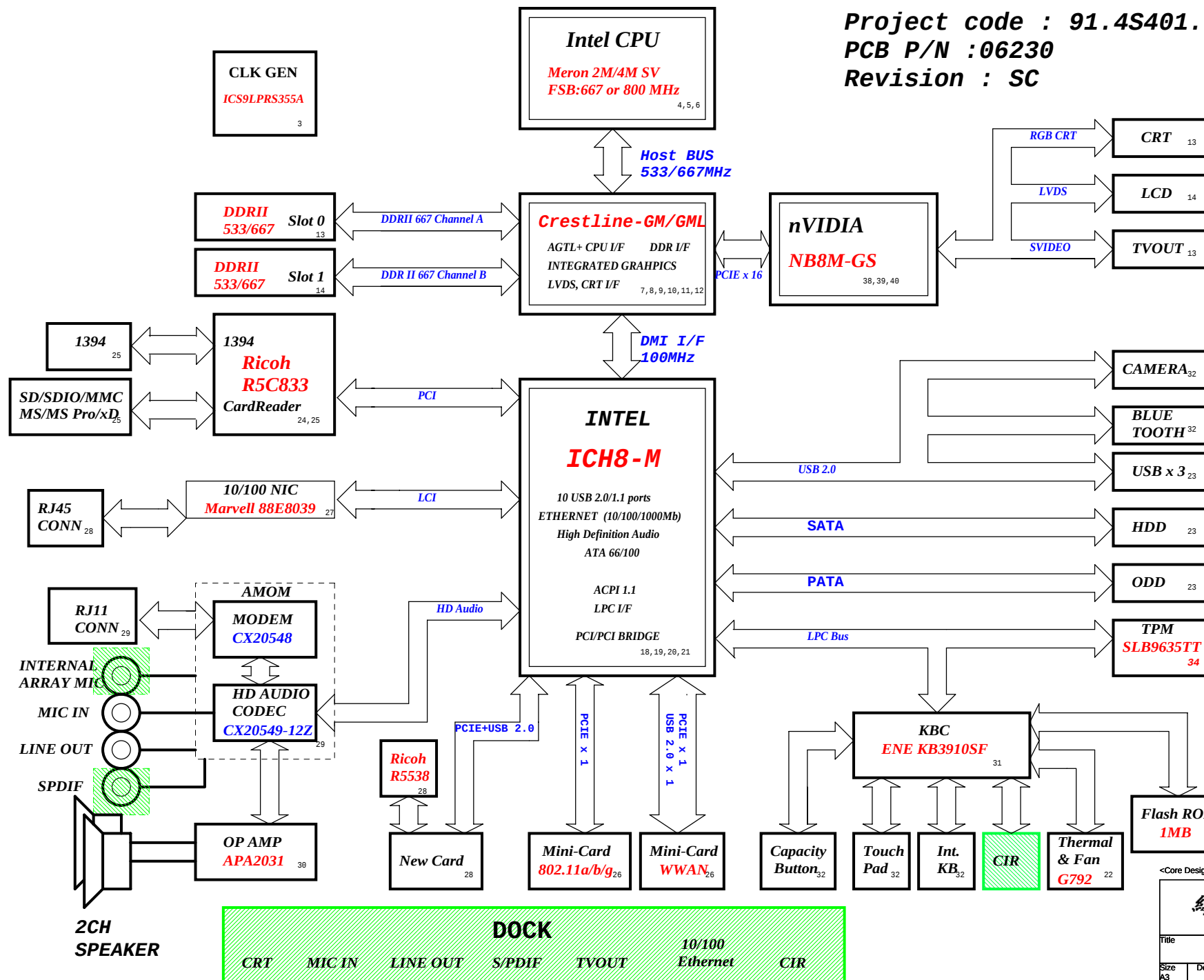


Pamirs-Discrete Block Diagram

Project code : 91.4S401.001
PCB P/N :06230
Revision : SC



SYSTEM DC/DC TPS51120	
INPUTS	OUTPUTS
DCBATOUT	5V_S3 3V_S5
SYSTEM DC/DC MAX8743	
INPUTS	OUTPUTS
DCBATOUT	1D05V_S0 1D8V_S3
SYSTEM DC/DC FAN5234	
INPUTS	OUTPUTS
DCBATOUT	VGA_CORE_S0 11A

MAXIM CHARGER MAX8725	
INPUTS	OUTPUTS
DCBATOUT	BT+ 18V 3.0A 5V 100mA

CPU DC/DC	
MAX8736ETL	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE 0.844-1.3V 44A

PCB LAYER	
L1:	Signal 1
L2:	GND
L3:	Signal 2
L4:	Signal 3
L5:	GND
L6:	VCC
L7:	Signal 4
L8:	Signal 5
L9:	GND
L10:	Signal 5

<Core Design>

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

Title			
<i>Block Diagram</i>			
Size A3	Document Number		Rev
	Pamirs-Discrete		SC
Date:	Monday, December 18, 2006	Sheet 1 of	47

INTEL ICH8-M STRAP PIN

Signal	Usage/When Sampled	Comment
HDA_SDOUT	XOR Chain Entrance/ PCIe Port Config 1 bit1, 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 bit1 of RPC.PC(Config Registers:offset 224h)
HDA_SYNC	PCIe Port Config 1 bit0, Rising Edge of PWROK.	Sets bit0 of RPC.PC(Config Registers:Offset 224h)
GNT2#	PCIe Port Config 2 bit0, Rising Edge of PWROK.	Sets bit2 of RPC.PC(Config Registers:Offset 224h)
GPI020	Reserved	Weak Internal PULL-DOWN.NOTE:This signal should not be pull HIGH.
GNT3#	Top-Block Swap Override. Rising Edge of PWROK.	Sampled low:Top-Block Swap mode(inverts A16 for all cycles targeting FWH BIOS space). Note: Software will not be able to clear the Top-Swap bit until the system is rebooted without GNT3# being pulled down.
GNT0# SPI_CS1#	Boot BIOS Destination Selection. Rising Edge of PWROK.	Controllable via Boot BIOS Destination bit (Config Registers:Offset 3410h:bit 11:10). GNT0# is MSB, 01-SPI, 10-PCI, 11-LPC.
INTVRMEN	Integrated VccSus1_05 VccSus1_5 and VccCL1_5 VRM Enable/Disable.Always sampled.	Enables integrated VccSus1_05,VccSus1_5 and VccCL1_5 VRM when sampled high
LAN100_SLP	Integrated VccLAN1_05 VccCL1_05 VRM enable /Disable. Always sampled.	Enables integrated VccLAN1_05,VccCL1_05 VRM when sampled high
SATALED#	PCIe LAN REVERSAL.Rising Edge of PWROK.	This signal has weak internal pull-up. set bit27 of MPC.LR(Device28:Function0:Offset D8)
SPKR	No Reboot. Rising Edge of PWROK.	If sampled high, the system is strapped to the "No Reboot" mode(ICH8M will disable the TCO Timer system reboot feature). The status is readable via the NO REBOOT bit.(Offset:3410h:bit5)
TP3	XOR Chain Entrance. Rising Edge of PWROK.	This signal should not be pull low unless using XOR Chain testing.
GPI033/ HDA_DOCK_EN#	Flash Descriptor Security Override Strap Rising Edge of PWROK.	Internal Pull-Up.If sampled low,the Flash Descriptor Security will be overridden.if high,the Security measures defined in the Flash Descriptor will be in effect. This should only be used in manufacturing environments

XOR Chain Entrance Strap			
ICH_RSVDTP3	AZ_DOUT_ICH	Description	
0	0	RSVD	
0	1	Enter XOR Chain	
1	0	Normal Operation(default)	
1	1	Set PCIe port config bit1	

A16 swap override strap	
PCT_GNT3#	low = A16 swap override enable high = default

BOOT BIOS Strap		
PCI_GNT0#	SPI_CS#1	BOOT BIOS Location
0	1	SPT
1	0	PCT
1	1	LPC(Default)

Integrated VccSus1_05,VccSus1_5,VccCL1_5		
SM_INTVRMEN	High=Enable	Low=Disable
Integrated VccLAN1_05VccCL1_05		
LAN100_SLP	High=Enable	Low=Disable

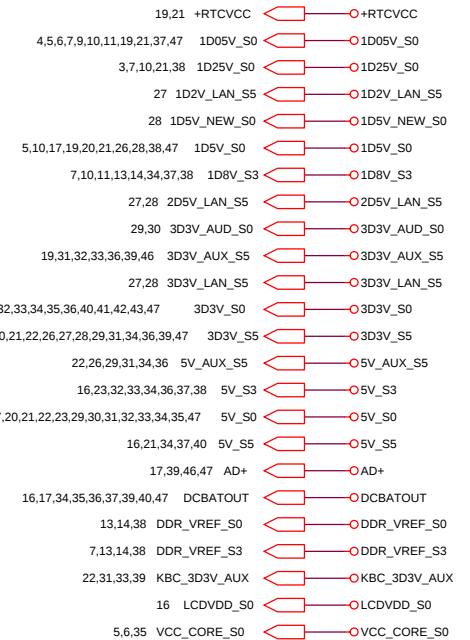
DEFAULE HIGH

No Reboot Strap	
SPKR	LOW = Defaule
	High=No Reboot

8.2K PULL HIGH

INTEL ICH8-M INTEGRATED PULL-UPS and PULL-DOWNS

SIGNAL	Resistor Type/Value
HDA_BIT_CLK	PULL-DOWN 20K
HDA_RST#	NONE
HDA_SDIN[3:0]	PULL-DOWN 20K
HDA_SDOUT	PULL-DOWN 20K
HDA_SYNC	PULL-DOWN 20K
GNT[3:0]	PULL-UP 20K
GPI0[20]	PULL-DOWN 20K
LDA[3:0]#/FWH[3:0]#	PULL-UP 20K
LAN_RXD[2:0]	PULL-UP 20K
LDRQ[0]	PULL-UP 20K
LDRQ[1]/GPI023	PULL-UP 20K
PME#	PULL-UP 20K
PWRBTN#	PULL-UP 20K
SATALED#	PULL-UP 20K
SPI_CS1#	PULL-UP 20K
SPI_CLK	PULL-UP 20K
SPI_MOSI	PULL-UP 20K
SPI_MISO	PULL-UP 20K
TACH_[3:0]	PULL-UP 20K
SPKR	PULL-DOWN 20K
TP[3]	PULL-UP 20K
USB[9:0][P,N]	PULL-DOWN 15K
CL_RST#	TBD

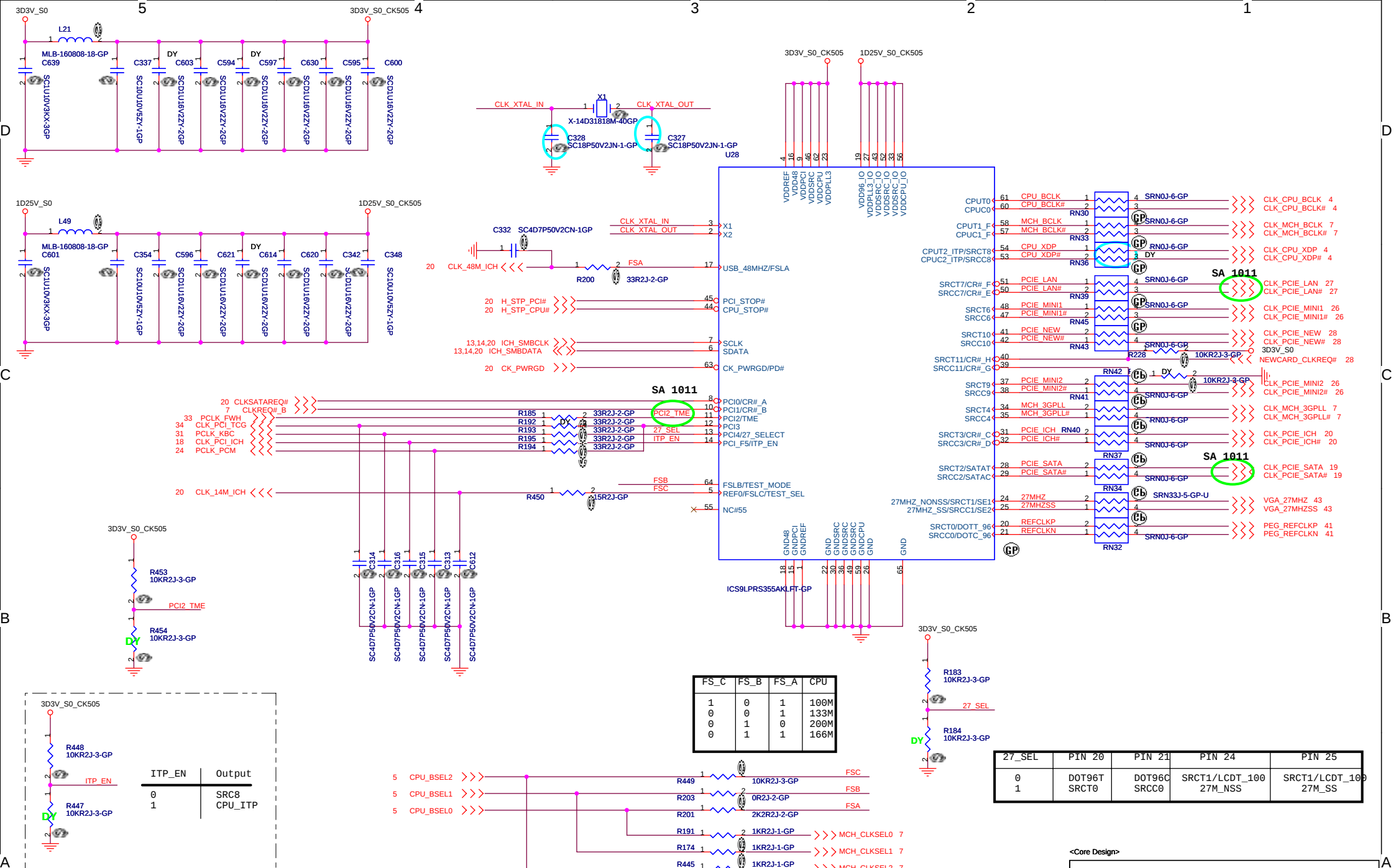


INTEL CRESTLINE STRAP PIN

CFG Strap	LOW 0	HIGH 1
CFG 5		
CFG 8	DMI X 2	DMI X 4
CFG 9	Low Power PCI Express	Normal
CFG 9	PCI Express Graphics Lane Reversal	Normal Mode(Lanes number in order)
CFG 16	FSB Dynamic ODT	Disabled
CFG 19	DMI Lane Reserved	Enabled
CFG 20	Concurrent SDVO/PCIe	Normal Operation
SDVO_CTRL_DATA	NO SDVO Card Present	SDVO Card Present

CFG 12	XOR/ALL-Z
CFG 13	
LL(00)	Reserved
LH(01)	XOR Mode Enabled
HL(10)	All Z Mode Enabled
HH(11)	Normal Operation

<Core Design>		
緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title		
Table of Content		
Size A3	Document Number	Rev
Pamirs-Discrete		SA
Date: Wednesday, November 01, 2006	Sheet 2	of 47



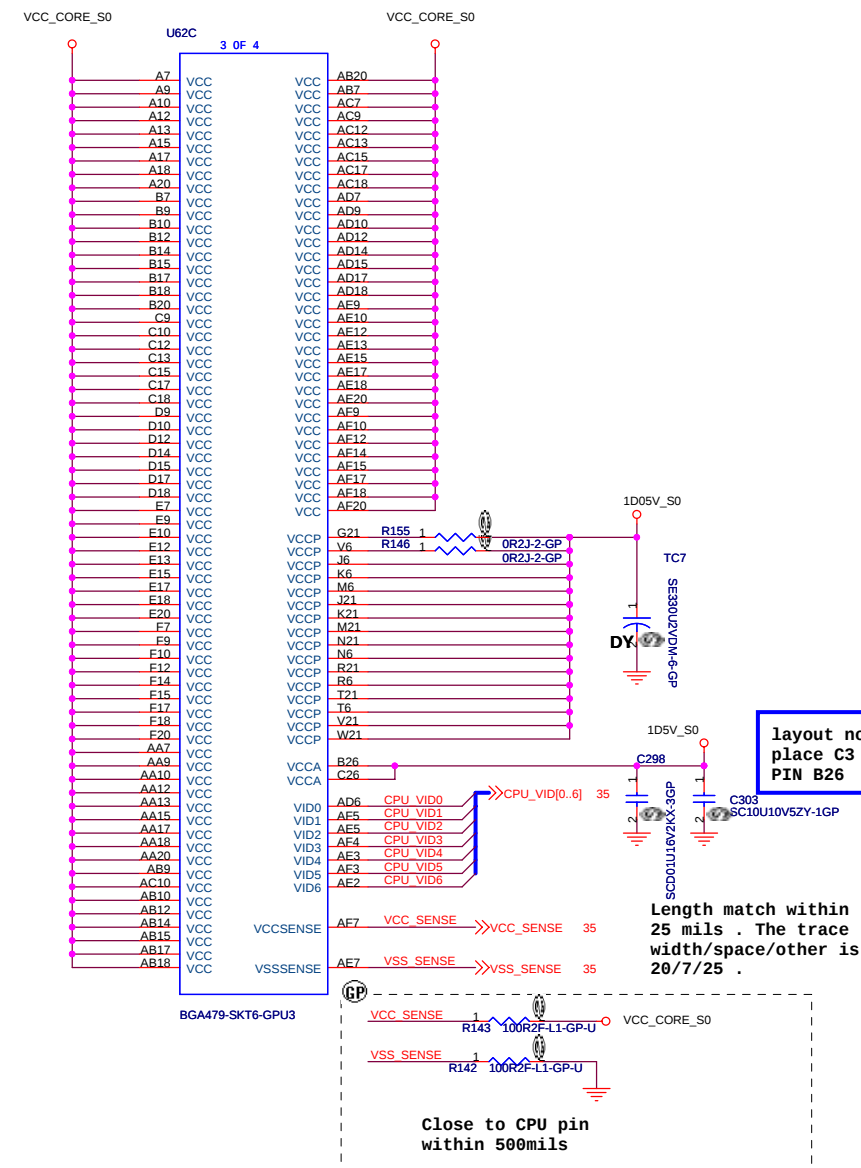
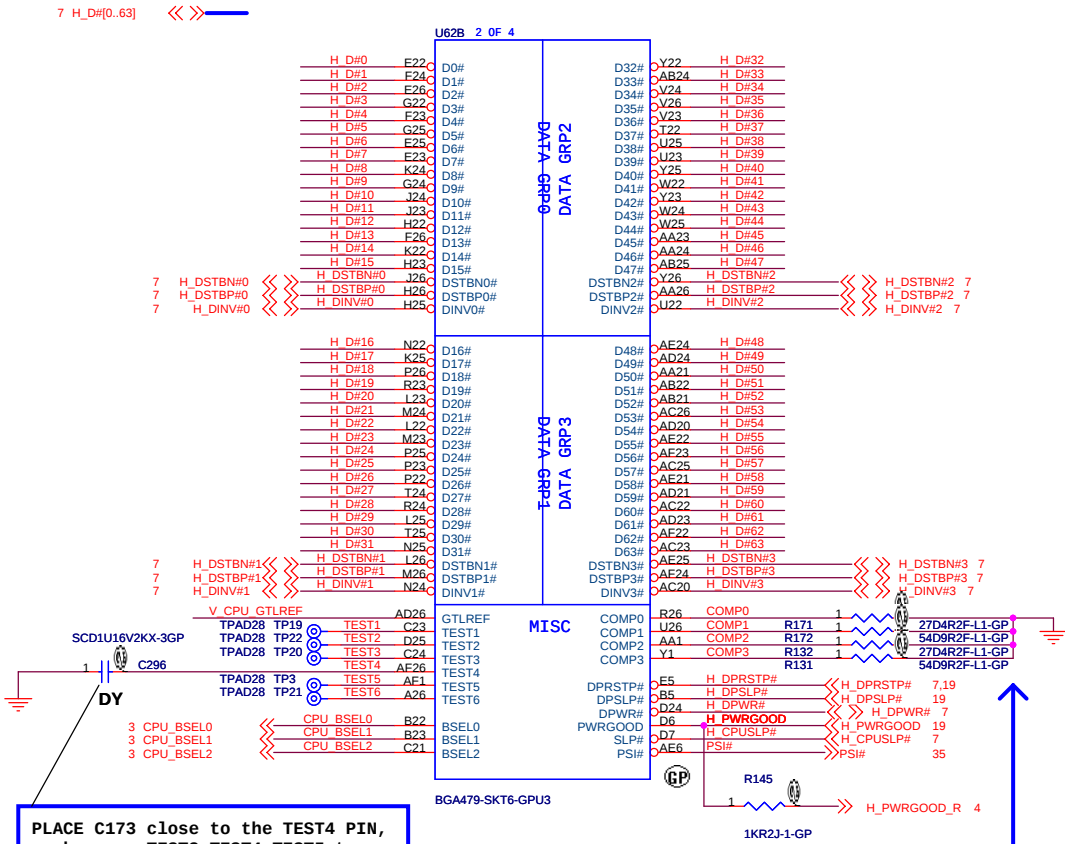
<Core Design>

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

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

Title			
Clock generator CY28548			
Size A3	Document Number	Rev	
Pamirs-Discrete		SC	
Date: Tuesday, December 19, 2006		Sheet 3	of 47





PLACE C173 close to the TEST4 PIN,
make sure TEST3, TEST4, TEST5 trace
routing is reference to GND and
away other noisy signals

CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0

Close to CPU
pin AD26
Z0=55 ohm
with in
500mils .

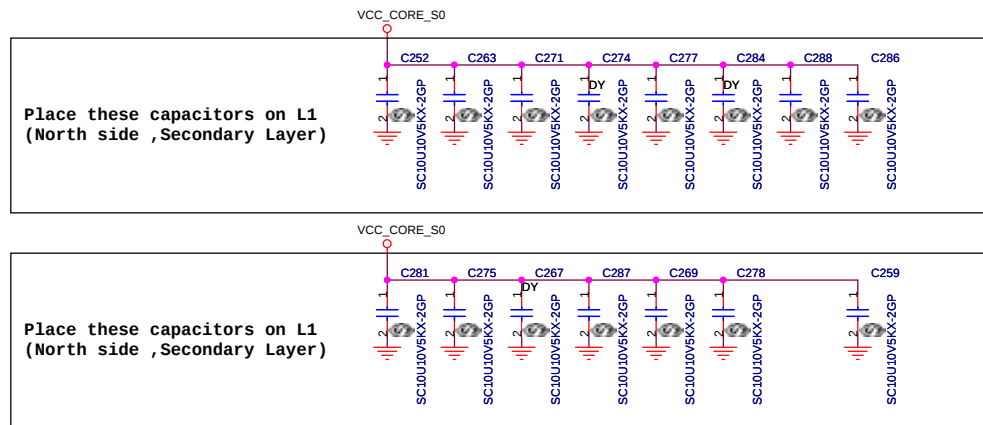
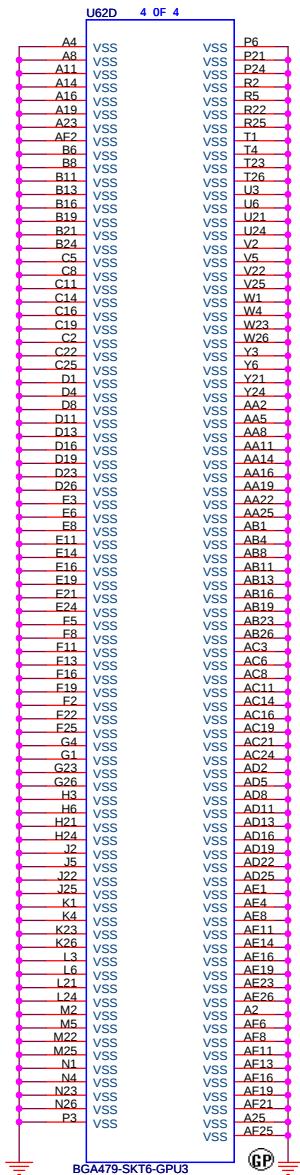
Resistor Placed
within 0.5" of CPU
pin. Trace should
be at least 25 mils
away from any other
toggling signal .
COMP[0,2] trace
width is 18 mils.
COMP[1,3] trace
width is 4 mils .

layout note:
place C3 near
PIN B26

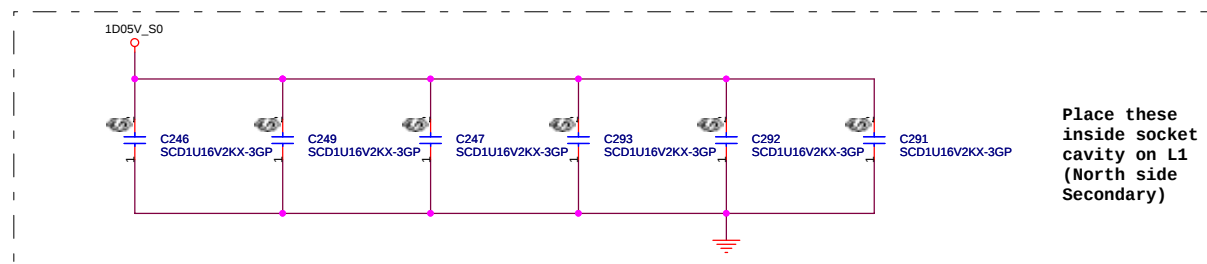
Length match within
25 mils . The trace
width/space/other is
20/7/25 .

Close to CPU pin
within 500mils

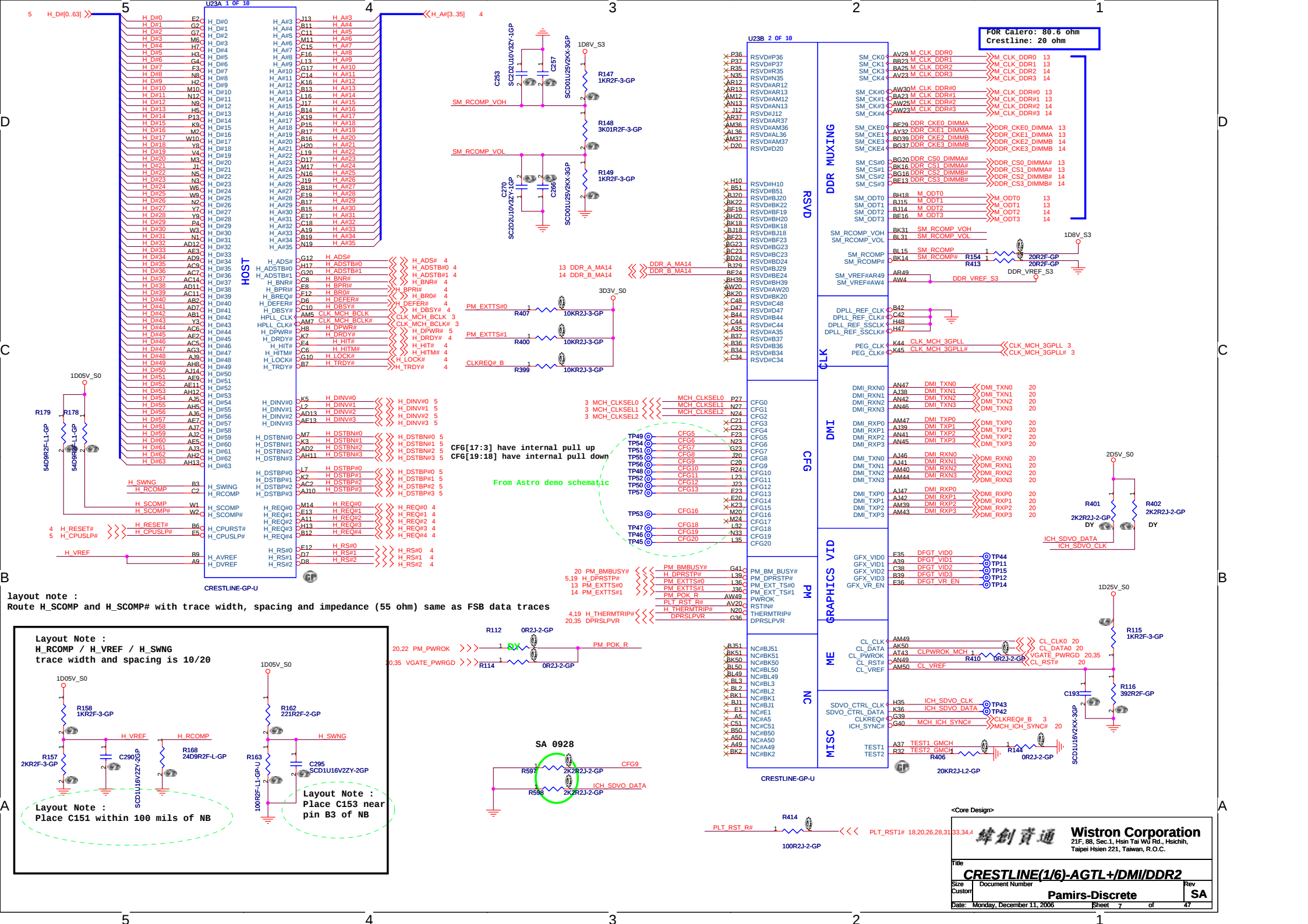
<Core Design>

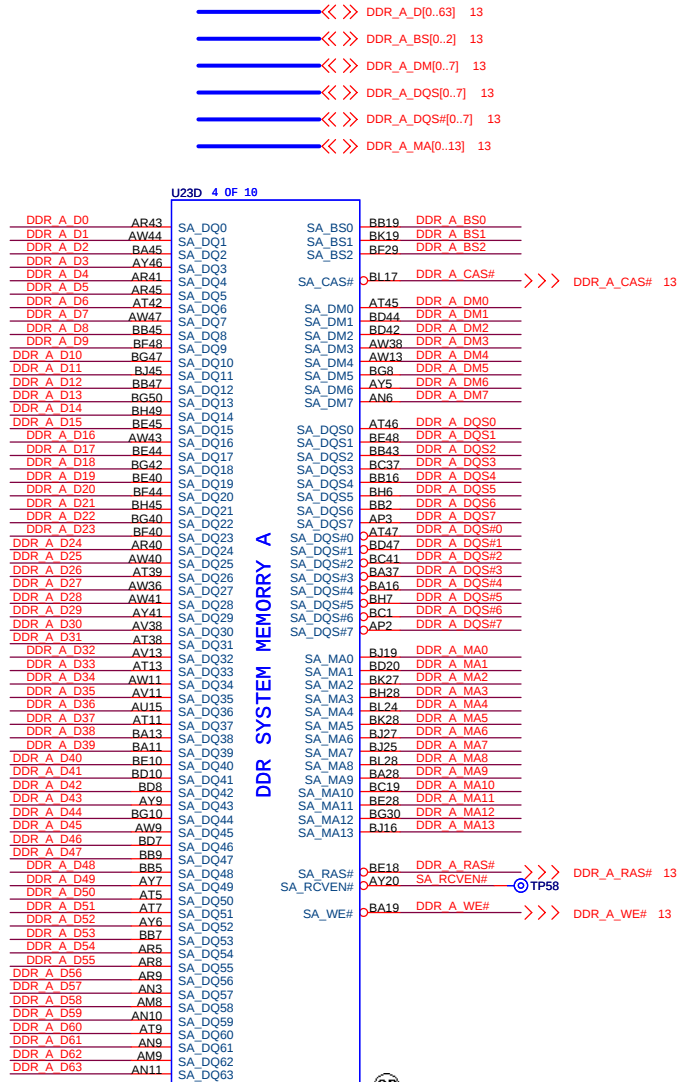


Mid Freqencd Decoupling

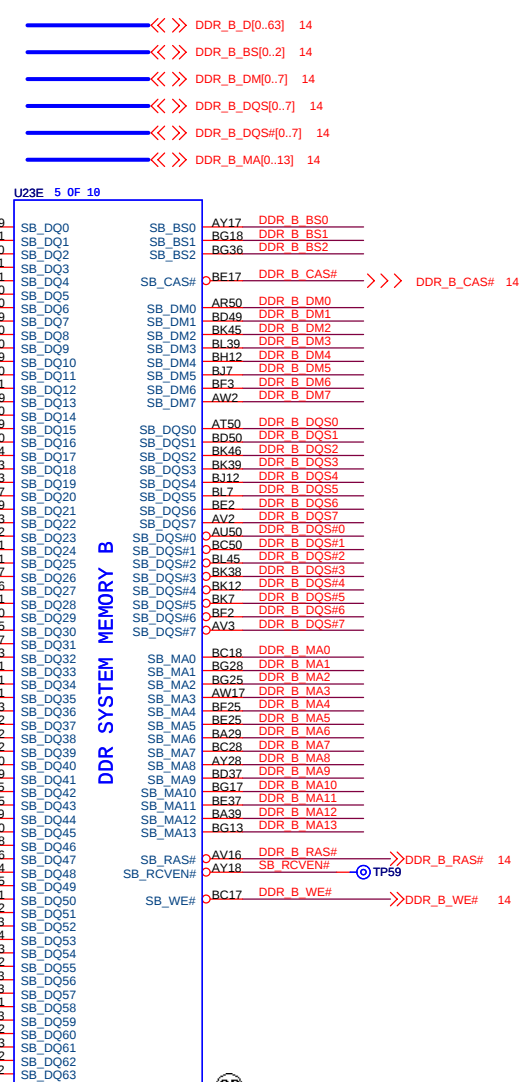


<Core Design>





CRESTLINE-GP-U

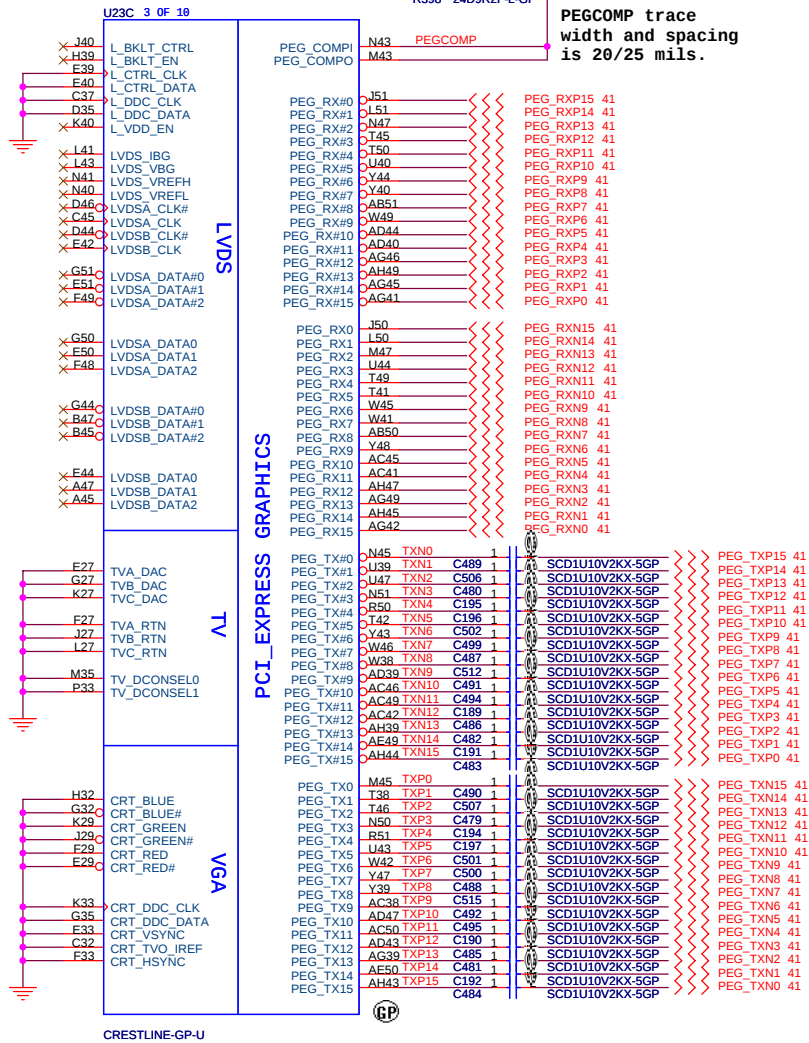


CRESTLINE-GP-U



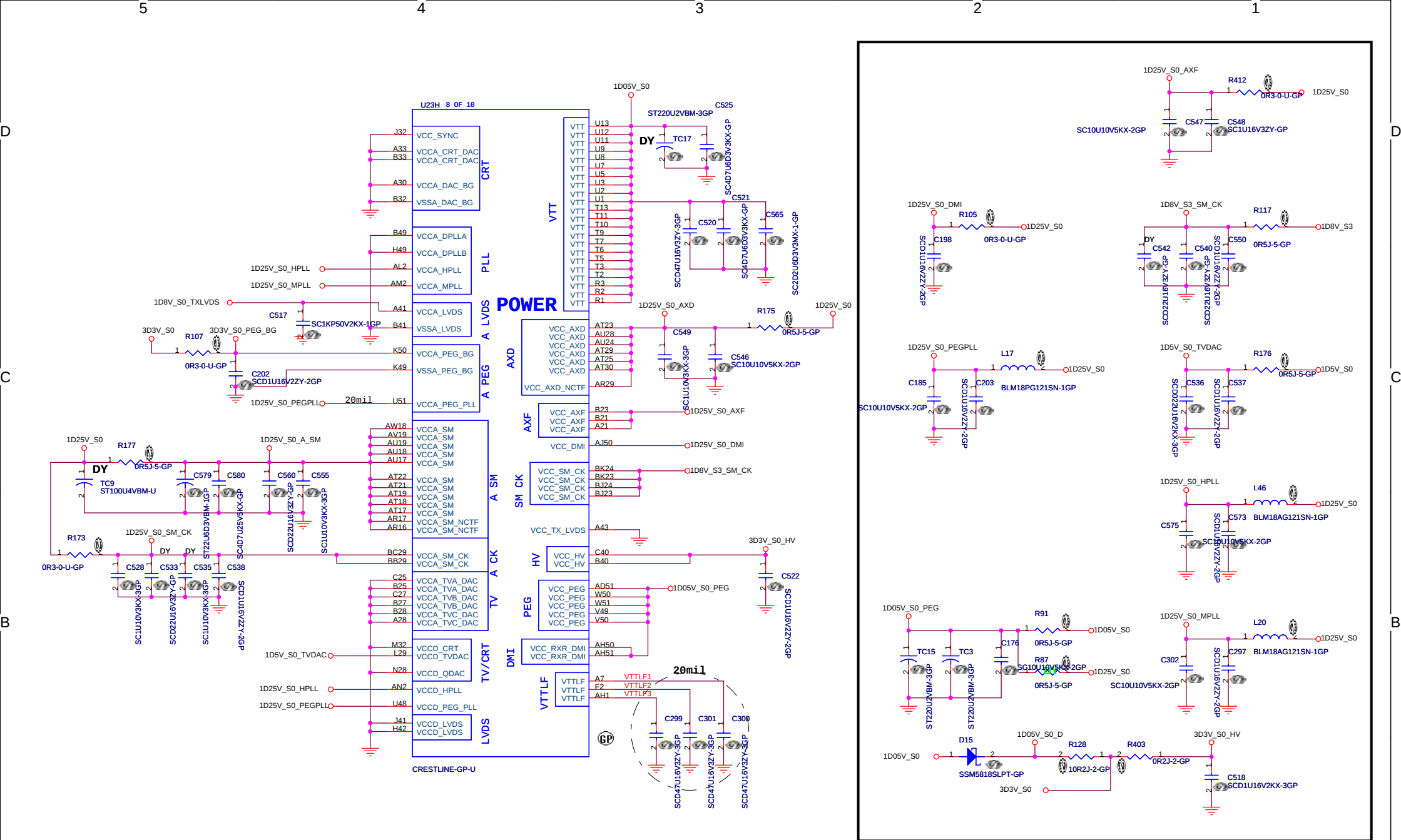
<Core Design>

緯創資通 Wistron Corporation	
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
CRESTLINE(2/6)-DDR2 A/B CH	
Size	Document Number
A3	
Date:	Wednesday, October 18, 2006
Sheet	8
of	47
Rev	SA
Pamirs-Discrete	



Strap Pin Table	
CFG[2:0] FSB Freq select	010 = FSB 800MHZ 011 = FSB 667MHZ Others = Reserved
CFG5 (DMI select)	0 = DMI x 2 1 = DMI x 4 *
CFG6	Reserved
CFG7 (CPU Strap)	0 = Reserved 1 = Mobile CPU *
CFG8 (Low power PCIE)	0 = Normal mode 1 = Low Power mode *
CFG9 (PCIE Graphics Lane Reversal)	0 = Reverse Lane 1 = Normal Operation *
CFG[11:10]	Reserved
CFG[13:12] (XOR/ALLZ)	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation (Default)*
CFG[15:14]	Reserved
CFG16 (FSB Dynamic ODT)	0 = Disable 1 = Enable *
CFG[18:17]	Reversed
SDVO_CTRLDATA	0 = No SDVO Device Present * 1 = SDVO Device Present
CFG19(DMI Lane Reversal)	0 = Normal Operation * (Lane number in Order) 1 = Reverse lane
CFG20(PCIE/SDVO consurent)	0 = Only PCIE or SDVO is operational * 1 = PCIE/SDVO are operating simu.

<Core Design>



U23I 9 OF 10

A13	VSS	AW24
A15	VSS	AW29
A17	VSS	AW32
A24	VSS	AW5
AA21	VSS	AW7
AA24	VSS	AY10
AA29	VSS	AY24
AB20	VSS	AY37
AB23	VSS	AY42
AB26	VSS	AY43
AB28	VSS	AY45
AB31	VSS	AY47
AC10	VSS	AY50
AC13	VSS	B10
AC3	VSS	B20
AC39	VSS	B24
AC43	VSS	B29
AC47	VSS	B30
AD1	VSS	B35
AD21	VSS	B38
AD26	VSS	B43
AD29	VSS	B46
AD3	VSS	B5
AD41	VSS	B8
AD45	VSS	BA1
AD49	VSS	BA17
AD5	VSS	BA18
AD50	VSS	BA2
AD8	VSS	BA24
AE10	VSS	BB12
AE14	VSS	BB25
AE6	VSS	BB40
AE20	VSS	BB44
AE23	VSS	BB49
AE24	VSS	BB8
AE31	VSS	BC16
AG2	VSS	BC24
AG38	VSS	BC25
AG43	VSS	BC36
AG47	VSS	BC40
AG50	VSS	J2
AH3	VSS	BC51
AH40	VSS	BD13
AH41	VSS	BD2
AH7	VSS	BD28
AH9	VSS	BD45
AJ11	VSS	BD48
AJ13	VSS	BD5
AJ21	VSS	BE1
AJ24	VSS	BE19
AJ29	VSS	BE23
AJ32	VSS	BE30
AJ43	VSS	BE42
AJ45	VSS	BE51
AJ49	VSS	BE8
AK20	VSS	BF12
AK21	VSS	BF16
AK26	VSS	BF36
AK28	VSS	BG19
AK31	VSS	BG2
AK51	VSS	BG24
AL1	VSS	BG29
AM11	VSS	BG39
AM13	VSS	BG48
AM3	VSS	BG5
AM4	VSS	BG51
AM41	VSS	N14
AM45	VSS	N17
AN1	VSS	NH17
AN38	VSS	NH30
AN39	VSS	NH44
AN43	VSS	NH46
AN5	VSS	NH8
AN7	VSS	BJ11
AP4	VSS	BJ13
AP48	VSS	BJ4
AP50	VSS	BJ42
AR11	VSS	BJ46
AR2	VSS	BK15
AR39	VSS	BK25
AR44	VSS	BK29
AR7	VSS	BK36
AT10	VSS	BK40
AT14	VSS	BK44
AT41	VSS	BK6
AT49	VSS	BK8
AU1	VSS	BL11
AU23	VSS	BL13
AU29	VSS	BL19
AU3	VSS	BL22
AU36	VSS	BL37
AU49	VSS	BL47
AU51	VSS	C12
AV39	VSS	C16
AV48	VSS	C19
AW1	VSS	C28
AW12	VSS	C29
AW16	VSS	C33
	VSS	C36
	VSS	C41

CRESTLINE-GP-U

U23J 10 OF 10

C46	VSS	W11
C50	VSS	W39
C7	VSS	W43
D13	VSS	W47
D24	VSS	W5
D3	VSS	W7
D324	VSS	Y13
D39	VSS	Y2
D45	VSS	Y41
D49	VSS	Y45
E10	VSS	Y49
E16	VSS	Y5
E24	VSS	Y50
E28	VSS	Y11
E32	VSS	P29
E47	VSS	T29
F19	VSS	T31
F36	VSS	T33
F4	VSS	R28
F40	VSS	
F50	VSS	
G1	VSS	
G13	VSS	
G16	VSS	AA32
G19	VSS	AB32
G24	VSS	AD32
G28	VSS	AE28
G29	VSS	AE29
G33	VSS	AT27
G42	VSS	AV25
G45	VSS	H50
G48	VSS	
GB44	VSS	
H24	VSS	
H28	VSS	
H4	VSS	
H45	VSS	
J11	VSS	
J16	VSS	
J2	VSS	
J24	VSS	
J28	VSS	
J33	VSS	
J35	VSS	
J39	VSS	
K12	VSS	
K47	VSS	
K8	VSS	
L1	VSS	
L17	VSS	
L20	VSS	
L24	VSS	
L28	VSS	
L3	VSS	
L33	VSS	
L49	VSS	
M28	VSS	
M42	VSS	
M46	VSS	
M49	VSS	
M5	VSS	
M50	VSS	
M9	VSS	
N11	VSS	
N14	VSS	
N17	VSS	
N29	VSS	
N32	VSS	
N36	VSS	
N39	VSS	
N44	VSS	
N49	VSS	
N7	VSS	
P19	VSS	
P2	VSS	
P23	VSS	
P3	VSS	
PS17	VSS	
PS0	VSS	
R49	VSS	
T39	VSS	
T43	VSS	
T47	VSS	
U41	VSS	
U46	VSS	
U50	VSS	
V2	VSS	
V3	VSS	

VSS

CRESTLINE-GP-U



<Core Design>

緯創資通

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

Title

CRESTLINE(6/6)-PWR/GND

Size

A3

Document Number

Pamirs-Discrete

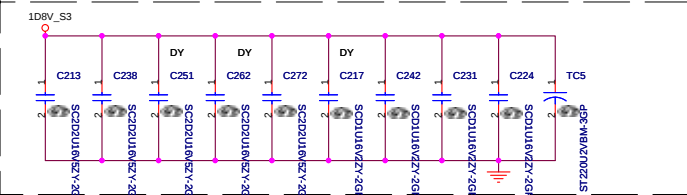
Rev

SA

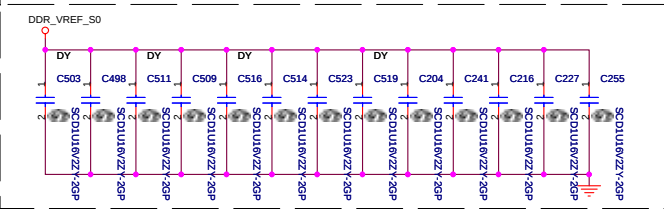
Date: Wednesday, October 18, 2006

Sheet 12 of 47

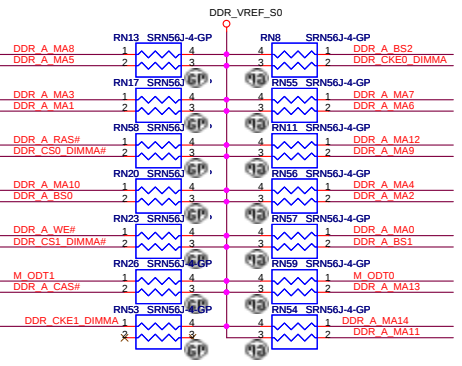
Layout Note:
Place near DM1



Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9VS



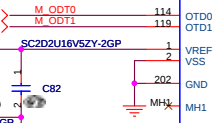
Layout Note:
Place these resistors
closely DM1, all
trace length Max=1.5"



DDR2		
DDR A MA0	102	A0
DDR A MA1	101	A1
DDR A MA2	100	A2
DDR A MA3	99	A3
DDR A MA4	98	A4
DDR A MA5	97	A5
DDR A MA6	94	A6
DDR A MA7	92	A7
DDR A MA8	91	A8
DDR A MA9	90	A9
DDR A MA10	105	A10/AP
DDR A MA11	90	A11
DDR A MA12	89	A12
DDR A MA13	116	A13
DDR A MA14	86	A14
DDR A BS2	84	A15
DDR A BS0	107	BA0
DDR A BS1	106	BA1

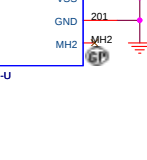
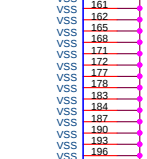
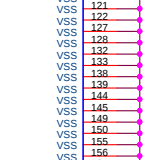
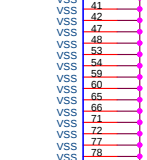
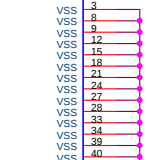
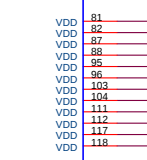
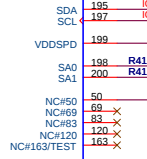
DDR2		
DDR A D0	5	DQ0
DDR A D1	7	DQ1
DDR A D2	17	DQ2
DDR A D3	19	DQ3
DDR A D4	4	DQ4
DDR A D5	6	DQ5
DDR A D6	14	DQ6
DDR A D7	16	DQ7
DDR A D8	23	DQ8
DDR A D9	25	DQ9
DDR A D10	35	DQ10
DDR A D11	37	DQ11
DDR A D12	20	DQ12
DDR A D13	22	DQ13
DDR A D14	36	DQ14
DDR A D15	38	DQ15
DDR A D16	43	DQ16
DDR A D17	45	DQ17
DDR A D18	55	DQ18
DDR A D19	57	DQ19
DDR A D20	44	DQ20
DDR A D21	46	DQ21
DDR A D22	58	DQ22
DDR A D23	58	DQ23
DDR A D24	61	DQ24
DDR A D25	63	DQ25
DDR A D26	73	DQ26
DDR A D27	75	DQ27
DDR A D28	62	DQ28
DDR A D29	64	DQ29
DDR A D30	74	DQ30
DDR A D31	76	DQ31
DDR A D32	123	DQ32
DDR A D33	125	DQ33
DDR A D34	135	DQ34
DDR A D35	137	DQ35
DDR A D36	124	DQ36
DDR A D37	126	DQ37
DDR A D38	134	DQ38
DDR A D39	136	DQ39
DDR A D40	141	DQ40
DDR A D41	143	DQ41
DDR A D42	151	DQ42
DDR A D43	153	DQ43
DDR A D44	140	DQ44
DDR A D45	142	DQ45
DDR A D46	152	DQ46
DDR A D47	154	DQ47
DDR A D48	157	DQ48
DDR A D49	159	DQ49
DDR A D50	173	DQ50
DDR A D51	175	DQ51
DDR A D52	158	DQ52
DDR A D53	160	DQ53
DDR A D54	174	DQ54
DDR A D55	176	DQ55
DDR A D56	179	DQ56
DDR A D57	181	DQ57
DDR A D58	189	DQ58
DDR A D59	191	DQ59
DDR A D60	180	DQ60
DDR A D61	182	DQ61
DDR A D62	192	DQ62
DDR A D63	194	DQ63

DDR2		
DDR A DQS#0	11	DQS0
DDR A DQS#1	29	DQS1
DDR A DQS#2	49	DQS2
DDR A DQS#3	69	DQS3
DDR A DQS#4	129	DQS4
DDR A DQS#5	146	DQS5
DDR A DQS#6	167	DQS6
DDR A DQS#7	186	DQS7
DDR A DQS0	13	DQS0
DDR A DQS1	31	DQS1
DDR A DQS2	51	DQS2
DDR A DQS3	70	DQS3
DDR A DQS4	131	DQS4
DDR A DQS5	148	DQS5
DDR A DQS6	169	DQS6
DDR A DQS7	188	DQS7



DM2

DDR2		
RAS#	108	DDR A RAS#
WE#	109	DDR A WE#
CAS#	113	DDR A CAS#
CS0#	110	DDR CS0 DIMMA#
CS1#	115	DDR CS1 DIMMA#
CKE0	79	DDR CKE0 DIMMA
CKE1	80	DDR CKE1 DIMMA
CLK0	30	M_CLK_DDR0
CLK1	32	M_CLK_DDR#0
CLK2	164	M_CLK_DDR1
CLK3	166	M_CLK_DDR#1
DM0	10	DDR A DM0
DM1	26	DDR A DM1
DM2	52	DDR A DM2
DM3	67	DDR A DM3
DM4	130	DDR A DM4
DM5	147	DDR A DM5
DM6	170	DDR A DM6
DM7	185	DDR A DM7



DDR2		
DDR A RAS#	8	DDR_A_RAS#
DDR A WE#	8	DDR_A_WE#
DDR A CAS#	8	DDR_A_CAS#
DDR CS0 DIMMA#	7	DDR_CS0_DIMMA#
DDR CS1 DIMMA#	7	DDR_CS1_DIMMA#
DDR CKE0 DIMMA	7	DDR_CKE0_DIMMA
DDR CKE1 DIMMA	7	DDR_CKE1_DIMMA
M_CLK_DDR0	7	M_CLK_DDR0
M_CLK_DDR#0	7	M_CLK_DDR#0
M_CLK_DDR1	7	M_CLK_DDR1
M_CLK_DDR#1	7	M_CLK_DDR#1

DDR2		
ICH_SMBDATA	3.14.20	ICH_SMBDATA
ICH_SMBCLK	3.14.20	ICH_SMBCLK

DDR2		
PM_EXTS#0	7	PM_EXTS#0

DDR2		
VDD	81	VDD
VDD	82	VDD
VDD	87	VDD
VDD	88	VDD
VDD	95	VDD
VDD	96	VDD
VDD	103	VDD
VDD	104	VDD
VDD	111	VDD
VDD	112	VDD
VDD	117	VDD
VDD	118	VDD

DDR2		
VSS	3	VSS
VSS	8	VSS
VSS	9	VSS
VSS	12	VSS
VSS	15	VSS
VSS	18	VSS
VSS	21	VSS
VSS	24	VSS
VSS	27	VSS
VSS	28	VSS
VSS	33	VSS
VSS	34	VSS
VSS	39	VSS
VSS	40	VSS
VSS	41	VSS
VSS	42	VSS
VSS	47	VSS
VSS	48	VSS
VSS	53	VSS
VSS	54	VSS
VSS	59	VSS
VSS	65	VSS
VSS	66	VSS
VSS	71	VSS
VSS	72	VSS
VSS	77	VSS
VSS	78	VSS
VSS	121	VSS
VSS	122	VSS
VSS	127	VSS
VSS	128	VSS
VSS	132	VSS
VSS	133	VSS
VSS	138	VSS
VSS	139	VSS
VSS	144	VSS
VSS	145	VSS
VSS	149	VSS
VSS	150	VSS
VSS	155	VSS
VSS	156	VSS
VSS	161	VSS
VSS	162	VSS
VSS	165	VSS
VSS	168	VSS
VSS	171	VSS
VSS	172	VSS
VSS	177	VSS
VSS	178	VSS
VSS	183	VSS
VSS	184	VSS
VSS	187	VSS
VSS	190	VSS
VSS	193	VSS
VSS	196	VSS

DDR2		
OTD0	114	OTD0
OTD1	119	OTD1
VREF	1	VREF
VSS	2	VSS
GND	201	GND
MH1	202	MH1
MH2	201	MH2

DDR2		
DDR2-200P-20-GP-U		

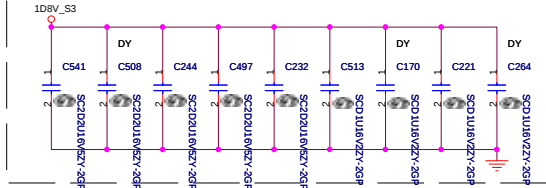
DDR2		
Wistron Corporation		
21F, 80, Sec.1, Hsin Tai Wu Rd., Hsinchi,		
Taipei Hsien 221, Taiwan, R.O.C.		

DDR2		
DDR2-200P-20-GP-U		

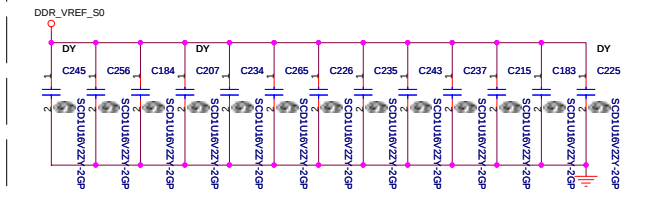
DDR2		
Wistron Corporation		
21F, 80, Sec.1, Hsin Tai Wu Rd., Hsinchi,		
Taipei Hsien 221, Taiwan, R.O.C.		

8 DDR_B_DQS#[0..7] <<>>
8 DDR_B_DQ[0..63] <<>>
8 DDR_B_DM[0..7] <<>>
8 DDR_B_DQS[0..7] <<>>
8 DDR_B_MA[0..13] <<>>
8 DDR_B_BS[0..2] <<>>

Layout Note:
Place near DM2



Layout Note:
Place one cap close to every 2 pullup
resistors terminated to +0.9VS



7 DDR_B_MA14 <<>>

DM1
DDR B MA0 102 A0
DDR B MA1 101 A1
DDR B MA2 100 A2
DDR B MA3 99 A3
DDR B MA4 98 A4
DDR B MA5 97 A5
DDR B MA6 96 A6
DDR B MA7 95 A7
DDR B MA8 94 A8
DDR B MA9 93 A9
DDR B MA10 92 A10/AP
DDR B MA11 91 A11
DDR B MA12 90 A12
DDR B MA13 89 A13
DDR B MA14 88 A14
DDR B BS2 87 A15
DDR B BS0 107 BA0
DDR B BS1 106 BA1

DDR B D0 5 DQ0
DDR B D1 7 DQ1
DDR B D2 17 DQ2
DDR B D3 18 DQ3
DDR B D4 19 DQ4
DDR B D5 4 DQ5
DDR B D6 14 DQ6
DDR B D7 16 DQ7
DDR B D8 23 DQ8
DDR B D9 25 DQ9
DDR B D10 85 DQ10
DDR B D11 37 DQ11
DDR B D12 22 DQ12
DDR B D13 22 DQ13
DDR B D14 36 DQ14
DDR B D15 38 DQ15
DDR B D16 43 DQ16
DDR B D17 45 DQ17
DDR B D18 55 DQ18
DDR B D19 57 DQ19
DDR B D20 44 DQ20
DDR B D21 46 DQ21
DDR B D22 56 DQ22
DDR B D23 58 DQ23
DDR B D24 61 DQ24
DDR B D25 63 DQ25
DDR B D26 73 DQ26
DDR B D27 75 DQ27
DDR B D28 62 DQ28
DDR B D29 74 DQ29
DDR B D30 76 DQ30
DDR B D31 123 DQ31
DDR B D32 125 DQ32
DDR B D33 135 DQ33
DDR B D34 137 DQ34
DDR B D35 139 DQ35
DDR B D36 124 DQ36
DDR B D37 126 DQ37
DDR B D38 134 DQ38
DDR B D39 136 DQ39
DDR B D40 141 DQ40
DDR B D41 143 DQ41
DDR B D42 151 DQ42
DDR B D43 153 DQ43
DDR B D44 140 DQ44
DDR B D45 142 DQ45
DDR B D46 152 DQ46
DDR B D47 154 DQ47
DDR B D48 157 DQ48
DDR B D49 159 DQ49
DDR B D50 173 DQ50
DDR B D51 175 DQ51
DDR B D52 158 DQ52
DDR B D53 160 DQ53
DDR B D54 174 DQ54
DDR B D55 176 DQ55
DDR B D56 179 DQ56
DDR B D57 181 DQ57
DDR B D58 189 DQ58
DDR B D59 191 DQ59
DDR B D60 180 DQ60
DDR B D61 182 DQ61
DDR B D62 192 DQ62
DDR B D63 194 DQ63

DDR B DQS0# 11 DQS0#
DDR B DQS1# 29 DQS1#
DDR B DQS2# 49 DQS2#
DDR B DQS3# 68 DQS3#
DDR B DQS4# 129 DQS4#
DDR B DQS5# 146 DQS5#
DDR B DQS6# 167 DQS6#
DDR B DQS7# 186 DQS7#

DDR B DQ0 13 DQ0
DDR B DQ1 31 DQ1
DDR B DQ2 51 DQ2
DDR B DQ3 70 DQ3
DDR B DQ4 131 DQ4
DDR B DQ5 148 DQ5
DDR B DQ6 169 DQ6
DDR B DQ7 188 DQ7

M_ODT2 114
M_ODT3 119

SC2D2U16V2Y-2GP
C71
C77
MH1
MH2

DDR2-200P-21-GP-U

RAS# 108 DDR_B_RAS# <<>> DDR_B_RAS# 8
WE# 109 DDR_B_WE# <<>> DDR_B_WE# 8
CAS# 113 DDR_B_CAS# <<>> DDR_B_CAS# 8
CS0# 110 DDR_CS2_DIMMB# <<>> DDR_CS2_DIMMB# 7
CS1# 115 DDR_CS3_DIMMB# <<>> DDR_CS3_DIMMB# 7
CKE0 79 DDR_CKE2_DIMMB <<>> DDR_CKE2_DIMMB 7
CKE1 80 DDR_CKE3_DIMMB <<>> DDR_CKE3_DIMMB 7
CK0# 30 M_CLK_DDR2 <<>> M_CLK_DDR2 7
CK0# 32 M_CLK_DDR#2 <<>> M_CLK_DDR#2 7
CK1# 164 M_CLK_DDR3 <<>> M_CLK_DDR3 7
CK1# 166 M_CLK_DDR#3 <<>> M_CLK_DDR#3 7
DM0 10 DDR_B_DM0
DM1 26 DDR_B_DM1
DM2 52 DDR_B_DM2
DM3 67 DDR_B_DM3
DM4 130 DDR_B_DM4
DM5 147 DDR_B_DM5
DM6 170 DDR_B_DM6
DM7 185 DDR_B_DM7

SDA 195 ICH_SMBDATA <<>> ICH_SMBDATA 3.13.20
SCL 197 ICH_SMBCLK <<>> ICH_SMBCLK 3.13.20

VDDSPD 199
SA0 198 R420 1 10K R21-3-GP
SA1 200 R421 1 10K R21-3-GP

NC#50 50
NC#69 83
NC#83 83
NC#120 120
NC#163/TEST 163

PM_EXTTSH1 7
SCD1U16V2Y-2GP
C577
C578
SC2D2U6D3V3KX-GP

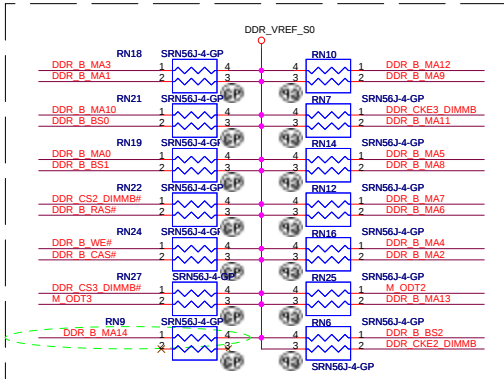
1D8V_S3
VDD 81
VDD 82
VDD 87
VDD 88
VDD 89
VDD 95
VDD 96
VDD 103
VDD 104
VDD 111
VDD 112
VDD 118
VDD 119

VSS 3
VSS 9
VSS 12
VSS 15
VSS 18
VSS 21
VSS 24
VSS 27
VSS 28
VSS 33
VSS 34
VSS 39
VSS 40
VSS 41
VSS 42
VSS 47
VSS 48
VSS 53
VSS 54
VSS 59
VSS 60
VSS 65
VSS 66
VSS 71
VSS 72
VSS 77
VSS 78
VSS 121
VSS 122
VSS 127
VSS 128
VSS 132
VSS 133
VSS 138
VSS 139
VSS 144
VSS 145
VSS 149
VSS 150
VSS 155
VSS 156
VSS 161
VSS 162
VSS 165
VSS 166
VSS 171
VSS 172
VSS 177
VSS 178
VSS 183
VSS 184
VSS 187
VSS 190
VSS 193
VSS 196
VSS 201

OTD0 201
OTD1 202
VREF 203
VSS 204
GND 205
MH1 206
MH2 207

DDR2-200P-21-GP-U

Layout Note:
Place these resistors
closely DM2, all
trace length Max=1.5"



DDR_VREF_S3

7 M_ODT2
7 M_ODT3

SCD1U16V2Y-2GP

C71
C77
MH1
MH2

DDR2-200P-21-GP-U

<Core Design>

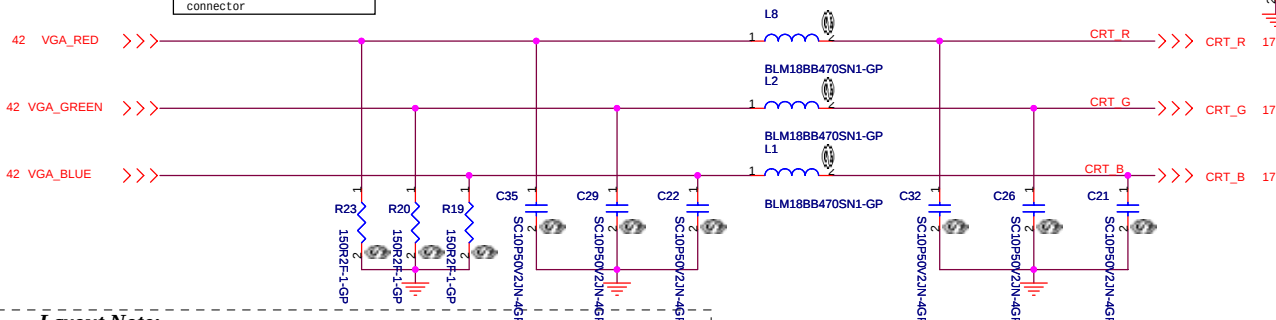
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu,
Taichung Hsien 221, Taiwan, R.O.C.

DDR2-200P-21-GP-U

Size Custom
Date: Wednesday, October 18, 2006
Sheet 14 of 47

CRT I/F & CONNECTOR

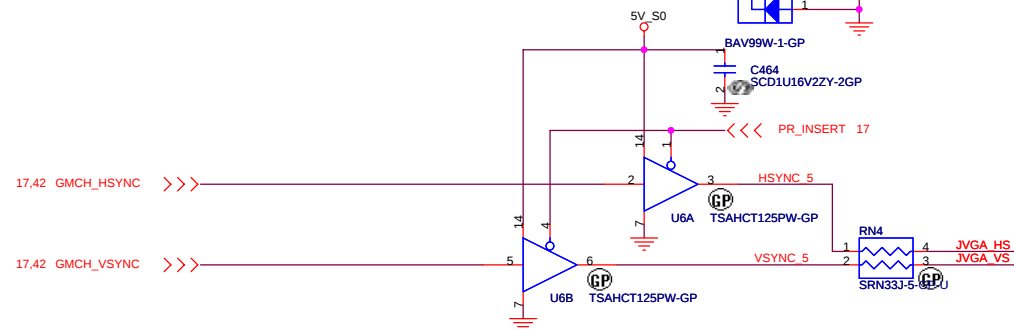
Layout Note:
Place these resistors
close to the CRT-out
connector



Layout Note:

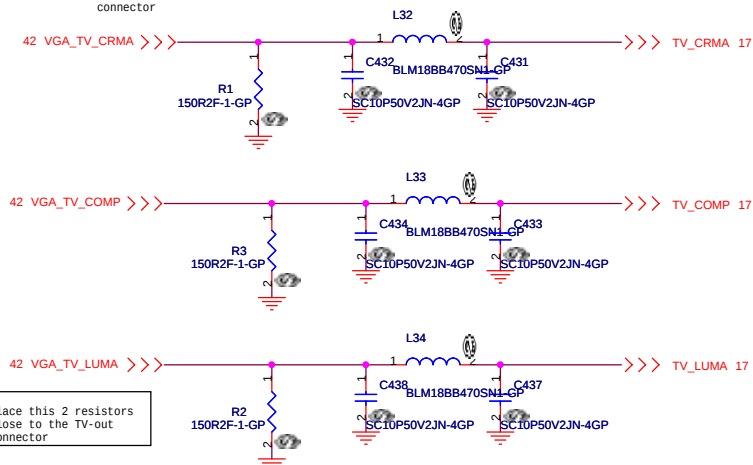
* Must be a ground return path between this ground and the ground on the VGA connector.
Pi-filter & 150 Ohm pull-down resistors should be as close as to CRT CONN. RGB will hit 75 Ohm pi-filter, then CRT CONN.

Hsync & Vsync level shift

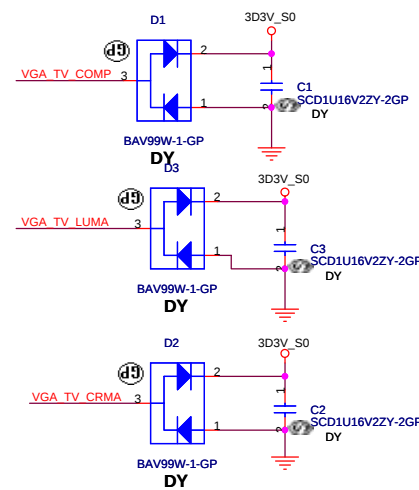
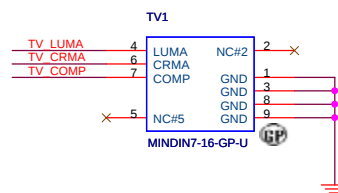


TV OUT CONN

connector



Place this 2 resistors
close to the TV-out
connector



<Core Design>

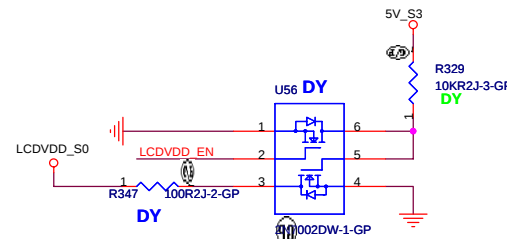
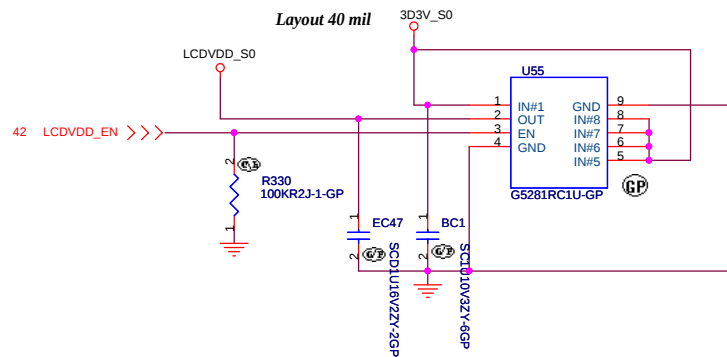
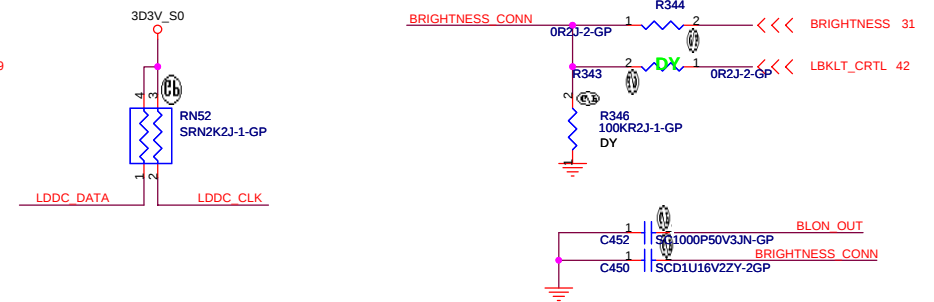
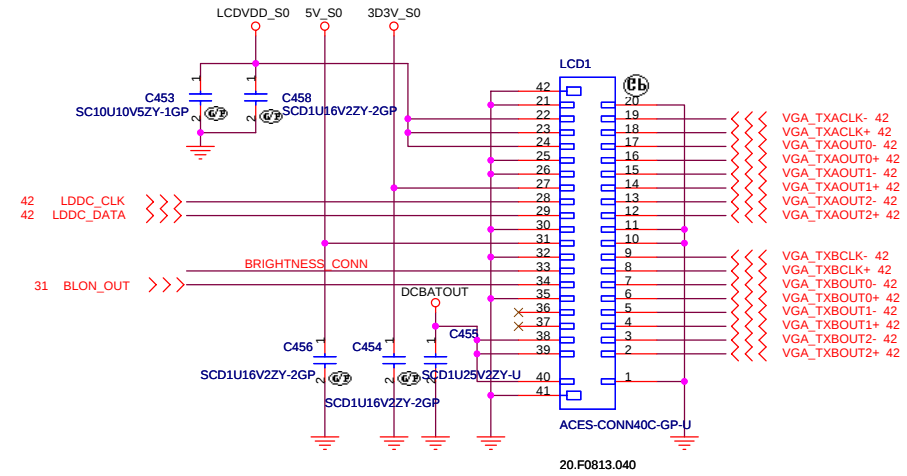
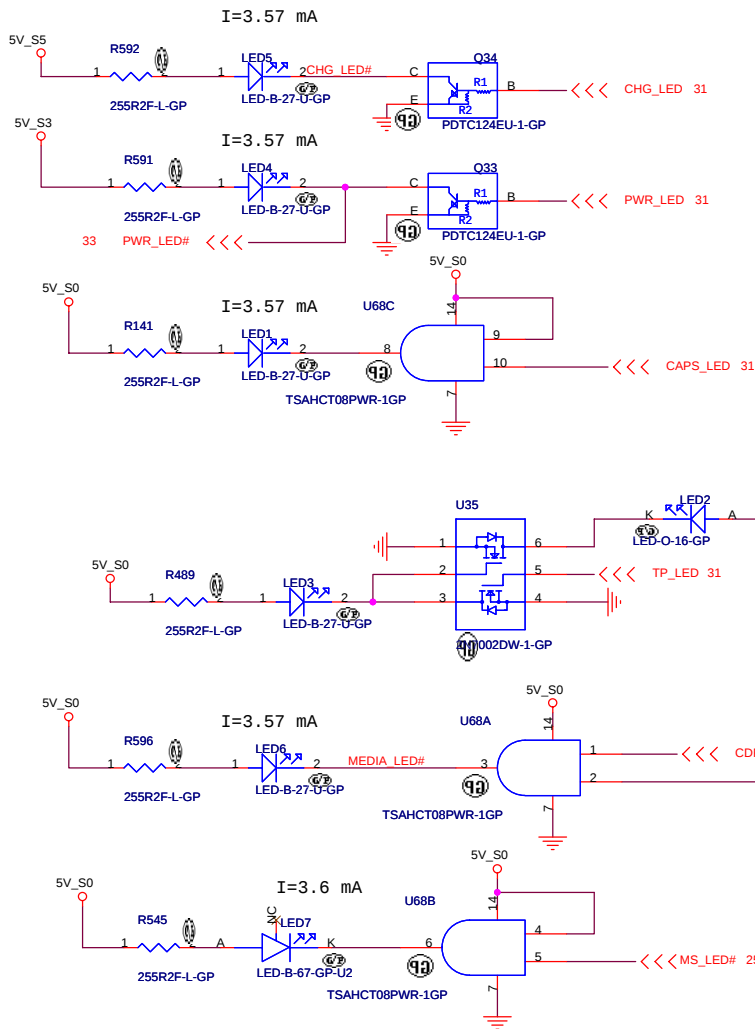
緯創資通

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

CRT/TV Connector			
Size A3	Document Number	Pamirs-Discrete	Rev SA
Date: Friday, November 24, 2006	Sheet 15	of 47	

LED / INVERTER INTERFACE

LCD/INV CONN

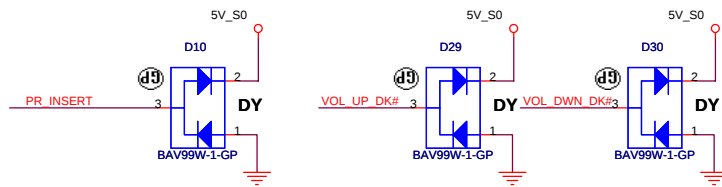


<Core Design>

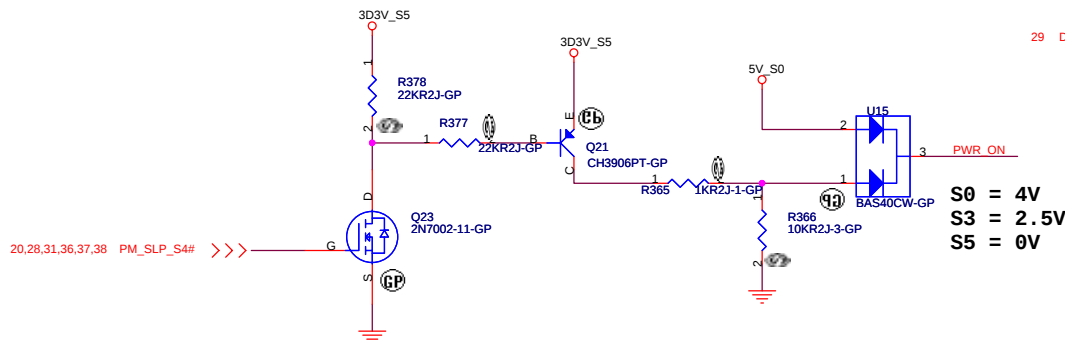
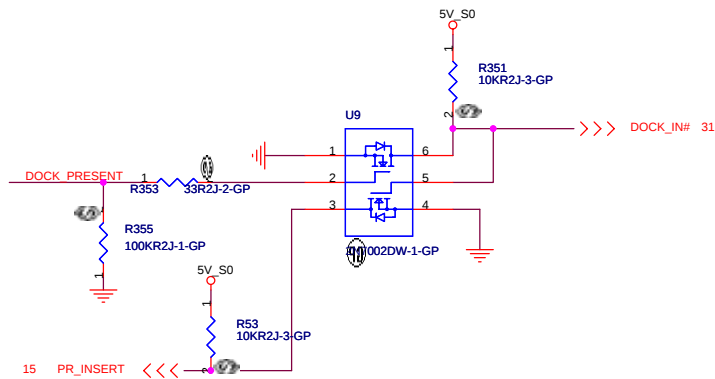
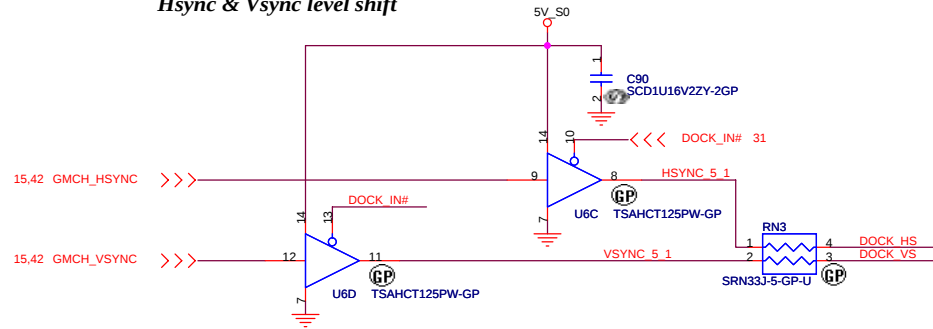
緯創資通

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

LCD/Inverter Connector			
Title	Document Number	Rev	SA
Size	Custom	Pamirs-Discrete	SA
Date:	Tuesday, December 19, 2006	Sheet 16 of 47	

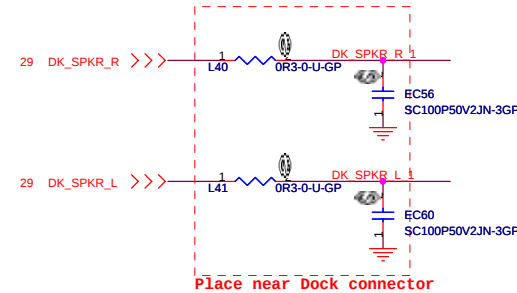
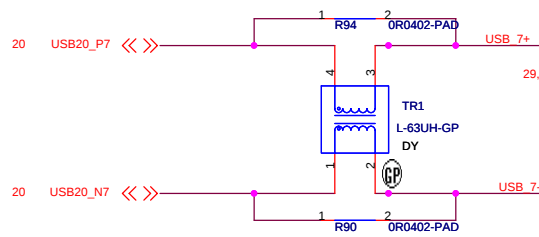
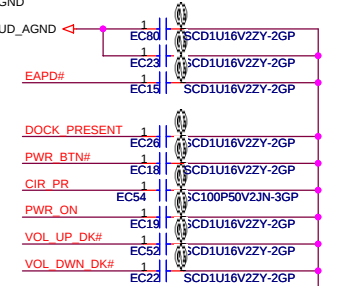
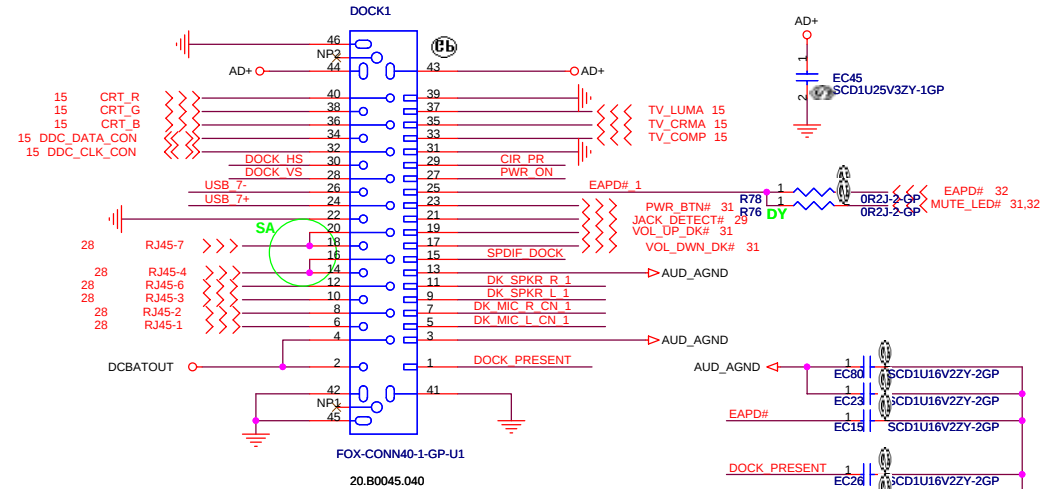


Hsync & Vsync level shift

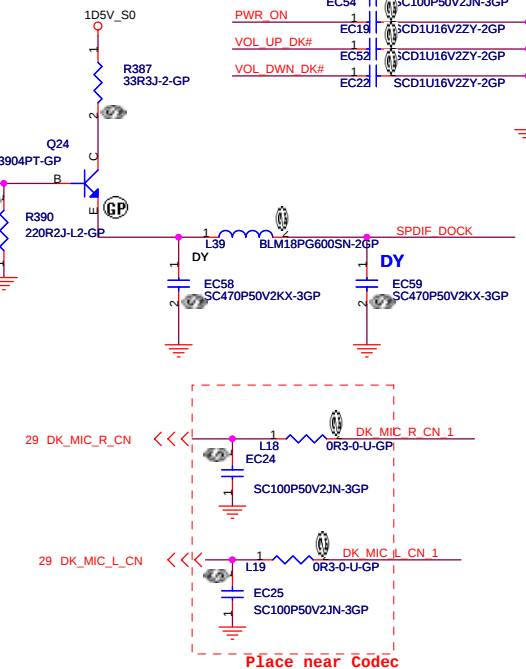


S0 = 4V
S3 = 2.5V
S5 = 0V

Docking Connector



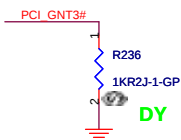
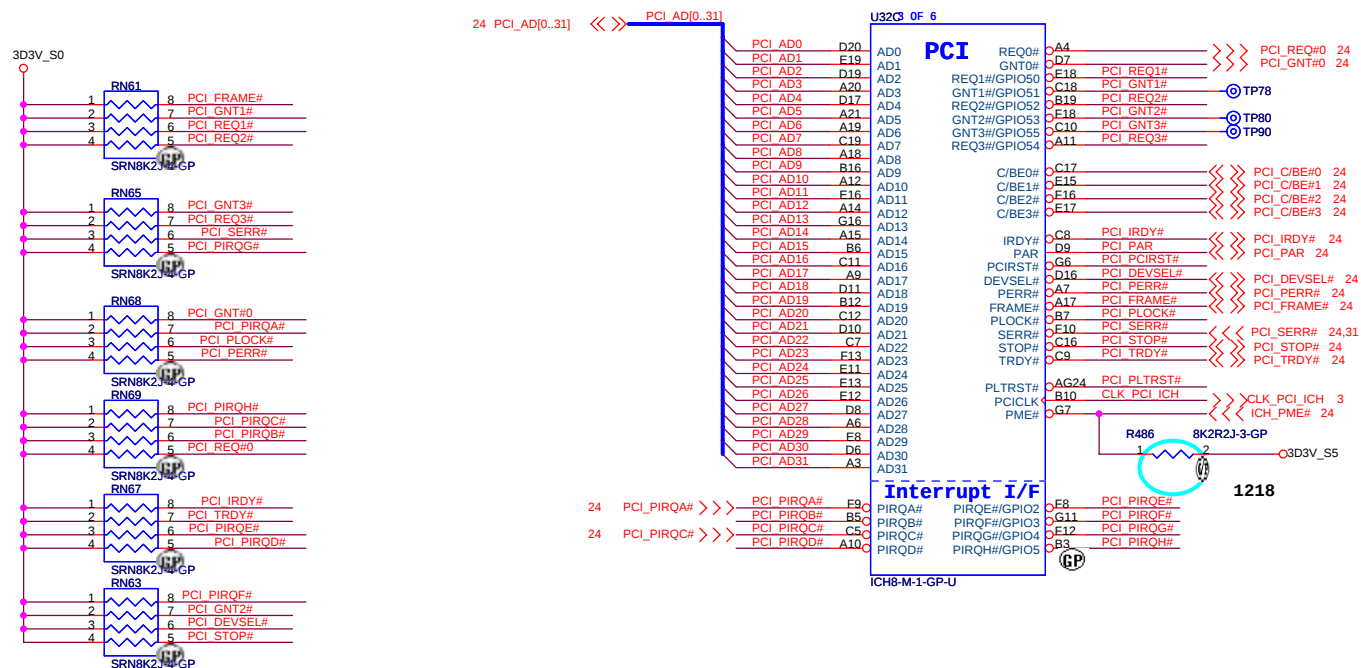
Place near Dock connector



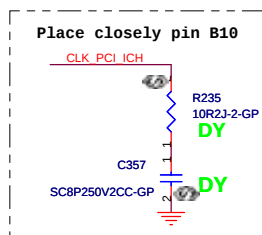
Place near Codec

<Core Design>

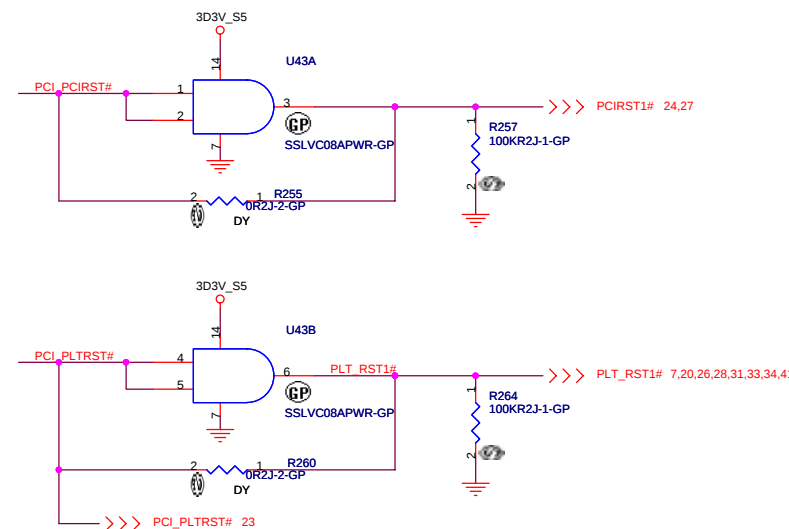
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Board to board conn/ Docking	
Title Size A3 Date: Friday, November 24, 2006	Document Number Pamirs-Discrete Sheet 17 of 47
Rev SA	

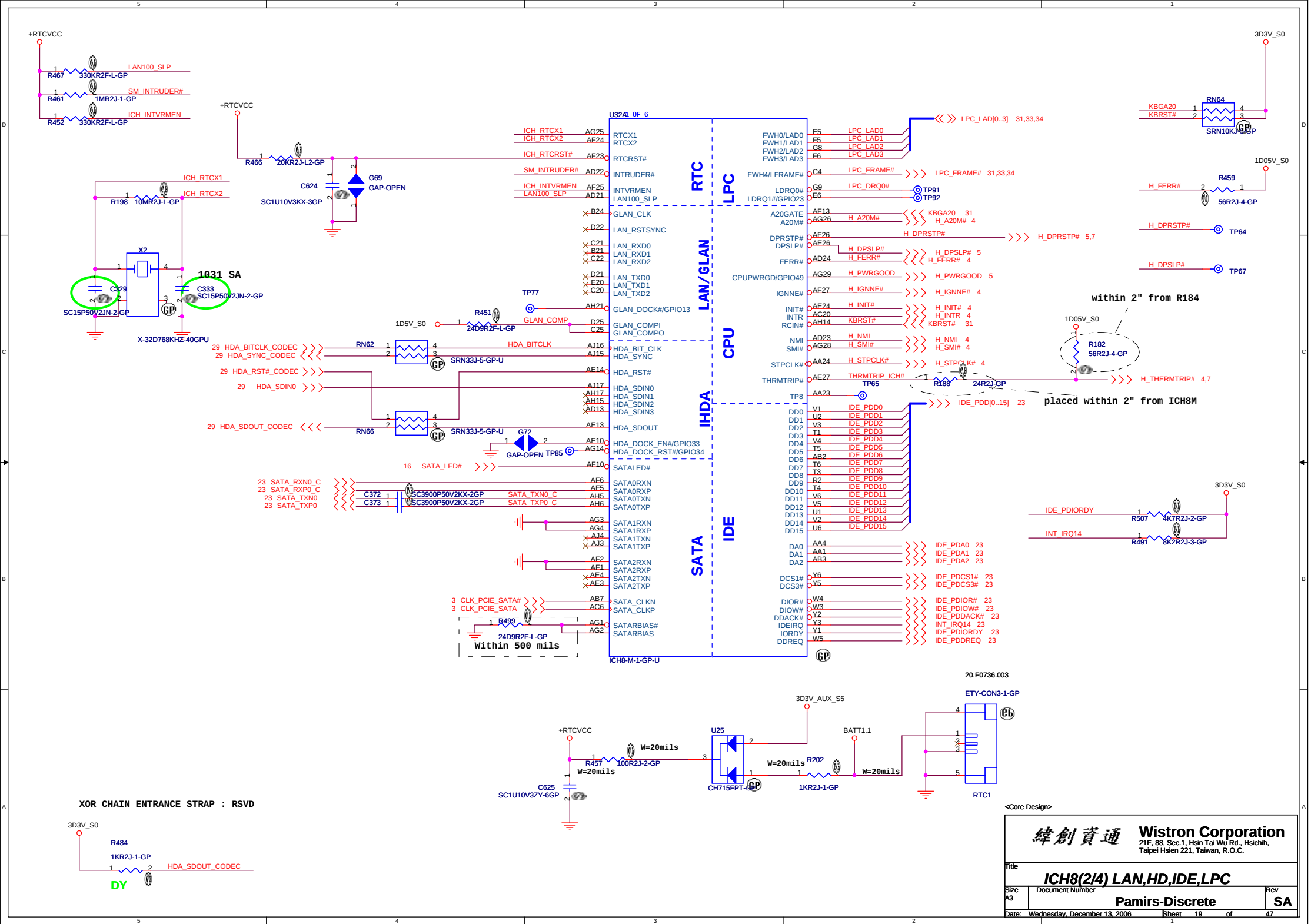


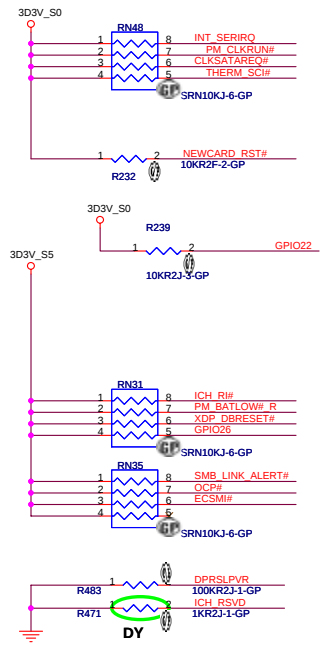
A16 swap override Strap	
PCI_GNT3#	Low= A16 swap override Enable High= Default *



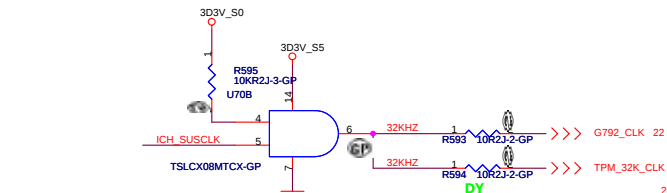
Boot BIOS Strap		
PCI_GNT0#	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *







32K suspend clock output

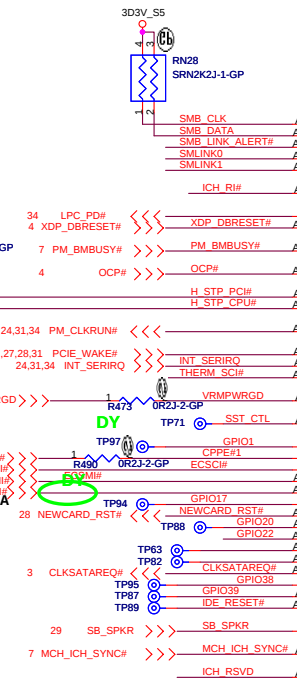
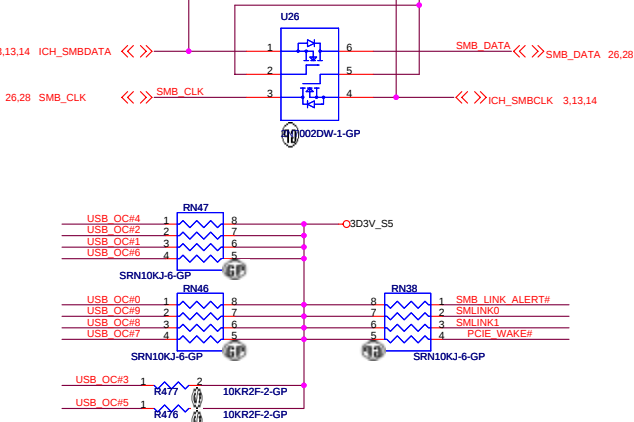


New Card

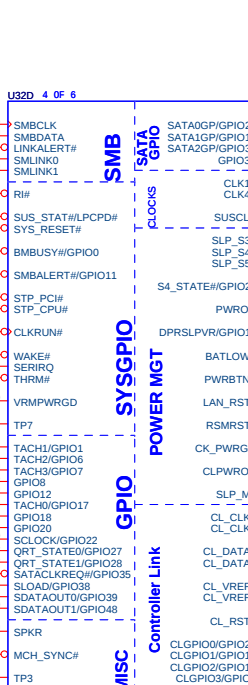
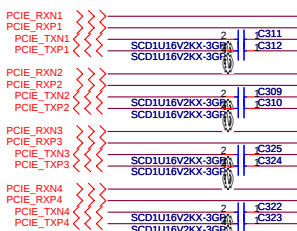
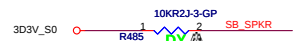
LAN

Mini Card 1

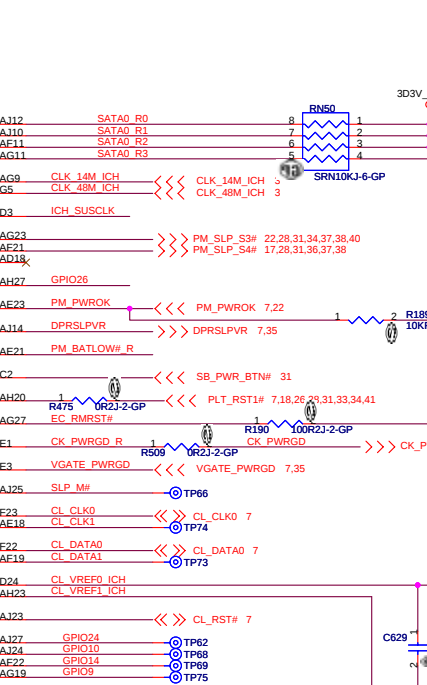
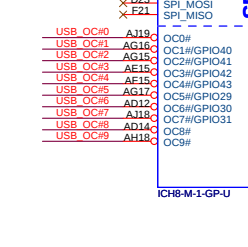
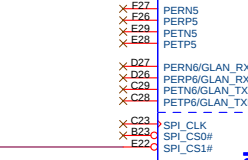
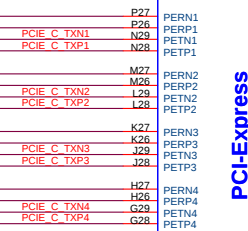
Mini Card 2



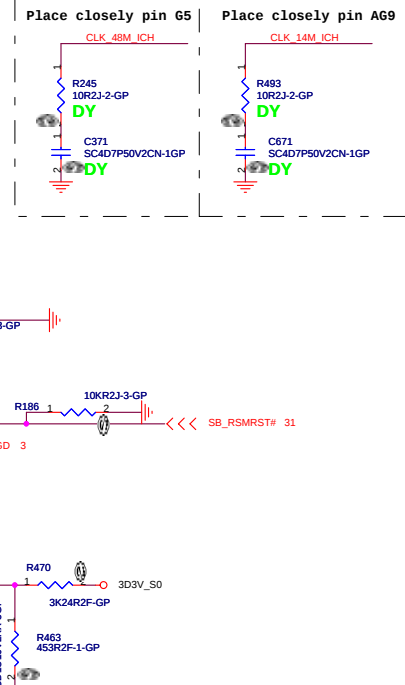
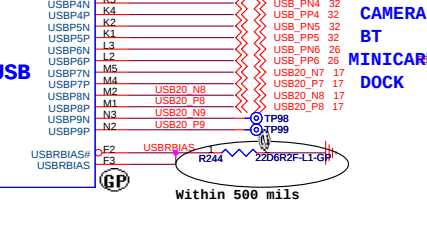
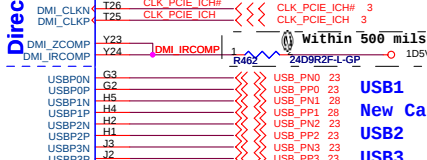
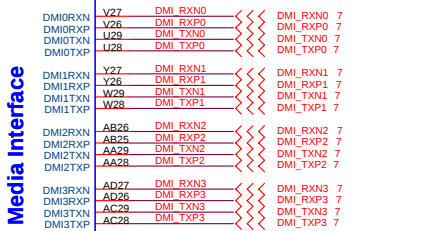
Low--> default
High--> No boot



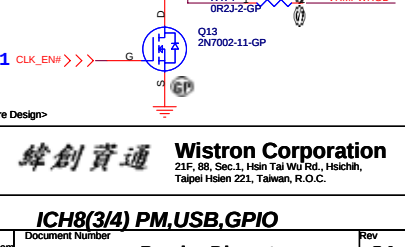
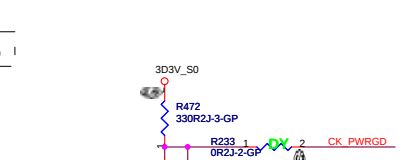
Low--> default
High--> No boot

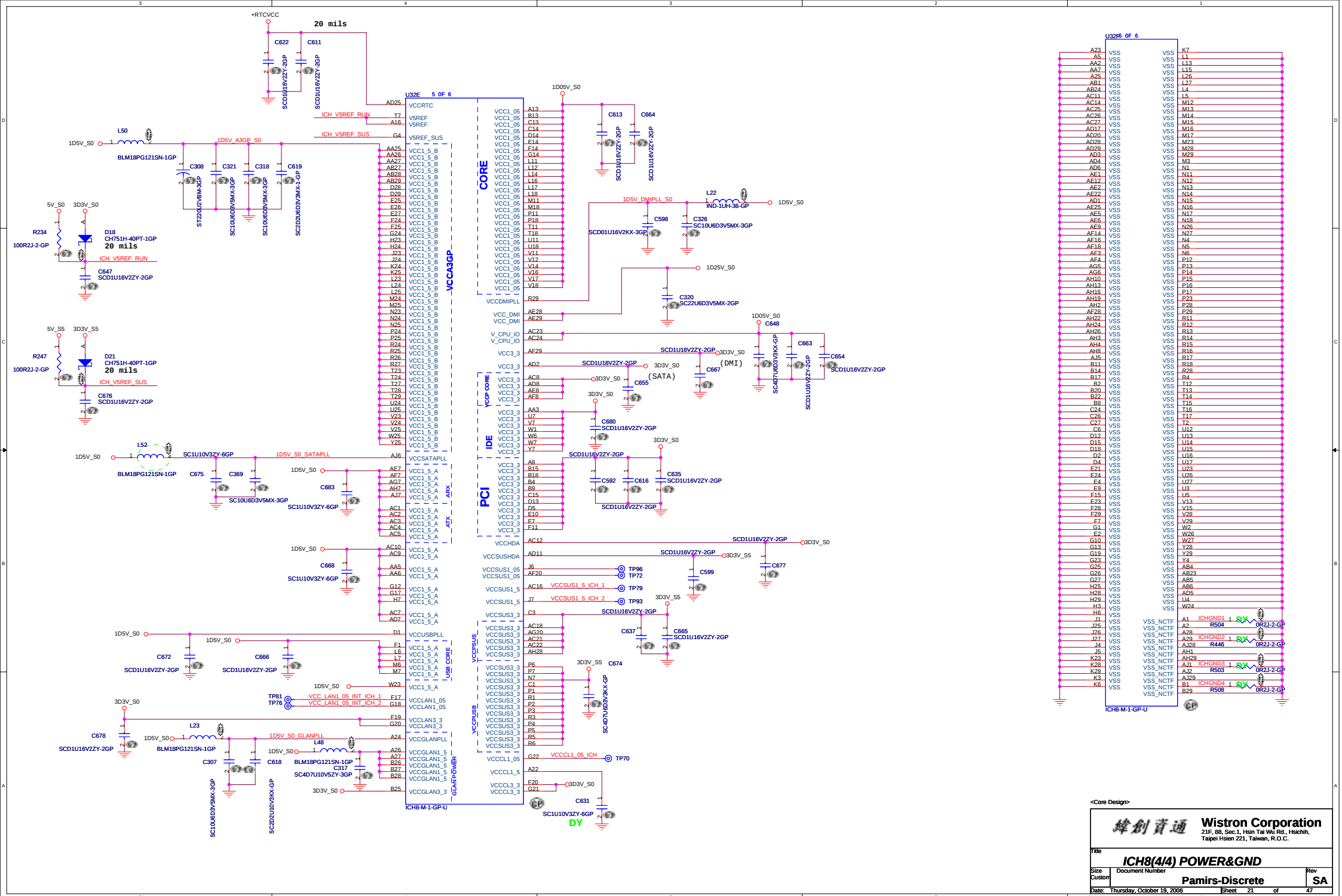


Low--> default
High--> No boot

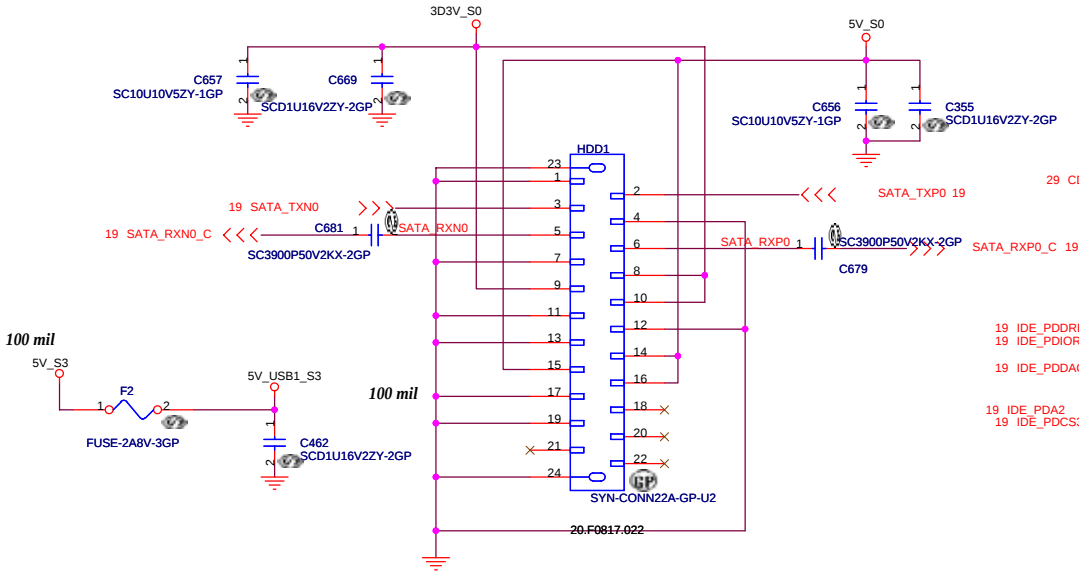


Low--> default
High--> No boot

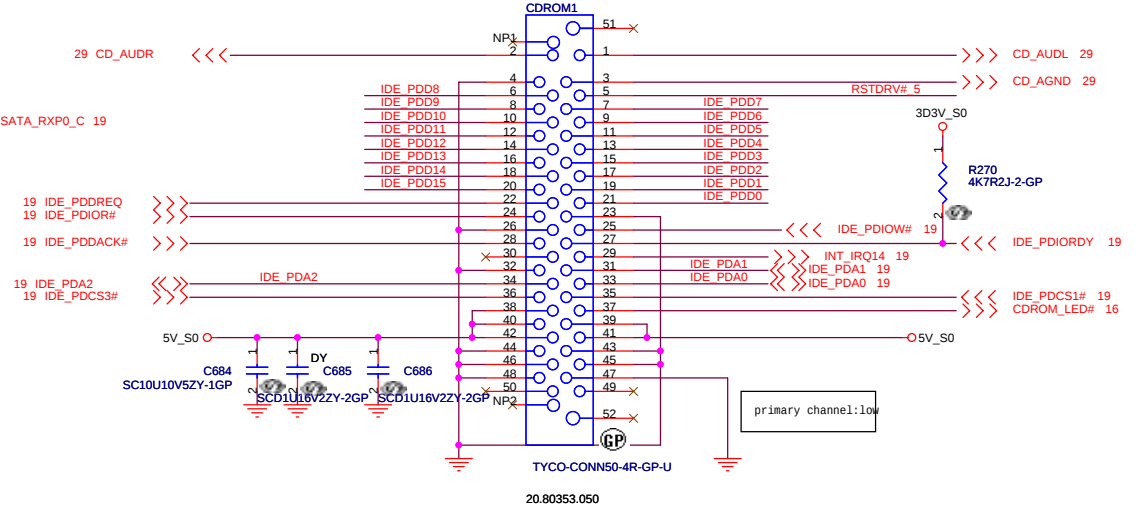




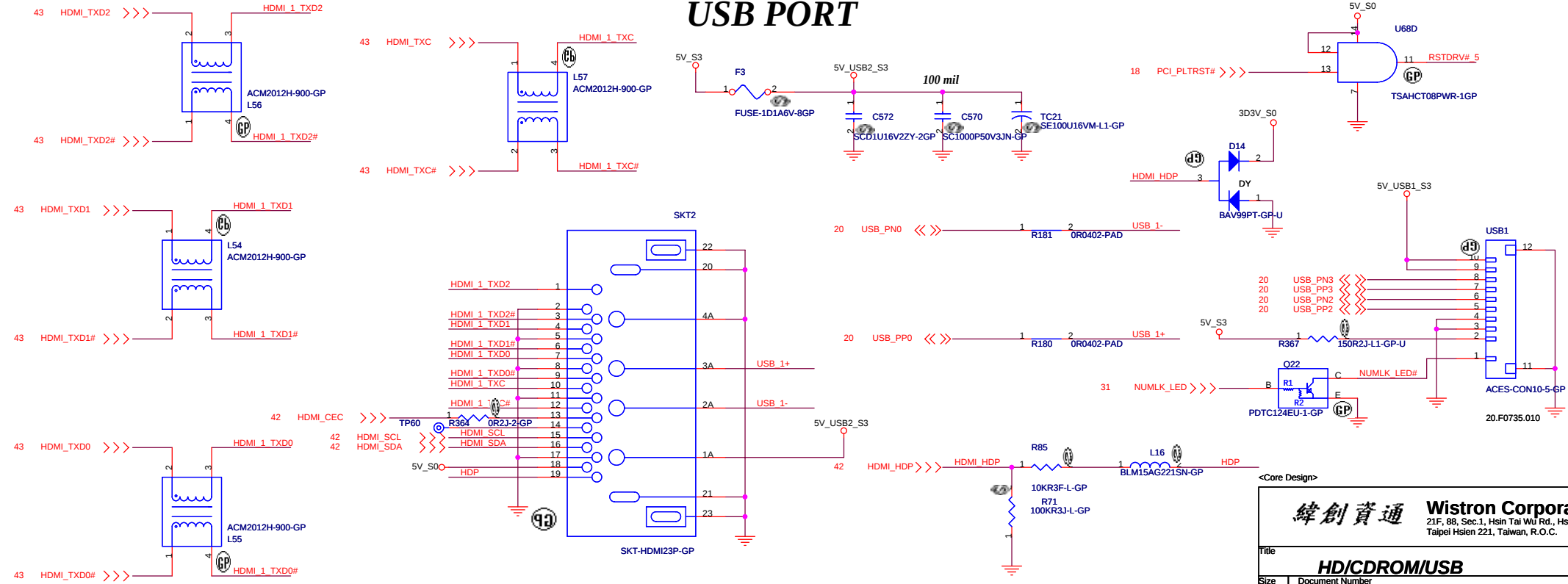
SATA HD Connector

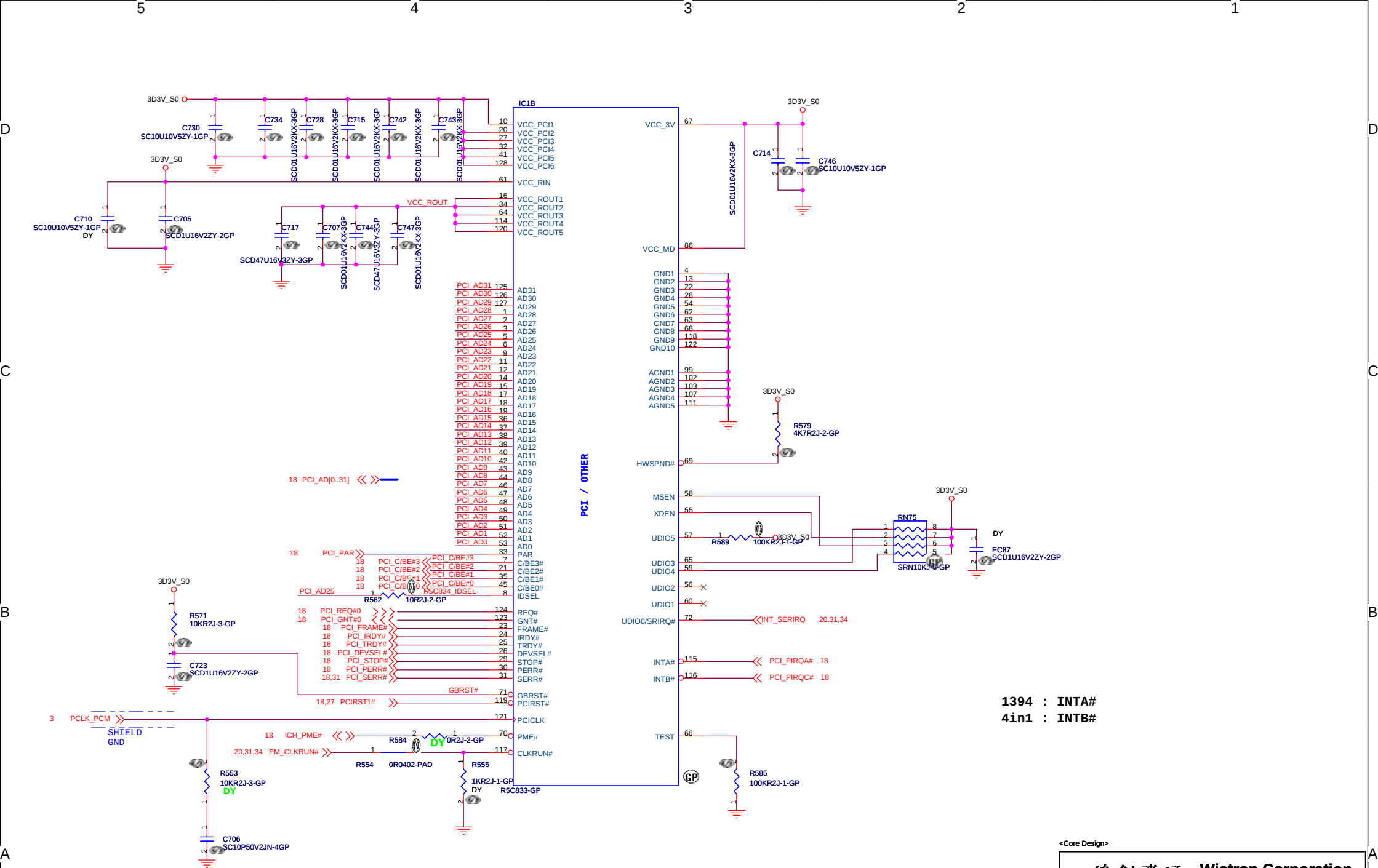


CD-ROM CONNECTOR



USB PORT





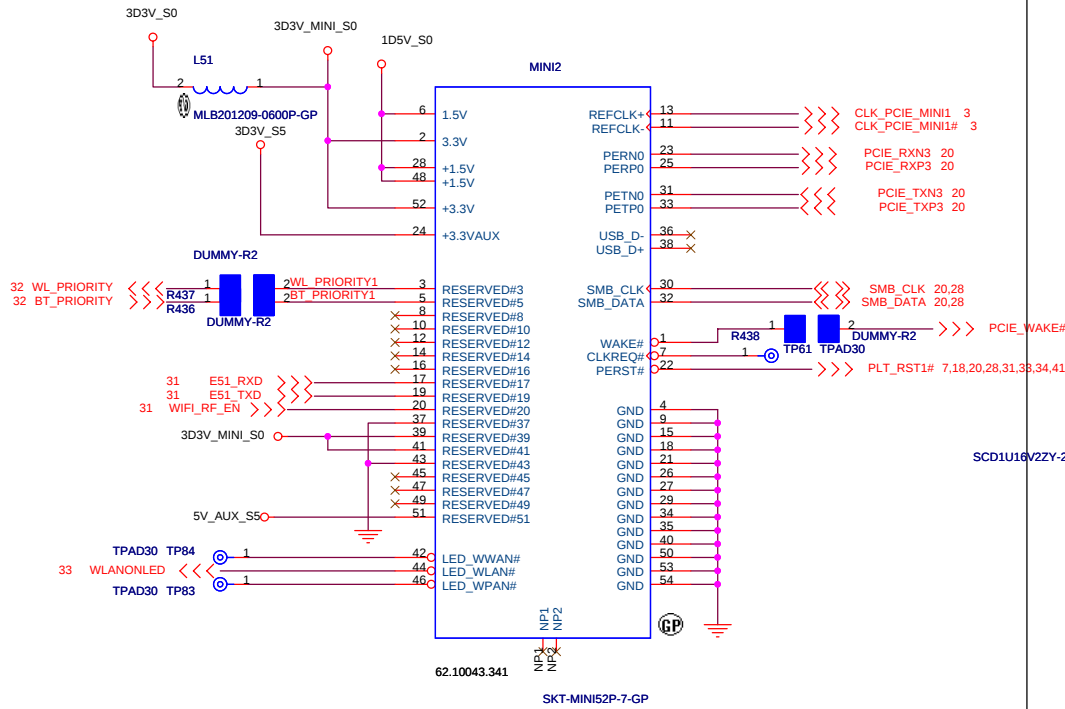
<Core Design>

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

Title			
<i>R5C832/PCI</i>			
Size A3	Document Number		Rev
	Pamirs-Discrete		SA
Date:	Wednesday, December 06, 2006	Sheet 24 of	47

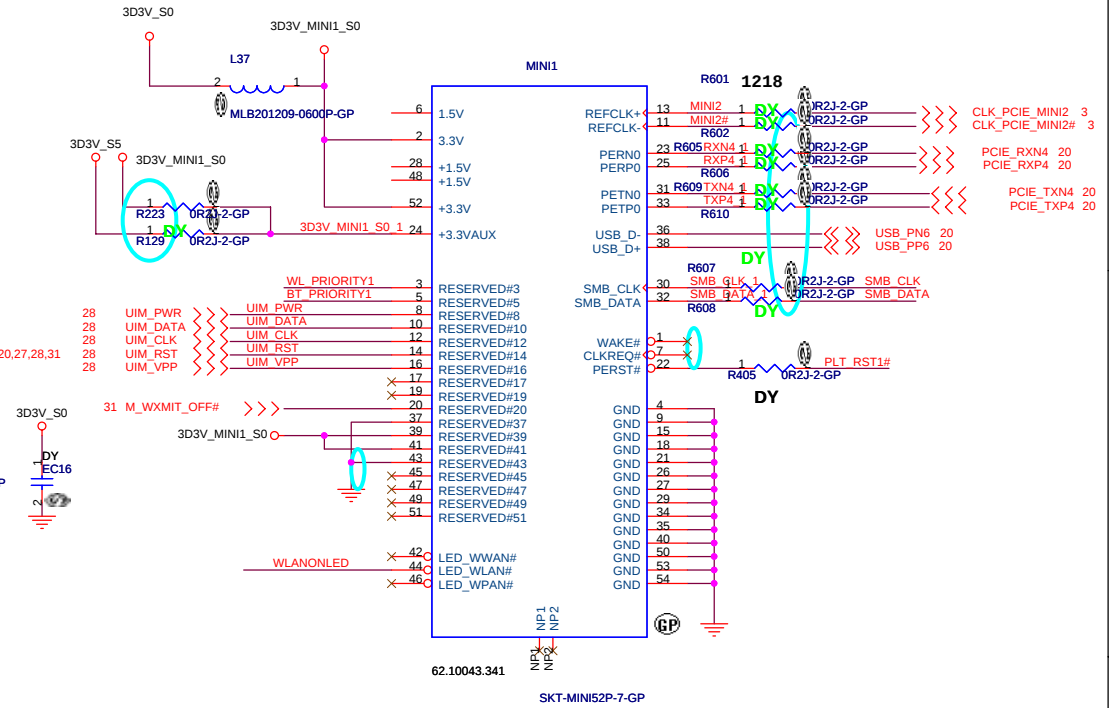
Mini Card Connector 2

Wireless card



Mini Card Connector 1

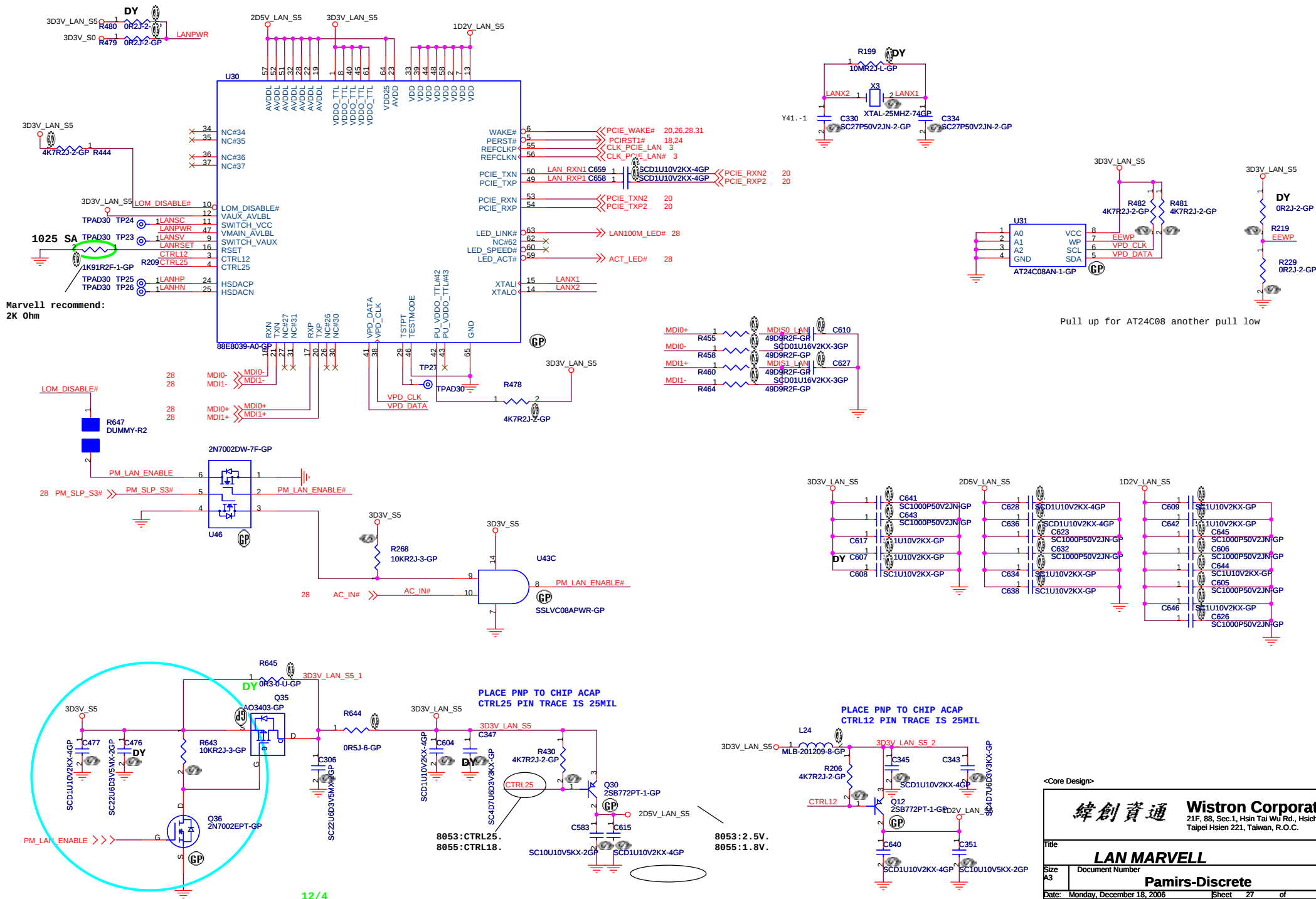
WWAN



<Core Design>

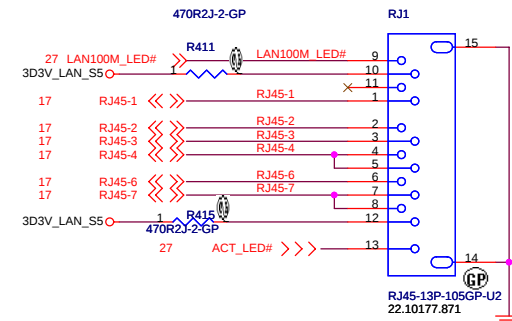
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title MINI CARD CONN.		
Size A3	Document Number Pamirs-Discrete	Rev SA
Date: Tuesday, December 19, 2006	Sheet 26	of 47



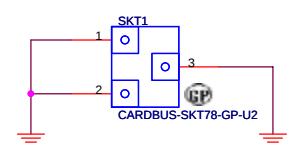
<Core Design>			
緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LAN MARVELL			
Size A3	Document Number	Rev	
Pamirs-Discrete		SA	
Date: Monday, December 18, 2006		Sheet 27 of 47	

```
PIN09 : GREEN
PIN11 : ORANGE
PIN13 : YELLOW
```

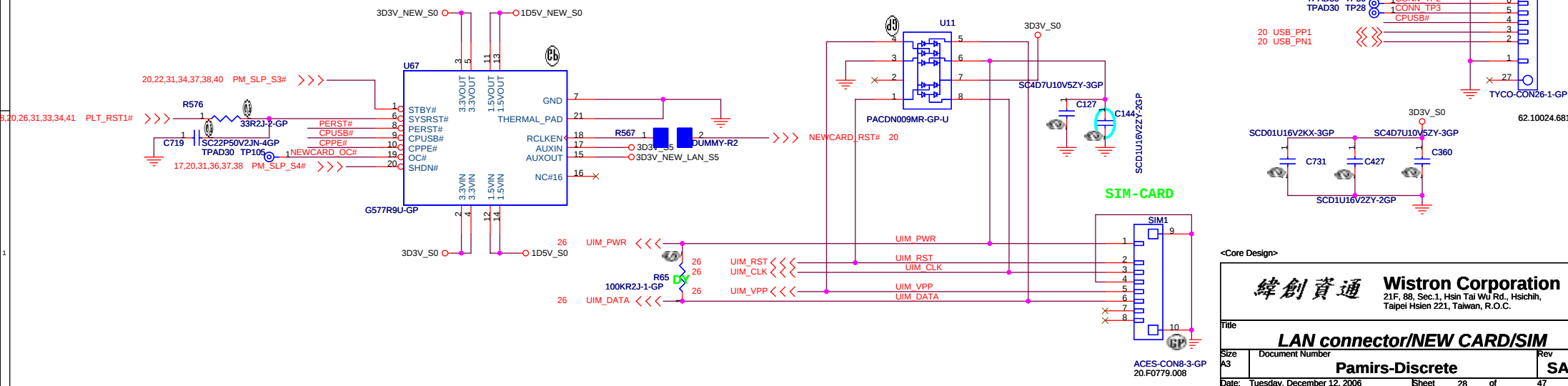


Green : Link up
Blinking : TX/RX activity

Place them Near to Connector



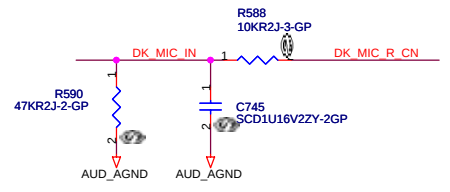
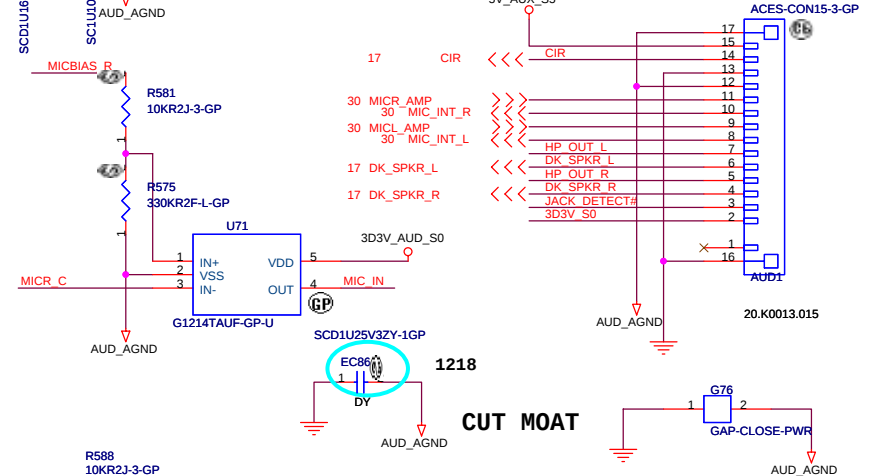
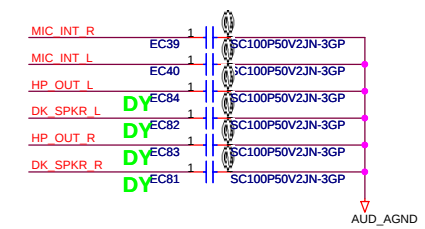
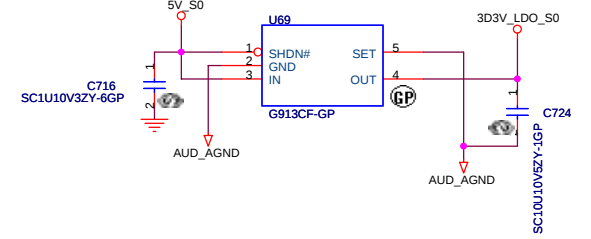
For Newcard socket

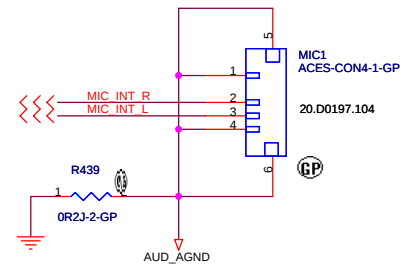
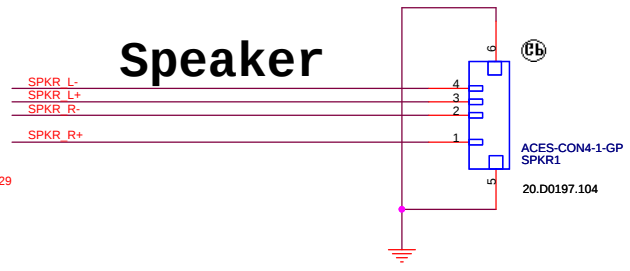
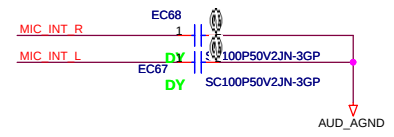
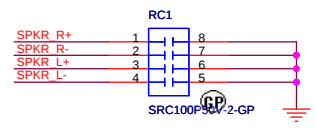
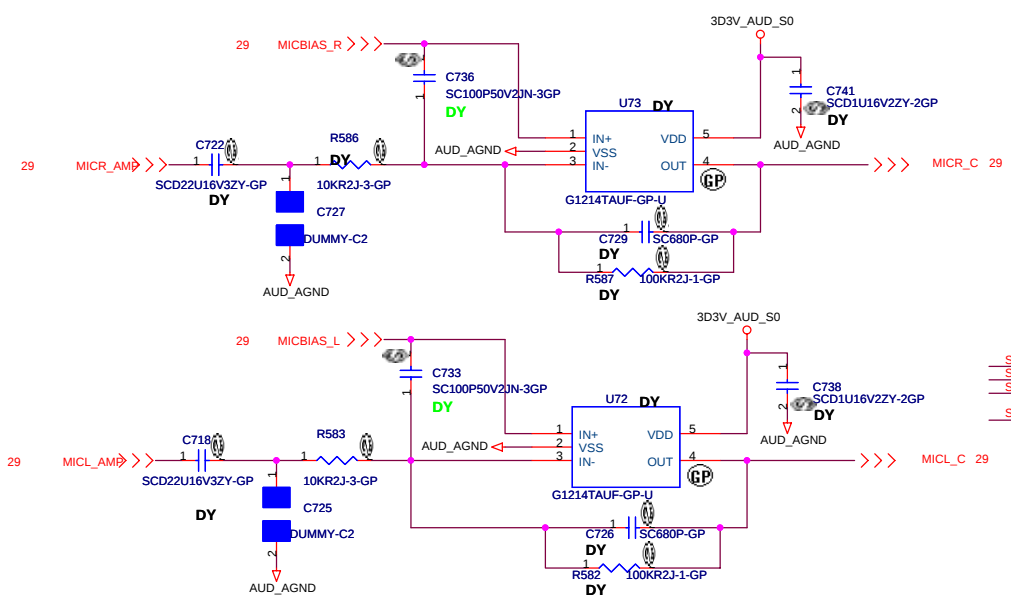
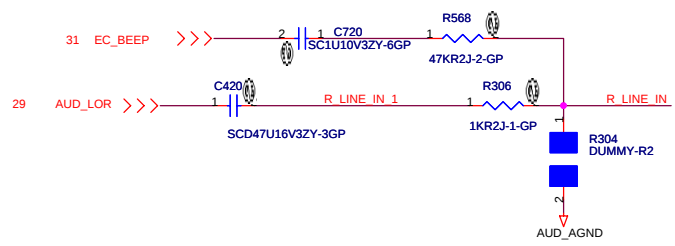
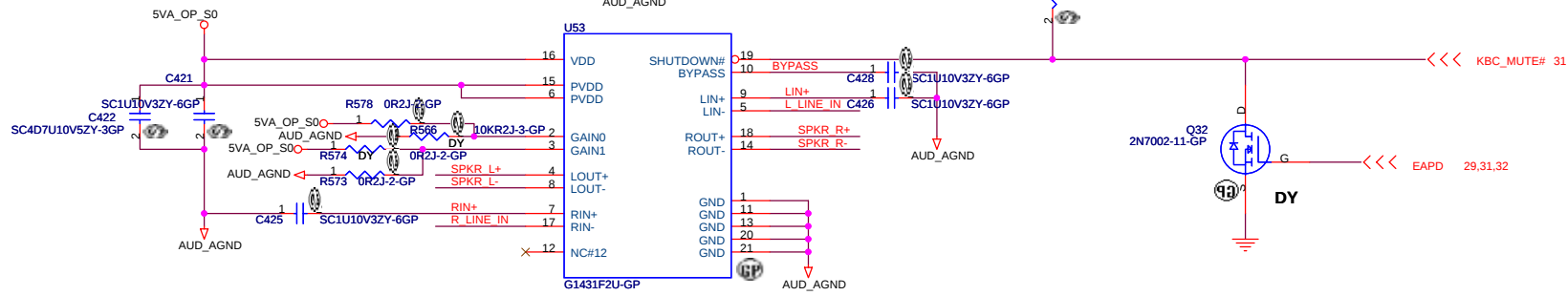
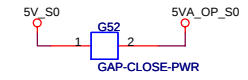
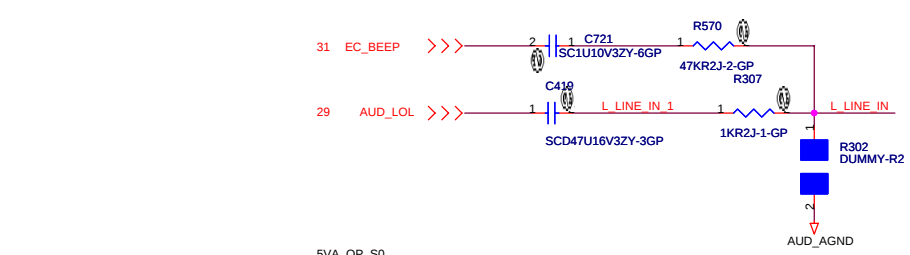


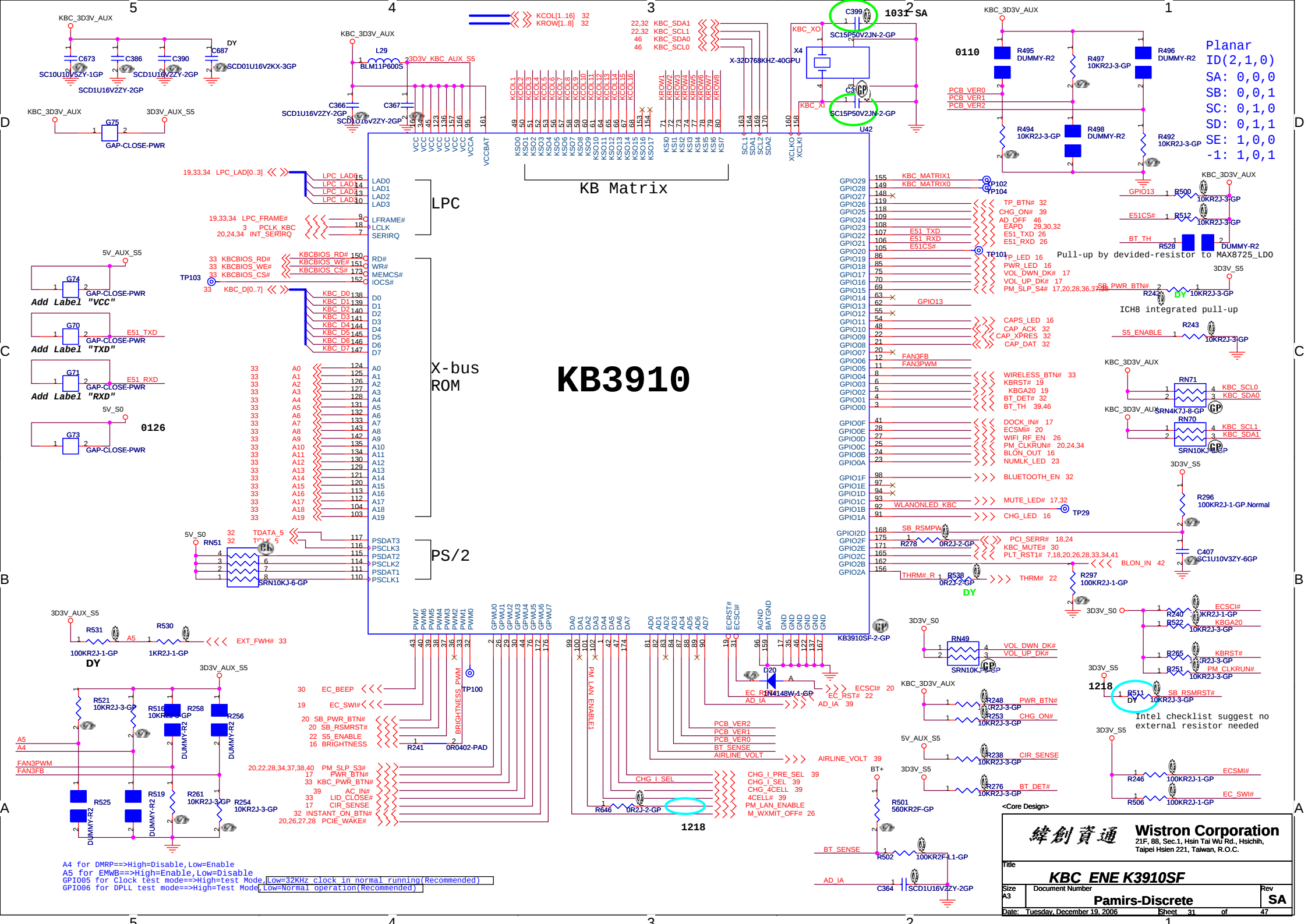
<Core Design>

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

Title			
LAN connector/NEW CARD/SIM			
Size	Document Number		Rev
A3	Pamirs-Discrete		S
Date:	Tuesday, December 12, 2006	Sheet	28 of 47







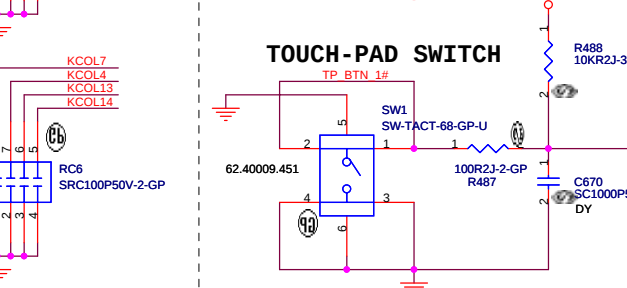
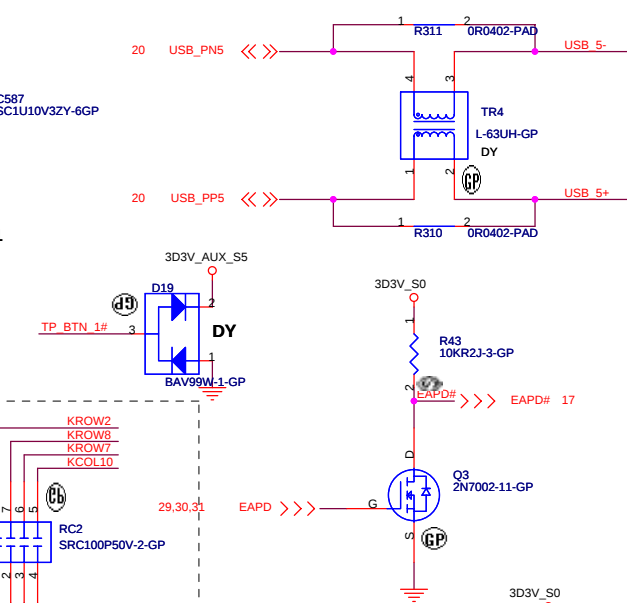
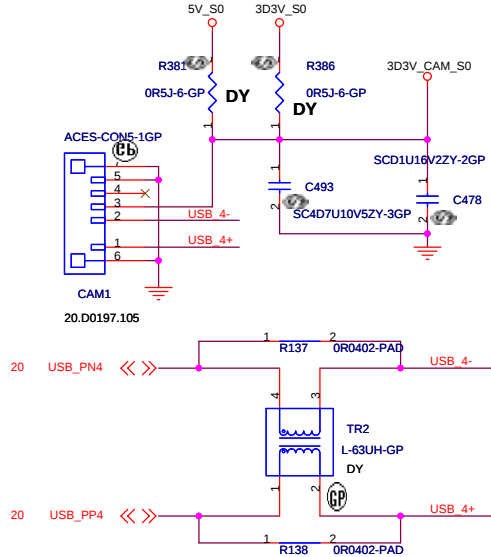
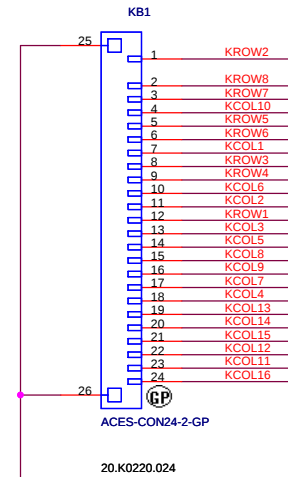
CAMERA

Internal KeyBoard Connector

31 KROW[1..8] <<< <<<
31 KCOL[1..16] <<< <<<

Keyboard matrix (from vendor)

	US	Eur	Jap
MATRIXID1#	0	1	0
MATRIXID2#	0	0	1



(3.3V) 3D3V_CAM_S0

(3.93V)

R699=31K6R2

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

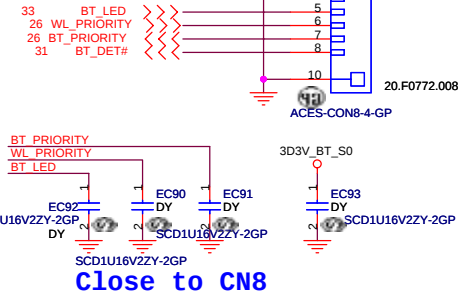
SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

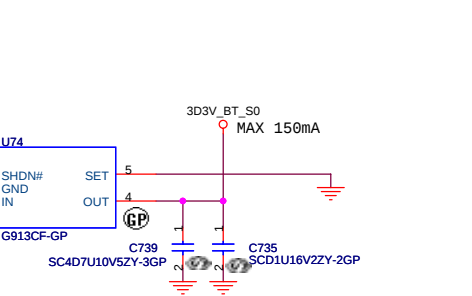
SC10U10V5ZY-1GP

SC10U10V5ZY-1GP

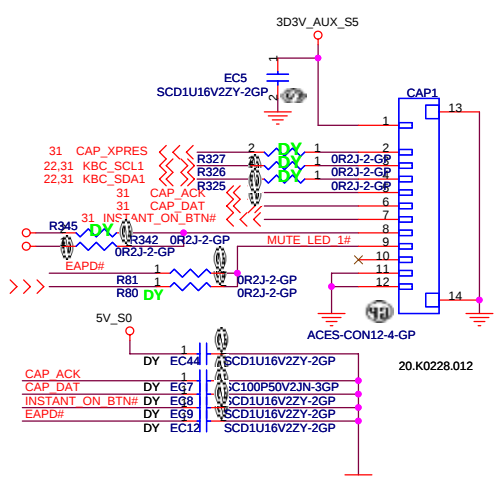
Blue thumb



Close to CN8

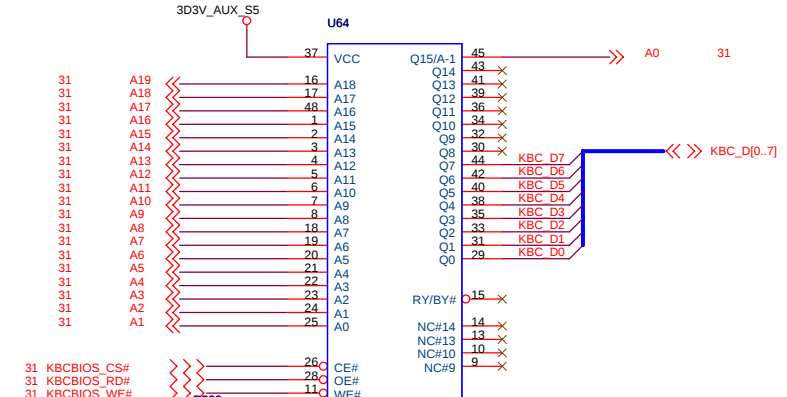


CAPACITY BUTTON

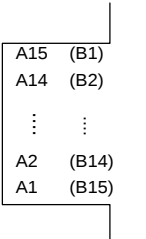


<Core Design>

緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
KeyBoard-CONN	
Size A3	Document Number
Date: Monday, December 18, 2006	Sheet 32 of 47



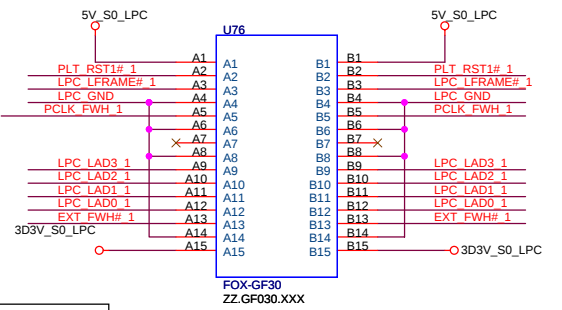
TOP VIEW



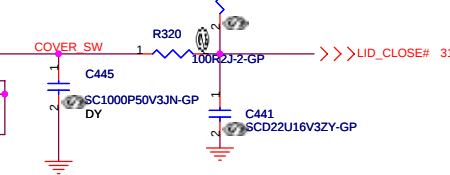
(BOTTOM VIEW)

Boot Device must have ID[3:0] = 0000
Has internal pull-down resistors
All may be left floated
FPET7 Elec. P3-46

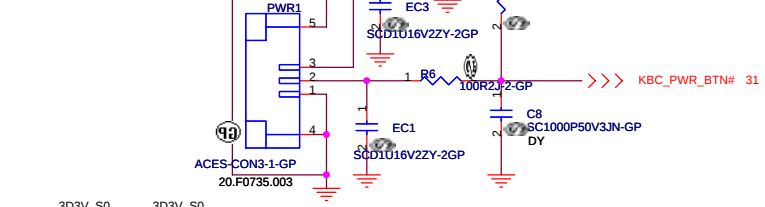
GOLDEN FINGER FOR DEBUG BOARD



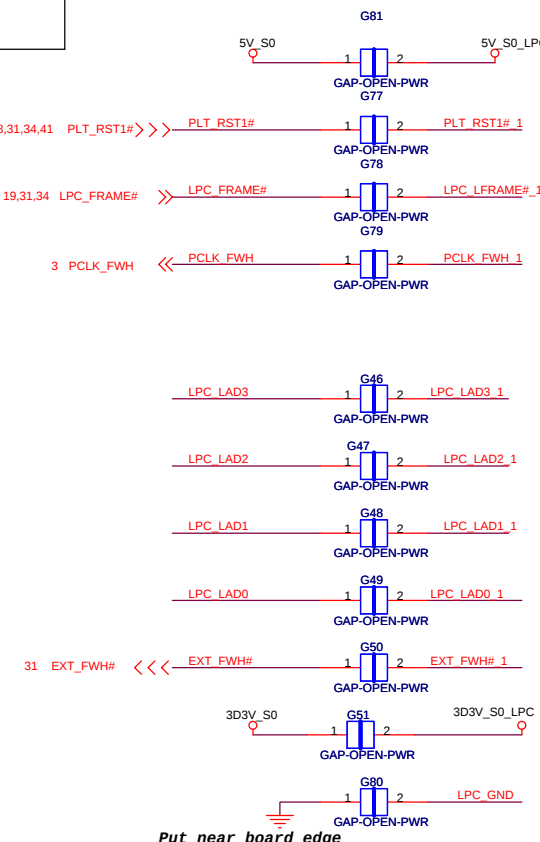
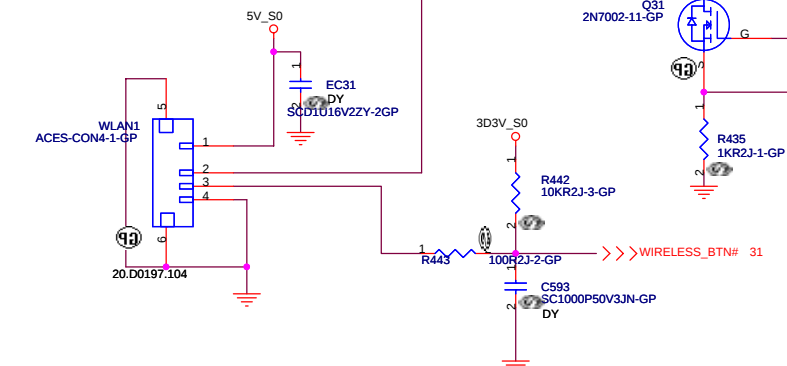
COVER SWITCH



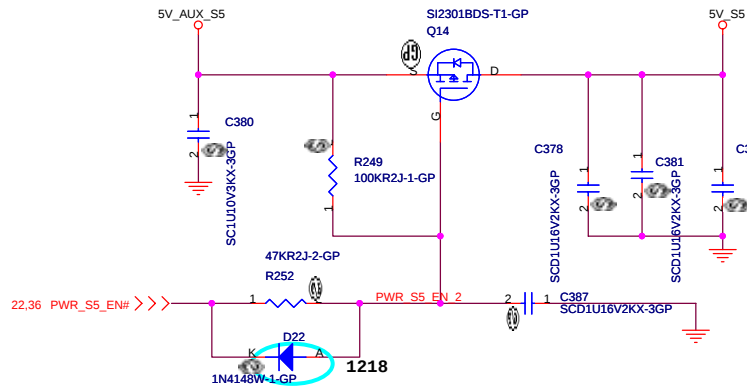
POWER SWITCH



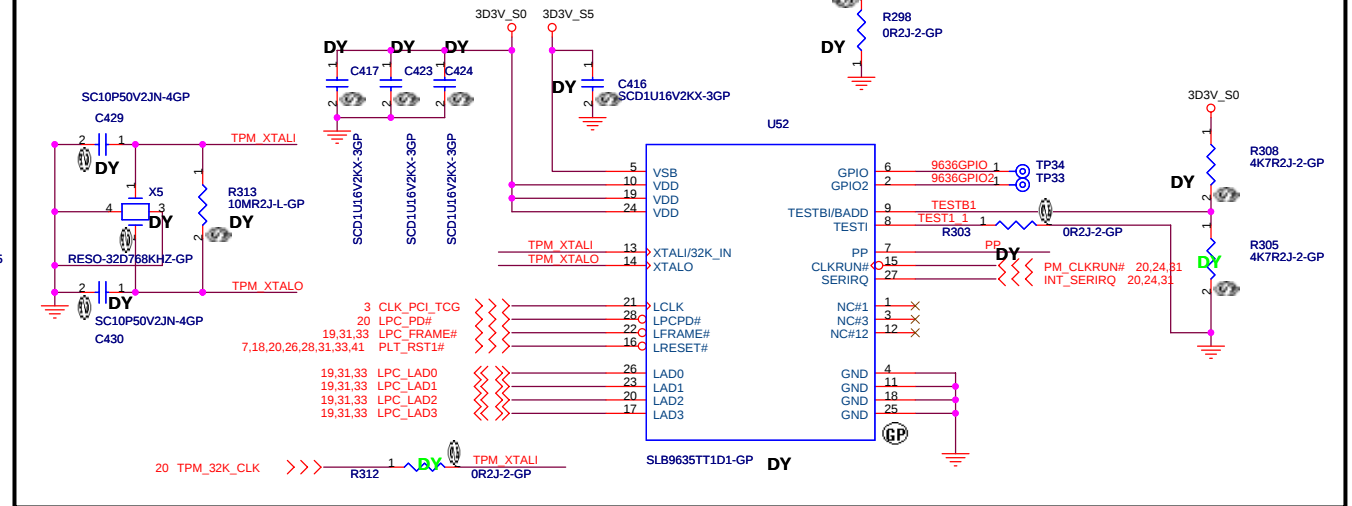
WIRELESS SWITCH



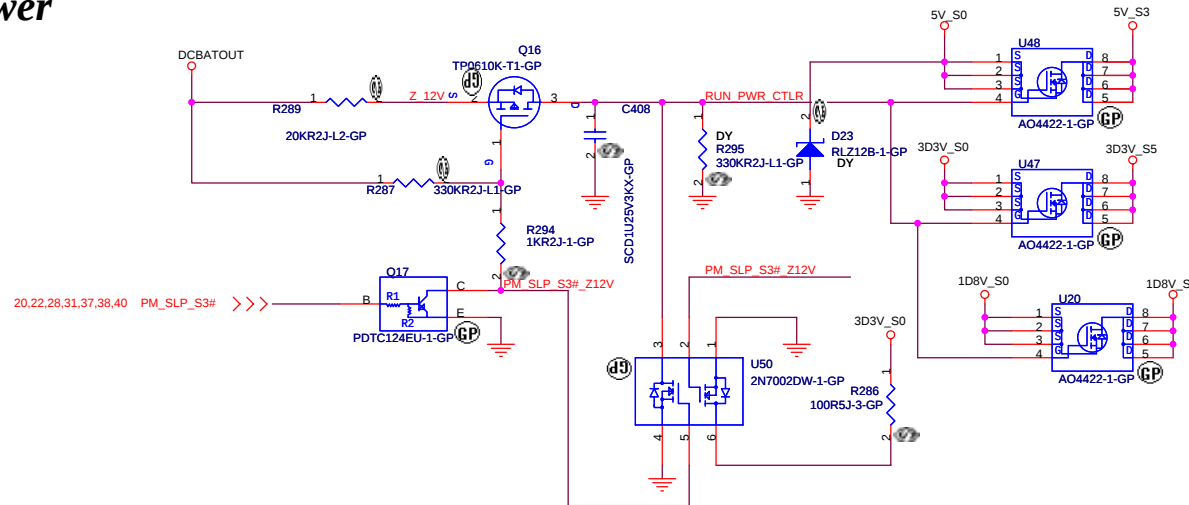
5V_AUX_S5 TO 5V_S5



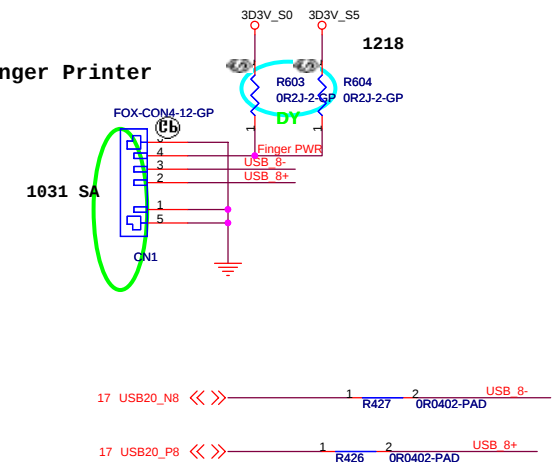
TPM 1.2



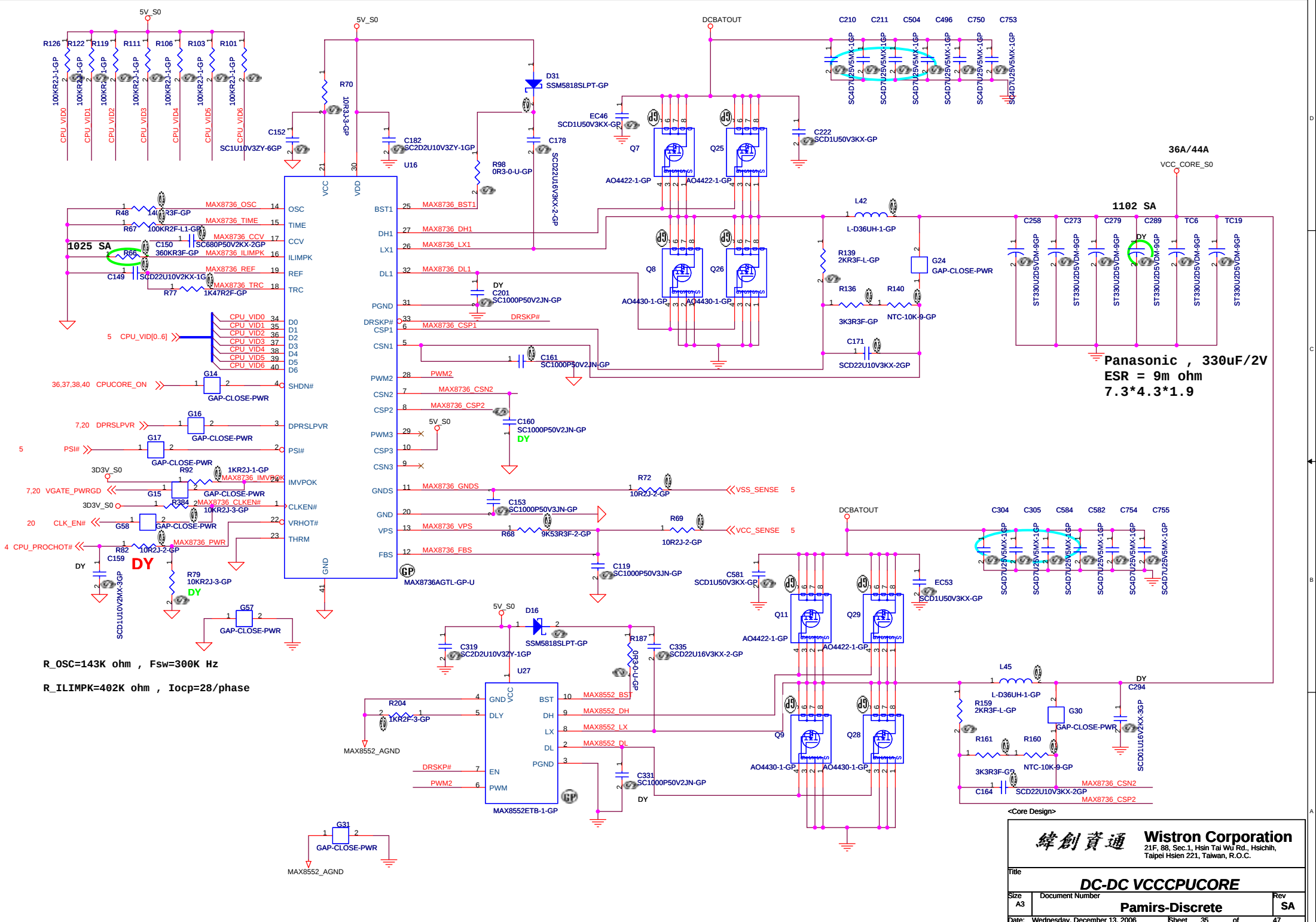
Run Power



Finger Printer



<Core Design>

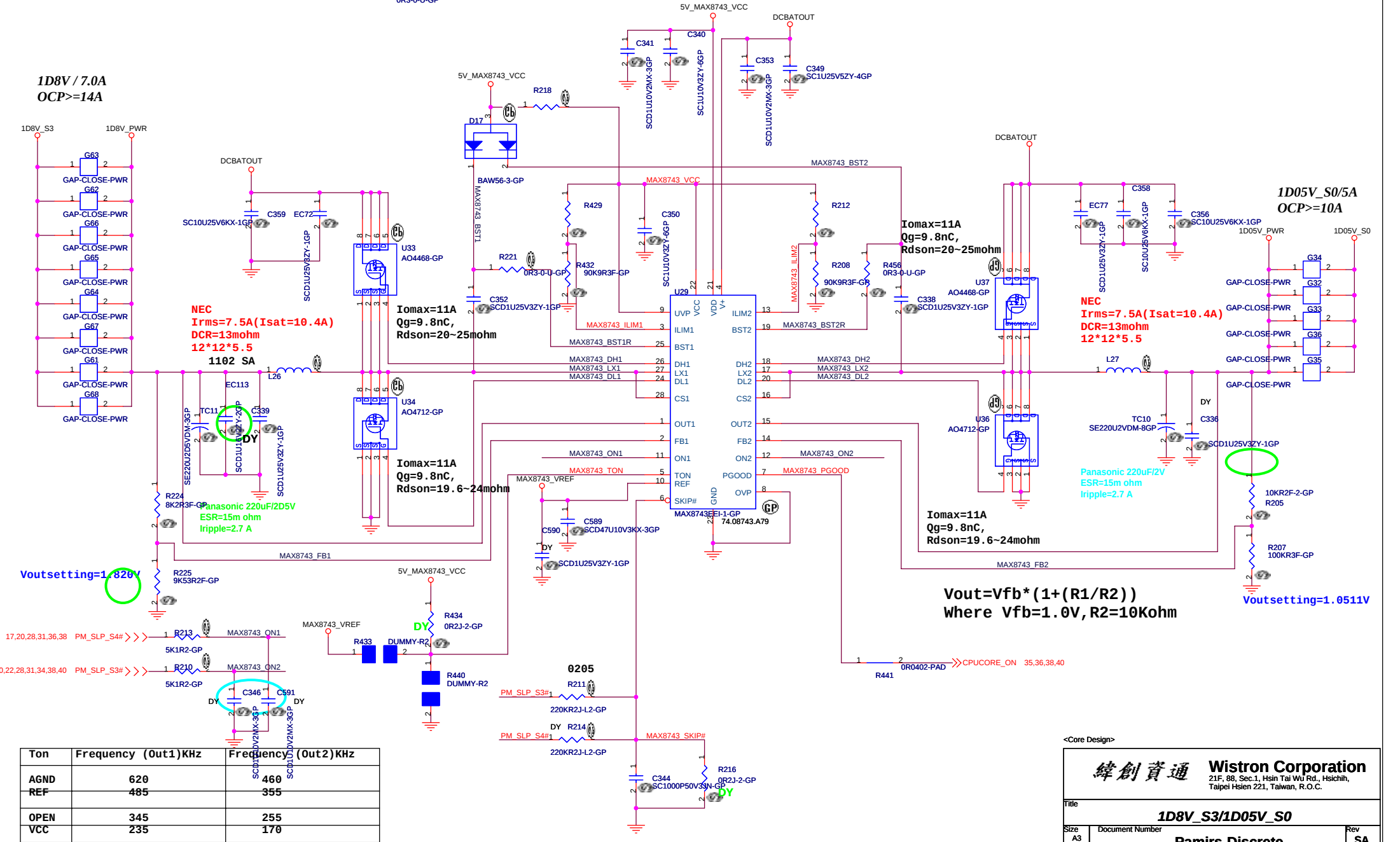


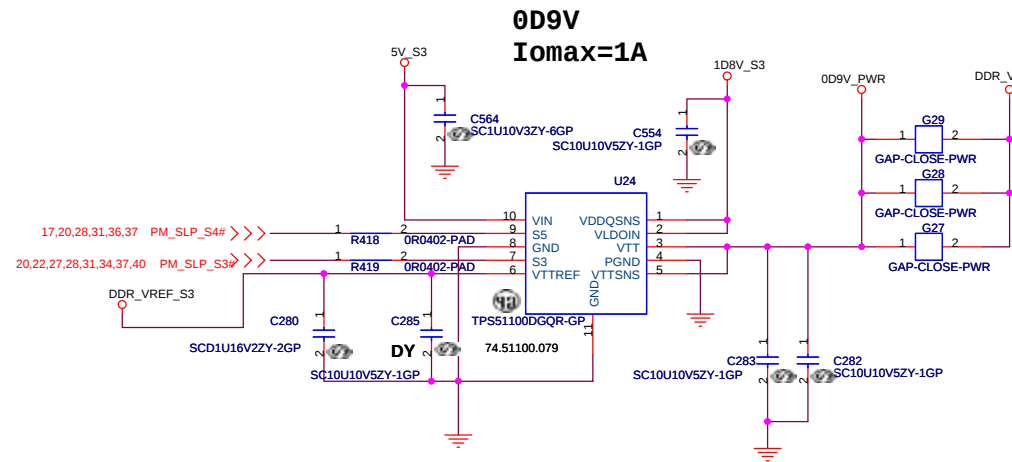
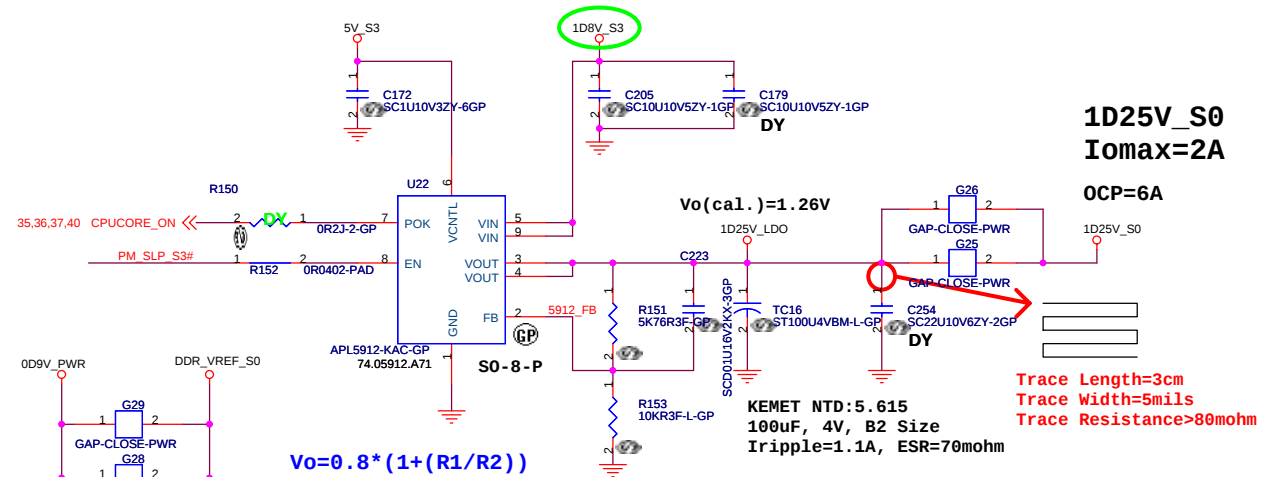
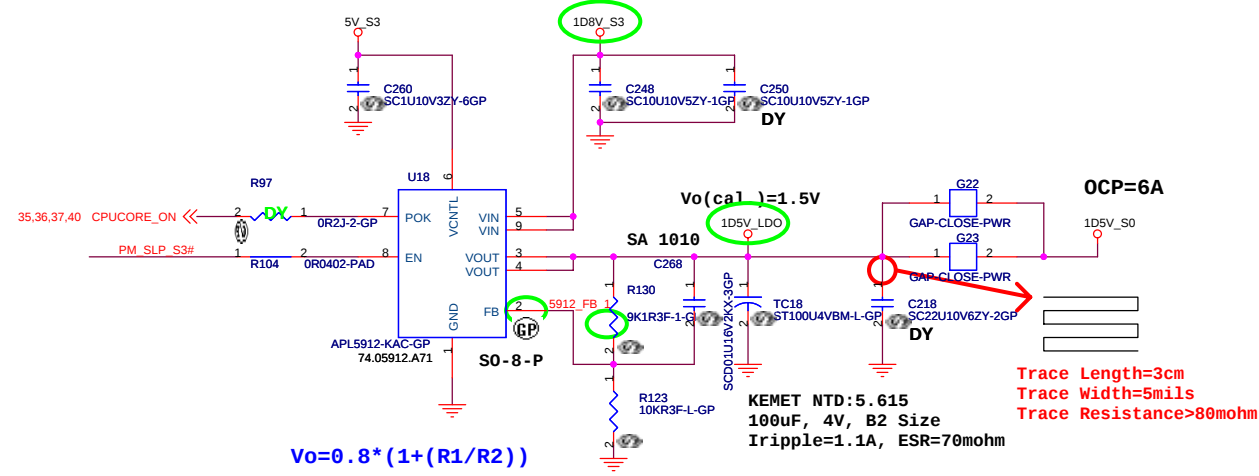
R_OSC=143K ohm , Fsw=300K Hz

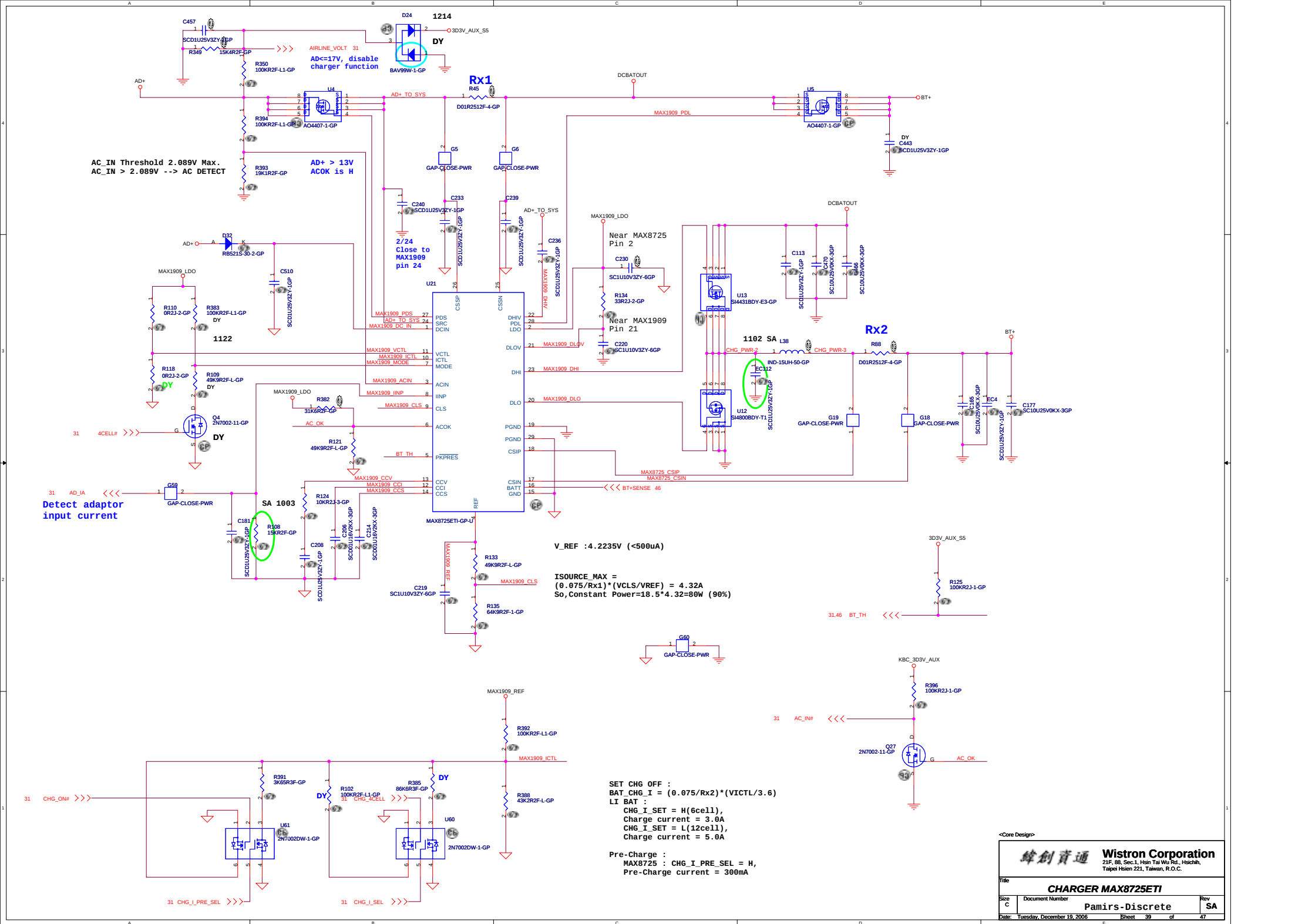
R_ILIMPK=402K ohm , Iocp=28/phase

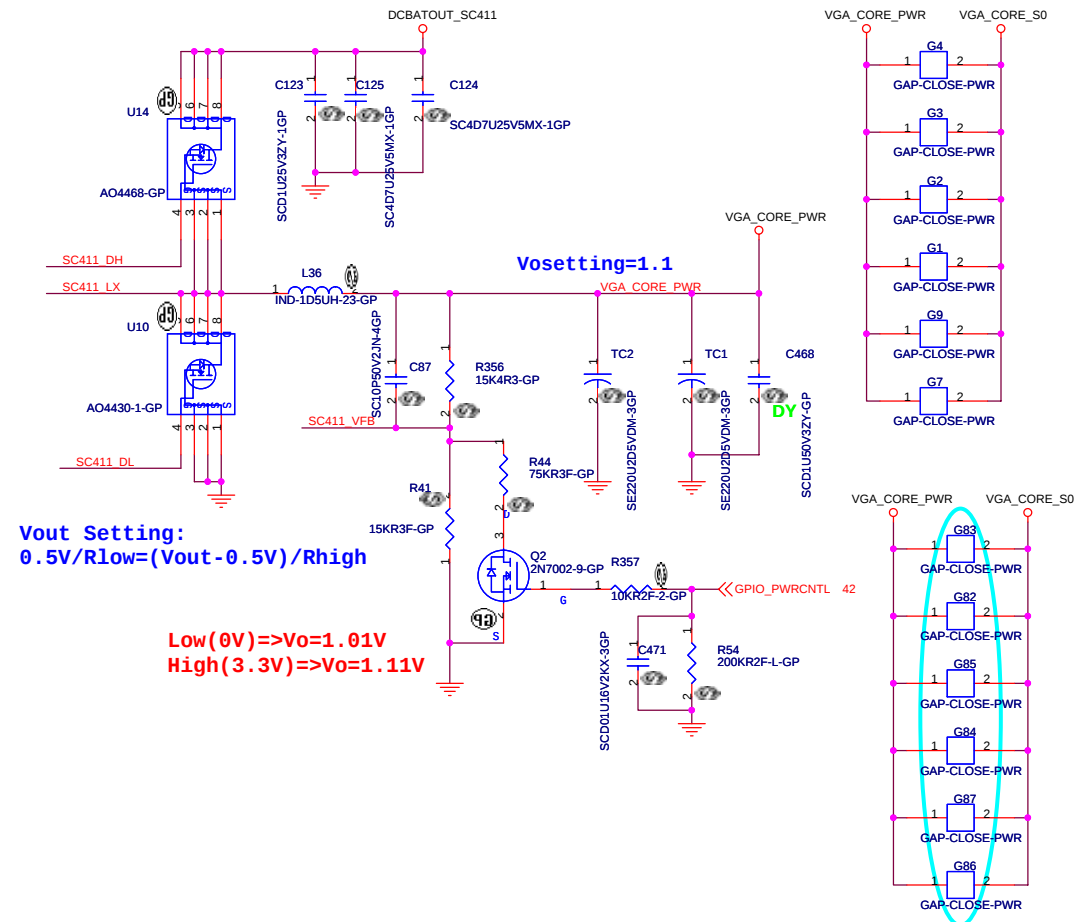
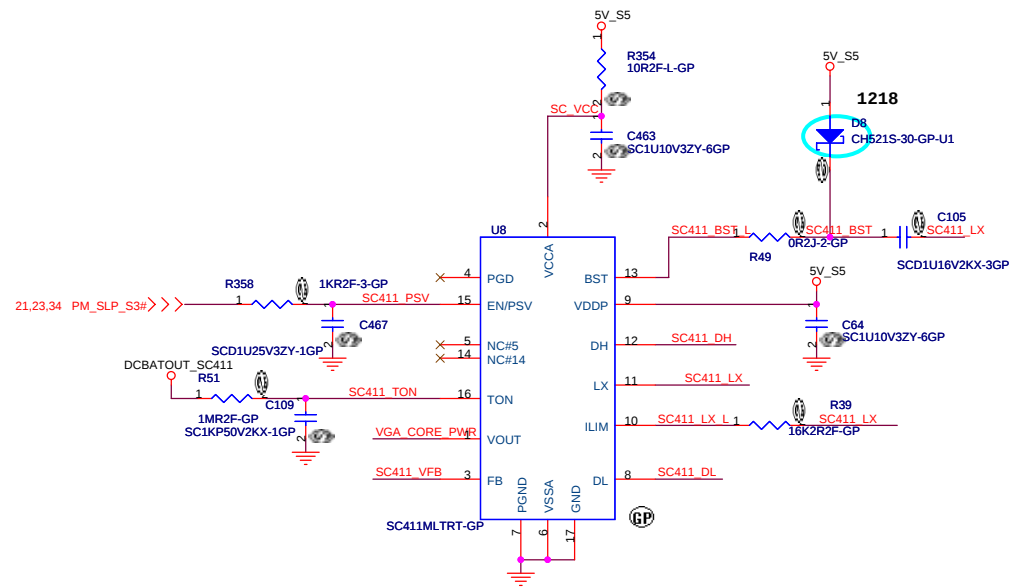
$I_{ocp}=7.0*2=14A$
 $R_{ds,on}=17m\ ohm$
 $V_{cs1}=I_{ocp}*R_{ds,on}=238mV$
 $V_{ILIM}=V_{cs1}/0.1=2.38V$

$I_{ocp}=7.0*2=14A$
 $R_{ds,on}=17m\ ohm$
 $V_{cs2}=I_{ocp}*R_{ds,on}=28mV$
 $V_{ILIM2}=V_{cs2}/0.1=2.38V$

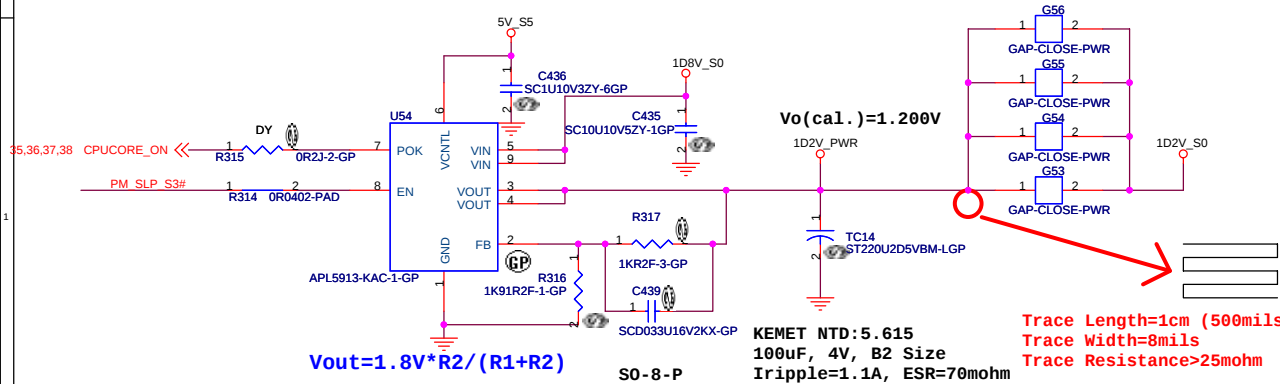




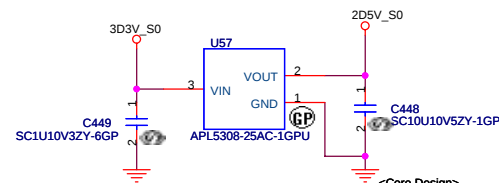


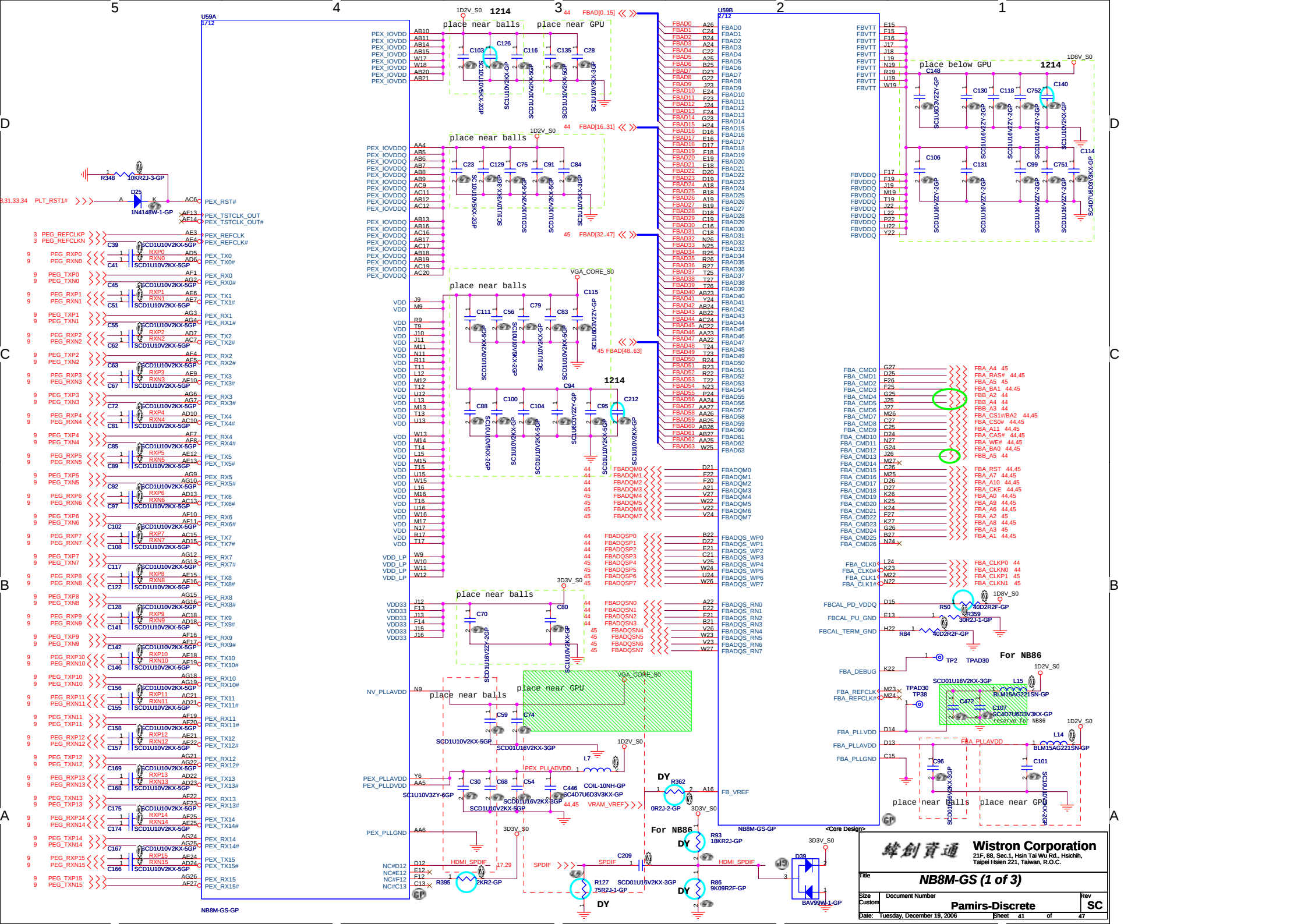


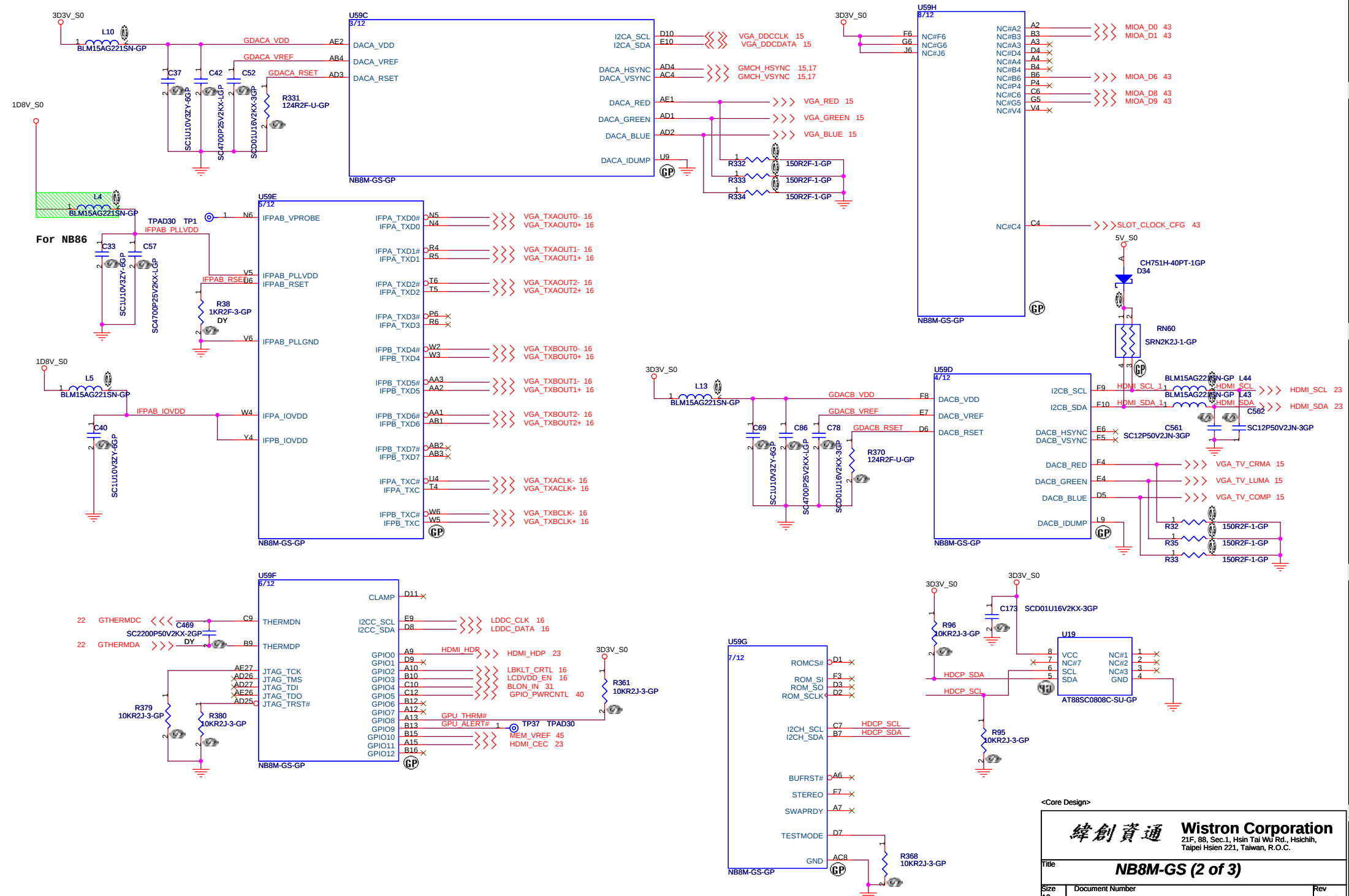
1D2V_S0
 Iomax=3A

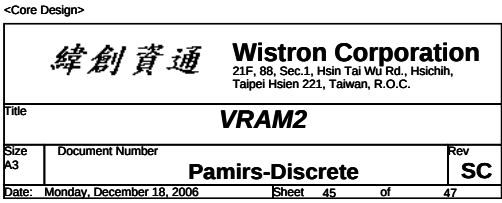


2D5V_S0
 Iomax=300mA









[illegible]

Title			
AD/BATT CONN			
Size	Document Number		Rev
A3		Pamirs-Discrete	SC
Date:	Monday, December 18, 2006	Sheet	46 of 47

