

DJ1 Montevina UMA Schematics Document

uFCPGA Mobile Penryn


Intel GM45+ICH9M

2010-02-10

REV : A00

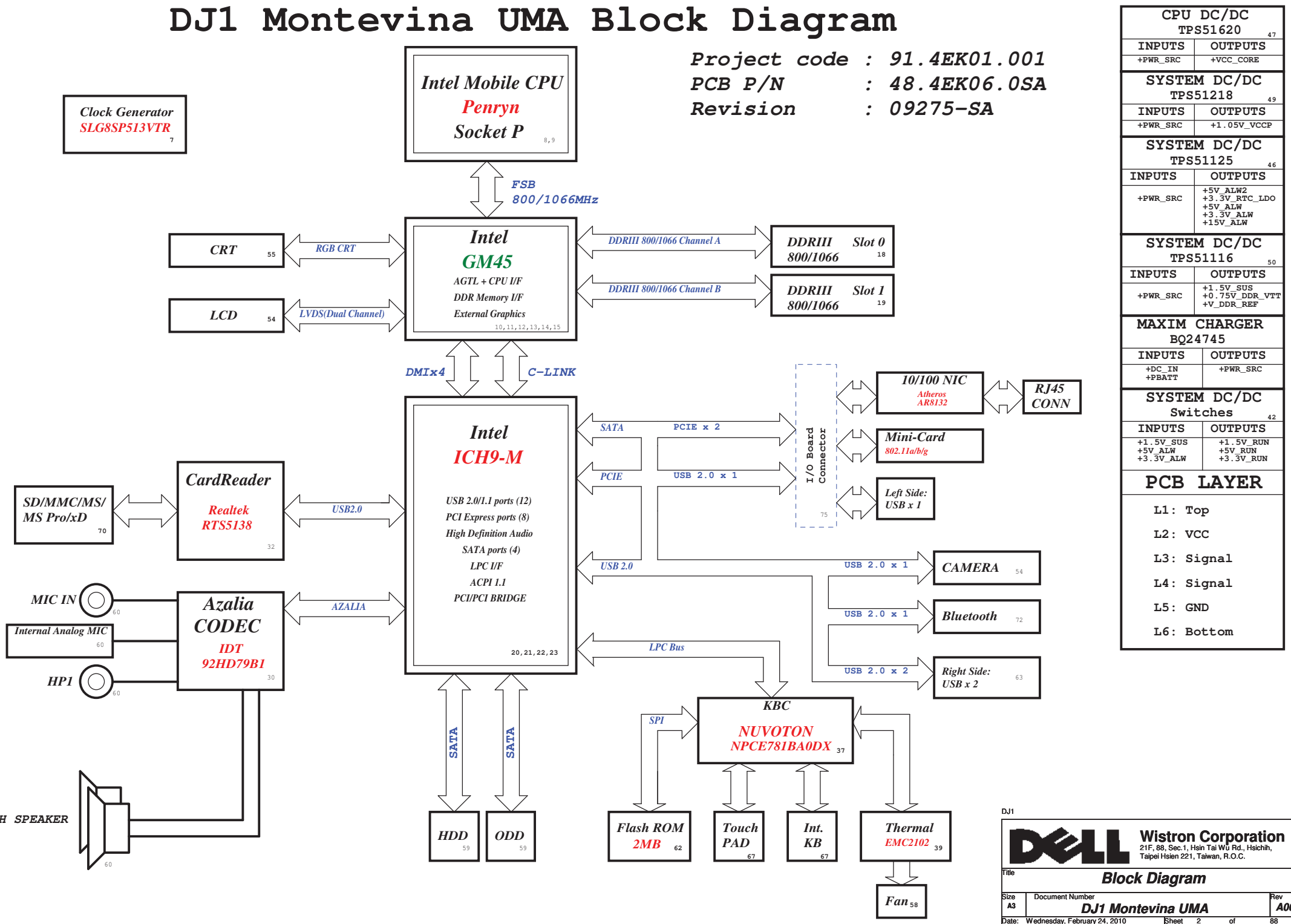
DY : Nopop Component

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Cover Page		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 1	of 88

DJ1 Montevina UMA Block Diagram

Project code : 91.4EK01.001
 PCB P/N : 48.4EK06.0SA
 Revision : 09275-SA



CPU DC/DC TPS51620 ₄₇	
INPUTS	OUTPUTS
+PWR_SRC	+VCC_CORE
SYSTEM DC/DC TPS51218 ₄₉	
INPUTS	OUTPUTS
+PWR_SRC	+1.05V_VCCP
SYSTEM DC/DC TPS51125 ₄₆	
INPUTS	OUTPUTS
+PWR_SRC	+5V_ALW2 +3.3V_RTC_LDO +5V_ALW +3.3V_ALW +15V_ALW
SYSTEM DC/DC TPS51116 ₅₀	
INPUTS	OUTPUTS
+PWR_SRC	+1.5V_SUS +0.75V_DDR_VTT +V_DDR_REF
MAXIM CHARGER BQ24745	
INPUTS	OUTPUTS
+DC_IN +PBATT	+PWR_SRC
SYSTEM DC/DC Switches ₄₂	
INPUTS	OUTPUTS
+1.5V_SUS +5V_ALW +3.3V_ALW	+1.5V_RUN +5V_RUN +3.3V_RUN
PCB LAYER	
L1: Top	
L2: VCC	
L3: Signal	
L4: Signal	
L5: GND	
L6: Bottom	

DJ1

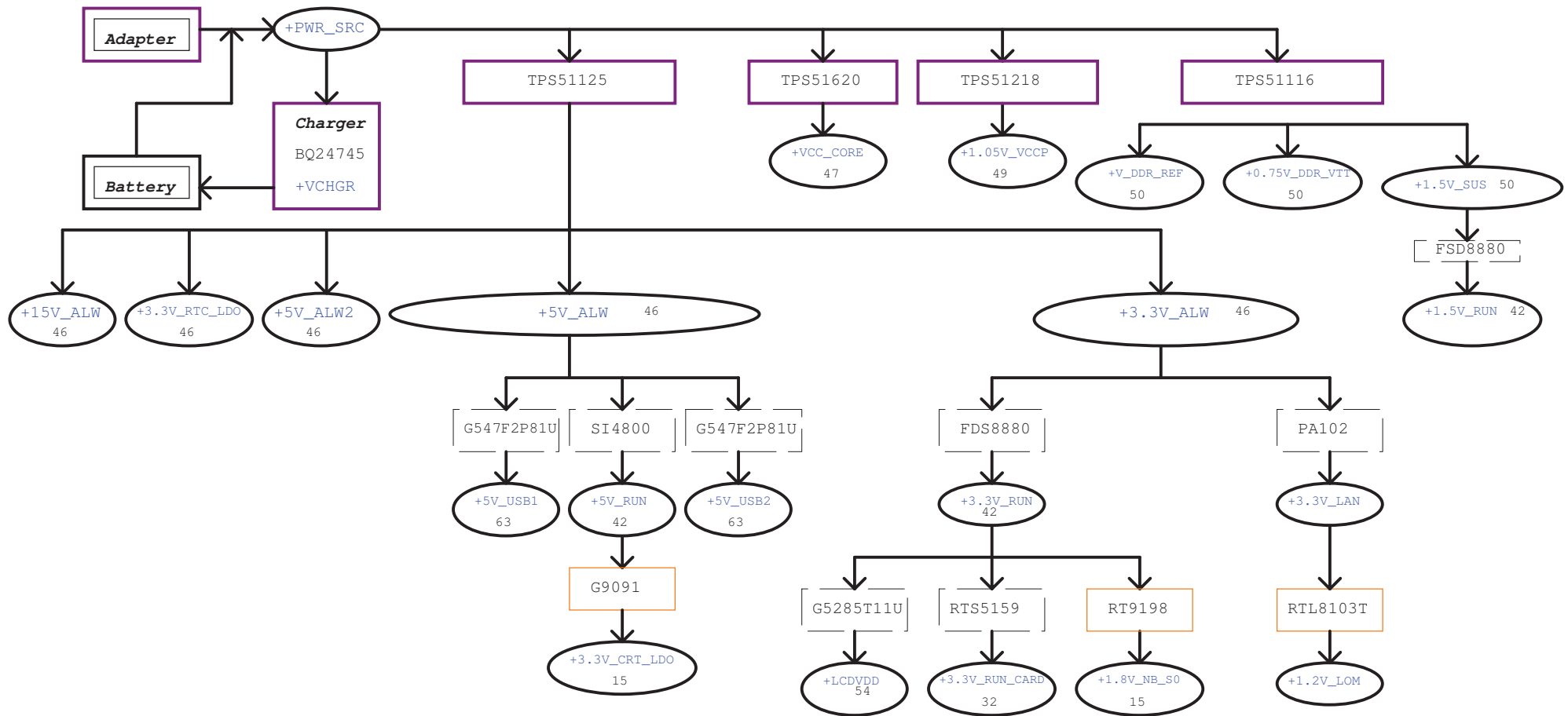
Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

Title: **Block Diagram**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------

Date: Wednesday, February 24, 2010 Sheet 2 of 88

DJ1 Montevina UMA Power Block Diagram



Power Shape

Regulator

LDO

Switch

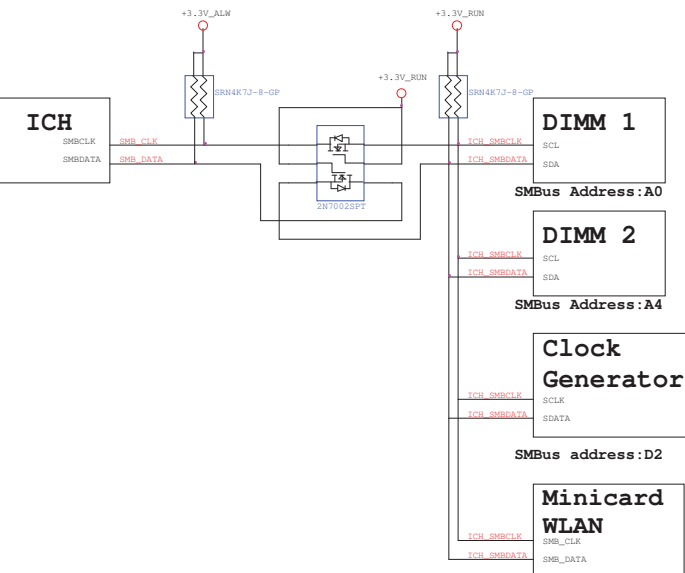
DJ1



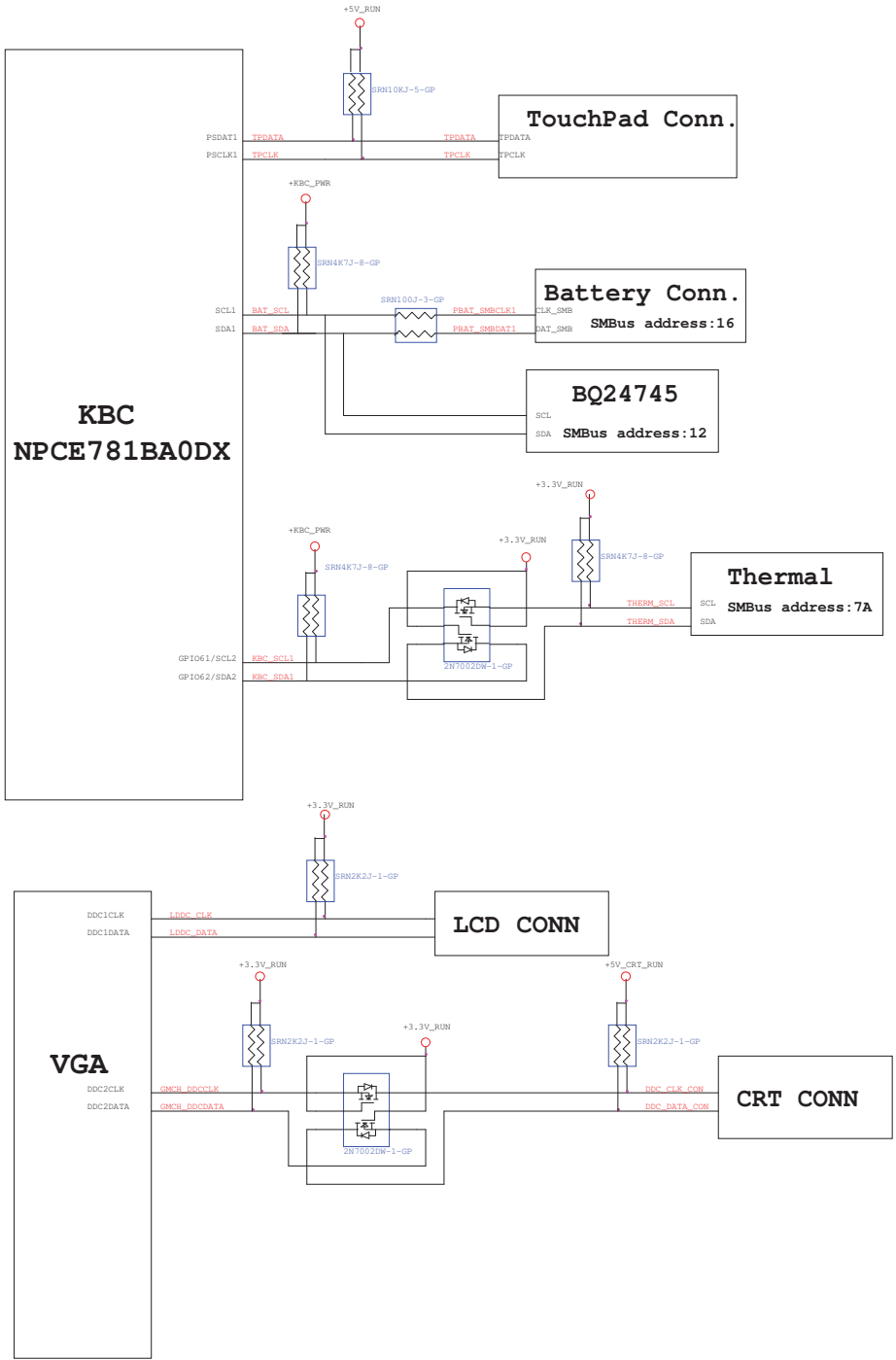
Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			Power Block Diagram		
Size	Document Number	Rev		A00	
A3	DJ1 Montevina UMA				
Date:	Wednesday, February 24, 2010	Sheet	3	of	88

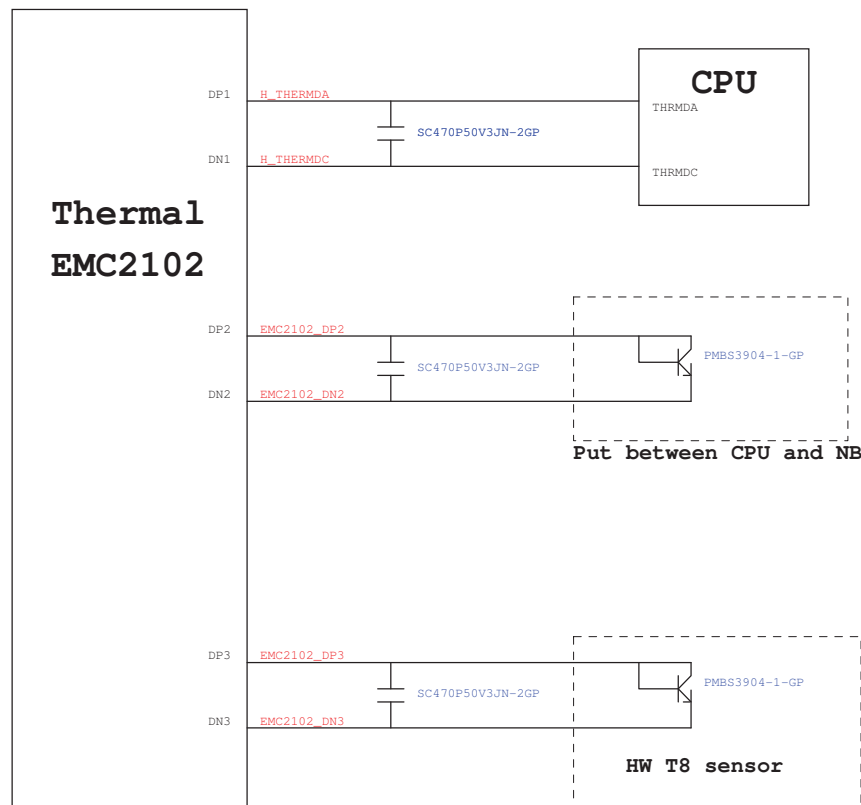
ICH SMBus Block Diagram



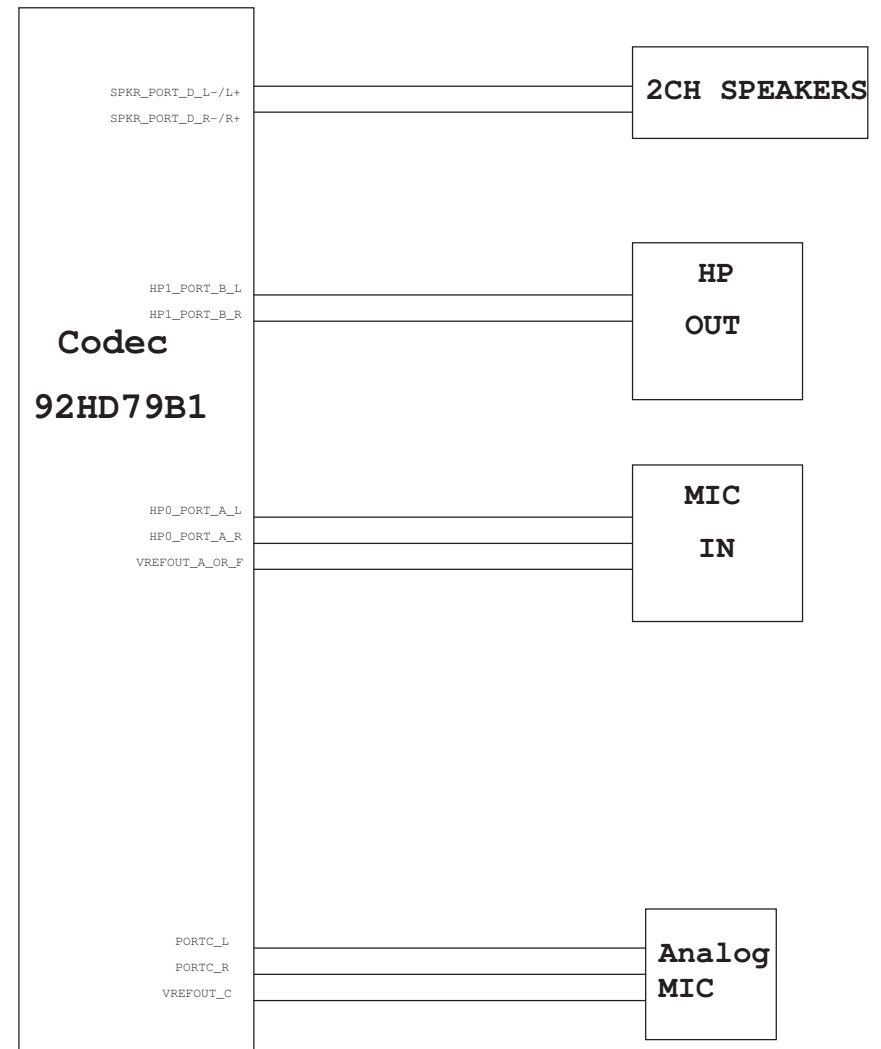
KBC SMBus Block Diagram



Thermal Block Diagram



Audio Block Diagram



DJ1

ICH9M Functional Strap Definitions

ICH9 EDS 642879 Rev.2.3

Signal	Usage/When Sampled	Comment															
HDA_SDOUT	XOR Chain Entrance / PCI Express* Port Config 1 bit 1 (Port 1-4), Rising Edge of PWROK	Allows entrance to XOR Chain testing when TP3 pulled low at rising edge of PWROK. When TP3 not pulled low at rising edge of PWROK, sets bit 1 of RPC.PC (Chipset Config Registers: Offset 224h). This signal has a weak internal pull-down.															
HDA_SYNC	PCI Express Port Config 1 bit 0 (Port 1-4), Rising Edge of PWROK.	This signal has a weak internal pull-down. Sets bit 0 of RPC.PC (Chipset Config Registers: Offset 224h)															
GNT2# / GPIO53	PCI Express Port Config 2 bit 2 (Port 5-6), Rising Edge of PWROK	This signal has a weak internal pull-up. Sets bit 2 of RPC.PC2 (Chipset Config Registers: Offset 0224h) when sampled low.															
GPIO20	Reserved, Rising Edge of PWROK	This signal has a weak internal pull-down. NOTE: This signal should not be pulled high															
GNT1# / GPIO51	ESI Strap (Server Only), Rising Edge of PWROK.	Tying this strap low configures DMI for ESIncompatible operation. This signal has a weak internal pull-up. NOTE: ESI compatible mode is for server platforms only. This signal should not be pulled low for desktop and mobile.															
GNT3# / GPIO55	Top-Block Swap override, Rising Edge of PWROK.	Sampled low: this indicates that the system is strapped to the "top-block swap" mode (IntelR ICH9 inverts A16 for all cycles targeting BIOS space). The status of this strap is readable via the Top Swap bit (Chipset Config Registers: Offset 3414h; bit 0). Note that software will not be able to clear the Top-Swap bit until the system is rebooted without GNT3# being pulled down.															
GNT0#	Boot BIOS Destination Selection 1, Rising Edge of PWROK.	Controllable via Boot BIOS Destination bit (Chipset Config Registers: Offset 3410h; bit 11). This strap is used in conjunction with Boot BIOS Destination Selection 0 strap. <table border="1"> <thead> <tr> <th>Bit11 (GNT0#)</th> <th>Bit 10 (SPI_CS1#)</th> <th>Boot BIOS Destination</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>SPI</td> </tr> <tr> <td>1</td> <td>0</td> <td>PCI</td> </tr> <tr> <td>1</td> <td>1</td> <td>LPC</td> </tr> <tr> <td>0</td> <td>0</td> <td>Reserved</td> </tr> </tbody> </table>	Bit11 (GNT0#)	Bit 10 (SPI_CS1#)	Boot BIOS Destination	0	1	SPI	1	0	PCI	1	1	LPC	0	0	Reserved
Bit11 (GNT0#)	Bit 10 (SPI_CS1#)	Boot BIOS Destination															
0	1	SPI															
1	0	PCI															
1	1	LPC															
0	0	Reserved															
SPI_CS1# / GPIO58	Boot BIOS Destination Selection 0, Rising Edge of CLPWROK	Controllable via Boot BIOS Destination bit (Chipset Config Registers: Offset 3410h; bit 10). This strap is used in conjunction with Boot BIOS Destination Selection 1 strap. <table border="1"> <thead> <tr> <th>Bit11 (GNT0#)</th> <th>Bit 10 (SPI_CS1#)</th> <th>Boot BIOS Destination</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>SPI</td> </tr> <tr> <td>1</td> <td>0</td> <td>PCI</td> </tr> <tr> <td>1</td> <td>1</td> <td>LPC</td> </tr> <tr> <td>0</td> <td>0</td> <td>Reserved</td> </tr> </tbody> </table>	Bit11 (GNT0#)	Bit 10 (SPI_CS1#)	Boot BIOS Destination	0	1	SPI	1	0	PCI	1	1	LPC	0	0	Reserved
Bit11 (GNT0#)	Bit 10 (SPI_CS1#)	Boot BIOS Destination															
0	1	SPI															
1	0	PCI															
1	1	LPC															
0	0	Reserved															
SATALED#	PCI Express Lane Reversal (Lanes 1-4), Rising Edge of PWROK.	Signal has weak internal pull-up. Sets bit 27 of MPC.LR (Device 28; Function 0; Offset D8)															
SPKR	No Reboot, Rising Edge of PWROK.	Sampled high: this indicates that the system is strapped to the "No Reboot" mode (ICH9 will disable the TCO Timer system reboot feature). The status of this strap is readable via the NO REBOOT bit (Chipset Config Registers: Offset 3410h; bit 5).															
TP3	XOR Chain Entrance, Rising Edge of PWROK.	This signal should not be pull low unless using XOR Chain testing.															
GPIO33 / HDA_DOCK_EN#	Flash Descriptor Security Override Strap. (Mobile Only)	Sampled low: the Flash Descriptor Security will be overridden. Sampled high: the security measures will be in effect. This strap should only be enabled in manufacturing environments.															
GPIO49	DMI Termination Voltage, Rising Edge of CLPWROK.	The signal is required to be high for mobile applications.															
SPI_MOSI (Mobile Only)	Integrated TPM Enable, Rising Edge of CLPWROK.	Sampled low: the Integrated TPM will be disabled. Sampled high: the MCH TPM enable strap is sampled low and the TPM Disable bit is clear, the Integrated TPM will be enabled. NOTE: This signal is required to be floating or pulled low for desktop applications.															

ICH9 Integrated pull-up and pull-down Resistors

ICH9 EDS 642879 Rev.2.3

SIGNAL	Resistor Type/Value
CL_CLK[1:0]	PULL-UP 20K
CL_DATA[1:0]	PULL-UP 20K
CL_RST0#	PULL-UP 10K
DPRSLPVR/GPIO16	PULL-DOWN 20K
HDA_BIT_CLK	PULL-DOWN 20K
HDA_DOCK_EN#/GPIO33	PULL-UP 20K
HDA_RST#	PULL-DOWN 20K
HDA_SDIN[3:0]	PULL-DOWN 20K
HDA_SDOUT	PULL-DOWN 20K
HDA_SYNC	PULL-DOWN 20K
GNT0#, GNT[3:1]#/GPIO[55, 53, 51]	PULL-UP 20K
GPIO20	PULL-DOWN 20K
GPIO49	PULL-UP 20K
LAD[3:0]# / FHW[3:0]#	PULL-UP 20K
LAN_RXD[2:0]	PULL-UP 20K
LDRQ0	PULL-UP 20K
LDRQ1 / GPIO23	PULL-UP 20K
PME#	PULL-UP 20K
PWRBTN#	PULL-UP 20K
SATALED#	PULL-UP 15K
SPI_CS1# / GPIO58 (Desktop Only) / CLGPIO6 (Digital Office Only)	PULL-UP 20K
SPI_MOSI	PULL-DOWN 20K
SPI_MISO	PULL-UP 20K
SPKR	PULL-DOWN 20K
TACH[3:0]	PULL-UP 20K
TP3	PULL-UP 20K
USB[11:0] [P,N]	PULL-DOWN 15K

PCIE Routing

LANE1	
LANE2	MiniCard WLAN
LANE3	LAN

USB Table

USB Pair	Device
0	USB0 (I/O Board)
1	USB1 (I/O Board 17")
2	USB2
3	USB3
4	BLUETOOTH
5	RESERVED
6	WLAN
7	RESERVED
8	RESERVED
9	RESERVED
10	Card Reader
11	CAMERA

Cantiga chipset and ICH9M I/O controller Hub strapping configuration

Montevina Platform Design guide 355648 Rev.2.3

Pin Name	Strap Description	Configuration
CFG2:0	FSB Frequency	000 = FSB1066 010 = FSB800 011 = FSB667 Others = Reserved
CFG5	DMI x2 Select	0 = DMI x2 1 = DMI x4 (Default)
CFG6	iTPM Host Interface	0 = The iTPM Host Interface is enabled (Note 2) 1 = The iTPM Host Interface is disabled (default)
CFG7	Intel Management engine crypto strap	0 = Intel Management Engine Crypto Transport Layer Security (TLS) cipher suite with no confidentiality 1 = Intel Management Engine Crypto TLS cipher suite with confidentiality (default)
CFG9	PCIe Graphics Lane	0 = Reverse Lanes, 15->0, 14->1 etc. 1 = Normal operation (default): Lane Numbered in Order
CFG10	PCIe Loopback enable	0 = Enable (Note 3) 1 = Disable (Default)
CFG12	ALLZ	0 = ALLZ mode enabled (Note 3) 1 = Disable (Default)
CFG13	XOR	0 = XOR mode enabled (Note 3) 1 = Disable (Default)
CFG16	FSB Dynamic ODT	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled (Default)
CFG19	DMI Lane Reversal	0 = Normal operation (Default): Lane Numbered in Order 1 = Reverse Lanes DMI x4 mode [MCH->ICH]: (3->0, 2->1, 1->2 and 0->3) DMI x2 mode [MCH->ICH]: (3->0, 2->1)
CFG20	Digital Display Port (SDVO/DP/HDMI) Concurrent with PCIe	0 = Only digital DisplayPort (SDVO/DP/HDMI) or PCIe is operational (default) 1 = Digital DisplayPort (SDVO/DP/HDMI) and PCIe are operating simultaneously via the PEG port
SDVO_CTRLDATA (Note4)	SDVO Present	0 = No SDVO/HDMI/DP interface disabled (default) 1 = SDVO/HDMI/DP interface enabled
L_DDC_DATA	Local Flat Panel (LFP) Present	0 = LFP Disabled (Default) 1 = LFP Card Present; PCIe disabled
DDPC_CTRLDATA (Note4)	Digital Display Present	0 = Digital display (HDMI/DP) device absent (default) 1 = Digital display (HDMI/DP) Device Present
CFG4:3 CFG8 CFG11 CFG14 CFG15 CFG17 CFG18	Reserved	

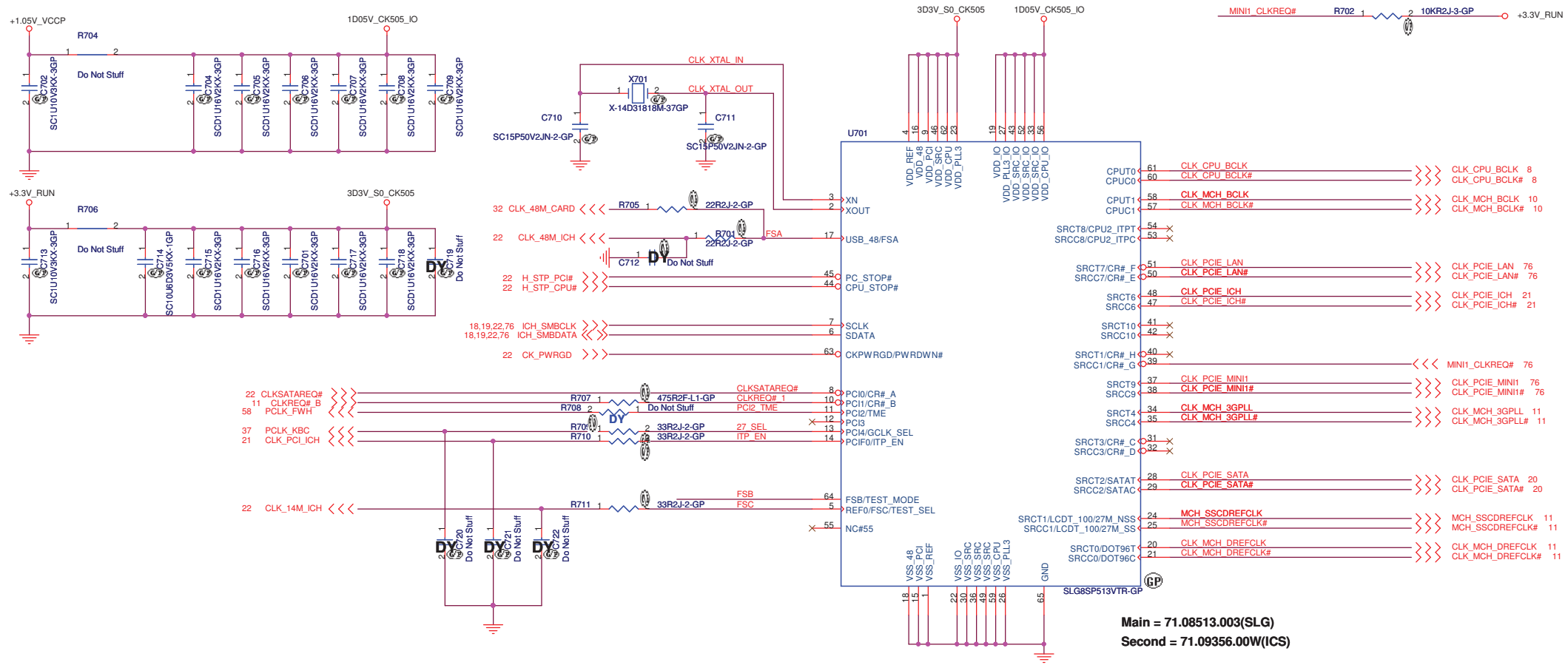
NOTE:

- All strap signals are sampled with respect to the leading edge of the GMCH Power OK (PWROK) signal.
- iTPM can be disabled by a 'Soft-Strap' option in the Flash-descriptor section of the Firmware. This 'Soft-Strap' is activated only after enabling iTPM via CFG6.
- Only one of the CFG10/CFG12/CFG13 straps can be enabled at any time.
- DDPC_CTRL_DATA & SDVO_CTRL_DATA straps should both be high to enable Display Port.

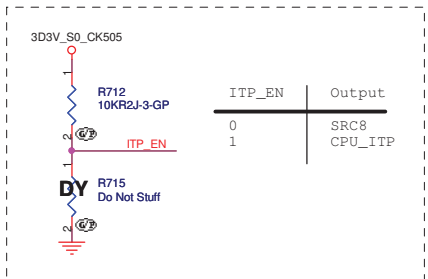
DJ1

			Wistron Corporation		
			21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title					
Table of Content					
Size	Document Number			Rev	
Custom	DJ1 Montevina UMA			A00	
Date:	Wednesday, February 24, 2010	Sheet	6	of	88

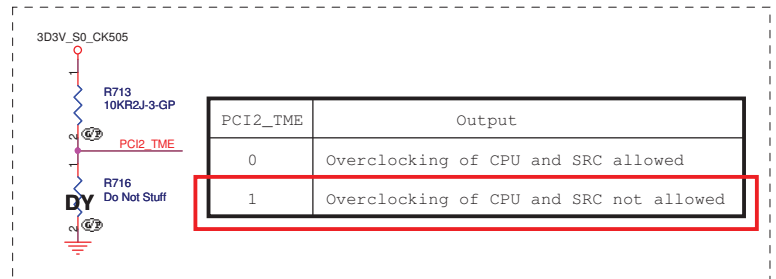
SSID = CLOCK



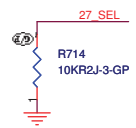
Main = 71.08513.003(SLG)
Second = 71.09356.00W(ICS)



ITP_EN	Output
0	SRC8
1	CPU_ITP

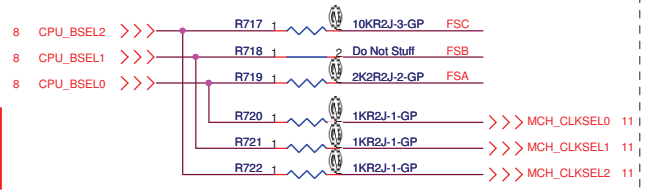


PCI2_TME	Output
0	Overclocking of CPU and SRC allowed
1	Overclocking of CPU and SRC not allowed



27_SEL	PIN20/21	PIN24/25
0	96M	100M
1	100M	27M

SEL2	SEL1	SEL0	CPU	FSB
FSC	FSB	FSA		
1	0	1	100M	X
0	0	1	133M	533M
0	1	1	166M	667M
0	1	0	200M	800M
0	0	0	266M	1067M



DJ1

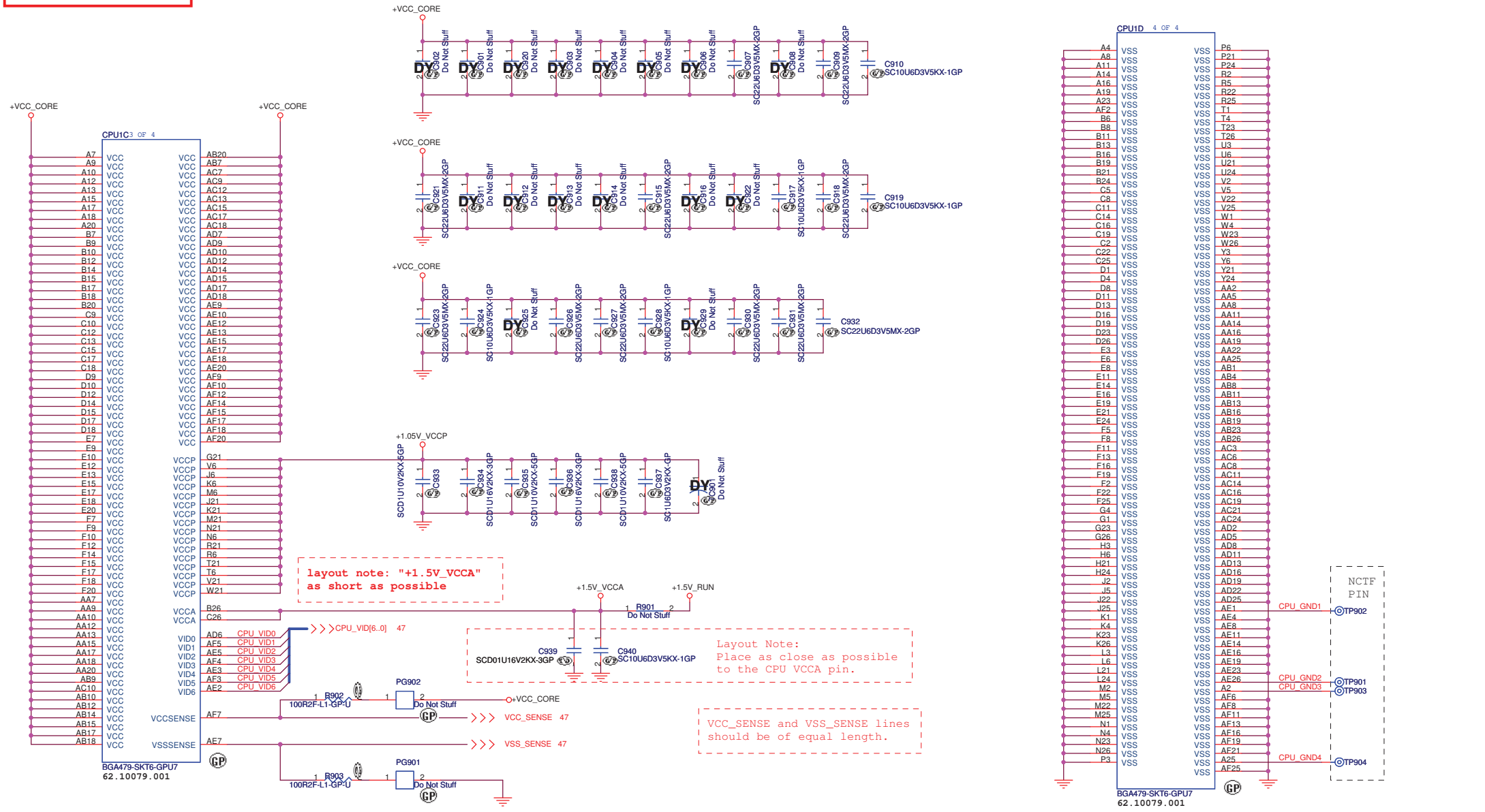
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **Clock Generator SLG8SP513VTR**

Size: Custom Document Number: **DJ1 Montevina UMA** Rev: **A00**

Date: Friday, February 26, 2010 Sheet 7 of 88

SSID = CPU



CPUID 4 OF 4		CPUID 4 OF 4	
A4	VSS	P6	VSS
A8	VSS	P21	VSS
A11	VSS	P24	VSS
A14	VSS	R2	VSS
A16	VSS	R5	VSS
A19	VSS	R22	VSS
A23	VSS	R25	VSS
AF2	VSS	T1	VSS
B6	VSS	T4	VSS
B8	VSS	T23	VSS
B11	VSS	T26	VSS
B13	VSS	U3	VSS
B16	VSS	U6	VSS
B19	VSS	U21	VSS
B21	VSS	U24	VSS
B24	VSS	V2	VSS
C5	VSS	V5	VSS
C8	VSS	V22	VSS
C11	VSS	V25	VSS
C14	VSS	W1	VSS
C16	VSS	W4	VSS
C19	VSS	W23	VSS
C2	VSS	W26	VSS
C22	VSS	V3	VSS
C25	VSS	Y6	VSS
D1	VSS	Y21	VSS
D4	VSS	Y24	VSS
D8	VSS	AA2	VSS
D11	VSS	AA5	VSS
D13	VSS	AA8	VSS
D16	VSS	AA11	VSS
D19	VSS	AA14	VSS
D23	VSS	AA16	VSS
D26	VSS	AA19	VSS
E3	VSS	AA22	VSS
E6	VSS	AA25	VSS
E8	VSS	AB1	VSS
E11	VSS	AB4	VSS
E14	VSS	AB7	VSS
E16	VSS	AB11	VSS
E19	VSS	AB13	VSS
E21	VSS	AB16	VSS
E24	VSS	AB19	VSS
F5	VSS	AB23	VSS
F8	VSS	AB26	VSS
F11	VSS	AC3	VSS
F13	VSS	AC6	VSS
F16	VSS	AC8	VSS
F19	VSS	AC11	VSS
F2	VSS	AC14	VSS
F22	VSS	AC16	VSS
F25	VSS	AC19	VSS
G4	VSS	AC21	VSS
G1	VSS	AC24	VSS
G23	VSS	AD2	VSS
G26	VSS	AD5	VSS
H3	VSS	AD8	VSS
H6	VSS	AD11	VSS
H21	VSS	AD13	VSS
H24	VSS	AD16	VSS
J2	VSS	AD19	VSS
J5	VSS	AD22	VSS
J22	VSS	AD25	VSS
J25	VSS	AE1	VSS
K1	VSS	AE4	VSS
K4	VSS	AE8	VSS
K23	VSS	AE11	VSS
L3	VSS	AE14	VSS
L6	VSS	AE16	VSS
L21	VSS	AE19	VSS
L24	VSS	AE23	VSS
M2	VSS	AE26	VSS
M5	VSS	A2	VSS
M22	VSS	AF6	VSS
M25	VSS	AF8	VSS
N1	VSS	AF11	VSS
N4	VSS	AF13	VSS
N4	VSS	AF16	VSS
N23	VSS	AF19	VSS
N26	VSS	AF21	VSS
P3	VSS	A25	VSS
	VSS	AF25	VSS

DJ1

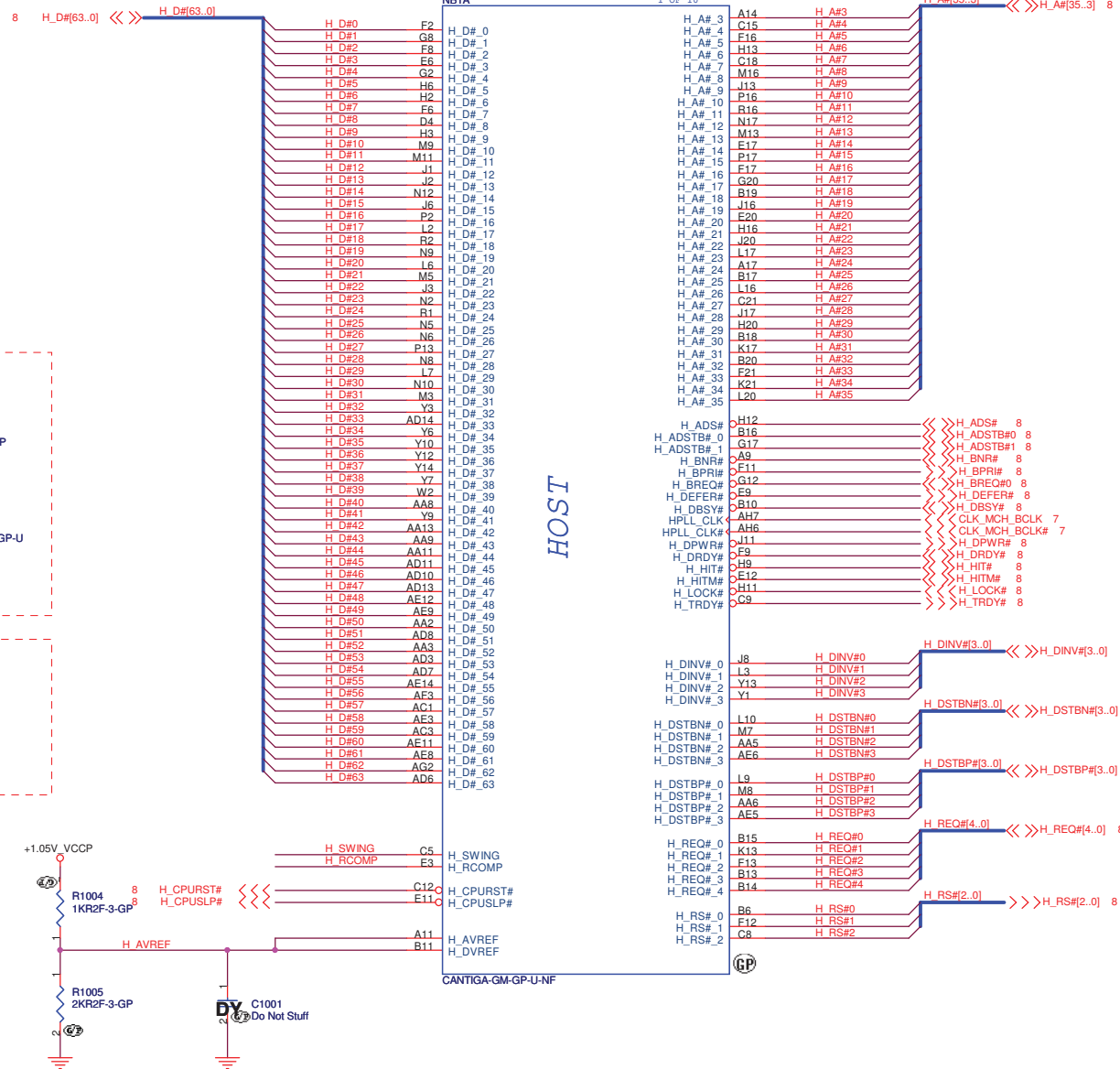
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **CPU-Power(2/2)**

Size: Custom	Document Number: DJ1 Montevina UMA	Rev: A00
--------------	---	-----------------

Date: Friday, February 26, 2010 Sheet 9 of 88

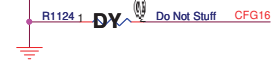
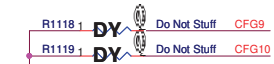
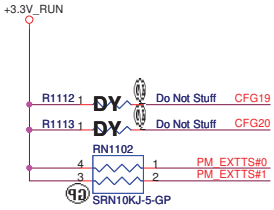
SSID = MCH



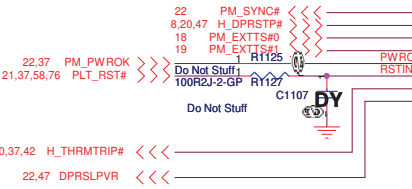
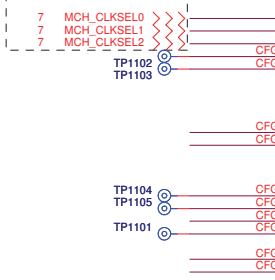
SSID = MCH

* is current setting

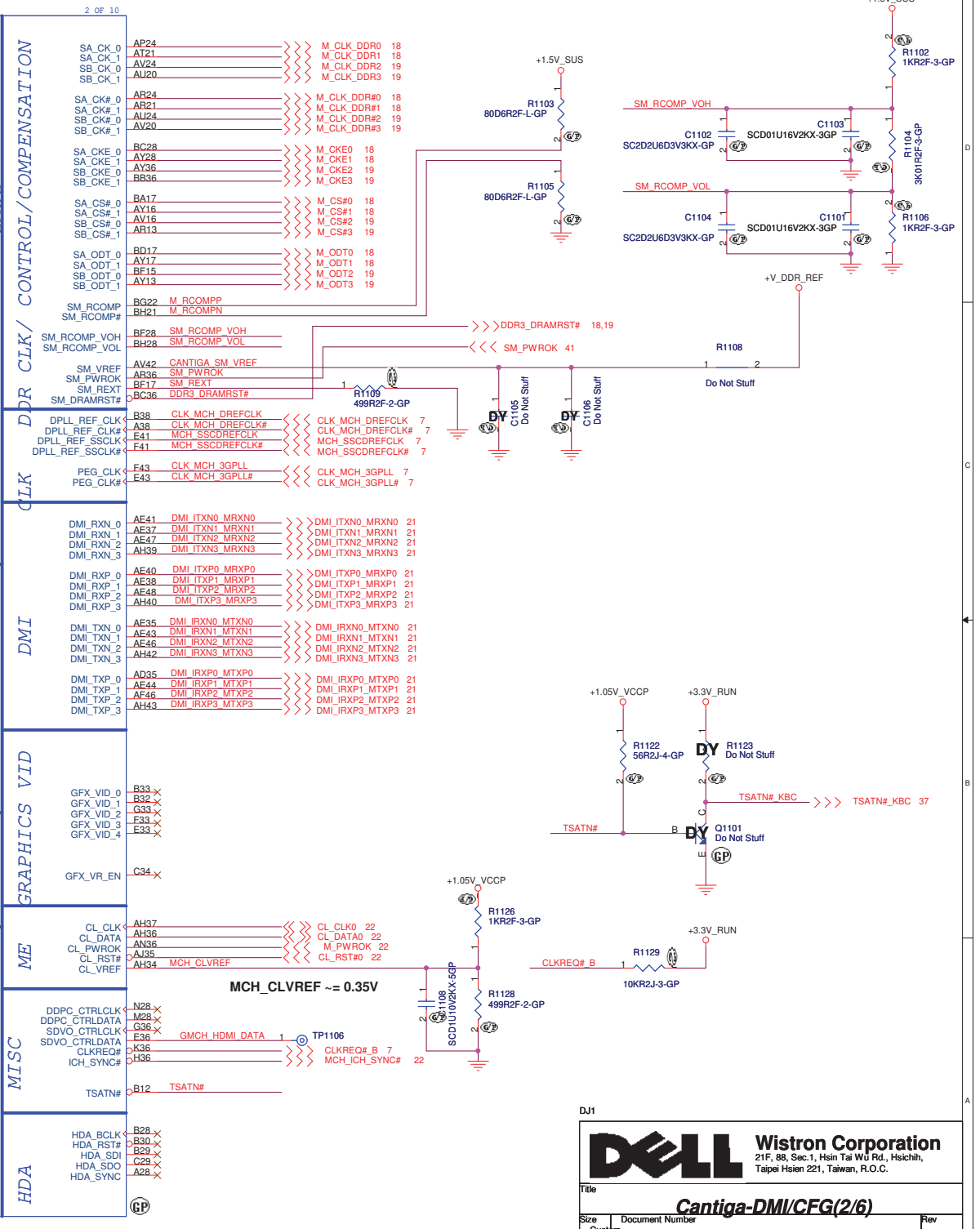
CFG Strap	Low	High
CFG 5	DMI X 2	DMI X 4 *
CFG 6	ITPM enable	ITPM disable *
CFG 7	TLS cipher suite with no confidentiality	TLS cipher suite with confidentiality *
CFG 9	PCIE GFX lane reversed	PCIE GFX lane numbered in order *
CFG 10	PCIE loopback enable	PCIE loopback disable *
CFG 12	ALLZ mode enable	ALLZ mode disable *
CFG 13	XOR mode enable	XOR mode disable *
CFG 16	FSB dynamic ODT disable	FSB Dynamic ODT enable *
CFG 19	Normal operation *	Reverse DMI lanes
CFG 20	Only PCIE or SDVO is operational *	PCIE and SDVO are operating simultaneously via the PEG port
SDVO_CTRLDATA	SDVO interface disable *	SDVO interface enable
L_DDC_DATA	LFP disable *	LFP card present
DDPC_CTRLDATA	SDVO/iHDMI/DP interface disabled *	SDVO/iHDMI/DP interface enabled



FSB setting



- NB1B 2 OF 10
- RESERVED#M36
- RESERVED#N36
- RESERVED#R33
- RESERVED#T33
- RESERVED#AH9
- RESERVED#AH10
- RESERVED#AH12
- RESERVED#AH13
- RESERVED#K12
- RESERVED#AL34
- RESERVED#AK34
- RESERVED#AN35
- RESERVED#AM35
- RESERVED#T24
- RESERVED#B31
- RESERVED#B2
- RESERVED#M1
- RESERVED#AY21
- RESERVED#BG23
- RESERVED#BF23
- RESERVED#BH18
- RESERVED#BF18
- RESERVED#M36
- RESERVED#N36
- RESERVED#R33
- RESERVED#T33
- RESERVED#AH9
- RESERVED#AH10
- RESERVED#AH12
- RESERVED#AH13
- RESERVED#K12
- RESERVED#AL34
- RESERVED#AK34
- RESERVED#AN35
- RESERVED#AM35
- RESERVED#T24
- RESERVED#B31
- RESERVED#B2
- RESERVED#M1
- RESERVED#AY21
- RESERVED#BG23
- RESERVED#BF23
- RESERVED#BH18
- RESERVED#BF18
- CFG_0
- CFG_1
- CFG_2
- CFG_3
- CFG_4
- CFG_5
- CFG_6
- CFG_7
- CFG_8
- CFG_9
- CFG_10
- CFG_11
- CFG_12
- CFG_13
- CFG_14
- CFG_15
- CFG_16
- CFG_17
- CFG_18
- CFG_19
- CFG_20
- PM_SYNC#
- H DPRSTP#
- PM_EXTTSS0
- PM_EXTTSS1
- PM_PWROK
- PLT_RST#
- H_THRMTRIP#
- DPRSLPVR
- NC#BG48
- NC#BF48
- NC#BD48
- NC#BC48
- NC#BH47
- NC#BG47
- NC#BE47
- NC#BH46
- NC#BF46
- NC#BG45
- NC#BH44
- NC#BH43
- NC#BH6
- NC#BH5
- NC#BG4
- NC#BH3
- NC#BF3
- NC#BH2
- NC#BG2
- NC#BE2
- NC#BG1
- NC#BF1
- NC#BD1
- NC#BC1
- NC#F1
- NC#A47
- SA CK_0
- SA CK_1
- SB CK_0
- SB CK_1
- SA CK_0
- SA CK_1
- SB CK_0
- SB CK_1
- SA_CKE_0
- SA_CKE_1
- SB_CKE_0
- SB_CKE_1
- SA_CS_0
- SA_CS_1
- SB_CS_0
- SB_CS_1
- SA_ODT_0
- SA_ODT_1
- SB_ODT_0
- SB_ODT_1
- M_RCMPMP
- M_RCMPFN
- SM_RCAMP_VOH
- SM_RCAMP_VOL
- SM_VREF
- SM_PWROK
- SM_REXT
- SM_DRAMRST#
- CLK MCH DREFCLK
- CLK MCH DREFCLK#
- MCH_SSCDREFCLK
- MCH_SSCDREFCLK#
- CLK MCH_3GPLL
- CLK MCH_3GPLL#
- DMITXN0_MRXN0
- DMITXN1_MRXN1
- DMITXN2_MRXN2
- DMITXN3_MRXN3
- DMITXP0_MRXP0
- DMITXP1_MRXP1
- DMITXP2_MRXP2
- DMITXP3_MRXP3
- DMIRXN0_MTXN0
- DMIRXN1_MTXN1
- DMIRXN2_MTXN2
- DMIRXN3_MTXN3
- DMIRXP0_MTXP0
- DMIRXP1_MTXP1
- DMIRXP2_MTXP2
- DMIRXP3_MTXP3
- GFX_VID_0
- GFX_VID_1
- GFX_VID_2
- GFX_VID_3
- GFX_VID_4
- GFX_VR_EN
- CL_CLK0
- CL_DATA0
- CL_RST0
- MCH_CLVREF
- GMCH_HDMI_DATA
- CLKREQ#_B
- MCH_LCH_SYNC#
- TSATN#
- HDA_BCLK
- HDA_RST#
- HDA_SDI
- HDA_SDO
- HDA_SYNC



DELL Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

Title: **Cantiga-DMI/CFG(2/6)**

Size: Custom Document Number: **DJ1 Montevina UMA** Rev: **A00**

Date: Friday, February 26, 2010 Sheet 11 of 88

SSID = MCH

18 M_A_DQ[63..0] <<< M_A_DQ[63..0]

NB1D		4 OF 10	
M_A_DQ0	AJ38	SA_DQ_0	
M_A_DQ1	AJ41	SA_DQ_1	
M_A_DQ2	AN38	SA_DQ_2	
M_A_DQ3	AM38	SA_DQ_3	
M_A_DQ4	AJ46	SA_DQ_4	
M_A_DQ5	AJ40	SA_DQ_5	
M_A_DQ6	AM44	SA_DQ_6	
M_A_DQ7	AM42	SA_DQ_7	
M_A_DQ8	AN43	SA_DQ_8	
M_A_DQ9	AN44	SA_DQ_9	
M_A_DQ10	AU40	SA_DQ_10	
M_A_DQ11	AT38	SA_DQ_11	
M_A_DQ12	AN41	SA_DQ_12	
M_A_DQ13	AN39	SA_DQ_13	
M_A_DQ14	AU44	SA_DQ_14	
M_A_DQ15	AU42	SA_DQ_15	
M_A_DQ16	AV39	SA_DQ_16	
M_A_DQ17	AY44	SA_DQ_17	
M_A_DQ18	BA40	SA_DQ_18	
M_A_DQ19	BD43	SA_DQ_19	
M_A_DQ20	AV41	SA_DQ_20	
M_A_DQ21	AY43	SA_DQ_21	
M_A_DQ22	BB41	SA_DQ_22	
M_A_DQ23	BC40	SA_DQ_23	
M_A_DQ24	AY37	SA_DQ_24	
M_A_DQ25	BD38	SA_DQ_25	
M_A_DQ26	AV37	SA_DQ_26	
M_A_DQ27	AT36	SA_DQ_27	
M_A_DQ28	AY38	SA_DQ_28	
M_A_DQ29	BB38	SA_DQ_29	
M_A_DQ30	AV36	SA_DQ_30	
M_A_DQ31	AW36	SA_DQ_31	
M_A_DQ32	BD13	SA_DQ_32	
M_A_DQ33	AU11	SA_DQ_33	
M_A_DQ34	BC11	SA_DQ_34	
M_A_DQ35	BA12	SA_DQ_35	
M_A_DQ36	AU13	SA_DQ_36	
M_A_DQ37	AV13	SA_DQ_37	
M_A_DQ38	BD12	SA_DQ_38	
M_A_DQ39	BC12	SA_DQ_39	
M_A_DQ40	BB9	SA_DQ_40	
M_A_DQ41	BA9	SA_DQ_41	
M_A_DQ42	AU10	SA_DQ_42	
M_A_DQ43	AV9	SA_DQ_43	
M_A_DQ44	BA11	SA_DQ_44	
M_A_DQ45	BD9	SA_DQ_45	
M_A_DQ46	AY8	SA_DQ_46	
M_A_DQ47	BA6	SA_DQ_47	
M_A_DQ48	AV5	SA_DQ_48	
M_A_DQ49	AV7	SA_DQ_49	
M_A_DQ50	AT5	SA_DQ_50	
M_A_DQ51	AN8	SA_DQ_51	
M_A_DQ52	AU5	SA_DQ_52	
M_A_DQ53	AU6	SA_DQ_53	
M_A_DQ54	AT5	SA_DQ_54	
M_A_DQ55	AN10	SA_DQ_55	
M_A_DQ56	AM11	SA_DQ_56	
M_A_DQ57	AM5	SA_DQ_57	
M_A_DQ58	AJ9	SA_DQ_58	
M_A_DQ59	AJ8	SA_DQ_59	
M_A_DQ60	AN12	SA_DQ_60	
M_A_DQ61	AM13	SA_DQ_61	
M_A_DQ62	AJ11	SA_DQ_62	
M_A_DQ63	AJ12	SA_DQ_63	

DDR SYSTEM MEMORY A

CANTIGA-GM-GP-U-NF

SA_BS_0	BD21	M_A_BS0	18
SA_BS_1	BG18	M_A_BS1	18
SA_BS_2	AT25	M_A_BS2	18
SA_RAS#	BB20	M_A_RAS#	18
SA_CAS#	BD20	M_A_CAS#	18
SA_WE#	AY20	M_A_WE#	18
SA_DM_0	AM37	M_A_DM[7..0]	18
SA_DM_1	AT41	M_A_DM1	
SA_DM_2	AY41	M_A_DM2	
SA_DM_3	AU39	M_A_DM3	
SA_DM_4	BB12	M_A_DM4	
SA_DM_5	AV6	M_A_DM5	
SA_DM_6	AT7	M_A_DM6	
SA_DM_7	AJ5	M_A_DM7	
SA_DQS_0	AJ44	M_A_DQS[7..0]	18
SA_DQS_1	AT44	M_A_DQS1	
SA_DQS_2	BA43	M_A_DQS2	
SA_DQS_3	BC37	M_A_DQS3	
SA_DQS_4	AW12	M_A_DQS4	
SA_DQS_5	BC8	M_A_DQS5	
SA_DQS_6	AU8	M_A_DQS6	
SA_DQS_7	AM7	M_A_DQS7	
SA_DQS#_0	AJ43	M_A_DQS#0	18
SA_DQS#_1	AT43	M_A_DQS#1	
SA_DQS#_2	BA44	M_A_DQS#2	
SA_DQS#_3	BD37	M_A_DQS#3	
SA_DQS#_4	AY12	M_A_DQS#4	
SA_DQS#_5	BD8	M_A_DQS#5	
SA_DQS#_6	AU9	M_A_DQS#6	
SA_DQS#_7	AM8	M_A_DQS#7	
SA_MA_0	BA21	M_A_A[14..0]	18
SA_MA_1	BC24	M_A_A1	
SA_MA_2	BG24	M_A_A2	
SA_MA_3	BH24	M_A_A3	
SA_MA_4	BG25	M_A_A4	
SA_MA_5	BA24	M_A_A5	
SA_MA_6	BD24	M_A_A6	
SA_MA_7	BG27	M_A_A7	
SA_MA_8	BF25	M_A_A8	
SA_MA_9	AW24	M_A_A9	
SA_MA_10	BC21	M_A_A10	
SA_MA_11	BG26	M_A_A11	
SA_MA_12	BH26	M_A_A12	
SA_MA_13	BH17	M_A_A13	
SA_MA_14	AY25	M_A_A14	



19 M_B_DQ[63..0] <<< M_B_DQ[63..0]

NB1E		5 OF 10	
M_B_DQ0	AK47	SB_DS_0	
M_B_DQ1	AH46	SB_DS_1	
M_B_DQ2	AP47	SB_DS_2	
M_B_DQ3	AP46	SB_DS_3	
M_B_DQ4	AJ46	SB_DS_4	
M_B_DQ5	AJ48	SB_DS_5	
M_B_DQ6	AM48	SB_DS_6	
M_B_DQ7	AP48	SB_DS_7	
M_B_DQ8	AU47	SB_DS_8	
M_B_DQ9	AU46	SB_DS_9	
M_B_DQ10	AY48	SB_DS_10	
M_B_DQ11	AT47	SB_DS_11	
M_B_DQ12	AR47	SB_DS_12	
M_B_DQ13	BA47	SB_DS_13	
M_B_DQ14	BC47	SB_DS_14	
M_B_DQ15	BC46	SB_DS_15	
M_B_DQ16	BC44	SB_DS_16	
M_B_DQ17	BC43	SB_DS_17	
M_B_DQ18	BE43	SB_DS_18	
M_B_DQ19	BE45	SB_DS_19	
M_B_DQ20	BC41	SB_DS_20	
M_B_DQ21	BE40	SB_DS_21	
M_B_DQ22	BF41	SB_DS_22	
M_B_DQ23	BG38	SB_DS_23	
M_B_DQ24	BF38	SB_DS_24	
M_B_DQ25	BH35	SB_DS_25	
M_B_DQ26	BG35	SB_DS_26	
M_B_DQ27	BH40	SB_DS_27	
M_B_DQ28	BG39	SB_DS_28	
M_B_DQ29	BG34	SB_DS_29	
M_B_DQ30	BH34	SB_DS_30	
M_B_DQ31	BH14	SB_DS_31	
M_B_DQ32	BG12	SB_DS_32	
M_B_DQ33	BH11	SB_DS_33	
M_B_DQ34	BG8	SB_DS_34	
M_B_DQ35	BH12	SB_DS_35	
M_B_DQ36	BF11	SB_DS_36	
M_B_DQ37	BF8	SB_DS_37	
M_B_DQ38	BG7	SB_DS_38	
M_B_DQ39	BC5	SB_DS_39	
M_B_DQ40	BC5	SB_DS_40	
M_B_DQ41	BC6	SB_DS_41	
M_B_DQ42	AY3	SB_DS_42	
M_B_DQ43	AV1	SB_DS_43	
M_B_DQ44	BE6	SB_DS_44	
M_B_DQ45	BF5	SB_DS_45	
M_B_DQ46	BA1	SB_DS_46	
M_B_DQ47	BD3	SB_DS_47	
M_B_DQ48	AV2	SB_DS_48	
M_B_DQ49	AU3	SB_DS_49	
M_B_DQ50	AR3	SB_DS_50	
M_B_DQ51	AN2	SB_DS_51	
M_B_DQ52	AY2	SB_DS_52	
M_B_DQ53	AV1	SB_DS_53	
M_B_DQ54	AP3	SB_DS_54	
M_B_DQ55	AR1	SB_DS_55	
M_B_DQ56	AL1	SB_DS_56	
M_B_DQ57	AL2	SB_DS_57	
M_B_DQ58	AJ1	SB_DS_58	
M_B_DQ59	AH1	SB_DS_59	
M_B_DQ60	AM2	SB_DS_60	
M_B_DQ61	AM3	SB_DS_61	
M_B_DQ62	AH3	SB_DS_62	
M_B_DQ63	AJ3	SB_DS_63	

DDR SYSTEM MEMORY B

CANTIGA-GM-GP-U-NF

SB_BS_0	BC16	M_B_BS0	19
SB_BS_1	BB17	M_B_BS1	19
SB_BS_2	BB33	M_B_BS2	19
SB_RAS#	AU17	M_B_RAS#	19
SB_CAS#	BG16	M_B_CAS#	19
SB_WE#	BF14	M_B_WE#	19
SB_DM_0	AM47	M_B_DM[7..0]	19
SB_DM_1	AY47	M_B_DM1	
SB_DM_2	BD40	M_B_DM2	
SB_DM_3	BF35	M_B_DM3	
SB_DM_4	BG11	M_B_DM4	
SB_DM_5	BA3	M_B_DM5	
SB_DM_6	AP1	M_B_DM6	
SB_DM_7	AK2	M_B_DM7	
SB_DQS_0	AL47	M_B_DQS[7..0]	19
SB_DQS_1	AV48	M_B_DQS1	
SB_DQS_2	BG41	M_B_DQS2	
SB_DQS_3	BG37	M_B_DQS3	
SB_DQS_4	BH9	M_B_DQS4	
SB_DQS_5	BB2	M_B_DQS5	
SB_DQS_6	AU1	M_B_DQS6	
SB_DQS_7	AN6	M_B_DQS7	
SB_DQS#_0	AL46	M_B_DQS#0	19
SB_DQS#_1	AV47	M_B_DQS#1	
SB_DQS#_2	BH41	M_B_DQS#2	
SB_DQS#_3	BH37	M_B_DQS#3	
SB_DQS#_4	BG3	M_B_DQS#4	
SB_DQS#_5	BC2	M_B_DQS#5	
SB_DQS#_6	AT2	M_B_DQS#6	
SB_DQS#_7	AN5	M_B_DQS#7	
SB_MA_0	AV17	M_B_A[14..0]	19
SB_MA_1	BA25	M_B_A1	
SB_MA_2	BC25	M_B_A2	
SB_MA_3	AU25	M_B_A3	
SB_MA_4	AW25	M_B_A4	
SB_MA_5	BB28	M_B_A5	
SB_MA_6	AU28	M_B_A6	
SB_MA_7	AW28	M_B_A7	
SB_MA_8	AT33	M_B_A8	
SB_MA_9	BD33	M_B_A9	
SB_MA_10	BB16	M_B_A10	
SB_MA_11	AW33	M_B_A11	
SB_MA_12	AY33	M_B_A12	
SB_MA_13	BH15	M_B_A13	
SB_MA_14	AU33	M_B_A14	



DJ1

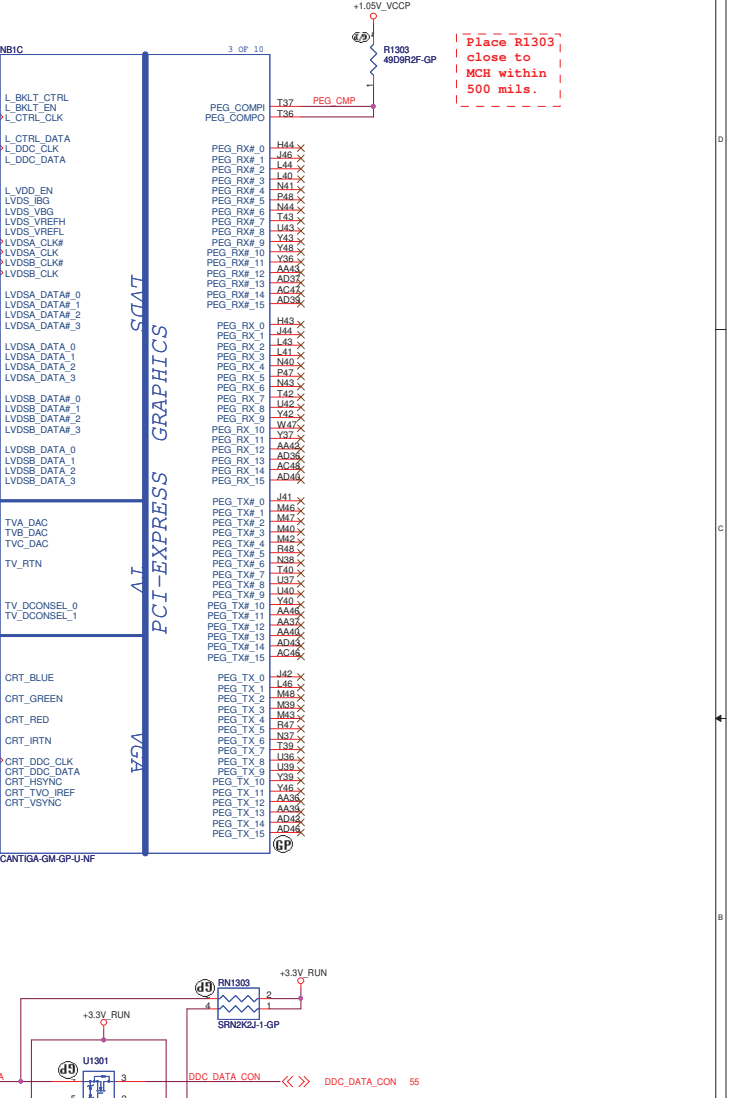
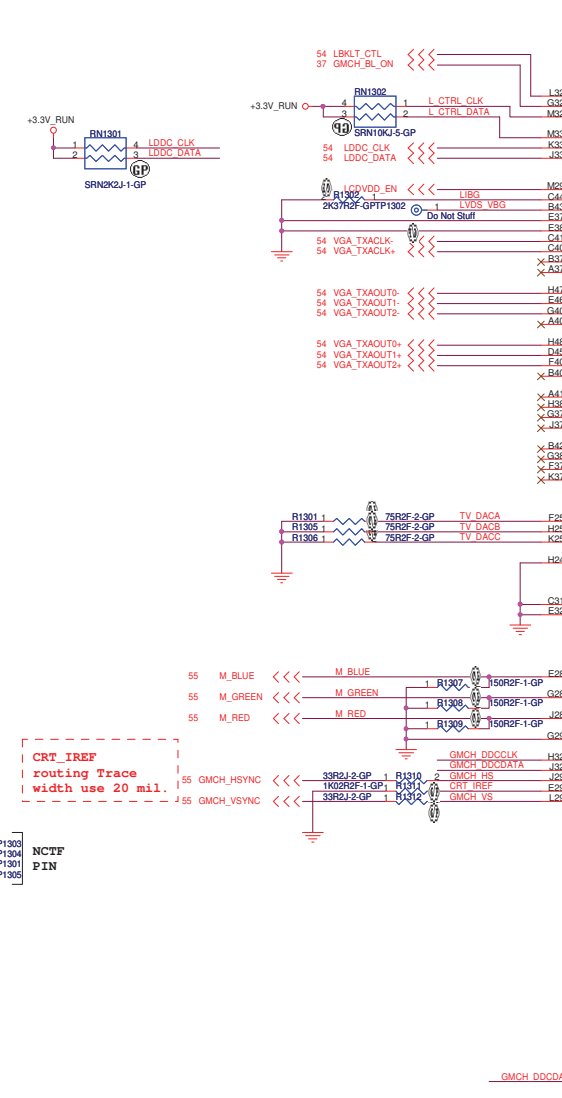
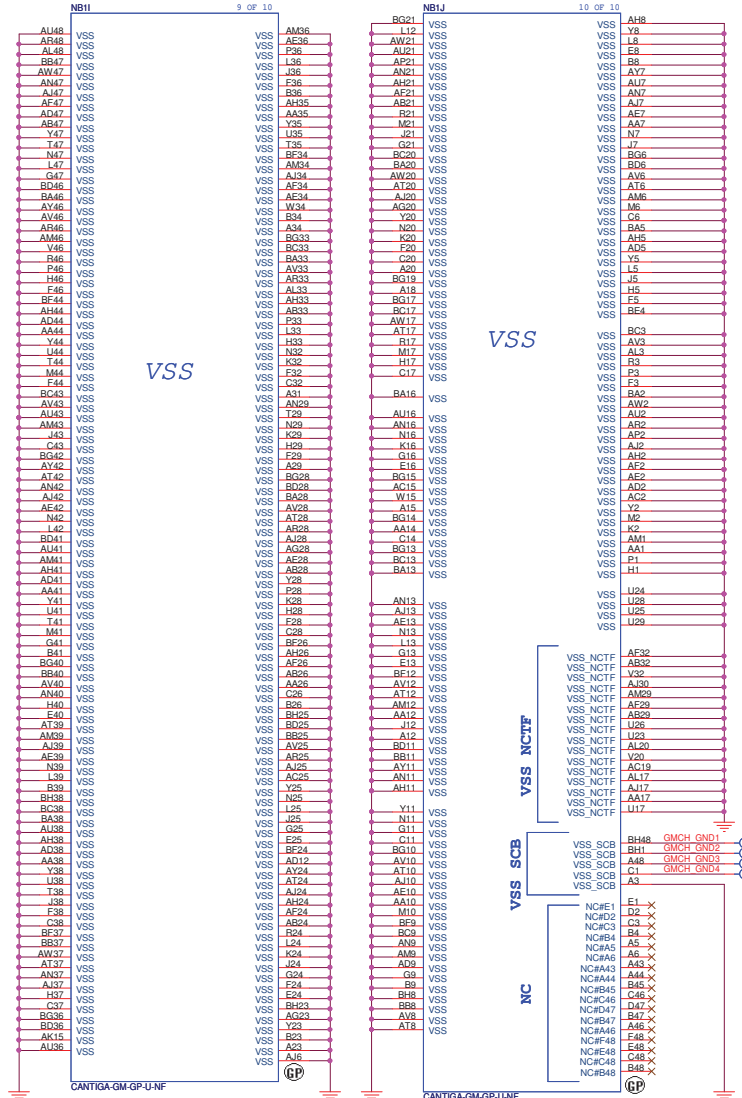
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **Cantiga-DDR(3/6)**

Size	Document Number	Rev
Custom	DJ1 Montevina UMA	A00

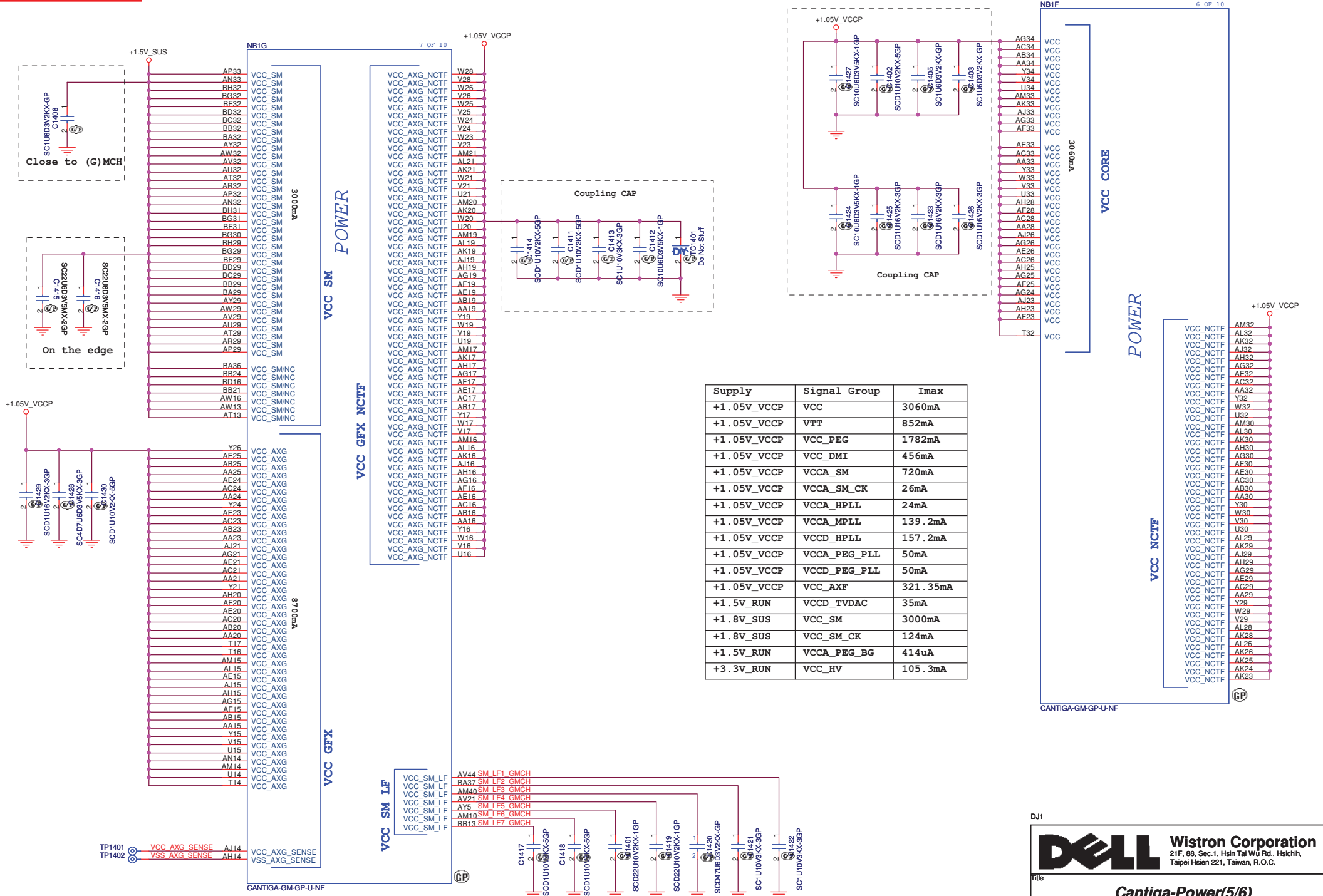
Date: Friday, February 26, 2010 Sheet 12 of 88

SSID = MCH



Place R1303 close to MCH within 500 mils.

SSID = MCH



Supply	Signal Group	Imax
+1.05V_VCCP	VCC	3060mA
+1.05V_VCCP	VTT	852mA
+1.05V_VCCP	VCC_PEG	1782mA
+1.05V_VCCP	VCC_DMI	456mA
+1.05V_VCCP	VCCA_SM	720mA
+1.05V_VCCP	VCCA_SM_CK	26mA
+1.05V_VCCP	VCCA_HPLL	24mA
+1.05V_VCCP	VCCA_MPLL	139.2mA
+1.05V_VCCP	VCCD_HPLL	157.2mA
+1.05V_VCCP	VCCA_PEG_PLL	50mA
+1.05V_VCCP	VCCD_PEG_PLL	50mA
+1.05V_VCCP	VCC_AXF	321.35mA
+1.5V_RUN	VCCD_TVDC	35mA
+1.8V_SUS	VCC_SM	3000mA
+1.8V_SUS	VCC_SM_CK	124mA
+1.5V_RUN	VCCA_PEG_BG	414uA
+3.3V_RUN	VCC_HV	105.3mA

DJ1

DELL Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.


File: **Cantiga-Power(5/6)**

Size: Custom Document Number: **DJ1 Montevina UMA** Rev: **A00**

Date: Wednesday, February 24, 2010 Sheet 14 of 88


(Blanking)

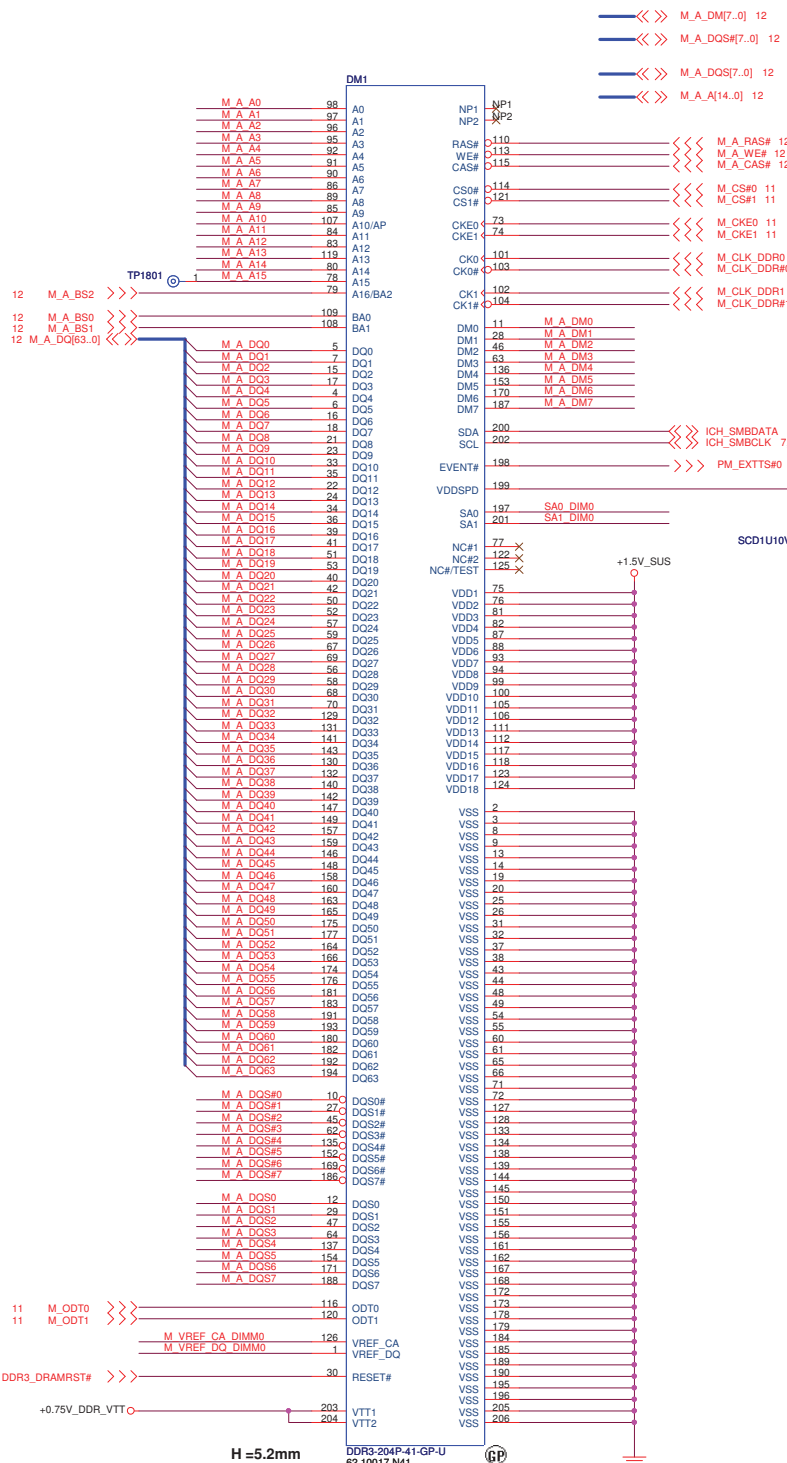
DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 16	of 88

(Blanking)

DJ1

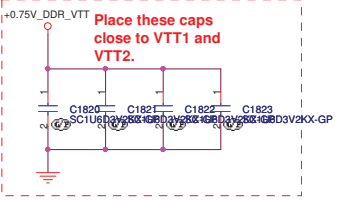
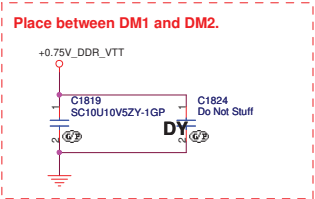
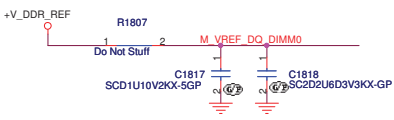
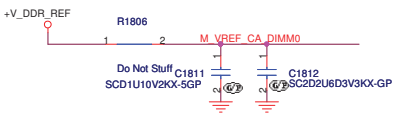
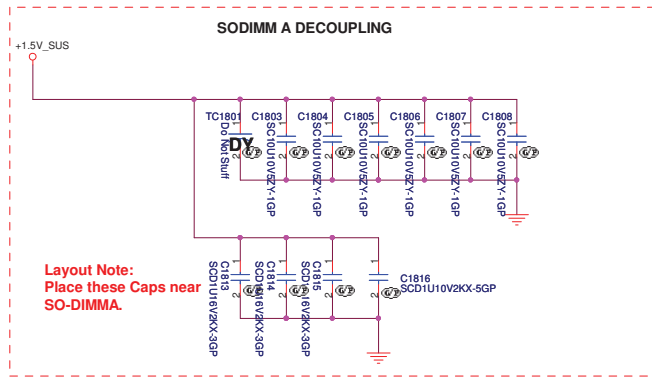
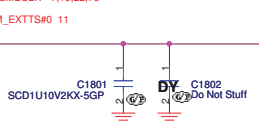
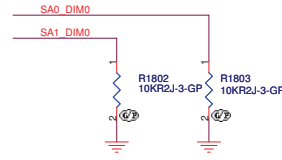
		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 17	of 88



M_A_DM7[7..0] 12
 M_A_DQS#7[7..0] 12
 M_A_DQS[7..0] 12
 M_A_A[14..0] 12

Note:
 If SA0_DIM0 = 0, SA1_DIM0 = 0
 SO-DIMMA SPD Address is 0xA0
 SO-DIMMA TS Address is 0x30

 If SA0_DIM0 = 1, SA1_DIM0 = 0
 SO-DIMMA SPD Address is 0xA2
 SO-DIMMA TS Address is 0x32



Place between DM1 and DM2.

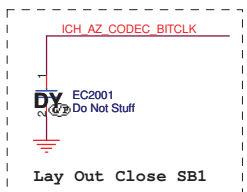
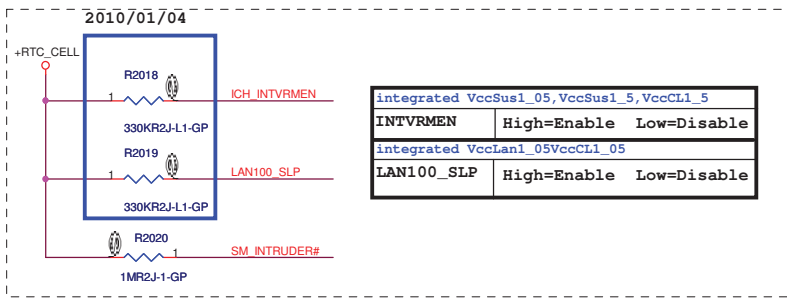
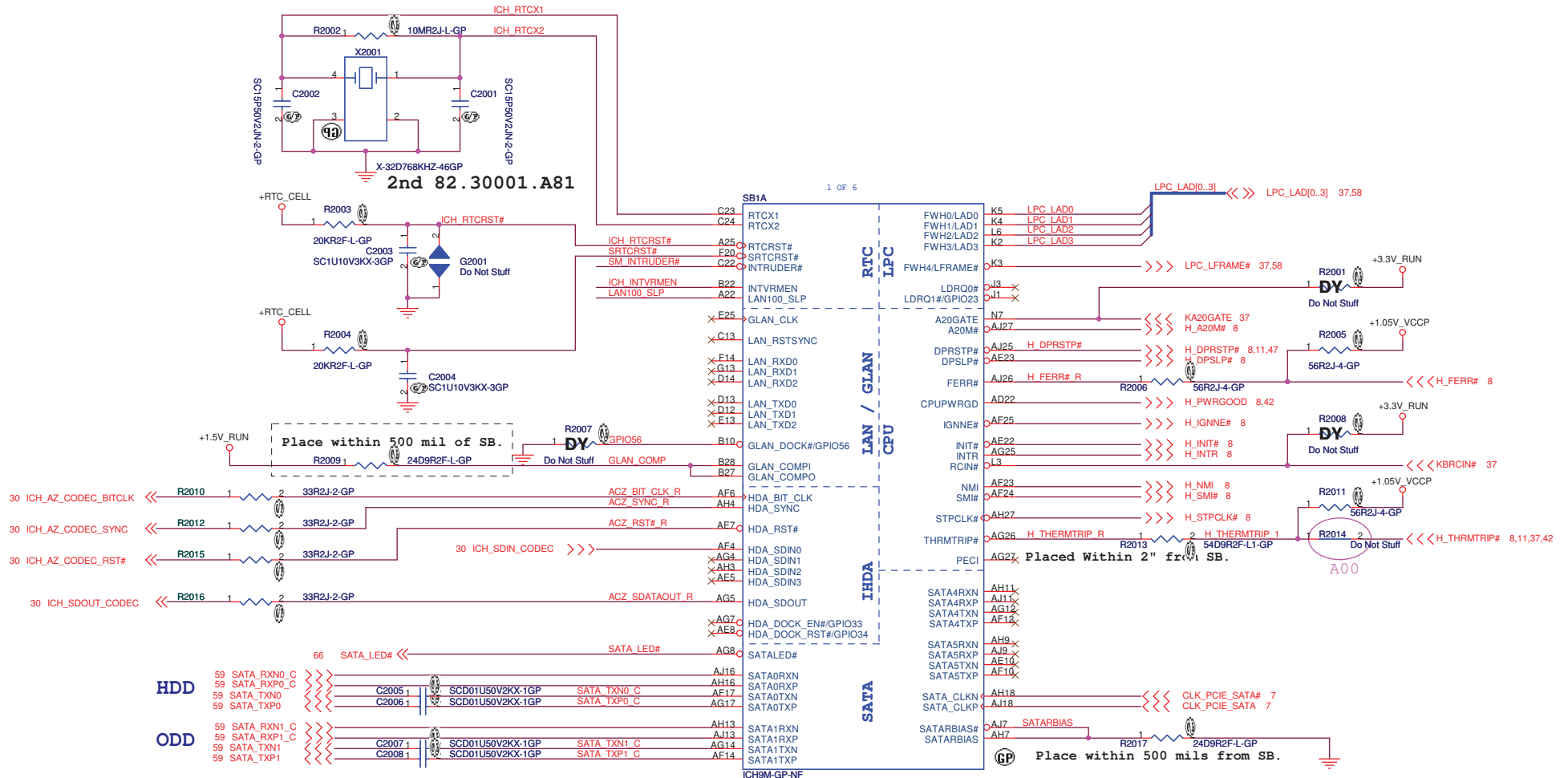
Place these caps close to VTT1 and VTT2.

Layout Note: Place these Caps near SO-DIMMA.

H = 5.2mm

DDR3-204P-41-GP-U
62-10017.N41

SSID = ICH



DJ1

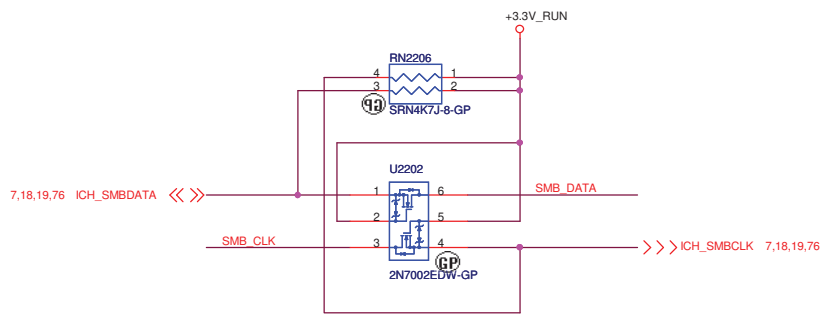
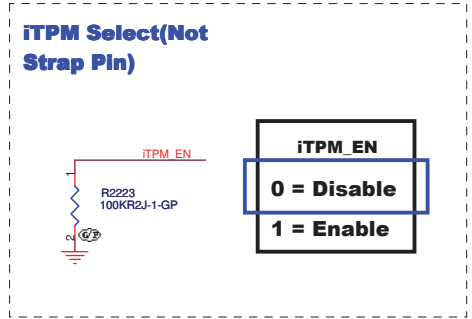
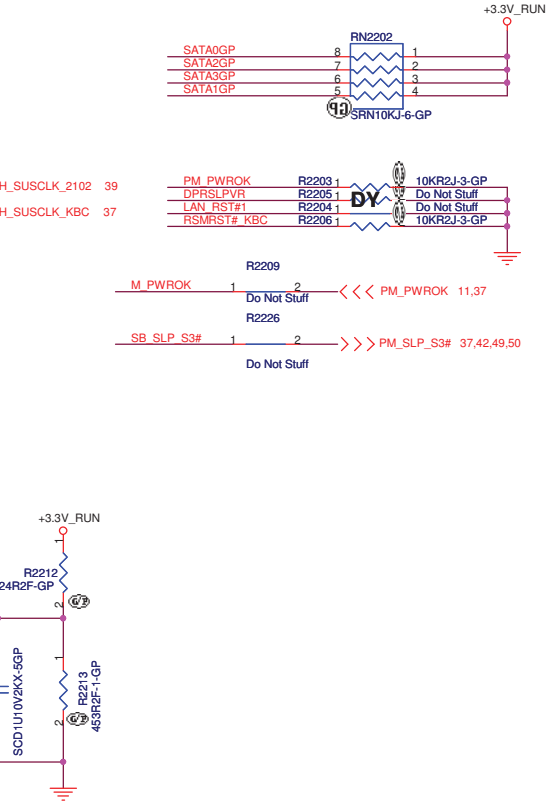
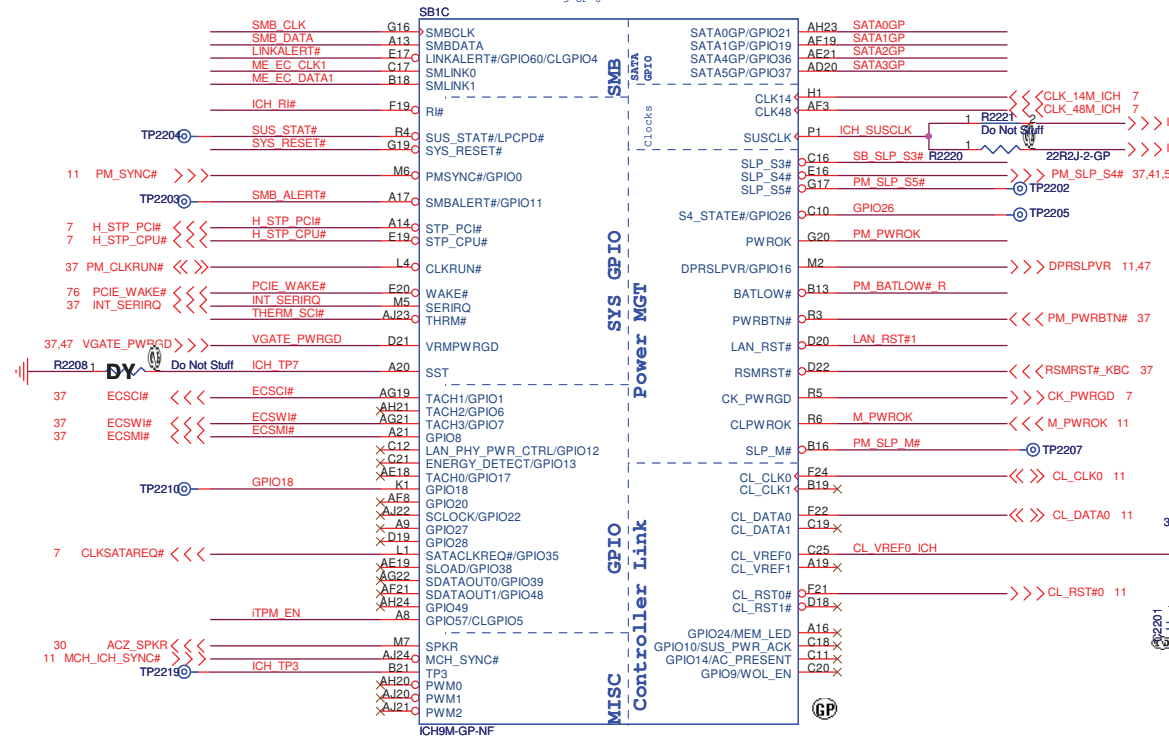
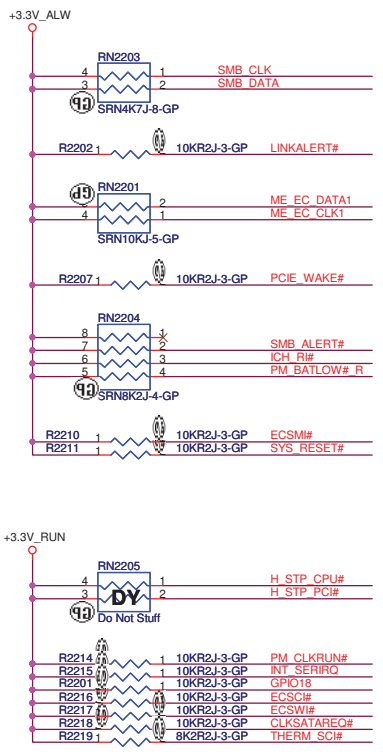
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **ICH9-LAN/HDA/SATA/LPC(1/4)**

Size	Document Number	Rev
Custom	DJ1 Montevina UMA	A00

Date: Friday, February 26, 2010 Sheet 20 of 88

SSID = ICH



DJ1

Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title: **ICH9-GPIO/PM/CL(3/4)**

Size: Custom | Document Number: **DJ1 Montevina UMA** | Rev: **A00**

Date: Friday, February 26, 2010 | Sheet: 22 of 88

(Blanking)

DJ1



Title		
Reserved		
Size Custom	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010		
Sheet 24 of 88		

(Blanking)

DJ1



Title		
Reserved		
Size	Document Number	Rev
Custom	DJ1 Montevina UMA	A00
Date:	Wednesday, February 24, 2010	Sheet 25 of 88

(Blanking)


DJ1



Title		
Reserved		
Size Custom	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 26	of 88

(Blanking)

DJ1

			Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title					
Reserved					
Size	Document Number				Rev
Custom	DJ1 Montevina UMA				A00
Date: Wednesday, February 24, 2010			Sheet	27	of 88

(Blanking)

DJ1



Title		
Reserved		
Size	Document Number	Rev
Custom	DJ1 Montevina UMA	A00
Date:	Wednesday, February 24, 2010	Sheet 28 of 88

(Blanking)

DJ1

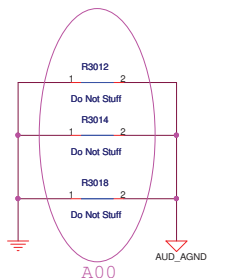
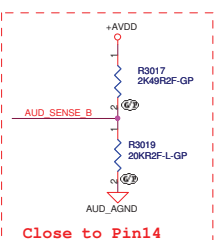
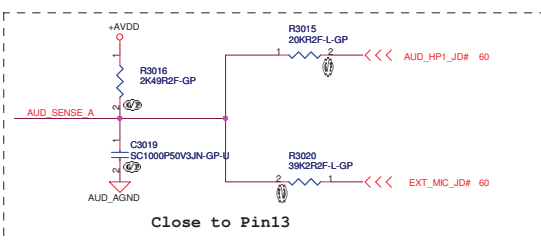
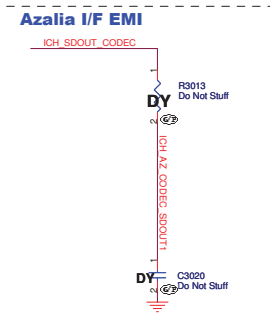
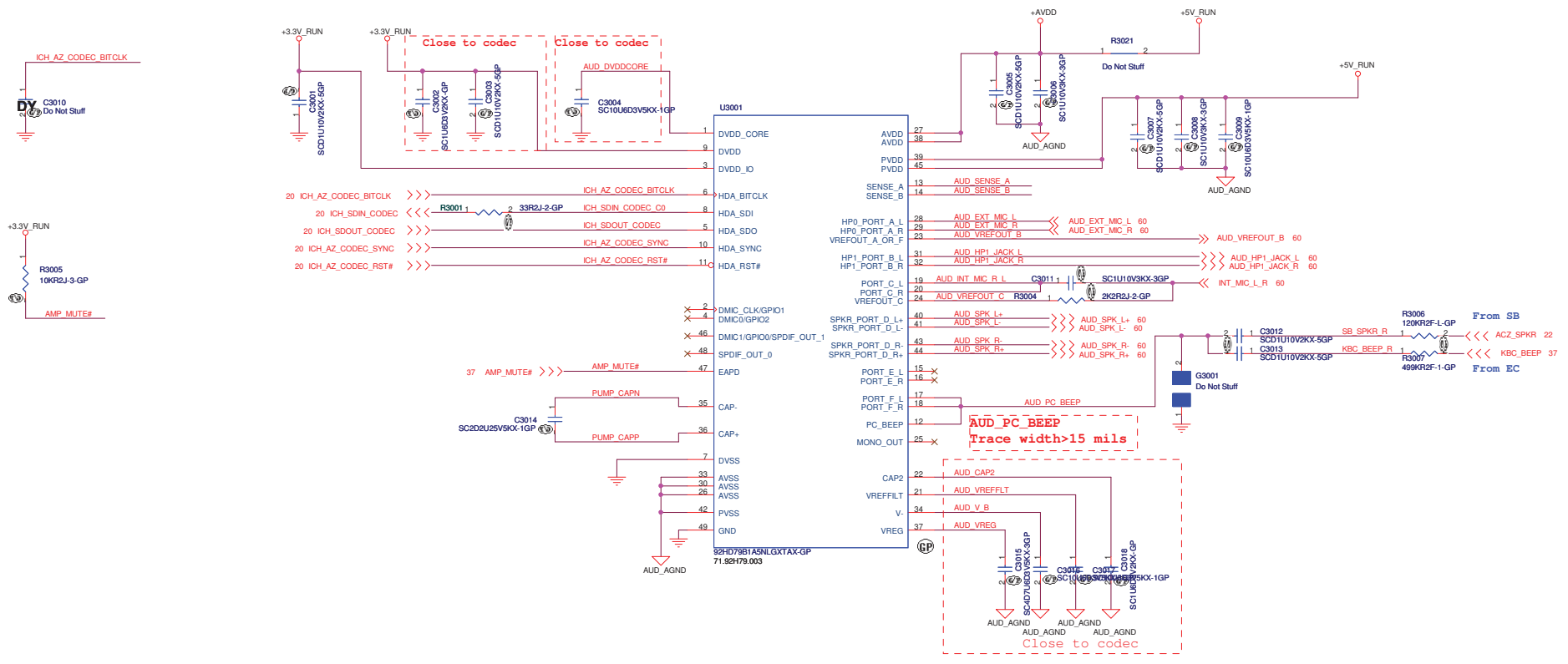


Title **Reserved**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------


Date: Wednesday, February 24, 2010 Sheet 29 of 88

SSID = AUDIO

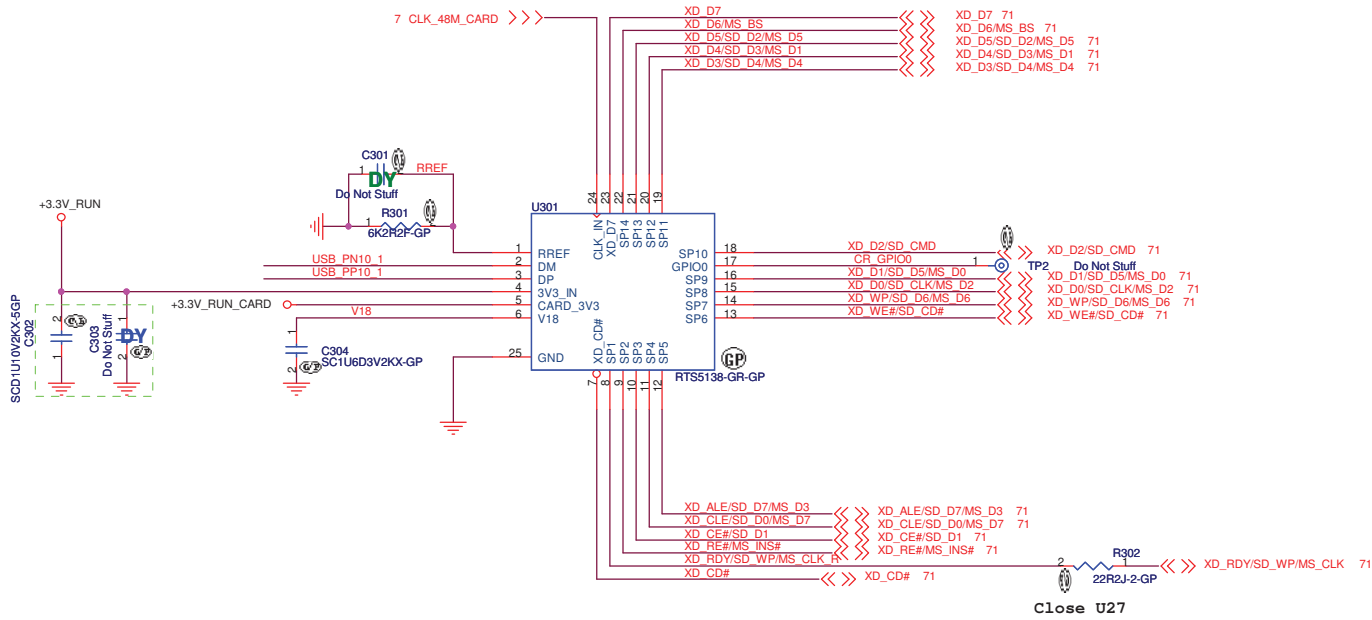


(Blanking)

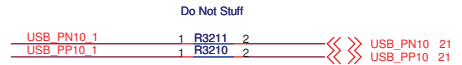
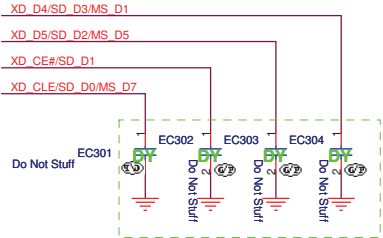
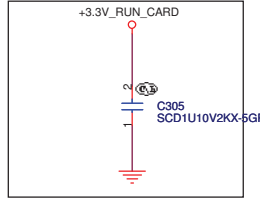
DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 31	of 88

SSID = SDIO



Close to U301



Do Not Stuff

Do Not Stuff

2010/01/05

DJ1

DELL Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.


Title: **Card Reader-RTS5138**

Size: Custom	Document Number: DJ1 Montevina UMA	Rev: A00
--------------	---	-----------------

Date: Friday, February 26, 2010 Sheet 32 of 88


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 33 of	88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 34	of 88

(Blanking)


DJ1



Title		(Reserved)	
Size	Document Number	Rev	A00
Date: Wednesday, February 24, 2010	Sheet 35 of 88	E	


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 36	of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 38 of	88

(Blanking)

DJ1

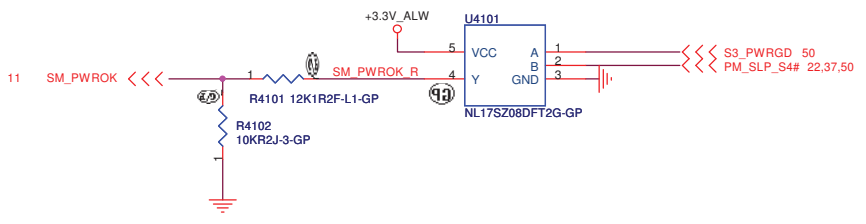


Title **Reserved**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------

Date: Wednesday, February 24, 2010 Sheet 40 of 88

SSID = Reset.Suspend

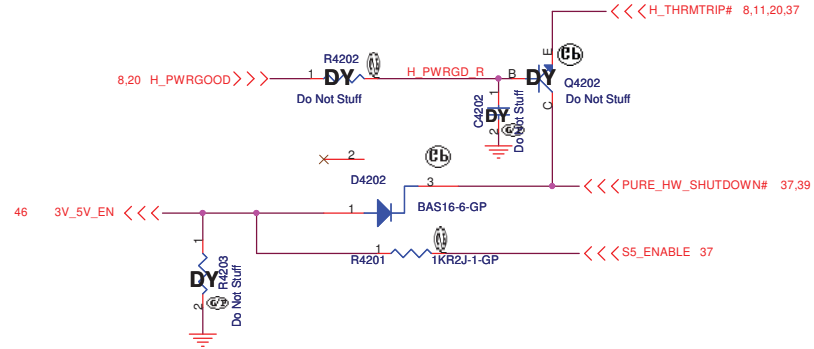


DJ1

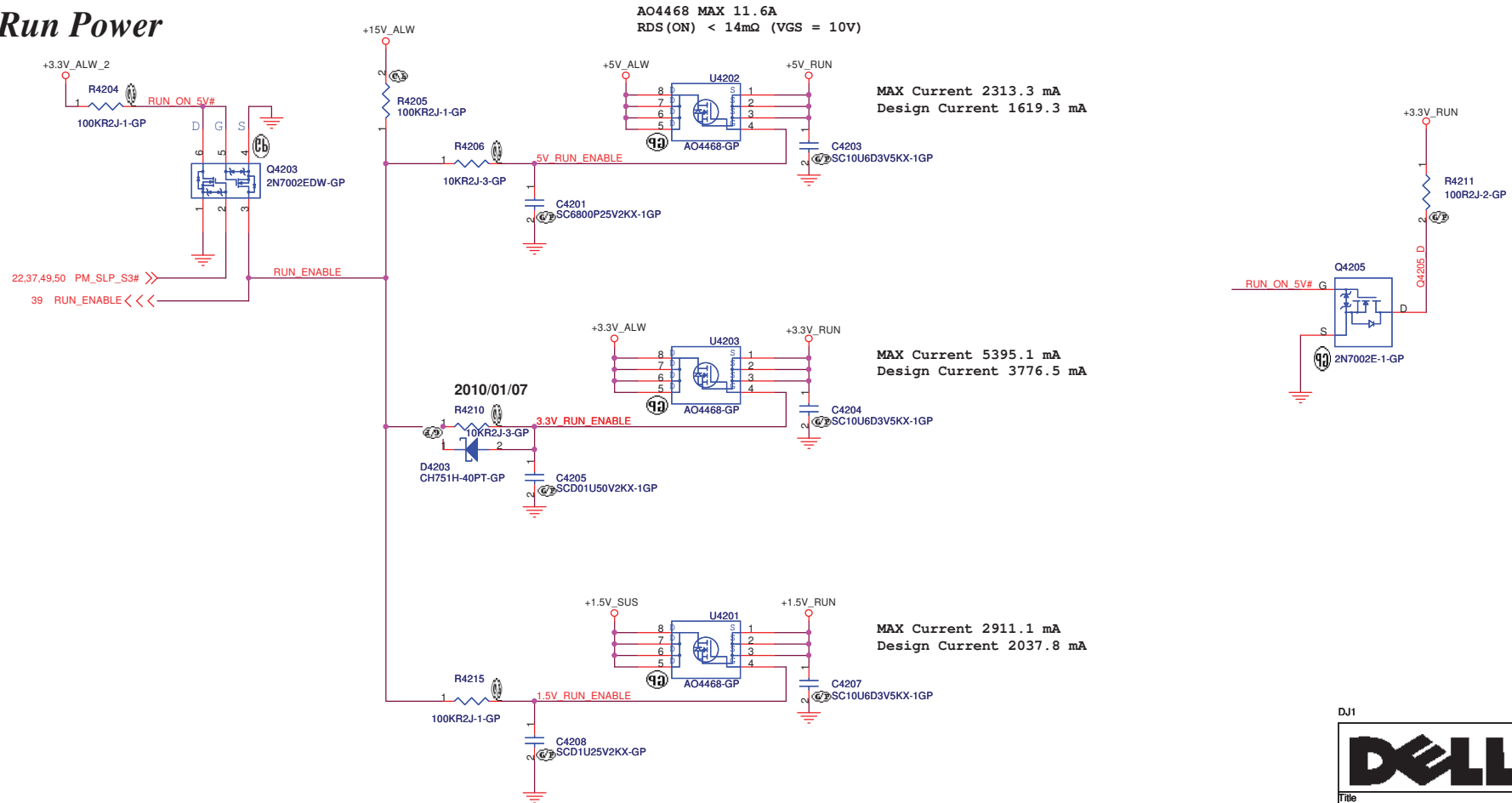


Title			Power On Logic		
Size	Document Number	Rev			
A3	DJ1 Montevina UMA	A00			
Date:	Friday, February 26, 2010	Sheet	41	of	88

SSID = Reset . Suspend



Run Power




DJ1



Title		
Power Plane Enable		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date:	Friday, February 26, 2010	Sheet 42 of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 43 of	88

(Blanking)

DJ1



Title **Reserved**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------

Date: Wednesday, February 24, 2010 Sheet 44 of 88

(Blanking)

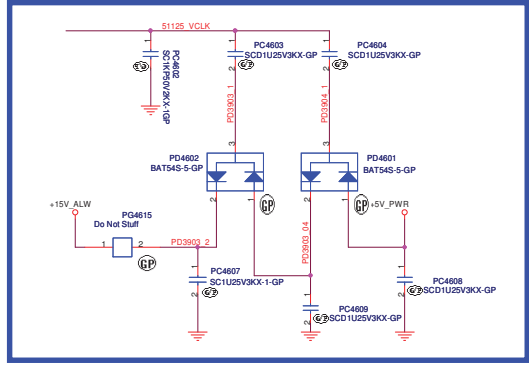
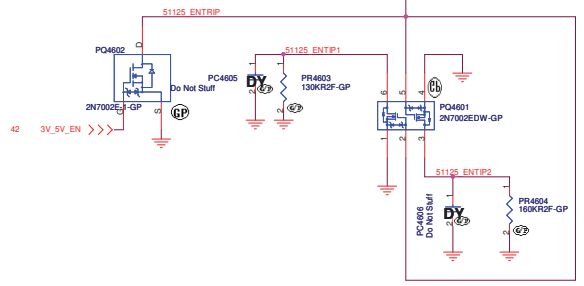
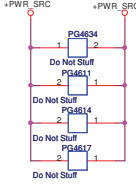
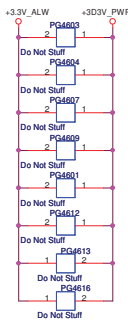
DJ1



Title **Reserved**

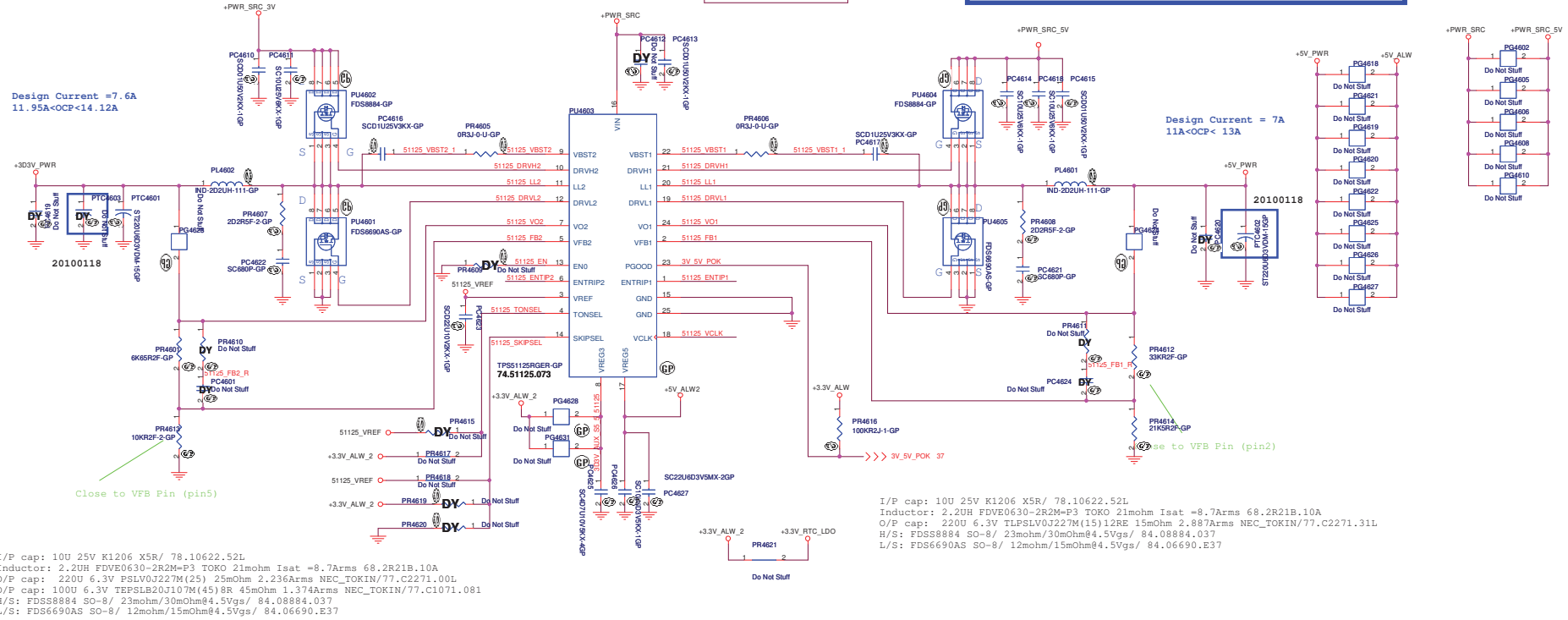
Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------

Date: Wednesday, February 24, 2010 Sheet 45 of 88



Design Current = 7.6A
11.95A OCP 14.12A

Design Current = 7A
11A OCP 13A



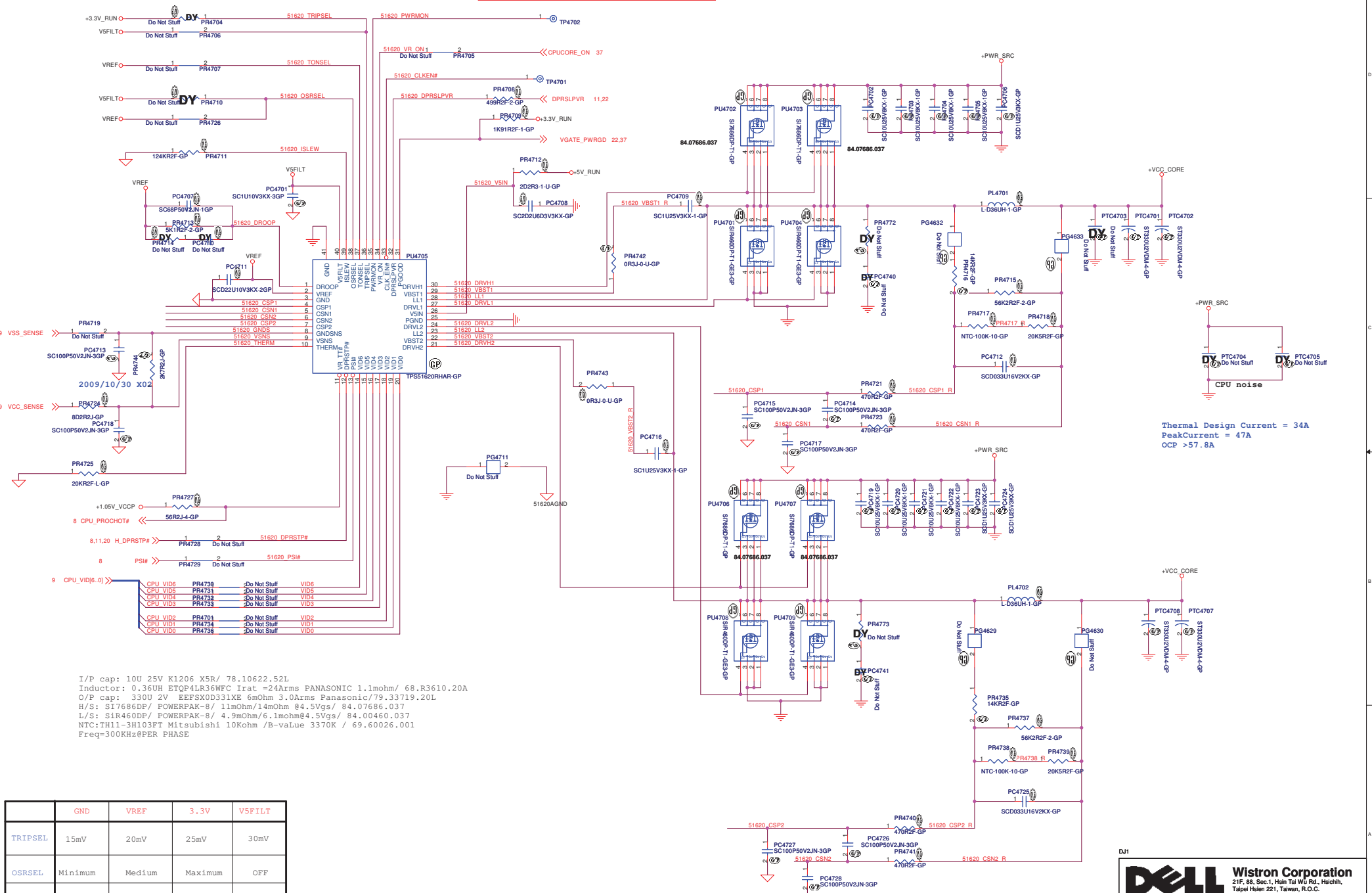
Close to VFB Pin (pin5)

I/P cap: 10U 25V K1206 X5R/ 78.10622.52L
 Inductor: 2.2UH FDVE0630-2R2M-P3 TOKO 21mohm Isat =8.7Arms 68.2R21B.10A
 O/P cap: 220U 6.3V TPLSLVJ227M(25) 25mOhm 2.236Arms NEC_TOKIN/77.C2271.00L
 O/P cap: 100U 6.3V TEPSLB20J107M(45) 8R 45mOhm 1.374Arms NEC_TOKIN/77.C1071.081
 H/S: FDS8884 SO-8/ 23mohm/30mOhm@4.5Vgs/ 84.08884.037
 L/S: FDS6690AS SO-8/ 12mohm/15mOhm@4.5Vgs/ 84.06690.E37

TONSEL	CH1	CH2	SKIPSEL	VREG3 or VREG5	VREF(2V)	GND
GND	200kHz	265kHz	Operating Mode	OOA Auto Skip	Auto Skip	PWM only
VREF	245kHz	305kHz				
VREG3	300kHz	375kHz				
VREG5	365kHz	460kHz				

ENO	Open	820kΩ to GND	GND
Operating Mode	enable both LDs, VCLK on and ready to turn on switcher channels	enable both LDs, VCLK off and ready to turn on switcher channels	disable all circuit

SSID = CPU.Regulator



Thermal Design Current = 34A
 PeakCurrent = 47A
 OCP >57.8A

I/P cap: 10U 25V K1206 X5R/ 78.10622.52L
 Inductor: 0.36UH ETQP4LR36WFC Irat =24Arms PANASONIC 1.1mohm/ 68.R3610.20A
 O/P cap: 330U 2V EEP5X0D331XE 6mOhm 3.0Arms Panasonic/79.33719.20L
 H/S: SI7686DP/ POWERPAK-8/ 11mOhm/14mOhm @4.5Vgs/ 84.07686.037
 L/S: SiR460DP/ POWERPAK-8/ 4.9mOhm/6.1mohm@4.5Vgs/ 84.00460.037
 NTC:TH11-3H103FT Mitsubishi 10Kohm /B-value 3370K / 69.60026.001
 Freq=300KHz@PER PHASE

	GND	VREF	3.3V	V5FILT
TRIPSEL	15mV	20mV	25mV	30mV
OSRSEL	Minimum	Medium	Maximum	OFF
TONSEL	200KHz	300KHz	400KHz	500KHz
OVPSSEL	ENABLE	DISABLE	N/A	N/A

DJI


Wistron Corporation
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
 Taipei Hsien 221, Taiwan, R.O.C.

CPU VCORE POWER

Size	Document Number	Rev	
Custom	DJ1 Montevina UMA	A00	
Date: Friday, February 26, 2010	Sheet 47	of	88

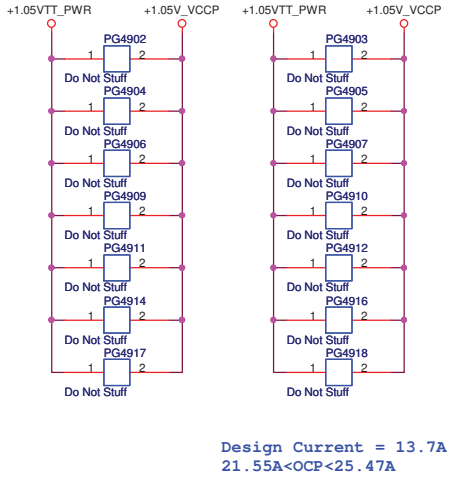
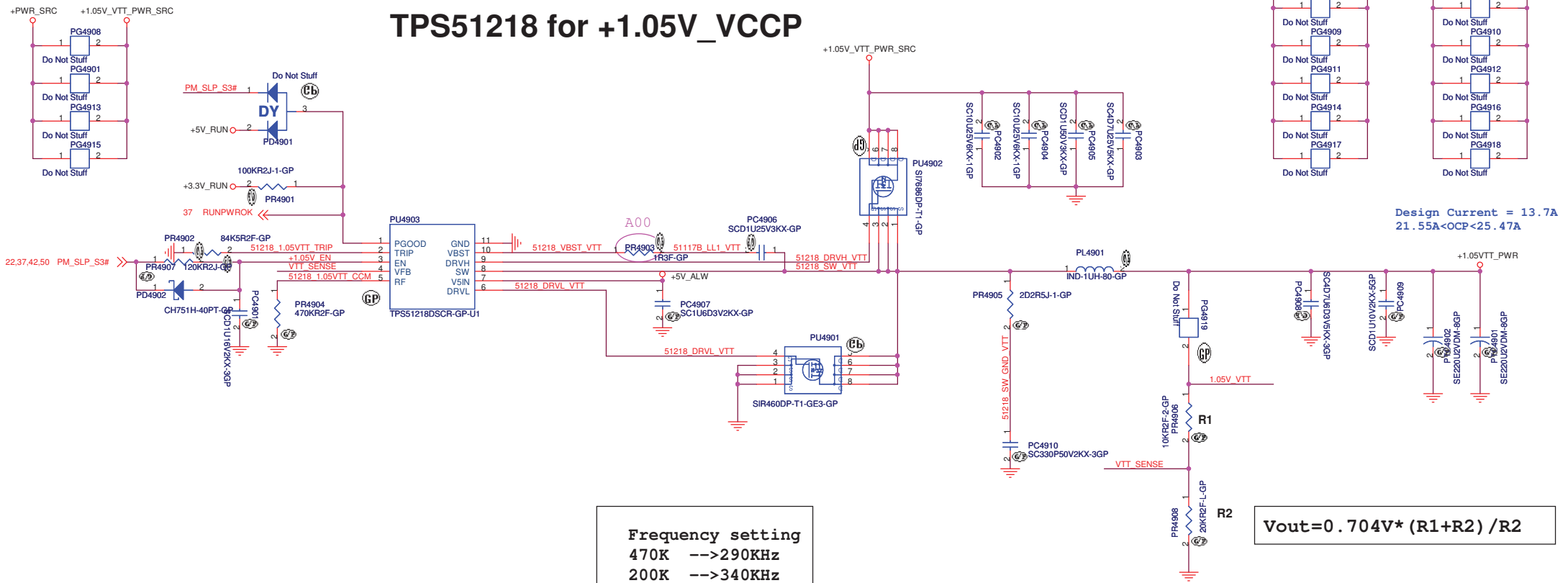
(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
CPU VCORE POWER(2/2)		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 48	of 88

SSID = PWR.Plane.Regulator_1p05v

TPS51218 for +1.05V_VCCP




Frequency setting
 470K -->290KHz
 200K -->340KHz
 100K -->380KHz
 39K -->430KHz

$$V_{out} = 0.704V * (R1 + R2) / R2$$

I/P cap: 10U 25V K1206 X5R/ 78.10622.52L
 Inductor: 1uH FDUE1040D-1R0M=P3 TOKO DCR:2.35mohm Isat =17.9Arms 68.1R01B.10A
 O/P cap: 220U 2V EEFX0D221R 15mOhm 2.7Arms PANASONIC/ 79.22719.20L
 H/S: SI7686DP-T1-E3/11mohm/ 14mOhm@4.5Vgs/ 84.07686.037
 L/S: SIR460DP-T1-GE3-GP/4.5mOhm/6.1mohm@4.5Vgs/ 84.00460.037


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
(Reserved)		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 51 of	88


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 52 of	88

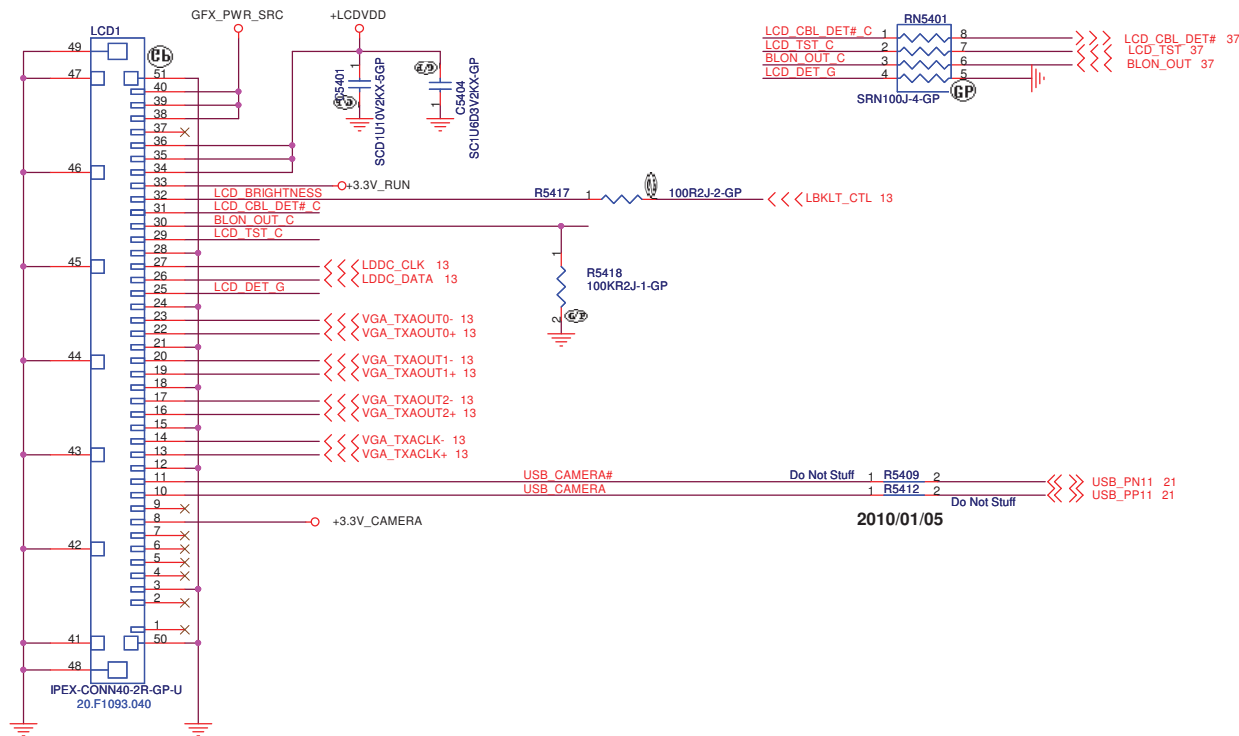
(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 53 of	88

SSID = VIDEO

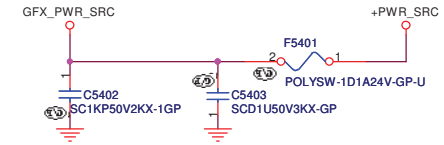
LVDS CONNECTOR



2010/01/05

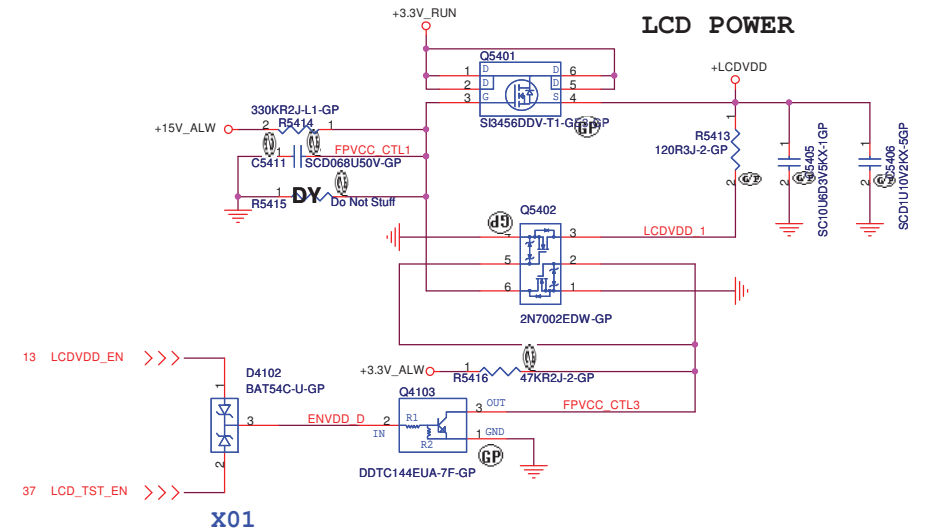
SSID = Inverter

INVERTER POWER



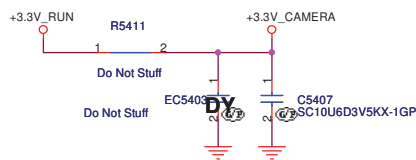
SSID = VIDEO

LCD POWER

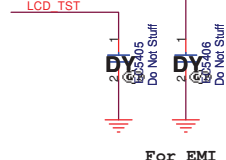


X01

Camera Power



For EMI request



DJ1

DELL Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

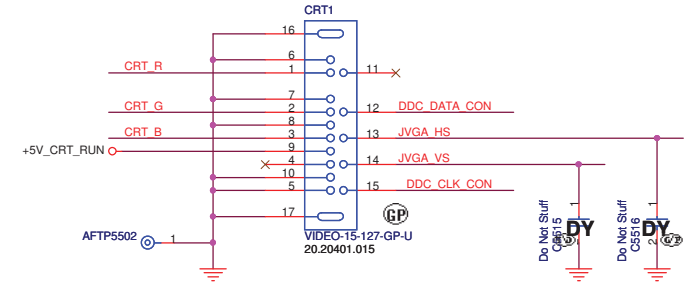
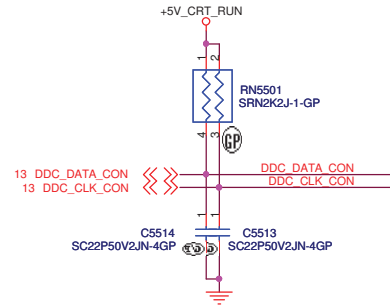
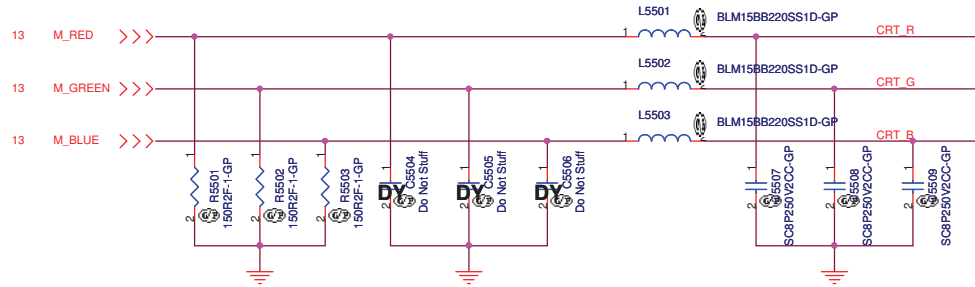
Title: **LCD/Inverter Connector**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Friday, February 26, 2010	Sheet 54 of 88	

SSID = VIDEO

Layout Note:

- *Pi-filter & 150 Ohm pull-down resistors should be as close as to CRT CONN.
- * RGB signal will hit 75 Ohm first, then pi-filter, finally CRT CONN.

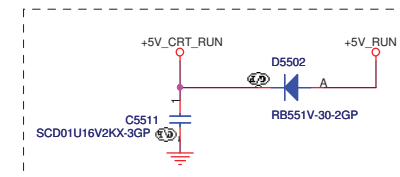
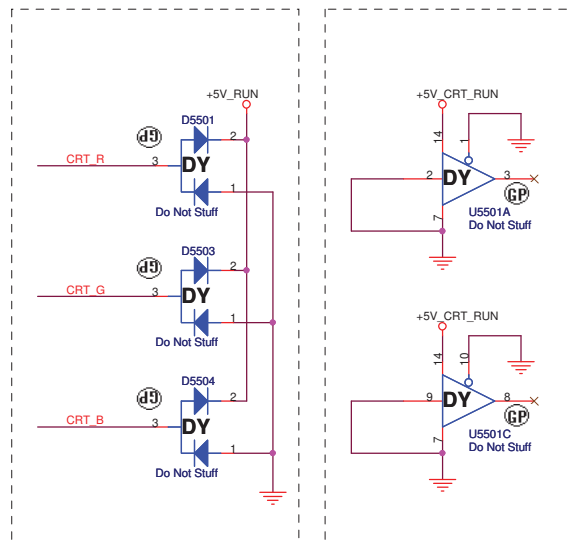
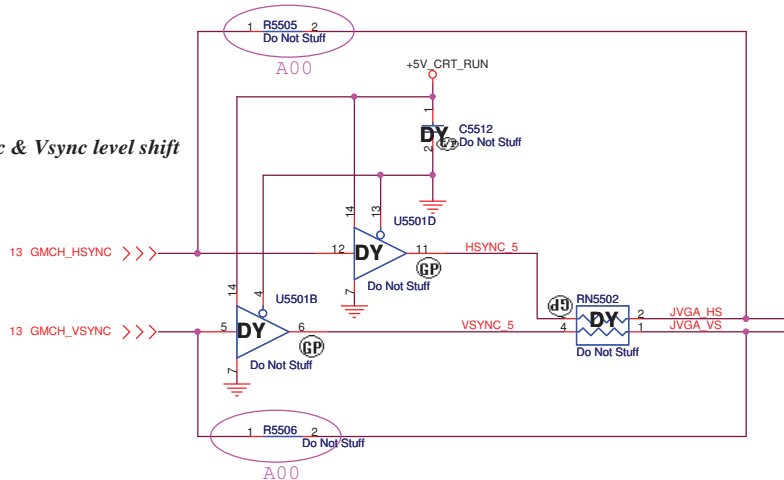


AFTP5501	1	+5V_CRT_RUN
AFTP5508	1	DDC_DATA_CON
AFTP5503	1	DDC_CLK_CON
AFTP5506	1	CRT_R
AFTP5507	1	CRT_G
AFTP5504	1	CRT_B

TP5505	1	JVGA_HS
TP5509	1	JVGA_VS

2010/01/15

Hsync & Vsync level shift




DJ1

Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title CRT Connector		
Size	Document Number	Rev
	DJ1 Montevina UMA	A00
Date: Friday, February 26, 2010	Sheet 55	of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 10, 2010	Sheet 56 of 88	1

(Blanking)

DJ1

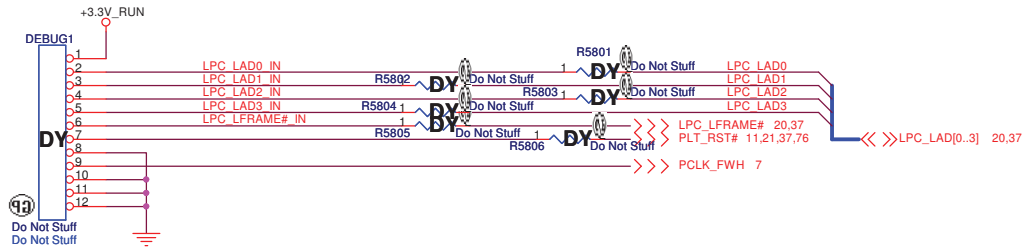


Title **HDMI**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
------------	---	-------------------

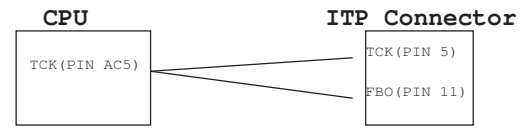
Date: Wednesday, February 24, 2010 Sheet 57 of 88

SSID = User.Interface



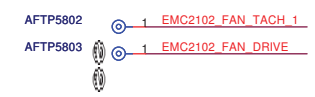
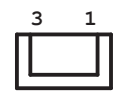
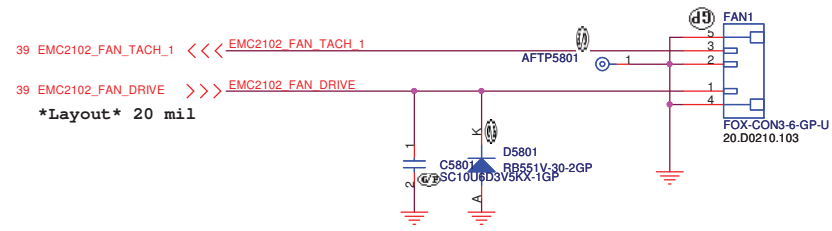
ITP Connector

H_CPURST# use pull-up Resistor close
ITP connector 500 mil (max),
others place near CPU side.



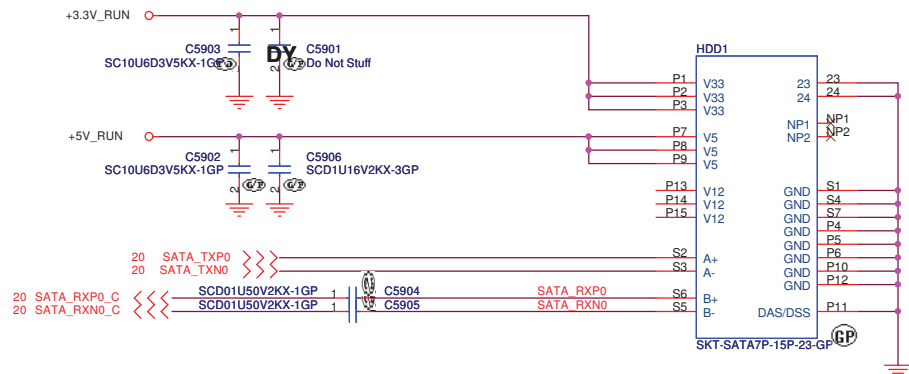
SSID = Thermal

Fan Connector

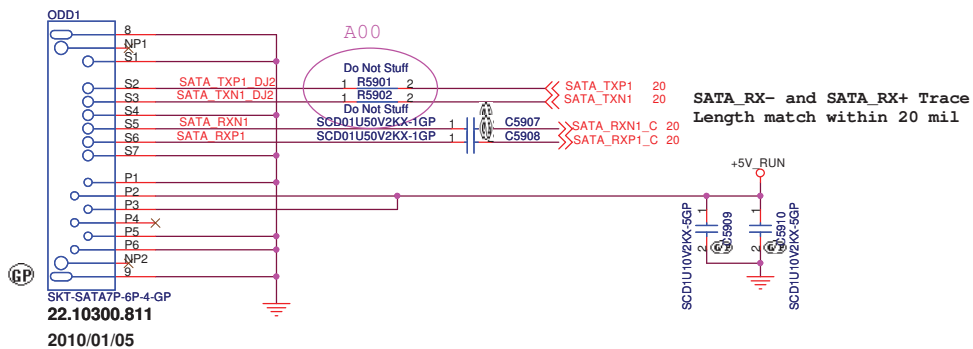


SSID = SATA

SATA HDD Connector



ODD Connector



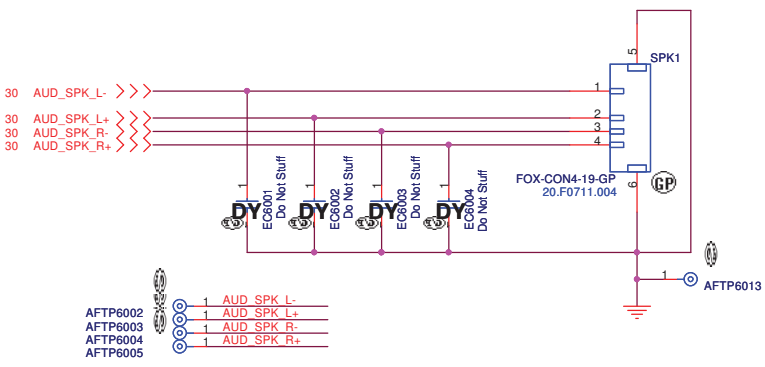
DJ1

DELL Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

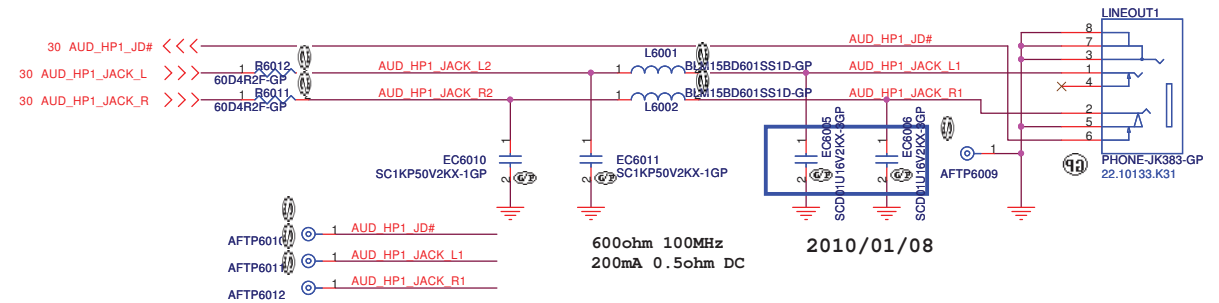
Title		
HDD/ODD		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date:	Friday, February 26, 2010	Sheet 59 of 88

SSID = AUDIO

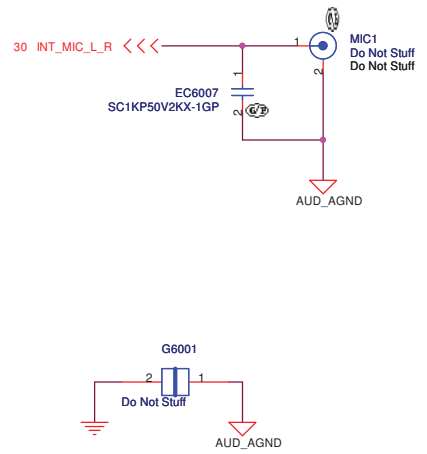
Speaker Connector



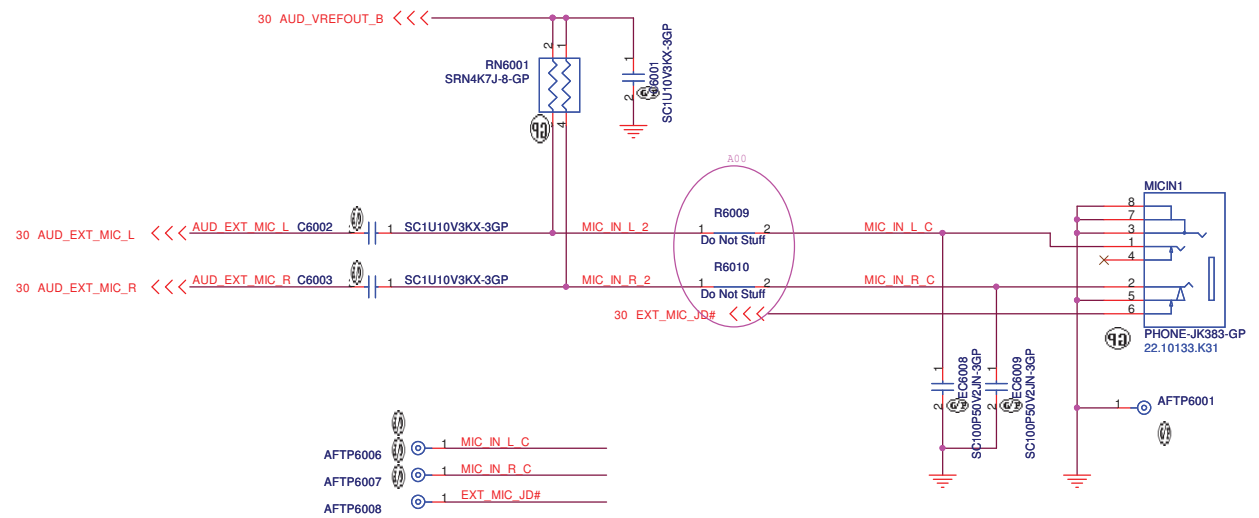
LINE1 OUT



Internal Microphone



MIC IN



DJ1

DELL Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.


Title
Audio Jack/Mic/Speaker

Size A3 Document Number **DJ1 Montevina UMA** Rev **A00**

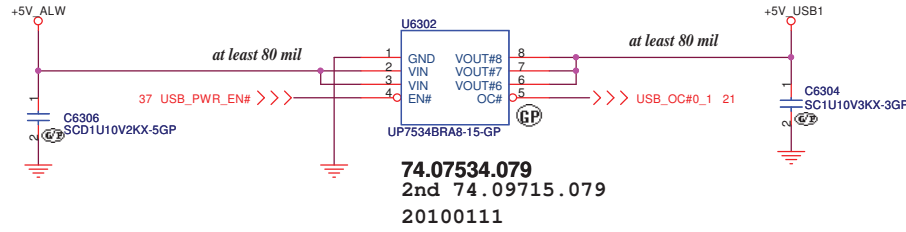
Date: Friday, February 26, 2010 Sheet 60 of 88

(Blanking)

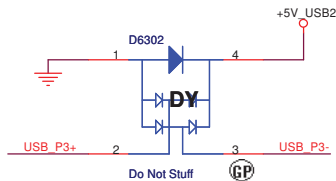
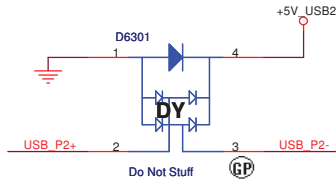
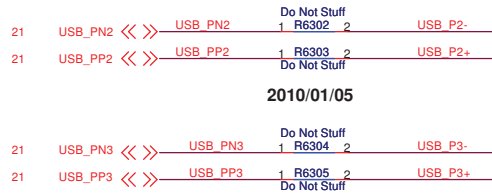
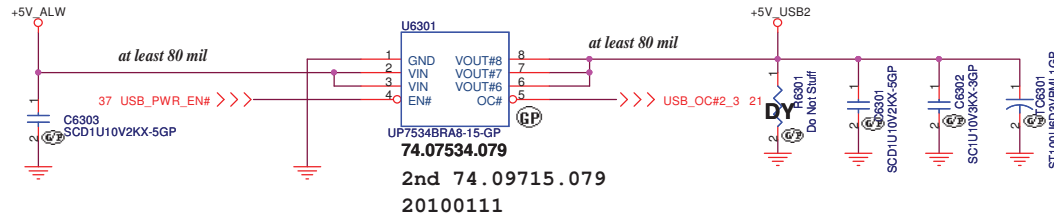
DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 61 of	88

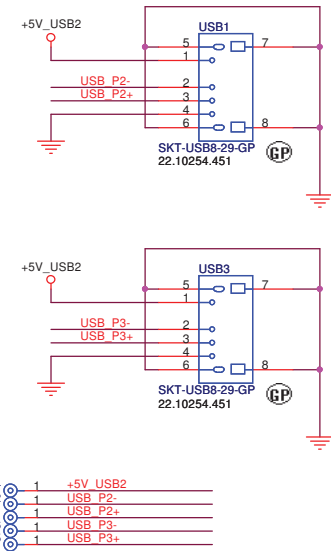
IO Board USB Power



Right USB Power



USB Socket



DJ1

(Blanking)

DJ1



Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 64 of	88

(Blanking)

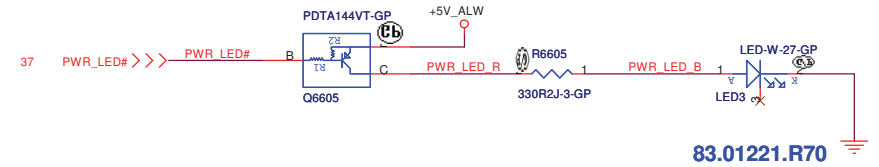
DJ1



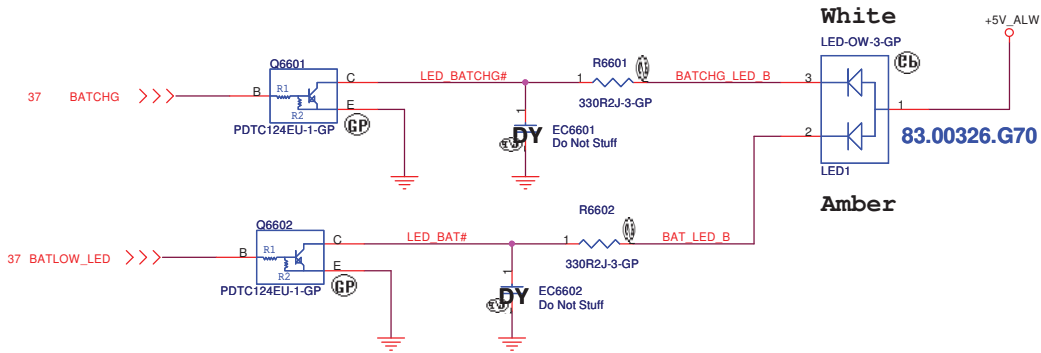
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 65 of	88

SSID = LED

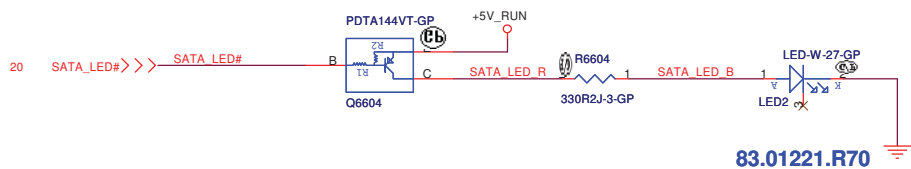
Power button LED



Battery LED



HDD LED



Power LED


DJ1



Title LED		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Friday, February 26, 2010	Sheet 66 of 88	

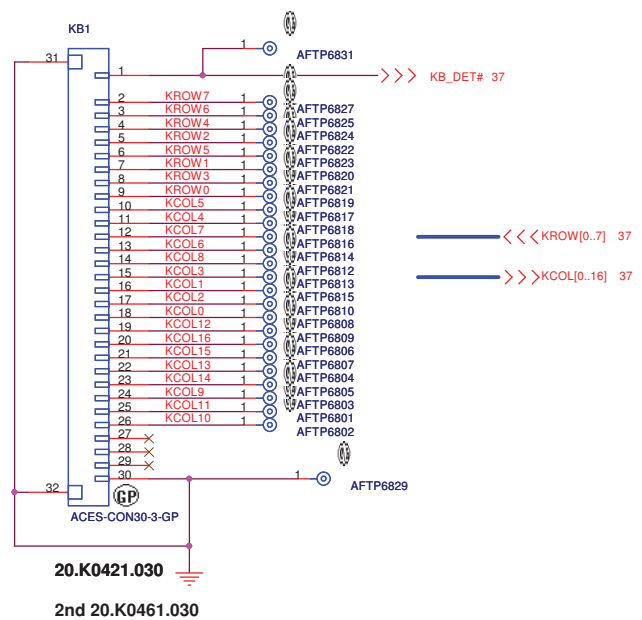
(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 67 of	88

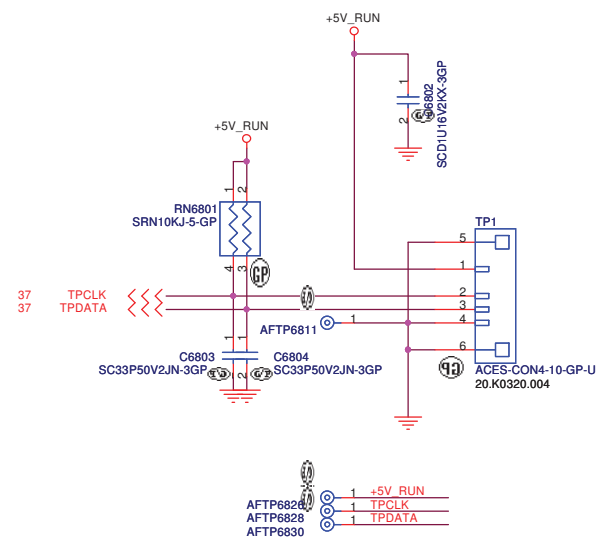
SSID = KBC

Internal Keyboard Connector



SSID = Touch.Pad

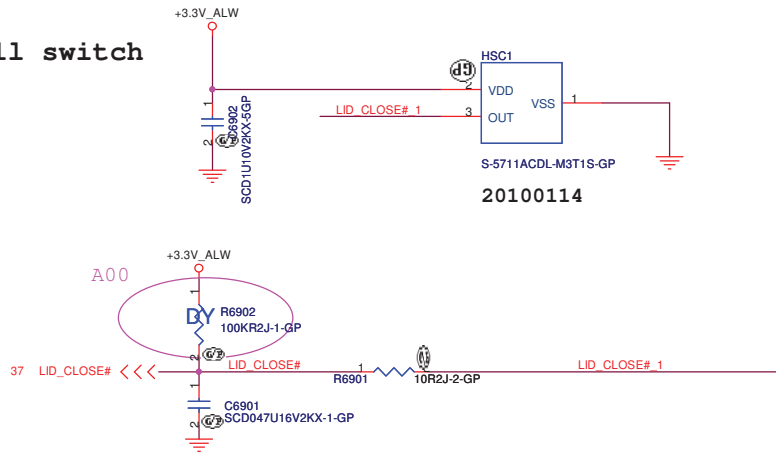
TouchPad Connector



DJ1

			Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
			Title Key Board/Touch Pad		
Size	Document Number			Rev	
A3	DJ1 Montevina UMA			A00	
Date:	Friday, February 26, 2010	Sheet	68	of	88

Hall switch



DJ1



Title		
Hall Sensor		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Friday, February 26, 2010	Sheet 69 of 88	

(Blanking)

DJ1

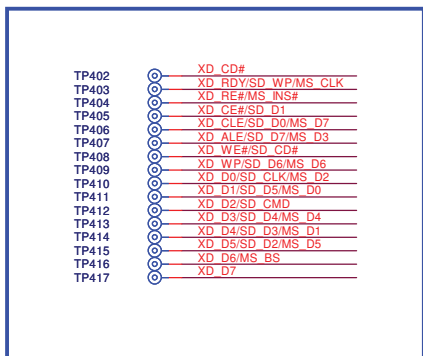
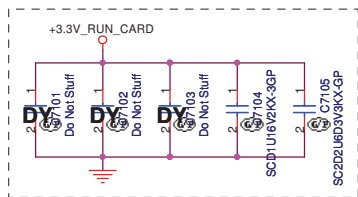


Title **Reserved**

Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010		Sheet 70 of 88

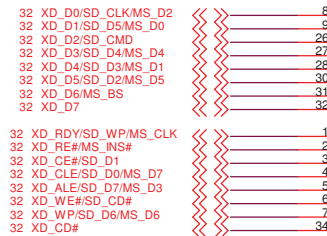
SSID = SDIO

SD/XD/MS Card Reader



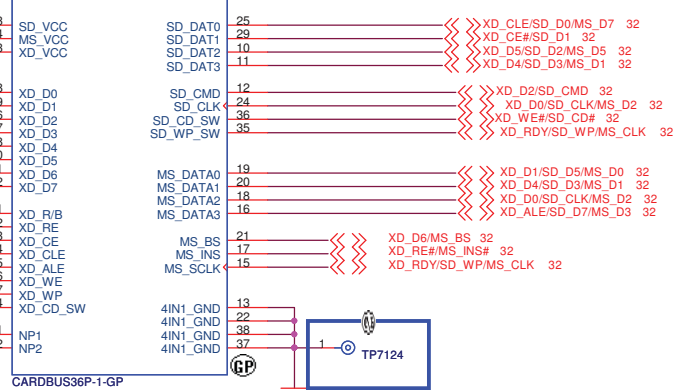
2010/01/15

2010/01/15



+3.3V_RUN_CARD

CARD1



20.I0109.001

2010/01/15

DJ1

Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.


Title: **CARD Reader Connector**

Size: A3 Document Number: **DJ1 Montevina UMA** Rev: **A00**

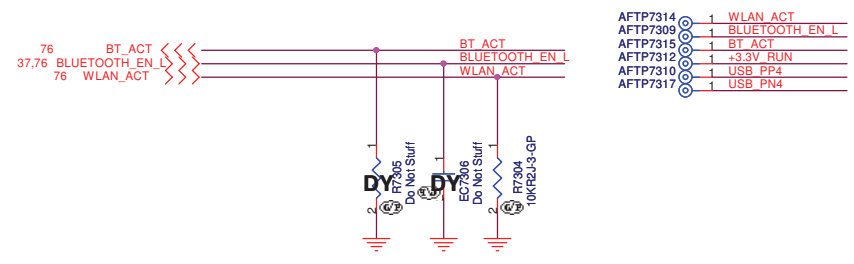
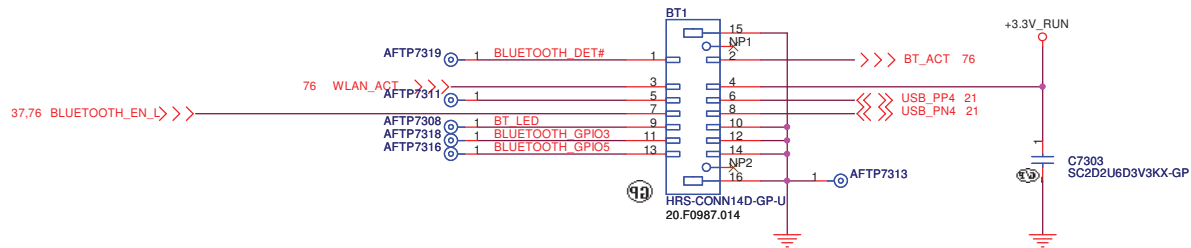
Date: Friday, February 26, 2010 Sheet 71 of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
RESERVED		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 72 of 88	1

SSID = User.Interface



- AFTP7314 1 WLAN_ACT
- AFTP7309 1 BLUETOOTH EN L
- AFTP7315 1 BT_ACT
- AFTP7312 1 +3.3V_RUN
- AFTP7310 1 USB_PP4
- AFTP7317 1 USB_PN4

DJ1



Title		
Bluetooth		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date:	Friday, February 26, 2010	Sheet 73 of 88

(Blanking)


DJ1



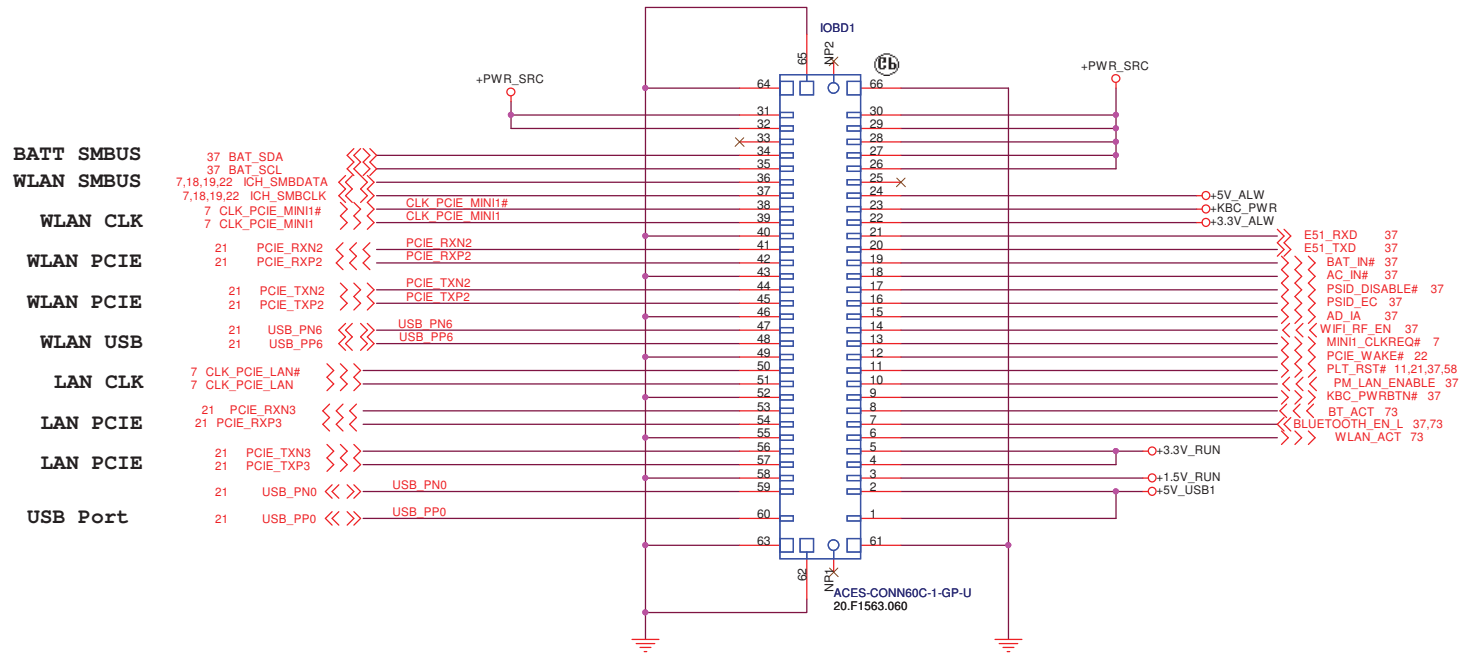
Title		
Reserved		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 74	of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 75 of	88

SSID = PWR.Support

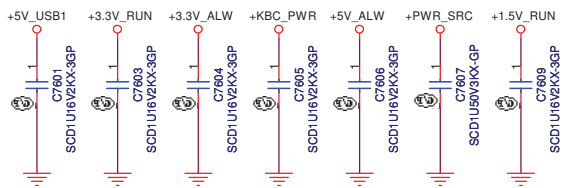


- BATT SMBUS**
- WLAN SMBUS**
- WLAN CLK**
- WLAN PCIE**
- WLAN PCIE**
- WLAN USB**
- LAN CLK**
- LAN PCIE**
- LAN PCIE**
- USB Port**

- 37 BAT_SDA
- 37 BAT_SCL
- 7,18,19,22 ICH_SMBDATA
- 7,18,19,22 ICH_SMBCLK
- 7 CLK_PCIE_MINI1#
- 7 CLK_PCIE_MINI1
- 21 PCIE_RXN2
- 21 PCIE_RXP2
- 21 PCIE_TXN2
- 21 PCIE_TXP2
- 21 USB_PN6
- 21 USB_PP6
- 7 CLK_PCIE_LAN#
- 7 CLK_PCIE_LAN
- 21 PCIE_RXN3
- 21 PCIE_RXP3
- 21 PCIE_TXN3
- 21 PCIE_TXP3
- 21 USB_PN0
- 21 USB_PP0

- E51_RXD 37
- E51_TXD 37
- BAT_IN# 37
- AC_IN# 37
- PSID_DISABLE# 37
- PSID_EC 37
- AD_IA 37
- WIFI_RF_EN 37
- MINI_CLKREQ# 7
- PCIE_WAKE# 22
- PLT_RST# 11,21,37,58
- PM_LAN_ENABLE 37
- KBC_PWRBTN# 37
- BT_ACT 73
- BLUETOOTH_EN_L 37,73
- WLAN_ACT 73

Close to IOBD Conn




DJ1

DELL		Wistron Corporation	
		21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: IO Board Connector			
Size: A3	Document Number: DJ1 Montevina UMA	Rev: A00	
Date: Friday, February 26, 2010	Sheet: 76	of: 88	


(Blanking)

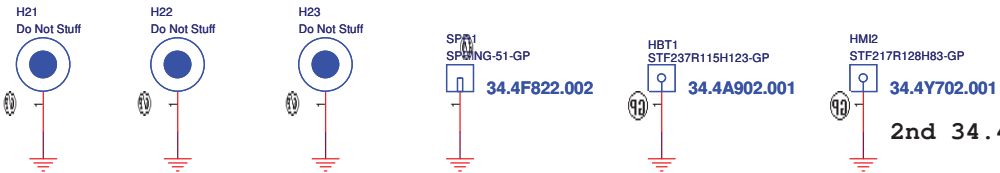
DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 77 of 88	

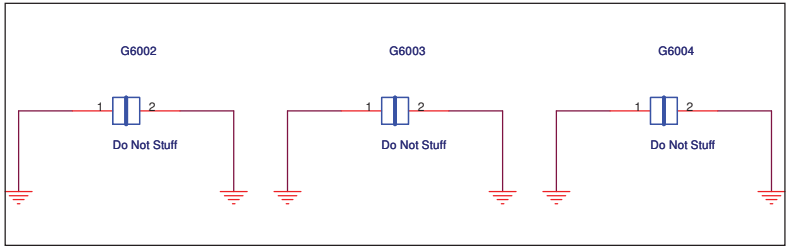
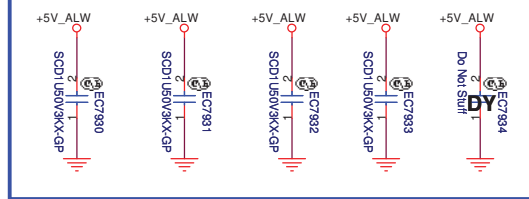
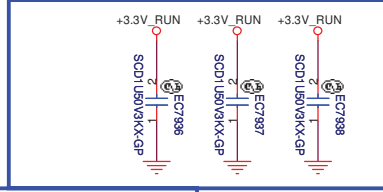
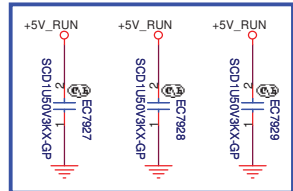
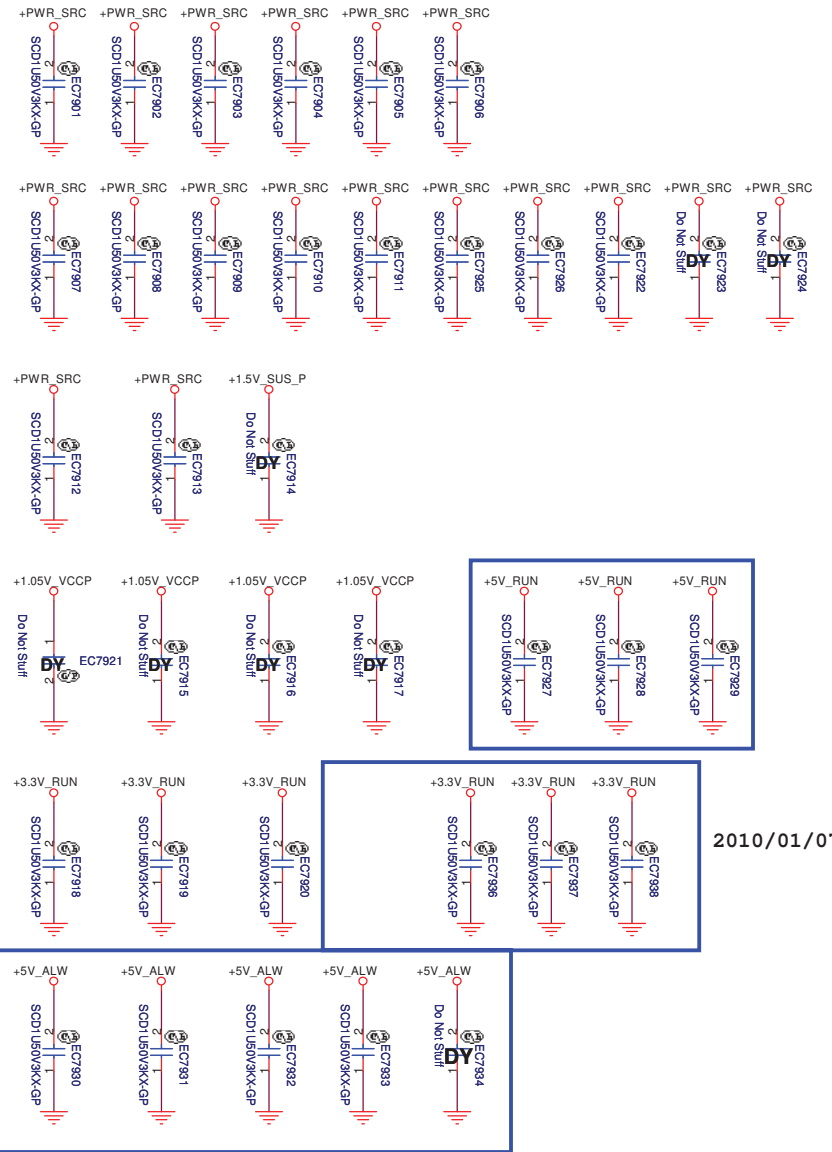
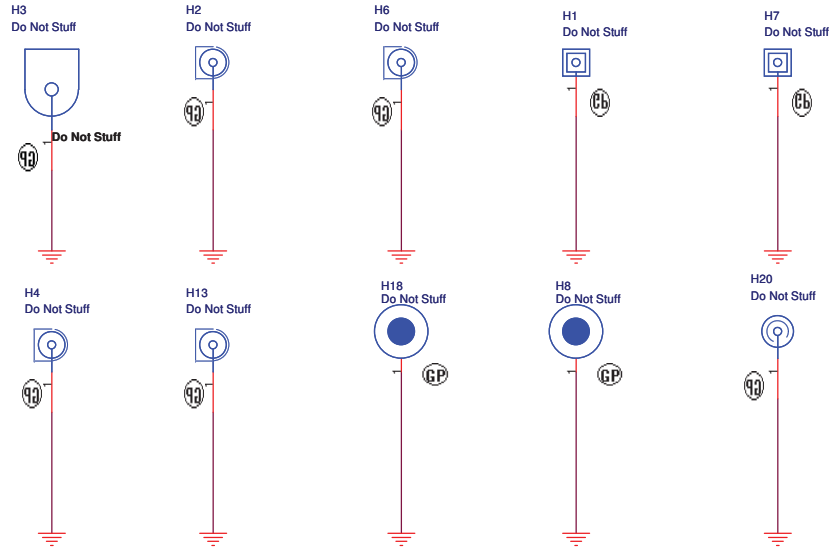
(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
Reserved		
Size A3	Document Number DJ1 Montevina UMA	Rev A00
Date: Wednesday, February 24, 2010	Sheet 78	of 88



2nd 34.4H103.201



EMI Request

2010/01/07

DJ1

Wistron Corporation
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.


Title: **UNUSED PARTS/EMI Capacitors**

Size: A3	Document Number: DJ1 Montevina UMA	Rev: A00
----------	---	-----------------

Date: Wednesday, February 24, 2010 Sheet 79 of 88

(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
(Reserved)			
Size	Document Number	Rev	
A3	DJ1 Montevina UMA	A00	
Date: Wednesday, February 24, 2010	Sheet 80	of 88	

(Blanking)

(Blanking)

(Blanking)


DJI

DELL **Wistron Corporation**
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title		(Reserved)	
Size	Document Number	Rev	
C	DJI Montevina UMA	A00	
Date: Wednesday, February 24, 2010		Sheet	83 of 88


(Blanking)

DJ1

			Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title					
(Reserved)					
Size	Document Number				Rev
Custom	DJ1 Montevina UMA				A00
Date:	Wednesday, February 24, 2010			Sheet	84 of 88


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
(Reserved)			
Size	Document Number	Rev	
Custom	DJ1 Montevina UMA	A00	
Date: Wednesday, February 24, 2010		Sheet	85 of 88


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
(Reserved)		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 86 of	88


(Blanking)

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title		
(Reserved)		
Size	Document Number	Rev
A3	DJ1 Montevina UMA	A00
Date: Wednesday, February 24, 2010	Sheet 87 of	88

Item	Page#	Date	Request By	Issue description	Solution Description	Rev.
1	20	2010/01/04	Wistron	R2018.R2019 to J accuracy	Change R2018 R2019 to 63.33434.1DL	X01
2	54	2010/01/04	Wistron	D4102 Change	D4102 change to 83.00054.Q81	X01
3	37	2010/01/04	Wistron	MB version chang to X01	Change R3722 pop,R3727 dummy.	X01
4	59	2009/01/06	Wistron	ME change ODD&RTC Conn	Change ODD Conn to 22.10300.811 Change RTC Conn to 62.70001.011	X01
5	79	2009/01/07	Wistron	EMI Request	Add EC7927 EC7928 EC7929 EC7936 EC7937 EC7938 EC7930 EC7931 EC7932 EC7933 EC7934 POP EC7913 EC7912 EC7925 EC7922 EC7926 PC4610 PC4615	X01
6	54 32 63	2010/01/07	Wistron	USB layout change	Del TR5401 TR3201 TR6301 TR6302 Change R5409 R5412 R3211 R3210 R6302 R6303 R6304 R6305 to 0ohm	X01
7	42	2010/01/07	Wistron	Change R4210 for POP noise	Change R4210 to 10K 63.10334.1DL	X01
8	60	2010/01/08	IDT	IDT Request change EMI CAP to 0.01u	EC6005 EC6006 change to 0.01u 78.10321.2FL	X01
9	63	2010/01/11	Wistron	USB power switch change	Change U6301 U6302 to 74.07534.079	X01
10	37	2010/01/12	Wistron	Prevent BIOS damage	POP U3702 74.00690.I7B	X01
11	37	2010/01/12	DELL	Add one capacitor for IPCC function	Add C3721 close KBC Pin AD_IA	X01
12	69	2010/01/14	Wistron	SMT issue	Change HSC1 layout symbol to Seiko 74.05711.07B	X01
13	47 49 50	2010/01/16	Wistron	Power team request	change PC4740 PC4741 PC4910 PC5020to 78.33124.2FL	X01
14	46	2010/01/18	Wistron	Power team request	DY PTC4603.change PTC5001 PTC4602	X01
15	37	2010/02/10	Wistron	U3702 reset timing is too long	DY U3702	A00
16	37	2010/02/10	Wistron	Change PCB version from X01 to A00	DY R3722 and R3728, stuff R3727 and R3723	A00
17	20 37 55	2010/02/24	Wistron	Change 0ohm to short pad.	Change R2014 R3725 R3748 R5505 R5506 R3012 R3014 R3018 RN5901 R6009 R6010	A00
18	37	2010/02/24	DELL	Add one FET for RCID function	Reserve Q3706	A00
19	69	2010/02/25	Wistron	Do not stuff R6902	Reserve R6902	A00

DJ1

		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Change History			
Title	Document Number		Rev
	DJ1 Montevina UMA		A00
Date: Thursday, February 25, 2010	Sheet 88	of	88