

Schematics Page Index (Title / Revision / Change Date)

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03	Clarksfield (DMI,PEG,FDI)	A00	09'12'25	38	BT & CAMERA/Dig MIC CON	A00	09'12'25
04	Clarksfield (CLK,MISC,JTAG)	A00	09'12'25	39	Broadcom LAN(BCM57780M)	A00	09'12'25
05	Clarksfield (DDR3)	A00	09'12'25	40	Audio (CODEC & POWER)	A00	09'12'25
06	Clarksfield (POWER)	A00	09'12'25	41	Audio (HP,EXT MIC)	A00	09'12'25
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09	Clarksfield (RESERVED)	A00	09'12'25	44	FAN/Thermal/G Sensor	A00	09'12'25
10	CLOCK GEN	A00	09'12'25	45	USB2.0 & e-SATA	A00	09'12'25
11	PCH (HDA,JTAG,SAT)	A00	09'12'25	46	DB board connector (MB)	A00	09'12'25
12	PCH (PCI-E,SMBUS,CLK)	A00	09'12'25	47	PWR BTN & BT & LED DB	A00	09'12'25
13	PCH (DMI,FDI,GPIO)	A00	09'12'25	48	SATA HDD/ODD	A00	09'12'25
14	PCH (LVDS,DDI)	A00	09'12'25	49	Power Design Diagram	A00	09'12'25
15	PCH (PCI,USB,NVRAM)	A00	09'12'25	50	DCIN & Battery	A00	09'12'25
16	PCH (GPIO,VSS NCTF,RSVD)	A00	09'12'25	51	MAX8731A Smart Charger	A00	09'12'25
17	PCH (POWER) 1/2	A00	09'12'25	52	MAX17020 (+3 3V/+5V)	A00	09'12'25
18	PCH (POWER) 2/2	A00	09'12'25	53	SYS Power+1 1VVT/+1 05V	A00	09'12'25
19	PCH (VSS)	A00	09'12'25	54	DDR3 Power(+1 5V/+0 75V)	A00	09'12'25
20	DDR3(SO-DIMM 0) 1/2	A00	09'12'25	55	CPU Power VHCORE	A00	09'12'25
21	DDR3(SO-DIMM 1) 2/2	A00	09'12'25	56	CPU Power DRV-PHASE3	A00	09'12'25
22	VGA (PCI-E) 1/6	A00	09'12'25	57	VGA Power(ATI VDD)	A00	09'12'25
23	VGA (STRAP) 2/6	A00	09'12'25	58	SYS Power +1 8V	A00	09'12'25
24	VGA (IO) 3/6	A00	09'12'25	59	Others power plane	A00	09'12'25
25	VGA (DDR3) 4/6	A00	09'12'25	60	HOLE	A00	09'12'25
26	VGA (DP) 5/6	A00	09'12'25	61	History (1)	A00	09'12'25
27	VGA (POWER) 6/6	A00	09'12'25	62	History (2)	A00	09'12'25
28	VRAM (DDR3) 1/3	A00	09'12'25	63	History (3)	A00	09'12'25
29	VRAM (DDR3) 2/3	A00	09'12'25	64	Power History (1)	A00	09'12'25
30	VRAM (BYPASS) 3/3	A00	09'12'25	65	Power History (2)	A00	09'12'25
31	CRT	A00	09'12'25	66			
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34	EC+KBC(IT8502E)	A00	09'12'25	69			
35	Flash ROM/SPI	A00	09'12'25	70			

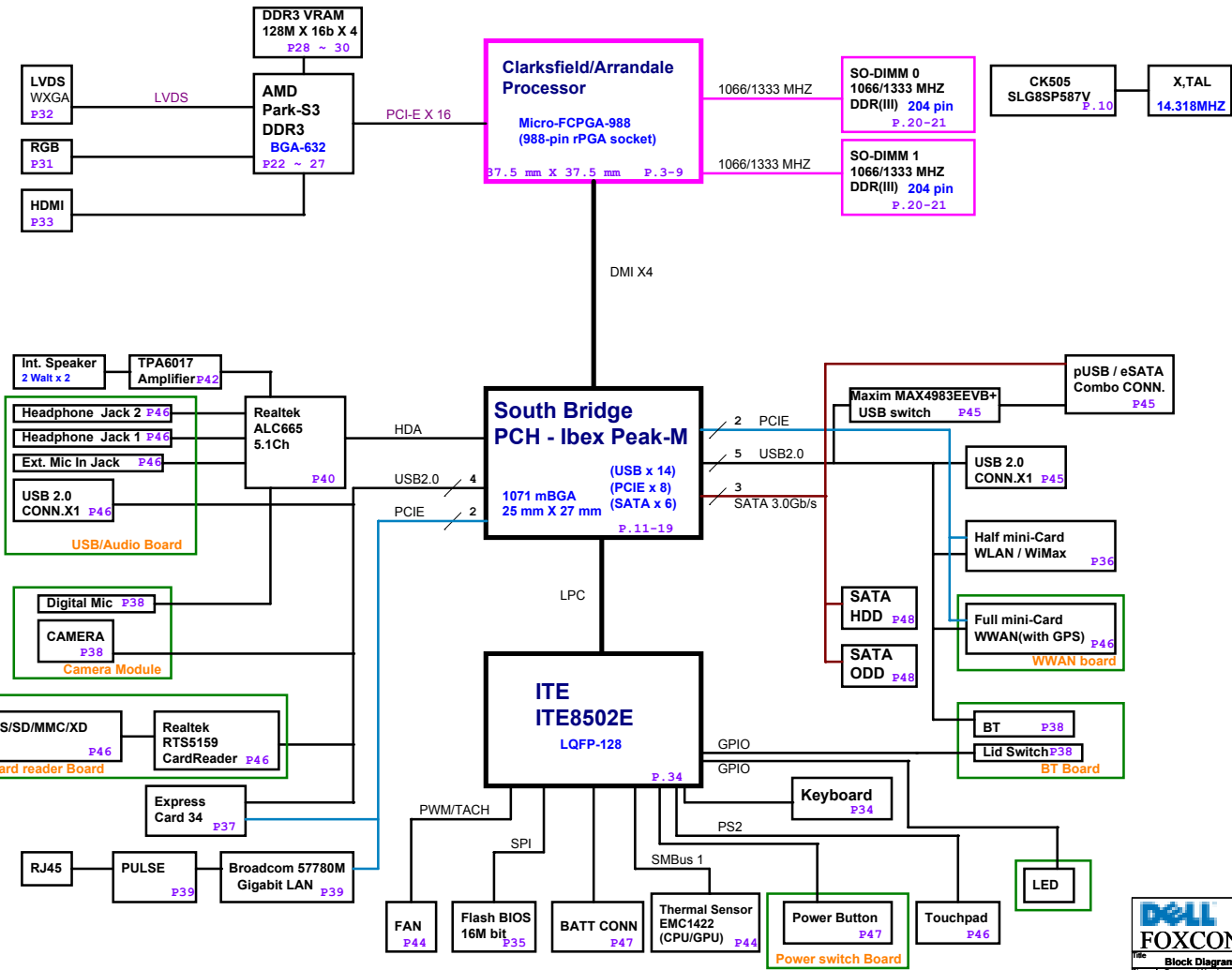
Project Code & Schematics Subject: H902 Main Board 8L

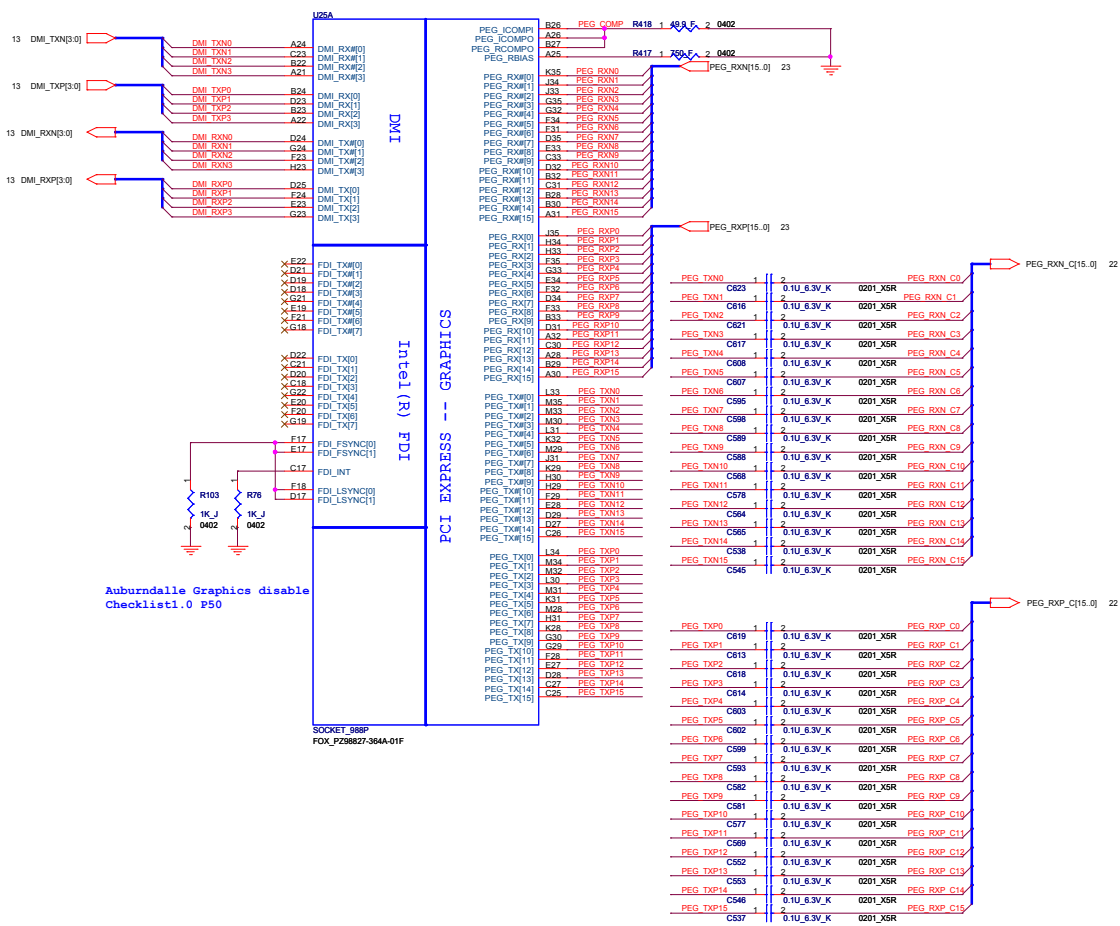
PCB P/N:	1P-009CJ00-8000 (IRIS)
	1P-009C500-8000 (HANNSTAR)
	1P-009C200-8000 (NANYA)
BT DB P/N:	1P-1098J01-8000 (IRIS)
	1P-1098501-8000 (HANNSTAR)
	1P-1098201-8000 (NANYA)
LED DB P/N:	1P-1098J00-8000 (IRIS)
	1P-1098500-8000 (HANNSTAR)
	1P-1098200-8000 (NANYA)
P/B DB P/N:	1P-1098J02-8000 (IRIS)
	1P-1098502-8000 (HANNSTAR)
	1P-1098202-8000 (NANYA)

P. Leader	Check by	Design by

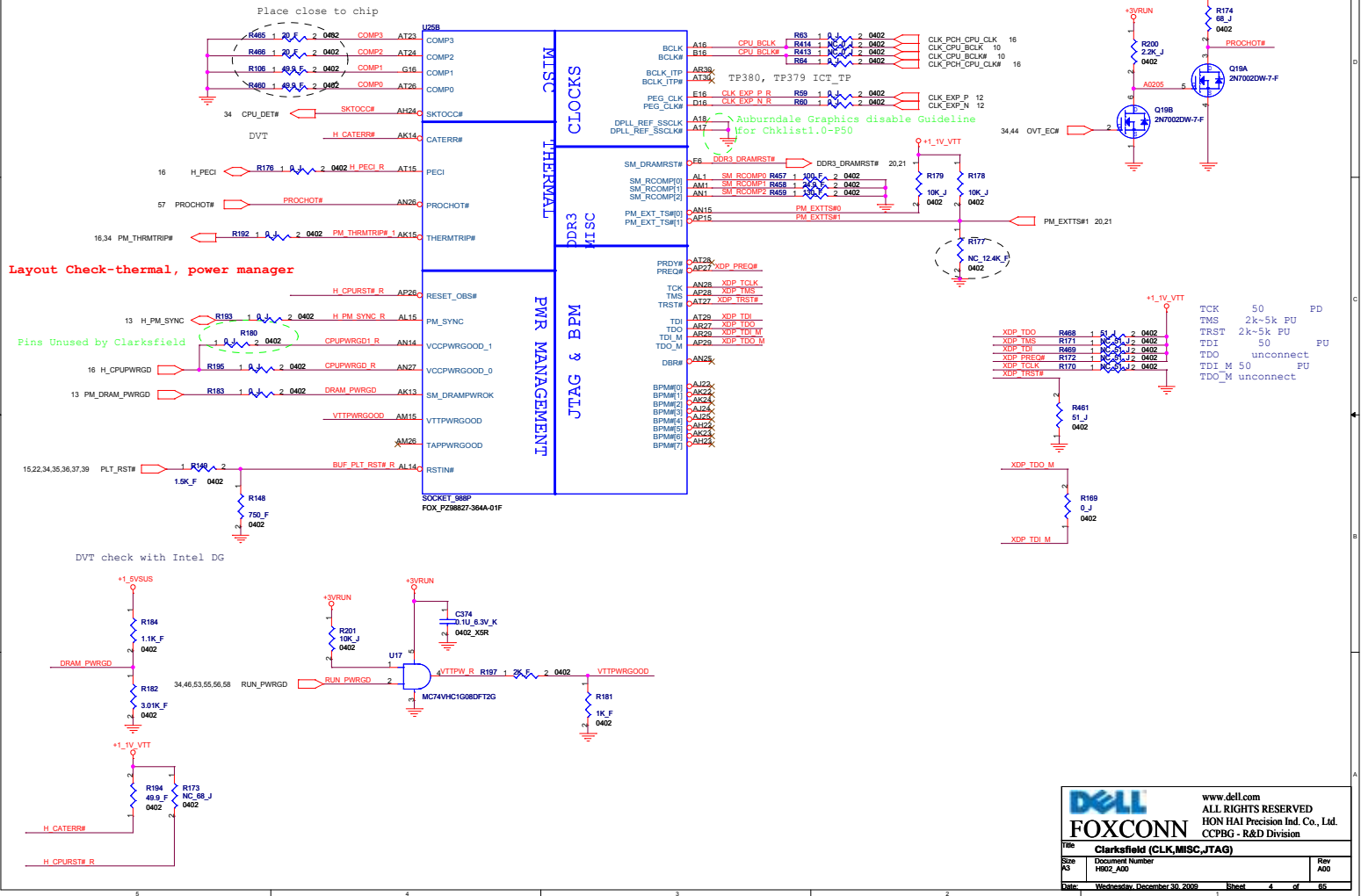
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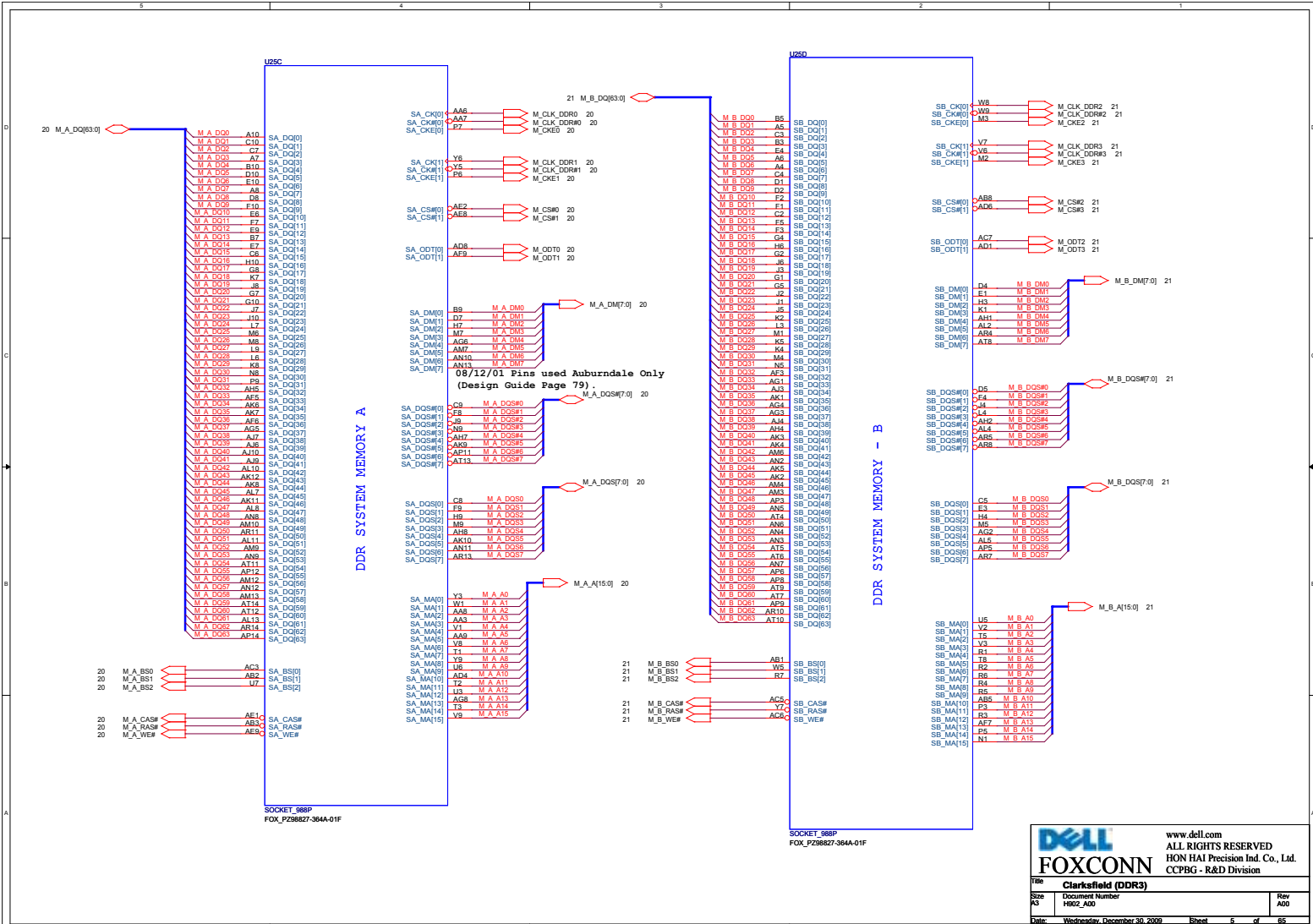
H902 Calpella + Discrete VGA

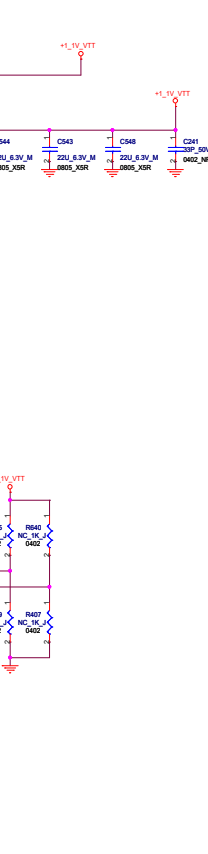
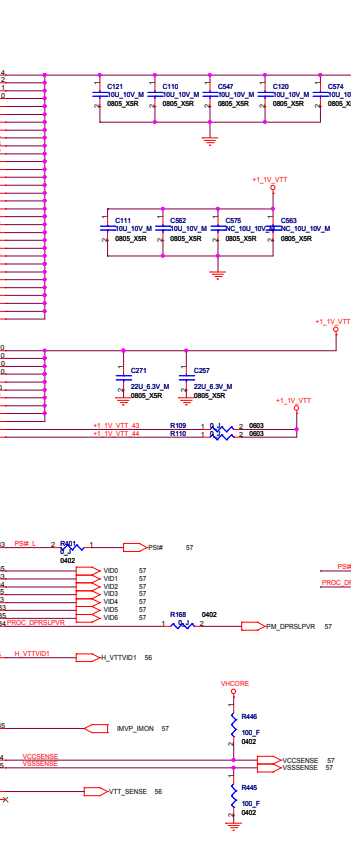
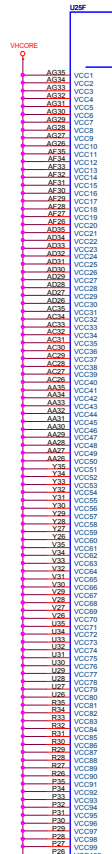
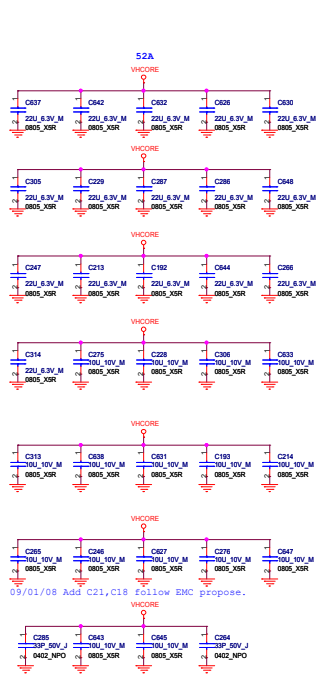




Layout Note:
Comp0,2 connect with Zo=27.4 ohm, make trace
length shorter then 0.5". Width=20mil(MS)
Comp1,3 connect with Zo=55 ohm, make trace
length shorter then 0.5". Width=5mil(MS)

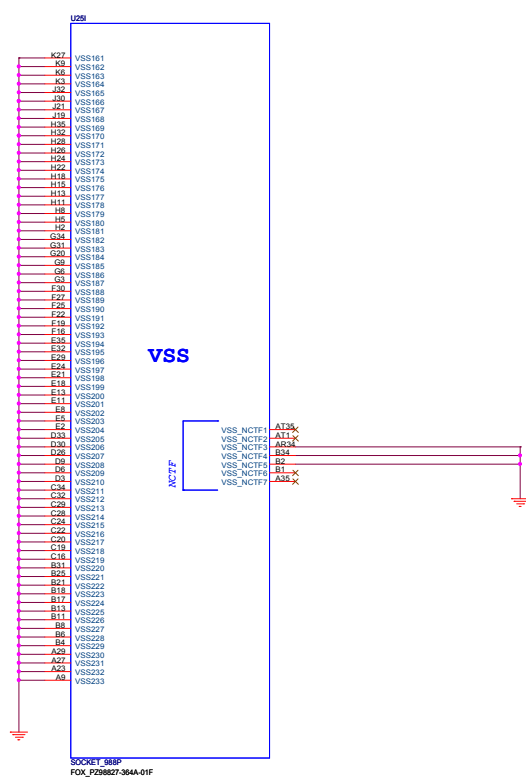
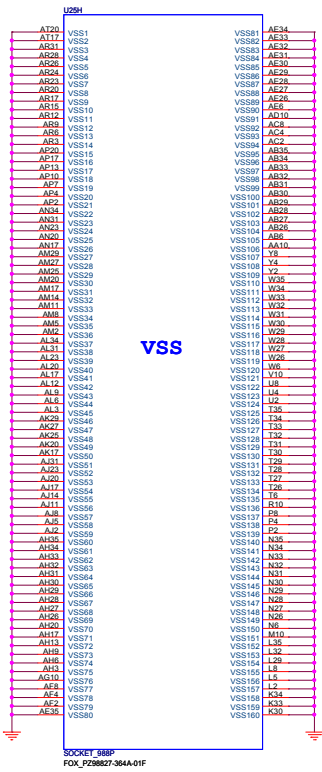


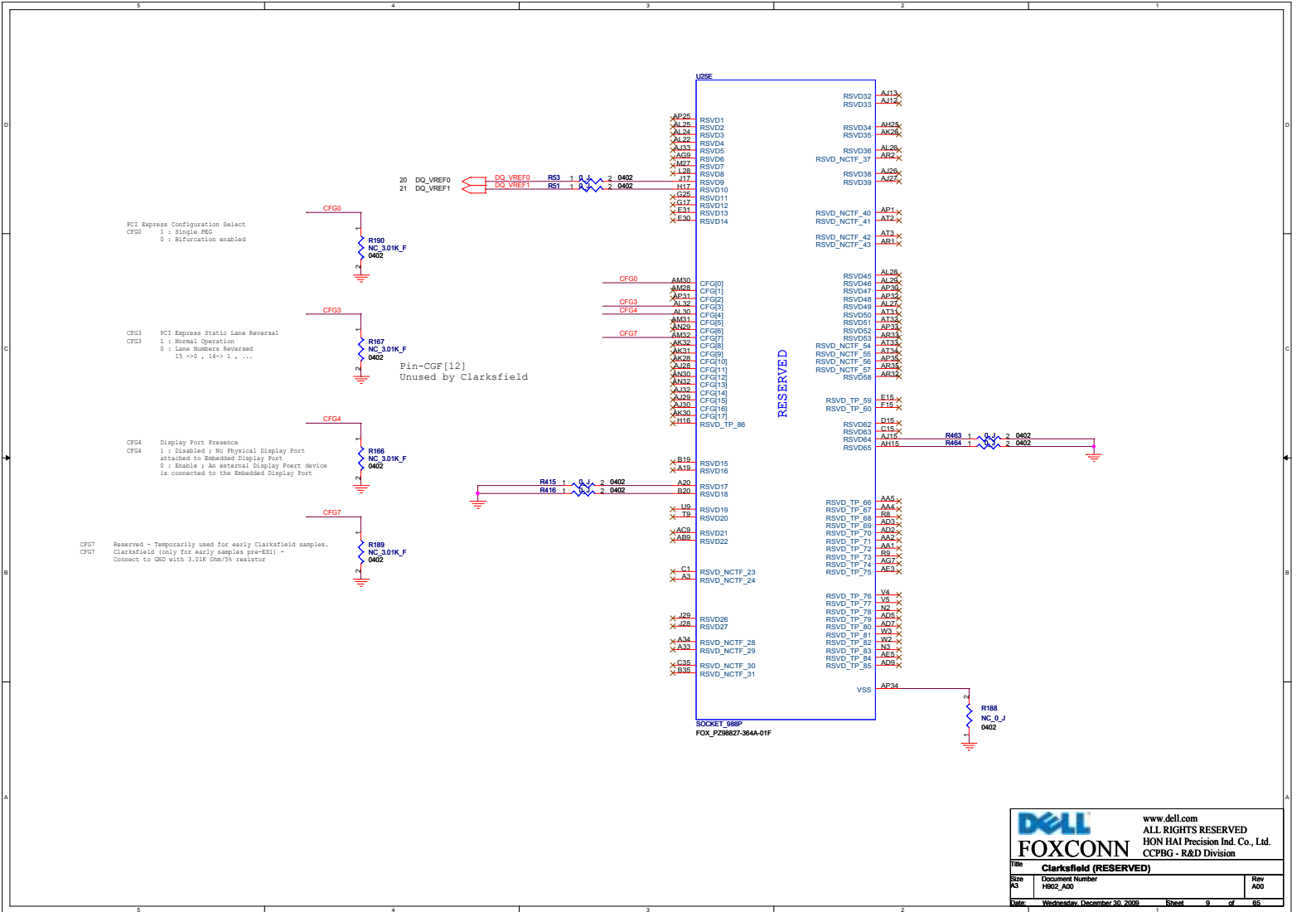


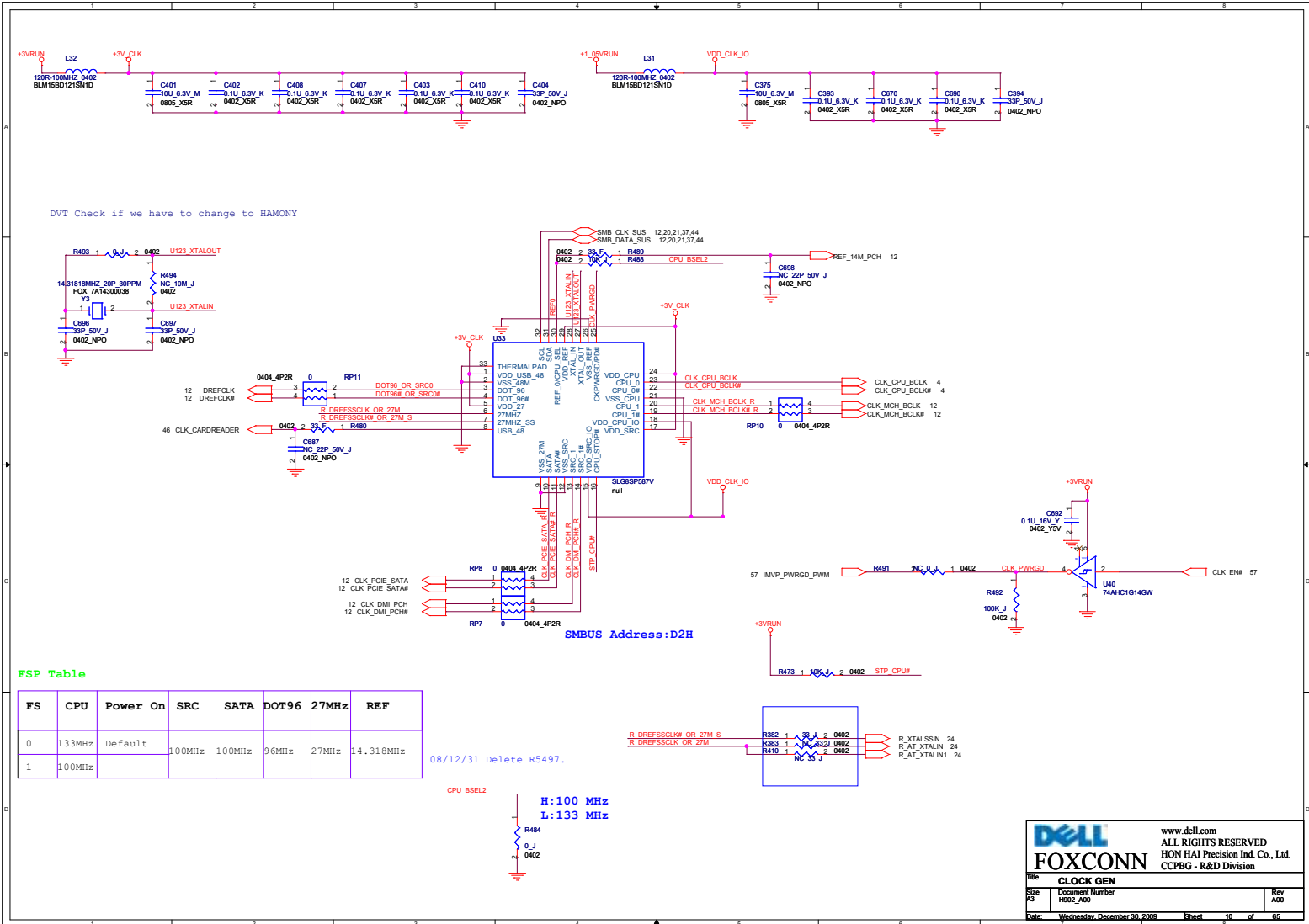


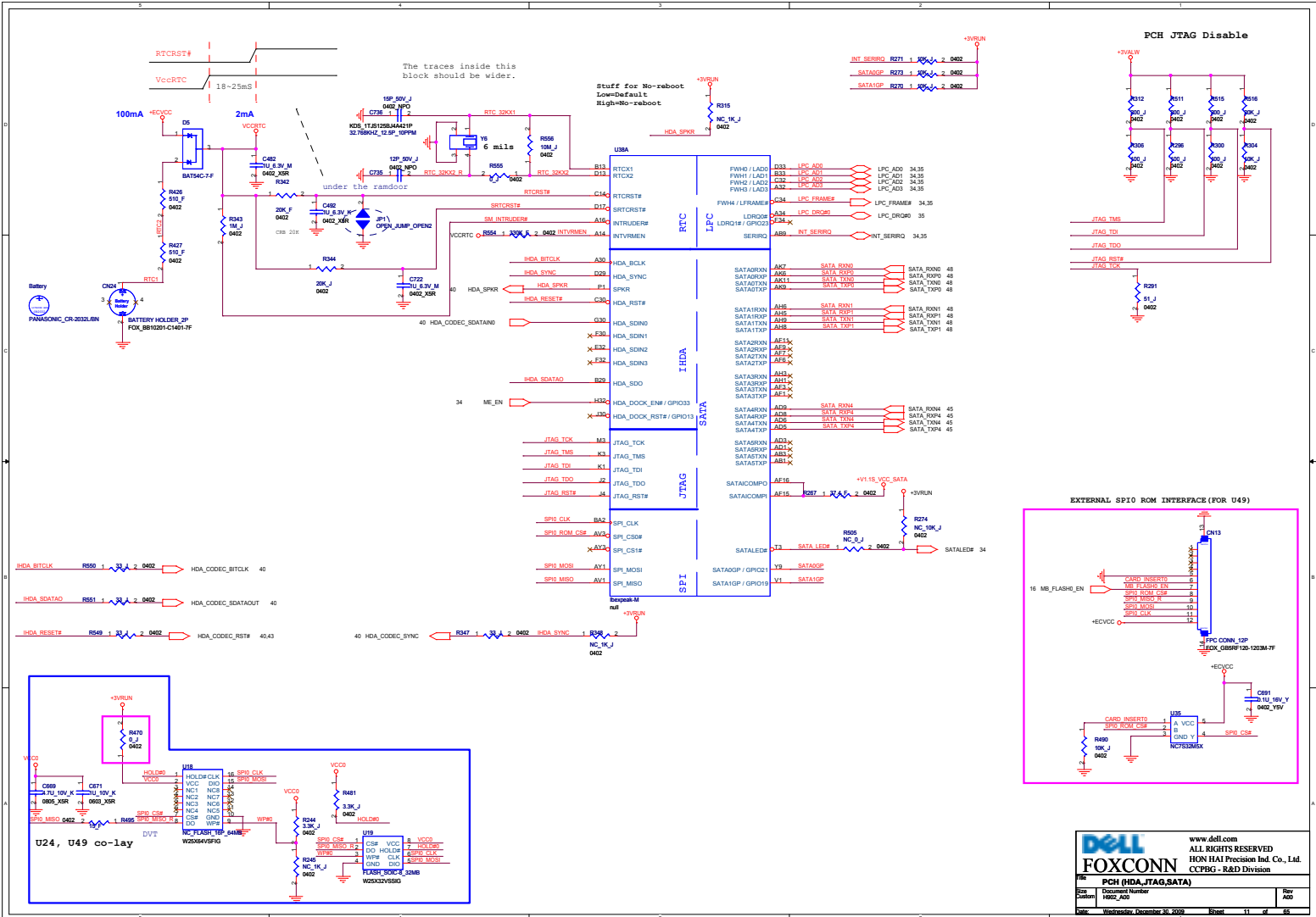
09/01/08 Add C21,C18 follow EMC propose.

FOX P238627-36A4-01P



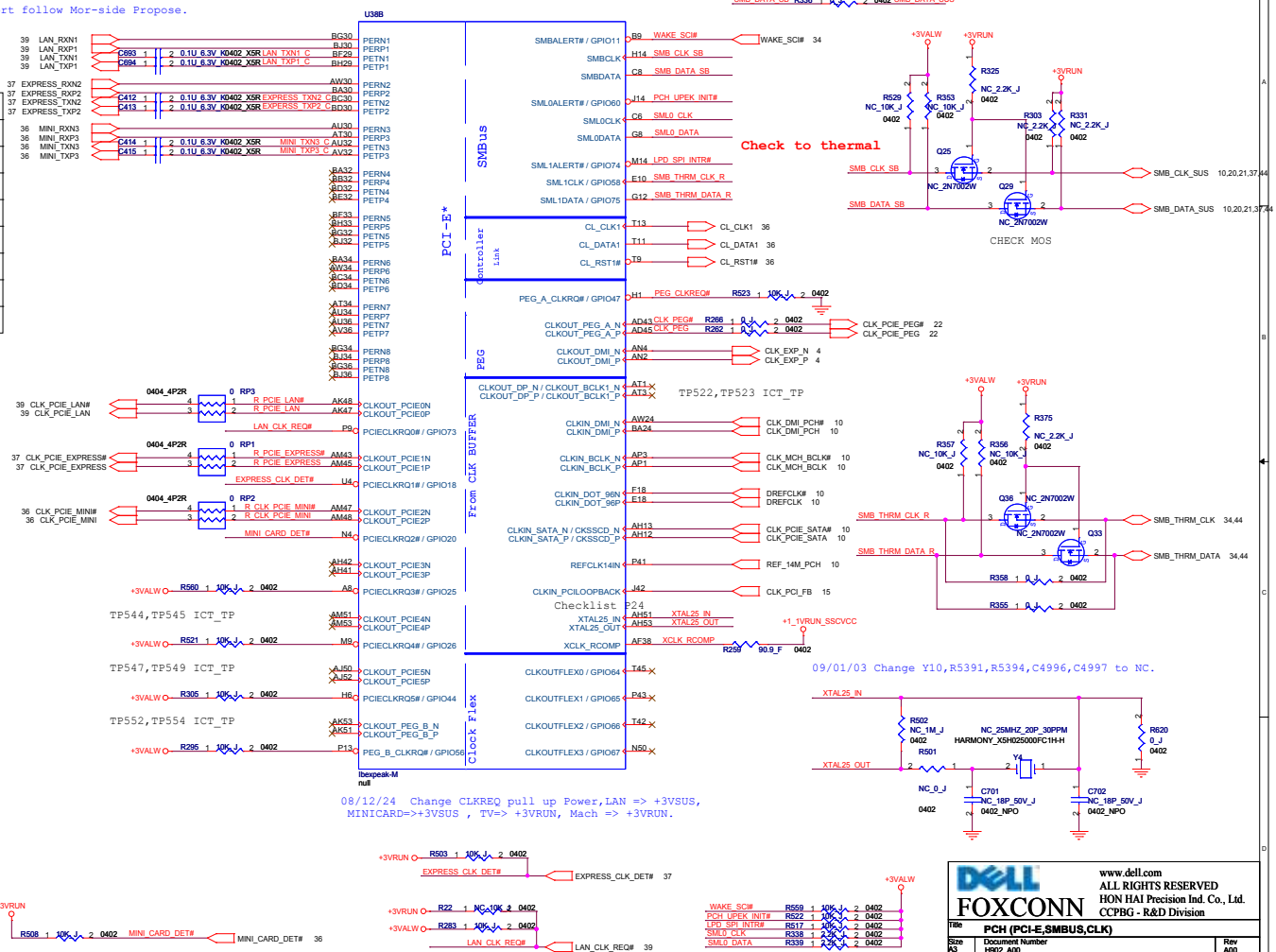




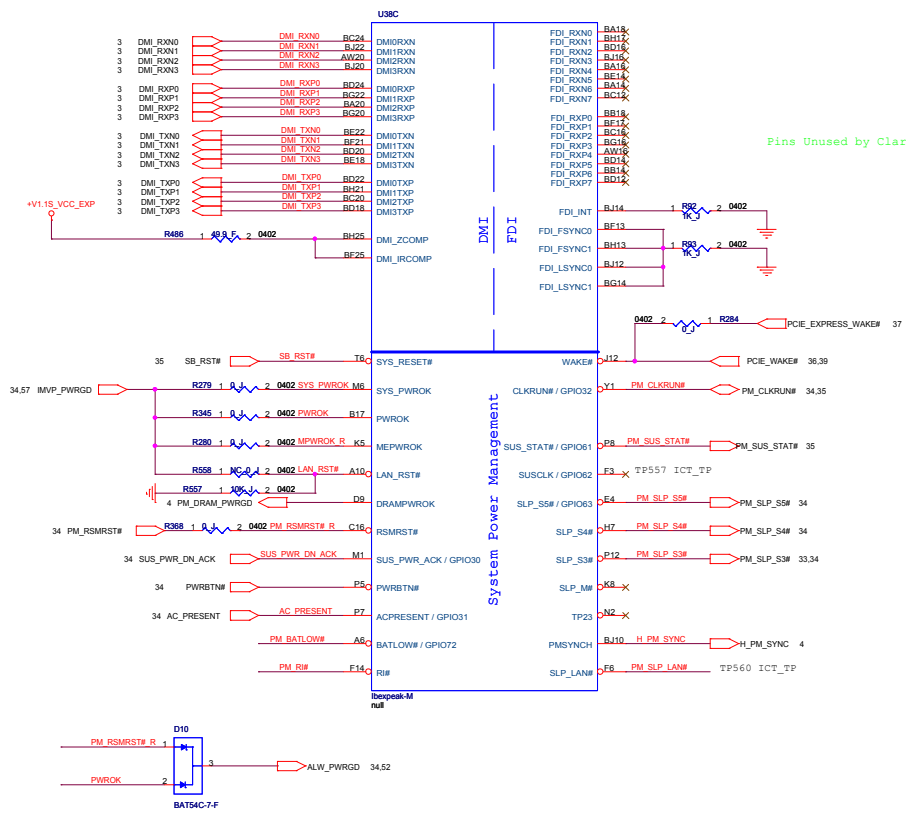


SMB CLK SB R527 1 0 J 2 0402 SMB CLK SUS
SMB DATA SB R336 1 0 J 2 0402 SMB DATA SUS

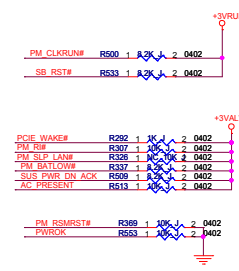
Port	Function
Port1	LAN
Port2	Express Card
Port3	WLAN
Port4	Un-used
Port5	Un-used
Port6	Un-used
Port7	Un-used
Port8	Un-used



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FOXCONN			
PCH (PCI-E,SMBUS,CLK)			
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Pins Unused by Clarksfield



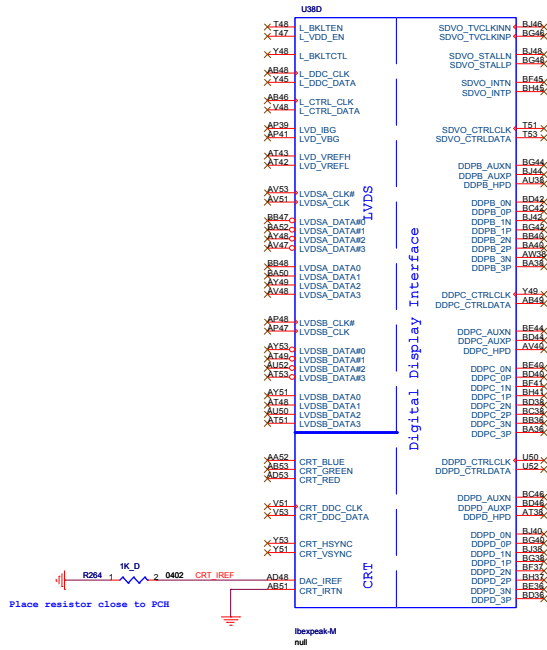


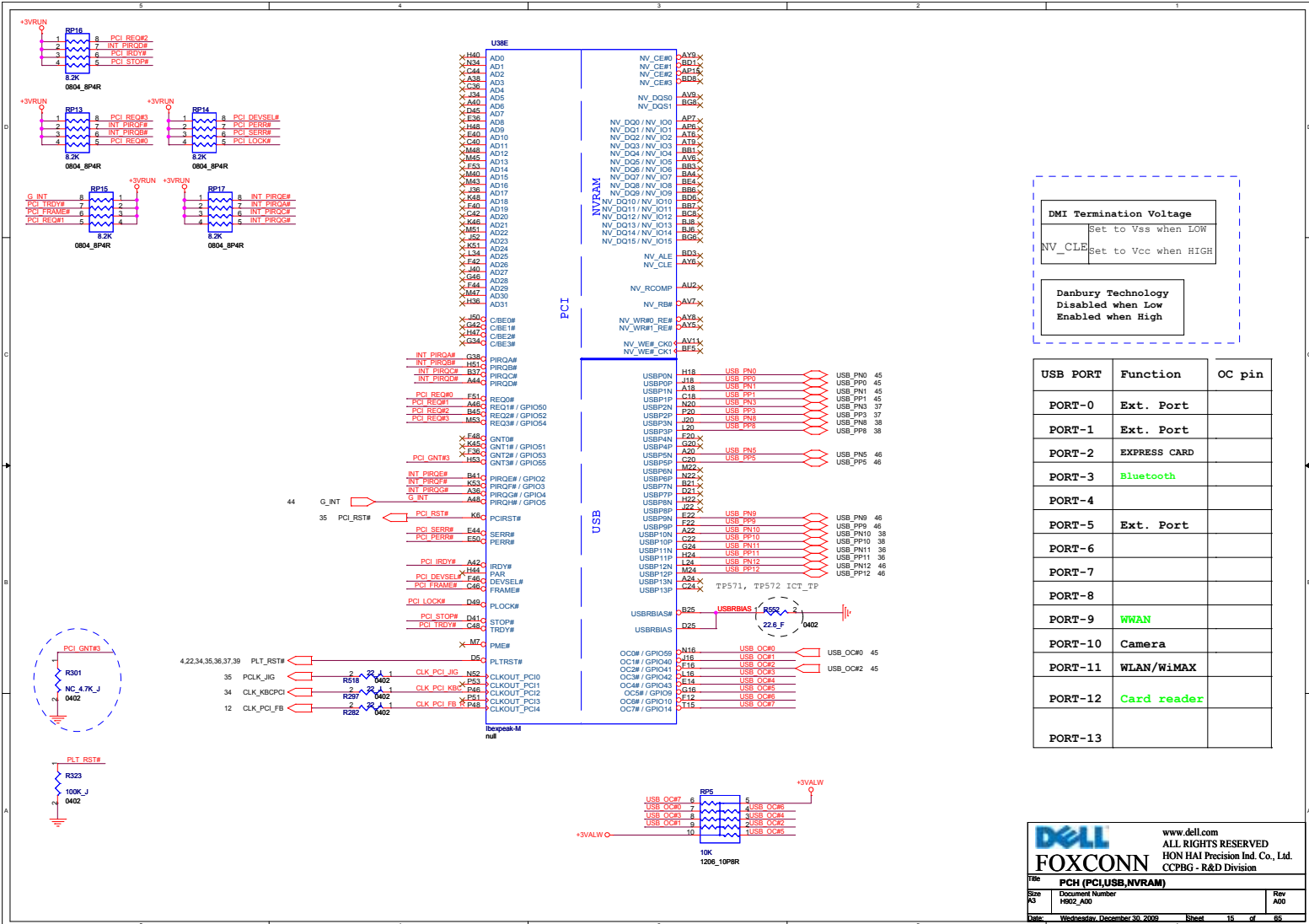
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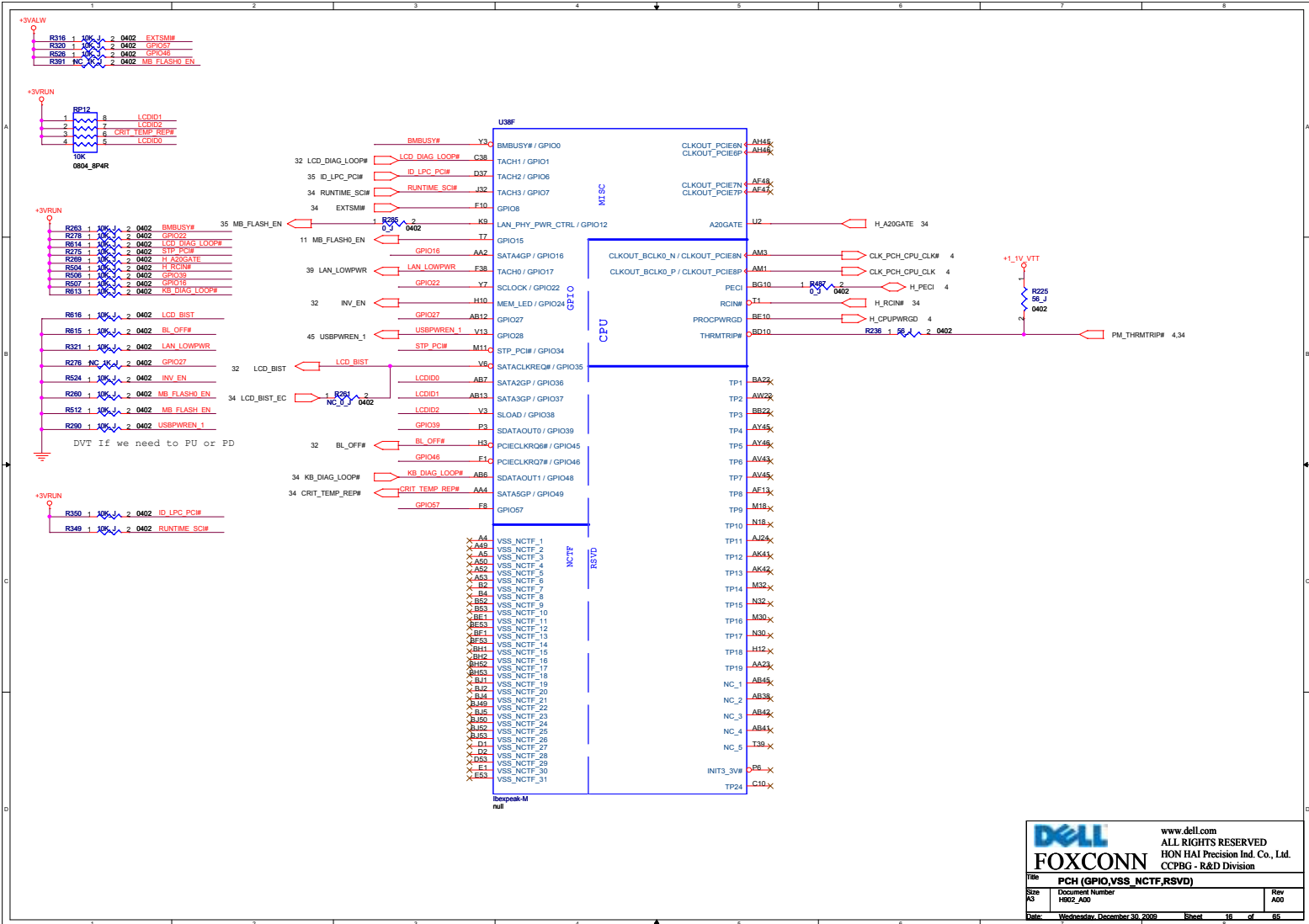
PCH (DMI, FDI, GPIO)

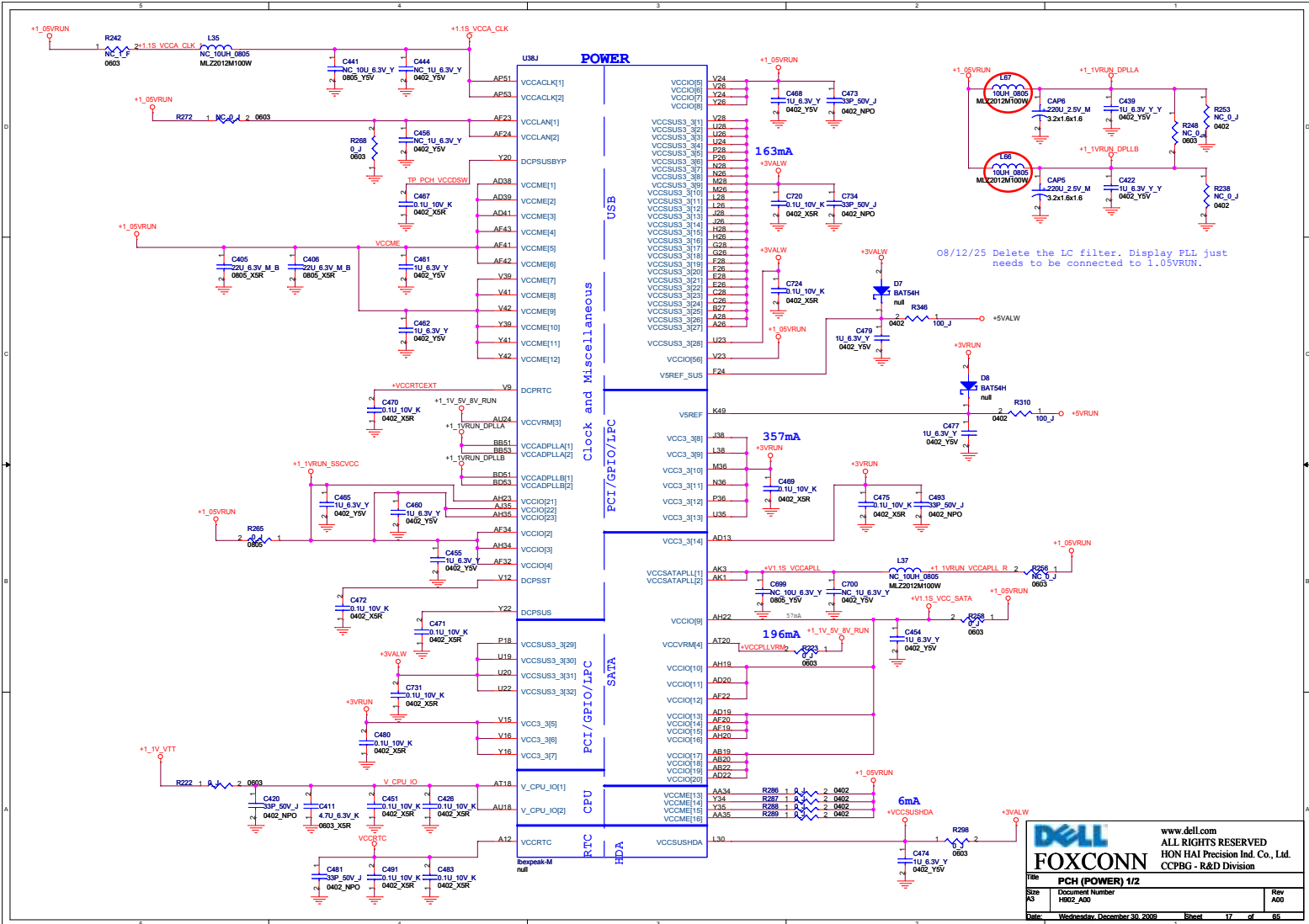
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PCH Intergrated Graphics Disable

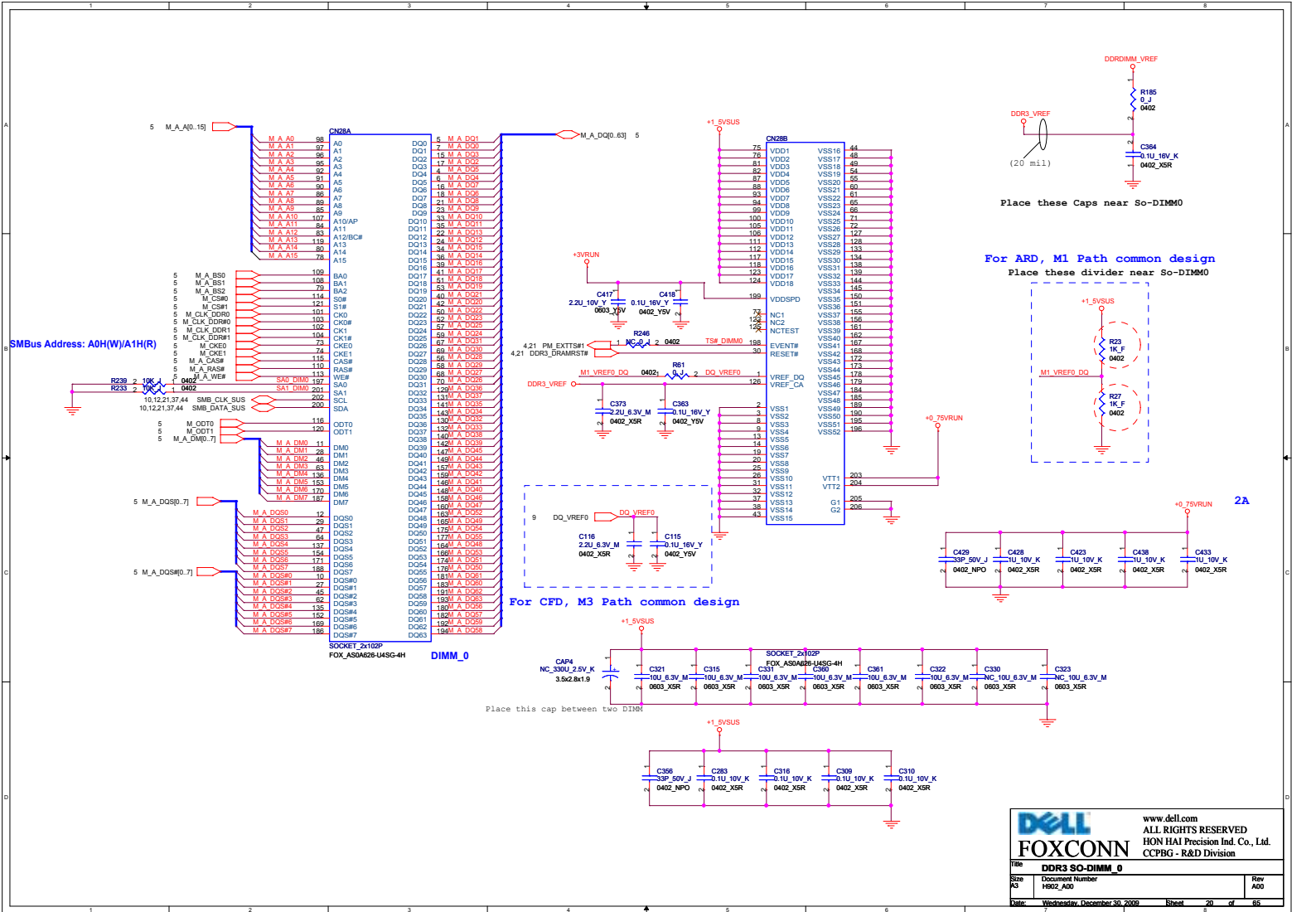


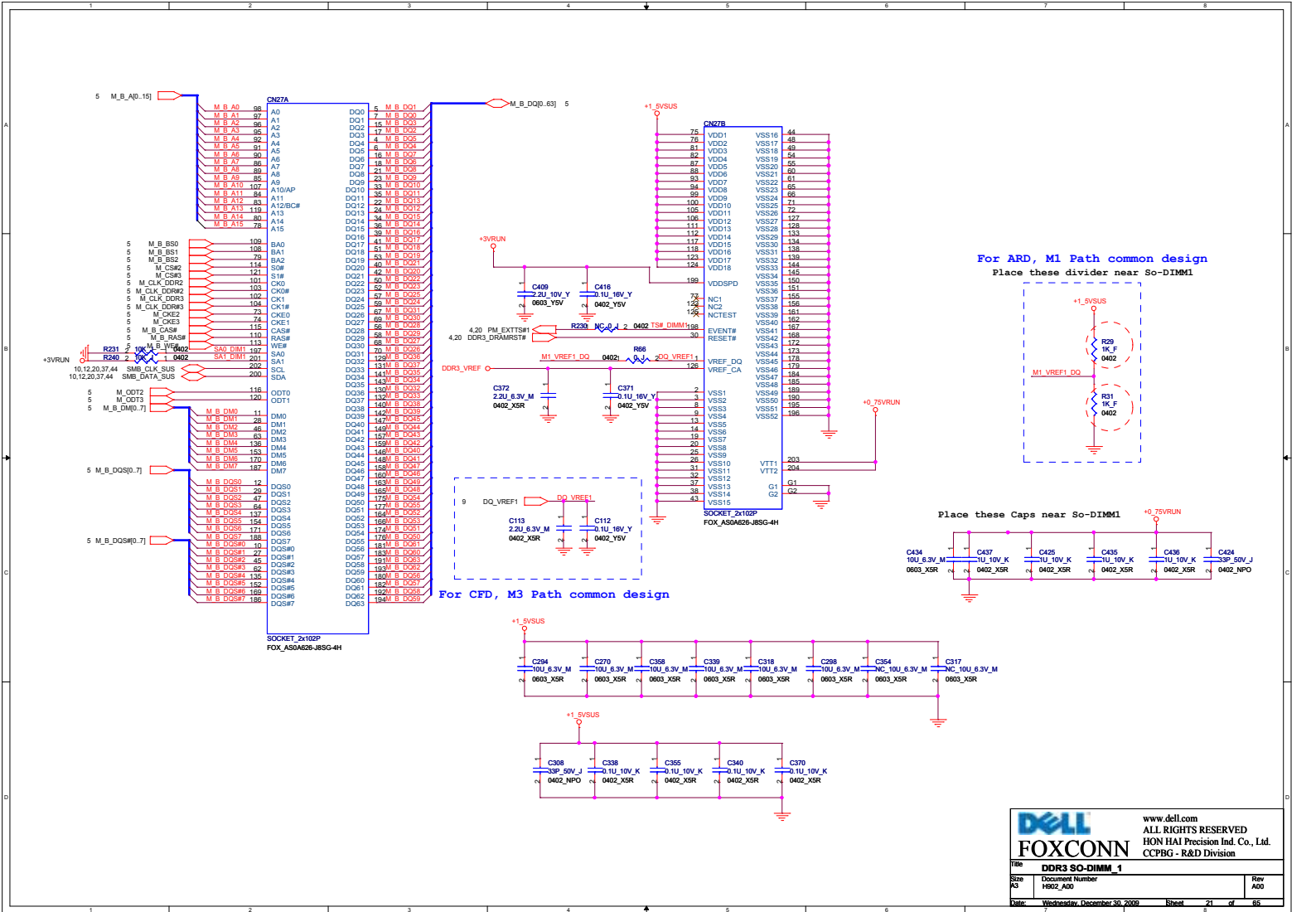


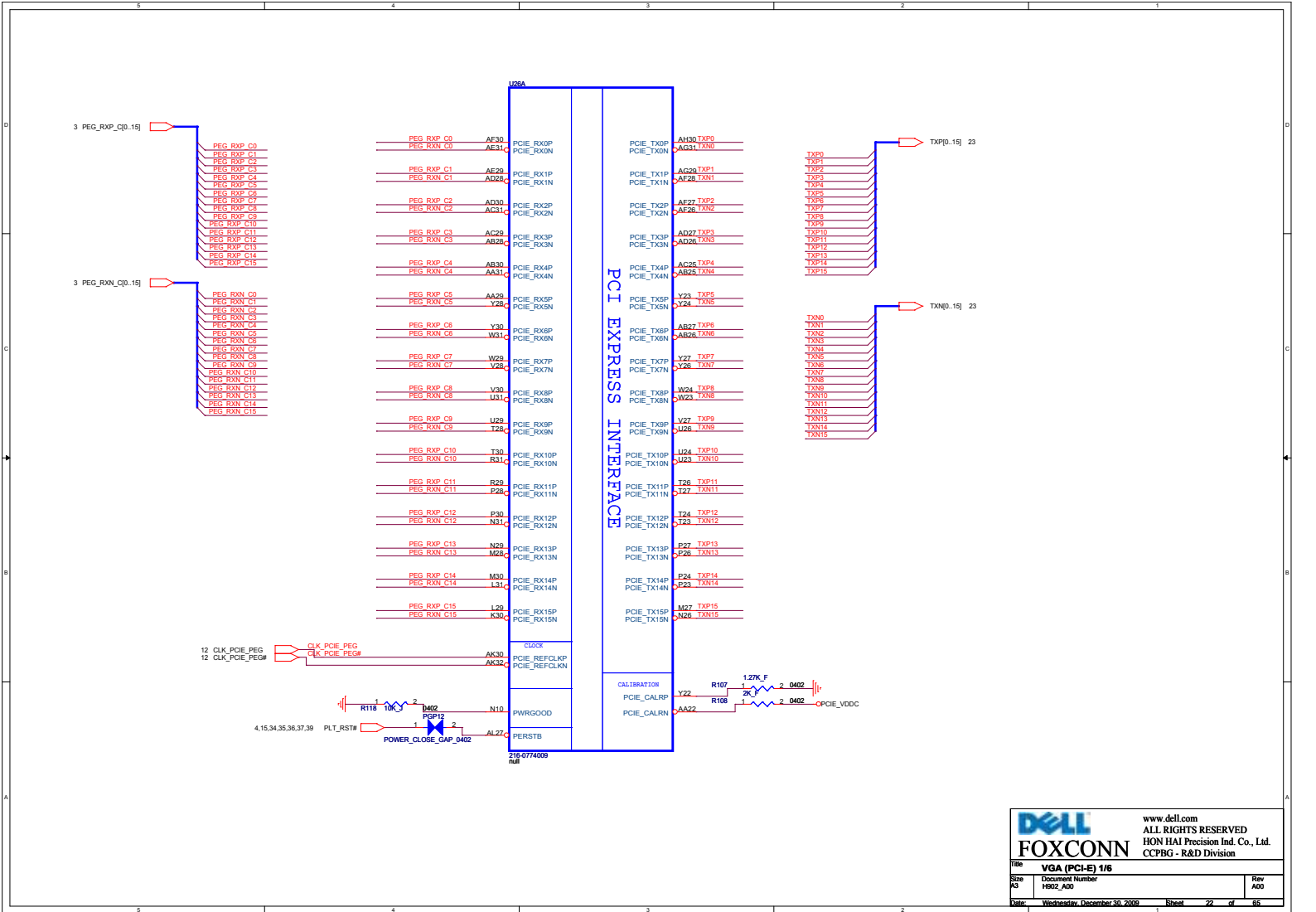




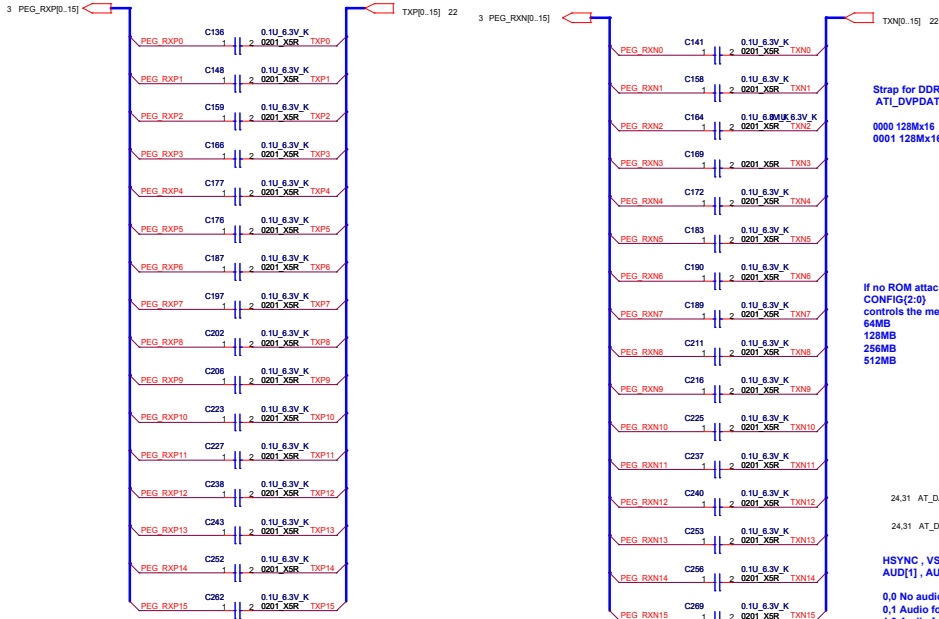
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B11	VSS1600	H5
B15	VSS1601	J24
B19	VSS1602	K43
B23	VSS1603	K47
B35	VSS1604	R7
B39	VSS1605	L14
B43	VSS1606	L18
B47	VSS1607	L2
B51	VSS1608	L22
B55	VSS1609	L32
B59	VSS1610	L36
B63	VSS1611	L40
B67	VSS1612	L44
B71	VSS1613	M12
B75	VSS1614	M16
B79	VSS1615	M20
B83	VSS1616	M24
B87	VSS1617	M28
B91	VSS1618	M32
B95	VSS1619	M36
B99	VSS1620	M40
C03	VSS1621	M44
C07	VSS1622	M48
C11	VSS1623	M52
C15	VSS1624	M56
C19	VSS1625	M60
C23	VSS1626	M64
C27	VSS1627	M68
C31	VSS1628	M72
C35	VSS1629	M76
C39	VSS1630	M80
C43	VSS1631	M84
C47	VSS1632	M88
C51	VSS1633	M92
C55	VSS1634	M96
C59	VSS1635	M100
C63	VSS1636	M104
C67	VSS1637	M108
C71	VSS1638	M112
C75	VSS1639	M116
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C83	VSS1641	M124
C87	VSS1642	M128
C91	VSS1643	M132
C95	VSS1644	M136
C99	VSS1645	M140
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D19	VSS1650	M160
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D55	VSS1659	M196
D59	VSS1660	M200
D63	VSS1661	M204
D67	VSS1662	M208
D71	VSS1663	M212
D75	VSS1664	M216
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D83	VSS1666	M224
D87	VSS1667	M228
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D95	VSS1669	M236
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F35	VSS1704	M376
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F43	VSS1706	M384
F47	VSS1707	M388
F51	VSS1708	M392
F55	VSS1709	M396
F59	VSS1710	M400
F63	VSS1711	M404
F67	VSS1712	M408
F71	VSS1713	M412
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F83	VSS1716	M424
F87	VSS1717	M428
F91	VSS1718	M432
F95	VSS1719	M436
F99	VSS1720	M440
G03	VSS1721	M444
G07	VSS1722	M448
G11	VSS1723	M452
G15	VSS1724	M456
G19	VSS1725	M460
G23	VSS1726	M464
G27	VSS1727	M468
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G71	VSS1738	M512
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G83	VSS1741	M524
G87	VSS1742	M528
G91	VSS1743	M532
G95	VSS1744	M536
G99	VSS1745	M540
H03	VSS1746	M544
H07	VSS1747	M548
H11	VSS1748	M552
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H71	VSS1763	M612
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H91	VSS1768	M632
H95	VSS1769	M636
H99	VSS1770	M640
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I07	VSS1772	M648
I11	VSS1773	M652
I15	VSS1774	M656
I19	VSS1775	M660
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I31	VSS1778	M672
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J83	VSS1816	M824
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J91	VSS1818	M832
J95	VSS1819	M836
J99	VSS1820	M840
K03	VSS1821	M844
K07	VSS1822	M848
K11	VSS1823	M852
K15	VSS1824	M856
K19	VSS1825	M860
K23	VSS1826	M864
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K31	VSS1828	M872
K35	VSS1829	M876
K39	VSS1830	M880
K43	VSS1831	M884
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K71	VSS1838	M912
K75	VSS1839	M916
K79	VSS1840	M920
K83	VSS1841	M924
K87	VSS1842	M928
K91	VSS1843	M932
K95	VSS1844	M936
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L63	VSS1861	M1004
L67	VSS1862	M1008
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M27	VSS1877	M1068
M31	VSS1878	M1072
M35	VSS1879	M1076
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M43	VSS1881	M1084
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M79	VSS1890	M1120
M83	VSS1891	M1124
M87	VSS1892	M1128
M91	VSS1893	M1132
M95	VSS1894	M1136
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N71	VSS1913	M1212
N75	VSS1914	M1216
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N95	VSS1919	M1236
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O35	VSS1929	M1276
O39	VSS1930	M1280
O43	VSS1931	M1284
O47	VSS1932	M1288
O51	VSS1933	M1292
O55	VSS1934	M1296
O59	VSS1935	M1300
O63	VSS1936	M1304
O67	VSS1937	M1308
O71	VSS1938	M1312
O75	VSS1939	M1316
O79	VSS1940	M1320
O83	VSS1941	M1324
O87	VSS1942	M1328
O91	VSS1943	M1332
O95	VSS1944	M1336
O99	VSS1945	M1340
P03	VSS1946	M1344
P07	VSS1947	M1348
P11	VSS1948	M1352
P15	VSS1949	M1356
P19	VSS1950	M1360
P23	VSS1951	M1364
P27	VSS1952	M1368
P31	VSS1953	M1372
P35	VSS1954	M1376
P39	VSS1955	M1380
P43	VSS1956	M1384
P47	VSS1957	M1388
P51	VSS1958	M1392
P55	VSS1959	M1396
P59	VSS1960	M1400
P63	VSS1961	M1404
P67	VSS1962	M1408
P71	VSS1963	M1412
P75	VSS1964	M1416
P79	VSS1965	M1420
P83	VSS1966	M1424
P87	VSS1967	M1428
P91	VSS1968	M1432
P95	VSS1969	M1436
P99	VSS1970	M1440
Q03	VSS1971	M1444
Q07	VSS1972	M1448
Q11	VSS1973	M1452
Q15	VSS1974	M1456
Q19	VSS1975	M1460
Q23	VSS1976	M1464
Q27	VSS1977	M1468
Q31	VSS1978	M1472
Q35	VSS1979	M1476
Q39	VSS1980	M1480
Q43	VSS1981	M1484
Q47	VSS1982	M1488
Q51	VSS1983	M1492
Q55	VSS1984	M1496
Q59	VSS1985	M1500
Q63	VSS1986	M1504
Q67	VSS1987	M1508
Q71	VSS1988	M1512
Q75	VSS1989	M1516
Q79	VSS1990	M1520
Q83	VSS1991	M1524
Q87	VSS1992	M1528
Q91	VSS1993	M1532
Q95	VSS1994	M1536
Q99	VSS1995	M1540
R03	VSS1996	M1544
R07	VSS1997	M1548
R11	VSS1998	M1552
R15	VSS1999	M1556
R19	VSS2000	M1560
R23	VSS2001	M1564
R27	VSS2002	M1568
R31	VSS2003	M1572
R35	VSS2004	M1576
R39	VSS2005	M1580
R43	VSS2	







	Mount	NC
Samsung 1GB K4W2G1646B-HC12 P/N: 13-K4W2G16-3000	R432 (0), R105 (0) R433 (0), R94 (1)	R430 (1), R104 (1) R431 (1), R95 (0)
Hynix 1GB H5TQ2G63BFR-12C P/N: 13-H5T02G6-3000	R432 (0), R105 (0) R433 (0), R95 (0)	R430 (1), R104 (1) R431 (1), R94 (1)



Strap for DDR3
ATL_DVPPDATA[1:0 :21:20]
0000 128Mx16 Hynix 1GB
0001 128Mx16 Samsung 1GB

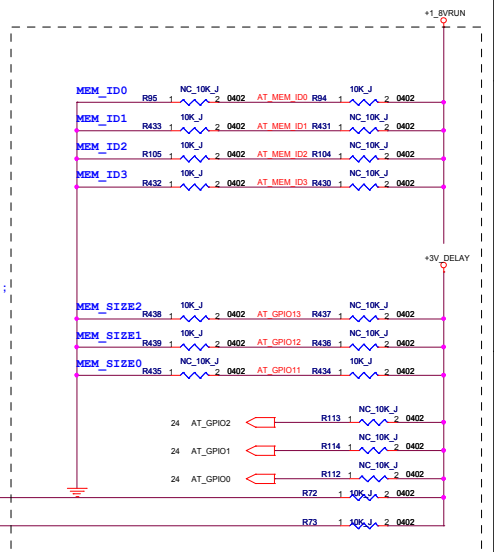
If no ROM attached, GPIO[13:12:11] ;
CONFIG(2:0)
controls the memory aperture size.
64MB 010
128MB 000
256MB 001
512MB 001

24.31 AT_DACA_HSYNC
24.31 AT_DACA_VSYNC

HSYNC, VSYNC
AUD[1], AUD[0]
0,0 No audio function
0,1 Audio for DisplayPort and HDMI if dongle is detected
1,0 Audio for DisplayPort only
1,1 Audio for both DisplayPort and HDMI

24 AT_MEM_ID0
24 AT_MEM_ID1
24 AT_MEM_ID2
24 AT_MEM_ID3

24 AT_GPIO11
24 AT_GPIO12
24 AT_GPIO13

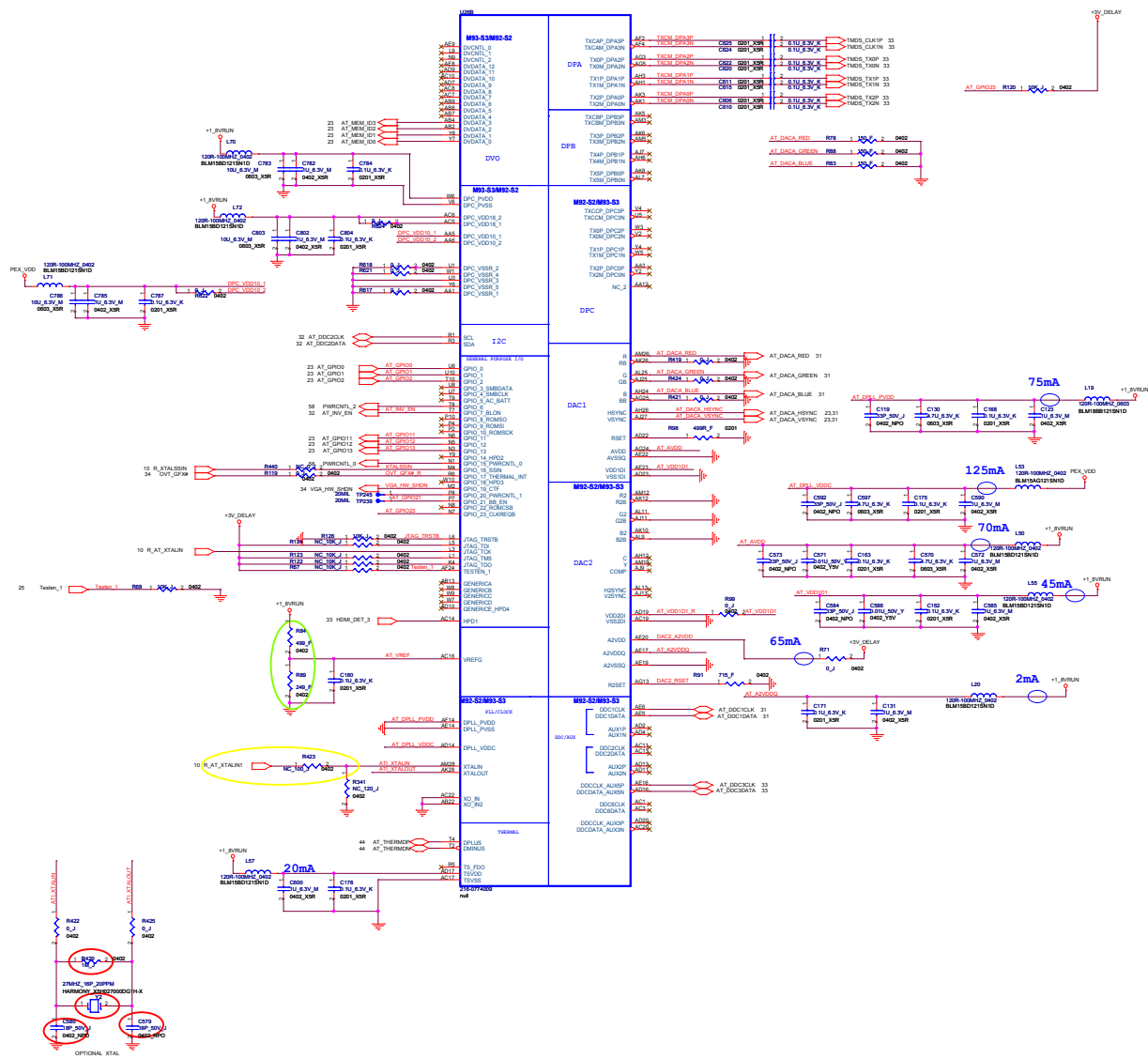


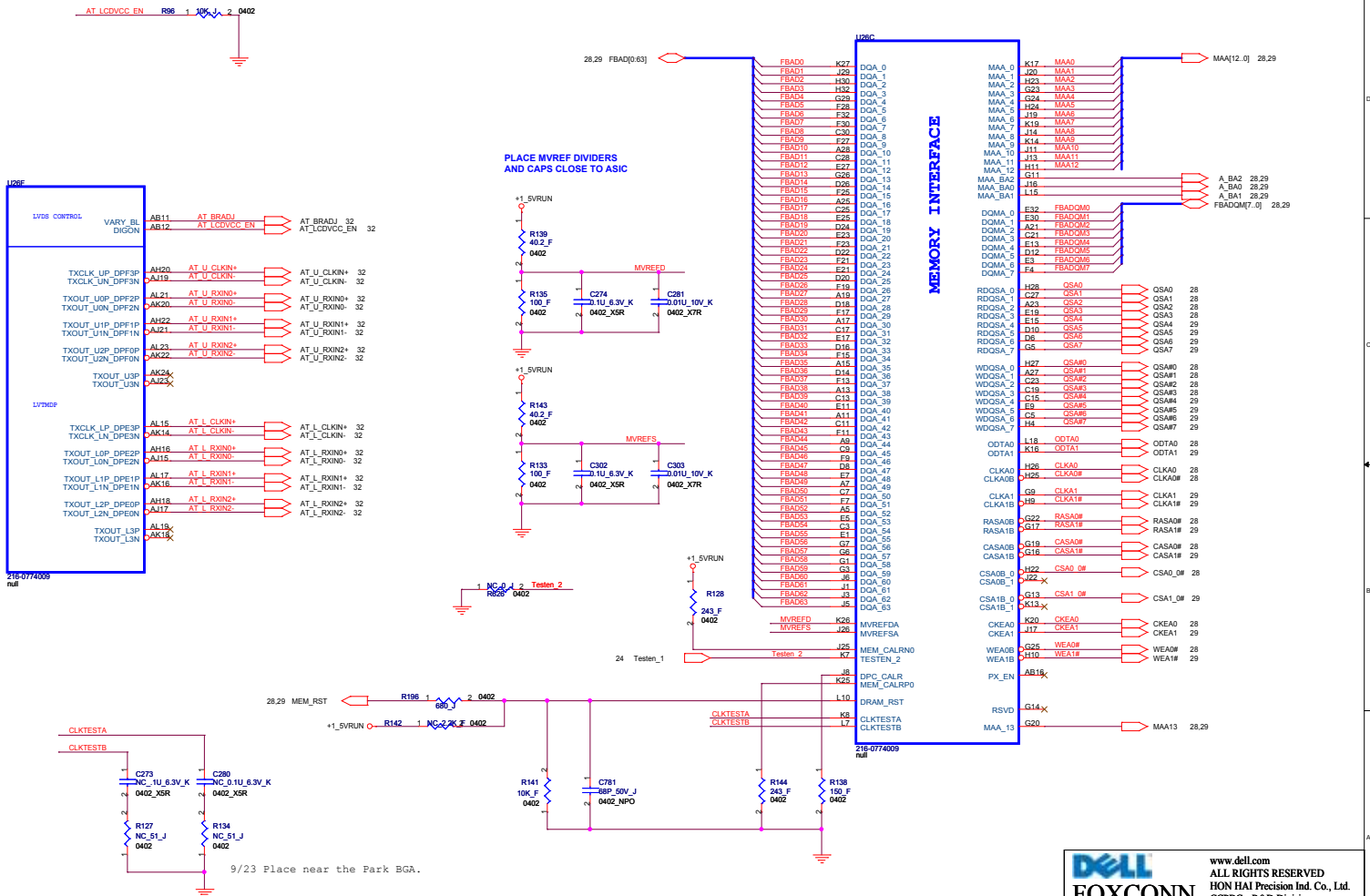
GPIO 0 : PCIE FULL TX OUTPUT SWING
GPIO 1 : PCIE TRANSMITTER DE-EMPHASIS ENABLED
GPIO 2 : PCIE GEN2 ENABLED

FOXCONN

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Title VGA (STRAP) 2/6	
Size A3	Document Number H802_A00
Date Wednesday, December 30, 2009	Sheet 23 of 95

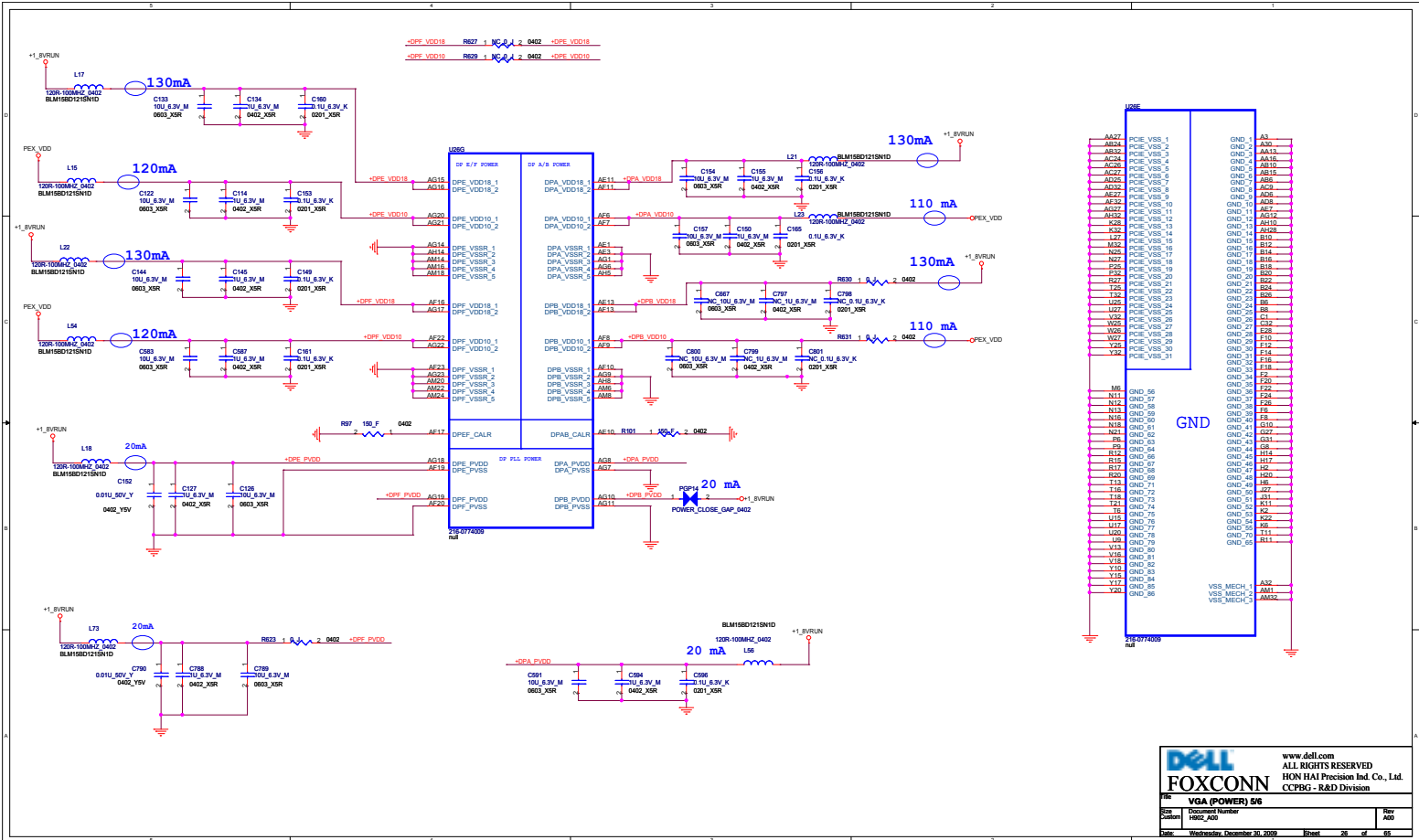


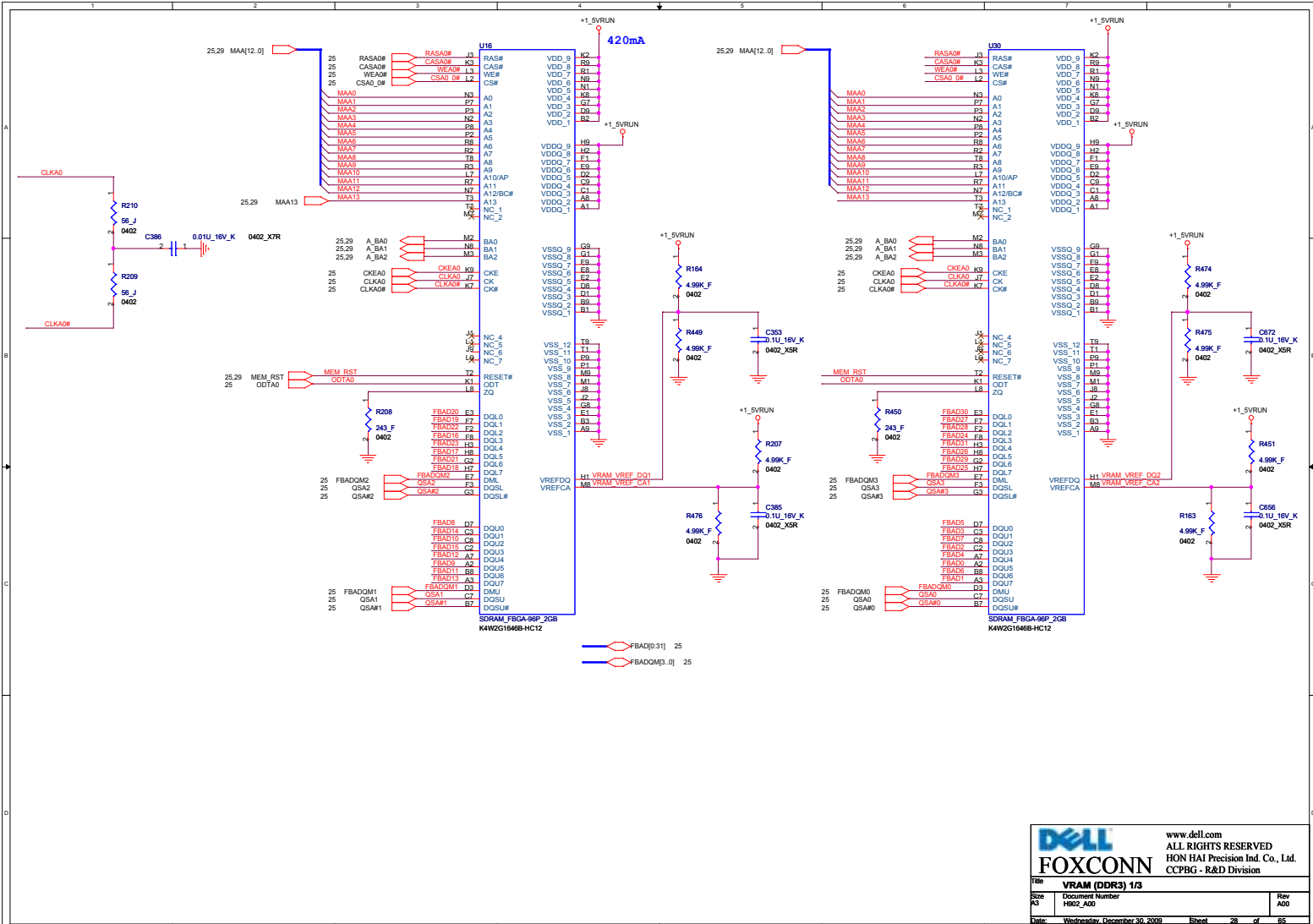


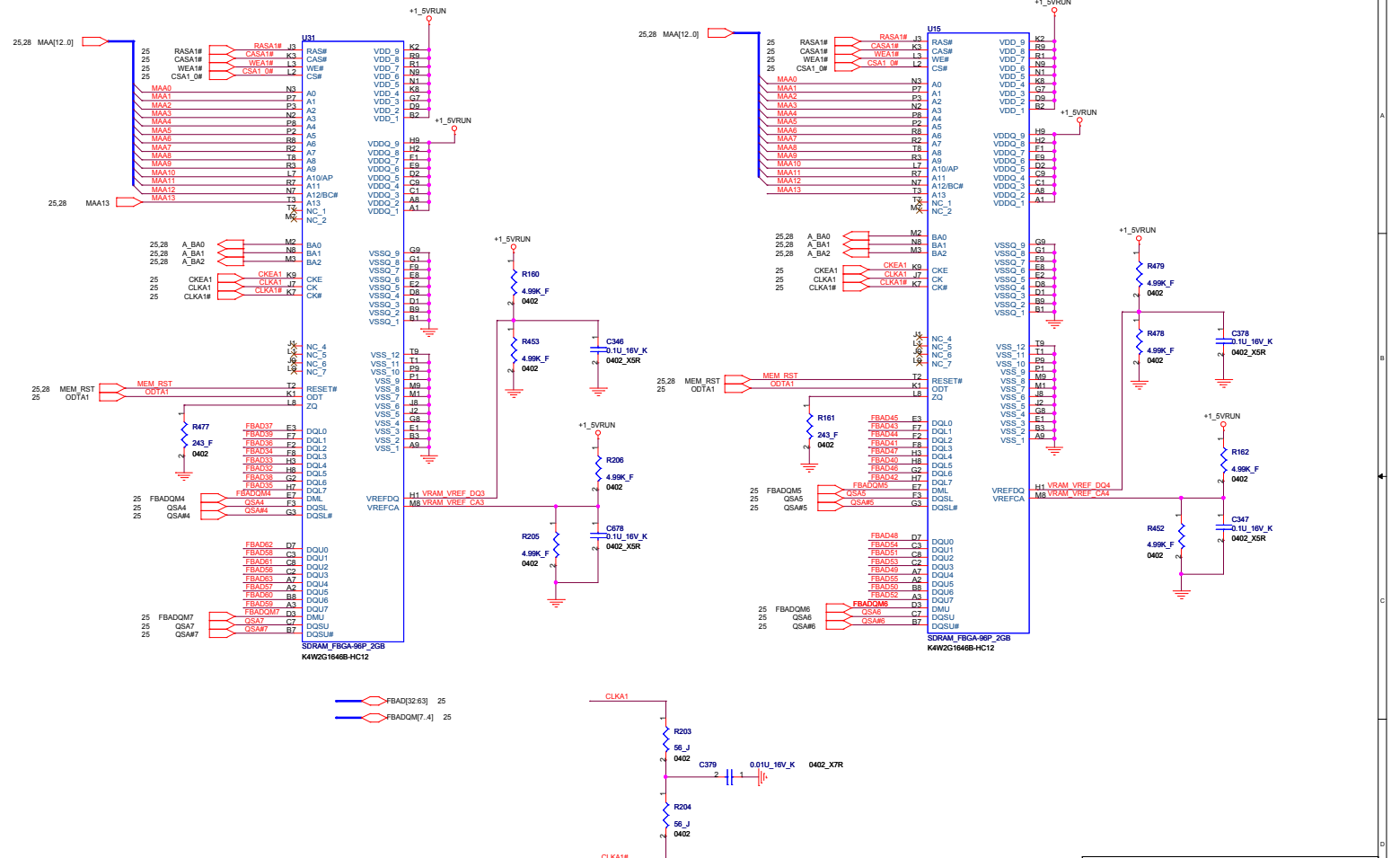
FOXCONN

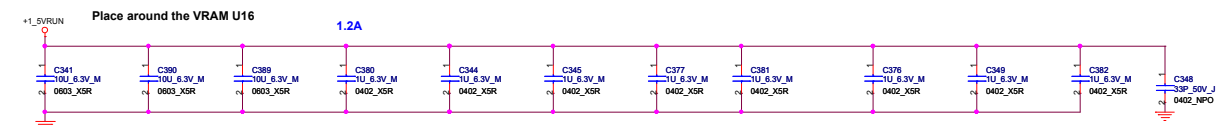
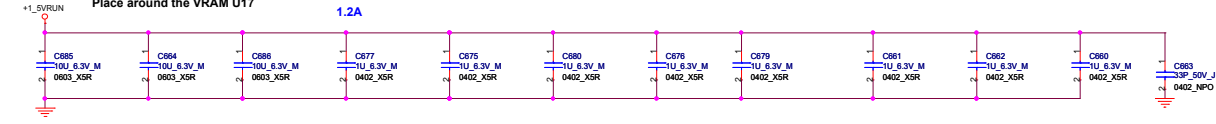
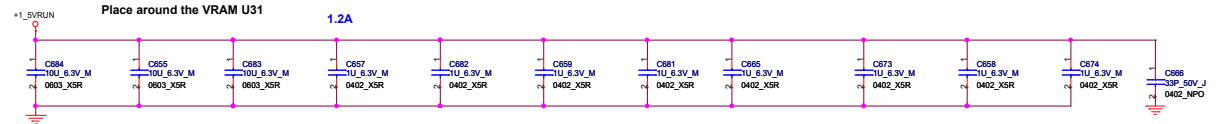
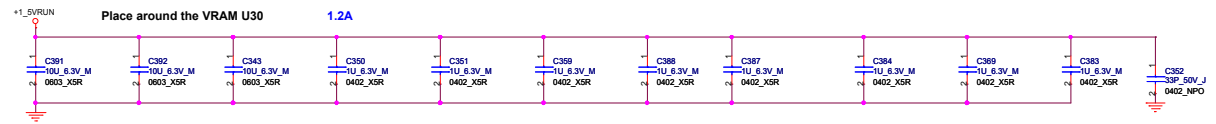
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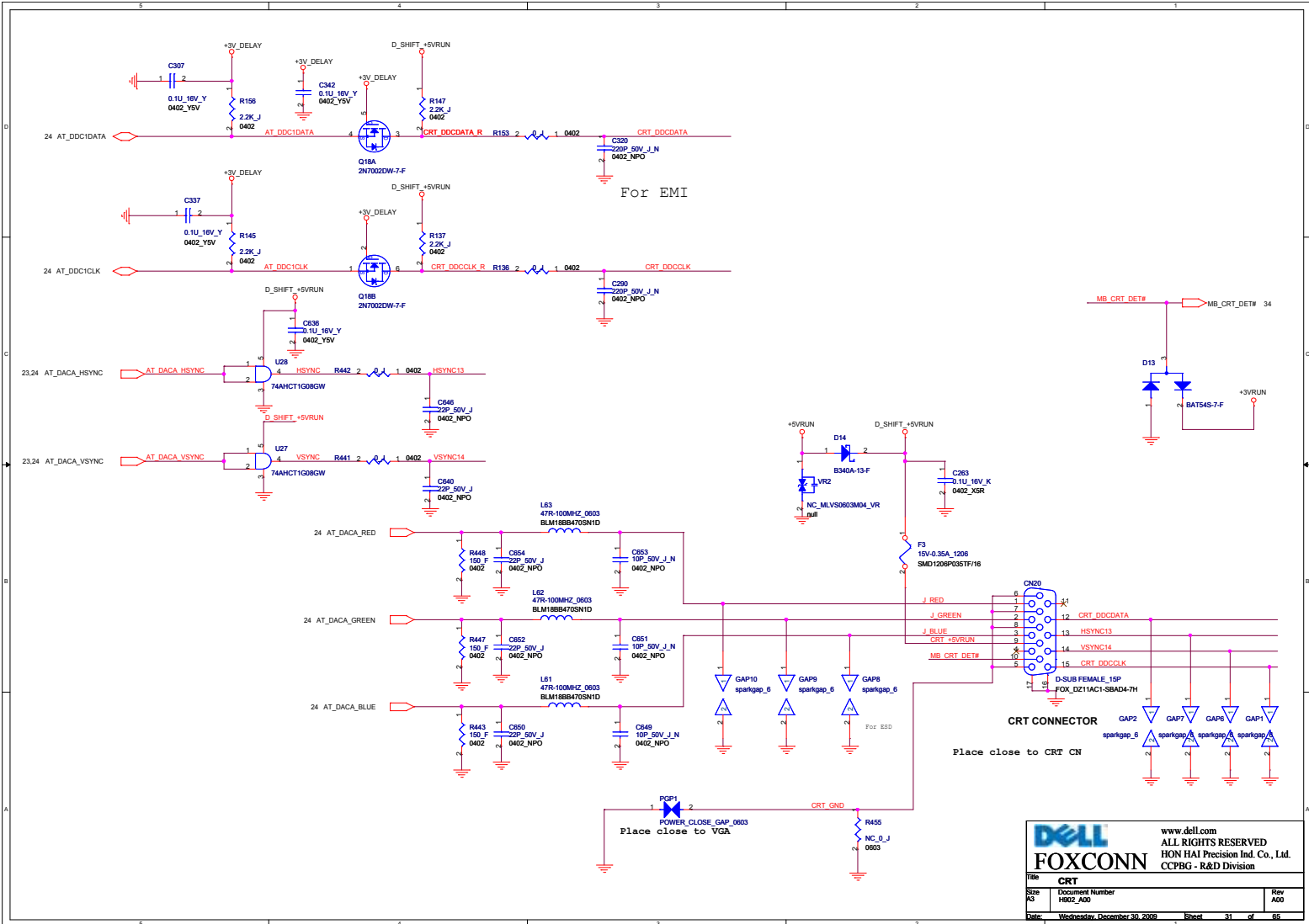
VGA (DDR3) 4/6		
Rev	Document Number	Rev
A3	H802_A00	A00
Date	Wednesday, December 30, 2009	Sheet 26 of 85



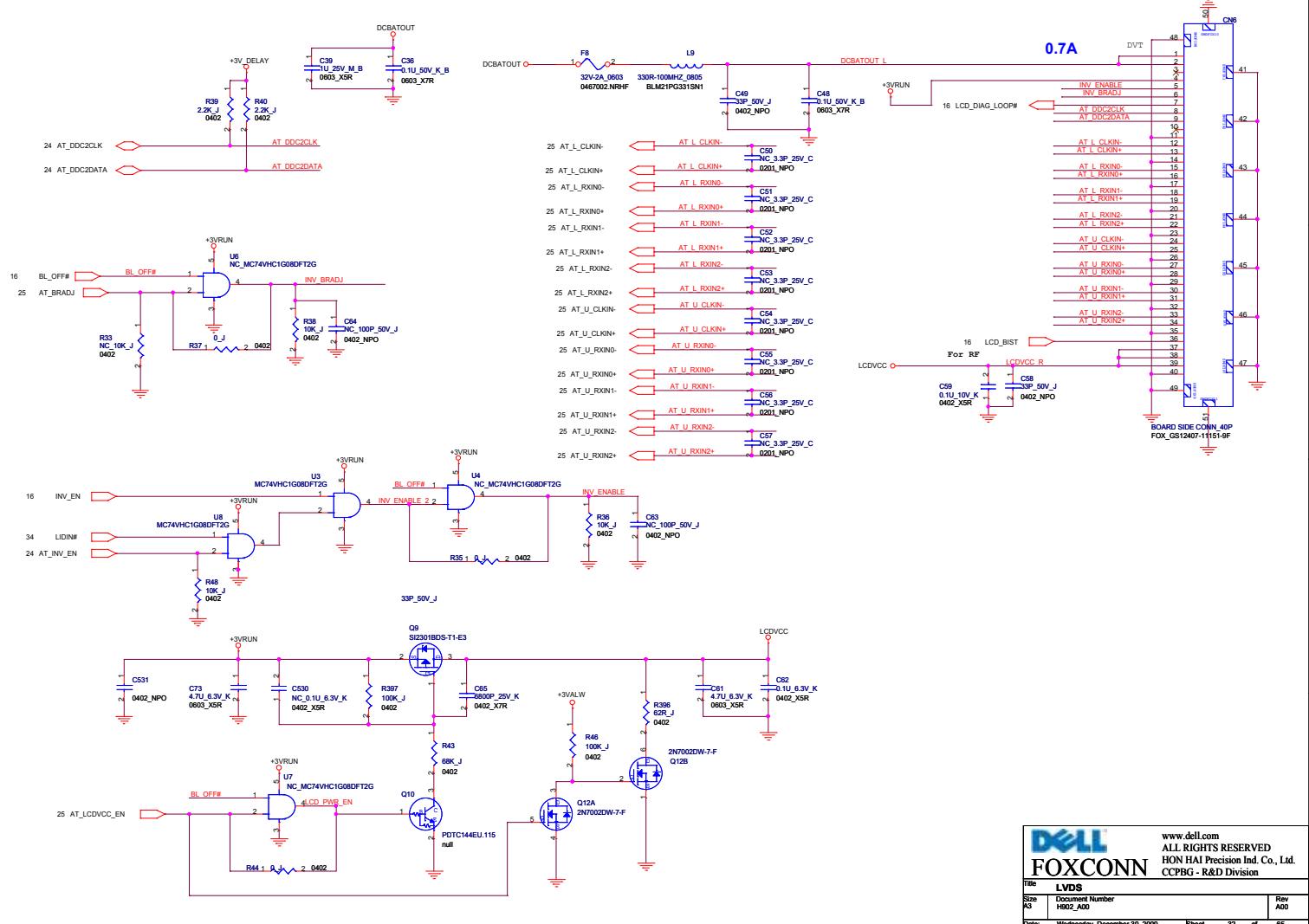






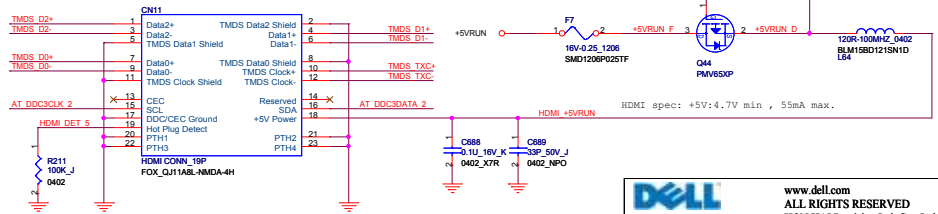
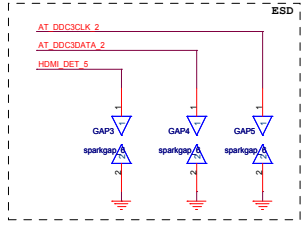
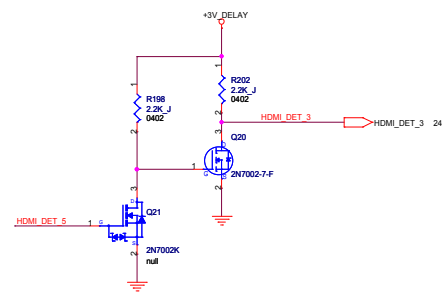


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		CCPBG - R&D Division	
Title CRT			
Size A3	Document Number H802_A00	Rev A00	
Date:	Wednesday, December 30, 2009	Sheet	31 of 85

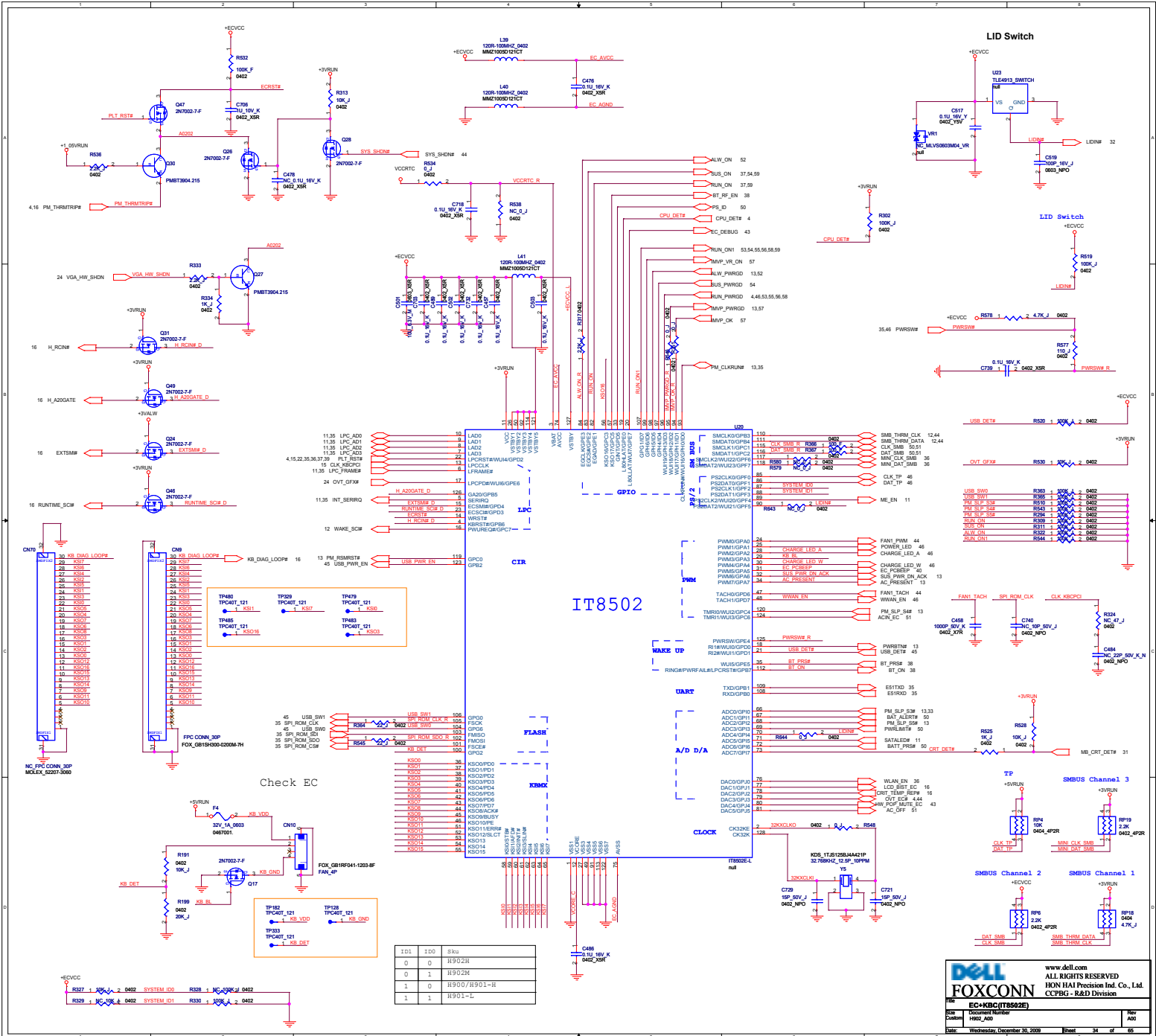


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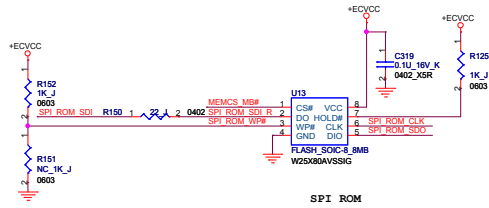
Title: LVDS		
Size: A3	Document Number: H802_A00	Rev: A00
Date: Wednesday, December 30, 2009		
Sheet: 32	of 85	



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FOXCONN			
Title HDMI			
Size A3	Document Number H902_A00	Rev A00	
Date: Wednesday, December 30, 2009		Sheet 33	of 65

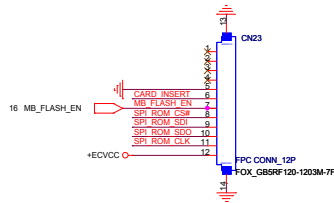


34 SPI_ROM_SDI
34 SPI_ROM_SDO
34 SPI_ROM_CLK

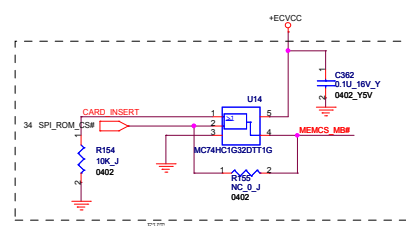


SPI ROM

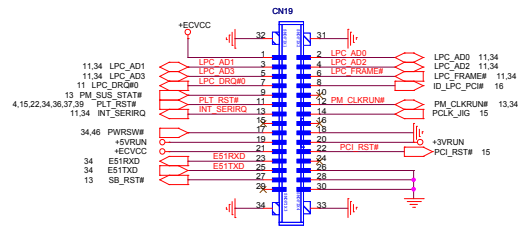
Discuss with SW about BIOS Capacity



EXTERNAL SPI ROM INTERFACE



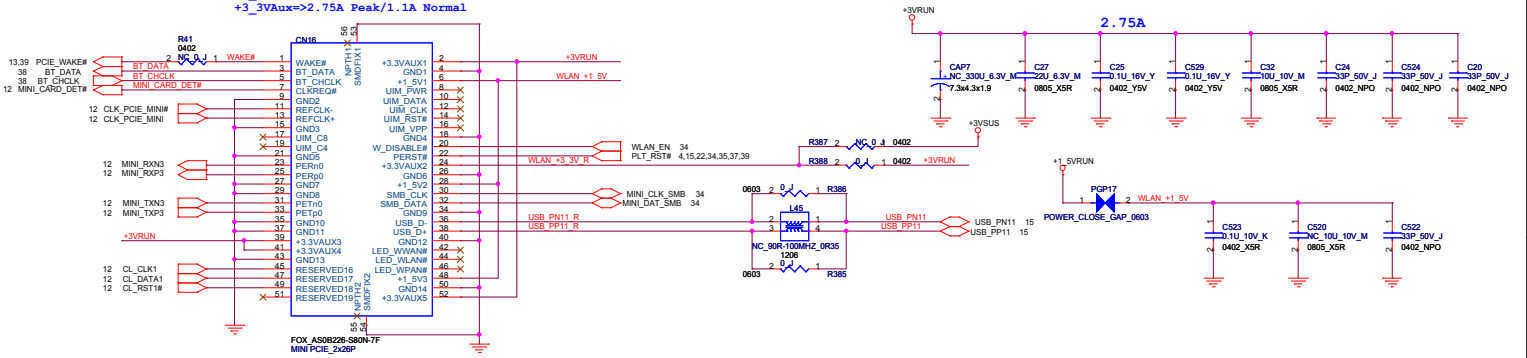
When MP, change U11 no stuff, R233 stuff



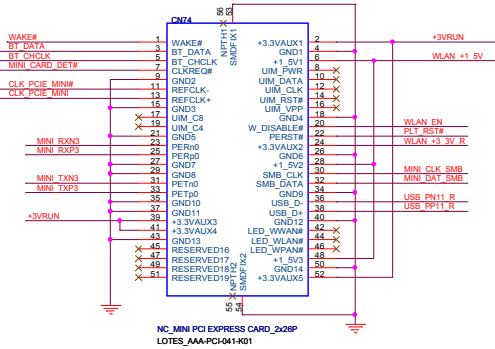
JIG-120

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Title: Flash ROM/SPI			
Size: A3	Document Number: H802_A00	Rev: A00	
Date: Wednesday, December 30, 2009 Sheet 36 of 95			

+1.5V=>0.5A Peak/0.375A Normal
+3.3Vaux=>2.75A Peak/1.1A Normal



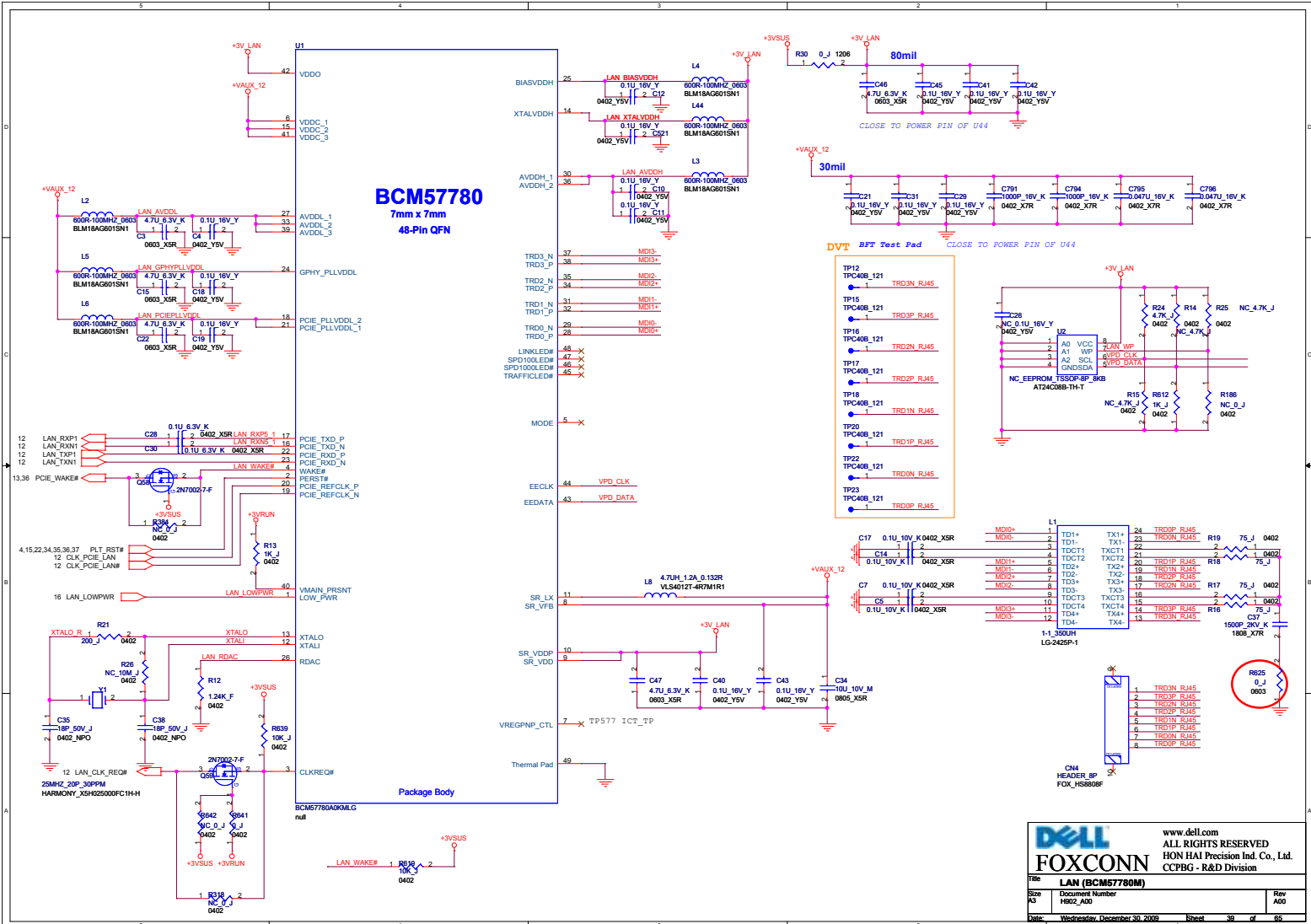
Half Mini Card for WLAN or WiMAX

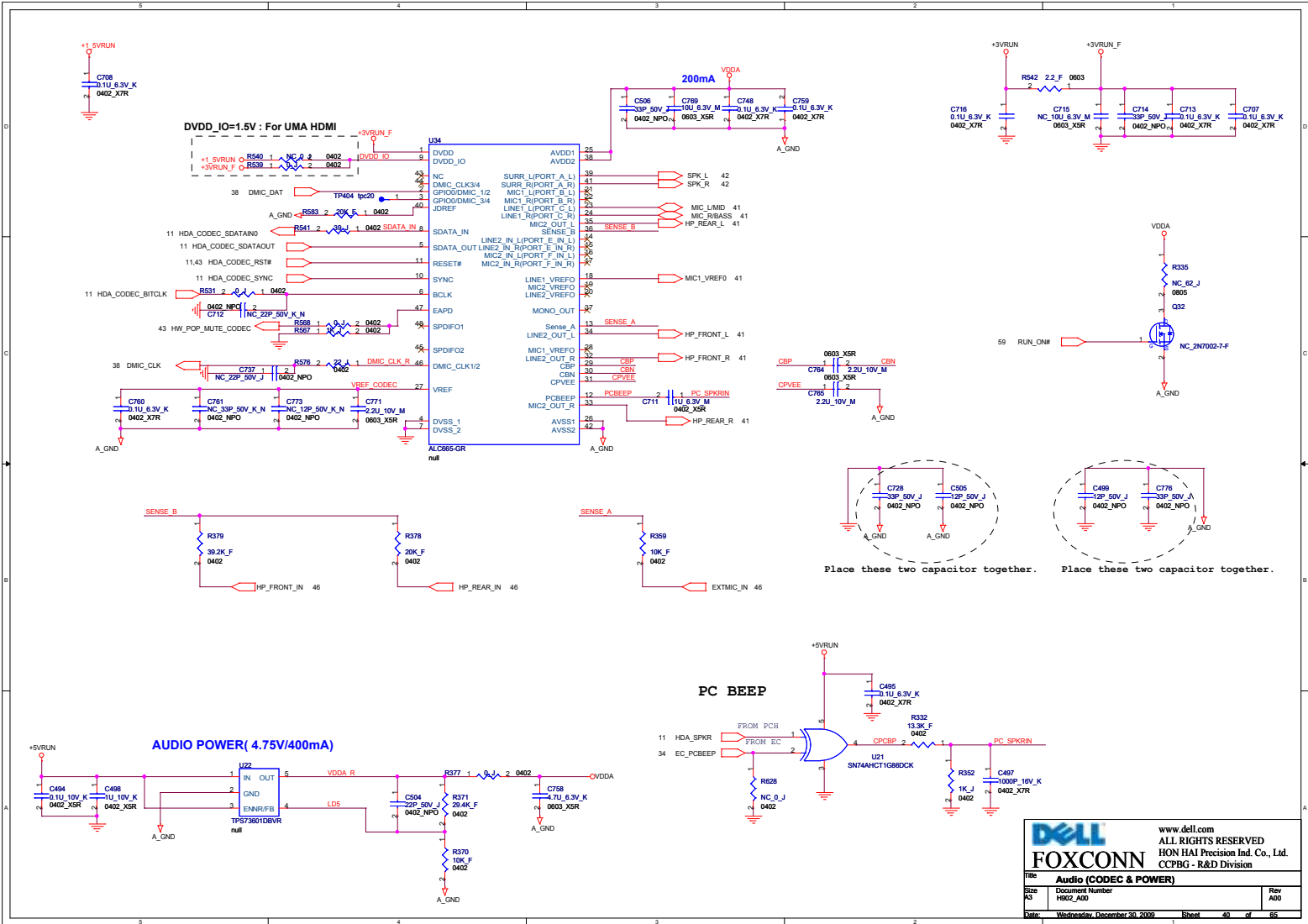


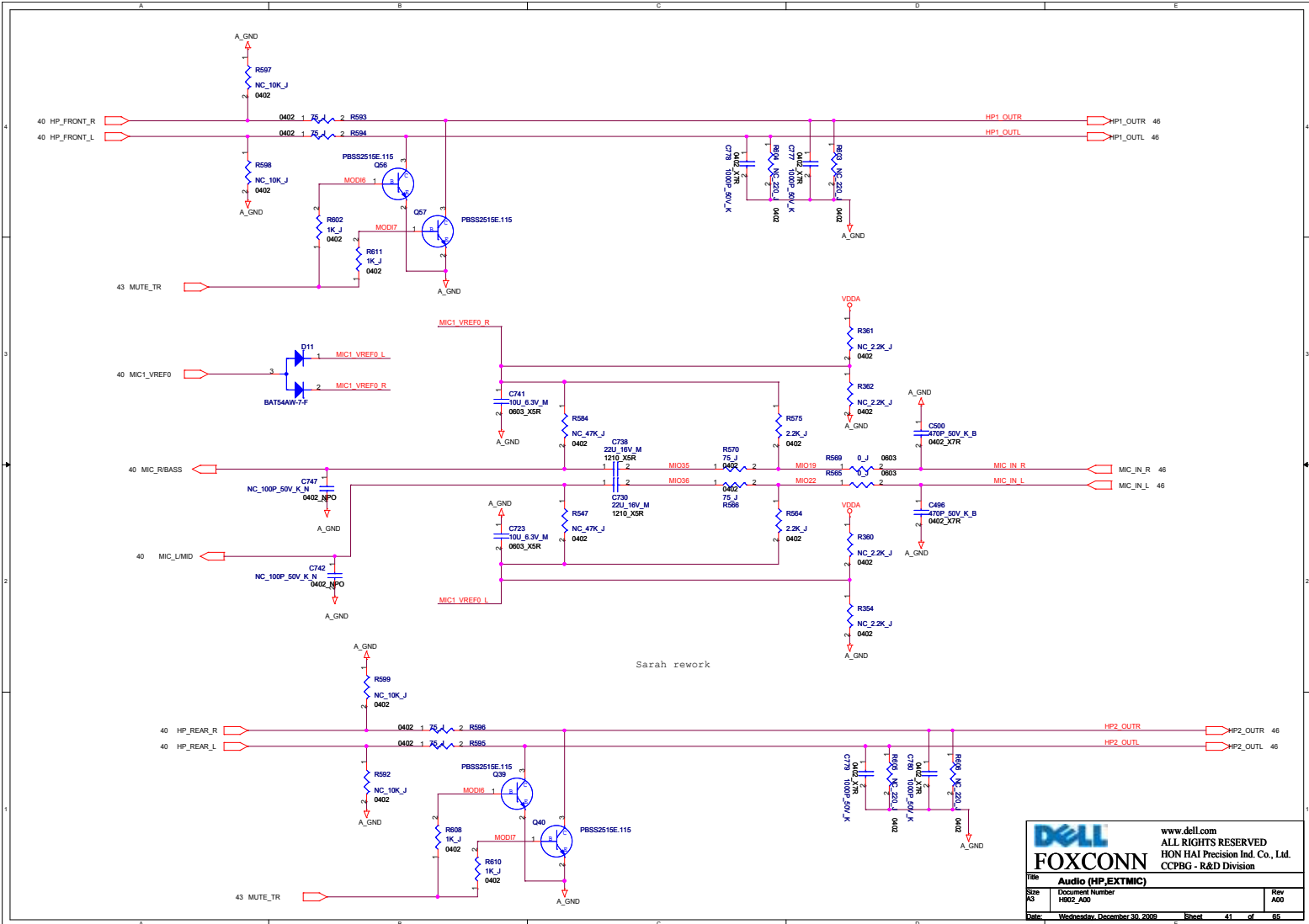


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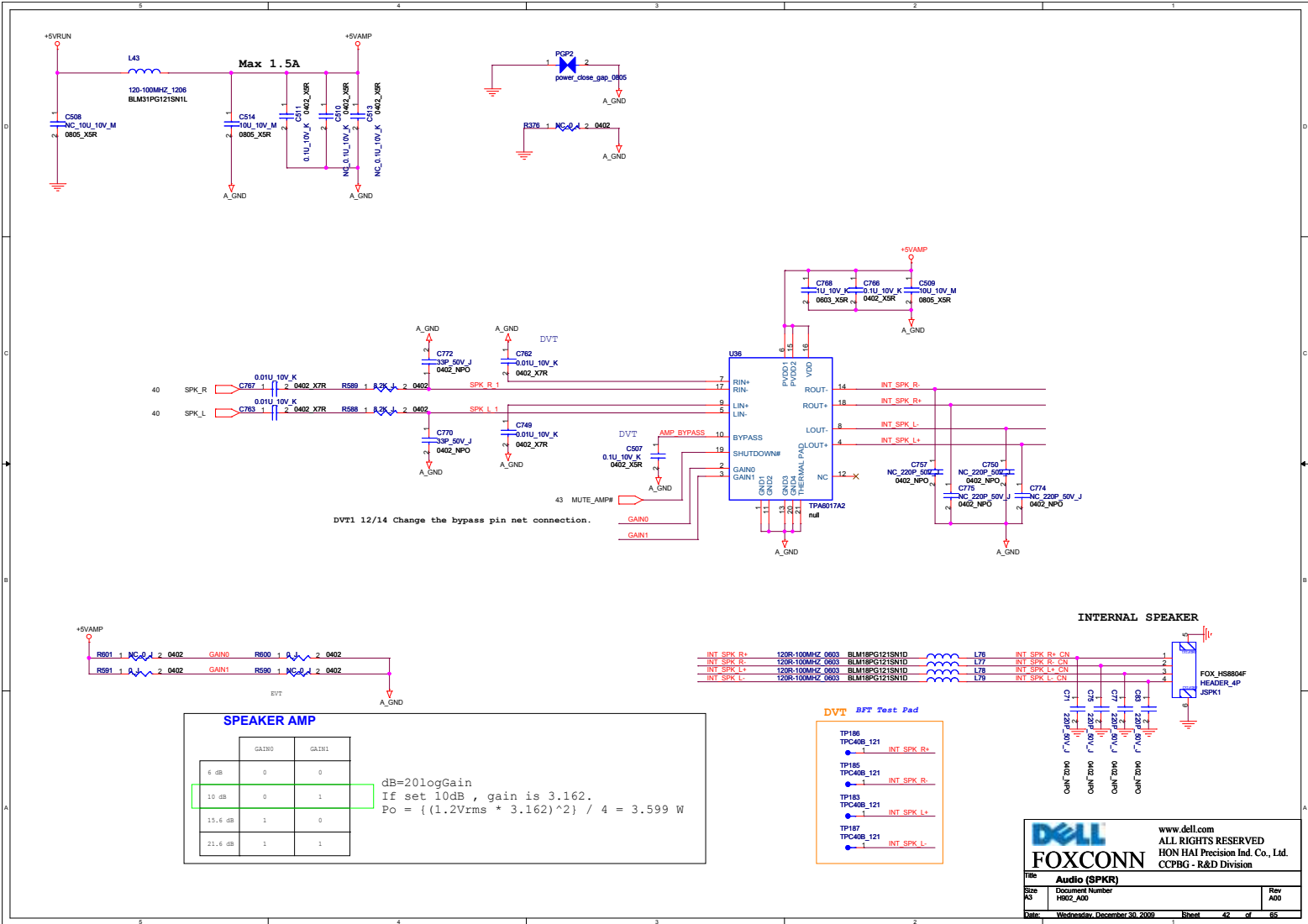
Title: WLAN/Wimax Mini-PCIE Card		
Size: A3	Document Number: H802_A00	Rev: A00
Date: Wednesday, December 30, 2009 Sheet 38 of 85		

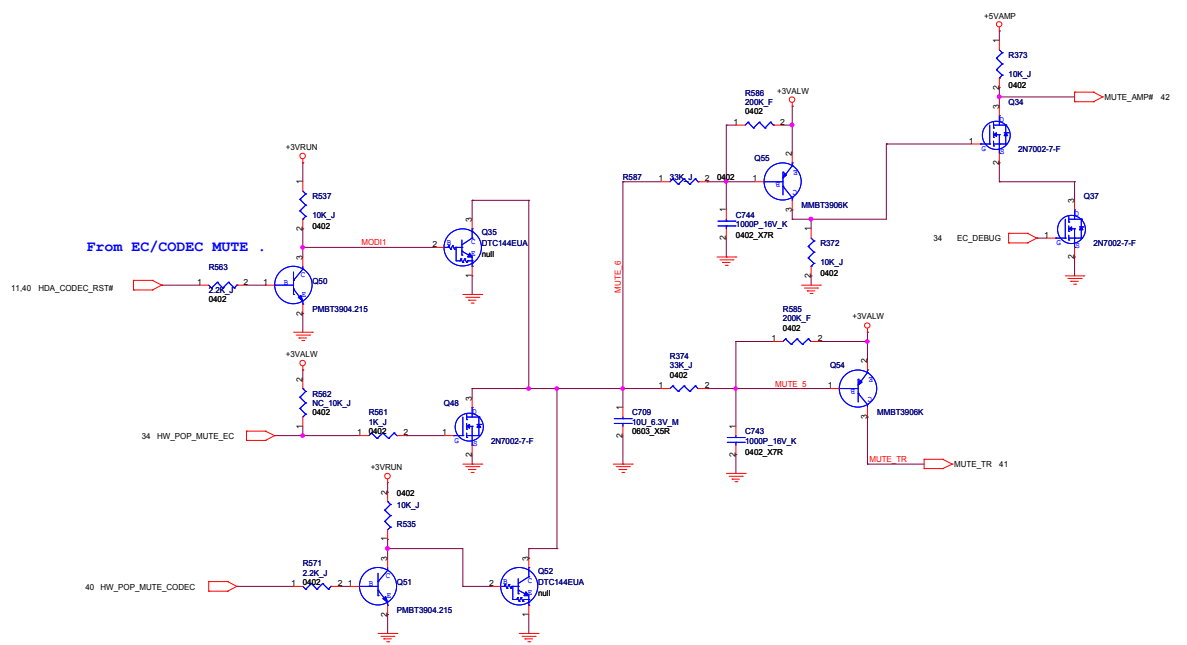




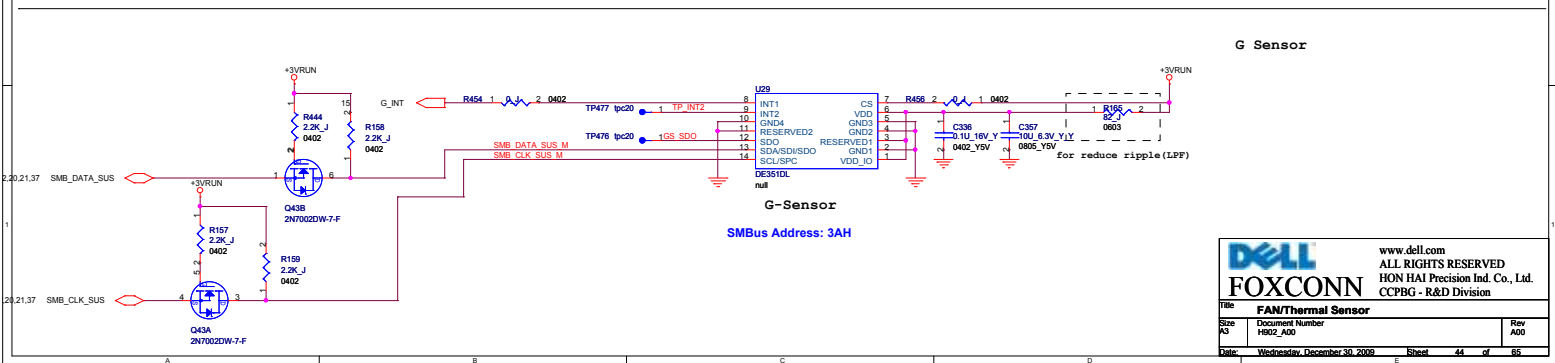
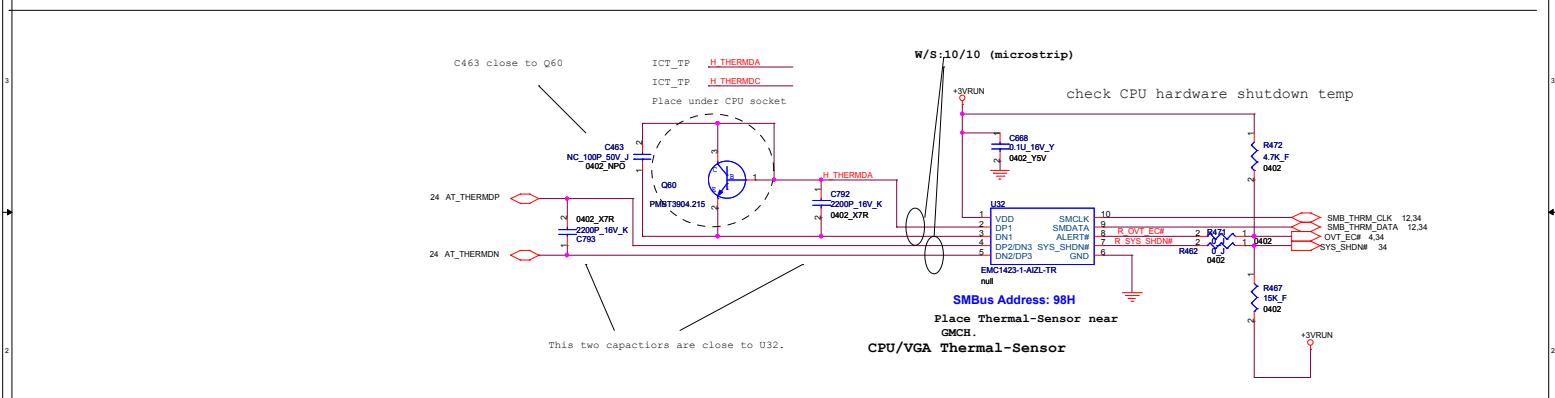
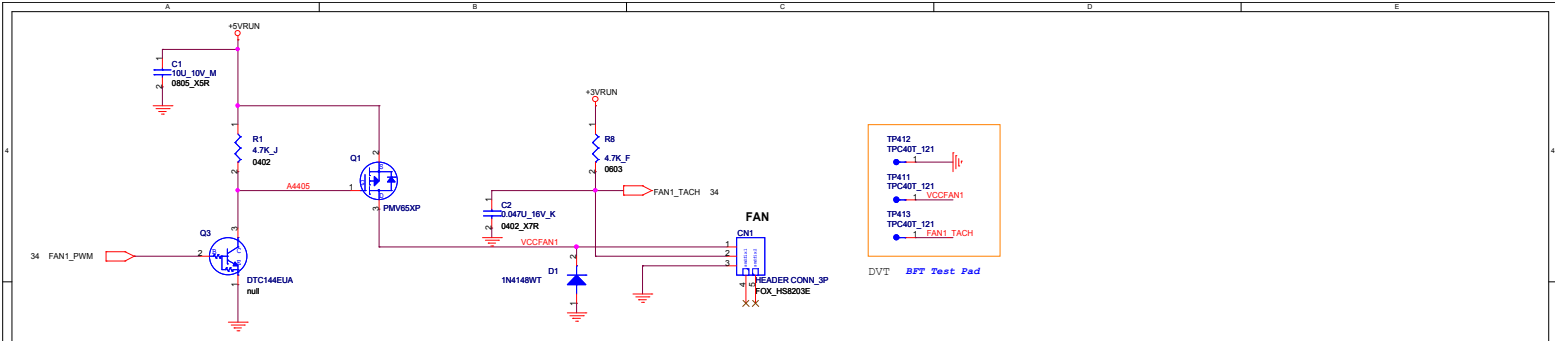


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Title: Audio (HP_EXTMIC)		
Size: A3	Document Number: H802_A00	Rev: A00
Date: Wednesday, December 30, 2009 Sheet: 41 of 95		

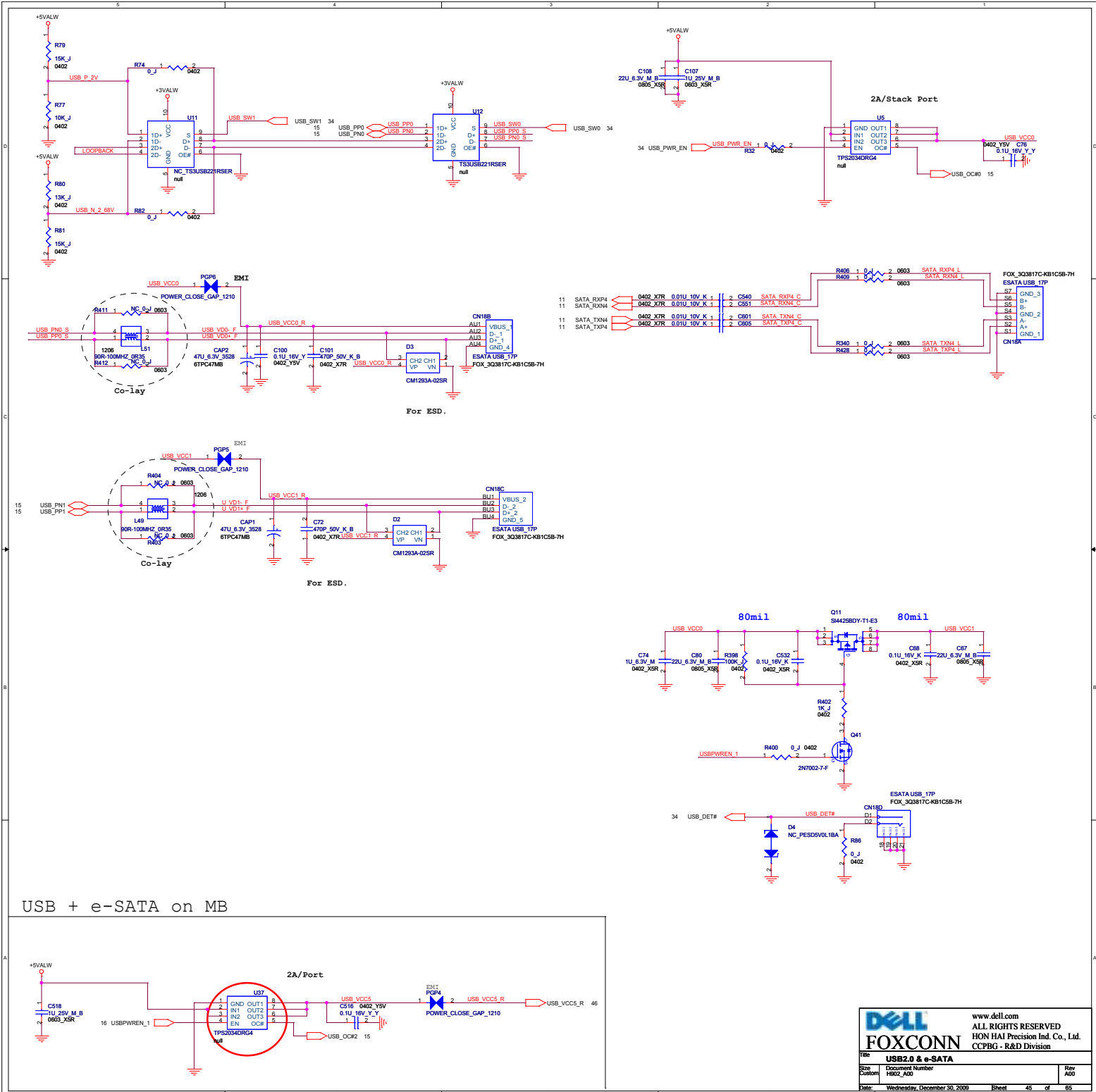


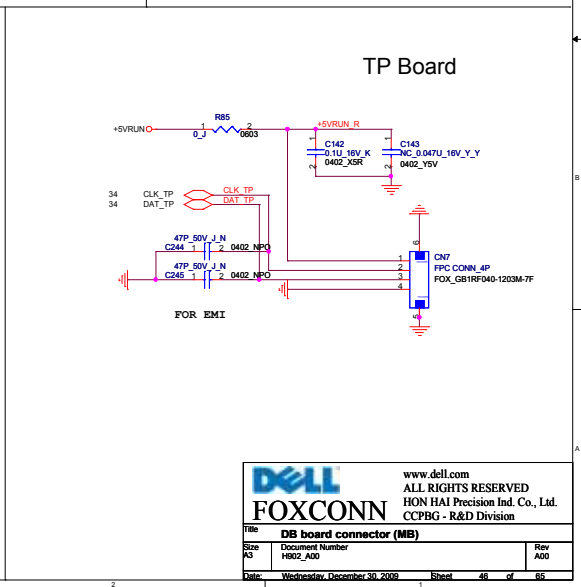
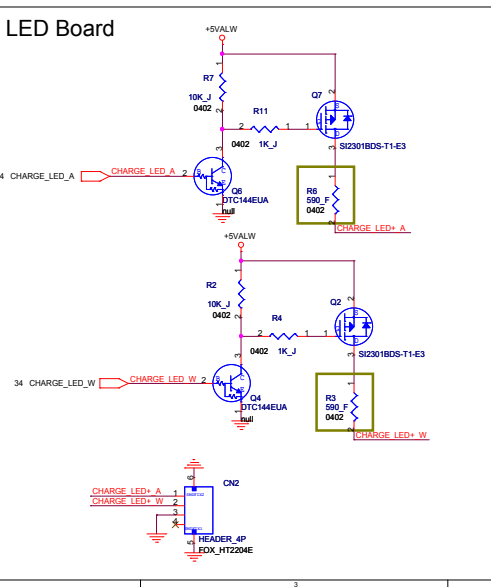
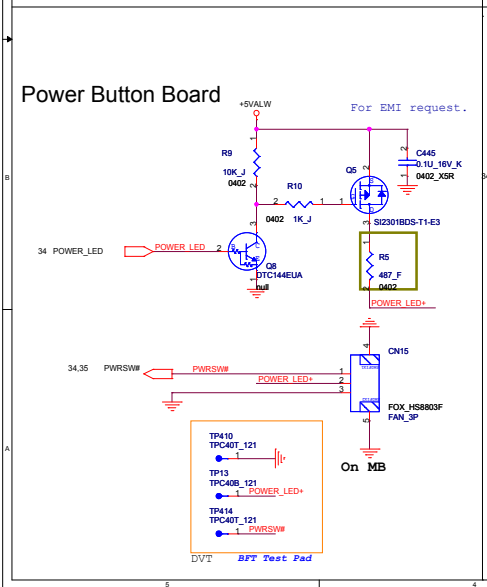
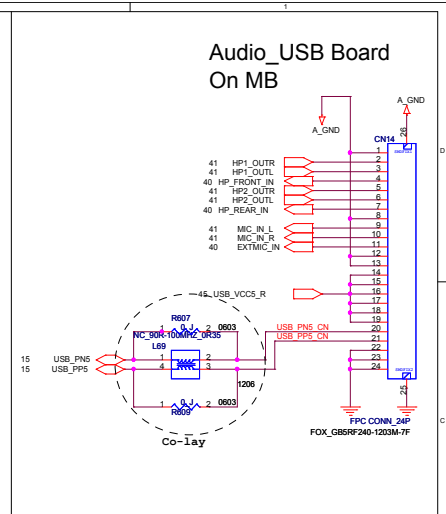
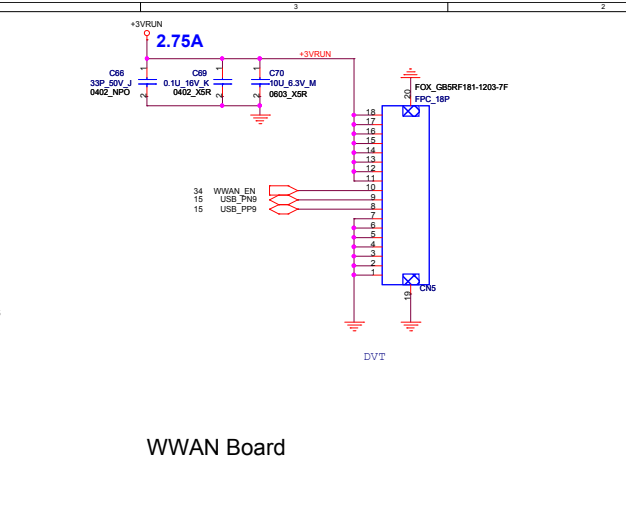
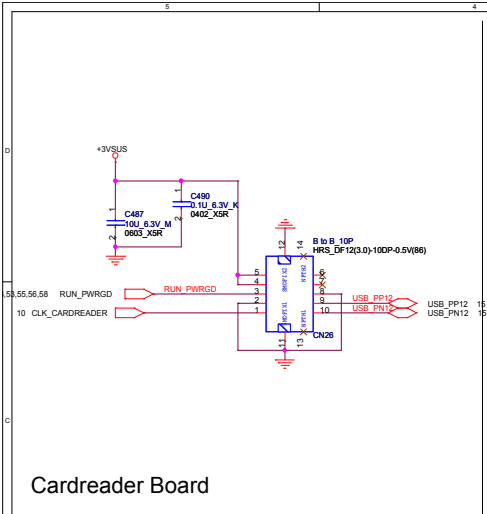


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Title: Audio (MUTE)			
Size: A3	Document Number: H802_A00	Rev: A00	
Date: Wednesday, December 30, 2009	Sheet: 43	of 95	



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FOXCONN			
Title	FAN/Thermal Sensor		
Size	Document Number		Rev
A3	H802_A00		A00
Date:	Wednesday, December 30, 2009	Sheet	44 of 95

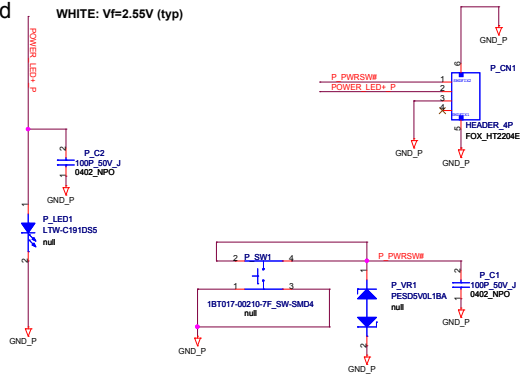




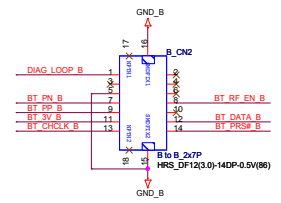
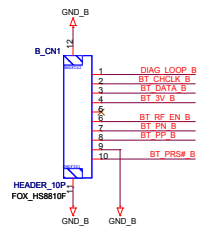
		www.dell.com	
FOXCONN		ALL RIGHTS RESERVED	
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		CCPBG - R&D Division	
Title DB board connector (MB)			
Size	Document Number	Rev	
A3	H802_A00	A00	
Date: Wednesday, December 30, 2009 Sheet 46 of 85			

Power Button Board

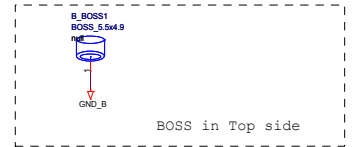
WHITE: Vf=2.55V (typ)



POWER BUTTON

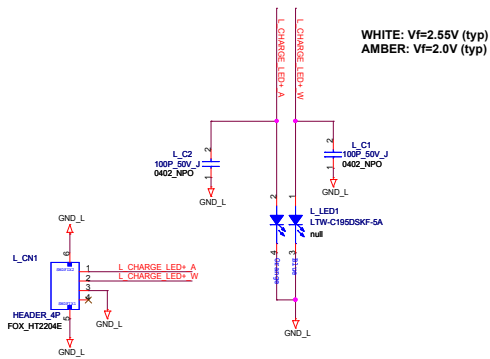


Bluetooth CONN.



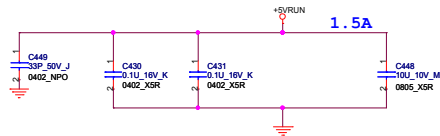
Bluetooth Board

LED Board

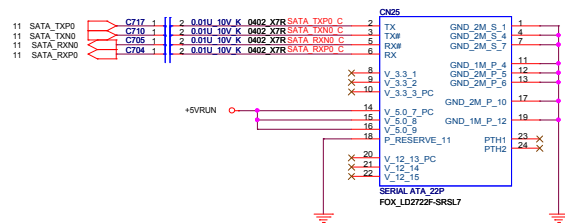


WHITE: Vf=2.55V (typ)
AMBER: Vf=2.0V (typ)

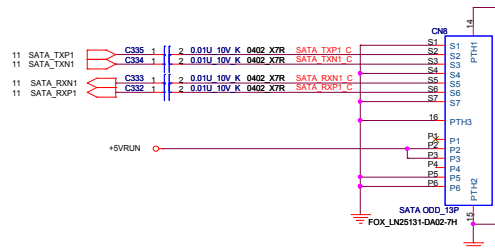
		www.dell.com ALL RIGHTS RESERVED HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
FOXCONN			
Title PWR_BTn&LED&BT DB			
Size A3	Document Number H802_A00	Rev A00	
Date:	Wednesday, December 30, 2009	Sheet	47 of 65



SATA HDD CONN

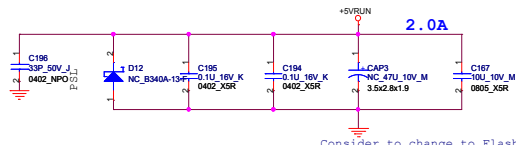


SATA ODD CONN



ODD CON ADAPTER

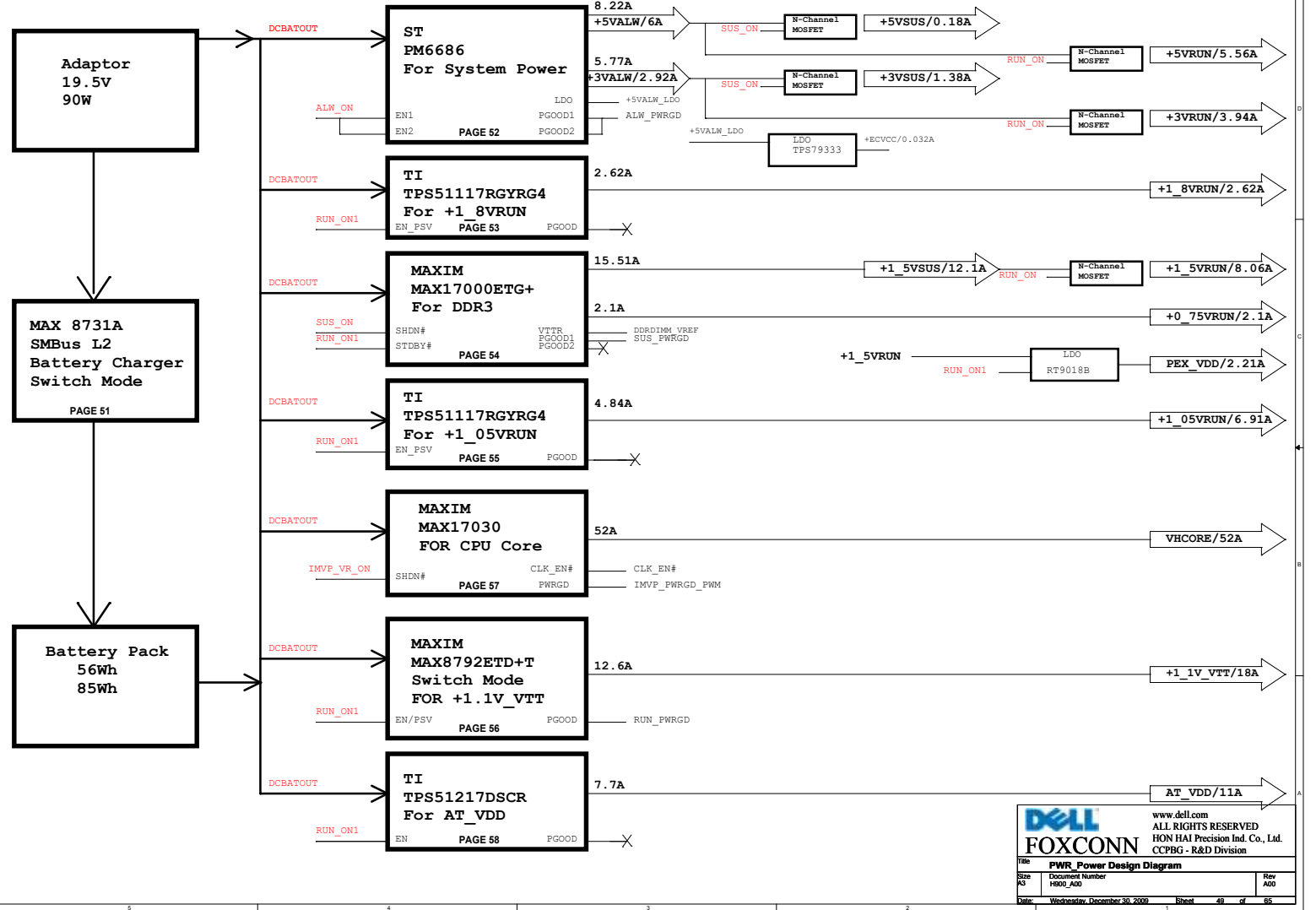
Add CN68 need 2N-0013009-FKG0 in BOM

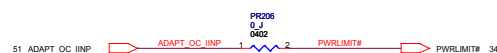
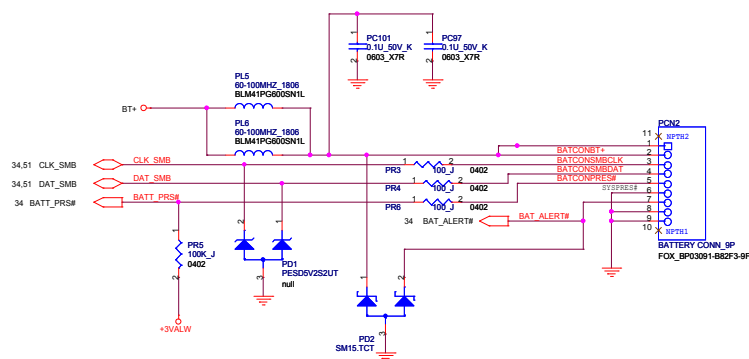
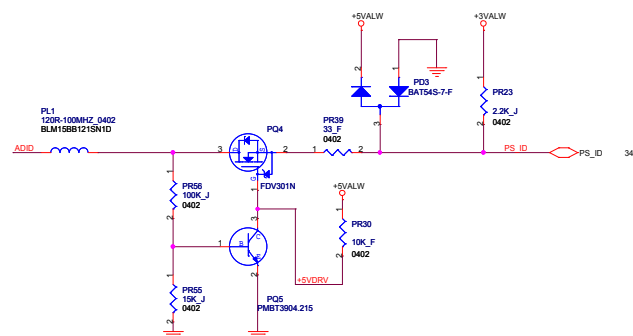


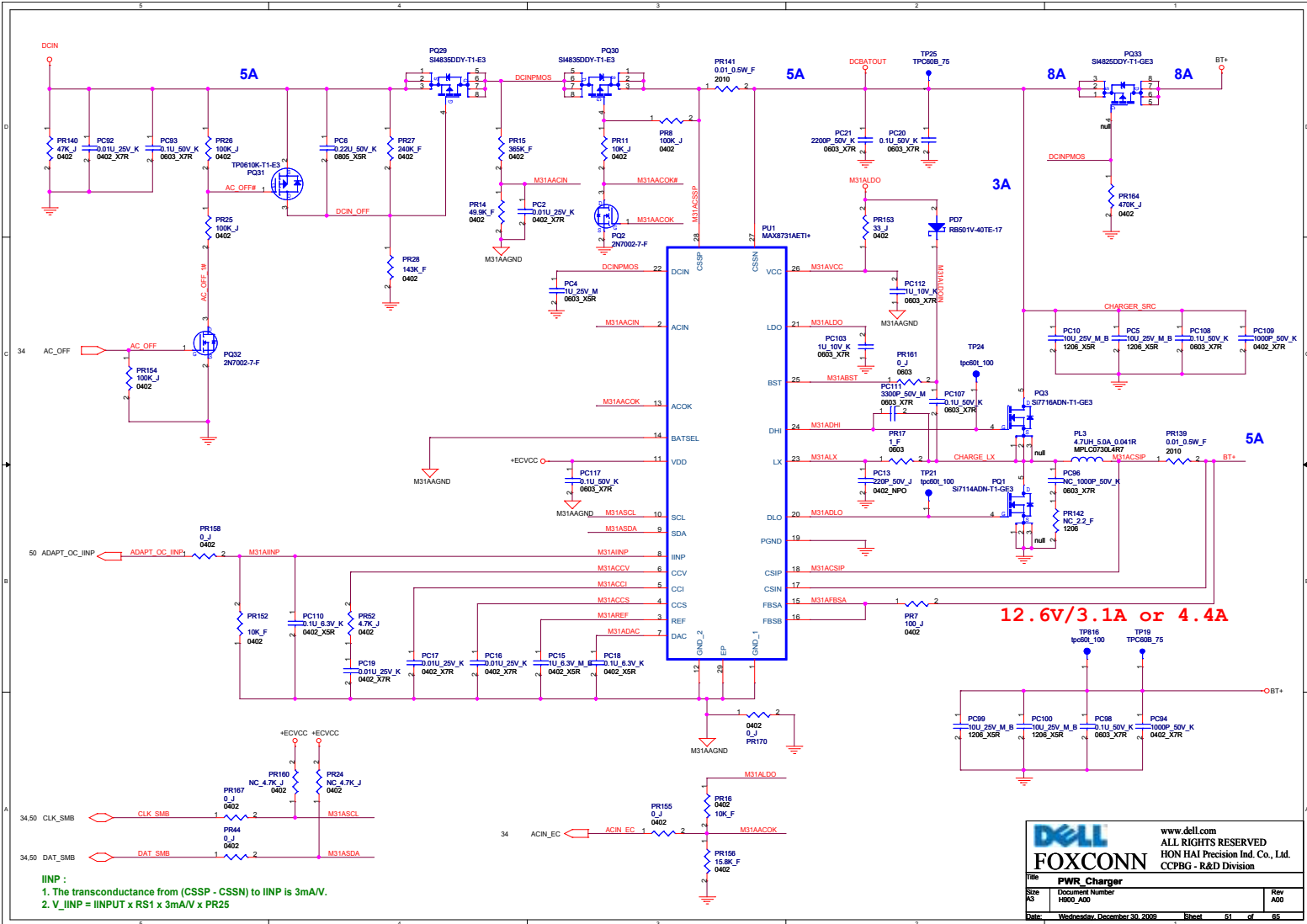
Consider to change to Flash board connector.

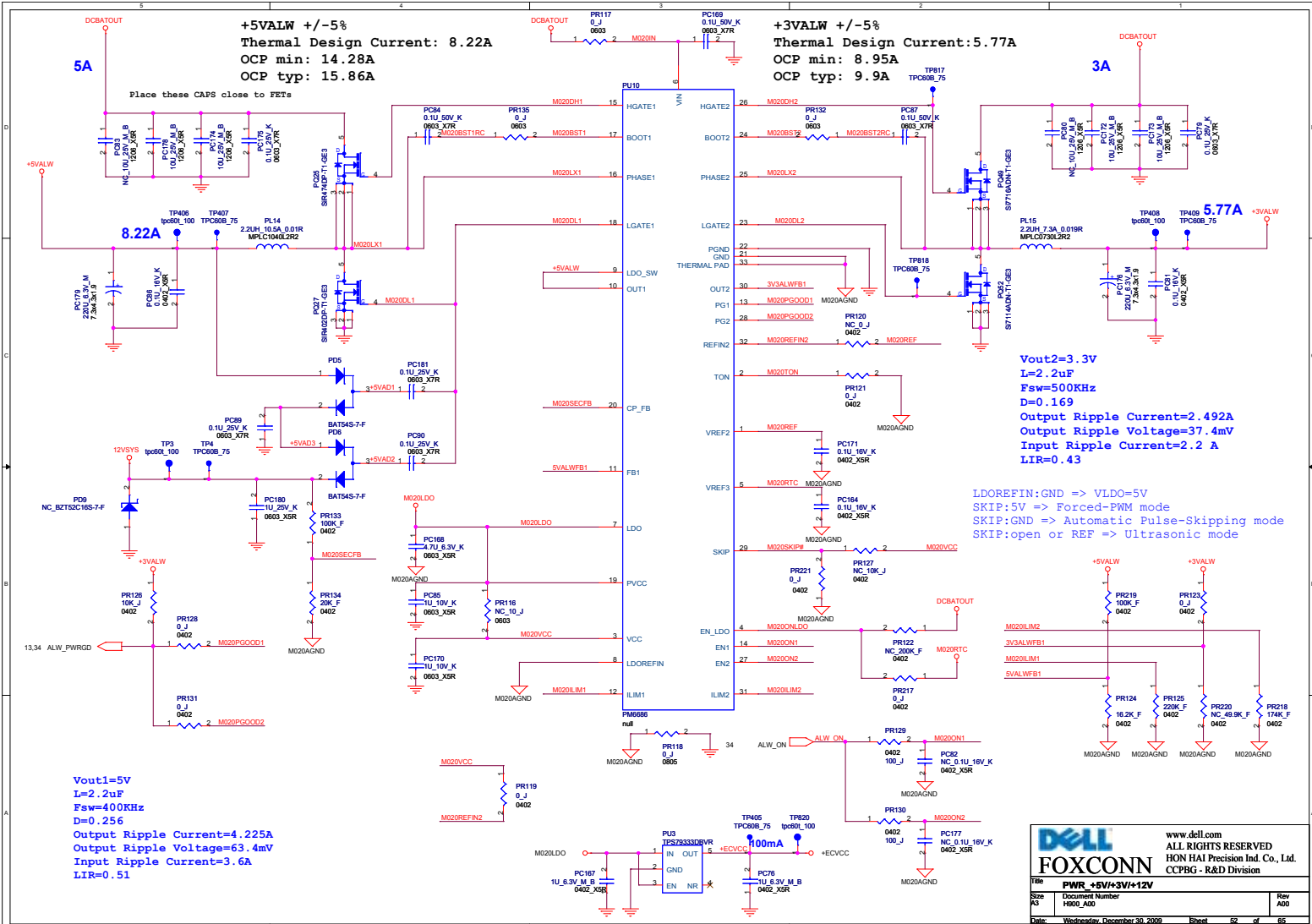
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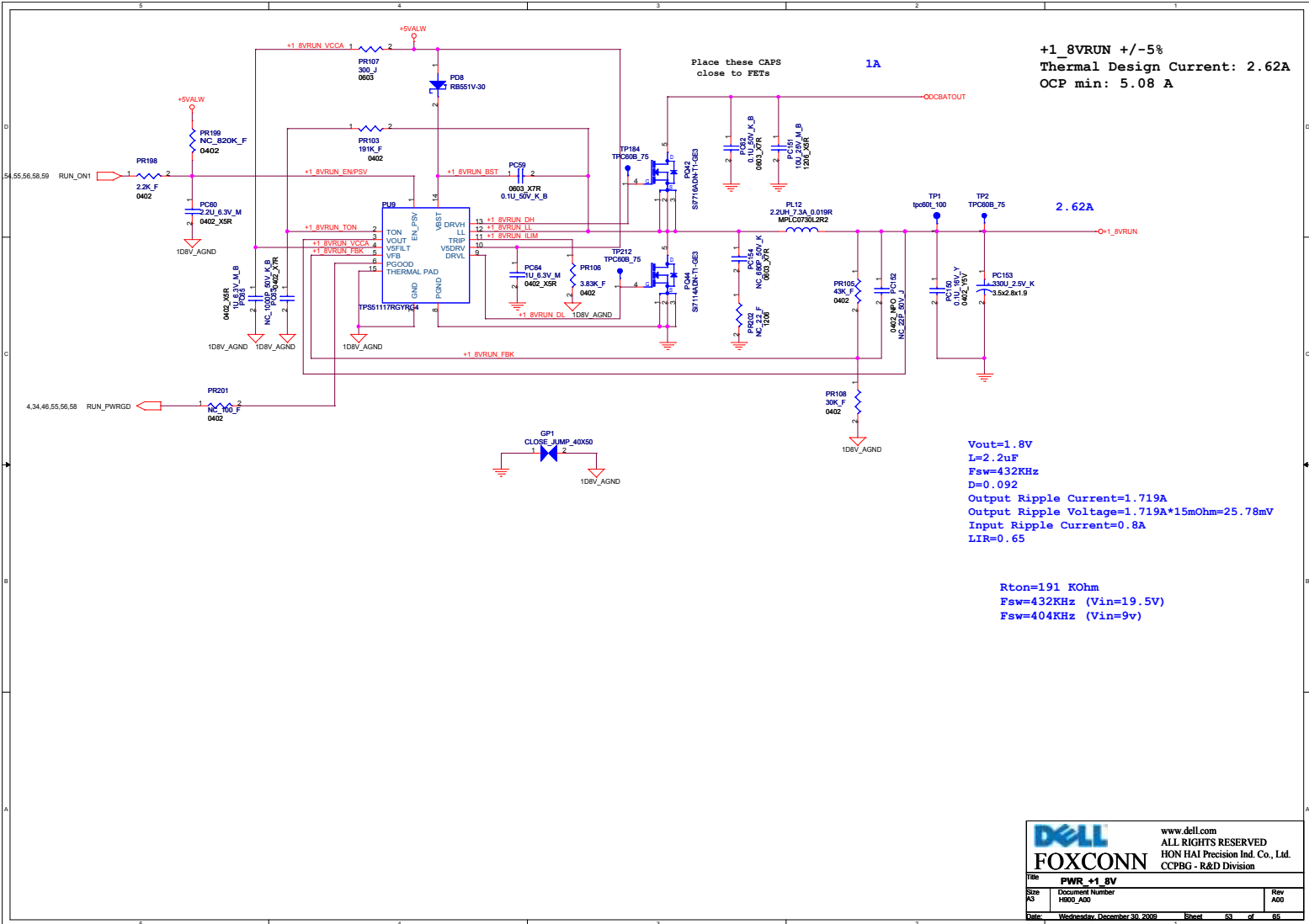
Title SATA HDD/ODD		
Size A3	Document Number H802_A00	Rev A00
Date Wednesday, December 30, 2009	Sheet 48	of 95



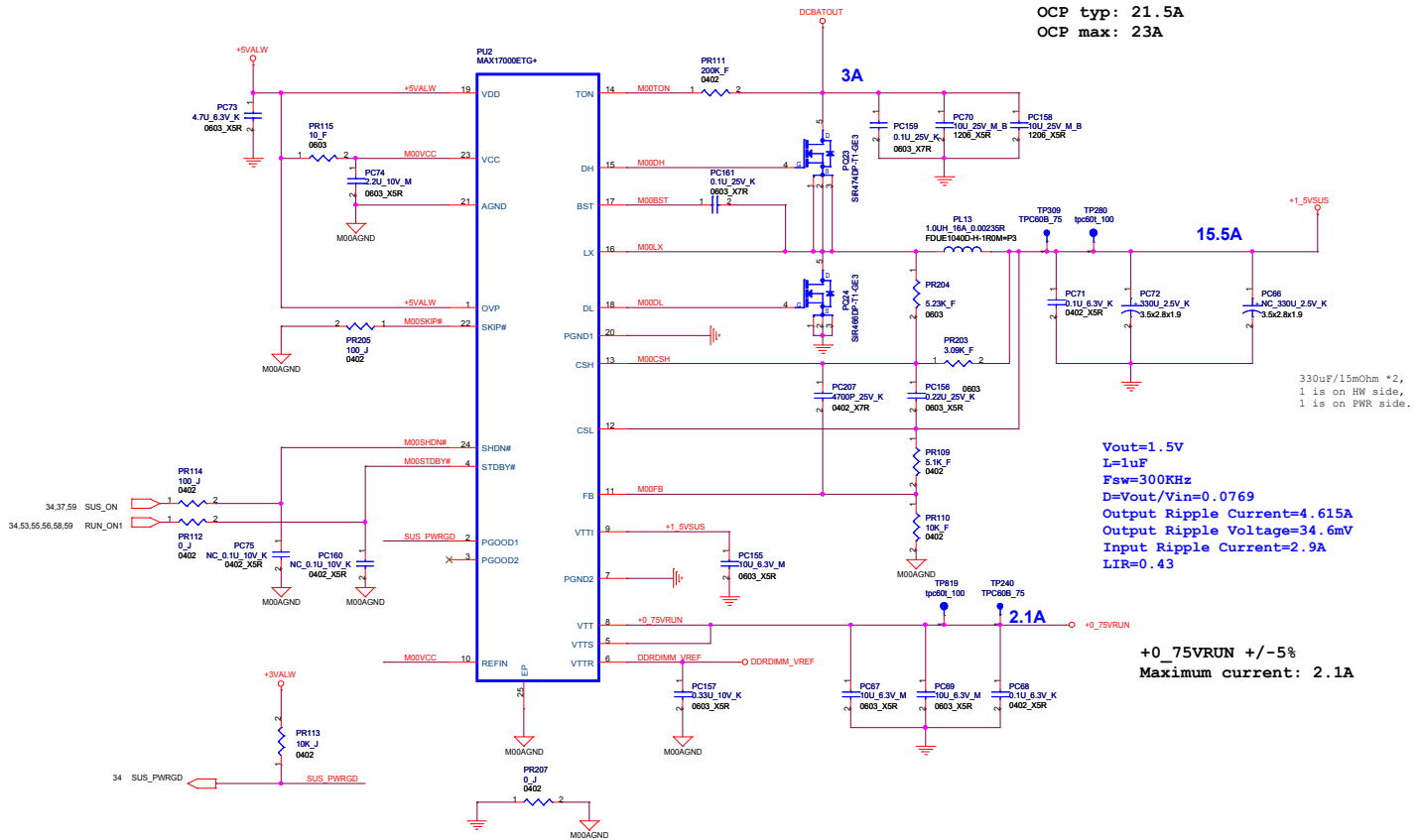






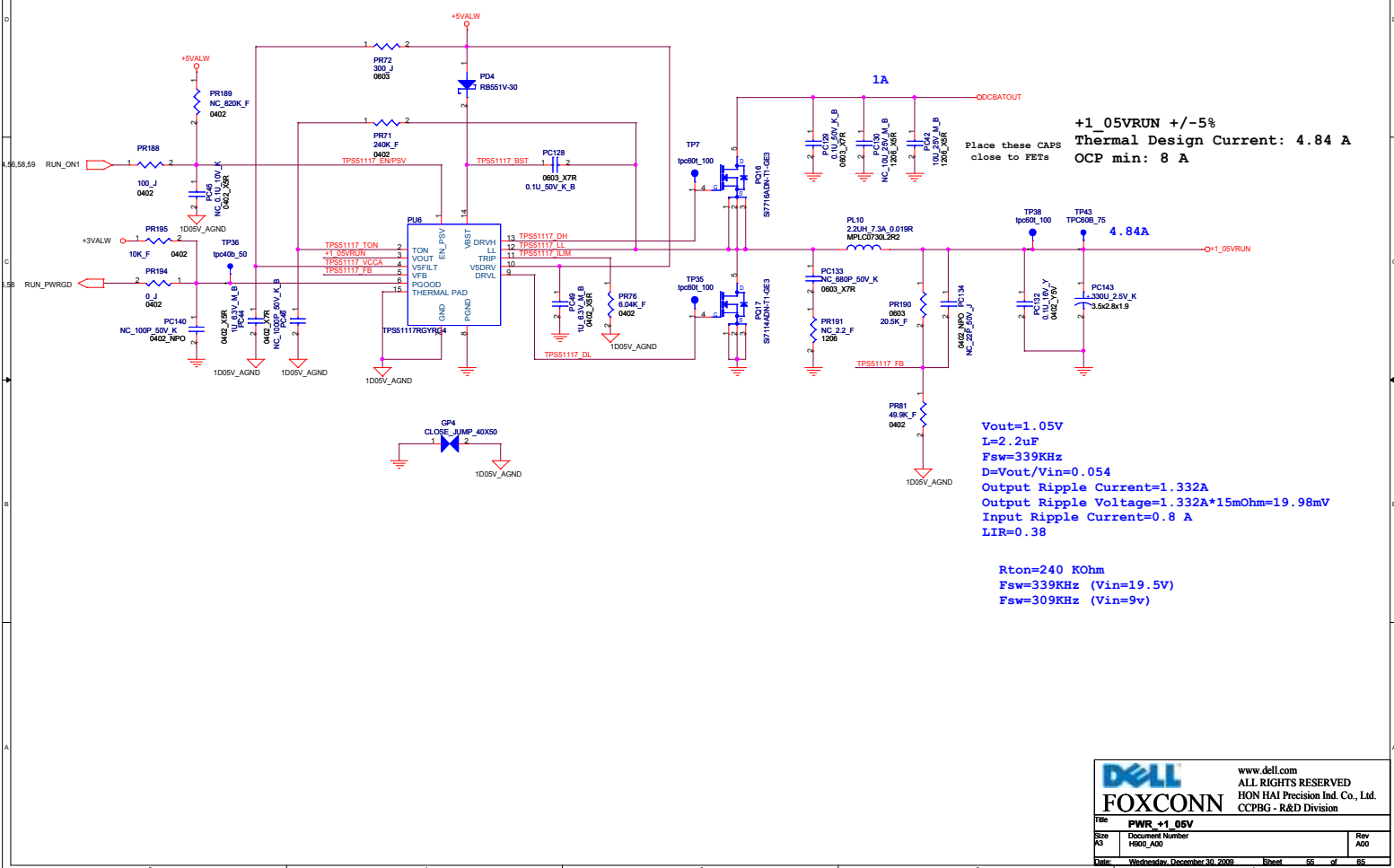


```
+1_5VSUS +/-5%
Thermal Design Current: 15.5A
OCP min: 20.3A
OCP typ: 21.5A
OCP max: 23A
```

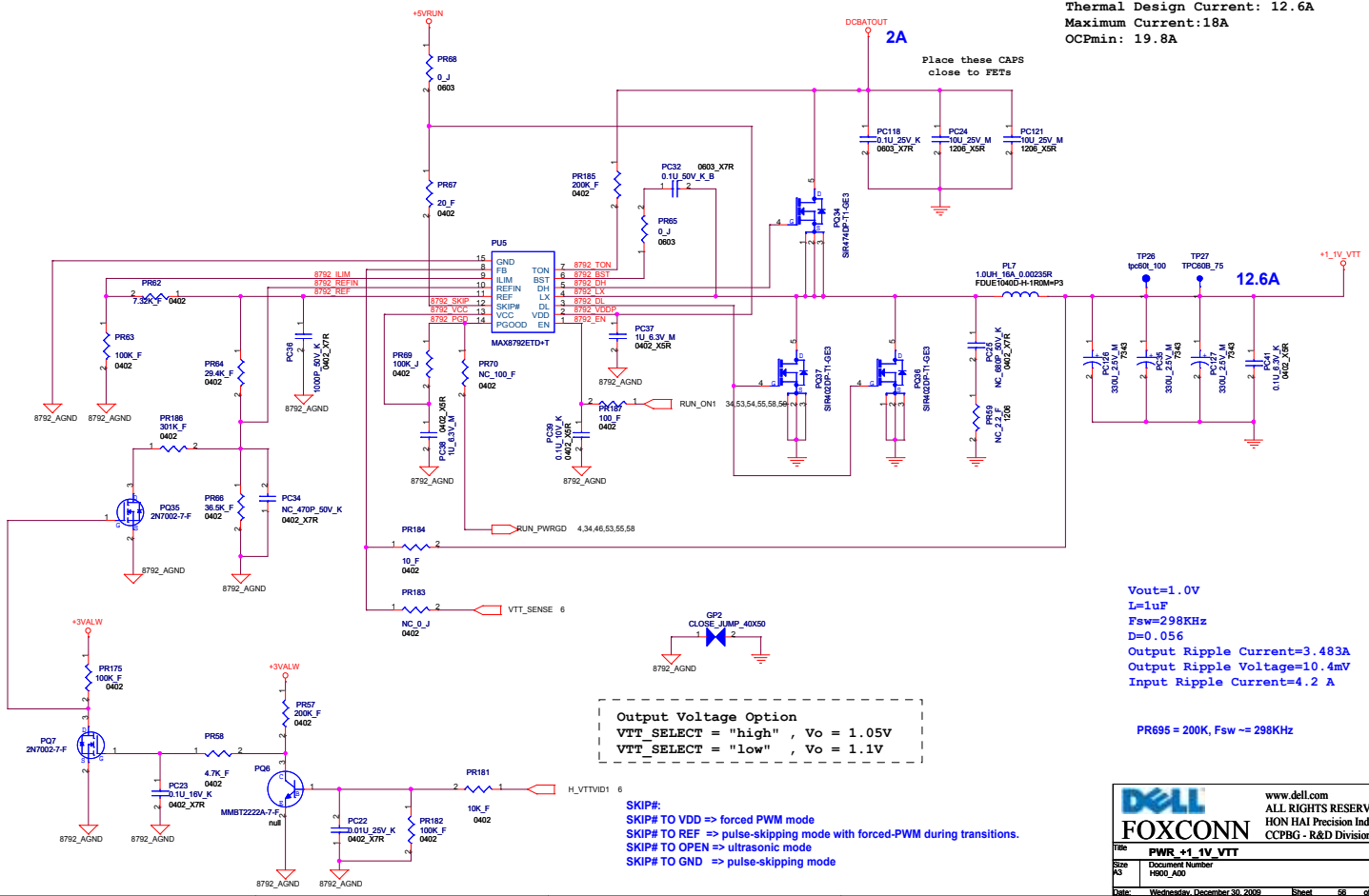


Vout=1.5V
L=1uF
Fsw=300KHz
D=Vout/Vin=0.0769
Output Ripple Current=4.615A
Output Ripple Voltage=34.6mV
Input Ripple Current=2.9A
LIR=0.43

+0_75VRUN +/-5%
Maximum current: 2.1A



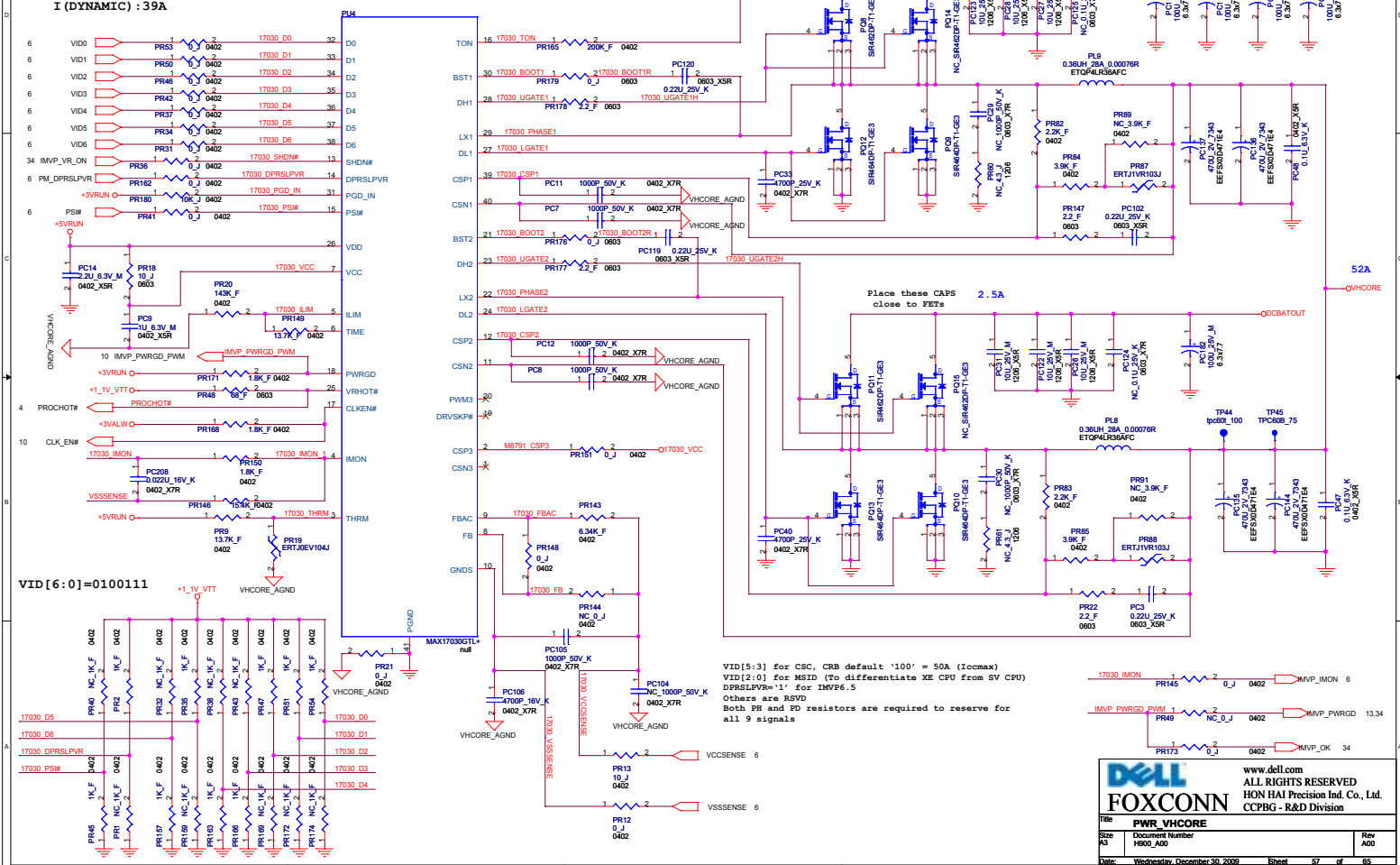
+1.1V VTT +/-5%
 Thermal Design Current: 12.6A
 Maximum Current:18A
 OCPmin: 19.8A



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		Title: PWR +1.1V VTT Size: A3 Document Number: H800_A00 Rev: A00	
Date: Wednesday, December 30, 2009		Sheet: 58 of 95	

Clarksfield SV 45W CPU
V(HFM): 0.95V
V(LFM): 0.875V
LL: -1.9mOhm
I(HFM): 51A
I(TDC): 38A
I(DYNAMIC): 39A

OCP setting: 61.7A (30.83A per phase).
PR649=13.7K Ohm
OCPmax: 65.6A
OCPmin: 58.2A



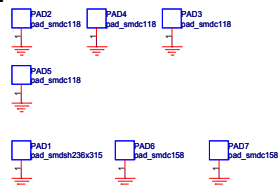
DELL
FOXCONN

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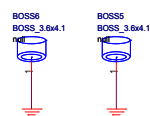
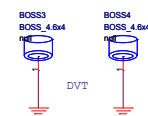
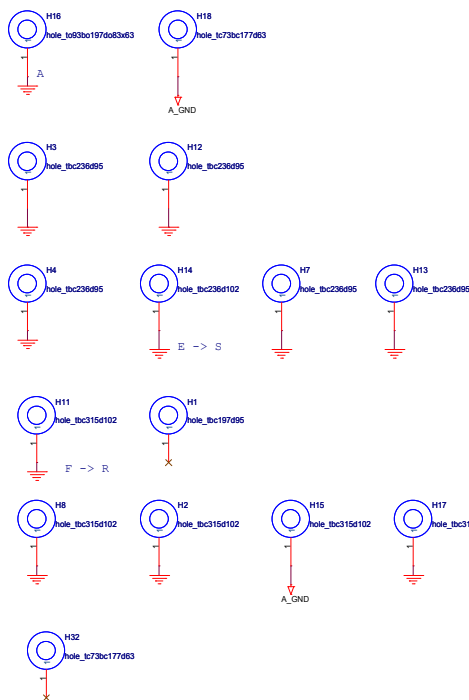
PWR_VHORE	
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FOXCONN			
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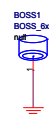
ME



CPU



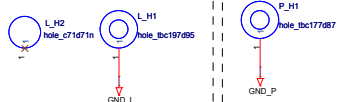
BOSS in Bottom side



BOSS in Top side

LED

Power Button

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H902 DVT

(2009/09/25)

P.25 Change R139 & R143 from 100 ohm to 40.2 ohm for AMD recommend.
P.24 Change AT_MEM ID0~3 connect to DVDDATA 0~3.
P.26 Reserve R627 & R629 for reduce DPE/F_PLL.
P.26 Add R630 & R631 to replace Bead L74, L75 and NC C667, C797, C798, C800, C799, C801 for AMD recommend.
P.25 NC C273, C280, R127, R134 for AMD recommend.

H902 PVT

(2009/11/03)

P.22-27 Change U26 HHPN to 12-2160774-0002.
P.17 Change L35, L37, L66, L67 to 1L-DML2201-2M00 for PUR recommend.
P.20 Change C364 to 1C-2B20104-K301 for PUR recommend.
P.31 Change C263 to 1C-2B20104-K301 for PUR recommend.
P.34 Change C457, C732, C502, C489, C703, C476, C486, C503, C718 & C739 to 1C-2B20104-K301 for PUR recommend.
P.35 Change C319 to 1C-2B20104-K301 for PUR recommend.
P.37 Change C485 & C488 & C725 to 1C-2B20104-K301 for PUR recommend.
P.45 Change C68 & C532 to 1C-2B20104-K301 for PUR recommend.
P.46 Change C69 & C142 to 1C-2B20104-K301 for PUR recommend.
P.46 Change C194, C195, C430 & C431 to 1C-2B20104-K301 for PUR recommend.

(2009/11/18)

P.46 Add C445 0.1uF for EMI recommend.
P.33 Change CN11 for ME recommend.



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H900 EVT -> DVT

(2009/05/13)

P.25 Add R196 0 ohm and change R630 68 ohm to DRAM_RST pin for AMD recommend.

(2009/05/14)

P.12 Add R620 0 ohm to GND in Xtal_in for Intel recommend.
P.7 Del R407, R399, and R405 0 ohm for 1.1VTT power plane.

(2009/05/20)

P.4 Change R173 to NC for un-used.
P.27 Change C208 from 0.22u 10V to 0.22u 16V for derating issue.
P.17 Stuff R268 0 ohm to GND for disable Intel internal LAN.

(2009/05/22)

P.17 Change R237 and R265 from 0603 to 0805 for derating.
P.27 Change R146 from 0805 to 1206 for derating.

(2009/05/25)

P.17 Change CAP5 and CAP6 from 35m ohm ESR to 45m ohm ESR.

(2009/06/06)

P.39 Add Q58, Q59, R619, and R639 10K ohm and del D15 & D16 for leakage issue.
P.6 Add R401 0 ohm and Add R399, R405, R407, R640 1K ohm NC for C-state debugging.

(2009/06/16)

P.6 Add R641 & R642 0 ohm for controlling LAN_CLK_REQ# turn on voltage.
P.34 Add R643 & R644 0 ohm for debugging white screen issue.

(2009/06/25)

P.11 Change RTC battery P/N from 1M-BCR2032-LB00 to 1M-BCR2032-LB01.

(2009/07/01)

P.60 Add H32 for ME request.

(2009/07/14)

P.12 Add R645 & R646 2.2K ohm for SMBUS PH.

(2009/07/20)

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P.38 Change C33 and C44 from NPO 10% to 5% for PUR recommend.
P.47 Change P_C1, P_C2, L_C1, L_C2 from 10pF NPO 10% to 5% for PUR recommend.
P.40 Change C499 and C505 from 12pF NPO 10% to 5% for PUR recommend.
P.11 Change C735 from 12pF NPO 10% to 5% for PUR recommend.
P.38 Change C78 and C79 from 15pF NPO 10% to 5% for PUR recommend.
P.11 Change C736 from 15pF NPO 10% to 5% for PUR recommend.
P.46 Change C244 and C245 from 47pF NPO 10% to 5% for PUR recommend.
P.39 Add C445 0.1uF for Hipot test.
P.27 Delete R146 0ohm for derating.
P.18 Delete R257 0ohm for derating.
P.17 Delete R237 0ohm for derating.
```

(2009/07/22)

P.17 Change C208 0.22uF from 16V to 25V for derating.
P.39 Add C791, C794 1000pF and C795, C796 0.047uF for EMI request.
P.12 Change R303 & R331 from 4.7K to 2.2K ohm NC.

H900 DVT -> PVT

(2009/07/24)

```
P.34 Add Q28 and NC C478 0.1uF for Sys_shdn#.
P.44 Change R467 from 33K to 10K ohm & R472 from 15K to 6.8Kohm
for thermal setting.
P.39 NC C26 0.1uF, R14 1K ohm and U2 C4C08.
Add R612 1K ohm for disable external EEPROM.
P.44 Add C463 100p NC for Thermal sensor vendor recommend.
```

(2009/07/28)

P.9 Change R51 & R53 from NC to introduce.
P.33 Change HDMI connector from 2N-0019003-FKG0 to 2N-0019002-MKG0

H900 PVT -> X-Build

(2009/08/03)

P.31 Change L61, L62, and L63 from 33R to 47R for CRT debug.
P.33 Change D5 location to D9 for Safety recommend.
P.11 Change D9 location to D5 for Safety recommend.
P.11 Change R340 & R341 location to R427 & R426 for Safety recommend.
P.24 Change R426 location to R341 for Safety recommend.
P.45 Change R427 location to R340 for Safety recommend.
P.32 Change U5 location to U4 for Safety recommend.
P.10 Change U37 location to U40 for Safety recommend.
P.45 Change U4 & U40 location to U5 & U37 for Safety recommend.
P.4 Change U17 from 14-MC74VHC-1G04 to 14-74AHC1G-1400 for L6 recommend.

(2009/08/07)

P.31 Change C646 & C640 from 47p to 22p.

(2009/08/20)

P.30 Change L1 to LanKom 1T-1LG2425-P100.
P.20 Change R61 to NC for DDR Intel recommend.
P.21 Change R66 to NC for DDR Intel recommend.

(2009/08/22)

P.20 & 21 Del R146 & R237 for customer recommend.
P.20 Reserve R23 & R27 1K ohm for intel DDR3 M1 solution.
P.21 Reserve R29 & R31 1K ohm for intel DDR3 M1 solution.

(2009/08/24)

P.24 Add R636 0 ohm for EMI recommend.
P.24 Add Cap7 330 uF for debugging WLAN issue.

(2009/08/25)

P.44 Add R637, R638, R645 & R646 0 ohm for Intel recommend.

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Number	Date	Page	Title	Issue	Description	Version
1	2009/04/10	P.55	+1_05VRUN	1.05V Vripple over spec.	Change PC143 from 220uF 2.5V 35m Ohm(1C-31R0227-MX00) to 330uF 2.5V 15m Ohm(1C-33U0337-KX00).	X01
2	2009/04/13	P.51	Charger	Change PR152 for ADAPT OC function.	Change PR152 from 8.45K 0402 1%(1R-0008451-F200) to 10K 0402 1%(1R-0000103-F200)	X01
3	2009/05/06	P.57	VCORE	Fine tune VCORE setting for loadline, transition and mosfet ring issue.	Add PC7 :470pF 50V X7R 0402(1C-2B20471-K000) Add PC106 :4700pF 16V X7R 0402(1C-2B20472-K002) Add PC29 and PC30 :1000pF 50V X7R(1C-2B3012-MX00) Add PR60 and PR61 :4.3 Ohm 1206 5%(1R-000043X-J600) Del PQ14 and PQ15 SiR462DP-T1-GE3 (17-SiR462D-PT00) Change PR12 from 10 Ohm 0402 5%(1R-0000100-J200) to 0 Ohm 0402 5%(1R-0000000-J200) Change PR143 from 7.15K Ohm 0402 1%(1R-0007151-F200) to 6.34K Ohm 0402 1%(1R-0006341-F200) Change PR82 and PR83 from 2.7K Ohm 0402 1%(1R-0000272-F200) to 2.2K Ohm 0402 1%(1R-0000222-F200) Change PR84 and PR85 from 4.02K Ohm 0402 1%(1R-0004021-F200) to 1.69K Ohm 0402 1%(1R-0001691-F200)	X01
4	2009/05/06	P.58	AT_VDD	Changing H-S,L-S Mosfets and boost resistor for solving ring issue.	Change PQ40 from Si7716ADN(17-S17716A-DN00) to AON7402L(17-AON7402-L000) Change PQ41 from Si7114ADN(17-S17114A-DN00) to AON7700(17-AON7700-0000) Change PR222 from 0 Ohm 0603 1%(1R-0000000-J300) to 1 Ohm 0603 1%(1R-000010X-F300)	X01
5	2009/05/07	P.54	+1_5VSUS	Modifying OCP setting for +1_5VSUS.	Change PR204 from 4.87K 0603 1%(1R-0004871-F300) to 5.23K 0603 1%(1R-0005231-F300) Change PR203 from 3.24K 0603 1%(1R-0003241-F300) to 3.09K 0603 1%(1R-0003091-F300)	X01
6	2009/05/11	P.56	+1_1V_VTT	Change remote sense detection from CPU to output Cap.	Add PR184 10 Ohm 0402 1%(1R-0000100-F200) Delete PR183 0 Ohm 0402 5%(1R-0000000-J200)	X01
7	2009/05/12	P.50	PSID	Change PQ4 to high ESD protection (6000KV).	Change PQ4 from 2N7002K(17-2N7002K-0001) to FDV301N(17-FDV301N-0000).	X01
8	2009/05/12	P.55 P.56	+1_05VRUN +1_1V_VTT	Change RUN_PWRGD singal from +1_1V_VTT rail to +i_05VRUN rail.	Delete PR70 100 Ohm 0402 1%(1R-0000101-F200) Add PR195 10 Kohm 0402 1%(1R-0000103-F200) Add PR194 0 Ohm 0402 5%(1R-0000000-J200)	X01
9	2009/05/13	P.57	VCORE	PROCHOT# signal pull-up resistor is 56 ohm in IMVP side.	Change PR48 from 56 Ohm 0603 1%(1R-0000560-J300) to 68 Ohm 0603 1%(1R-0000680-F300)	X01
10	2009/05/20	P.58	PEX_VDD	Modify feedback capacitor for improving loop response.	Change PC57 from 0.01uF 0402 25V X7R(1C-2B20103-M000) to 470pF 0402 50V X7R(1C-2B20471-K000)	X01
11	2009/05/20	P.51	DC_IN	Modify resistor and capacitor for reducing adapeter's inrush current.	Change PR28 from 47KOhm 0402 5%(1R-0000473-J200) to 100KOhm 0402 5%(1R-0000104-J200) Change PC6 from 0.1uF 0603 50V(1C-2B30104-K000) to 0.22uF 0603 25V X5R(1C-2B30224-K400)	X01
12	2009/05/26	P.54	+1_5VSUS	Add a capacitor between CSH and FB for improving jitter issue.	Add PC207 4700pF 25V 0402 X7R 10%(1C-2B20472-K001)	X01



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13	2009/06/18	P.57	V_CORE	Change GND design for C-state issue	Change PR21.1 to PGND. Change PR21.2 to AGND. Change PC14.2 to PGND.	X02
14	2009/07/02	P.57	V_CORE	Change boost resistor to reduce ring of Mosfet. Add feedback capacitor to reduce ground noise.	Change PR178 from 0 Ohm 0603 5% (1R-0000000-J300) to 2.2 Ohm 0603 1% (1R-000022X-F300) Change PR177 from 0 Ohm 0603 5% (1R-0000000-J300) to 2.2 Ohm 0603 1% (1R-000022X-F300) Add PC7: 1000pF 16V X7R (1C-2B20102-K001) . Add PC8: 1000pF 16V X7R (1C-2B20102-K001) . Add PC11: 1000pF 16V X7R (1C-2B20102-K001) . Add PC12: 1000pF 16V X7R (1C-2B20102-K001) .	X02
15	2009/07/06	P.51	Charger	Change rating voltage from 25V to 50V and size from 0603 to 0805 for Capacitor(PC6) .	Change PC6 from 0.22uF 25V X5R 0603 10% (1C-2B30224-K400) to 0.22uF 50V X5R 0805 10% (1C-2B70224-K600)	
16	2009/07/10	P.57	V_CORE	Modify DCR feedback and IMON setting.	Change PR84 and PR85 from 1.69K 0402 1% (1R-000169I-F200) to 3.9K 0402 1% (1R-000390I-F200) Change PR150 from 10K 0402 1% (1R-0000103-F200) to 1.8K 0402 1% (1R-0000182-F200) Change PC208 from 0.1uF 6.3V 0402 (1C-2B20104-K101) to 0.022uF 16V 0402 X7R (1C-2B20223-K000) Change PR146 from 12K 0402 1% (1R-0000123-F200) to 15.4K 0402 1% (1R-0001542-F200)	X02
17	2009/07/20	P.59	Other power plane	Add discharge path for 1_5VRUN and 1_05VRUN	Add PR104:330 Ohm 0603 5% (1R-000033I-J300) Add PR95:330 Ohm 0603 5% (1R-000033I-J300) Add PQ21:2N7002-7-F SOT-23 (17-2N70027-F000) Add PQ18:2N7002-7-F SOT-23 (17-2N70027-F000)	X02
18	2009/07/24	P.57	V_CORE	Add AL capacitor to reduce acoustic noise.	Add PC113:EEEFK1E101XP,100uF,25V,20%, 6.3*7.7,0.34ohm (1C-1XX0107-M400) Add PC182:EEEFK1E101XP,100uF,25V,20%, 6.3*7.7,0.34ohm (1C-1XX0107-M400)	X02
19	2009/09/25	P.58	VGA_CORE	Add more GPIO pin for VAG 4 level controller	Add NC_PC187,NC_PC188,NC_PC189 PR230,PR231,PR232, 0ohm Remove PR79, PR80	X02
20	2009/09/25	P.58	VGA_CORE	Change AOS MOS to ON MOS for reducing risk of induce voltage	Change PQ40 PQ41 and PQ54 to ON MOS 4823 and 4821.	
21	2009/11/19	P.58	VGA_CORE	EMI request add one cap	Add PC185 1000pF	
22	2009/11/19	P.58	VGA_CORE	Reduce inductor current when VID change	change PR230, PR232, from 0 to 47K. change PC188, PC189, from 0.047uF to 0.015uF. PC56 from 22pF to 560pF NC_PC131, PC141, PC142, from 330uF 15mohm to 330uF 9mohm. Add NC_PC190,NC_PC191 change PR86, to 46.4K for OCP 15A	
23	2009/11/19	P.58	VGA_CORE	TI suggest reducing short through risk	change PR222, from 1 ohm to 2.2 ohm	
24	2009/11/19	P.58	VGA_CORE	Remove unused GPIO pin	Remove PQ57,PD10,PR228,PR229	
24	2009/11/27	P.58	VGA_CORE	R C delay as Dell request	NC_PC188, PC_PC189 and add PC190, PC191 0.1uF	



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