



1 2 3 4 5 6 7 8

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# Timex

## SI Build

2009/11/12

DATE	CHANGE NO.	REV

DRAWER	EE	DATE	POWER	DATE	<b>INVENTEC</b>			
DESIGN								
CHECK								
RESPONSIBLE								
TITLE					<b>TIMEX</b>			
SIZE =	3	VER :						
FILE NAME :	XXXX-XXXXXX-XX				SIZE	CODE	DOC. NUMBER	REV
P/N	XXXXXXXXXXXX				A3	CS	1310A23268-0-MTR	X01
					SHEET	1	OF	51

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- 08- +V1.1A
- 09- +V1.5 & +V1.8S
- 10- +VDD\_CORE & VDDNB\_CORE
- 11- +VCC\_NB & CPU\_DDR
- 12- +V3S, +V5S, +V1.5S, +V1.1S
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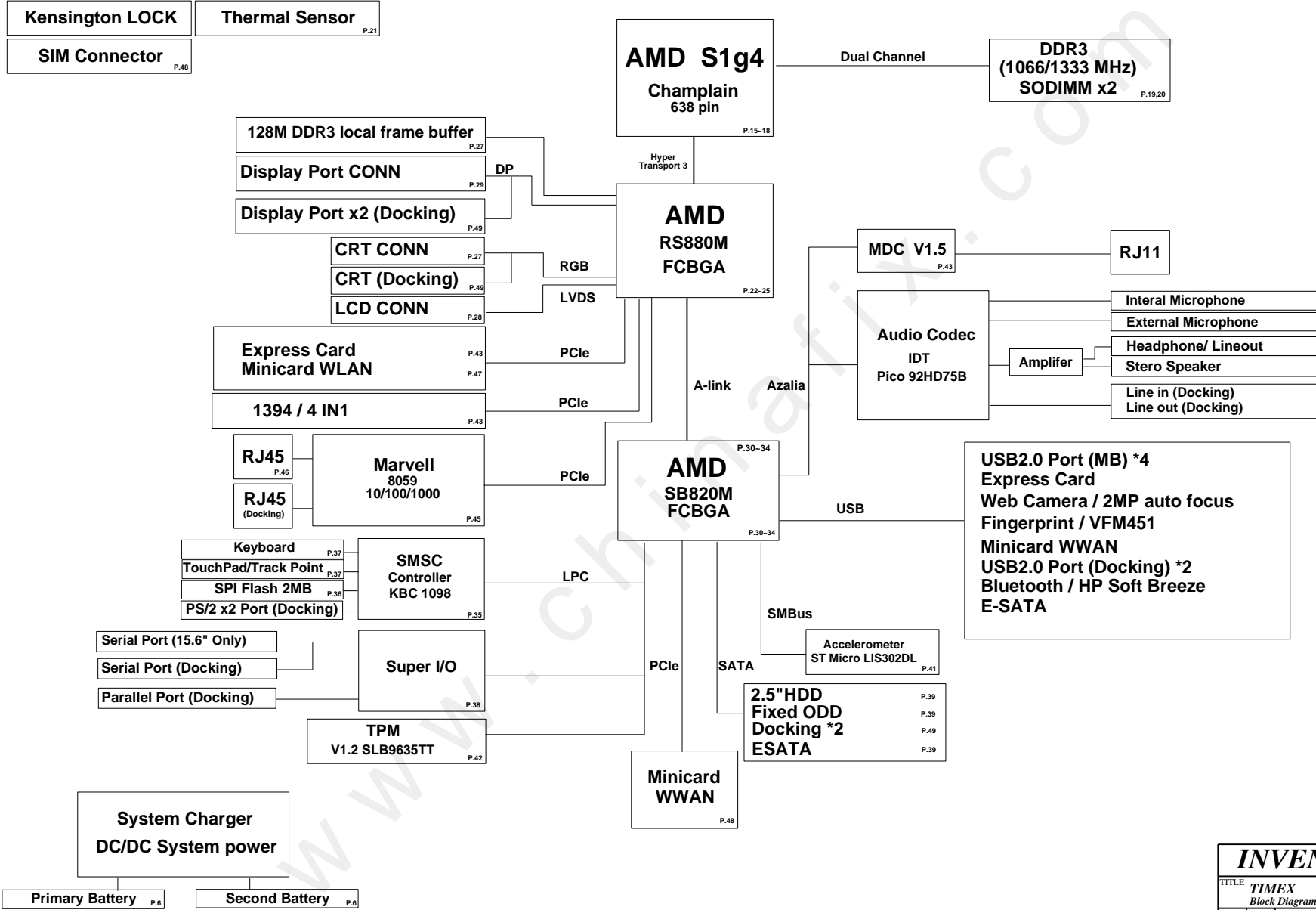
**PAGE**

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- 45- LAN
- 46- RJ45 CONN
- 47- WLAN CONN
- 48- WWAN CONN , SIM CONN
- 49- DOCK
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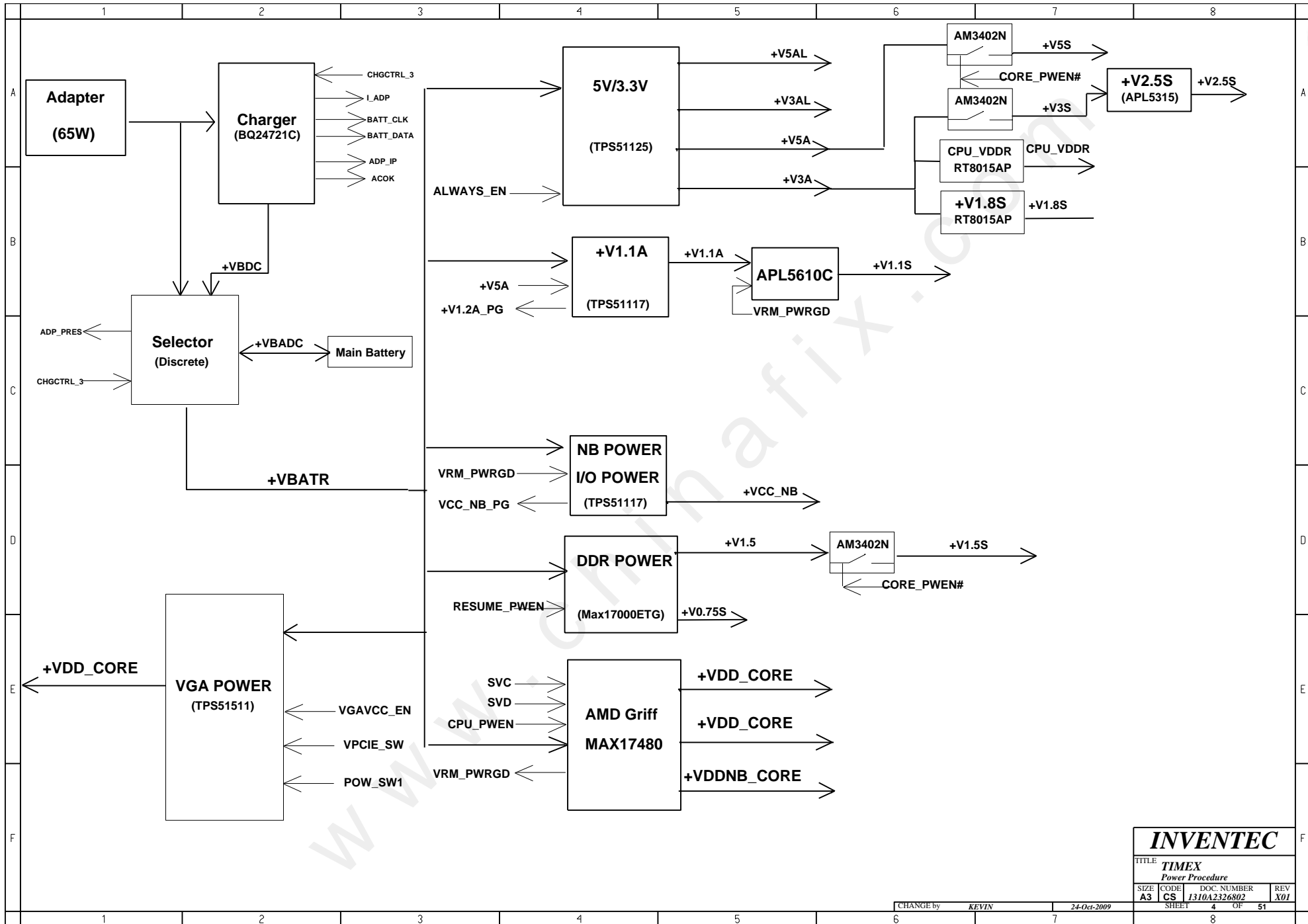
**INVENTEC**

TITLE <b>TIMEX</b>			
Index			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
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# Inventec Confidential



<b>INVENTEC</b>			
TITLE <i>TIMEX</i>			
Block Diagram			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
CHANGE by KEVIN			29-Oct-2009
SHEET 3			OF 51



### INVENTEC

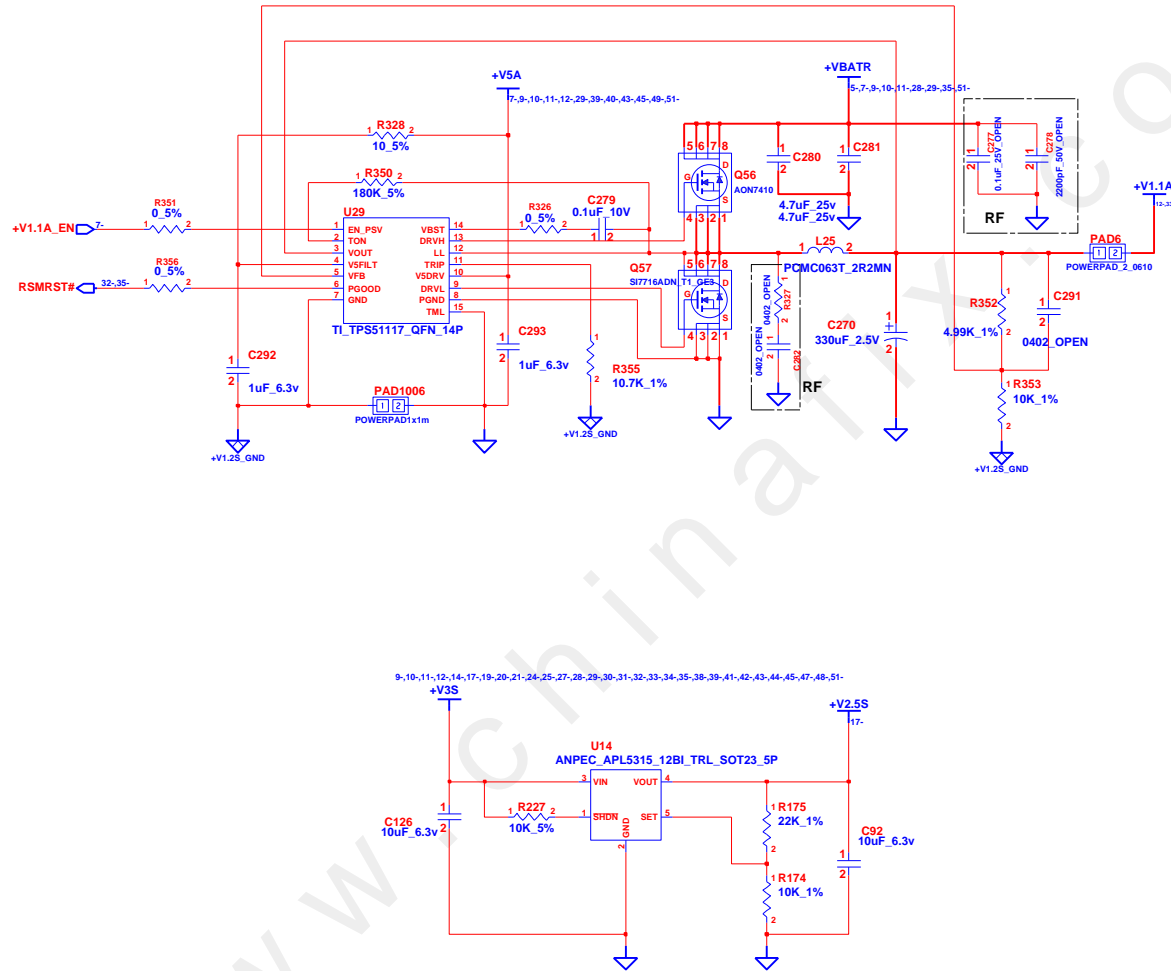
TITLE			
TIMEX			
Power Procedure			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
SHEET		OF	
4		51	

CHANGE by KEVIN 24-Oct-2009









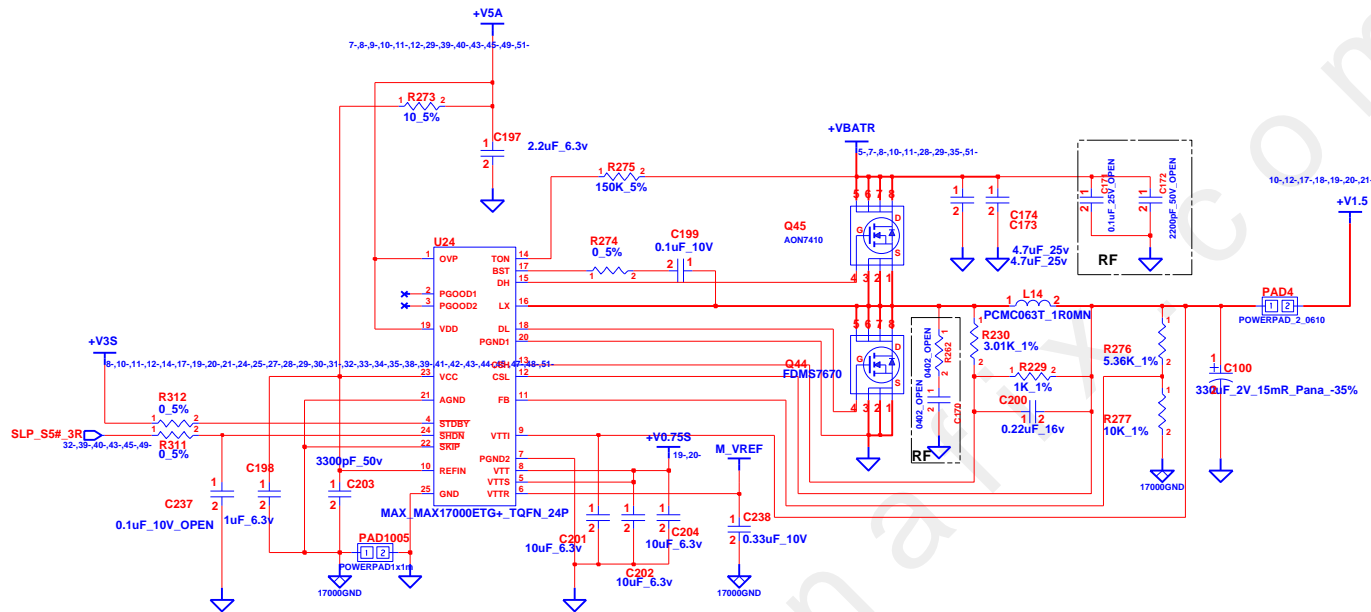
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TITLE			
TIMEX			
+V1.2A & VCC_NB			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2326802	X01

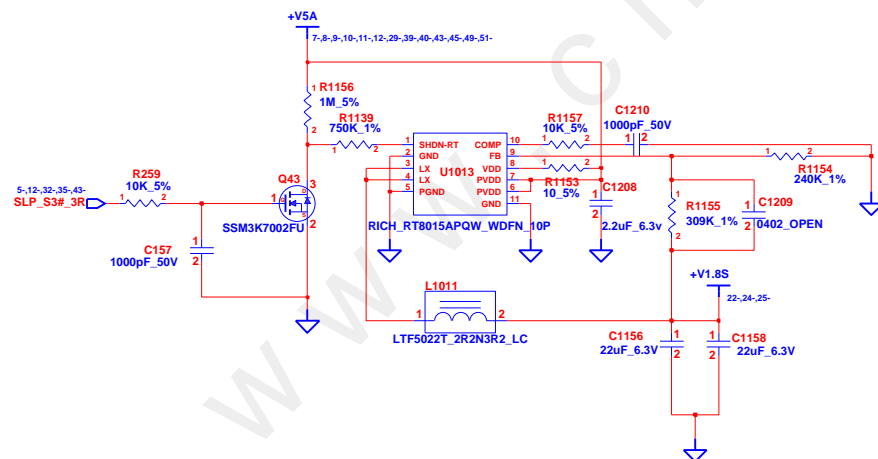
CHANGE by KEVIN 24-Oct-2009

SHEET 8 OF 51





**NOTE: DDR3 REGULATOR**

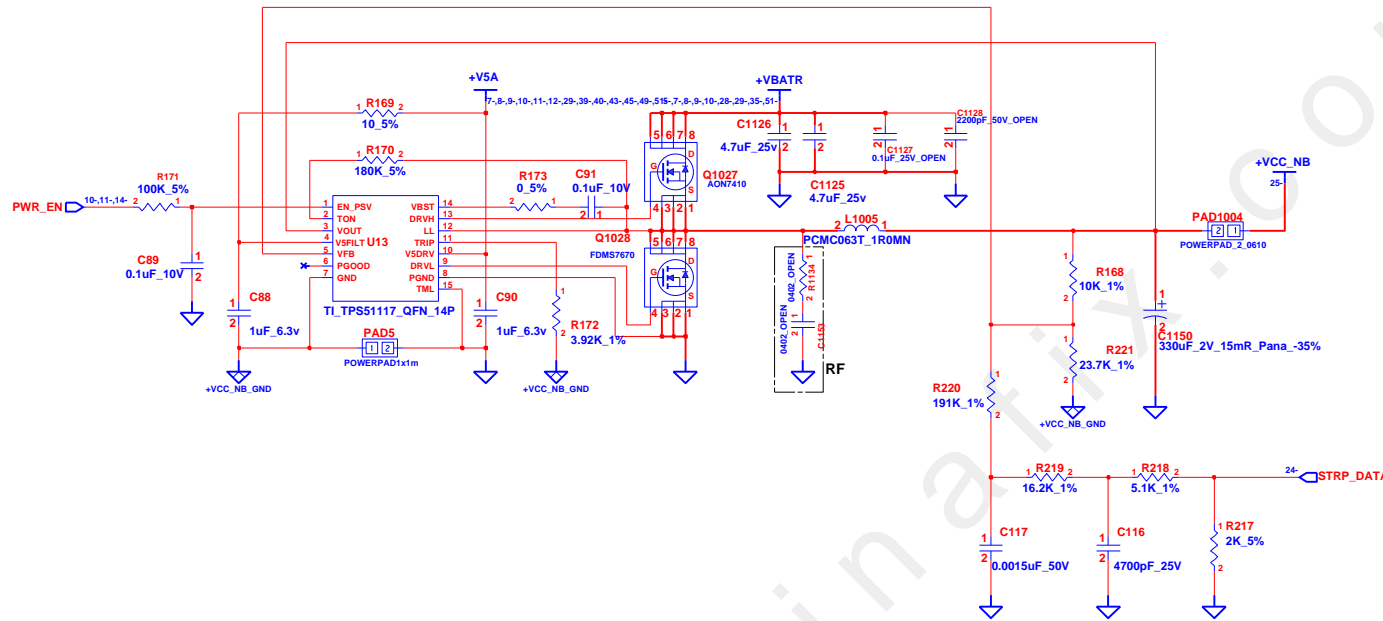


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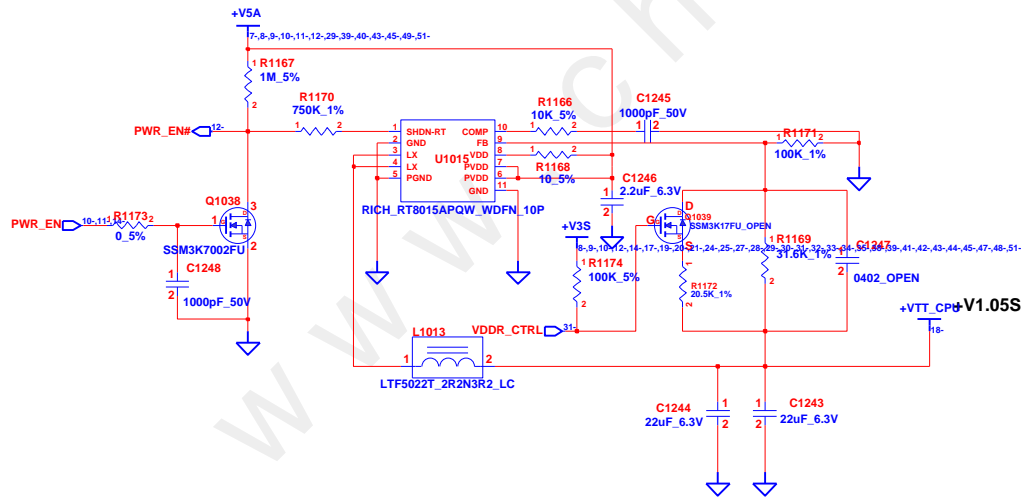
TITLE			
TIMEX			
DDR3 POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A2326802	X01
SHEET		9	OF 51

CHANGE by KEVIN 24-Oct-2009





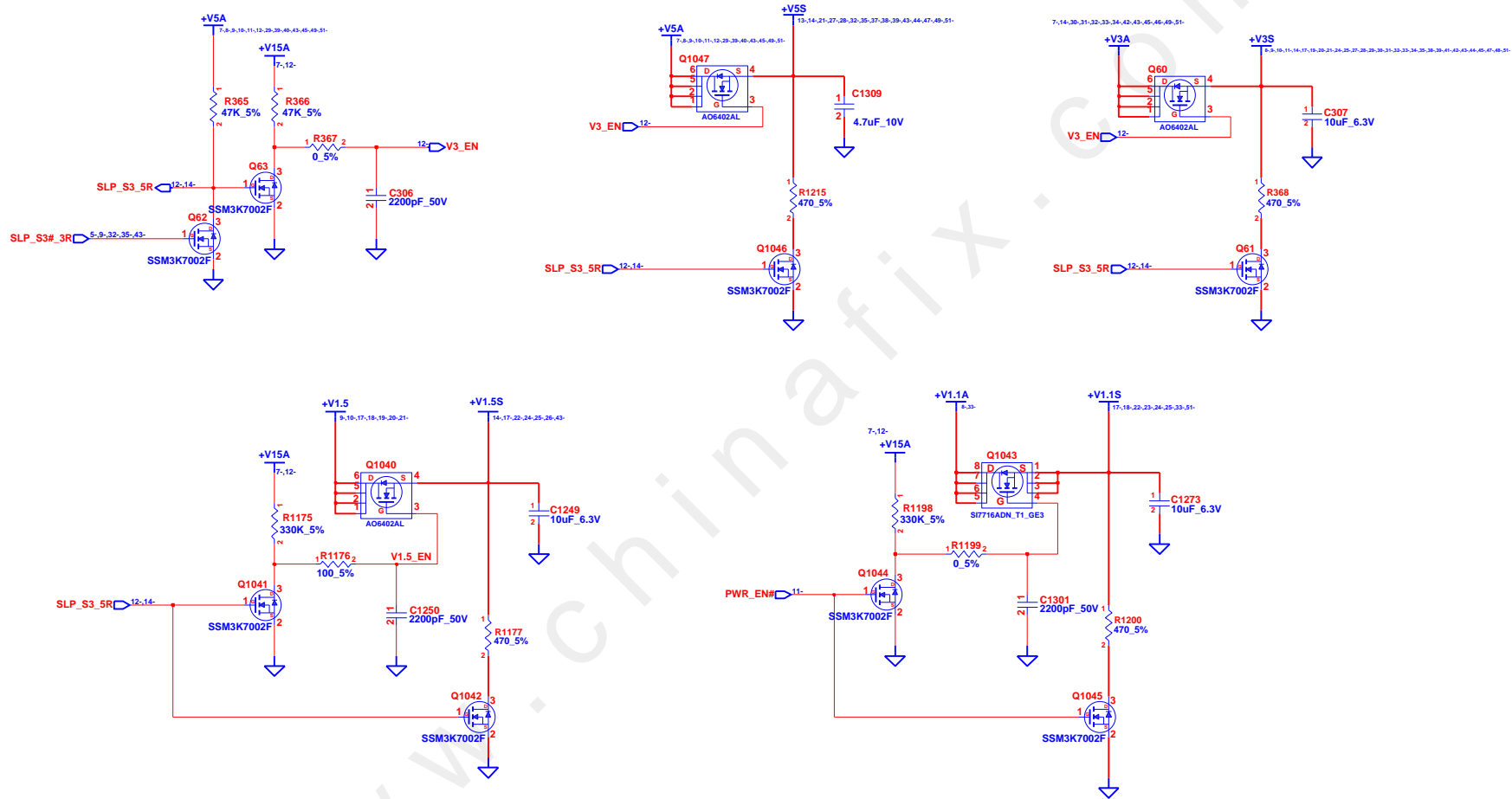
STRP_DATA	VCC_NB
0	1.1
1	0.95



0.9_EN	CPU_VDDR
1	1.05
0	0.9

**INVENTEC**  
 TITLE: **TIMEX**  
 SIZE: **A3** CODE: **CS** DOC. NUMBER: **1310A2326802** REV: **X01**  
 SHEET: **11** OF: **51**

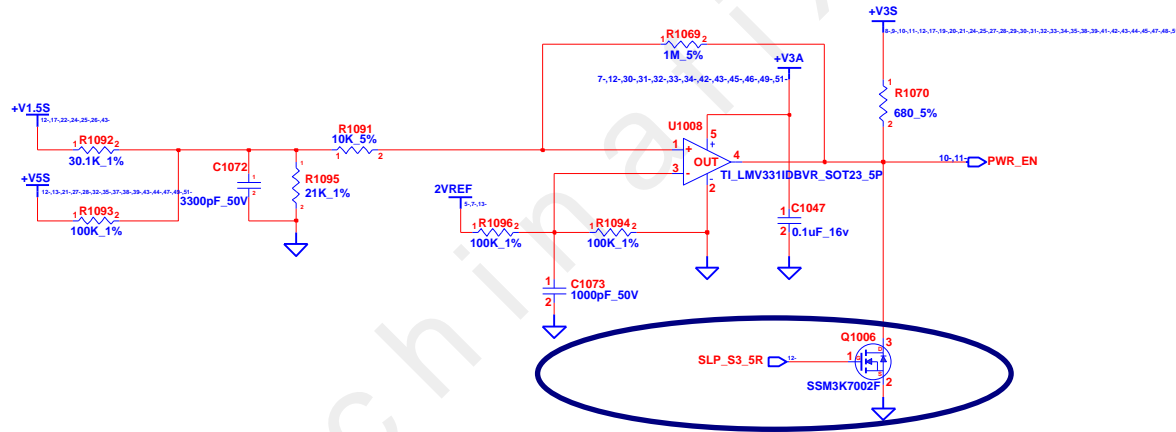
CHANGE by: **KEVIN** 24-Oct-2009



<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
+V5S & +V3.3S & +V1.5S & +V1.2S			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A2326802	X01
CHANGE by		SHEET	
KEVIN		12 OF 51	

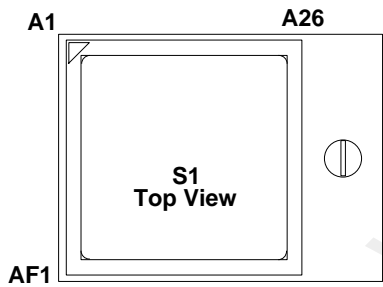
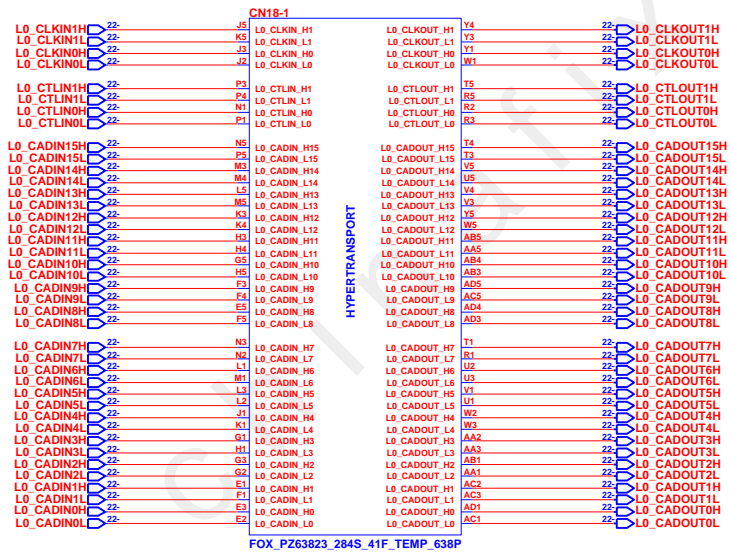
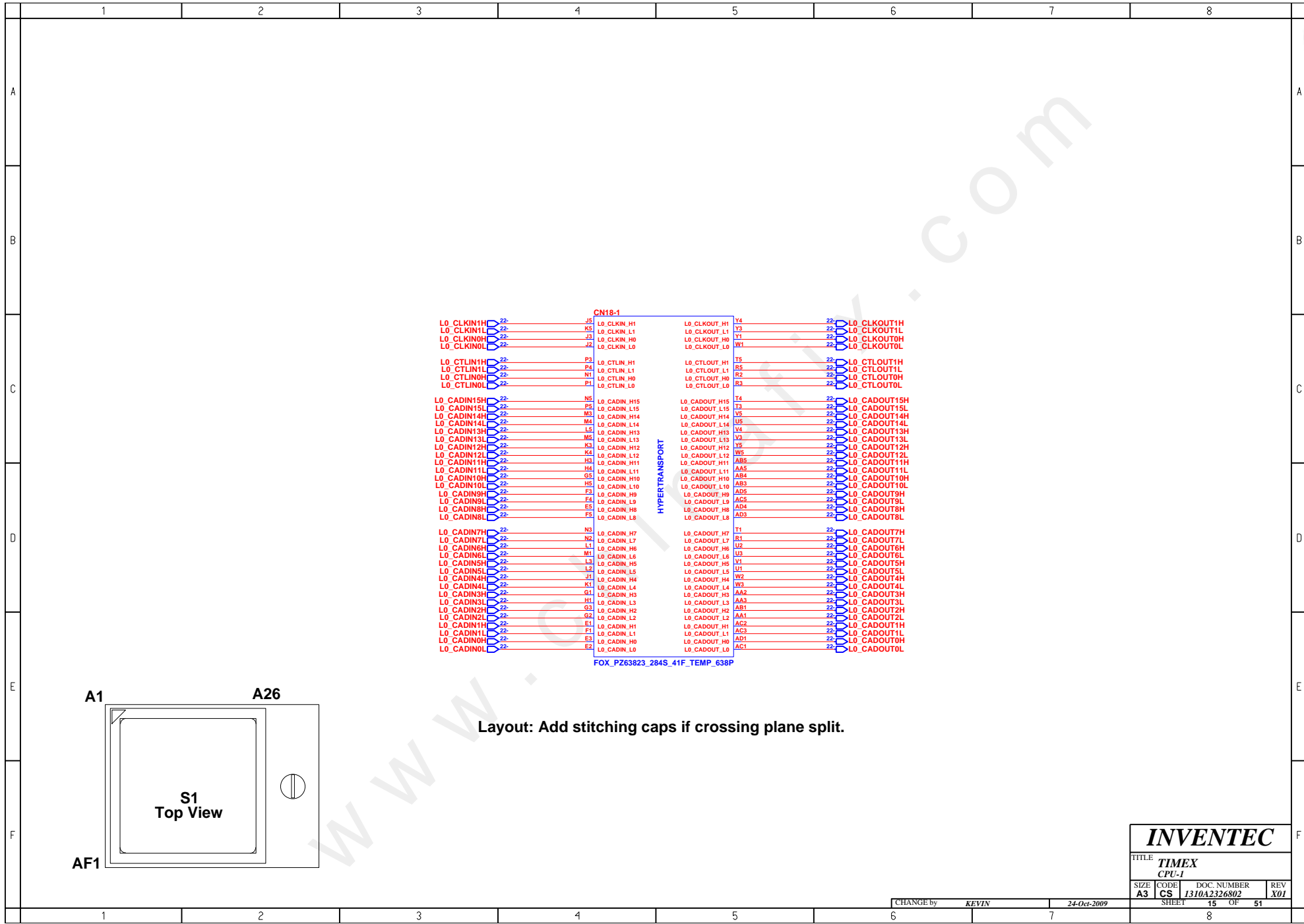
CHANGE by KEVIN 24-Oct-2009





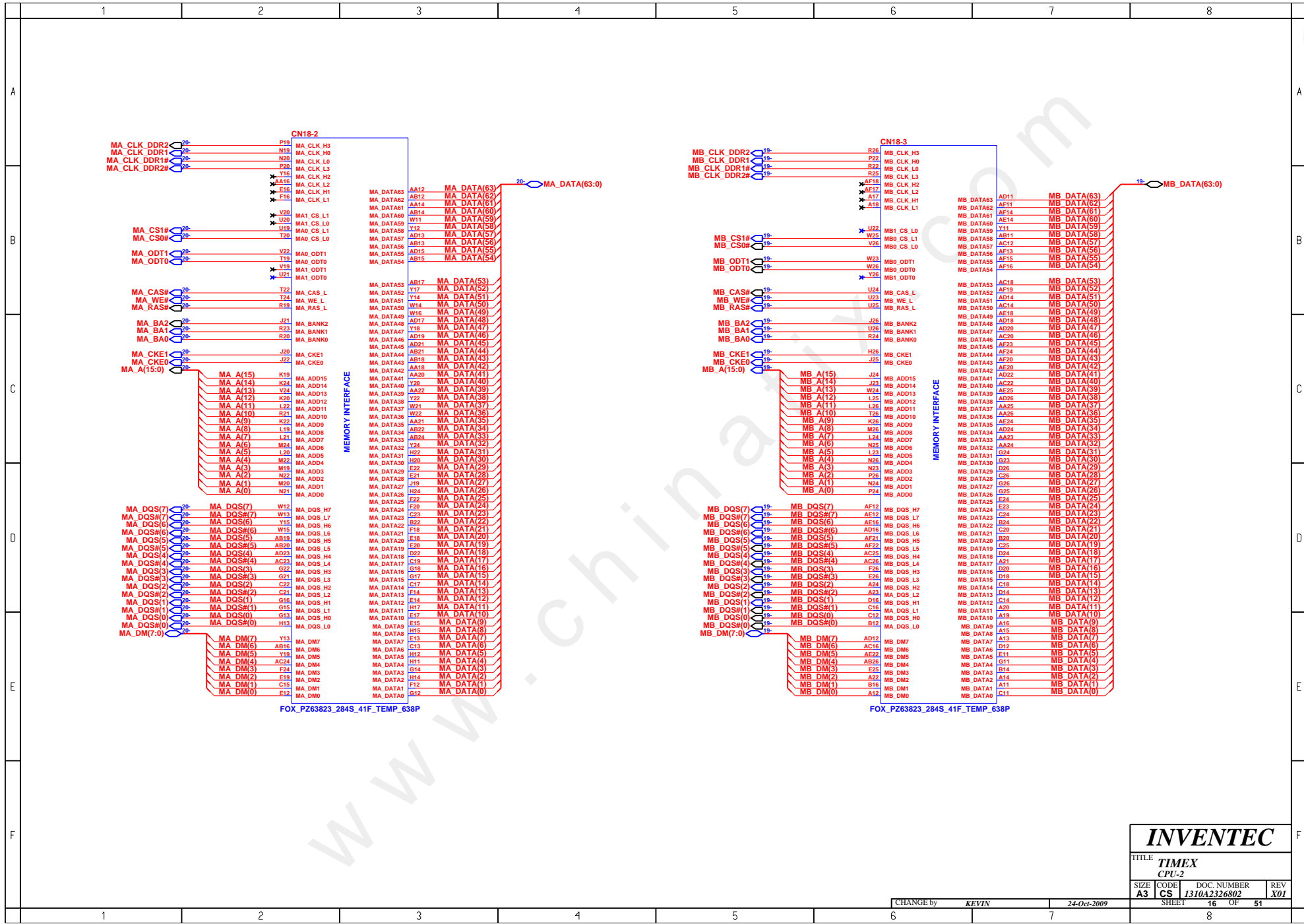
<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
+V5S & +V3.3S & +V1.5S & +V1.2S			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
CHANGE by		SHEET	OF
KEVIN		14	51

24-Oct-2009



Layout: Add stitching caps if crossing plane split.

<b>INVENTEC</b>			
TITLE <b>TIMEX CPU-1</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>15</b>		OF <b>51</b>	



FOX\_PZ63823\_284S\_41F\_TEMP\_638P

FOX\_PZ63823\_284S\_41F\_TEMP\_638P

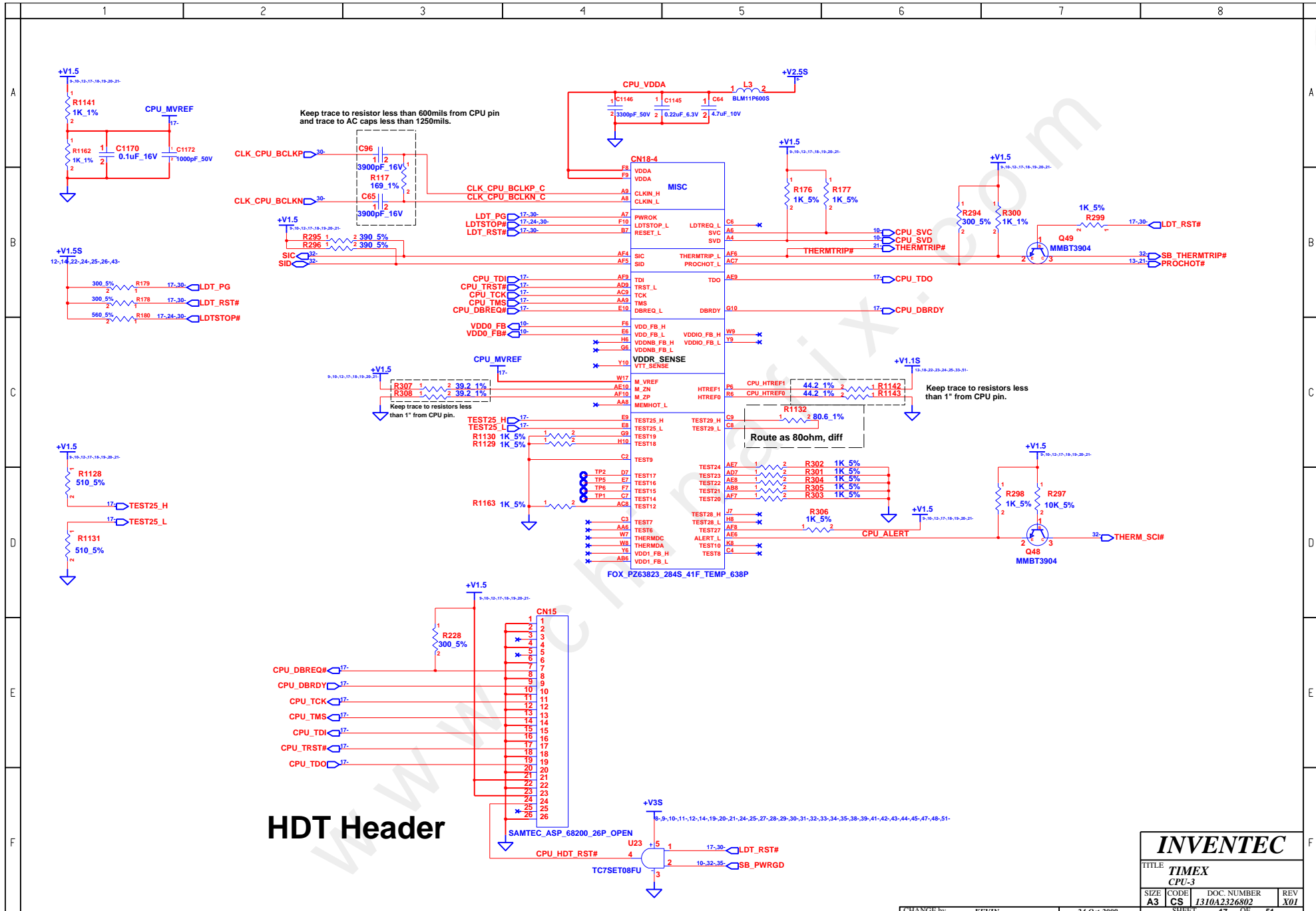
# INVENTEC

TITLE  
TIMEX  
CPU-2

SIZE A3	CODE CS	DOC. NUMBER 1310A2326802	REV X01
SHEET		16	OF 51

CHANGE by KEVIN 24-Oct-2009

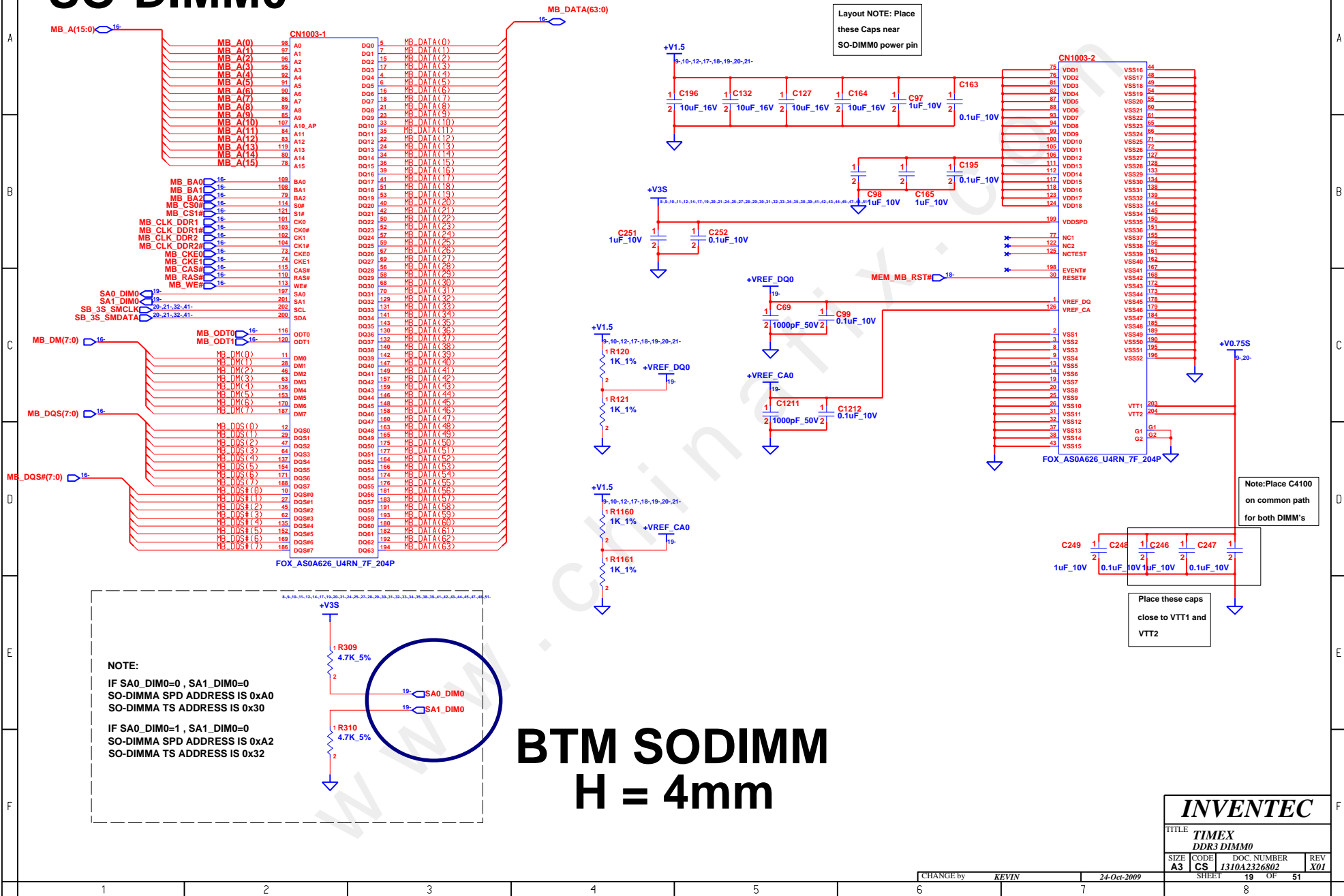




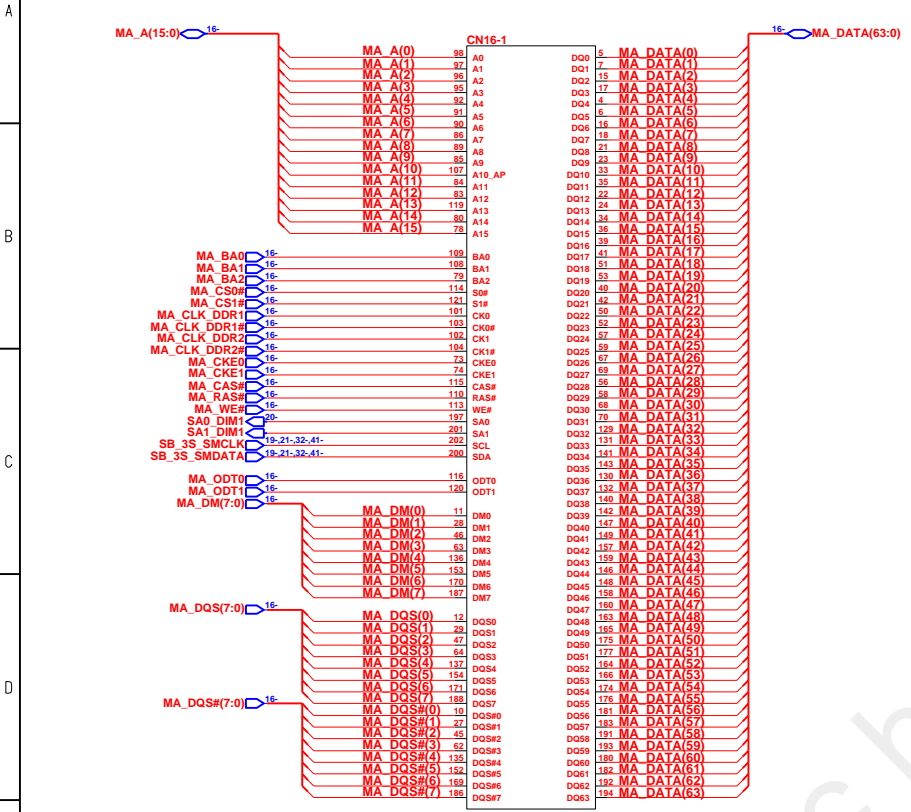
<b>INVENTEC</b>			
TITLE <b>TIMEX CPU-3</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>17</b>		OF <b>51</b>	



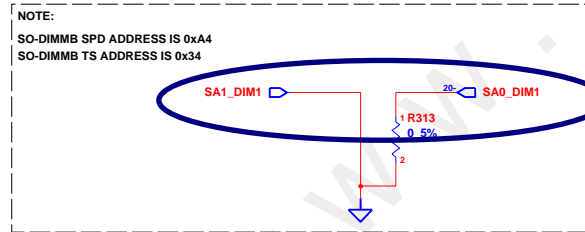
# SO-DIMM0



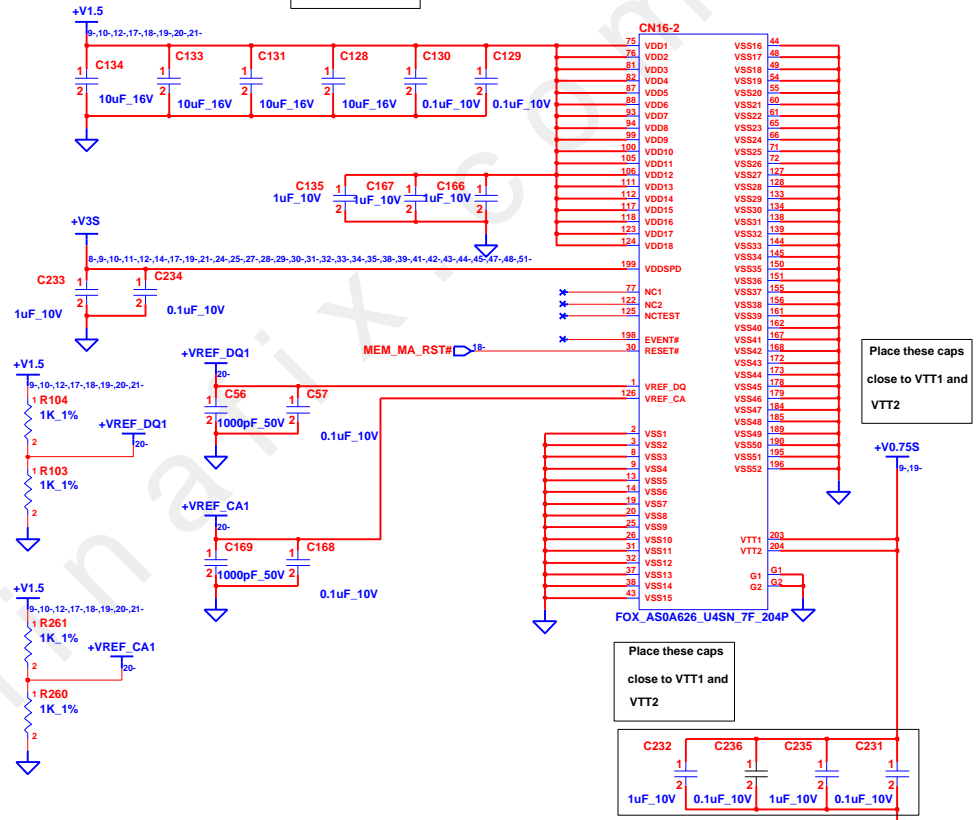
# SO-DIMM1



FOX\_AS0A626\_U4SN\_7F\_204P



Layout Note: Place these Caps near SO-DIMM1 power pin



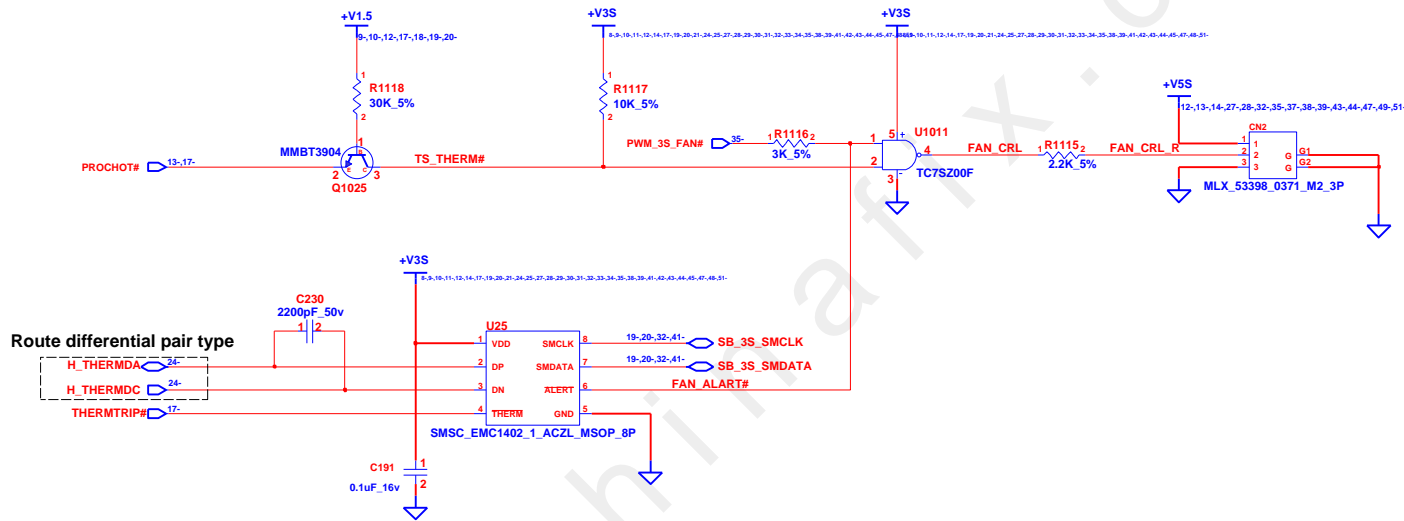
## TOP SODIMM

### H = 8mm

**INVENTEC**

TITLE			
TIMEX			
DDR3 DIMM1			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2326802	X01
SHEET		20	OF 51

CHANGE by KEVIN 24-Oct-2009

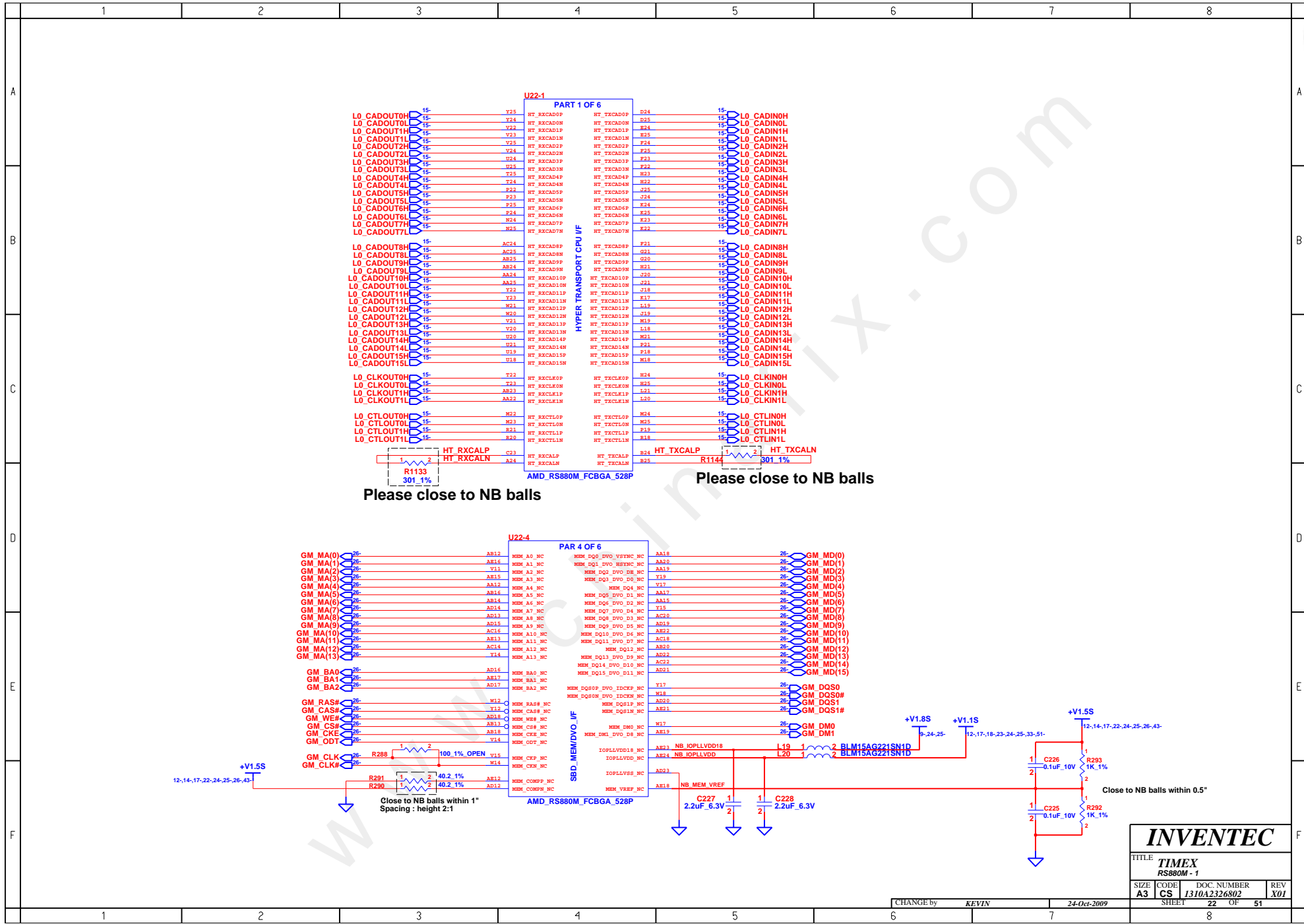


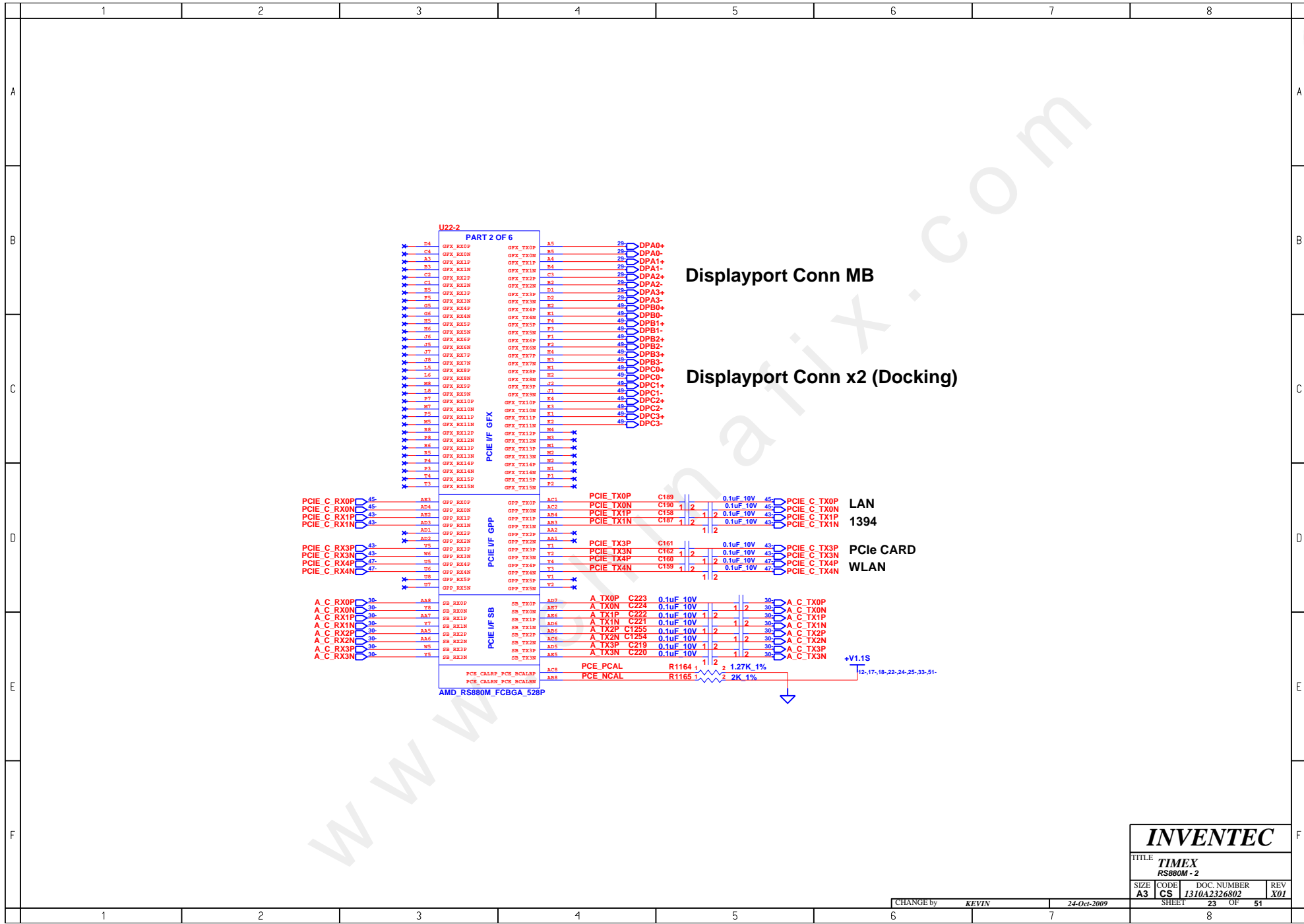
LAYOUT Note: Put the thermal sensor close to north bridge.

### INVENTEC

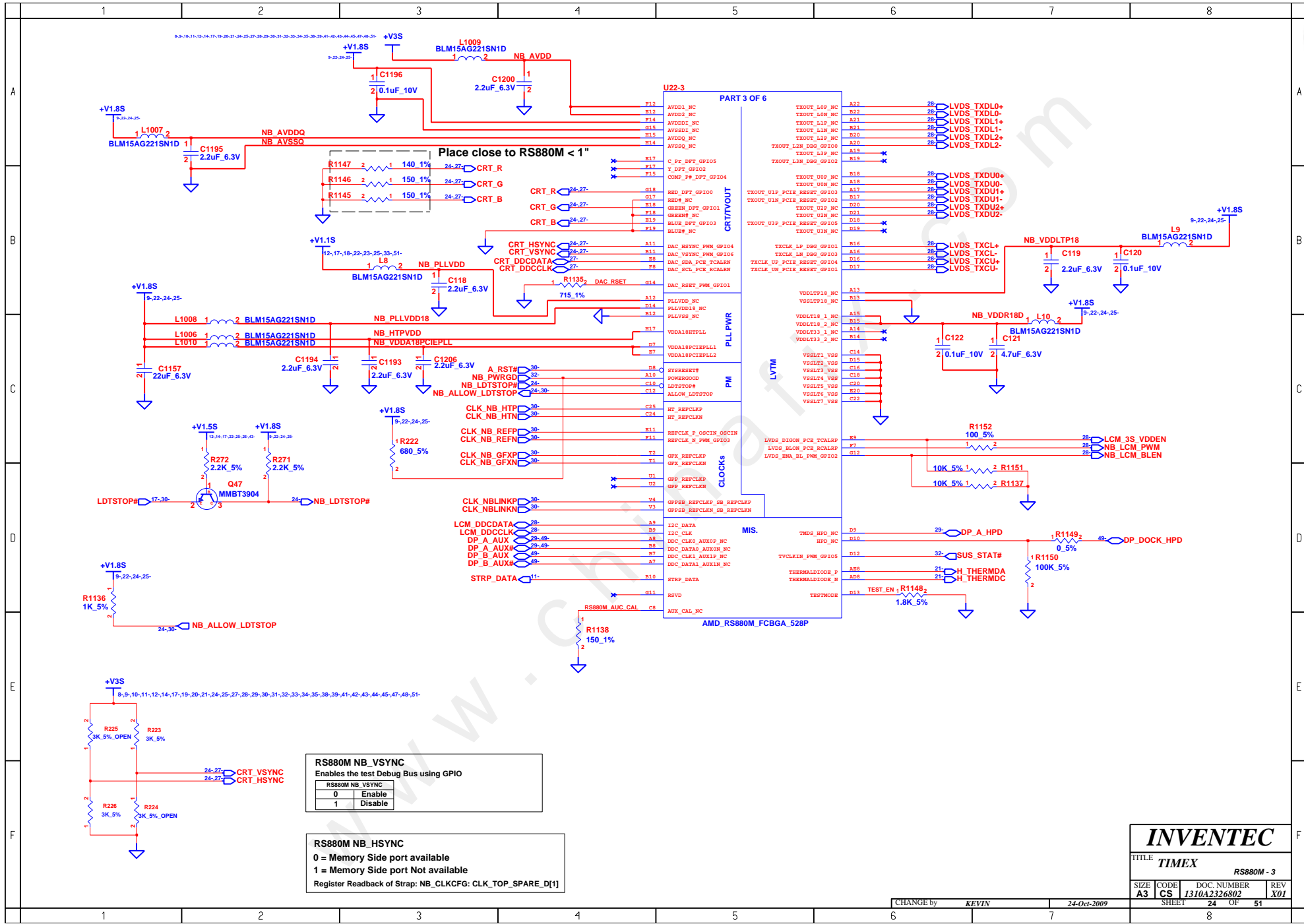
TITLE			
TIMEX			
FAN & THERMAL			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
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CHANGE by KEVIN 24-Oct-2009





<b>INVENTEC</b>			
TITLE <b>TIMEX</b> RS880M - 2			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>23</b>		OF <b>51</b>	



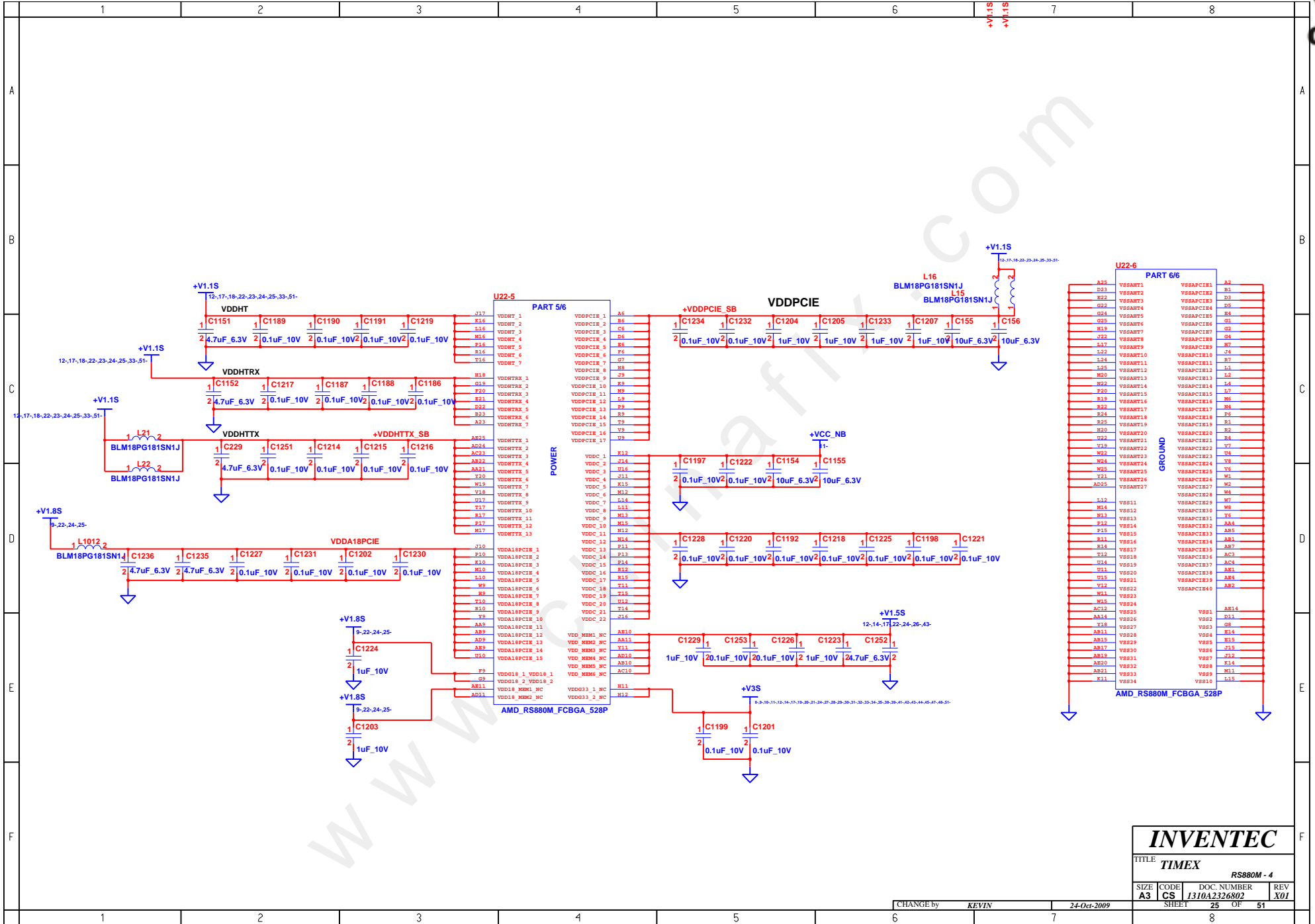
**RS880M NB\_VSYNC**  
Enables the test Debug Bus using GPIO

RS880M NB_VSYNC	
0	Enable
1	Disable

**RS880M NB\_HSYNC**  
0 = Memory Side port available  
1 = Memory Side port Not available  
Register Readback of Strap: NB\_CLKCFG: CLK\_TOP\_SPARE\_D[1]

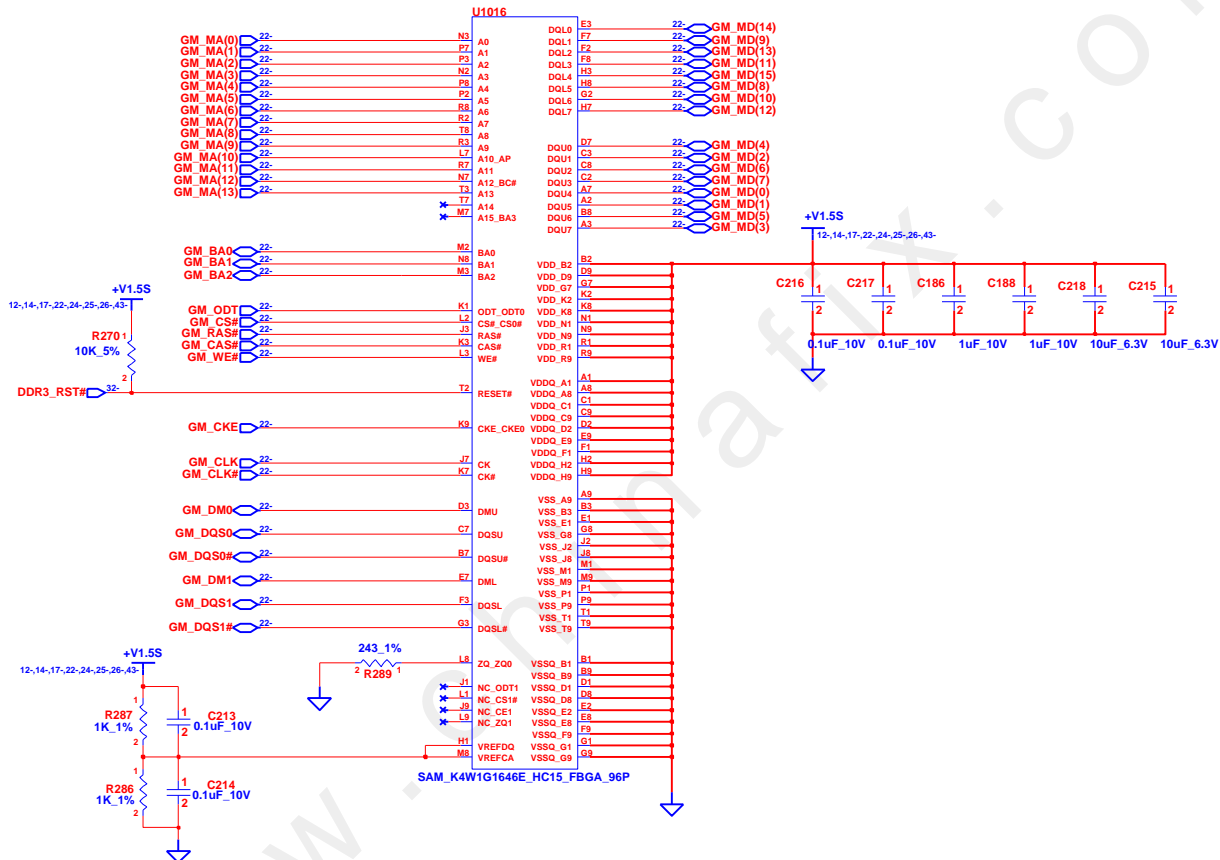
<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
		RS880M - 3	
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
CHANGE by		24-Oct-2009	
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<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
RS880M - 4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
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CHANGE by KEVIN 24-Oct-2009

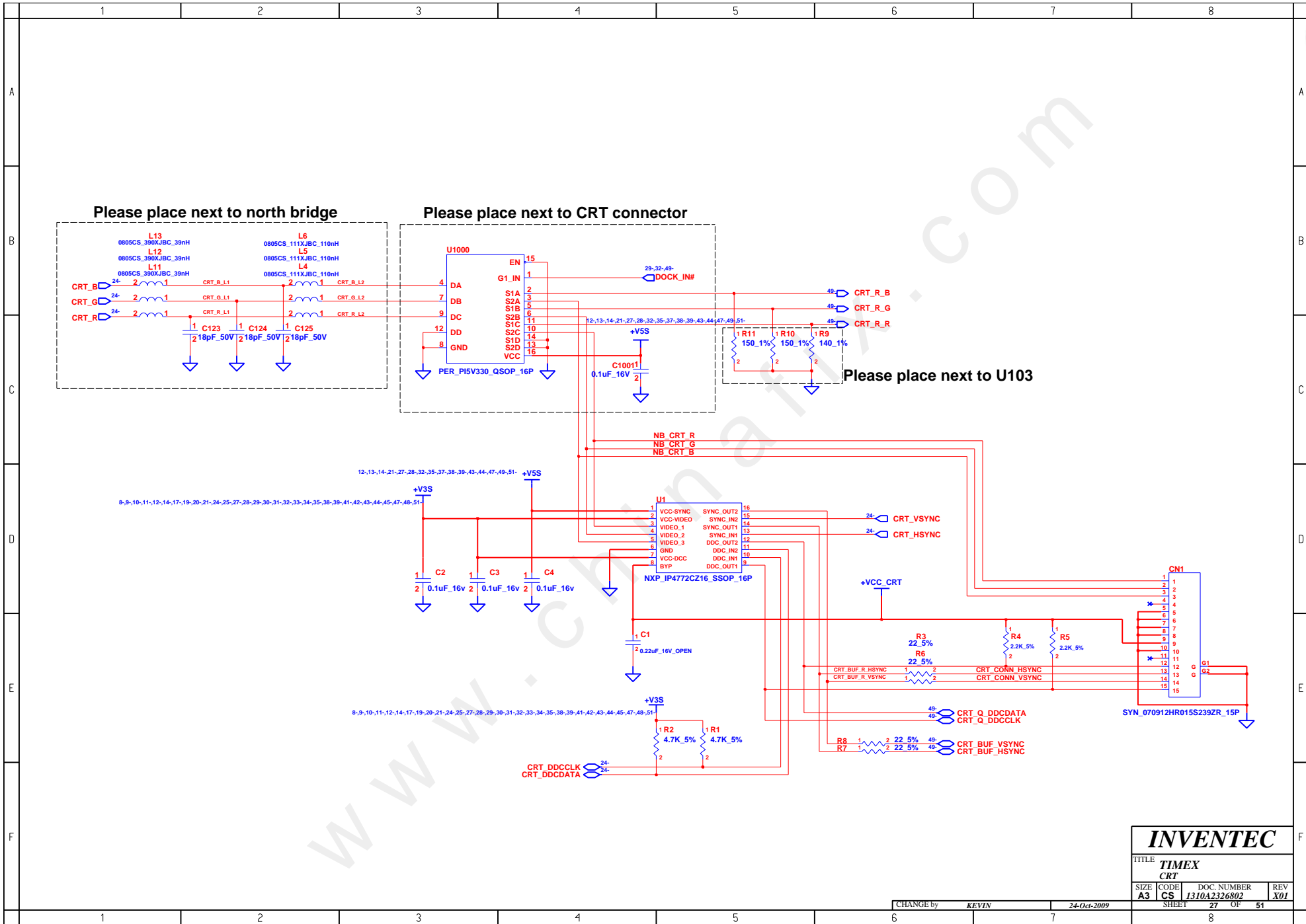


# DDR III side port memory

**INVENTEC**

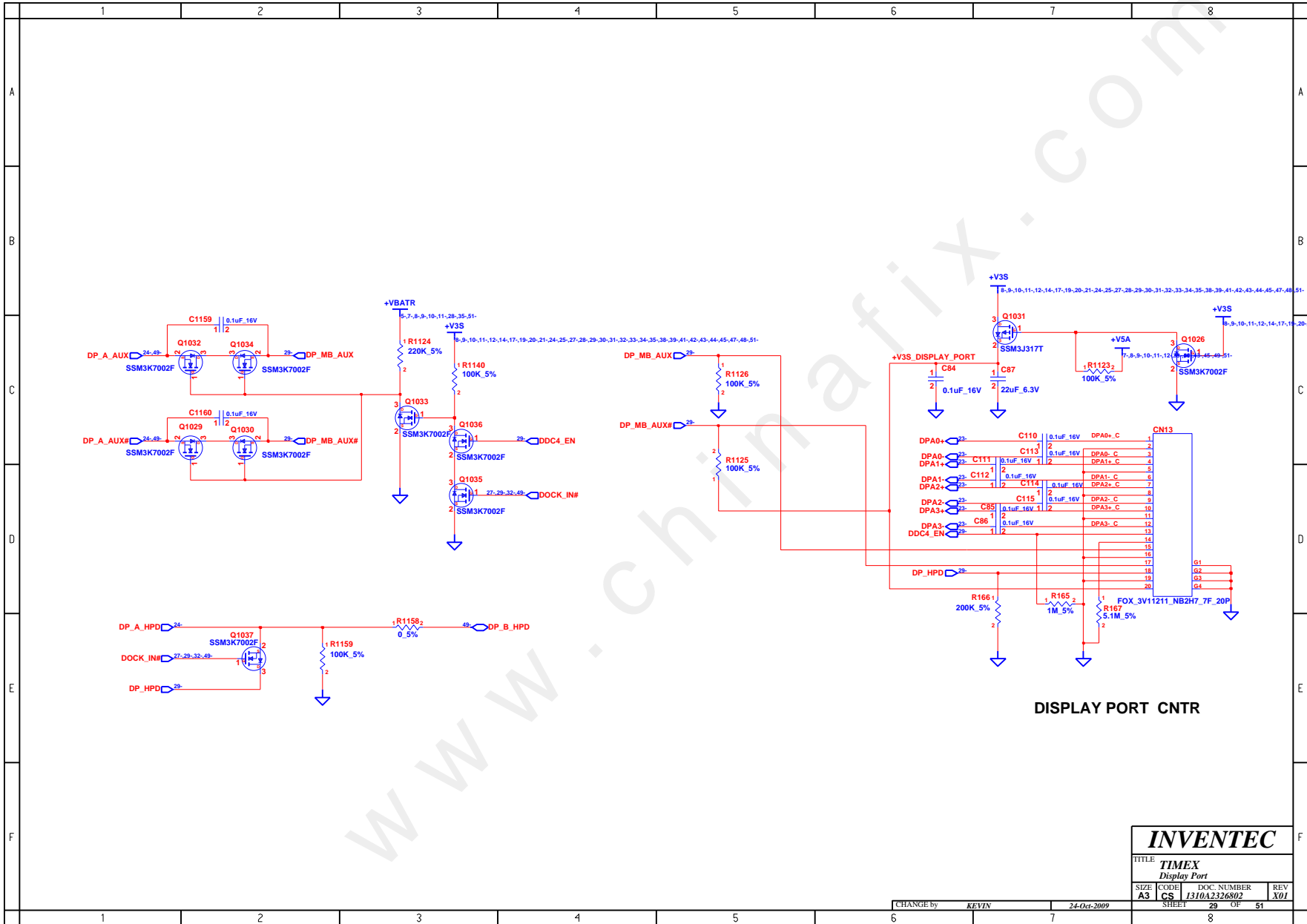
TITLE			
TIMEX			
SIDE-PORT			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
CHANGE by		SHEET	OF
KEVIN		26	51

24-Oct-2009



<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
CRT			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>27</b>		OF <b>51</b>	

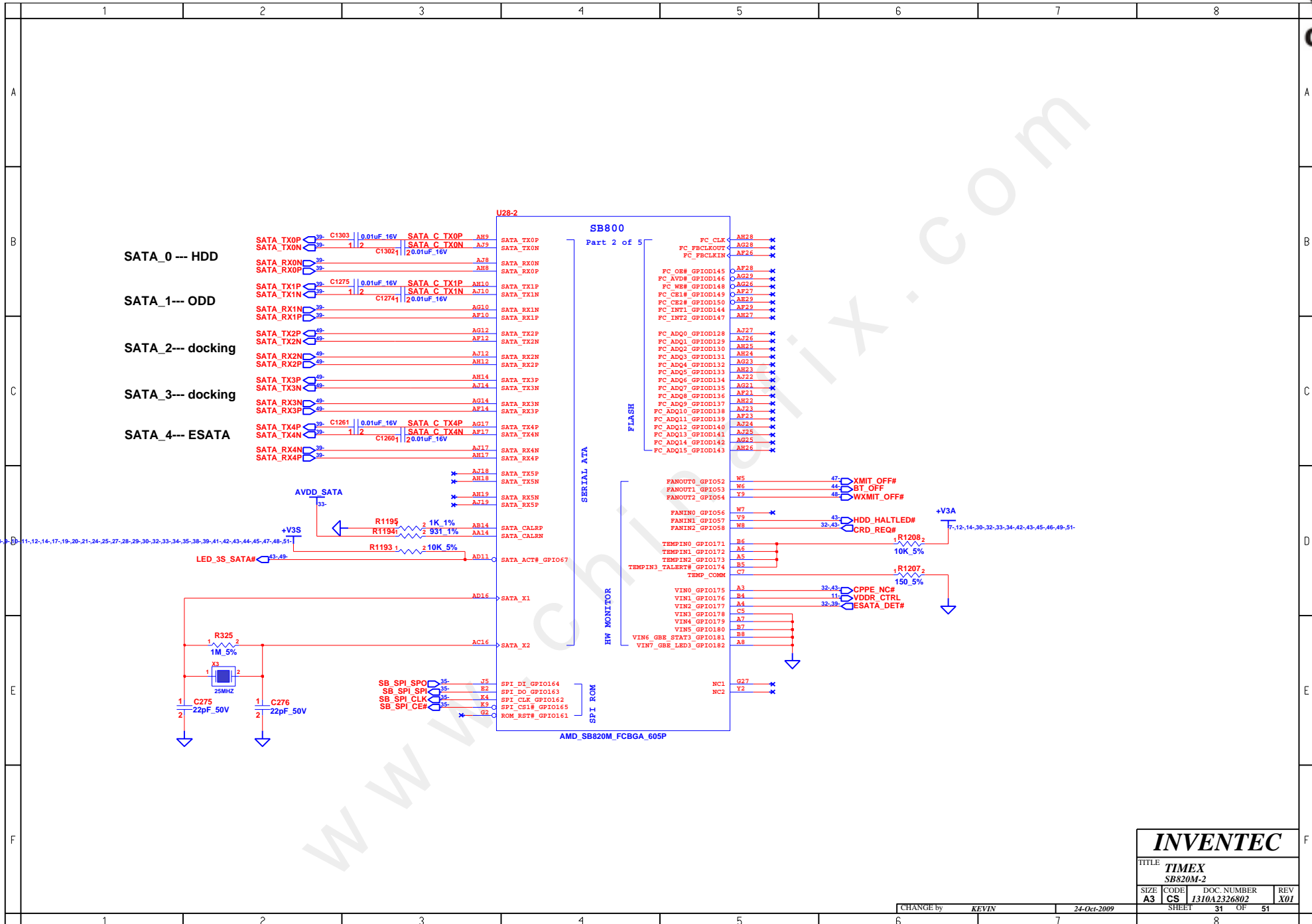




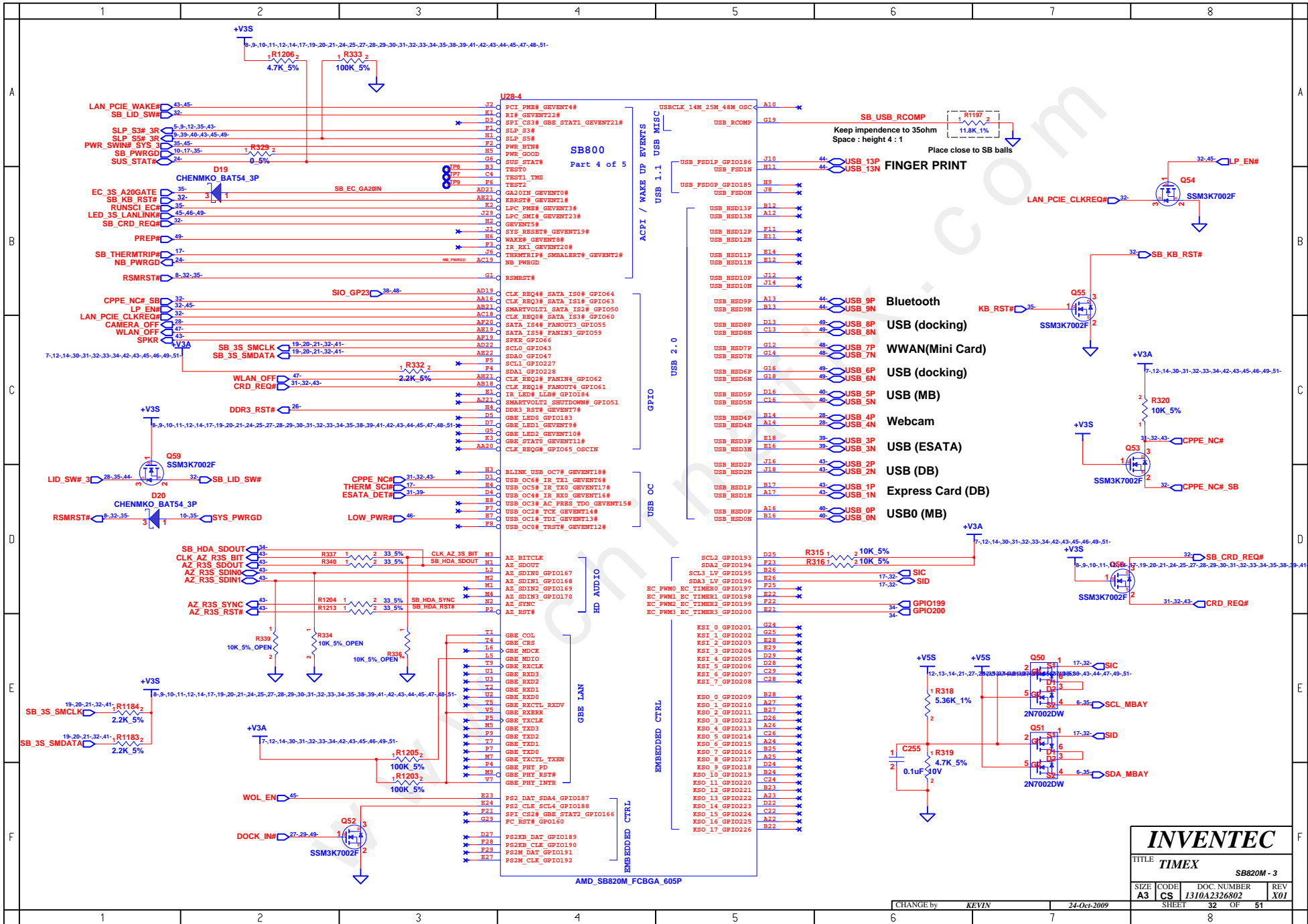
**DISPLAY PORT CNTR**

<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
Display Port			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I310A2326802</b>	REV <b>X01</b>





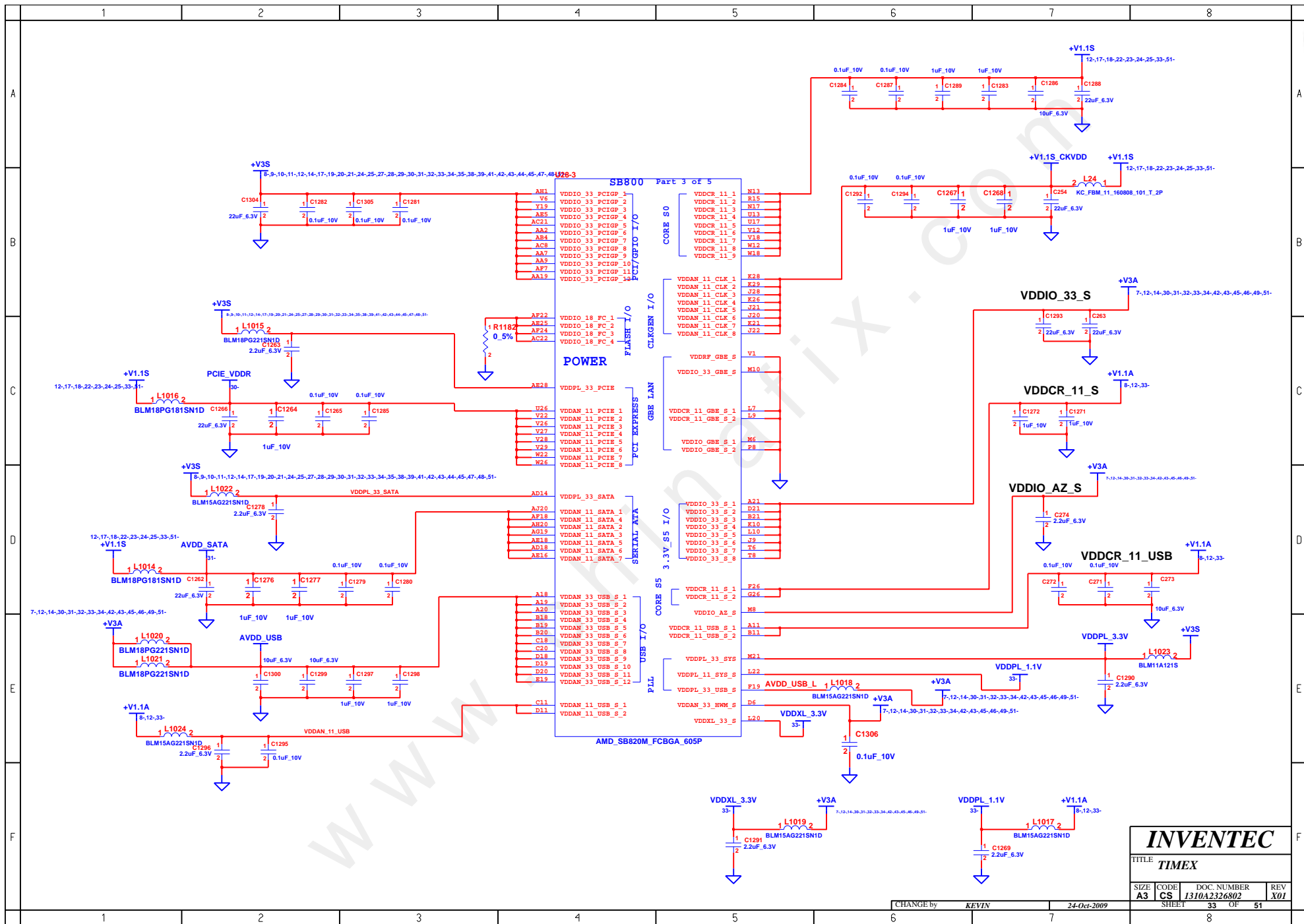
<b>INVENTEC</b>			
TITLE <b>TIMEX</b> <b>SB820M-2</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>31</b>		OF <b>51</b>	



<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
		SB820M - 3	
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
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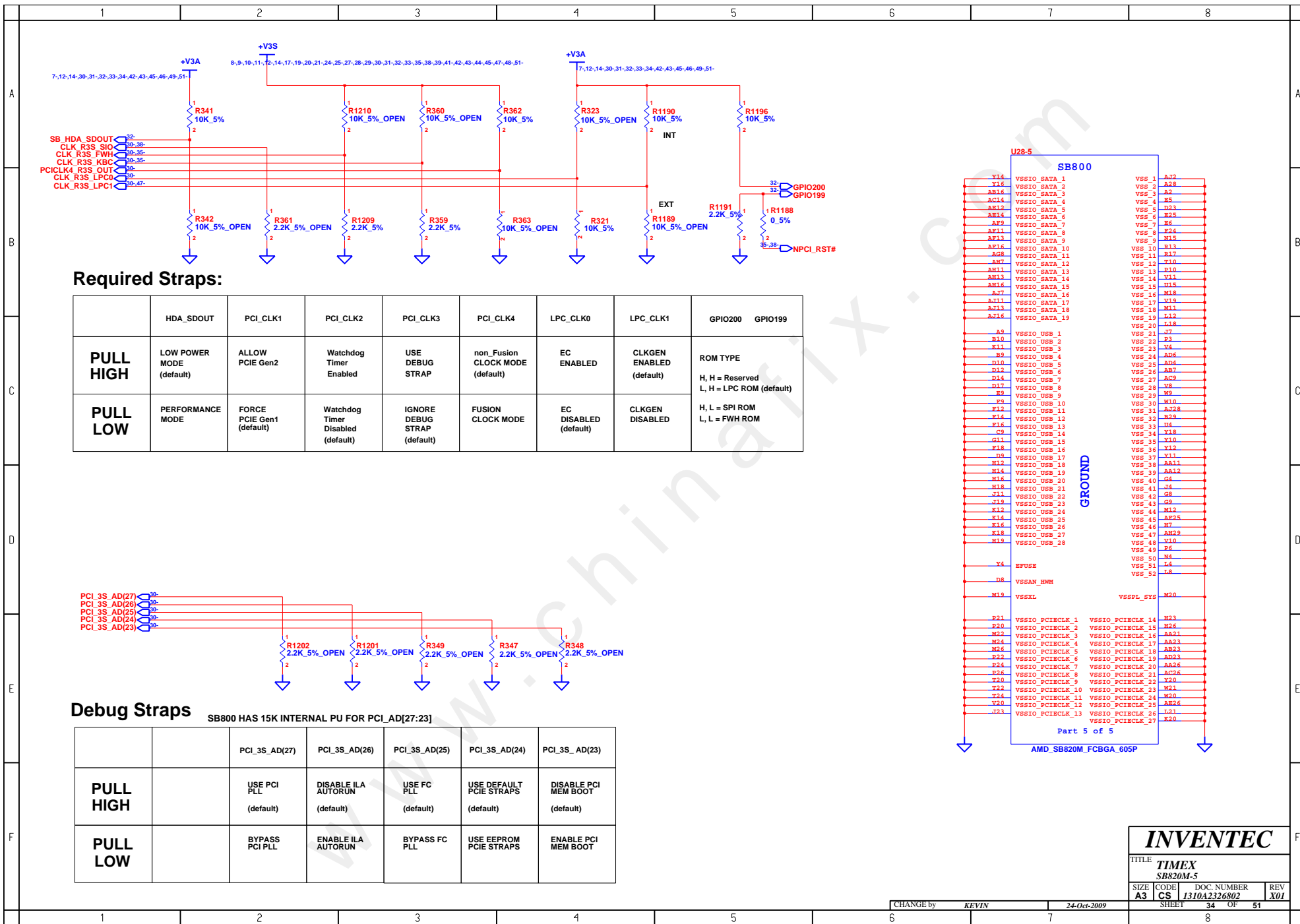
CHANGE by KEVIN 24-Oct-2009





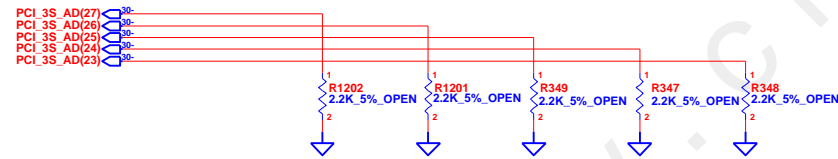
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TITLE <b>TIMEX</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
SHEET <b>33</b>		OF <b>51</b>	

CHANGE by **KEVIN** 24-Oct-2009



**Required Straps:**

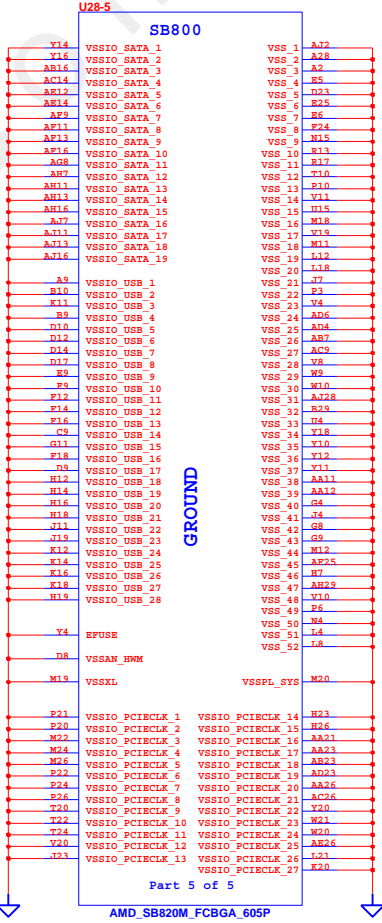
	HDA_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPC_CLK0	LPC_CLK1	GPIO200	GPIO199
<b>PULL HIGH</b>	LOW POWER MODE (default)	ALLOW PCIE Gen2	Watchdog Timer Enabled	USE DEBUG STRAP	non_Fusion CLOCK MODE (default)	EC ENABLED	CLKGEN ENABLED (default)	ROM TYPE H, H = Reserved L, H = LPC ROM (default)	
<b>PULL LOW</b>	PERFORMANCE MODE	FORCE PCIE Gen1 (default)	Watchdog Timer Disabled (default)	IGNORE DEBUG STRAP (default)	FUSION CLOCK MODE	EC DISABLED (default)	CLKGEN DISABLED	H, L = SPI ROM L, L = FW ROM	



**Debug Straps**

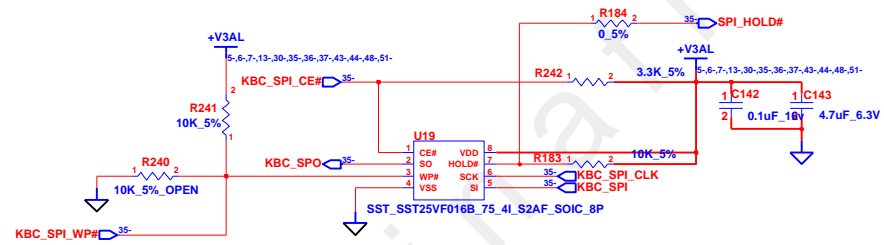
SB800 HAS 15K INTERNAL PU FOR PCI\_AD[27:23]

	PCI_3S_AD(27)	PCI_3S_AD(26)	PCI_3S_AD(25)	PCI_3S_AD(24)	PCI_3S_AD(23)
<b>PULL HIGH</b>	USE PCI PLL (default)	DISABLE ILA AUTORUN (default)	USE FC PLL (default)	USE DEFAULT PCIE STRAPS (default)	DISABLE PCI MEM BOOT (default)
<b>PULL LOW</b>	BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT



<b>INVENTEC</b>			
TITLE <b>TIMEX</b> <b>SB820M-5</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>34</b>		OF <b>51</b>	





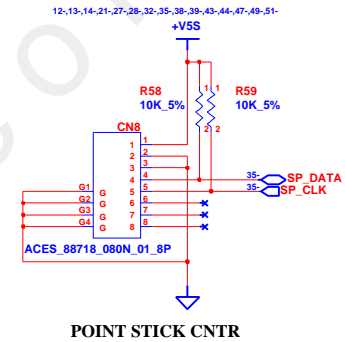
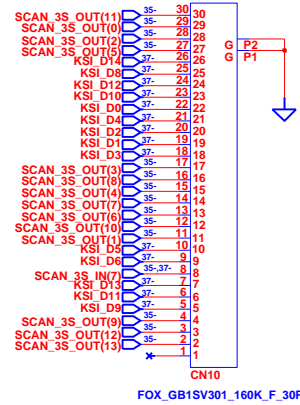
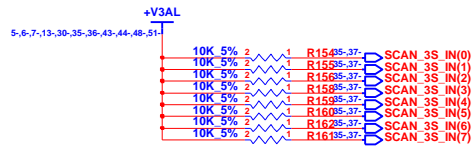
### SPI Flash

www.chinafox.com

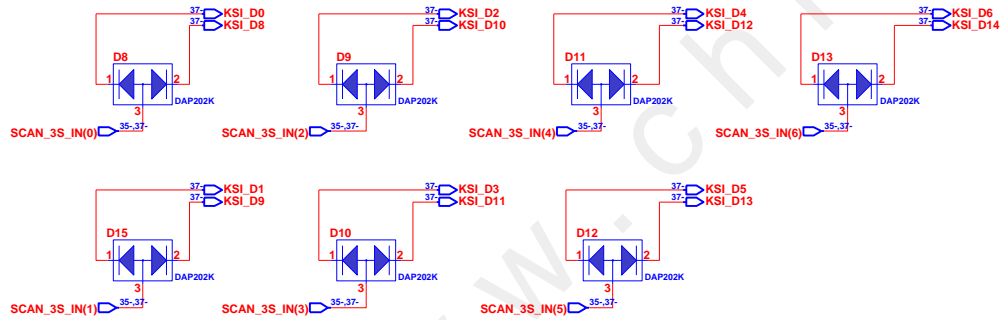
**INVENTEC**

TITLE			
TIMEX			
SPI			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
SHEET		36	OF 51

CHANGE by KEVIN 24-Oct-2009



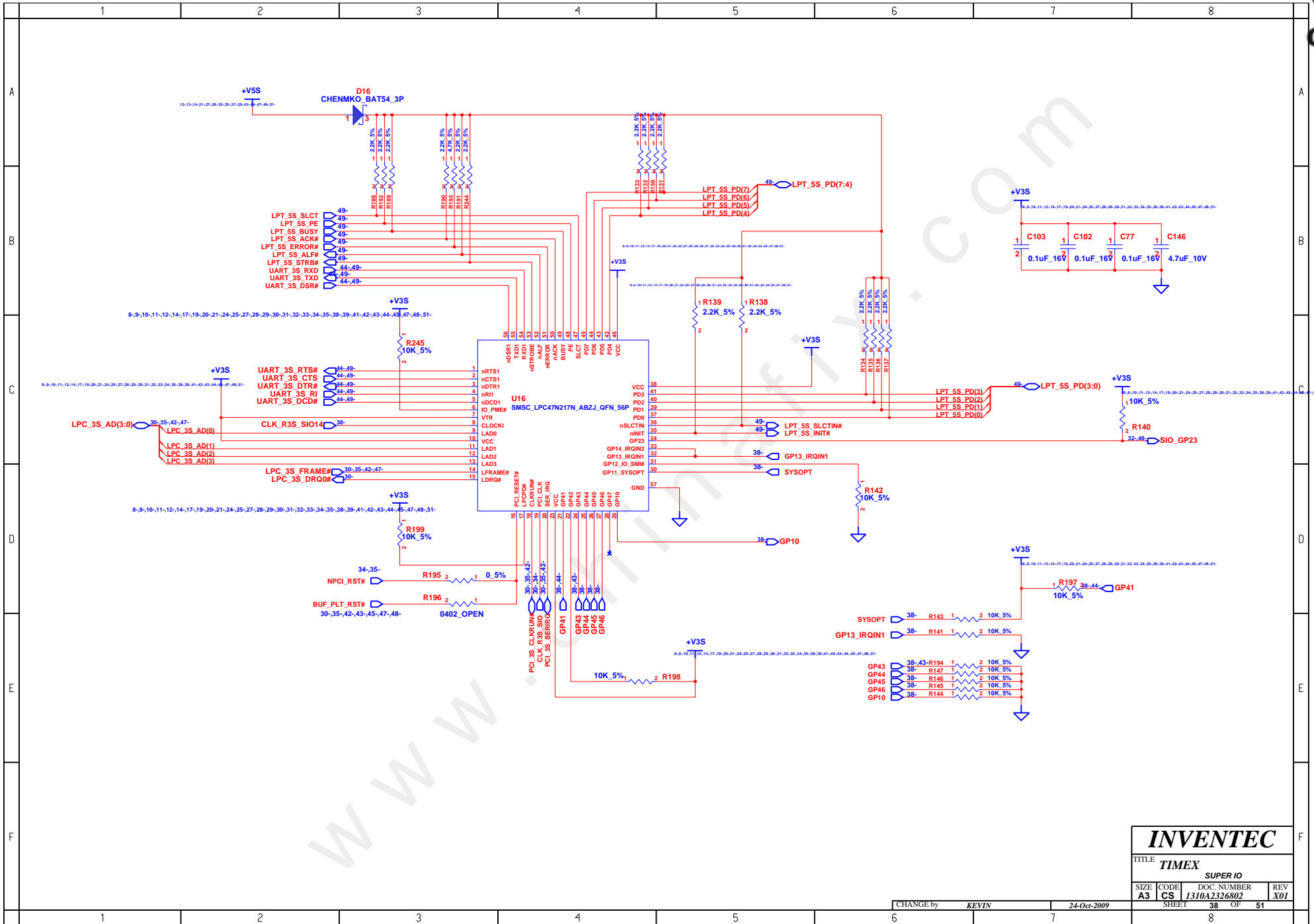
### KeyBoard CONN (30 pin)



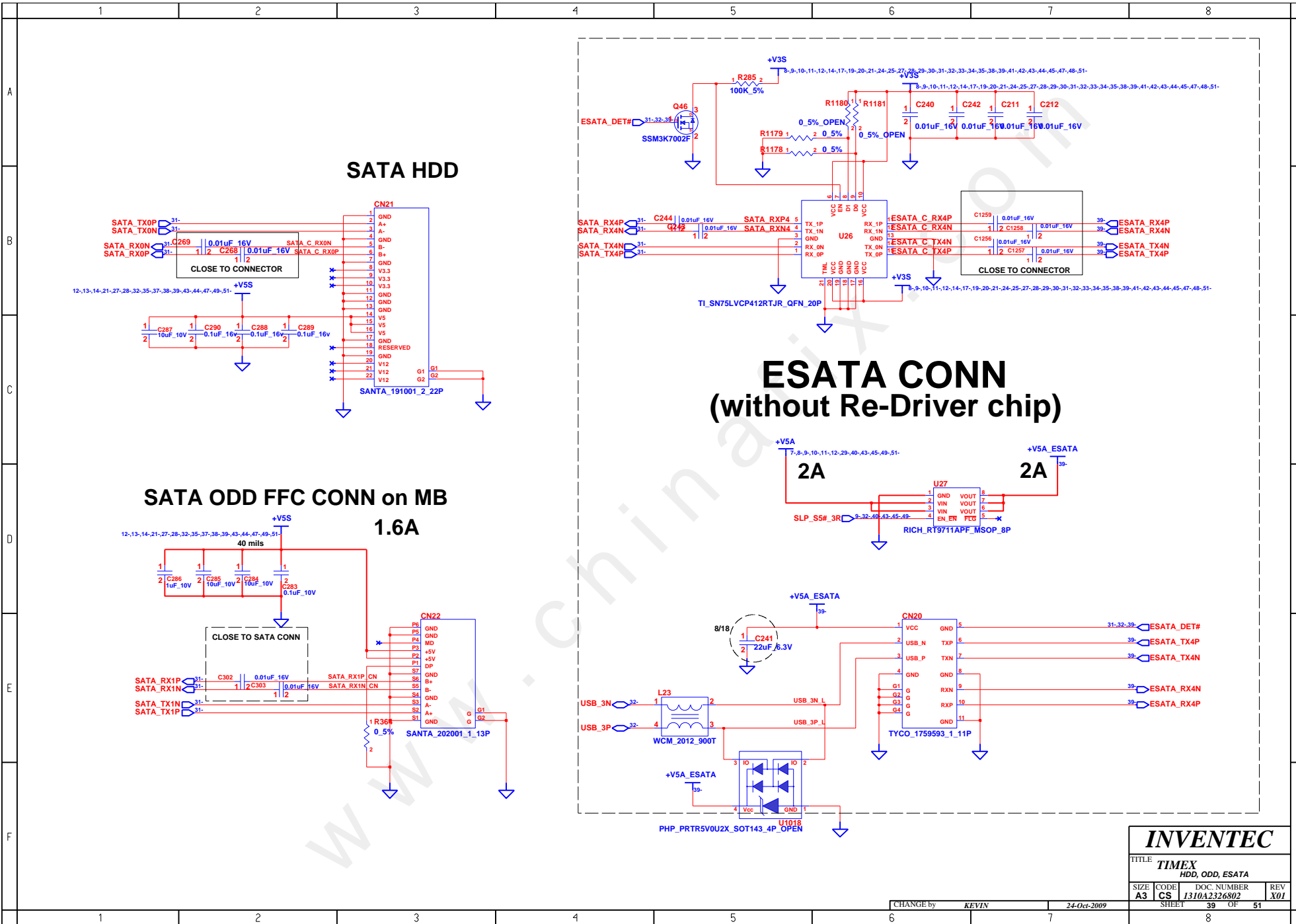
### INVENTEC

TITLE			
TIMEX			
KEYBOARD , Pointstick			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
SHEET		OF	
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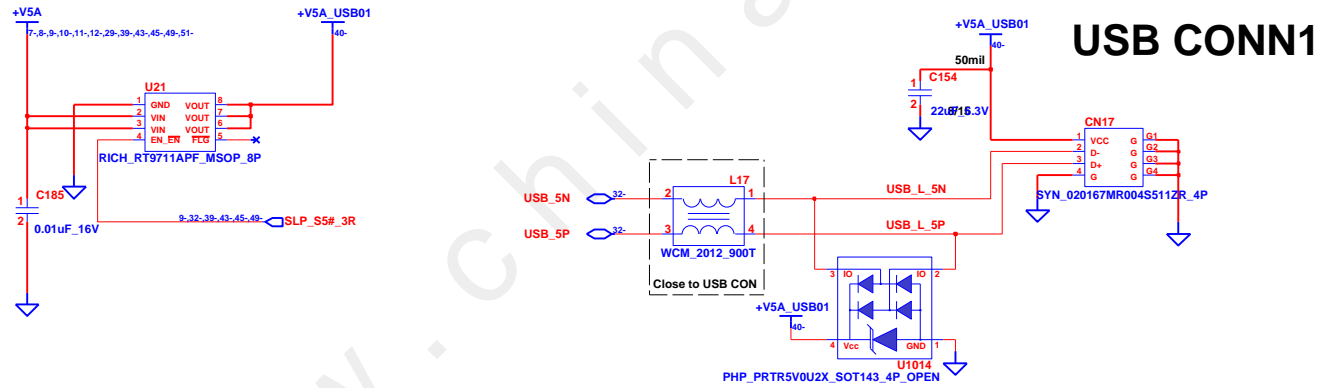
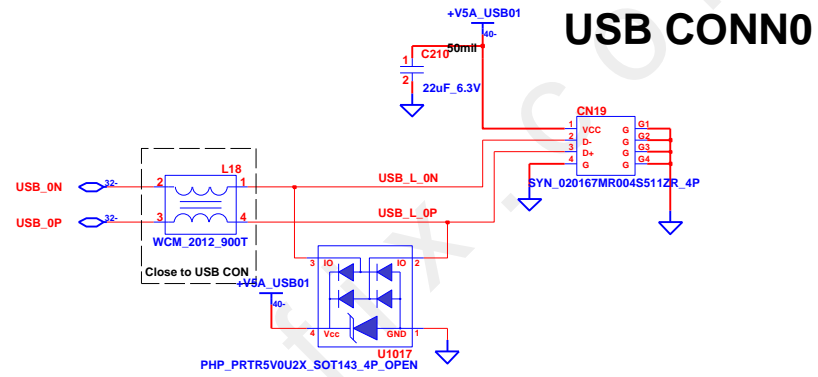
CHANGE by KEVIN 24-Oct-2009



<b>INVENTEC</b>			
TITLE <b>TIMEX</b>			
SUPER IO			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>38</b>		OF <b>51</b>	

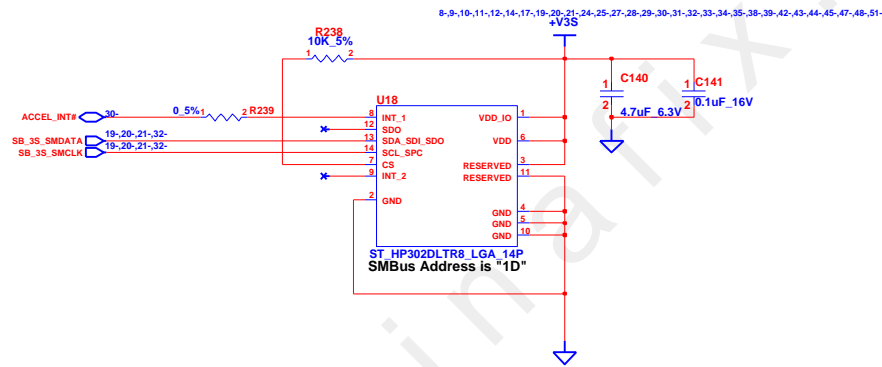


<b>INVENTEC</b>				
TITLE <b>TIMEX</b> <b>HDD, ODD, ESATA</b>				
SIZE	CODE	DOC NUMBER	REV	
A3	CS	1310A2326802	X01	
CHANGE by KEVIN			24-Oct-2009	
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<b>INVENTEC</b>			
TITLE <b>TIMEX</b> USB CONN			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
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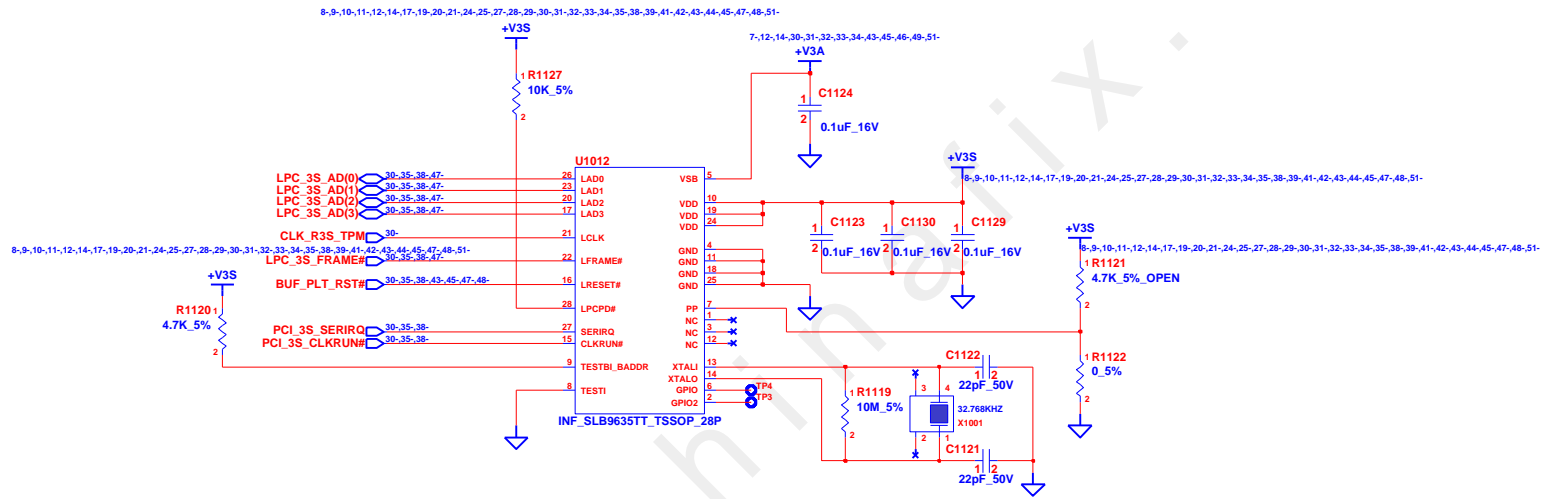


**HARDDRIVE PROTECTION**  
**P/N = 6019B0505201**

**INVENTEC**

TITLE			
TIMEX			
Accelerometer			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A2326802	X01
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CHANGE by KEVIN 24-Oct-2009

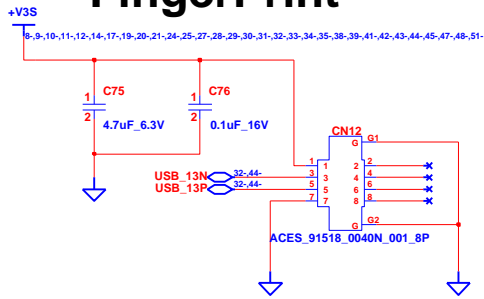


**TPM V1.2**

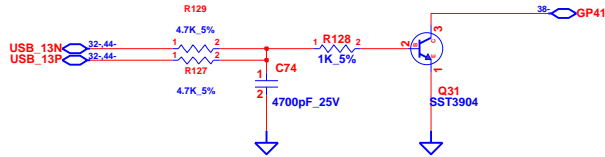
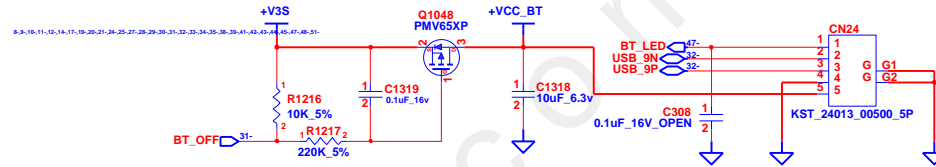
<b>INVENTEC</b>			
TITLE <b>TIMEX TPM</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	SHEET <b>42</b> OF <b>51</b>



### FingerPrint

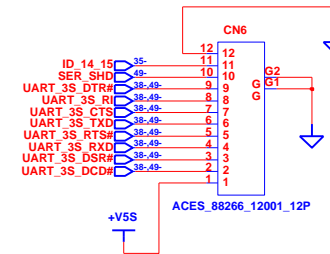
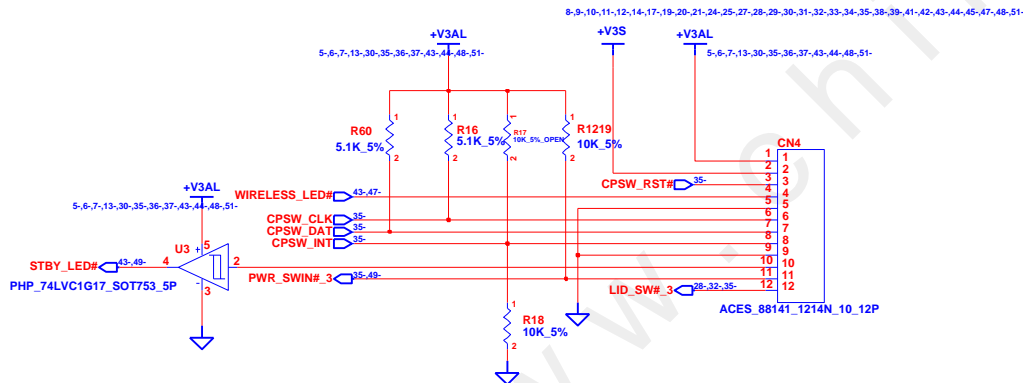


### BLUETOOTH CONN



### SWITCH BOARD

### SERIAL PORT CONN



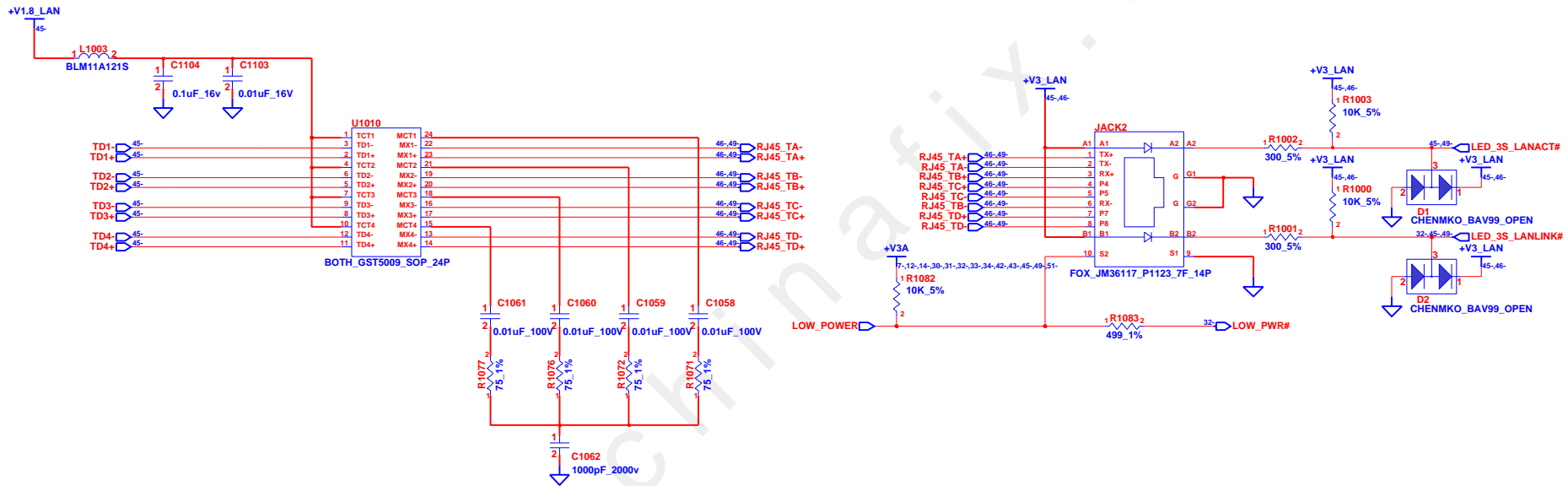
# W2B Connectors

**INVENTEC**

TITLE			
TIMEX			
W2B Connectors			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A2326802	X01
SHEET		44	OF 51

CHANGE by KEVIN 24-Oct-2009



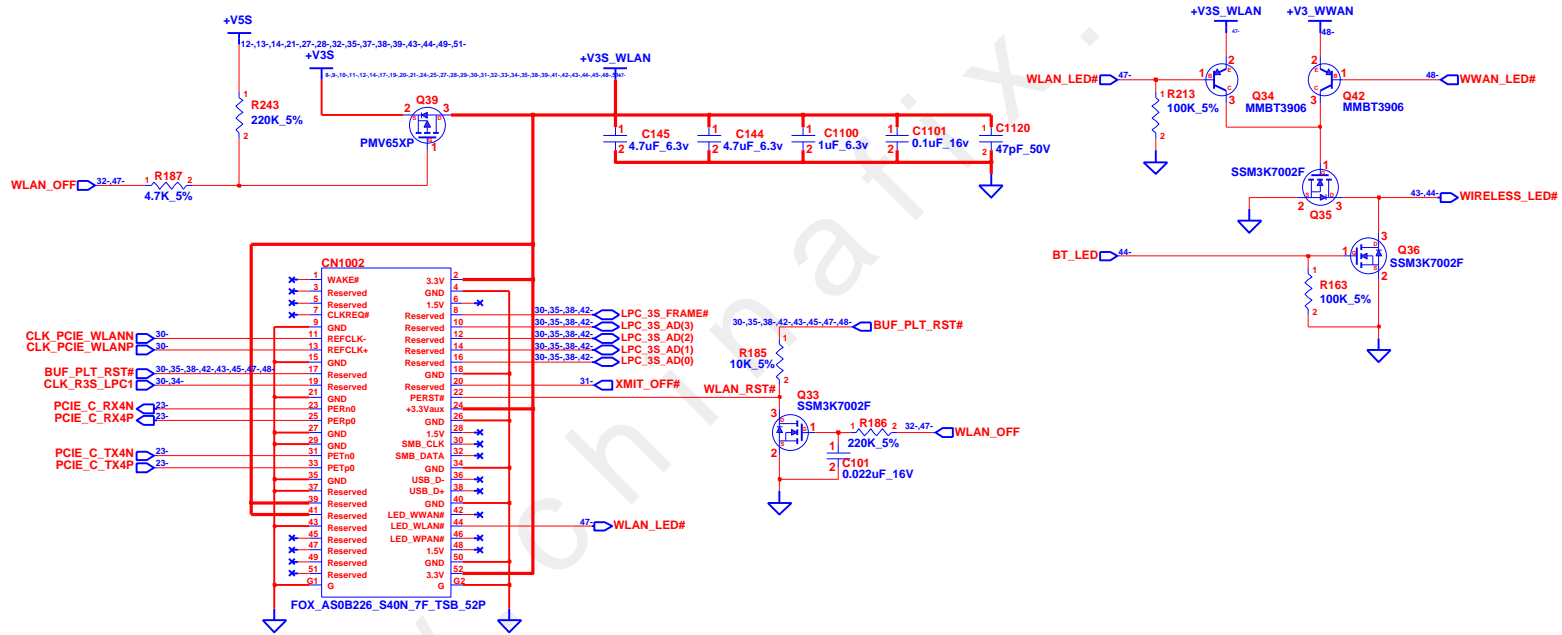


Main Source GSL5009 P/N:6016B0010401  
 Second Source LG-2413-2 P/N:6016B0005801

### INVENTEC

TITLE			
TIMEX			
LAN & RJ45 CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A2326802	X01
CHANGE by		SHEET	OF
KEVIN		46	51

24-Oct-2009



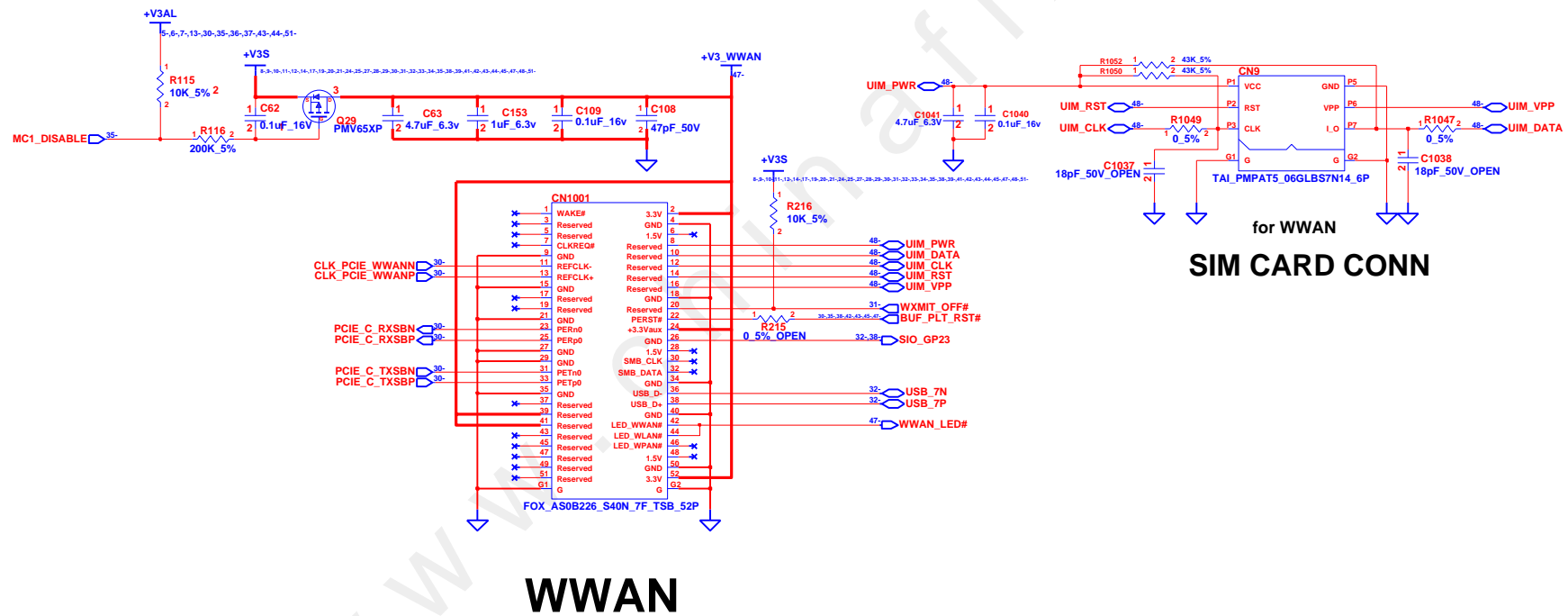
### WLAN CONN (MINICARD)

## INVENTEC

TITLE				TIMEX	
CODE				WLAN	
SIZE	CODE	DOC. NUMBER	REV		
A3	CS	1310A2326802	X01		
SHEET			47	OF 51	

CHANGE by KEVIN 24-Oct-2009

# OPTION PART



**INVENTEC**

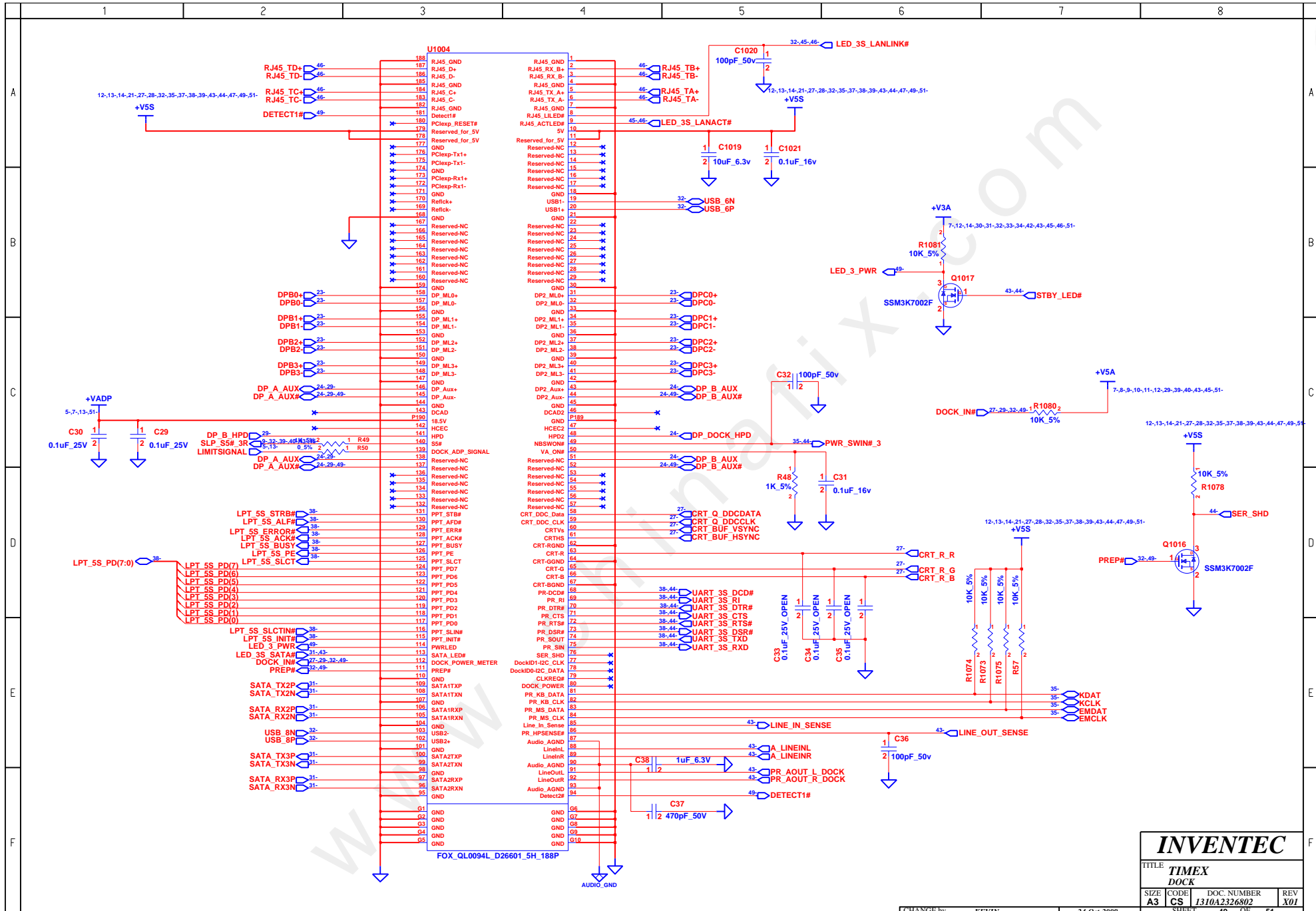
TITLE  
**TIMEX**  
WWAN & SIM CARD CONN

SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
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CHANGE by **KEVIN** 24-Oct-2009

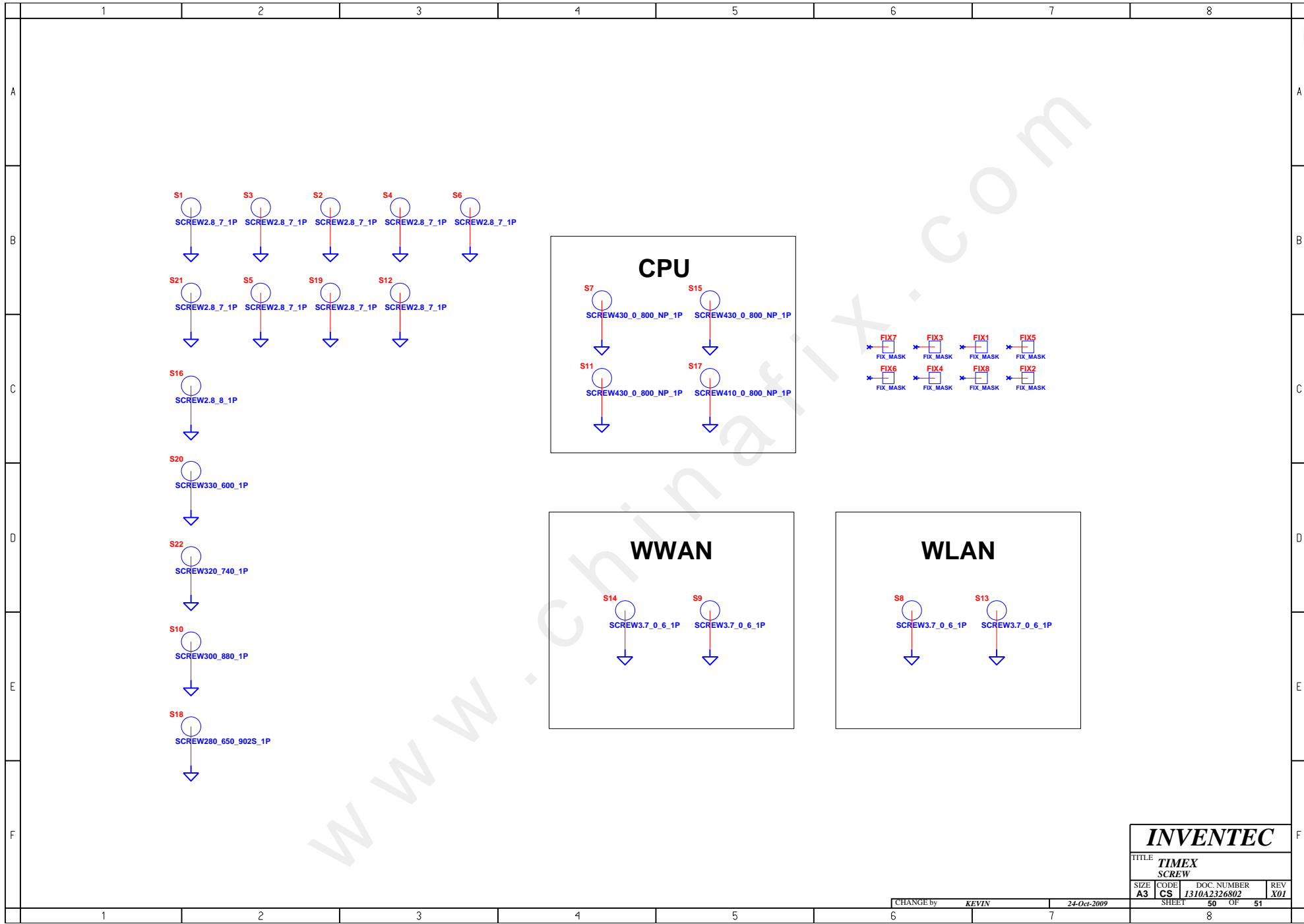
SHEET 48 OF 51



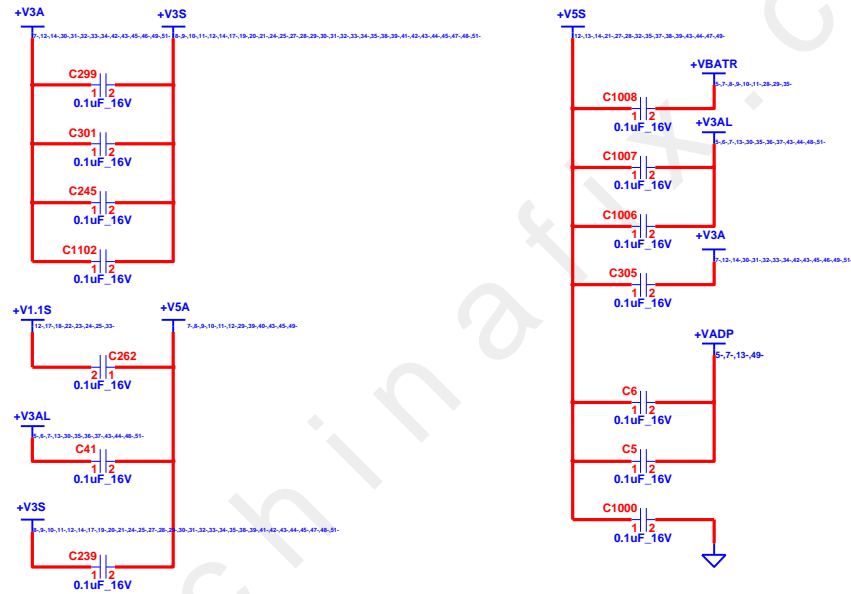


<b>INVENTEC</b>			
TITLE <b>TIMEX DOCK</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
SHEET <b>49</b>		OF <b>51</b>	

CHANGE by **KEVIN** 24-Oct-2009



<b>INVENTEC</b>			
TITLE <b>TIMEX SCREW</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>1310A2326802</b>	REV <b>X01</b>
CHANGE by <b>KEVIN</b>		24-Oct-2009	
SHEET <b>50</b>		OF <b>51</b>	



# EMI Capacitors

<b>INVENTEC</b>			
TITLE <i>TIMEX</i>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <i>1310A2326802</i>	REV <i>X01</i>
CHANGE by <i>KEVIN</i>		24-Oct-2009	
SHEET 51		OF 51	