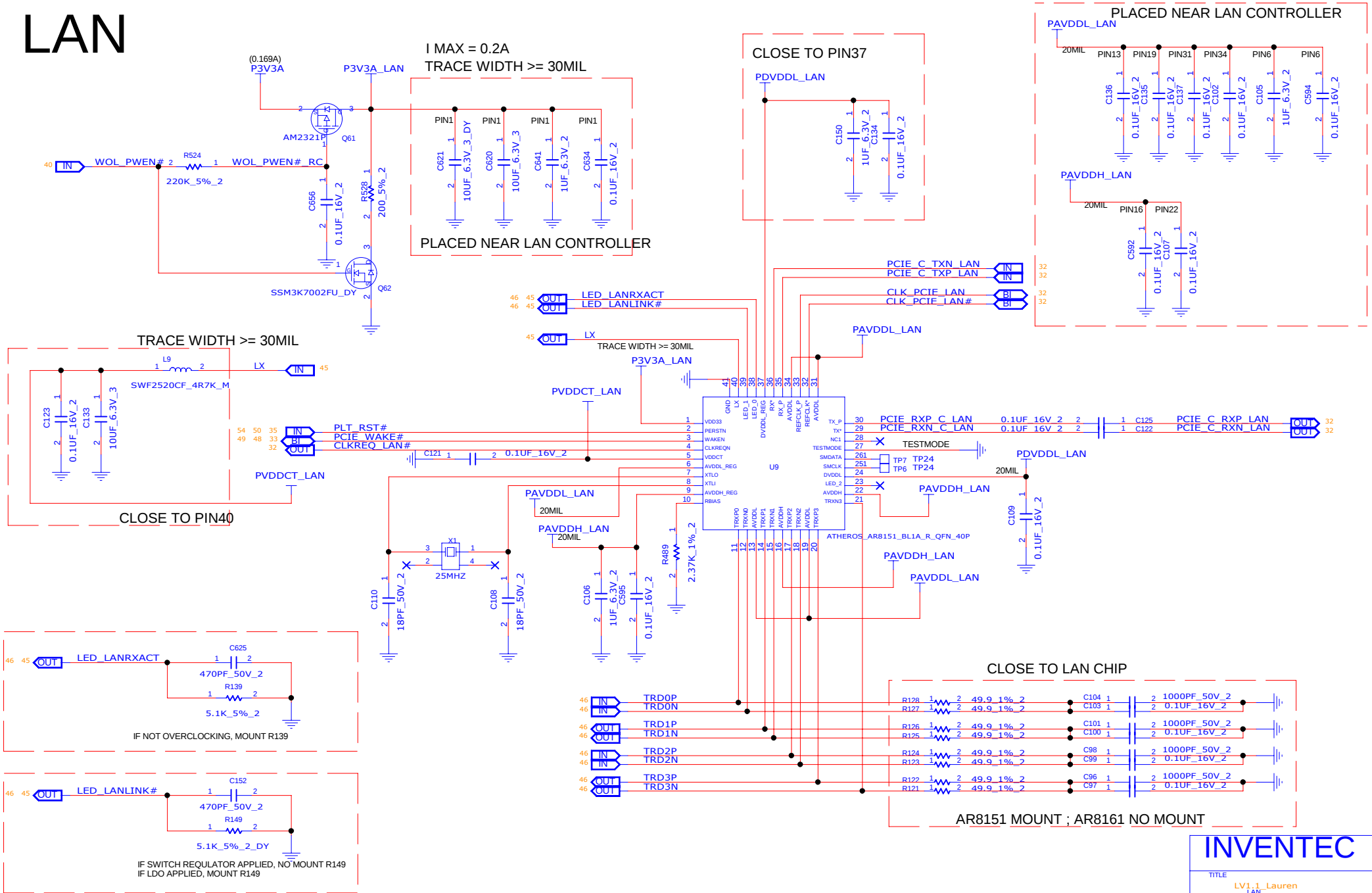
0201 RESISTOR

INVENTEC

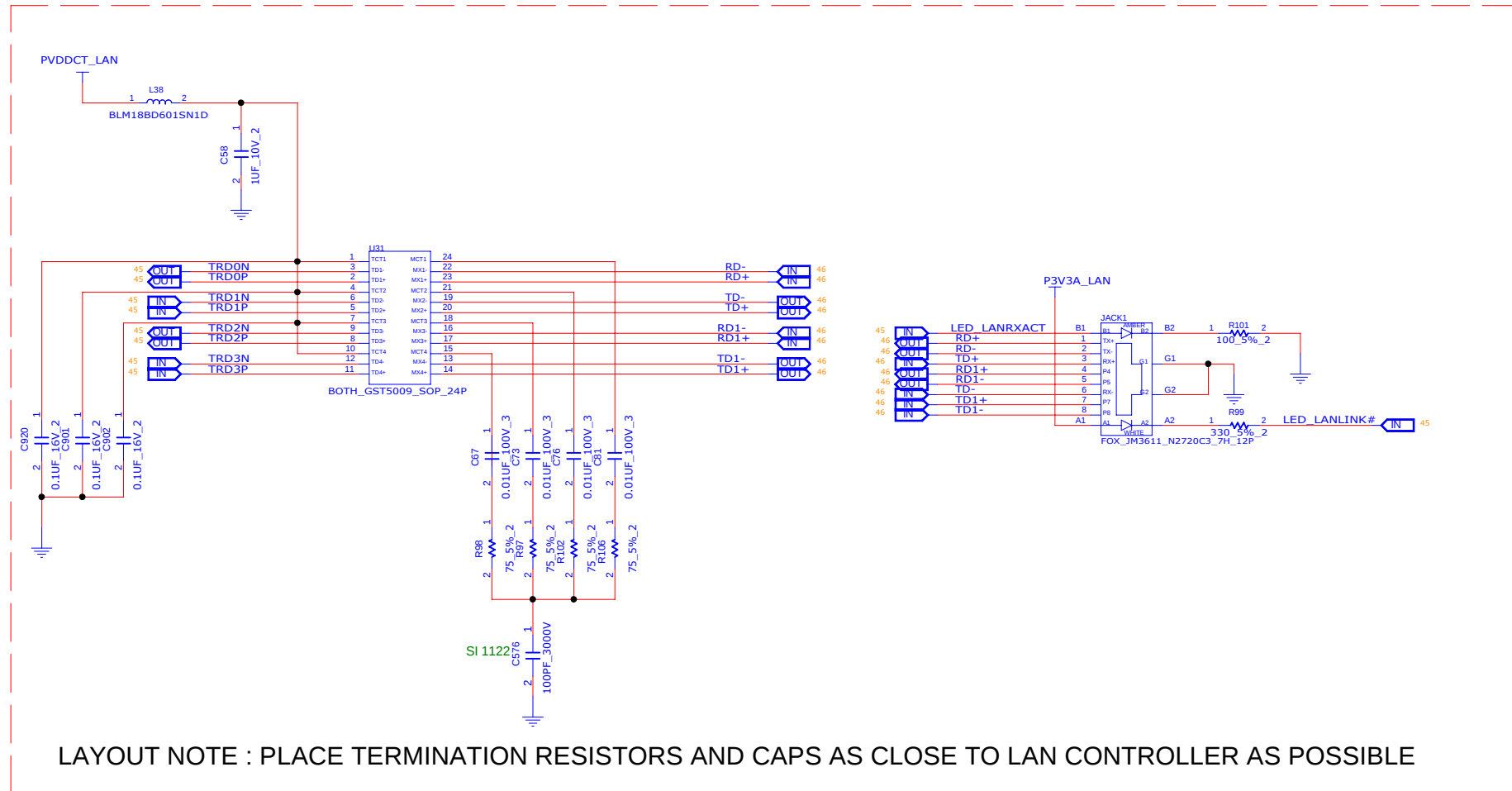
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Sheet		41	of 67

CHANGE by David_Chang DATE 12-12-2011

LAN



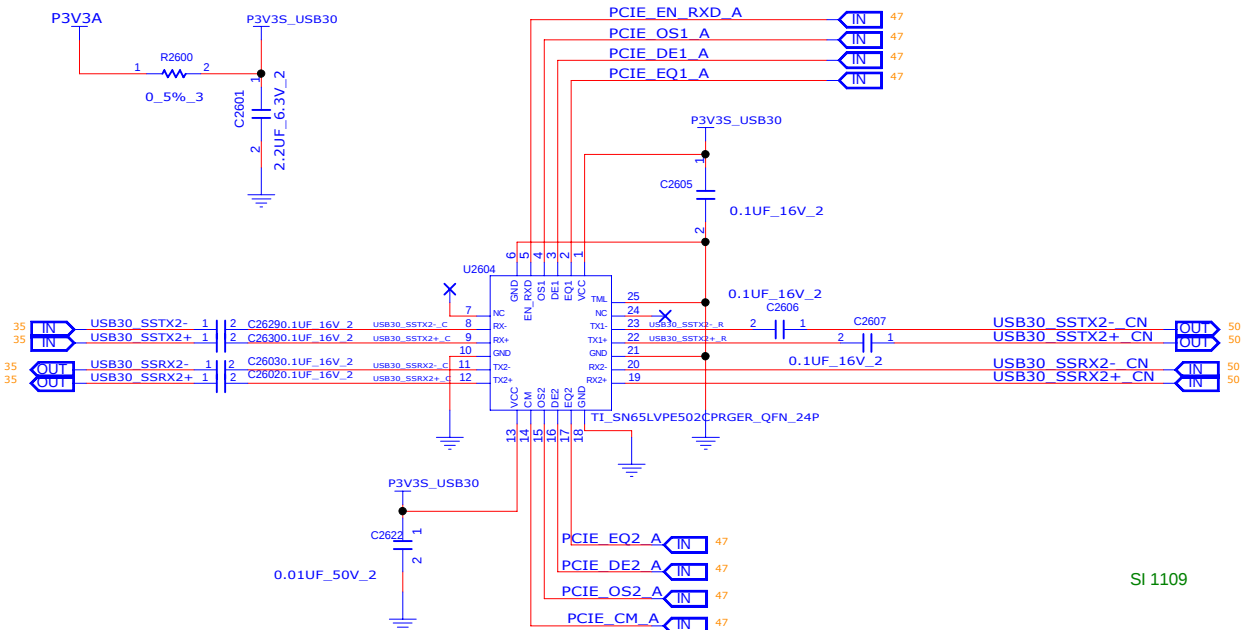
RJ45



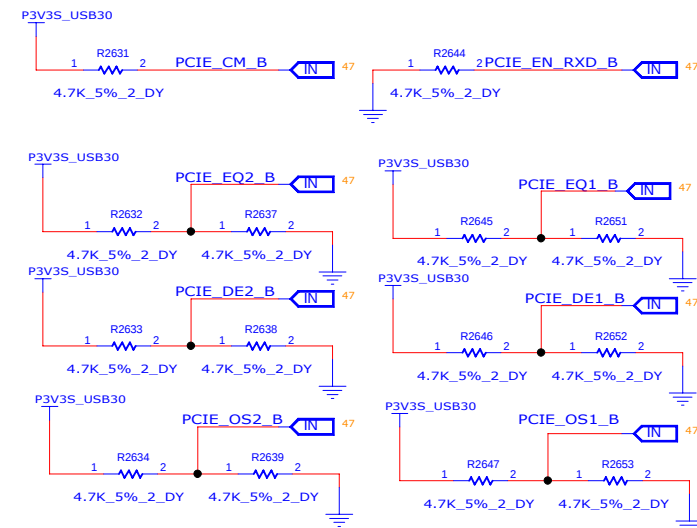
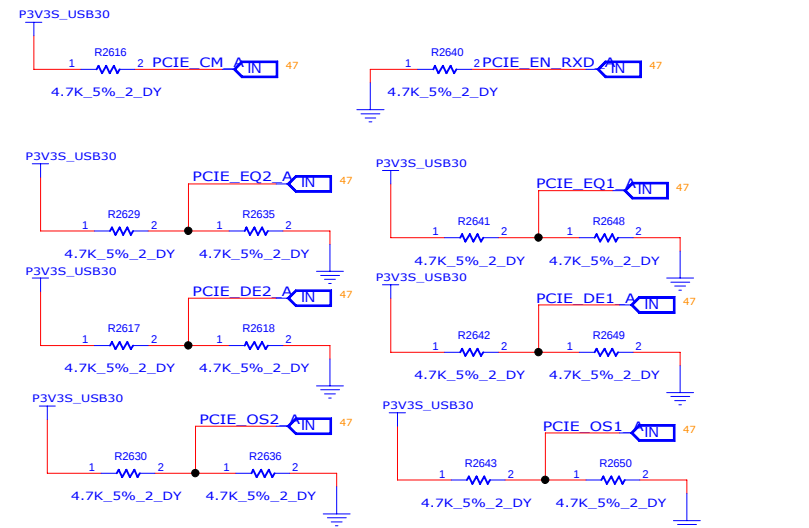
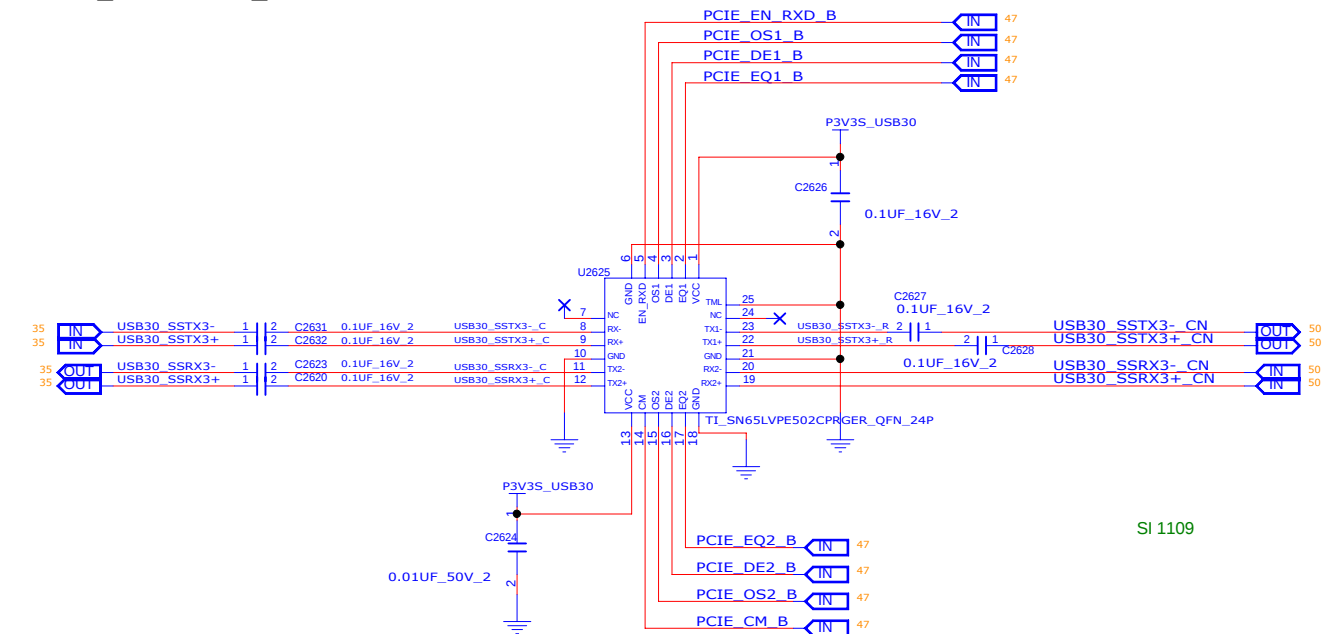
INVENTEC

TITLE			
LV1.1_Lauren RJ-45			
SIZE A3	CODE CS	DOC.NUMBER 1310A24893-0	REV AX1
CHANGE by David Cheng		DATE 12-12-2011	SHEET 46 of 67

USB30_REDRIIVER_PORT2



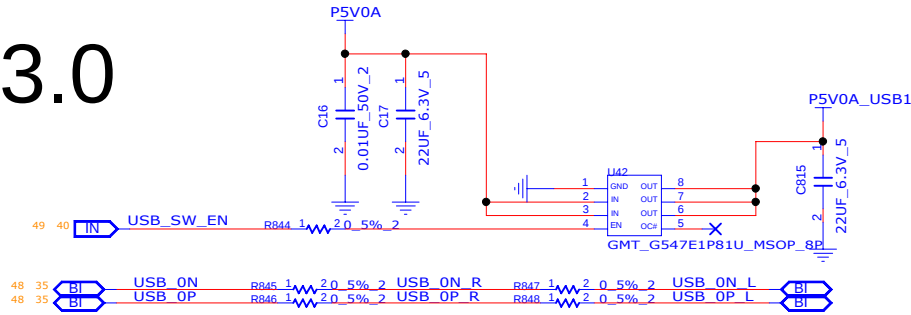
USB30_REDRIIVER_PORT3



INVENTEC

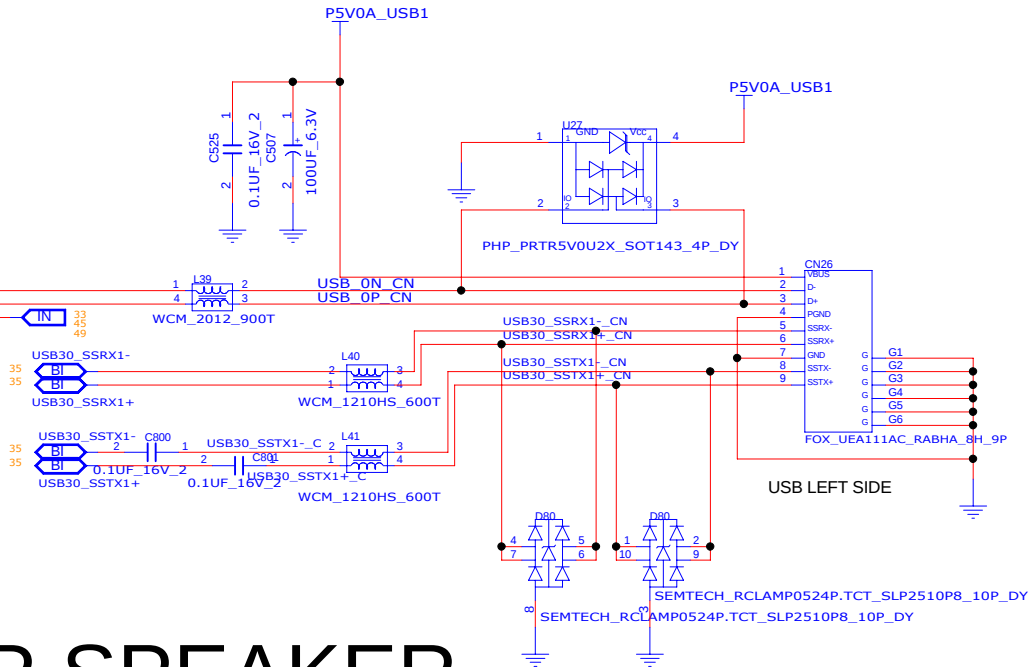
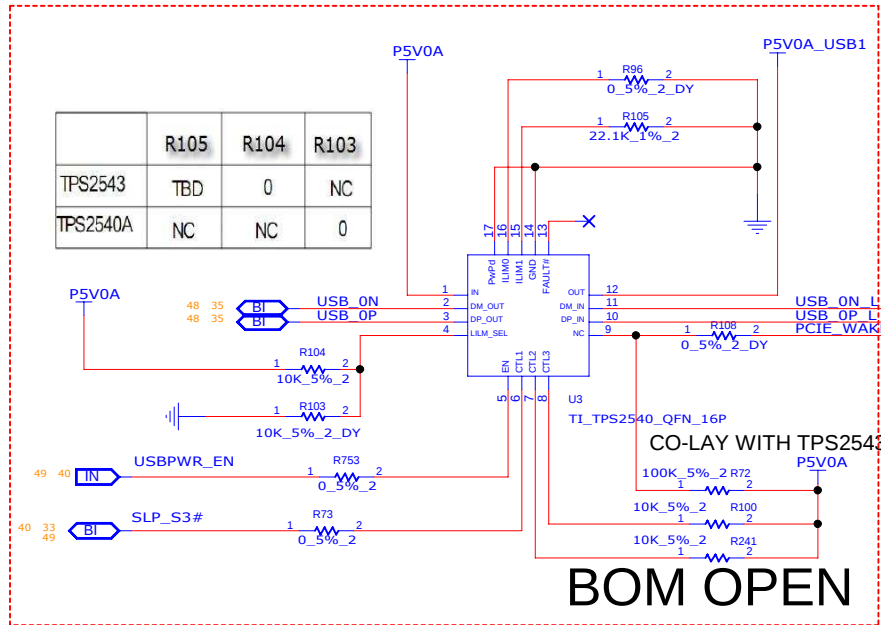
TITLE			
LV1.1 Lauren			
USB30_REDRIIVER			
DOCNUMBER			
1310A24893-0			
SIZE	CODE	MTR	REV
A3	CS		AX1

USB 3.0

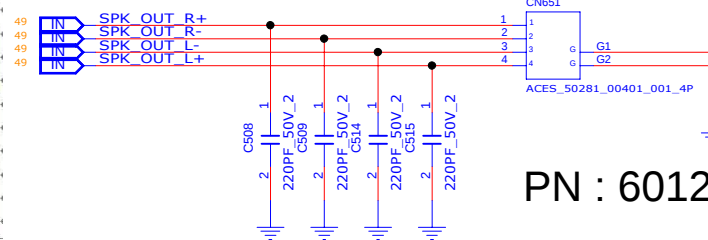


TPS2543/44 Control Truth Table

Input Logic Level				Logic Output	
CTL1	CTL2	CTL3	ILIM_SEL	Charging Mode	WAKE Output (active low)
0	0	0	x	OUT discharge, power switch off	off
0	x	1	0	Dedicated charging port, auto-detect	off
0	x	1	1	Dedicated charging port, auto-detect, w/ Mouse/Keyboard detect + pass through enabled (back to auto detect when detached)	active low if DCP load present
x	1	0	x	Standard downstream port, USB 2.0 Mode	off
1	0	0	x	Dedicated charging port, BC1.2 only	off
1	0	1	x	Dedicated charging port, divider	off
1	1	1	0	Standard downstream port, USB 2.0 Mode	off
1	1	1	1	Charging downstream port, BC1.2	active low if CDP load present



REAR SPEAKER



USB CONN01

PN : 6012B0096202

	USB charger port ^o			Standard USB port ^o		
	S0 ^o	S3 ^o	S4,S5 ^o	S0 ^o	S3 ^o	S4,S5 ^o
AC ^o	ON (EN=1) ^o (1,1,1) ^o (CDP MODE) ^o	ON (EN=1) ^o (0,1,1) ^o (DCP auto MODE) ^o	ON (EN=1) ^o (0,1,1) ^o (DCP auto MODE) ^o	ON ^o	ON ^o	ON ^o
DC ^o (normal batt) ^o (10%-100%) ^o	ON (EN=1) ^o (1,1,1) ^o (CDP MODE) ^o	ON (EN=1) ^o (0,1,1) ^o (DCP auto MODE) ^o	ON (EN=1) ^o (0,1,1) ^o (DCP auto MODE) ^o	ON ^o	OFF ^o	OFF ^o
DC ^o (low batt 10%) ^o	ON (EN=1) ^o (1,1,1) ^o (CDP MODE) ^o	OFF (EN=0) ^o (0,1,1) ^o	OFF (EN=0) ^o (0,1,1) ^o	ON ^o	OFF ^o	OFF ^o

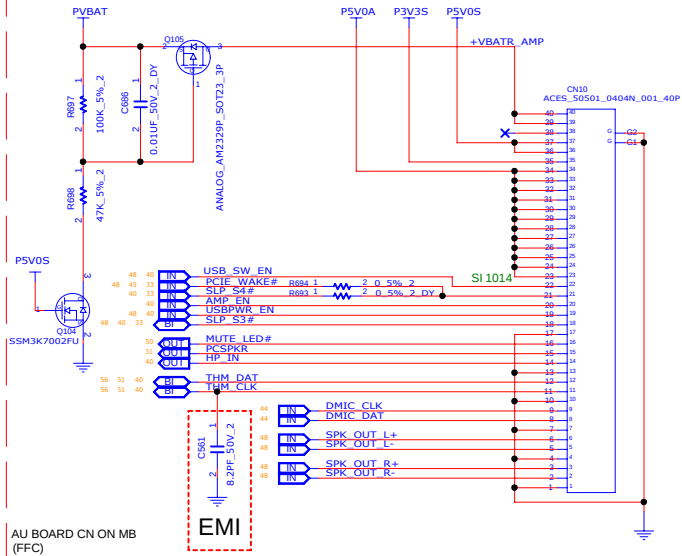
INVENTEC

TITLE			
LV1.1 Lauren USB3.0_CONN			
SIZE A3	CODE CS	DOC NUMBER 1310A24893-0	REV AX1

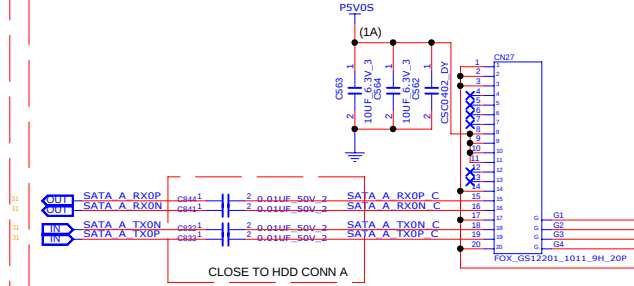
AUDIO BOARD CNTR

AU BOARD CN ON MB

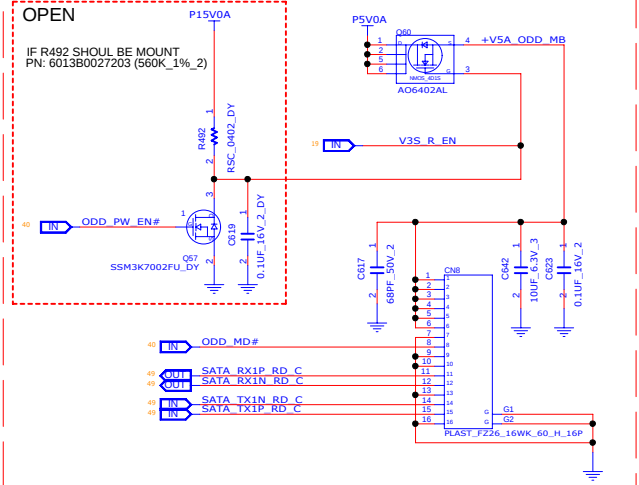
PN : 6012B0218428



SATA HDD CONN A

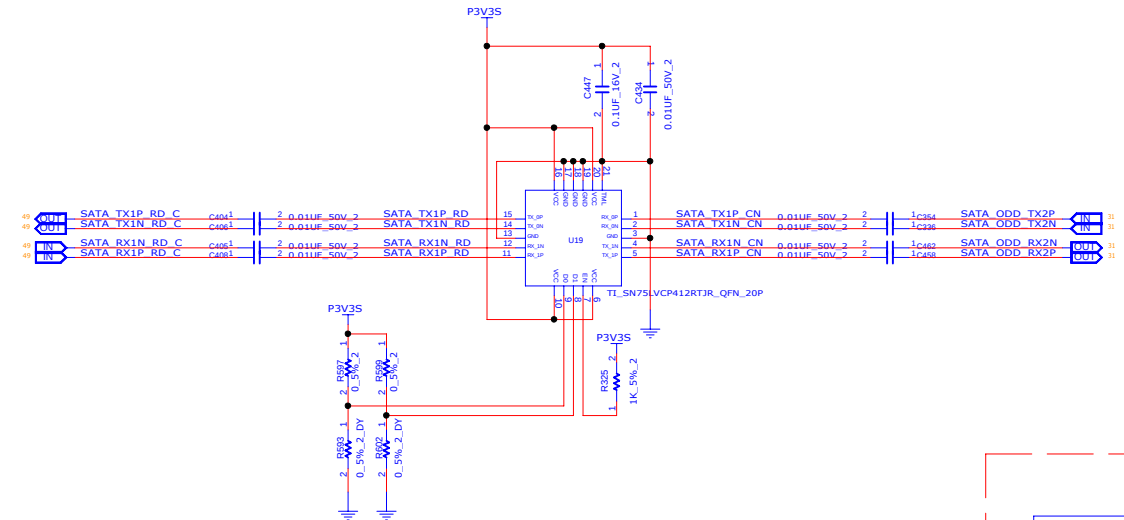
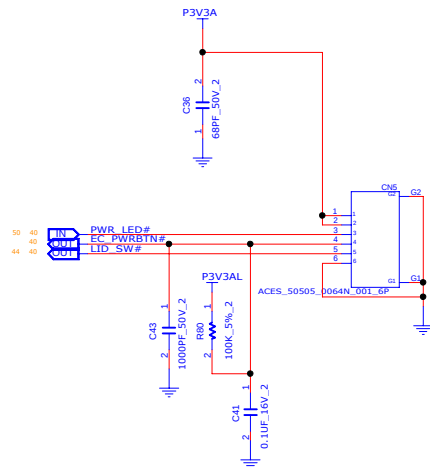


SATA ODD FFC CONN ON MB



POWER FFC CNTR

PBN CABLE CN ON MB

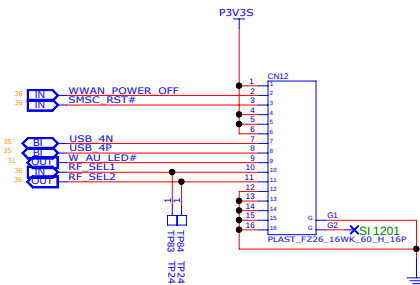


INVENTEC

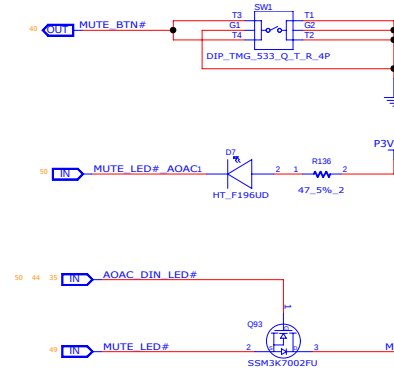
SIZE	CODE	DOC NUMBER	REV
C	CS	1310A248P3-D MTR	AX1
SHEET	49	REV	AX1

CHANGE By David Chen DATE 12-12-2011

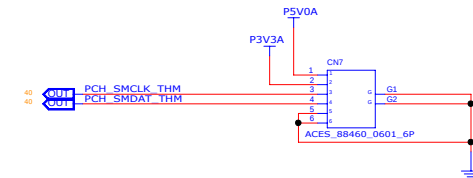
WIRELESS AUDIO BOARD CN ON MB MUTE BUTTON



MUTE BUTTON SWITCH

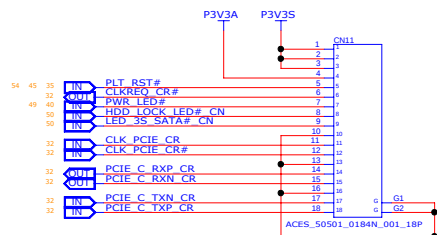


LDPS BOARD CN ON MB

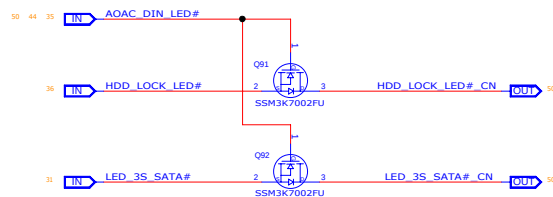


PN : 6012B0073304

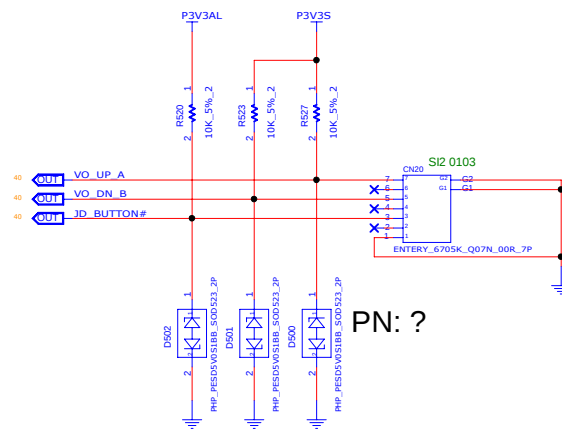
CR BOARD CN ON MB



PN : 6012B0354701

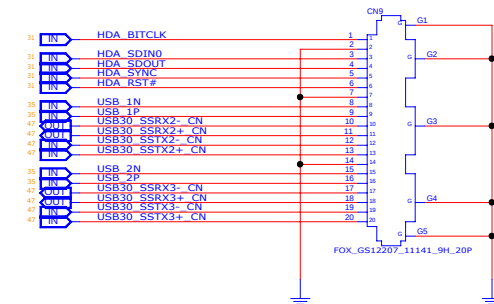


JOG DIAL CN ON MB



PN: ?

AU-USB30 CN ON MB (WIRE OR COXIAL)

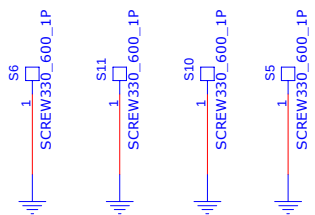


INVENTEC

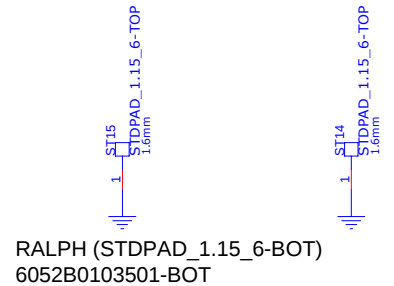
SIZE	CODE	DOC NUMBER	REV
C	CS	1310A24853-0	A/1
SHEET	31	67	

CHANGE BY: David_Chaud DATE: 12-12-2014

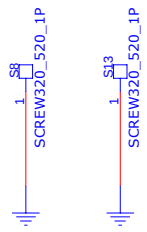
CPU SCREWS



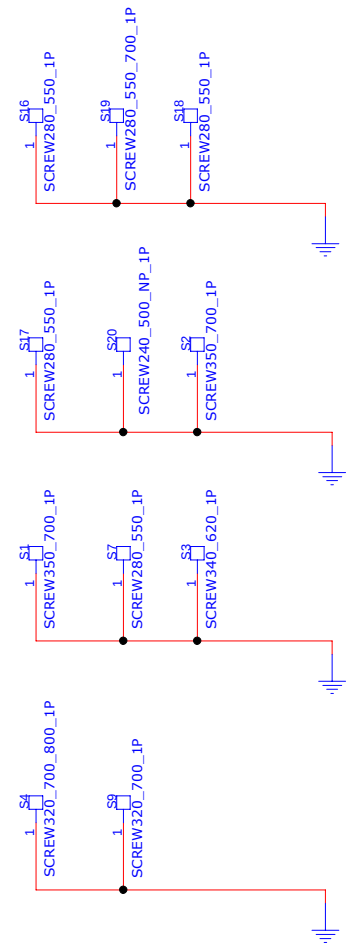
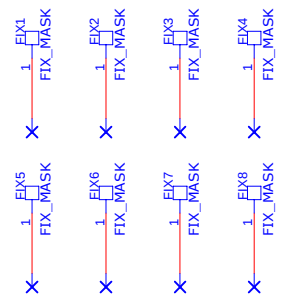
WWAN SCREWS



VGA SCREWS



FAN SCREWS



INVENTEC

TITLE			
LV1.1-Lauren EMI CAP & SCREW			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24893-0 MTR	AX1

GPU

INVENTEC

TITLE

LV1: J. Lauren
BLANK

SIZE
A3

CODE
CS

DOC NUMBER
1310A24893-0

REV
AX1

MTR

CHANGE by David Cheng

DATE 12-12-2011

SHEET 53 of 67

8

7

6

5

4

3

2

1

D

D

C

C

B

B

A

A

8

7

6

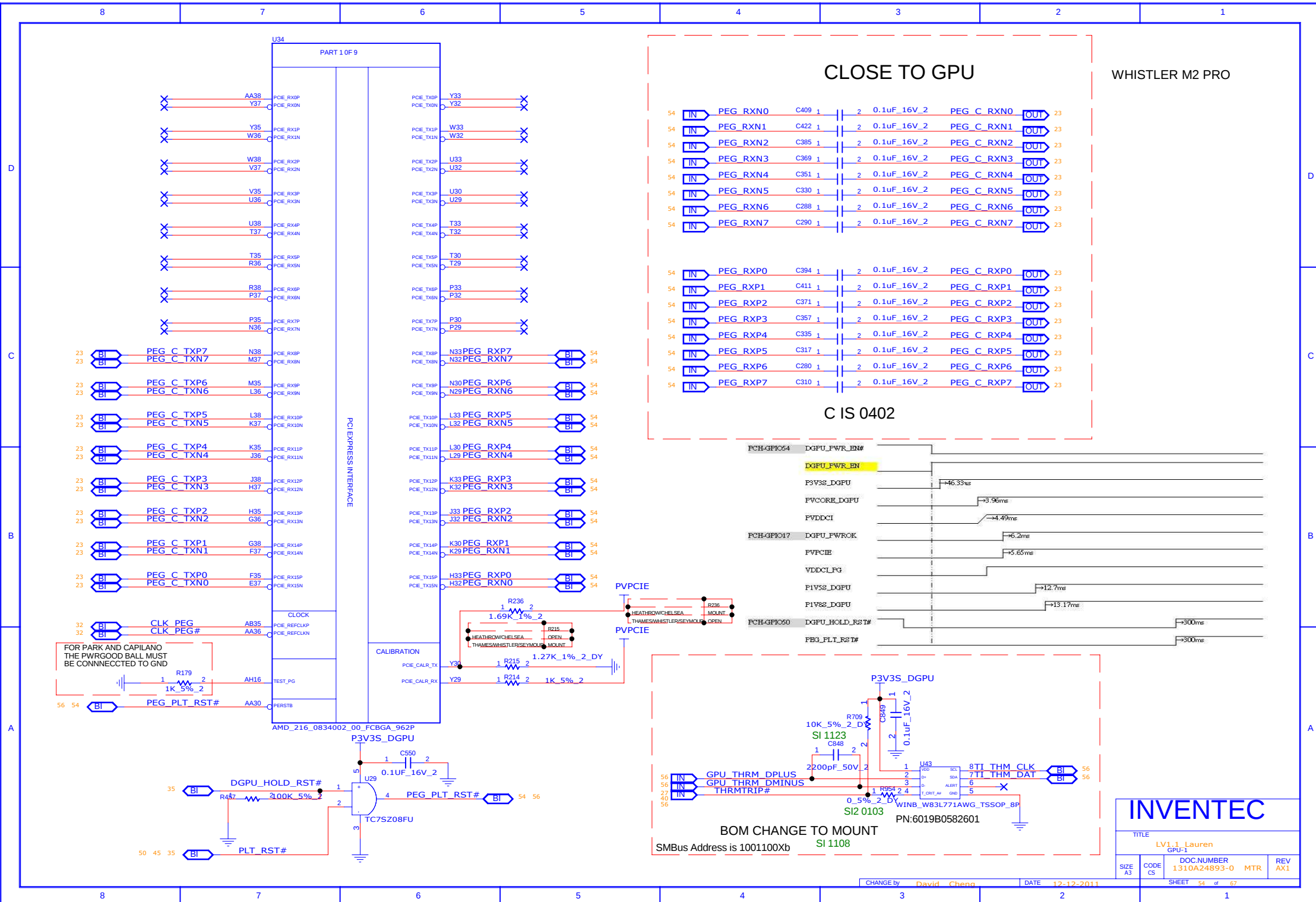
5

4

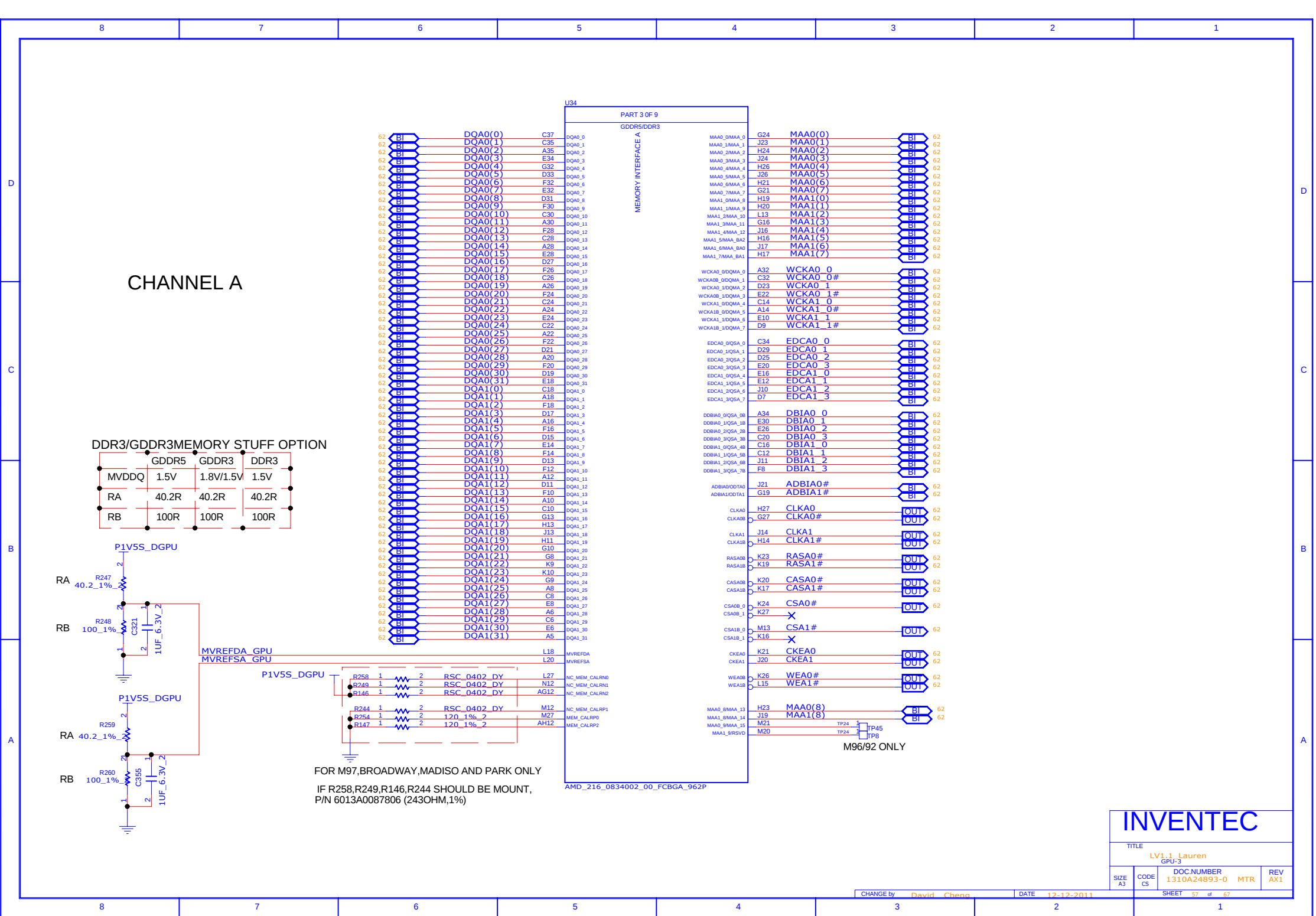
3

2

1



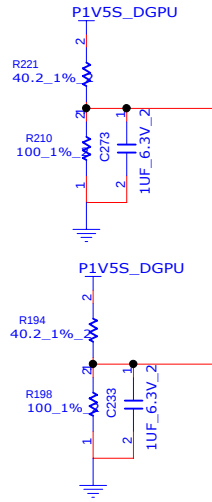




CHANNEL B

DDR3/GDDR3MEMORY STUFF OPTION

	GDDR5	GDDR3	DDR3
MVDDQ	1.5V	1.8V/1.5V	1.5V
RA	40.2R	40.2R	40.2R
RB	100R	100R	100R



MVREFDB_GPU

MVREFSB_GPU

Y12

AA12

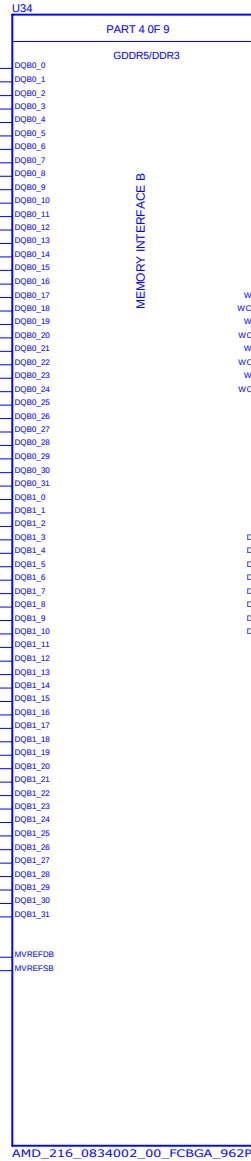
MVREFDB_GPU

MVREFSB_GPU

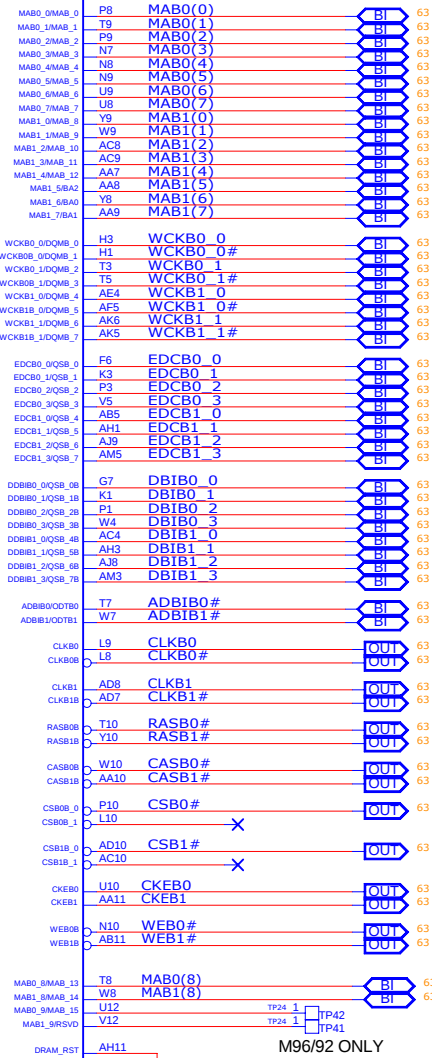
Y12

AA12

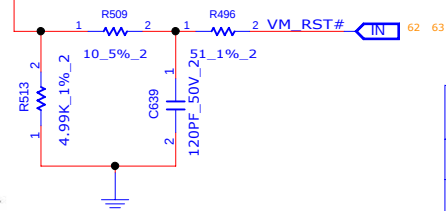
Place all these components vry close to GPU (Within 25mm)
and keep all component close to each other (within 5mm) except Rser2
** This basic topology should be used for DDR3/GDDR3/GDDR5
These Capacitors and Resistor values are an example only.
The Series R and || Cap values will depend on the DRAM load and will have to be
calculated for different Memory , DRAM Load and board to pass Reset Signal Spec.



MEMORY INTERFACE B

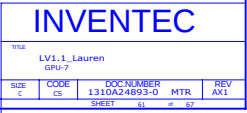


M96/92 ONLY



INVENTEC

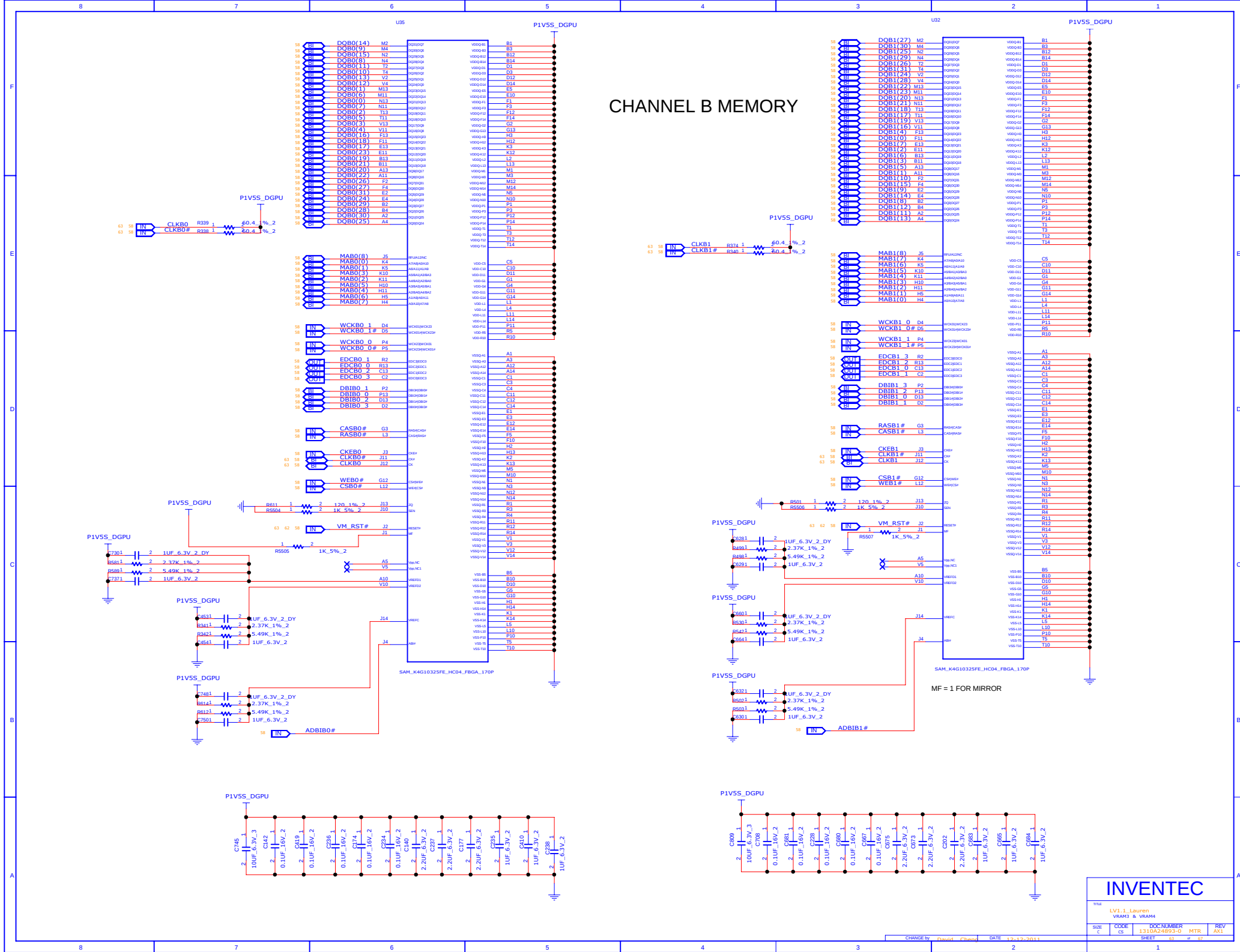
TITLE	LV1.1_Lauren		
DOC NUMBER	1310A24893-0	MTR	REV AX1
SHEET	58	of	67



CHANNEL A MEMORY

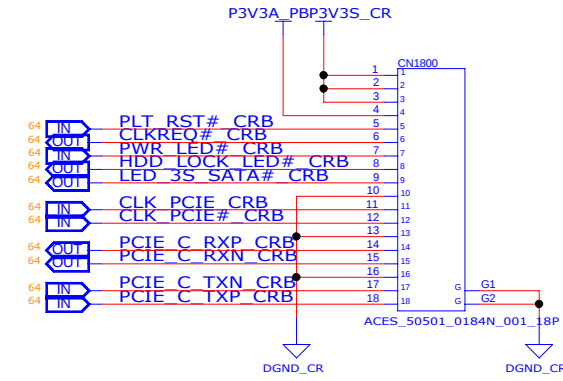
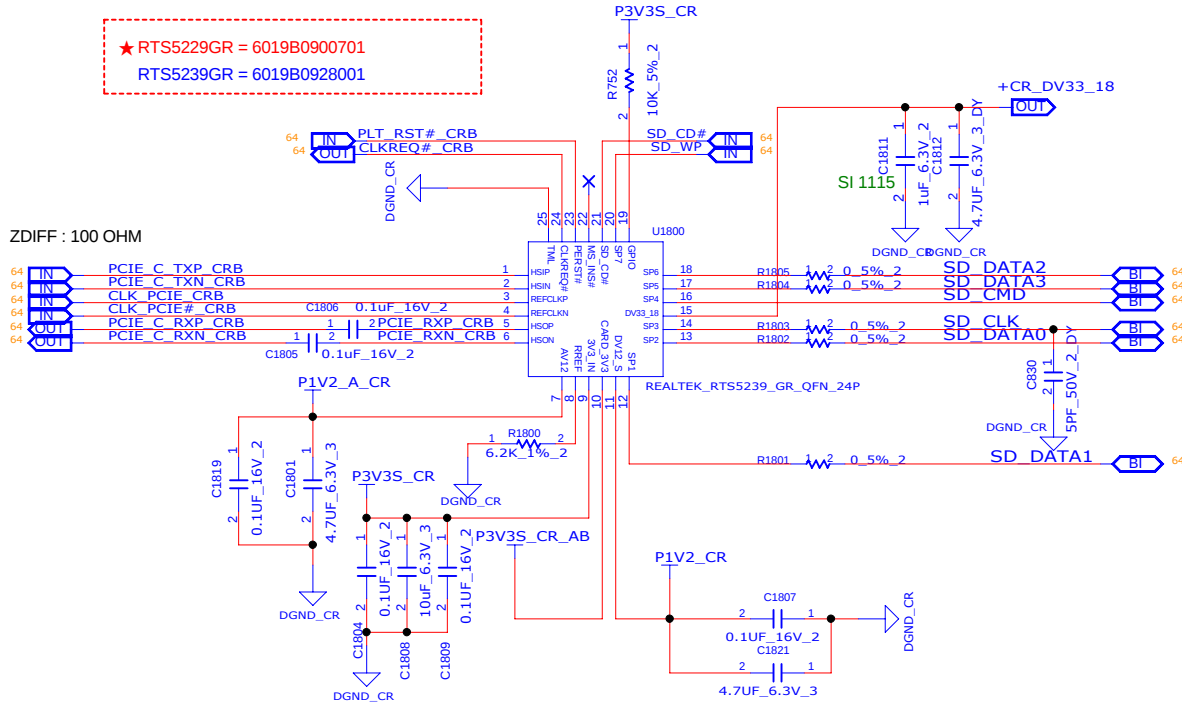
VENDER	DENSITY	VENDER PN	IEC PN
SAMSUNG	32MX32	K4G10325FC-HC04	6019B0899201
HYNIX	32MX32	H5GQ1H24BFR-T2C	6019B0866701
SAMSUNG	64MX32	K4G20325FC-HC04	6019B0842201
HYNIX	64MX32	H5GQ2H24MFR-T2C	6019B0843001



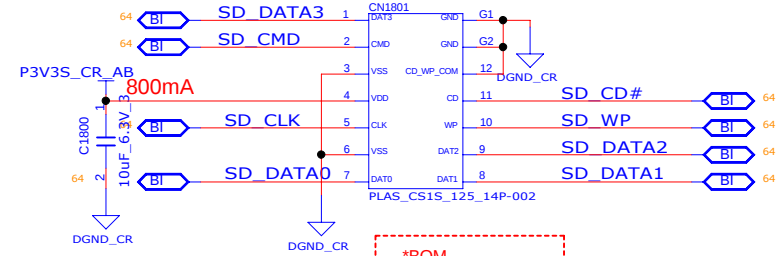


CARDREADER BOARD

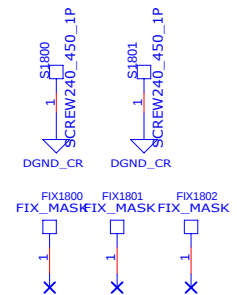
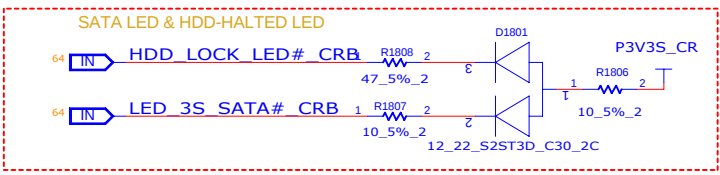
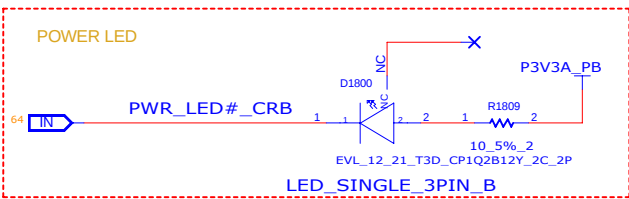
★ RTS5229GR = 6019B0900701
RTS5239GR = 6019B0928001



CARD READER CONN



*BOM
CN1801
PN: 6026B0103603

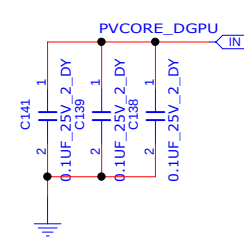
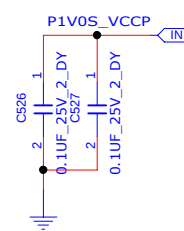
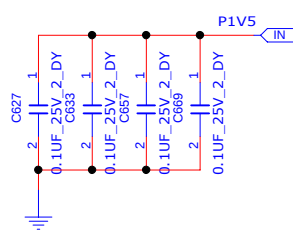
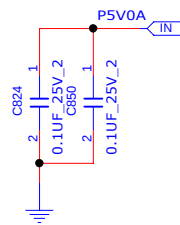
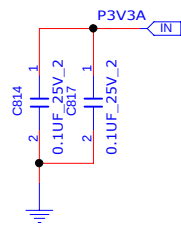


INVENTEC				
TITLE				
LV1.1 Lauren CARDREADER BOARD				
DOC NUMBER				
1310A24893-0 MTR REV AX1				
SIZE	CODE	DATE		SHEET
A3	CS	12-12-2011		64 of 67



TITLE				
LV1.1 Lauren Block Diagram				
SIZE A2	CODE CS	DOC NUMBER 1310A24893-0	MTR	REV AX1

EMI



INVENTEC

TITLE			
LV1.1_Lauren Block Diagram			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A24893-0 MTR	AX1