NOZOMI-1 EXT SDV LOGIC SCHEMATICS

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 1 / 99

NZM1H-1

VER 1.31

DEC/04/2008

BASE LOGIC:NZM1 EXT PRE-DV
VER 0.56
SEP/29/2008

1. TITLE PAGE
2. EC HISTORY
3. CPU(1/8):DMI/PEG/FDI
4. CPU(2/8):CLK/MISC/JTAG
5. CPU(3/8):DDR3 CH-A
6. CPU(4/8):DDR3 CH-B
7. CPU(5/8):CFG/RSVD
8. CPU(6/8):PWR
9. CPU(7/8):GFX/PWR
10. CPU(8/8):GND
11. XDP CONNECTOR
12. DDR3 SO DIMM CHANNEL-A
13. DDR3 SO DIMM CHANNEL-B
14. DDR3 DECOUPLING
15. CLOCK GEN
16. N10M-GS(1/6):PEG I/F
17. N10M-GS(2/6):DIGITAL OUT I/F
18. N10M-GS(3/6):VRAM I/F
19. N10M-GS(4/6):GPIO
20. N10M-GS(5/6):POWER
21. N10M-GS(6/6):GND
22. VRAM CHANNEL-A
23. DYNAMIC MEMORY TERMINATION
24. LVDS SWITCH
25. LCD CONNECTOR
26. RGB SWITCH
27. EXT CRT INTERFACE
28. DISPLAY PORT CONNECTOR
29. DISPLAY PORT MUX
30. PCH(1/8):HDA/JTAG/SATA
31. PCH(2/8):PCIE/SMBUS/CLK
32. PCH(3/8):DMI/FDI/PM
33. PCH(4/8):LVDS/CRT/DDI
34. PCH(5/8):PCI/USB/NVM
35. PCH(6/8):PWR
36. PCH(7/8):GPIO/NCTF/RSVD
37. PCH(8/8):GND
38. TURBO MEMORY SLOT
39. RTC BATTERY
40. SATA HDD CONN
41. SATA BAY I/F CONN
42. USB POWER/CONN
43. AUDIO CX20585
44. AUDIO MISC
45. AUDIO CONNECTOR
46. AUDIO JACK SENSE
47. AUDIO EXT MIC I/F
48. AUDIO SPEAKER
49. AUDIO HDP AMP
50. AUDIO BEEP
51. MDC CONNECTOR
52. GBE HANKSVILLE
53. GBE LAN SWITCH
54. GBE MAGNETICS
55. RJ45 CONNECTOR
56. PCIE MINI CARD SLOT(1/2)
57. PCIE MINI CARD SLOT(2/2)
58. 1394/MEDIA CARD CONTROLLER
59. MEDIA CARD INTERFACE
60. EXPRESS CARD/SMART CARD I/F
61. SLOT POWER CONTROL
62. SPI FLASH
63. DOCKING CONNECTOR
64. H8S/2112 (1/2)
65. H8S/2112 (2/2)
66. KEYBOARD CONNECTOR
67. TOUCH PAD CONNECTOR
68. WIRELESS DISABLE SW
69. FAN CONNECTOR
70. G-SENSOR
71. THINKER-1
72. TPM
73. THERMAL SENSOR
74. EEPROM/SMBUS SW
75. DC-IN
76. BATTERY INPUT
77. BATTERY CHARGER
78. CHARGE SELECTOR
79. BATTERY MONITOR
80. POWER SEQUENCE
81. DC/DC VCC5M/VCC3M
82. DC/DC VCCCPUCORE
83. VCCCPUCORE DECOUPLING
84. DC/DC VCCGFXCORE_D
85. DC/DC VCCGFXCORE_I
86. DC/DC VCC1R05B_VTT
87. DC/DC VCC1R05LAN
88. DC/DC VCC1R5A
89. DC/DC VCC0R75B
90. DC/DC VCC1R8VIDEO
91. DC/DC VCC1R8B
92. DC/DC RINKAN
93. LOAD SW LAN & LANPWRG
94. LOAD SW VIDEO
95. LOAD SW AMT / MEPWRG
96. LOAD SW B
97. LOAD SW VCC5MUBAY
98. LOAD SW WAN & WLAN
99. PTH FOR SCREW HOLES

VER.1.31

			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	TITLE PAGE	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

EC HISTORY

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 2 / 99

NOZOMI-1 PRE-DV :BASE LOGIC COR5 EXT SOVP VER.6.01 04/07/2008

VER.0.01	07/01/2008	APPLIED	PDV_EC001-009
VER.0.02	07/02/2008	APPLIED	PDV_EC010-019
VER.0.03	07/03/2008	APPLIED	PDV_EC020-031
VER.0.04	07/04/2008	APPLIED	PDV_EC032-040
VER.0.05	07/07/2008	APPLIED	PDV_EC041-049
VER.0.06	07/08/2008	APPLIED	PDV_EC050-060
VER.0.07	07/09/2008	APPLIED	PDV_EC061-071
VER.0.08	07/10/2008	APPLIED	PDV_EC072-079
VER.0.09	07/11/2008	APPLIED	PDV_EC080-087
VER.0.10	07/14/2008	APPLIED	PDV_EC088-099
VER.0.11	07/15/2008	APPLIED	PDV_EC100-103
VER.0.12	07/16/2008	APPLIED	PDV_EC104-109
VER.0.13	07/17/2008	APPLIED	PDV_EC110-113
VER.0.14	07/18/2008	APPLIED	PDV_EC114-118
VER.0.15	07/22/2008	APPLIED	PDV_EC119
VER.0.16	07/23/2008	APPLIED	PDV_EC120,121
VER.0.17	07/24/2008	APPLIED	PDV_EC122-124
VER.0.18	07/25/2008	APPLIED	PDV_EC125,126
VER.0.19	07/28/2008	APPLIED	PDV_EC127
VER.0.20	07/29/2008	APPLIED	PDV_EC128,129
VER.0.21	07/30/2008	APPLIED	PDV_EC131-133,135,136
VER.0.22	07/31/2008	APPLIED	PDV_EC137-143
VER.0.23	08/01/2008	APPLIED	PDV_EC144-155,157,158,160,161
VER.0.24	08/04/2008	APPLIED	PDV_EC159,162-173
VER.0.25	08/05/2008	APPLIED	PDV_EC174-182
VER.0.26	08/06/2008	APPLIED	PDV_EC173-186
VER.0.27	08/07/2008	APPLIED	PDV_EC187,188,190-193
VER.0.28	08/08/2008	APPLIED	PDV_EC194-210
VER.0.29	08/11/2008	APPLIED	PDV_EC212-215,218,219
VER.0.30	08/12/2008	APPLIED	PDV_EC216,217,220,221
VER.0.31	08/13/2008	APPLIED	PDV_EC222-225
VER.0.32	08/14/2008	APPLIED	PDV_EC226-231
VER.0.33	08/15/2008	APPLIED	PDV_EC232-244
VER.0.34	08/18/2008	APPLIED	PDV_EC246,247,249,250
VER.0.35	08/19/2008	APPLIED	PDV_EC245,251-255
VER.0.36	08/20/2008	APPLIED	PDV_EC256-259
VER.0.37	08/21/2008	APPLIED	PDV_EC260-263
VER.0.38	08/22/2008	APPLIED	PDV_EC264-268
VER.0.39	08/25/2008	APPLIED	PDV_EC269-271
VER.0.40	08/26/2008	APPLIED	PDV_EC272-275
VER.0.41	08/27/2008	APPLIED	PDV_EC276-283
VER.0.42	08/28/2008	APPLIED	PDV_EC284-291
VER.0.43	08/29/2008	APPLIED	PDV_EC292-295
VER.0.44	09/01/2008	APPLIED	PDV_EC296,298-300,302-304
VER.0.45	09/02/2008	APPLIED	PDV_EC305-314
VER.0.46	09/03/2008	APPLIED	PDV_EC315-319
VER.0.47	09/04/2008	APPLIED	PDV_EC320-334
VER.0.48	09/05/2008	APPLIED	PDV_EC335-344
VER.0.49	09/08/2008	APPLIED	PDV_EC345,346
VER.0.50	09/09/2008	APPLIED	PDV_EC347-350
VER.0.51	09/10/2008	APPLIED	PDV_EC351-357
VER.0.52	09/11/2008	APPLIED	PDV_EC358,359,361
VER.0.53	09/12/2008	APPLIED	PDV_EC362-370
VER.0.54	09/16/2008	APPLIED	PDV_EC371,372
VER.0.55	09/26/2008	APPLIED	PDV_EC373
VER.0.56	09/29/2008	APPLIED	PDV_EC374

NOZOMI-1 EXT SDV :BASE LOGIC NZM1 EXT PRE-DV VER.0.56 09/29/2008

VER.1.00	10/03/2008	APPLIED	SDV_EC001
VER.1.01	10/07/2008	APPLIED	SDV_EC002-012
VER.1.02	10/08/2008	APPLIED	SDV_EC013-022
VER.1.03	10/09/2008	APPLIED	SDV_EC023-030
VER.1.04	10/10/2008	APPLIED	SDV_EC031-039
VER.1.05	10/14/2008	APPLIED	SDV_EC040-042
VER.1.06	10/15/2008	APPLIED	SDV_EC044-048
VER.1.07	10/16/2008	APPLIED	SDV_EC043,049,050,054-060
VER.1.08	10/17/2008	APPLIED	SDV_EC061-069
VER.1.09	10/20/2008	APPLIED	SDV_EC070-072
VER.1.10	10/21/2008	APPLIED	SDV_EC073-075
VER.1.11	10/22/2008	APPLIED	SDV_EC076-078
VER.1.12	10/23/2008	APPLIED	SDV_EC079-088
VER.1.13	10/24/2008	APPLIED	SDV_EC090-091
VER.1.14	10/27/2008	APPLIED	SDV_EC092-095,097-101
VER.1.15	10/28/2008	APPLIED	SDV_EC103-104
VER.1.16	10/29/2008	APPLIED	SDV_EC105-112
VER.1.17	10/30/2008	APPLIED	SDV_EC113-127
VER.1.18	10/31/2008	APPLIED	SDV_EC128-134,136-140
VER.1.19	11/06/2008	APPLIED	SDV_EC141-144
VER.1.20	11/07/2008	APPLIED	SDV_EC145
VER.1.21	11/10/2008	APPLIED	SDV_EC146
VER.1.22	11/12/2008	APPLIED	SDV_EC147
VER.1.23	11/13/2008	APPLIED	SDV_EC149-150
VER.1.24	11/17/2008	APPLIED	SDV_EC151-153
VER.1.25	11/18/2008	APPLIED	SDV_EC154
VER.1.26	11/20/2008	APPLIED	SDV_EC156-158
VER.1.27	11/25/2008	APPLIED	SDV_EC160
VER.1.28	11/26/2008	APPLIED	SDV_EC161
VER.1.29	12/01/2008	APPLIED	SDV_EC162,163
VER.1.30	12/02/2008	APPLIED	SDV_EC164
VER.1.31	12/04/2008	APPLIED	SDV_EC166

VER.1.31

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

EC HISTORY

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 3 / 99

U58

AUBURNDALE(1/9)

DMI

32.7C>	IN	DMI_RXN<3..0>	0 A24	DMI_RX#[0]
			1 C23	DMI_RX#[1]
			2 B22	DMI_RX#[2]
			3 A21	DMI_RX#[3]
32.6C>	IN	DMI_RXP<3..0>	0 B24	DMI_RX[0]
			1 D23	DMI_RX[1]
			2 B23	DMI_RX[2]
			3 A22	DMI_RX[3]
32.8C<	OUT	DMI_TXN<3..0>	0 D24	DMI_TX#[0]
			1 G24	DMI_TX#[1]
			2 F23	DMI_TX#[2]
			3 H23	DMI_TX#[3]
32.7C<	OUT	DMI_TXP<3..0>	0 D25	DMI_TX[0]
			1 F24	DMI_TX[1]
			2 E23	DMI_TX[2]
			3 G23	DMI_TX[3]

Intel(R) FDI

32.8M<	OUT	FDI_TXN<7..0>	0 E22	FDI_TX#[0]
			1 D21	FDI_TX#[1]
			2 D19	FDI_TX#[2]
			3 D18	FDI_TX#[3]
			4 G21	FDI_TX#[4]
			5 E19	FDI_TX#[5]
			6 F21	FDI_TX#[6]
			7 G18	FDI_TX#[7]
32.7M<	OUT	FDI_TXP<7..0>	0 D22	FDI_TX[0]
			1 C21	FDI_TX[1]
			2 D20	FDI_TX[2]
			3 C18	FDI_TX[3]
			4 G22	FDI_TX[4]
			5 E20	FDI_TX[5]
			6 F20	FDI_TX[6]
			7 G19	FDI_TX[7]
32.6N>	IN	FDI_FSYNC0	F17	FDI_FSYNC[0]
32.6N>	IN	FDI_FSYNC1	E17	FDI_FSYNC[1]
32.6N>	IN	FDI_INT	C17	FDI_INT
32.5N>	IN	FDI_LSYNC0	F18	FDI_LSYNC[0]
32.5N>	IN	FDI_LSYNC1	D17	FDI_LSYNC[1]

PCI EXPRESS -- GRAPHICS

PEG_ICOMPI	B26	49.9 1% 1/16W	
PEG_ICOMPO	A26	R57 1005	
PEG_RCOMPO	B27	750 1% 1/16W	
PEG_RBIAS	A25	R63 1005	
PEG_RX#[0]	K35	15	PCIE_GFX_RXN<15..0> IN 16.2N>
PEG_RX#[1]	J34	14	
PEG_RX#[2]	J33	13	
PEG_RX#[3]	G35	12	
PEG_RX#[4]	G32	11	
PEG_RX#[5]	F34	10	
PEG_RX#[6]	F31	9	
PEG_RX#[7]	D35	8	
PEG_RX#[8]	E33	7	
PEG_RX#[9]	C33	6	
PEG_RX#[10]	D32	5	
PEG_RX#[11]	B32	4	
PEG_RX#[12]	C31	3	
PEG_RX#[13]	B28	2	
PEG_RX#[14]	B30	1	
PEG_RX#[15]	A31	0	
PEG_RX[0]	J35	15	PCIE_GFX_RXP<15..0> IN 16.4N>
PEG_RX[1]	H34	14	
PEG_RX[2]	H33	13	
PEG_RX[3]	F35	12	
PEG_RX[4]	G33	11	
PEG_RX[5]	E34	10	
PEG_RX[6]	F32	9	
PEG_RX[7]	D34	8	
PEG_RX[8]	F33	7	
PEG_RX[9]	B33	6	
PEG_RX[10]	D31	5	
PEG_RX[11]	A32	4	
PEG_RX[12]	C30	3	
PEG_RX[13]	A28	2	
PEG_RX[14]	B29	1	
PEG_RX[15]	A30	0	
PEG_TX#[0]	L33	15	C793 0.1UF 10% 10V 1005
PEG_TX#[1]	M35	14	C728 0.1UF 10% 10V 1005
PEG_TX#[2]	M33	13	C792 0.1UF 10% 10V 1005
PEG_TX#[3]	M30	12	C692 0.1UF 10% 10V 1005
PEG_TX#[4]	L31	11	C791 0.1UF 10% 10V 1005
PEG_TX#[5]	K32	10	C690 0.1UF 10% 10V 1005
PEG_TX#[6]	M29	9	C790 0.1UF 10% 10V 1005
PEG_TX#[7]	J31	8	C689 0.1UF 10% 10V 1005
PEG_TX#[8]	K29	7	C789 0.1UF 10% 10V 1005
PEG_TX#[9]	H30	6	C688 0.1UF 10% 10V 1005
PEG_TX#[10]	H29	5	C783 0.1UF 10% 10V 1005
PEG_TX#[11]	F29	4	C782 0.1UF 10% 10V 1005
PEG_TX#[12]	E28	3	C687 0.1UF 10% 10V 1005
PEG_TX#[13]	D29	2	C685 0.1UF 10% 10V 1005
PEG_TX#[14]	D27	1	C684 0.1UF 10% 10V 1005
PEG_TX#[15]	C26	0	C668 0.1UF 10% 10V 1005
PEG_TX[0]	L34	15	C665 0.1UF 10% 10V 1005
PEG_TX[1]	M34	14	C780 0.1UF 10% 10V 1005
PEG_TX[2]	M32	13	C779 0.1UF 10% 10V 1005
PEG_TX[3]	L30	12	C740 0.1UF 10% 10V 1005
PEG_TX[4]	M31	11	C781 0.1UF 10% 10V 1005
PEG_TX[5]	K31	10	C780 0.1UF 10% 10V 1005
PEG_TX[6]	M28	9	C779 0.1UF 10% 10V 1005
PEG_TX[7]	H31	8	C740 0.1UF 10% 10V 1005
PEG_TX[8]	K28	7	C665 0.1UF 10% 10V 1005
PEG_TX[9]	G30	6	
PEG_TX[10]	G29	5	
PEG_TX[11]	F28	4	
PEG_TX[12]	E27	3	
PEG_TX[13]	D28	2	
PEG_TX[14]	C27	1	
PEG_TX[15]	C25	0	

PCIE_GFX_TXN<15..0> OUT 16.1B<

PCIE_GFX_TXP<15..0> OUT 16.2B<

C662 0.1UF 10% 10V 1005
C661 0.1UF 10% 10V 1005
C649 0.1UF 10% 10V 1005
C635 0.1UF 10% 10V 1005
C581 0.1UF 10% 10V 1005
C530 0.1UF 10% 10V 1005
C526 0.1UF 10% 10V 1005
C513 0.1UF 10% 10V 1005
C504 0.1UF 10% 10V 1005
C330 0.1UF 10% 10V 1005
C328 1005

VER.1.31

DESIGNER	K.Y	12/04/08	
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

CPU(1/8):DMI/PEG/FDI

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
4 / 99

U58
AUBURNDALE(2/9)

MISC
CLOCKS
THERMAL
DDR3 MISC
PWR MANAGEMENT
JTAG & BPM

VCC1R05B_VTT
R64 68 1/16W 5% 1005
R65 49.9 1/16W 1% 1005
R76 20 1% 1/16W 1005
R77 20 1% 1/16W 1005
R81 49.9 1% 1/16W 1005
R5 49.9 1% 1/16W 1005
COMP3 AT23
COMP2 AT24
COMP1 G16
COMP0 AT26
SKTOCC# AH24
CATERR# AK14
PECI AT15
PROCHOT# AN26
THERMTRIP# AK15
36.6M<> BI PECI
82.3B> BI -PROCHOT
TP19 1.0
36.5P< OUT -THERMTRIP

COMP0/1: Z0=49.9 OHM TRACE <0.5"
COMP2/3: Z0=20 OHM TRACE <0.5"

11.5E< OUT -CPURST
32.2N> IN -PM_SYNC
11.5E< 36.6M<> IN CPUPWRGD
RESET_OBS# AP26
PM_SYNC AL15
VCCPWRGOOD_1 AN14
VCCPWRGOOD_0 AN27
SM_DRAMPWROK AK13
VTTPWRGOOD AM15
TAPPWRGOOD AM26
RSTIN# AL14

VCC1R5A
R934 4.75K 1% 1/16W 1005
32.3C> IN DRAMPWRG
R17 12.1K 1% 1/16W 1005
11.5E< OUT TAPPWRG

VCC3B
VCC1R05B_VTT
R834 100K 5% 1/16W 1005
R594 10K 5% 1/16W 1005
80.5J< 86.3N> IN VTT_PWRG
Q6 2SK3541
Q7 2SK3541

57.4C<
52.6B< 34.1C>
56.6B< 56.2D<
IN -PLTRST_FAR
R79 26.1K 1% 1/16W 1005
R990 12.1K 1% 1/16W 1005

VCC1R05B_VTT
R168 10K 5% 1/16W 1005
R533 10K 5% 1/16W 1005

BCLK A16
BCLK# B16
BCLK_ITP AR30
BCLK_ITP# AT30
PEG_CLK E16
PEG_CLK# D16
DPLL_REF_SSCLK A18
DPLL_REF_SSCLK# A17

CPU_CLK_133M IN 36.6M>
-CPU_CLK_133M IN 36.6M>
XDP_CLK_133M OUT 11.5A<
-XDP_CLK_133M OUT 11.5A<
PEG_CLK_100M IN 31.4M>
-PEG_CLK_100M IN 31.4M>
EDP_CLK_120M IN 31.4M>
-EDP_CLK_120M IN 31.4M>

SM_DRAMRST# F6
SM_RCOMP[0] AL1
SM_RCOMP[1] AM1
SM_RCOMP[2] AN1
R7 100 1% 1/16W 1005
R84 24.9 1% 1/16W 1005
R85 130 1% 1/16W 1005
PM_EXT_TS#[0] AN15
PM_EXT_TS#[1] AP15

-DRAMRST OUT 12.8M< 13.8M<
-MEM_TS0 IN 12.0K>
-MEM_TS1 IN 13.0K>

PRDY# AT28
PREQ# AP27
TCK AN28
TMS AP28
TRST# AT27
TDI AT29
TDO AR27
TDI_M AR29
TDO_M AP29
DBR# AN25

-XDP_PRDY OUT 11.4E<
-XDP_PREQ IN 11.4E>
XDP_TCK IN 11.6E>
XDP_TMS IN 11.6E>
-XDP_TRST IN 11.5E>
XDP_TDI IN 11.6E>
XDP_TDO OUT 11.5E<
-XDP_DBR IN 11.5E> 11.5L> 32.5C<

BPM#[0] AJ22
BPM#[1] AK22
BPM#[2] AK24
BPM#[3] AJ24
BPM#[4] AJ25
BPM#[5] AH22
BPM#[6] AK23
BPM#[7] AH23

VER.1.31

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

CPU(2/8):CLK/MISC/JTAG

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 5 / 99

U58

AUBURNDALE(3/9)

DDR SYSTEM MEMORY A

12.9L<> 12.9B<> BI M_A_DQ<63..0>

0	A10	SA_DQ[0]
1	C10	SA_DQ[1]
2	C7	SA_DQ[2]
3	A7	SA_DQ[3]
4	B10	SA_DQ[4]
5	D10	SA_DQ[5]
6	E10	SA_DQ[6]
7	A8	SA_DQ[7]
8	D8	SA_DQ[8]
9	F10	SA_DQ[9]
10	E6	SA_DQ[10]
11	F7	SA_DQ[11]
12	E9	SA_DQ[12]
13	B7	SA_DQ[13]
14	E7	SA_DQ[14]
15	C6	SA_DQ[15]
16	H10	SA_DQ[16]
17	G8	SA_DQ[17]
18	K7	SA_DQ[18]
19	J8	SA_DQ[19]
20	G7	SA_DQ[20]
21	G10	SA_DQ[21]
22	J7	SA_DQ[22]
23	J10	SA_DQ[23]
24	L7	SA_DQ[24]
25	M6	SA_DQ[25]
26	M8	SA_DQ[26]
27	L9	SA_DQ[27]
28	L6	SA_DQ[28]
29	K8	SA_DQ[29]
30	N8	SA_DQ[30]
31	P9	SA_DQ[31]
32	AH5	SA_DQ[32]
33	AF5	SA_DQ[33]
34	AK6	SA_DQ[34]
35	AK7	SA_DQ[35]
36	AF6	SA_DQ[36]
37	AG5	SA_DQ[37]
38	AJ7	SA_DQ[38]
39	AJ6	SA_DQ[39]
40	AJ10	SA_DQ[40]
41	AJ9	SA_DQ[41]
42	AL10	SA_DQ[42]
43	AK12	SA_DQ[43]
44	AK8	SA_DQ[44]
45	AL7	SA_DQ[45]
46	AK11	SA_DQ[46]
47	AL8	SA_DQ[47]
48	AN8	SA_DQ[48]
49	AM10	SA_DQ[49]
50	AR11	SA_DQ[50]
51	AL11	SA_DQ[51]
52	AM9	SA_DQ[52]
53	AN9	SA_DQ[53]
54	AT11	SA_DQ[54]
55	AP12	SA_DQ[55]
56	AM12	SA_DQ[56]
57	AN12	SA_DQ[57]
58	AM13	SA_DQ[58]
59	AT14	SA_DQ[59]
60	AT12	SA_DQ[60]
61	AL13	SA_DQ[61]
62	AR14	SA_DQ[62]
63	AP14	SA_DQ[63]

12.4A< OUT M_A_BS0 AC3 SA_BS[0]
12.4N< OUT M_A_BS1 AB2 SA_BS[1]
12.5B< OUT M_A_BS2 U7 SA_BS[2]

12.4A< OUT -M_A_CAS AE1 SA_CAS#
12.4N< OUT -M_A_RAS AB3 SA_RAS#
12.4A< OUT -M_A_WE AE9 SA_WE#

SA_CK[0] AA6 DDRCLK0_533M OUT 12.4A<
SA_CK#[0] AA7 -DDRCLK0_533M OUT 12.4A<
SA_CKE[0] P7 M_CKE0 OUT 12.6B<

SA_CK[1] Y6 DDRCLK1_533M OUT 12.4N<
SA_CK#[1] Y5 -DDRCLK1_533M OUT 12.4N<
SA_CKE[1] P6 M_CKE1 OUT 12.6M<

SA_CS#[0] AE2 -M_CS0 OUT 12.4N<
SA_CS#[1] AE8 -M_CS1 OUT 12.4A<

SA_ODT[0] AD8 M_ODT0 OUT 12.4N<
SA_ODT[1] AF9 M_ODT1 OUT 12.4N<

M_A_DM<7..0> OUT 12.8M< 12.9B<

SA_DM[0]	B9	0
SA_DM[1]	D7	1
SA_DM[2]	H7	2
SA_DM[3]	M7	3
SA_DM[4]	AG6	4
SA_DM[5]	AM7	5
SA_DM[6]	AN10	6
SA_DM[7]	AN13	7

-M_A_DQS<7..0> BI 12.8B<> 12.8M<>

SA_DQS#[0]	C9	0
SA_DQS#[1]	F8	1
SA_DQS#[2]	J9	2
SA_DQS#[3]	N9	3
SA_DQS#[4]	AH7	4
SA_DQS#[5]	AK9	5
SA_DQS#[6]	AP11	6
SA_DQS#[7]	AT13	7

M_A_DQS<7..0> BI 12.8B<> 12.8M<>

SA_DQS[0]	C8	0
SA_DQS[1]	F9	1
SA_DQS[2]	H9	2
SA_DQS[3]	M9	3
SA_DQS[4]	AH8	4
SA_DQS[5]	AK10	5
SA_DQS[6]	AN11	6
SA_DQS[7]	AR13	7

M_A_A<15..0> OUT 12.5B< 12.6M<

SA_MA[0]	Y3	0
SA_MA[1]	W1	1
SA_MA[2]	AA8	2
SA_MA[3]	AA3	3
SA_MA[4]	V1	4
SA_MA[5]	AA9	5
SA_MA[6]	V8	6
SA_MA[7]	T1	7
SA_MA[8]	Y9	8
SA_MA[9]	U6	9
SA_MA[10]	AD4	10
SA_MA[11]	T2	11
SA_MA[12]	U3	12
SA_MA[13]	AG8	13
SA_MA[14]	T3	14
SA_MA[15]	V9	15

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

CPU(3/8):DDR3 CH-A

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 6 / 99

U58

AUBURNDALE(4/9)

DDR SYSTEM MEMORY - B

13.9L<> 13.9B<> BI M_B_DQ<63..0>

		SB_DQ[n]
0	B5	SB_DQ[0]
1	A5	SB_DQ[1]
2	C3	SB_DQ[2]
3	B3	SB_DQ[3]
4	E4	SB_DQ[4]
5	A6	SB_DQ[5]
6	A4	SB_DQ[6]
7	C4	SB_DQ[7]
8	D1	SB_DQ[8]
9	D2	SB_DQ[9]
10	F2	SB_DQ[10]
11	F1	SB_DQ[11]
12	C2	SB_DQ[12]
13	F5	SB_DQ[13]
14	F3	SB_DQ[14]
15	G4	SB_DQ[15]
16	H6	SB_DQ[16]
17	G2	SB_DQ[17]
18	J6	SB_DQ[18]
19	J3	SB_DQ[19]
20	G1	SB_DQ[20]
21	G5	SB_DQ[21]
22	J2	SB_DQ[22]
23	J1	SB_DQ[23]
24	J5	SB_DQ[24]
25	K2	SB_DQ[25]
26	L3	SB_DQ[26]
27	M1	SB_DQ[27]
28	K5	SB_DQ[28]
29	K4	SB_DQ[29]
30	M4	SB_DQ[30]
31	N5	SB_DQ[31]
32	AF3	SB_DQ[32]
33	AG1	SB_DQ[33]
34	AJ3	SB_DQ[34]
35	AK1	SB_DQ[35]
36	AG4	SB_DQ[36]
37	AG3	SB_DQ[37]
38	AJ4	SB_DQ[38]
39	AH4	SB_DQ[39]
40	AK3	SB_DQ[40]
41	AK4	SB_DQ[41]
42	AM6	SB_DQ[42]
43	AN2	SB_DQ[43]
44	AK5	SB_DQ[44]
45	AK2	SB_DQ[45]
46	AM4	SB_DQ[46]
47	AM3	SB_DQ[47]
48	AP3	SB_DQ[48]
49	AN5	SB_DQ[49]
50	AT4	SB_DQ[50]
51	AN6	SB_DQ[51]
52	AN4	SB_DQ[52]
53	AN3	SB_DQ[53]
54	AT5	SB_DQ[54]
55	AT6	SB_DQ[55]
56	AN7	SB_DQ[56]
57	AP6	SB_DQ[57]
58	AP8	SB_DQ[58]
59	AT9	SB_DQ[59]
60	AT7	SB_DQ[60]
61	AP9	SB_DQ[61]
62	AR10	SB_DQ[62]
63	AT10	SB_DQ[63]

13.4B<	OUT	M_B_BS0	AB1 SB_BS[0]
13.4M<	OUT	M_B_BS1	W5 SB_BS[1]
13.5B<	OUT	M_B_BS2	R7 SB_BS[2]
13.4B<	OUT	-M_B_CAS	AC5 SB_CAS#
13.4M<	OUT	-M_B_RAS	Y7 SB_RAS#
13.4B<	OUT	-M_B_WE	AC6 SB_WE#

SB_CK[0]	W8	DDRCLK2_533M	OUT	13.4B<
SB_CK#[0]	W9	-DDRCLK2_533M	OUT	13.4B<
SB_CKE[0]	M3	M_CKE2	OUT	13.6B<
SB_CK[1]	V7	DDRCLK3_533M	OUT	13.4M<
SB_CK#[1]	V6	-DDRCLK3_533M	OUT	13.4M<
SB_CKE[1]	M2	M_CKE3	OUT	13.6M<
SB_CS#[0]	AB8	-M_CS2	OUT	13.4M<
SB_CS#[1]	AD6	-M_CS3	OUT	13.4B<
SB_ODT[0]	AC7	M_ODT2	OUT	13.4M<
SB_ODT[1]	AD1	M_ODT3	OUT	13.4M<

M_B_DM<7..0> OUT 13.8M< 13.9B<

SB_DM[0]	D4	0
SB_DM[1]	E1	1
SB_DM[2]	H3	2
SB_DM[3]	K1	3
SB_DM[4]	AH1	4
SB_DM[5]	AL2	5
SB_DM[6]	AR4	6
SB_DM[7]	AT8	7

-M_B_DQS<7..0> BI 13.8B<> 13.8M<>

SB_DQS#[0]	D5	0
SB_DQS#[1]	F4	1
SB_DQS#[2]	J4	2
SB_DQS#[3]	L4	3
SB_DQS#[4]	AH2	4
SB_DQS#[5]	AL4	5
SB_DQS#[6]	AR5	6
SB_DQS#[7]	AR8	7

M_B_DQS<7..0> BI 13.8B<> 13.8M<>

SB_DQS[0]	C5	0
SB_DQS[1]	E3	1
SB_DQS[2]	H4	2
SB_DQS[3]	M5	3
SB_DQS[4]	AG2	4
SB_DQS[5]	AL5	5
SB_DQS[6]	AP5	6
SB_DQS[7]	AR7	7

M_B_A<15..0> OUT 13.5B< 13.6M<

SB_MA[0]	U5	0
SB_MA[1]	V2	1
SB_MA[2]	T5	2
SB_MA[3]	V3	3
SB_MA[4]	R1	4
SB_MA[5]	T8	5
SB_MA[6]	R2	6
SB_MA[7]	R6	7
SB_MA[8]	R4	8
SB_MA[9]	R5	9
SB_MA[10]	AB5	10
SB_MA[11]	P3	11
SB_MA[12]	R3	12
SB_MA[13]	AF7	13
SB_MA[14]	P5	14
SB_MA[15]	N1	15

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

CPU(4/8):DDR3 CH-B

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 7 / 99

TABLE

CFG0 PEG CONFIG
BIFURCATION:ASM
SINGLE:NO_ASM

CFG3 PEG LANE REVERSAL
REVERSE:ASM
NORMAL:NO_ASM

CFG4 DISPLAY PORT PRESENCE
ENABLE:ASM
DISABLE:NO_ASM

CFG7 CLARKSFIELD JITTER ISSUE TEMPORARY WORKAROUND
ENABLE:ASM
DISABLE:NO_ASM

U58

AUBURNDALE(5/9)

RESERVED

		RSVD1	AP25
		RSVD2	AL25
		RSVD3	AL24
		RSVD4	AL22
		RSVD5	AJ33
		RSVD6	AG9
		RSVD7	M27
		RSVD8	L28
		RSVD9	J17
		RSVD10	H17
		RSVD11	G25
		RSVD12	G17
		RSVD13	E31
		RSVD14	E30
		RSVD15	B19
		RSVD16	A19
		RSVD17	A20
		RSVD18	B20
		RSVD19	U9
		RSVD20	T9
		RSVD21	AC9
		RSVD22	AB9
		RSVD23	C1
		RSVD24	A3
		RSVD26	J29
		RSVD27	J28
		RSVD28	A34
		RSVD29	A33
		RSVD30	C35
		RSVD31	B35

		RSVD32	AJ13
		RSVD33	AJ12
		RSVD34	AH25
		RSVD35	AK26
		RSVD36	AL26
		RSVD37	AR2
		RSVD38	AJ26
		RSVD39	AJ27
		RSVD40	AP1
		RSVD41	AT2
		RSVD42	AT3
		RSVD43	AR1
		RSVD45	AL28
		RSVD46	AL29
		RSVD47	AP30
		RSVD48	AP32
		RSVD49	AL27
		RSVD50	AT31
		RSVD51	AT32
		RSVD52	AP33
		RSVD53	AR33
		RSVD54	AT33
		RSVD55	AT34
		RSVD56	AP35
		RSVD57	AR35
		RSVD58	AR32
		RSVD59	E15
		RSVD60	F15
		RSVD61	A2
		RSVD62	D15
		RSVD63	C15
		RSVD64	AJ15
		RSVD65	AH15
		RSVD66	AA5
		RSVD67	AA4
		RSVD68	R8
		RSVD69	AD3
		RSVD70	AD2
		RSVD71	AA2
		RSVD72	AA1
		RSVD73	R9
		RSVD74	AG7
		RSVD75	AE3
		RSVD76	V4
		RSVD77	V5
		RSVD78	N2
		RSVD79	AD5
		RSVD80	AD7
		RSVD81	W3
		RSVD82	W2
		RSVD83	N3
		RSVD84	AE5
		RSVD85	AD9
		RSVD86	AP34

		CFG[0]	AM30
TP15		CFG[1]	AM28
TP2		CFG[2]	AP31
		CFG[3]	AL32
		CFG[4]	AL30
TP3		CFG[5]	AM31
TP4		CFG[6]	AN29
		CFG[7]	AM32
TP6		CFG[8]	AK32
TP7		CFG[9]	AK31
TP8		CFG[10]	AK28
TP9		CFG[11]	AJ28
TP11		CFG[12]	AN30
TP12		CFG[13]	AN32
TP13		CFG[14]	AJ32
TP14		CFG[15]	AJ29
TP55		CFG[16]	AJ30
TP17		CFG[17]	AK30
TP18		CFG[18]	H16

NO_ASM 5% 1/16W 3K R14 1005
NO_ASM 5% 1/16W 3K R86 1005
NO_ASM 5% 1/16W 3K R89 1005
NO_ASM 5% 1/16W 3K R940 1005

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	CPU(5/8):CFG/RSVD

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

VER.1.31

TABLE

IMAX	VID<5..3>
DISABLE	000
20A	001
30A	010
40A	011
50A	100
60A	101
70A	110
90A	111

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

CPU(6/8):PWR

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 9 / 99

VCCGFXCORE_I

C696 10UF 6.3V 20% 1608
C698 10UF 6.3V 20% 1608
C702 22UF 6.3V 20% 2125
C941 22UF 6.3V 20% 2125

PLACE NEAR CPU

VCCGFXCORE_I

U58
AUBURNDALE(7/9)

GRAPHICS

AT21	VCCAXG1
AT19	VCCAXG2
AT18	VCCAXG3
AT16	VCCAXG4
AR21	VCCAXG5
AR19	VCCAXG6
AR18	VCCAXG7
AR16	VCCAXG8
AP21	VCCAXG9
AP19	VCCAXG10
AP18	VCCAXG11
AP16	VCCAXG12
AN21	VCCAXG13
AN19	VCCAXG14
AN18	VCCAXG15
AN16	VCCAXG16
AM21	VCCAXG17
AM19	VCCAXG18
AM18	VCCAXG19
AM16	VCCAXG20
AL21	VCCAXG21
AL19	VCCAXG22
AL18	VCCAXG23
AL16	VCCAXG24
AK21	VCCAXG25
AK19	VCCAXG26
AK18	VCCAXG27
AK16	VCCAXG28
AJ21	VCCAXG29
AJ19	VCCAXG30
AJ18	VCCAXG31
AJ16	VCCAXG32
AH21	VCCAXG33
AH19	VCCAXG34
AH18	VCCAXG35
AH16	VCCAXG36

SENSE LINES

VCCAXG_SENSE	AR22	GFXCORE_VDD_SENSE_I	OUT 85.0K<
VSSAXG_SENSE	AT22	GFXCORE_GND_SENSE_I	OUT 85.0K<

GRAPHICS VIDs

GFX_VID[0]	AM22	GFXVID0	OUT 85.6B<
GFX_VID[1]	AP22	GFXVID1	OUT 85.6B<
GFX_VID[2]	AN22	GFXVID2	OUT 85.6B<
GFX_VID[3]	AP23	GFXVID3	OUT 85.7B<
GFX_VID[4]	AM23	GFXVID4	OUT 85.7B<
GFX_VID[5]	AP24	GFXVID5	OUT 85.7B<
GFX_VID[6]	AN24	GFXVID6	OUT 85.7B<

GFX_VR_EN	AR25	GFX_PWR_EN_I	OUT 80.8H<
GFX_DPRSLPVR	AT25	TP142	
GFX_IMON	AM24	GFX_IMON	IN 85.5B>

VCC1R5A

R941 4.7K 5% 1/16W 1005

POWER - 1.5V RAILS DDR3

VDDQ1	AJ1
VDDQ2	AF1
VDDQ3	AE7
VDDQ4	AE4
VDDQ5	AC1
VDDQ6	AB7
VDDQ7	AB4
VDDQ8	Y1
VDDQ9	W7
VDDQ10	W4
VDDQ11	U1
VDDQ12	T7
VDDQ13	T4
VDDQ14	P1
VDDQ15	N7
VDDQ16	N4
VDDQ17	L1
VDDQ18	H1

VCC1R5A

C835 22UF 6.3V 20% 2125
C1184 22UF 6.3V 20% 2125 X5R
C838 1UF 10V 10% 1005
C840 1UF 10V 10% 1005
C842 1UF 10V 10% 1005
C844 1UF 10V 10% 1005
C846 1005

VCC1R05B_VTT

J24 VTT45 VTT46 VTT47
H25

C95 22UF 6.3V 20% 2125

FDI

VCC1R05B_VTT

C80 22UF 6.3V 20% 2125
C85 22UF 6.3V 20% 2125
C98 22UF 6.3V 20% 2125

K26	VTT48
J27	VTT49
J26	VTT50
J25	VTT51
H27	VTT52
G28	VTT53
G27	VTT54
G26	VTT55
F26	VTT56
E26	VTT57
E25	VTT58

PEG & DMI

1.1V

VTT59	P10
VTT60	N10
VTT61	L10
VTT62	K10

VCC1R05B_VTT

C132 10UF 6.3V 20% 1608
C141 10UF 6.3V 20% 1608

VTT63	J22
VTT64	J20
VTT65	J18
VTT66	H21
VTT67	H20
VTT68	H19

VCC1R05B_VTT

C111 22UF 6.3V 20% 2125

1.8V

VCCPLL1	L26
VCCPLL2	L27
VCCPLL3	M26

VCC1R8B

C110 1UF 10V 10% 1005
C121 1UF 10V 10% 1005
C123 2.2UF 4V 10% 1005
C135 4.7UF 6.3V 10% 1608
C144 22UF 6.3V 20% 2125

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	CPU(7/8):GFX/PWR

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

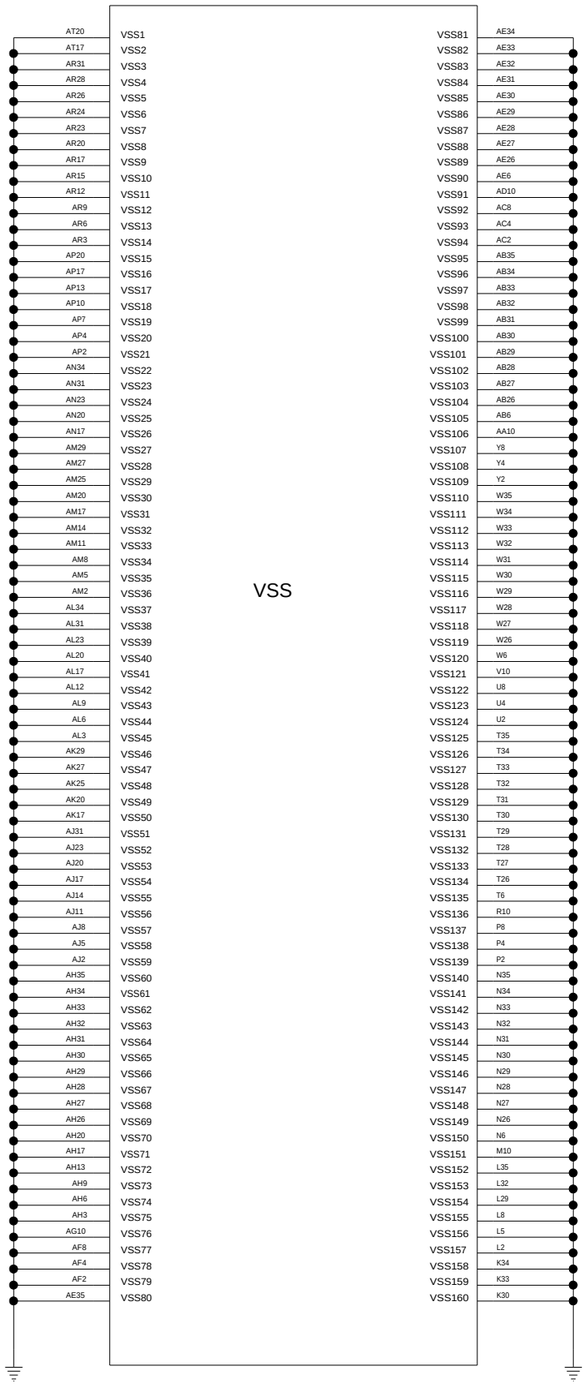
VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 10 / 99

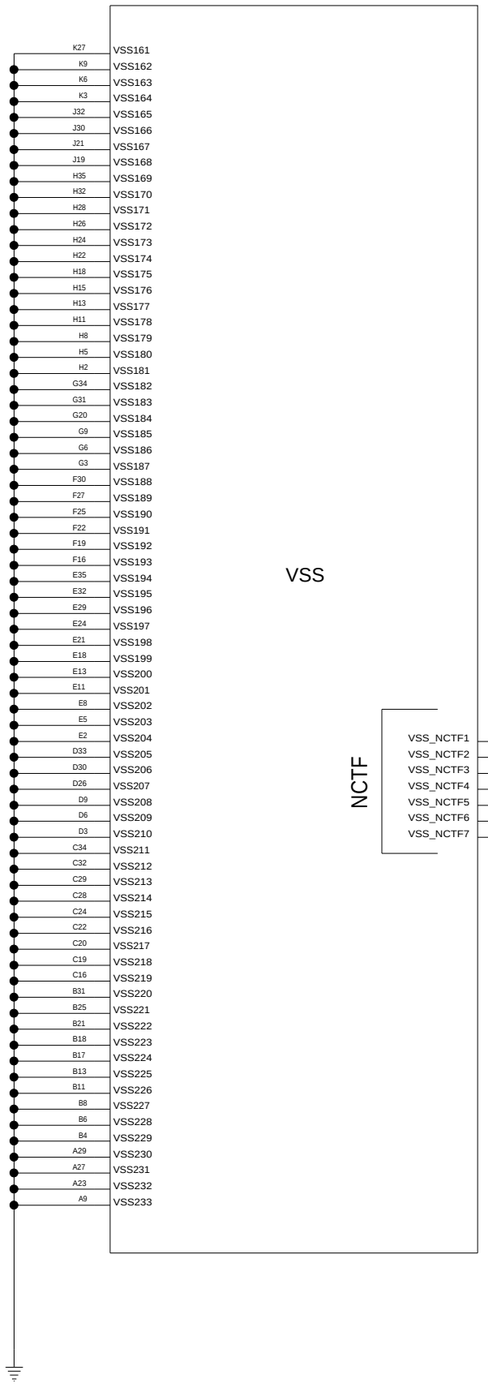
U58

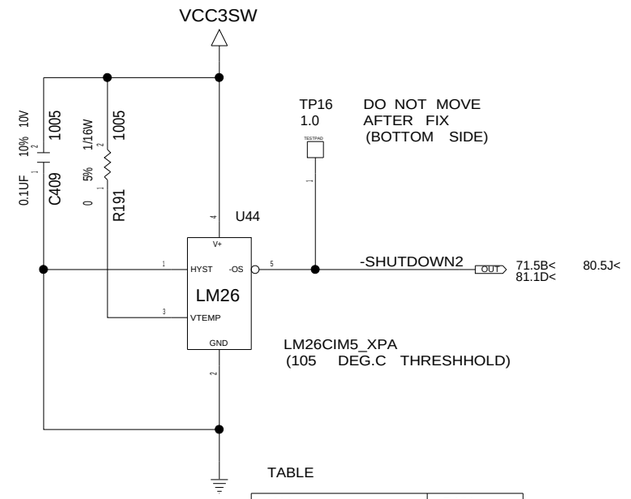
AUBURNDALE(8/9)



U58

AUBURNDALE(9/9)



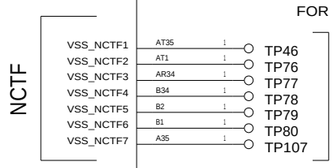


TABLE

U44	R191
NS LM26 MAXIM MAX6519	NO_ASM
MAXIM MAX6501 ADI ADT6501	ASM

LOGIC

FOR SOLDER CRACK DETECTION

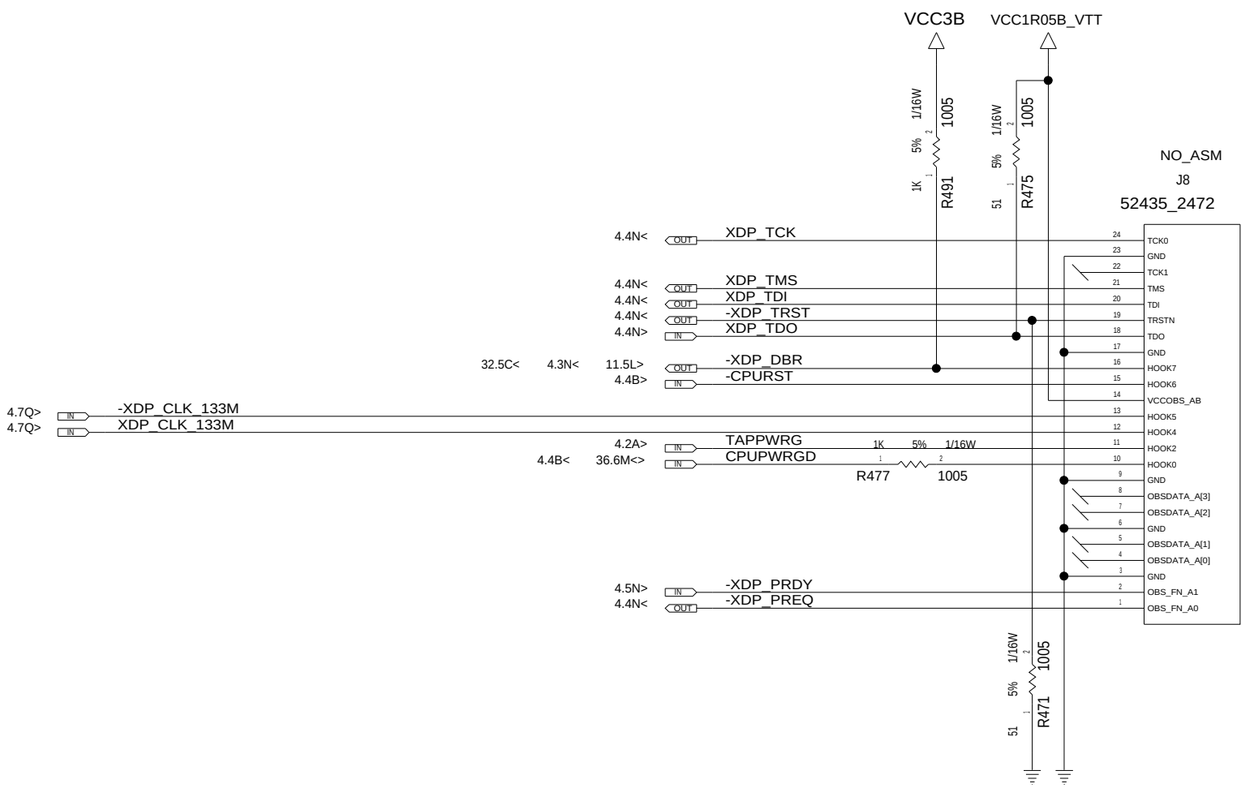


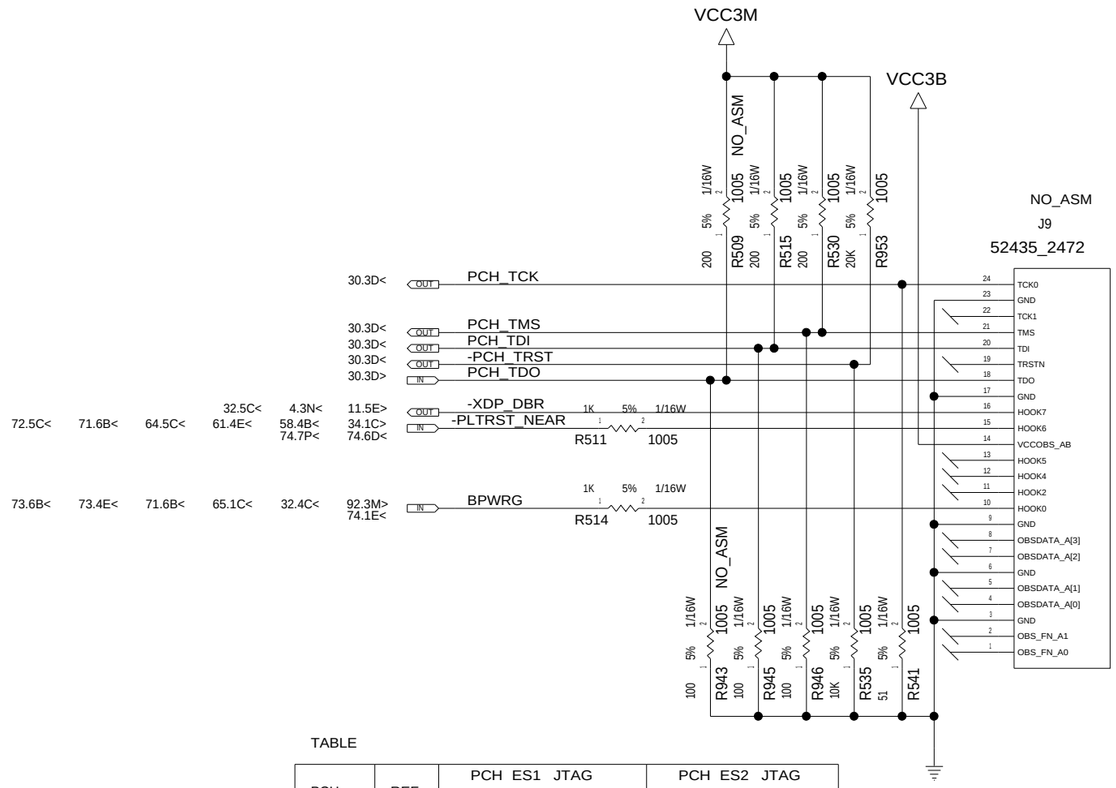
			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	CPU(8/8):GND	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 11 / 99





TABLE

PCH PIN	REF DES	PCH ES1 JTAG		PCH ES2 JTAG	
		ENABLE	DISABLE	ENABLE	DISABLE
TDO	R509 R943	NO_ASM NO_ASM	NO_ASM NO_ASM	200 100	NO_ASM NO_ASM
TMS	R530 R946	200 100	NO_ASM NO_ASM	200 100	NO_ASM NO_ASM
TDI	R515 R945	200 100	20K 10K	200 100	NO_ASM NO_ASM
TCK	R541	51	51	51	51
TRST#	R953 R535	20K 10K	NO_ASM NO_ASM	20K 10K	NO_ASM NO_ASM

LOGIC

			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	XDP CONNECTOR	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
12 / 99

DDR3_VREF

VCC1R5A

J21

2013290_1

M_A_DQ<63..0>

M_A_DM<7..0>

-M_A_DQS<7..0>

M_A_DQS<7..0>

M_CKE0

M_A_BS2

M_A_A<15..0>

DDRCLK0_533M

-DDRCLK0_533M

M_A_BS0

-M_A_WE

-M_A_CAS

-M_CS1

M_CKE1

DDRCLK1_533M

-DDRCLK1_533M

M_A_BS1

-M_A_RAS

-M_CS0

M_ODT0

M_ODT1

-DRAMRST

C341 2.2UF 10% 4V 1005

C344 0.1UF 10% 10V 1005

C428 C242 C534 C537 C540 C583 1UF 10% 10V 1005

C425 C426 C427 1UF 10% 10V 1005

PLACE 1UF NEAR VCC1R5A PIN.

VCC0R75B

VCC3B

C411 4.7UF 10% 6.3V 1608

C466 4.7UF 10% 6.3V 1608

C31 C87 C100 C103 1UF 10% 10V 1005

C66 C430 0.1UF 10% 10V 1005

C342 2.2UF 10% 10V X5R 1608

C908 0.1UF 10% 10V 1005

SPD ADDRESS 50H

-MEM_TS0 OUT 4.5Q<

SMB_DATA_3B BI 13.0K<> 15.5C<> 74.2E<>

SMB_CLK_3B IN 74.2E> 13.0K< 15.5C<

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

DDR3 SO DIMM CHANNEL-A

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
13 / 99

DDR3_VREF

VCC1R5A

J30

2013287_1

M_B_DQ<63..0>

M_B_DM<7..0>

-M_B_DQS<7..0>

M_B_DQS<7..0>

M_CKE2

M_B_BS2

M_B_A<15..0>

DDRCLK2_533M

-DDRCLK2_533M

M_B_BS0

-M_B_WE

-M_B_CAS

-M_CS3

M_CKE3

DDRCLK3_533M

-DDRCLK3_533M

M_B_BS1

-M_B_RAS

-M_CS2

M_ODT2

M_ODT3

-DRAMRST

C400 2.2UF 4V 10% 1005
C555 0.1UF 10V 10% 1005

C680 1UF 10V 10% 1005
C129 1UF 10V 10% 1005
C128 1UF 10V 10% 1005
C180 1UF 10V 10% 1005
C181 1UF 10V 10% 1005
C57 1UF 10V 10% 1005

C160 1UF 10V 10% 1005
C159 1UF 10V 10% 1005
C58 1UF 10V 10% 1005

PLACE 1UF NEAR VCC1R5A PIN.

VCC0R75B

C682 4.7UF 6.3V 10% 1608
C104 4.7UF 6.3V 10% 1608
C108 1UF 10V 10% 1005
C189 1UF 10V 10% 1005
C213 1UF 10V 10% 1005
C214 1UF 10V 10% 1005

VCC3B

R187 10K 1/16W 5% 1005

SPD_ADDRESS_51H

C97 0.1UF 10V 10% 1005
C410 0.1UF 10V 10% 1005
C910 2.2UF 10V 10% 1608 X5R
C944 0.1UF 10V 10% 1005

-MEM_TS1 4.5Q<
SMB_DATA_3B 12.0K<> 15.5C<> 74.2E<>
SMB_CLK_3B 74.2E> 12.0K< 15.5C<

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

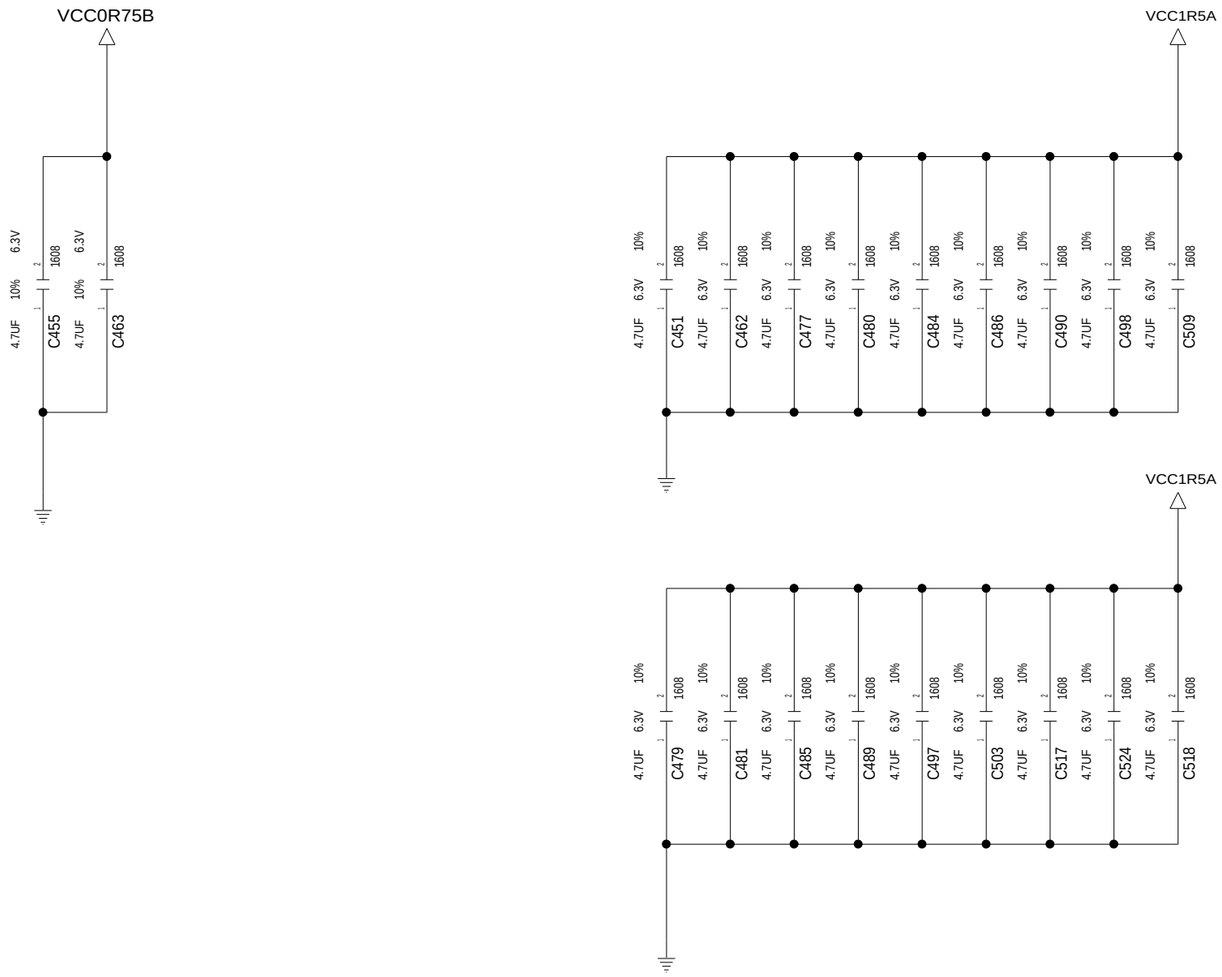
DDR3 SO DIMM CHANNEL-B

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

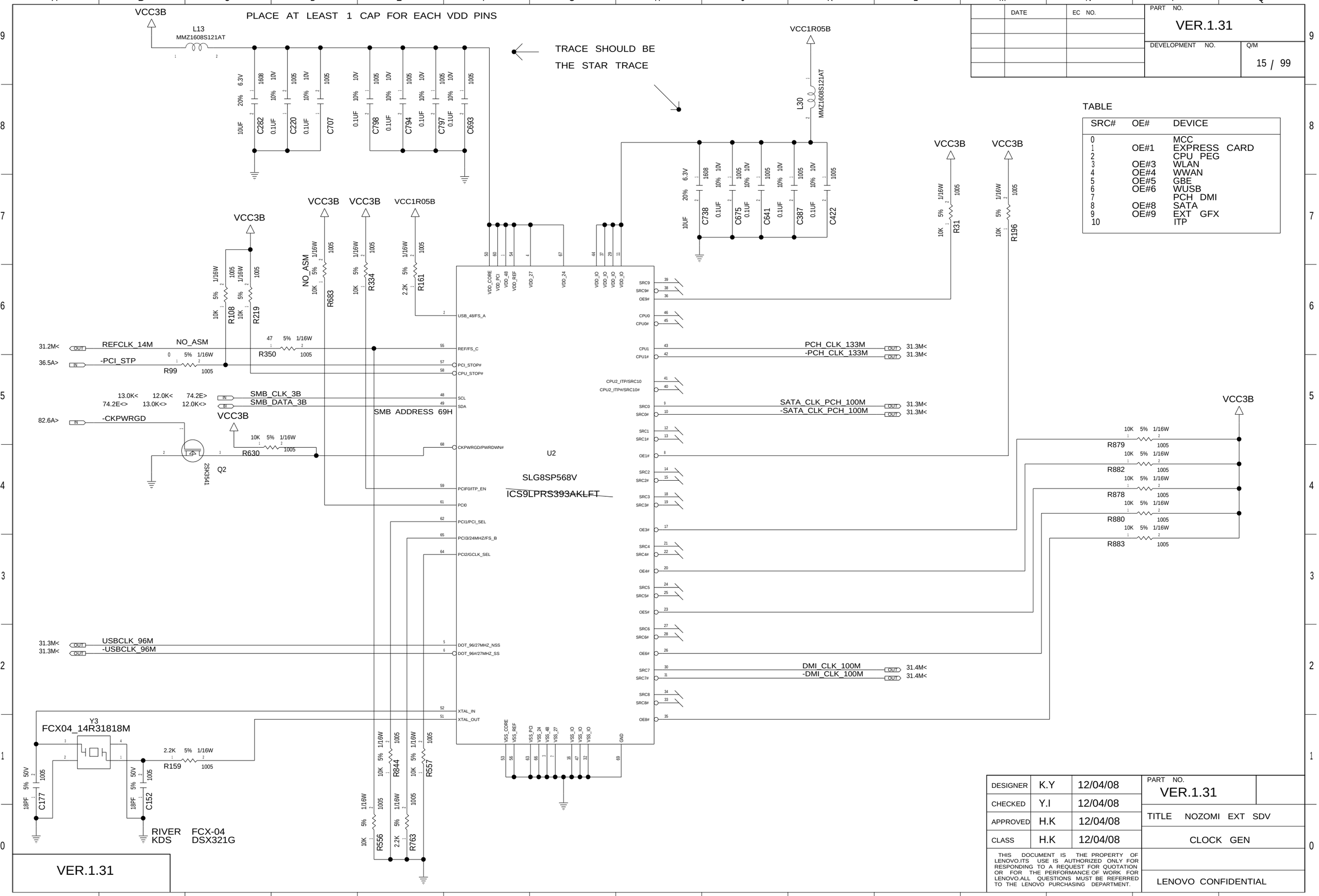
	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 14 / 99



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DDR3 DECOUPLING
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL



TABLE

SRC#	OE#	DEVICE
0		MCC
1	OE#1	EXPRESS CARD
2		CPU PEG
3	OE#3	WLAN
4	OE#4	WWAN
5	OE#5	GBE
6	OE#6	WUSB
7		PCH DMI
8	OE#8	SATA
9	OE#9	EXT GFX
10		ITP

DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 15 / 99

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

CLOCK GEN

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 16 / 99

1.2A

VCC1R05VIDEO_PLL 110mA — MLG1608B10NJT 1608 — L14

VCC3VIDEO — C1015 4.7UF 10% 6.3V 1608; C925 0.1UF 10% 10V 1005; C925 0.01UF 10% 25V 1005; C137 4.7UF 10% 6.3V 1608

VCC3VIDEO — C325 1UF 10% 10V 1005; C332 1UF 10% 10V 1005; C419 1UF 10% 10V 1005; C521 1UF 10% 10V 1005; C236 0.1UF 10% 10V 1005; C468 10% 6.3V 1608

VCC1R05VIDEO 500mA — C448 10UF 20% 6.3V 2125; C523 4.7UF 20% 6.3V 1608; C38 1UF 10% 6.3V 1608; C531 0.1UF 10% 10V 1005; C539 10% 6.3V 1005

R286 10K 5% 1/16W 1005

92.4B< 80.6G> 71.6P> IN 1R05VIDEO_ON

R391 5.1K 5% 1/16W 1005

R416 1K 5% 1/16W 1005 — D55 1SS400G

C102 0.1UF 10% 10V 1005

U47
N10M_GS(1/6)

PEX_IOVDD1	AC9	
PEX_IOVDD2	AD7	
PEX_IOVDD3	AD8	
PEX_IOVDD4	AE7	
PEX_IOVDD5	AF7	
PEX_IOVDD6	AG7	
PEX_PLLVDD	AF9	
PEX_SVDD_3V3	AG9	
PEX_IOVDDQ1	AB7	
PEX_IOVDDQ2	AB8	
PEX_IOVDDQ3	AB9	
PEX_IOVDDQ4	AB13	
PEX_IOVDDQ5	AB16	
PEX_IOVDDQ6	AB17	
PEX_IOVDDQ7	AC7	
PEX_IOVDDQ8	AC13	
PEX_IOVDDQ9	AD6	
PEX_IOVDDQ10	AE6	
PEX_IOVDDQ11	AF6	
PEX_IOVDDQ12	AG6	
PEX_TSTCLK_OUT	AF10	
PEX_TSTCLK_OUT_N	AE10	
PEX_TERMP	AG10	

VCC1R05VIDEO 1600mA — C494 0.1UF 10% 10V 1005; C541 0.1UF 10% 10V 1005; C544 1UF 10% 10V 1005; C19 1UF 10% 10V 1005; C88 1UF 10% 10V 1005; C44 4.7UF 10% 6.3V 1005; C61 10UF 20% 6.3V 1608; C885 22UF 20% 6.3V 1608; C886 2125

R214 200 1% 1/16W 1005

71.5P> IN -GPU_RST → PEX_RST_N (AD9)

31.5Q< OUT -CLKREQ_GFX → PEX_CLKREQ_N (AE9)

31.5M> IN GFX_CLK_100M → REX_REFCLK (AB10)

31.5M> IN -GFX_CLK_100M → REX_REFCLK_N (AC10)

3.3N> IN PCIE_GFX_TXP<15..0>

0	PEX_RX0 (AE12)
1	PEX_RX1 (AG12)
2	PEX_RX2 (AF13)
3	PEX_RX3 (AE15)
4	PEX_RX4 (AG15)
5	PEX_RX5 (AF16)
6	PEX_RX6 (AE18)
7	PEX_RX7 (AG18)
8	PEX_RX8 (AF19)
9	PEX_RX9 (AE21)
10	PEX_RX10 (AG21)
11	PEX_RX11 (AF22)
12	PEX_RX12 (AE24)
13	PEX_RX13 (AG24)
14	PEX_RX14 (AG25)
15	PEX_RX15 (AF27)

3.5N> IN PCIE_GFX_TXN<15..0>

0	PEX_RX0_N (AF12)
1	PEX_RX1_N (AG13)
2	PEX_RX2_N (AE13)
3	PEX_RX3_N (AF15)
4	PEX_RX4_N (AG16)
5	PEX_RX5_N (AE16)
6	PEX_RX6_N (AF18)
7	PEX_RX7_N (AG19)
8	PEX_RX8_N (AE19)
9	PEX_RX9_N (AF21)
10	PEX_RX10_N (AG22)
11	PEX_RX11_N (AE22)
12	PEX_RX12_N (AF24)
13	PEX_RX13_N (AF25)
14	PEX_RX14_N (AG26)
15	PEX_RX15_N (AE27)

PEX_TX0	AD10	
PEX_TX1	AD12	
PEX_TX2	AB11	
PEX_TX3	AD13	
PEX_TX4	AD15	
PEX_TX5	AB14	
PEX_TX6	AC16	
PEX_TX7	AD17	
PEX_TX8	AC18	
PEX_TX9	AB19	
PEX_TX10	AD19	
PEX_TX11	AD21	
PEX_TX12	AB21	
PEX_TX13	AC22	
PEX_TX14	AD23	
PEX_TX15	AE25	
PEX_TX0_N	AD11	
PEX_TX1_N	AC12	
PEX_TX2_N	AB12	
PEX_TX3_N	AD14	
PEX_TX4_N	AC15	
PEX_TX5_N	AB15	
PEX_TX6_N	AD16	
PEX_TX7_N	AD18	
PEX_TX8_N	AB18	
PEX_TX9_N	AB20	
PEX_TX10_N	AD20	
PEX_TX11_N	AC21	
PEX_TX12_N	AB22	
PEX_TX13_N	AD22	
PEX_TX14_N	AD24	
PEX_TX15_N	AE26	

C449, C1032, C1030, C1018, C1019, C488, C924 — 0.1UF 10% 10V 1005

C622, C631, C636, C1031, C1020, C1025 — 0.1UF 10% 10V 1005

C812, C857, C859, C861, C862, C725 — 0.1UF 10% 10V 1005

PCIE_GFX_RXP<15..0> OUT 3.6N<

PCIE_GFX_RXN<15..0> OUT 3.8N<

0	C686	0.1UF 10% 10V 1005
1	C1037	0.1UF 10% 10V 1005
2	C559	0.1UF 10% 10V 1005
3	C1034	0.1UF 10% 10V 1005
4	C1038	0.1UF 10% 10V 1005
5	C596	0.1UF 10% 10V 1005
6	C1026	0.1UF 10% 10V 1005
7	C1035	0.1UF 10% 10V 1005
8	C1023	0.1UF 10% 10V 1005
9	C1027	0.1UF 10% 10V 1005
10	C1036	0.1UF 10% 10V 1005
11	C1024	0.1UF 10% 10V 1005
12	C719	0.1UF 10% 10V 1005
13	C1025	0.1UF 10% 10V 1005
14	C725	0.1UF 10% 10V 1005
15		

R19 2.49K 1% 1/16W 1005

VCC1R5A — C1202 2.2UF 10% 10V 1608

VCC5M — C1205 0.1UF 10% 10V 1005

U3
BD3552HFN
VIN, VCC, VO, EN, FB, GATE, NRCS, GND, FIN

C1204 0.068UF 10% 16V 1005

NO_ASM — R1073 300 5% 1/16W 1005 — C1206 1000PF 10% 50V 1005

R1075 6.19K 1% 1/16W 1005 — C1207 1000PF 10% 50V 1005

NO_ASM — R1074 10K 1% 1/16W 1005

C1203 2.2UF 10% 4V 1005; C1210 22UF 20% 6.3V 2125

VCC1R05VIDEO_PLL — NO_ASM — 0.001 YJP1608-R001 5% 1/10W 1608 — R20

VCC1R05VIDEO_IO

0.001 YJP1608-R001 5% 1/10W 1608 — R602

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	N10M-GS(1/6):PEG I/F
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 18 / 99

U47

N10M_GS(3/6)

FBA_D<63..0> 22.9H< 22.9B<

0	D22	FBA_D0	FBA_CLK0	F24	FBA_CLK0	OUT	22.3C< 22.5N<
1	E24	FBA_D1	FBA_CLK0_N	F23	-FBA_CLK0	OUT	22.3C< 22.5N<
2	E22	FBA_D2					
3	D24	FBA_D3	FBA_CLK1	N24	FBA_CLK1	OUT	22.3H< 22.5N<
4	D26	FBA_D4	FBA_CLK1_N	N23	-FBA_CLK1	OUT	22.3H< 22.4N<
5	D27	FBA_D5			FBA_DQM<7..0>	OUT	22.2C< 22.2H<
6	C27	FBA_D6	FBA_DQM0	C26 0			
7	B27	FBA_D7	FBA_DQM1	B19 1	FBA_A<12..0>	OUT	22.1J< 22.3Q< 22.5B< 22.5H<
8	A21	FBA_D8	FBA_DQM2	D19 2			
9	B21	FBA_D9	FBA_DQM3	D23 3	FBB_A<5..2>	OUT	22.5H<
10	C21	FBA_D10	FBA_DQM4	T24 4			
11	C19	FBA_D11	FBA_DQM5	AA23 5			
12	C18	FBA_D12	FBA_DQM6	AB27 6			
13	D18	FBA_D13	FBA_DQM7	T26 7			
14	B18	FBA_D14					
15	C16	FBA_D15	FBA_CMD0	F26 4			
16	E21	FBA_D16	FBA_CMD1	J24	-FBA_RAS	OUT	22.4C< 22.4H<
17	F21	FBA_D17	FBA_CMD2	F25 5			
18	D20	FBA_D18	FBA_CMD3	M23	FBA_BA1	OUT	22.6B< 22.6H<
19	F20	FBA_D19	FBA_CMD4	N27 2			
20	D17	FBA_D20	FBA_CMD5	M27 4			
21	F18	FBA_D21	FBA_CMD6	K26 3			
22	D16	FBA_D22	FBA_CMD7	J25	FBB_CKE	OUT	22.3H<
23	E16	FBA_D23	FBA_CMD8	J27	-FBB_CS0	OUT	22.4H<
24	A22	FBA_D24	FBA_CMD9	G23 11			
25	C24	FBA_D25	FBA_CMD10	G26	-FBA_CAS	OUT	22.4C< 22.4H<
26	D21	FBA_D26	FBA_CMD11	J23	-FBA_WE	OUT	22.4C< 22.4H<
27	B22	FBA_D27	FBA_CMD12	M25	FBA_BA0	OUT	22.6B< 22.6H<
28	C22	FBA_D28	FBA_CMD13	K27 5			
29	A25	FBA_D29	FBA_CMD14	G25 12			
30	B25	FBA_D30	FBA_CMD15	L24	FBA_RST	OUT	22.2C< 22.2H<
31	A26	FBA_D31	FBA_CMD16	K23 7			
32	U24	FBA_D32	FBA_CMD17	K24 10			
33	V24	FBA_D33	FBA_CMD18	G22	FBA_CKE	OUT	22.3C<
34	V23	FBA_D34	FBA_CMD19	K25 0			
35	R24	FBA_D35	FBA_CMD20	H22 9			
36	T23	FBA_D36	FBA_CMD21	M26 6			
37	R23	FBA_D37	FBA_CMD22	H24 2			
38	P24	FBA_D38	FBA_CMD23	F27 8			
39	P22	FBA_D39	FBA_CMD24	J26 3			
40	AC24	FBA_D40	FBA_CMD25	G24 1			
41	AB23	FBA_D41	FBA_CMD26	G27			
42	AB24	FBA_D42	FBA_CMD27	M24	FBA_BA2	OUT	22.6B< 22.6H<
43	W24	FBA_D43	FBA_CMD28	K22			
44	AA22	FBA_D44	FBA_CMD29	J22	-FBA_CS0	OUT	22.4C<
45	W23	FBA_D45	FBA_CMD30	L22			
46	W22	FBA_D46			FBA_DQS_WP<7..0>	OUT	22.3C< 22.3H<
47	V22	FBA_D47	FBA_DQS_WP0	C25 0			
48	AA25	FBA_D48	FBA_DQS_WP1	A19 1	FBA_DQS_RN<7..0>	OUT	22.3C< 22.3H<
49	W27	FBA_D49	FBA_DQS_WP2	E19 2			
50	W26	FBA_D50	FBA_DQS_WP3	A24 3			
51	W25	FBA_D51	FBA_DQS_WP4	T22 4			
52	AB25	FBA_D52	FBA_DQS_WP5	AA24 5			
53	AB26	FBA_D53	FBA_DQS_WP6	AA26 6			
54	AD26	FBA_D54	FBA_DQS_WP7	T27 7			
55	AD27	FBA_D55					
56	V25	FBA_D56	FBA_DQS_RN0	D25 0			
57	R25	FBA_D57	FBA_DQS_RN1	A18 1			
58	V26	FBA_D58	FBA_DQS_RN2	E18 2			
59	V27	FBA_D59	FBA_DQS_RN3	B24 3			
60	R26	FBA_D60	FBA_DQS_RN4	R22 4			
61	T25	FBA_D61	FBA_DQS_RN5	Y24 5			
62	N25	FBA_D62	FBA_DQS_RN6	AA27 6			
63	N26	FBA_D63	FBA_DQS_RN7	R27 7			
			FB_CAL_PD_VDDQ	B15			
			FB_VREF	A16			
			FB_CAL_PU_GND	A15			
TP5 1	M22	FBA_DEBUG	FB_CAL_TERM_GND	B16			

FOR FB DEBUG

10K 5% 1/16W 1005 R126

10K 5% 1/16W 1005 R130

10K 5% 1/16W 1005 R472

VCC1R8VIDEO

1/16W 1% 1005 48.7 R117

VCC1R8VIDEO

1/16W 1% 1005 549 R336

1/16W 1% 1005 40.2 R127

1/16W 1% 1005 33.2 R131

25V 10% 1005 0.01UF C585

1/16W 1% 1005 1.33K R337

1/16W 1% 1005 931 R341

Q67 BSS138

ALT_MEM_VREF IN 19.7P> 23.3C<

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08		
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV	
CLASS	H.K	12/04/08	N10M-GS(3/6):VRAM I/F	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
19 / 99

U47
N10M_GS(4/6)

VCC3VIDEO
R253 2.2K 1/16W 5% 1005
R274 2.2K 1/16W 5% 1005
R348 2.2K 1/16W 5% 1005
R349 2.2K 1/16W 5% 1005

27.4K<> DDCCLK_D
27.2K<> DDCDATA_D
R325 33 5% 1/16W 1005
R326 33 5% 1/16W 1005
24.1B<> SPWG_EDID_CLK_D
24.1G<> SPWG_EDID_DATA_D
R331 33 5% 1/16W 1005
R335 33 5% 1/16W 1005
HDCPSCL
HDCPSDA
NO_ASM
R345 10K 5% 1/16W 1005
R346 10K 5% 1/16W 1005
NO_ASM
R596 10K 5% 1/16W 1005
R608 10K 5% 1/16W 1005
VCC3VIDEO
R388 10K 5% 1/16W 1005
73.5N< DXP2
73.4N< DXN2

R1 I2CA_SCL
T3 I2CA_SDA
R2 I2CB_SCL
R3 I2CB_SDA
A2 I2CC_SCL
B1 I2CC_SDA
A3 I2CH_SCL
A4 I2CH_SDA
T1 I2CS_SCL
T2 I2CS_SDA
D10 XTAL_IN
E10 XTAL_OUT
D11 XTAL_SSIN
E9 XTAL_OUTBUFF
N5 BUFRST_N*
N2 CEC
F9 SPDIF
D9 THERMDP
D8 THERMDN
B10 ROM_CS_N*
C9 ROM_SCLK
C10 ROM_SO
A10 ROM_SI
C15 NC1
D15 NC2
J5 NC3

GPIO0 N1
GPIO1 G1
GPIO2 C1
GPIO3 M2
GPIO4 M3
GPIO5 K3
GPIO6 K2
GPIO7 J2
GPIO8 C2
GPIO9 M1
GPIO10 D2
GPIO11 D1
GPIO12 J3
GPIO13 J1
GPIO14 K1
GPIO15 F3
GPIO16 G3
GPIO17 G2
GPIO18 F1
GPIO19 F2

PM_VID1 OUT 84.6B<
IFPC_DPHPD IN 28.4D>
PANEL_BKLT_CTRL_D OUT 25.2L<
PANEL_POWER_ON_D OUT 19.1J<
VGA_BLON_D OUT 71.9G<
PM_VID2 OUT 84.6B<
PM_VID3 OUT 84.6B<
PM_VID4 OUT 84.7B<
-VIDEO_THERM_ALERT OUT 73.2B<
ALT_MEM_VREF OUT 18.1N< 23.3C<
DOCKB_DPHPD_D IN 29.7K>
DOCKA_DPHPD_D IN 29.8K>

RFU_1 T6
RFU_2 W6
RFU_3 Y6
RFU_4 AA6
RFU_5 N3

STRAP0 C7
STRAP1 B9
STRAP2 A9

MULTI_STRAP_REF0_GND F11
MULTI_STRAP_REF1_GND F10

FOR JTAG DEBUG
JTAG_TDO AE4 TP21
JTAG_TMS AF4 TP23
JTAG_TDI AG4 TP24
JTAG_TCK AF3 TP25
JTAG_TRST_N* AG3
TESTMODE AD25

R578 10K 5% 1/16W 1005
R590 1K NO_ASM 5% 1/16W 1005
R347 40.2K 1% 1/16W 1005
R355 0.01UF 10% 25V 1005
C1233 10K 5% 1/16W 1005
R626 10K 5% 1/16W 1005
R607 10K 5% 1/16W 1005
R21 10K 5% 1/16W 1005
R189 1% 1/16W 1005

VCC3VIDEO
R163 45.3K 1% 1/16W 1005
R240 2K NO_ASM 5% 1/16W 1005
R247 10K 1% 1/16W 1005
R175 2K NO_ASM 5% 1/16W 1005
R243 10K 1% 1/16W 1005
R249 2K NO_ASM 5% 1/16W 1005

KDS RIVER DSX321S FCX-04
Y1 FCX04_27M
R23 1M 5% 1/16W 1005
C408 20PF 50V 5% 1005
C7 20PF 50V 5% 1005

VCC3VIDEO
R764 2K NO_ASM 5% 1/16W 1005
R765 10K NO_ASM 1% 1/16W 1005
R679 2K NO_ASM 5% 1/16W 1005
R700 45.3K 1% 1/16W 1005
R73 10K 1% 1/16W 1005
R78 15K 1% 1/16W 1005

TABLE
VIDEO MEMORY

	QIMONDA 0101	SAMSUNG 0111	HYNIX 0110
R764	NO_ASM	NO_ASM	NO_ASM
R700	30.1KOHM	45.3KOHM	34.8KOHM

LOGIC

71.9G< 28.6M< 27.2B< 27.0B< 26.3A< 24.3B< 34.5A>

VCC3VIDEO
U1
NO_ASM
AT24C16B
SDA SCL VCC WP A0 A1 GND A2
R376 2.2K NO_ASM 5% 1/16W 1005
R378 2.2K NO_ASM 5% 1/16W 1005
C624 0.1UF 10% 16V 1005

NEAR VIDEO CHIP

VCC3B
U85
NC7SB3157
VDD B0 B1 S A GND
33.7C> PANEL_POWER_ON_I IN
19.7P> PANEL_POWER_ON_D IN
DISCRETE_ENABLE IN
PANEL_POWER_ON OUT 92.5B<

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

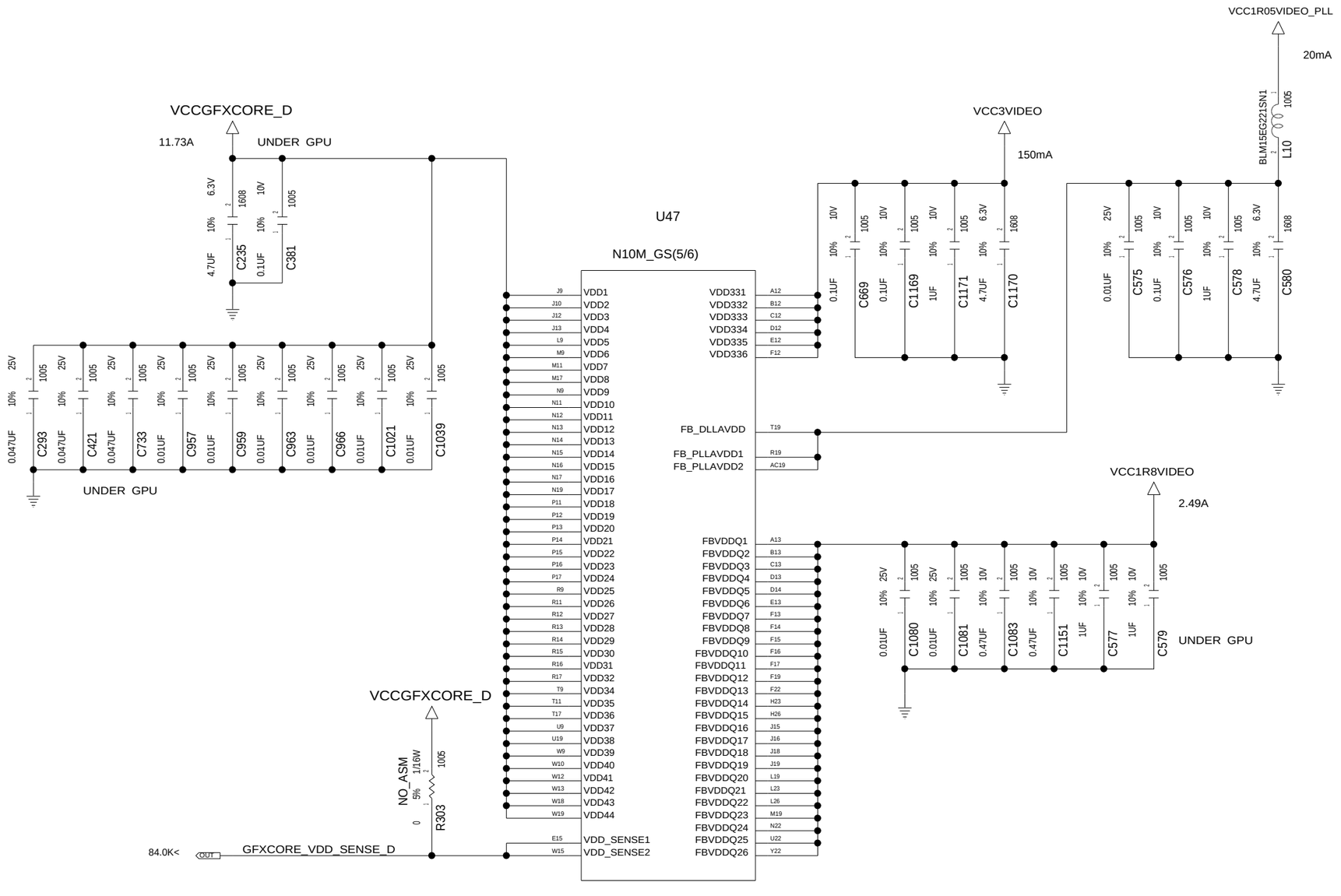
TITLE NOZOMI EXT SDV

N10M-GS(4/6):GPIO

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	N10M-GS(5/6):POWER
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO.
			Q/M 21 / 99

U47

N10M_GS(6/6)

B2	GND1	GND47	T13
B5	GND2	GND48	T14
B8	GND3	GND49	T15
B11	GND4	GND50	T16
B14	GND5	GND51	U2
B17	GND6	GND52	U5
B20	GND7	GND53	U11
B23	GND8	GND54	U12
B26	GND9	GND55	U13
E2	GND10	GND56	U14
E5	GND11	GND57	U15
E8	GND12	GND58	U16
E11	GND13	GND59	U17
E17	GND14	GND60	U23
E20	GND15	GND61	U26
E23	GND16	GND62	V9
E26	GND17	GND63	V19
F6	GND18	GND64	W11
H2	GND19	GND65	W14
H5	GND20	GND66	W17
J11	GND21	GND67	Y2
J14	GND22	GND68	Y5
J17	GND23	GND69	Y23
K9	GND24	GND70	Y26
K19	GND25	GND71	AC2
L2	GND26	GND72	AC5
L5	GND27	GND73	AC6
L11	GND28	GND74	AC8
L12	GND29	GND75	AC11
L13	GND30	GND76	AC14
L14	GND31	GND77	AC17
L15	GND32	GND78	AC20
L16	GND33	GND79	AC23
L17	GND34	GND80	AC26
M12	GND35	GND81	AF2
M13	GND36	GND82	AF5
M14	GND37	GND83	AF8
M15	GND38	GND84	AF11
M16	GND39	GND85	AF14
P2	GND40	GND86	AF17
P5	GND41	GND87	AF20
P9	GND42	GND88	AF23
P19	GND43	GND89	AF26
P23	GND44		
P26	GND45		
T12	GND46		
		GND_SENSE1	E14
		GND_SENSE2	W16

GFXCORE_GND_SENSE_D — OUT — 84.0K<

NO_ASM 1/16W 1% 1005 R304

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	N10M-GS(6/6):GND

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 22 / 99

(TOP SIDE)

U35

HY5RS123235FP
K4J10324QE-HC1A

NVIDIA

CHANNEL A

FBA_D<63..0>

FBA_BA2
FBA_BA1
FBA_BA0

FBA_A<12..0>

-FBA_CS0
-FBA_WE
-FBA_RAS
-FBA_CAS
FBA_CKE
FBA_CLK0
-FBA_CLK0

FBA_DQS_RN<7..0>
FBA_DQS_WP<7..0>
FBA_DQM<7..0>

FBA_RST

R393 243 1% 1/16W 1005

VREF0_0

VCC1R8VIDEO

NEAR K1/K12 PIN

C994 0.047UF 10% 25V 1005
C996 0.047UF 10% 25V 1005

C1278 0.1UF 10% 10V 1005
C825 10UF 20% 10V 1608
C826 6.3V 10UF 20% 1608
C870 6.3V 0.1UF 10% 1608
C872 1UF 10% 10V 1005
C884 1UF 10% 10V 1005
C993 0.1UF 10% 10V 1005
C995 0.1UF 10% 10V 1005
C997 0.1UF 10% 10V 1005
C1000 0.1UF 10% 10V 1005
C1001 0.01UF 10% 25V 1005
C1002 0.01UF 10% 25V 1005

(TOP SIDE)

U46

HY5RS123235FP
K4J10324QE-HC1A

FBA_D<63..0>

FBA_BA2
FBA_BA1
FBA_BA0

FBA_A<12..0>

FBB_A<5..2>

-FBB_CS0
-FBA_WE
-FBA_RAS
-FBA_CAS
FBB_CKE
FBA_CLK1
-FBA_CLK1

FBA_DQS_RN<7..0>
FBA_DQS_WP<7..0>
FBA_DQM<7..0>

FBA_RST

R458 243 1% 1/16W 1005

VREF1_0

FBA_A<12..0> 12 IN 18.8K> 22.3Q< 22.5B< 22.5H<

VCC1R8VIDEO

NEAR K1/K12 PIN

C1009 0.047UF 10% 25V 1005
C1014 0.047UF 10% 25V 1005

FBA_A<12..0> 12 IN 22.5B< 18.8K> 22.1J< 22.5H<

C1010 10UF 20% 6.3V 1608
C1013 10UF 20% 6.3V 1608
C1045 0.1UF 10% 10V 1005
C1046 1UF 10% 10V 1005
C1047 1UF 10% 10V 1005
C1281 0.1UF 10% 10V 1005
C1050 0.1UF 10% 10V 1005
C1051 0.1UF 10% 10V 1005
C1056 0.1UF 10% 10V 1005
C1057 0.01UF 10% 10V 1005
C1058 0.01UF 10% 25V 1005
C1059 0.01UF 10% 25V 1005

VCC1R8VIDEO

NO_ASM R442 80.6 1% 1/16W 1005
NO_ASM R307 80.6 1% 1/16W 1005

R441 73.2 1% 1/16W 1005
C12760.01UF 10% 25V 1005
R443 73.2 5% 1/16W 1005

R306 73.2 1% 1/16W 1005
C5820.01UF 10% 25V 1005
R308 0 5% 1/16W 1005

18.8K> 22.3C< FBA_CLK0
18.8K> 22.3C< -FBA_CLK0
18.8K> 22.3H< FBA_CLK1
18.8K> 22.3H< -FBA_CLK1

NEAR GPU

MEMORY CHANNEL A

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	VRAM CHANNEL-A
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

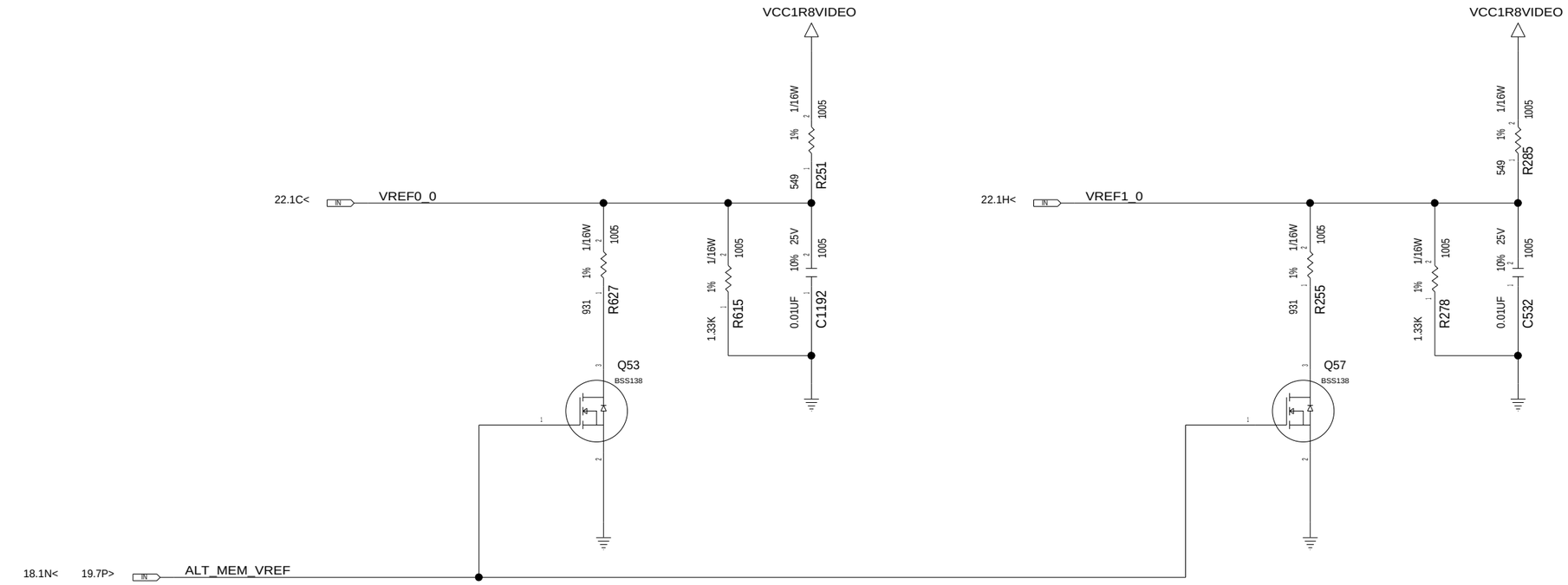
VER.1.31

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 23 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

DYNAMIC MEMORY TERMINATION

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
24 / 99

VCC1R8B

C901 0.1UF 10% 10V 1005
C906 0.1UF 10% 10V 1005
C955 1000PF 10% 50V 1005
C961 1000PF 10% 50V 1005
C1085 0.1UF 10% 10V 1005
C1092 0.1UF 10% 10V 1005
C1185 1000PF 10% 50V 1005
C1186 1000PF 10% 50V 1005

U11
TS3DV421RUAR

33.5G> TXCLK_LN_I
33.5G> TXCLK_LP_I
33.5G> TXOUT_L2N_I
33.4G> TXOUT_L2P_I
33.5G> TXOUT_L1N_I
33.4G> TXOUT_L1P_I
33.5G> TXOUT_L0N_I
33.5G> TXOUT_L0P_I

17.5D> TXCLK_LN_D
17.5D> TXCLK_LP_D
17.4D> TXOUT_L2N_D
17.5D> TXOUT_L2P_D
17.5D> TXOUT_L1N_D
17.5D> TXOUT_L1P_D
17.5D> TXOUT_L0N_D
17.5D> TXOUT_L0P_D

ATMDS2+ ATMDS2- ATMDS1+ ATMDS1- ATMDS0+ ATMDS0- ATMDSCLK+ ATMDSCLK-
BTMDS2+ BTMDS2- BTMDS1+ BTMDS1- BTMDS0+ BTMDS0- BTMDSCLK+ BTMDSCLK-
SEL
VDD VSS

TMDS2+ TXCLK_LN 25.5B<
TMDS2- TXCLK_LP 25.5B<
TMDS1+ TXOUT_L2N 25.5B<
TMDS1- TXOUT_L2P 25.5B<
TMDS0+ TXOUT_L1N 25.4B<
TMDS0- TXOUT_L1P 25.4B<
TMDSCLK+ TXOUT_L0N 25.4B<
TMDSCLK- TXOUT_L0P 25.4B<

U27
TS3DV421RUAR

33.4G> TXCLK_UN_I
33.4G> TXCLK_UP_I
33.4G> TXOUT_U2N_I
33.3G> TXOUT_U2P_I
33.4G> TXOUT_U1N_I
33.3G> TXOUT_U1P_I
33.4G> TXOUT_U0N_I
33.3G> TXOUT_U0P_I

17.4D> TXCLK_UN_D
17.4D> TXCLK_UP_D
17.3D> TXOUT_U2N_D
17.4D> TXOUT_U2P_D
17.4D> TXOUT_U1N_D
17.4D> TXOUT_U1P_D
17.4D> TXOUT_U0N_D
17.4D> TXOUT_U0P_D

ATMDS2+ ATMDS2- ATMDS1+ ATMDS1- ATMDS0+ ATMDS0- ATMDSCLK+ ATMDSCLK-
BTMDS2+ BTMDS2- BTMDS1+ BTMDS1- BTMDS0+ BTMDS0- BTMDSCLK+ BTMDSCLK-
SEL
VDD VSS

TMDS2+ TXCLK_UN 25.6B<
TMDS2- TXCLK_UP 25.6B<
TMDS1+ TXOUT_U2N 25.6B<
TMDS1- TXOUT_U2P 25.6B<
TMDS0+ TXOUT_U1N 25.5B<
TMDS0- TXOUT_U1P 25.5B<
TMDSCLK+ TXOUT_U0N 25.5B<
TMDSCLK- TXOUT_U0P 25.5B<

VCC3B
VCC1R8B

R877 10K 5% 1/16W 1005
R506 10K 5% 1/16W 1005

Q116 DTC115EE
Q117 DTC115EE

28.6M< 19.1J< 27.0B< 27.2B< 34.5A> 26.3A< 71.9G<
DISCRETE_ENABLE

VCC3B

U91
NC7SB3157
VDD B0 B1 S GND A

19.7B> SPWG_EDID_CLK_D
33.6C<> SPWG_EDID_CLK_I
29.7K< DDC_MUX_SEL
SPWG_EDID_CLK 25.4B<

27.4K< 29.4G< 27.2K< 29.2J< 24.1G< 29.1B< 24.4A> 28.3E< 29.2J< 29.1B< 28.3E< 27.4K< 27.2K< 24.1B< 29.7K< 34.4A> 29.4G<

VCC3B

U92
NC7SB3157
VDD B0 B1 S GND A

19.7B> SPWG_EDID_DATA_D
33.6C<> SPWG_EDID_DATA_I
DDC_MUX_SEL
SPWG_EDID_DATA 25.4B<>

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

LVDS SWITCH

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 25 / 99

LCD CONN

J10 20439_040E

J11 20374_030E

WIDE PATTERN (10MIL)

U33 NC7SB3157

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

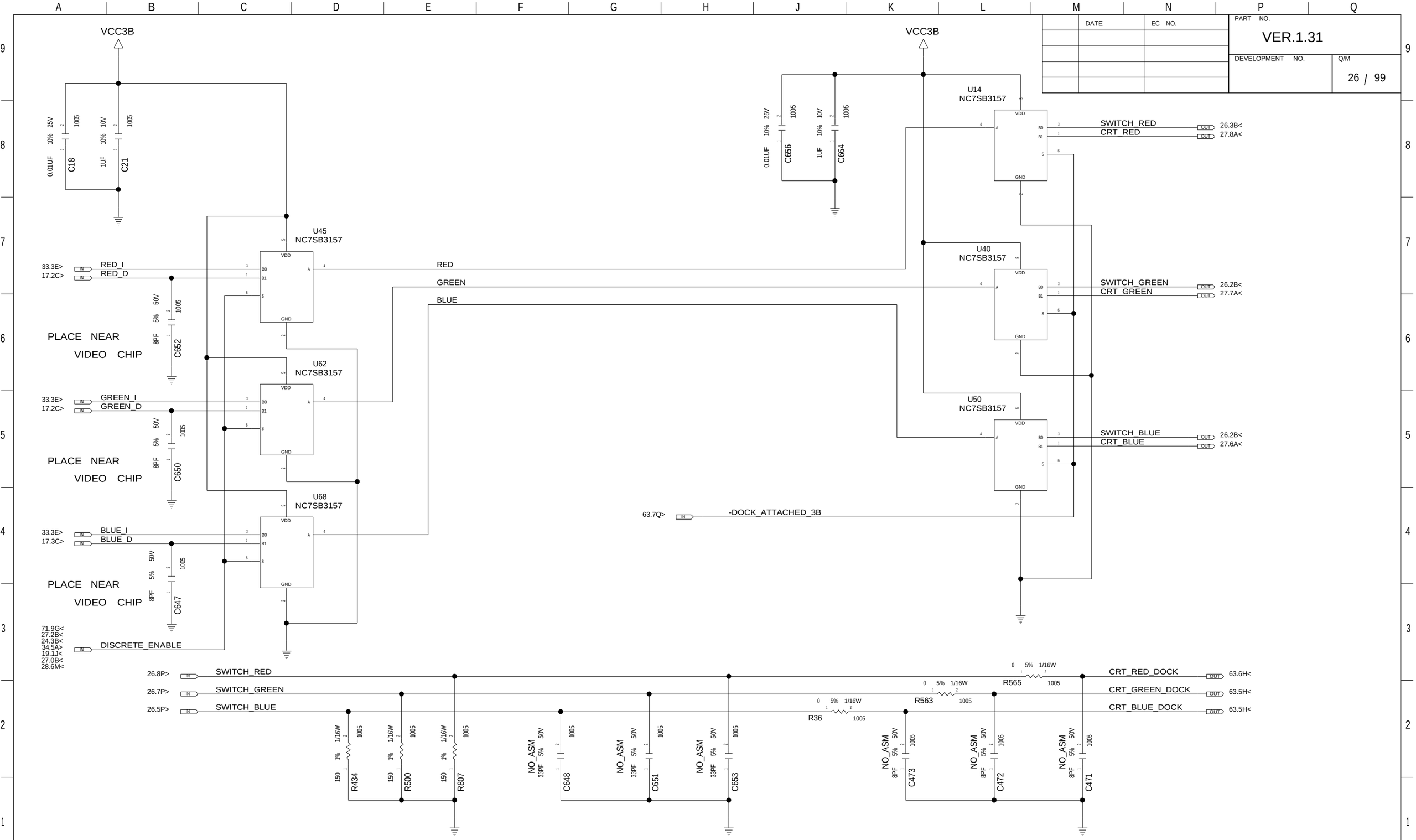
LCD CONNECTOR

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE



	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 26 / 99

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

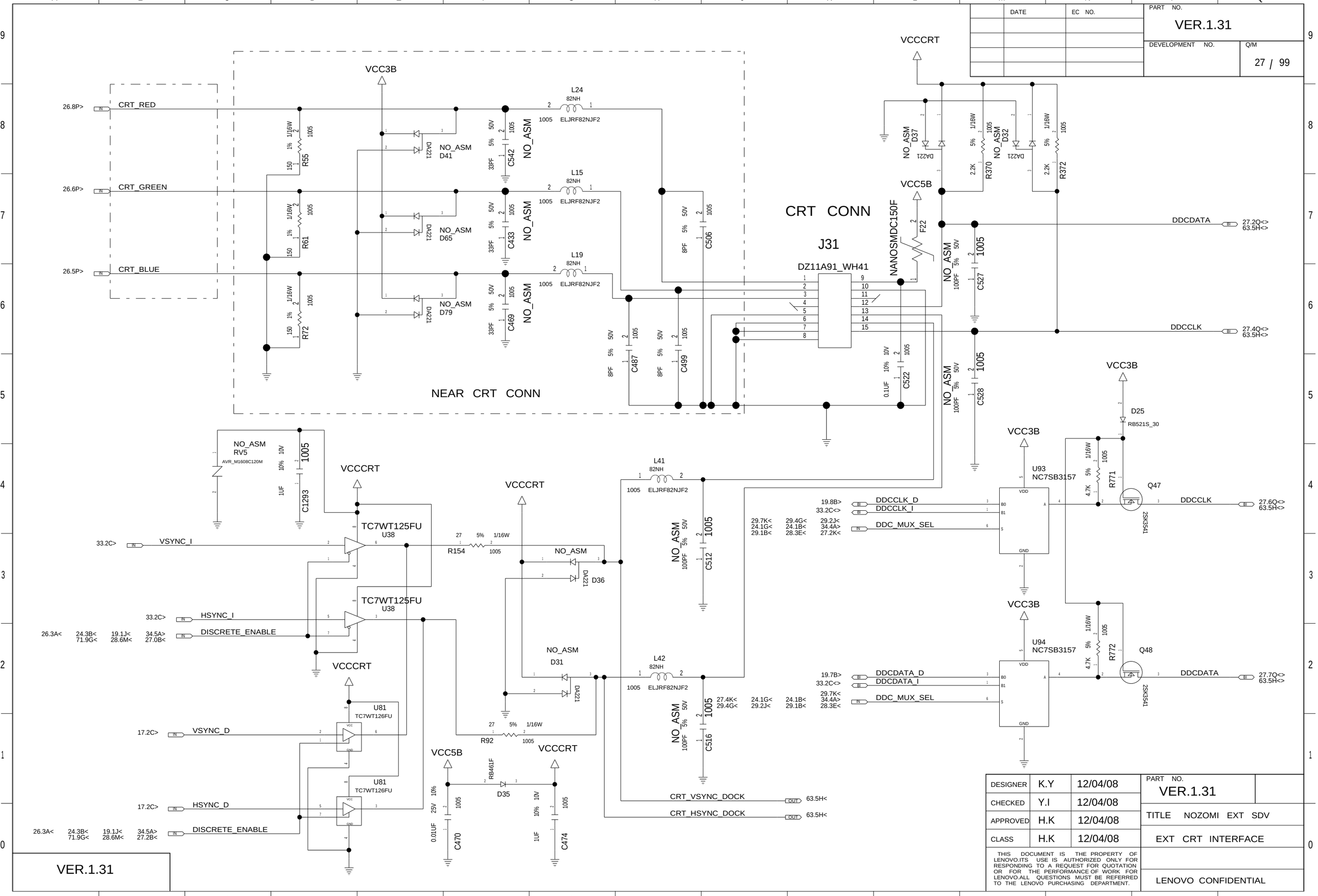
TITLE NOZOMI EXT SDV

RGB SWITCH

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	EXT CRT INTERFACE
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
28 / 99

VCC3B
F18
NANOSMDC150F
VCC3VIDEO_DP
4.7UF 10% 6.3V 1608 C1113
4.7UF 10% 6.3V 1608 C1133
NO_ASM 5% 1/16W 2.2K 1005 R102
NO_ASM 5% 1/16W 2.2K 1005 R105
VCC5B
U6
CBT3257ABQ
0.1UF 10% 10V 1005 C146
0.1UF 10% 10V 1005 C147
33.5P<> DPB_AUXP
33.6P<> DPB_AUXN
33.6P<> DPB_CTRLCLK
33.6P<> DPB_CTRLDATA
17.4M<> IFPC_DPAUXP
17.4M<> IFPC_DPAUXN
28.4Q> DVI_DONGLE_DTCT
NO_ASM 5% 1/16W 100K 1005 R309
NO_ASM 5% 1/16W 100K 1005 R311
0.1UF 10% 10V 1005 C171
0.1UF 10% 10V 1005 C204
0.01UF 25V 10% 1005 C340
1UF 10% 10V 1005 C514
0.1UF 10% 10V 1005 C496
VCC1R8B
U10
FOR SYSTEM DP
STMUX3040
33.5P> DPB_0P
33.5P> DPB_0N
33.5P> DPB_1P
33.5P> DPB_1N
33.5P> DPB_2P
33.5P> DPB_2N
33.5P> DPB_3P
33.5P> DPB_3N
17.5M> IFPC_DP0P
17.5M> IFPC_DP0N
17.5M> IFPC_DP1P
17.5M> IFPC_DP1N
17.5M> IFPC_DP2P
17.5M> IFPC_DP2N
17.5M> IFPC_DP3P
17.4M> IFPC_DP3N
0.1UF 10% 10V 1005 C218
0.1UF 10% 10V 1005 C226
0.1UF 10% 10V 1005 C276
0.1UF 10% 10V 1005 C277
0.1UF 10% 10V 1005 C312
0.1UF 10% 10V 1005 C317
0.1UF 10% 10V 1005 C323
0.1UF 10% 10V 1005 C339
DP0P 28.3J<
DP0N 28.3J<
DP1P 28.3J<
DP1N 28.3J<
DP2P 28.3J<
DP2N 28.3J<
DP3P 28.3J<
DP3N 28.3J<
NEAR DP CONN
SEL
DISCRETE_ENABLE
71.9G< 34.5A> 26.3A<
19.1J< 27.0B<
24.3B< 27.2B<
USB_PWR_S2
RNJ3
SHORT1616_4MIL
34.3M<> USBP8-
34.3M<> USBP8+
TP106
TP98
TP99
0.1UF 10% 10V 1005 C351
0.1UF 10% 20% 10V 1005 C364 150UF
C395 10TPB150ML
D5
SRV05_4
7343
NO_ASM
VCC3B
NO_ASM 5% 1/16W 20K 1005 R198
0 5% 1/16W 1005 R203
33.5P< OUT DPB_HPD
Q80
2SK3541
NO_ASM
NO_ASM 5% 1/16W 7.5K 1005 R109
5% 100K 1/16W 1005 R200
29.1B< 27.4K< 27.2K< 24.1G< 29.7K< 24.1B< 29.4G< 34.4A> 29.2J<
VCC5B
0.1UF 10% 10V 1005 C495
U9
CBT3257ABQ
19.7P< OUT IFPC_DPHPD
IN DDC_MUX_SEL
NO_ASM 5% 1/16W 100K 1005 R312
VCC3B
NO_ASM 5% 1/16W 100K 1005 R94
NO_ASM 5% 1/16W 100K 1005 R98
VCC5B
NO_ASM D15 BAV99WT1
VCC5B
NO_ASM D107 BAV99WT1
D111 BAV99WT1
NO_ASM
J6
2013659_2
DVI_DONGLE_DTCT OUT 28.7A<
VCC3VIDEO_DP
HPD PWR
PWER_RET
AUXP GND
AUXN GND
MODE
LANE_3P GND
LANE_3N GND
GND
LANE_2P GND
LANE_2N
LANE_1P SHIELD
LANE_1N SHIELD
LANE_0P SHIELD
LANE_0N SHIELD
28.7P> DP3P
28.7P> DP3N
28.8P> DP2P
28.8P> DP2N
28.8P> DP1P
28.8P> DP1N
28.8P> DP0P
28.8P> DP0N
D95
NO_ASM RCLAMP0522P
NO_ASM 0.01UF 10% 25V 1005 C67
1M 5% 1/16W 1005 R93
1M 5% 1/16W 1005 R97
NO_ASM 0.1UF 10% 25V 1608 C139
0.1UF 10% 10V 1005 C1112
NEAR DP CONN
D86
NO_ASM RCLAMP0524P
D88
NO_ASM RCLAMP0524P
NEAR DP CONN

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

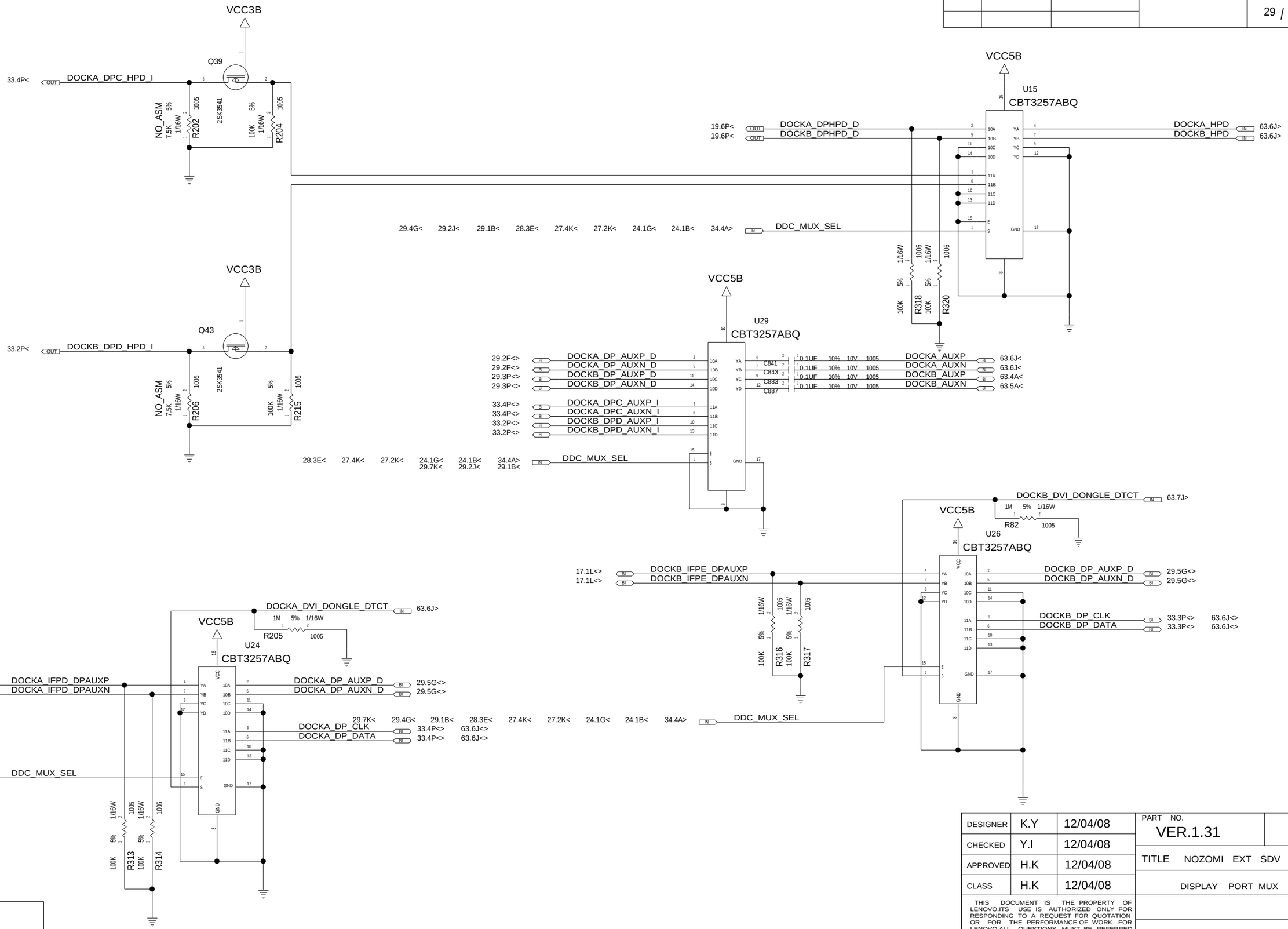
TITLE NOZOMI EXT SDV

DISPLAY PORT CONNECTOR

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 29 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	DISPLAY PORT MUX	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 30 / 99

U5

IBEX_PEAK_M(1/10)

RTC

RTCVCC

VCC3SW

18PF 5% 50V C348 1005

18PF 5% 50V C326 1005

Y6 DST310S_32R768K

10M 5% 1/16W 1005 R351

330K 5% 1/16W 1005 R408

1M 5% 1/16W 1005 R646

39.4K> IN -RTCRST

B13 RTCX1

D13 RTCX2

C14 RTCRST#

D17 SRTCRST#

A16 INTRUDER#

A14 INTVRMEN

LPC

FWH0/LAD0 D33

FWH1/LAD1 B33

FWH2/LAD2 C32

FWH3/LAD3 A32

FWH4/LFRAME# C34

LDRQ0# A34

LDRQ1#/GPIO23 F34 TP84

SERIRQ AB9

VCC3B

8.2K 5% 1/16W 1005 R860

LPC_AD<3..0> BI 64.6C<> 72.5C<> 74.7Q<>

-LPC_FRAME BI 72.5C<> 64.5C< 74.7K<

-LPC_DREQ0 IN 74.7K>

IRQSER BI 64.5C<> 72.4C<> 74.7K<>

IHDA

51.5M< OUT ACZ_BCLK_MDC

43.6B< OUT ACZ_BCLK_ADI

33 5% 1/16W R144 1005

33 5% 1/16W R60 1005

A30 HDA_BCLK

51.5C< OUT ACZ_SYNC_MDC

43.6B< OUT ACZ_SYNC_ADI

33 5% 1/16W R148 1005

33 5% 1/16W R423 1005

D29 HDA_SYNC

50.5D< OUT PCH_SPKR

51.4C< OUT -ACZ_RST_MDC

43.6B< OUT -ACZ_RST_ADI

33 5% 1/16W R223 1005

33 5% 1/16W R456 1005

P1 SPKR

C30 HDA_RST#

43.6B> IN ACZ_SDIN0

51.5C> IN ACZ_SDIN1

G30 HDA_SDIN0

F30 HDA_SDIN1

E32 HDA_SDIN2

F32 HDA_SDIN3

51.5C< OUT ACZ_SDOUT_MDC

43.6B< OUT ACZ_SDOUT_ADI

33 5% 1/16W R241 1005

33 5% 1/16W R74 1005

B29 HDA_SDO

TEST PAD
BOTTOM SIDE
DO NOT MOVE AFTER FIX

1.0 TP900

H32 HDA_DOCK_EN#/GPIO33

64.4C> IN -EC_WAKE

J30 HDA_DOCK_RST#/GPIO13

SATA

SATA0RXN AK7

SATA0RXP AK6

SATA0TXN AK11

SATA0TXP AK9

0.01UF 10% 25V C803 1005

0.01UF 10% 25V C804 1005

0.01UF 10% 25V C805 1005

0.01UF 10% 25V C827 1005

SATA0_RXN IN 40.5C>

SATA0_RXP IN 40.5C>

SATA0_TXN OUT 40.5C<

SATA0_TXP OUT 40.5C<

SATA1RXN AH6

SATA1RXP AH5

SATA1TXN AH9

SATA1TXP AH8

0.01UF 10% 25V C272 1005

0.01UF 10% 25V C280 1005

0.01UF 10% 25V C284 1005

0.01UF 10% 25V C374 1005

SATA1_RXN IN 41.6E>

SATA1_RXP IN 41.6E>

SATA1_TXN OUT 41.6E<

SATA1_TXP OUT 41.6E<

SATA2RXN AF11 TP67

SATA2RXP AF9 TP69

SATA2TXN AF7 TP70

SATA2TXP AF6 TP72

SATA3RXN AH3 TP74

SATA3RXP AH1 TP75

SATA3TXN AF3 TP81

SATA3TXP AF1 TP83

SATA4RXN AD9

SATA4RXP AD8

SATA4TXN AD6

SATA4TXP AD5

0.01UF 10% 25V C892 1005

0.01UF 10% 25V C893 1005

SATA4_RXN IN 63.5Q>

SATA4_RXP IN 63.5Q>

SATA4_TXN OUT 63.5Q<

SATA4_TXP OUT 63.5Q<

SATA5RXN AD3 TP88

SATA5RXP AD1 TP89

SATA5TXN AB3 TP90

SATA5TXP AB1 TP91

SATAICOMPO AF16

SATAICOMPI AF15

VCC1R05B

1% 1/16W 1005 37.4 R116

JTAG

VCC3LAN

20K 5% 1/16W 1005 R216

11.6L> IN PCH_TCK M3 JTAG_TCK

11.6L> IN PCH_TMS K3 JTAG_TMS

11.6L> IN PCH_TDI K1 JTAG_TDI

11.5L< OUT PCH_TDO J2 JTAG_TDO

11.5L> IN -PCH_TRST J4 JTAG_RST#

SPI

62.5C< OUT SPI_CLK BA2 SPI_CLK

62.5C< OUT -SPI_CS0 AV3 SPI_CS0#

AY3 SPI_CS1#

62.5C< OUT SPI_MOSI AY1 SPI_MOSI

62.5C> IN SPI_MISO AV1 SPI_MISO

SATALED# T3 -DASPHDD OUT 71.4B<

SATA0GP/GPIO21 Y9 -DISCRETE_PRESENCE

SATA1GP/GPIO19 V1 SATA_BAY_DTCT IN 36.6A>

NO_ASM 0 5% 1/8W 2125 R566

PLACE ON TOP SIDE
LOCATE AT WUSB SLOT AREA

10K 5% 1/16W 1005 R239

TABLE

SPI_MOSI
PULL UP : ENABLE ITPM
FLOAT : DISABLE ITPM

VER.1.31

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

PCH(1/8):HDA/JTAG/SATA

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
31 / 99

U5
IBEX_PEAK_M(2/10)

PCI-E*

56.2L>	IN	PCIE_WLAN_RXN	BG30 PERN1
56.2L>	IN	PCIE_WLAN_RXP	BJ30 PERP1
56.2L<	OUT	PCIE_WLAN_TXN	BF29 PETN1
56.3L<	OUT	PCIE_WLAN_TXP	BH29 PETP1
56.6K>	IN	PCIE_WWAN_RXN	AW30 PERN2
56.7K>	IN	PCIE_WWAN_RXP	BA30 PERP2
56.7K<	OUT	PCIE_WWAN_TXN	BC30 PETN2
56.7K<	OUT	PCIE_WWAN_TXP	BD30 PETP2
57.4M>	IN	PCIE_WUSB_RXN	AU30 PERN3
57.5M>	IN	PCIE_WUSB_RXP	AT30 PERP3
57.5M<	OUT	PCIE_WUSB_TXN	AU32 PETN3
57.5M<	OUT	PCIE_WUSB_TXP	AV32 PETP3
60.4J>	IN	PCIE_EXC_RXN	BA32 PERN4
60.4J>	IN	PCIE_EXC_RXP	BB32 PERP4
60.4J<	OUT	PCIE_EXC_TXN	BD32 PETN4
60.4J<	OUT	PCIE_EXC_TXP	BE32 PETP4
58.5B>	IN	PCIE_MCC_RXN	BF33 PERN5
58.5B>	IN	PCIE_MCC_RXP	BH33 PERP5
58.5B<	OUT	PCIE_MCC_TXN	BG32 PETN5
58.5B<	OUT	PCIE_MCC_TXP	BJ32 PETP5
			BA34 PERN6
			AW34 PERP6
			BC34 PETN6
			BD34 PETP6
			AT34 PERN7
			AU34 PERP7
			AU36 PETN7
			AV36 PETP7
52.5B>	IN	PCIE_GBE_RXN	BG34 PERN8
52.5B>	IN	PCIE_GBE_RXP	BJ34 PERP8
52.5B<	OUT	PCIE_GBE_TXN	BG36 PETN8
52.5B<	OUT	PCIE_GBE_TXP	BJ36 PETP8
56.6Q<	OUT	-PCIE_CLK_WWAN	AK48 CLKOUT_PCIE0N
56.6Q<	OUT	PCIE_CLK_WWAN	AK47 CLKOUT_PCIE0P
56.6Q>	IN	-CLKREQ_WWAN	P9 PCIECLKRQ0#/GPIO73
56.1P<	OUT	-PCIE_CLK_WLAN	AM43 CLKOUT_PCIE1N
56.2P<	OUT	PCIE_CLK_WLAN	AM45 CLKOUT_PCIE1P
56.1P>	IN	-CLKREQ_WLAN	U4 PCIECLKRQ1#/GPIO18
57.4M<	OUT	-PCIE_CLK_WUSB	AM47 CLKOUT_PCIE2N
57.4M<	OUT	PCIE_CLK_WUSB	AM48 CLKOUT_PCIE2P
57.4P>	IN	-CLKREQ_WUSB	N4 PCIECLKRQ2#/GPIO20
60.4J<	OUT	-PCIE_CLK_EXC	AH42 CLKOUT_PCIE3N
60.4J<	OUT	PCIE_CLK_EXC	AH41 CLKOUT_PCIE3P
60.2H>	IN	-CLKREQ_EXC	A8 PCIECLKRQ3#/GPIO25
58.5B>	OUT	-PCIE_CLK_MCC	AM51 CLKOUT_PCIE4N
58.5B>	OUT	PCIE_CLK_MCC	AM53 CLKOUT_PCIE4P
58.6A>	IN	-CLKREQ_MCC	M9 PCIECLKRQ4#/GPIO26
52.6B<	OUT	-PCIE_CLK_GBE	AJ50 CLKOUT_PCIE5N
52.7B<	OUT	PCIE_CLK_GBE	AJ52 CLKOUT_PCIE5P
52.6B>	IN	-CLKREQ_GBE	H6 PCIECLKRQ5#/GPIO44
			AK53 CLKOUT_PEG_B_N
			AK51 CLKOUT_PEG_B_P
			P13 PEG_B_CLKRQ#/GPIO56

0.1UF 10% 10V

C250 1005 C246 1005
C601 1005 C569 1005
C572 1005 C828 1005
C245 1005 C252 1005
C118 1005 C365 1005
C799 1005 C720 1005

VCC3M
10K 5% 1/16W R27 1005

SMBus Controller

SMBALERT#/GPIO11	B9		
SMBCLK	H14	SMB_CLK	74.7D<> 74.2Q<
SMBDATA	C8	SMB_DATA	74.2Q<> 74.7D<>
SML0ALERT#/GPIO60	J14		
SML0CLK	C6	SML0_CLK	52.5B<>
SML0DATA	G8	SML0_DATA	52.5B<>
SML1ALERT#/GPIO74	M14		
SML1CLK/GPIO58	E10	EC_SCL2	65.8K> 65.3B< 73.5E<
SML1DATA/GPIO75	G12	EC_SDA2	65.8K> 73.4E<> 65.3B<

Link

CL_CLK1	T13	CL_CLK_WLAN	56.3L<>
CL_DATA1	T11	CL_DATA_WLAN	56.3L<>
CL_RST1#	T9	-CL_RST_WLAN	56.3L<>

PEG

PEG_A_CLKRQ#/GPIO47	H1		
CLKOUT_PEG_A_N	AD43	-GFX_CLK_100M	16.4B<
CLKOUT_PEG_A_P	AD45	GFX_CLK_100M	16.4B<
CLKOUT_DMI_N	AN4	-PEG_CLK_100M	4.6Q<
CLKOUT_DMI_P	AN2	PEG_CLK_100M	4.6Q<

From CLK BUFFER

CLKOUT_DP_N/CLKOUT_BCLK1_N	AT1	-EDP_CLK_120M	4.6Q<
CLKOUT_DP_P/CLKOUT_BCLK1_P	AT3	EDP_CLK_120M	4.6Q<
CLKIN_DMI_N	AW24	-DMI_CLK_100M	15.2L>
CLKIN_DMI_P	BA24	DMI_CLK_100M	15.2L>
CLKIN_BCLK_N	AP3	-PCH_CLK_133M	15.5L>
CLKIN_BCLK_P	AP1	PCH_CLK_133M	15.6L>
CLKIN_DOT_96N	F18	-USBCLK_96M	15.2A>
CLKIN_DOT_96P	E18	USBCLK_96M	15.2A>
CLKIN_SATA_N/CKSSCD_N	AH13	-SATA_CLK_PCH_100M	15.5L>
CLKIN_SATA_P/CKSSCD_P	AH12	SATA_CLK_PCH_100M	15.5L>
REFCLK14IN	P41	REFCLK_14M	15.6A>
CLKIN_PCILOOPBACK	J42	PCICLK_FB_33M	34.1C>
XTAL25_IN	AH51		
XTAL25_OUT	AH53		
XCLK_RCOMP	AF38		

Flex Clock

CLKOUTFLEX0/GPIO64	T45		
CLKOUTFLEX1/GPIO65	P43	1394_24M	58.4K<
CLKOUTFLEX2/GPIO66	T42		
CLKOUTFLEX3/GPIO67	N50		

VCC1R05B
90.9 1% 1/16W R118 1005
22 5% 1/16W R33 1005

D27 1SS400G -CLKREQ_GFX IN 16.4B>
D22 1SS400G -DGFX_PWRGD

VCC3M
100K 5% 1/16W R147 1005
10K 5% 1/16W R551 1005

Q98 2SK3541
DGFX_PWRGD IN 84.5B> 36.6A<

0 5% 1/16W R123 1005
0 5% 1/16W R133 1005

Y5 DSX321G_25M_18PF
33PF 50V 5% C205 1005
27PF 50V 5% C206 1005

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	PCH(2/8):PCIE/SMBUS/CLK

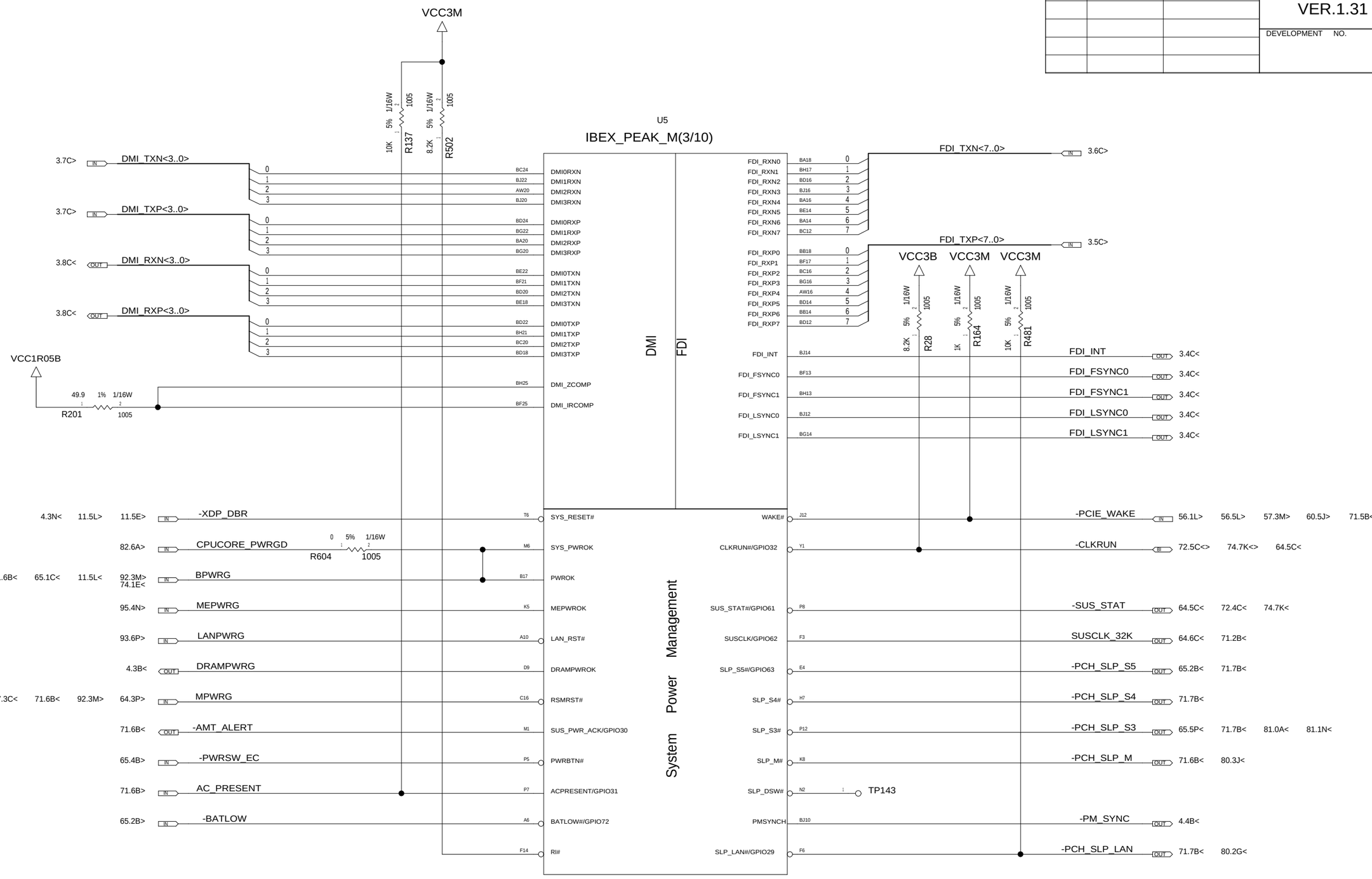
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 32 / 99



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	PCH(3/8):DMI/FDI/PM
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

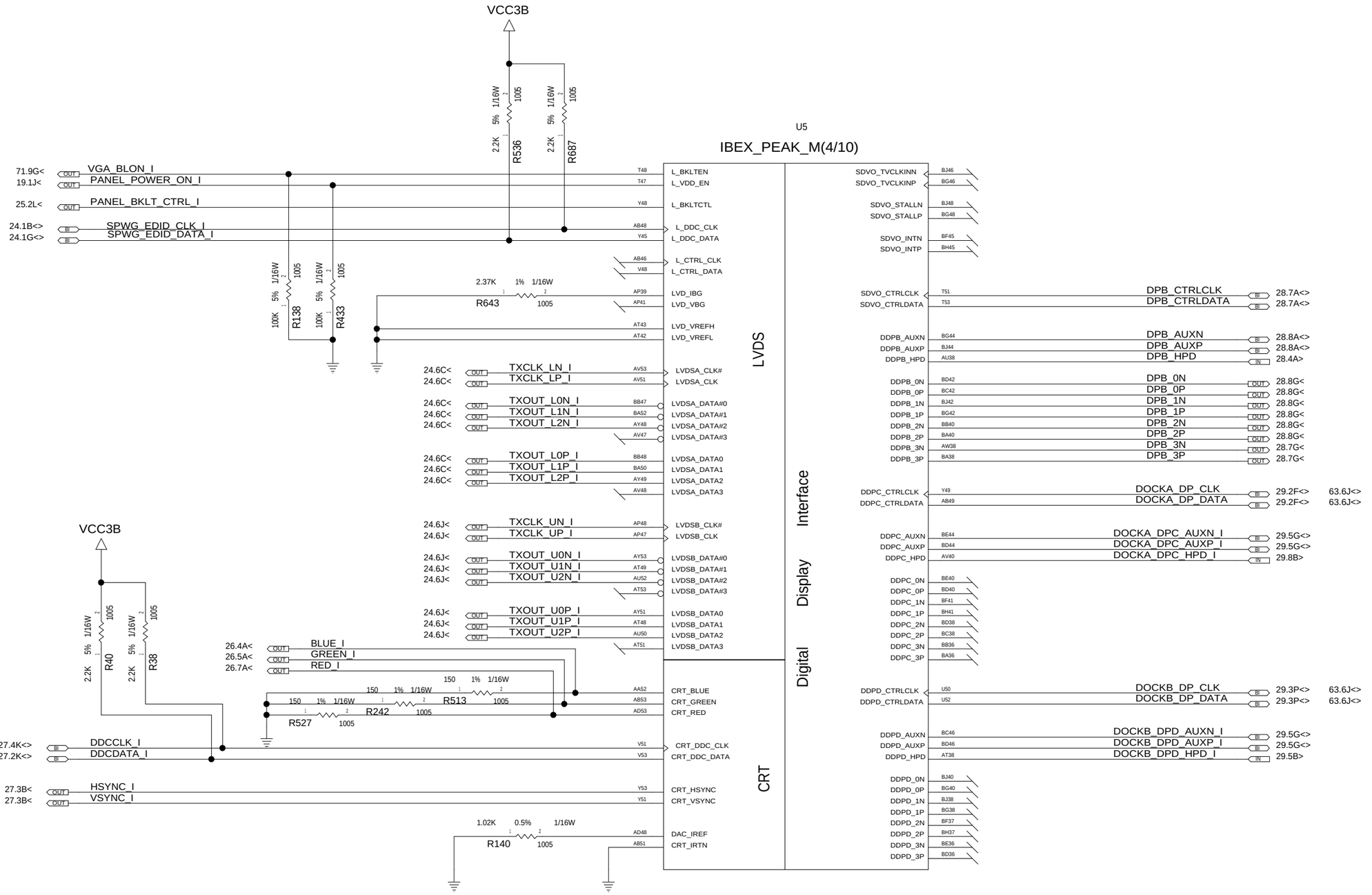
VER.1.31

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
33 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

PCH(4/8):LVDS/CRT/DDI

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

DATE	EC NO.	PART NO.
		VER.1.31
		DEVELOPMENT NO. / Q/M: 34 / 99

U5

IBEX_PEAK_M(5/10)

VCC3B

R400 R403 R404 R410 R411 R419 R425 R427 R430 R432 R435 R438 R440 R464 R465 R476 R550 R546 R545 R542

8.2K 5% 1/16W 1005

PCI

AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 AD8 AD9 AD10 AD11 AD12 AD13 AD14 AD15 AD16 AD17 AD18 AD19 AD20 AD21 AD22 AD23 AD24 AD25 AD26 AD27 AD28 AD29 AD30 AD31

C/BE0# C/BE1# C/BE2# C/BE3#

PIRQA# PIRQB# PIRQC# PIRQD#

REQ0# REQ1#/GPIO50 REQ2#/GPIO52 REQ3#/GPIO54

GNT0# GNT1#/GPIO51 GNT2#/GPIO53 GNT3#/GPIO55

PIRQE#/GPIO2 PIRQF#/GPIO3 PIRQG#/GPIO4 PIRQH#/GPIO5

PCIRST# SERR# PERR# IRDY# PAR DEVSEL# FRAME# PLOCK# STOP# TRDY# PME# PLTRST#

CLKOUT_PCI0 CLKOUT_PCI1 CLKOUT_PCI2 CLKOUT_PCI3 CLKOUT_PCILOOPBACK

TP82 TP92 TP93

25.2L< OUT BKLT_CTRL_SEL

28.6M< 24.3B< 27.0B< 27.2B< 19.1J< 26.3A< 71.9G< OUT DISCRETE_ENABLE

29.7K< 28.3E< 24.1B< 27.2K< 29.2J< 29.1B< 24.1G< 27.4K< 29.4G< OUT DDC_MUX_SEL

25.7B> IN -LCD_PRESENCE

63.4H> IN DOCKID<2..0>

INTEGRATED PULL UP

72.6C< LPCCLK_CRYPT_33M

74.7K< LPCCLK_DEBUG_33M

64.5C< LPCCLK_EC_33M

31.2M< PCICLK_FB_33M

R114 22 5% 1/16W 1005

R220 22 5% 1/16W 1005

R193 22 5% 1/16W 1005

R356 51 5% 1/16W 1005

71.6B< 64.5C< 61.4E< 74.7P< 58.4B< 74.6D< 11.5L< 72.5C< -PLTRST_NEAR

57.4C< 56.6B< 56.2D< 52.6B< 4.1A< -PLTRST_FAR

R991 33 5% 1/16W 1005

R993 33 5% 1/16W 1005

VCC3M

U73

TC7SG17FE

DUTY VCC INA NC GND

C460 100PF 5% 50V 1005

C46 100PF 5% 50V 1005

NVRAM

NV_CE#0 NV_CE#1 NV_CE#2 NV_CE#3 AY9 BD1 AP15 BD8 0 1 2 3

-NV_CE<3..0> OUT 38.7D< 38.7L<

NV_DQS0 AV9 NV_DQS1 BG8

NV_DQS0 BI 38.6D<>

NV_DQS1 BI 38.3D<>

NV_DQ<15..0> BI 38.7D<> 38.7L<>

NV_DQ0/NV_IO0 AP7 NV_DQ1/NV_IO1 AP6 NV_DQ2/NV_IO2 AT6 NV_DQ3/NV_IO3 AT9 NV_DQ4/NV_IO4 BB1 NV_DQ5/NV_IO5 AV6 NV_DQ6/NV_IO6 BB3 NV_DQ7/NV_IO7 BA4 NV_DQ8/NV_IO8 BE4 NV_DQ9/NV_IO9 BB6 NV_DQ10/NV_IO10 BD6 NV_DQ11/NV_IO11 BB7 NV_DQ12/NV_IO12 BC8 NV_DQ13/NV_IO13 BJ8 NV_DQ14/NV_IO14 BJ6 NV_DQ15/NV_IO15 BG6 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

VCC1R8B

NO_ASM 10K 5% 1/16W 1005 R676

TABLE

NV_ALE	
HIGH :	ENABLE AT-D
LOW :	DISABLE AT-D

NV_ALE BD3 NV_CLE AY6

NV_ALE OUT 38.5D< 38.5L<

NV_CLE OUT 38.5D< 38.5L<

-NV_BUSY IN 38.5L>

-NV_RE0 OUT 38.4D<

-NV_RE1 OUT 38.4L<

-NV_WE0 OUT 38.6L<

-NV_WE1 OUT 38.3L<

NV_RCOMP AU2

NV_RB# AV7

NV_WR#0_RE# AY8 NV_WR#1_RE# AY5

NV_WE#_CK0 AV11 NV_WE#_CK1 BF5

VCC3M

R248 R260 R262 10K 5% 1/16W 1005

R254 R261 R266 10K 5% 1/16W 1005

USB

USBP0N H18 USBP0P J18 USBP1N A18 USBP1P C18 USBP2N N20 USBP2P P20 USBP3N J20 USBP3P L20 USBP4N F20 USBP4P G20 USBP5N A20 USBP5P C20 USBP6N M22 USBP6P N22 USBP7N B21 USBP7P D21 USBP8N H22 USBP8P J22 USBP9N E22 USBP9P F22 USBP10N A22 USBP10P C22 USBP11N G24 USBP11P H24 USBP12N L24 USBP12P M24 USBP13N A24 USBP13P C24

USBP0- BI 42.3B<>

USBP0+ BI 42.3B<>

USBP1- BI 42.5B<>

USBP1+ BI 42.5B<>

USBP2- BI 56.3C<>

USBP2+ BI 56.3C<>

USBP3- BI 56.7A<>

USBP3+ BI 56.7A<>

USBP4- BI 57.5C<>

USBP4+ BI 57.5C<>

USBP5- BI 60.1H<>

USBP5+ BI 60.1H<>

USBP6- BI 60.7P<>

USBP6+ BI 60.7P<>

USBP7- BI 25.5N<>

USBP7+ BI 25.5N<>

USBP8- BI 28.7M<>

USBP8+ BI 28.7M<>

USBP9- BI 42.8B<>

USBP9+ BI 42.8B<>

USBP10- BI 67.6A<>

USBP10+ BI 67.6A<>

USBP11- BI 67.7M<>

USBP11+ BI 67.7M<>

USBP12- BI 63.5Q<>

USBP12+ BI 63.5Q<>

USB PORT	TO
0	SYSTEM PORT 4
1	SYSTEM PORT 2
2	HALF MINICARD (WLAN)
3	FULL MINICARD (WWAN)
4	HALF MINICARD (WUSB)
5	SMART CARD SLOT
6	EXPRESS CARD SLOT
7	USB CAMERA (LCD)
8	SYSTEM PORT 3
9	SYSTEM PORT 1
10	FPR (TOUCH PAD)
11	BLUETOOTH (TOUCH PAD)
12	DOCKING
13	RESERVED

USBRBIAS# B25 USBRBIAS D25

R564 22.6 1% 1/16W 1005

OC0#/GPIO59 N16 OC1#/GPIO40 J16 OC2#/GPIO41 F16 OC3#/GPIO42 L16 OC4#/GPIO43 E14 OC5#/GPIO9 G16 OC6#/GPIO10 F12 OC7#/GPIO14 T15

-USB_PORT_0_1_OC0 IN 42.0L> 42.1E>

-MDC_KILL OUT 51.3C<

SMB_3B_EN OUT 74.0E<

-USB_PORT_8_9_OC4 IN 42.1L> 42.6Q>

R142 32.4 1% 1/16W 1005

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

PCH(5/8):PCI/USB/NVM

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

IBEX_PEAK_M(10/10)

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 35 / 99

POWER

Clock and Miscellaneous

VCC1R05B
NO_ASM L26 10UH 1608 GLFR1608T100M-LR
52mA (For VCCACLK)
VCCACLK[1] VCCACLK[2]
VCC1R05AMT
320mA (For VCCLAN)
VCCLAN[1] VCCLAN[2]
DCPSUSBYP
VCC1R05AMT
1.849A (For VCCME)
VCCME[1] VCCME[2] VCCME[3] VCCME[4] VCCME[5] VCCME[6] VCCME[7] VCCME[8] VCCME[9] VCCME[10] VCCME[11] VCCME[12]
DCPRTC
VCC1R8B
196mA (For VCCRAM)
VCCVRM[3]
VCCADPLLA[1] VCCADPLLA[2]
VCC1R05B
68mA (For VCCADPLLA)
L27 10UH 1608 GLFR1608T100M-LR
L29 10UH 1608 GLFR1608T100M-LR
69mA (For VCCDPLLB)
VCCADPLLB[1] VCCADPLLB[2]
VCC1R05B
3.062A (For VCCIO)
VCCIO[21] VCCIO[22] VCCIO[23] VCCIO[2] VCCIO[3] VCCIO[4]
C700,C721 : 15 MILI OHM
DCPSST
DCPSUS
VCC3M
163mA (For VCCSUS3_3)
VCCSUS3_3[29] VCCSUS3_3[30] VCCSUS3_3[31] VCCSUS3_3[32]
VCC3B
357mA (For VCC3_3)
VCC3_3[5] VCC3_3[6] VCC3_3[7]
VCC1R05B_VTT
1mA (For V_CPU_IO)
V_CPU_IO[1] V_CPU_IO[2]
RTCVCC
2mA (For VCCRTC)
VCCRTC

USB

U5
VCC1R05B
3.062A (For VCCIO)
VCCIO[5] VCCIO[6] VCCIO[7] VCCIO[8]
VCC3M
163mA (For VCCSUS3_3)
VCCSUS3_3[1] VCCSUS3_3[2] VCCSUS3_3[3] VCCSUS3_3[4] VCCSUS3_3[5] VCCSUS3_3[6] VCCSUS3_3[7] VCCSUS3_3[8] VCCSUS3_3[9] VCCSUS3_3[10] VCCSUS3_3[11] VCCSUS3_3[12] VCCSUS3_3[13] VCCSUS3_3[14] VCCSUS3_3[15] VCCSUS3_3[16] VCCSUS3_3[17] VCCSUS3_3[18] VCCSUS3_3[19] VCCSUS3_3[20] VCCSUS3_3[21] VCCSUS3_3[22] VCCSUS3_3[23] VCCSUS3_3[24] VCCSUS3_3[25] VCCSUS3_3[26] VCCSUS3_3[27]
VCC3M
163mA (For VCCSUS3_3)
VCCSUS3_3[28]
VCCIO[56]
3.062A (For VCCIO)
V5REF_SUS
1mA (For V5REF)
VCC3M VCC5M
D17 RB461F
VCC1R05B
R655
VCC3B VCC5B
D46 RB461F
R656
V5REF
1mA (For V5REF)
VCC3B
357mA (For VCC3_3)
VCC3_3[8] VCC3_3[9] VCC3_3[10] VCC3_3[11] VCC3_3[12] VCC3_3[13]
VCC3B
357mA (For VCC3_3)
VCC1R05B
VCC3_3[14]
VCCSATAPLL[1] VCCSATAPLL[2]
31mA (For VCCSATAPLL)
NO_ASM L33 10UH 1608 GLFR1608T100M-LR
VCC1R8B
VCC1R05B
VCCIO[9]
VCCVRM[4]
196mA (For VCCRAM)
VCCIO[10] VCCIO[11] VCCIO[12] VCCIO[13] VCCIO[14] VCCIO[15] VCCIO[16] VCCIO[17] VCCIO[18] VCCIO[19] VCCIO[20]
3.062A (For VCCIO)
VCC1R05AMT
1.849A (For VCCME)
VCCME[13] VCCME[14] VCCME[15] VCCME[16]
VCC3M
6mA (For VCCSUSHDA)
VCCSUSHDA

PCI/GPIO/LPC

SATA

CPU

RTC

HDA

IBEX_PEAK_M(7/10)

U5

VCC1R05B
1.432A (For VCCCORE)
VCCCORE[1] VCCCORE[2] VCCCORE[3] VCCCORE[4] VCCCORE[5] VCCCORE[6] VCCCORE[7] VCCCORE[8] VCCCORE[9] VCCCORE[10] VCCCORE[11] VCCCORE[12] VCCCORE[13] VCCCORE[14] VCCCORE[15]

VCC CORE

VCC1R05B
NO_ASM L17 1UH 1608 GLFR1608T1R0M-LR
VCC1R05B
3.062A (For VCCIO)
VCCIO[24]
VCCAPLLEXP
VCC1R05B
3.062A (For VCCIO)
VCCIO[25] VCCIO[26] VCCIO[27] VCCIO[28] VCCIO[29] VCCIO[30] VCCIO[31] VCCIO[32] VCCIO[33] VCCIO[34] VCCIO[35] VCCIO[36] VCCIO[37] VCCIO[38] VCCIO[39] VCCIO[40] VCCIO[41] VCCIO[42] VCCIO[43] VCCIO[44] VCCIO[45] VCCIO[46] VCCIO[47] VCCIO[48] VCCIO[49] VCCIO[50] VCCIO[51] VCCIO[52] VCCIO[53] VCCIO[54] VCCIO[55]
VCC3_3[1]
VCC1R8B
VCC3B
357mA (For VCC3_3)
196mA (For VCCRAM)
NO_ASM L20 1UH 1608 GLFR1608T1R0M-LR
37mA (For VCCFDIPLL)
3.062A (For VCCIO)
VCCVRM[1]
VCCFDIPLL
VCCIO[1]

PCI E*

FDI

CRT

VCCADAC[1] VCCADAC[2] VSSA_DAC[1] VSSA_DAC[2]
69mA (For VCCDAC)
L21 180 OHM BLM18PG181SN1 1608
VCC3B
1mA (For VCCALVDS)

LVDS

VCCALVDS VSSA_LVDS VCCTX_LVDS[1] VCCTX_LVDS[2] VCCTX_LVDS[3] VCCTX_LVDS[4]
VCC1R8B
59mA (For VCCTX_LVDS)
L22 0.1UH 1608 MLF1608DR10JT000

HVCMOS

VCC3_3[2] VCC3_3[3] VCC3_3[4]
VCC3B
357mA (For VCC3_3)

DMI

VCCVRM[2] VCCDMI[1] VCCDMI[2]
VCC1R8B
196mA (For VCCRAM)
VCC1R05B_VTT
58mA (For VCCDMI)

NAND / SPI

VCCPNAND[1] VCCPNAND[2] VCCPNAND[3] VCCPNAND[4] VCCPNAND[5] VCCPNAND[6] VCCPNAND[7] VCCPNAND[8] VCCPNAND[9]
VCC1R8B
156mA (For VCCPNAND)
VCC3LAN
VCCME3_3[1] VCCME3_3[2] VCCME3_3[3] VCCME3_3[4]
1.849A (For VCCME)

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

PCH(6/8):PWR

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 36 / 99

TABLE

GPIO15 ME CRYPTO STRAP
HIGH : WITH CONFIDENTIALITY
LOW : NO CONFIDENTIALITY

VCC3B VCC3M VCC3B VCC3M VCC3B

R282 20K 5% 1/16W 1005

U37 TC7SG17FE

GFX_PWR_EN_D OUT 80.4A<

U5 IBEX_PEAK_M(6/10)

R226 1K 5% 1/16W 1005
R270 10K 5% 1/16W 1005
R543 10K 5% 1/16W 1005
R933 10K 5% 1/16W 1005
R482 10K 5% 1/16W 1005
R610 10K 5% 1/16W 1005
R360 10K 5% 1/16W 1005
R280 10K 5% 1/16W 1005
R484 10K 5% 1/16W 1005
R485 10K 5% 1/16W 1005
R544 10K 5% 1/16W 1005

		Y3	BMBUSY#/GPIO0	
64.4C>	IN -EC_SCI	C38	TACH1/GPIO1	
59.1J>	IN -MC_DTCT	D37	TACH2/GPIO6	
60.1H>	IN -SC_DTCT	J32	TACH3/GPIO7	
		F10	GPIO8	
52.5B<	OUT LANPHYPC	K9	LAN_PHY_PWR_CTRL/GPIO12	
		T7	GPIO15	
42.3P>	IN -1394_DTCT	AA2	SATA4GP/GPIO16	
31.3Q< 84.5B>	IN DGFX_PWRGD	F38	TACH0/GPIO17	
30.2P<	OUT SATA_BAY_DTCT	Y7	SCLOCK/GPIO22	
	NO_ASM R932 1K 5% 1/16W 1005	H10	MEM_LED/GPIO24	TP94
		AB12	GPIO27	
		V13	GPIO28	
15.5A<	OUT -PCI_STP	M11	STP_PCI#/GPIO34	
		V6	SATACLKREQ#/GPIO35	
36.2D>	IN PLANARID0	AB7	SATA2GP/GPIO36	
36.2D>	IN PLANARID1	AB13	SATA3GP/GPIO37	
36.2D>	IN PLANARID2	V3	SLOAD/GPIO38	
36.2D>	IN PLANARID3	P3	SDATAOUT0/GPIO39	
	VCC3M R658 10K 5% 1/16W 1005	H3	PCIECLKRQ6#/GPIO45	
	R660 10K 5% 1/16W 1005	F1	PCIECLKRQ7#/GPIO46	
67.7M<>	IN -BDC_PRESENCE	AB6	SDATAOUT1/GPIO48	
	R276 200K 5% 1/16W 1005	AA4	SATA5GP/GPIO49	
74.6K>	IN -DEBUGCARD	F8	GPIO57	

GPIO

MISC

CLKOUT_PCIE6N	AH45	
CLKOUT_PCIE6P	AH46	
CLKOUT_PCIE7N	AF48	
CLKOUT_PCIE7P	AF47	
A20GATE	U2	KBGA20 IN 64.5C>

CPU

CLKOUT_BCLK0_N/CLKOUT_PCIE8N	AM3	-CPU_CLK_133M OUT 4.7Q<
CLKOUT_BCLK0_P/CLKOUT_PCIE8P	AM1	CPU_CLK_133M OUT 4.7Q<
PECI	BG10	PECI BI 4.6A<>
RCIN#	T1	-KBRC IN 65.3B>
PROCPWRGD	BE10	CPUPWRGD BI 4.4B<
THRMTRIP#	BD10	-THERMTRIP IN 4.5A>

VCC1R05B_VTT

R600 56 5% 1/16W 1005

11.5E<

R357 54.9 1% 1/16W 1005

RSVD

TP1	BA22
TP2	AW22
TP3	BB22
TP4	AY45
TP5	AY46
TP6	AV43
TP7	AV45
TP8	AF13
TP9	M18
TP10	N18
TP11	AJ24
TP12	AK41
TP13	AK42
TP14	M32
TP15	N32
TP16	M30
TP17	N30
TP18	H12
TP19	AA23
NC_1	AB45
NC_2	AB38
NC_3	AB42
NC_4	AB41
NC_5	T39
INIT3_3V#	P6
SST	C10

NCTF

TP108	A4	VSS_NCTF_1
TP109	A49	VSS_NCTF_2
TP110	A5	VSS_NCTF_3
TP111	A50	VSS_NCTF_4
TP112	A52	VSS_NCTF_5
TP113	A53	VSS_NCTF_6
TP114	B2	VSS_NCTF_7
TP115	B4	VSS_NCTF_8
TP116	B52	VSS_NCTF_9
TP117	B53	VSS_NCTF_10
TP118	BE1	VSS_NCTF_11
TP119	BE53	VSS_NCTF_12
TP120	BF1	VSS_NCTF_13
TP121	BF53	VSS_NCTF_14
TP122	BH1	VSS_NCTF_15
TP123	BH2	VSS_NCTF_16
TP124	BH52	VSS_NCTF_17
TP125	BH53	VSS_NCTF_18
TP126	BJ1	VSS_NCTF_19
TP127	BJ2	VSS_NCTF_20
TP128	BJ4	VSS_NCTF_21
TP129	BJ49	VSS_NCTF_22
TP130	BJ5	VSS_NCTF_23
TP131	BJ50	VSS_NCTF_24
TP132	BJ52	VSS_NCTF_25
TP133	BJ53	VSS_NCTF_26
TP134	D1	VSS_NCTF_27
TP135	D2	VSS_NCTF_28
TP136	D53	VSS_NCTF_29
TP137	E1	VSS_NCTF_30
TP138	E53	VSS_NCTF_31

VCC3B VCC3B VCC3B VCC3B

NO_ASM R39 10K 5% 1/16W 1005
NO_ASM R505 10K 5% 1/16W 1005
NO_ASM R37 10K 5% 1/16W 1005
R671 10K 5% 1/16W 1005

PLANARID0 OUT 36.5A<
PLANARID1 OUT 36.5A<
PLANARID2 OUT 36.5A<
PLANARID3 OUT 36.4A<

R43 10K 5% 1/16W 1005
R47 10K 5% 1/16W 1005
R113 10K 5% 1/16W 1005
NO_ASM R48 10K 5% 1/16W 1005

FOR SOLDER CRACK DETECTION

TABLE

LEVEL	PLANAR ID			
	3	2	1	0
1	R39	R505	R37	R671
0	R43	R47	R113	R48

TABLE

LEVEL	PLANARID[3..0]
PDV	0000B
SDV	0001B

VER.1.31

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	PCH(7/8):GPIO/NCTF/RSVD
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

U5

IBEX_PEAK_M(8/10)

AB16	VSS[0]		
AA19	VSS[1]	VSS[80]	AK30
AA20	VSS[2]	VSS[81]	AK31
AA22	VSS[3]	VSS[82]	AK32
AM19	VSS[4]	VSS[83]	AK34
AA24	VSS[5]	VSS[84]	AK35
AA26	VSS[6]	VSS[85]	AK38
AA28	VSS[7]	VSS[86]	AK43
AA30	VSS[8]	VSS[87]	AK46
AA31	VSS[9]	VSS[88]	AK49
AA32	VSS[10]	VSS[89]	AK5
AB11	VSS[11]	VSS[90]	AK8
AB15	VSS[12]	VSS[91]	AL2
AB23	VSS[13]	VSS[92]	AL52
AB30	VSS[14]	VSS[93]	AM11
AB31	VSS[15]	VSS[94]	BB44
AB32	VSS[16]	VSS[95]	AD24
AB39	VSS[17]	VSS[96]	AM20
AB43	VSS[18]	VSS[97]	AM22
AB47	VSS[19]	VSS[98]	AM24
AB5	VSS[20]	VSS[99]	AM26
AB8	VSS[21]	VSS[100]	AM28
AC2	VSS[22]	VSS[101]	BA42
AC52	VSS[23]	VSS[102]	AM30
AD11	VSS[24]	VSS[103]	AM31
AD12	VSS[25]	VSS[104]	AM32
AD16	VSS[26]	VSS[105]	AM34
AD23	VSS[27]	VSS[106]	AM35
AD30	VSS[28]	VSS[107]	AM38
AD31	VSS[29]	VSS[108]	AM39
AD32	VSS[30]	VSS[109]	AM42
AD34	VSS[31]	VSS[110]	AU20
AU22	VSS[32]	VSS[111]	AM46
AD42	VSS[33]	VSS[112]	AV22
AD46	VSS[34]	VSS[113]	AM49
AD49	VSS[35]	VSS[114]	AM7
AD7	VSS[36]	VSS[115]	AA50
AE2	VSS[37]	VSS[116]	BB10
AE4	VSS[38]	VSS[117]	AN32
AF12	VSS[39]	VSS[118]	AN50
Y13	VSS[40]	VSS[119]	AN52
AH49	VSS[41]	VSS[120]	AP12
AU4	VSS[42]	VSS[121]	AP42
AF35	VSS[43]	VSS[122]	AP46
AP13	VSS[44]	VSS[123]	AP49
AN34	VSS[45]	VSS[124]	AP5
AF45	VSS[46]	VSS[125]	AP8
AF46	VSS[47]	VSS[126]	AR2
AF49	VSS[48]	VSS[127]	AR52
AF5	VSS[49]	VSS[128]	AT11
AF8	VSS[50]	VSS[129]	BA12
AG2	VSS[51]	VSS[130]	AH48
AG52	VSS[52]	VSS[131]	AT32
AH11	VSS[53]	VSS[132]	AT36
AH15	VSS[54]	VSS[133]	AT41
AH16	VSS[55]	VSS[134]	AT47
AH24	VSS[56]	VSS[135]	AT7
AH32	VSS[57]	VSS[136]	AV12
AV18	VSS[58]	VSS[137]	AV16
AH43	VSS[59]	VSS[138]	AV20
AH47	VSS[60]	VSS[139]	AV24
AH7	VSS[61]	VSS[140]	AV30
AJ19	VSS[62]	VSS[141]	AV34
AJ2	VSS[63]	VSS[142]	AV38
AJ20	VSS[64]	VSS[143]	AV42
AJ22	VSS[65]	VSS[144]	AV46
AJ23	VSS[66]	VSS[145]	AV49
AJ26	VSS[67]	VSS[146]	AV5
AJ28	VSS[68]	VSS[147]	AV8
AJ32	VSS[69]	VSS[148]	AW14
AJ34	VSS[70]	VSS[149]	AW18
AT5	VSS[71]	VSS[150]	AW2
AJ4	VSS[72]	VSS[151]	BF9
AK12	VSS[73]	VSS[152]	AW32
AM41	VSS[74]	VSS[153]	AW36
AN19	VSS[75]	VSS[154]	AW40
AK26	VSS[76]	VSS[155]	AW52
AK22	VSS[77]	VSS[156]	AY11
AK23	VSS[78]	VSS[157]	AY43
AK28	VSS[79]	VSS[158]	AY47

U5

IBEX_PEAK_M(9/10)

AY7	VSS[159]	VSS[259]	H49
B11	VSS[160]	VSS[260]	H5
B15	VSS[161]	VSS[261]	J24
B19	VSS[162]	VSS[262]	K11
B23	VSS[163]	VSS[263]	K43
B31	VSS[164]	VSS[264]	K47
B35	VSS[165]	VSS[265]	K7
B39	VSS[166]	VSS[266]	L14
B43	VSS[167]	VSS[267]	L18
B47	VSS[168]	VSS[268]	L2
B7	VSS[169]	VSS[269]	L22
BG12	VSS[170]	VSS[270]	L32
BB12	VSS[171]	VSS[271]	L36
BB16	VSS[172]	VSS[272]	L40
BB20	VSS[173]	VSS[273]	L52
BB24	VSS[174]	VSS[274]	M12
BB30	VSS[175]	VSS[275]	M16
BB34	VSS[176]	VSS[276]	M20
BB38	VSS[177]	VSS[277]	N38
BB42	VSS[178]	VSS[278]	M34
BB49	VSS[179]	VSS[279]	M38
BB5	VSS[180]	VSS[280]	M42
BC10	VSS[181]	VSS[281]	M46
BC14	VSS[182]	VSS[282]	M49
BC18	VSS[183]	VSS[283]	M5
BC2	VSS[184]	VSS[284]	M8
BC22	VSS[185]	VSS[285]	N24
BC32	VSS[186]	VSS[286]	P11
BC36	VSS[187]	VSS[287]	AD15
BC40	VSS[188]	VSS[288]	P22
BC44	VSS[189]	VSS[289]	P30
BC52	VSS[190]	VSS[290]	P32
BH9	VSS[191]	VSS[291]	P34
BD48	VSS[192]	VSS[292]	P42
BD49	VSS[193]	VSS[293]	P45
BD5	VSS[194]	VSS[294]	P47
BE12	VSS[195]	VSS[295]	R2
BE16	VSS[196]	VSS[296]	R52
BE20	VSS[197]	VSS[297]	T12
BE24	VSS[198]	VSS[298]	T41
BE30	VSS[199]	VSS[299]	T46
BE34	VSS[200]	VSS[300]	T49
BE38	VSS[201]	VSS[301]	T5
BE42	VSS[202]	VSS[302]	T8
BE46	VSS[203]	VSS[303]	U30
BE48	VSS[204]	VSS[304]	U31
BE50	VSS[205]	VSS[305]	U32
BE6	VSS[206]	VSS[306]	U34
BE8	VSS[207]	VSS[307]	P38
BF3	VSS[208]	VSS[308]	V11
BF49	VSS[209]	VSS[309]	P16
BF51	VSS[210]	VSS[310]	V19
BG18	VSS[211]	VSS[311]	V20
BG24	VSS[212]	VSS[312]	V22
BG4	VSS[213]	VSS[313]	V30
BG50	VSS[214]	VSS[314]	V31
BH11	VSS[215]	VSS[315]	V32
BH15	VSS[216]	VSS[316]	V34
BH19	VSS[217]	VSS[317]	V35
BH23	VSS[218]	VSS[318]	V38
BH31	VSS[219]	VSS[319]	V43
BH35	VSS[220]	VSS[320]	V45
BH39	VSS[221]	VSS[321]	V46
BH43	VSS[222]	VSS[322]	V47
BH47	VSS[223]	VSS[323]	V49
BH7	VSS[224]	VSS[324]	V5
C12	VSS[225]	VSS[325]	V7
C50	VSS[226]	VSS[326]	V8
D51	VSS[227]	VSS[327]	W2
E12	VSS[228]	VSS[328]	W52
E16	VSS[229]	VSS[329]	Y11
E20	VSS[230]	VSS[330]	Y12
E24	VSS[231]	VSS[331]	Y15
E30	VSS[232]	VSS[332]	Y19
E34	VSS[233]	VSS[333]	Y23
E38	VSS[234]	VSS[334]	Y28
E42	VSS[235]	VSS[335]	Y30
E46	VSS[236]	VSS[336]	Y31
E48	VSS[237]	VSS[337]	Y32
E6	VSS[238]	VSS[338]	Y38
E8	VSS[239]	VSS[339]	Y43
F49	VSS[240]	VSS[340]	Y46
F5	VSS[241]	VSS[341]	P49
G10	VSS[242]	VSS[342]	Y5
G14	VSS[243]	VSS[343]	Y6
G18	VSS[244]	VSS[344]	Y8
G2	VSS[245]	VSS[345]	P24
G22	VSS[246]	VSS[346]	T43
G32	VSS[247]	VSS[347]	AD51
G36	VSS[248]	VSS[348]	AT8
G40	VSS[249]	VSS[349]	AD47
G44	VSS[250]	VSS[350]	Y47
G52	VSS[251]	VSS[351]	AT12
AF39	VSS[252]	VSS[352]	AM6
H16	VSS[253]	VSS[353]	AT13
H20	VSS[254]	VSS[354]	AM5
H30	VSS[255]	VSS[355]	AK45
H34	VSS[256]	VSS[356]	AK39
H38	VSS[257]	VSS[366]	AV14
H42	VSS[258]		

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
37 / 99

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

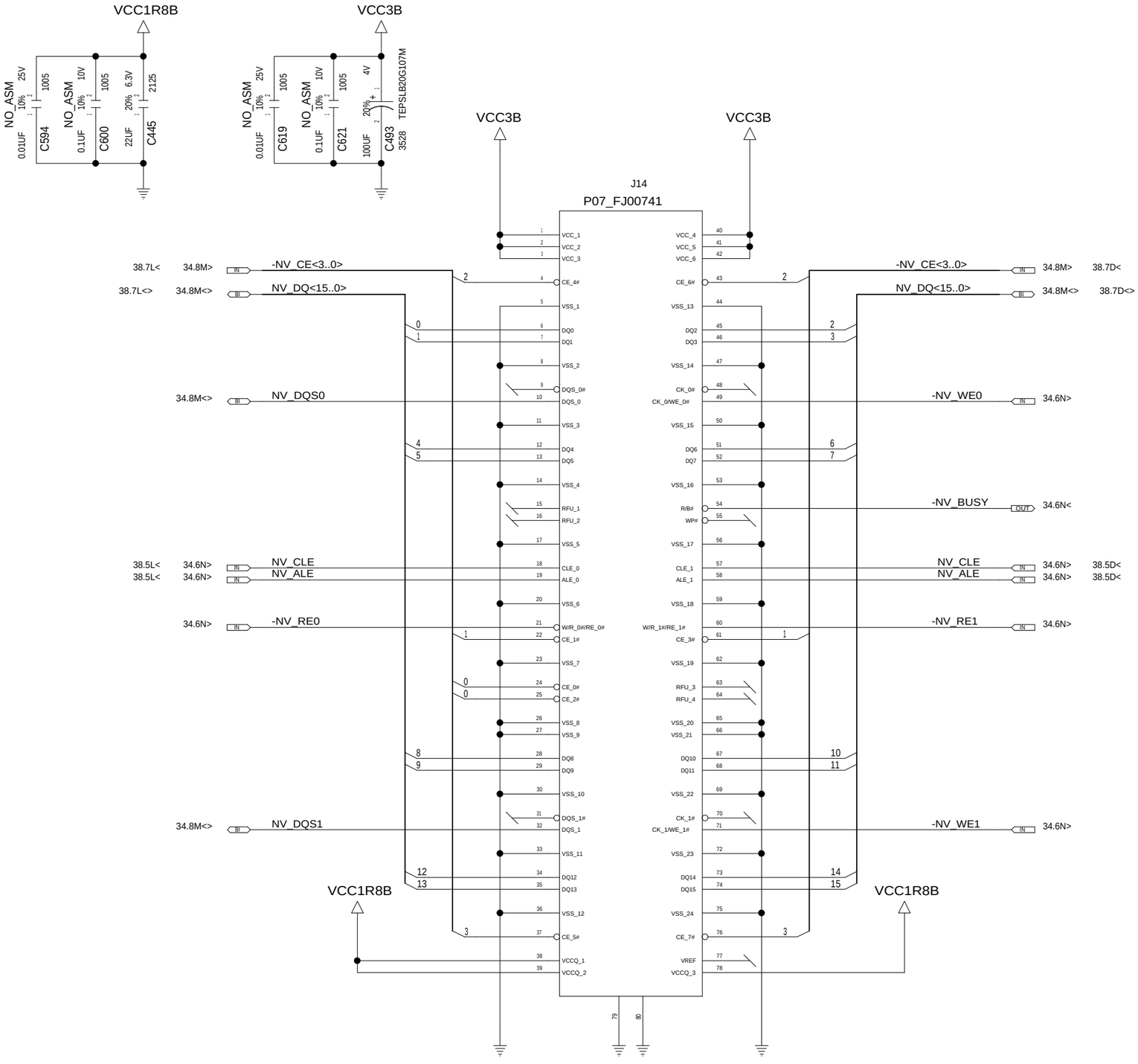
PCH(8/8):GND

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 38 / 99

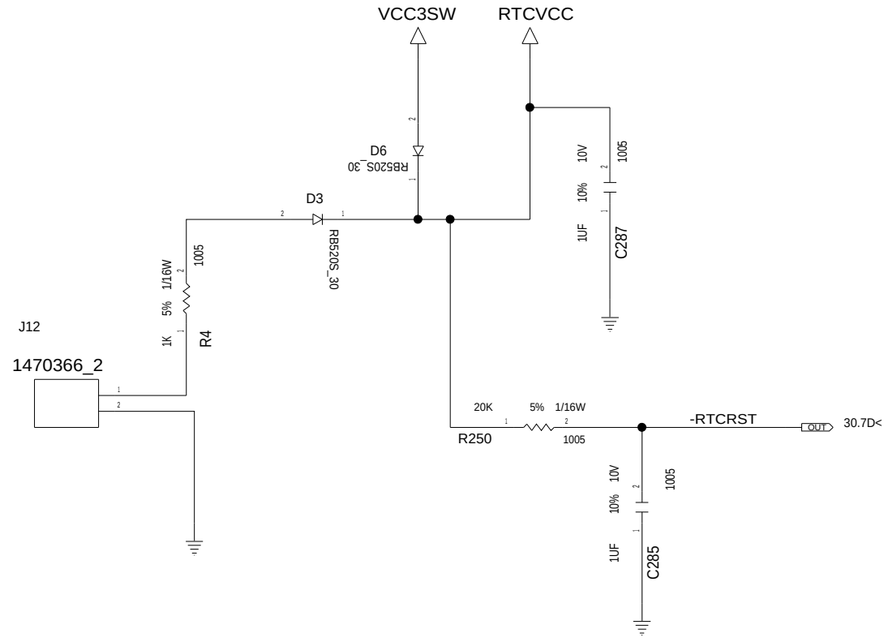


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	TURBO MEMORY SLOT	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 39 / 99



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	RTC BATTERY
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

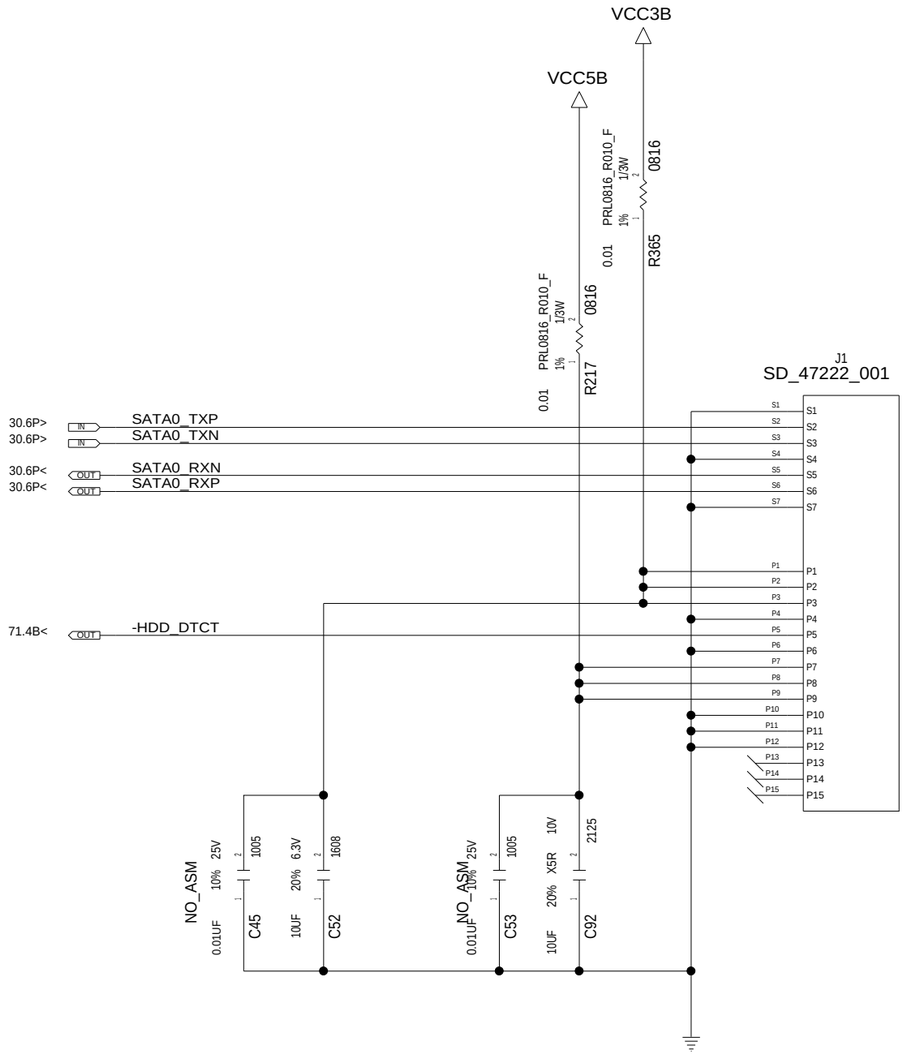
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 40 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

SATA HDD CONN

LENOVO CONFIDENTIAL

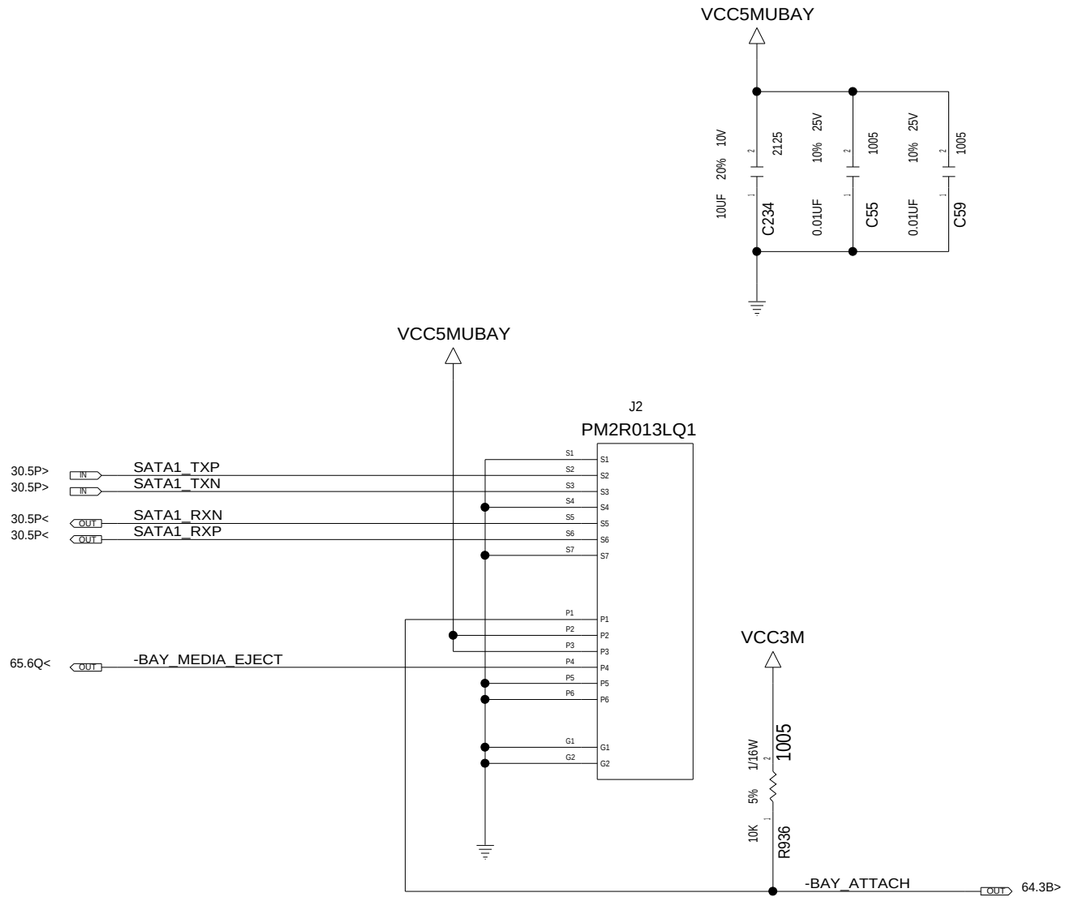
VER.1.31

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
41 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

SATA BAY I/F CONN

LENOVO CONFIDENTIAL

VER.1.31

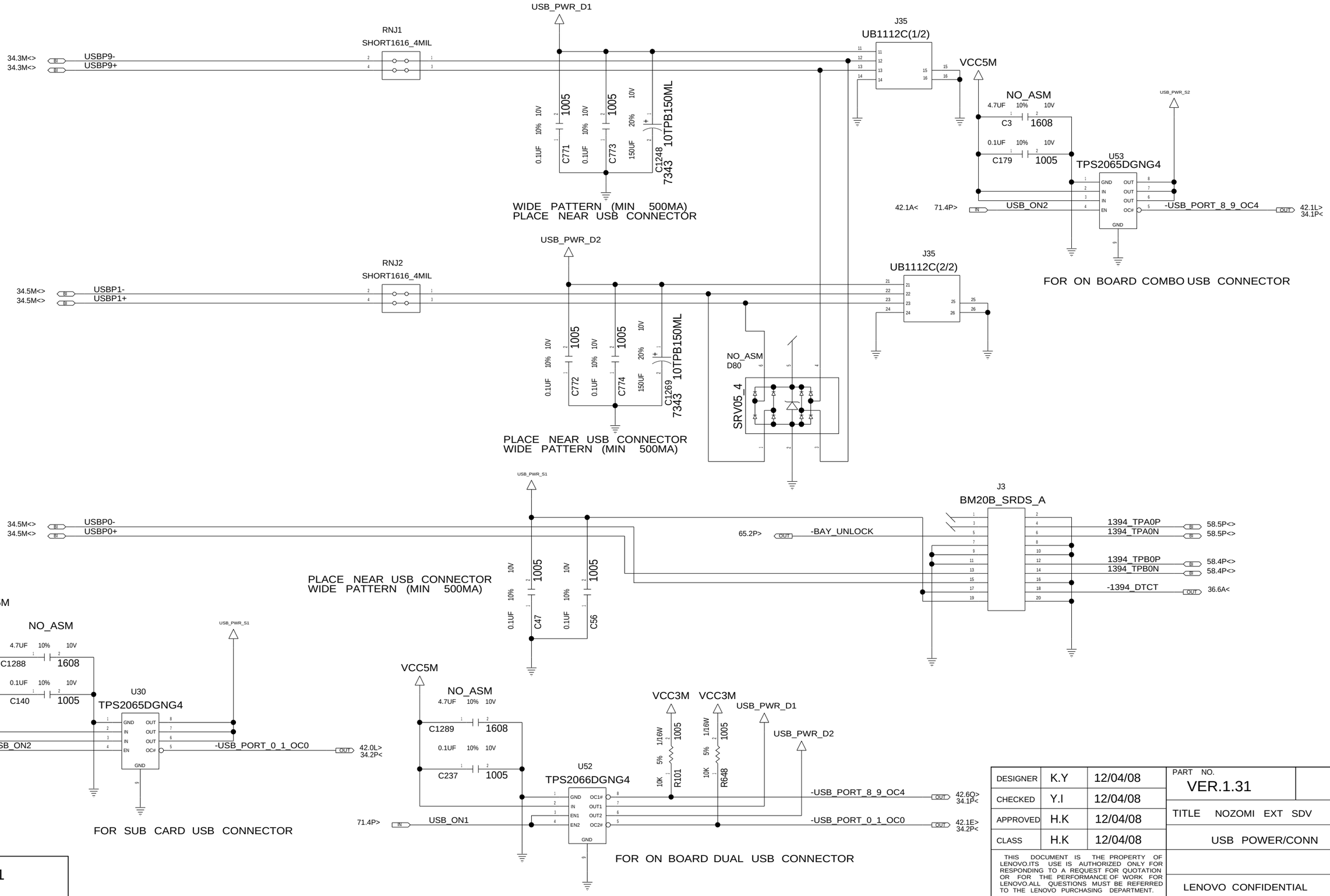
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 42 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

USB POWER/CONN

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 43 / 99

VCC5M SHORT1005_20MIL RJ63 VCC5MA

C150 10UF 20% 10V 2125
NO_ASM C319 0.1UF 10% 10V 1005
NO_ASM C324 0.01UF 10% 25V 1005
C345 0.1UF 10% 10V 1005
C346 10UF 20% 10V 2125
AGND

VCC3M VCC3MA

C23 1UF 10% 10V 1005
C42 0.1UF 10% 10V 1005
C62 10UF 20% 6.3V 1608
C15 0.1UF 10% 10V 1608
C321 0.1UF 10% 10V 1005
C28 0.1UF 10% 10V 1005
C63 10UF 20% 6.3V 1608
C81 0.1UF 10% 10V 1005
R473 0 5% 1/16W 1005
AGND

VCC5MA AVDD_3R3

R618 0.1 1% 1/4W 2125
C148 0.1UF 10% 10V 1005
C54 0.1UF 10% 10V 1005
C34 0.1UF 10% 10V 1005
C329 10UF 20% 6.3V 1608
C153 0.1UF 10% 10V 1608
C154 0.1UF 10% 10V 1005
C157 10UF 20% 6.3V 1608
C82 0.1UF 10% 10V 1005
C105 10UF 20% 6.3V 1608
AGND AGND AGND

C114 10UF 20% 6.3V 1608
C116 0.1UF 10% 10V 1005
C32 10UF 20% 6.3V 1608
C75 0.1UF 10% 10V 1005
AGND

30.5A> IN -ACZ_RST_ADI
30.6A> IN ACZ_BCLK_ADI
30.6A> IN ACZ_SYNC_ADI
30.5A< OUT ACZ_SDIN0
30.4A> IN ACZ_SDOUT_ADI

NO_ASM R124 47K 5% 1/16W 1005
NO_ASM C4 47PF 5% 50V 1005
R169 39 5% 1/16W 1005 AC97_SDIN0_CS

FILT_1.8 VAUX_3.31 VAUX_3.32 VDD_IO DVDD_3.3 AVDD_HP FILT_1.65 AVDD_3.3 AVDD_5V LPWR_5.0 RPWR_5.0 CLASSDREF

RESET# BIT_CLK SYNC SDATA_IN SDATA_OUT

U8 CX20585

DIB_P DIB_N PC_BEEP DMIC_3/4 DMIC_CLK0 DMIC_1/2 S/PDIF_OUT EAPD/GPIO0 GPIO1/GAIN GPIO2 SENSE_A SENSE_B SPARE

PORTF_R PORTF_L PORTB_R PORTB_L B_BIAS C_BIAS PORTC_R PORTC_L PORTE_R PORTE_L PORTD_R PORTD_L PORTA_R PORTA_L RIGHT+ RIGHT- LEFT+ LEFT-

50.4L> IN BEEP_MIX_ATT
C1294 0.1UF 10% 10V 1005

25.6N< OUT MIC_CLK
25.6N> IN MIC_DATA
R119 33 5% 1/16W 1005

63.6B< OUT SPDIF_OUT

65.1P> IN -SPK_MUTE
R58 0 5% 1/16W 1005

RJ38 SHORT1005_20MIL
25.6N< OUT MIC_PWR
RJ39 SHORT1005_20MIL
25.6N< OUT MIC_GND

VCC3M VCC3M
R122 10K 5% 1/16W 1005
NO_ASM R908 10K 5% 1/16W 1005
R83 10K 5% 1/16W 1005
R100 5.11K 1% 1/16W 1005
C119 1UF 10% 10V 1005 NO_ASM
AGND

46.7Q> OUT SENSE_A
49.4E< 65.1P> IN -MUTE

EXT_MUTE FLY_P FLY_N GND AGND1 AGND2 AGND3 AVEE EP_GND

C211 1UF 10% 10V 1608
C334 0.1UF 10% 10V 1005
AGND AGND AGND

C43 0.1UF 10% 10V 1005
C244 10UF 20% 6.3V 1608
C260 33PF 5% 50V 1005
C274 33PF 5% 50V 1005
NO_ASM C133 33PF 5% 50V 1005
NO_ASM C259 33PF 5% 50V 1005
C122 1000PF 10% 50V 1005
C127 1000PF 10% 50V 1005
C117 1000PF 10% 50V 1005
C243 1000PF 10% 50V 1005
AGND AGND AGND AGND

PLACE NEAR U8

DOCK_MIC_R IN 44.6L>
DOCK_MIC_L IN 44.6L>
BVREF_PORT_C OUT 47.8A<
C131 2.2UF 10% 10V 1608
C134 2.2UF 10% 10V 1608
EXT_MIC_IN IN 47.4K>

C561 1UF 10% 10V 1005
R631 56 5% 1/16W 1005
DOCK_HP_OUT_R OUT 63.5A<
C538 1UF 10% 10V 1005
R632 56 5% 1/16W 1005
DOCK_HP_OUT_L OUT 63.5A<
HP_R_OUT R677 56 5% 1/16W 1005 HP_R_JACK OUT 45.7B<
HP_L_OUT R678 56 5% 1/16W 1005 HP_L_JACK OUT 45.8B<

BLM31PG601SN1 L8 3216 SP_OUTR+ OUT 48.7E<
BLM31PG601SN1 L9 3216 SP_OUTR- OUT 48.7E<
BLM31PG601SN1 L11 3216 SP_OUTL+ OUT 48.6E<
BLM31PG601SN1 L12 3216 SP_OUTL- OUT 48.6E<

VCC3M VCC5MA

RJ26 SHORT1005_20MIL
C333 10UF 20% 10V 2125
NO_ASM C318 0.1UF 10% 10V 1005
NO_ASM C36 0.01UF 10% 25V 1005
C30 0.1UF 10% 10V 1005
C535 10UF 20% 10V 2125
AGND

PLACE UNDER CX20561

NO_ASM C143 0.01UF 10% 25V 1005 AGND

RJ41 SHORT1005_20MIL AGND

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

AUDIO CX20585

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

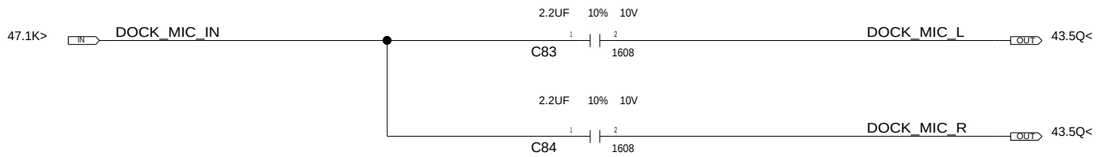
hexainf@hotmail.com
GRATIS - FOR FREE

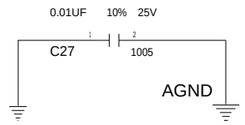
	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
44 / 99





DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

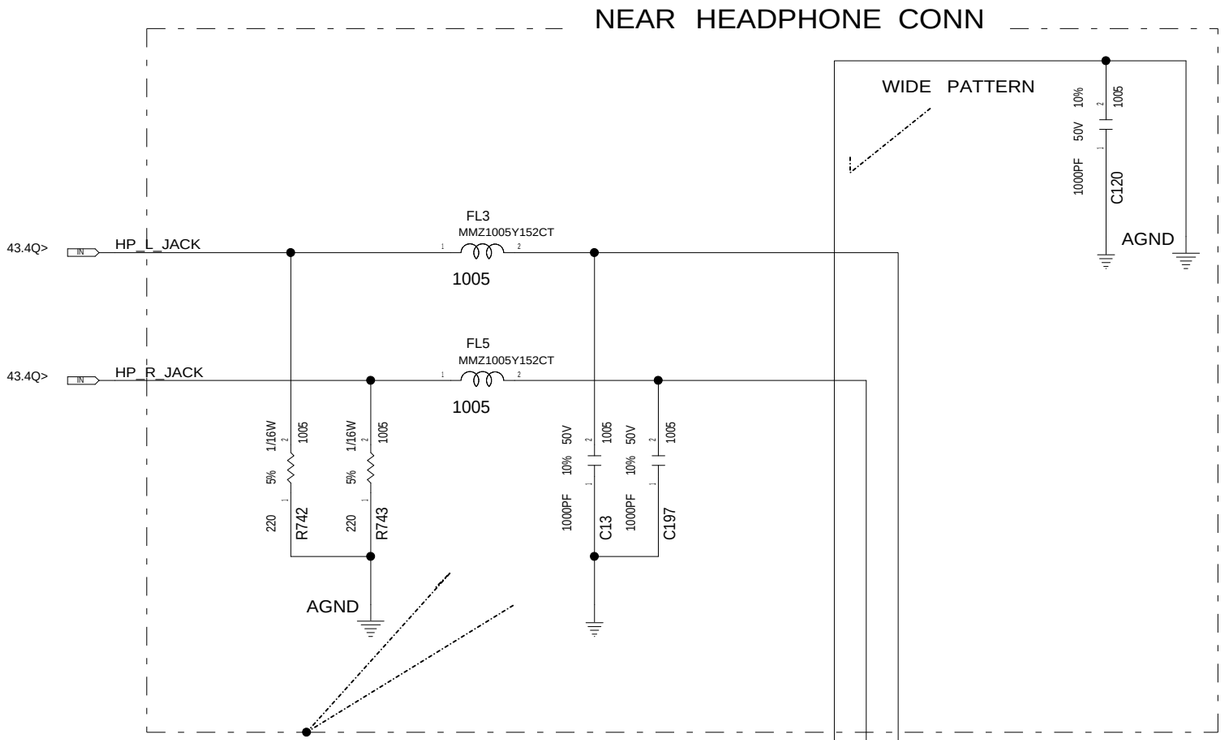
PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

AUDIO MISC

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 45 / 99



DESIGNER	K.Y	12/04/08	
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

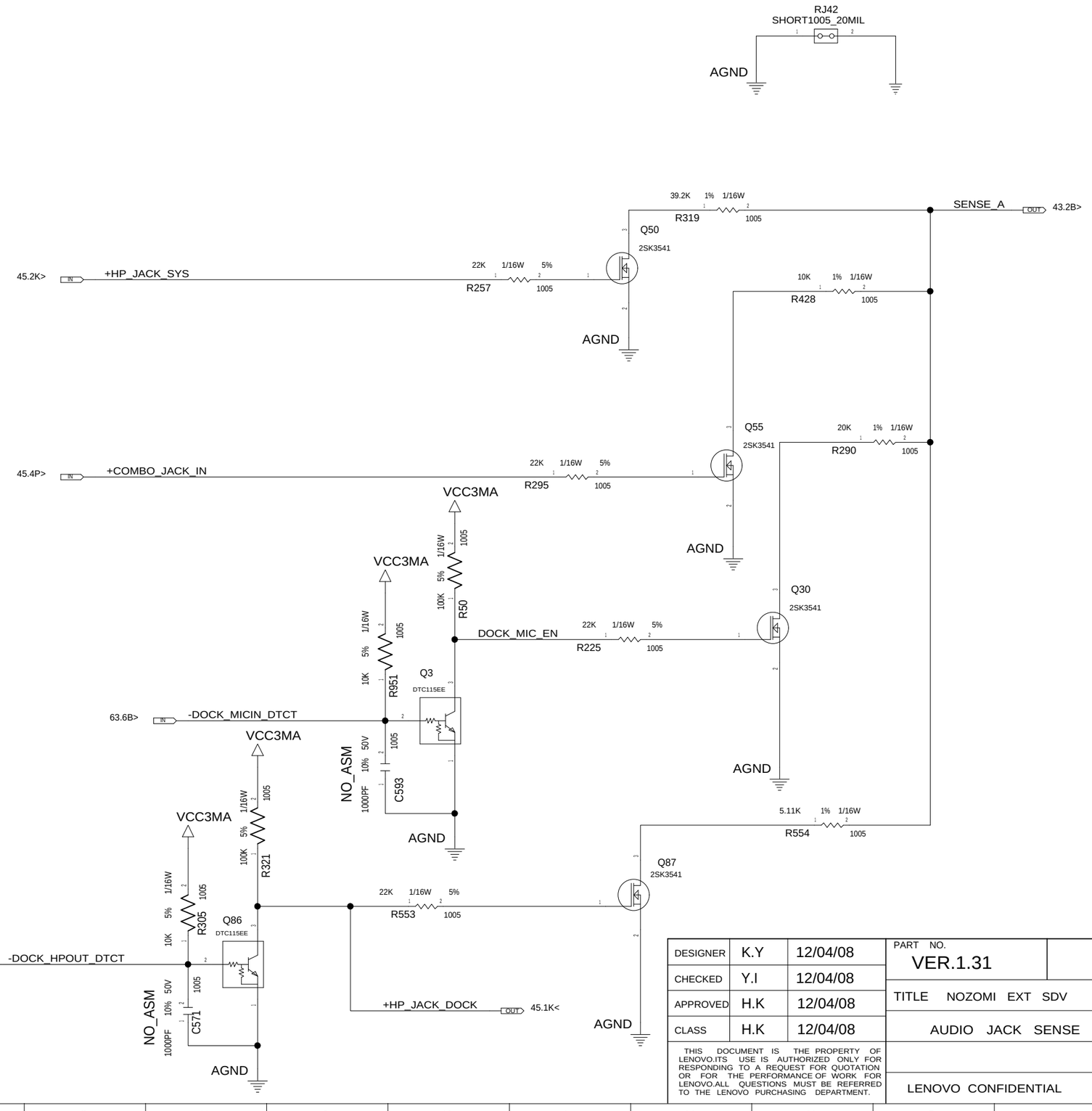
AUDIO CONNECTOR

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 46 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08	TITLE NOZOMI EXT SDV	
CHECKED	Y.I	12/04/08	AUDIO JACK SENSE	
APPROVED	H.K	12/04/08		
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

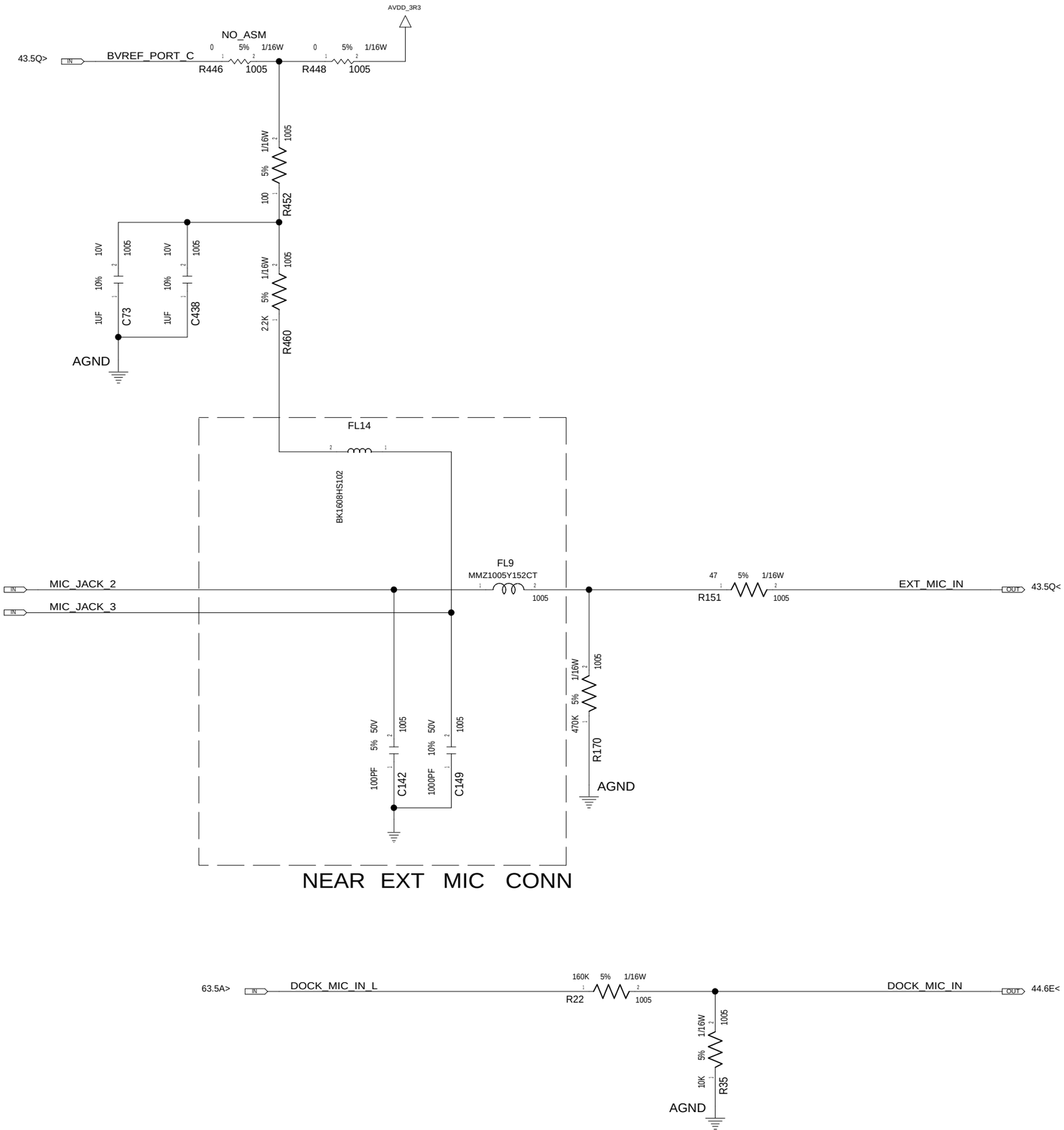
LENOVO CONFIDENTIAL

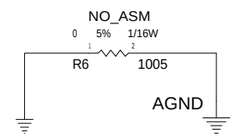
	DATE	EC NO.

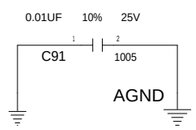
PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 47 / 99







DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

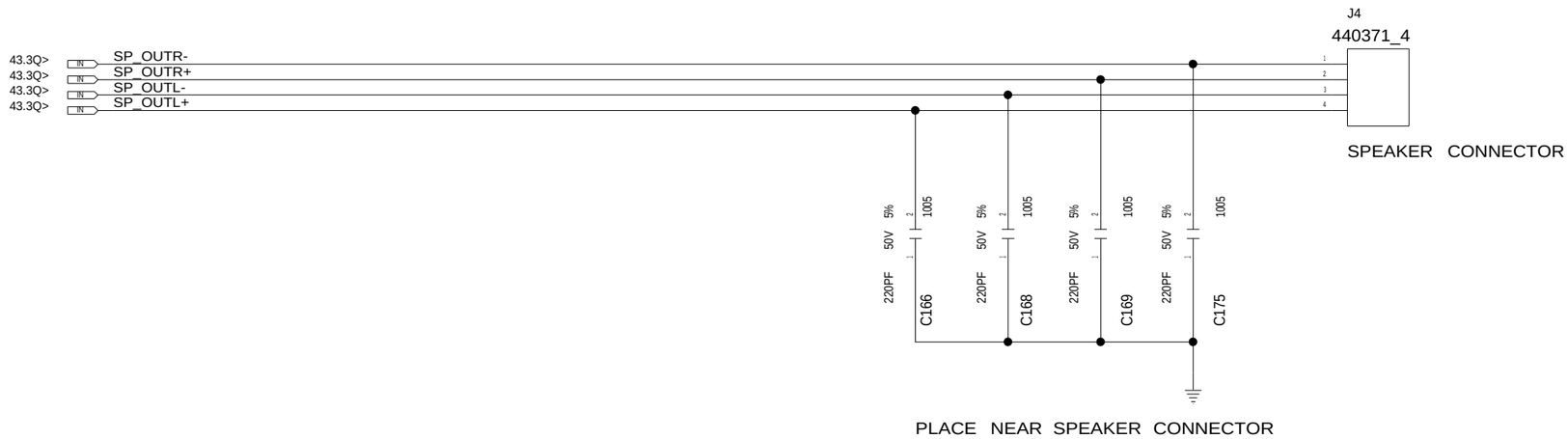
AUDIO EXT MIC I/F

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 48 / 99

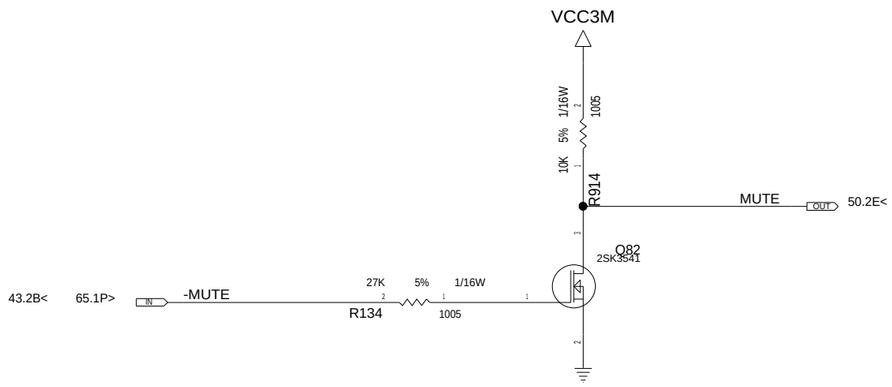


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	AUDIO SPEAKER	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 49 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	AUDIO HDP AMP	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

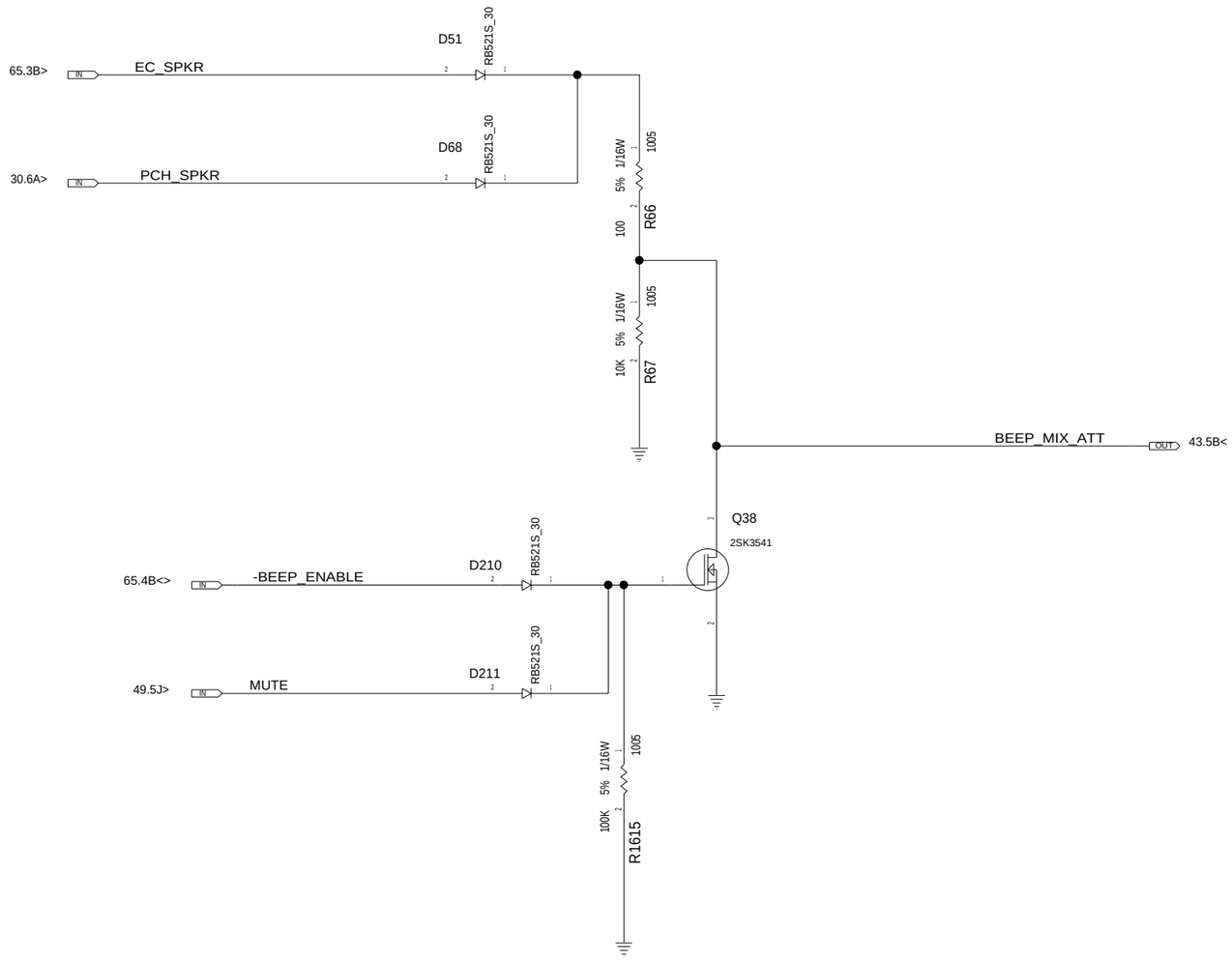
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 50 / 99



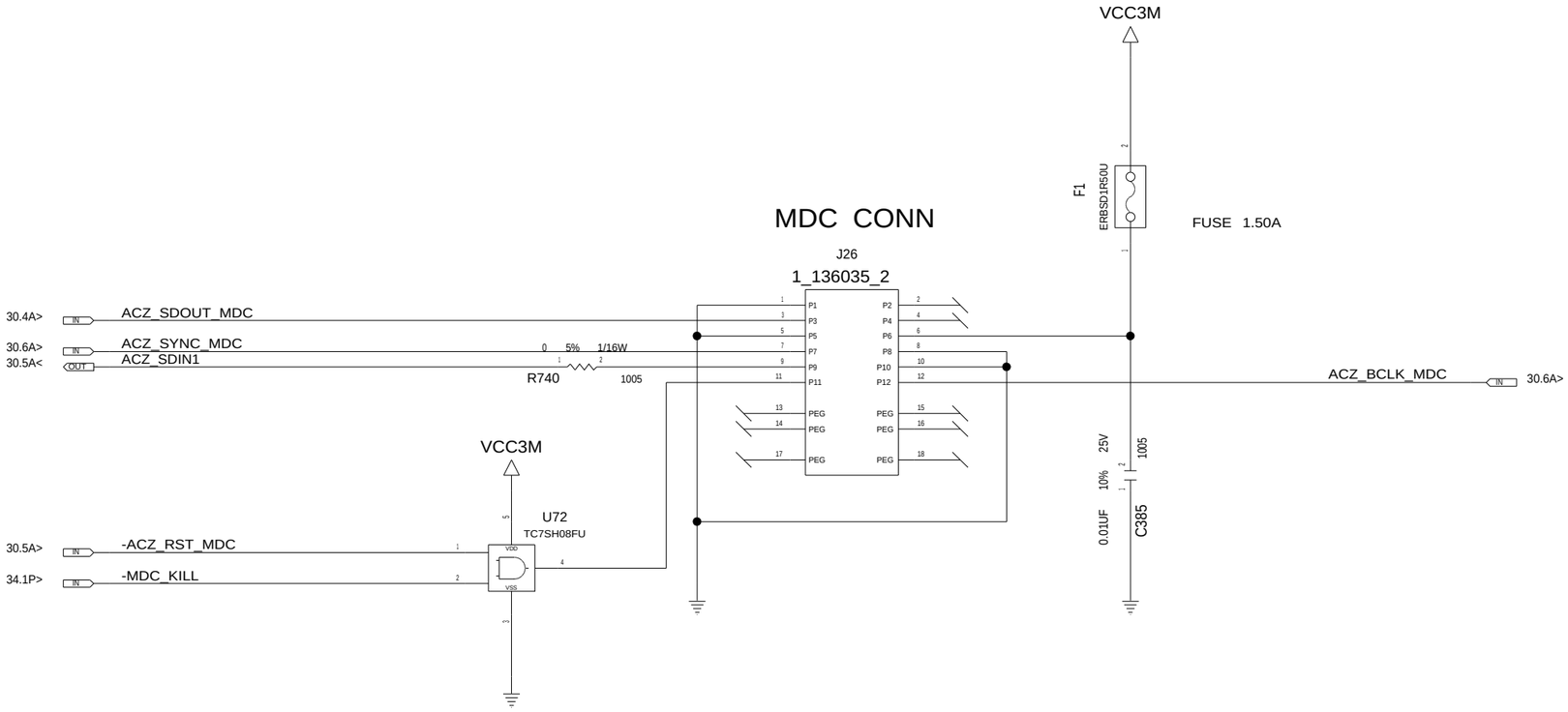
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	AUDIO BEEP
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 51 / 99

MDC CONN



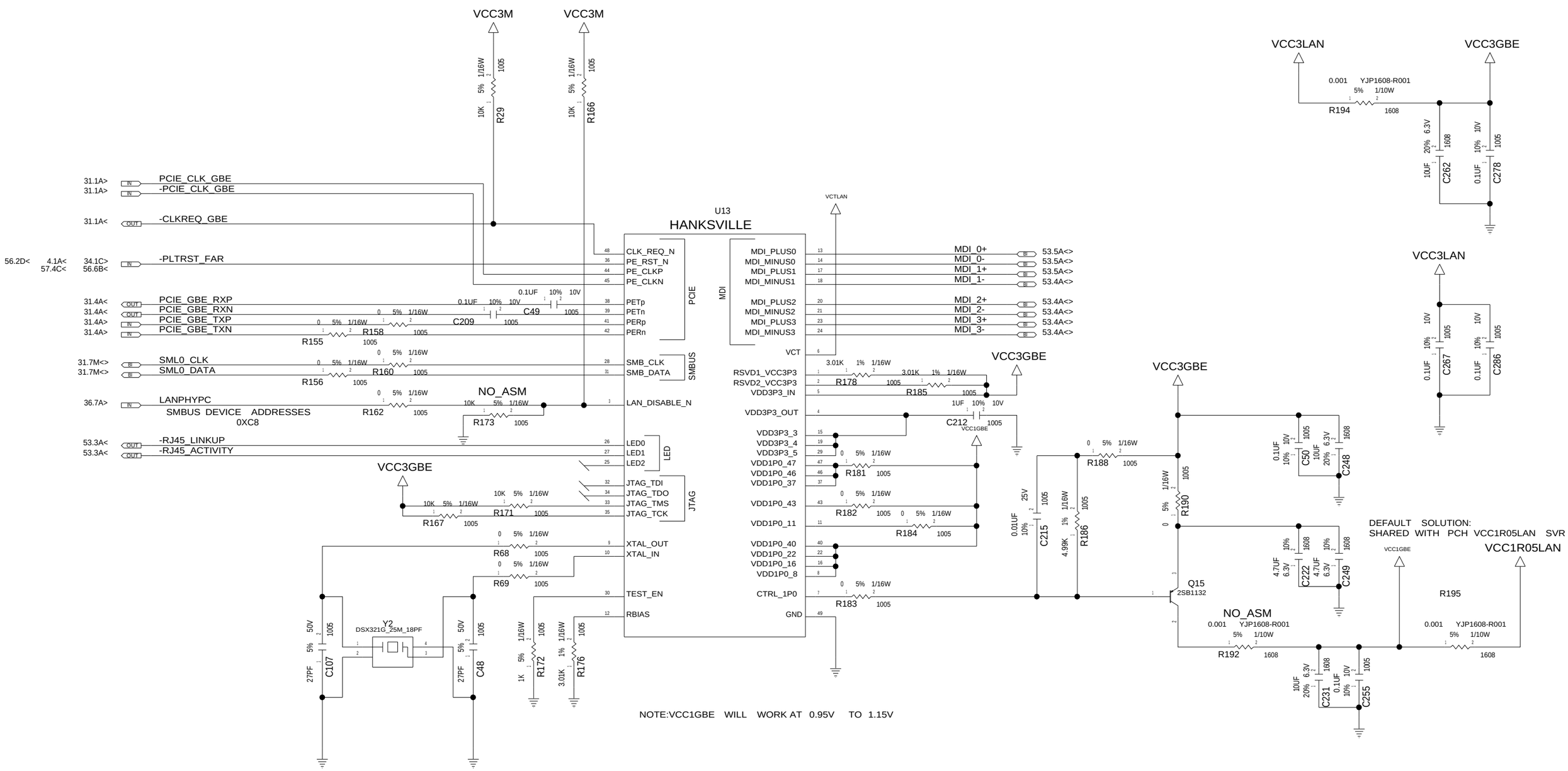
			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	MDC CONNECTOR	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 52 / 99

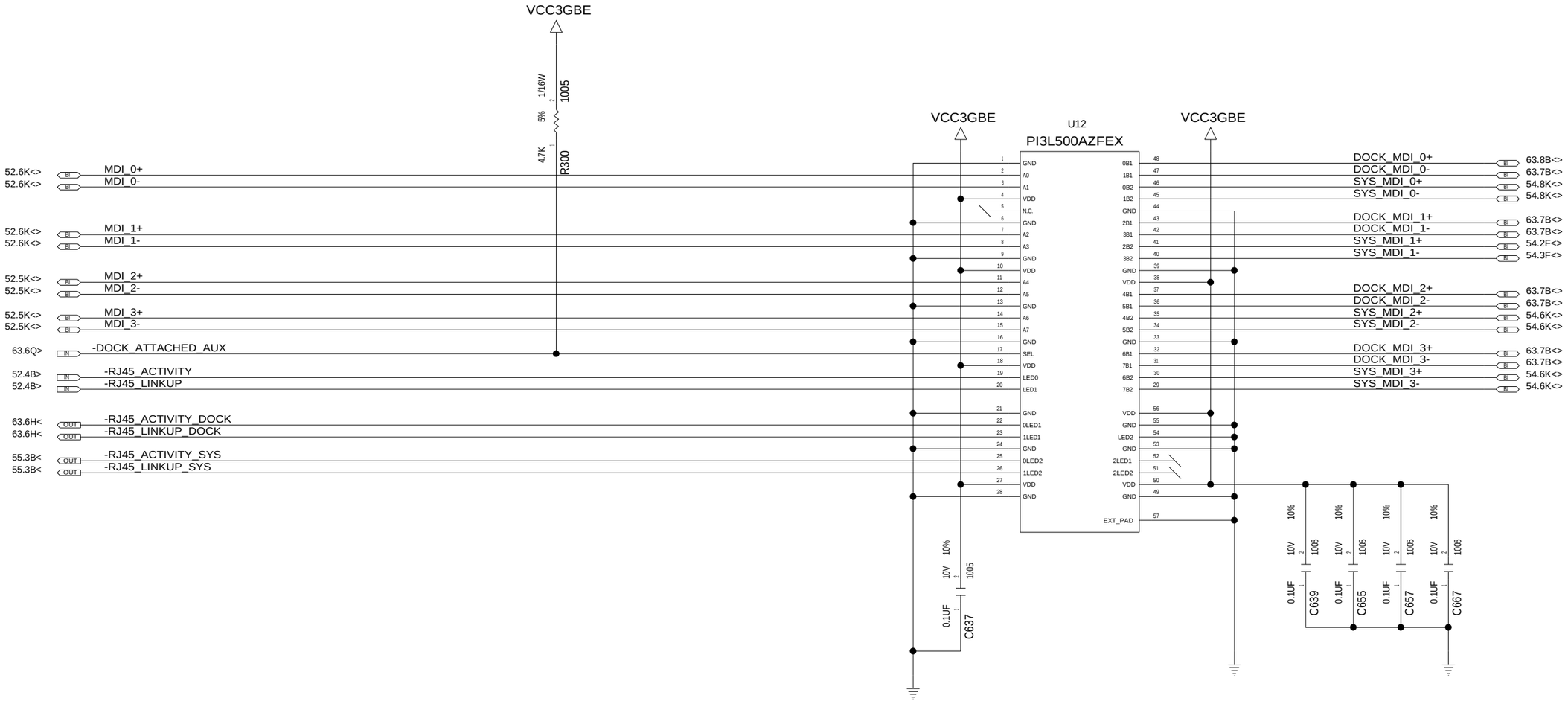


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	GBE HANKSVILLE	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 53 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08	TITLE NOZOMI EXT SDV	
CHECKED	Y.I	12/04/08	GBE LAN SWITCH	
APPROVED	H.K	12/04/08		
CLASS	H.K	12/04/08	LENOVO CONFIDENTIAL	

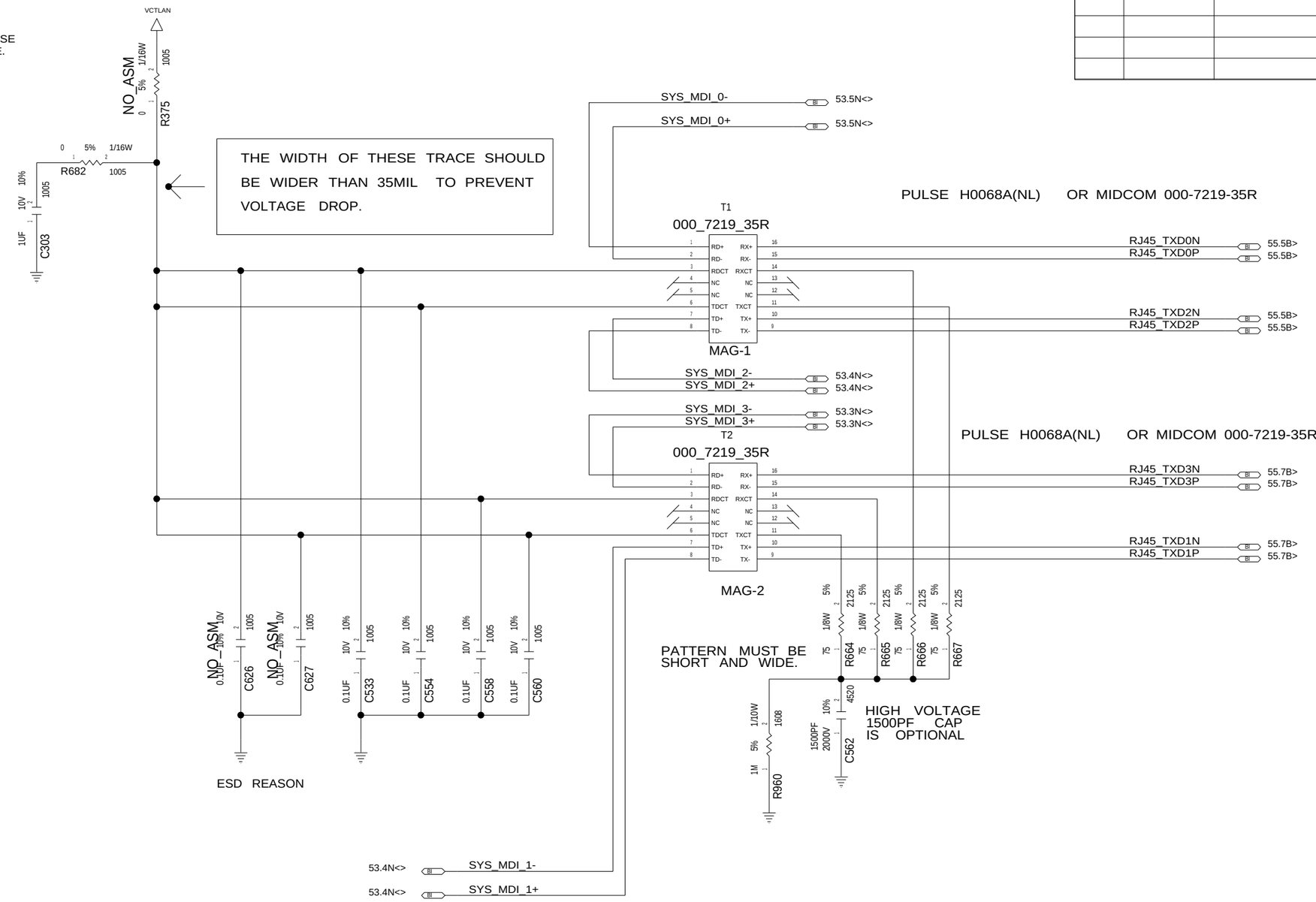
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 54 / 99

C303 AND 0 OHM RESISTOR SHOULD BE PLACED AS CLOSE TO MAGNETICS AS POSSIBLE.



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	GBE MAGNETICS

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 55 / 99

D103 NO_ASM

SRV05_4

54.5N<> RJ45_TXD1P
54.5N<> RJ45_TXD1N
54.5N<> RJ45_TXD3P
54.6N<> RJ45_TXD3N

D104 NO_ASM

SRV05_4

54.7N<> RJ45_TXD0P
54.7N<> RJ45_TXD0N
54.7N<> RJ45_TXD2P
54.7N<> RJ45_TXD2N

VCC3GBE

330 1/16W 5% 1005 R861
330 1/16W 5% 1005 R862

1UF 10% 10V 1005 C628

ESD REASON

J36
2013711_1

RJ45_TXD0P
RJ45_TXD0N
RJ45_TXD1P
RJ45_TXD2P
RJ45_TXD2N
RJ45_TXD1N
RJ45_TXD3P
RJ45_TXD3N
SHIELD
SHIELD

D114 SML_A12WT GREEN

D115 SML_A12WT YELLOW

53.3A> -RJ45_LINKUP_SYS
53.3A> -RJ45_ACTIVITY_SYS

0.1UF 10% 10V 1005 C263
0.1UF 10% 10V 1005 C452

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

RJ45 CONNECTOR

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

FULL MINI CARD FOR WWAN
4.1H CONNECTOR

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 56 / 99

VCC1R5B
1005 10V 10% 1UF C717
1005 10V 10% 1UF C718

25.6N< OUT -LED_WIRELESS

VCC3M
0 5% 1/16W 1005 R629
0 5% 1/16W 1005 R651

NO_ASM
PI3USB10LP_AZME
U83
VCC
D+A D-A D+B D-B SEL OE# GND
D+ D-

34.4M<> BI USBP3+
34.4M<> BI USBP3-
60.7P<> BI USBAO+
60.7P<> BI USBAO-

56.2D< 52.6B< 4.1A< 34.1C< 57.4C< IN -PLTRST_FAR

64.3B> IN -WWAN_DISABLE

60.7H< 71.3B> IN USB_SEL_ALWAYS_ON

VCC3WAN
Q90
DTC115TE

VCC3WAN
VCC1R5B

D52
RCLAMP0502B
NO_ASM

PLACE NEAR J22

200 1% 1/16W 1005 R1066

J22
679100002

52	+3.3V	RESERVED	51		
50	GND	RESERVED	49		
48	+1.5V	RESERVED	47		
46	LED_WPAN#	RESERVED	45		
44	LED_WLAN#	RESERVED	43		
42	LED_WWAN#	RESERVED	41	+3.3V	
40	GND	RESERVED	39	+3.3V	
38	USB_D+	RESERVED	37	GND	
36	USB_D-	GND	35		
34	GND	PETP0	33		
32	SMB_DATA	PETN0	31		
30	SMB_CLK	GND	29		
28	+1.5V	GND	27		
26	GND	PERP0	25		
24	+3.3VAUX	PERN0	23		
22	PERST#	GND	21		
20	DISABLE#	RESERVED	19		
18	GND	RESERVED	17		
16	UIM_VPP	GND	15		
14	UIM_RESET	REFCLK+	13		
12	UIM_CLK	REFCLK-	11		
10	UIM_DATA	GND	9		
8	UIM_PWR	CLKREQ#	7		
6	1.5V	COEXISTENCE_2	5		
4	GND	COEXISTENCE_1	3		
2	3.3V	WAKE#	1		
53	PEG	PEG	54		

UIM_C4
UIM_C8

UIM_VPP
UIM_RESET
UIM_CLK
UIM_DATA
UIM_PWR

PCIE_WWAN_TXP IN 31.7A>
PCIE_WWAN_TXN IN 31.7A>
PCIE_WWAN_RXP OUT 31.7A<
PCIE_WWAN_RXN OUT 31.7A<

-PCIE_WAKE OUT 56.1L> 57.3M> 60.5J> 32.5N< 71.5B<

PLACE NEAR J25

D21
FTZ6R8E

J25
1747314_1

4.7UF 10% 6.3V 1608 C623

VCC3M
0 5% 1/16W 1005 R592
10K

PCIE_CLK_WWAN IN 31.4A>
-PCIE_CLK_WWAN IN 31.4A>
-CLKREQ_WWAN OUT 31.4A<

VCC3WAN
0.1UF 10% 10V 1005 C1118
1UF 10% 10V 1005 C1119
NO_ASM 10UF 20% 6.3V 1608 C1156

TABLE

WWAN ALWAYS ON	W/WWAN REG	W/WWAN LITE/BB/NO	W/O WWAN NO
J22	ASM	ASM	NO_ASM
J25	ASM	ASM	NO_ASM
C1118	ASM	ASM	NO_ASM
C1119	ASM	ASM	NO_ASM
R1066	ASM	ASM	NO_ASM
U83	ASM	NO_ASM	NO_ASM
R629	NO_ASM	ASM	NO_ASM
R651	NO_ASM	ASM	NO_ASM

HALF MINI CARD FOR WLAN
7.0H CONNECTOR

VCC3WLAN
Q89
DTC115TE

VCC3WLAN
VCC1R5B

J32
1827680_1

52	+3.3V	RESERVED	51		
50	GND	RESERVED	49		
48	+1.5V	RESERVED	47		
46	LED_WPAN#	RESERVED	45		
44	LED_WLAN#	RESERVED	43		
42	LED_WWAN#	RESERVED	41		
40	GND	RESERVED	39		
38	USB_D+	RESERVED	37		
36	USB_D-	GND	35		
34	GND	PETP0	33		
32	SMB_DATA	PETN0	31		
30	SMB_CLK	GND	29		
28	+1.5V	GND	27		
26	GND	PERP0	25		
24	+3.3VAUX	PERN0	23		
22	PERST#	GND	21		
20	DISABLE#	RESERVED	19		
18	GND	RESERVED	17		
16	UIM_VPP	GND	15		
14	UIM_RESET	REFCLK+	13		
12	UIM_CLK	REFCLK-	11		
10	UIM_DATA	GND	9		
8	UIM_PWR	CLKREQ#	7		
6	1.5V	COEXISTENCE_2	5		
4	GND	COEXISTENCE_1	3		
2	3.3V	WAKE#	1		
53	PEG	PEG	54		

-CL_RST_WLAN BI 31.5M>
CL_DATA_WLAN BI 31.6M<>
CL_CLK_WLAN BI 31.6M<>

PCIE_WLAN_TXP IN 31.7A>
PCIE_WLAN_TXN IN 31.7A>
PCIE_WLAN_RXP OUT 31.8A<
PCIE_WLAN_RXN OUT 31.8A<

WIFI_BUSY BI 67.6M<>
BT_BUSY BI 67.7M<>
-PCIE_WAKE OUT 56.5L> 57.3M> 60.5J> 32.5N< 71.5B<

34.4M<> BI USBP2+
34.4M<> BI USBP2-

57.4C< 56.6B< 52.6B< 4.1A< 34.1C< IN -PLTRST_FAR
64.3B> IN -WLAN_RF_KILL

VCC1R5B
1005 10V 10% 1UF C723
1005 10V 10% 1UF C1176

VCC3WLAN
0.1UF 10% 10V 1005 C1116
1005 10V 10% 1UF C1117
NO_ASM 10UF 20% 6.3V 1608 C1155

D109
RCLAMP0502B
NO_ASM

PLACE NEAR J32

VCC3B
200 1% 1/16W 1005 R591
10K

LOGIC

PCIE_CLK_WLAN IN 31.3A>
-PCIE_CLK_WLAN IN 31.3A>
-CLKREQ_WLAN OUT 31.3A<

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

PCIE MINI CARD SLOT(1/2)

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

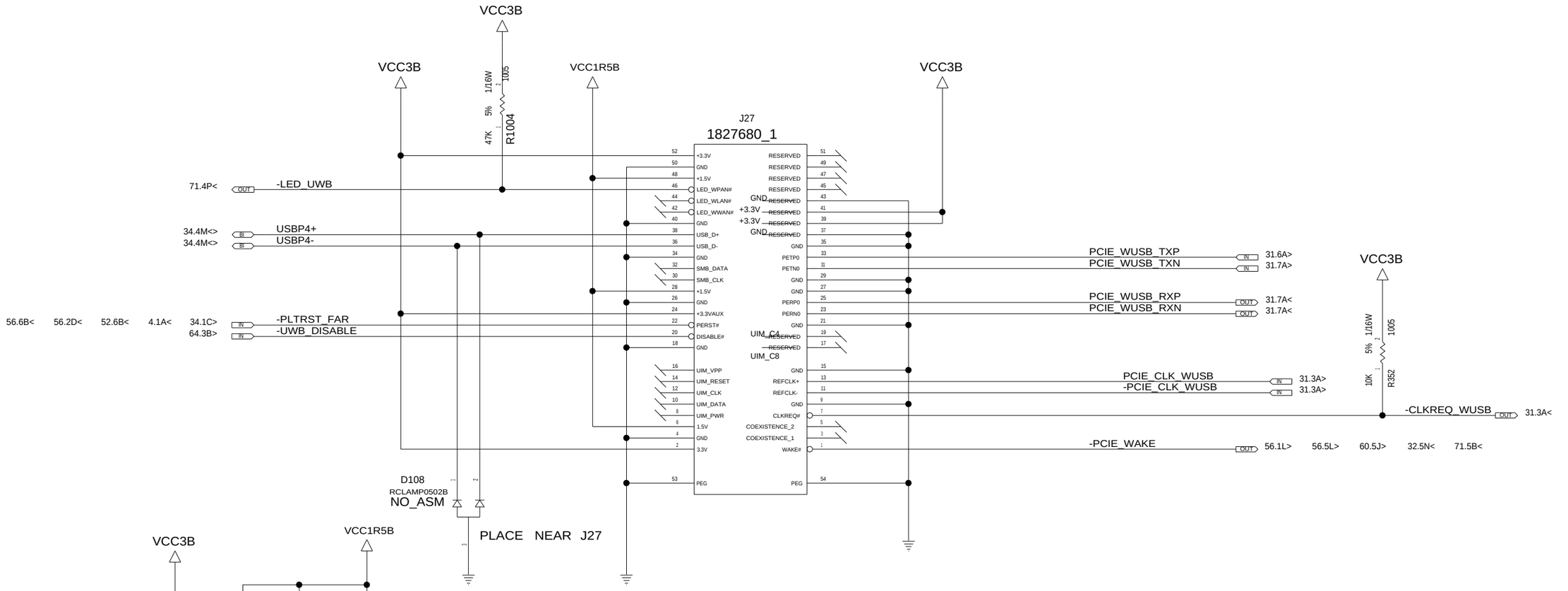
LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 57 / 99

HALF MINI CARD FOR WUSB

7.0H CONNECTOR



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	PCIE MINI CARD SLOT(2/2)
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

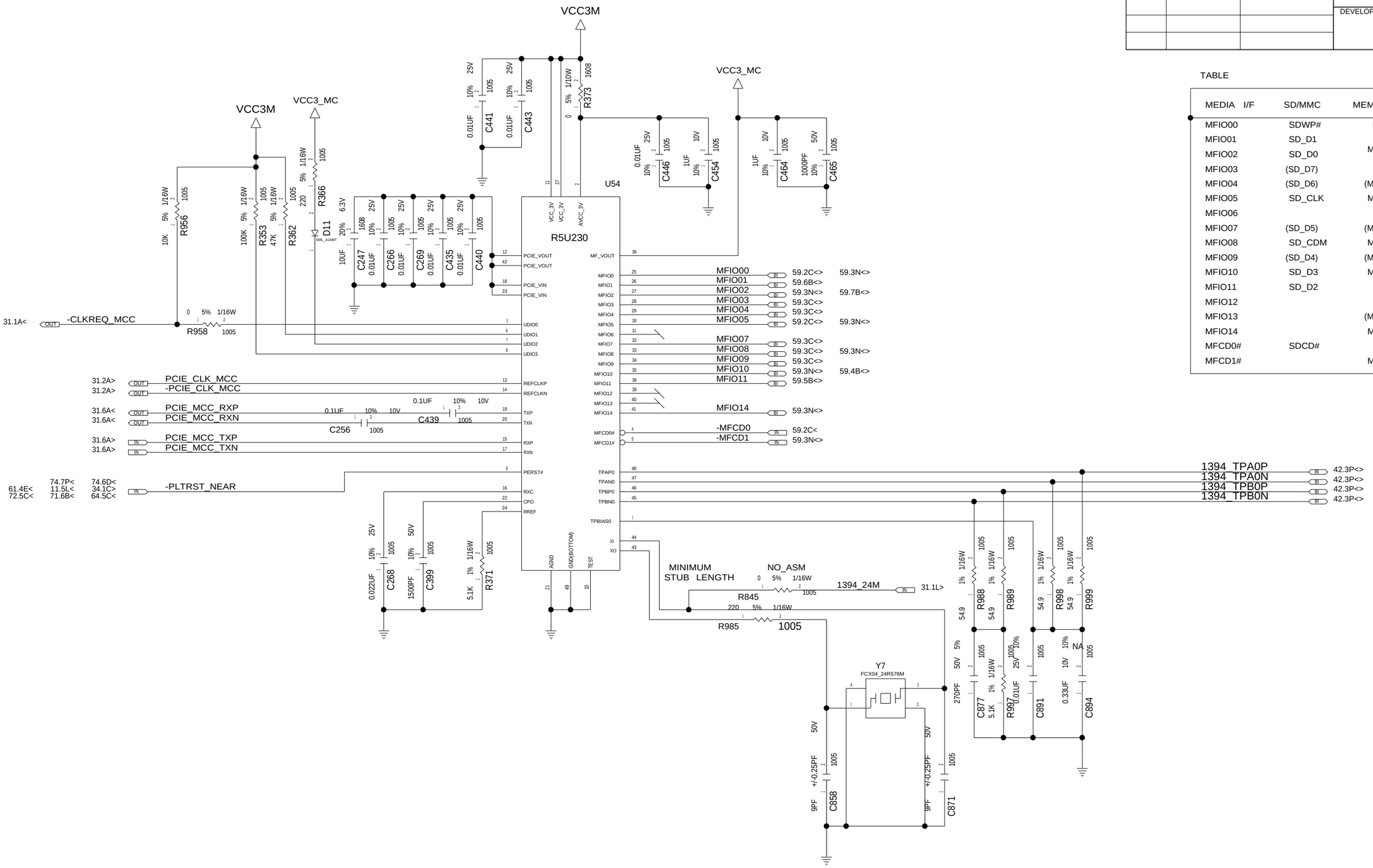
VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 58 / 99

TABLE

MEDIA I/F	SD/MMC	MEMORYSTICK	XD
MFIO00	SDWP#	MSBS	XD_D7
MFIO01	SD_D1	MS_D1	XD_D6
MFIO02	SD_D0		XD_D5
MFIO03	(SD_D7)		XD_D4
MFIO04	(SD_D6)	(MS_D5)	XD_D3
MFIO05	SD_CLK	MS_D0	XD_D2
MFIO06			XD_D1
MFIO07	(SD_D5)	(MS_D4)	XD_D0
MFIO08	SD_CDM	MS_D2	XD_WP#
MFIO09	(SD_D4)	(MS_D6)	XD_WE#
MFIO10	SD_D3	MS_D3	XD_ALE
MFIO11	SD_D2		XD_CLE
MFIO12			XD_CE#
MFIO13		(MS_D7)	XD_RE#
MFIO14		MS_CLK	XD_R/B#
MFCD0#	SDCD#		XDCD0#
MFCD1#		MSINS#	XDCD1#

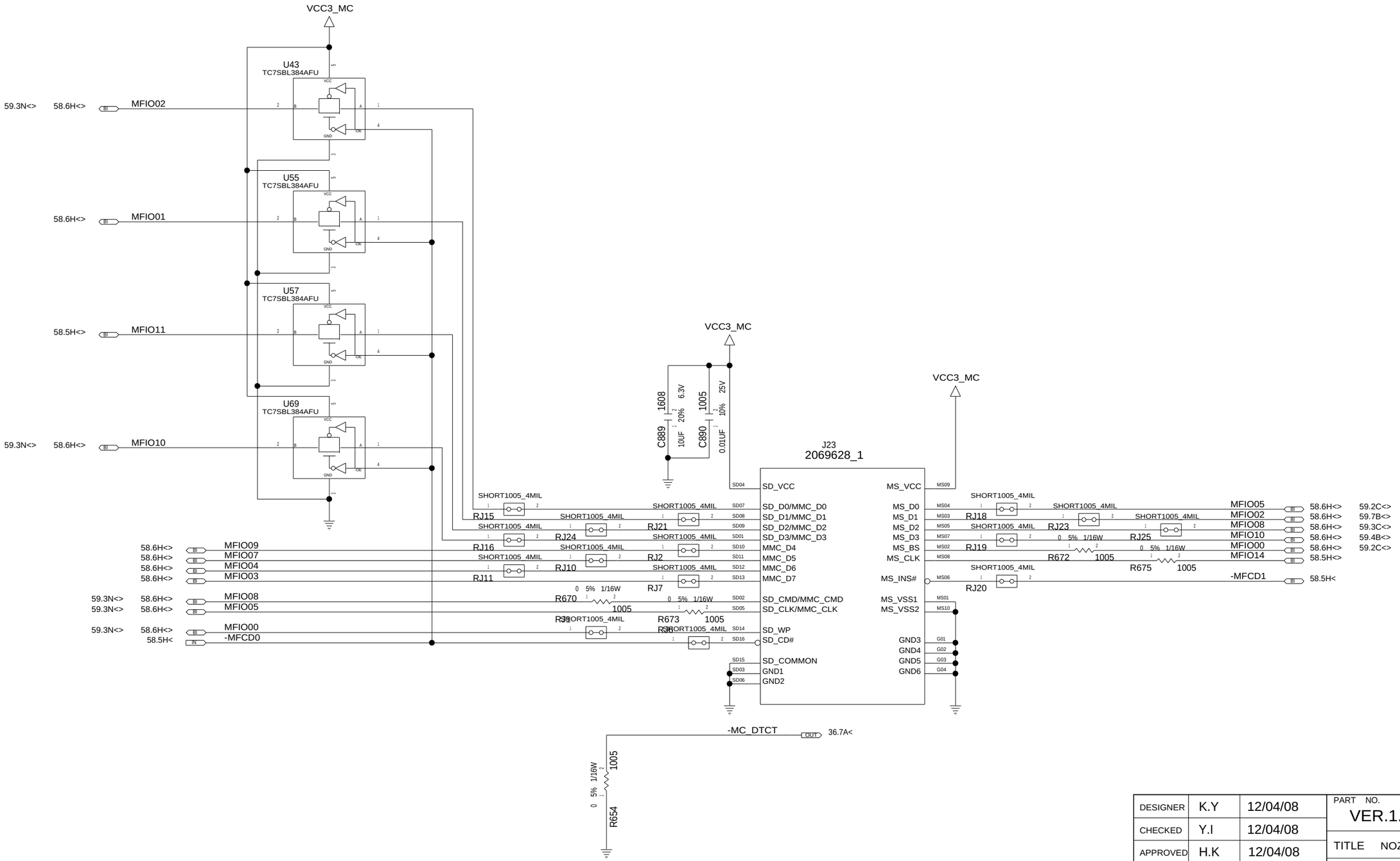


			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	1394/MEDIA CARD CONTROLLER	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 59 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	MEDIA CARD INTERFACE	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
60 / 99

VCC3M

R653 0 5% 1/16W 1005
R659 0 5% 1/16W 1005
NO_ASM

U84 PI3USB10LP_AZME
VCC
D+ D- SEL OE# GND
D+A D-A D+B D-B

USBP6+ BI 34.4M<>
USBP6- BI 34.4M<>
USBAO+ BI 56.7A<>
USBAO- BI 56.7A<>

56.6B< 71.3B< IN USB_SEL_ALWAYS_ON

D81 RCLAMP0502B NO_ASM

PLACE NEAR J28

VCC3AUX_EXC VCC3M

R724 10K 5% 1/16W 1005
R727 10K 5% 1/16W 1005
R729 100K 5% 1/16W 1005
R737 10K 5% 1/16W 1005 NO_ASM
R730 100K 5% 1/16W 1005

VCC3AUX_EXC VCC1R5_EXC VCC3_EXC

J28
PT08_077

GND	1		
USBD-	2		
USBD+	3		
CPUSB#	4	OUT	-CPUSB 61.4E< 65.5B<
RESERVED	5		
RESERVED	6		
SMBCLK	7	BI	AO_CLK 65.4B>
SMBDATA	8	BI	AO_DATA 65.4B<>
+1.5V	9		
+1.5V	10		
WAKE#	11	OUT	-PCIE_WAKE 56.1L> 56.5L> 57.3M> 32.5N< 71.5B<
+3.3VAUX	12		
PERST#	13	IN	-PERST 61.4P>
+3.3V	14		
+3.3V	15	OUT	-CPPE 61.4E<
CLKREQ#	16		
CPPE#	17		
REFCLK-	18	IN	-PCIE_CLK_EXC 31.2A>
REFCLK+	19	IN	PCIE_CLK_EXC 31.2A>
GND	20		
PERXN0	21	OUT	PCIE_EXC_RXN 31.6A<
PERXP0	22	OUT	PCIE_EXC_RXP 31.6A<
GND	23		
PETXN0	24	IN	PCIE_EXC_TXN 31.6A>
PETXP0	25	IN	PCIE_EXC_TXP 31.6A>
GND	26		

VCC3M

R599 10K 5% 1/16W 1005

Q74 2SK3541

-CLKREQ_EXC OUT 31.2A<

61.4P> IN EXC_PWRG

TABLE

ALWAYS ON	REG	LITE/BB/NO
U84	ASM	NO_ASM
R653	NO_ASM	ASM
R659	NO_ASM	ASM

LOGIC

PLACE NEAR PCMCIA SOCKET

VCC3_EXC C800 0.1UF 10V 10% 1005
VCC3AUX_EXC C264 0.1UF 10V 10% 1005
VCC1R5_EXC C265 0.1UF 10V 10% 1005

VCC5B

J18
DF12_10DP

36.7A<	OUT	-SC_DTCT
34.4M<>	BI	USBP5+
34.4M<>	BI	USBP5-

VCC5B

C41 0.1UF 10V 10% 1005

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

EXPRESS CARD/
SMART CARD I/F

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 61 / 99

VCC1R5A

NO_ASM 0.001 YJP1608-R001 5% 1/10W 1608

R961

VCC1R5M

VCC3M

U48 R5538

12	1R5VIN	1R5VOUT	11
14	1R5VIN	1R5VOUT	13
2	3VIN	3VOUT	3
4	3VIN	3VOUT	5
17	AUXIN	3VAUXOUT	15
10	CPPE#		
9	CPUSB#	PERST#	8
1	STBY#	RCLKEN	18
20	SHDN#	OC#	19
6	SYSRST#	GND	7
16	NC	GND	21

VCC1R5_EXC VCC3_EXC VCC3AUX_EXC

65.1P> IN -EXC_PWR_SHDN

NO_ASM 0 5% 1/16W 1005 R537

89.4C< 86.5C< 74.7K< 80.7N> 80.4J< 80.1G< 92.6B<

B_ON

71.3B> IN -EXC_PWR_STBY

D42 DAN222

R898 20K 5% 1/16W 1005

60.5J> IN -CPPE

60.6J> 65.5B< IN -CPUSB

11.5L< 64.5C< 72.5C< 74.7P< 34.1C< 58.4B< 71.6B< 74.6D< IN -PLTRST_NEAR

-PERST OUT 60.5J<

EXC_PWRG OUT 60.1D<

C270 0.01UF 10% 25V 1005

C271 1UF 10% 10V 1005

NA C306 1UF 10% 10V 1005

C320 1000PF 10% 50V 1005

C275 2.2UF 10% 10V 1608

C322 1000PF 10% 50V 1005

NA C382 1UF 10% 10V 1005

C384 1000PF 10% 50V 1005

TABLE

ALWAYS ON	REG/BB	LITE/NO
D42	ASM	NO_ASM
R898	ASM	NO_ASM
R537	NO_ASM	ASM

LOGIC

TABLE

ALWAYS ON	REG/BB	LITE/NO
R961	NO_ASM	ASM
U59	ASM	NO_ASM
R948	ASM	NO_ASM
C1196	ASM	NO_ASM
C1247	ASM	NO_ASM
C1198	ASM	NO_ASM
R949	NO_ASM	NO_ASM
C1240	NO_ASM	NO_ASM
R952	ASM	NO_ASM
R950	ASM	NO_ASM
C1282	NO_ASM	NO_ASM
C1283	ASM	NO_ASM
C1284	ASM	NO_ASM

LOGIC

VCC3M VCC5M

R948 100K 5% 1/16W 1005

C1247 0.1UF 10% 10V 1005

U59 BD3551HFN

VIN VCC EN VO FB GATE NRCS GND FN

0.65A VCC1R5M

C1196 2.2UF 10% 10V 1608

C1198 6800PF 10% 25V 1005

NO_ASM 1000PF 10% 50V 1005

R949 300 5% 1/16W 1005

C1240

R952 10K 1% 1/16W 1005

NO_ASM 1000PF 10% 50V 1005

C1282

R950 7.5K 1% 1/16W 1005

C1283 2.2UF 10% 4V 1005

C1284 22UF 20% 6.3V 2125

VER.1.31

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

SLOT POWER CONTROL

LENOVO CONFIDENTIAL

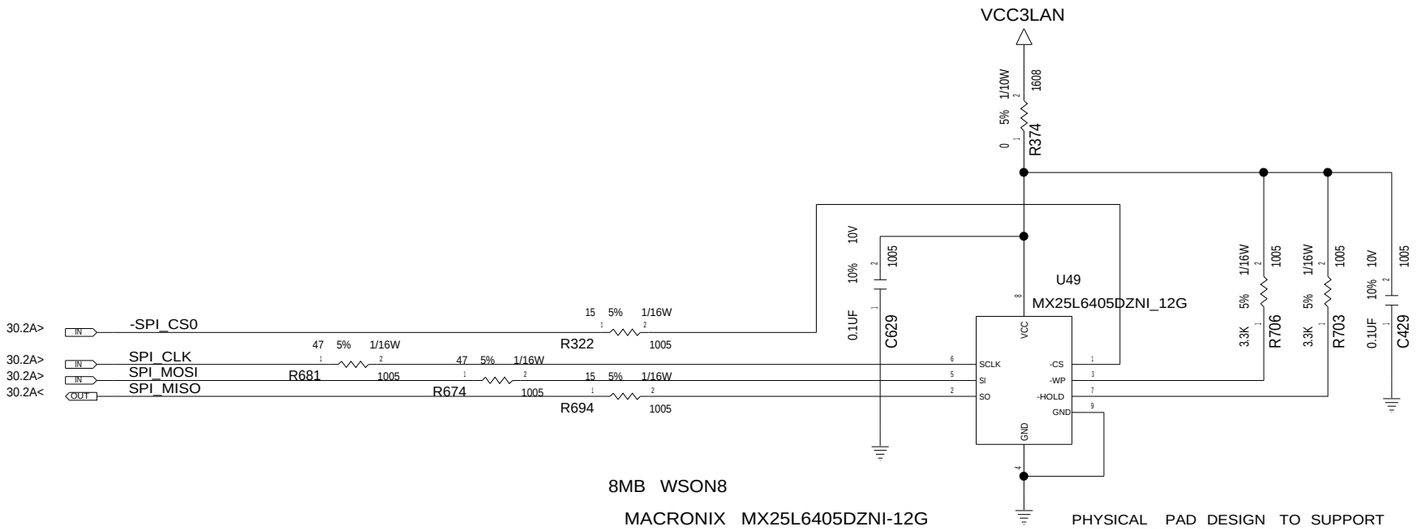
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
62 / 99



8MB WSON8

MACRONIX MX25L6405DZNI-12G

WINBOND W25X64VZEIG

PHYSICAL PAD DESIGN TO SUPPORT BOTH WSON8 AND SOIC8

TABLE

	ICP ENABLE
R374	RB520S-30
R322	470 5%
R681	470 5%
R674	470 5%
R694	470 5%

TABLE

SF100 PIN HEADER INTERFACE					
1	VCC	R374.1	GND	GND	2
3	CS#	R322.2	R681.2	CLK	4
5	MISO	R694.2	R674.2	MOSI	6
7	(KEY)	N/A	N/A	(RESET)	8

TABLE

8MB WSON8 PIN	SIGNAL	8MB SOP16 PIN
1	-CS	7
2	SO	8
3	-WP	9
4	GND	10
5	SI	15
6	SCLK	16
7	-HOLD	1
8	VCC	2

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

SPI FLASH

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 63 / 99

J17 WD3M148UQ-1
5.5H CONNECTOR

VCC3M

S-BAT-PWR

10K 5% 1/16W 1005 R302

J17
JAE_DOCK_148(1/3)

53.5N<>	DOCK_MDI_0+	#DOCKED0	-PWRON_DOCK 71.5B>
53.5N<>	DOCK_MDI_0-	#DOCK_PWRON	EXTPWRG 71.5B<
53.5N<>	DOCK_MDI_1+	DOCK_PWRGOOD	
53.5N<>	DOCK_MDI_1-	#DOCK_EJECT_LEVER	-DOCK_EVENT 65.1C<
53.4N<>	DOCK_MDI_2+	#DOCK_EVENT	S_TEMP_DOCK 76.4A<
53.4N<>	DOCK_MDI_2-	DOCK_S_TEMP	I2C_CLK_BT1_DOCK 76.5A>
53.4N<>	DOCK_MDI_3+	DOCK_I2C_CLK_BT_R	I2C_DATA_BT1_DOCK 76.4A<>
53.4N<>	DOCK_MDI_3-	DOCK_I2C_DATA_BT_R	
		DOCK_SBAT_PWR	S1_DRV IN 92.4J>
		DOCK_BAT_GATE_ON1	S2_DRV IN 92.4J>
		DOCK_BAT_GATE_ON2	
		DOCK_VCC5MUBAY_DRV	
		DOCK_BAYLED	
		#DOCK_BAY_MEDIA_EJECT	
		#DOCK_BAY_EJECT	
		#DOCK_BAY_ATTACH	
		#DOCK_MICROP_FLASHUP	
		#DOCK_RJ45_LINK_LED	-RJ45_LINKUP_DOCK IN 53.3A>
		#DOCK_RJ45_ACT_LED	-RJ45_ACTIVITY_DOCK IN 53.3A>
		DOCK_RJ45_LED_EN	
		DOCK_RJ45_CENTER_TAP	
		CRT_GND1	
		DOCK_VGA_RED	CRT_RED_DOCK IN 26.3P>
		CRT_GND2	
		DOCK_VGA_GREEN	CRT_GREEN_DOCK IN 26.2P>
		CRT_GND3	
		DOCK_VGA_BLUE	CRT_BLUE_DOCK IN 26.2P>
		CRT_GND4	
		DOCK_CRT_HSYNC	CRT_HSYNC_DOCK IN 27.0K>
		DOCK_CRT_VSYNC	CRT_VSYNC_DOCK IN 27.1K>
		DOCK_CRT_DDCCLK	DDCCLK BI 27.4Q<> 27.6Q<
		DOCK_CRT_DDCDATA	DDCDATA BI 27.2Q<> 27.7Q<
		DOCK_ACDC_ID	ACDC_ID OUT 64.4C> 75.8H>
		DOCK_ID0	0
		DOCK_ID1	1
		DOCK_ID2	2 DOCKID<2..0> OUT 34.4A<

46.1F<	-DOCK_HPOUT_DTCT	VOID1	
46.3H<	-DOCK_MICIN_DTCT	DOCK_MDI_0P	
43.4B>	SPDIF_OUT	DOCK_MDI_0N	
		VOID2	
		DOCK_MDI_1P	
		DOCK_MDI_1N	
		VOID3	
		DOCK_MDI_2P	
		DOCK_MDI_2N	
		VOID4	
		DOCK_MDI_3P	
		DOCK_MDI_3N	
		VOID5	
		VOID6	
		VOID7	
		VOID8	
		VOID9	
		VOID10	
		AGND1	
		#DOCK_HPOUT_DTCT	
		#DOCK_MICIN_DTCT	
		DOCK_SPDIF_RTN	
		DOCK_SPDIF_DATA	
		DOCK_SPK_MUTE	
		AGND2	
		DOCK_SPKOUT_R	
		DOCK_SPKOUT_L	
		AGND3	
		#DOCK_DP_DGL_DIS	
		DOCK_MICIN	
		AGND4	
		DOCK_HPOUT_R	
		DOCK_HPOUT_L	
		AGND5	
		DOCK_DP1_AUXN	
		DOCK_DP1_AUXP	
		GND1	

47.1C< DOCK_MIC_IN_L
43.5Q> DOCK_HP_OUT_R
43.4Q> DOCK_HP_OUT_L
29.5M<> DOCKB_AUXN
29.5M<> DOCKB_AUXP

NO_ASM 1K 5% 1/16W R1137 1005
NO_ASM 1K 5% 1/16W R1138 1005

50V X7R 1005 C666 1000PF 10%
50V X7R 1005 C764 1000PF 10%
50V X7R 1005 C1087 1000PF 10%
1000PF 10% 50V C633 X7R 1005

AGND

DOCK_PWR20

SI7121DN Q85

1/16W 5% 1005 200K R731

63.7Q> -DOCK_ATTACHED_20

100K 5% 1/16W R657 1005

DOCK_PWR20_IN

C24 0.1UF 10% 25V 1608

4.7UF 10% 6.3V 1608 C550
0.1UF 10% 25V 1608 C566

VCTLAN

DOCK_DCIN20

J17
JAE_DOCK_148(2/3)

17.1M>	DOCKB_DP3N	DOCK_DP1_LANE3N	DOCK_I2C_CLK	DOCK_SCL	65.4B> 65.8B>
17.1M>	DOCKB_DP3P	DOCK_DP1_LANE3P	DOCK_I2C_DATA	DOCK_SDA	65.3B<> 65.7B>
		GND1	DOCK_STATUS_LED_0	DOCK_LED_CTL0	64.4K>
17.1M>	DOCKB_DP2N	DOCK_DP1_LANE2N	DOCK_STASUS_LED_1	DOCK_LED_CTL1	64.4K>
17.1M>	DOCKB_DP2P	DOCK_DP1_LANE2P	#DOCK_PWR_SW	-PWRSWITCH	66.6N> 74.7K> 71.0G<
		GND2	DOCK_DCIN20		
17.1M>	DOCKB_DP1N	DOCK_DP1_LANE1N	DOCK_DISCHARGE	DISCHARGE	65.1P> 63.1J<
17.1M>	DOCKB_DP1P	DOCK_DP1_LANE1P	#DOCK_PWRSHUTDOWN	-PWRSHUTDOWN	92.2K> 71.5B< 75.2B< 81.1D< 92.1B<
		GND3	GND11		
17.2M>	DOCKB_DP0N	DOCK_DP1_LANE0N	RESERVE4		
17.2M>	DOCKB_DP0P	DOCK_DP1_LANE0P	RESERVE5		
		GND4	GND12		
29.4P<	DOCKB_DVI_DONGLE_DTCT	DOCK_DP1_DGL_DCT	RESERVE6		
29.7Q<	DOCKB_HPD	DOCK_DP1_HPD	RESERVE7		
33.3P<> 29.3P<>	DOCKB_DP_DATA	DOCK_DP1_DDC_DATA	GND13		
33.3P<> 29.3P<>	DOCKB_DP_CLK	DOCK_DP1_DDC_CLK	RESERVE8		
29.3F<	DOCKA_DVI_DONGLE_DTCT	DOCK_DP0_DGL_DCT	RESERVE9		
29.8Q<	DOCKA_HPD	DOCK_DP0_HPD	GND14		
33.4P<> 29.2F<>	DOCKA_DP_DATA	DOCK_DP0_DDC_DATA	RESERVE10		
33.4P<> 29.2F<>	DOCKA_DP_CLK	DOCK_DP0_DDC_CLK	RESERVE11		
		GND5	GND15		
29.5M<>	DOCKA_AUXN	DOCK_DP0_AUXN	DOCK_USB_SS_RXN		
29.5M<>	DOCKA_AUXP	DOCK_DP0_AUXP	DOCK_USB_SS_RXP		
		GND6	GND16		
17.3M>	DOCKA_DP3N	DOCK_DP0_LANE3N	DOCK_USB_SS_TXN		
17.3M>	DOCKA_DP3P	DOCK_DP0_LANE3P	DOCK_USB_SS_TXP		
		GND7	GND17		
17.3M>	DOCKA_DP2N	DOCK_DP0_LANE2N	DOCK_USB_HS_N	USBP12-	34.3M<>
17.3M>	DOCKA_DP2P	DOCK_DP0_LANE2P	DOCK_USB_HS_P	USBP12+	34.3M<>
		GND8	GND18		
17.3M>	DOCKA_DP1N	DOCK_DP0_LANE1N	DOCK_SATA_RXN	SATA4_RXN	30.4P<
17.3M>	DOCKA_DP1P	DOCK_DP0_LANE1P	DOCK_SATA_RXP	SATA4_RXP	30.4P<
		GND9	GND19		
17.3M>	DOCKA_DP0N	DOCK_DP0_LANE0N	DOCK_SATA_TXN	SATA4_TXN	30.4P>
17.3M>	DOCKA_DP0P	DOCK_DP0_LANE0P	DOCK_SATA_TXP	SATA4_TXP	30.4P>
		#DOCKED2	#DOCKED1	DOCK_CONSUMP	77.8K<
		RESERVE1	DOCK_CONSUMP		

47K 5% 1/16W 1005 R2
-DOCK_ATTACHED_3B OUT 26.4H<
-DOCK_ATTACHED_20 OUT 63.2B<

VCC3M

100K 5% 1/16W 1005 R603

D2 DAN222
-DOCK_ATTACHED_3M OUT 65.2C<
-DOCK_ATTACHED_AUX OUT 53.4A<
D61 DAN222

D77 1SS400G
-DOCK_ATTACHED_S_BAT OUT 76.3G<

DOCK_PWR20_F

RB520S_30 D26
1/16W 5% 1M 1005 R230
-DOCK_ATTACHED_BAT_OP OUT 75.3H< 75.7D<
1/16W 5% 1M 1005 R232

VCC3SW

1/16W 5% 100K 1005 R228

Q44 2SK3541
DISCHARGE2 OUT 75.3B< 92.3B<

Q14 2SK3541

NO_ASM 1/16W 5% 0 1005 R229

63.7P< 65.1P> DISCHARGE

S_BAT_IN

J17
JAE_DOCK_148(3/3)

149	PWR201	FGND1	157
150	PWR202	FGND2	158
151	GND1	FGND3	159
152	GND2	FGND4	160
153	SBAT1	FGND5	161
154	SBAT2	FGND6	162
155	VCC3M		
156	VCC5M		

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

DOCKING CONNECTOR

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 64 / 99

TABLE

E10A DEBUG I/F	ENABLE	DISABLE(FINAL LOGIC)
R955	NO_ASM	ASM
R971	NO_ASM	ASM
D58	ASM	NO_ASM
D69	ASM	NO_ASM
R289	ASM	NO_ASM
D75	ASM	NO_ASM
R831	ASM	NO_ASM
R327	ASM	NO_ASM
RN25	NO_ASM	ASM
R881	ASM	NO_ASM
R218	NO_ASM	ASM

LOGIC

U23 H8S2112(1/2)

NEAR H8S/2116B SHORT PATTERN. NO PATTERN UNDER THIS AREA.

PLACE NEAR H8

DO NOT MOVE

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	H8S/2112 (1/2)
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 65 / 99

TEST PAD X2
BOTTOM SIDE
DO NOT MOVE AFTER FIX

H8

I2C BUS2

TP42 1.0 TP43 1.0

EC_SCL2 OUT 31.6M<> 65.3B< 73.5E<

EC_SDA2 OUT 31.6M<> 73.4E<> 65.3B<

VCC3M

63.8P< 65.4B> DOCK_SCL
76.7G< 65.2P> I2C_CLK_BT0
76.5F< 65.4B> I2C_CLK_BT1
65.3B<> 63.8P<> DOCK_SDA
76.7G<> 65.2P<> I2C_DATA_BT0
76.4F<> 65.4B<> I2C_DATA_BT1

R395 4.7K 5% 1/16W 1005
R396 4.7K 5% 1/16W 1005
RN54 4.7K 1/32W 5% RP4X4
RN54 4.7K 1/32W 5% RP4X4
RN54 4.7K 1/32W 5% RP4X4
RN54 4.7K 1/32W 5% RP4X4

VCC3M

R552 100K 5% 1/16W 1005
R909 8.2K 5% 1/16W 1005
R1014 100K 5% 1/16W 1005
R572 20K 5% 1/16W 1005
R575 100K 5% 1/16W 1005
R581 100K 5% 1/16W 1005

VCC5B VCC3B

R424 4.7K 5% 1/16W 1005
R329 10K 5% 1/16W 1005
R906 4.7K 5% 1/16W 1005

67.2J<> IPDCLK
67.2J<> IPDDATA
R153 33 5% 1/16W 1005
R412 33 5% 1/16W 1005

61.4E< 60.6J> -CPUSB
32.2C< -PWRSW_EC

60.5J<> AO_CLK
60.5J<> AO_DATA
76.5F< 65.8B> I2C_CLK_BT1
76.4F<> 65.7B<> I2C_DATA_BT1

50.3E< -BEEP_ENABLE
63.8P< 65.8B> DOCK_SCL
65.7B> 63.8P<> DOCK_SDA

73.4E<> 65.8K> 31.6M<> EC_SDA2
73.5E< 65.8K> 31.6M<> EC_SCL2

36.6M< -KBRC
50.6D< EC_SPKR

32.2C< -BATLOW
71.3P< 69.3B< FAN_ON
79.4L< BATMON_EN
77.4B< CHARGE_CURRENT_SEL
71.7B< 32.3N< -PCH_SLP_S5

63.6Q> -DOCK_ATTACHED_3M
63.7H> -DOCK_EVENT
73.6B< 73.4E< 71.6B< 32.4C< 11.5L< 92.3M> BPWRG
74.1E<

C188 220PF 5% 50V 1005
C196 220PF 5% 50V 1005

U23
H8S2112(2/2)

39	PA2/KIN10/PS2AC	P90/IRQ2	24
38	PA3/KIN11/PS2AD	P91/IRQ1	23
37	PA4/KIN12/PS2BC	P92/IRQ0	22
35	PA5/KIN13/PS2BD	P93/IRQ12	21
34	PA6/KIN14	P94/IRQ13	20
33	PA7/KIN15	P95/IRQ14	19
		PA0/KIN8/PS2DC	41
		PA1/KIN9/PS2DD	40
14	P52/SCL0	PB2/RI/PWMU0B	118
17	P97/IRQ15/SDA0	PB3/DCD/PWMU1B	117
53	PG5/ExIRQ13/SCLC		
54	PG4/ExIRQ12/SDAC		
135	P86/IRQ5/SCK1	PC0/TIOCA0/WUE8	94
138	P42/TCMCYI1	PC1/TIOCB0/WUE9	93
51	PG7/ExIRQ15/SCLD	PC2/TIOCC0/TCLKA/WUE10	92
52	PG6/ExIRQ14/SDAD	PC3/TIOCD0/TCLKB/WUE11	91
		PC4/TIOCA1/WUE12	90
56	PG2/ExIRQ10/SDAB	PC5/TIOCB1/TCLKC/WUE13	89
55	PG3/ExIRQ11/SCLB	PC6/TIOCA2/WUE14	88
		PC7/TIOCB2/TCLKD/WUE15	87
		PE0/ExEXCL	32
136	P40/TMCI0/TCMCYI0	PF0/IRQ8/PWMU0A	50
137	P41/TMO0/TCMCKI0/TCMMCI0	PF1/IRQ9/PWMU1A	49
		PF2/IRQ10/TMOY	48
		PF3/IRQ11/TMOX	47
2	P43/TMI1/TZCMCKI1/TCMMCI1	PF4/PWMU2A/SPIDO	46
3	P44/TMO1/PWMU2B/TCMCYI2	PF5/PWMU3A/SPIDI	45
4	P45/PWMU3B/TCMCKI2/TCMMCI2	PF6/PWMU4A/SPICK	44
5	P46/PWMU4B	PF7/PWMU5A/SPISS	43
6	P47/PWMU5B		
		PG0/ExIRQ8/TMIX/SDAA	58
16	P50/FTxD	PG1/ExIRQ9/TMIY/SCLA	57
15	P51/FRxD		
		PH0/EXIRQ6	10
129	P80/PME	PH1/ExIRQ7/TDPCKI2	12
133	P84/IRQ3/TXD1	PH2	26
134	P85/IRQ4/RXD1	PH3	140
		PH4	141
		PH5	142

VCC3B

65.5P< -EXTPWR_EC
65.4P< GLOBAL_WL_DISABLE_EC
65.4P< LID_SWITCH_EC
65.2P< -BAY_MEDIA_EJECT_EC

RB521S_30 D7
R919 10K 5% 1/16W 1005
R269 560 5% 1/16W 1005
R892 560 5% 1/16W 1005
R252 1K 5% 1/16W 1005

-EXTPWR 77.3K> 92.4B< 71.7A<
GLOBAL_WL_DISABLE 68.5L>
LID_SWITCH 25.5N>
-BAY_MEDIA_EJECT 41.5E>

VCC3M

R586 100K 5% 1/16W 1005
R924 100K 5% 1/16W 1005
R923 100K 5% 1/16W 1005
R922 100K 5% 1/16W 1005
R926 100K 5% 1/16W 1005
NO_ASM R881 47K 5% 1/16W 1005
NO_ASM R927 100K 5% 1/16W 1005
R277 20K 5% 1/16W 1005
R935 100K 5% 1/16W 1005
R1012 10K 5% 1/16W 1005
R1041 10K 5% 1/16W 1005
R1042 10K 5% 1/16W 1005
R263 20K 5% 1/16W 1005

VIDEO_ID

-EXTPWR_EC 65.7K>
-PWRSW 71.1G>
-HOTKEY 66.7N>
-PCH_SLP_S3 32.3N> 71.7B< 81.0A<
LID_SWITCH_EC 81.1N< 65.6K>
+HP_JACK_IN 45.2P>
GLOBAL_WL_DISABLE_EC 65.7K>

R323 0 5% 1/16W 1005
FAN_FRQ_ASIC 71.3P>
FAN_FRQ 69.4N> 71.3P<
-MISCSMI 71.5B>
-90W_AC 77.8K<
-LPMODE 77.3K>

-LEDMICMUTE 66.5A<
-LEDCPSLOCK 66.6N<

NO_ASM
R587 0 5% 1/16W 1005

-LEDPWR 71.5P> 66.6N<
KBD_LIGHT_ON 25.4N<
-GSENSE_ON 70.7A<
GSENSE_TST 70.5A<
ECSPI_MOSI 71.2P<
ECSPI_MISO 71.2P>
ECSPI_CLK 71.2P<
-ECSPI_SS 71.2P<

I2C_DATA_BT0 65.7B<> 76.7G<>
I2C_CLK_BT0 65.8B> 76.7G<

-BAY_UNLOCK 42.3K>
-BAY_MEDIA_EJECT_EC 65.6K>
-SPK_MUTE 43.4B<
-EXC_PWR_SHDN 61.5A<
-MUTE 43.2B< 49.4E<
DISCHARGE 63.1J< 63.7P<

R218 100K 5% 1/16W 1005
NO_ASM R925 100K 5% 1/16W 1005
R930 100K 5% 1/16W 1005
R891 100K 5% 1/16W 1005

TABLE

GFX	EXT.	INT.
R922	ASM	NO_ASM
R925	NO_ASM	ASM

LOGIC

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

H8S/2112 (2/2)

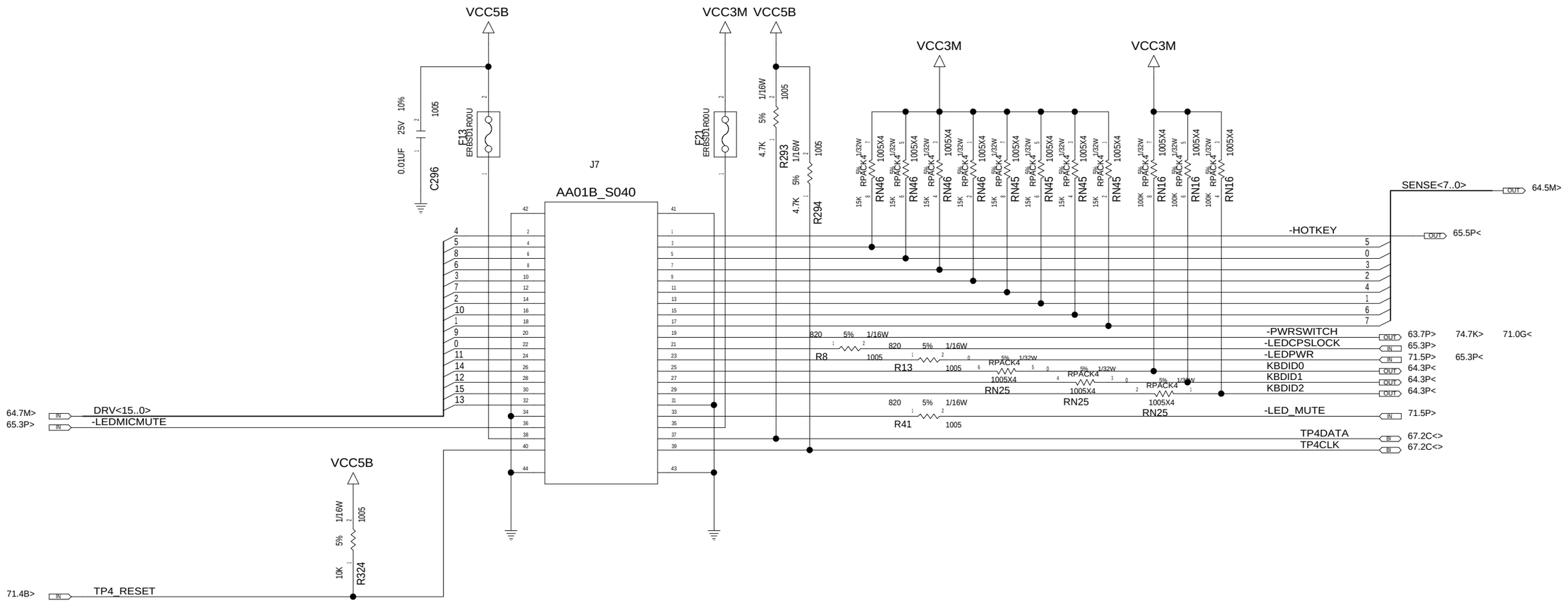
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 66 / 99



			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	KEYBOARD CONNECTOR	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
67 / 99

VCC3FP VCC3B VCC5B VCC5B VCC5B VCC3M

NO_ASM 1/16W 5% 0 1005 R418

F5 ERB500R50U

4.7K 5% 1/16W 1005 R25

4.7K 5% 1/16W 1005 R24

F15 ERB500R50U

100K 5% 1/16W 1005 R15

100K 5% 1/16W 1005 R18

F17 ERB500R50U

J16
DF12_30DP

67.2J<> TP4DATAPAD
67.2J<> TP4CLKPAD
FUSEVCC5B
71.4B> -PAD_RESET
67.2C<> PADCLK
67.2C<> PADDATA
FUSEVCC3B
34.3M<> USBP10-
34.3M<> USBP10+
71.0F< -POA_WAKE

-PAD_DETECT OUT 71.4B<
USBP11- BI 34.3M<>
USBP11+ BI 34.3M<>
BT_BUSY BI 56.1L<>
-BDC_PRESENCE BI 36.4A<
WIFI_BUSY BI 56.1L<>
BDC_ON BI 64.3B>
LED_BDC_IN BI 71.4P<
POA_PWRREQ BI 71.3B<
-POA_ENABLE BI 71.3B>

2.2UF 10% 10V 1608 C208

NO_ASM 4PF +/-0.25PF 50V 1005 C643

220PF 5% 50V 1005 C492

VCC3M VCC3FP

Q103 2SK3541

92.5K> M_DRV 0 5% 1/16W R562 1005

VCC3SW

D90 RB521S_30

1000PF 10% 50V 1005 C678

Q101 RTM002P02

10K 5% 1/16W 1005 R454

Q106 DTC115EE

81.4N< 80.8G> 92.5B< VCC3M_ON

VCC5B

0.01UF 10% 25V 1005 C5

VCC5B

100K 5% 1/16W 1005 R26

100K 5% 1/16W 1005 R32

VCC5B

U20
CBT3257ABQ

67.7A<> PADCLK
66.5N<> TP4CLK
67.7A<> PADDATA
66.5N<> TP4DATA
71.4B> BYPASS_PAD_QSW

IPDCLK 65.5B<>
TP4CLKPAD 67.7A<>
IPDDATA 65.5B<>
TP4DATAPAD 67.7A<>

VCC5B

0.01UF 10% 25V 1005 C6

VER.1.31

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

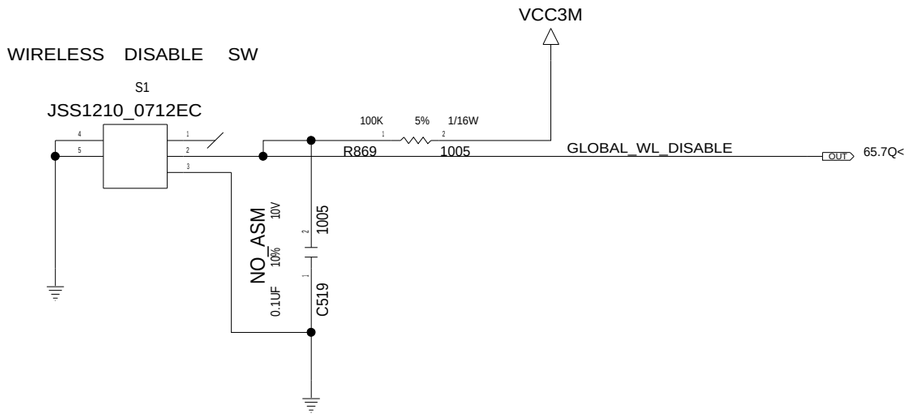
TOUCH PAD CONNECTOR

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 68 / 99

WIRELESS DISABLE SW

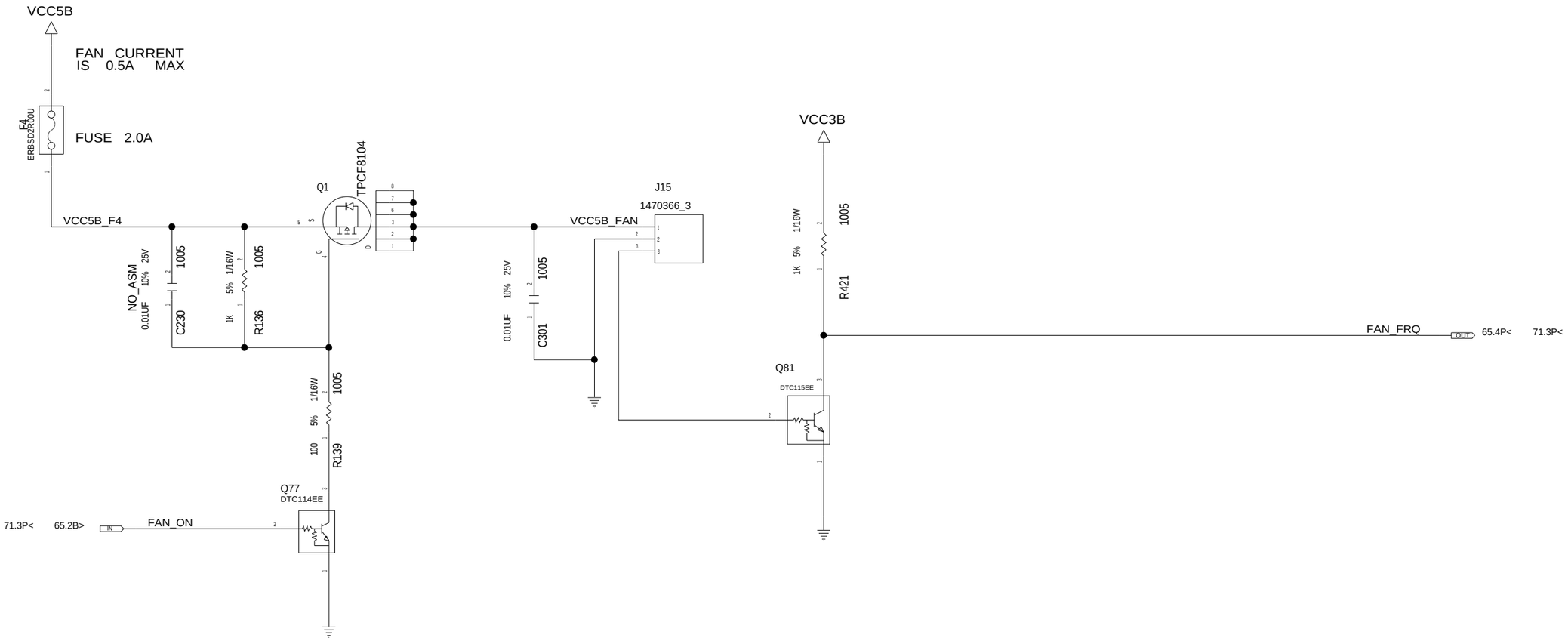


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	WIRELESS DISABLE SW
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 69 / 99



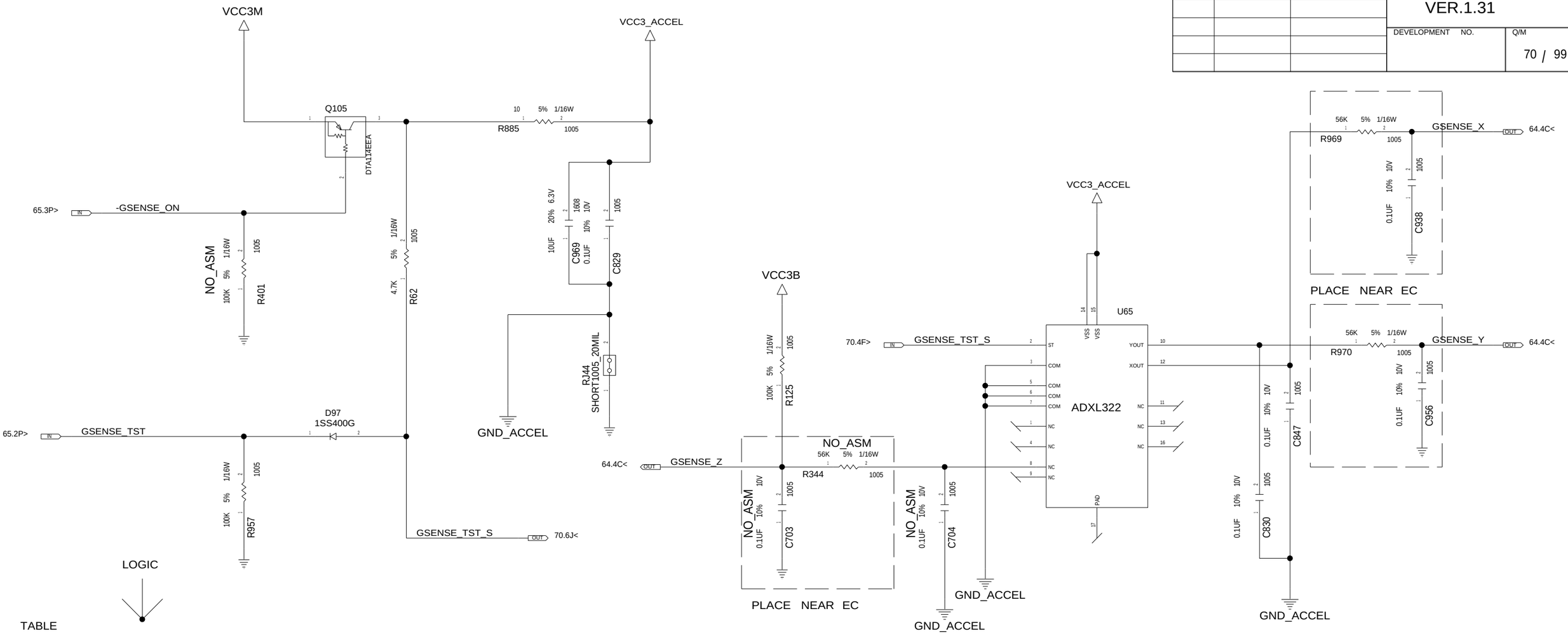
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	FAN CONNECTOR
CLASS	H.K	12/04/08	LENOVO CONFIDENTIAL

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 70 / 99



TABLE

	ADXL322/LIS244AL LIS34AL	NO ACC.
R401	NO_ASM	ASM
R957	ASM	ASM
U65	ASM	NO_ASM
Q105	ASM	NO-ASM
D97	ASM	NO-ASM
R62	ASM	NO-ASM
R885	10-OHM	NO-ASM
C829	ASM	NO-ASM
C969	ASM	NO-ASM
C830	ASM	NO-ASM
C847	ASM	NO-ASM
R969	56K	NO-ASM
C938	ASM	NO-ASM
R970	56K	NO-ASM
C956	ASM	NO-ASM
C704	NO-ASM	NO-ASM
R344	NO-ASM	NO-ASM
C703	NO-ASM	NO-ASM
R125	ASM	ASM

VER.1.31

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	G-SENSOR

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 71 / 99

VCC3SW

47K 5% 1/16W 1005 R53 -EXTPWR_ASIC OUT 71.7B<

VL5

10K 5% 1/16W 1005 R301

1000PF 10% 50V 1005 C529

Q65 2SK3541

65.7Q< 77.3K> 92.4B< IN -EXTPWR

VCC5MUBAY VCC3M VCC3SW NO_ASM NO_ASM

100K 5% 1/16W 1005 R633

47K 5% 1/16W 1005 R635

47K 5% 1/16W 1005 R637

47K 5% 1/16W 1005 R642

47K 5% 1/16W 1005 R644

47K 5% 1/16W 1005 R699

100K 5% 1/16W 1005 R701

100K 5% 1/16W 1005 R745

100K 5% 1/16W 1005 R754

100K 5% 1/16W 1005 R821

100K 5% 1/16W 1005 R836

100K 5% 1/16W 1005 R842

100K 5% 1/16W 1005 R848

100K 5% 1/16W 1005 R851

28.6M< 27.2B< 27.0B< 26.3A< 24.3B< 19.1J< 34.5A<

33.7C> IN VGA_BLON_I

19.7P> IN VGA_BLON_D

IN DISCRETE_ENABLE

VCC3B

U56 NC7SB3157

VDD B0 B1 S GND A

3 1 6 2 5 4

VGA_BLON OUT 71.4P<

VCC3SW

78 53 41 28 2

VCC5 VCC4 VCC3 VCC2 VCC1

U42

THINKER1

71.9D> IN -EXTPWR_ASIC

81.1N< 81.0A< 65.5P< 32.3N> IN -PCH_SLP_S3

32.3N> IN -PCH_SLP_S4

65.2B< 32.3N> IN -PCH_SLP_S5

80.2G< 32.2N> IN -PCH_SLP_LAN

80.3J< 32.2N> IN -PCH_SLP_M

32.3C> IN -AMT_ALERT

32.2C< OUT AC_PRESENT

77.3C< 32.3C< 92.3M> 64.3P> IN MPWRG

65.1C< 32.4C< 11.5L< 92.3M> IN BPWRG

74.1E< 73.6B< 73.4E<

74.7P< 61.4E< 58.4B< 11.5L< 34.1C< IN -PLTRST_NEAR

74.6D< 72.5C< 64.5C< 73.4B> IN -THRM

81.1D< 75.2B< 63.7P< 92.2K> IN -PWRSHUTDOWN

92.1B< 81.1D< 80.5J< 10.7Q> IN -SHUTDOWN2

71.0L> IN -PWRSW_ASIC

57.3M> 56.5L> 32.5N< 56.1L> 60.5J> IN -PCIE_WAKE

65.4P< OUT -MISCSMI

63.7H> IN EXTPWRG

63.8H> OUT -PWRON_DOCK

66.4A< OUT TP4_RESET

67.7A< OUT -PAD_RESET

67.7M> IN -PAD_DETECT

67.1C< OUT BYPASS_PAD_QSW

30.2P> IN -DASPHDD

92.5B< OUT ULTRA_ON

40.4C> IN -HDD_DTCT

77.5A< OUT CHARGE_VOLT_4D2V

77.5A< OUT CHARGE_VOLT_4D35V

77.1A< OUT CHARGE_3CELL

61.4A< OUT -EXC_PWR_STBY

60.7H< 56.6B< OUT USB_SEL_ALWAYS_ON

71.1A> IN AO_ID0

71.1A> IN AO_ID1

80.1G< OUT WWAN_ON

67.6M<> OUT -POA_ENABLE

67.6M<> IN POA_PWRREQ

64.6C< 32.3N> IN SUSCLK_32K

71 EXTPWR#

79 SLP_S3#

80 SLP_S4#

81 SLP_S5#

82 SLP_LAN#

83 SLP_M#

84 SUS_PWR_ACK

72 AC_PRESENT

0 5% 1/16W 1005 R858

70 SWPWRG

52 EPWRG

69 MPWRG

68 BPWRG

74 SWMONEN

100 PLTRST#

75 THERM#

76 SHUTDWN#

77 SHUTDWN2#

73 PWRSW#

85 PME#

88 EXTSMI#

87 EXTPWRG_DOCK

86 PWRON_DOCK#

18 TP4RST#

17 PADRST#

16 PADDETECT

14 BYP_PAD_QSW

89 DACT#

91 UBAYON

92 ULTRAOK

93 HDD_DTCT#/MGPIO6

1 LGPIO0

2 LGPIO1

4 LGPIO2

5 LGPIO3

6 LGPIO4

7 LGPIO5

8 LGPIO6

9 LGPIO7

10 PGPIO0

11 PGPIO1

12 PGPIO2

13 PGPIO3

12.4K 1% 1/16W 1005 R863

26 RINGOUT

27 RINGIN

29 CLK32K

30 CTEST

EON 58 TP139

MON 60

LANON 59

MEON 58

AON 57

BON 56

CPUON 55

IGFXON 67

DGFXON 66

FPSON1 64

FPSON2 63

FPSON3 62

FPSON4 61

EC_RST# 39

GPU_RST# 98

MISC_RST# 99

LEDPWR# 50

LEDSUS# 49

LEDFUEL0# 48

LEDFUEL1# 47

LEDMUTE# 46

LEDDRIVE# 45

LEDWPAN# 42

LED_BDC_IN 43

LED_UWB# 44

BLON_IN 96

BLON_OUT 97

USB_ON1/MGPIO4 94

USB_ON2/MGPIO5 95

MGPIO0/LANDIS# 31

M1GATEON 19

M2GATEON 20

MTRCL 21

S1GATEON 22

S2GATEON 23

STRCL 24

BATCRG 25

MGPIO1/FAN_FRQ_IN 32

MGPIO2/FAN_FRQ_OUT 33

MGPIO3/FAN_ON 34

SPICLK 38

SPIMOSI 37

SPISS# 36

SPIMISO 35

VCC3P VCC3SW VCC3B

47K 5% 1/16W 1005 R871

100K 5% 1/16W 1005 R874

100K 5% 1/16W 1005 R876

100K 5% 1/16W 1005 R893

10K 5% 1/16W 1005 R910

10K 5% 1/16W 1005 R916

VCC3SW

10% 25V 1005 C254 0.01UF

10% 25V 1005 C273 0.01UF

10% 25V 1005 C283 0.01UF

R609 R612

NO_ASM 0 5% 1/16W 1005 M1_ON OUT 80.8A<

0 5% 1/16W 1005 VCCLAN_ON OUT 80.2L> 87.5D< 92.4B< 93.3J<

NO_ASM 0 5% 1/16W 1005 AMT_ON OUT 80.3Q> 92.5B< 95.1J<

NO_ASM A1_ON OUT 80.7A<

B1_ON OUT 80.7H<

B2_ON OUT 80.6J<

IGFXON_ASIC OUT 80.8H<

R1016 0 5% 1/16W 1005 NO_ASM GFXCORE_ON_D OUT 80.4G> 84.6B<

R1017 0 5% 1/16W 1005 NO_ASM 3VIDEO_ON OUT 80.5G> 94.4B<

R1018 0 5% 1/16W 1005 NO_ASM 1R8VIDEO_ON OUT 80.3G> 90.5D<

R1019 0 5% 1/16W 1005 NO_ASM 1R05VIDEO_ON OUT 80.6G> 16.7F< 92.4B<

R1021 0 5% 1/16W 1005 NO_ASM VCC3WLAN_ON OUT 98.3J<

-EC_RESET OUT 64.3P< 64.7A< 77.3C<

-GPU_RST OUT 16.4B<

TP148

-LEDPWR OUT 65.3P< 66.6N<

-LEDSUS OUT 25.5N<

-LEDFUEL0 OUT 25.5N<

-LEDFUEL1 OUT 25.5N<

-LED_MUTE OUT 66.5N<

-LEDDRIVE OUT 25.6N<

-LED_WPAN OUT 25.6N<

LED_BDC_IN IN 67.6M<>

-LED_UWB IN 57.5C>

VGA_BLON IN 71.9L>

BACKLIGHT_ON OUT 25.6B<

USB_ON1 OUT 42.0F<

USB_ON2 OUT 42.1A< 42.6M<

M1GATEON OUT 92.4B<

M2GATEON OUT 92.4B<

M_TRCL OUT 77.2A< 78.3E<

S1GATEON OUT 92.4C<

S2GATEON OUT 92.4C<

S_TRCL OUT 77.2A< 78.1E<

BAT_CRG OUT 77.2A< 78.6D<

R980 0 5% 1/16W 1005 FAN_FRQ IN 69.4N> 65.4P<

R981 0 5% 1/16W 1005 FAN_FRQ_ASIC OUT 65.4P<

R987 0 5% 1/16W 1005 FAN_ON IN 65.2B> 69.3B<

33 5% 1/16W 1005 ECSPI_CLK IN 65.2P>

33 5% 1/16W 1005 ECSPI_MOSI IN 65.2P>

33 5% 1/16W 1005 -ECSPI_SS IN 65.2P>

0 5% 1/16W 1005 ECSPI_MISO OUT 65.2P<

R921 R928 R931 R463

VCC3SW VCC3SW

0.047UF 10% 16V 1005 C288

100K 5% 1/16W 1005 R711

100K 5% 1/16W 1005 R747

100K 5% 1/16W 1005 R605

100K 5% 1/16W 1005 R812

100K 5% 1/16W 1005 R606

100K 5% 1/16W 1005 R837

0.1UF 10% 10V 1005 C847

0.1UF 10% 25V 1005 C289

0.01UF 10% 25V 1005 C302

GND5 GND4 GND3 GND2 GND1

90 65 51 40 15

100K 5% 1/16W 1005 R872

100K 5% 1/16W 1005 R873

100K 5% 1/16W 1005 R875

100K 5% 1/16W 1005 R890

100K 5% 1/16W 1005 R907

100K 5% 1/16W 1005 R915

100K 5% 1/16W 1005 R917

NO_ASM NO_ASM NO_ASM

VCC3SW VCC3SW

NO_ASM 100K 5% 1/16W 1005 R90

100K 5% 1/16W 1005 R103

71.3B< OUT AO_ID0

71.3B< OUT AO_ID1

10K 5% 1/16W 1005 R91

NO_ASM 10K 5% 1/16W 1005 R104

TABLE

LEVEL	ALWAYS ON ID	
	ID1	ID0
1	R90	R103
0	R91	R104

TABLE

ALWAYS ON	AO_ID[1..0]
NO	11B
LITE	10B
LITE&BB	01B
REGULAR	00B

LOGIC

VCC3M

65.5P< OUT -PWRSW

20K 5% 1/16W 1005 R865

D1 RB521S-30

D76 1SS400G

74.7K> 66.6N> 63.7P> IN -PWRSWITCH

4.7K 5% 1/16W 1005 R868

67.6A> IN -POA_WAKE

0 5% 1/16W 1005 R579

VCC3SW

1/16W 1005 47K 5% R870

-PWRSW_ASIC OUT 71.5B<

0.022UF 10% 25V 1005 C316

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

THINKER-1

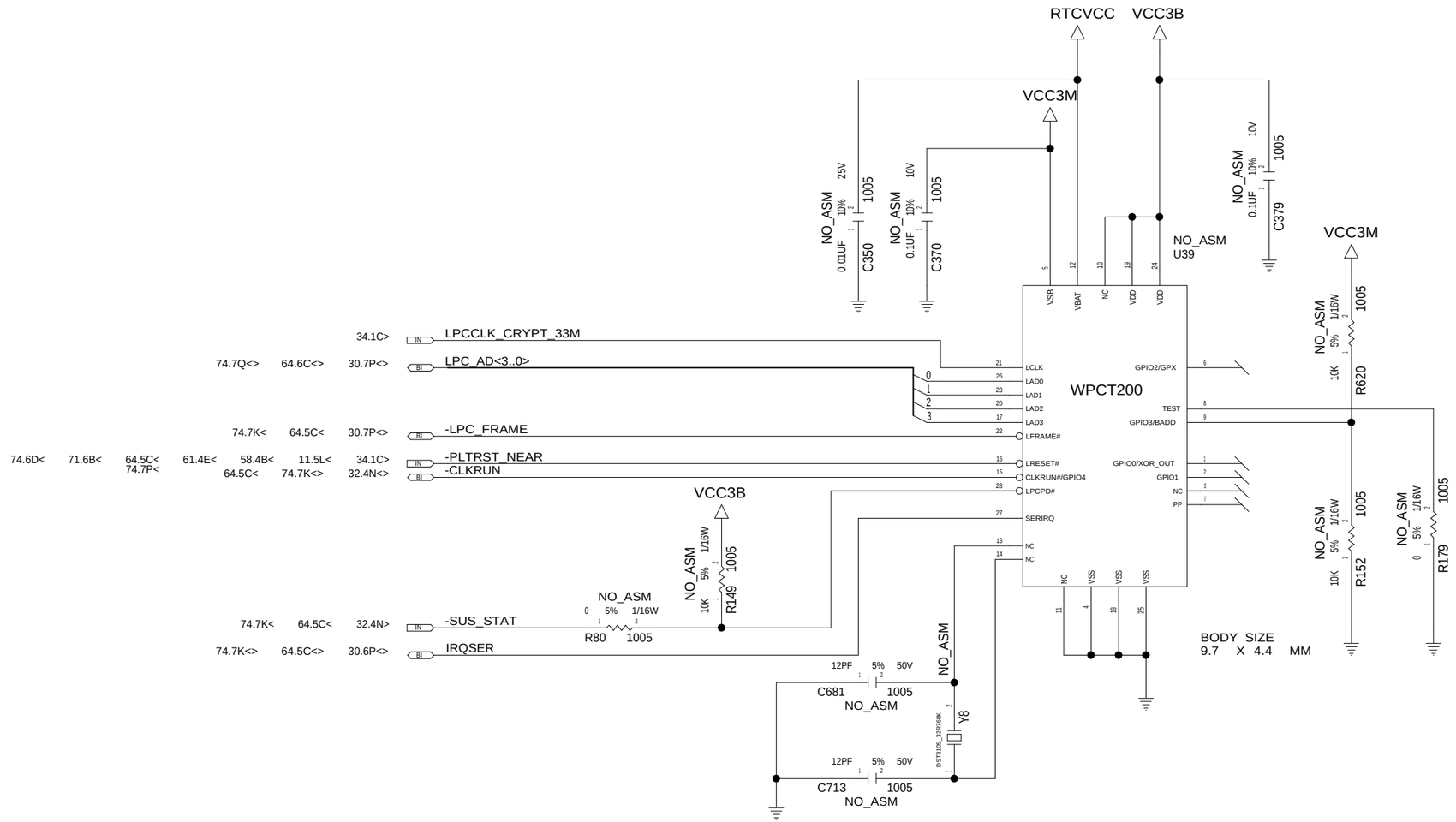
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 72 / 99



TABLE

REF DES	INTEL ITPM	WINBOND WPCT200	NUVOTON WPCT210	ST MICRO ST19NP18	INFINEON SLB9635TT
R216	ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
U39	NO_ASM	ASM	ASM	ASM	ASM
C350	NO_ASM	ASM	NO_ASM	NO_ASM	NO_ASM
C370	NO_ASM	ASM	ASM	ASM	ASM
C379	NO_ASM	ASM	ASM	ASM	ASM
R80	NO_ASM	ASM	ASM	ASM	ASM
R149	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R179	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM
R152	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM
R620	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM
Y8	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM
C681	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM
C713	NO_ASM	NO_ASM	NO_ASM	NO_ASM	ASM

LOGIC

VER.1.31

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	TPM	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

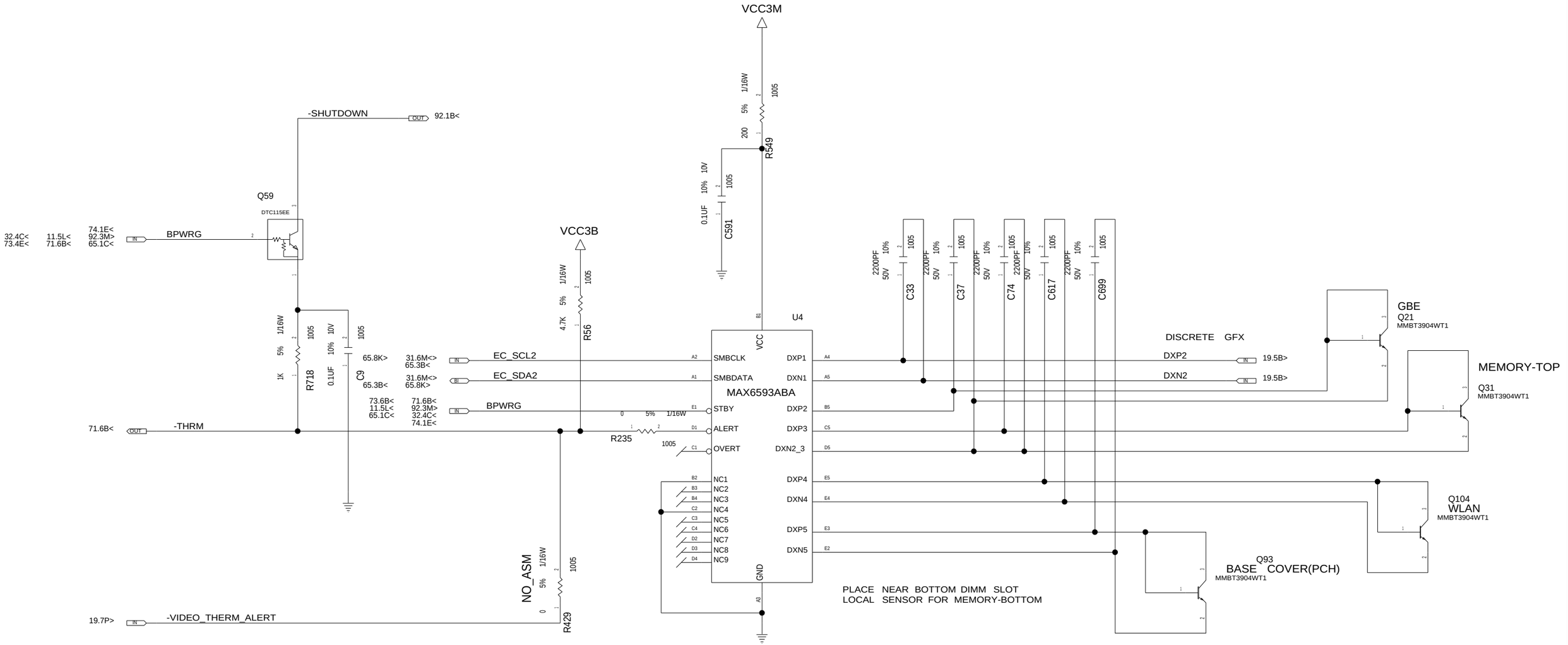
LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 73 / 99



ADDRESS : 4DH

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

THERMAL SENSOR

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
74 / 99

PHILIPS 1024 X 8
EEPROM W/ACCESS
PROTECTION

VCC3M VCC3M

R577 4.7K 5% 1/16W 1005

C1005 0.1UF 10% 10V 1005

U22
PCA24S08DP
VDD
-PROT
WP
SCL
SDA
NC
NC
GND

R582 100K 5% 1/16W 1005

R585 100K 5% 1/16W 1005

74.2Q< 31.7M> SMB_CLK
74.2Q<> 31.7M<> SMB_DATA

VCC3B

Q97
DTC115TE

72.5C< 71.6B< 64.5C< 61.4E< 58.4B< 11.5L< 34.1C> 74.7P< -PLTRST_NEAR

J5
BM20B_SRDS_A

34.1C> LPCCLK_DEBUG_33M

64.5C< 72.5C<> 30.7P<> -LPC_FRAME
30.7P< -LPC_DREQ0
64.5C< 72.5C<> 32.4N<> -CLKRUN
72.4C< 64.5C< 32.4N> -SUS_STAT
72.4C<> 64.5C<> 30.6P<> IRQSER
89.4C< 86.5C< 80.4J< 92.6B< 80.1G< 71.0G< 61.5A< 66.6N< 80.7N< 63.7P> 36.3A< B_ON
-PWRSWITCH
-DEBUGCARD

-PLTRST_NEAR 72.5C< 34.1C> 61.4E< 74.6D< 11.5L< 64.5C< 58.4B< 71.6B<

LPC_AD<3..0> 30.7P<> 72.5C<> 64.6C<>

VCC3M

ICH
SMBUS

R30 10K 5% 1/16W 1005

R45 10K 5% 1/16W 1005

SMB_CLK 31.7M> 74.7D<>

SMB_DATA 31.7M<> 74.7D<>

VCC5M

U21
TC7SB385FU
VCC
A
B
OE
GND

U31
TC7SB385FU
VCC
A
B
OE
GND

R207 33 5% 1/16W 1005

R208 33 5% 1/16W 1005

C25 0.01UF 10% 25V X7R 1005

VCC3B

R150 10K 5% 1/16W 1005

R177 10K 5% 1/16W 1005

R291 47K 5% 1/16W 1005

15.5C< 13.0K< 12.0K< SMB_CLK_3B

15.5C<> 13.0K<> 12.0K<> SMB_DATA_3B

Q84
DTC115TE

73.6B< 73.4E< 71.6B< 65.1C< 32.4C< 11.5L< 92.3M< BPWRG

R268 47K 5% 1/16W 1005

34.1P> SMB_3B_EN

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

EEPROM/SMBUS SW

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 75 / 99

NO_ASM 0 5% 1/16W R237 1005

Q64 2SK3541

ACDC_ID OUT 63.5H> 64.4C>

R236 1005 5% 1/16W 100K

75.3H< 63.3Q> IN -DOCK_ATTACHED_BAT_OP

DC-IN

J24 87438_0563

PLACE NEAR CONNECTOR

F2 429007

R715 1608 5% 1/10W 270

C1088 1005 50V 5% 100PF

C72 1005 50V 10% 1000PF

DOCK_PWR20_F

Q9 SI7121DN

CV20

R369 1005 5% 1/16W 470K

R143 1005 5% 1/16W 200K

C93 1608 25V 10% 0.47UF

C8 1005 25V 10% 0.01UF

R340 1005 5% 1/16W 1K

Q107 DTA114EEA

Q61 2SK3541

Q51 DTC115EE

Q78 2SK3541

Q79 2SK3541

R145 1005 5% 1/16W 100K

R662 1005 5% 1/16W 0 NO_ASM

R504 1005 5% 1/16W 0 NO_ASM

92.3B< 63.3M> IN DISCHARGE2

81.1D< 71.5B< 63.7P< 92.2K> 92.1B< IN -PWRSHUTDOWN

D13 1SS400G

Q33 DTC115EE

R238 1005 0 5% 1/16W NO_ASM

R222 1005 1M 5% 1/16W

92.3J> IN DCIN_DRV

Q68 DTA114EEA

R224 1005 100K 5% 1/16W

Q83 2SK3541

75.7D< 63.3Q> IN -DOCK_ATTACHED_BAT_OP

Q36 SIS406DN

DOCK_PWR20

VINT20

R380 3216 0.01 PRL1632_R010_F 1W 1%

RJ64 SHORT10_10MIL

RJ65 SHORT10_10MIL

C101 1005 25V 10% 0.01UF

77.9K< OUT DCIN_CURRENT_P

77.9K< OUT DCIN_CURRENT_N

R264 1005 10.0 1% 1/16W

R11 1005 0 5% 1/16W

PLACE NEAR R380

TABLE

PEAK SHIFT	YES	NO
R662	NO-ASM	ASM
R369	ASM	NO-ASM
Q78	ASM	NO-ASM
Q51	ASM	NO-ASM

LOGIC

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

DC-IN

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 76 / 99

MAIN BAT CONN

J13

1827654_1

M_BAT_IN

VCC3M

6.19K 1% 1/16W 1005 R328

WIDE PATTERN

M-BAT-PWR

F12 458010 10A

100 5% 1/16W R273 1005 I2C_CLK_BT0 IN 65.2P> 65.8B>

100 5% 1/16W R271 1005 I2C_DATA_BT0 BI 65.2P<> 65.7B<>

M_TEMP OUT 64.4C<

NO_ASM 10% 50V 390PF C407 1005

10% 50V 2200PF C199 1005

NO_ASM 10% 50V 390PF C203 1005

10% 50V 2200PF C207 1005

SIS406DN Q8 (A)

92.4J> M1_DRV IN 100K 5% 1/16W R634 1005

M_BAT_PWR_A

SI7129DN Q34 (B)

1/16W 5% 510K R483 1005

BAT-PWR12

92.4J> M2_DRV IN 150K 5% 1/16W R638 1005

SIS406DN Q13

VINT20

0.01UF 10% 25V C722 1005

92.4J> BAT_DRV IN 100K 5% 1/16W R639 1005

VCC3M

S_BAT_IN

F11 458010 10A

R292 6.19K 1% 1/16W 1005

S_BAT_PWR_A

SI7129DN Q10 (D)

510K 5% 1/16W R284 1005

VCC3B

1/16W 5% 4.7K R445 1005

BAT_FET_HOT OUT 64.3B<

PRF15BB471Q

RT16

NEAR TO Q13

10% 10V 0.1UF C683 1005

63.7H< I2C_CLK_BT1_DOCK OUT

100 5% 1/16W R265 1005 I2C_CLK_BT1 IN 65.4B> 65.8B>

63.7H<> I2C_DATA_BT1_DOCK BI

100 5% 1/16W R332 1005 I2C_DATA_BT1 BI 65.4B<> 65.7B<>

63.7H> S_TEMP_DOCK IN

SHORT1005_4MIL RJ35

S_TEMP OUT 64.4C<

NO_ASM 10% 50V 2200PF C193 1005

10% 50V 390PF C195 1005

NO_ASM 10% 50V 2200PF C198 1005

10% 50V 390PF C201 1005

63.4Q> -DOCK_ATTACHED_S_BAT IN 150K 5% 1/16W R636 1005

VREGIN20

DOCK_DCIN20

F20 ERBSD0R50U D60 DAN222

DOCK_PWR20_F

F5 ERBSD0R50U D10 DAN222

M-BAT-PWR M-BAT-TRCL

F9 ERBSD0R50U 500MA D19 DAN222

S-BAT-PWR S-BAT-TRCL

F10 ERBSD0R50U 500MA D23 DAN222

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

BATTERY INPUT

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 77 / 99

DOCK_DCIN20 DOCK_PWR20_F D78 1SS400G D87 1SS400G R363 20 5% 1/10W 1608 R688 20 5% 1/10W 1608 C450 0.1UF 10% 25V 1608 CHARGER_AGND

DOCK_DCIN20 DOCK_PWR20_F D82 RB520S_30 D84 RB520S_30 R584 432K 1% 1/10W 1608 R227 66.5K 1% 1/10W 1608 CHARGER_AGND

BQ_VREF R426 73.2K 1% 1/16W 1005 R719 60.4K 1% 1/16W 1005 R864 26.7K 1% 1/16W 1005 R146 40.2K 1% 1/16W 1005 CHARGER_AGND

VCC3M R110 0 5% 1/10W 1608 NO_ASM R120 0 5% 1/10W 1608 C20 0.1UF 10% 10V 1005 C14 1UF 10% 10V 1608 CHARGER_AGND

BQ_VREF R367 102K 1% 1/16W 1005 R121 64.9K 1% 1/16W 1005 Q58 2SK3541 R333 215K 1% 1/16W 1005 Q32 2SK3541 71.4B> CHARGE_VOLT_4D2V 71.3B> CHARGE_VOLT_4D35V CHARGER_AGND

BQ_VREF R379 120K 1% 1/16W 1005 65.2B> CHARGE_CURRENT_SEL

D18 DAP222 71.6B< 32.3C< 92.3M> 64.3P> 64.7A< 64.3P< 71.6P> MPWRG -EC_RESET R157 357K 1% 1/16W 1005 C356 0.1UF 10% 10V 1005 C233 0.01UF 10% 25V 1005 CHARGER_AGND

78.6D< 71.3P> BAT_CRG 78.1E< 71.3P> S_TRCL 78.3E< 71.3P> M_TRCL 1SS400G D34 1SS400G D14 1SS400G D9 1SS400G D16 1SS400G D29 R244 1K 5% 1/16W 1005 R904 10K 5% 1/16W 1005 CHARGER_AGND

71.3B> CHARGE_3CELL Q42 2SK3541 CHARGER_AGND

VADJ

U7 BQ24741

28	PVCC	BTST	27
3	ACP	HIDRV	26
2	ACN	SW	25
24	REGN	LODRV	23
5	ACDET	CSP	19
10	VREF	CSN	18
11	VDAC	BAT	17
6	ACSET	#DPMDET	21
7	LPREF	#EXTPWR	13
12	VADJ	#LPMOD	4
16	ISET	IADAPT	15
1	CE		
8	TRICKLE		
20	CELLS		
14	FSET		
9	AGND		
29	PAD		
22	PGND		

DCIN_CURRENT_P 75.2H> DCIN_CURRENT_N 75.2H>

R180 1K 1% 1/16W 1005 DOCK_CONSUMP 63.4Q>

R512 16.2K 1% 1/16W 1005 Q102 2SK3541 -90W_AC 65.4P>

C447 1UF 10% 10V 1608 CHARGER_AGND

C447,C444,C138 NEED TO BE CLOSE TO ACP-ACN

C444 0.01UF 10% 50V 1608 C138 0.01UF 10% 50V 1608 CHARGER_AGND

D39 RB521S_30 C99 1UF 10% 10V 1005 R213 3.3 5% 1/10W 1608 C192 0.1UF 10% 25V 1608

Q4 FDS8978 Q4 FDS8978 R959 2.2 5% 1/10W 1608 C436 470PF 10% 50V 1005 C806 0.1UF 10% 25V 1608 CHARGER_AGND

CHG_DH CHG_SW CHG_DL

CHARGER_OUT12_CSENSE CHARGER_OUT12_VSENSE

VINT20 C174 0.01UF 10% 25V 1005 C745 4.7UF 10% 25V 3216 C22 4.7UF 10% 25V 3216 C253 4.7UF 10% 25V 3216

CHARGER_OUT12 C746 0.01UF 10% 25V 1005

L5 10UH CDRH104R-100 R728 0.02 PRL1632_R020_F 1W 1% 3216 R963 0 5% 1/16W 1005

RJ52 SHORT10_10MIL C390 10UF 10% 10V 1005 C16 0.1UF 10% 25V 1608 CHARGER_AGND

C26 4.7UF 10% 25V 3216 C194 4.7UF 10% 25V 3216 RJ53 SHORT10_10MIL C221 4.7UF 10% 25V 3216 C424 4.7UF 10% 25V 3216

VCC3SW R721 10K 5% 1/16W 1005 -EXTPWR 65.7Q< 71.7A< 92.4B< -LPMODE 65.3P< ISYS 64.3B<

C155 100PF 5% 50V 1005 CHARGER_AGND

VCC3M R693 100K 5% 1/16W 1005

SHORT10_20MIL RJ48 CHARGER_AGND

C90 0.1UF 10% 25V 1608 CHARGER_AGND

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	BATTERY CHARGER

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

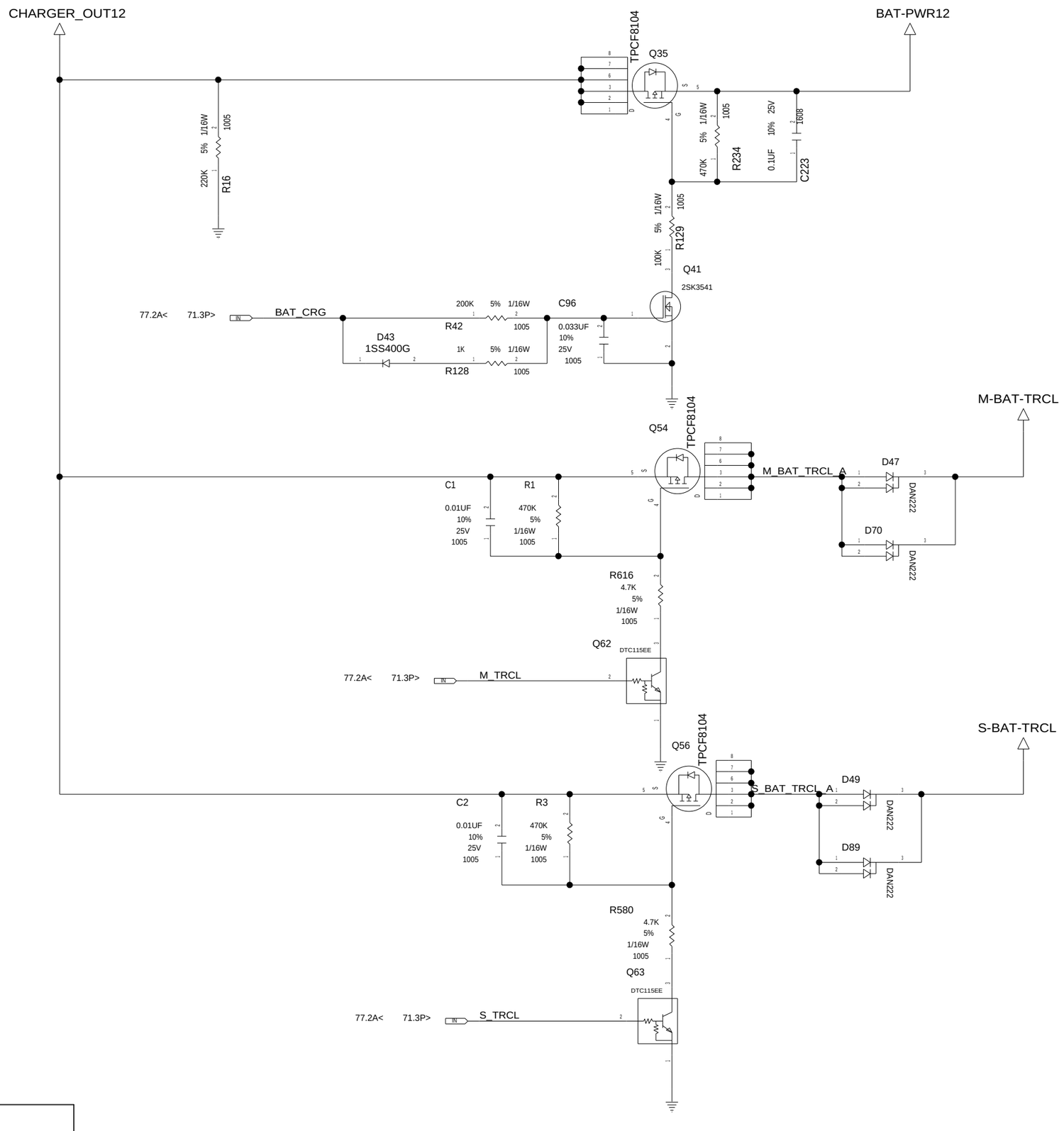
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
78 / 99



DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

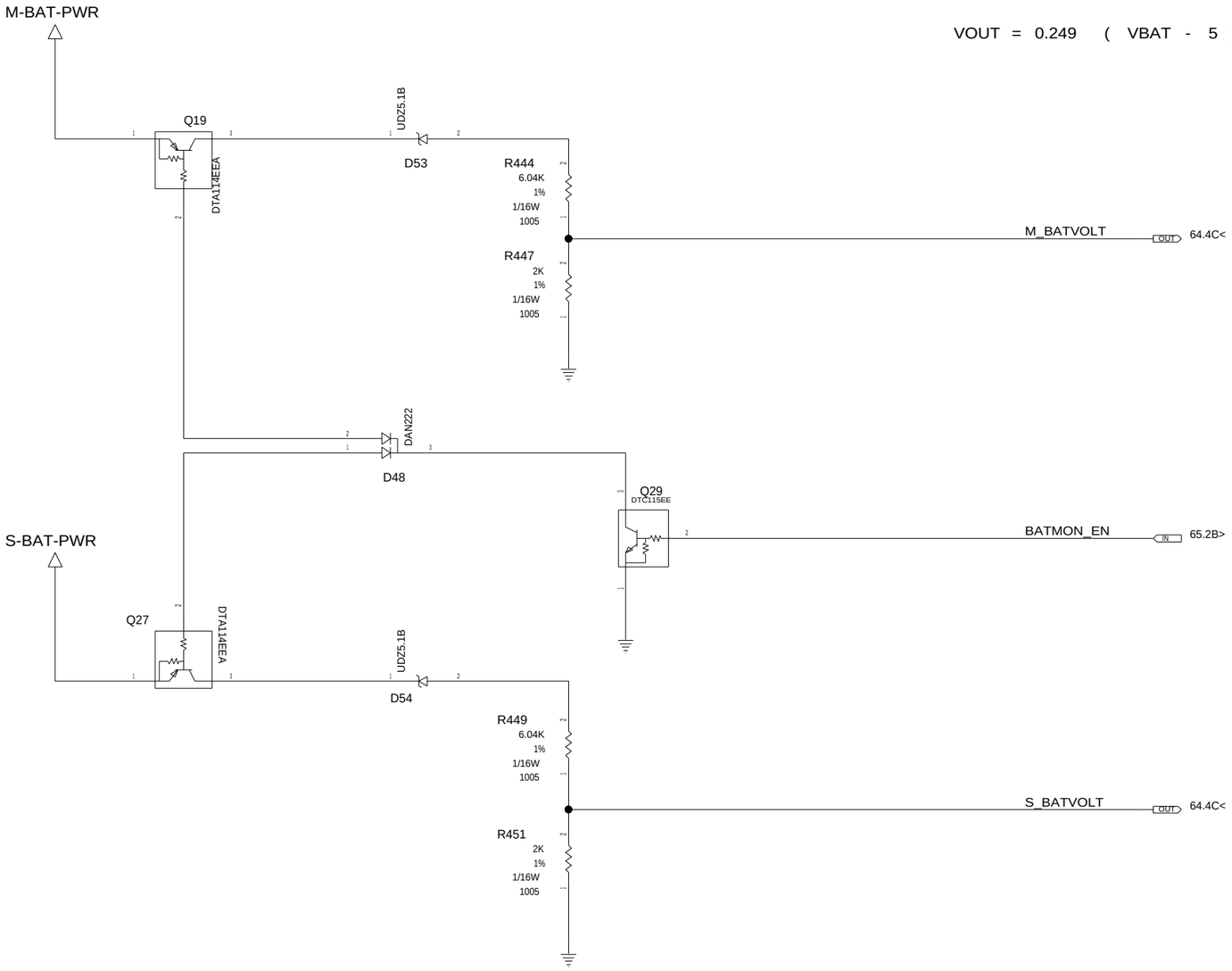
TITLE NOZOMI EXT SDV

CHARGE SELECTOR

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 79 / 99



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	BATTERY MONITOR
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 80 / 99

71.7P> M1_ON → R866 0 5% 1/16W 1005 → VCC5M_ON OUT 81.3A< 92.6B<
R405 0 5% 1/16W 1005 → VCC3M_ON OUT 67.2L< 81.4N< 92.5B<

71.7P> A1_ON → R901 0 5% 1/16W 1005 → VCC1R5A_ON OUT 88.4C<

71.6P> IGFXON_ASIC → R358 0 5% 1/16W 1005 → GFXCORE_ON_I OUT 85.6B<
9.6M> GFX_PWR_EN_I → R197 0 5% 1/16W 1005 NO_ASM
NO_ASM: C412 0.1UF 10% 10V 1005

71.7P> B1_ON → R867 0 5% 1/16W 1005 → B_ON OUT 61.5A< 74.7K< 80.1G< 80.4J< 86.5C< 89.4C< 92.6B<
R382 0 5% 1/16W 1005 → 1R8B_ON OUT 91.5E<

VCC3B

R526 1K 5% 1/16W 1005 → 1R05VIDEO_ON OUT 71.6P> 16.7F< 92.4B<
R1143 1K 5% 1/16W 1005 → D150 1SS400G → NO_ASM: C482 0.22UF 10% 6.3V 1005

R887 10K 5% 1/16W 1005 → 3VIDEO_ON OUT 71.6P> 94.4B<
C654 0.1UF 10% 10V 1005

92.6B< 89.4C< 86.5C< 80.1G< 74.7K< 61.5A< 80.7N> IN B_ON

36.8J> GFX_PWR_EN_D
R507 30K 5% 1/16W 1005 → GFXCORE_ON_D OUT 71.6P> 84.6B<
R231 1K 5% 1/16W 1005 → D83 1SS400G
C182 0.1UF 10% 10V 1005

R995 51K 5% 1/16W 1005 → 1R8VIDEO_ON OUT 71.6P> 90.5D<
R996 1K 5% 1K 1/16W 1005 → D116 1SS400G
C1287 0.22UF 10% 6.3V 1005

81.1D< 71.5B< 10.7Q> IN -SHUTDOWN2
D59 DAP222
R267 47K 5% 1/16W 1005
R59 0 5% 1/16W 1005 → VCORE_ON OUT 82.6A<
C590 1000PF 10% 50V 1005

4.1A< 86.3N> IN VTT_PWRG
D45 1SS400G

71.6B< 32.2N> IN -PCH_SLP_M
R275 0 5% 1/16W 1005
D151 DAN222
AMT_ON OUT 71.7P> 95.1J< 92.5B<
NO_ASM: R414 1K 5% 1/16W 1005 → D4 1SS400G
NO_ASM: C415 0.1UF 10% 10V 1005
R1610 10K 5% 1/16W 1005

71.7B< 32.2N> IN -PCH_SLP_LAN
R1618 0 5% 1/16W 1005 → VCCLAN_ON OUT 71.7P> 87.5D< 92.4B< 93.3J<

71.3B> IN WWAN_ON
D73 DAN222 → VCC3WAN_ON OUT 98.3C<
92.6B< 89.4C< 86.5C< 80.4J< 74.7K< 61.5A< 80.7N> IN B_ON

TABLE

ALWAYS ON	REG/LITE	BB/NO
D73	ASM	NO_ASM

LOGIC

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	POWER SEQUENCE
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 81 / 99

TPS51222

Q16 TPCA8021H_DUAL

Q46 TPCA8012H_DUAL

Q18 TPC8024H_DUAL

Q17 TPC8032H_DUAL

U41

Q28 2SK3541

Q37 2SK3541

D12 DAP222

L3 FDA1055_3R3M

L4 FDV1040-3R3M

VCC5M_OUT ESR 18mOHM

9A VCC3M ESR 18mOHM

12A

VCC5M_DH

VCC5M_DL

VCC3EC_DH

VCC3EC_DL

-PWRSHUTDOWN

-SHUTDOWN2

-PCH_SLP_S3

5M_PWRG

VCC5M_ON

3M_PWRG

VCC3M_ON

NO_ASM

S_AGND

RJ28 SHORT10_20MIL

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DC/DC VCC5M/VCC3M
CLASS	H.K	12/04/08	

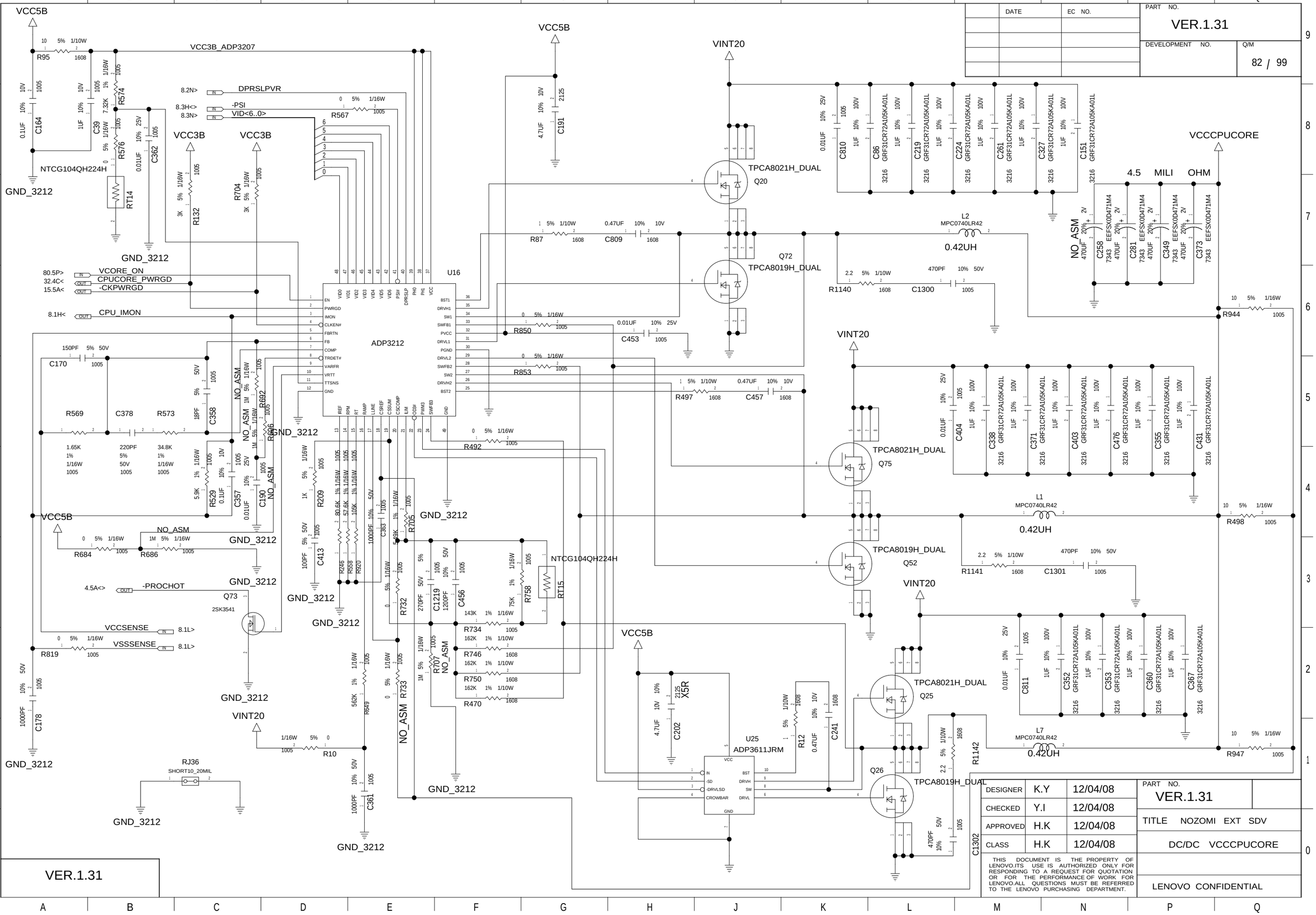
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31
			DEVELOPMENT NO. / Q/M 82 / 99



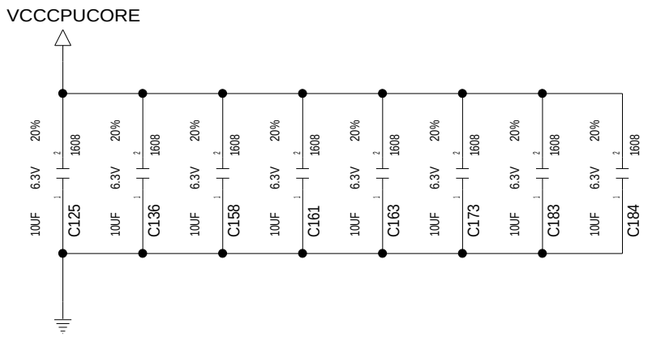
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	DC/DC VCCCPUCORE

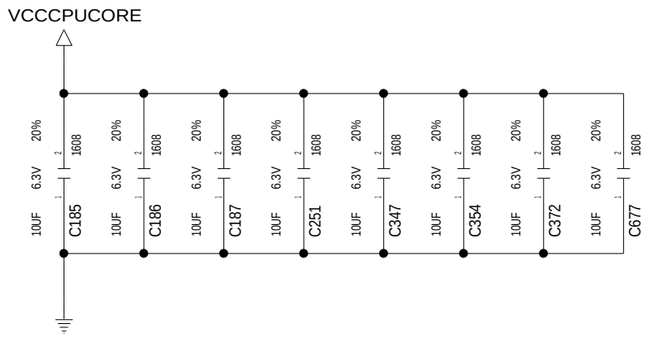
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

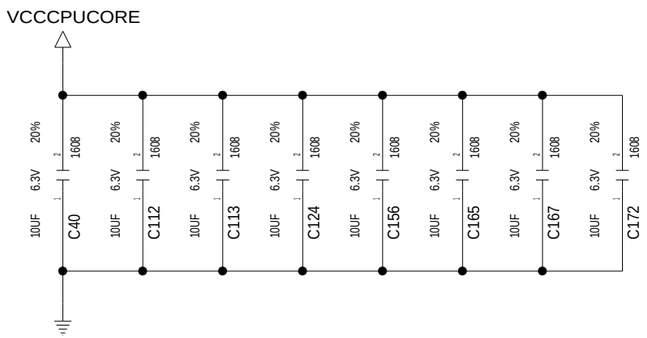
VER.1.31

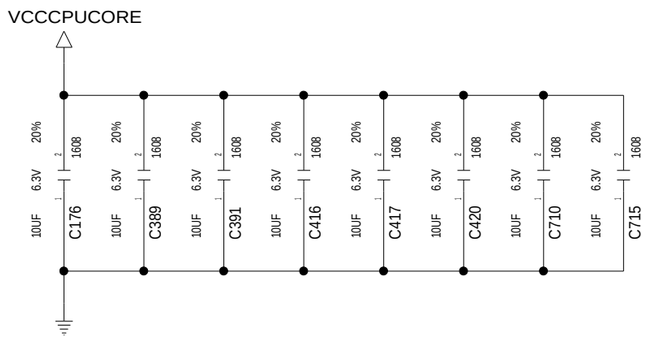
	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 83 / 99





10UF 6.3V X5R 1608 1/16W X 16PCS





10UF 6.3V X5R 1608 1/16W X 16PCS

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	VCCCPUCORE DECOUPLING	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO.
VER.1.31

DEVELOPMENT NO.

Q/M
84 / 99

TABLE

N10X
VID<6..0>

0100000=1.100V
0100100=1.050V
0101000=1.000V
0101100=0.950V
0110000=0.900V
0110100=0.850V

VCC3VIDEO

R383 10K 5% 1/16W 1005 NO_ASM
R390 10K 5% 1/16W 1005 NO_ASM
R415 10K 5% 1/16W 1005
R431 10K 5% 1/16W 1005
R453 10K 5% 1/16W 1005 NO_ASM
R459 10K 5% 1/16W 1005
R462 10K 5% 1/16W 1005 NO_ASM
R479 10K 5% 1/16W 1005
R486 10K 5% 1/16W 1005 NO_ASM
R490 10K 5% 1/16W 1005
R501 10K 5% 1/16W 1005
R510 10K 5% 1/16W 1005 NO_ASM
R516 10K 5% 1/16W 1005
R520 10K 5% 1/16W 1005 NO_ASM

VCC5M

R523 10 5% 1/10W 1608
C612 3.3UF 10V 20% 2125
C432 1UF 10V 10% 1005
D50 1SS400G NO_ASM
C478 0.47UF 25V 10% 1608
R524 1608 5% 1/10W
GND_3211_D

VINT20

C383 4.7UF 25V 10% X7R 3216
C589 4.7UF 25V 10% X7R 3216
C608 4.7UF 25V 10% X7R 3216
C697 4.7UF 25V 10% X7R 3216
C712 4.7UF 25V 10% X7R 3216
C632 0.01UF 25V 10% 1005

C630 1UF 10V 10% 1005
C634 10UF 6.3V 10% 2125
C640 10UF 6.3V 10% 2125

22A
VCCGFXCORE_D

19.7P> PM_VID4 R455 0 5% 1/16W 1005
19.7P> PM_VID3 R467 0 5% 1/16W 1005
19.7P> PM_VID2 R406 0 5% 1/16W 1005
19.8P> PM_VID1 R588 0 5% 1/16W 1005

80.4G> 71.6P> GFXCORE_ON_D

36.6A< 31.3Q< DGFX_PWRGD
64.3B< GFX_PWR_MONITOR

U17 ADP3211

1	PWRGD	VCC	24
2	IMON	BST	23
3	CLKEN#	DRVH	22
4	FBRTN	SW	21
5	FB	PVCC	20
6	COMP	DRVL	19
7	GPU	PGND	18
8	ILIM	GND	17
9	IREF		
10	RPM		
11	RT		
12	RAMP		
13	LLINE		
14	CSREF		
15	CSFB		
16	CSCOMP		
32	EN		
31	VID0		
30	VID1		
29	VID2		
28	VID3		
27	VID4		
26	VID5		
25	VID6		
33	GND		

GFX_DH_D
GFX_SW_D
GFX_DL_D

Q40 TPCA8021H_DUAL
Q95 TPCA8019H_DUAL

L23 0.56UH SPM10040T-R56M150

R539 2.2 5% 1/10W 1608
R540 154K 1% 1/10W 1608
RT17 NTCG104QH224H
C613 470PF 10% 50V 1005

R548 0 5% 1/16W 1005
C491 330UF 2.5V 20% 2R5TPE330M9
C605 330UF 2.5V 20% 2R5TPE330M9
C660 330UF 2.5V 20% 2R5TPE330M9
C642 0.01UF 10% 25V 1005

R480 10K 1% 1/16W 1005
R461 4.53K 1% 1/16W 1005
C376 0.1UF 10% 10V 1005

R478 80.6K 1% 1/16W 1005
R488 143K 1% 1/16W 1005
R521 261K 1% 1/16W 1005
R494 20K 1% 1/16W 1005 NO_ASM
R495 0 5% 1/16W 1005

R613 422K 1% 1/16W 1005
R531 1K 1% 1/16W 1005
R534 76.8K 1% 1/16W 1005
R538 140K 1% 1/16W 1005

C331 100PF 5% 50V 1005
R377 1K 1% 1/16W 1005
C337 470PF 10% 50V 1005
R398 20K 1% 1/16W 1005
C368 22PF 5% 50V 1005
C335 100PF 5% 50V 1005 NO_ASM

RJ43 SHORT10_20MIL

C377 1000PF 10% 50V 1005
C386 68PF 5% 50V 1005
C414 560PF 10% 50V 1005
C437 100PF 5% 50V 1005

R450 10 5% 1/16W 1005
R518 10 5% 1/16W 1005
C375 1000PF 10% 50V 1005

GFXCORE_VDD_SENSE_D IN 20.1D>
VGFX_CORE_RTN_D
GFXCORE_GND_SENSE_D IN 21.3L>

GND_3211_D

VER.1.31

CONNECT TO nVIDIA

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

DC/DC VCCGFXCORE_D

LENOVO CONFIDENTIAL

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 85 / 99

INTEG VCCGFXCORE VOLTAGE

1.NORMAL; 1.05V

2.GRAPHICS RENDER STANDBY MODE; 0.75V

VID <4..0>
01000 = 1.05V

VCC5M

VINT20

VCC3B

GFXVID6 9.6K>
GFXVID5 9.6K>
GFXVID4 9.6K>
GFXVID3 9.6K>
GFXVID2 9.6K>
GFXVID1 9.7K>
GFXVID0 9.7K>
GFXCORE_ON_I 80.8P>

R902 0 5% 1/16W 1005
R517 0 5% 1/16W 1005
R623 0 5% 1/16W 1005
R528 0 5% 1/16W 1005
R685 0 5% 1/16W 1005
R343 0 5% 1/16W 1005
R614 0 5% 1/16W 1005

U19 ADP3211

GFX_IMON 9.6K<

R779 10K 5% 1/16W 1005

R911 8.25K 1% 1/16W 1005

R794 10 5% 1/10W 1608

R795 5% 1/10W 1608

D28 1SS400G

NO_ASM

C638 3.3UF 10V 20% 2125

C618 1UF 10% 10V 1005

C620 0.47UF 10% 25V 1608

GND_3211_I

GFX_DH_I
GFX_SW_I
GFX_DL_I

Q66 TPC8024H_DUAL

Q76 TPC8032H_DUAL

L6 0.68UH SPM6530T-R68M140

14A
VCCGFXCORE_I

C672 C695 C708 C709 C714 4.7UF 25V 10% X7R 3216
C663 0.01UF 25V 10% X7R 1005

C1310 C1311 C109 1UF 10V 10% 1005
10UF 6.3V 10% 2125

C711 C716 330UF 2.5V 20% 2R5TPE330M9 7343
C739 0.01UF 25V 10% 1005

R799 2.2 5% 1/10W 1608
R800 154K 1% 1/10W 1608
R809 0 5% 1/16W 1005

C673 50V 10% 470PF 1005

RT18 NTCG104QH224H

R508 1K 1% 1/16W 1005
C475 470PF 10% 50V 1005
R115 20K 1% 1/16W 1005
C459 100PF 5% 50V 1005
C520 22PF 5% 50V 1005

R783 4.53K 1% 1/16W 1005
C592 0.1UF 10% 10V 1005

R781 80.6K 1% 1/16W 1005
R777 143K 1% 1/16W 1005
R792 261K 1% 1/16W 1005
R784 20K 1% 1/16W 1005 NO_ASM
R785 0 5% 1/16W 1005

R793 422K 1% 1/16W 1005
R796 1K 1% 1/16W 1005
R797 76.8K 1% 1/16W 1005
R798 140K 1% 1/16W 1005

C598 1000PF 10% 50V 1005
C599 68PF 5% 50V 1005
C607 560PF 10% 50V 1005
C615 100PF 5% 50V 1005

RJ46 SHORT10_20MIL

C461 NO_ASM 100PF 5% 50V 1005

R689 10 5% 1/16W 1005
C570 1000PF 10% 50V 1005
R790 10 5% 1/16W 1005

GFXCORE_VDD_SENSE_I 9.7L>
VGFX_CORE_RTN_I
GFXCORE_GND_SENSE_I 9.7L>

CONNECT TO GFXCORE

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

PART NO. VER.1.31

TITLE NOZOMI EXT SDV

DC/DC VCCGFXCORE_I

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

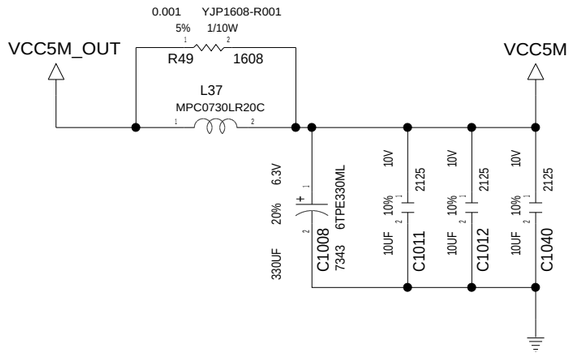
LENOVO CONFIDENTIAL

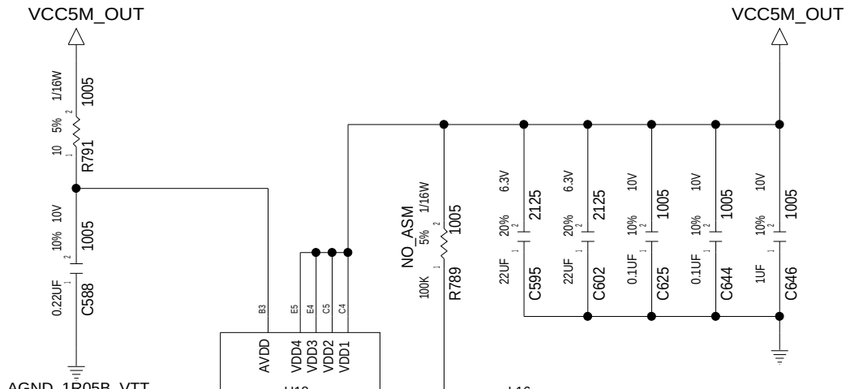
VER.1.31

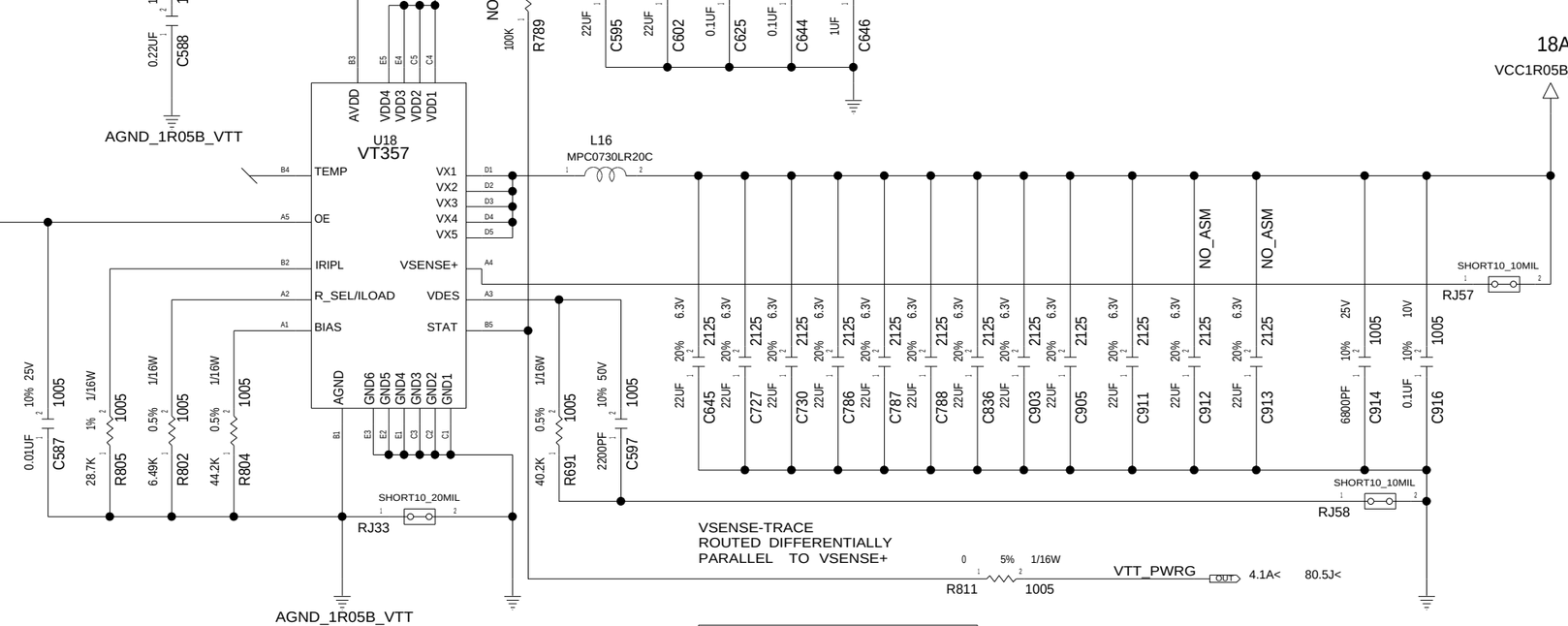
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 86 / 99

LAY OUT THIS 0.001OHM RESISTOR
INSIDE OF L37







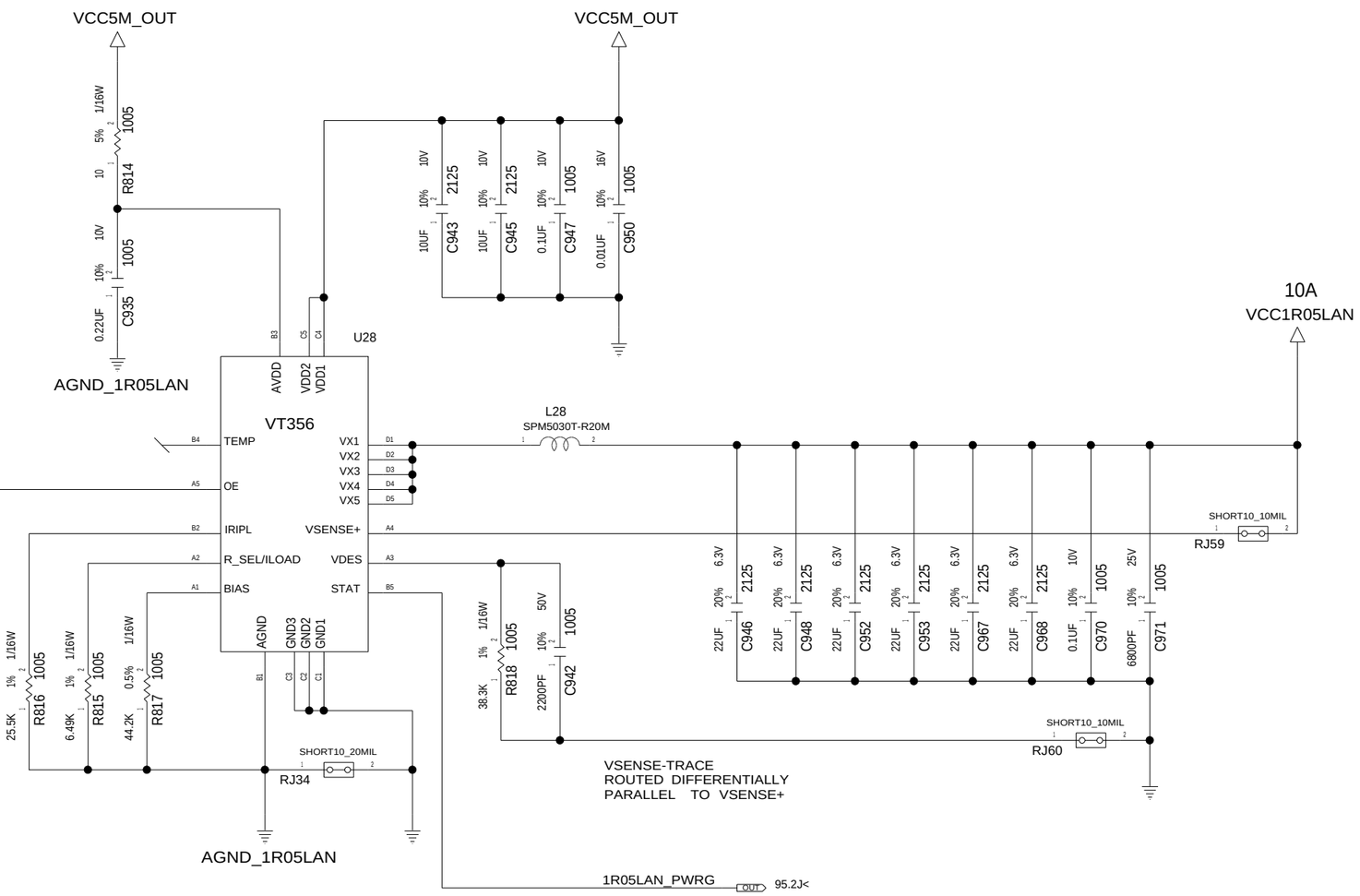
1.10V	R810 = 40.2K
1.05V	R810 = 38.3K
VOUT =	1.212*R810/44.2K

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DC/DC VCC1R05B_VTT
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 87 / 99



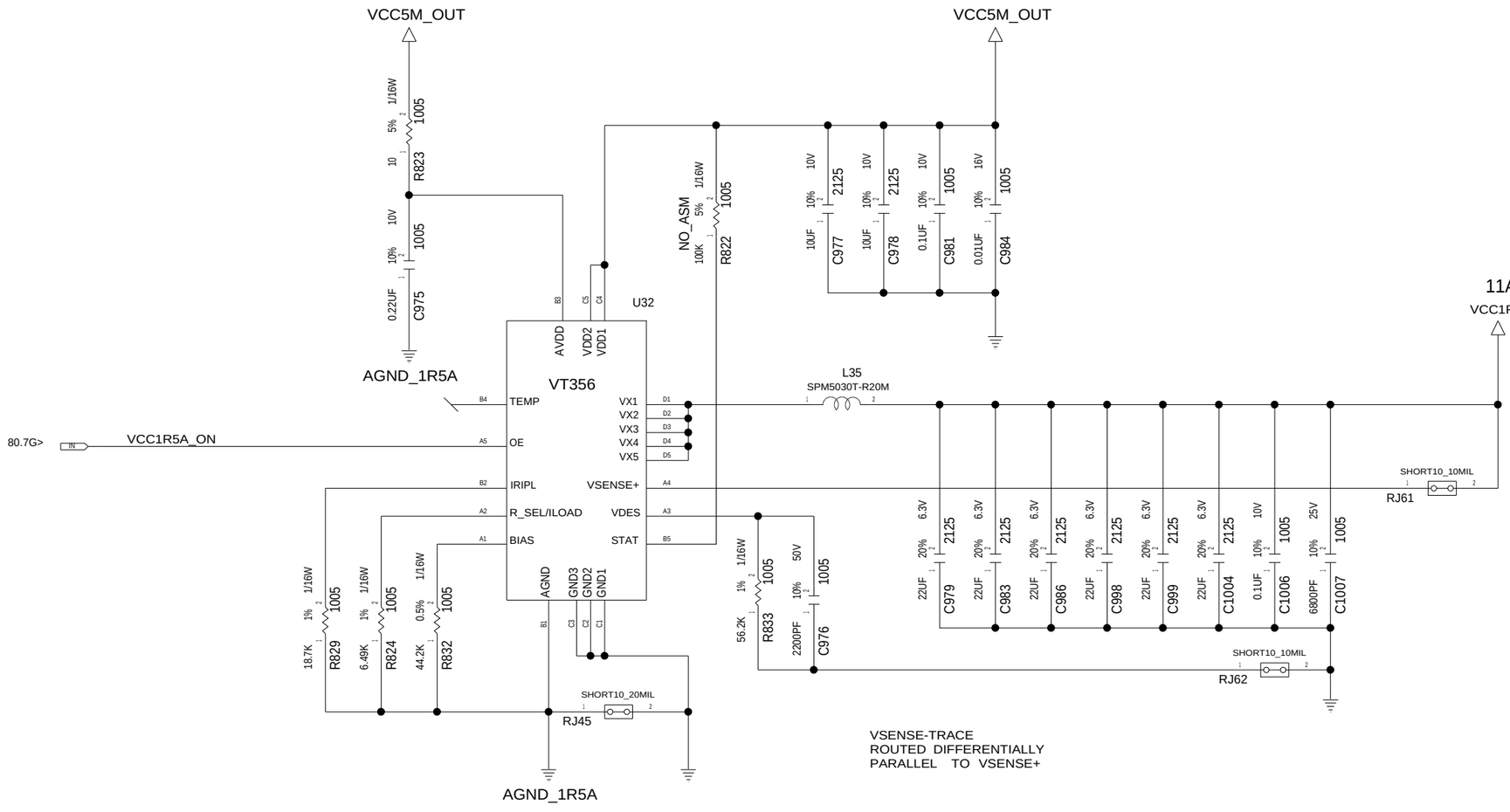
			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	DC/DC VCC1R05LAN	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

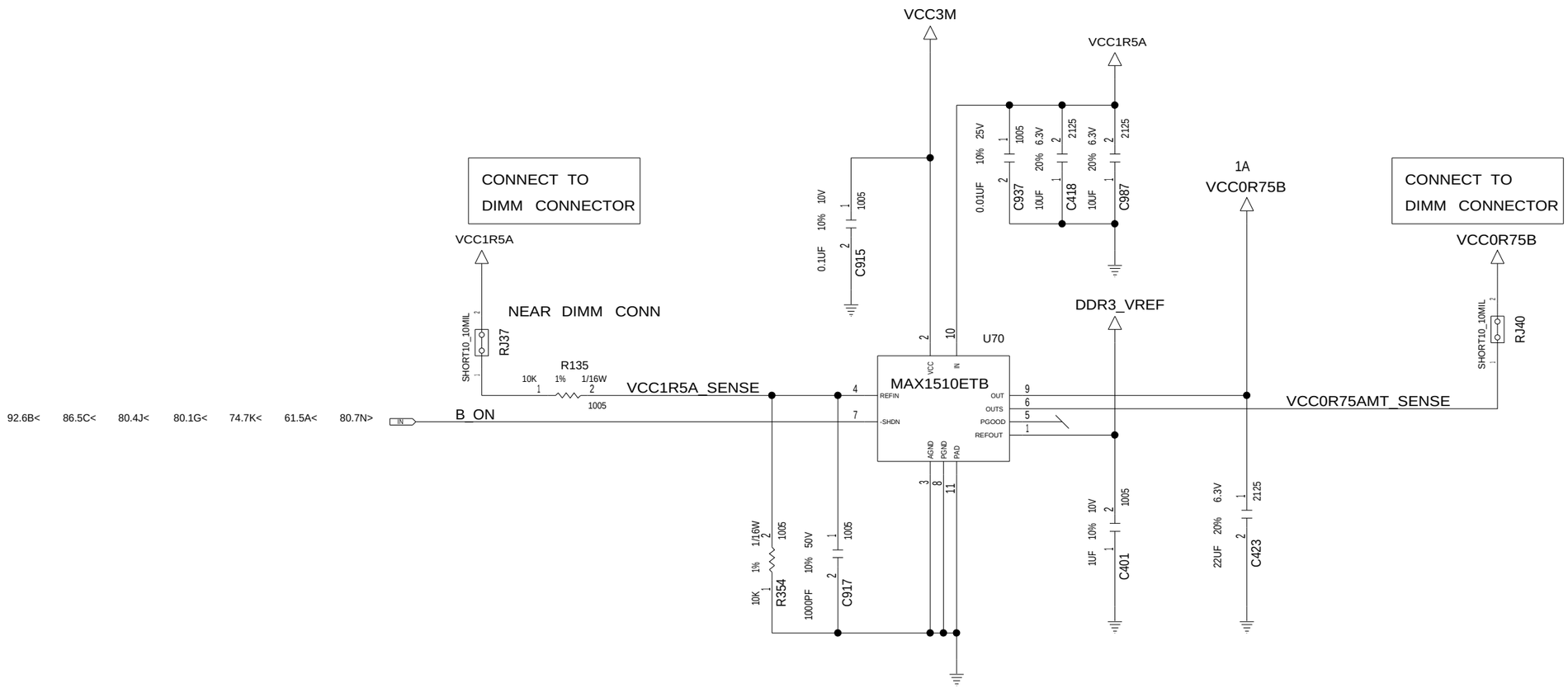


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DC/DC VCC1R5A
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 89 / 99



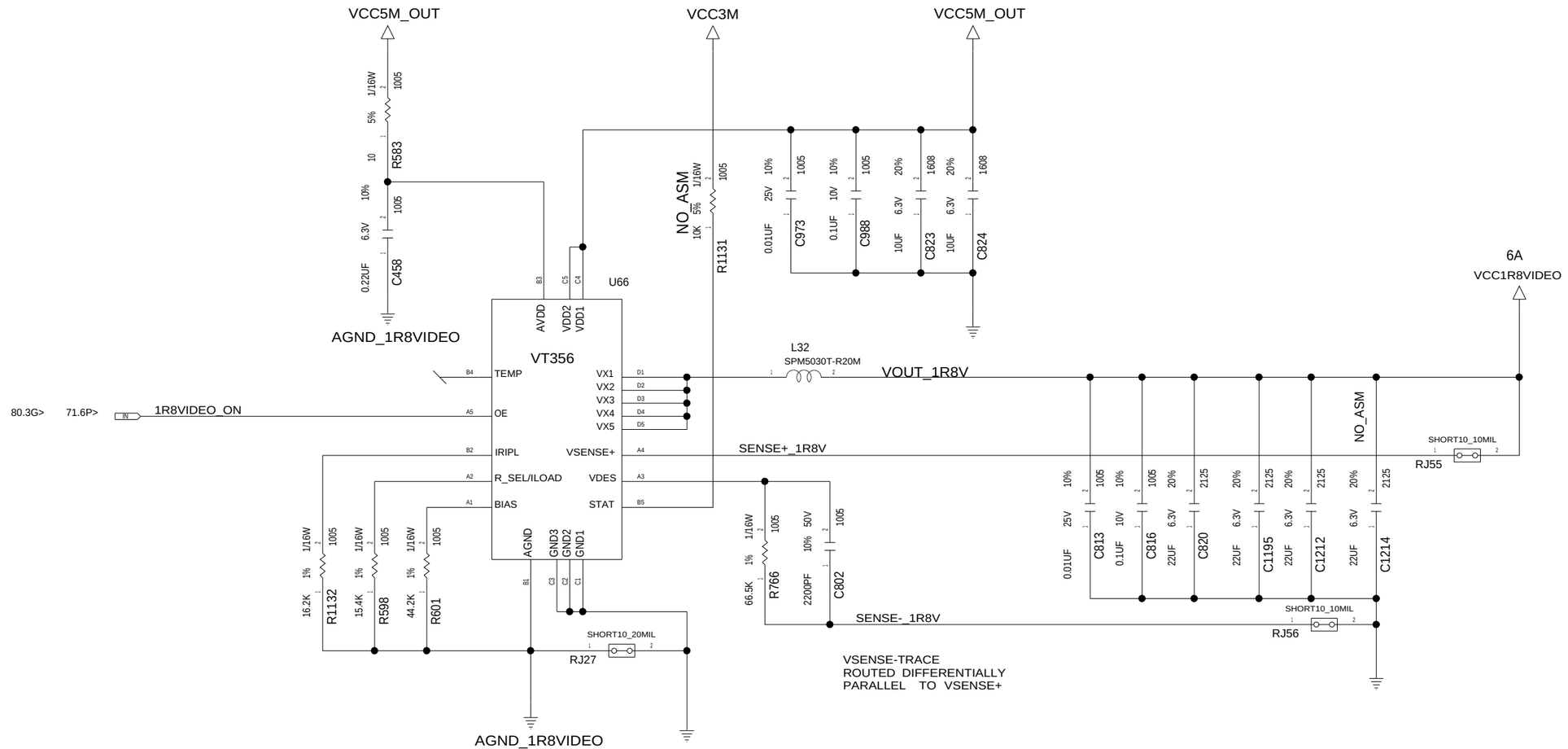
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DC/DC VCC0R75B
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 90 / 99

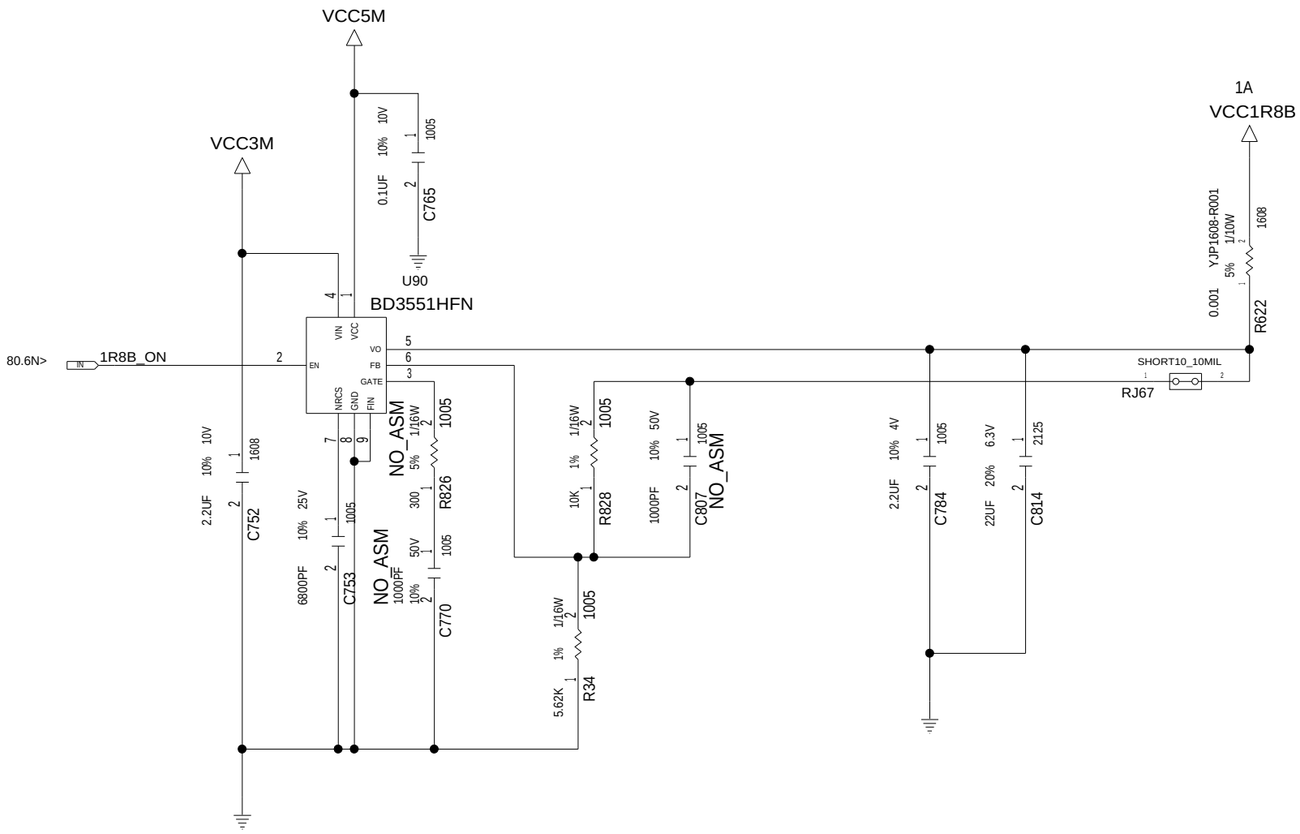


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	DC/DC VCC1R8VIDEO
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 91 / 99



DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	DC/DC VCC1R8B	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.

PART NO. VER.1.31

DEVELOPMENT NO.

Q/M 92 / 99

REFER TO VCPIN28 CIRCUIT

RINKAN_1

NO_ASM

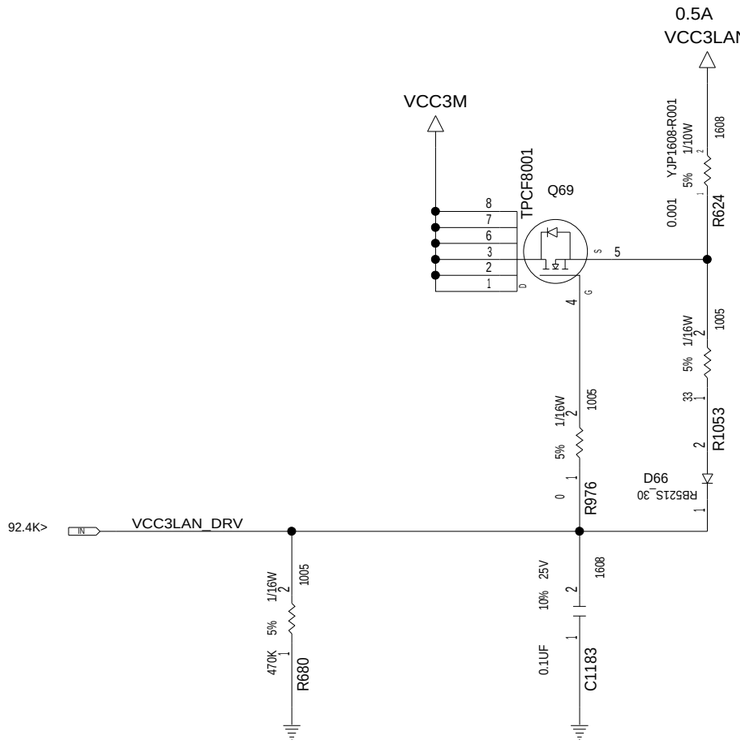
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	DC/DC RINKAN

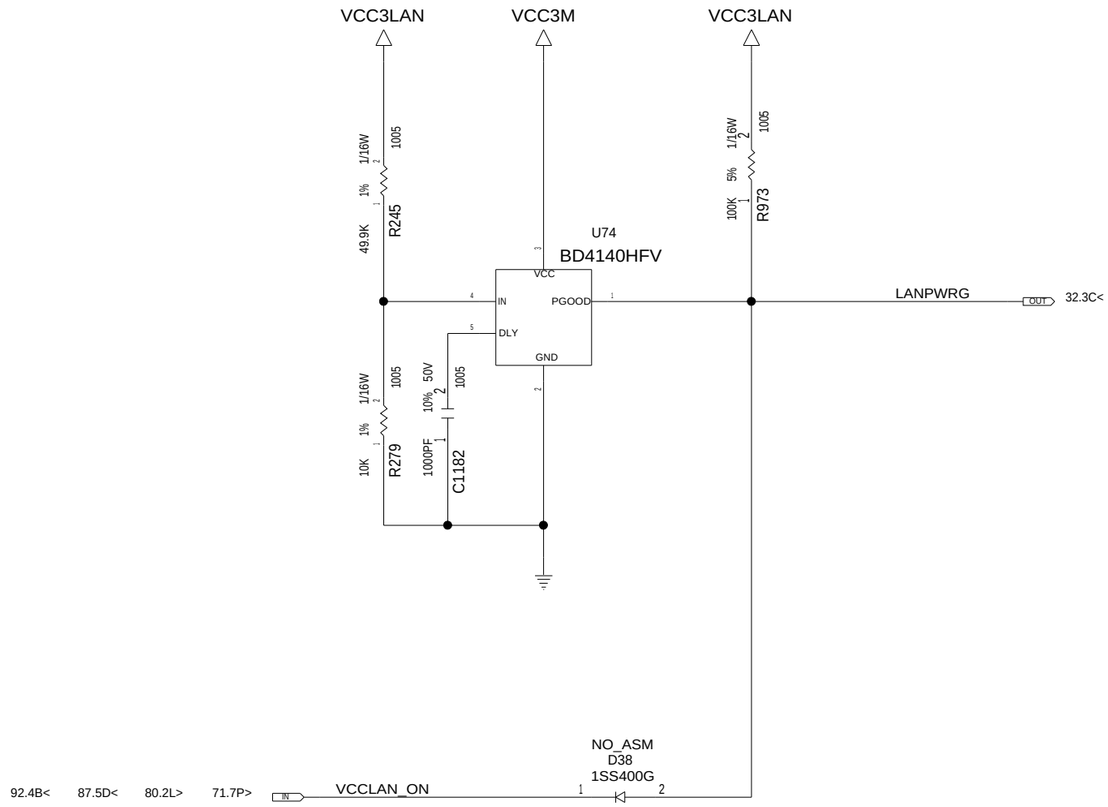
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 93 / 99





DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	LOAD SW LAN & LANPWRG	
CLASS	H.K	12/04/08		

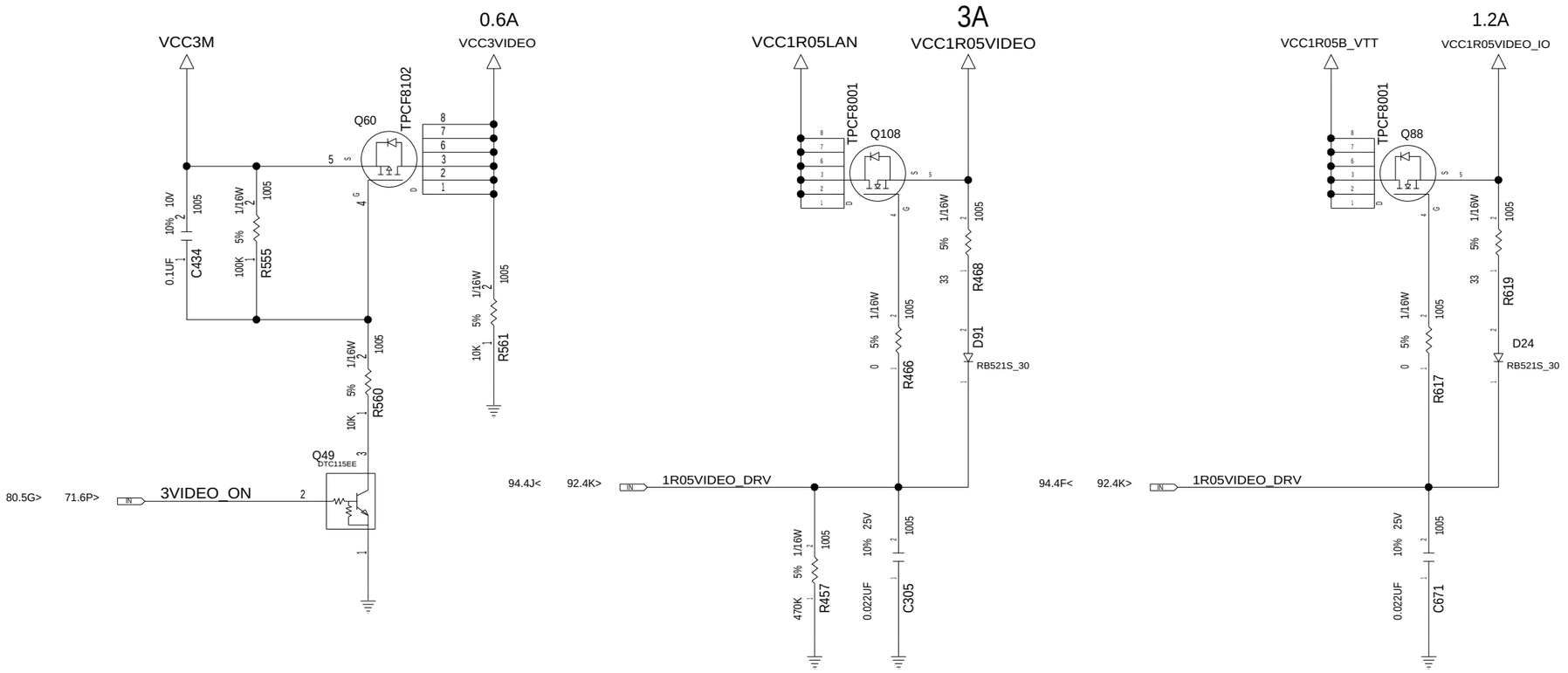
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 94 / 99

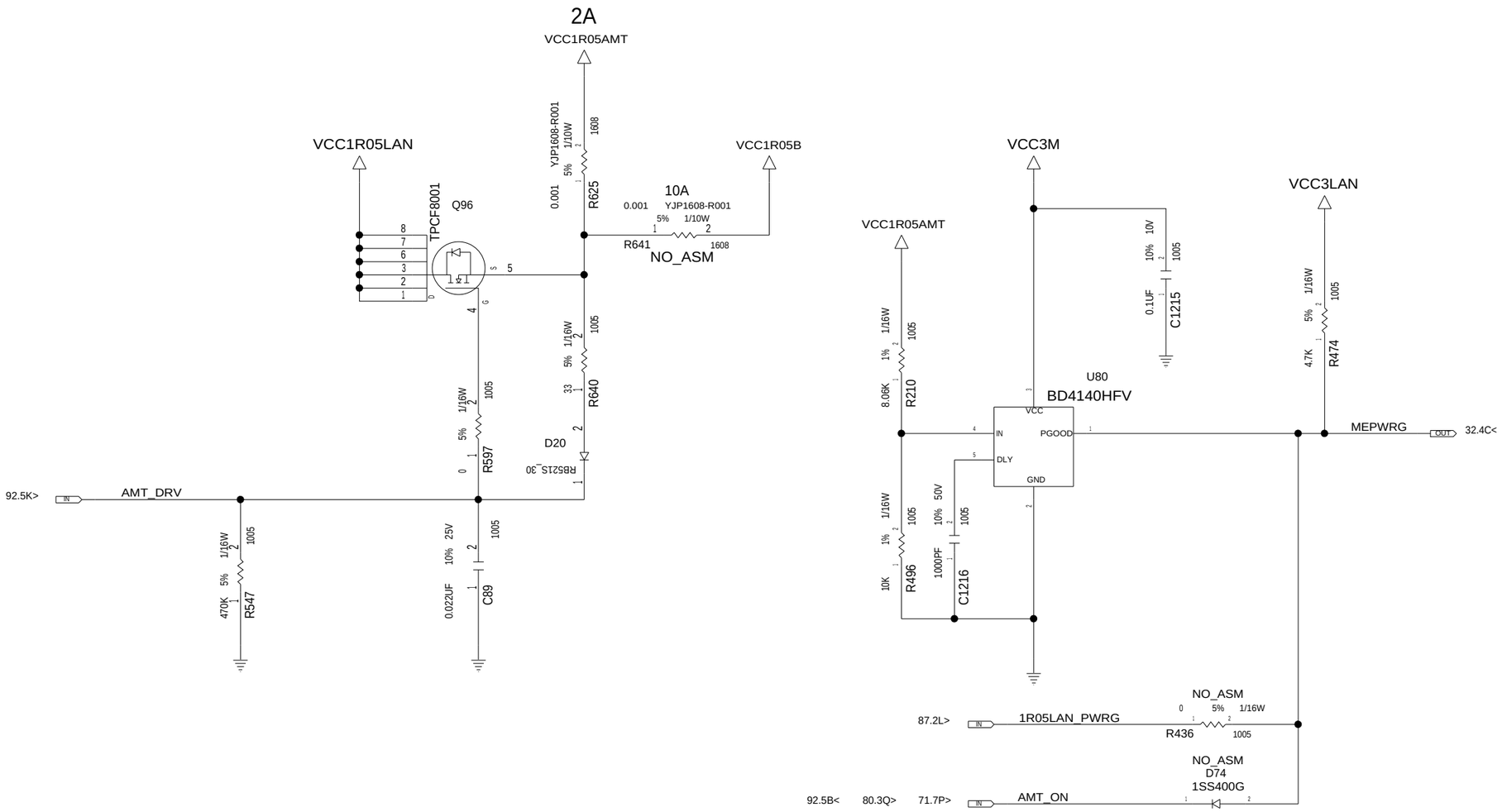


DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV
APPROVED	H.K	12/04/08	LOAD SW VIDEO
CLASS	H.K	12/04/08	

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 95 / 99



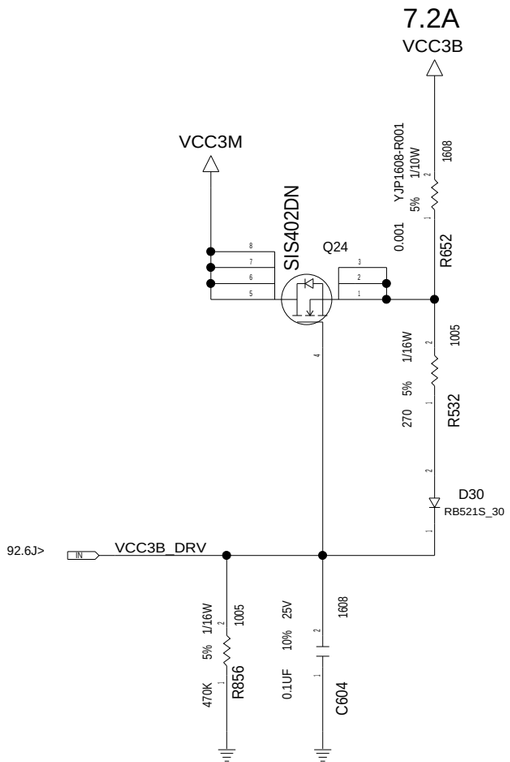
DESIGNER	K.Y	12/04/08	PART NO. VER.1.31	
CHECKED	Y.I	12/04/08		
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV	
CLASS	H.K	12/04/08	LOAD SW AMT / MEPWRG	

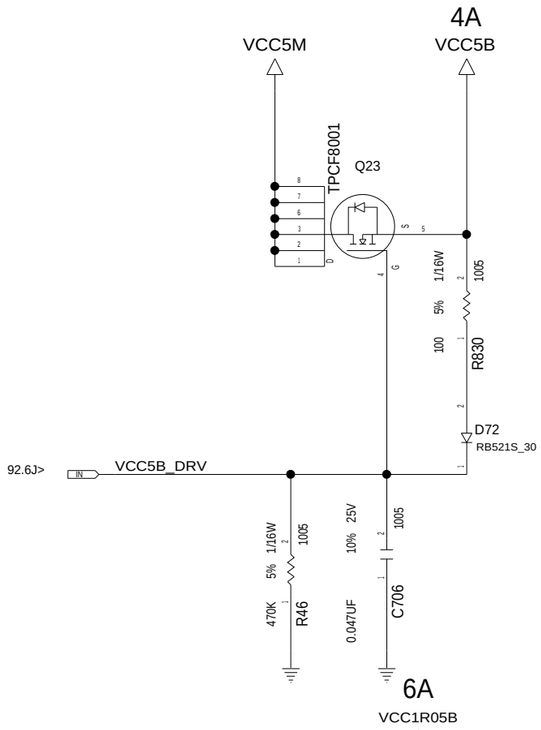
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

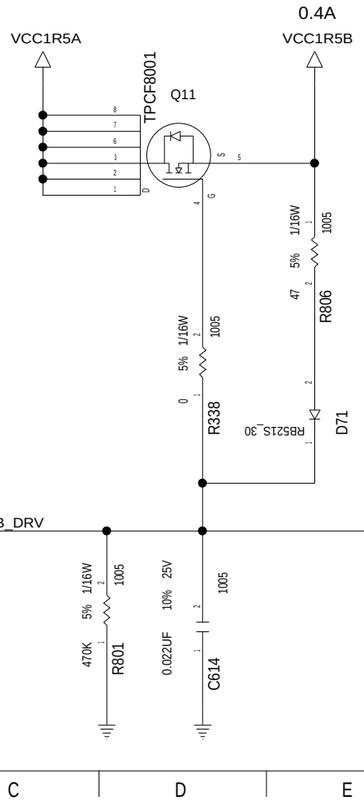
LENOVO CONFIDENTIAL

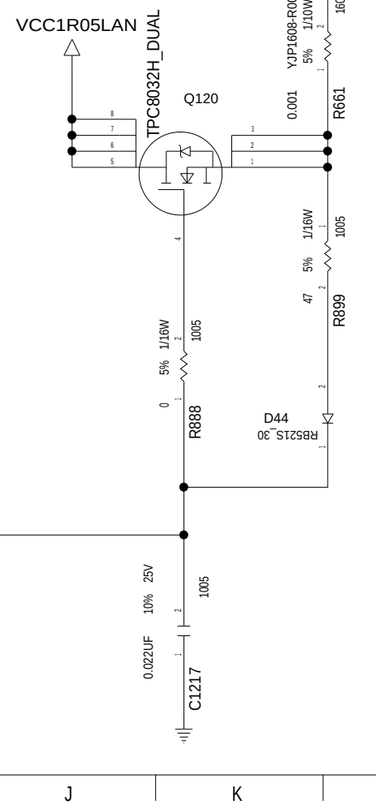
hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 96 / 99







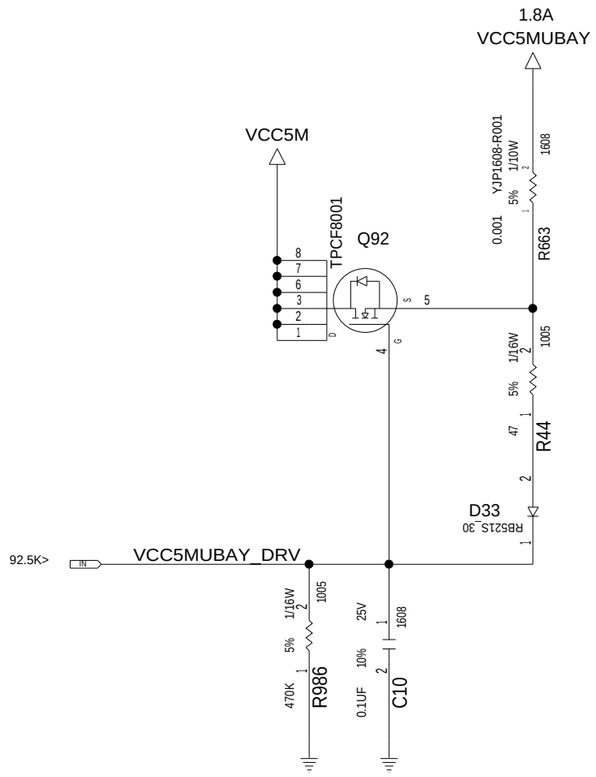


			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	LOAD SW B	
CLASS	H.K	12/04/08		

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 97 / 99



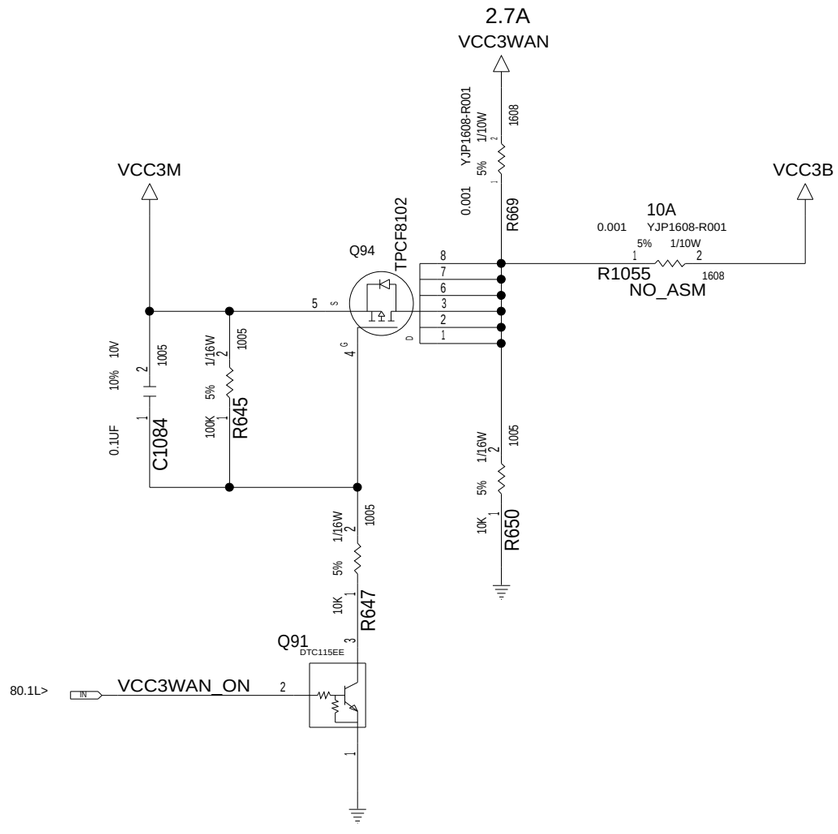
			PART NO. VER.1.31	
DESIGNER	K.Y	12/04/08		
CHECKED	Y.I	12/04/08	TITLE NOZOMI EXT SDV	
APPROVED	H.K	12/04/08	LOAD SW VCC5MUBAY	
CLASS	H.K	12/04/08		

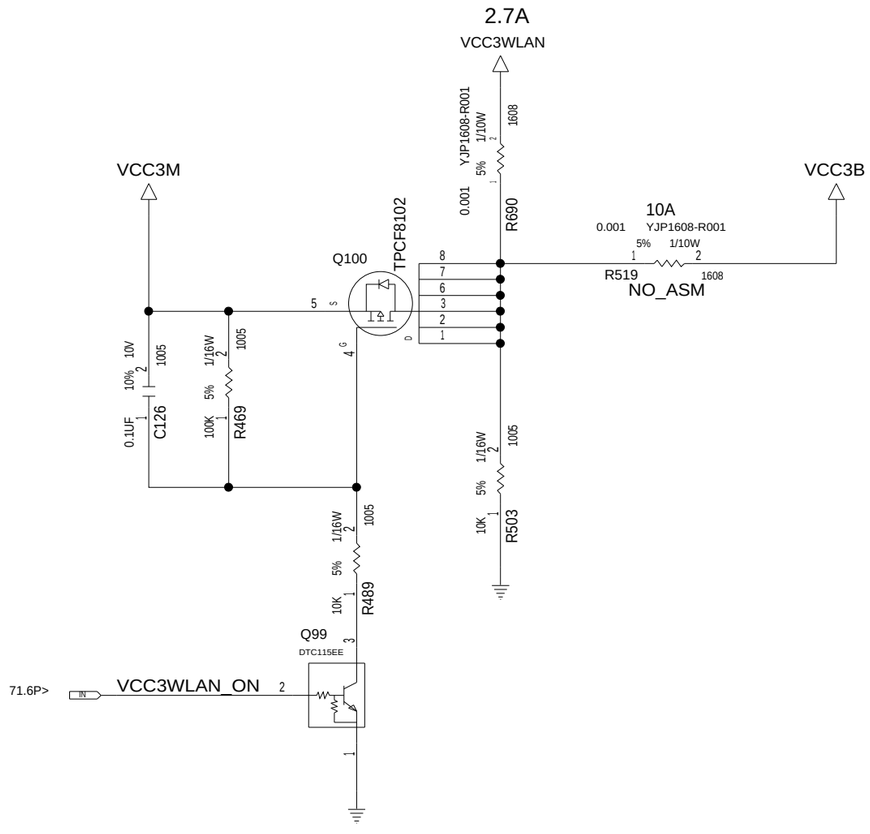
THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

hexainf@hotmail.com
GRATIS - FOR FREE

	DATE	EC NO.	PART NO. VER.1.31	
			DEVELOPMENT NO.	Q/M 98 / 99





TABLE

ALWAYS ON	REG/LITE	BB/NO
R1055	NO_ASM	ASM
Q94	ASM	NO_ASM
R650	ASM	NO_ASM
R645	ASM	NO_ASM
C1084	ASM	NO_ASM
R647	ASM	NO_ASM
Q91	ASM	NO_ASM

LOGIC

DESIGNER	K.Y	12/04/08	PART NO. VER.1.31
CHECKED	Y.I	12/04/08	
APPROVED	H.K	12/04/08	TITLE NOZOMI EXT SDV
CLASS	H.K	12/04/08	LOAD SW WAN & WLAN

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

LENOVO CONFIDENTIAL

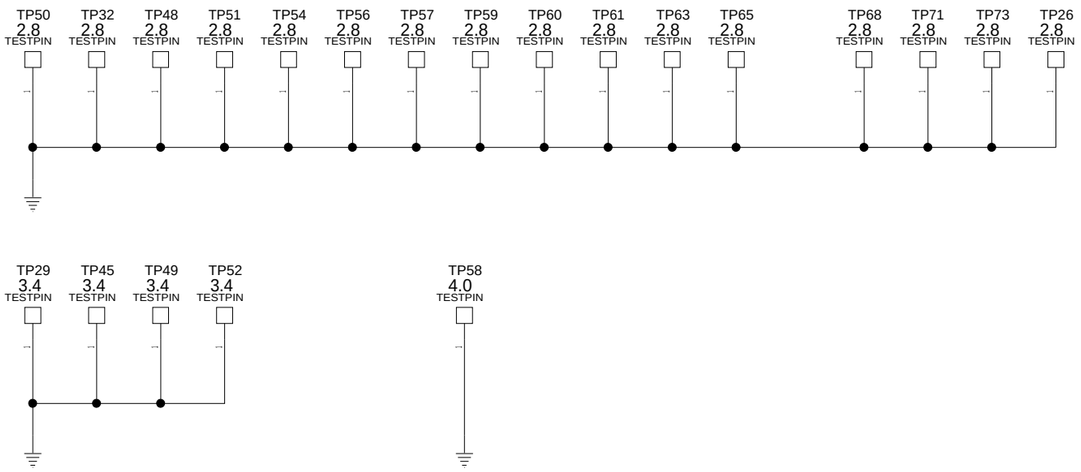
	DATE	EC NO.

PART NO.
VER.1.31

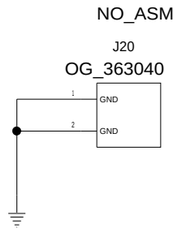
DEVELOPMENT NO.

Q/M
99 / 99

PTH FOR SCREW HOLE



NO_ASM



CONTACT FOR FAN MODULE

DESIGNER	K.Y	12/04/08
CHECKED	Y.I	12/04/08
APPROVED	H.K	12/04/08
CLASS	H.K	12/04/08

THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.

PART NO.
VER.1.31

TITLE NOZOMI EXT SDV

PTH FOR SCREW HOLES

LENOVO CONFIDENTIAL

VER.1.31

hexainf@hotmail.com
GRATIS - FOR FREE