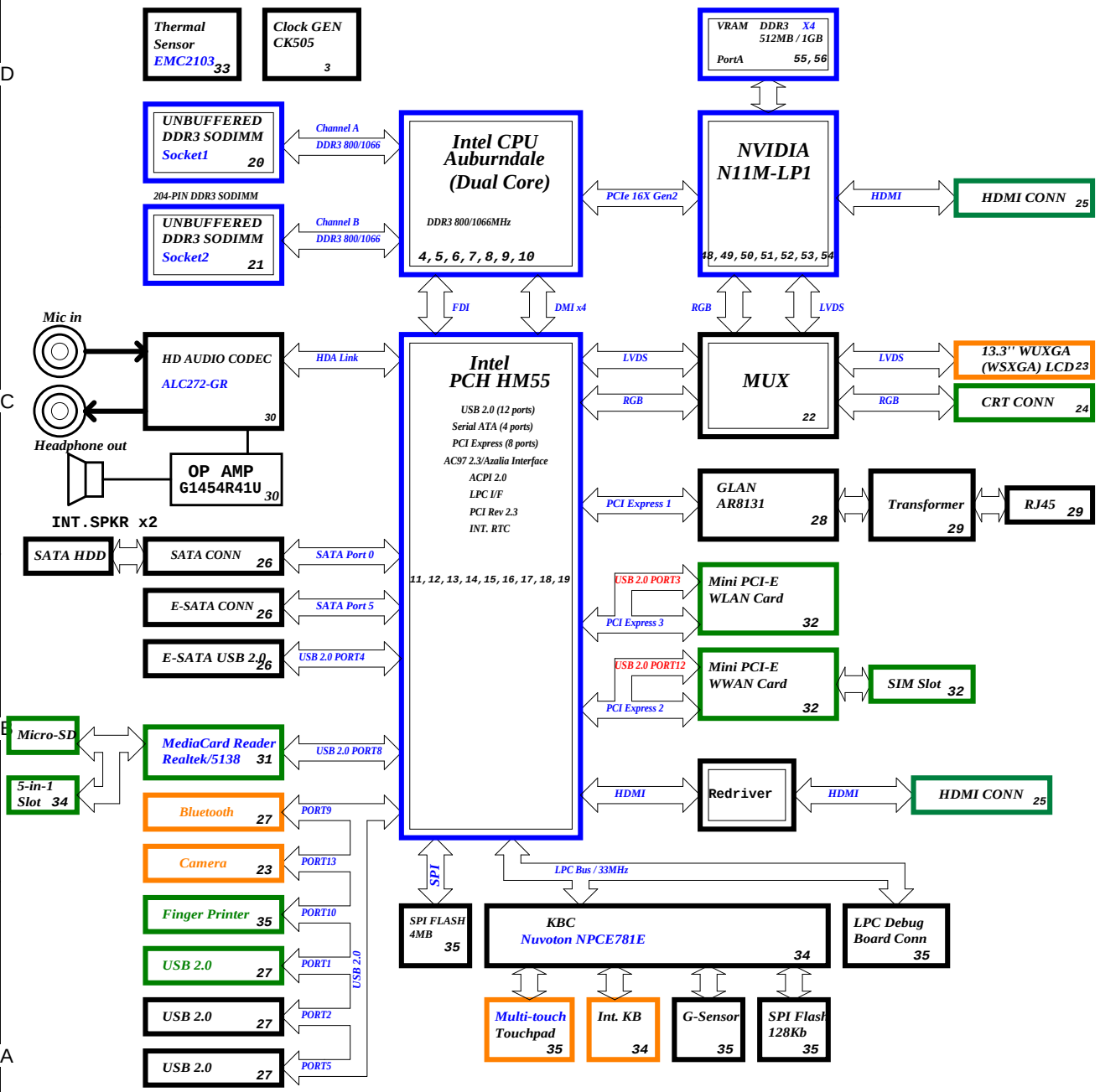
LA36 Switchable Graphics System Schematics

Project Code: 91.4JG01.001
PCB(Raw Card): 09939-1



Finger Printer BD

BT BD

AV BD

PCB LAYER

L1: Top
L2: VCC/GND
L3: Signal
L4: Signal
L5: GND
L6: Boot

CPU DC/DC ISL62882 40,41

INPUTS	OUTPUTS
DCBATOUT	VCC_CORE

SYSTEM DC/DC RT8223BGQW 42

INPUTS	OUTPUTS
DCBATOUT	5V_AUX_S5 3D3V_AUX_S5 5V_S5 3D3V_S5

SYSTEM DC/DC RT8209E 44

INPUTS	OUTPUTS
DCBATOUT	1D5V_S3

SYSTEM DC/DC RT8209E 44

INPUTS	OUTPUTS
DCBATOUT	1D05V_S0

SYSTEM DC/DC RT8209E 45

INPUTS	OUTPUTS
DCBATOUT	1D05V_VTT

LDO RT9025 46

INPUTS	OUTPUTS
3D3V_S5	1D8V_S0

LDO RT9026 46

INPUTS	OUTPUTS
1D5V_S3	0D75_S0 DDR_VREF_S3

SYSTEM DC/DC ISL62881 47

INPUTS	OUTPUTS
DCBATOUT	VCC_GFXCORE

SYSTEM DC/DC RT8208A 45

INPUTS	OUTPUTS
DCBATOUT	VGA_CORE_S0

CHARGER BQ24745 43

INPUTS	OUTPUTS
DCBATOUT	BT+

<Variant Name>

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

Title: Block Diagram

Size	Document Number	Rev
Custom	LA36 MB	-1

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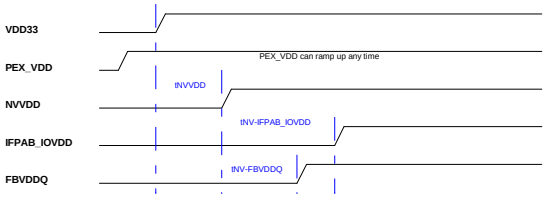
Processor Strapping

Pin Name	Strap Description	Configuration (Default value for each bit is 1 unless specified otherwise)	Default Value
CFG[4]	**Embedded DisplayPort Presence**	**1:** Disabled - No Physical Display Port attached to Embedded DisplayPort. **0:** Enabled - An external Display Port device is connected to the Embedded Display Port.	**1**
CFG[3]	**PCI-Express Static Lane Reversal**	**1:** Normal Operation. **0:** Lane Numbers Reversed 15 -> 0, 14 -> 1, ...	**1**
CFG[0]	**PCI-Express Configuration Select**	**1:** Single PCI-Express Graphics **0:** Bifurcation enabled	**1**
CFG[7]	**Reserved - Temporarily used for early Clarksfield samples.**	**Clarksfield (only for early samples pre-ES1)** - Connect to GND with 3.01K Ohm/5% resistor **Note:** Only temporary for early CFD samples (rPGA/BGA) [For details please refer to the WW33 MoW and sighting report]. For a common motherboard design (for AUB and CFD), the pull-down resistor should be used. Does not impact AUB functionality.	**0**

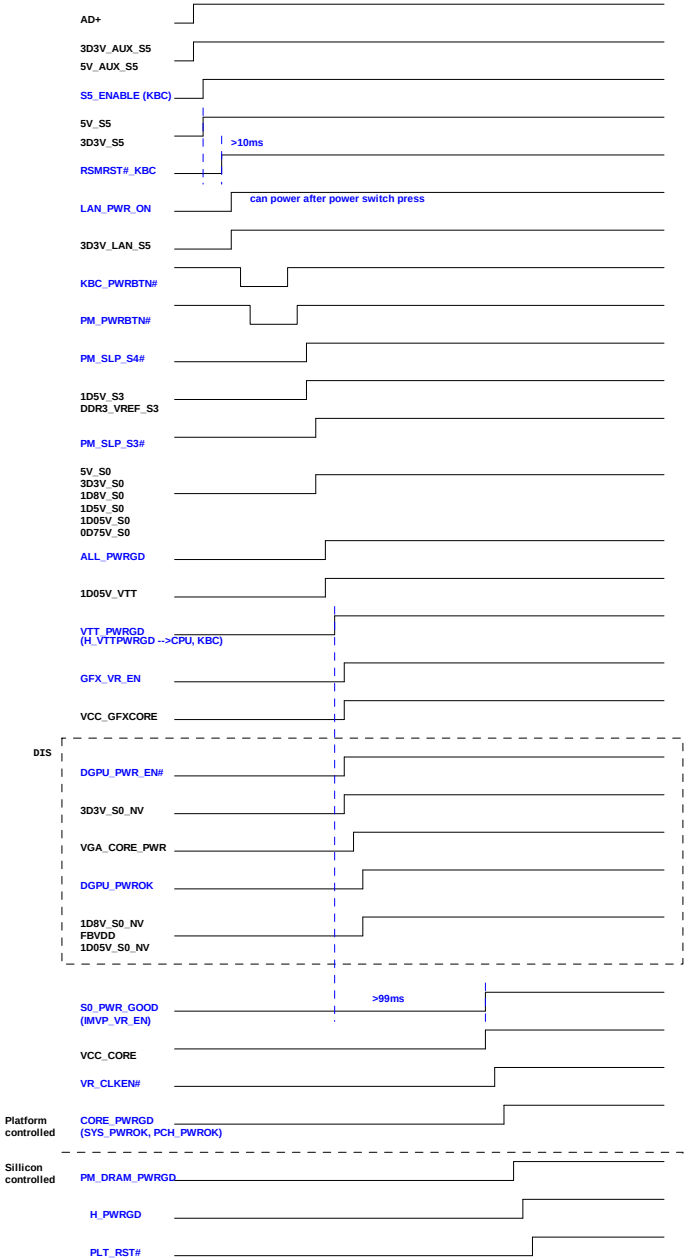
PCH Strapping

Name	Schematics Notes
SPKR	**Reboot option at power-up** **Default Mode:** Internal weak Pull-down. **No Reboot Mode with TCO Disabled:** Connect to Vcc3_3 with 8.2-kΩ - 10-kΩ weak pull-up resistor.
INIT3_3V#	Weak internal pull-down. Do not pull high.
GNT3#/ GPIO55	**Default Mode:** Internal pull-up. **Low (0) = Top Block Swap Mode** (Connect to ground with 4.7-kΩ weak pull-down resistor).
INTVRMEN	**High (1) = Integrated VRM is enabled** **Low (0) = Integrated VRM is disabled**
GNT0#, GNT1#	**Default (SPI):** Left both GNT0# and GNT1# floating. No pull up required. **Boot from PCI:** Connect GNT1# to ground with 1-kΩ pull-down resistor. Leave GNT0# Floating. **Boot from LPC:** Connect both GNT0# and GNT1# to ground with 1-kΩ pull-down resistor.
GNT2#/ GPIO53	**Default - Internal pull-up.** **Low (0)**= Configures DMI for ESI compatible operation (for servers only. Not for mobile/desktops).
GPIO33	**Default:** Do not pull low. **Disable ME in Manufacturing Mode:** Connect to ground with 1-kΩ pull-down resistor.
SPI_MOSI	**Enable iTPM:** Connect to Vcc3_3 with 8.2-kΩ weak pull-up resistor **Disable iTPM:** Left floating, no pull-down required.
NV_ALE	**Enable Danbury:** Connect to Vcc3_3 with 8.2-kΩ weak pull-up resistor. **Disable Danbury:** Connect to ground with 4.7-kΩ weak pull-down resistor.
NC_CLE	Weak internal pull-up. Do not pull low.
HAD_DOCK_EN# /GPIO[33]	**Low (0):** Flash Descriptor Security will be overridden. **High (1) :** Flash Descriptor Security will be in effect.
HDA_SDO	Weak internal pull-down. Do not pull high.
HDA_SYNC	Weak internal pull-down. Do not pull high.
GPIO15	Weak internal pull-down. Do not pull high.
GPIO8	Weak internal pull-up. Do not pull low.
GPIO27	**Default = Do not connect (floating)** High(1) = Enables the internal VccVRM to have a clean supply for analog rails. No need to use on-board filter circuit. Low (0) = Disables the VccVRM. Need to use on-board filter circuits for analog rails.

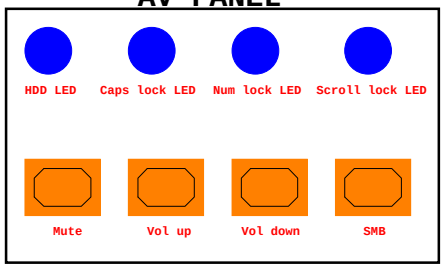
N11M-GE Power Sequence



Sequence AC

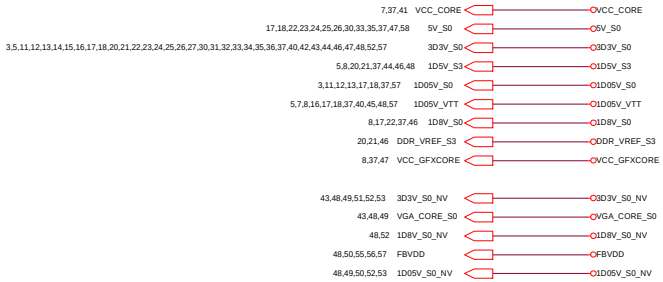


AV PANEL



PLANAR_ID[1..0]

KBC GPIn	31	23	Planar ID Version	Planar PCB Version
PLANAR_IDn	1	0		
	0	0	LA36 - SA	SA
	0	1		SB
	1	0		SC
	1	1		-1



<Variant Name>

Wistron Corporation
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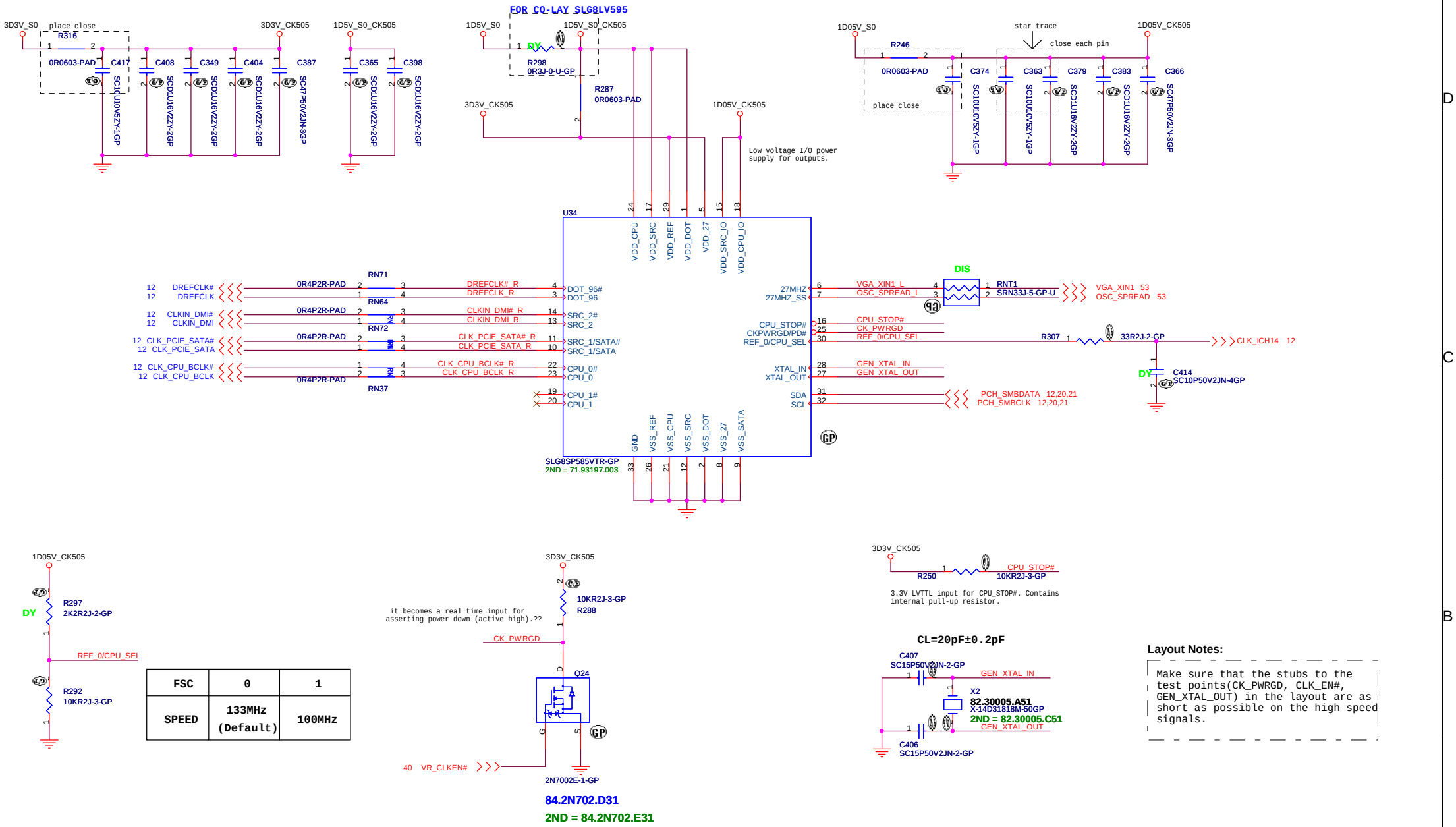
Taipei Hsien 221, Taiwan, R.O.C

Title: Reference

Size	Document Number	Rev
A2	LA36 MB DIS	-1

Date: Monday, March 22, 2010 Sheet 2 of 58



FSC	0	1
SPEED	133MHz (Default)	100MHz

Layout Notes:

Make sure that the stubs to the test points(CK_PWRGD, CLK_EN#, GEN_XTAL_OUT) in the layout are as short as possible on the high speed signals.

<Variant Name>

緯創資通 **Wistron Corporation**
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Taipei Hsien 221, Taiwan, R.O.C

Title: **Clock Generator SLG8SP585**

Size	Document Number	Rev
A3	LA36 MB DIS	-1

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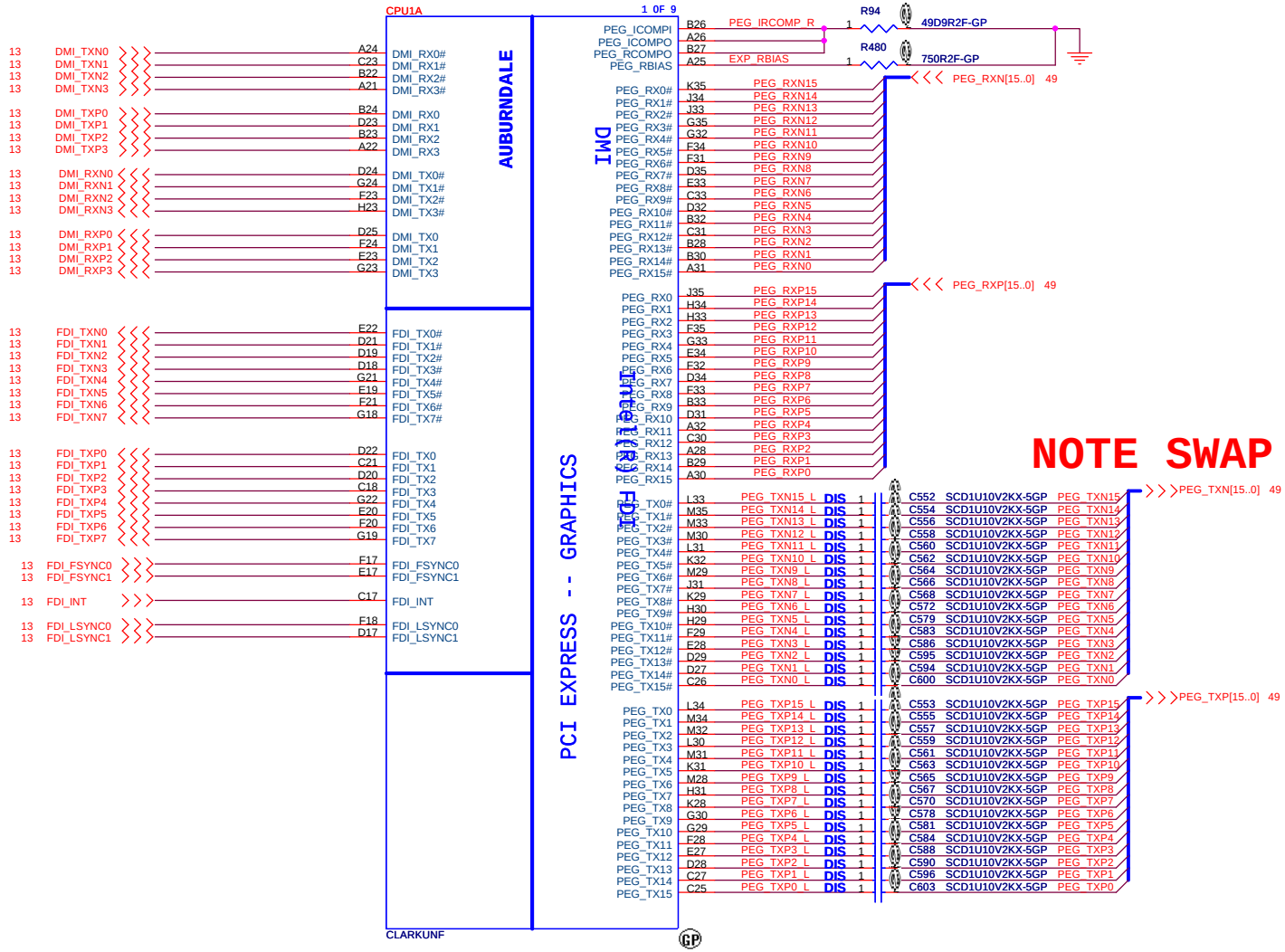

<variant_name>

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

Title: CPU (1/7)-PEG / DMI / FDI

Size	Document Number	Rev
A3	LA36 MB DIS	-1

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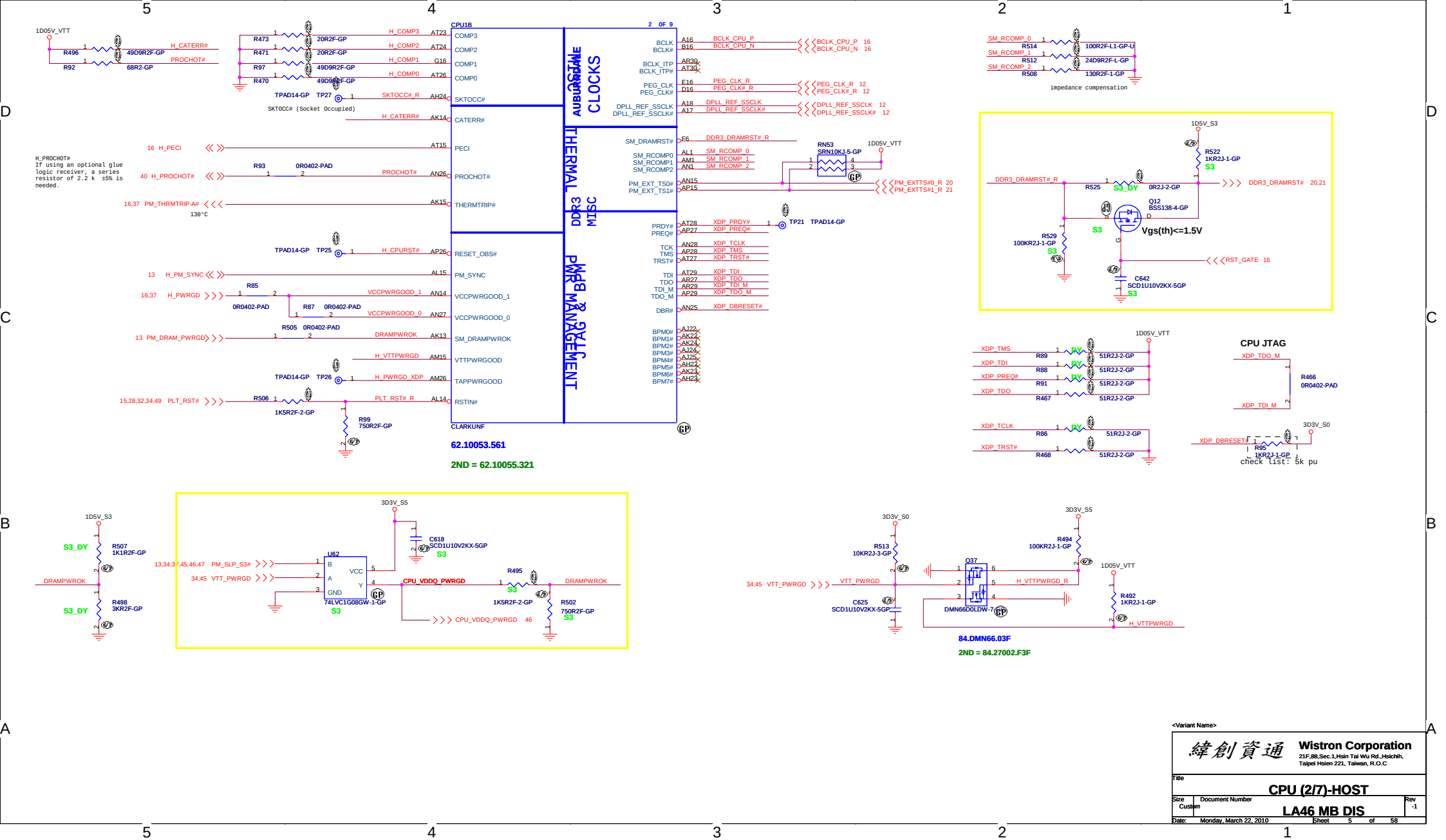
CPU1B
AUBURNDALE
CLOCKS
THERMAL
DDR3 MISC
PWR MANAGEMENT
JTAG
CLARKUNF
COMP3
COMP2
COMP1
COMP0
SKTOCC#
CATERR#
PECI
PROCHOT#
THERMTRIP#
RESET_OBS#
PM_SYNC
VCCPWRGOOD_1
VCCPWRGOOD_0
SM_DRAMPWROK
VTTPWRGOOD
TAPPWRGOOD
RSTIN#
BCLK
BCLK#
BCLK_ITP
BCLK_ITP#
PEG_CLK
PEG_CLK#
DPLL_REF_SSCLK
DPLL_REF_SSCLK#
SM_DRAMRST#
SM_RCOMP0
SM_RCOMP1
SM_RCOMP2
PM_EXT_TSO#
PM_EXT_TS1#
PRDY#
PREQ#
TCK
TMS
TRST#
TDI
TDO
TDI_M
TDO_M
DBR#
BPM0#
BPM1#
BPM2#
BPM3#
BPM4#
BPM5#
BPM6#
BPM7#
H_PROCHOT#
If using an optional glue logic receiver, a series resistor of 2.2 k ±5% is needed.
130°C
Socket Occupied
62.10053.561
2ND = 62.10055.321
impedance compensation
Vgs(th)<=1.5V
CPU JTAG
check list: 5k pu
84.DMN66.03F
2ND = 84.27002.F3F
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
CPU (2/7)-HOST
Size
Custom
Document Number
LA46 MB DIS
Rev
-1
Date: Monday, March 22, 2010
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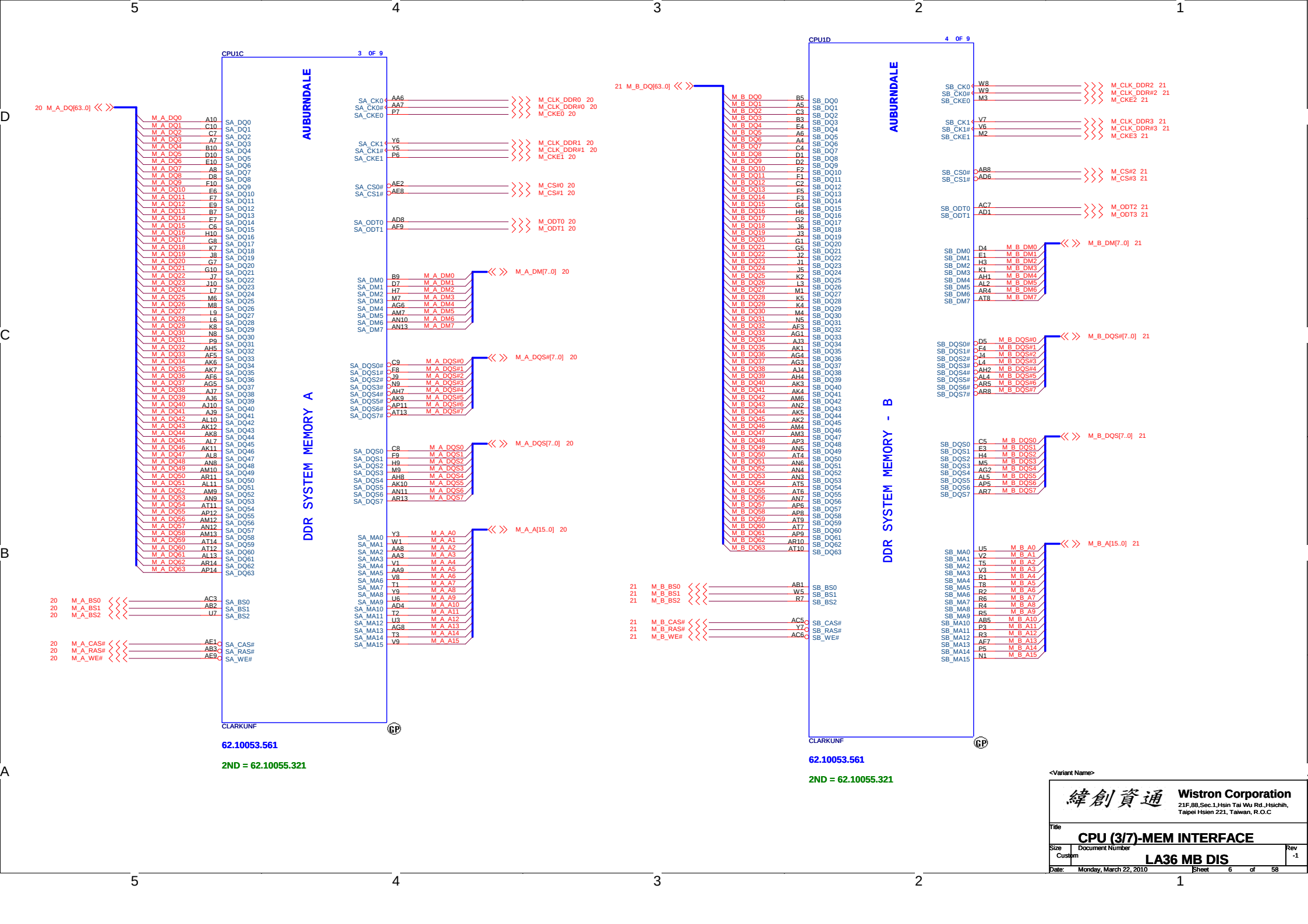
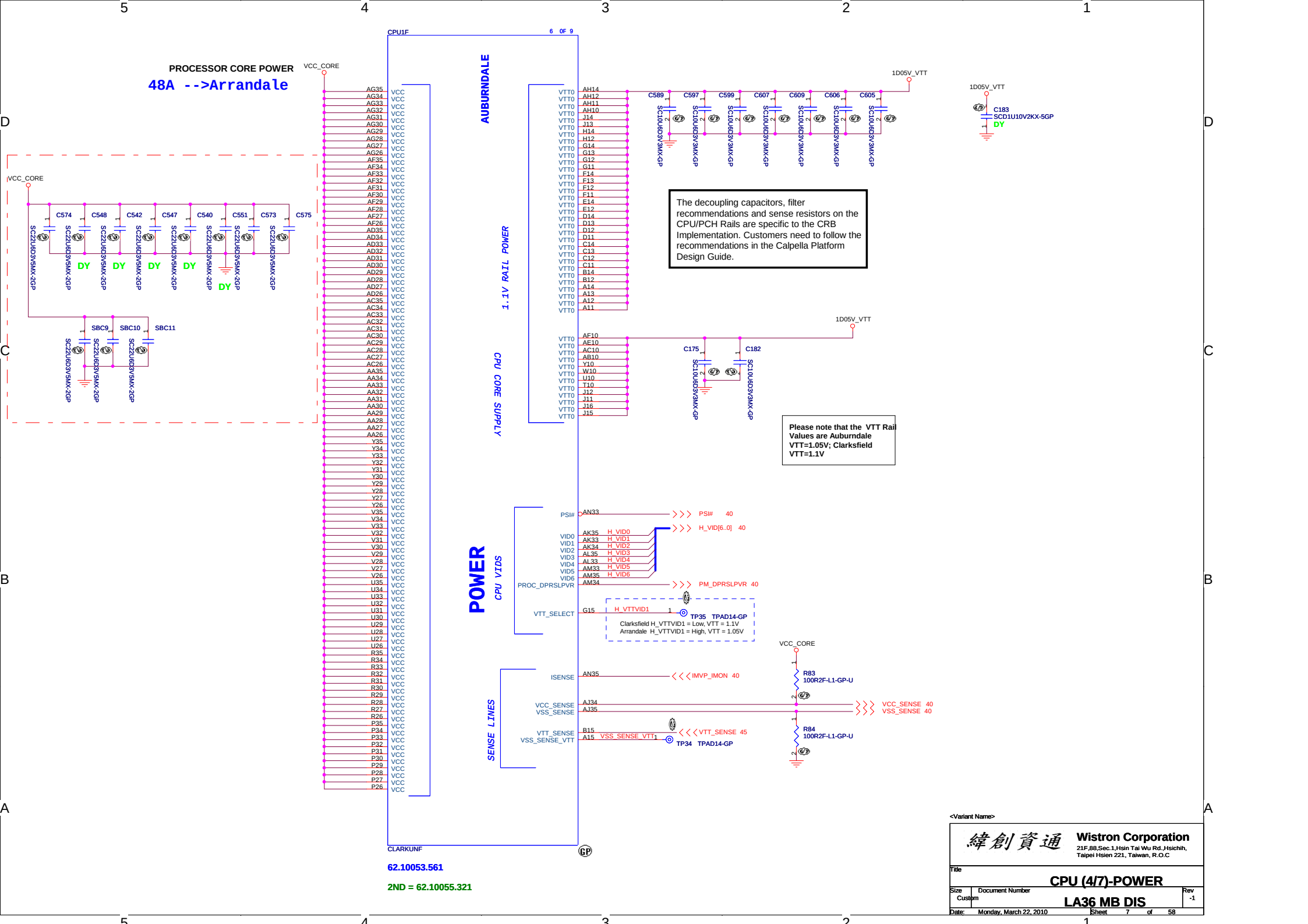

CPU1C
3 0F 9
AUBURNDALE
DDR SYSTEM MEMORY A
CLARKUNF
62.10053.561
2ND = 62.10055.321
CPU1D
4 0F 9
AUBURNDALE
DDR SYSTEM MEMORY - B
CLARKUNF
62.10053.561
2ND = 62.10055.321
<Variant Name>
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
CPU (3/7)-MEM INTERFACE
Size
Custom
Document Number
LA36 MB DIS
Rev
-1
Date: Monday, March 22, 2010
Sheet 6 of 58



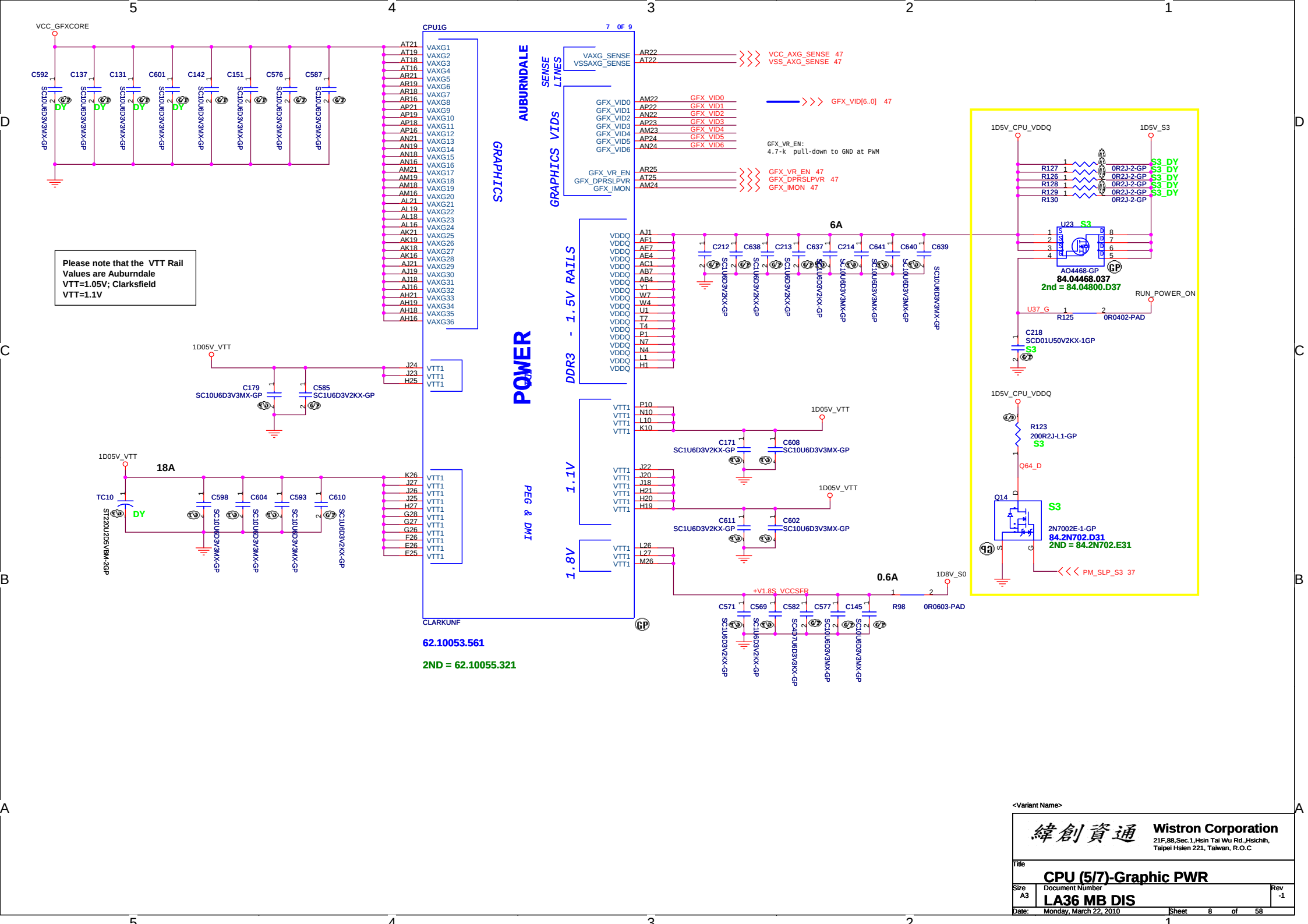
<Variant Name>

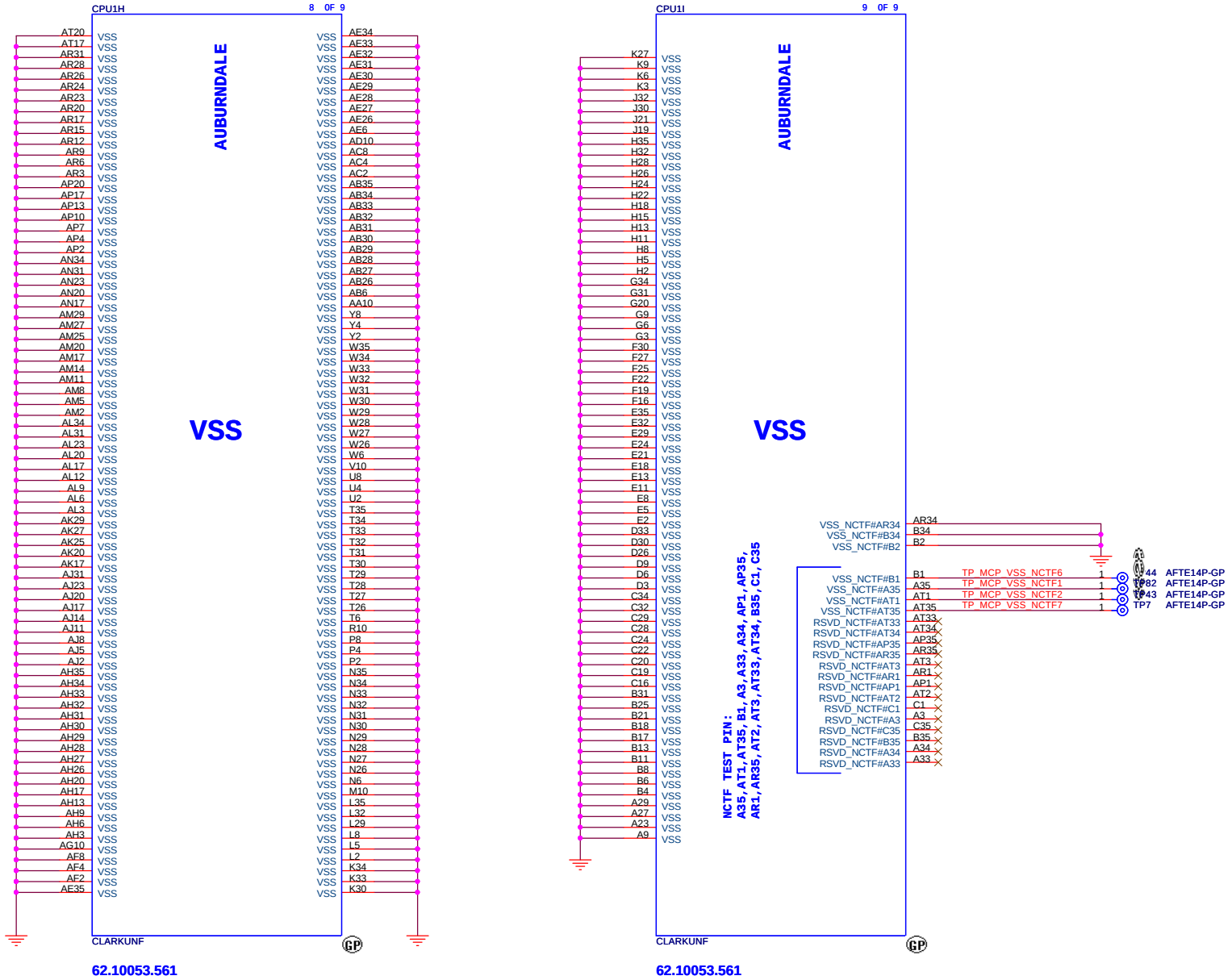
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

Title: CPU (4/7)-POWER

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 7 of 58


VCC_GFXCORE
CPU1G
7 OF 9
AUBURNDALE
GRAPHICS
SENSE LINES
GRAPHICS VIDS
DDR3 - 1.5V RAILS
1.1V
1.8V
PEG & DMI
POWER
CLARKUNF
62.10053.561
2ND = 62.10055.321
Please note that the VTT Rail Values are Auburndale VTT=1.05V; Clarksfield VTT=1.1V
VCC_AXG_SENSE 47
VSS_AXG_SENSE 47
GFX_VID[6..0] 47
GFX_VR_EN: 4.7-k pull-down to GND at PWM
GFX_VR_EN 47
GFX_DPRSLPVR 47
GFX_IMON 47
6A
0.6A
18A
1D05V_VTT
1D5V_CPU_VDDQ
1D5V_S3
1D8V_S0
RUN_POWER_ON
PM_SLP_S3 37
AO4468-GP
84.04468.037
2nd = 84.04800.D37
2N7002E-1-GP
84.2N702.D31
2ND = 84.2N702.E31
<Variant Name>
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
CPU (5/7)-Graphic PWR
Size A3
Document Number
LA36 MB DIS
Rev -1
Date: Monday, March 22, 2010
Sheet 8 of 58



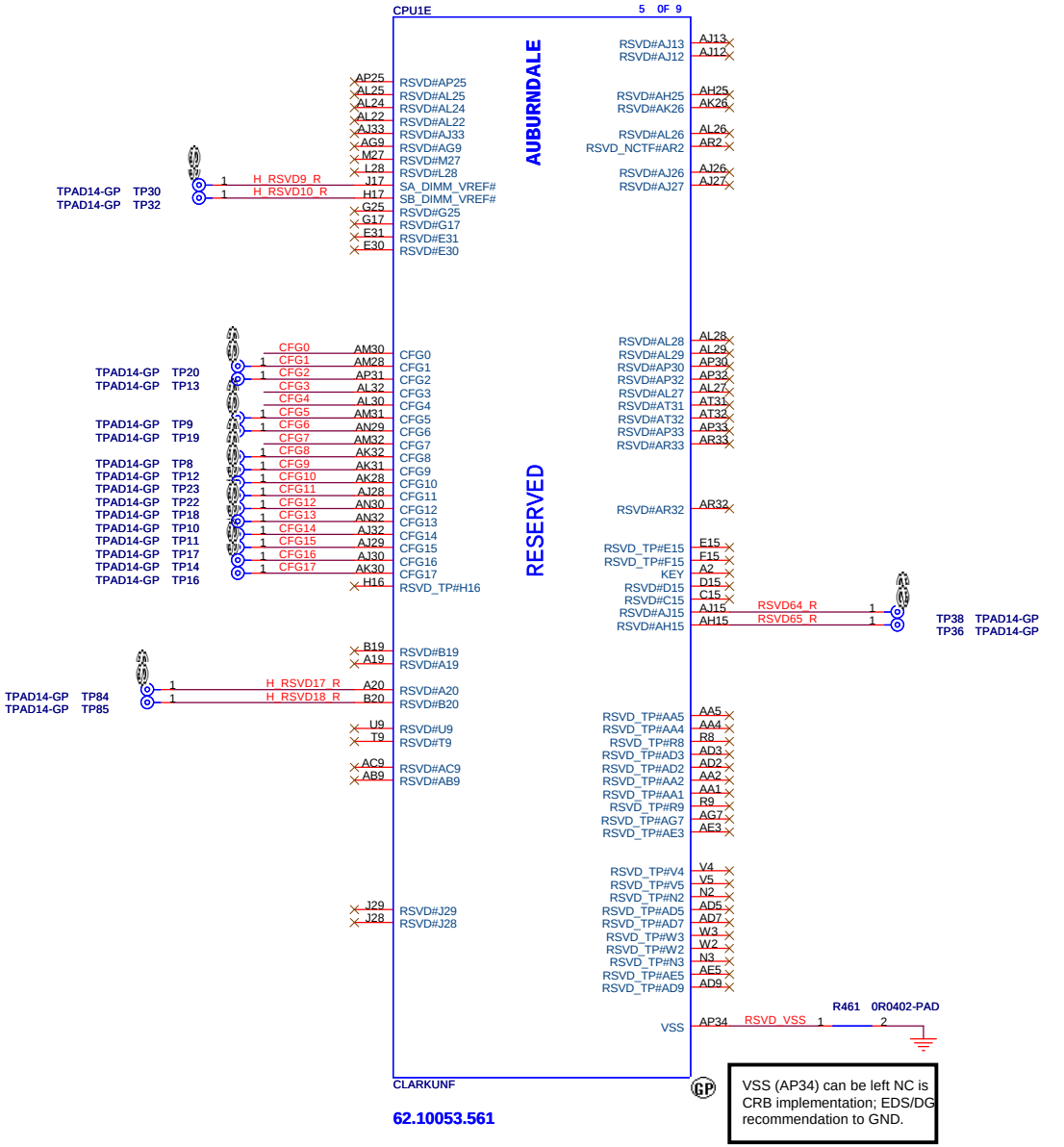
<Variant Name>

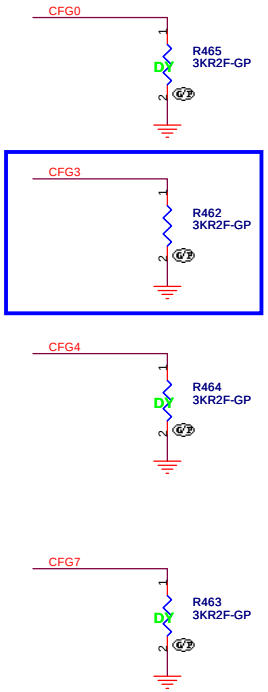
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

Title: CPU (6/7)-VSS

Size	Document Number	Rev
A3	LA36 MB DIS	-1

Date: Monday, March 22, 2010 Sheet 9 of 58





PCI-Express Configuration Select	
CFG0	1:Single PEG 0:Bifurcation enabled

CFG3 - PCI-Express Static Lane Reversal	
CFG3	1 :Normal Operation 0 :Lane Numbers Reversed 15 -> 0, 14 -> 1, ...

CFG4 - Display Port Presence	
CFG4	1:Disabled; No Physical Display Port attached to Embedded Display Port 0:Enabled; An external Display Port device is connected to the Embedded Display Port

CFG7(Reserved) - Temporarily used for early Clarksfield samples.	
CFG7	Clarksfield (only for early samples pre-ES1) - Connect to GND with 3.01K Ohm/5% resistor. Note: Only temporary for early CFD sample (rPGA/BGA) [For details please refer to the WW33 MoW and sighting report]. For a common M/B design (for AUB and CFD), the pull-down resistor shouble be used. Does not impact AUB functionality.

<Variant Name>

Wistron Corporation
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Title: CPU (7/7)-RESERVED

Size: A3 | Document Number: LA36 MB DIS | Rev: -1

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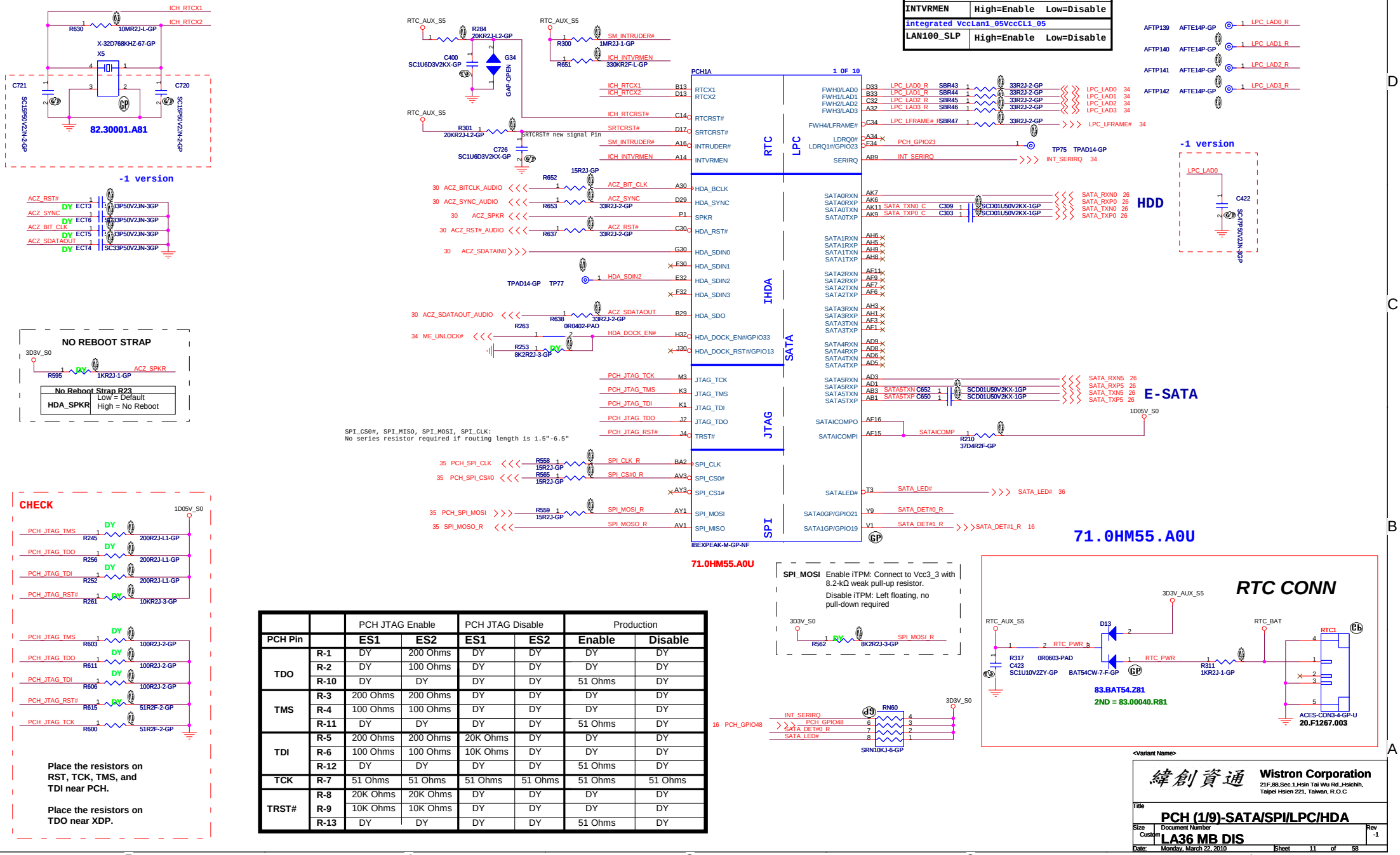
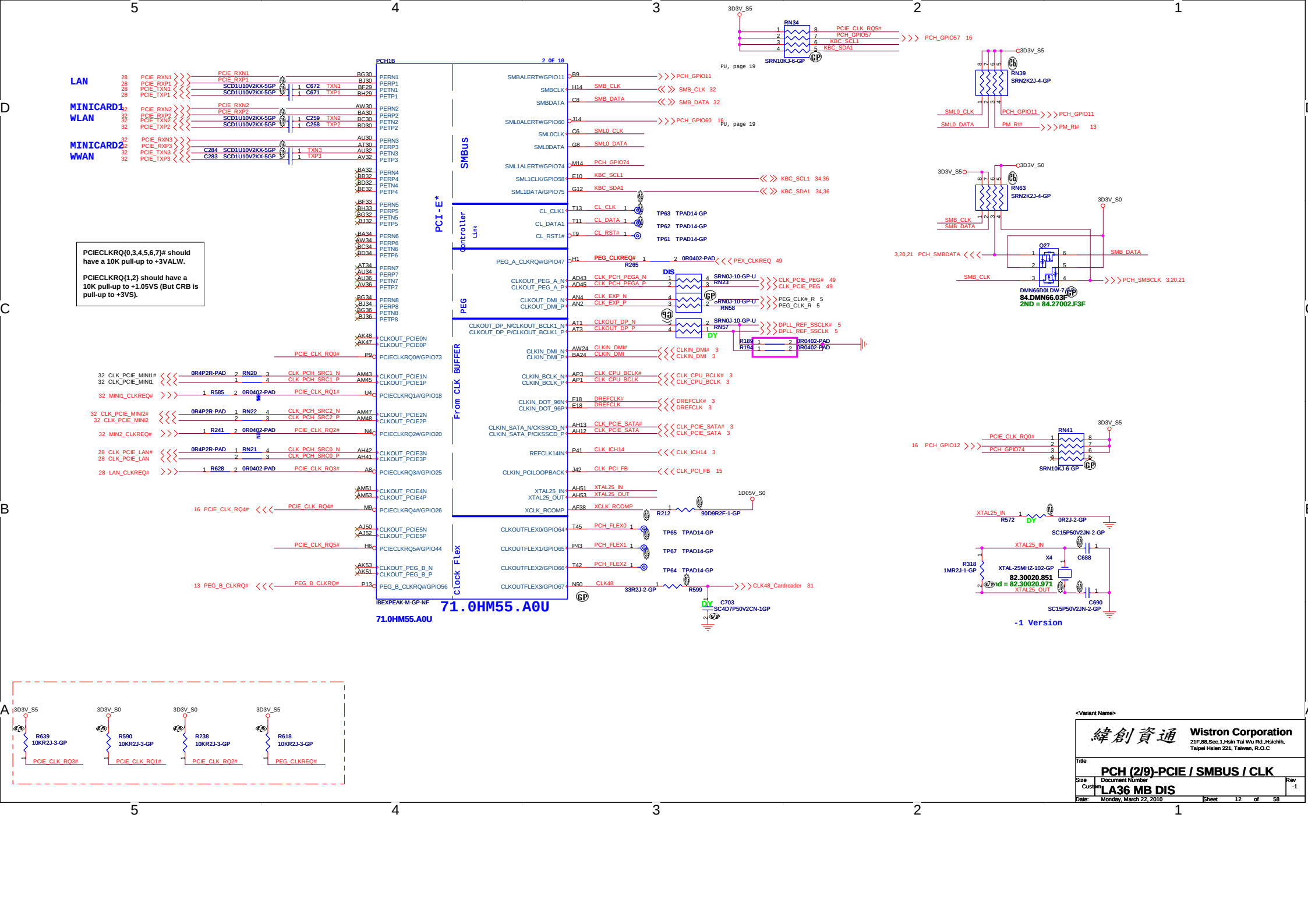


PCH Pin		PCH JTAG Enable		PCH JTAG Disable		Production	
		ES1	ES2	ES1	ES2	Enable	Disable
TDO	R-1	DY	200 Ohms	DY	DY	DY	DY
	R-2	DY	100 Ohms	DY	DY	DY	DY
	R-10	DY	DY	DY	DY	51 Ohms	DY
TMS	R-3	200 Ohms	200 Ohms	DY	DY	DY	DY
	R-4	100 Ohms	100 Ohms	DY	DY	DY	DY
	R-11	DY	DY	DY	DY	51 Ohms	DY
TDI	R-5	200 Ohms	200 Ohms	20K Ohms	DY	DY	DY
	R-6	100 Ohms	100 Ohms	10K Ohms	DY	DY	DY
	R-12	DY	DY	DY	DY	51 Ohms	DY
TCK	R-7	51 Ohms	51 Ohms	51 Ohms	51 Ohms	51 Ohms	51 Ohms
TRST#	R-8	20K Ohms	20K Ohms	DY	DY	DY	DY
	R-9	10K Ohms	10K Ohms	DY	DY	DY	DY
	R-13	DY	DY	DY	DY	51 Ohms	DY



Wistron Corporation
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Title: PCH (2/9)-PCIE / SMBUS / CLK

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

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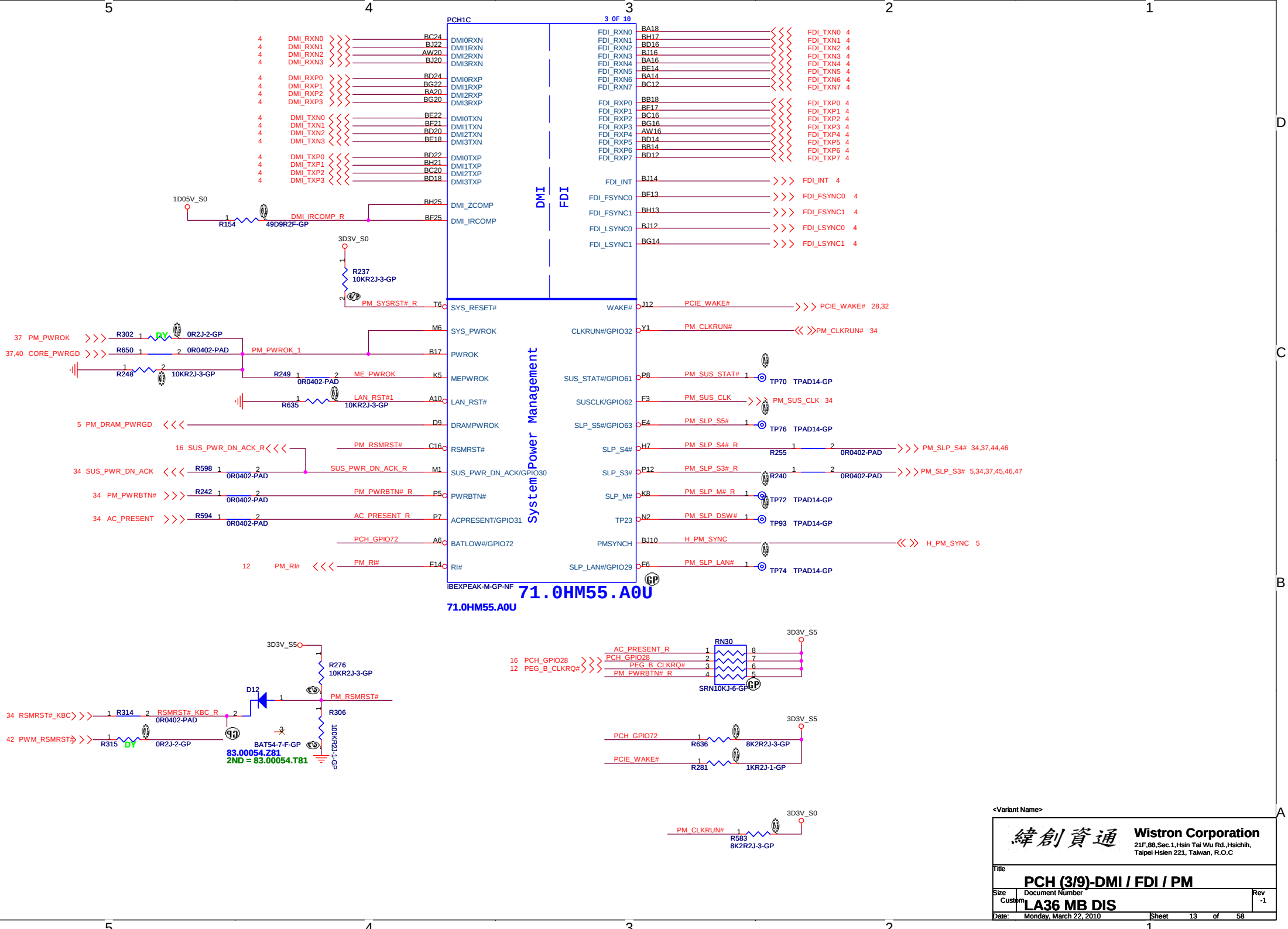
PCH1C
3 OF 10
DMI
FDI
System Power Management
IBEXPEAK-M-GP-NF
71.0HM55.A0U
71.0HM55.A0U
DMI_RXN0
DMI_RXN1
DMI_RXN2
DMI_RXN3
DMI_RXP0
DMI_RXP1
DMI_RXP2
DMI_RXP3
DMI_TXN0
DMI_TXN1
DMI_TXN2
DMI_TXN3
DMI_TXP0
DMI_TXP1
DMI_TXP2
DMI_TXP3
DMI_ZCOMP
DMI_IRCOMP
FDI_RXN0
FDI_RXN1
FDI_RXN2
FDI_RXN3
FDI_RXN4
FDI_RXN5
FDI_RXN6
FDI_RXN7
FDI_RXP0
FDI_RXP1
FDI_RXP2
FDI_RXP3
FDI_RXP4
FDI_RXP5
FDI_RXP6
FDI_RXP7
FDI_INT
FDI_FSYNC0
FDI_FSYNC1
FDI_LSYNC0
FDI_LSYNC1
1D05V_S0
R154
49D9R2F-GP
3D3V_S0
R237
10KR2J-3-GP
PM_SYSRST# R
SYS_RESET#
WAKE#
PCIE_WAKE#
CLKRUN#/GPIO32
PM_CLKRUN#
SYS_PWROK
PWROK
MEPWROK
LAN_RST#
DRAMPWROK
RSMRST#
SUS_PWR_DN_ACK/GPIO30
PWRBTN#
ACPRESENT/GPIO31
BATLOW#/GPIO72
RI#
SUS_STAT#/GPIO61
SUSCLK/GPIO62
SLP_S5#/GPIO63
SLP_S4#
SLP_S3#
SLP_M#
TP23
PMSYNCH
SLP_LAN#/GPIO29
PM_PWROK
CORE_PWRGD
PM_DRAM_PWRGD
SUS_PWR_DN_ACK_R
SUS_PWR_DN_ACK
PM_PWRBTN#
AC_PRESENT
PCH_GPIO72
PM_RI#
R302
0R2J-2-GP
R650
0R0402-PAD
R248
10KR2J-3-GP
R249
0R0402-PAD
R635
10KR2J-3-GP
R598
0R0402-PAD
R242
0R0402-PAD
R594
0R0402-PAD
PM_PWROK_1
ME_PWROK
LAN_RST#1
PM_RSMRST#
SUS_PWR_DN_ACK_R
PM_PWRBTN# R
AC_PRESENT_R
PM_SUS_STAT#
PM_SUS_CLK
PM_SLP_S5#
PM_SLP_S4# R
PM_SLP_S3# R
PM_SLP_M# R
PM_SLP_DSW#
H_PM_SYNC
PM_SLP_LAN#
TP70 TPAD14-GP
TP76 TPAD14-GP
R255
0R0402-PAD
R240
0R0402-PAD
TP72 TPAD14-GP
TP93 TPAD14-GP
TP74 TPAD14-GP
PCIE_WAKE# 28,32
PM_CLKRUN# 34
PM_SUS_CLK 34
PM_SLP_S4# 34,37,44,46
PM_SLP_S3# 5,34,37,45,46,47
H_PM_SYNC 5
3D3V_S5
R276
10KR2J-3-GP
D12
BAT54-7-F-GP
R306
100KR2J-1-GP
R314
RSMRST# KBC_R
0R0402-PAD
R315
0R2J-2-GP
83.00054.Z81
2ND = 83.00054.T81
RN30
SRN10KJ-6-GP
PCH_GPIO28
PEG_B_CLKRQ#
R636
8K2R2J-3-GP
R281
1KR2J-1-GP
R583
8K2R2J-3-GP
<Variant Name>
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
PCH (3/9)-DMI / FDI / PM
Size
Custom
Document Number
LA36 MB DIS
Rev
-1
Date: Monday, March 22, 2010
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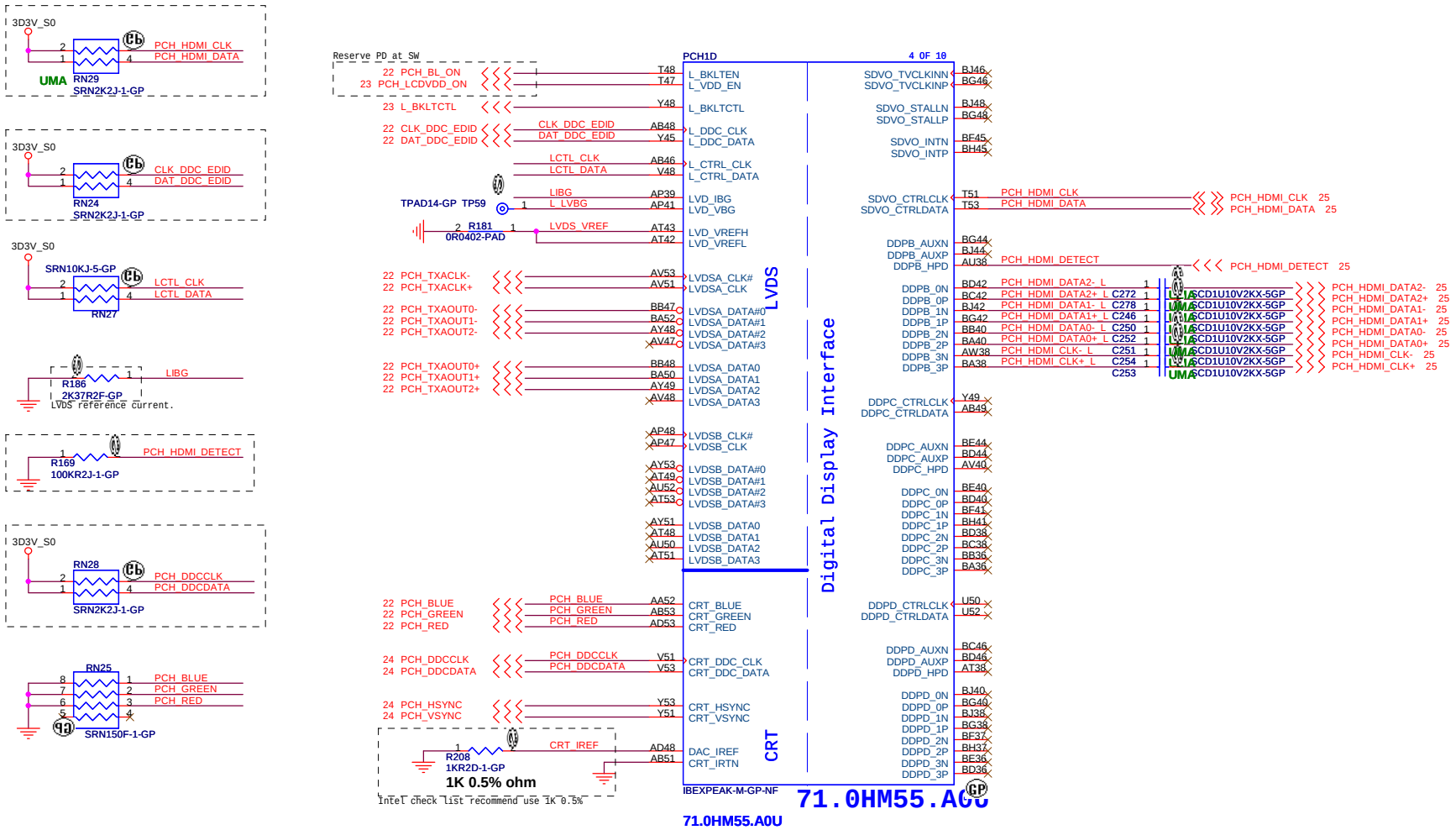


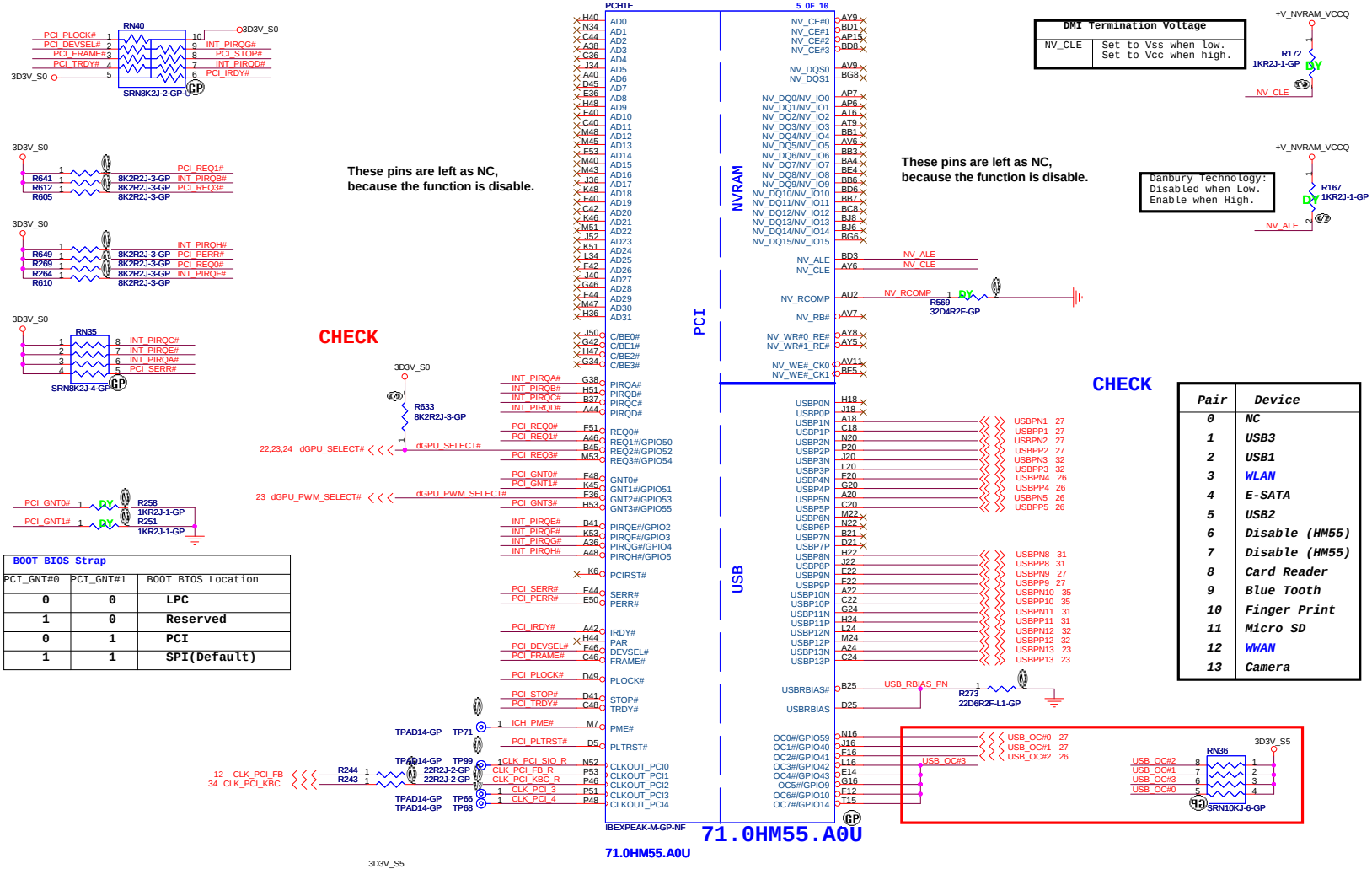
<Variant Name>

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

Title: PCH (4/9)-LVDS / CRT

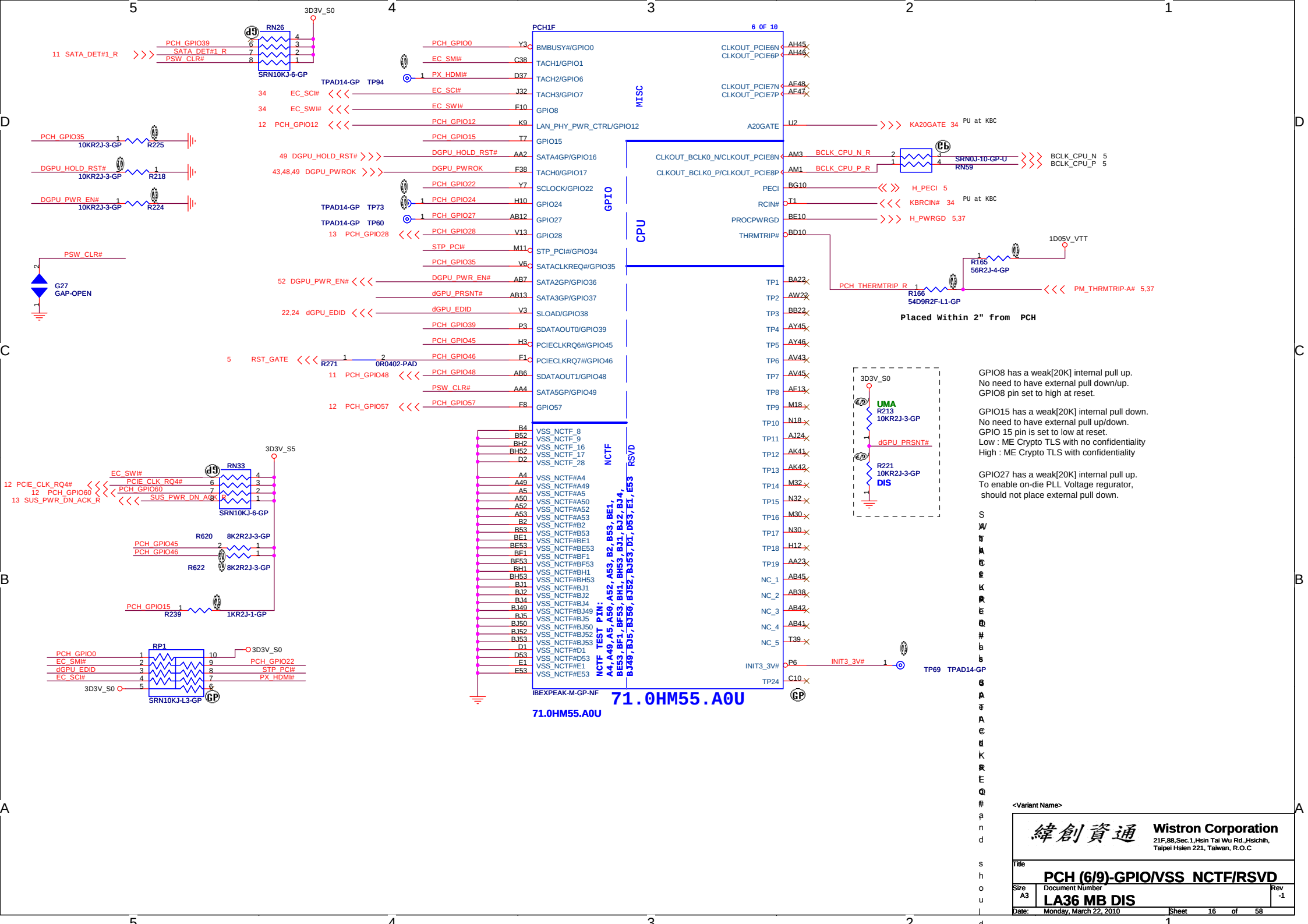
Size: A3 | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 14 of 58



<Variant Name>
緯創資通 Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C

Title: PCH (5/9)-PCI / USB
Size: Custom | Document Number: LA36 MB DIS | Rev: -1
Date: Monday, March 22, 2010 | Sheet 15 of 58


PCH1F
6 OF 10
MISC
GPIO
CPU
NCTF
RSVD
BMBUSY#/GPIO0
TACH1/GPIO1
TACH2/GPIO6
TACH3/GPIO7
GPIO8
LAN_PHY_PWR_CTRL/GPIO12
GPIO15
SATA4GP/GPIO16
TACH0/GPIO17
SCLOCK/GPIO22
GPIO24
GPIO27
GPIO28
STP_PCI#/GPIO34
SATACLKREQ#/GPIO35
SATA2GP/GPIO36
SATA3GP/GPIO37
SLOAD/GPIO38
SDATAOUT0/GPIO39
PCIECLKRQ6#/GPIO45
PCIECLKRQ7#/GPIO46
SDATAOUT1/GPIO48
SATA5GP/GPIO49
GPIO57
CLKOUT_PCIE6N
CLKOUT_PCIE6P
CLKOUT_PCIE7N
CLKOUT_PCIE7P
A20GATE
CLKOUT_BCLK0_N/CLKOUT_PCIE8N
CLKOUT_BCLK0_P/CLKOUT_PCIE8P
PECI
RCIN#
PROCPWRGD
THRMTRIP#
VSS_NCTF_8
VSS_NCTF_9
VSS_NCTF_16
VSS_NCTF_17
VSS_NCTF_28
NCTF TEST PIN:
A4,A49,A5,A50,A52,A53,B2,B53,BE1,
BE53,BF1,BF53,BH1,BH53,BJ1,BJ2,BJ4,
BJ49,BJ5,BJ50,BJ52,BJ53,D1,D53,E1,E53
IBEXPEAK-M-GP-NF
71.0HM55.A0U
RN26
SRN10KJ-6-GP
RN33
SRN10KJ-6-GP
RP1
SRN10KJ-L3-GP
SRN0J-10-GP-U
RN59
R165
56R2J-4-GP
R166
54D9R2F-L1-GP
R271
0R0402-PAD
R213
10KR2J-3-GP
R221
10KR2J-3-GP
R620
8K2R2J-3-GP
R622
8K2R2J-3-GP
R239
1KR2J-1-GP
R225
10KR2J-3-GP
R218
10KR2J-3-GP
R224
10KR2J-3-GP
G27
GAP-OPEN
TP69
TPAD14-GP
TP94
TPAD14-GP
TP73
TPAD14-GP
TP60
TPAD14-GP
3D3V_S0
3D3V_S5
1D05V_VTT
UMA
DIS
PU at KBC
PU at KBC
Placed Within 2" from PCH
GPIO8 has a weak[20K] internal pull up.
No need to have external pull down/up.
GPIO8 pin set to high at reset.
GPIO15 has a weak[20K] internal pull down.
No need to have external pull up/down.
GPIO 15 pin is set to low at reset.
Low : ME Crypto TLS with no confidentiality
High : ME Crypto TLS with confidentiality
GPIO27 has a weak[20K] internal pull up.
To enable on-die PLL Voltage regurator,
should not place external pull down.
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PCH (6/9)-GPIO/VSS NCTF/RSVD
LA36 MB DIS
Monday, March 22, 2010
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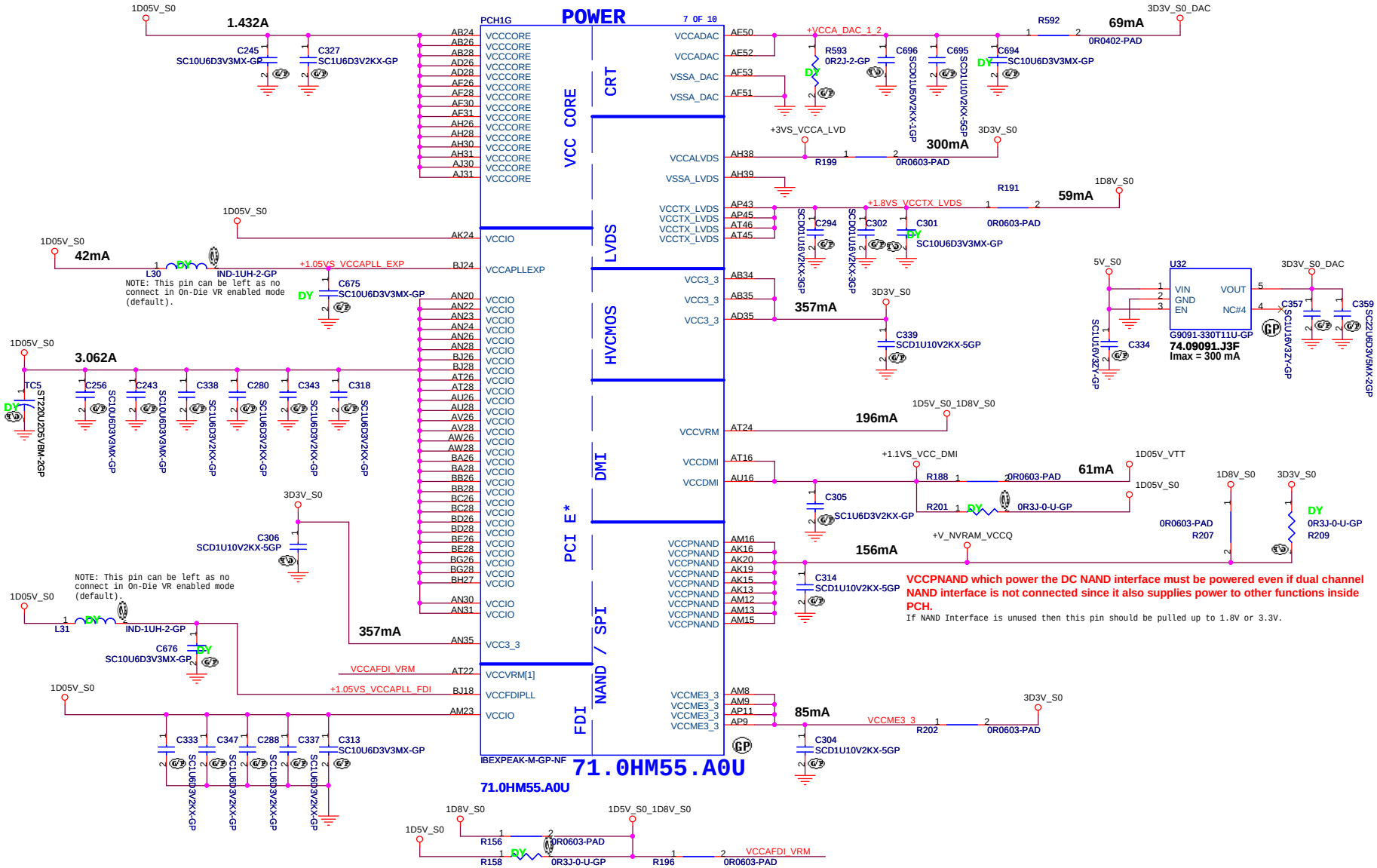
POWER
PCH1G
7 OF 10
VCC CORE
CRT
LVDS
HVCMOS
PCI E*
DMI
SPI
NAND
FDI
1.432A
42mA
3.062A
357mA
300mA
69mA
59mA
357mA
196mA
61mA
156mA
85mA
IBEXPEAK-M-GP-NF
71.0HM55.A0U
71.0HM55.A0U
VCCPNAND which power the DC NAND interface must be powered even if dual channel NAND interface is not connected since it also supplies power to other functions inside PCH.
If NAND Interface is unused then this pin should be pulled up to 1.8V or 3.3V.
NOTE: This pin can be left as no connect in On-Die VR enabled mode (default).
74.09091.J3F
Imax = 300 mA
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
<Variant Name>
PCH (7/9)-PWR_1
LA36 MB DIS
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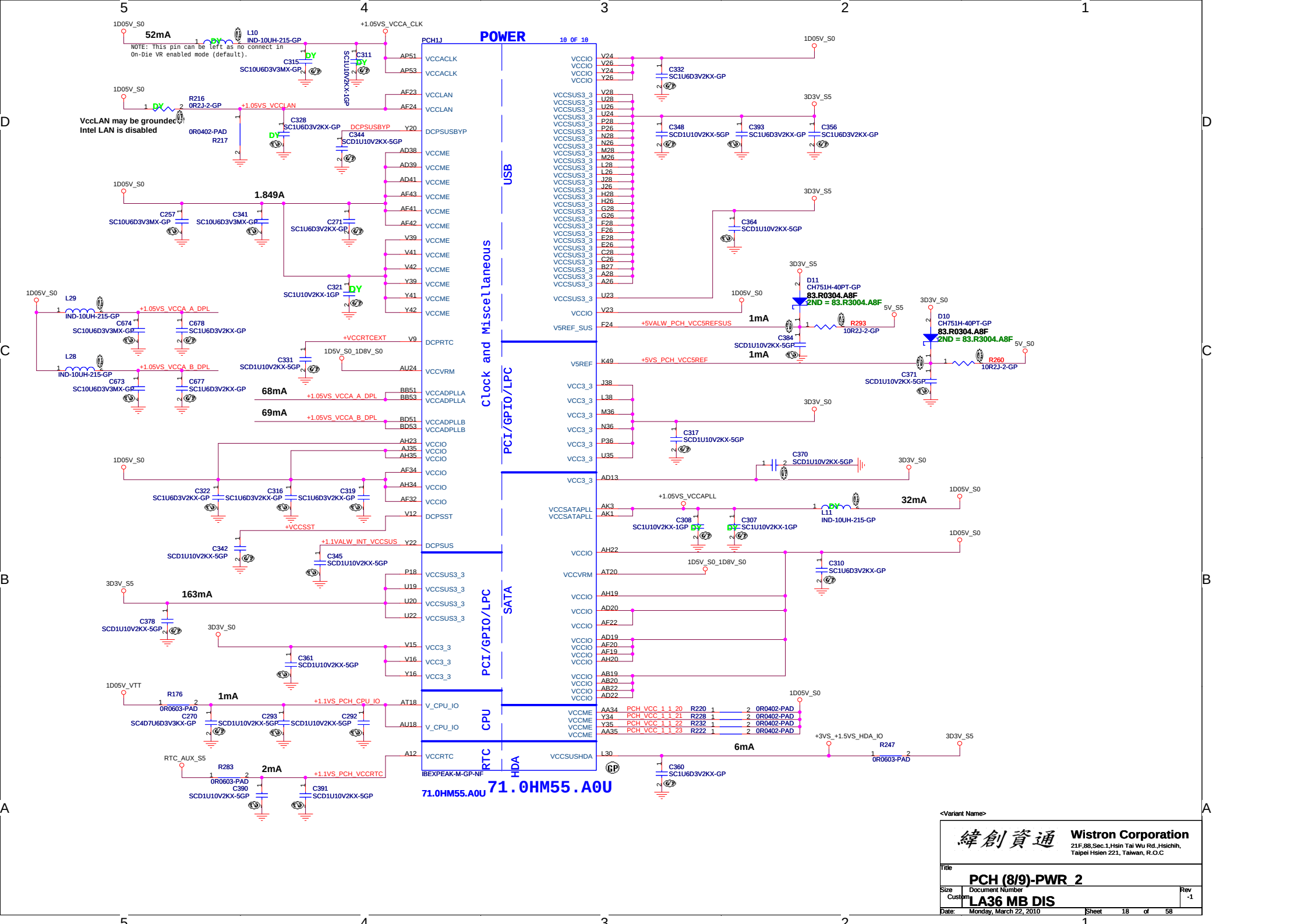

緯創資通 Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

<Variant Name>
Title: PCH (8/9)-PWR_2
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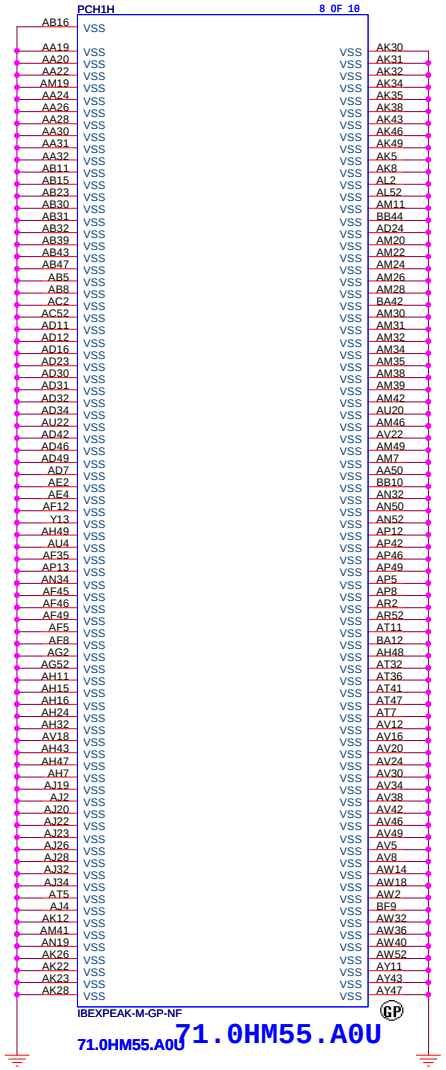

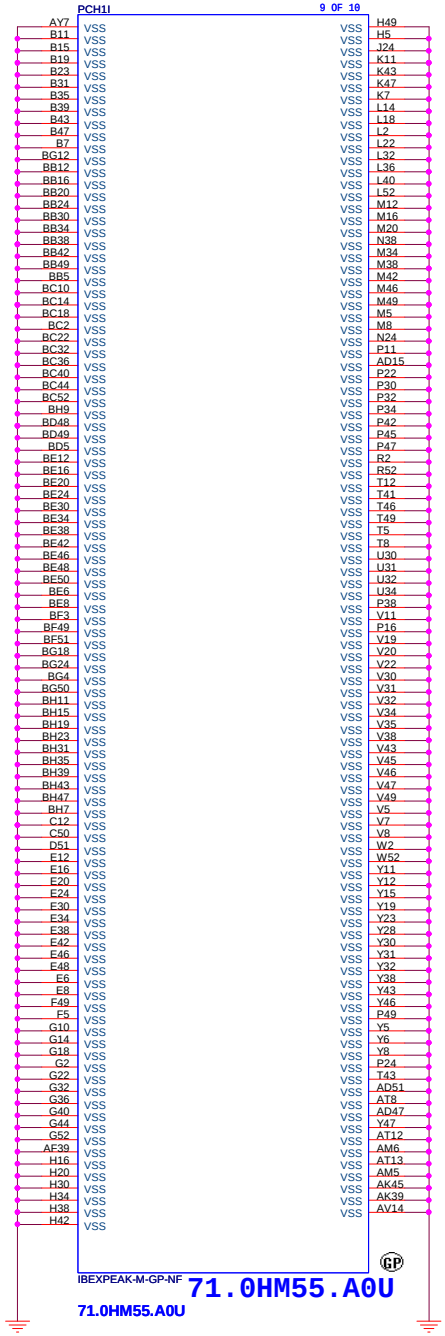

<Variant Name>

緯創資通 Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C

Title: PCH (9/9)-VSS

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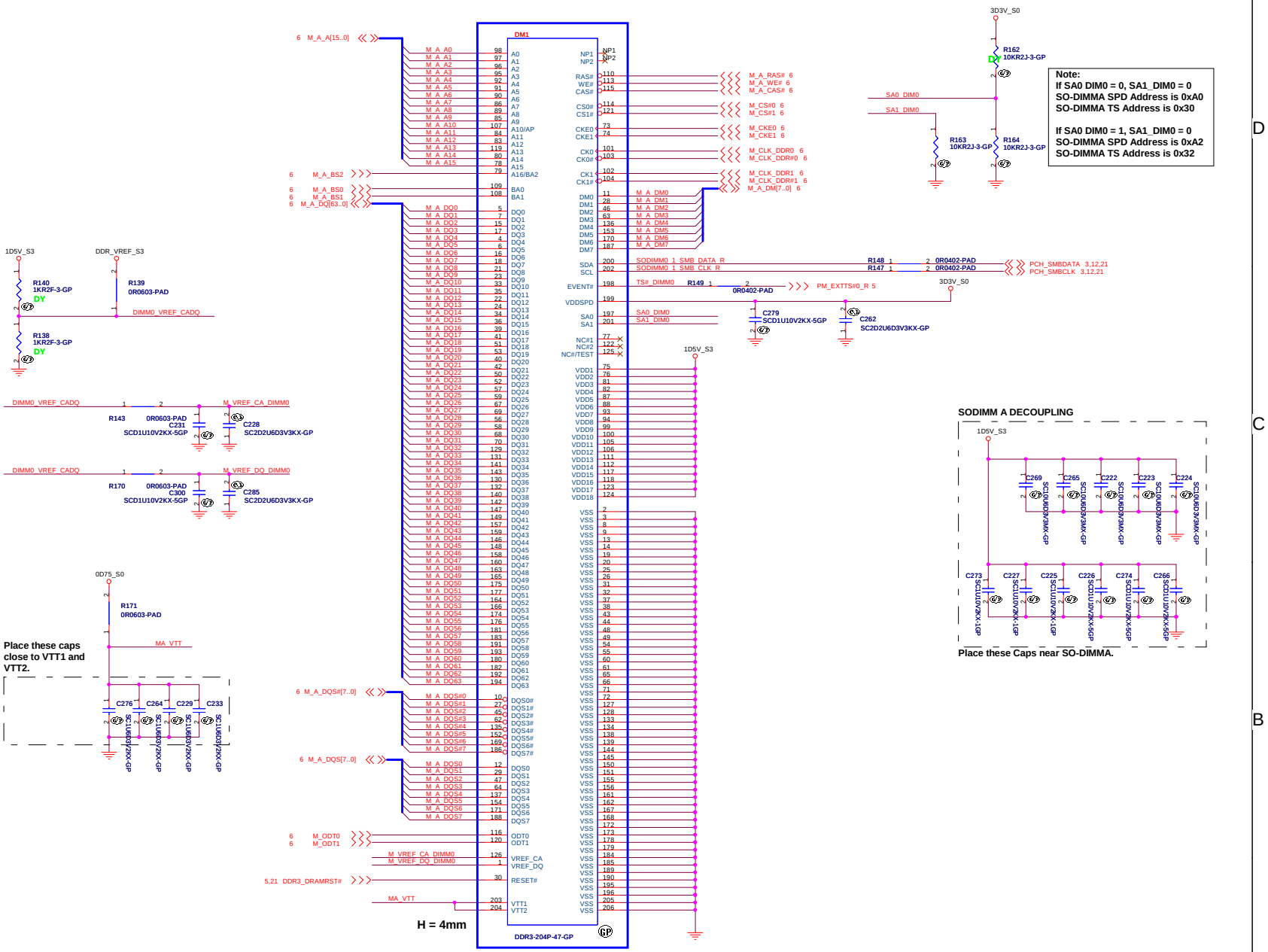

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Taipei Hsien 221, Taiwan, R.O.C

<Variant Name>

Title: DDR3-SODIMM1

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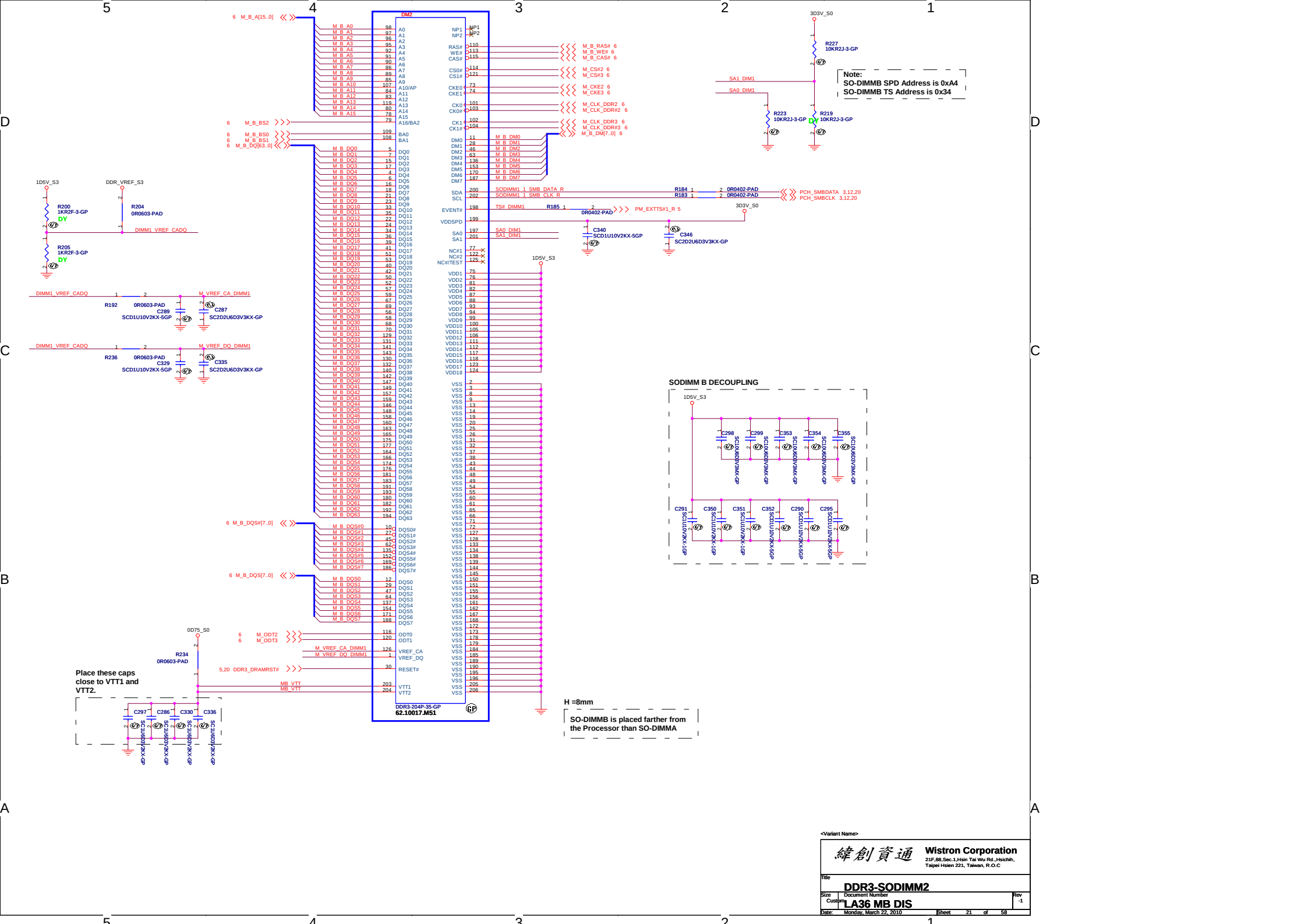

<Variant Name>

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

Title: DDR3-SODIMM2

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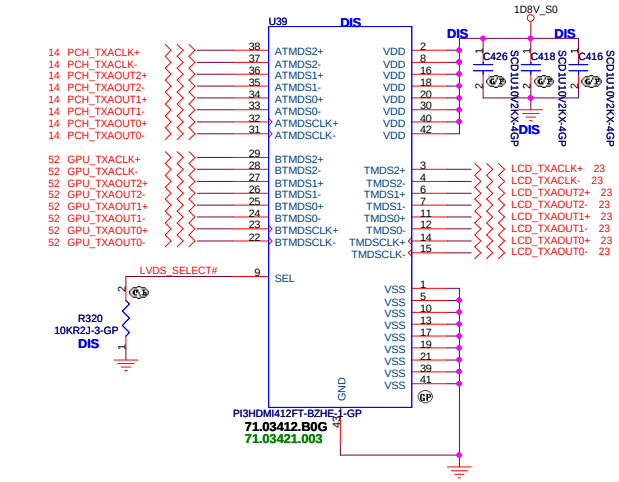

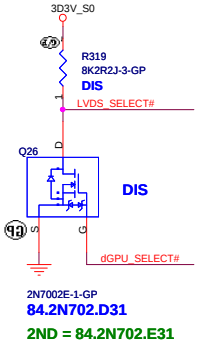

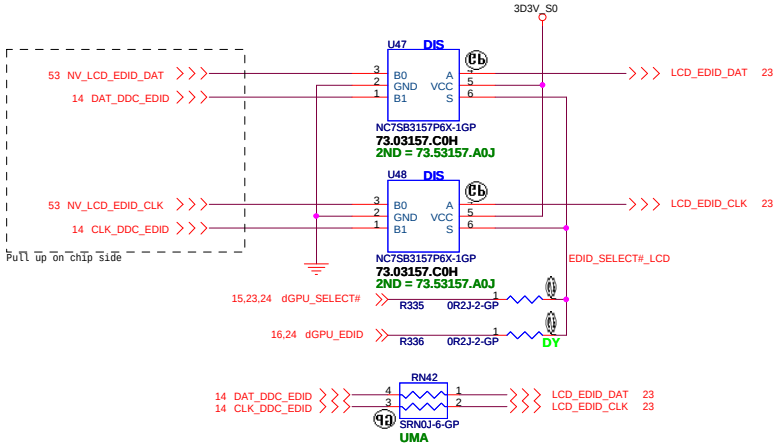

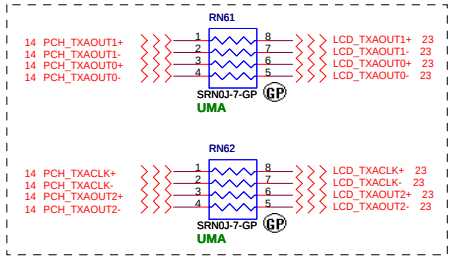

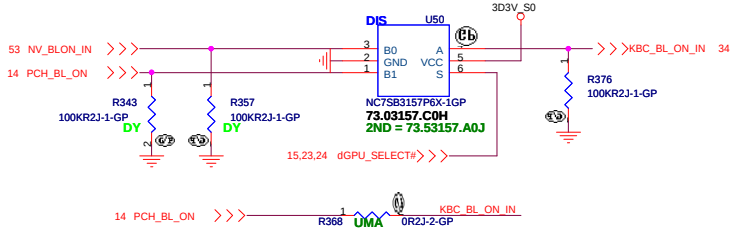

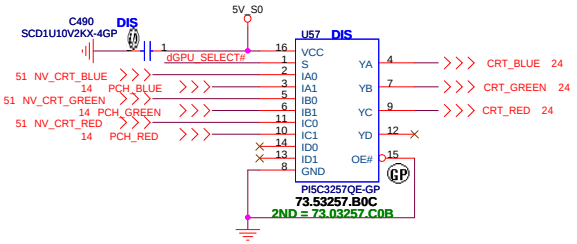

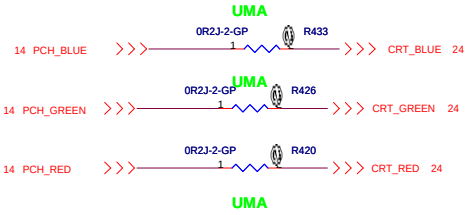

FUNCTION TABLE

SEL	FUNCTION	OUTPUT
L	TMDSn+ = ATMDSn+ TMDSn- = ATMDSn- TMDSCLK+ = ATMDSCLK+ TMDSCLK- = ATMDSCLK- BTMDSn+ = High Impedance BTMDSn- = High Impedance BTMDSCLK+ = High Impedance BTMDSCLK- = High Impedance	TMDSn+ TMDSn- TMDSCLK+ TMDSCLK-
H	TMDSn+ = BTMDSn+ TMDSn- = BTMDSn- TMDSCLK+ = BTMDSCLK+ TMDSCLK- = BTMDSCLK- ATMDSn+ = High Impedance ATMDSn- = High Impedance ATMDSCLK+ = High Impedance ATMDSCLK- = High Impedance	TMDSn+ TMDSn- TMDSCLK+ TMDSCLK-

$\overline{E}$	S	YA	YB	YC	YD	Function
H	X	Hi-Z	Hi-Z	Hi-Z	Hi-Z	Disable
L	L	IA0	IB0	IC0	ID0	S = 0
L	H	IA1	IB1	IC1	ID1	S = 1

<Variant Name>

Wistron Corporation
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Title: Display MUX

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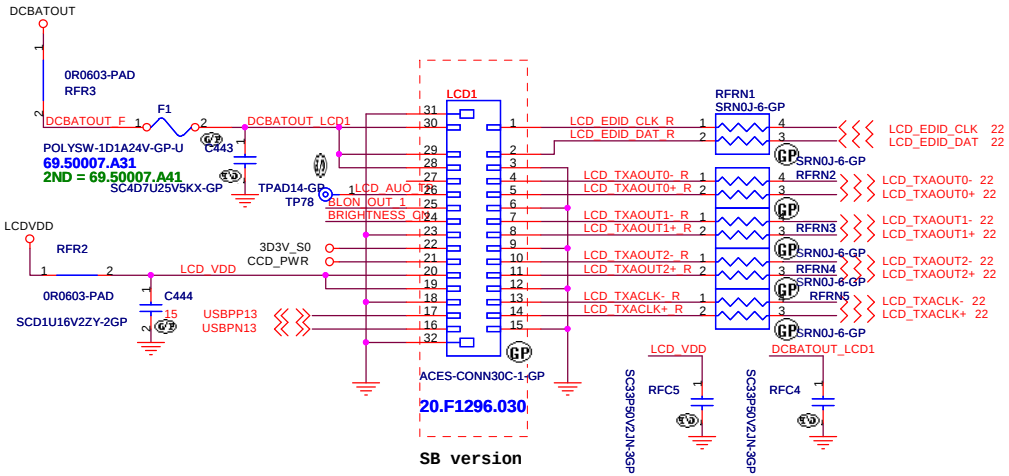
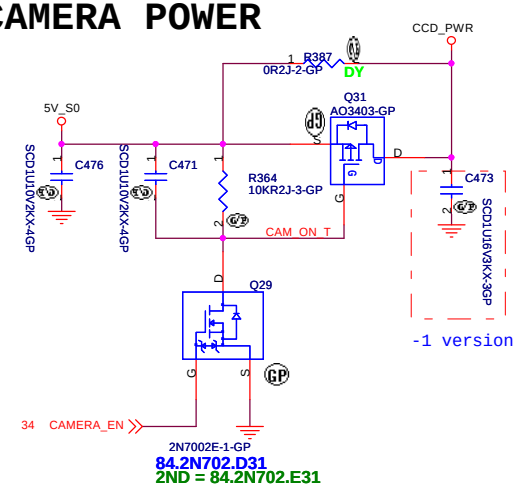
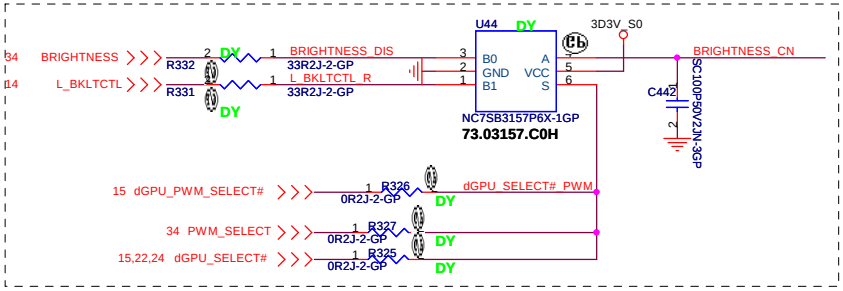
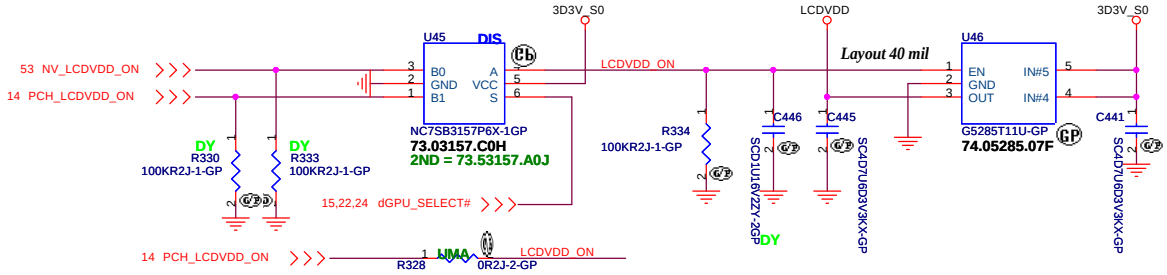
LCD/INVERTER/CCD CONN

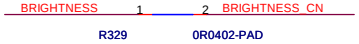


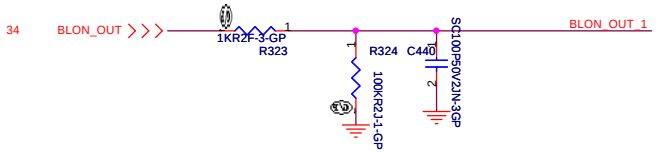
CAMERA POWER

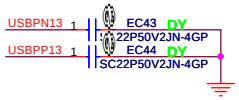


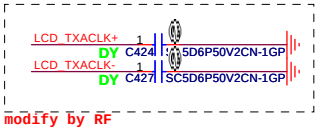


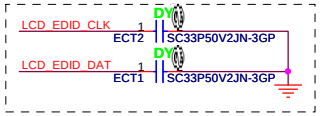












<Variant Name>

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

Title: LCD & CCD
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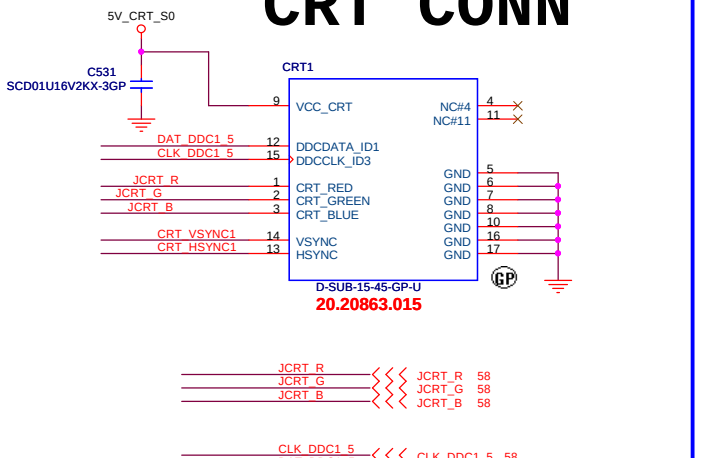
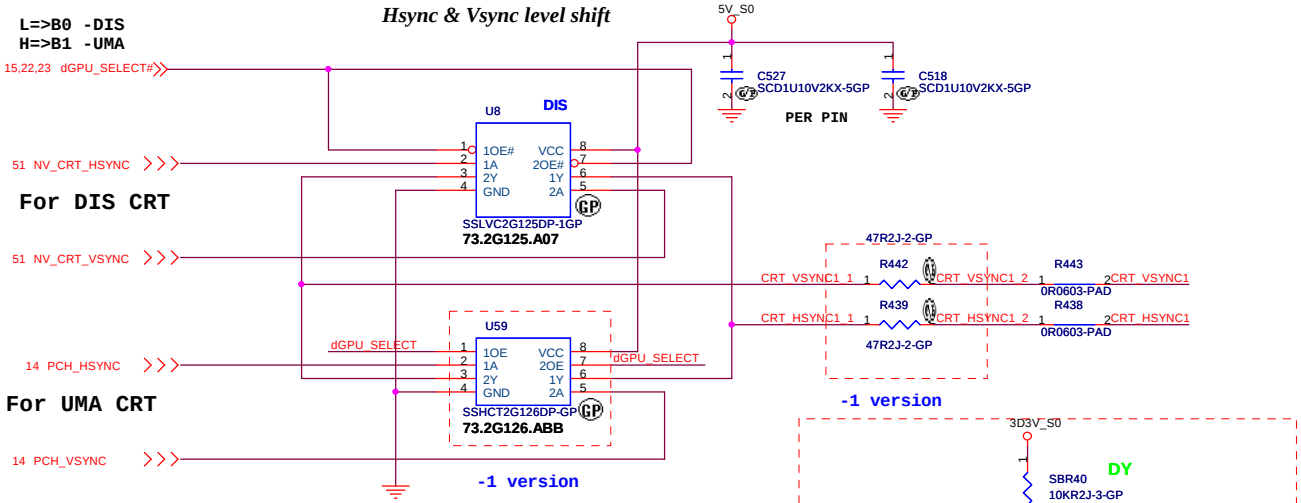
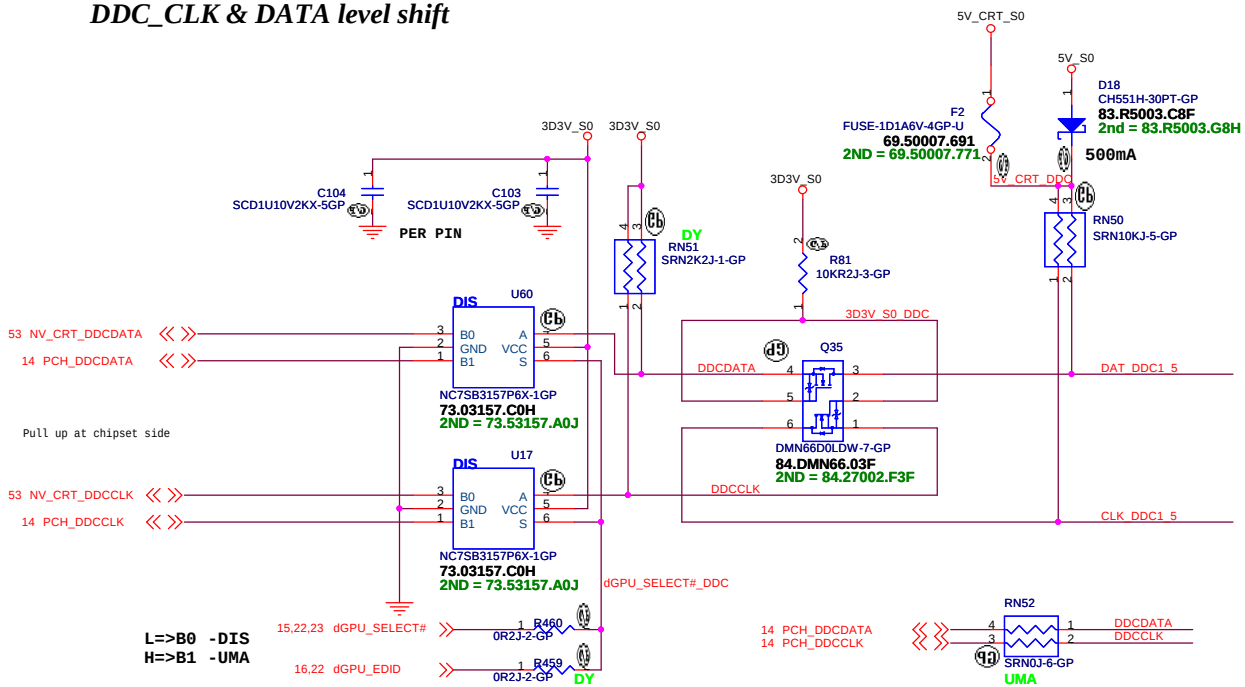
CRT CONN



Hsync & Vsync level shift

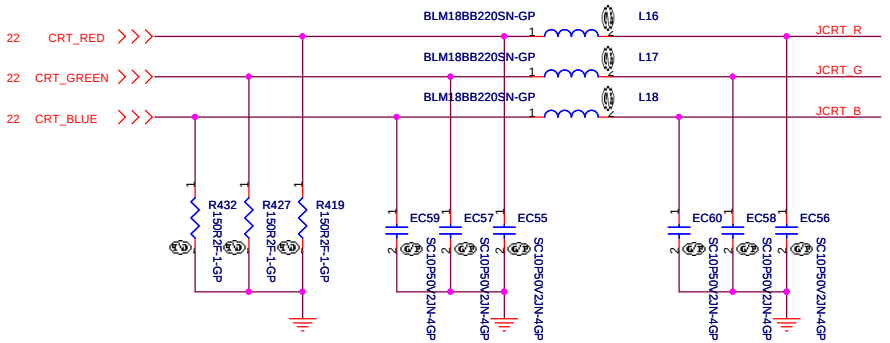


DDC_CLK & DATA level shift



CRT Termination/EMI Filter

Place Close Connector



<Variant Name>

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

Title	CRT	
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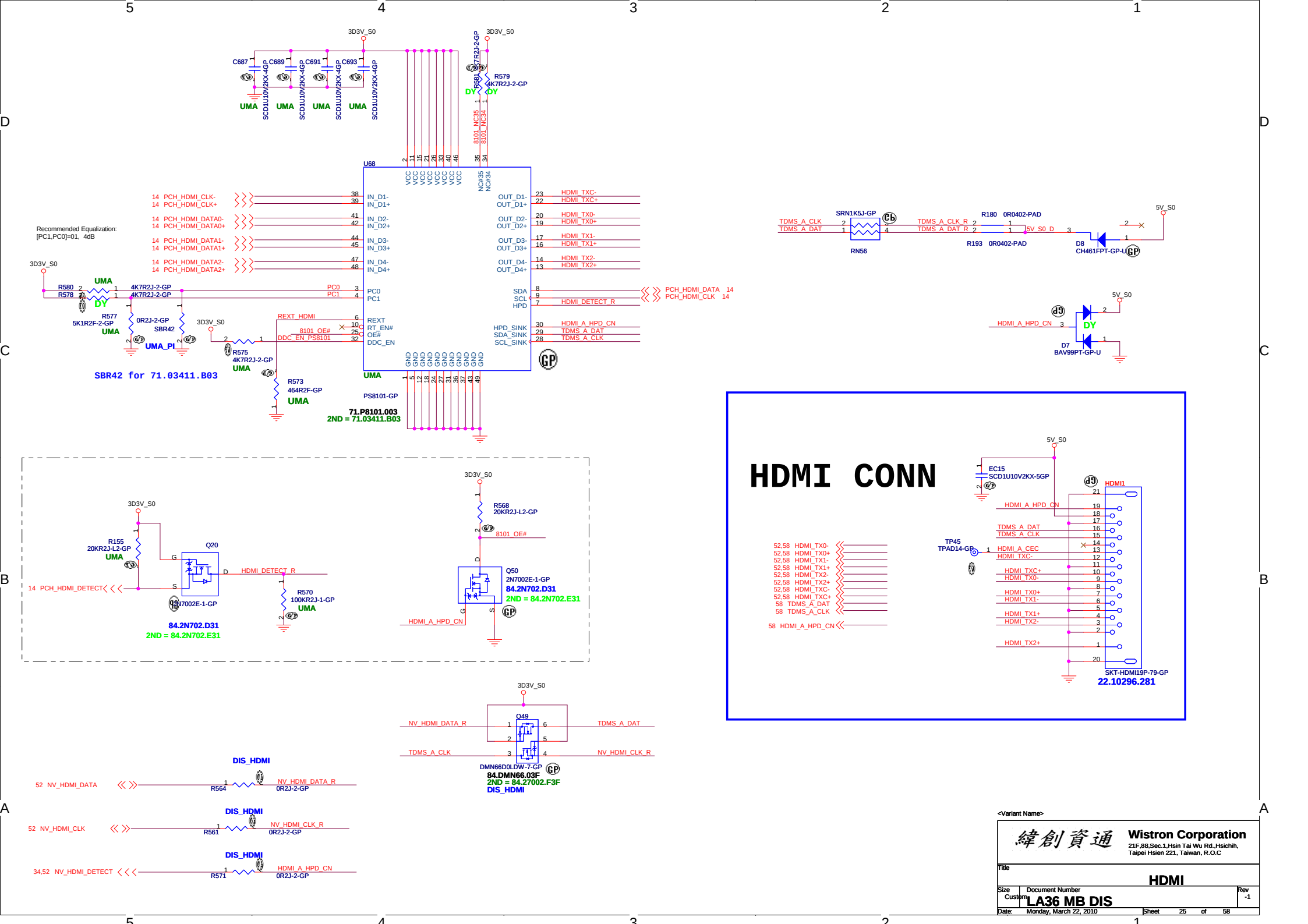
HDMI CONN
U68
PS8101-GP
71.P8101.003
2ND = 71.03411.B03
SBR42 for 71.03411.B03
Recommended Equalization:
[PC1,PC0]=01, 4dB
Q20
Q50
2N7002E-1-GP
84.2N702.D31
2ND = 84.2N702.E31
Q49
DMN66D0LDW-7-GP
84.DMN66.03F
2ND = 84.27002.F3F
DIS_HDMI
SRN1K5J-GP
RN56
D8
CH461FPT-GP-U
D7
BAV99PT-GP-U
HDMI1
SKT-HDMI19P-79-GP
22.10296.281
TP45
TPAD14-GP
EC15
SCD1U10V2KX-5GP
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
HDMI
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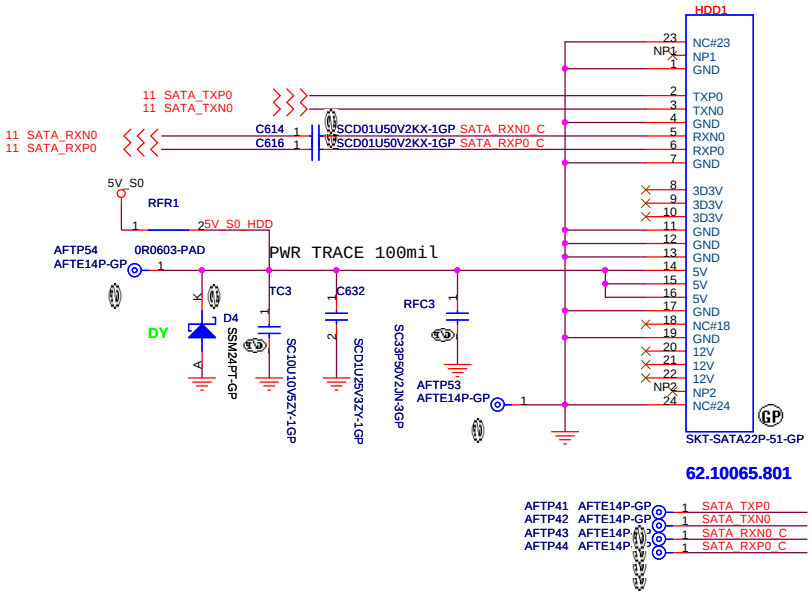
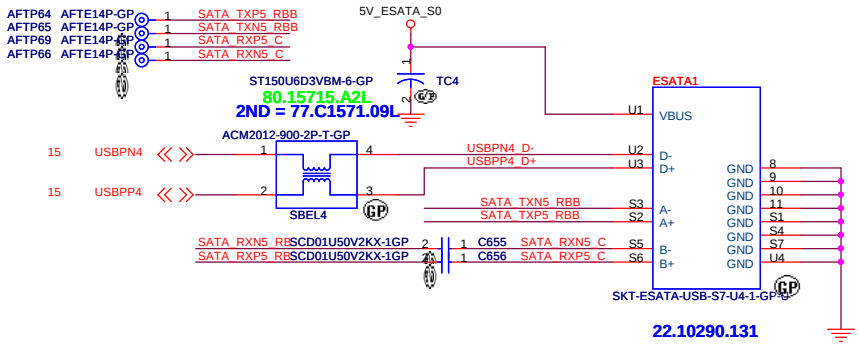
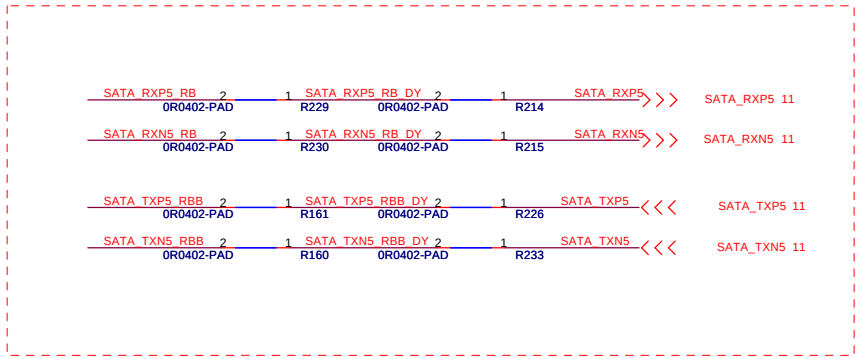
SATA Connector



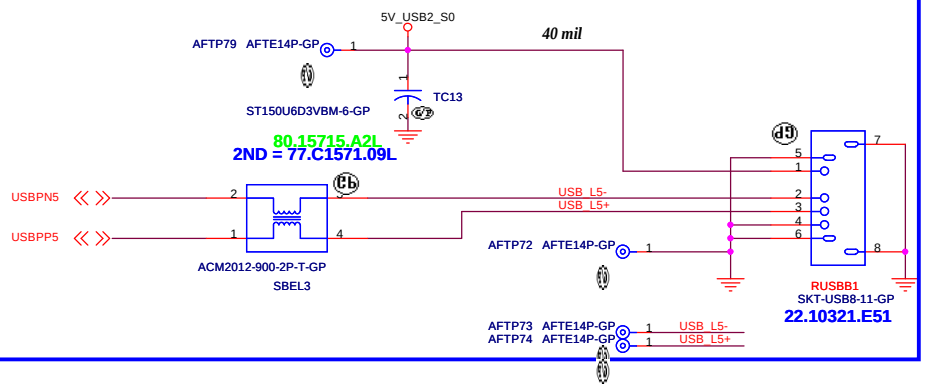
E-SATA Connector

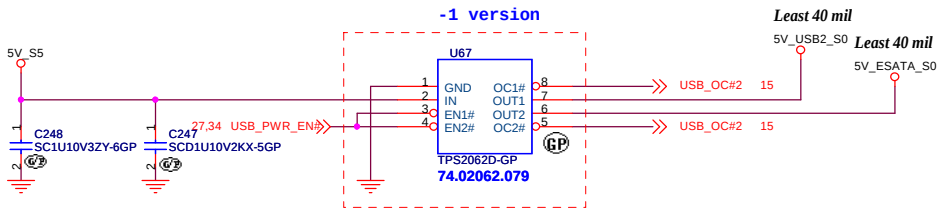




-1 Version

USB2





<Variant Name>

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

Title: HDD & E-SATA&USB2

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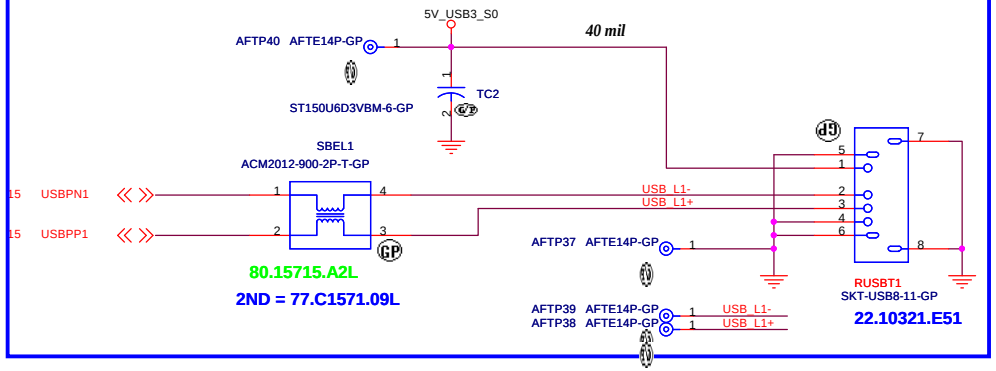
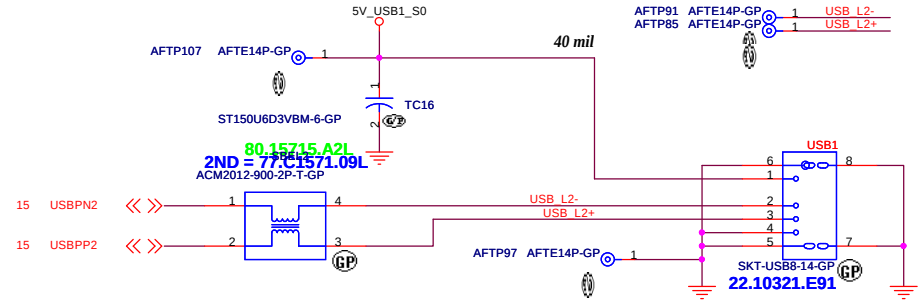
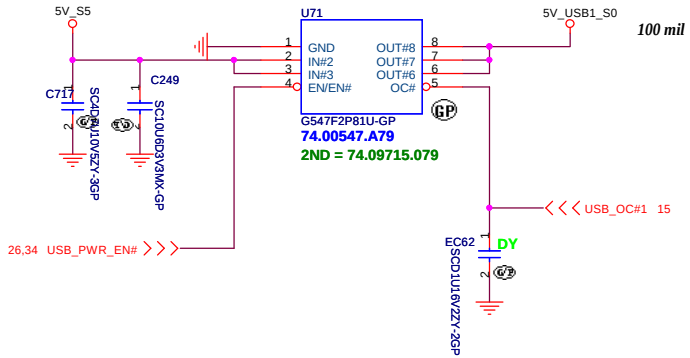
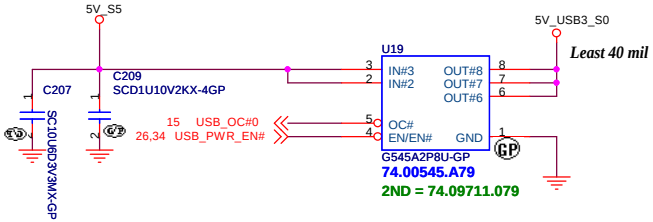
USB3



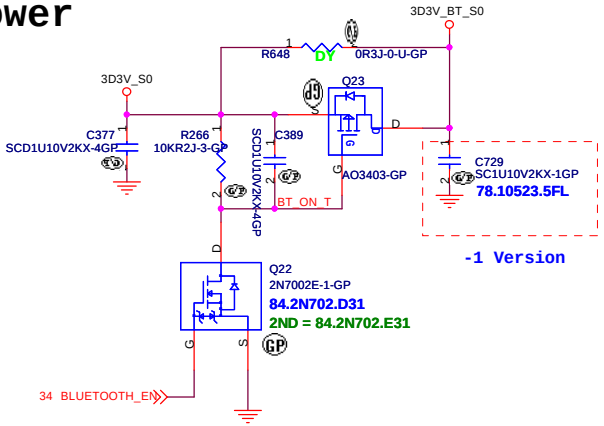
USB1



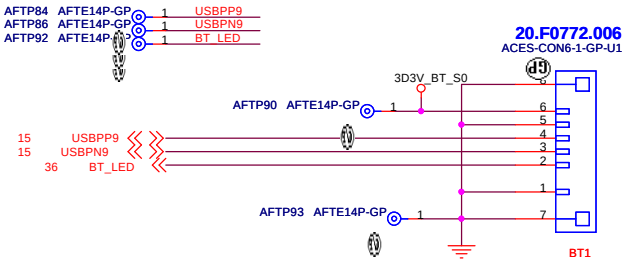




Bluetooth Power



BT CONN



<variant_name>

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Taipei Hsien 221, Taiwan, R.O.C

Title: USB1 and 3 & BT

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Close to pin16,pin22,pin36,pin39

Close to pin8

Close to pin42

1D1VA_LAN_S5

C88 SCD1U10V2KX-4GP
C53 SC1U10V2KX-1GP
C70 SCD1U10V2KX-4GP
C91 SCD1U10V2KX-4GP
C54 SCD1U10V2KX-4GP
C98 SCD1U10V2KX-4GP
C99 SCD1U10V2KX-4GP

1D25V_LAN_S5

C61 SCD1U10V2KX-4GP
C57 SC1KP50V2KX-1GP
DY

U58
A0 A1 A2 GND
VCC WP SCL SDA
LAN_SCLK
LAN_SDATA
AT24C02BN-SH-T-GP
72.24C02.R01
2ND = 72.24C02.M01

3D3V_LAN_S5

C519 SCD1U10V2KX-4GP

Close to LAN_AR8131

MDI0- MDI0+ MDI1- MDI1+ MDI2+ MDI2- MDI3- MDI3+
RN8 SRN49D9F-GP
RN6 SRN49D9F-GP
SRN49D9F-GP RN7
RN5 SRN49D9F-GP
MID0_RC C496 SCD1U10V2KX-4GP
MID1_RC C499 SCD1U10V2KX-4GP
MID2_RC C504 SCD1U10V2KX-4GP
MID3_RC C505 SCD1U10V2KX-4GP

Close to pin45.pin46

Close to pin28,pin32

1D1VD_LAN_S5

C87 SC1U10V2KX-1GP
C100 SCD1U10V2KX-4GP
C73 SCD1U10V2KX-4GP
C101 SCD1U10V2KX-4GP

for AR8131M apply in the future

LAN_SCLK
LAN_SDATA
DY C76 SCD1U10V2KX-4GP
DY C82 SCD1U10V2KX-4GP

Close to pin1

C77 SC10U6D3V3MX-GP
C74 SCD1U10V2KX-4GP
L1 IND-4D7UH-192-GP
LX
29 AVDD_CEN
AVDD_CEN1
R73 0R0402-PAD
C83 SCD1U10V2KX-4GP

Close to pin6

82.30020.971
2ND = 82.30020.791

LAN_XO
LAN_XI
X1 XTAL-25MHZ-113-GP
C65 SC18P50V2JN-1-GP
C59 SC18P50V2JN-1-GP

Close to pin15

Close to pin5,pin19,pin25

2D5V_LAN_S5

C503 SC1U10V2KX-1GP
C502 SCD1U10V2KX-4GP
C67 SCD1U10V2KX-4GP
C86 SCD1U10V2KX-4GP

Close to pin2

3D3V_LAN_S5

C95 SC10U6D3V3MX-GP
C94 SC1U10V2KX-1GP

1D1VA_LAN_S5
1D25V_LAN_S5
2D5V_LAN_S5
1D1VD_LAN_S5
3D3V_LAN_S5

U7

VDD11_REG AVDD_REG AVVDL AVDDL AVDDL AVDDL AVDDL
R79 2 1 AVDDL 0R0402-PAD
Pin42 connect to AVDDL
DO NOT SUPPORT Overclocking
VDDHO AVDDH AVDDH
DVDDL DVDDL DVDD_REG DVDD_REG
LX VDD3V VDD17 VDD25V
SMCLK SMDATA
TESTMODE NO_CONN
TWSI_CLK TWSI_DATA
AR8131-AL1E-R-GP
71.08131.M02
CO-LAY 71.08132.M01 (10/100)

REFCLKN REFCLKP RX_N RX_P TX_N TX_P
PCIE_RXDN C96 SCD1U10V2KX-5GP
PCIE_RXDP C97 SCD1U10V2KX-5GP
CLK_PCIE_LAN# 12
CLK_PCIE_LAN 12
PCIE_TXN1 12
PCIE_TXP1 12
PCIE_RXN1 12
PCIE_RXP1 12

TRXN0 TRXP0 TRXN1 TRXP1 TRXN2 TRXP2 TRXN3 TRXP3 WAKE#
MDI0- MDI0+ MDI1- MDI1+ MDI2- MDI2+ MDI3- MDI3+ PCIE_WAKE# 13,32

LED2 CLKREQ# LED1 LED0
LAN_CLKREQ# 12
LAN_ACT_LED# 10M/100M/1G_LED#
TP6 TPAD14-GP

RBIAS PERST# XTLI XTLO SEL_25_MHZ GND
LAN_RBIAS R61 2K37R2F-GP
LAN_RST
LAN_XI
LAN_XO
SEL_25M
R78 0R0402-PAD
PLT_RST# 5,15,32,34,49
C90 SC150P50V2JN-3GP
DY
R70 DY 4K7R2J-2GP
ASM : 48Mhz
DY : 25Mhz

ASM : 8132
DY : 8131
LAN_ACT_LED#
R80 4K7R2J-2GP

R72 4K7R2J-2-GP
R435 4K7R2J-2-GP
LAN_SCLK
LAN_SDATA
C522 SCD1U10V2KX-4GP
DY

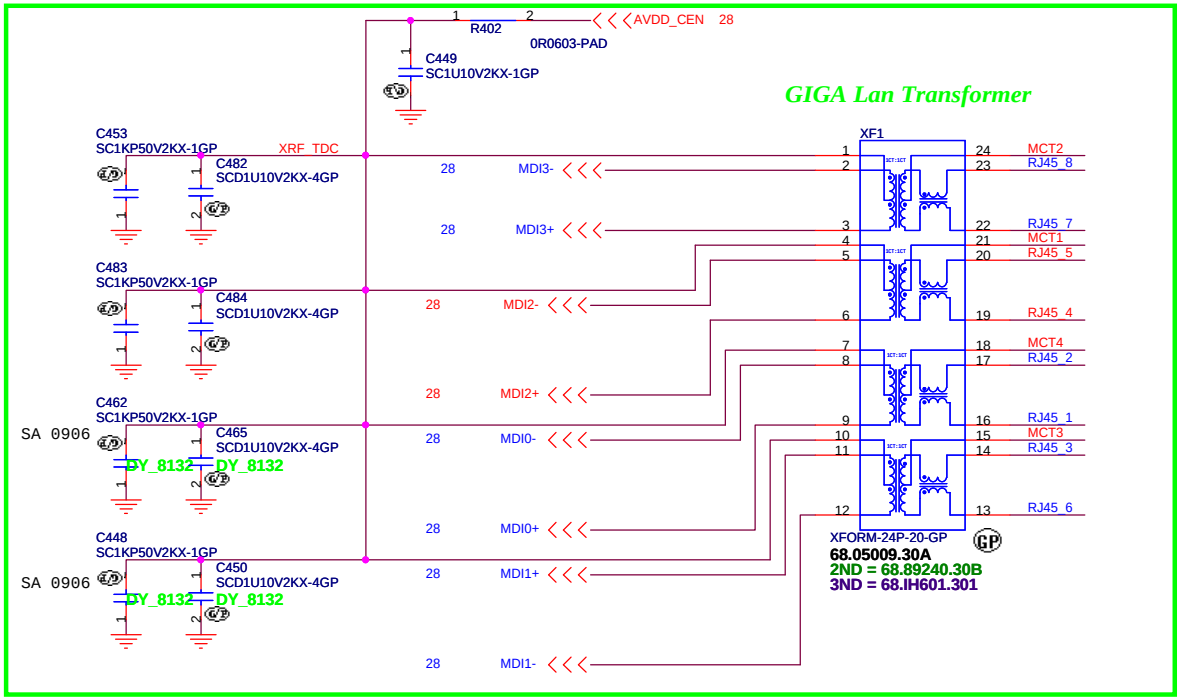
3D3V_S5
C92 SCD1U16V2Y-2GP
C80
R71 10KR2J-3-GP
LAN_PWR_ON_T
Q5 AO3403-GP
C93 SC1U10V2KX-1GP
R77 DY 0R3J-0-U-GP
Q4 2N7002E-1-GP
84.2N702.D31
2ND = 84.2N702.E31
34 LAN_PWR_ON

<Variant Name>

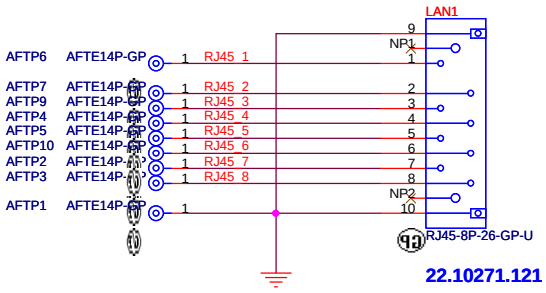
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

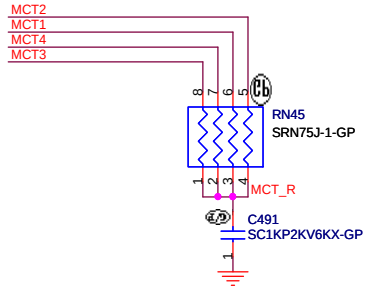
Title: LAN AR8131/8132
Size: A3
Document Number: LA36 MB DIS
Rev: -1
Date: Monday, March 22, 2010
Sheet 28 of 58

1.route on bottom as differential pairs.
2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
3.No vias, No 90 degree bends.
4.pairs must be equal lengths.
5.6mil trace width,12mil separation.
6.36mil between pairs and any other trace.
7.Must not cross ground moat,except
RJ-45 moat.



LAN Connector





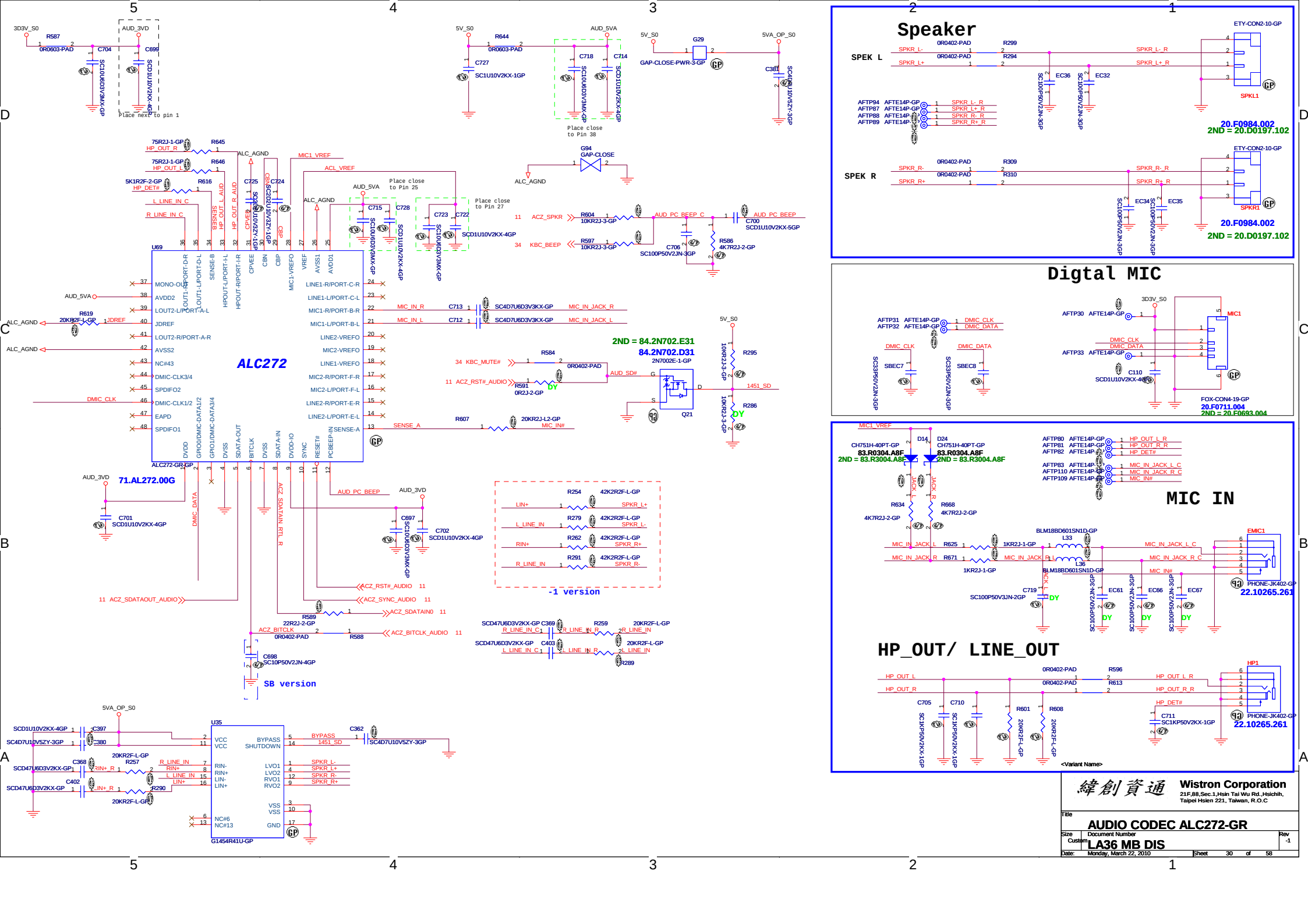
<Variant Name>

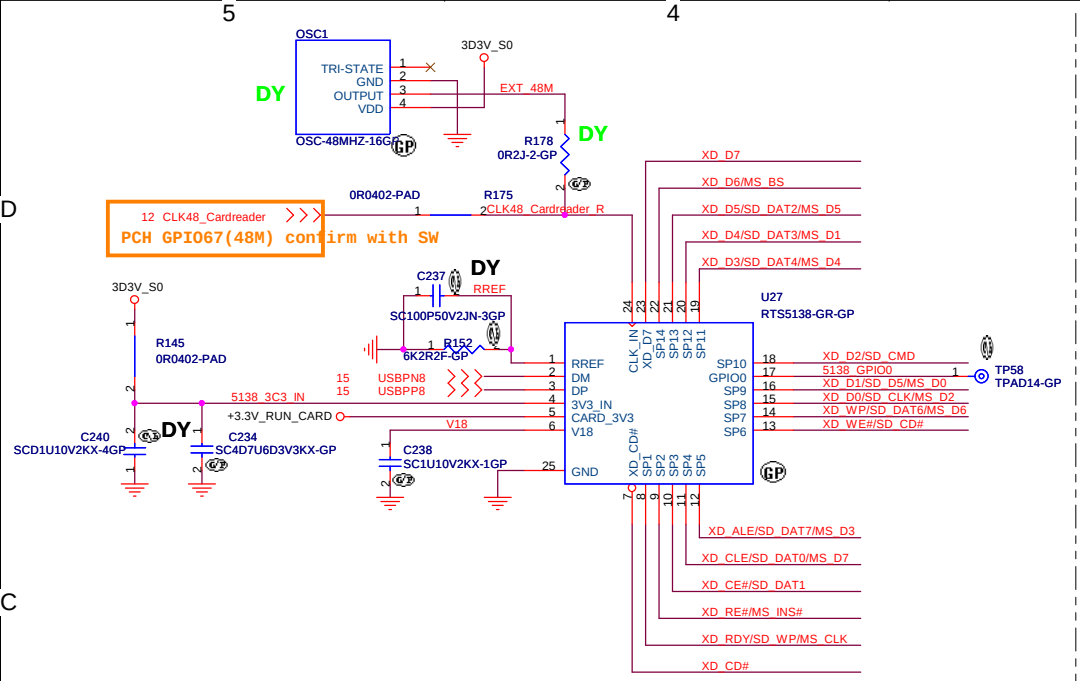
緯創資通 Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

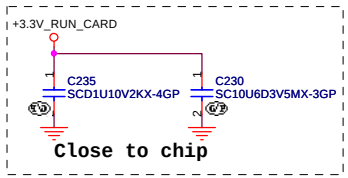
Title: LAN CONN

Size	Document Number	Rev
Custom	LA36 MB DIS	-1

Date: Monday, March 22, 2010 Sheet 29 of 58

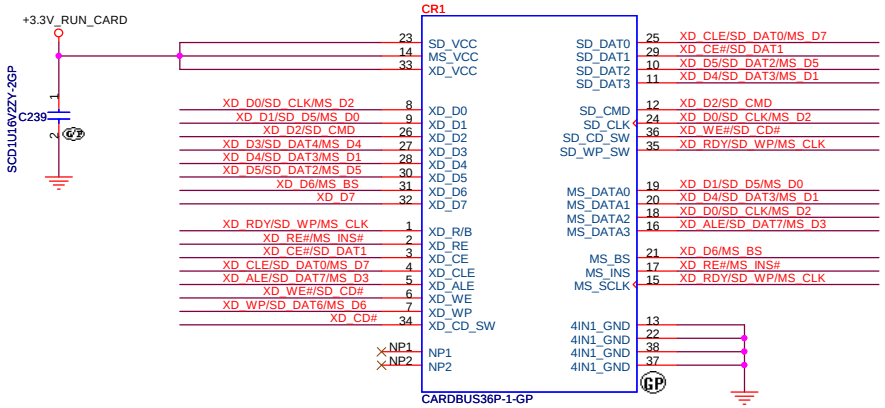

ALC272
ALC272-GR-GP
71.AL272.00G
SB version
-1 version
Speaker
SPEK L
SPEK R
SPKL1
SPKR1
20.F0984.002
2ND = 20.D0197.102
Digtal MIC
MIC1
20.F0711.004
2ND = 20.F0693.004
MIC IN
EMIC1
PHONE-JK402-GP
22.10265.261
HP_OUT/ LINE_OUT
HP1
2ND = 84.2N702.E31
84.2N702.D31
83.R0304.A8F
2ND = 83.R3004.A8F
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
AUDIO CODEC ALC272-GR
LA36 MB DIS
Monday, March 22, 2010



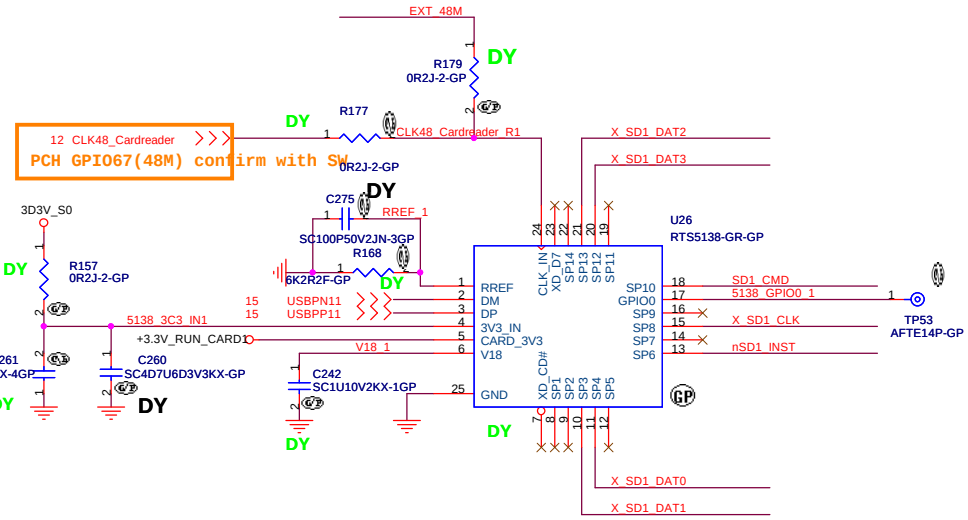


+3.3V_RUN_CARD trace = 40mil

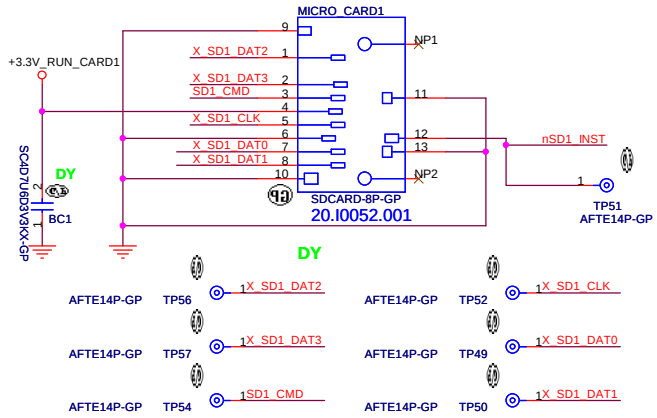
4 IN 1 CONN



20.I0109.001



Micro SD CONN



<Variant Name>

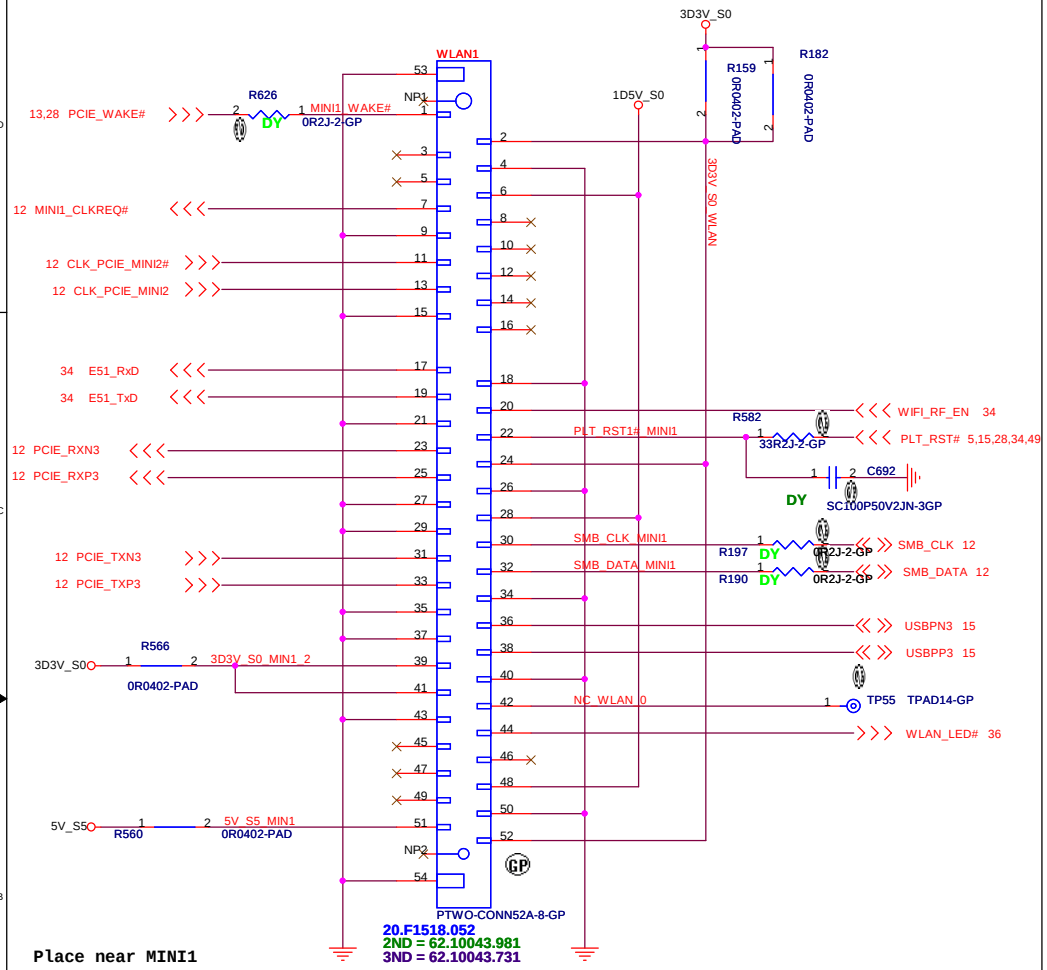
緯創資通 Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

Title: Cardreader RTS5138

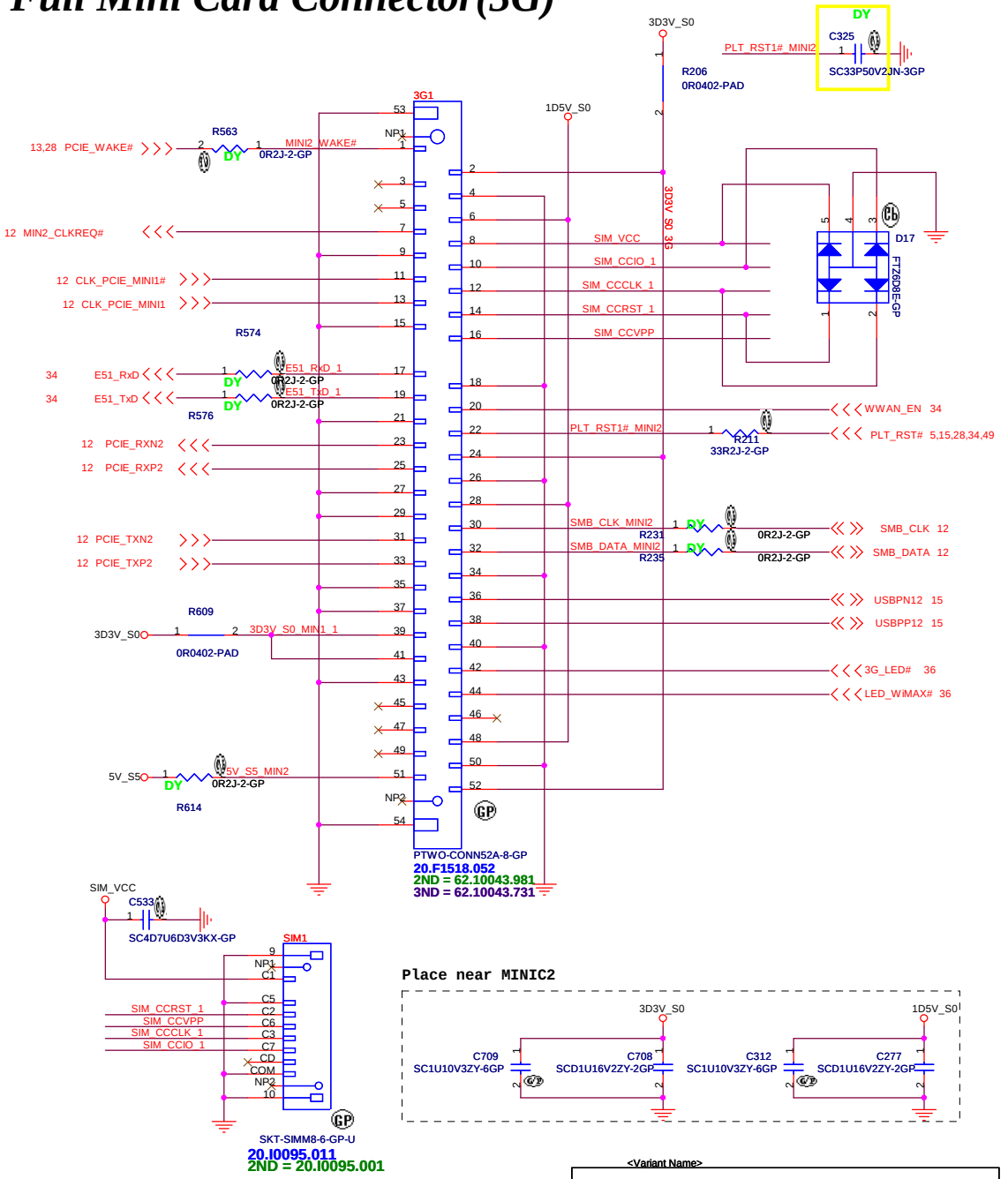
Size: A3 | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 31 of 58

Half Mini Card Connector(WLAN)



Full Mini Card Connector(3G)



<Variant Name>

緯創資通	Wistron Corporation 21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C	
Title	MINI CARD	
Size A3	Document Number LA36 MB DIS	Rev -1
Date: Monday, March 22, 2010	Sheet 32 of 58	

Close to PCH on top side.

3

C666
SC390P50V2KX-GP
Q17
MMBT3904WT1G-GP

2

C665
SC390P50V2KX-GP
DY
Q45
MMBT3904WT1G-GP

2200p close to smsc2103 chip
REMOTE2-
C232
SC2200P50V2KX-2GP
REMOTE2+

DIMM on bottom side

T8

1

Q7
MMBT3904WT1G-GP

2200p close to smsc2103 chip
H_THERMDA
C221
SC2200P50V2KX-2GP
H_THERMDC

CPU backside or inside the socket

CPU TEMP:
H_THERMDA and H_THERMDC routing 10mil trace width
and spacing. Locate Capacity near Thermal diode.

3D3V_AUX_S5
R134
10KR2J-3-GP
Q15
2N7002E-1-GP
84.2N702.D31
2ND = 84.2N702.E31
34,37 HW_THRMTRIP#
3D3V_S0
R136
10KR2J-3-GP
SYS_SHDN#

3D3V_S0
R137
6K8R2J-GP
SHDN_SEL

SHDN --> 2N3904 ON External diode

FAN CONN

Close to connector
5V_S0
D9
1SS355PT-GP
DY
C282
SC4D7U6D3V3KX-GP
R174
10KR2J-3-GP
R173
FAN_PWM
FAN_TACH
0R0402-PAD
FAN_PWM_C
58 FAN_PWM_C
58 FAN_TACH
FAN1
FOX-CON4-19-GP
20.F0711.004
2ND = 20.F0693.004

4 WIRE PWM Fan Control circuit

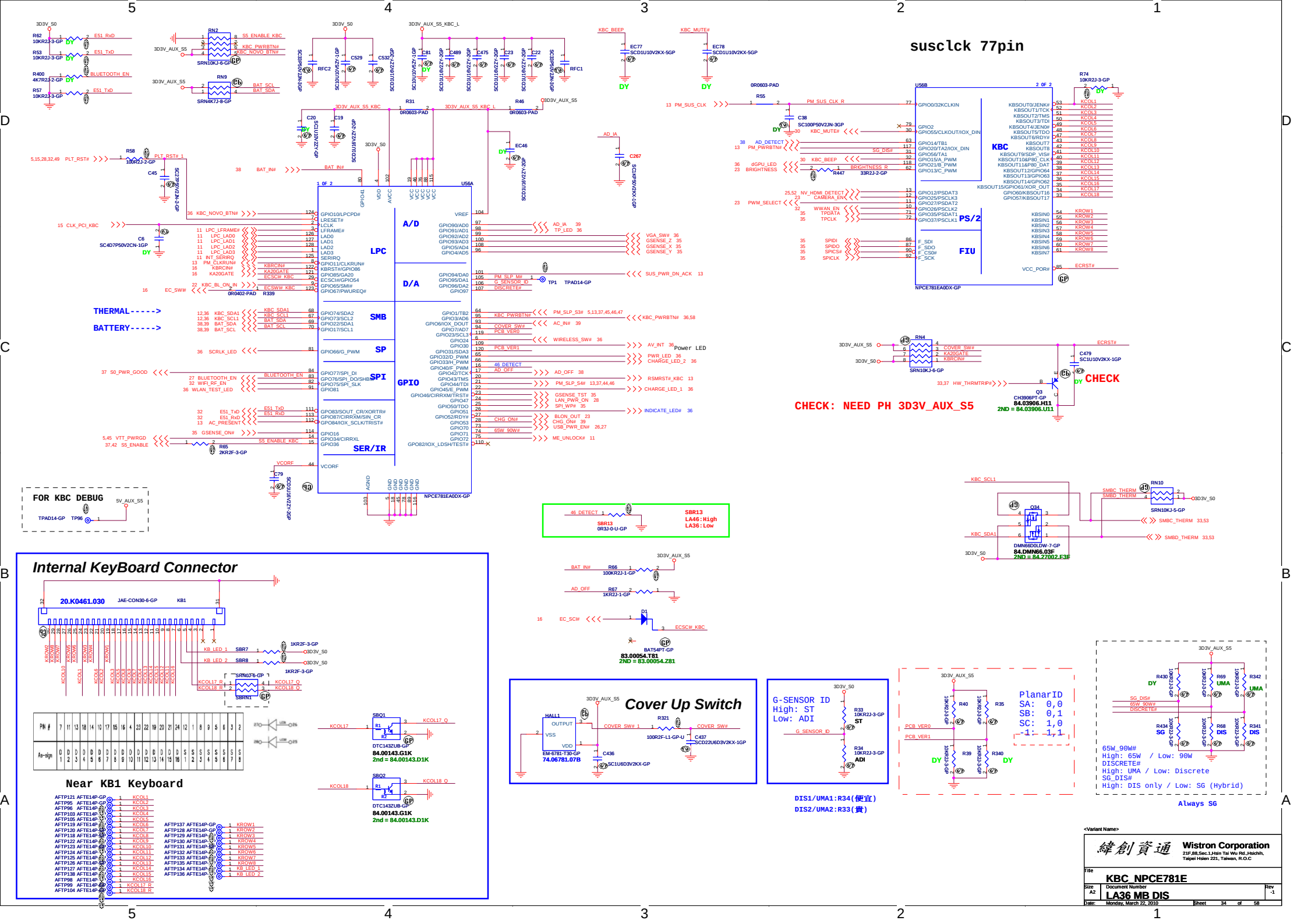
3D3V_S0
R131
68R2-GP
C220
SCD1U10V2KX-4GP
2103_VDD
U24
VDD
DP1
DN1
DP2/DN3
ND2/DP3
SYS_SHDN#
ALERT#
SMCLK
SMDATA
GPIO1
GPIO2
TACH
PWM
TRIP_SET
SHDN_SEL
GND
GND
EMC2103-2-AP-GP
H_THERMDA
H_THERMDC
REMOTE2+
REMOTE2-
THERM_SCI#
R133
0R0402-PAD
SYS_SHDN#
THERM_SCI#_R
34,53 SMBC_THERM
34,53 SMBD_THERM
2103_4
2103_5
TP46 TPAD14-GP
TP48 TPAD14-GP
TACH_R
TRIP_SET R135
SHDN_SEL
2K05R2F-GP
T8 = 105
RN17
SRN10KJ-5-GP
3D3V_S0
D5
1SS355PT-GP
FAN_TACH
FAN_PWM
TP47
TPAD14-GP

pin6, ALERT# OD
pin7, SYS_SHDN# OD

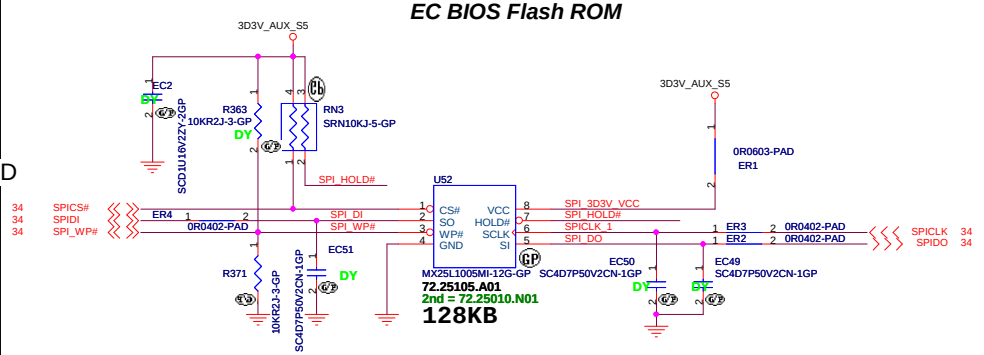
<Variant Name>

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

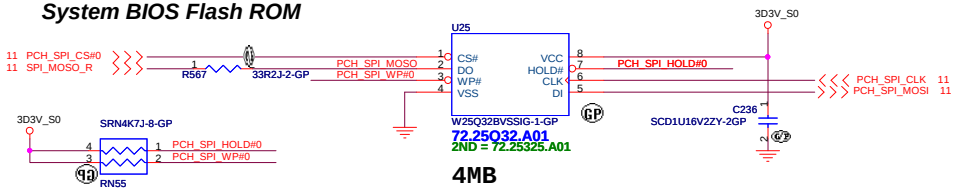
Title: THERMAL SMSC2103
Size: A3
Document Number: LA36 MB DIS
Rev: -1
Date: Monday, March 22, 2010
Sheet 33 of 58


susclck 77pin
U56B
NPCE781EA0DX-GP
KBC
PS/2
FIU
U56A
LPC
A/D
D/A
SMB
SP
SPI
GPIO
SER/IR
THERMAL----->
BATTERY----->
CHECK: NEED PH 3D3V_AUX_S5
CHECK
Power LED
FOR KBC DEBUG
Internal KeyBoard Connector
20.K0461.030
JAE-CON30-6-GP
Near KB1 Keyboard
Cover Up Switch
HALL1
EM-6781-T30-GP
74.06781.07B
G-SENSOR ID
High: ST
Low: ADI
DIS1/UMA1:R34(便宜)
DIS2/UMA2:R33(貴)
PlanarID
SA: 0,0
SB: 0,1
SC: 1,0
-1: 1,1
65W_90W#
High: 65W / Low: 90W
DISCRETE#
High: UMA / Low: Discrete
SG_DIS#
High: DIS only / Low: SG (Hybrid)
Always SG
SBR13
LA46:High
LA36:Low
Wistron Corporation
KBC_NPCE781E
LA36 MB DIS
Monday, March 22, 2010

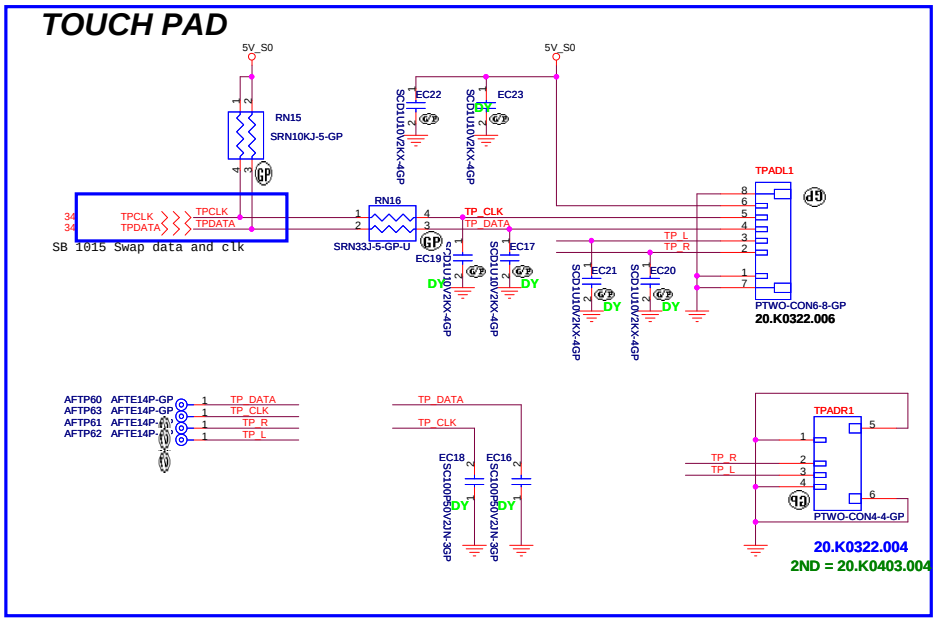
EC BIOS Flash ROM



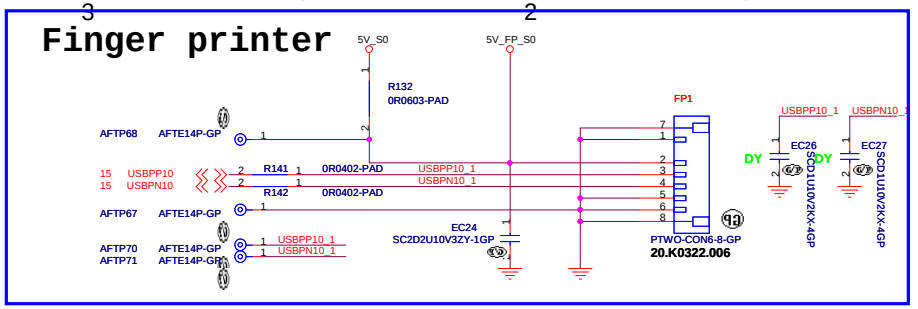
System BIOS Flash ROM



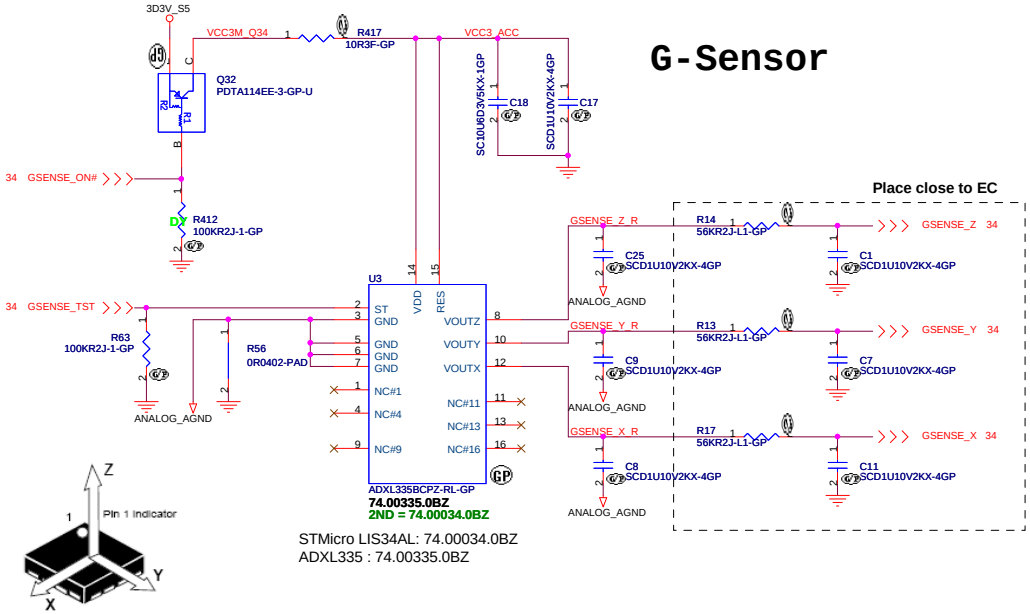
TOUCH PAD



Finger printer



G-Sensor



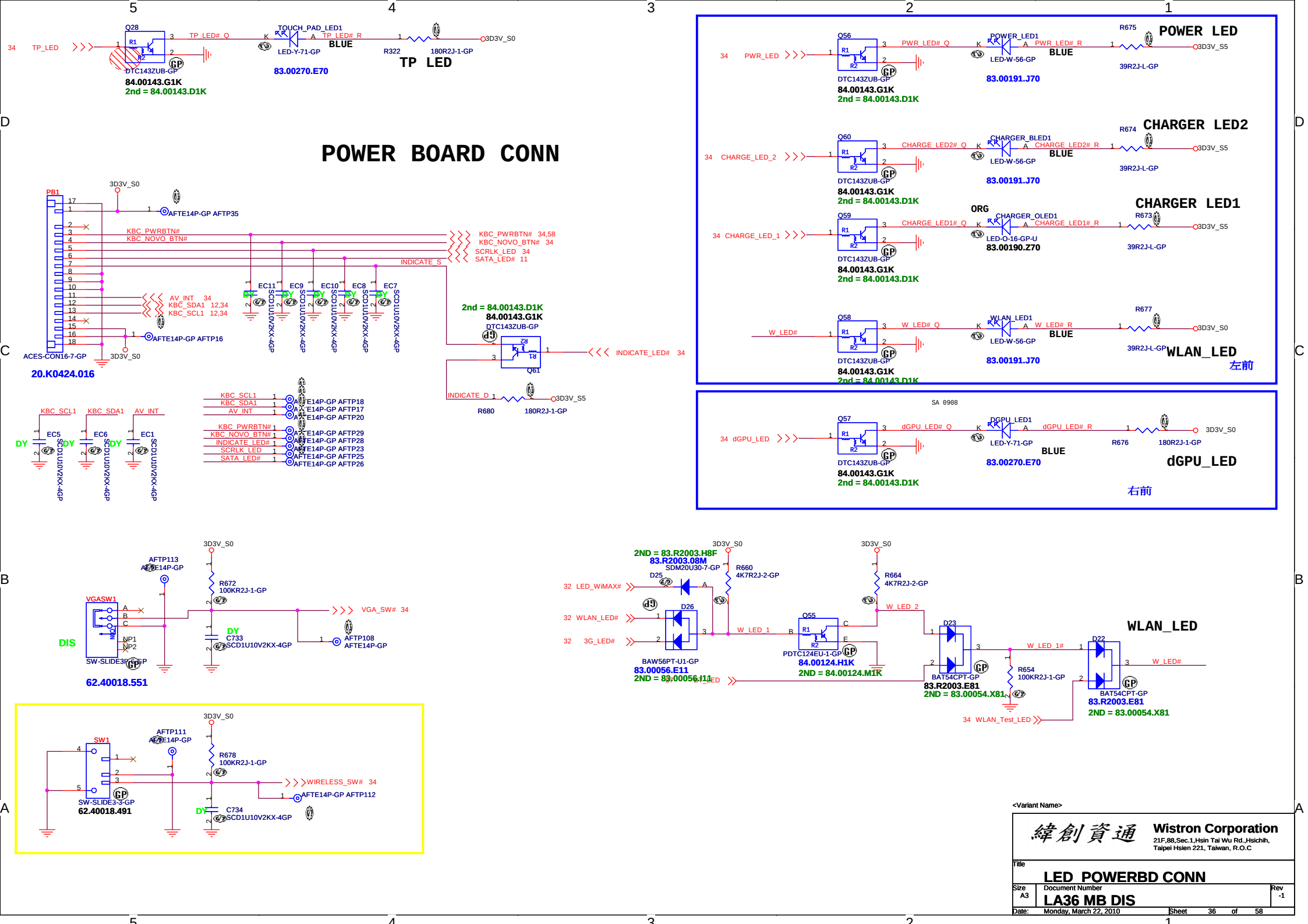
<Variant Name>

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

Title: BIOS & TP & G-Sensor & FP

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 35 of 58


TP_LED
Q28
DTC143ZUB-GP
84.00143.G1K
2nd = 84.00143.D1K
TP_LED# Q
TOUCH_PAD_LED1
LED-Y-71-GP
83.00270.E70
BLUE
TP_LED# R
R322
180R2J-1-GP
3D3V_S0
TP LED
POWER BOARD CONN
PB1
ACES-CON16-7-GP
20.K0424.016
AFTE14P-GP AFTP35
AFTE14P-GP AFTP16
KBC_PWRBTN#
KBC_NOVO_BTN#
AV_INT 34
KBC_SDA1 12,34
KBC_SCL1 12,34
KBC_PWRBTN# 34,58
KBC_NOVO_BTN# 34
SCRLK_LED 34
SATA_LED# 11
INDICATE_S
EC11
EC9
EC10
EC8
EC7
SCD1U10V2KX-4GP
2nd = 84.00143.D1K
84.00143.G1K
DTC143ZUB-GP
Q61
INDICATE_LED# 34
INDICATE_D
R680
180R2J-1-GP
KBC_SCL1
KBC_SDA1
AV_INT
EC5
EC6
EC1
KBC_PWRBTN#
KBC_NOVO_BTN#
INDICATE_LED#
SCRLK_LED
SATA_LED#
AFTE14P-GP AFTP18
AFTE14P-GP AFTP17
AFTE14P-GP AFTP20
AFTE14P-GP AFTP29
AFTE14P-GP AFTP28
AFTE14P-GP AFTP23
AFTE14P-GP AFTP25
AFTE14P-GP AFTP26
AFTP113
VGASW1
SW-SLIDE3R-GP
DIS
62.40018.551
R672
100KR2J-1-GP
C733
SCD1U10V2KX-4GP
VGA_SW# 34
AFTP108
AFTE14P-GP
SW1
SW-SLIDE3-3-GP
62.40018.491
AFTP111
R678
100KR2J-1-GP
C734
WIRELESS_SW# 34
AFTE14P-GP AFTP112
PWR_LED
Q56
DTC143ZUB-GP
84.00143.G1K
2nd = 84.00143.D1K
PWR_LED# Q
POWER_LED1
LED-W-56-GP
83.00191.J70
PWR_LED# R
R675
POWER LED
39R2J-L-GP
CHARGE_LED_2
Q60
CHARGE_LED2# Q
CHARGER_BLED1
CHARGE_LED2# R
R674
CHARGER LED2
CHARGE_LED_1
Q59
CHARGE_LED1# Q
ORG
CHARGER_OLED1
LED-O-16-GP-U
83.00190.Z70
CHARGE_LED1# R
R673
CHARGER LED1
W_LED#
Q58
W_LED# Q
WLAN_LED1
W_LED# R
R677
WLAN_LED
左前
SA 0908
dGPU_LED
Q57
dGPU_LED# Q
DGPU_LED1
dGPU_LED# R
R676
dGPU_LED
右前
2ND = 83.R2003.H8F
83.R2003.08M
SDM20U30-7-GP
D25
D26
R660
4K7R2J-2-GP
LED_WiMAX#
WLAN_LED#
3G_LED#
BAW56PT-U1-GP
83.00056.E11
2ND = 83.00056.I11
W_LED_1
Q55
PDTC124EU-1-GP
84.00124.H1K
2ND = 84.00124.M1K
R664
4K7R2J-2-GP
W_LED_2
D23
BAT54CPT-GP
83.R2003.E81
2ND = 83.00054.X81
W_LED_1#
R654
100KR2J-1-GP
D22
W_LED#
WLAN_Test_LED
WLAN_LED
<Variant Name>
緯創資通
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
Title
LED_POWERBD CONN
Size
A3
Document Number
LA36 MB DIS
Rev
-1
Date:
Monday, March 22, 2010
Sheet
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of
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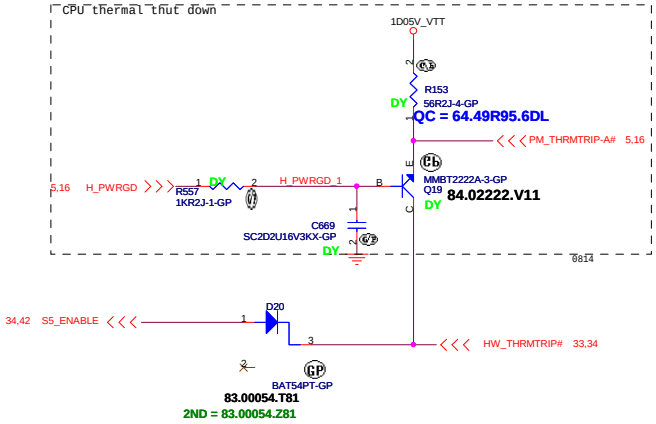
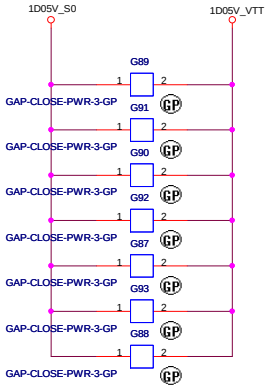
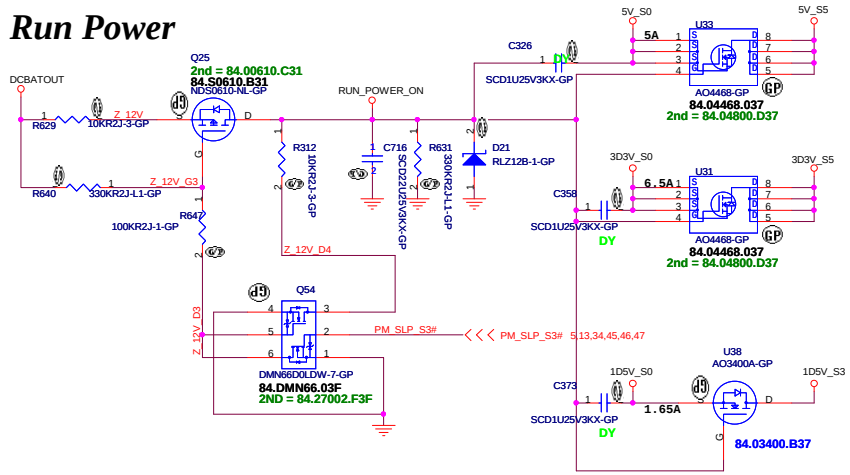
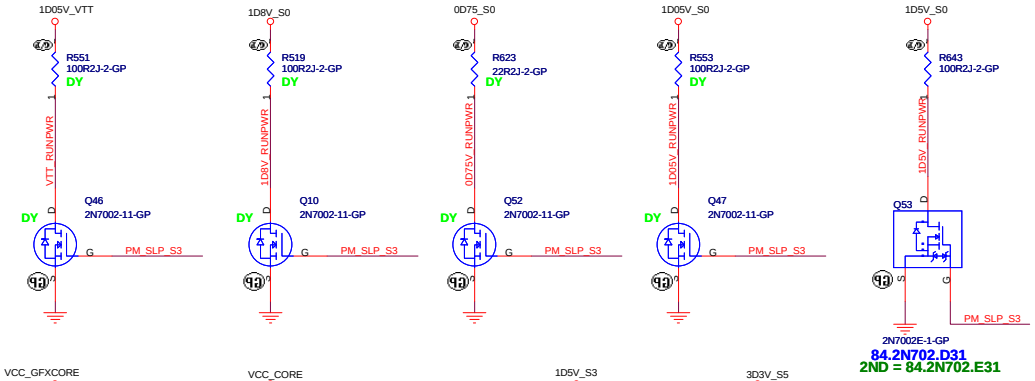
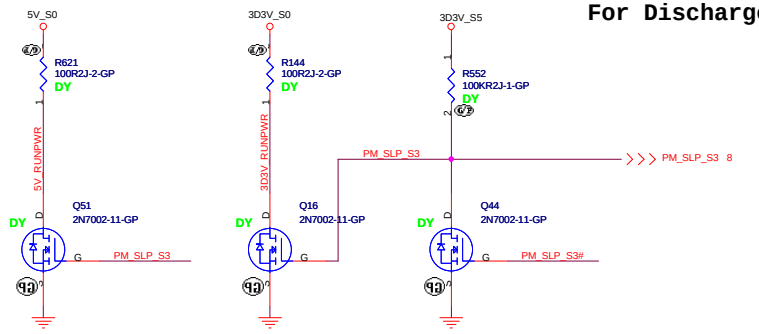




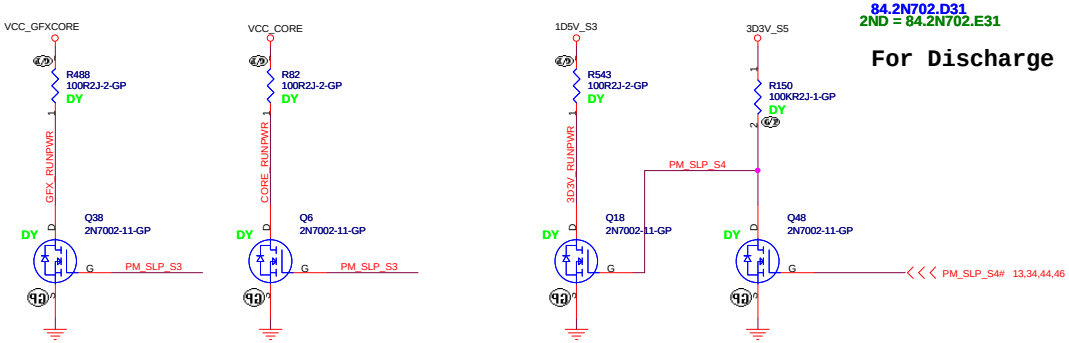


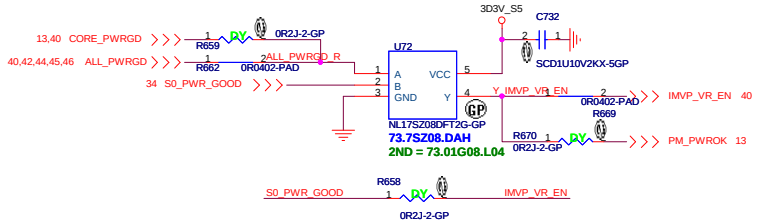
For Discharge





For Discharge





<variant_name>

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

Title	Run PWR	
Size: Custom	Document Number: LA36 MB DIS	Rev: -1
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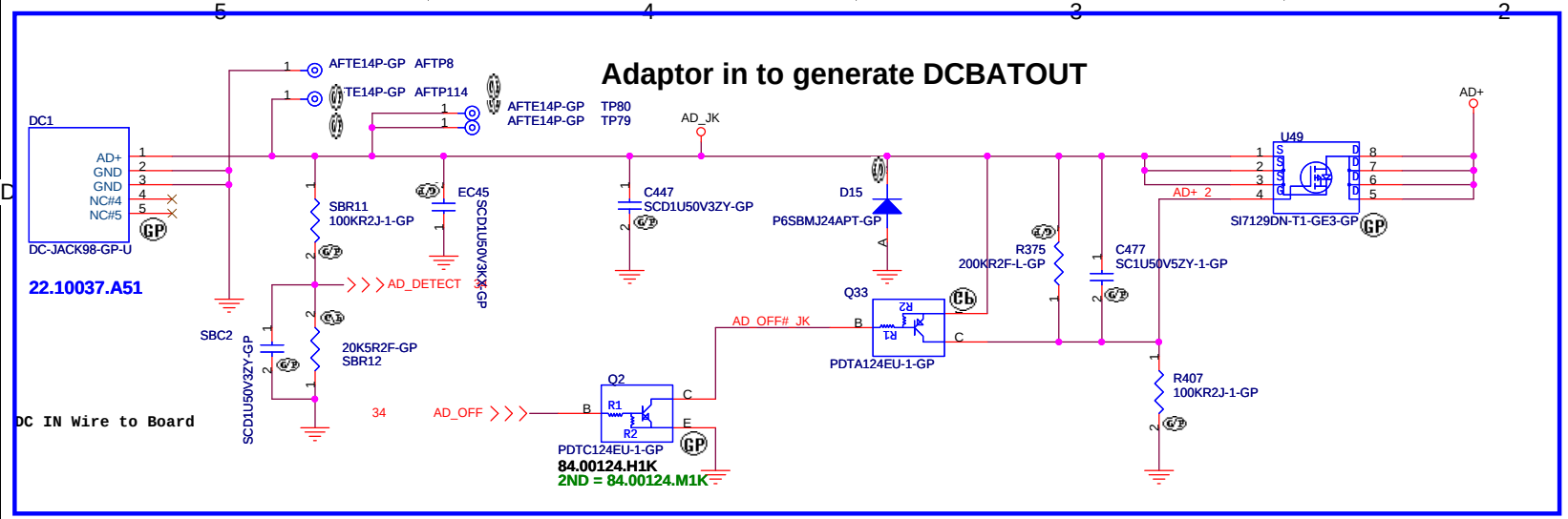
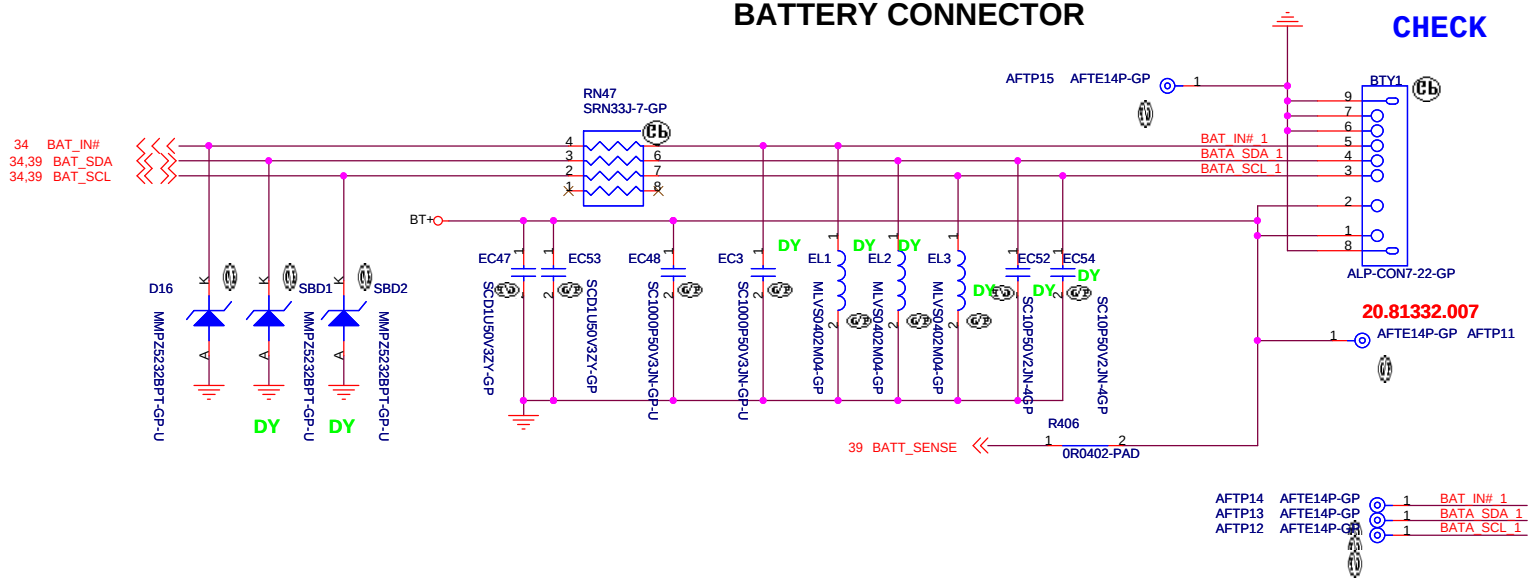


BATTERY CONNECTOR

CHECK



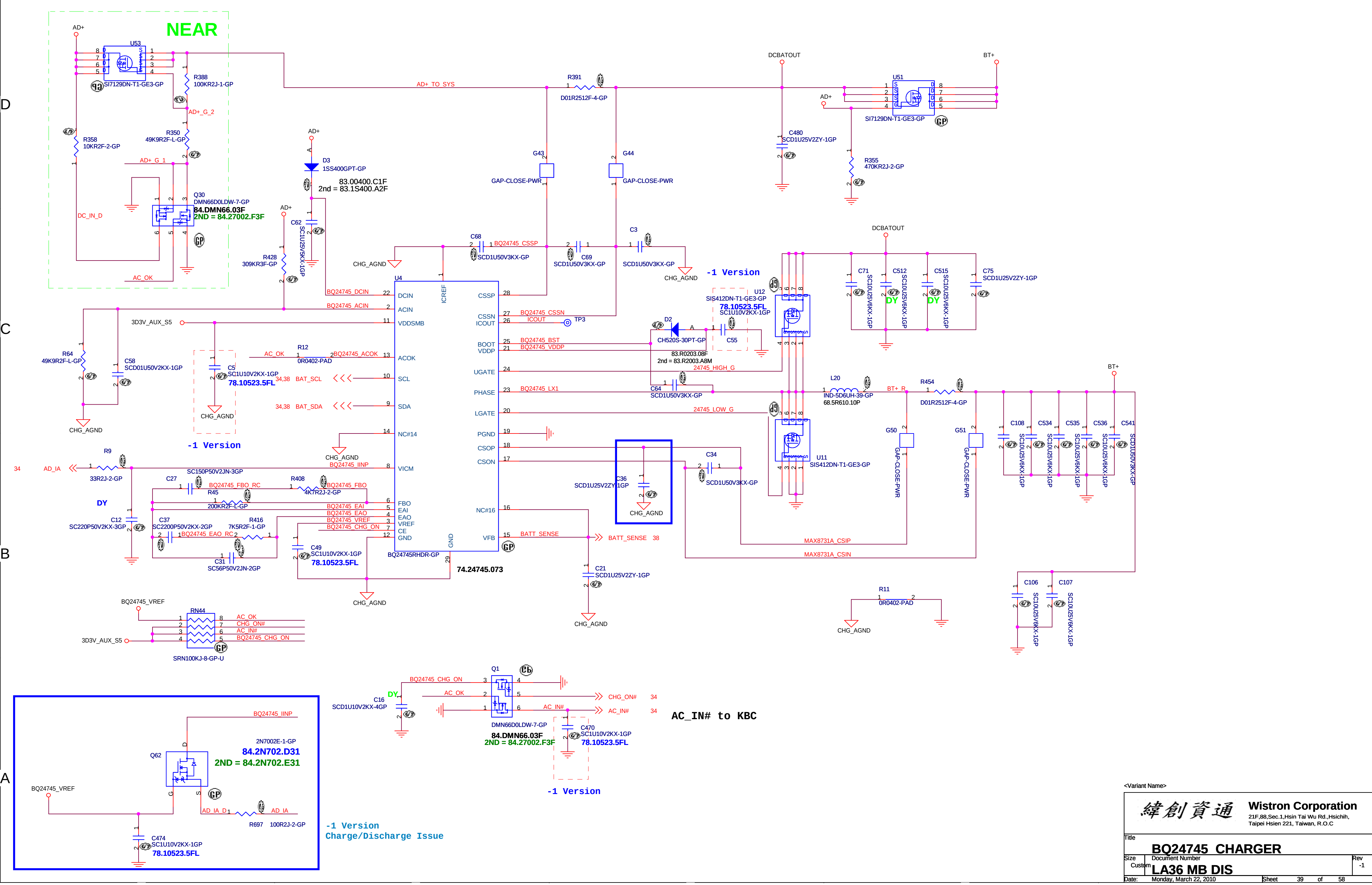
<Variant Name>

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

Title: AD / BATT CONN

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 38 of 58


NEAR
AD+
U53
SI7129DN-T1-GE3-GP
R388
100KR2J-1-GP
AD+_G_2
R358
10KR2F-2-GP
R350
49K9R2F-L-GP
AD+_G_1
Q30
DMN66D0LDW-7-GP
84.DMN66.03F
2ND = 84.27002.F3F
DC_IN_D
AC_OK
AD+_TO_SYS
R391
D01R2512F-4-GP
DCBATOUT
BT+
U51
SI7129DN-T1-GE3-GP
C480
SCD1U25V2ZY-1GP
R355
470KR2J-2-GP
D3
1SS400GPT-GP
83.00400.C1F
2nd = 83.1S400.A2F
G43
GAP-CLOSE-PWR
G44
GAP-CLOSE-PWR
C62
SC1U25V5KX-1GP
R428
309KR3F-GP
C68
SCD1U50V3KX-GP
BQ24745_CSSP
C69
SCD1U50V3KX-GP
C3
SCD1U50V3KX-GP
CHG_AGND
-1 Version
U12
SIS412DN-T1-GE3-GP
78.10523.5FL
SC1U10V2KX-1GP
C55
D2
CH520S-30PT-GP
83.R0203.08F
2nd = 83.R2003.A8M
C71
C512
C515
C75
SCD1U25V2ZY-1GP
SC10U25V6KX-1GP
DY
U4
DCIN
ACIN
VDDSMB
ACOK
SCL
SDA
NC#14
VICM
FBO
EAI
EAO
VREF
CE
GND
ICREF
CSSP
CSSN
ICOUT
BOOT
VDDP
UGATE
PHASE
LGATE
PGND
CSOP
CSON
NC#16
VFB
BQ24745RHDR-GP
74.24745.073
BQ24745_DCIN
BQ24745_ACIN
3D3V_AUX_S5
R64
49K9R2F-L-GP
C58
SCD01U50V2KX-1GP
C5
SC1U10V2KX-1GP
78.10523.5FL
R12
0R0402-PAD
BQ24745_ACOK
34,38 BAT_SCL
34,38 BAT_SDA
BQ24745_CSSN
ICOUT
TP3
BQ24745_BST
BQ24745_VDDP
24745_HIGH_G
C64
SCD1U50V3KX-GP
BQ24745_LX1
24745_LOW_G
L20
IND-5D6UH-39-GP
68.5R610.10P
BT+_R
R454
D01R2512F-4-GP
G50
G51
C108
C534
C535
C536
C541
SC10U25V6KX-1GP
SCD1U50V3KX-GP
U11
SIS412DN-T1-GE3-GP
C34
SCD1U50V3KX-GP
C36
SCD1U25V2ZY-1GP
R9
33R2J-2-GP
34 AD_IA
BQ24745_IINP
SC150P50V2JN-3GP
C27
R45
200KR2F-L-GP
R408
4K7R2J-2-GP
BQ24745_FBO_RC
BQ24745_FBO
BQ24745_EAI
BQ24745_EAO
BQ24745_VREF
BQ24745_CHG_ON
C12
SC220P50V2KX-3GP
C37
SC2200P50V2KX-2GP
R416
7K5R2F-1-GP
BQ24745_EAO_RC
C31
SC56P50V2JN-2GP
C49
SC1U10V2KX-1GP
78.10523.5FL
BATT_SENSE
BATT_SENSE 38
C21
SCD1U25V2ZY-1GP
MAX8731A_CSIP
MAX8731A_CSIN
R11
0R0402-PAD
C106
C107
SC10U25V6KX-1GP
BQ24745_VREF
RN44
SRN100KJ-8-GP-U
AC_OK
CHG_ON#
AC_IN#
BQ24745_CHG_ON
Q1
DMN66D0LDW-7-GP
84.DMN66.03F
2ND = 84.27002.F3F
C16
SCD1U10V2KX-4GP
C470
SC1U10V2KX-1GP
78.10523.5FL
CHG_ON# 34
AC_IN# 34
AC_IN# to KBC
-1 Version
Q62
2N7002E-1-GP
84.2N702.D31
2ND = 84.2N702.E31
BQ24745_IINP
AD_IA_D
AD_IA
R697
100R2J-2-GP
C474
SC1U10V2KX-1GP
78.10523.5FL
-1 Version
Charge/Discharge Issue

<Variant Name>

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

Title	BQ24745 CHARGER	
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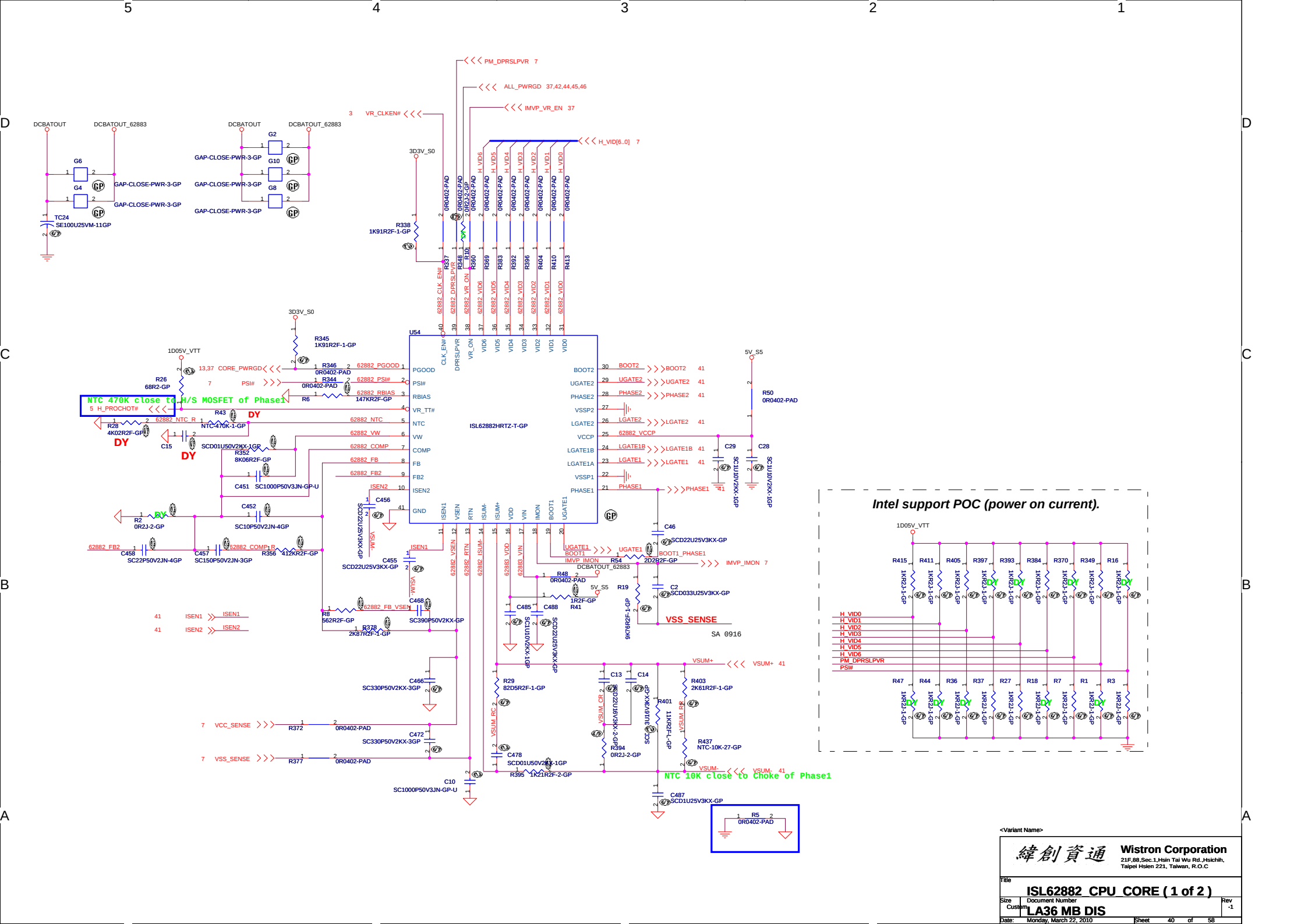
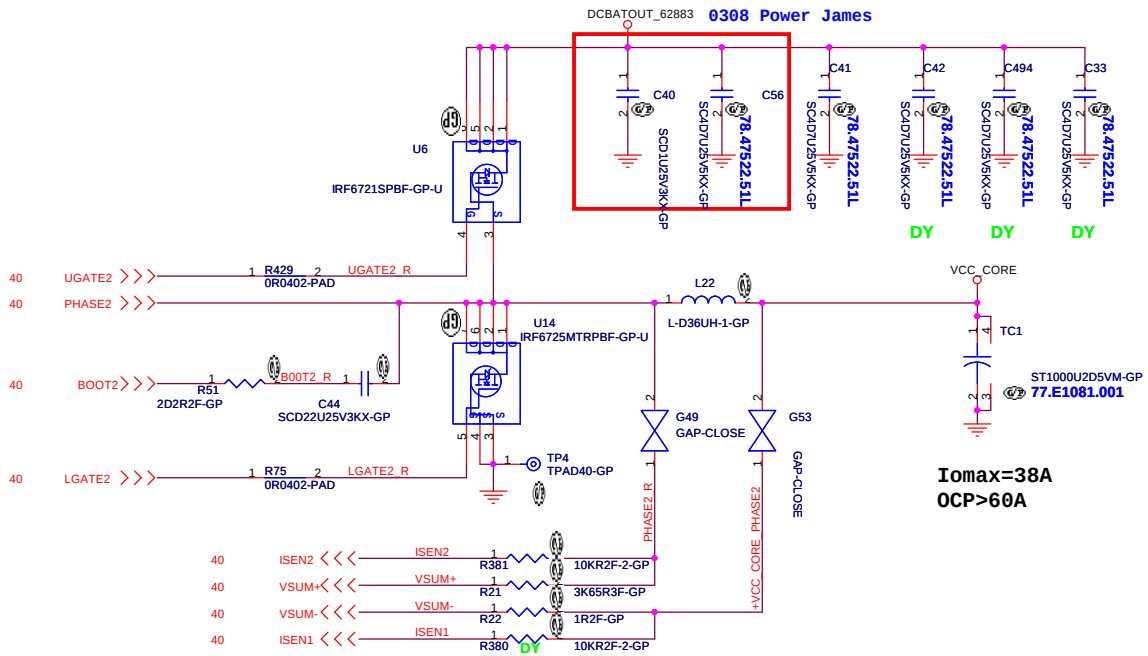
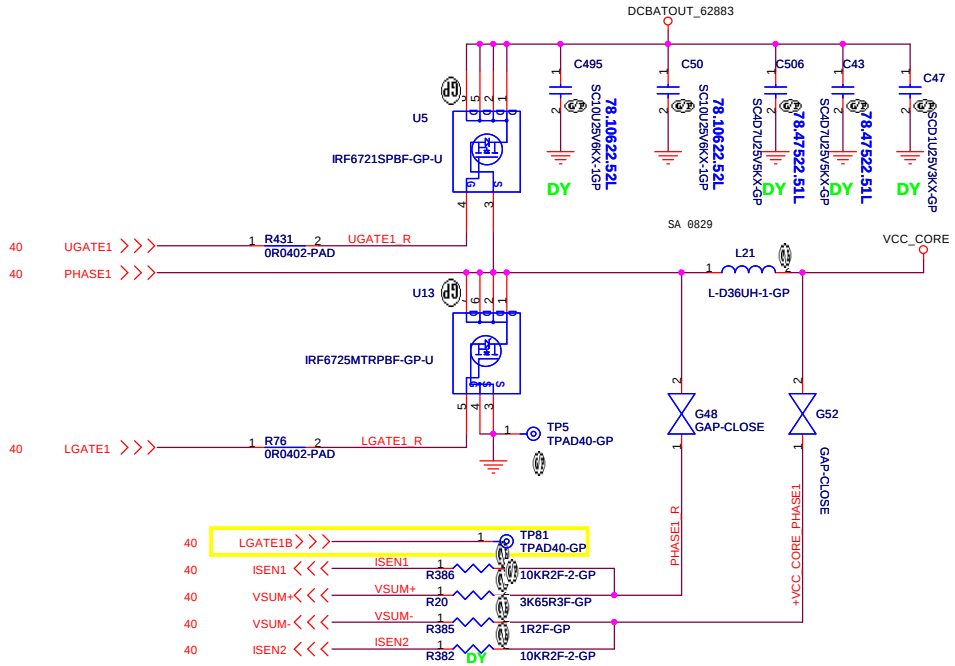

PM_DPRSLPVR 7
ALL_PWRGD 37,42,44,45,46
IMVP_VR_EN 37
VR_CLKEN# 3
H_VID[6..0] 7
3D3V_S0
1D05V_VTT
5V_S5
U54
ISL62882HRTZ-T-GP
NTC 470K close to H/S MOSFET of Phase1
NTC 10K close to Choke of Phase1
VSS_SENSE
SA 0916
Intel support POC (power on current).
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C
ISL62882_CPU_CORE (1 of 2)
LA36 MB DIS
Monday, March 22, 2010





<Variant Name>

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

Title: ISL62882 CPU CORE (2 of 2)

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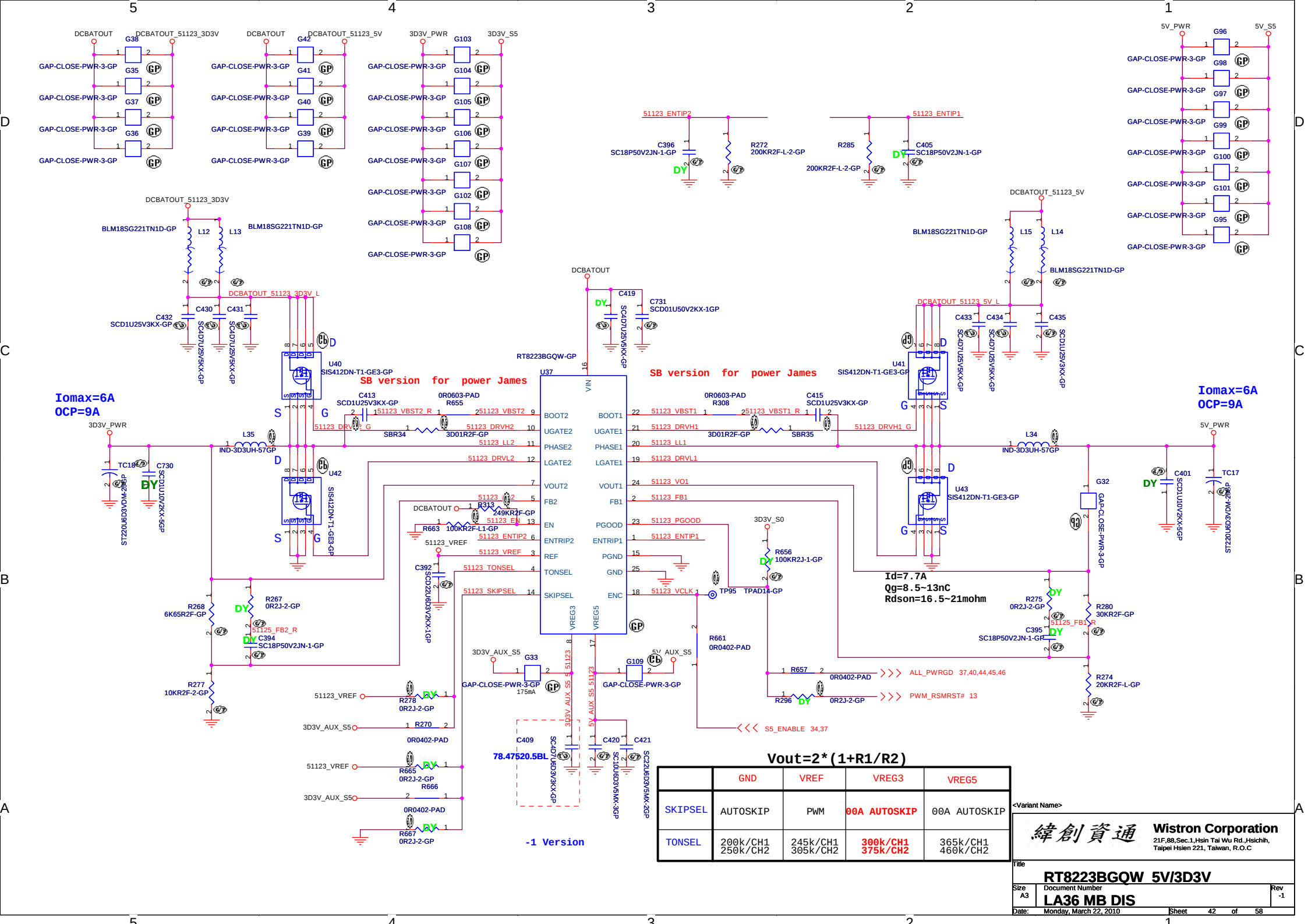
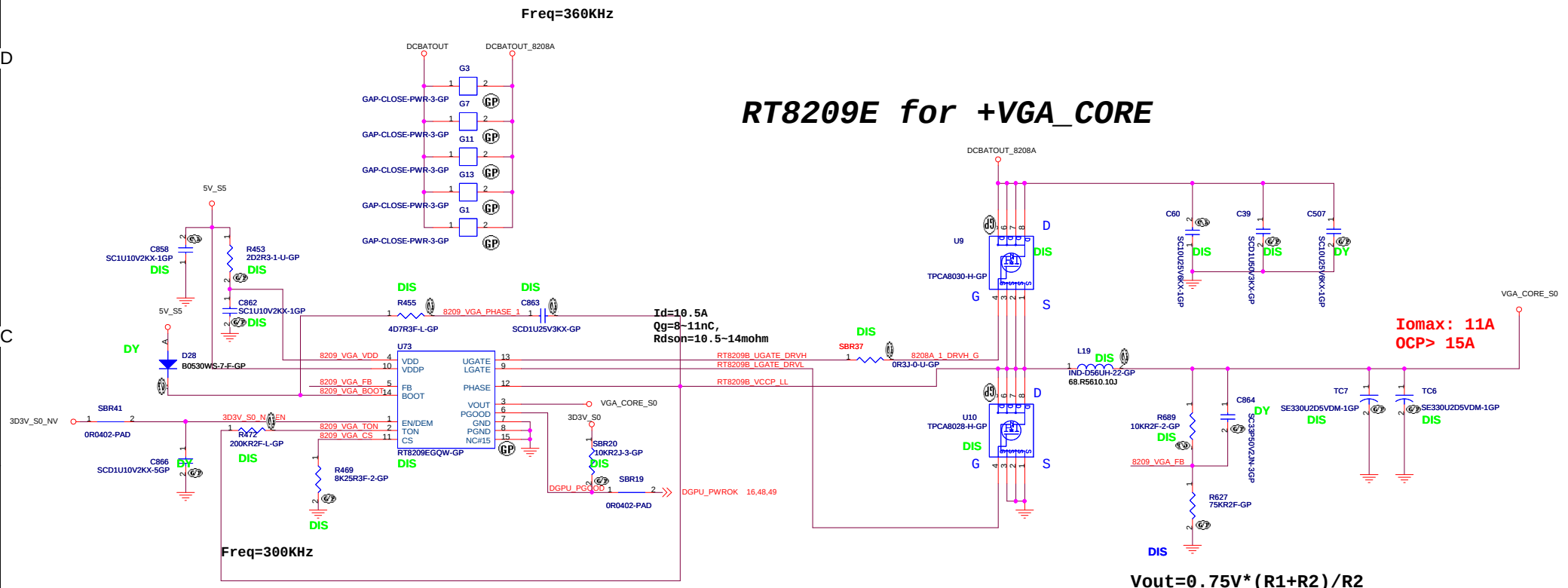
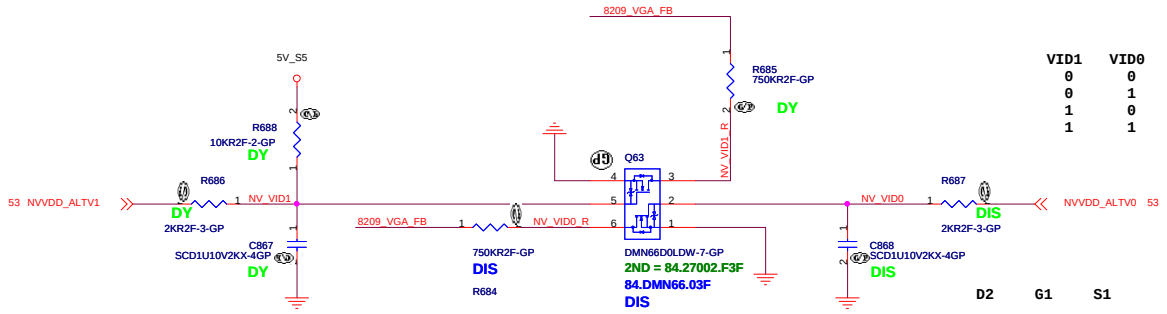


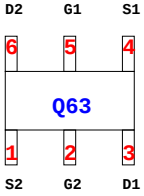
	GND	VREF	VREG3	VREG5
SKIPSEL	AUTOSKIP	PWM	00A AUTOSKIP	00A AUTOSKIP
TONSEL	200k/CH1 250k/CH2	245k/CH1 305k/CH2	300k/CH1 375k/CH2	365k/CH1 460k/CH2

RT8209E for +VGA_CORE





VID1	VID0	Vout
0	0	0.85V
0	1	0.86V
1	0	0.86V
1	1	0.87V



<Variant Name>

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

Title: RT8208A_VGA CORE

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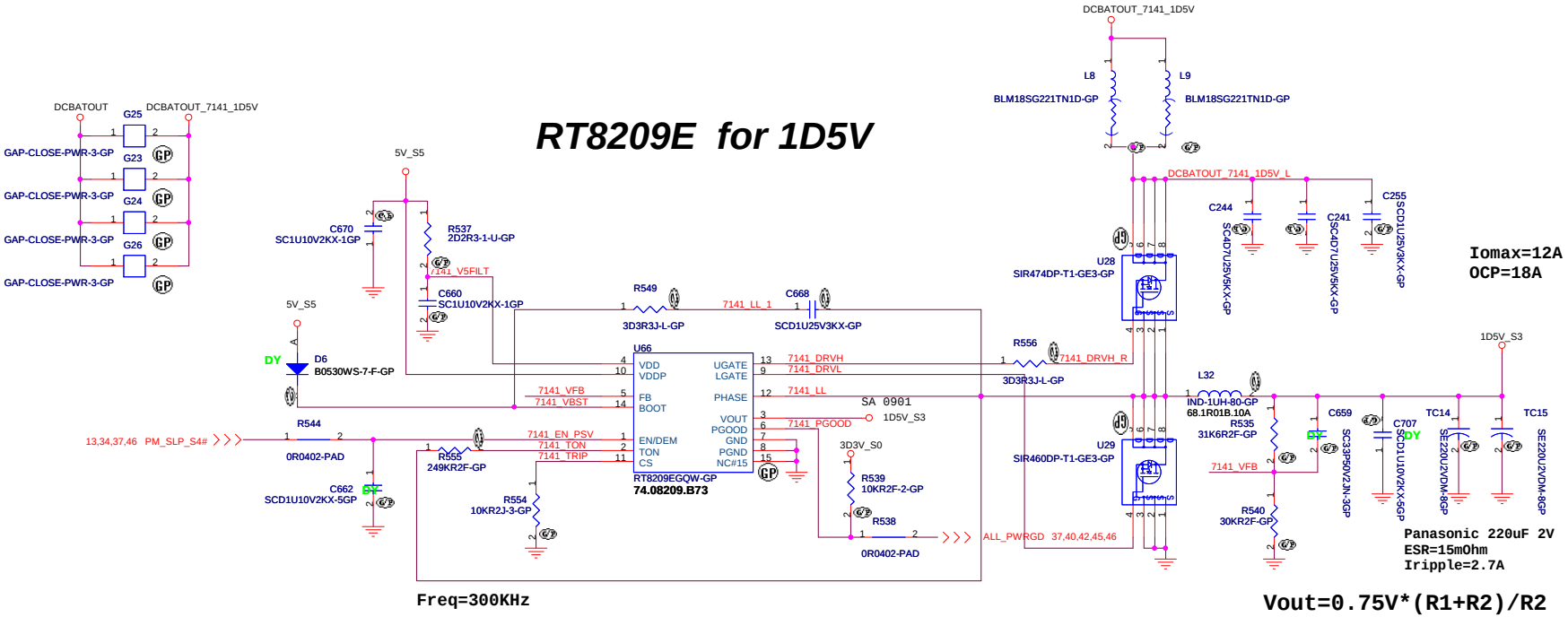
RT8209E for 1D5V



<Variant Name>

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

Title: RT8209E_1D5V / RT8209E_1D05V

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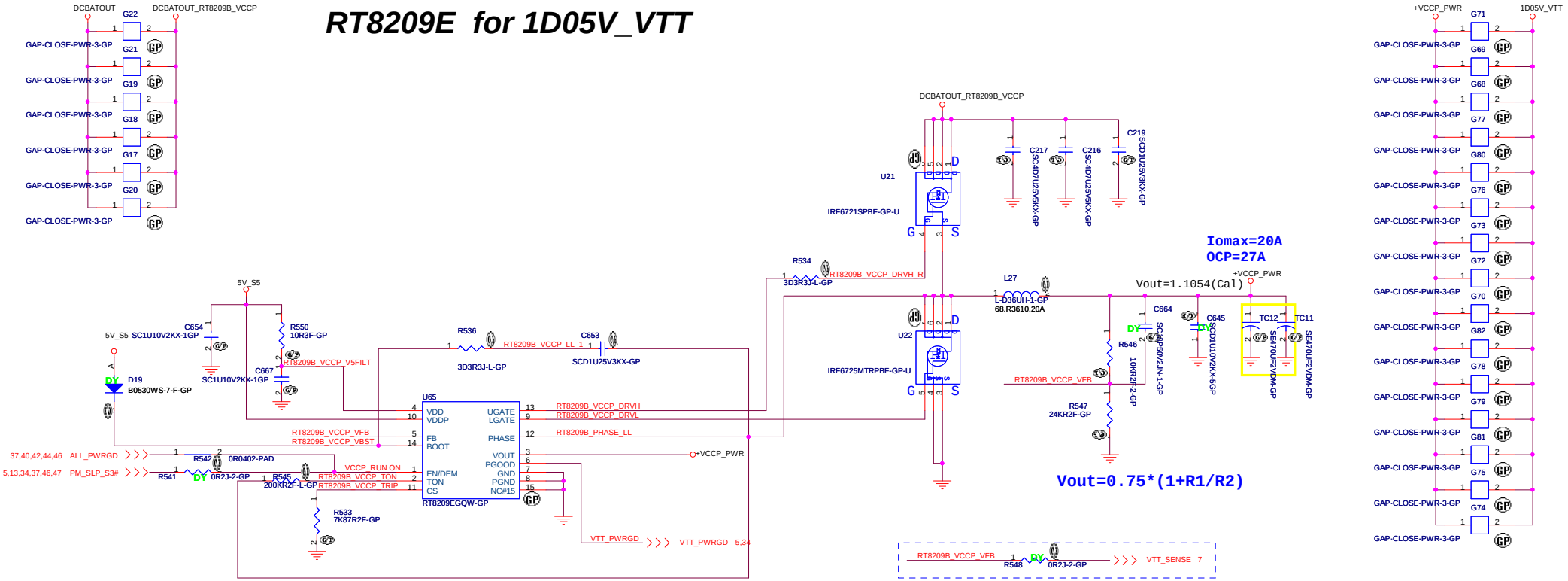
RT8209E for 1D05V_VTT



<Variant Name>

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

Title: 41_RT8209E_1D05V_VTT

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

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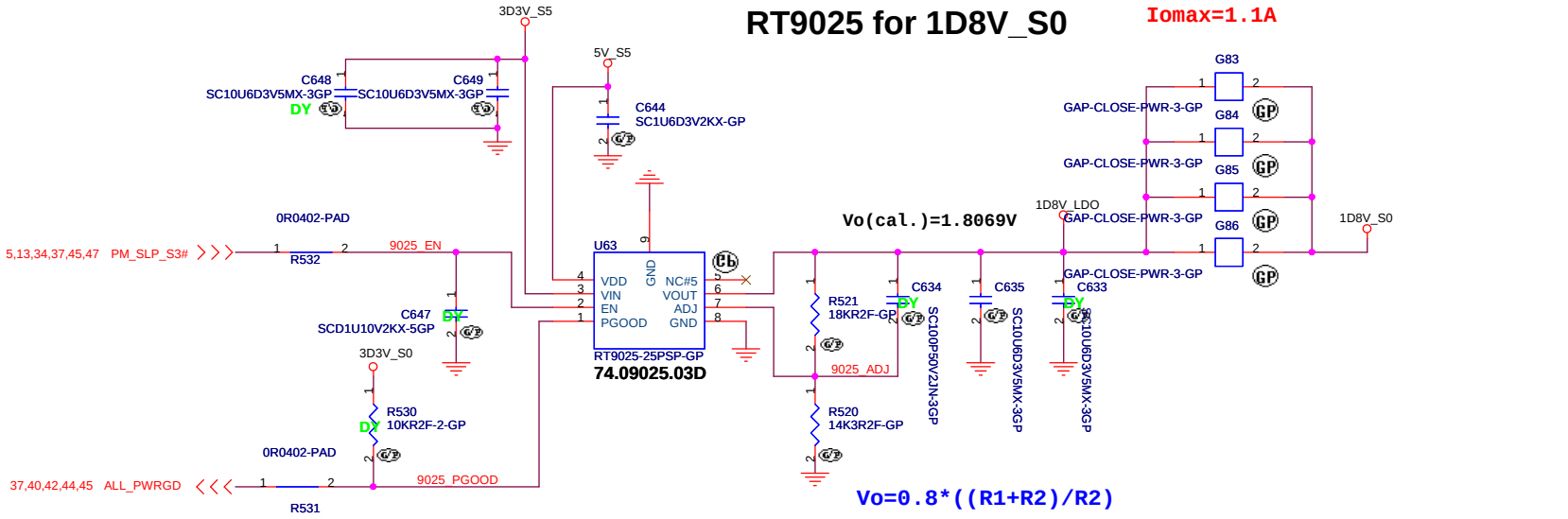

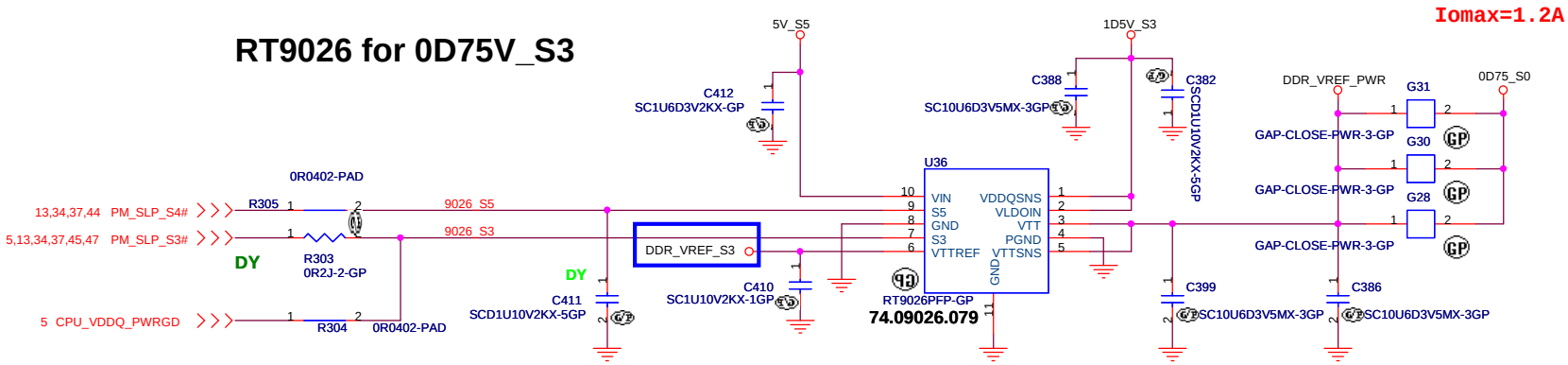

<variant_name>

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

Title: RT9025_1D8V/ RT9026_0D75

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Custom	LA36 MB DIS	-1

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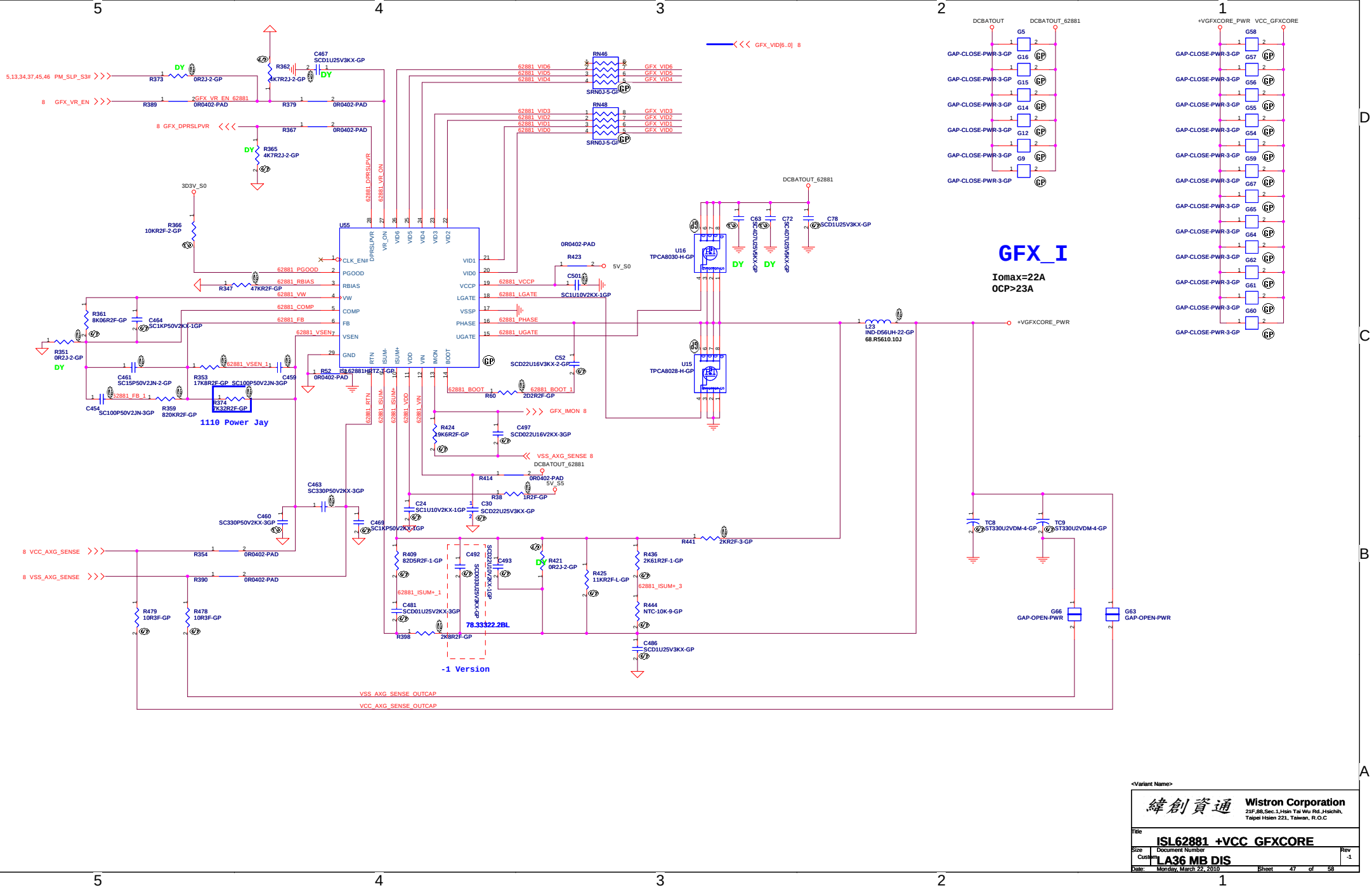

<Variant Name>

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

Title: ISL62881 +VCC_GFXCORE

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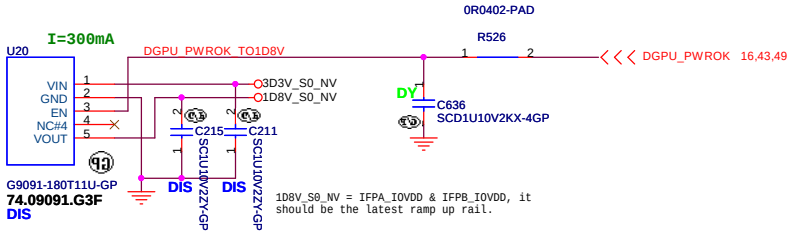
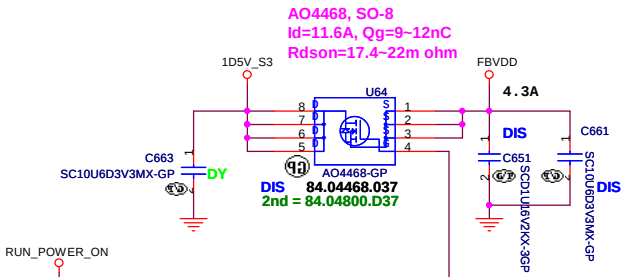
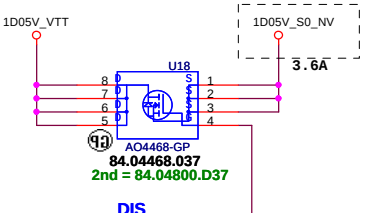
+3VS to 1.8V Transfer

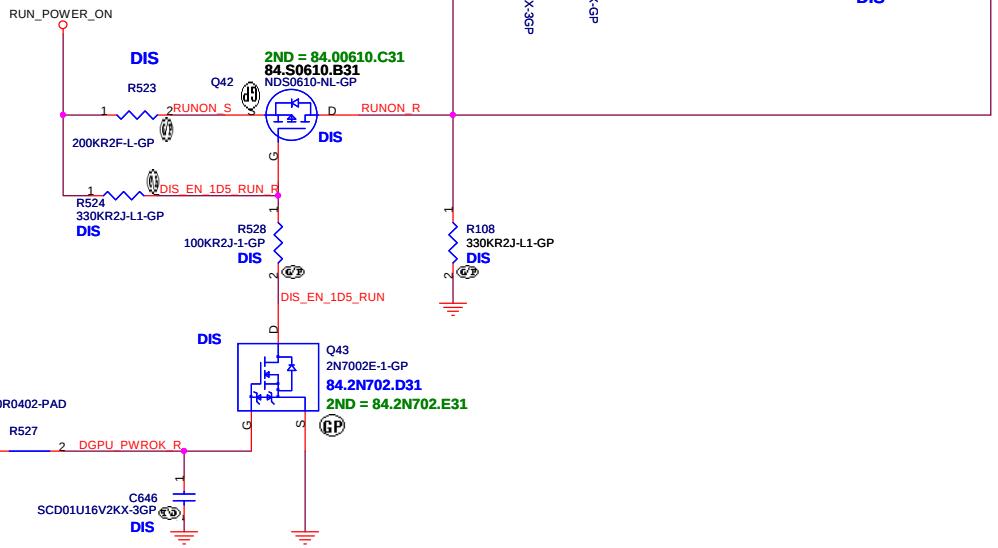


+1.5V to FBVDD Transfer



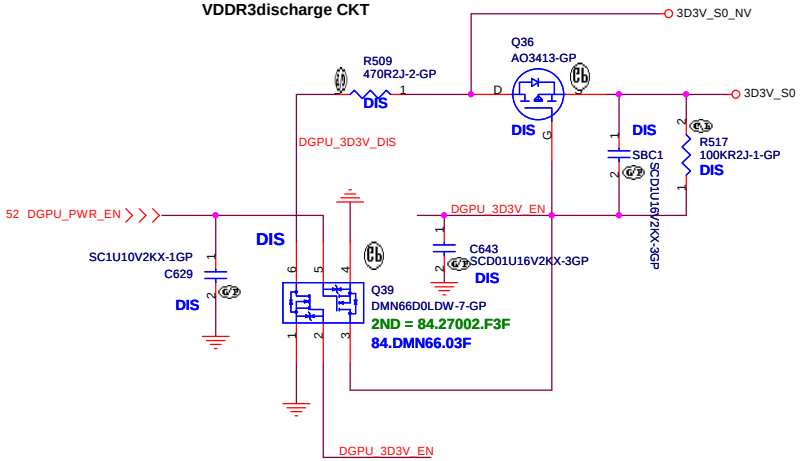
+1.05V to +1.05V_NV Transfer

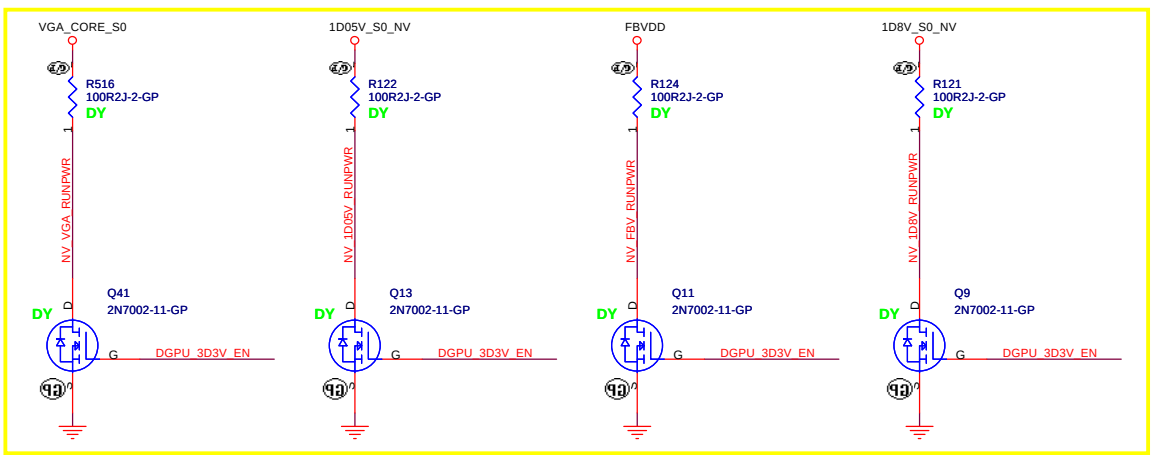


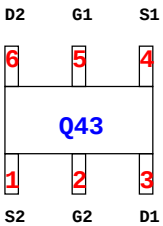


+3VS to 3.3V_DELAY Transfer

3.3v (580mA)







system turn on 3D3V_S0_NV --> VGA_CORE_S0
DGPU_PWROK --> FBVDD, 1D05V_S0_NV, 1D8V_S0_NV

<Variant Name>

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

Title: NV power

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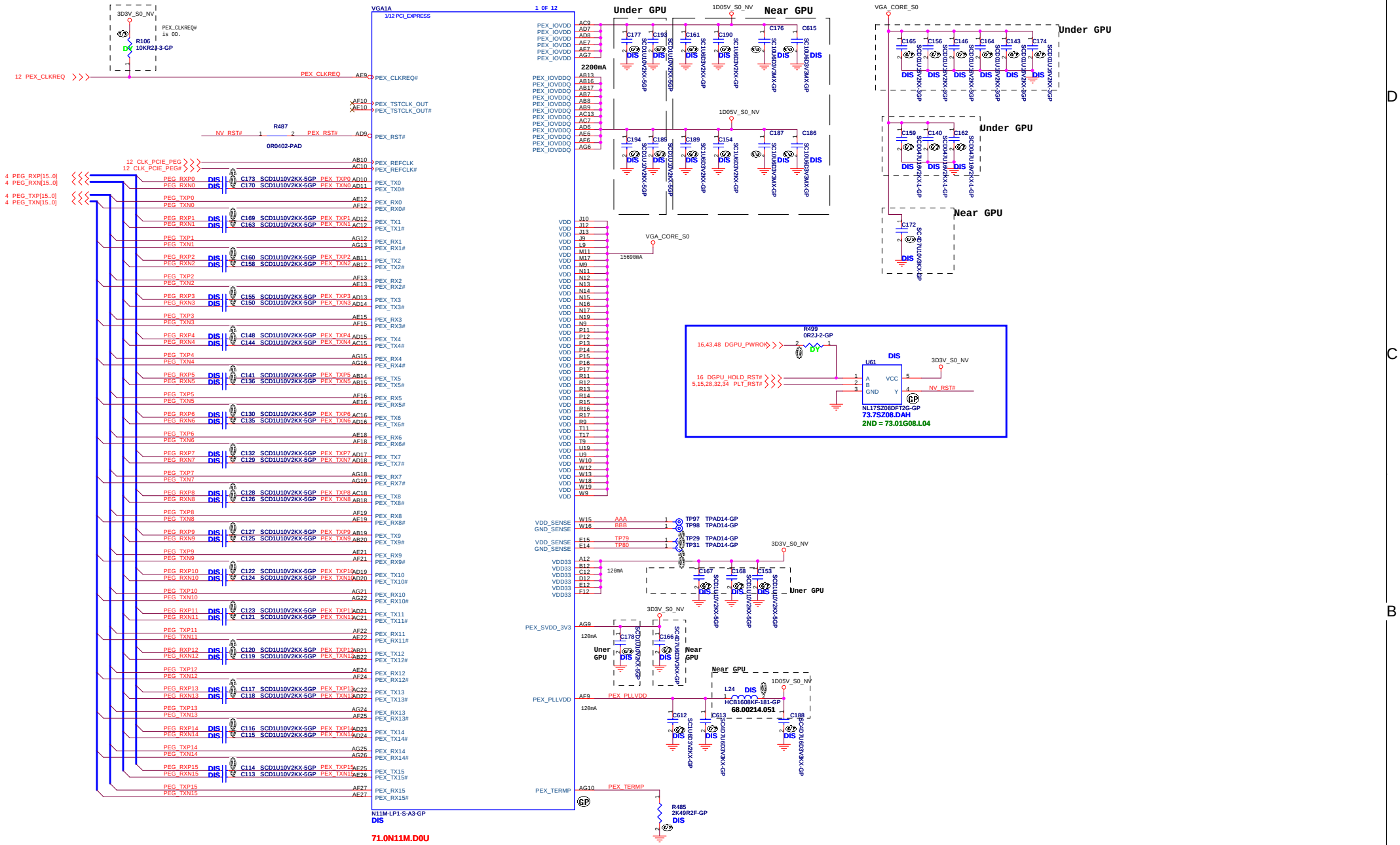

<Variant Name>

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

Title: N11M(1/6) PEG

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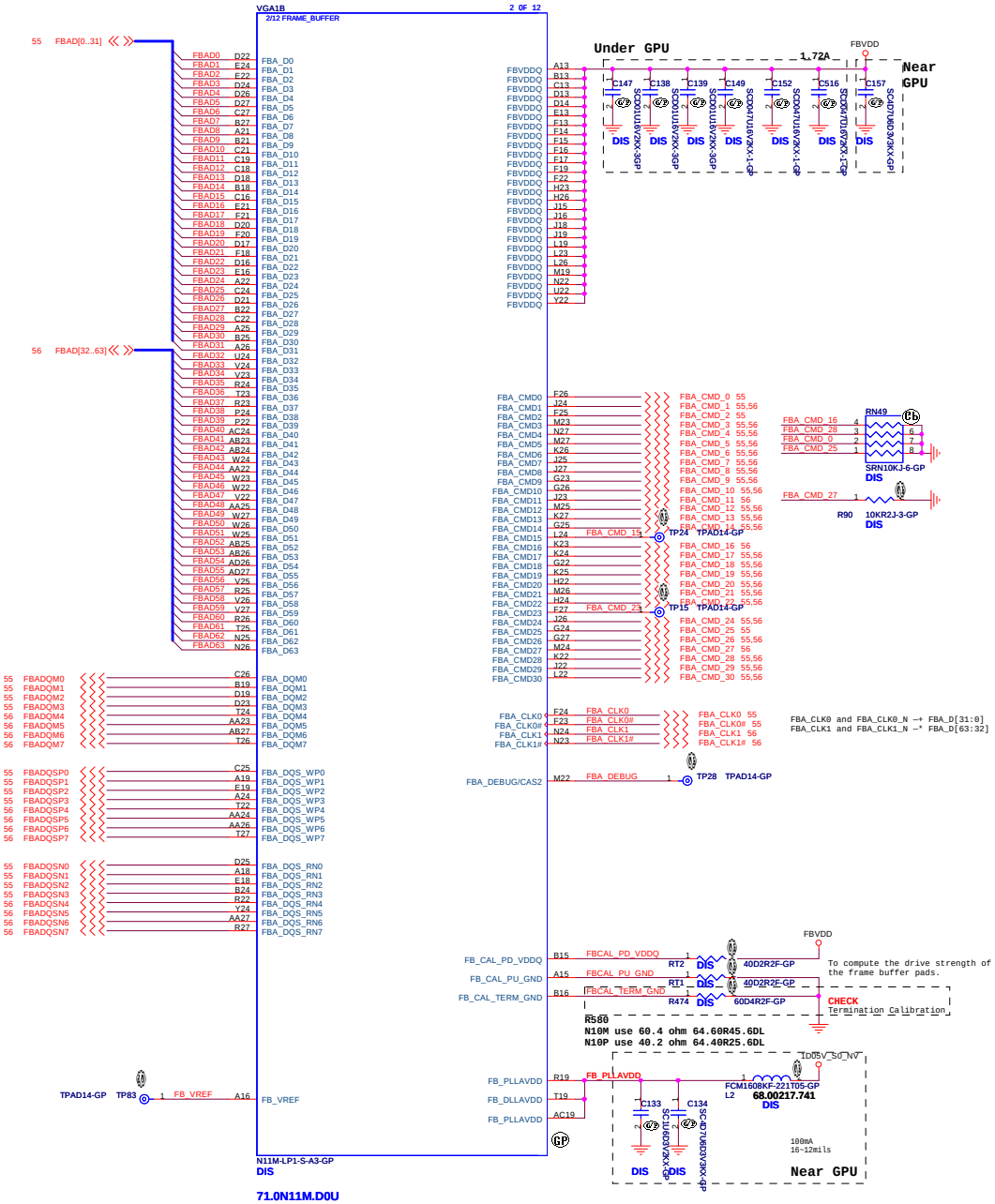

<Variant Name>

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

Title: 52_N11M(2/6)_MEM

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

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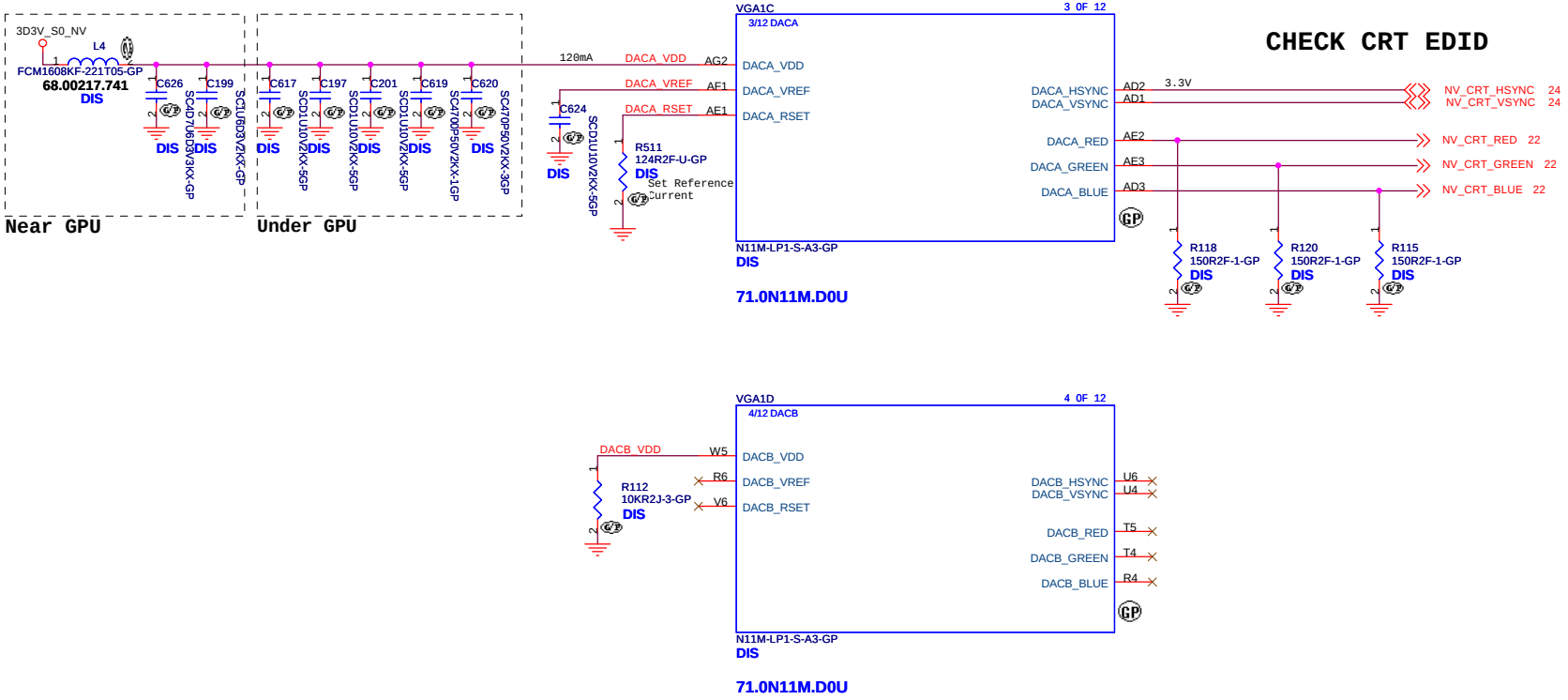
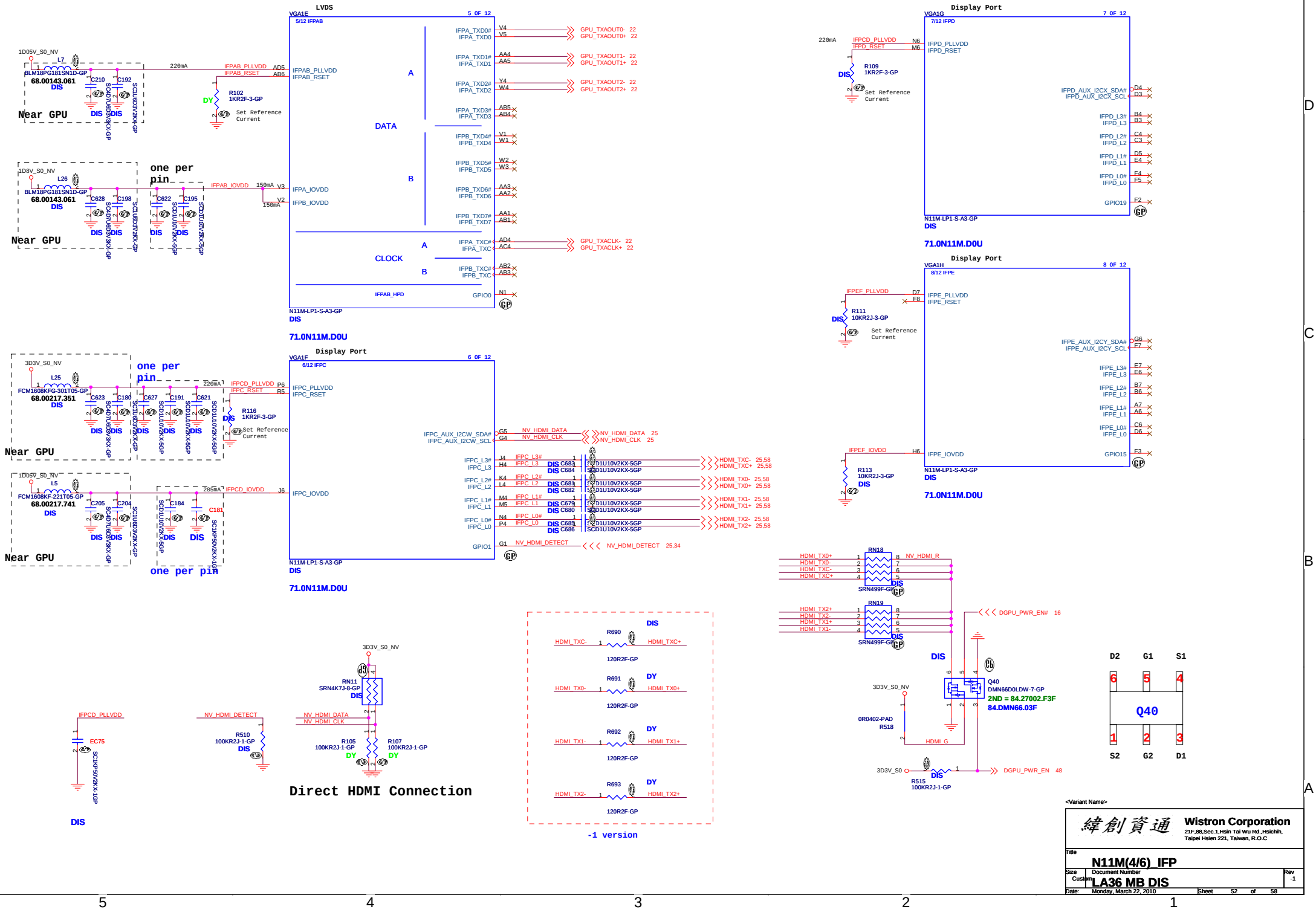


<variant_name>

緯創資通	Wistron Corporation 21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih, Taipei Hsien 221, Taiwan, R.O.C	
Title: N11M(3/6) DAC		
Size: Custom	Document Number: LA36 MB DIS	Rev: -1
Date: Monday, March 22, 2010	Sheet 51 of 58	



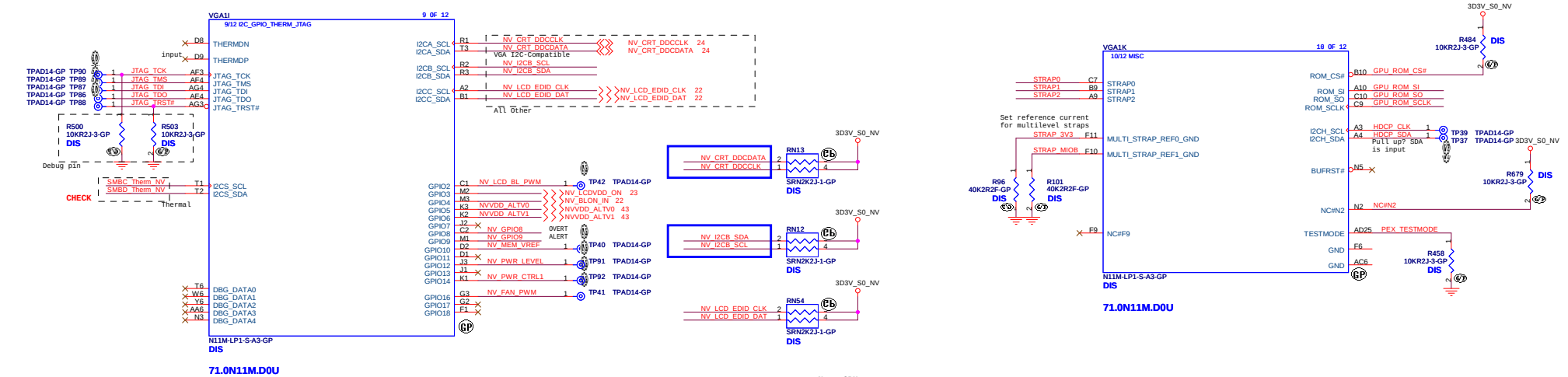
<Variant Name>

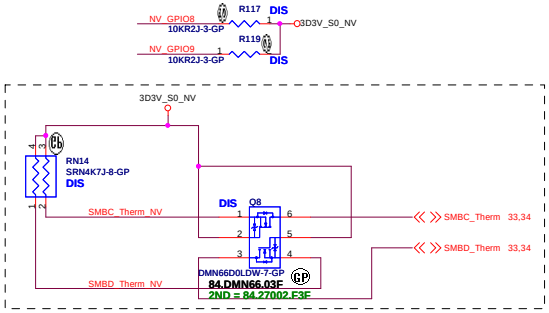
Wistron Corporation
21F,88,Sec.1,Hsin Tai Wu Rd.,Hsichih,
Taipei Hsien 221, Taiwan, R.O.C

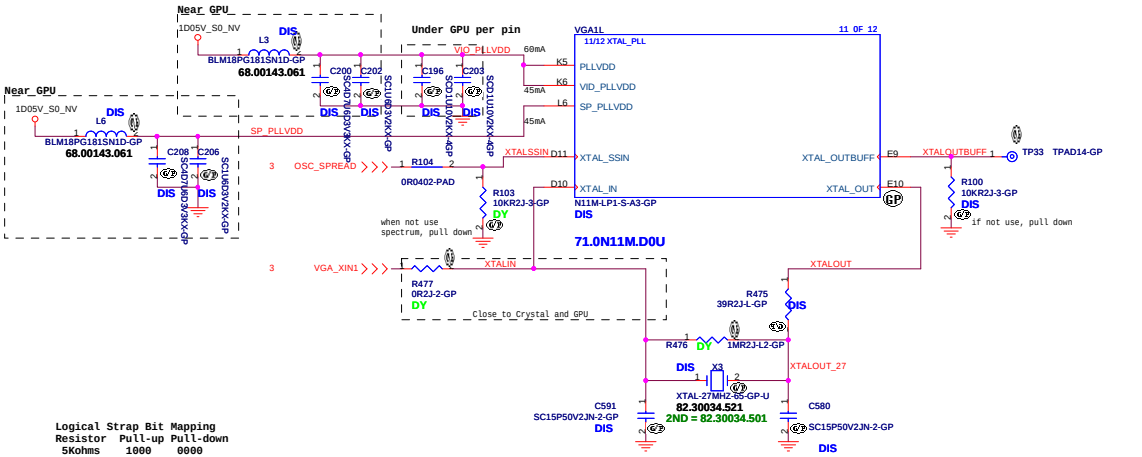
Title: N11M(4/6)_IFP

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 52 of 58







STRAP0

USER[0]=1	
USER[1]=1	
USER[2]=1	
USER[3]=1	

DeviceID
N11P-LM1(0x0A2B) ?
N11M-GE1(0x0A75) 1-0101

STRAP1

3GIO_PADCFG[0]=0	
3GIO_PADCFG[1]=1	
3GIO_PADCFG[2]=1	
3GIO_PADCFG[3]=1	

STRAP2

	N11M-LP1	N11M-GE1
PCI_DEVID[0]=1	[0] 1	1
PCI_DEVID[1]=0	[1] 1	0
PCI_DEVID[2]=1	[2] 0	1
PCI_DEVID[3]=0	[3] 1	0

GPU_ROM_SI

for Hynix VRAM	for Samsung VRAM
RAM_CFG[0]=0	RAM_CFG[0]=1
RAM_CFG[1]=1	RAM_CFG[1]=1
RAM_CFG[2]=0	RAM_CFG[2]=0
RAM_CFG[3]=0	RAM_CFG[3]=0

GPU_ROM_SO

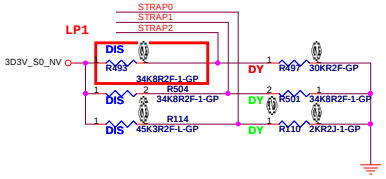
VGA_DEVICE	=1
SMB_ALT_ADDR	=0
FB_0_BAR_SIZE	=0
XCLK_417	=0

GPU_ROM_SCLK

		N11M-LP1	N11M-GE1
PEX_PLL_EN_TERM	=0		
SLOT_CLK_CFG	=1		
SUB_VENDOR	=0		
PCI_DEVID[4]	=1	[4] 0	1

Logical Strap Bit Mapping

Resistor	Pull-up	Pull-down
5Kohms	1000	0000
10Kohms	1001	0001
15Kohms	1010	0010
20Kohms	1011	0011
25Kohms	1100	0100
30Kohms	1101	0101
35Kohms	1110	0110
45Kohms	1111	0111



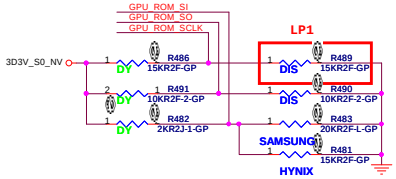


TABLE
KENDO VIDEO MEMORY

	SAMSUNG 0011	HYNIX 0010
R448	20KOHM 64.20025.6DL	15KOHM 64.15025.6DL

<variant_name>

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

Title: N11M(5/6) STRAP/ GPIO

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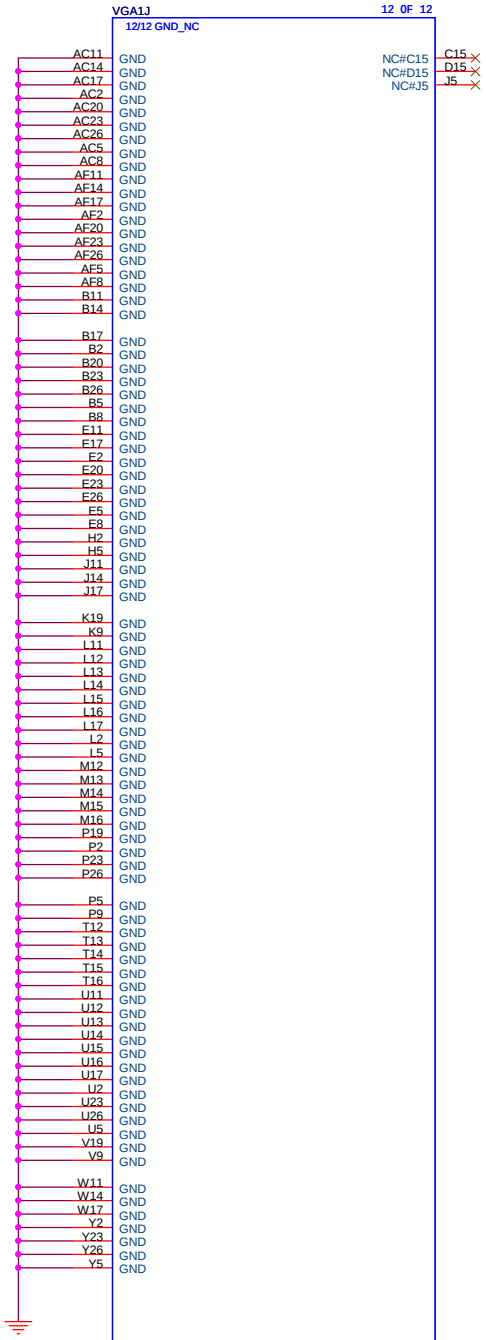

71.0N11M.D0U

<Variant Name>

緯創資通 **Wistron Corporation**

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

Title: **N11M(6/6) GND**

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Custom	**LA36 MB DIS**	-1

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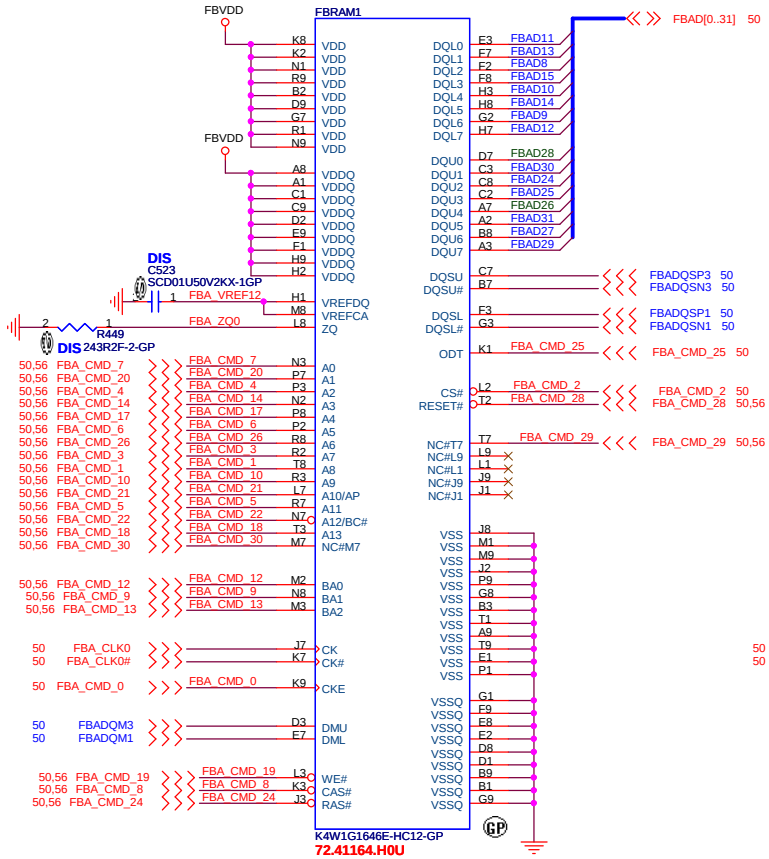
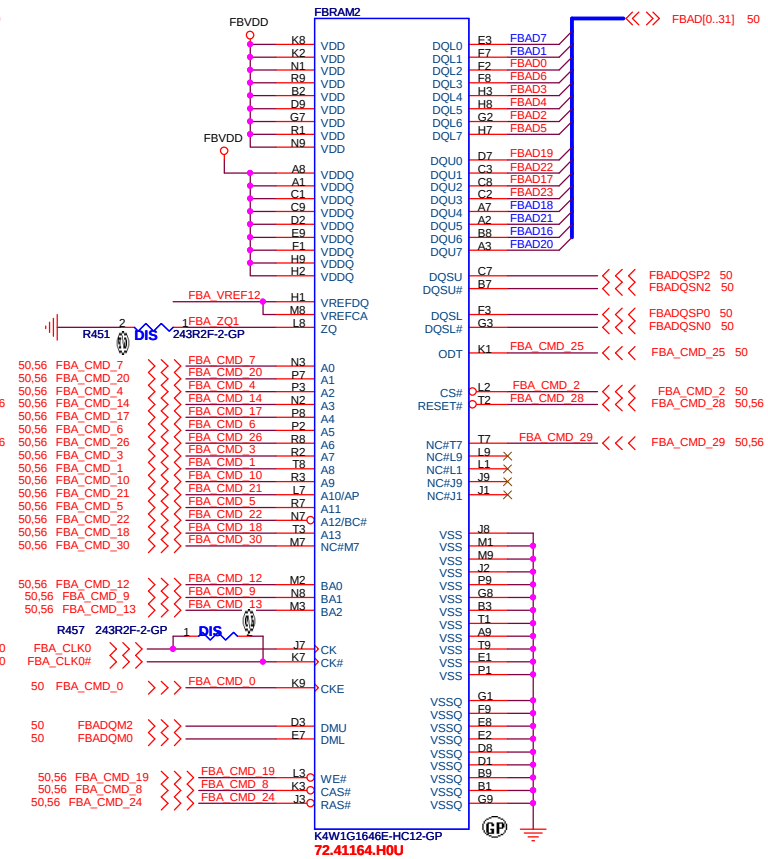
Mode C Command Mapping





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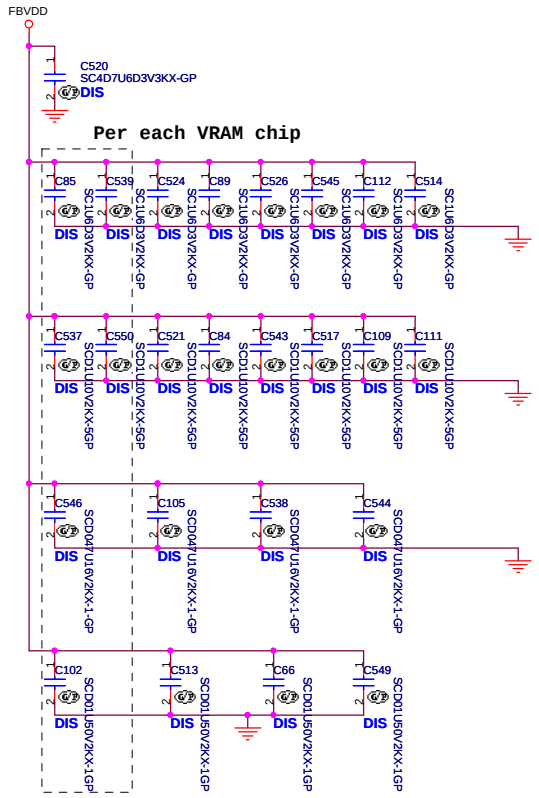
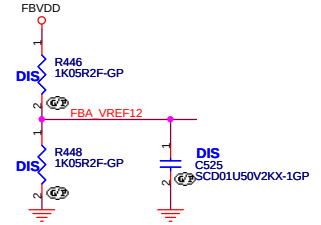




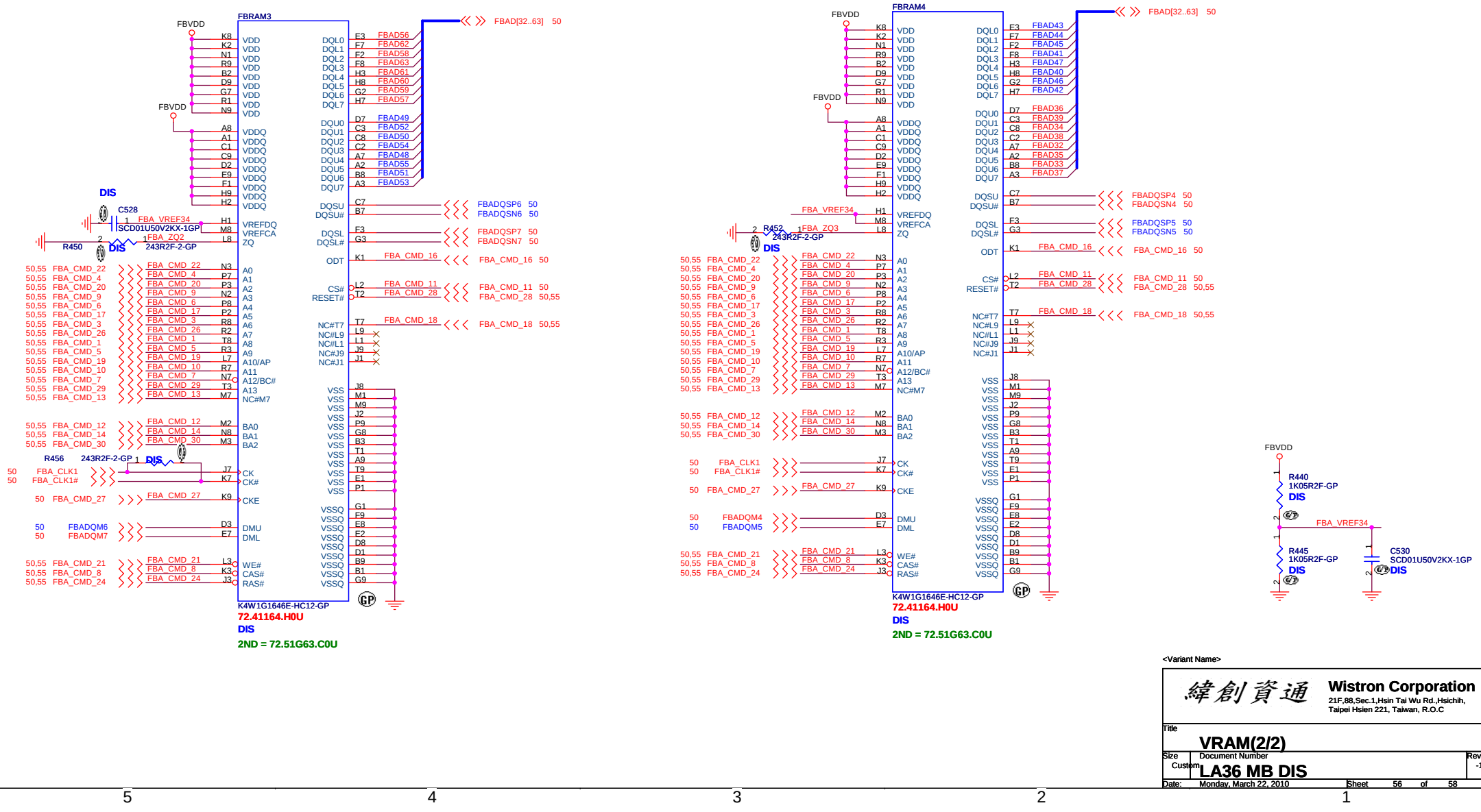
<Variant Name>

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

Title: VRAM(1/2)

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

Date: Monday, March 22, 2010 | Sheet 55 of 58



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

Title: VRAM(2/2)

Size: Custom | Document Number: LA36 MB DIS | Rev: -1

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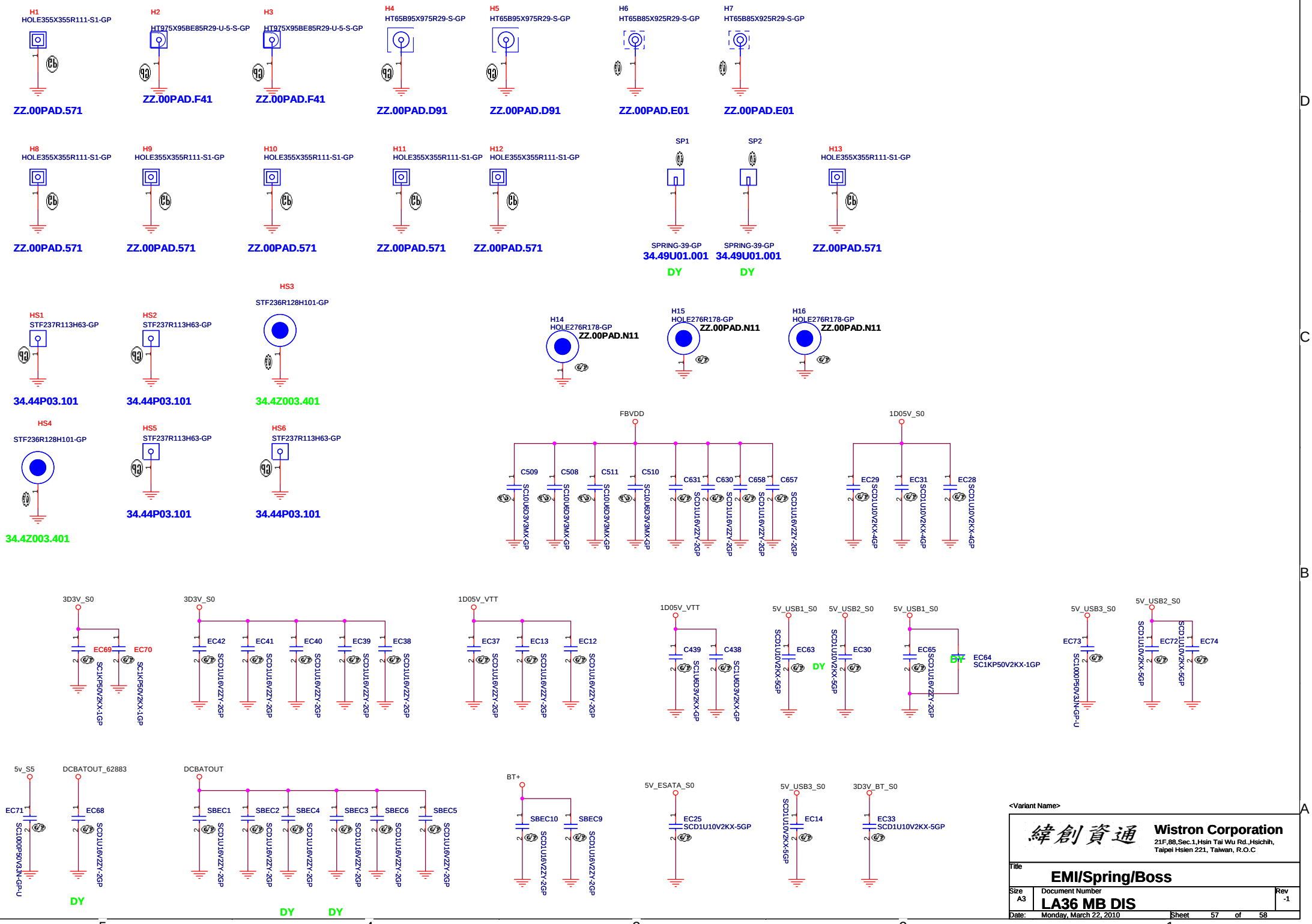

<Variant Name>

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

Title: EMI/Spring/Boss

Size: A3 | Document Number: LA36 MB DIS | Rev: -1

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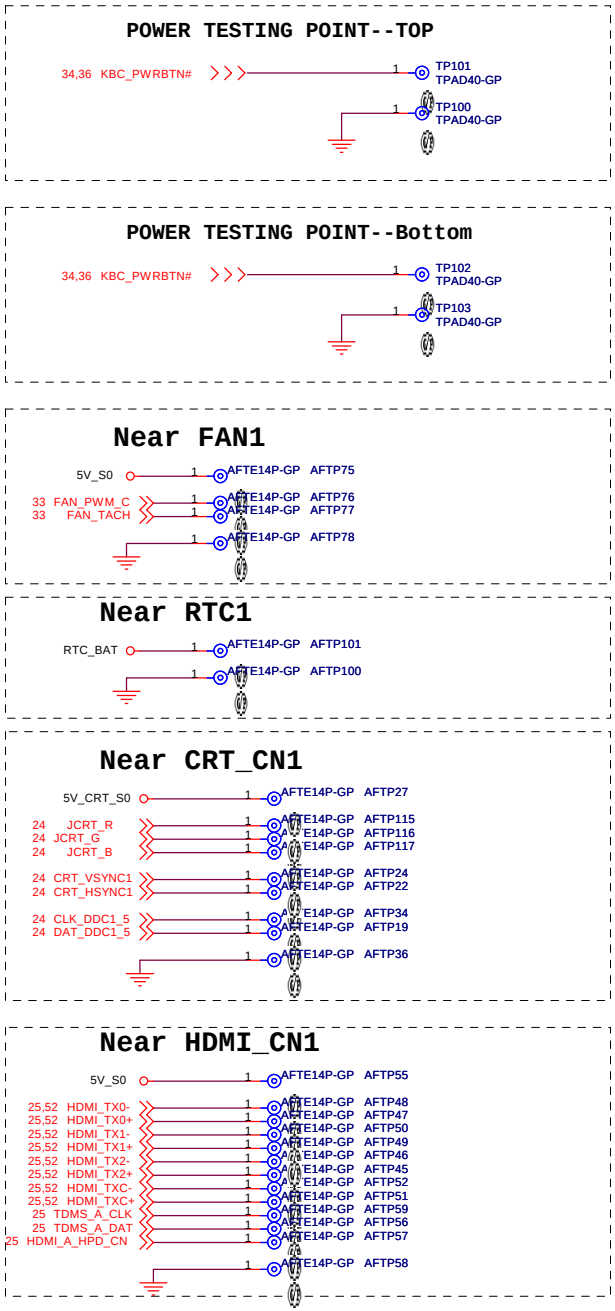

<Variant Name>

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

Title: AFTE_TP

Size	Document Number	Rev
A3	LA36 MB DIS	-1

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