

Wistron Confidential

MV-3

2008/08/20

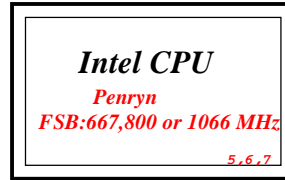
REV :MV-03

BOM1

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
VOX			
Size A3	Document Number		Rev 3
Date: Wednesday, August 20, 2008		Sheet 1 of	53

Artemis Block Diagram

Project code :
91.4V801.001
PCB P/N : 48.4V801.031
Revision : 07224-3



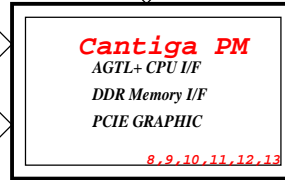
HOST BUS FSB
667/800/1066MHz



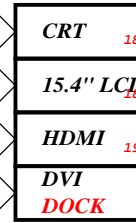
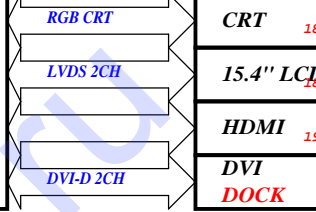
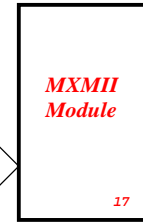
DDRII 667/800 Channel A



DDRII 667/800 Channel B



PCI EXPRESS GRAPHIC



SYSTEM DC/DC TPS51124	
INPUTS	OUTPUTS
B+	1.8V 10A 0.9V 2A 49

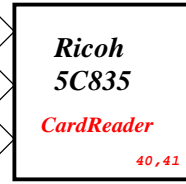
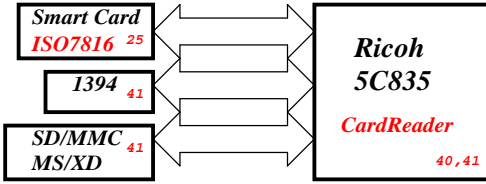
SYSTEM DC/DC TPS51120	
INPUTS	OUTPUTS
B+	+5VALW 6A +3VALW 6A 48

SYSTEM DC/DC TPS51124	
INPUTS	OUTPUTS
B+	+1.05M 13A 49

CHARGER BQ27470	
INPUTS	OUTPUTS
BATT_A BATT_B	BATT 18V 3.0A 5V 100mA 51

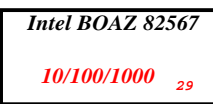
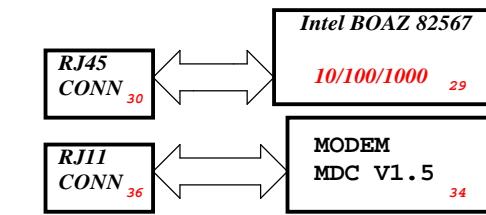
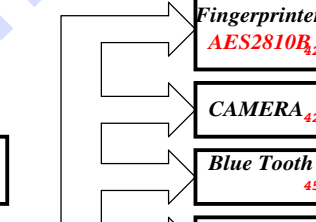
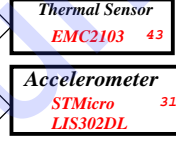
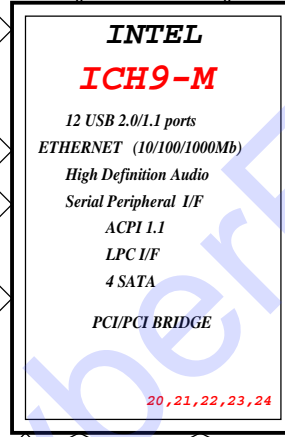
CPU DC/DC ISL6260C	
INPUTS	OUTPUTS
B+	+VCC_CORE 0.844~1.3V 65A 47

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

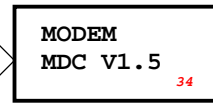


DMI x4

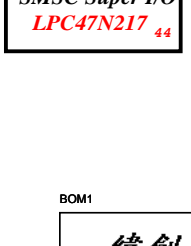
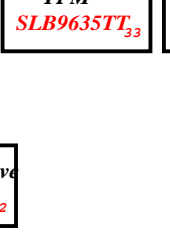
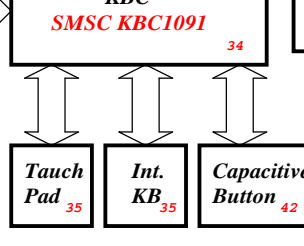
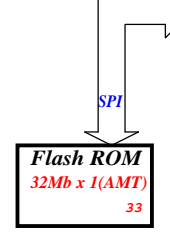
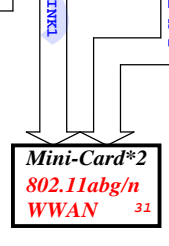
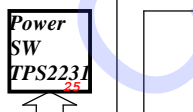
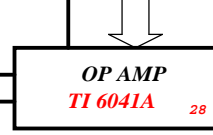
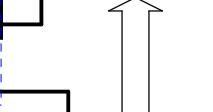
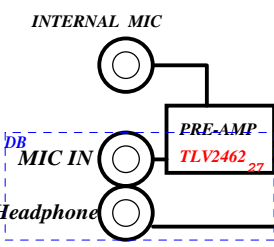
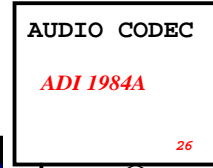
C-LINK0



PCIE/GLCI
PCI/LCI



HD Audio



BOM1

CyberForum.ru

VOX		
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Title		
Change Notes List		
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Voltage Rails

o MEANS ON x MEANS OFF

power plane State	+B +3VL LDO5	+5VALW +3VALW	+1.5V +5V +0.75V	+5VS +3VS +1.5VS +CPU CORE +VCCP	+3VM +1.05VM	CLOCK
S0	O	O	O	O	O	O
S3/M1	O	O	O	X	O	O
S3	O	O	O	X	O	O
S5 S4/AC	O	O	X	X	O	O
S5 S4/Battery only	O	X	X	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X	X	X

PCI Devices

EETERNAL	IDSEL#	REQ/GNT#	PIRQ
Cardreader & 1394	AD22	2	G,E

DMA Channel	Device
DMA0	Modem/LAN
DMA1	ECP
DMA2	Floppy Disk
DMA3	Audio
DMA4	(Cascade)
DMA5	Unused
DMA6	Unused
DMA7	Unused

Symbols	Description
DY/DUMMY	No install
1KR2J	Resistor 1K ohm ,Size 0402 ,5%
1KR3F	Resistor 1K ohm ,Size 0603 ,1%
GP	ROHS parts
NC	Pin no connect to anything

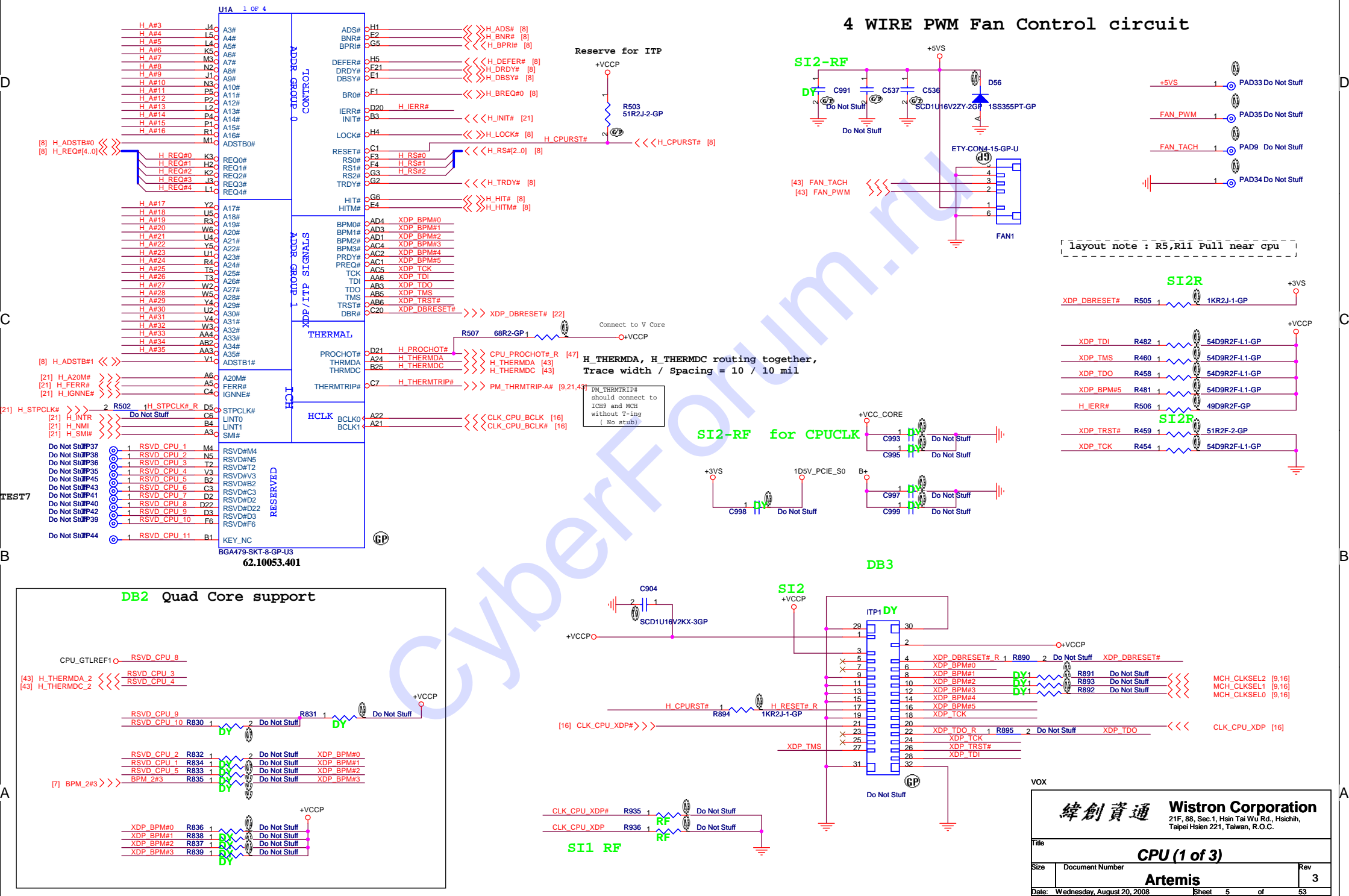
USB PORT#	Destination
0	USB1
1	USB4
2	EXPRESS SLOT
3	USB5
4	USB2
5	USB3
6	Bluetooth
7	WWAN
8	Fingerprint
9	Dock 1
10	Camera
11	Dock 2

IRQ	Device
0	System Timer
1	Keyboard
2	N/A
3	Serial port (COM2) ,LAN/Modem
4	Serial port (COM1)
5	Audio/VGA
6	Floppy
7	Parallel port
8	System CMOS/Real-time clock
9	Microsoft ACPI
10	N/A,Modem,LAN
11	Mass storage control/PCI simple communication control
12	synactic PS2 port GlidePAD
13	Numeric Data Process
14	Primary IDE interface ,HDD
15	Secondary IDE interface ,CD-ROM
16	Mobile Intel Crestline Express Chipset Family Microsoft UAA Bus Drive for High Definition Audio Intel 82801H (ICH8 Family) PCI Express Root Port -27D0
17	Intel 82801I (ICH9 Family) PCI Express Root Port -27D2 Intel 82801I (ICH9 Family) USB Universal Host Control
18	Intel 82801I (ICH9 Family) USB Universal Host Control Richo R5C835 Integrates FlashMedia Control Richo R5C835 Gemcore based SmartCard Control
19	Intel 82801I (ICH9 Family) PCI Express Root Port -27D6 Intel 82801I (ICH9 Family) USB Universal Host Control
20	Intel 82801I (ICH9 Family) USB Universal Host Control Intel 82801I (ICH9 Family) USB2 Enhanced Host Control
21	Intel 82801I (ICH9 Family) USB Universal Host Control
22	SDA Standard Compliant SD Host Control Accelerometer LIS302DL
23	HP Mobile Data Protection Sensor

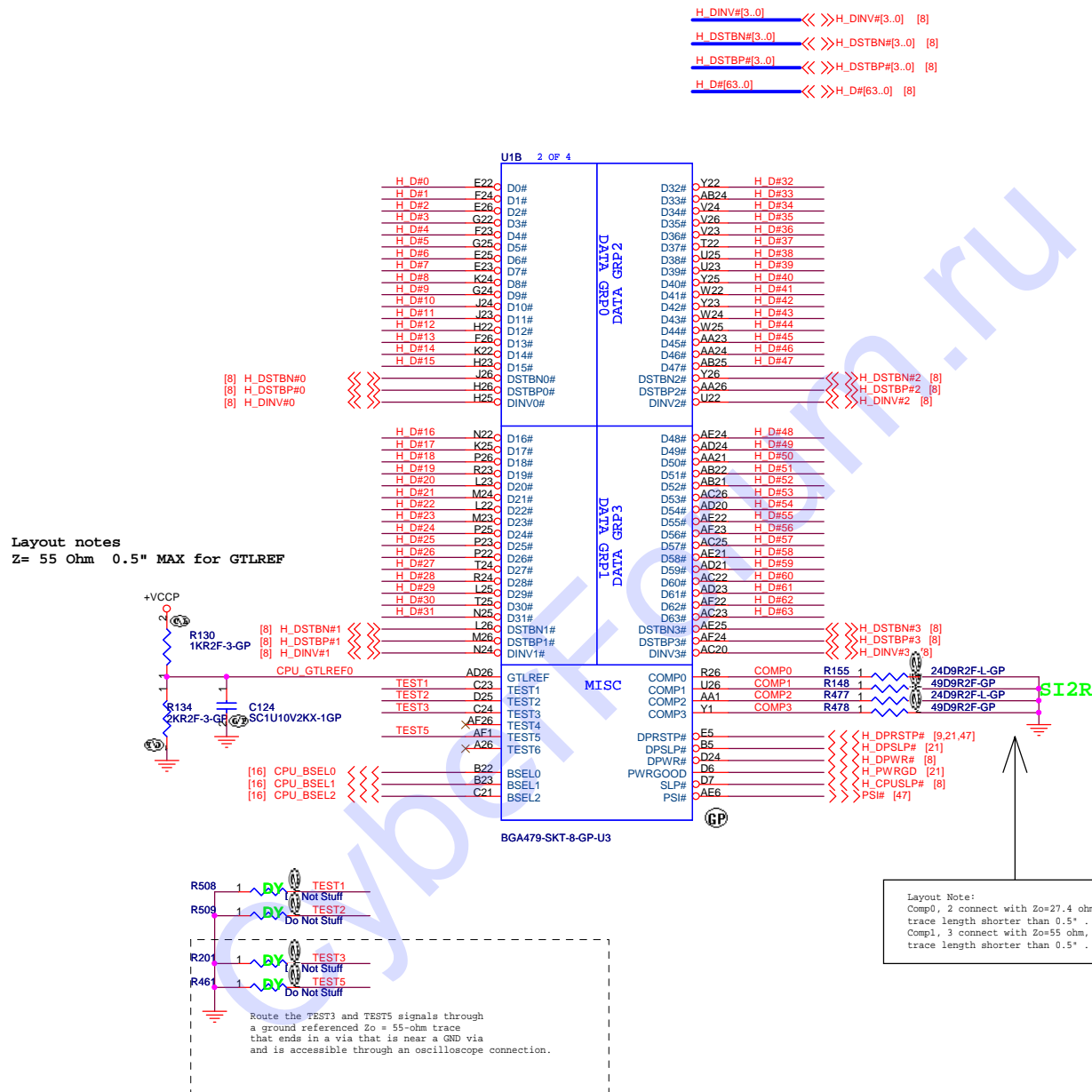
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Title		
Artemis List		
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CPU (1 of 3)

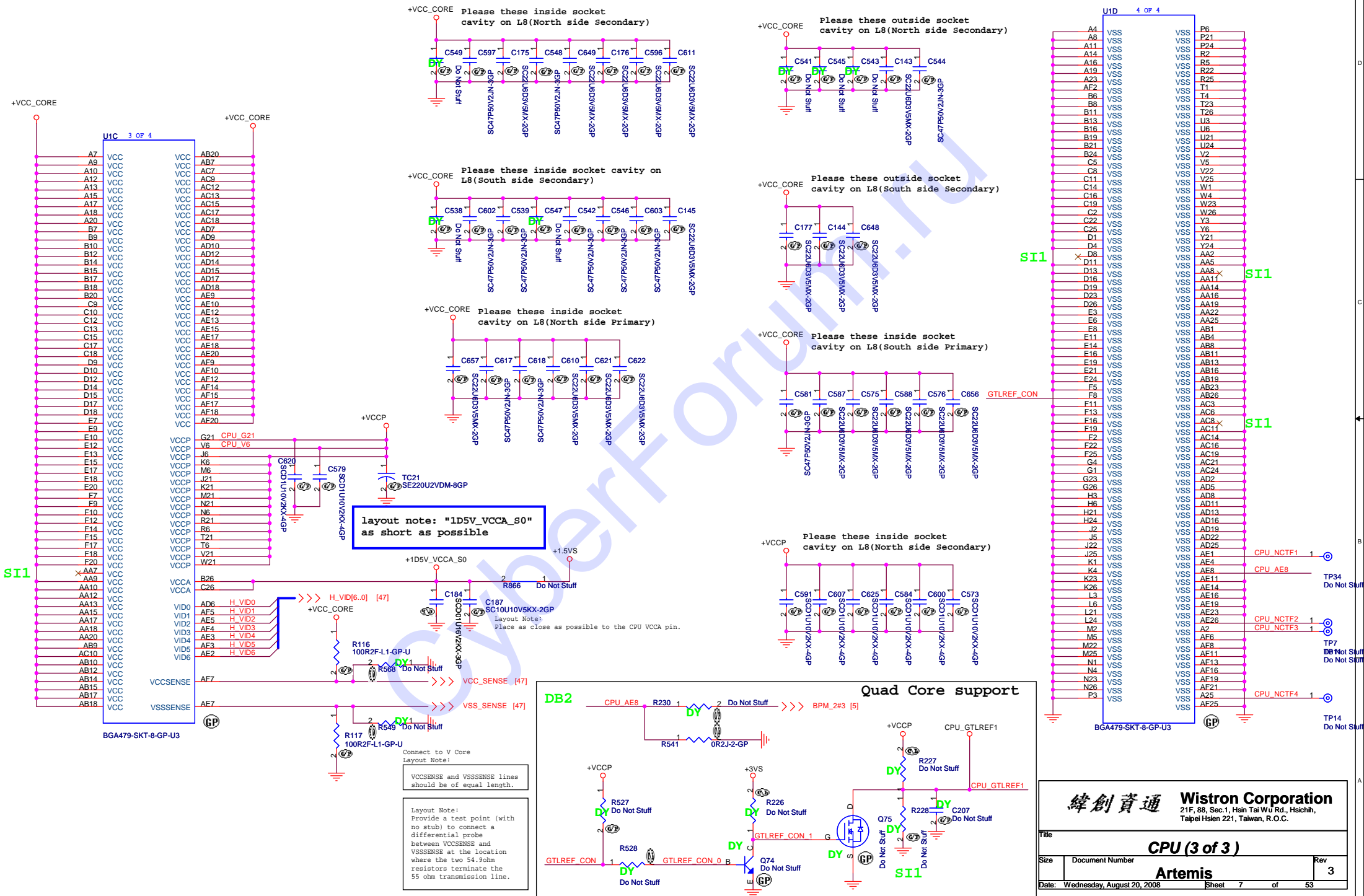


CPU (2 of 3)



Layout Note:
Comp0, 2 connect with $Z_0=27.4$ ohm, make
trace length shorter than $0.5''$.
Comp1, 3 connect with $Z_0=55$ ohm, make
trace length shorter than $0.5''$.

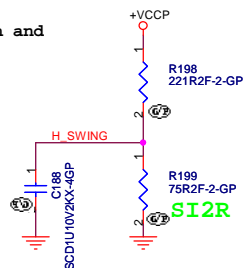
CPU (3 of 3)



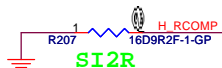
NB (1 of 6) HOST

H_SWING routing Trace width and Spacing use 10 / 20 mil

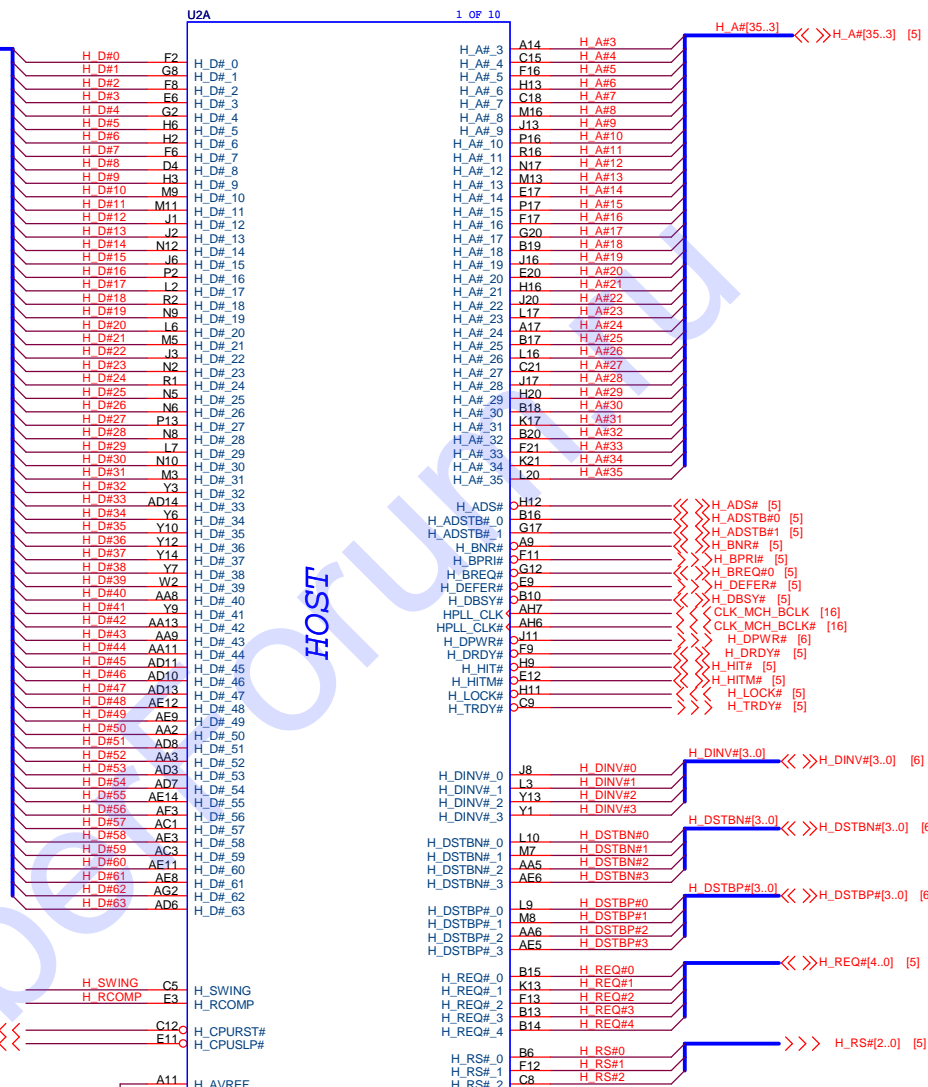
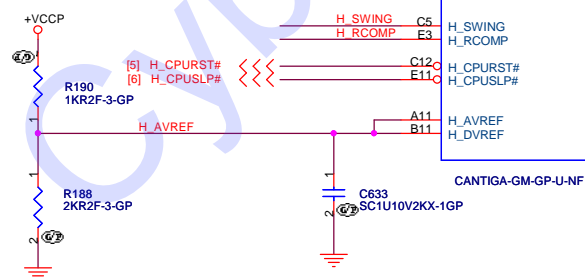
H_SWING Resistors and Capacitors close MCH 500 mil (MAX)



H_RCOMP routing Trace width and Spacing use 10 / 20 mil



Place them near to the chip (< 0.5")

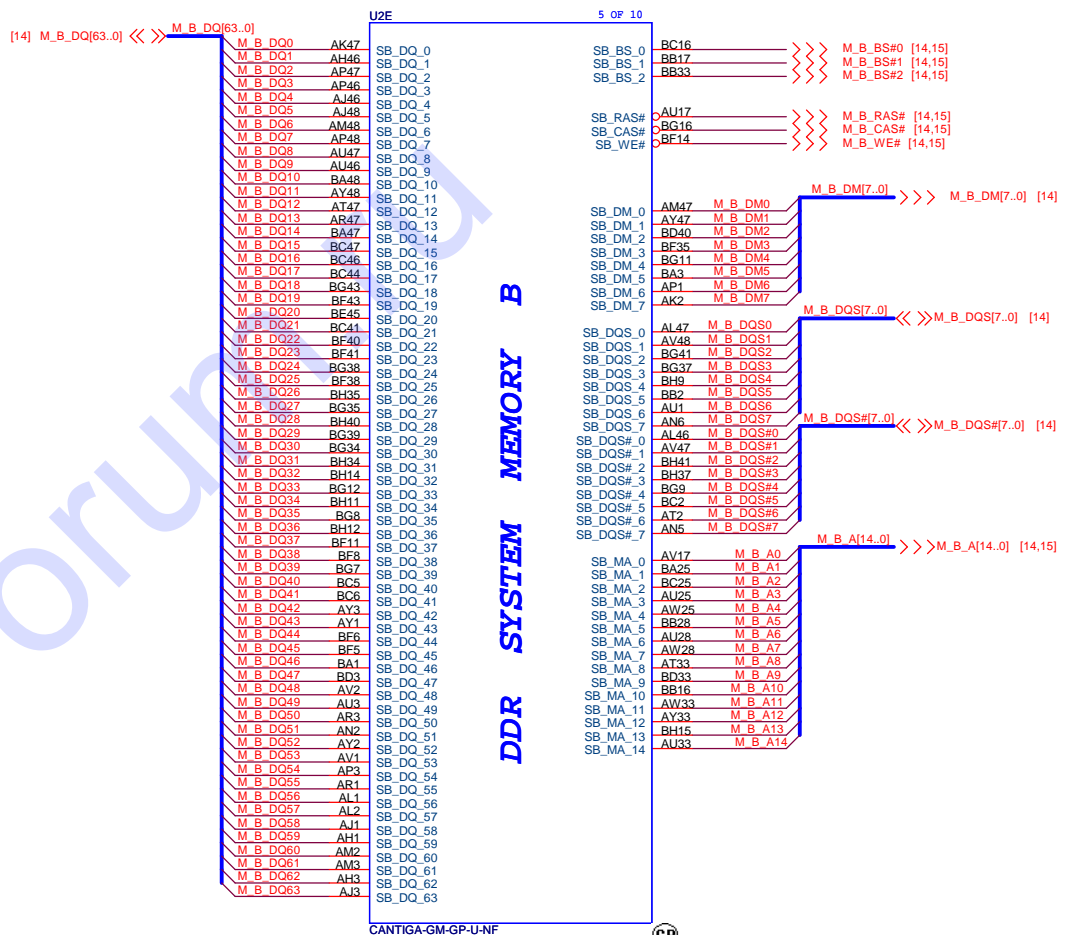
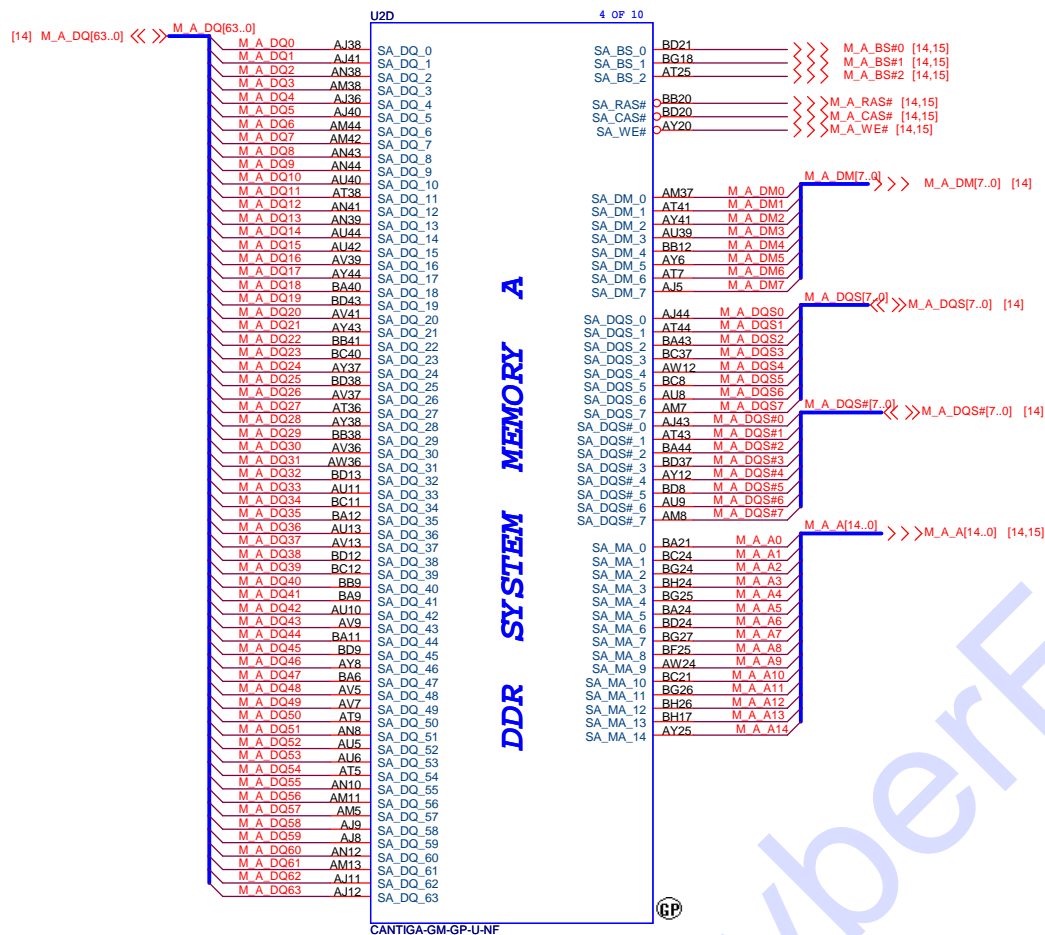


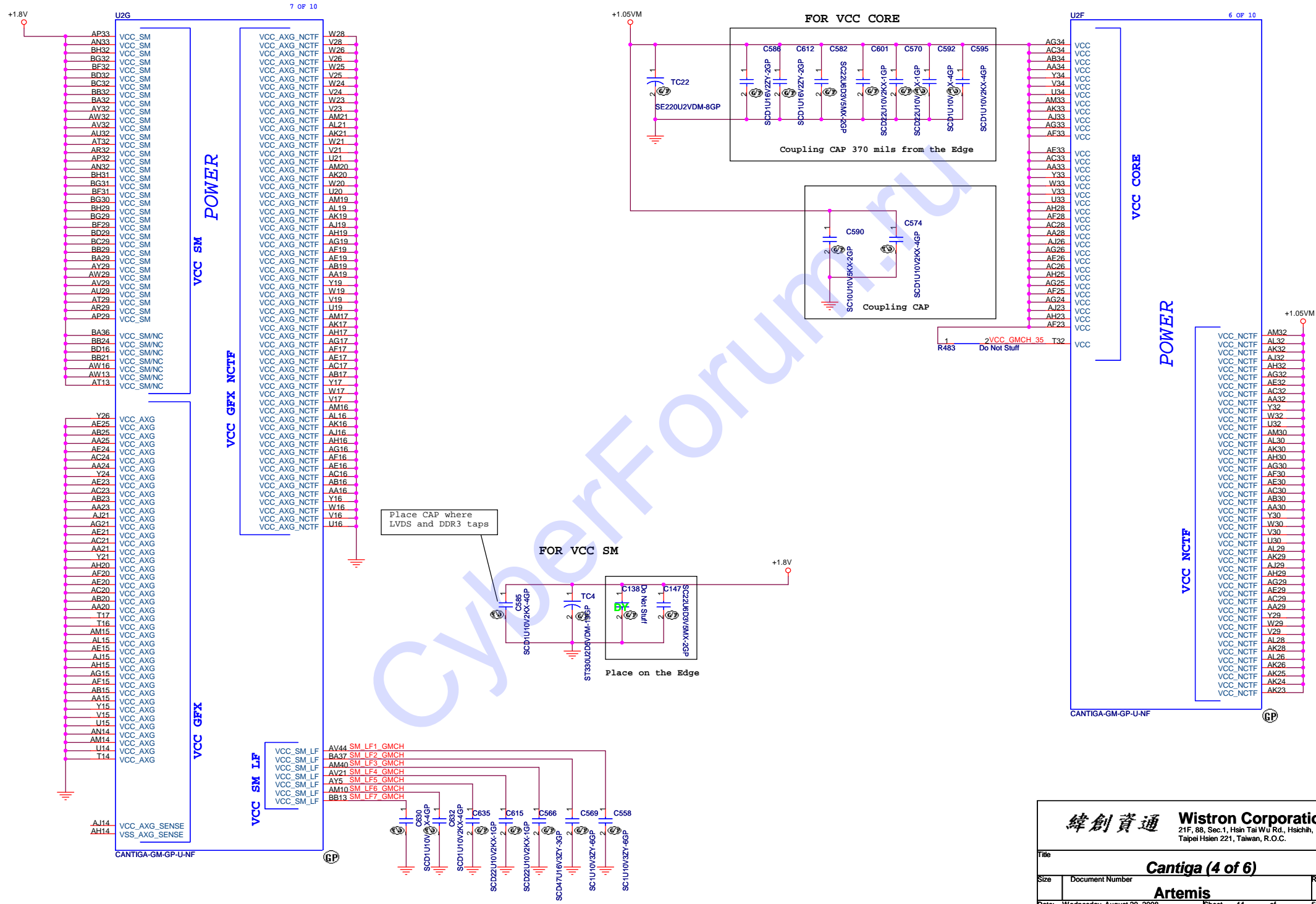
VOX

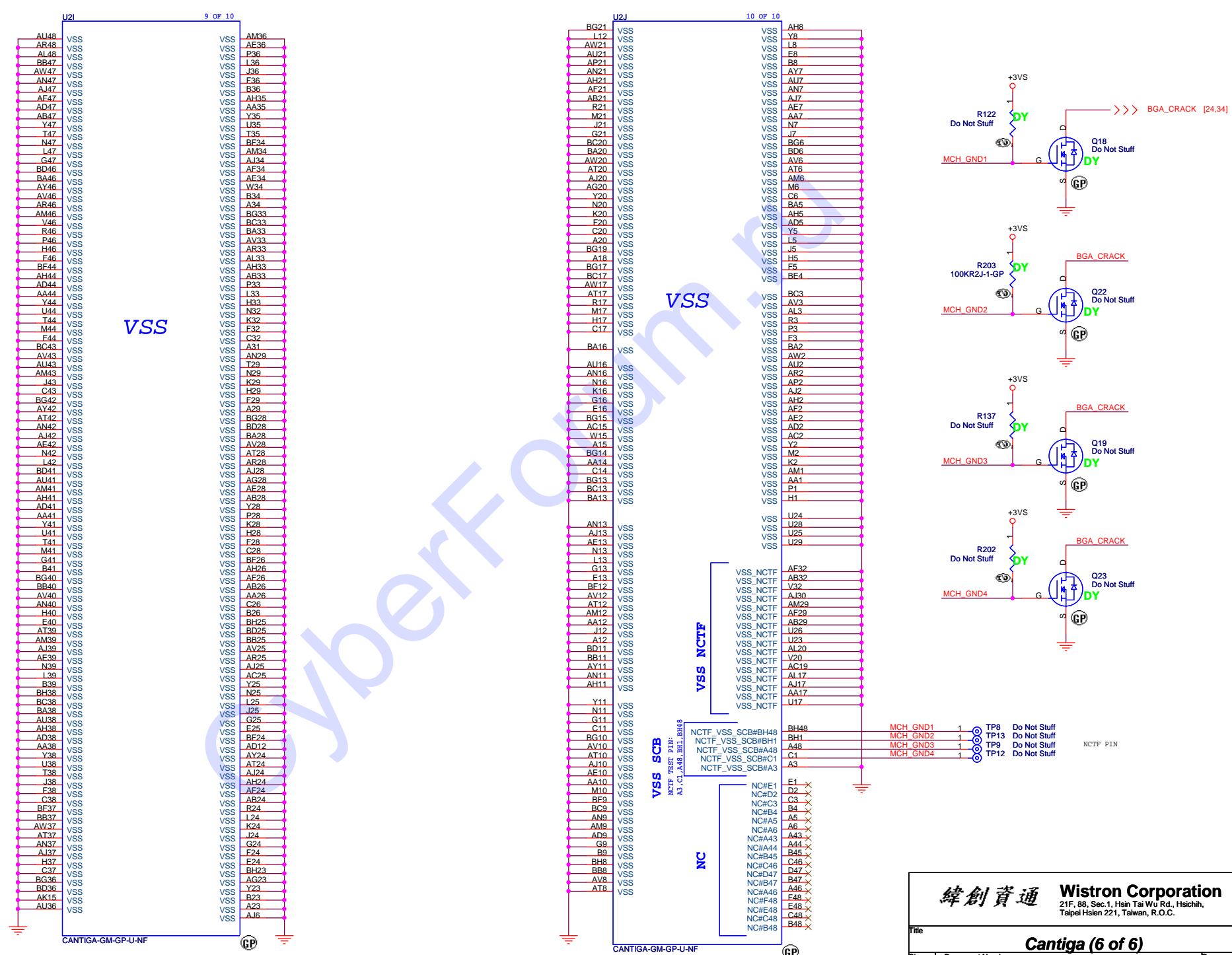
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Cantiga (1 of 6)			
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NB (3 of 6) DDRIII

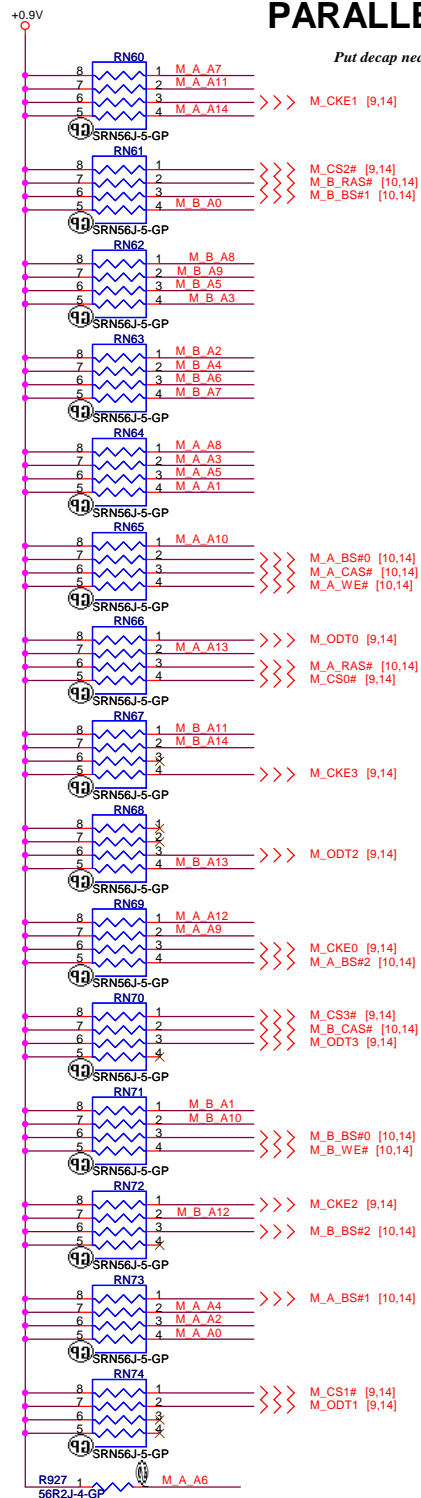






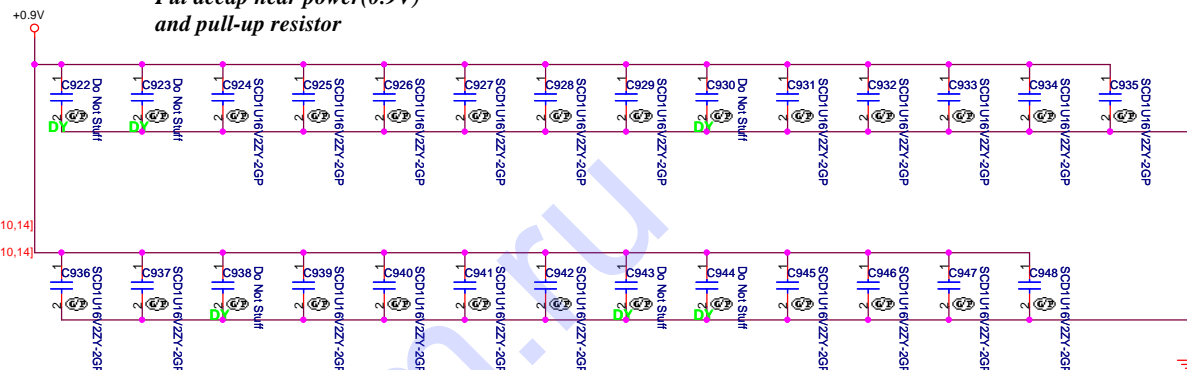
PARALLEL TERMINATION

Put decap near power(0.9V) and pull-up resistor

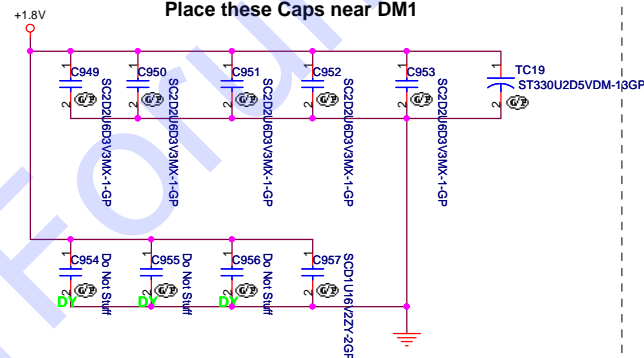


Decoupling Capacitor

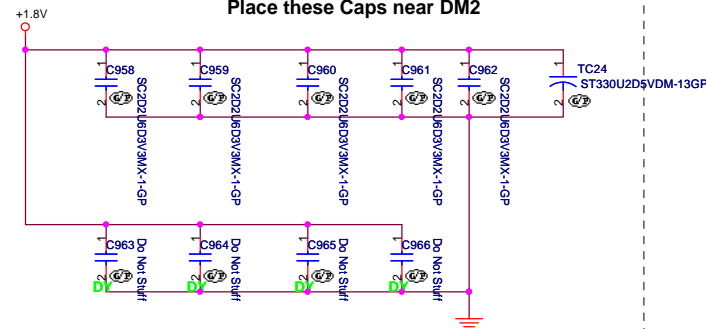
Put decap near power(0.9V) and pull-up resistor



Place these Caps near DM1



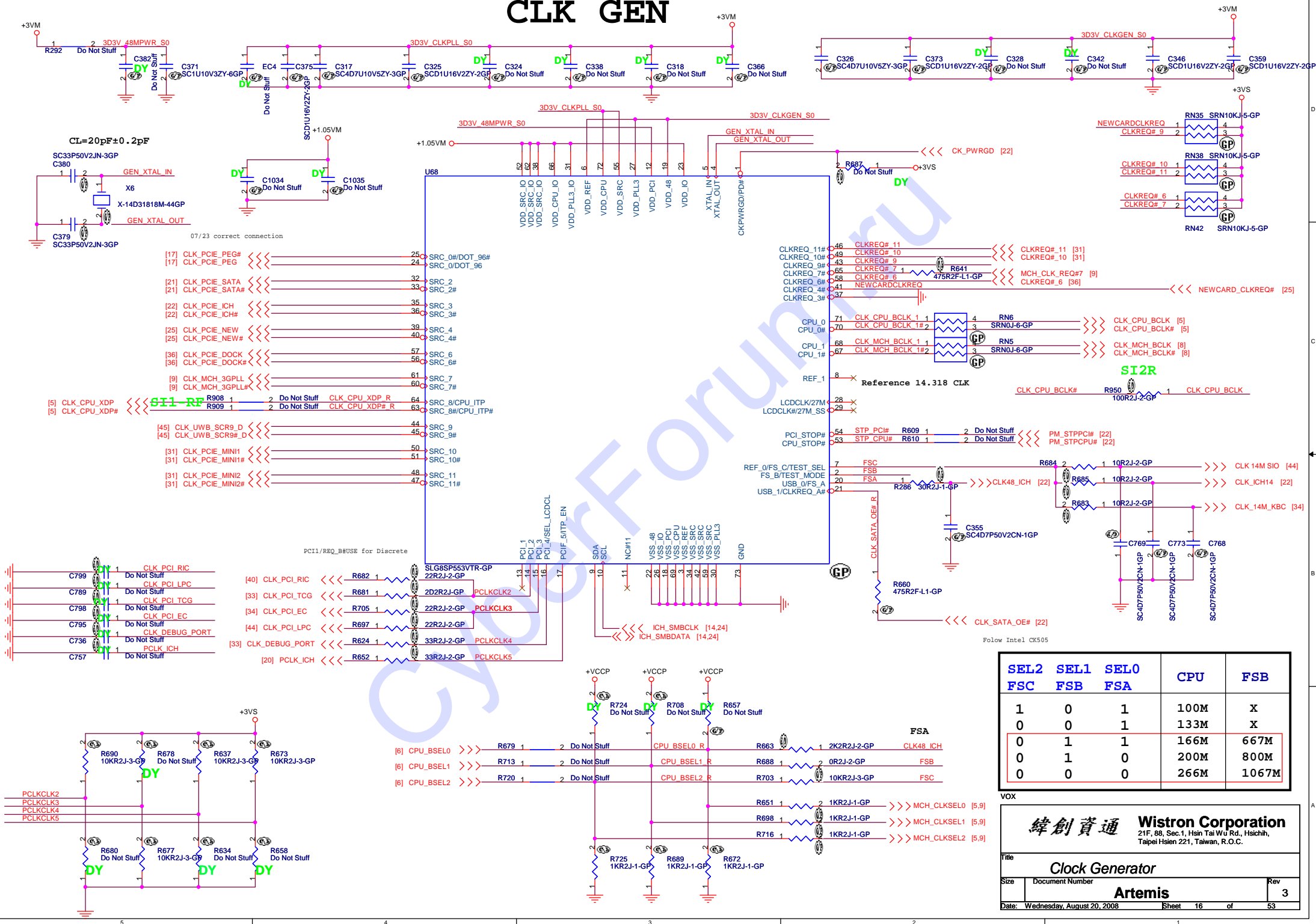
Place these Caps near DM2



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Title			DDR2 Termination Resistor
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CLK GEN



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

VOX

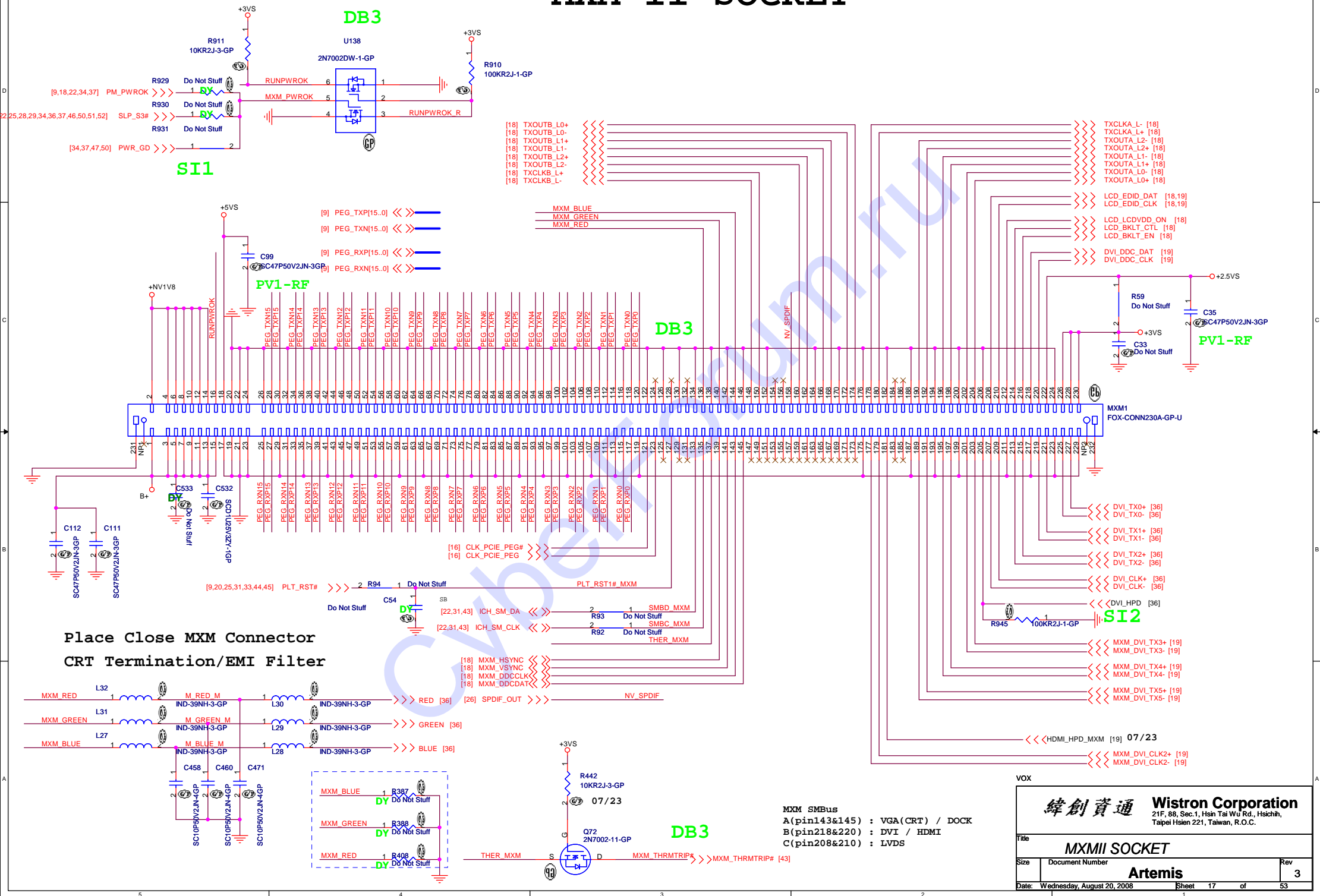
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Title: **Clock Generator**

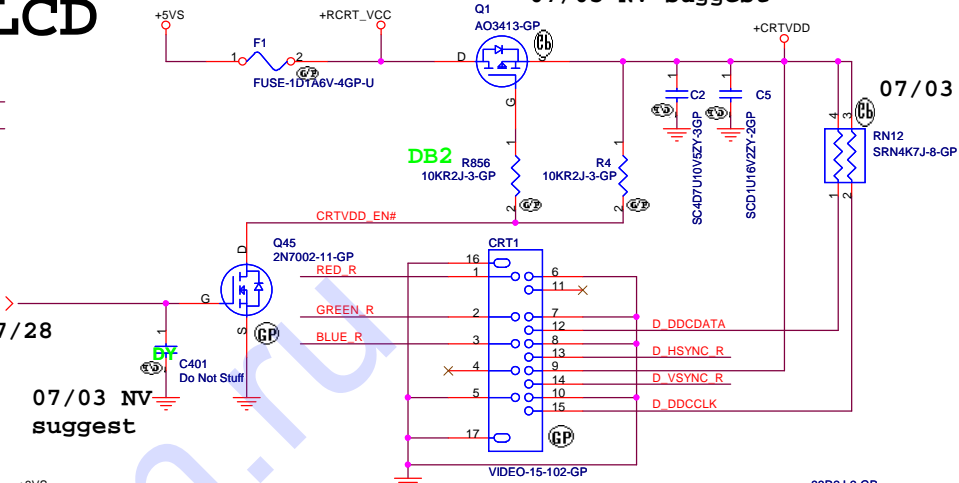
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MXM II SOCKET

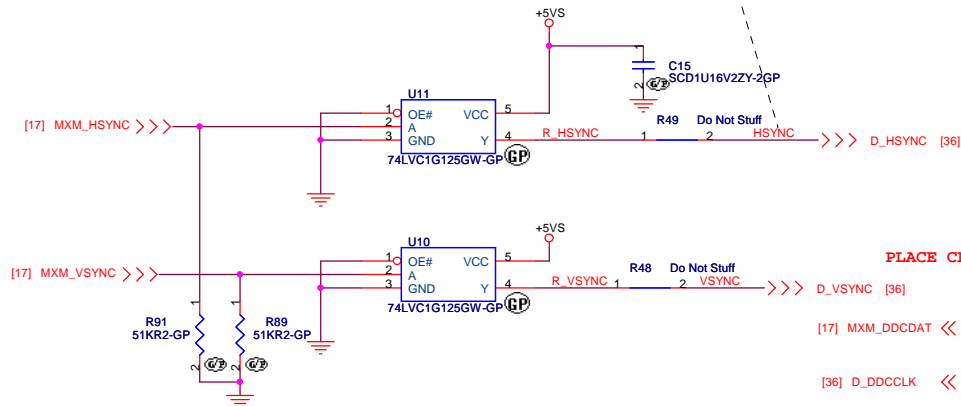


07/03

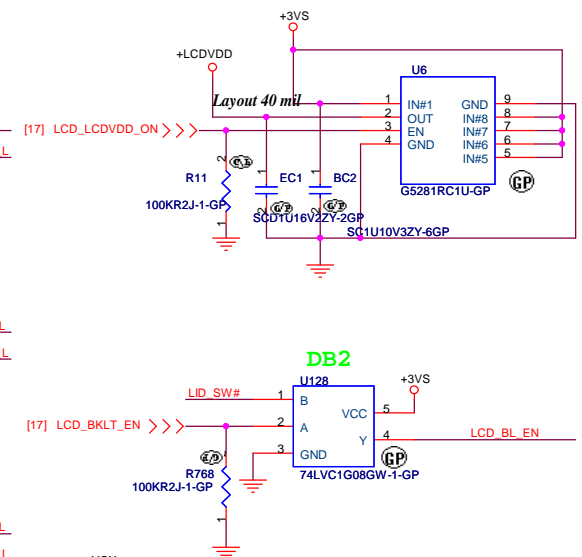
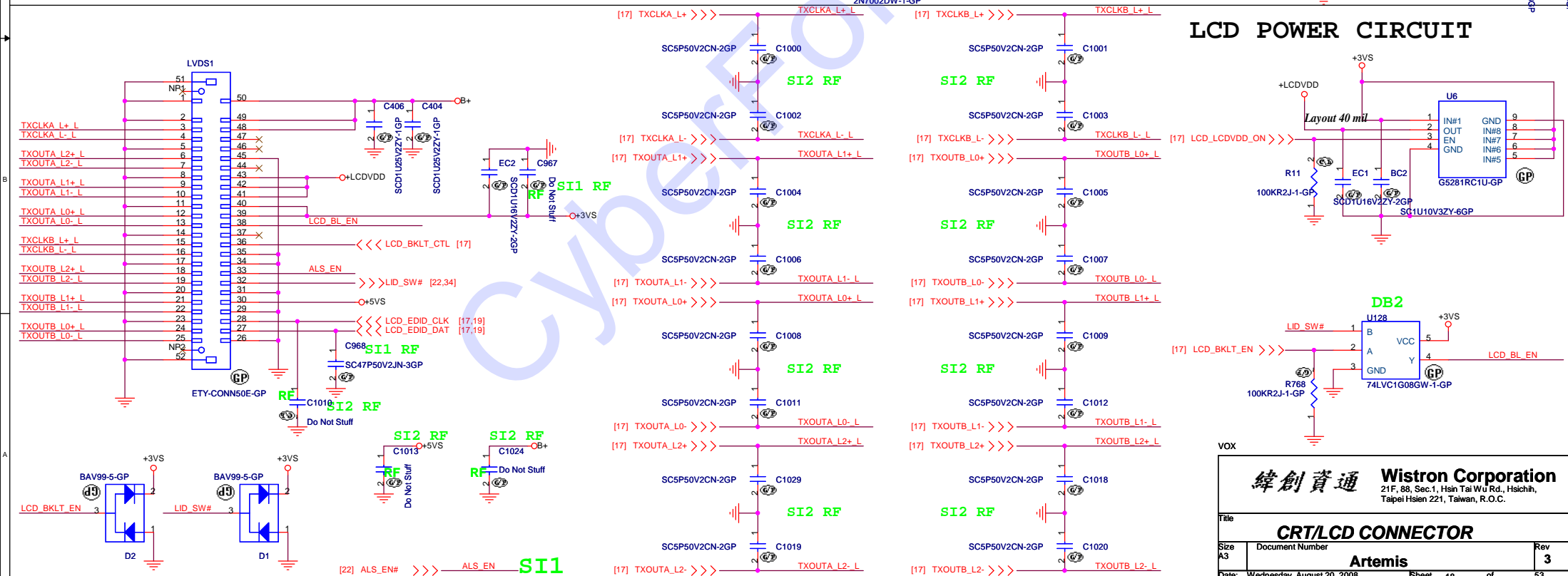
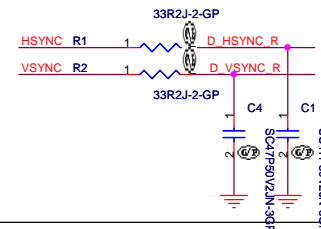
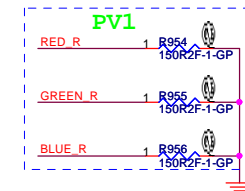


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07/03 N
suggest



07/03

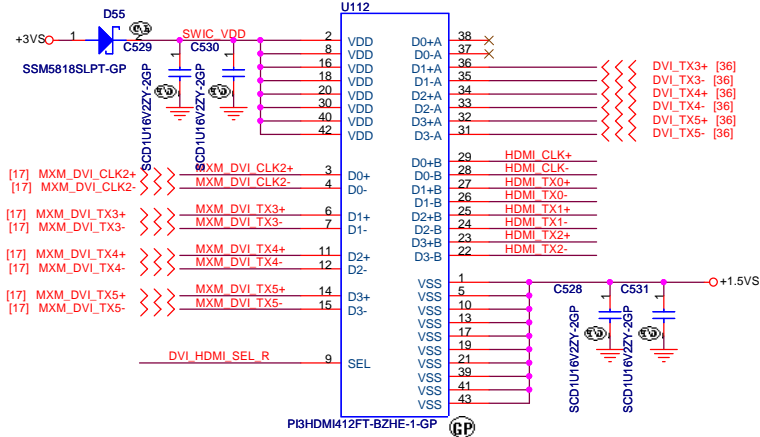


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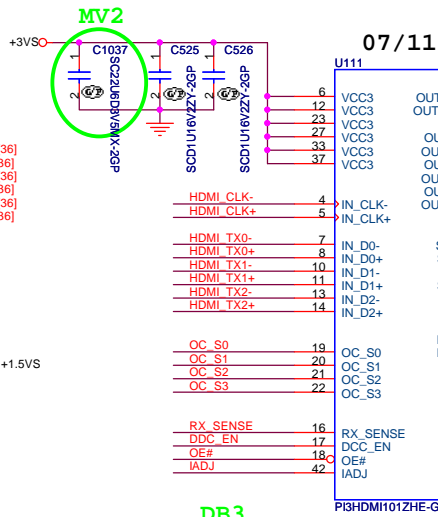
緯創資通 **Wistron Corporation**
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Title			
CRT/LCD CONNECTOR			
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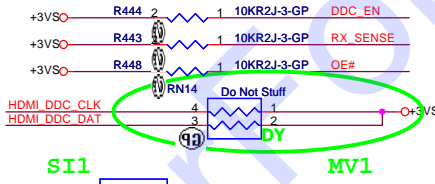
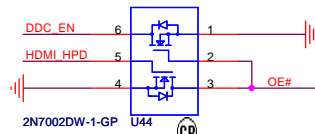
07/23



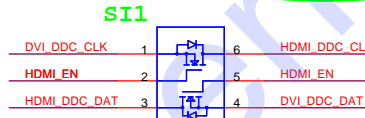
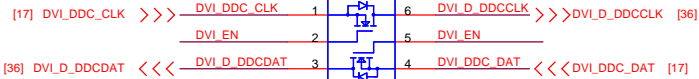
MV2



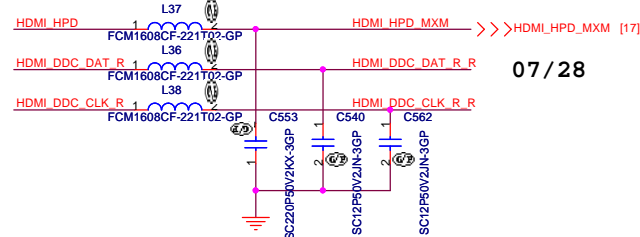
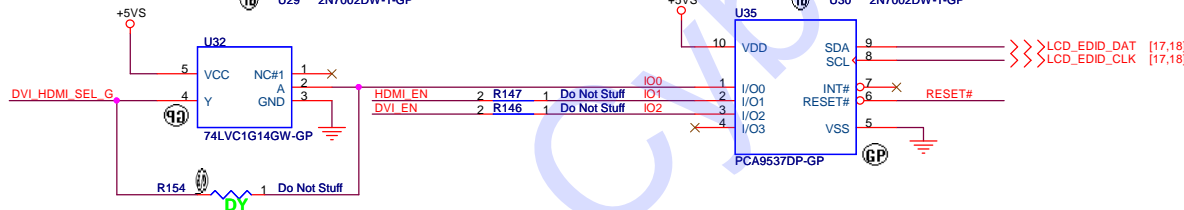
DB3



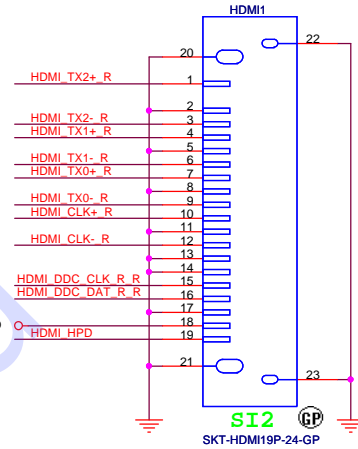
SI1



07/04 NV request



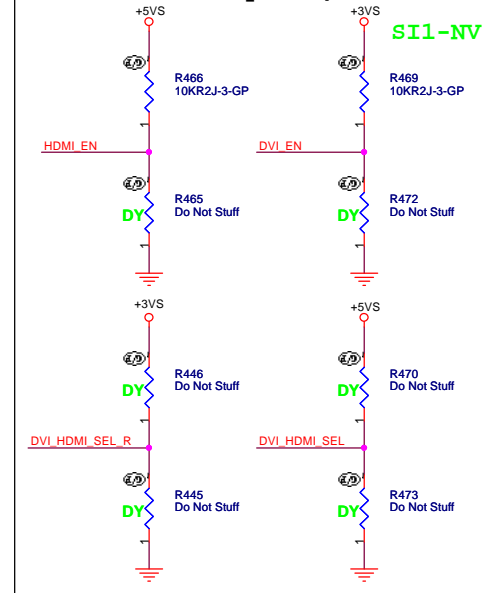
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07/03 NV request



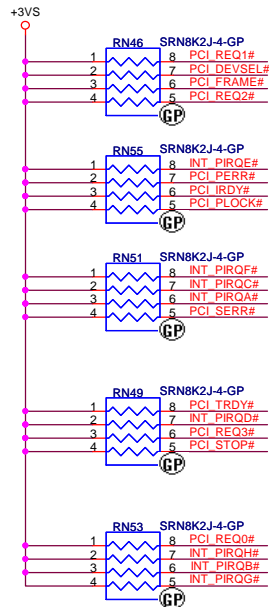
Function option, reserve



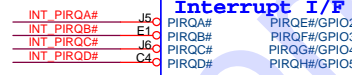
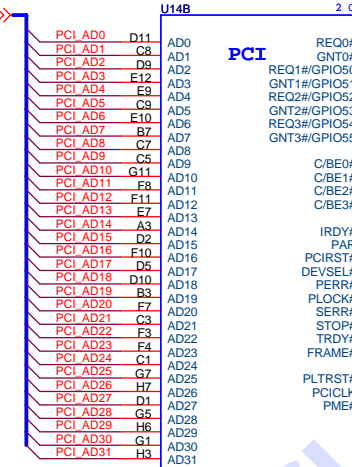
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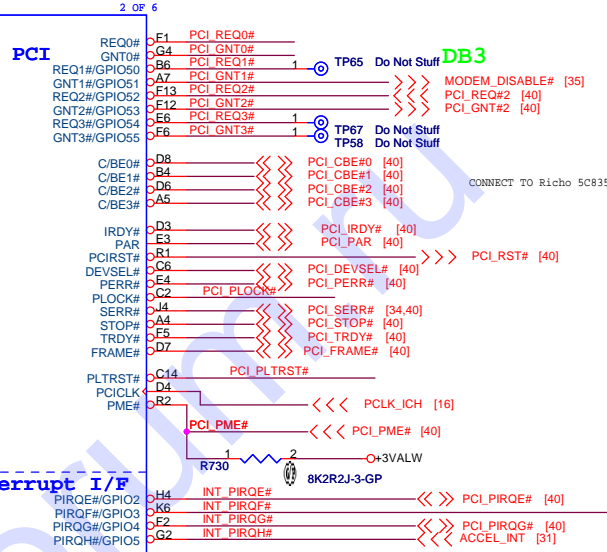
ICH9-M (1 of 5) PCI



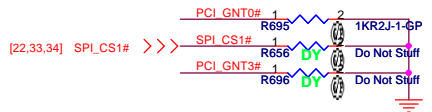
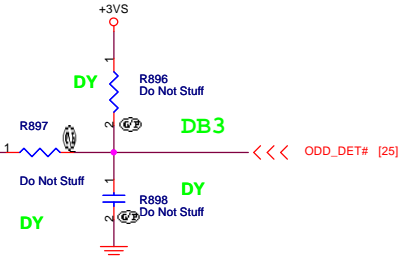
[40] PCI_AD[31..0] <<<



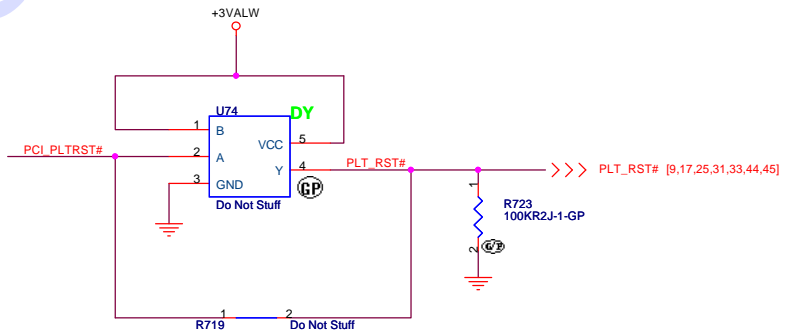
ICH9M-GP-NF



CONNECT TO Richo 5C835



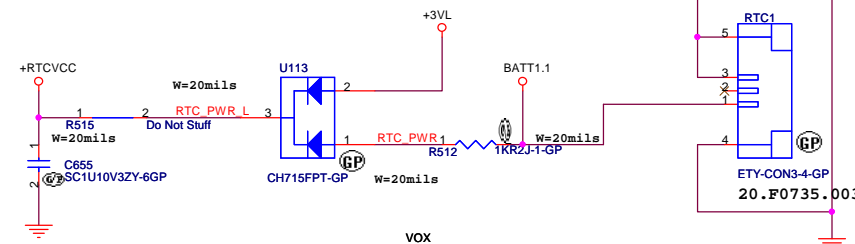
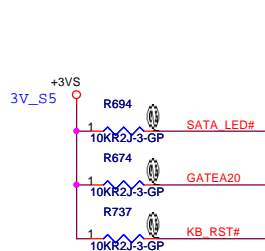
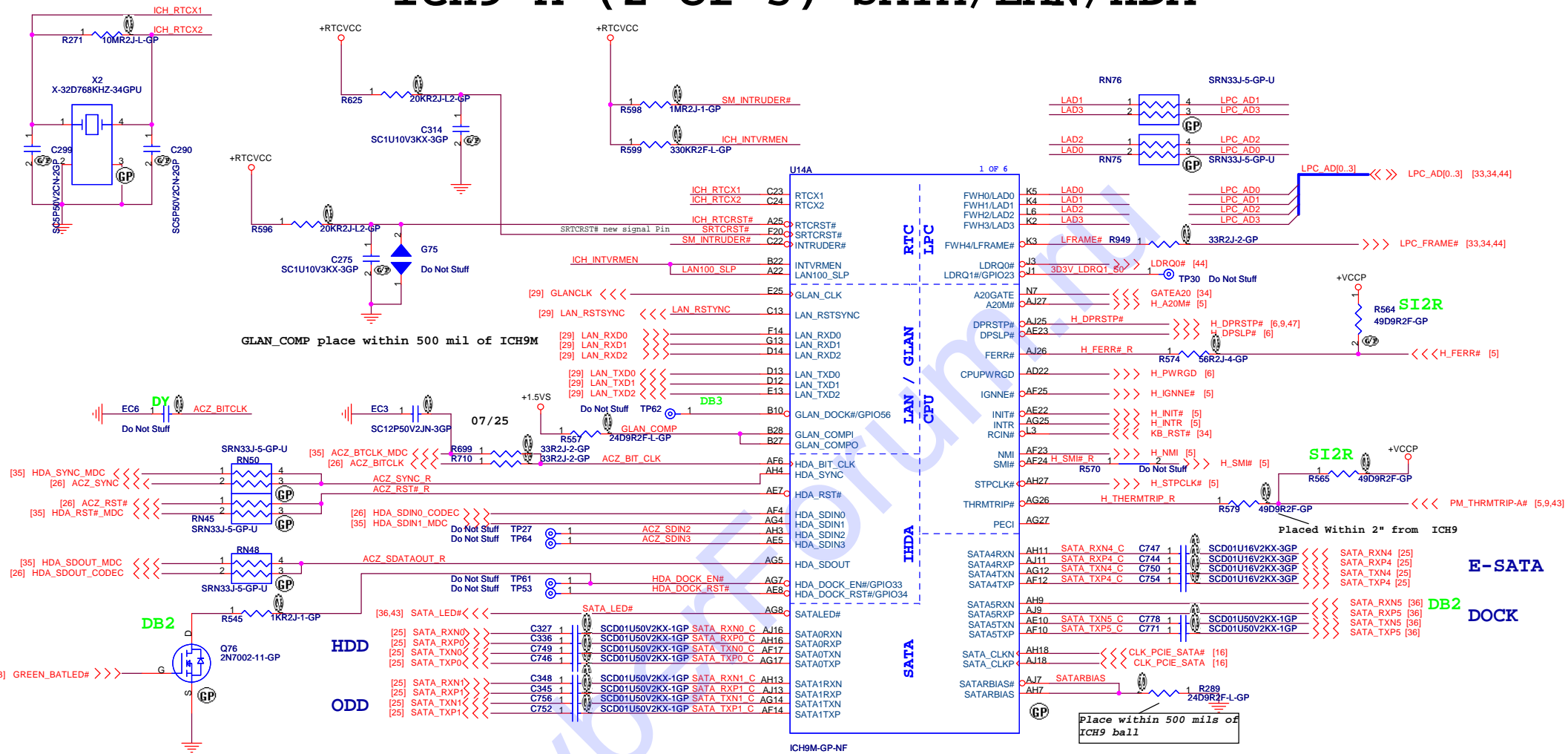
BOOT BIOS Strap		
PCI_GNT#0	SPI_CS#1	BOOT BIOS Location
0	1	SPT
1	0	PCI
1	1	LPC(Default)
A16 swap override strap		
PCI_GNT#3	Low = A16 swap override enable high = default	



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ICH9-M (2 of 5) SATA/LAN/HDA



integrated VccSus1_05,VccSus1_5,VccCL1_5	
INTVRMEN	High=Enable Low=Disable
integrated VccLan1_05VccCL1_05	
LAN100_SLP	High=Enable Low=Disable

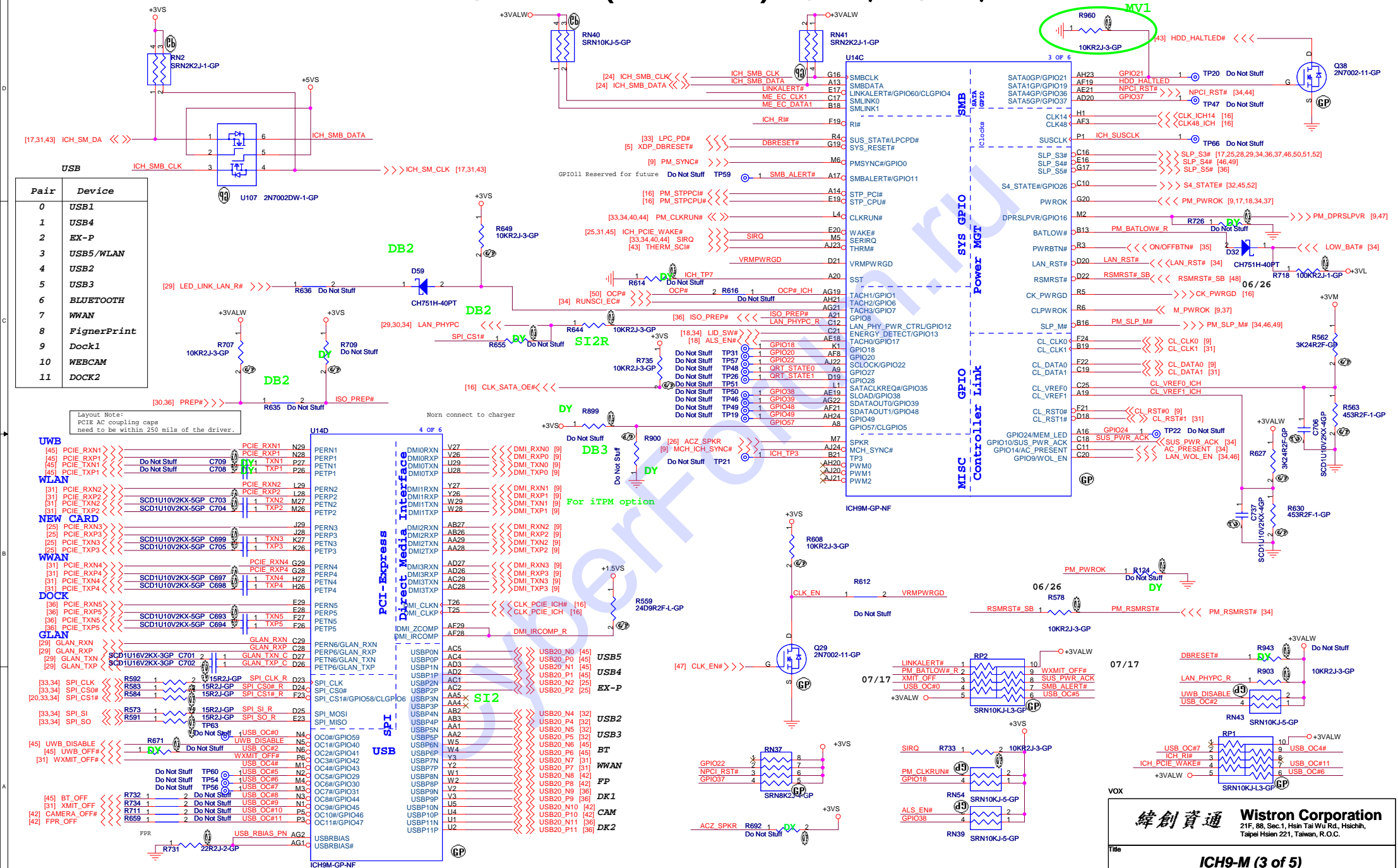
緯創資通 **Wistron Corporation**
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ICH9-M (2 of 5)

Artemis

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ICH9-M (3 of 5) USB/PCIE/DMI





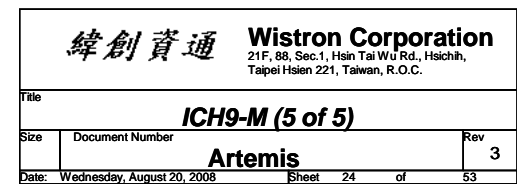
TP29 Do Not Stuff

TP18 Do Not Stuff

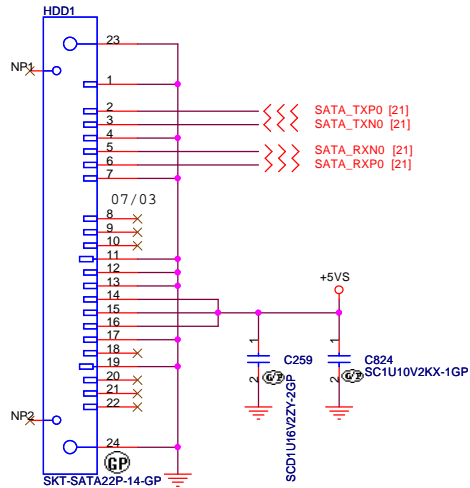
NCTF PIN

TP28 Do Not Stuff

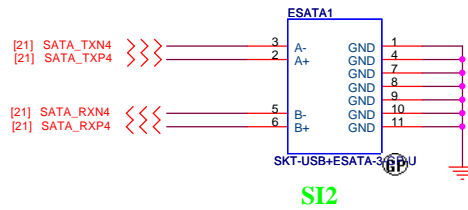
TP17 Do Not Stuff



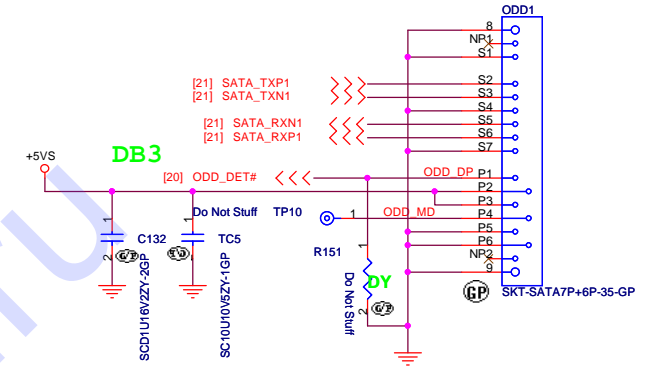
SATA HDD Connector



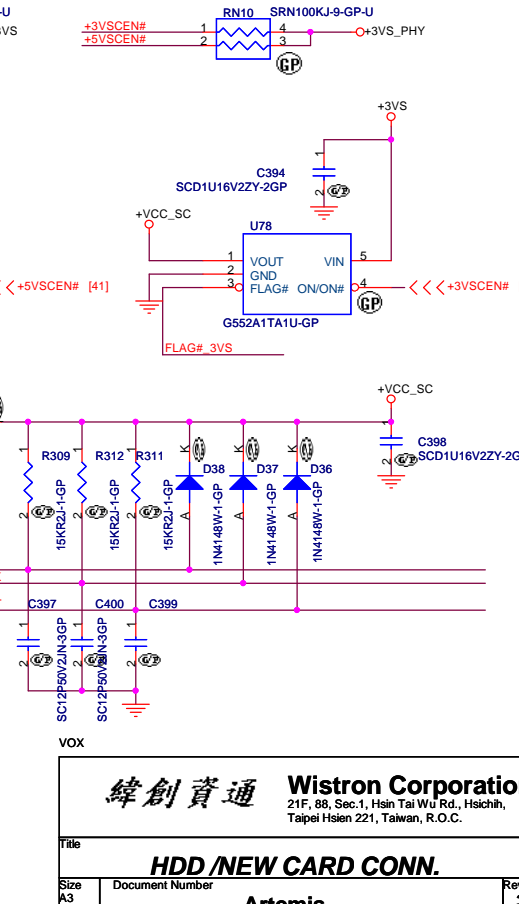
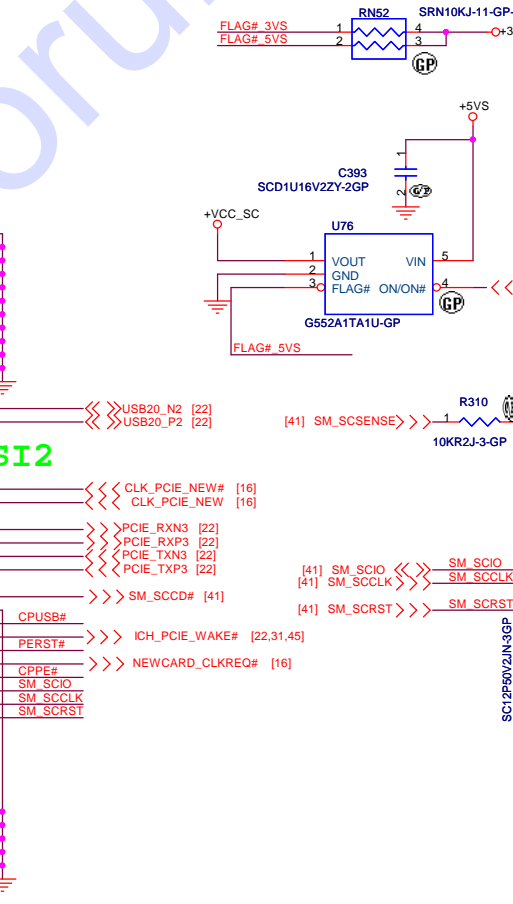
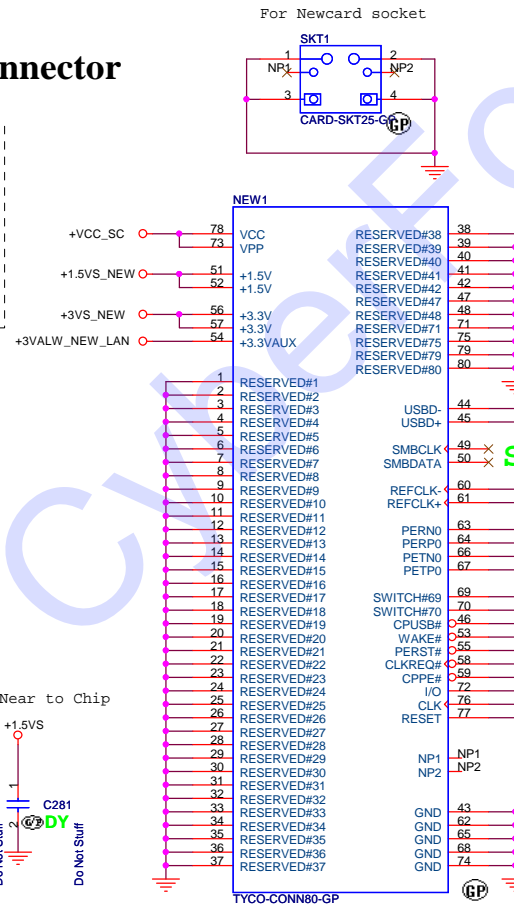
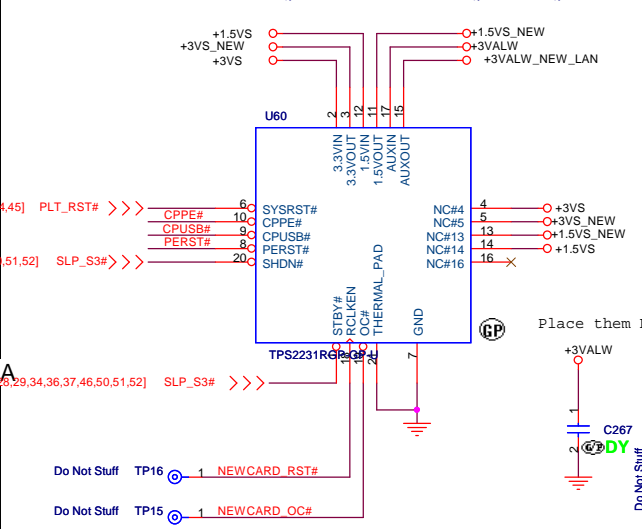
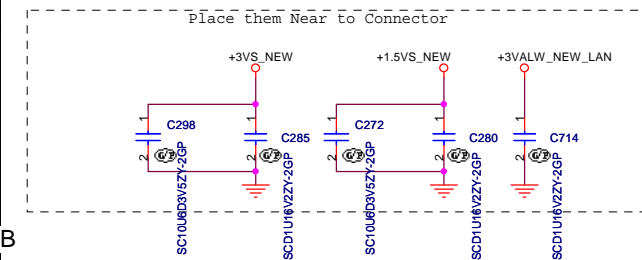
ESATA Connector

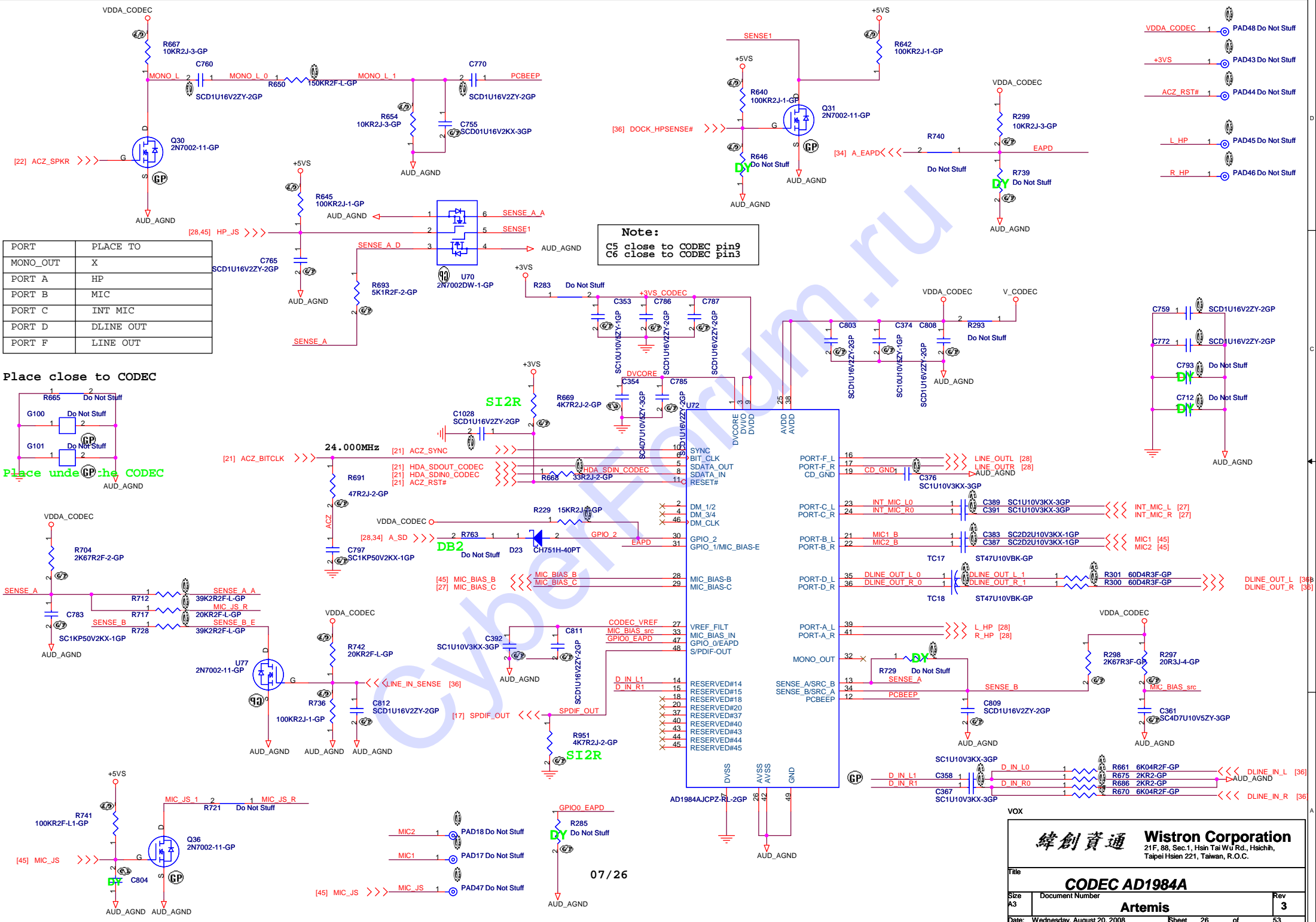


ODD Connector



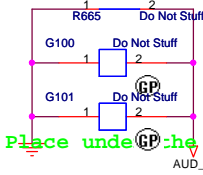
NEWCARD/SMART CARD Connector



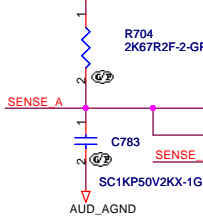


PORT	PLACE TO
MONO_OUT	X
PORT A	HP
PORT B	MIC
PORT C	INT MIC
PORT D	DLINE OUT
PORT F	LINE OUT

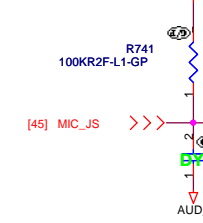
Place close to CODEC



VDDA_CODEC

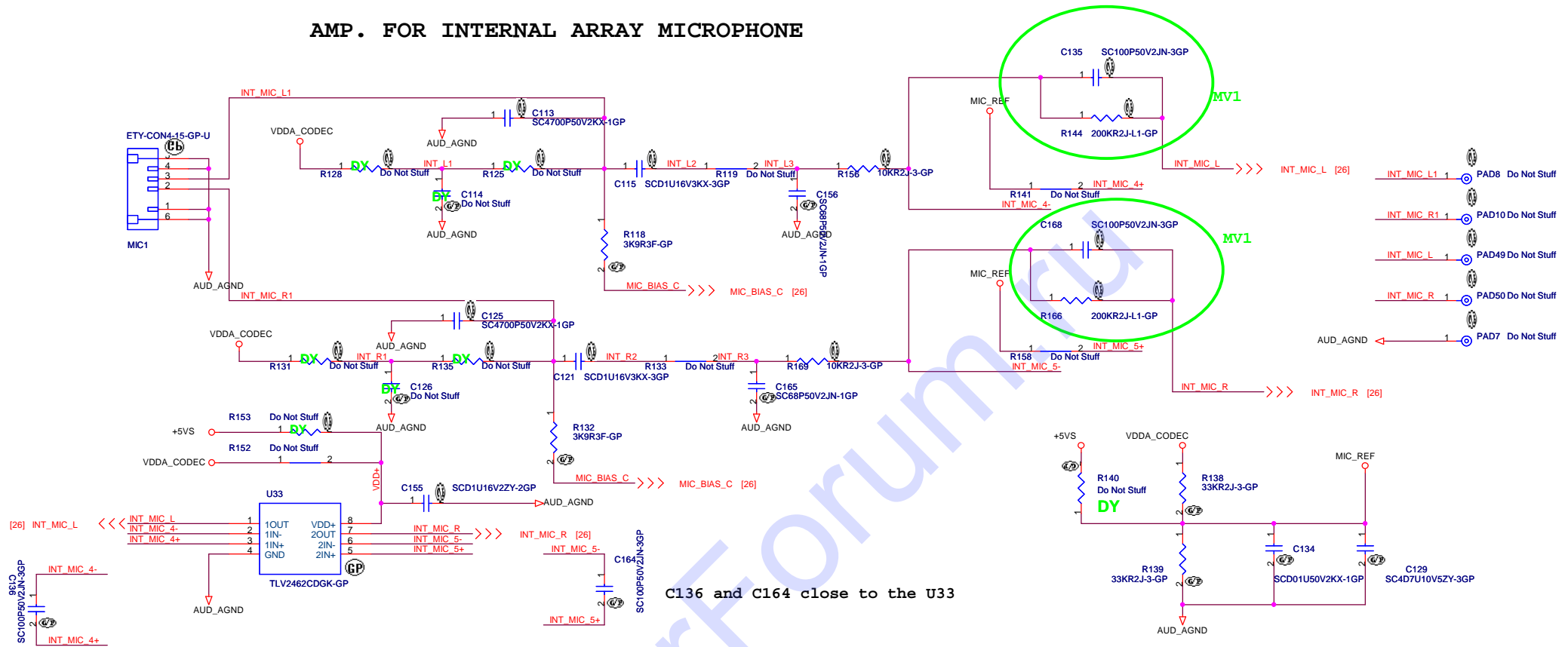


+5VS



Note:
C5 close to CODEC pin9
C6 close to CODEC pin3

AMP. FOR INTERNAL ARRAY MICROPHONE



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INT MIC		
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SI2R

+5VS

R291 0R5J-5-GP

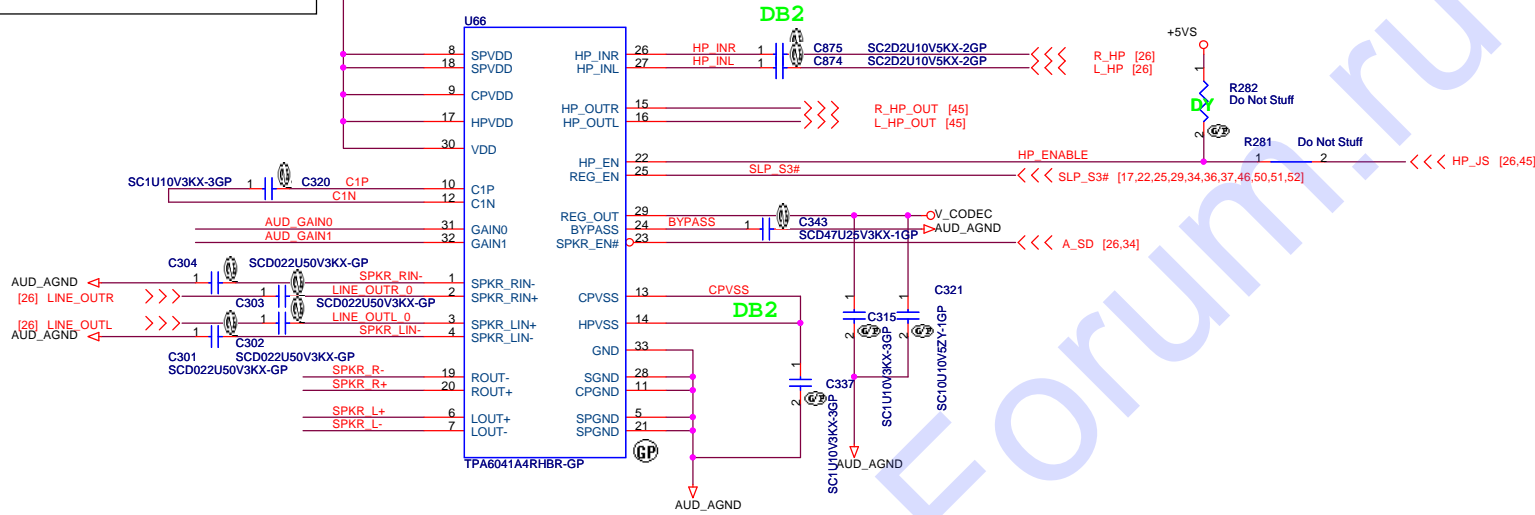
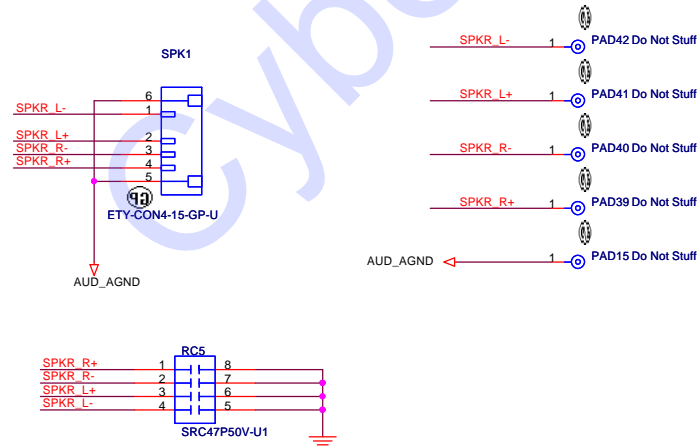
+5VAMP

Note:

pin8, pin9 and pin17, pin18
are in opposite corners of U3010

pin17, pin18 together and C26, C27
very close to the pins
pin8, pin9 together and C28, C29
very close to the pins

C32 close to the pin30

**Speaker CONN.**

VOX

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Title

AMP & SPEAKER

Size

Document Number

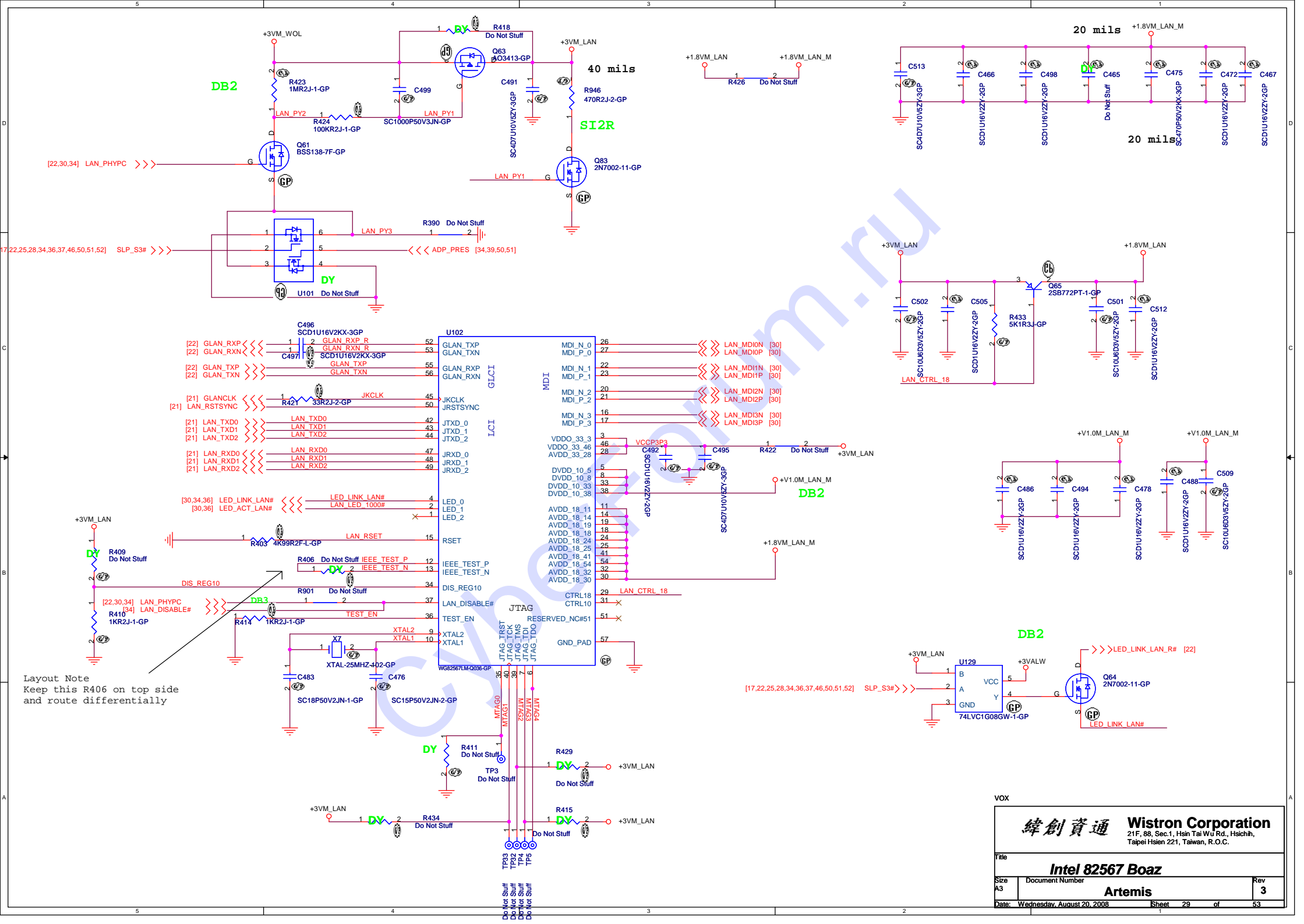
Artemis

Rev

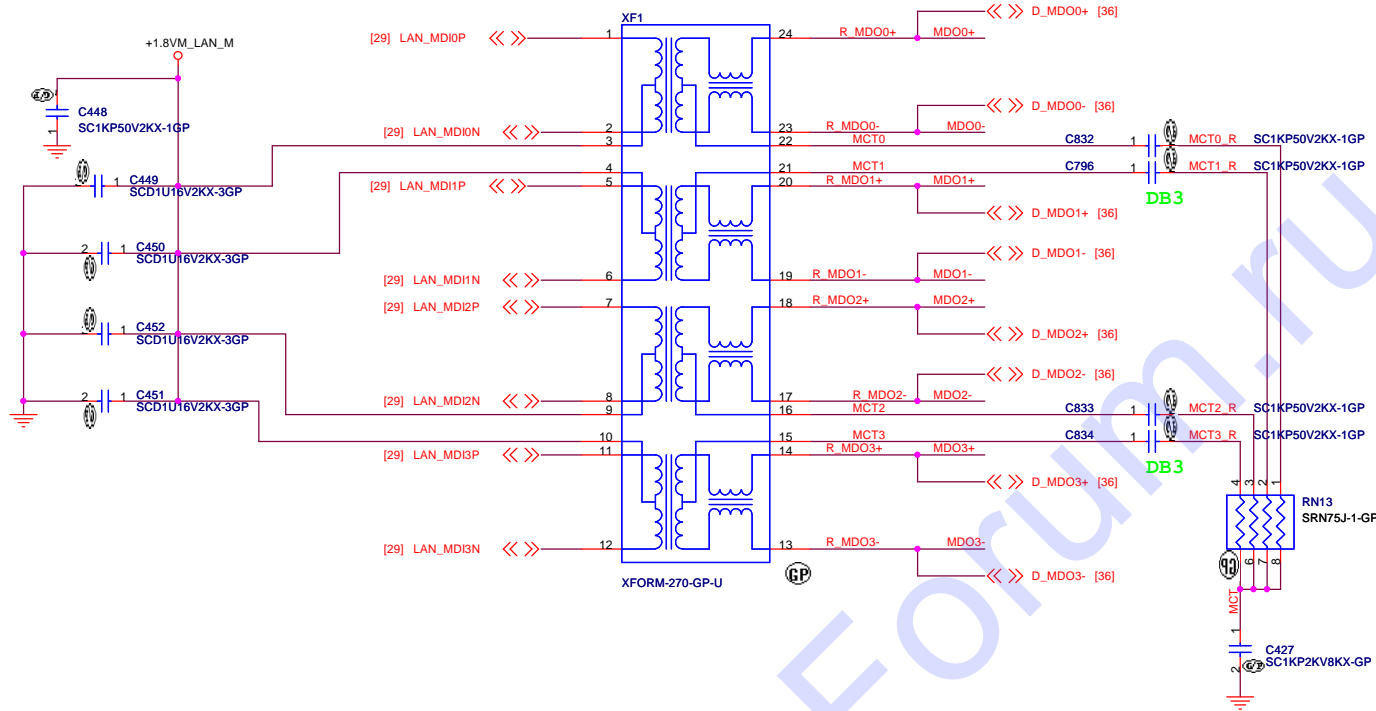
3

Date: Wednesday, August 20, 2008

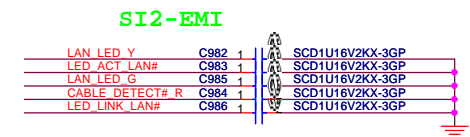
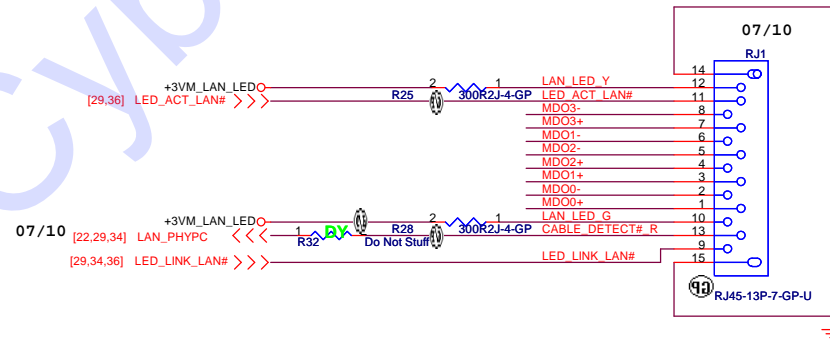
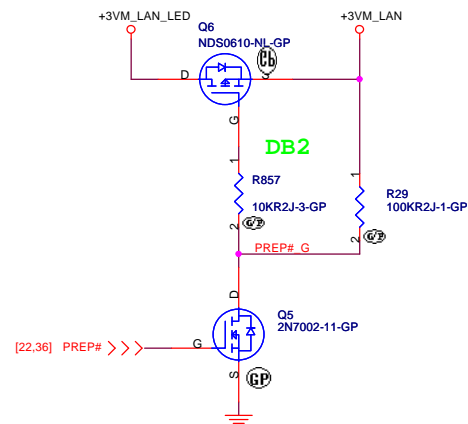
Sheet 28 of 53



Note : MDO[3..0]+- signals should route to RJ45 first then to DOCK CONN .



LAN ENERGY DET

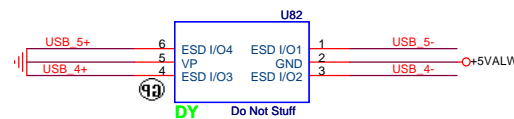
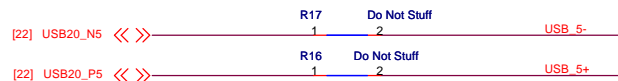
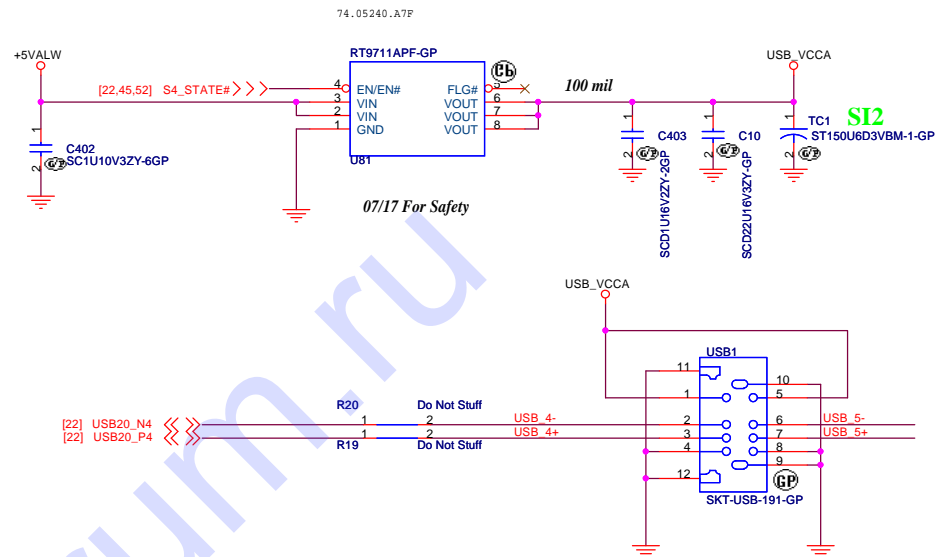


VOX

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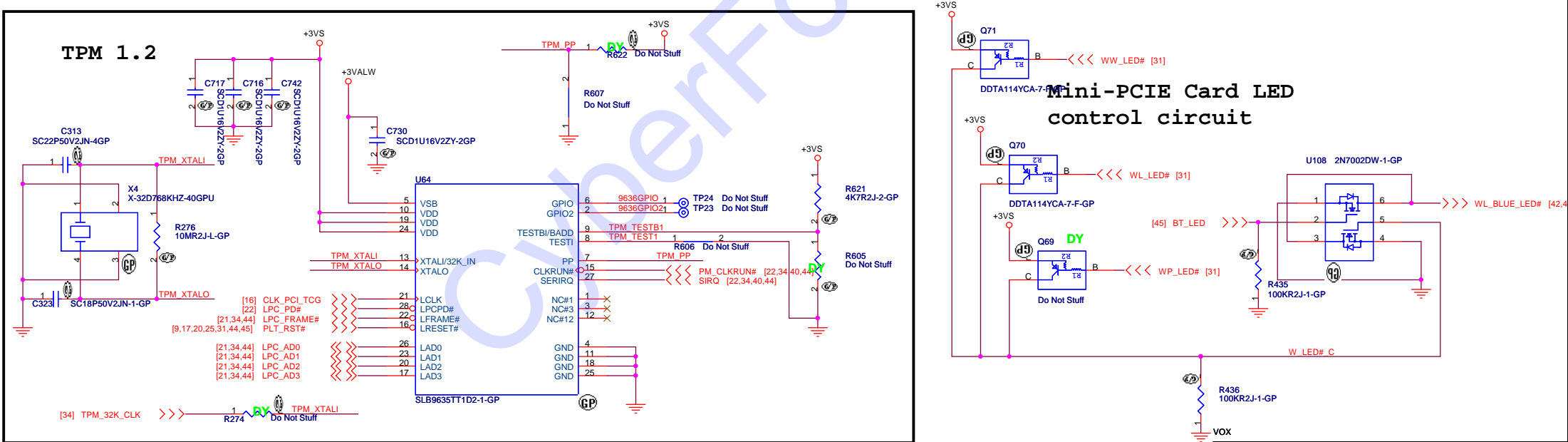
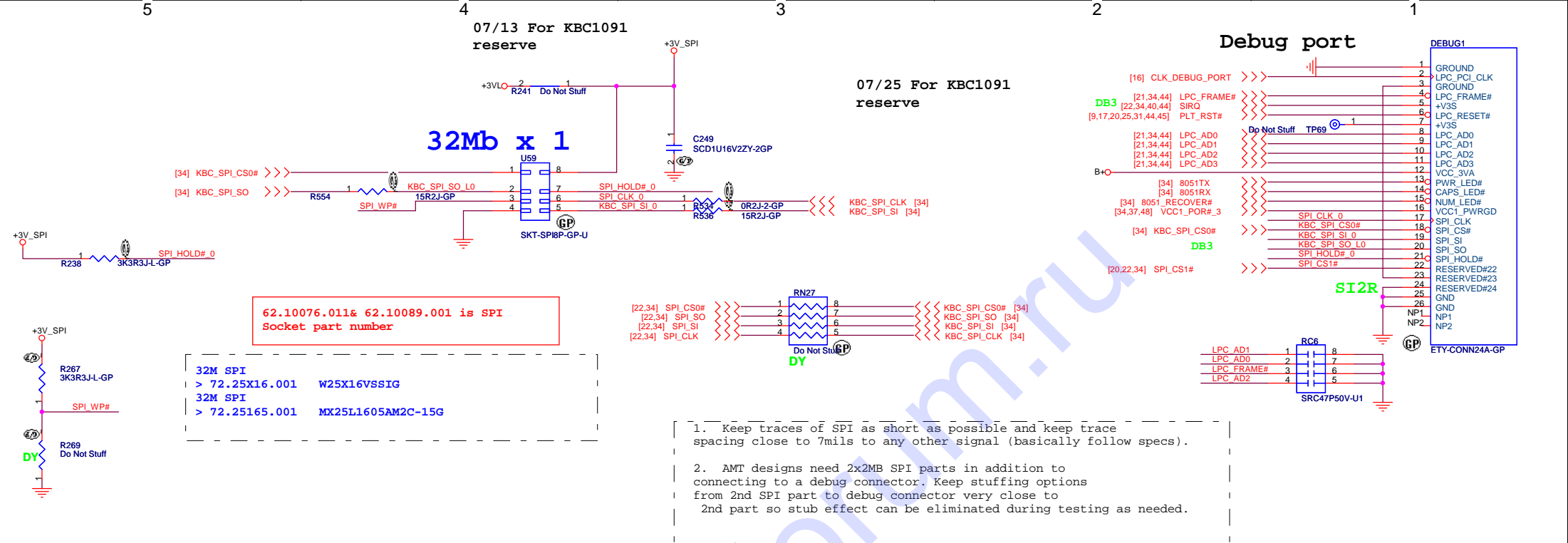
Title			
Magnetic & RJ45			
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74.02231.073-->74.00577.A73,74.05538.073
2462--G1224



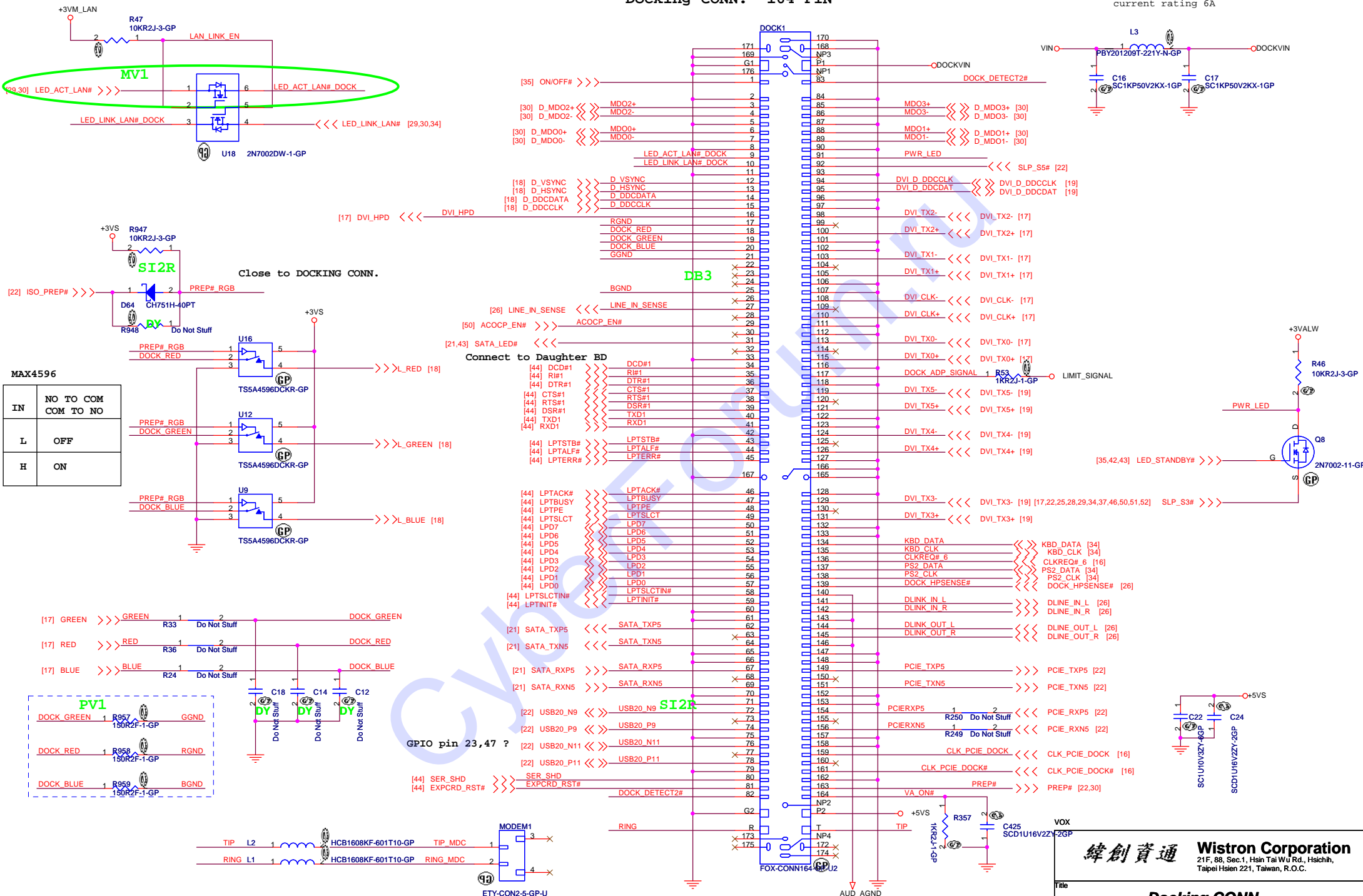
VOX

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USB Connector	
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Docking CONN. 164 PIN

current rating 6A

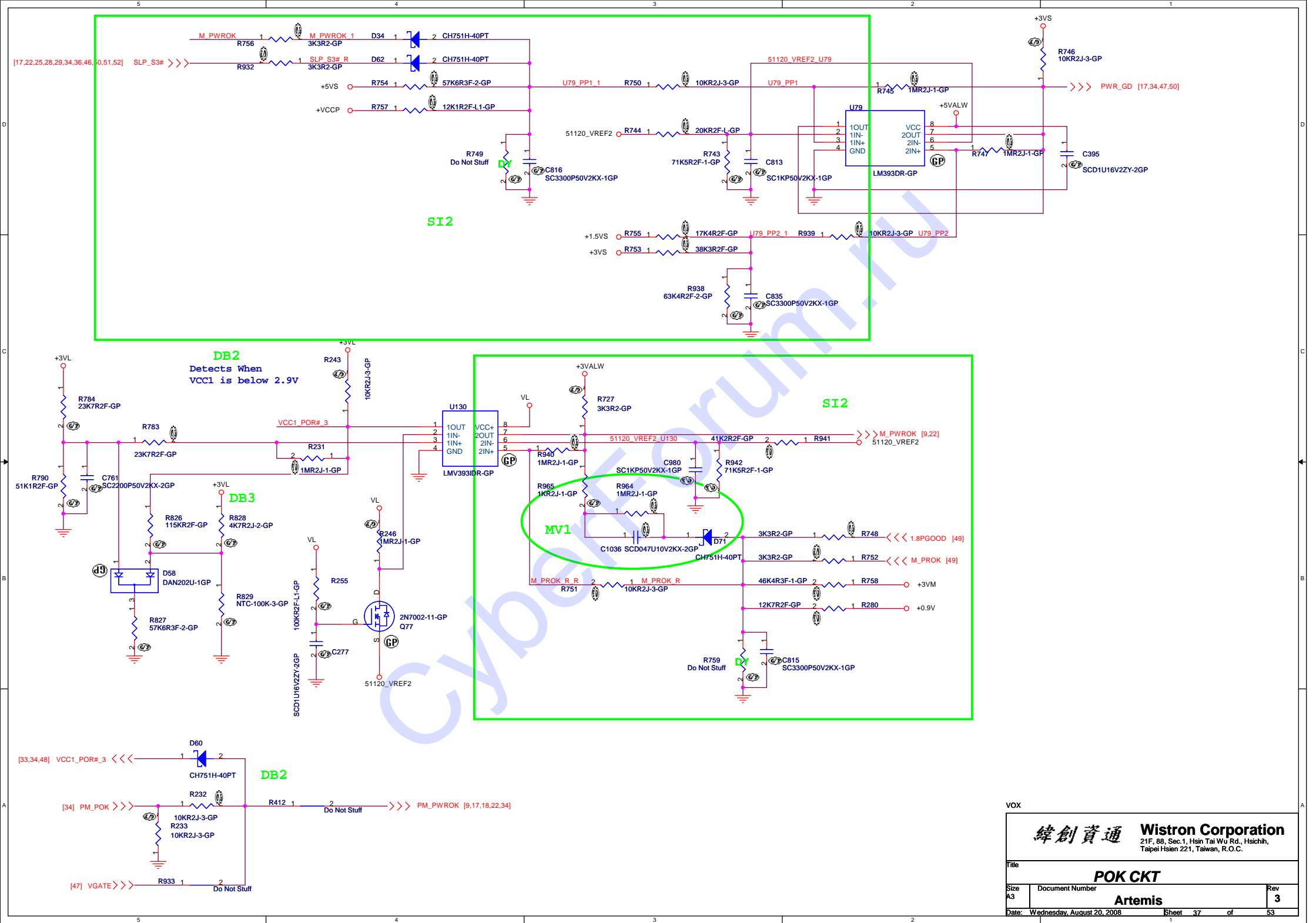


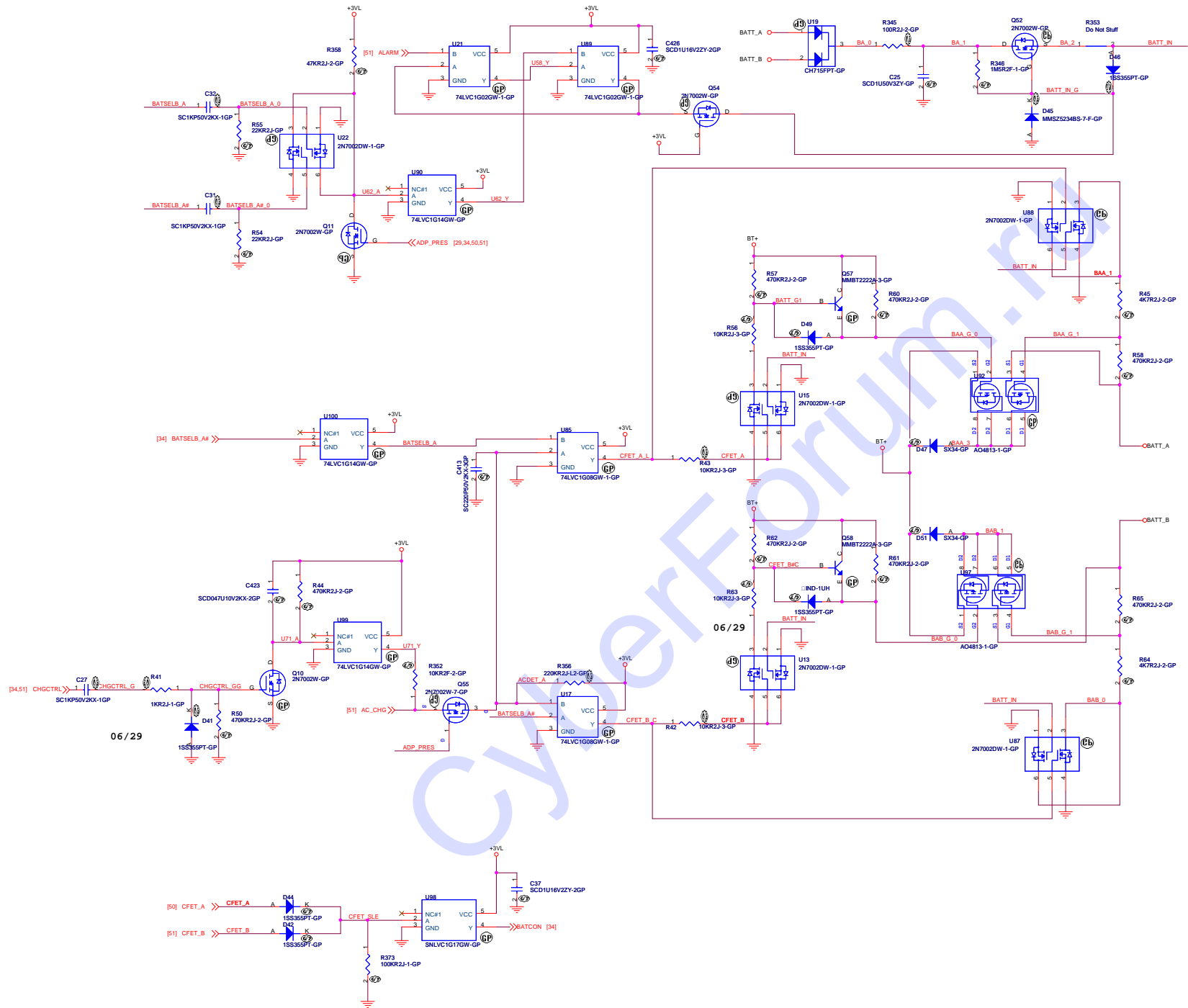
Layout Notes :
Place MODEM1 & BEAD near Docking connector

For TTP and Ring cut all layers

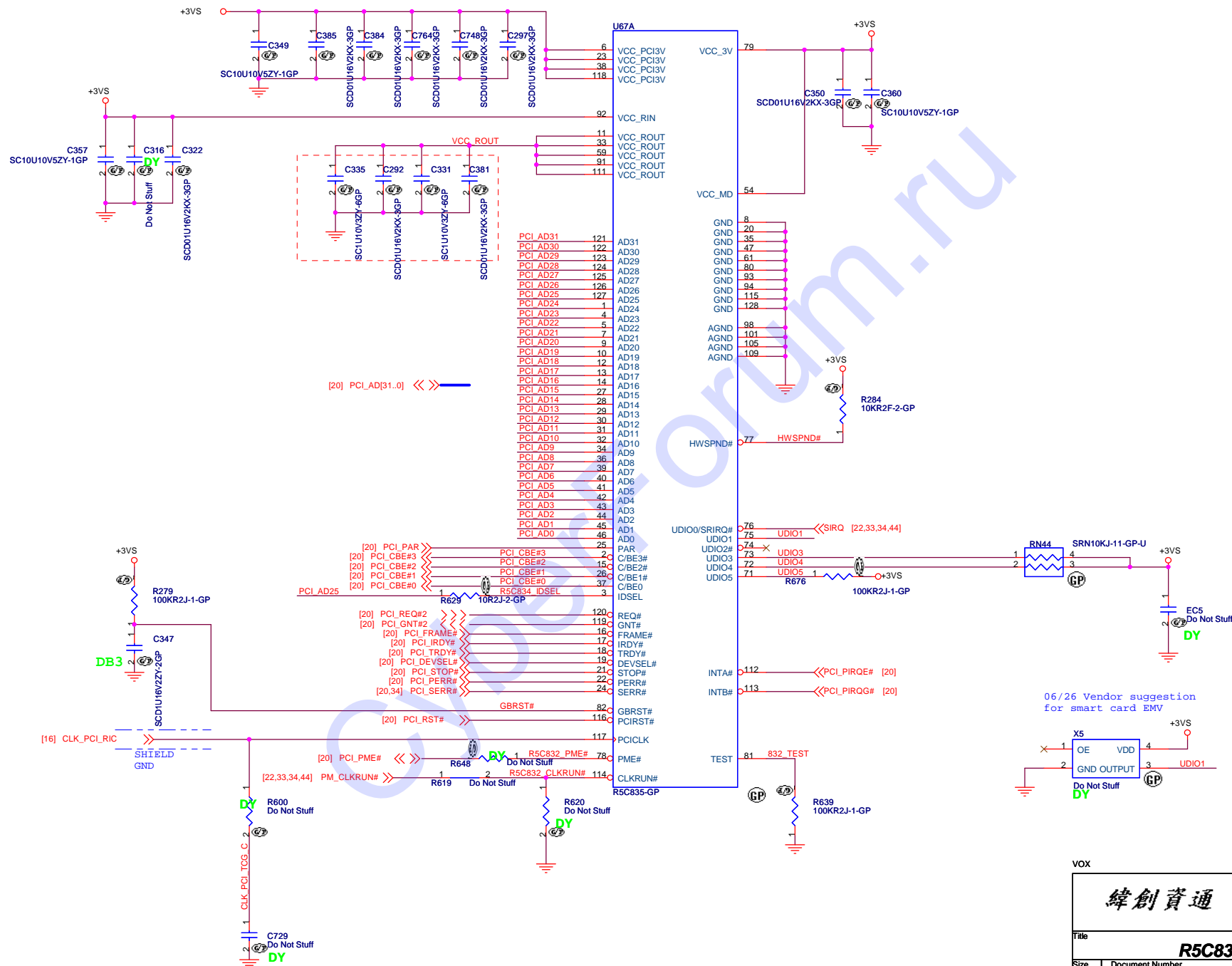
緯創資通 Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.

Docking CONN			
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RICOH R5C835 (1 OF 2) PCI



VOX

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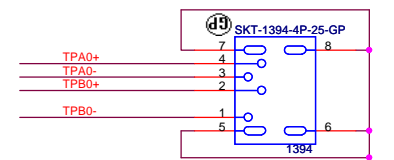
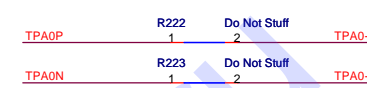
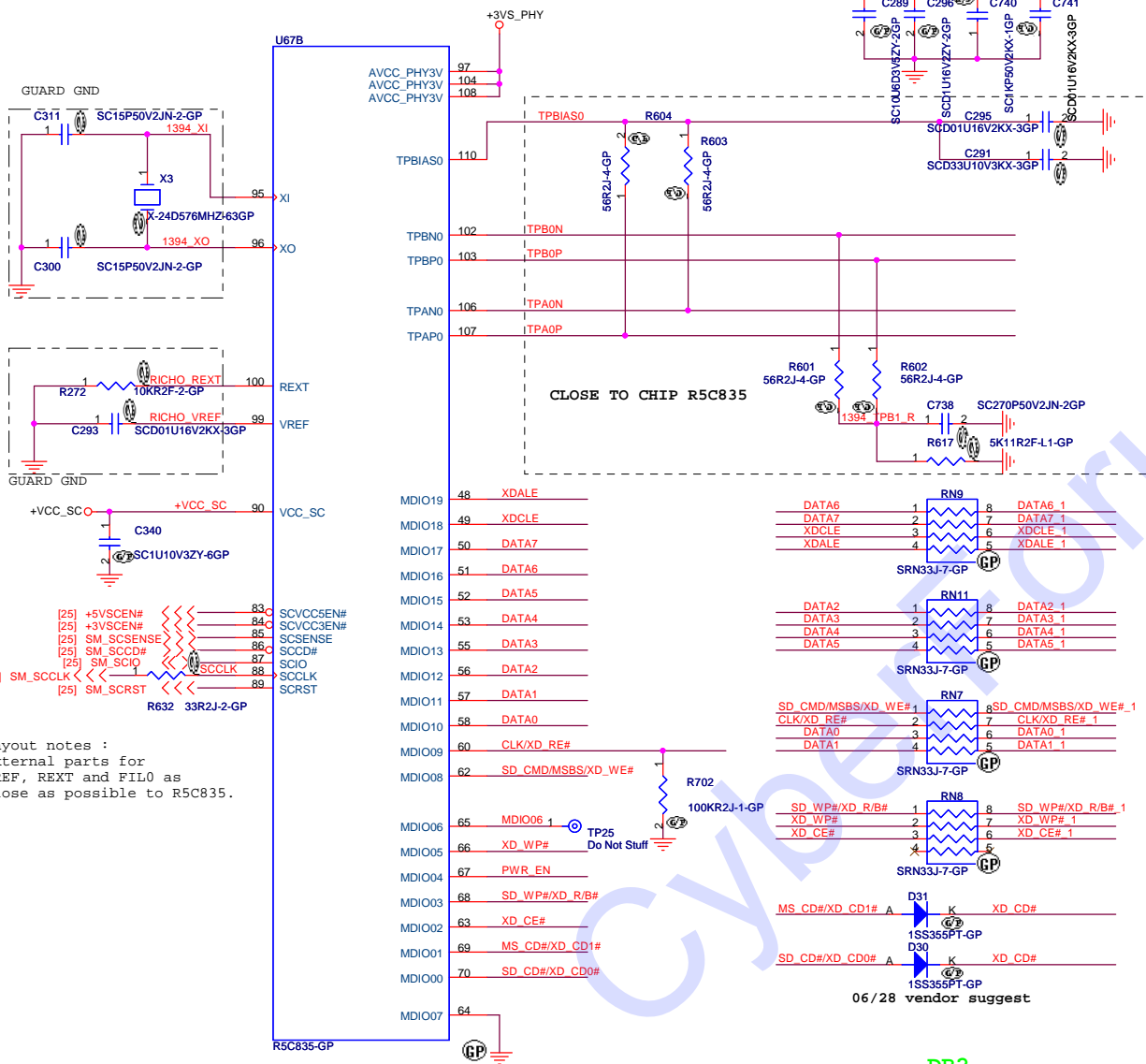
Title			
<i>R5C835/PC1</i>			
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RICOH R5C835 (2 OF 2)

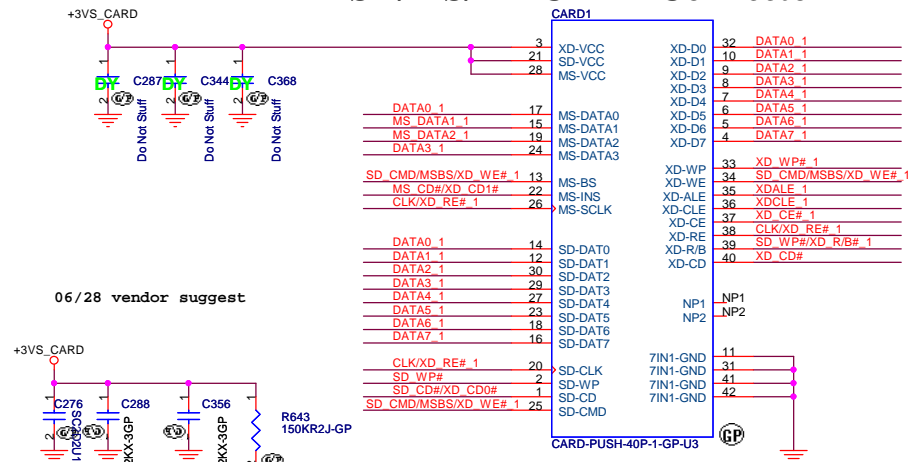
Layout notes :
1394

=====GND
-----TPB0-
-----TPB0+
-----GND
-----TPA0-
-----TPA0+
=====GND

06/28 vendor suggest

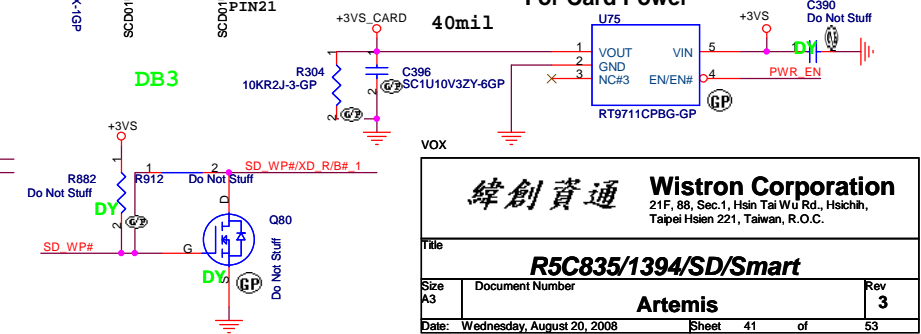


SD/MS/XD CARD Connector

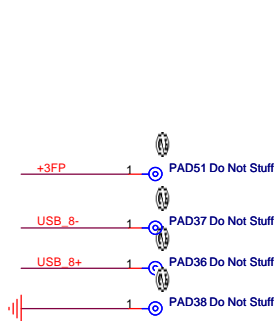
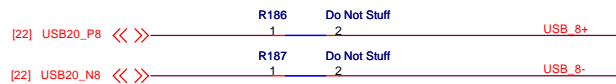
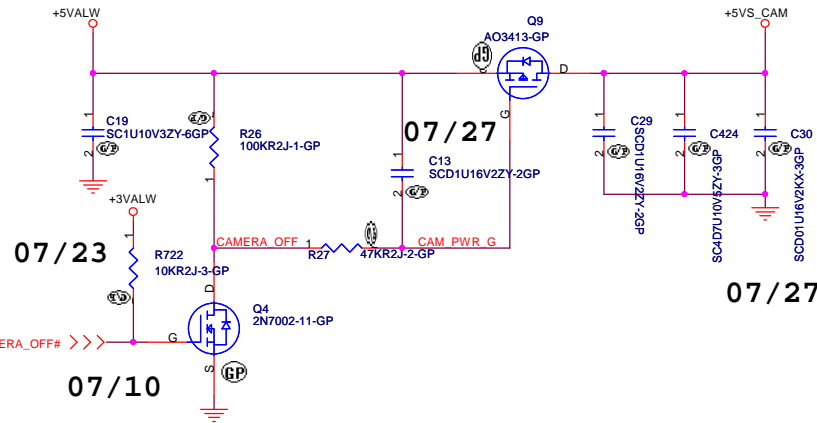


06/28 vendor suggest

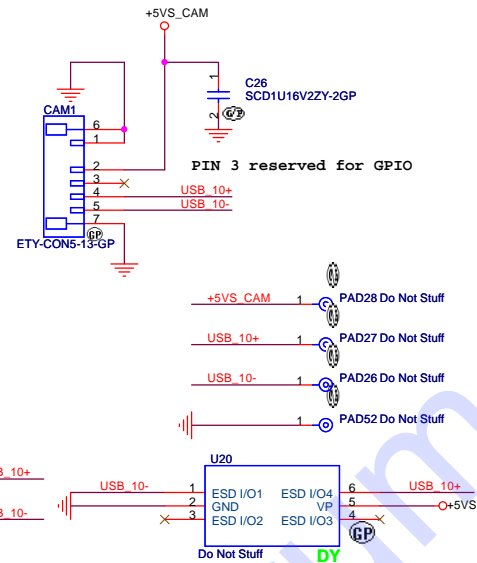
For Card Power



FingerPrint



CAMERA Conn.

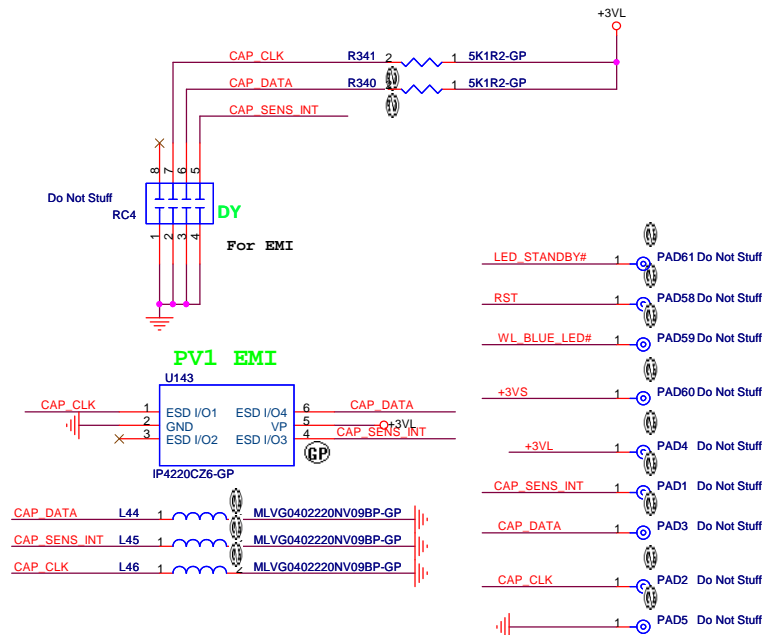
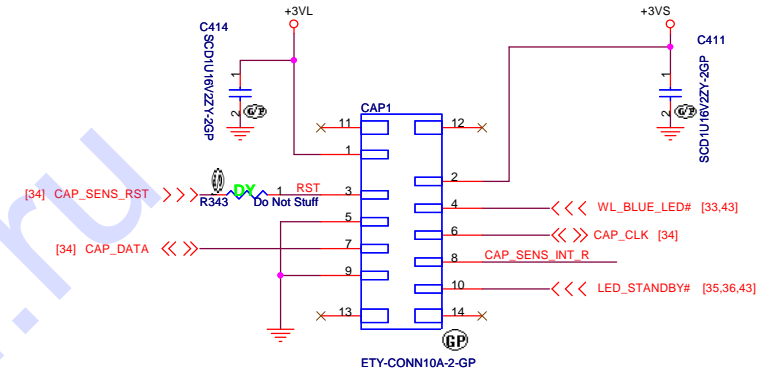


FingerPrint Conn.

SYSTEM CAPACITY BOARD

Vol up , Vol down , Mute ,Presentation

PIN 3 reserved for GPIO



VOX

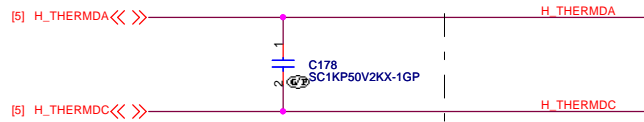
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Title			
Camera/W-COM			
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Thermal Sensor

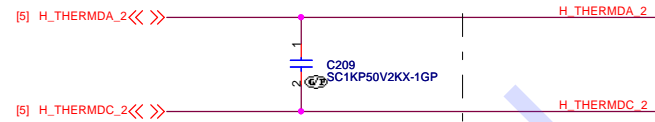
CPU TEMP:

H_THERMDA and H_THERMDC routing 10mil trace width and spacing. Locate Capacity near ADT7473.

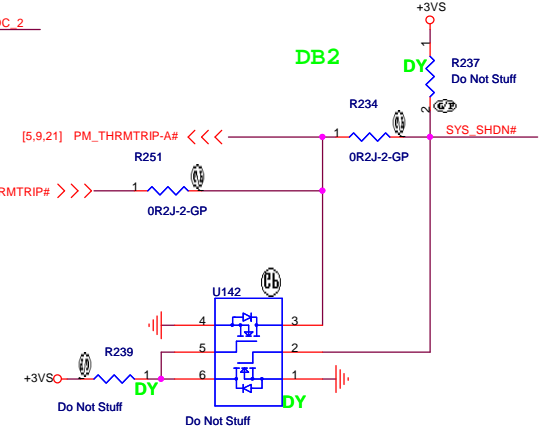
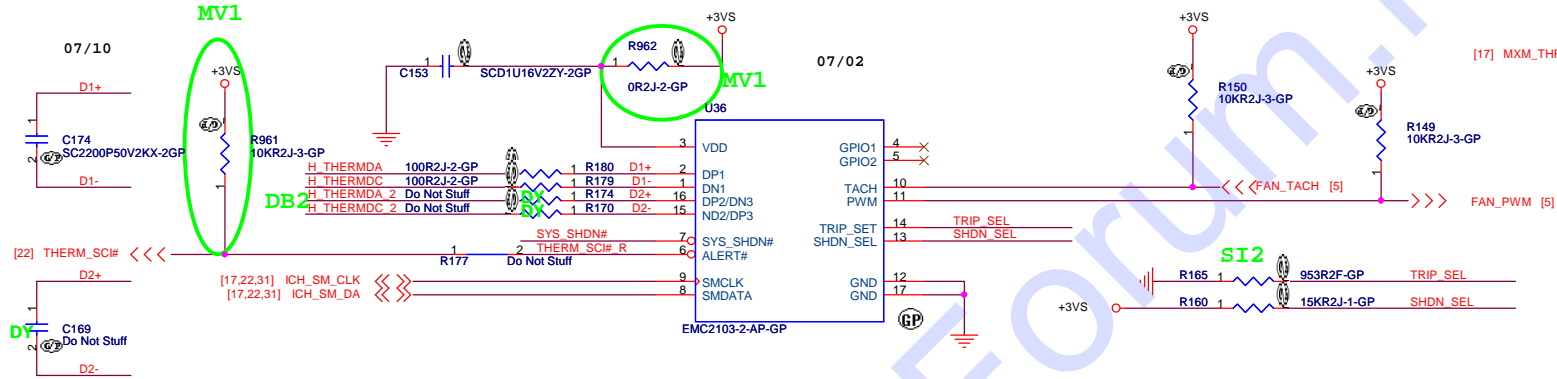


CPU TEMP:

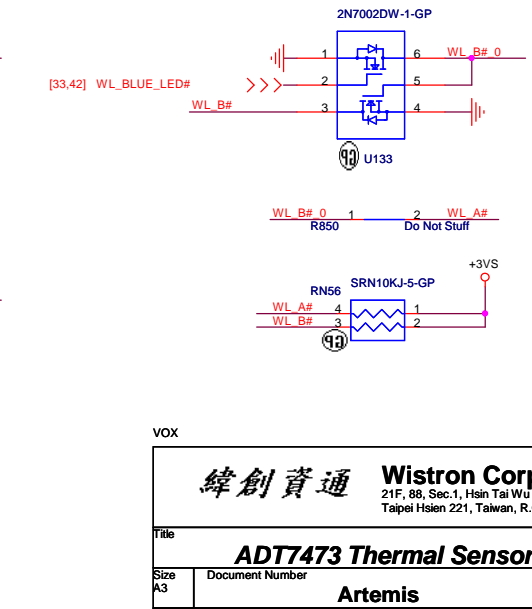
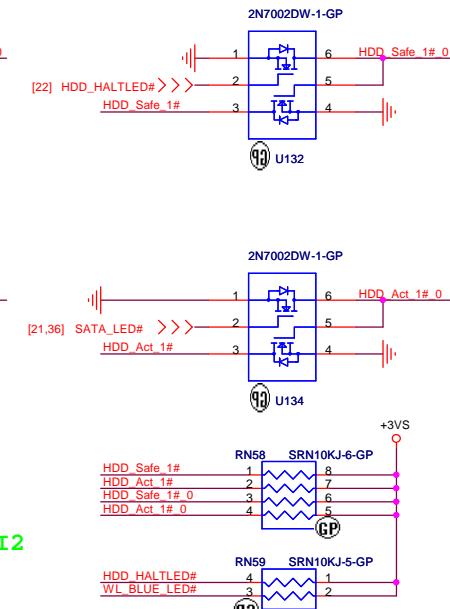
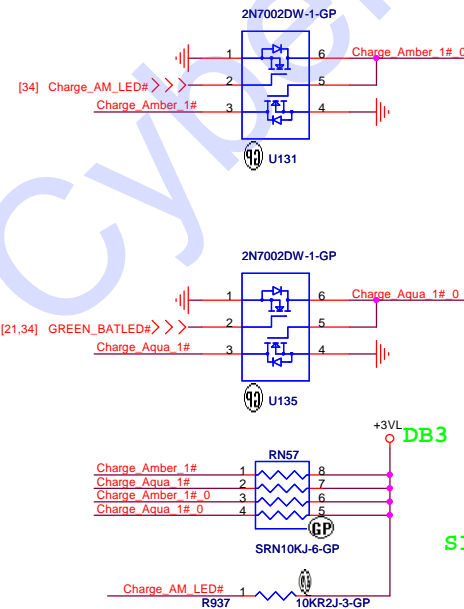
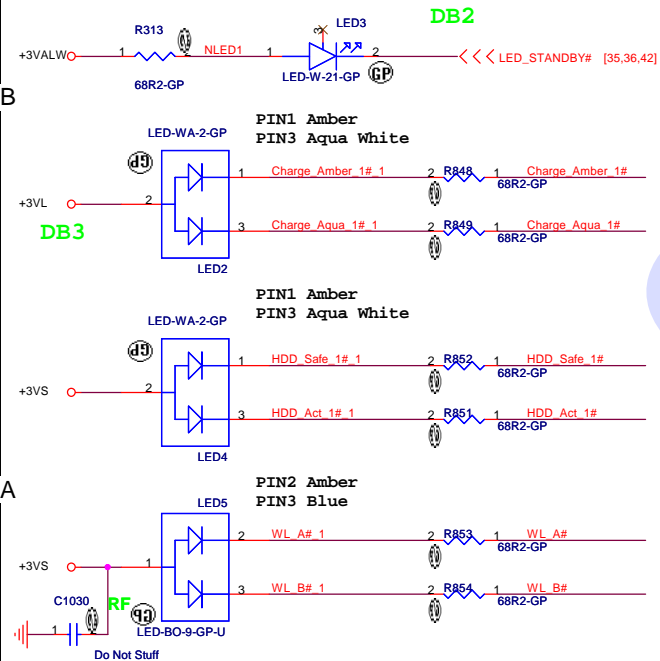
H_THERMDA and H_THERMDC routing 10mil trace width and spacing. Locate Capacity near ADT7473.



DB3 Change Power to 3VS for A009 issue

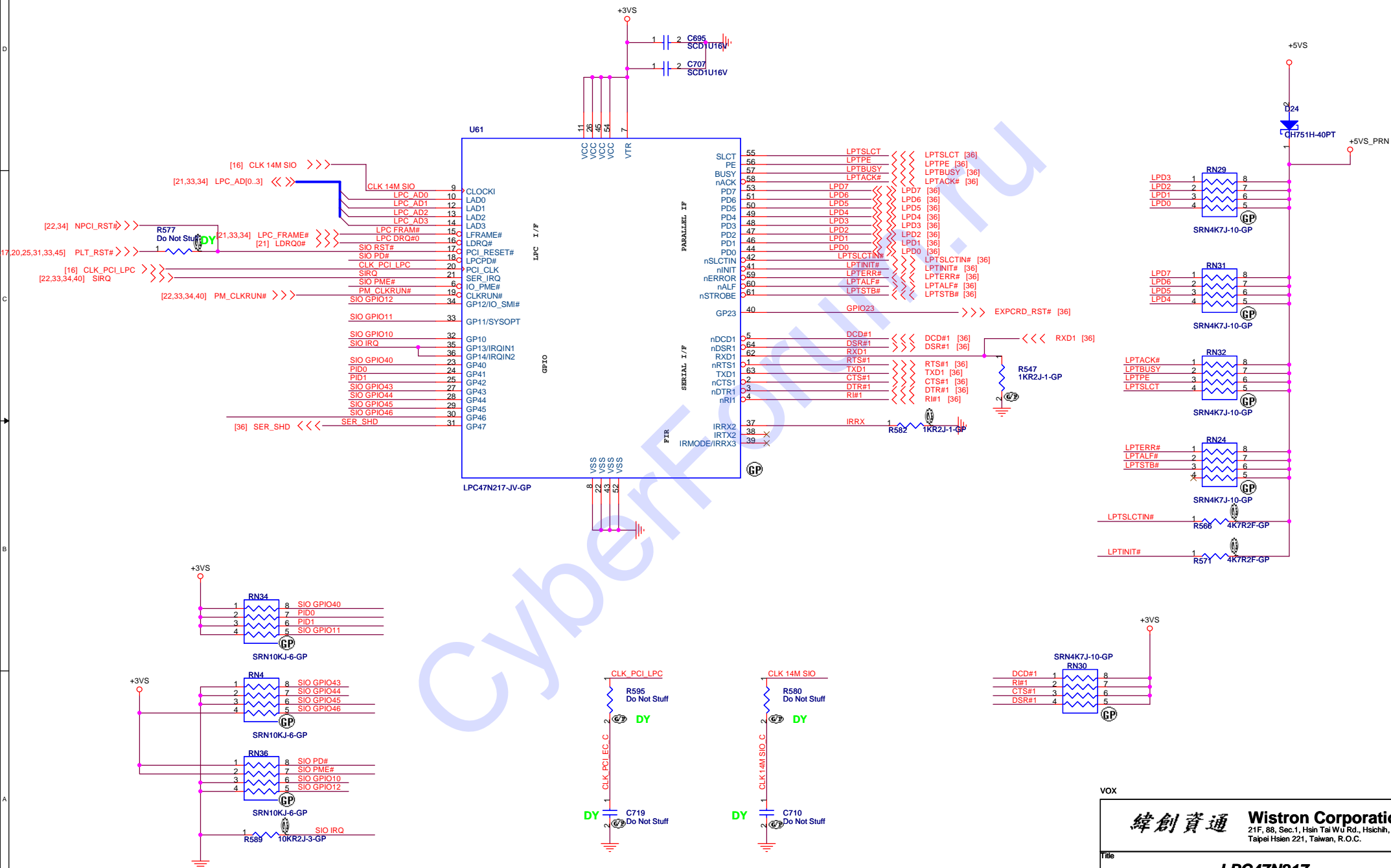


LED

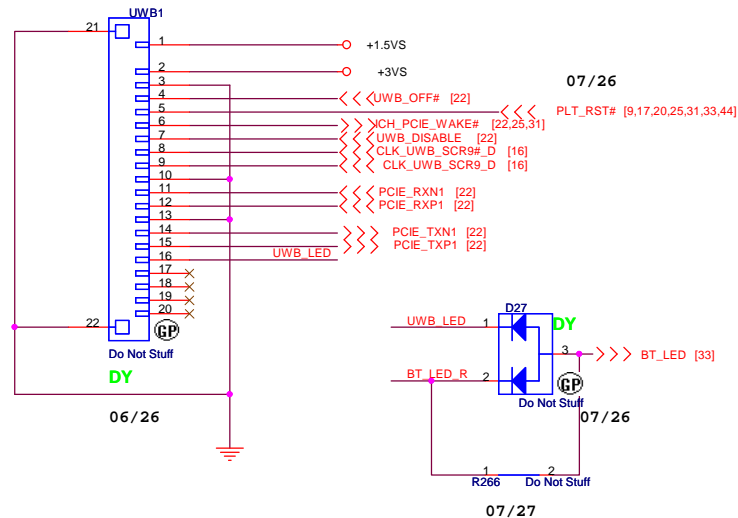


VOX

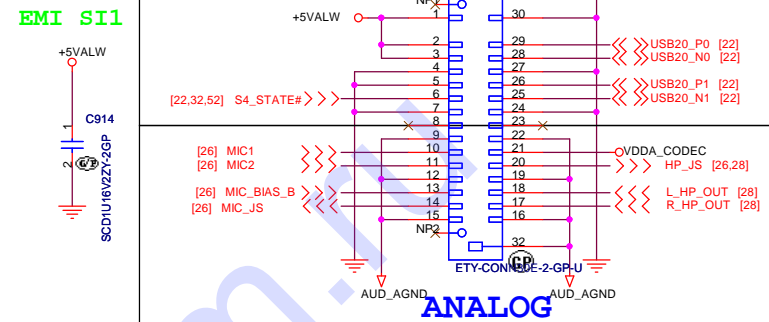
SIO



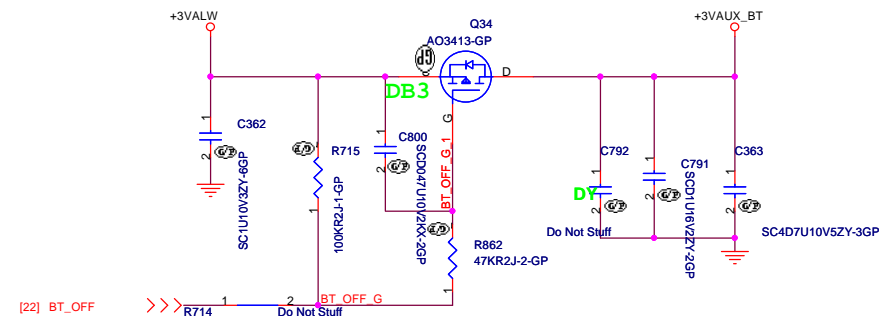
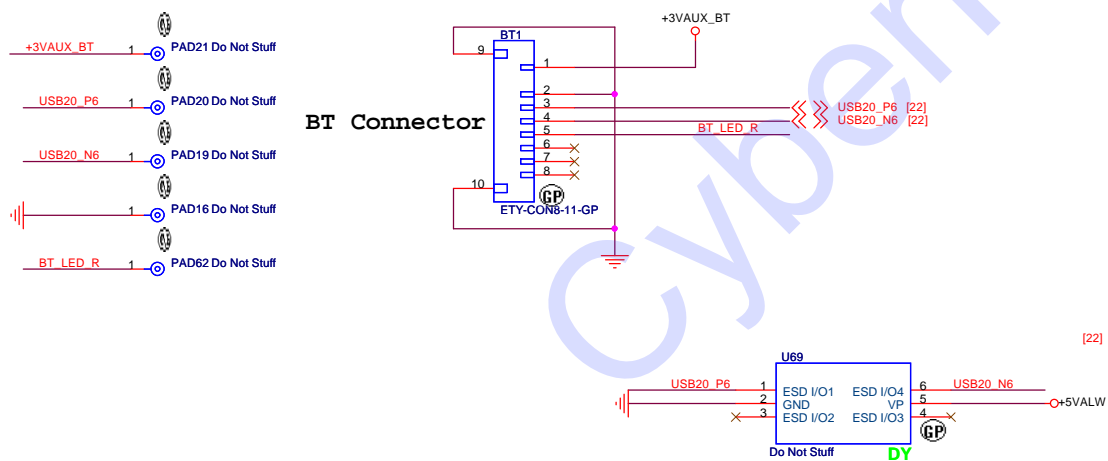
UWB Connector



AUDIO Daughter Board Connector



Bluetooth Connector

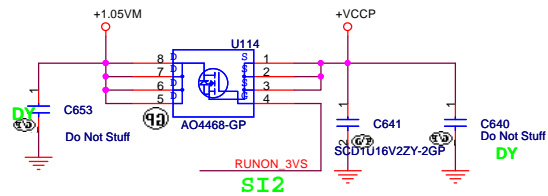


VOX

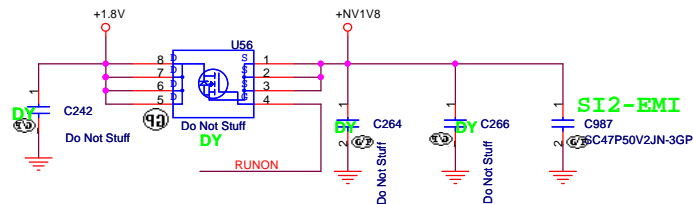
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Title			
<i>BT/UWB/Audio board Connector</i>			
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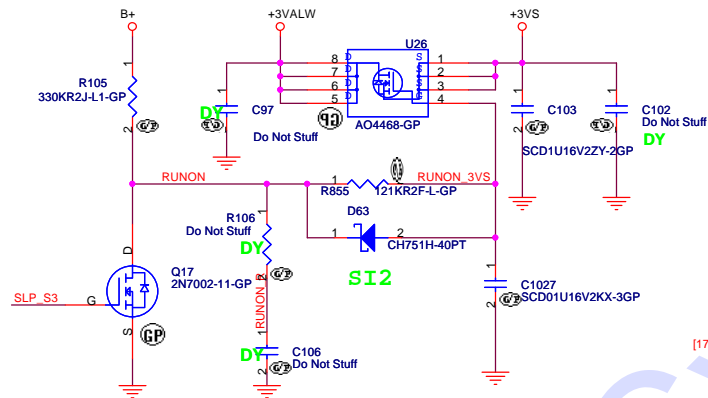
+1.05VM to +VCCP Transfer



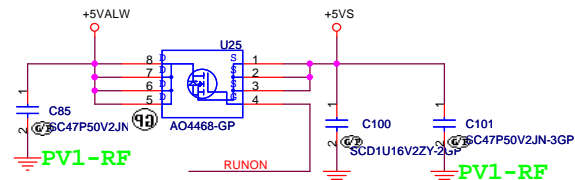
+1.8V to +1.8VS Transfer



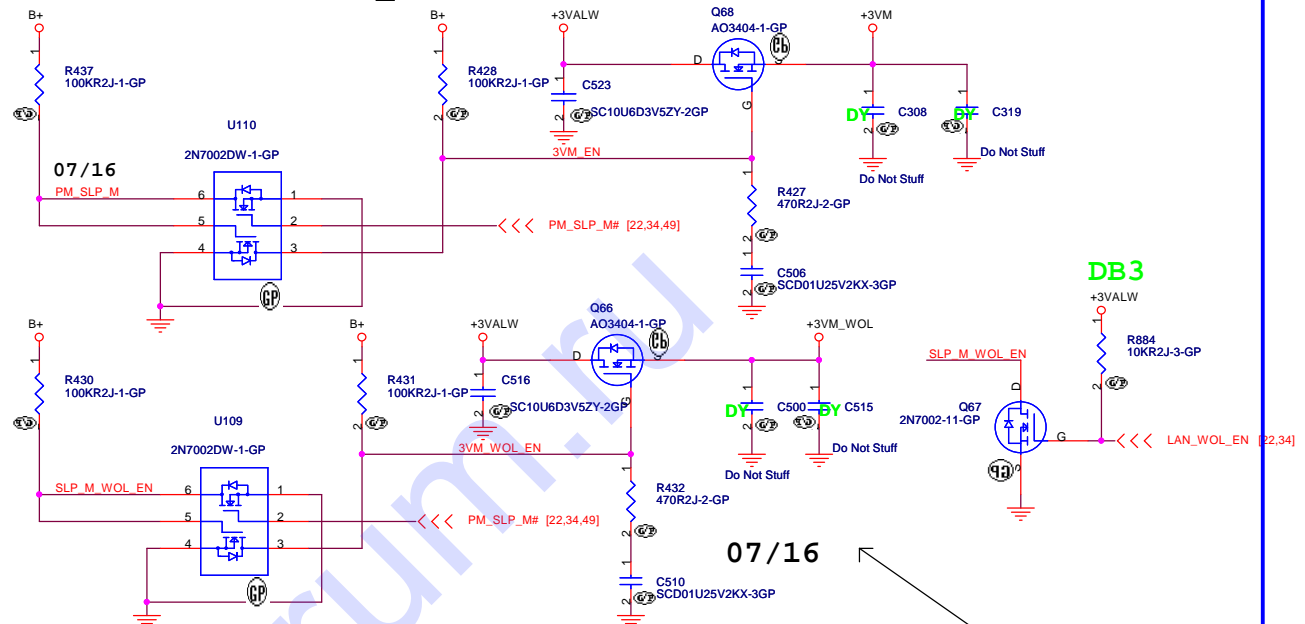
+3VALW to +3VS Transfer



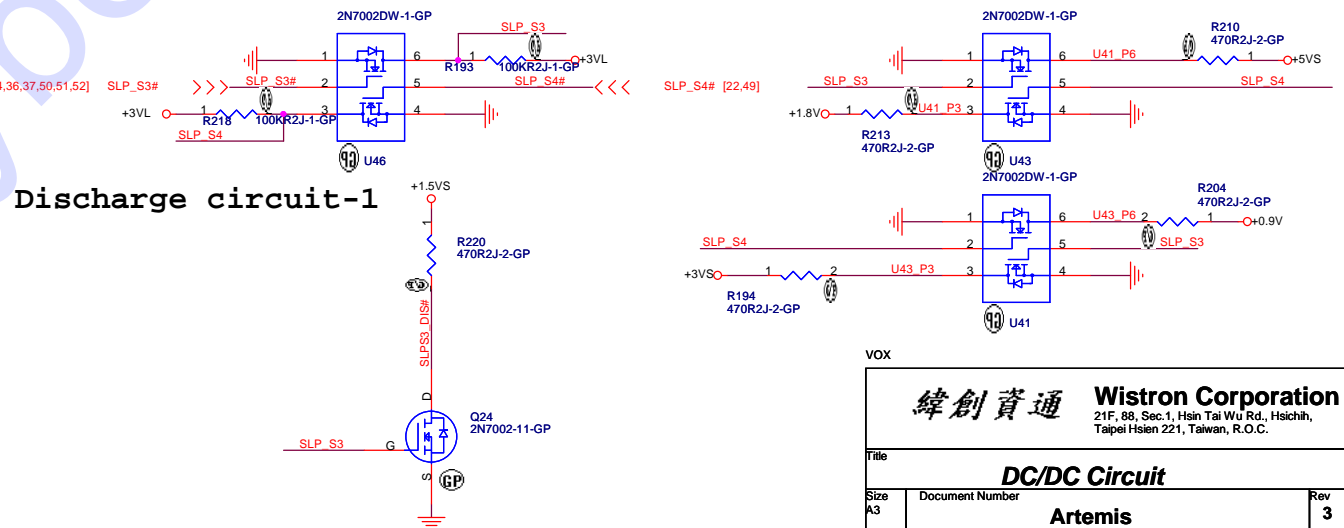
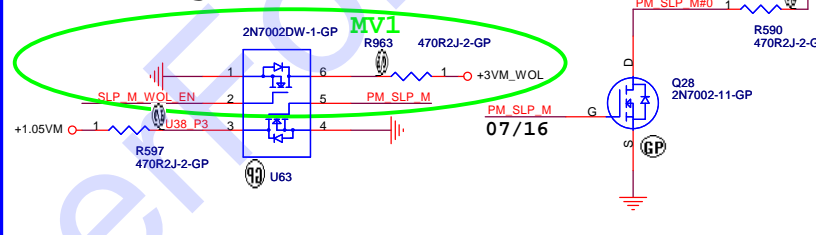
+5VALW to +5VS Transfer



+3VALW to +3VM / +3VM_WOL Transfer



Discharge circuit-2 for V-M

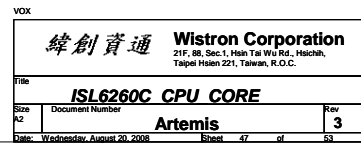


PM_SLP_M#	LAN_WOL_EN	+3VM_WOL	+3VM	SYSTEM STATE
0	0	0V	0V	MoFF / No WOL
0	1	3.3V	0V	Legacy WOL/ MoFF
1	0	3.3V	3.3V	M1
1	1	3.3V	3.3V	M1

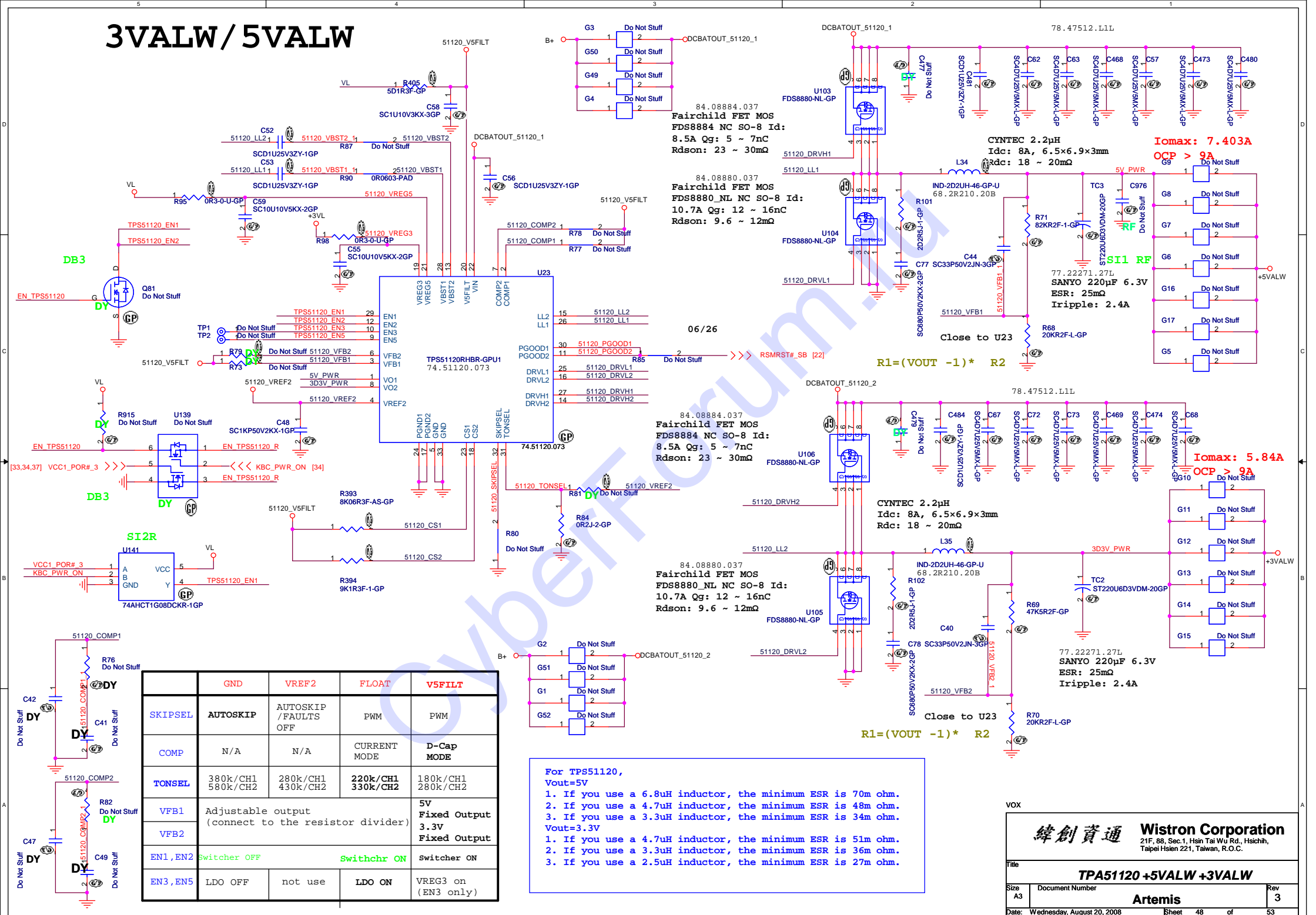
VOX

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

DC/DC Circuit		
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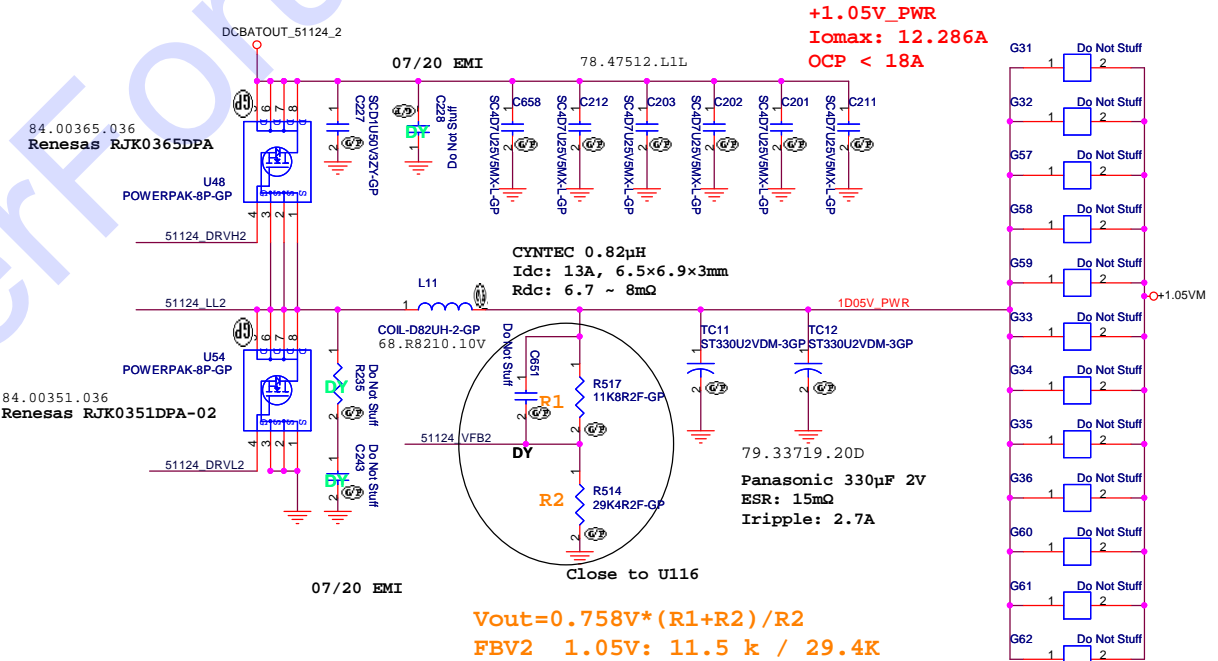
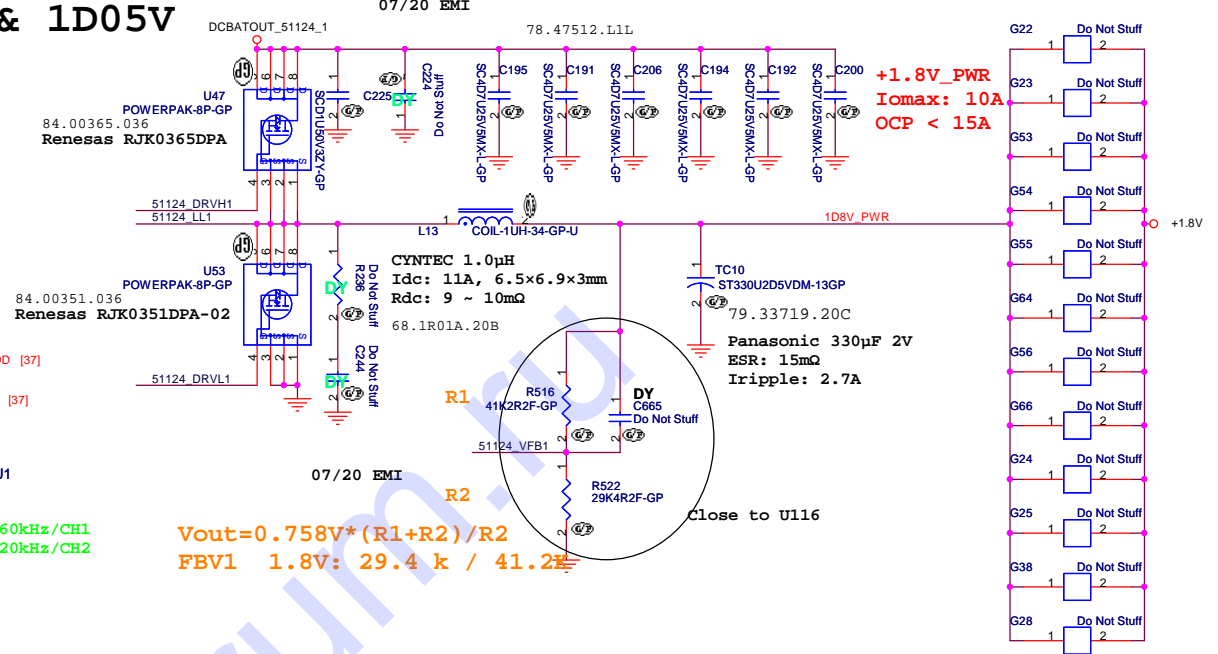
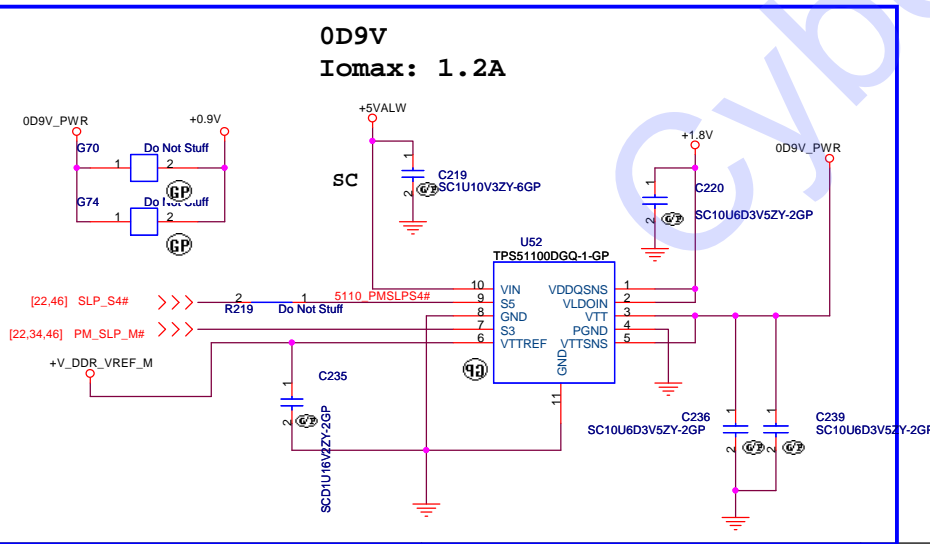
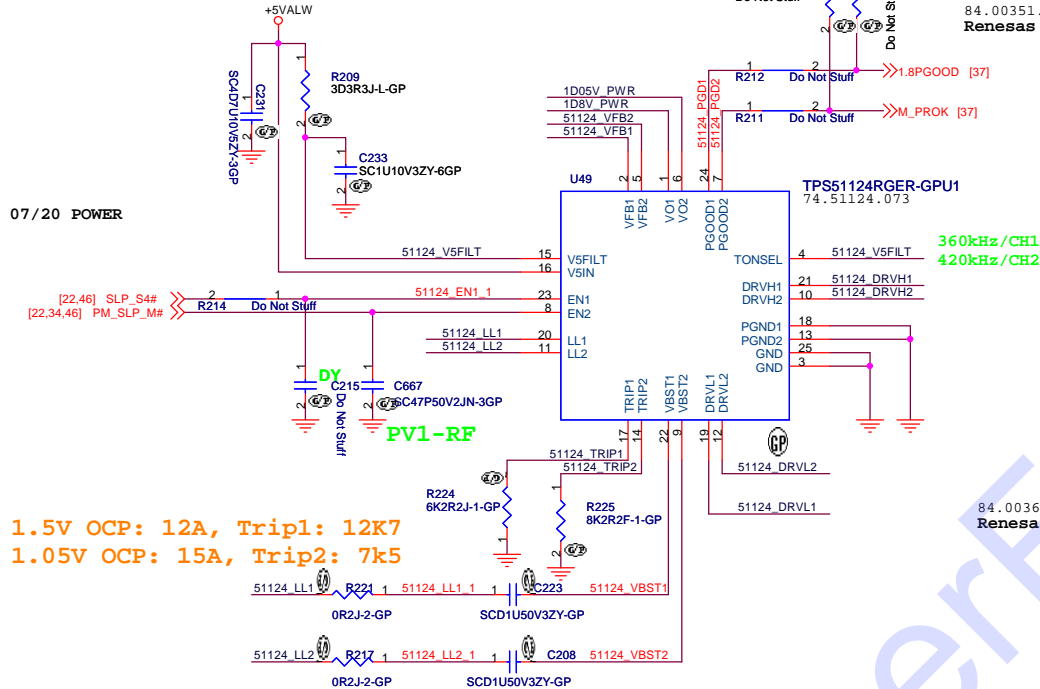
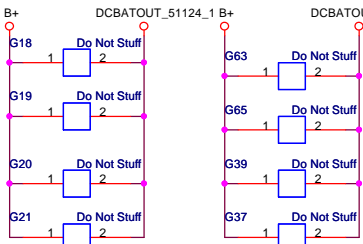
[illegible]

3VALW/5VALW

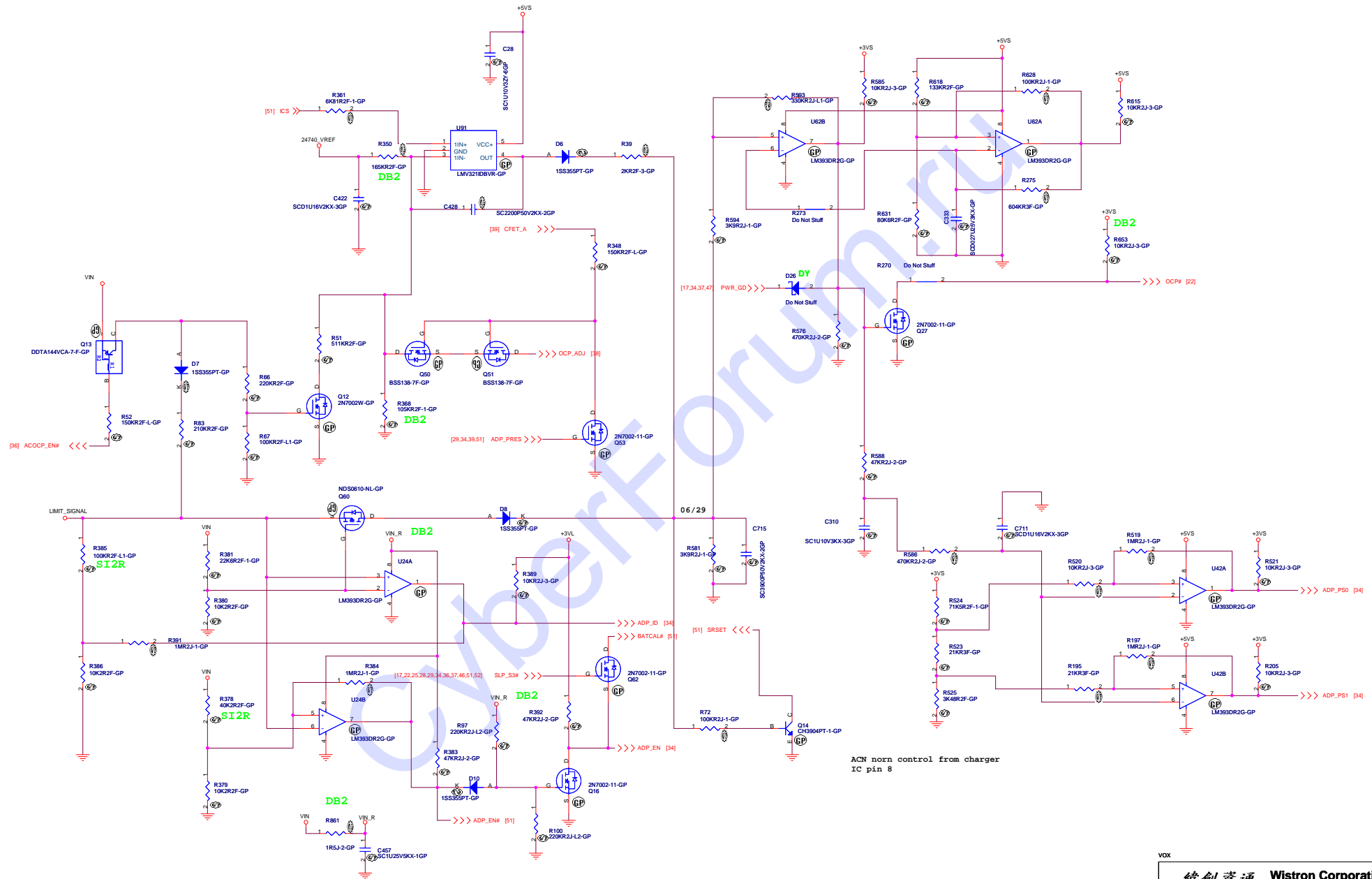


1D8V & 1D05V

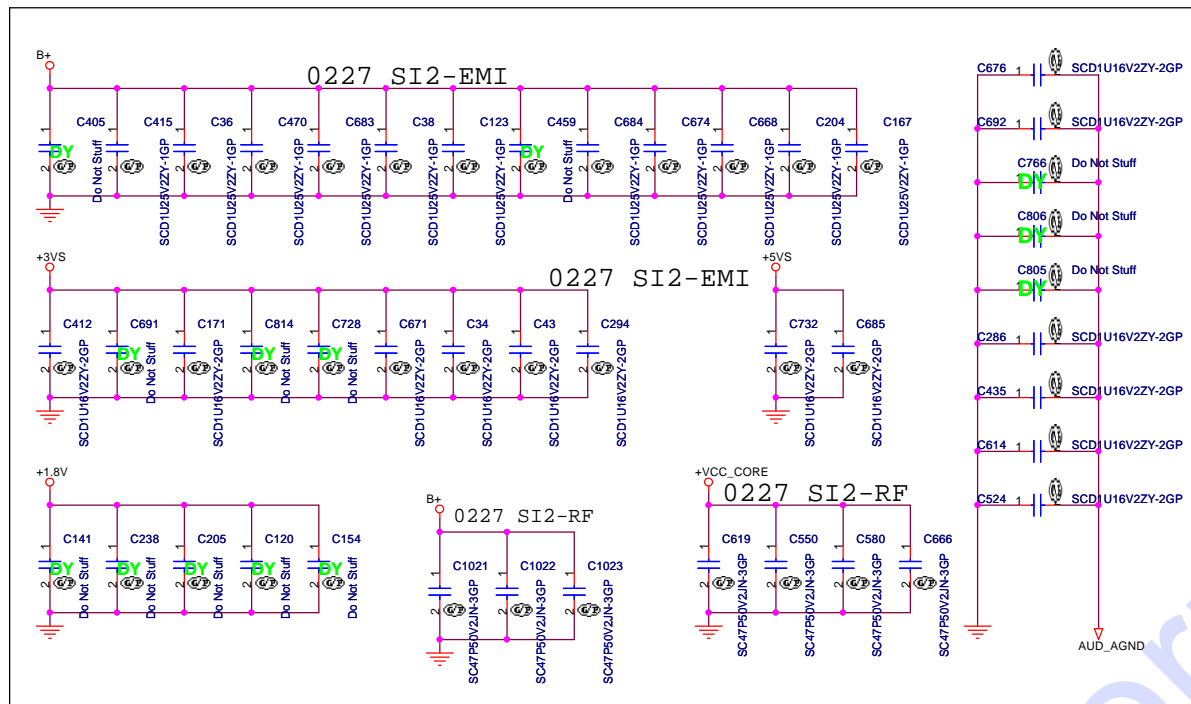
	GND	OPEN	V5FILT
TONSEL	230k/CH1 283k/CH2	283k/CH1 346k/CH2	360kHz/CH1 420kHz/CH2



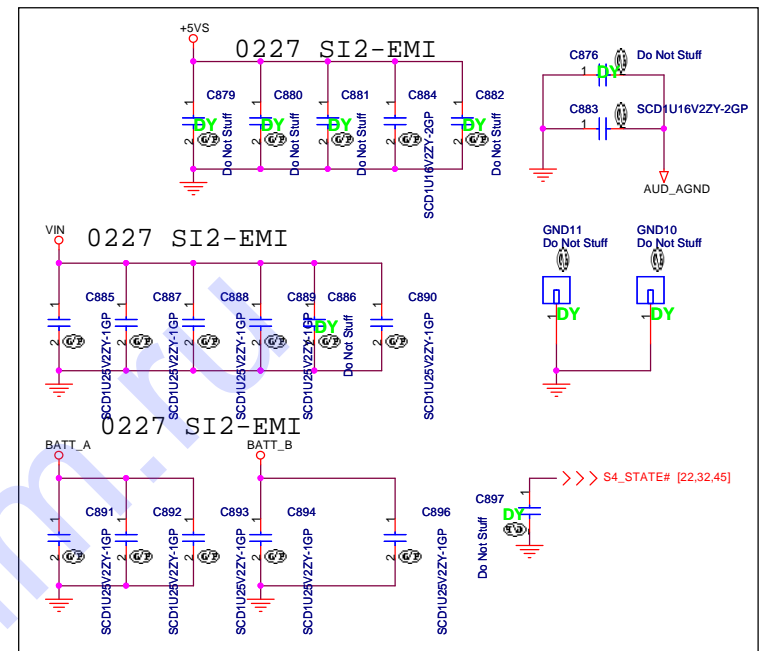
ADP / OCP



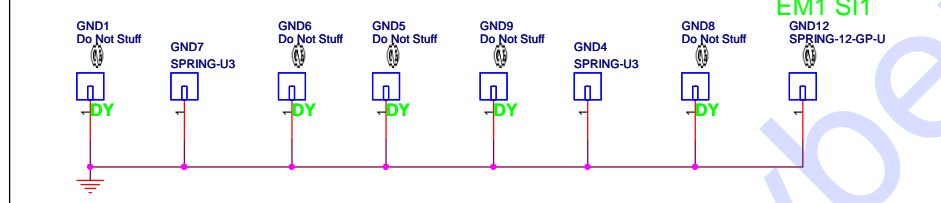
07/25 EMI



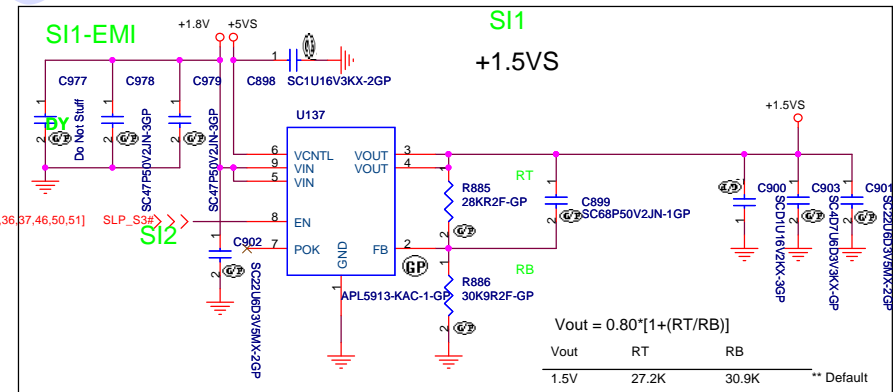
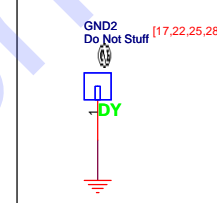
09/28 EMI



EMI SPRING



RF SPRING



07/18 ME add.

