MS-7693 VER:4.1

CPU

AMD M3 Phenom/Athlon 64 FX AM3/AM3R2

System Chipset

AMD RX970

ATI SB950

On Board Chip

FINTEK Super I/O -- F71878AD
LAN --E2205
HD Codec --ALC1150
ASM1042 USB3.0
BIOS -- SPI ROM 64Mb

Main Memory

DDR III X 4 (Max 32GB)

Expansion Slots

PCI-E X 16*1

PCI-E X 8 *1

PCI-E X 1 *2

PCI 2.2 Slot X 2

PWM

Controller--UPI1601 6+2 Phase
Vcore 6 Phase (MOS HIGHX2 LOWX2)
Vnb 2 Phase (MOS HIGHX2 LOWX2)

Clock Generator

Controller--RTM880N-793

Title	*Cover Sheet*
Rev	4.1
Document Number	*MS-7693*

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Last Revision Date: Wednesday, April 30, 2014

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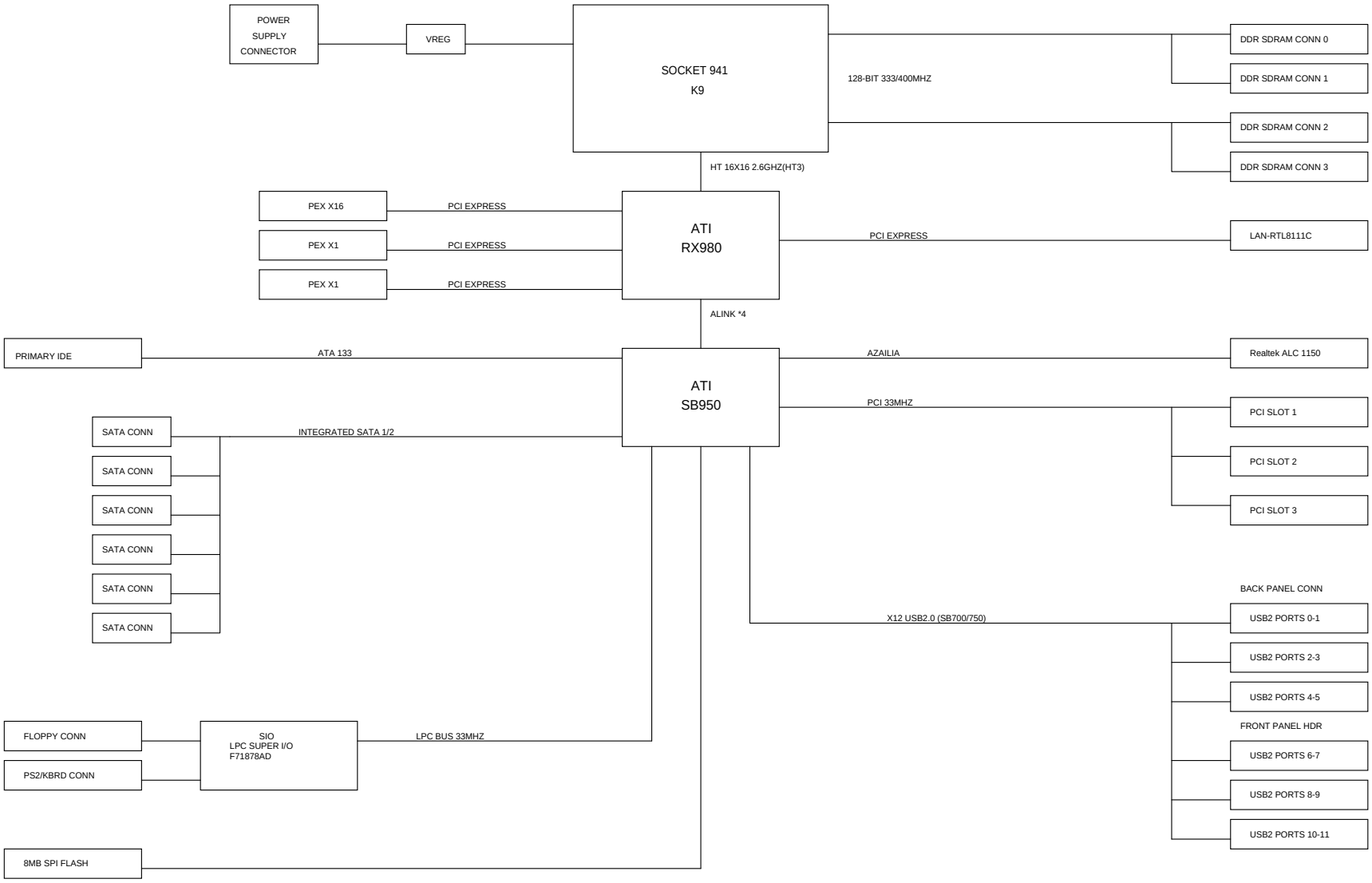
BLOCK DIAGRAM



Micro Star Restricted Secret		
Title	*Block Diagram*	Rev 4.1
Document Number	*MS-7693*	
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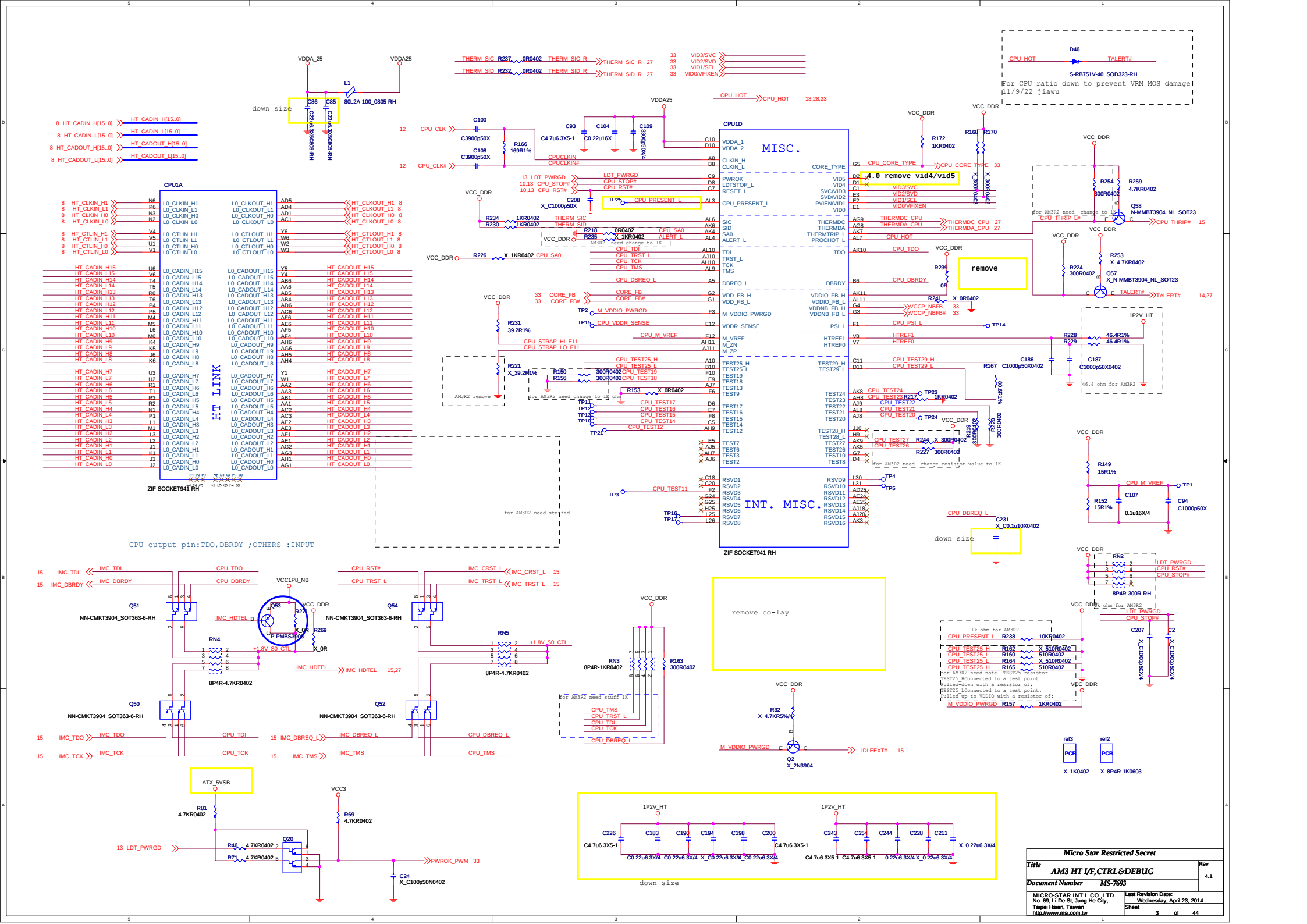
CPU1A
CPU1D
HT LINK
MISC.
INT. MISC.
ZIF-SOCKET941-RH
CPU output pin:TDO,DBRDY ;OTHERS :INPUT
4.0 remove vid4/vid5
remove
remove co-lay
down size
for AM3R2 need stuffed
AM3R2 remove
for AM3R2 need change to 1K ohm
AM3R2 need change to 1K
1k ohm for AM3R2
6.4 ohm for AM3R2
For CPU ratio down to prevent VRM MOS damage
11/9/22 jiawu
for AM3R2 need change resistor value to 1K
for AM3R2 need stuff 1K
NN-CMKT3904_SOT363-6-RH
P-PMBS3906
8P4R-4.7KR0402
8P4R-1KR0402
8P4R-300R-RH
ATX_5VSB
VCC1P8_NB
1P2V_HT
Micro Star Restricted Secret
AM3 HT I/F,CTRL&DEBUG
MS-7693
4.1
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Wednesday, April 23, 2014
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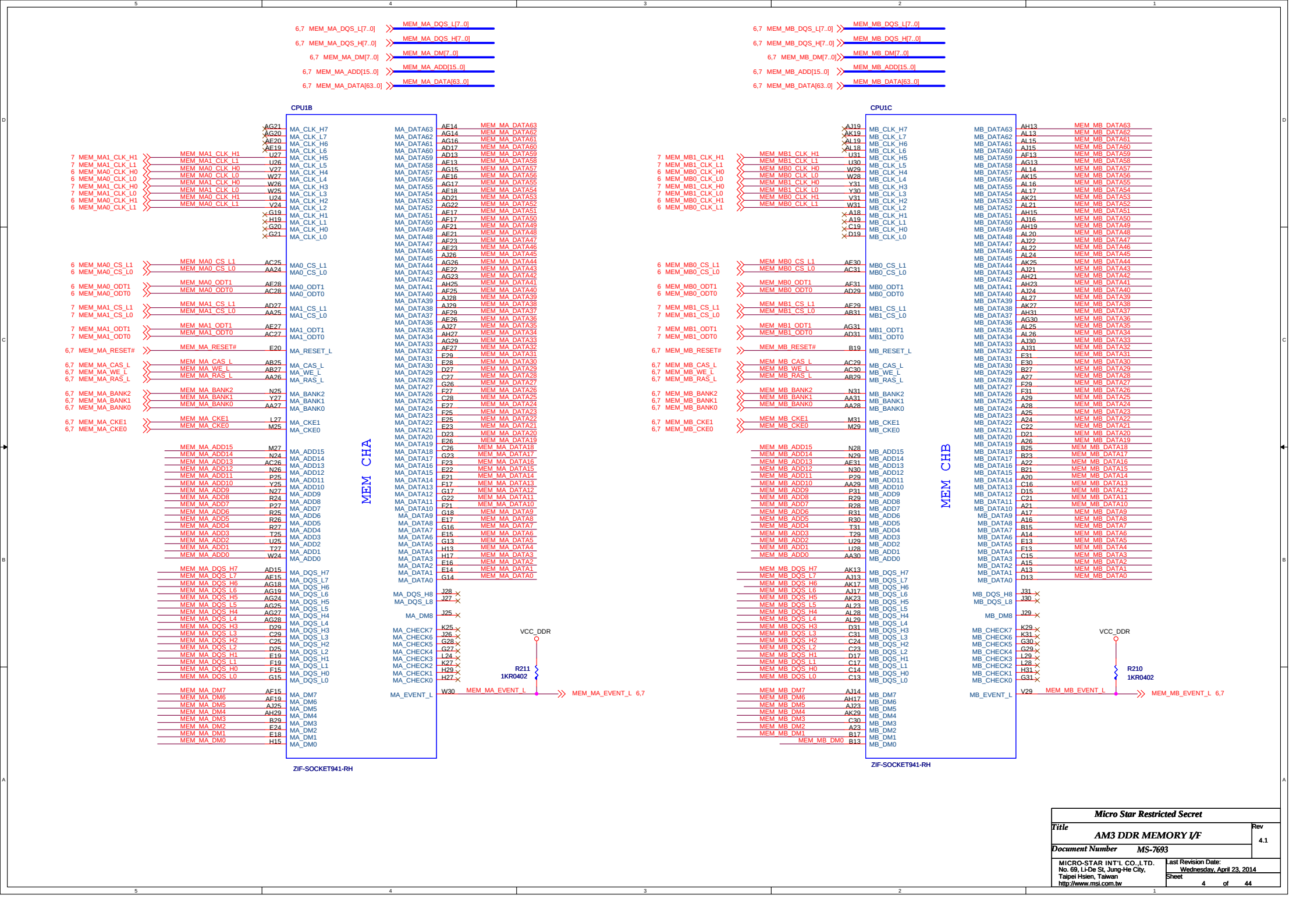

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Title: AM3 DDR MEMORY I/F	Rev: 4.1
Document Number: MS-7693	

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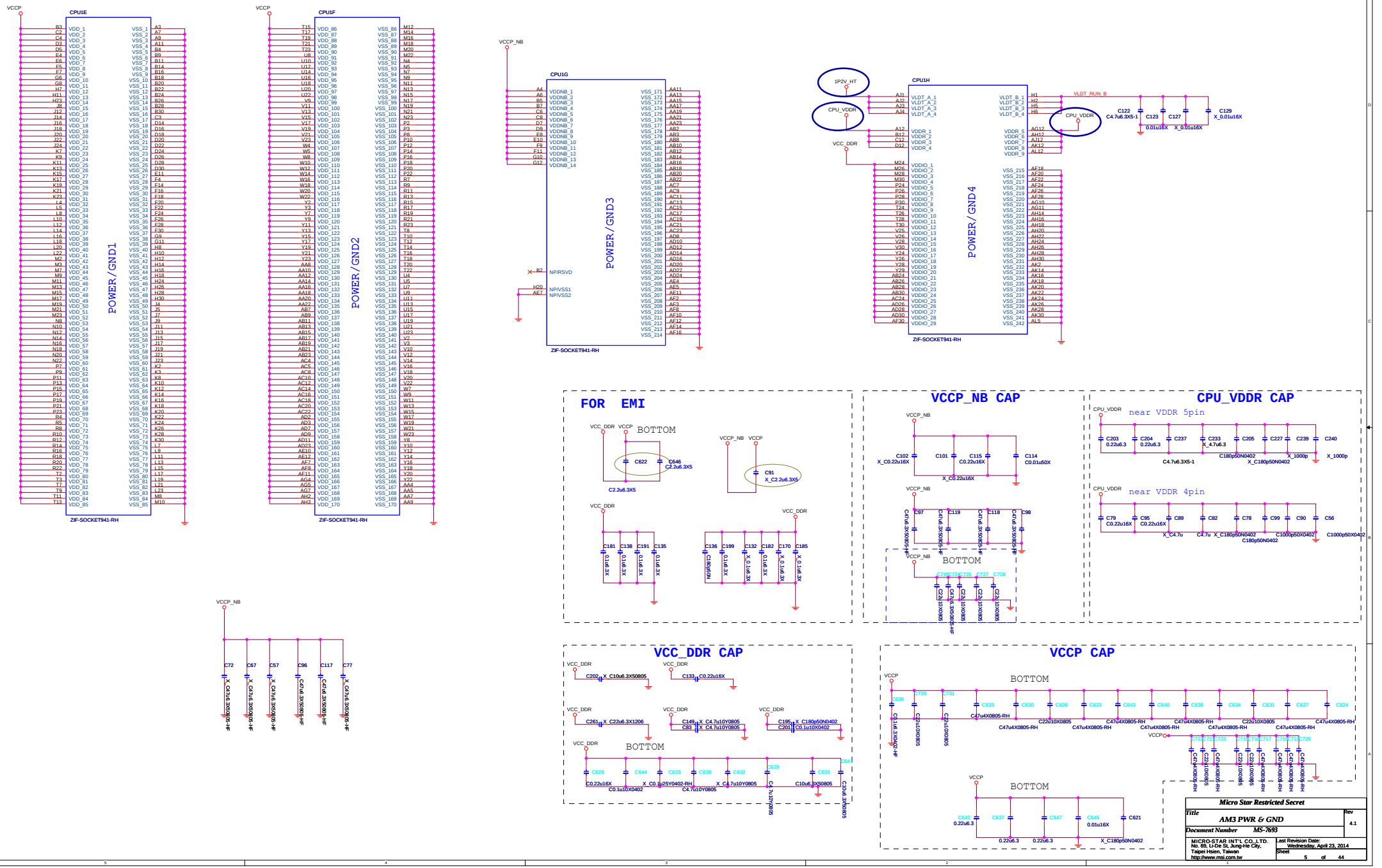
CPU1E
POWER/GND1
ZIF-SOCKET941-RH
CPU1F
POWER/GND2
ZIF-SOCKET941-RH
CPU1G
POWER/GND3
NP/RSVD
NP/VSS1
NP/VSS2
ZIF-SOCKET941-RH
CPU1H
POWER/GND4
1P2V_HT
CPU_VDDR
VCC_DDR
VLDT_RUN_B
ZIF-SOCKET941-RH
FOR EMI
BOTTOM
VCCP_NB CAP
near VDDR 5pin
near VDDR 4pin
CPU_VDDR CAP
VCC_DDR CAP
VCCP CAP
Micro Star Restricted Secret
AM3 PWR & GND
MS-7693
4.1
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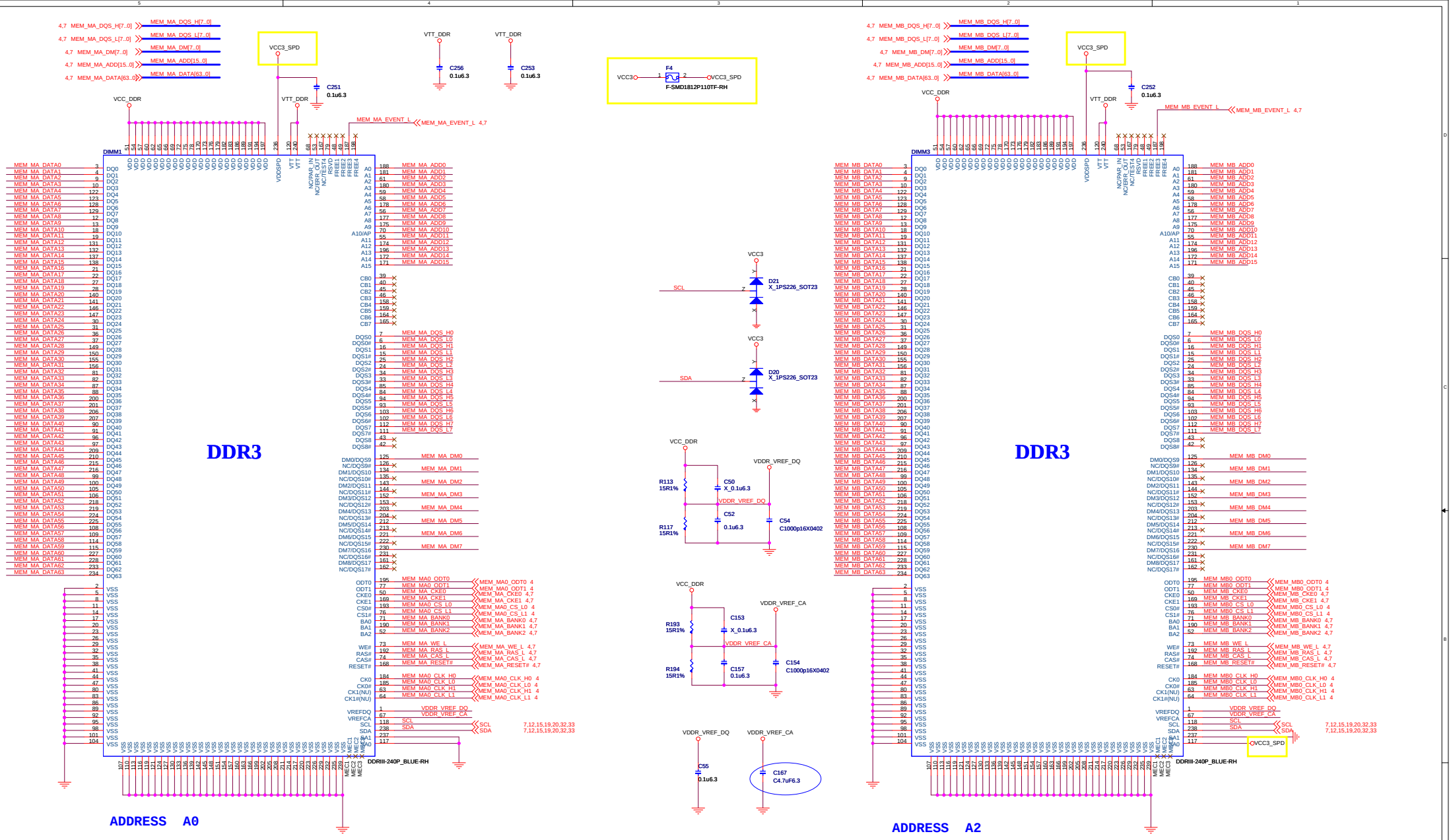

SMBus Addressing

SMBus 0	
Device	8-bit Address (hex)
DIMMA0	A0
DIMMB0	A2
DIMMA1	A4
DIMMB1	A6

Micro Star Restricted Secret

Title	FIRST LOGICAL DDR DIMM
Rev	4.1
Document Number	MS-7693
Last Revision Date:	Wednesday, April 23, 2014
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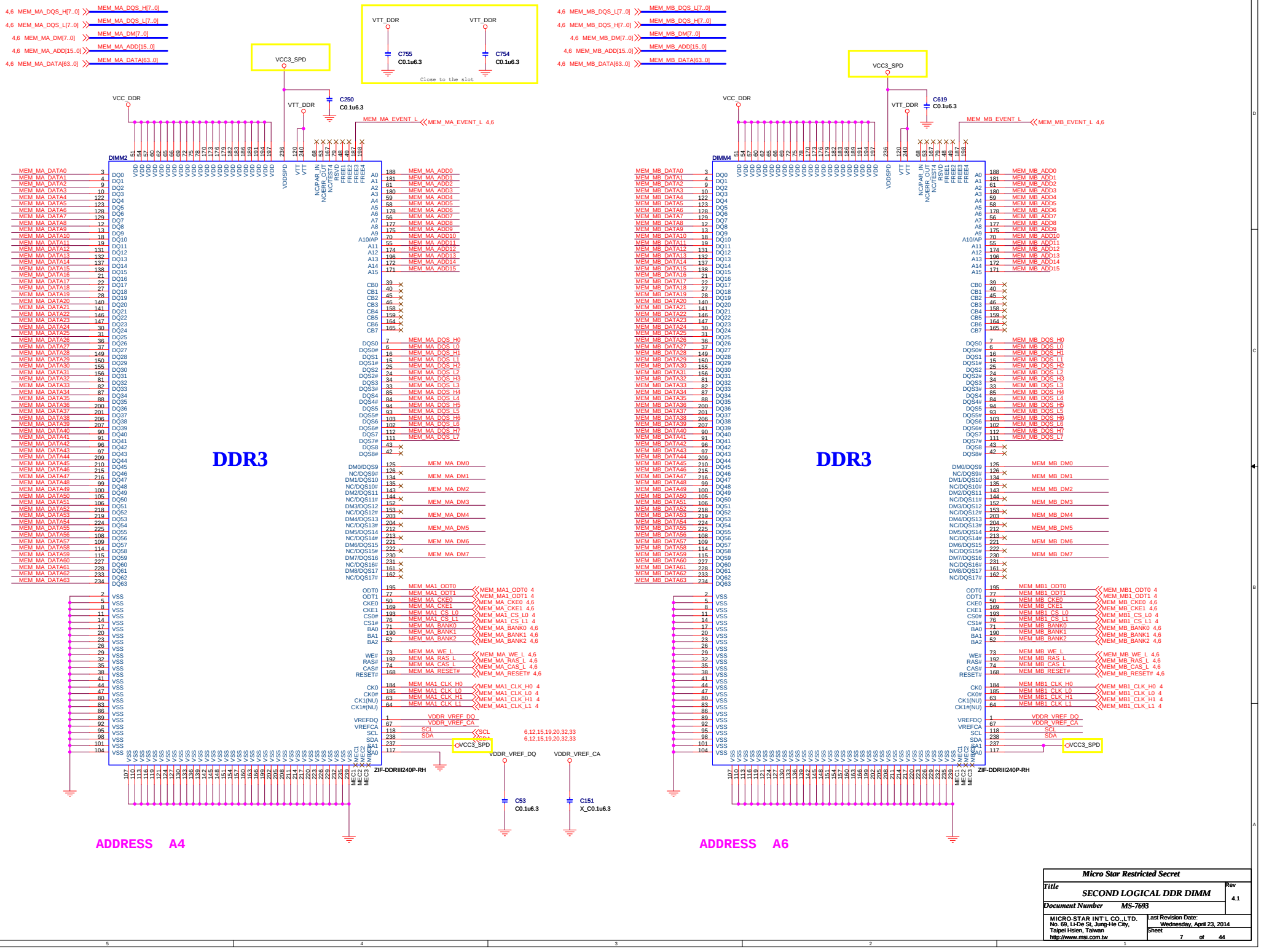

Micro Star Restricted Secret	
Title: SECOND LOGICAL DDR DIMM	Rev: 4.1
Document Number: MS-7693	
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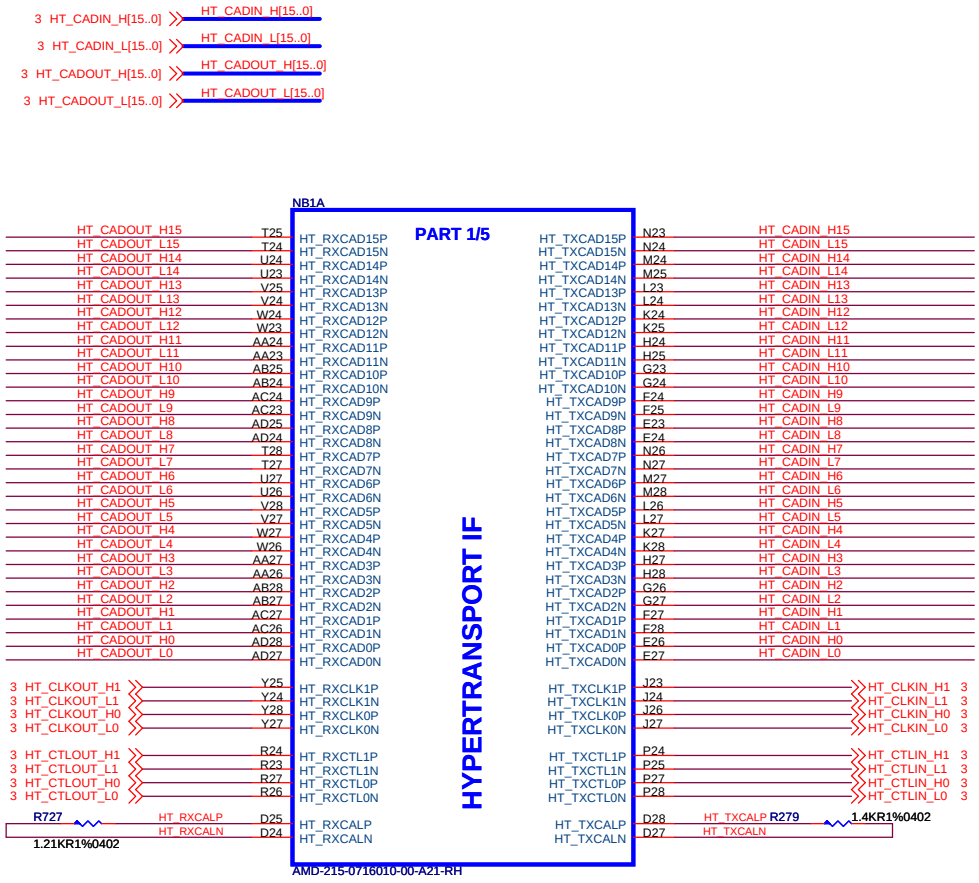

Micro Star Restricted Secret		
Title *RX980-HT LINK I/F*		Rev 4.1
Document Number *MS-7963*		
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Wednesday, April 23, 2014	
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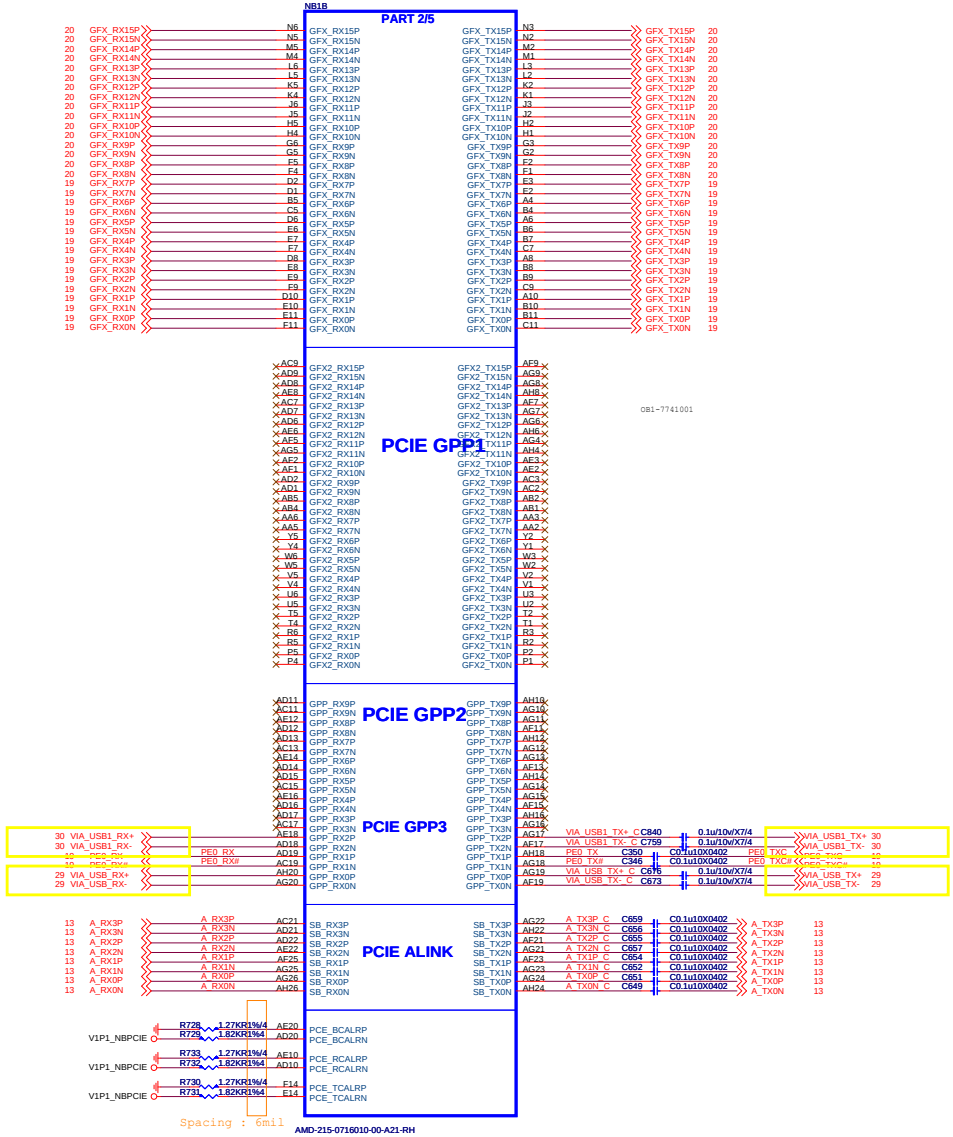

Micro Star Restricted Secret

Title: RX980-PCIE I/F		Rev: 4.1
Document Number: MS-7693		
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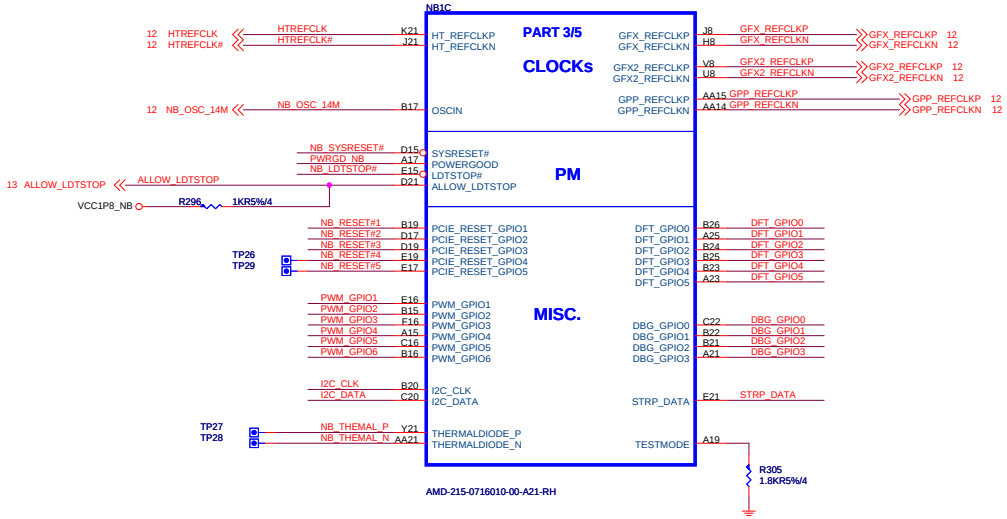
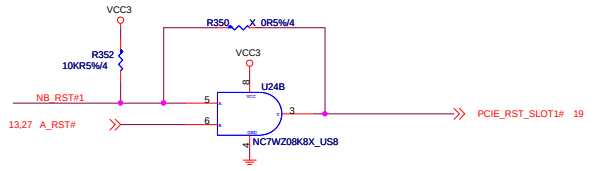
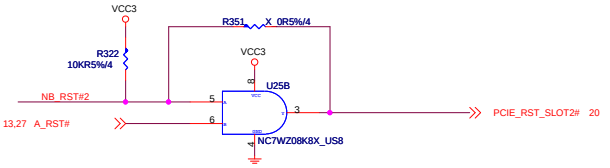
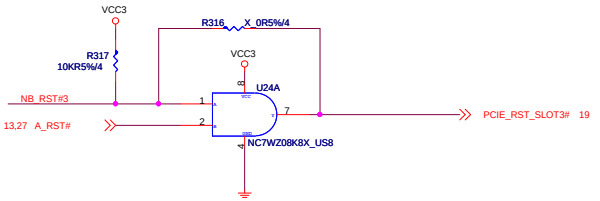
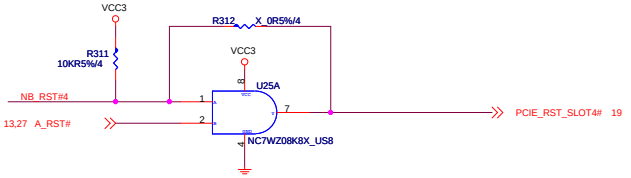
	Sheet 9 of 44	

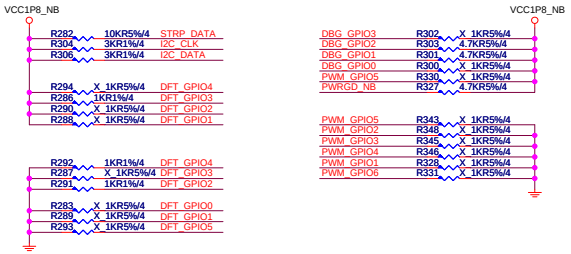






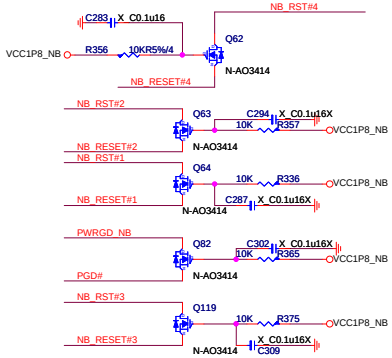


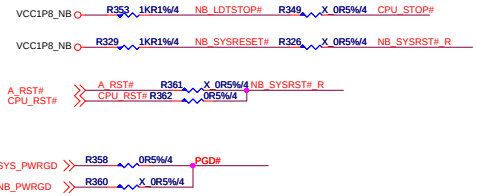




DFT_GPIO[4:2]
STRAP_PCIE_GPP_CFG

```
111: 1-1-1-1-1-1   Mode L
110: 1-1-1-1-1-1   Mode L
101: 2-0-2-0-2-0   Mode C2
100: 2-0-2-0-1-1   Mode K
011: 2-0-1-1-1-1   Mode E
010: 1-1-1-1-1-1   Mode L
001: 4-0-0-0-1-1   Mode C   default
000: 4-0-0-0-2-0   Mode B
```





PWM_GPIO[5:2]
Reserved.
Make provision for an external pull-down resistor on each of the pins, but do not install a resistor.

DFT_GPIO0
Reserved. Make provision for an external pull-down resistor on this pin, but do not install a resistor.

DFT_GPIO1
Selects loading of strap values from EEPROM
0: I2C master can load strap values from EEPROM if connected, or use hardware default values if not connected
1: Use hardware default values (Default)

DFT_GPIO5
Reserved. Make provision for an external pull-down resistor on this pin, but do not install a resistor.

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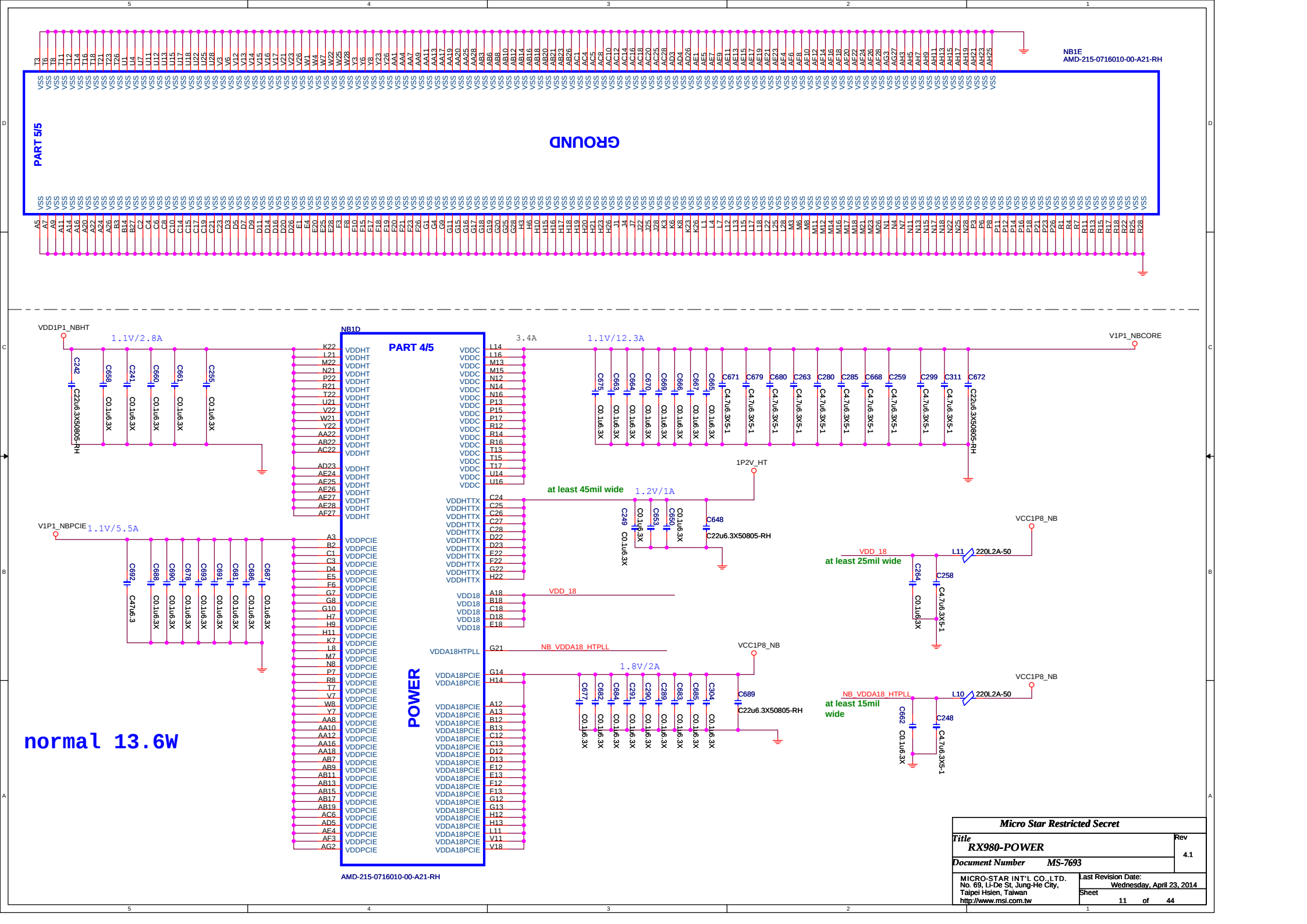
NB1E
AMD-215-0716010-00-A21-RH
PART 5/5
GROUND
NB1D
PART 4/5
POWER
VDD1P1_NBHT
1.1V/2.8A
V1P1_NBPCIE
1.1V/5.5A
3.4A
1.1V/12.3A
V1P1_NBCORE
1P2V_HT
at least 45mil wide
1.2V/1A
VDD_18
at least 25mil wide
VCC1P8_NB
NB_VDDA18_HTPLL
at least 15mil wide
1.8V/2A
C22u6.3X50805-RH
220L2A-50
normal 13.6W
AMD-215-0716010-00-A21-RH
Micro Star Restricted Secret
Title
RX980-POWER
Rev
4.1
Document Number
MS-7693
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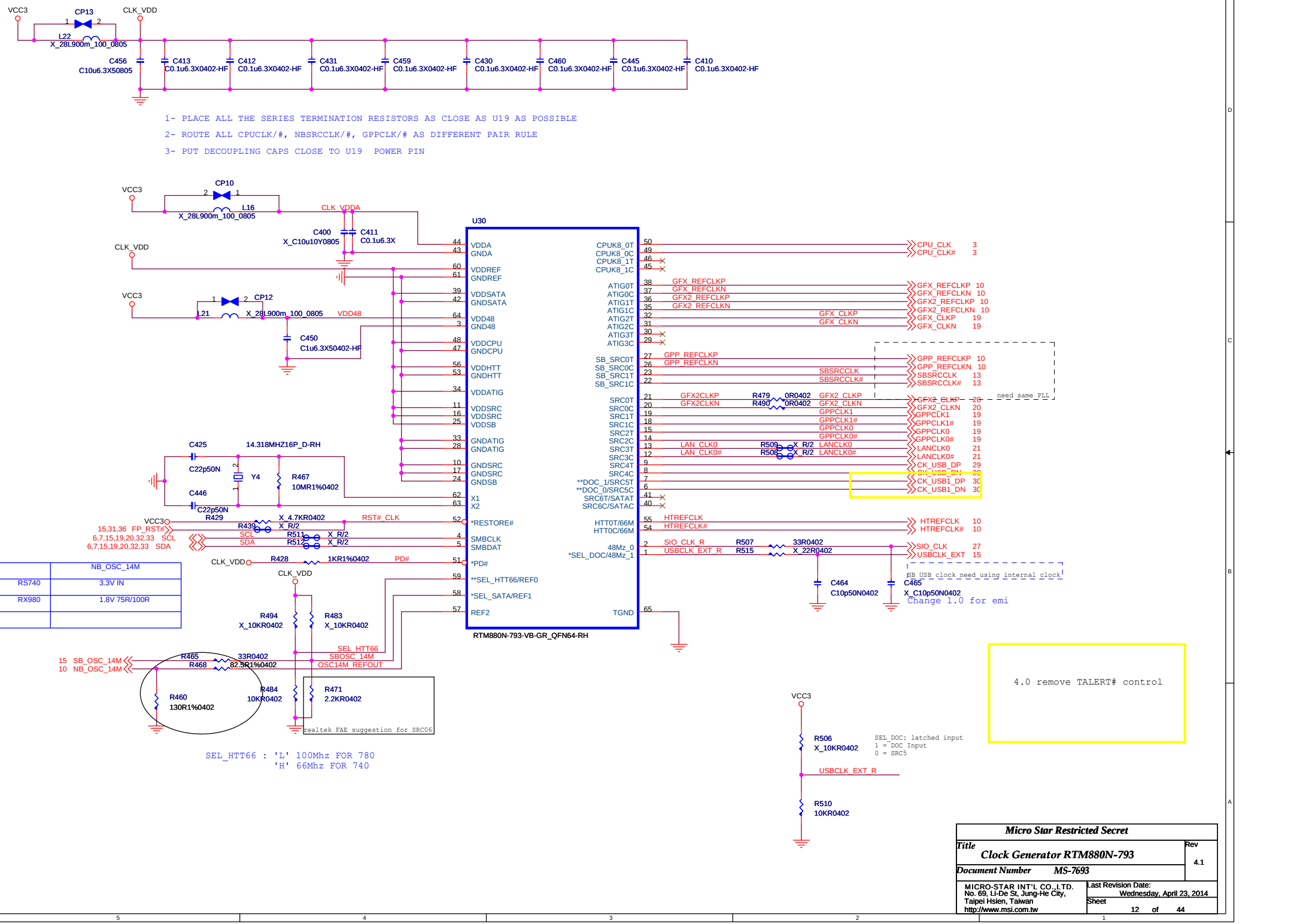

SEL_HTT66 : 'L' 100Mhz FOR 780
'H' 66Mhz FOR 740

For EMI

SB850 Part 1 of 5

SB1A

PLACE PCIE CAPS CLOSE TO U13

outed with 85ohm ± 15% different pair impedance

length need under 8 inch GEN2, under 12 inch GEN1

length should under 12 inche and over1 inch

PCI EXPRESS INTERFACES

PCI CLKS

PCI INTERFACE

CLOCK GENERATOR

LPC

CPU

RTC

B01-SB70035-A08

AMD-218-0697002-00-A12-RH

Adding some 0.1uF stitching capacitors for crossing a split when these signals change different reference layer.

Add VBAT test pad

P=3.3*3.3/510=0.02135W

Add CP32,JBAT1 change to 2pin and use amd new type

update cap value as checklist 1.04 suggestion

C530 and C519 change to 0603

PLACE THESE COMPONENTS CLOSE TO U600, AND USE GROUND GUARD FOR 32K_X1 AND 32K_X2

length need under 1.5inch

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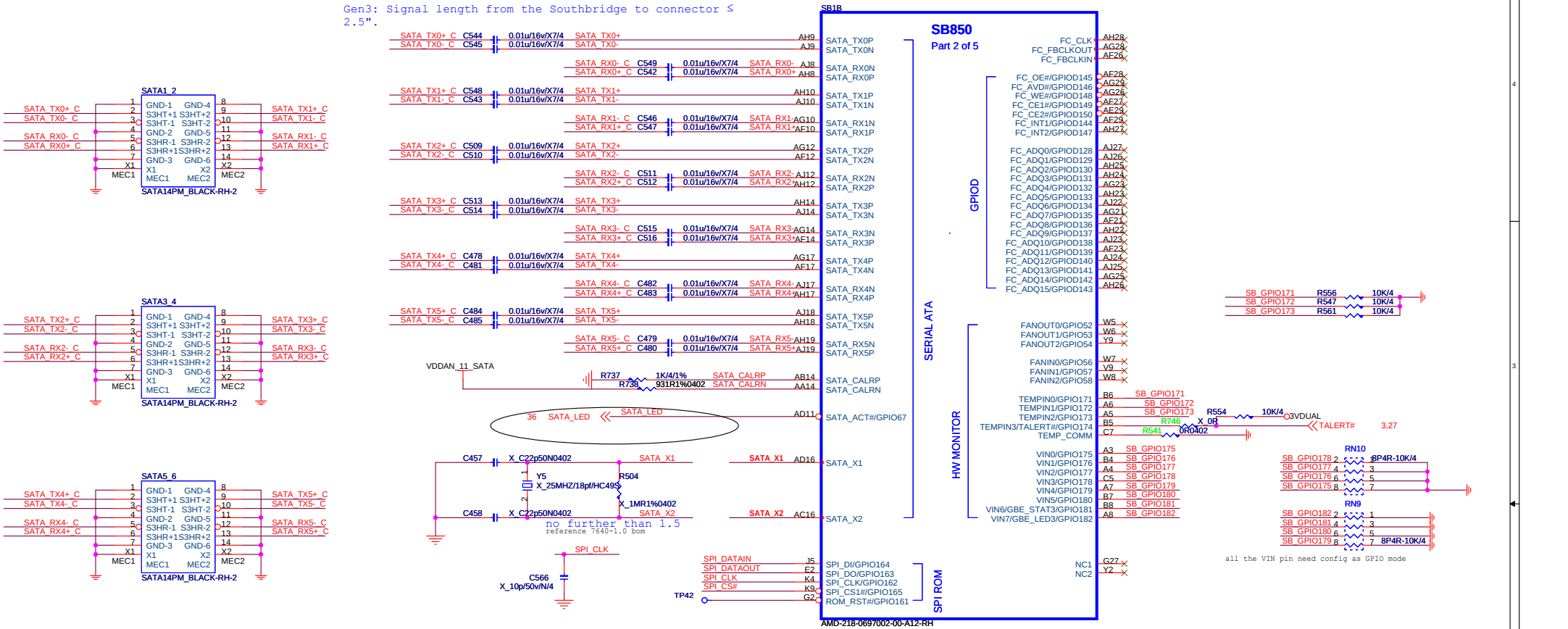
SATA_TX[5:0]P/N: Routed with 90-ohm ± 10% differential impedance.
SATA_RX[5:0]P/N: Routed with 90-ohm ± 10% differential impedance.

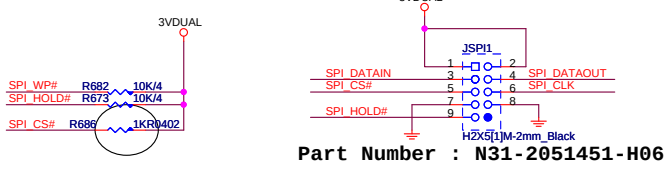
Gen3: Signal length from the Southbridge to connector ≤ 2.5".



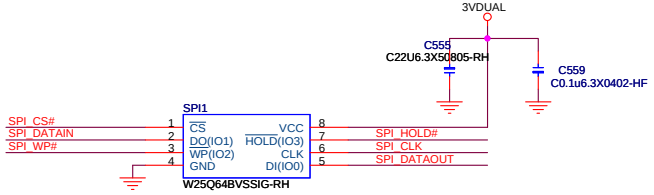
SPI FLASH MEMORY

SPI DEBUG PORT

Place close to SPI ROM



Part Number : N31-2051451-H06



Micro Star Restricted Secret		
Title: SB950 SATA/IDE/HWM/SPI		Rev: 4.1
Document Number: MS-7693		
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SB950 Pin USBCLK input ,or14M_25M_48M_OSC ouput
Function set output pin by BIOS.

PCI_PME# internal pull high 10k to 3VDUAL

Cap have been unpopulate for meet power sequence

PCI_PME# internal pull high 10k to 3VDUAL

OD need pull high

Connected to battery monitor circuit for Low-Low Battery notification.

R635 unstuff for VIA side stuff already

remove sdin1

remove RN14 which tie to PCIE1X

update as 1.04 circuit check

Add USB_OC

R585 should near the SB pin under 1inche

front port length need under 6inch

rear port length need under 18inch

SB850 Part 4 of 5

AMD-218-0697002-00-A12-RH

ACPI / WAKE UP EVENTS

USB 1.1USB MISC

USB 2.0

GPIO

USB OC

HD AUDIO

GBE LAN

EMBEDDED CTRL

EMBEDDED CTRL

Micro Star Restricted Secret

Title	SB950 ACPI/USB/AUDIO
Rev	4.1
Document Number	MS-7693
Last Revision Date:	Monday, April 28, 2014
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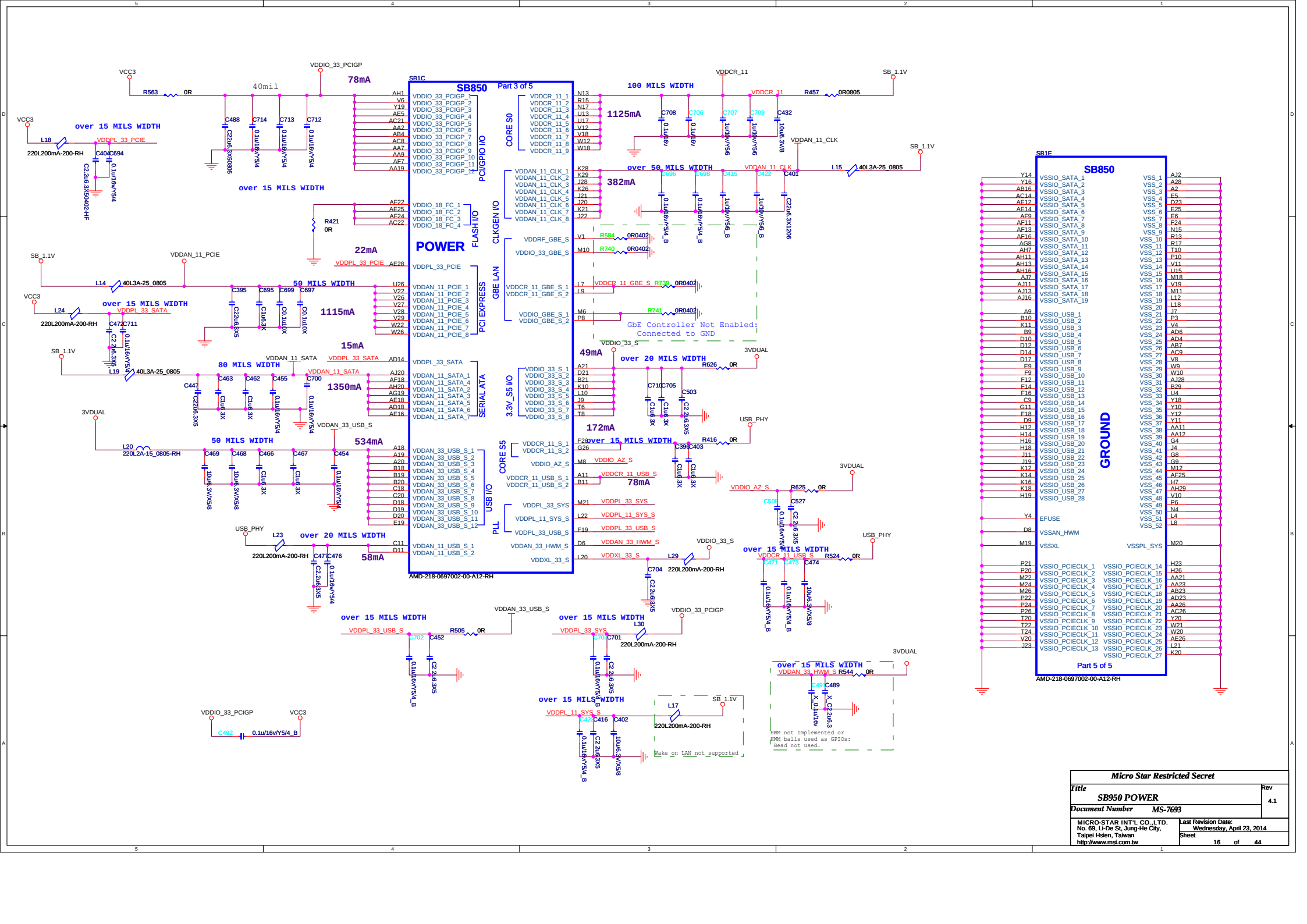
SB850
Part 3 of 5
POWER
PCI/GPIO I/O
CORE S0
FLASH I/O
CLKGEN I/O
GBE LAN
PCI EXPRESS
SERIAL ATA
3.3V_S5 I/O
CORE S5
USB I/O
PLL
AMD-218-0697002-00-A12-RH
SB850
Part 5 of 5
GROUND
AMD-218-0697002-00-A12-RH
GbE Controller Not Enabled:
Connected to GND
HWM not Implemented or
HWM balls used as GPIOs:
Bead not used.
Wake on LAN not supported
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SB950 POWER
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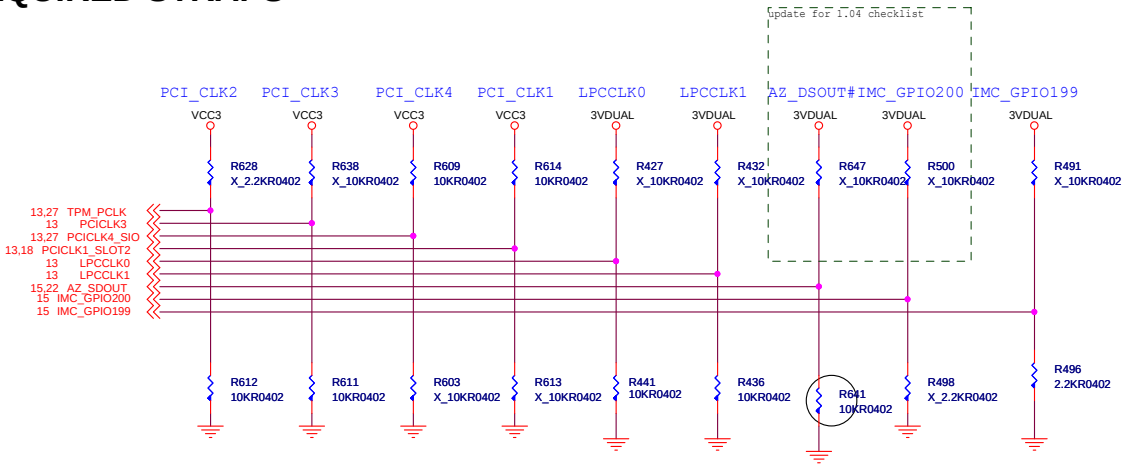
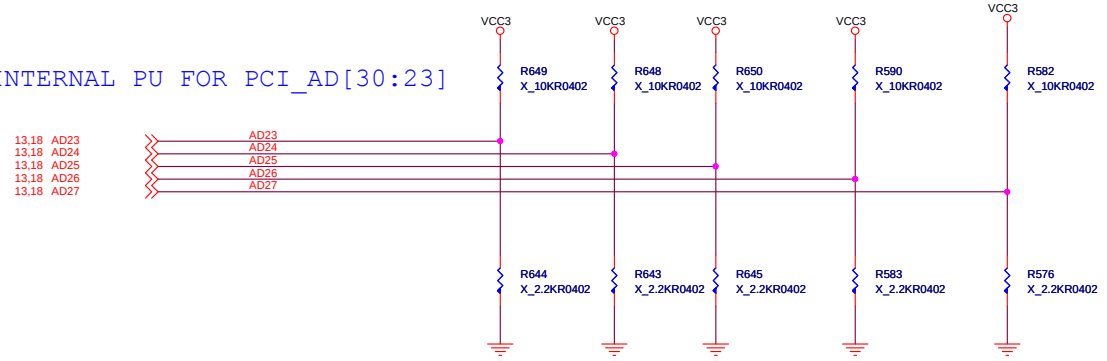
REQUIRED STRAPS

NOTE: SB700 HAS INTERNAL 15K PULL UP RESISTOR FOR RTC_CLK



	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPC_CLK0	LPC_CLK1	AZ_DOUT#	IMC_GPIO200 IMC_GPIO199
PULL HIGH	ALLOW PCIE GEN2 DEFAULT	WATCHDOG TIMER ON NB_PWRGD ENABLED	USE DEBUG STRAPS	NON-FUSION CPU CLOCK MODE DEFAULT	EC ENABLE	CLKGEN ENABLED		ROM TYPE: H, H = Reserved H, L = SPI ROM DEFAULT
PULL LOW	FORCE PCIE GEN1	WATCHDOG TIMER ON NB_PWRGD DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT	FUSION CPU CLOCK MODE	DISABLE EC DEFAULT	CLKGEN DISABLED DEFAULT	PERFORMANCE MODE DEFAULT	L, H = LPC ROM L, L = FWH ROM

SB800 HAS 15K INTERNAL PU FOR PCI_AD[30:23]



DEBUG STRAPS

	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE PCI PLL DEFAULT	DISABLE ILA AUTORUN DEFAULT	USE FC PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	DISABLE PCI MEM BOOT DEFAULT
PULL LOW	BYPASS PCI PLL	ENABLE ILA AUTORUN	BYPASS FC PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

Title: SB950 STRAPS

Rev: 4.1

Document Number: MS-7693

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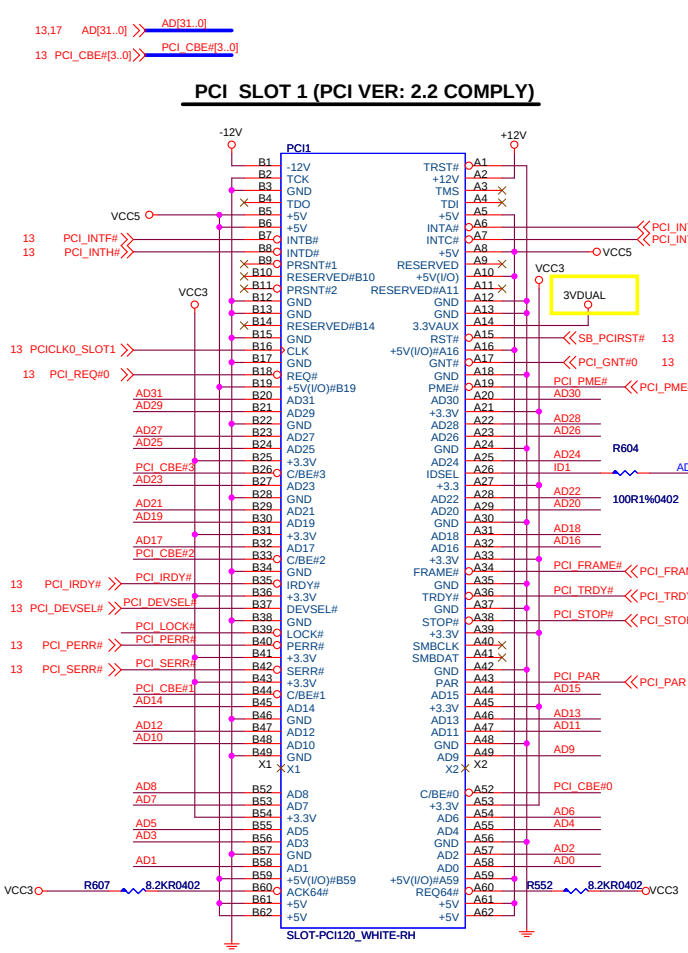
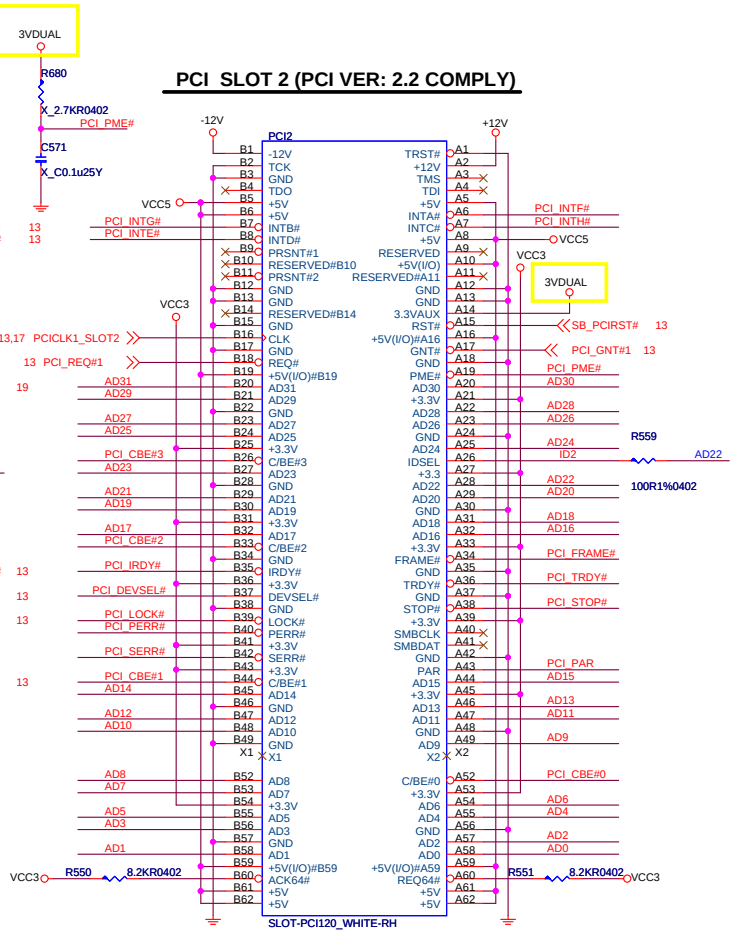
PCI SLOT 1 (PCI VER: 2.2 COMPLY)



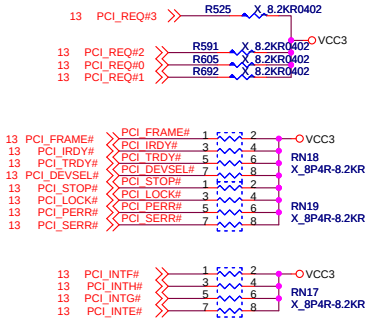
IDSEL = AD21
MASTER = PCI_REQ#0
PCI_GNT#0

PCI SLOT 2 (PCI VER: 2.2 COMPLY)



IDSEL = AD22
MASTER = PCI_REQ#1
PCI_GNT#1

PCI PULL-UP / DOWN RESISTORS



Micro Star Restricted Secret	
Title: PCI Slot 1&2	Rev: 4.1
Document Number: MS-7693	
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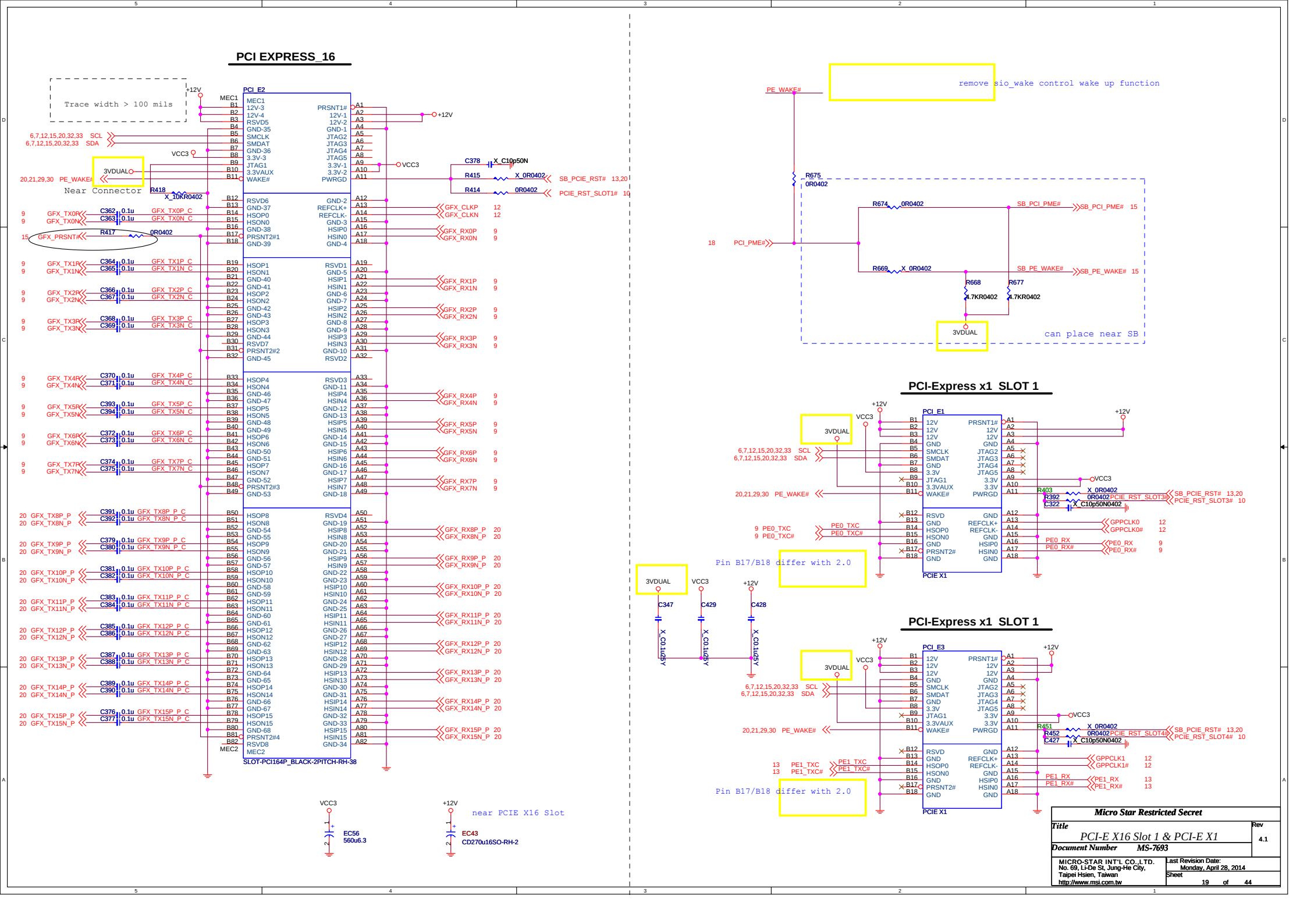
PCI EXPRESS_16
Trace width > 100 mils
Near Connector
PCI_E2
SLOT-PCI164P_BLACK-2PITCH-RH-38
remove sio_wake control wake up function
can place near SB
PCI-Express x1 SLOT 1
PCI_E1
PCIE X1
Pin B17/B18 differ with 2.0
PCI-Express x1 SLOT 1
PCI_E3
PCIE X1
Pin B17/B18 differ with 2.0
near PCIE X16 Slot
EC56
560u6.3
EC43
CD270u16SO-RH-2
Micro Star Restricted Secret
PCI-E X16 Slot 1 & PCI-E X1
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4.1
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PCI EXPRESS X8 SLOT

Trace width > 100 mils

within 500mil

PCI_E4

SLOT-PCI100P_BLACK-2PITCH-RH-3

near PCIE X8

EC51 CD270u16SO-RH-2

C753 C10u10Y0805

C744 C745 C746 C747 C749 C750 C751 C752 C0.1u0X0402

U40 U41 U42 U43 PI3PCIE3415ZHE_TQFN42-RH

C732 C733 C734 C735 0.1u

8X_CTRL

0: BIOS MODE
1: HW MODE

Micro Star Restricted Secret	
Title: PCI-E X8	Rev: 4.1
Document Number: MS-7693	
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E2205-B Giga LAN

3VDUAL
RL1
4.7KR0402
LAN_CLKREQ#

Pull-up resister RL1 required to either
3.3V suspend or core rail depending on
the power well of the PCH input CLKREQ# buffer.

LED0:
1=hi core voltage(overclocking)
0=low core voltage (non-overclocking)

LED1:
1=SWR mode
0=LDO mode

LED3:
1=25MHz clock
0=48MHz clock

UL1
E2205-BL3A-R-HF

Reserve for strap hi

CHOKEL1:
L04-47A7310-C08
L04-47A7680-T15

LL1:
L02-3018023-C08
L02-3018023-T19

Close to Pin52 (<400mil)
Close to Pin52 (<200mil)
Close to Pin24 (<200mil)
Close to Pin18
Close to Pin12
Close to Pin9
Close to Pin21
Close to Pin44
Close to Pin25
Close to Pin47
Close to CHOKEL1 (<200mil)
Close to Pin32

LX width > 30mil

VDD33 power trace should be wider than 30mils;
AVDD33 power trace should be wider than 30mils;
VDD_IO power trace should be wider than 30mils;
VDDIO_REG power trace should be wider than 20mils;
AVDDH power trace should be wider than 20mils;
AVDDL power traces should be wider than 20mils.
DVDDL power traces should be wider than 20mils.

10:
1. Support xD, not support SPI
2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFus
01:
1. Support SPI, not support xD
2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFus
11:
1. Not support xD, not support SPI
2. Only support PPS, PPS always at CRIO13.

ESD-VPORT0603102KV05-HF
ESD-AOZ8804DI
D0G-1020510-I05
D0G-8010510-SI0
D0G-05A0300-I14
D0G-06A050C-A68

LAN_USB1B
RJ45_USBX2_LEDX2_TX-1000-RH-43
LED1 low is Orange 1000
LED2 low is Green 100

Remove 3VSB_WAKE power

Micro Star Restricted Secret	
Title: LAN - Killer E2205	Rev: 4.1
Document Number: MS-7693	
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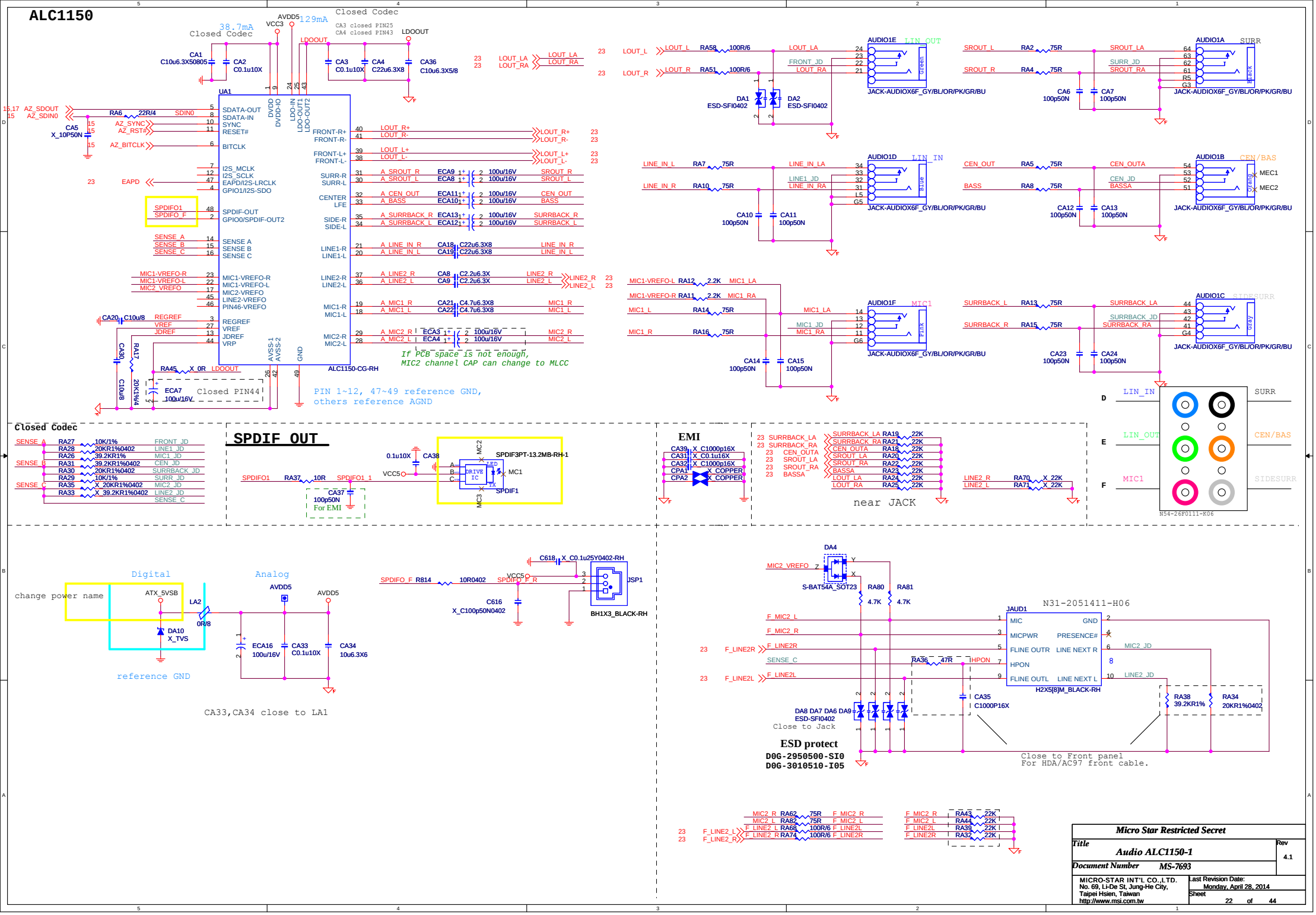
ALC1150



Micro Star Restricted Secret

Title	Audio ALC1150-1
Rev	4.1
Document Number	MS-7693
Last Revision Date:	Monday, April 28, 2014
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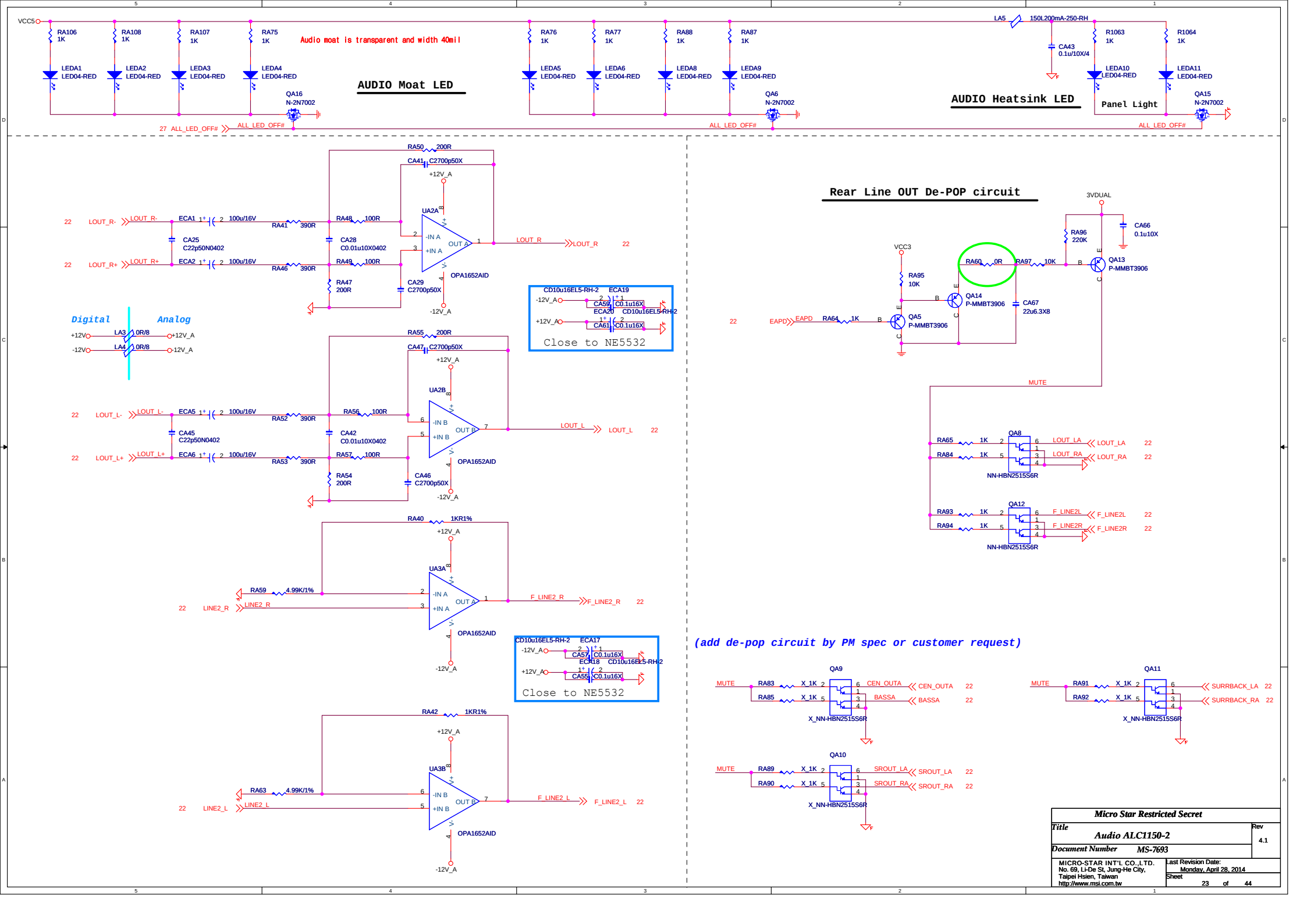
AUDIO Moat LED
Audio moat is transparent and width 40mil
AUDIO Heatsink LED
Panel Light
Rear Line OUT De-POP circuit
Digital
Analog
Close to NE5532
Close to NE5532
(add de-pop circuit by PM spec or customer request)
OPA1652AID
NN-HBN2515S6R
X_NN-HBN2515S6R
Micro Star Restricted Secret
Audio ALC1150-2
MS-7693
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Taipei Hsien, Taiwan
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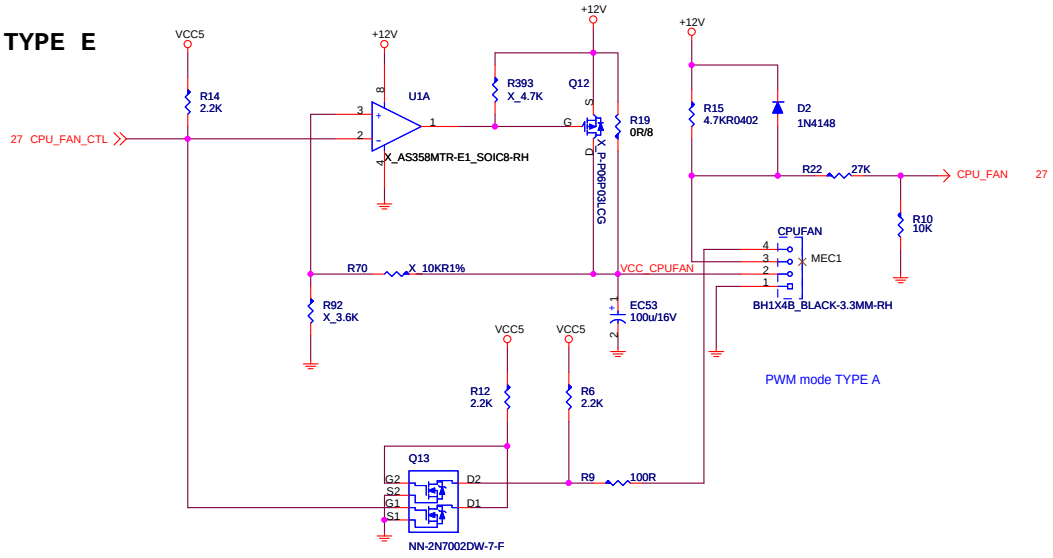
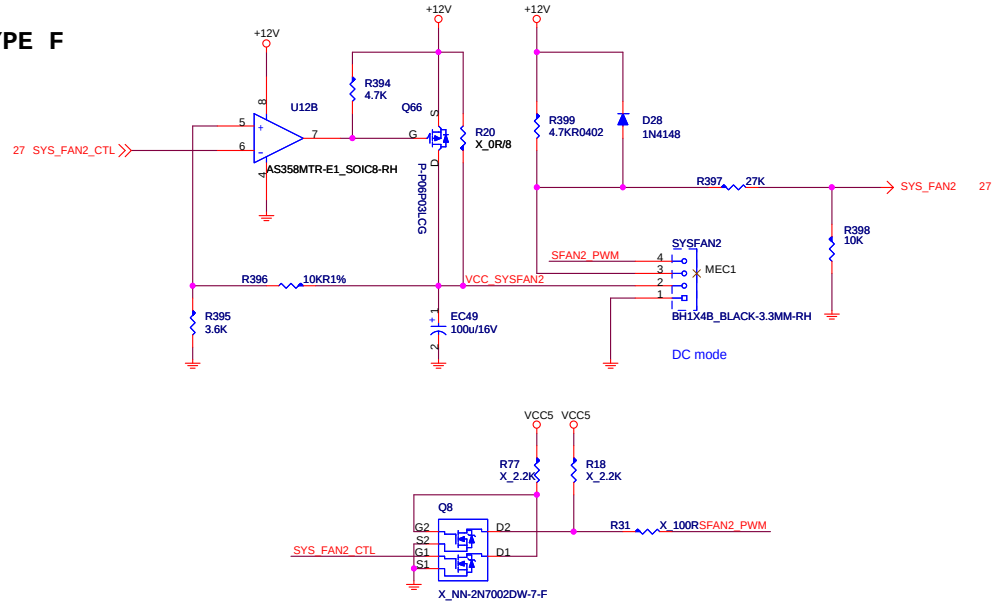
4.0 Remove APS LED

FAN

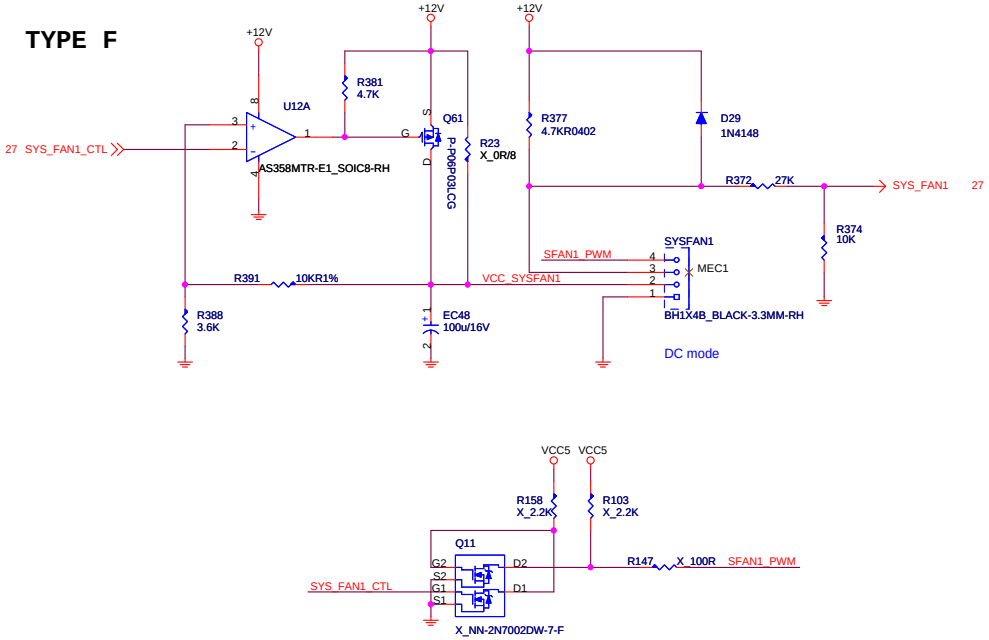
TYPE E



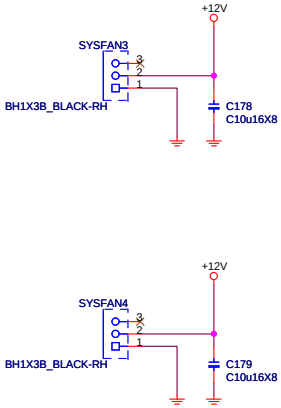
TYPE F



TYPE F

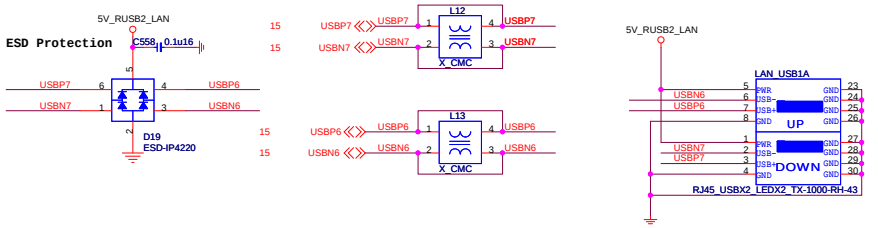


TYPE C

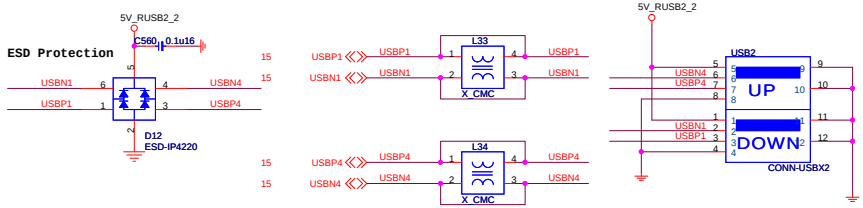


Micro Star Restricted Secret		
Title: FAN		Rev: 4.1
Document Number: MS-7693		
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Wednesday, April 23, 2014	Sheet 24 of 44

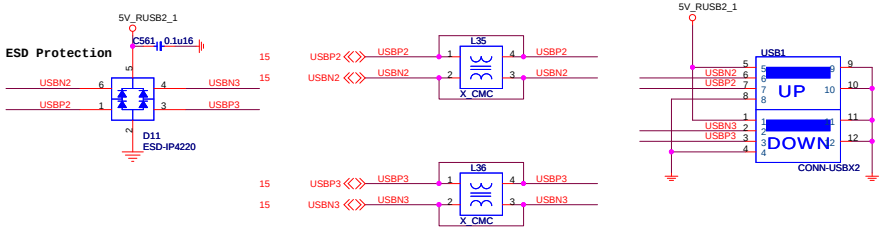
REAR PANEL USB CONNECTOR FOR USB PORT 0,1



REAR PANEL USB CONNECTOR FOR USB PORT 2,3

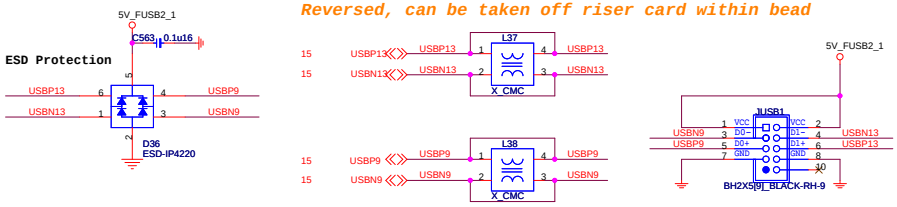


REAR PANEL USB CONNECTOR FOR USB PORT 4,5

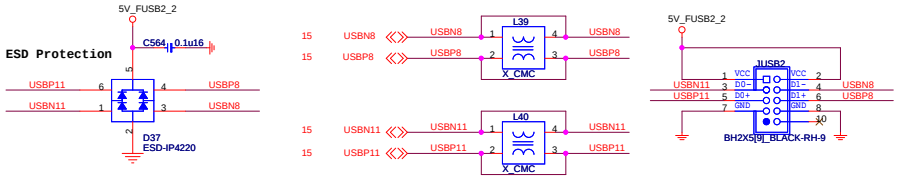


FRONT PANEL USB CONNECTOR FOR USB PORT 6,7

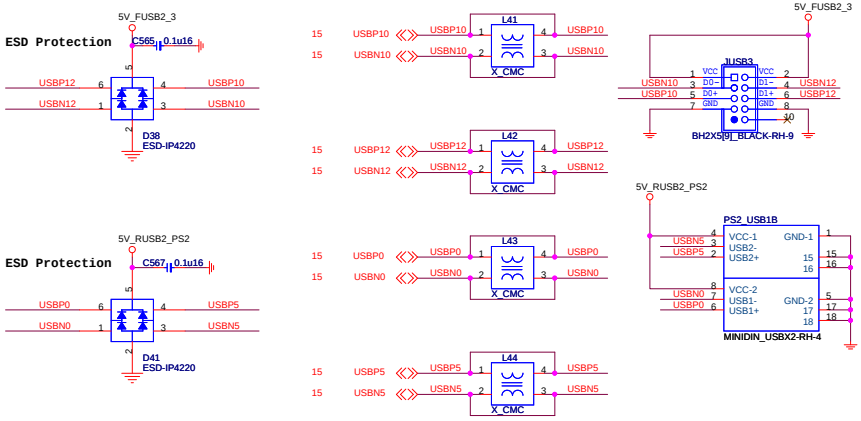
Reversed, can be taken off riser card within bead

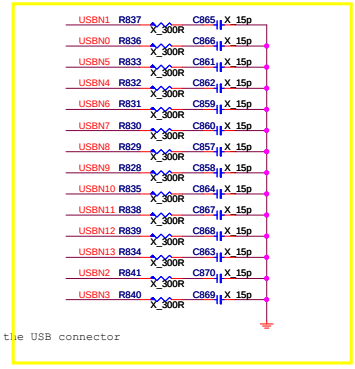


FRONT PANEL USB CONNECTOR FOR USB PORT 8,9



FRONT PANEL USB CONNECTOR FOR USB PORT10,11





close to the ESD or to the USB connector

Micro Star Restricted Secret		
Title	*USB CONNECTORS*	Rev 4.1
Document Number	*MS-7693*	
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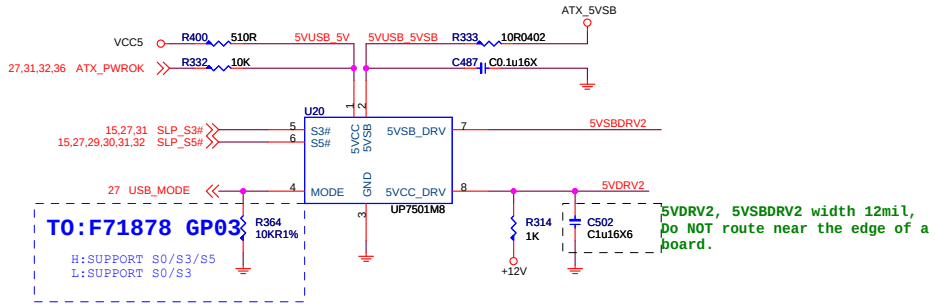
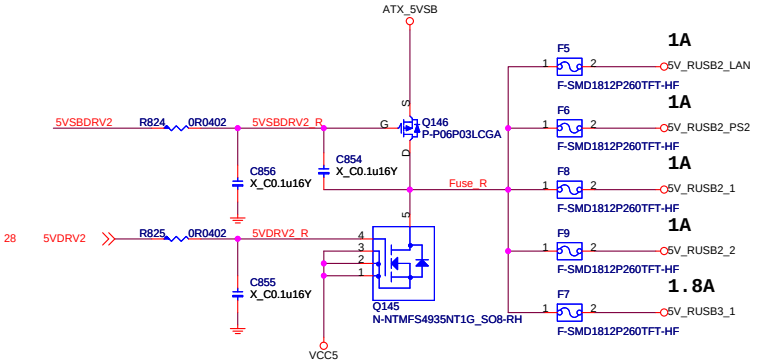
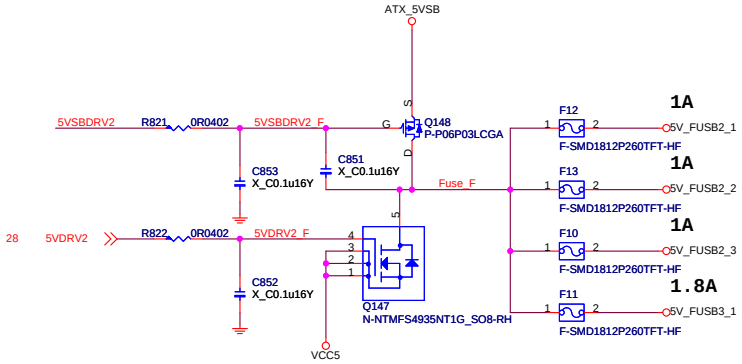
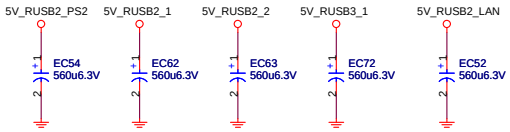
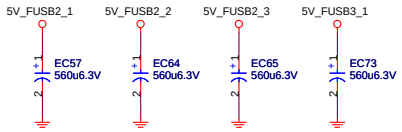


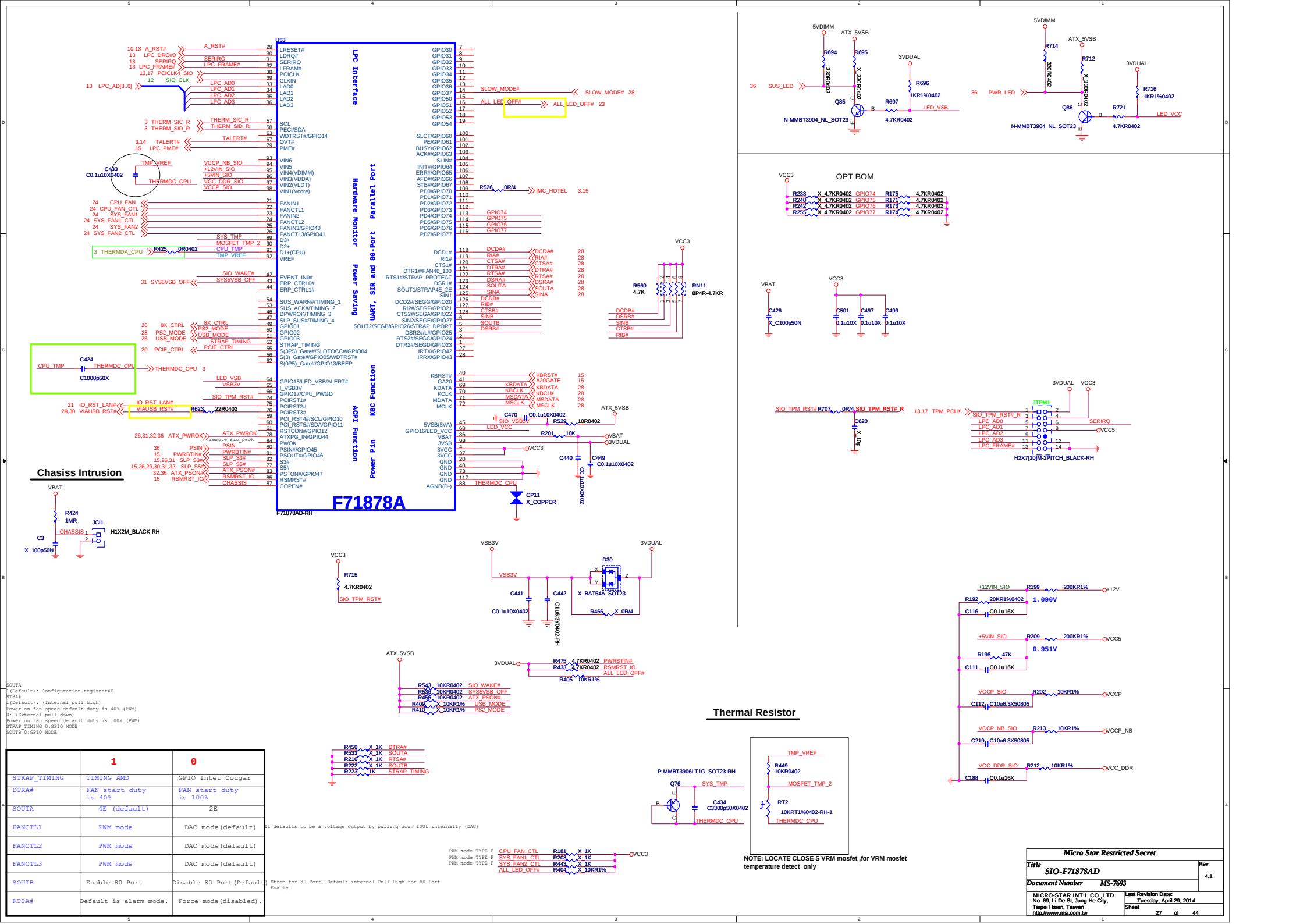






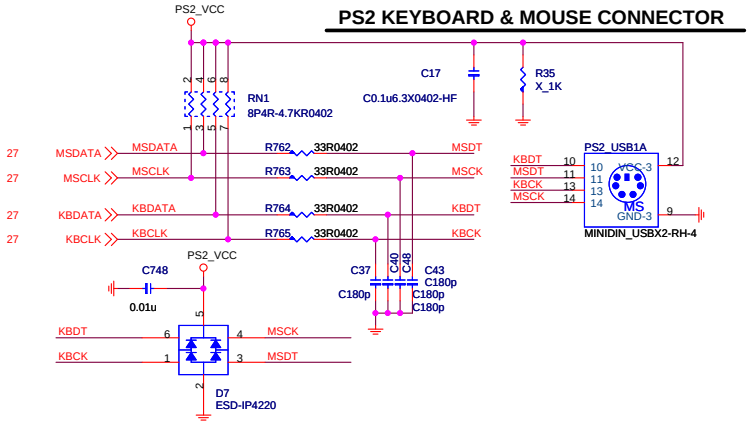


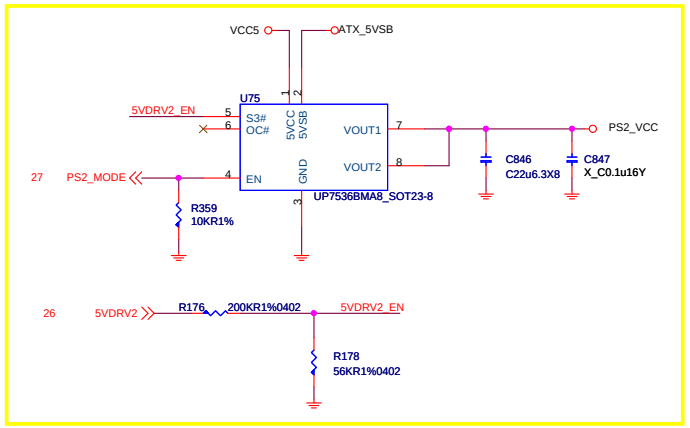
Micro Star Restricted Secret		
Title: USB Power		Rev: 4.1
Document Number: MS-7693		
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Monday, April 28, 2014 Sheet 26 of 44	

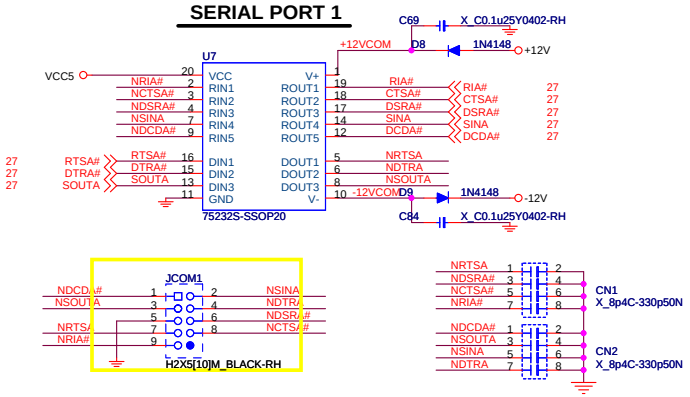


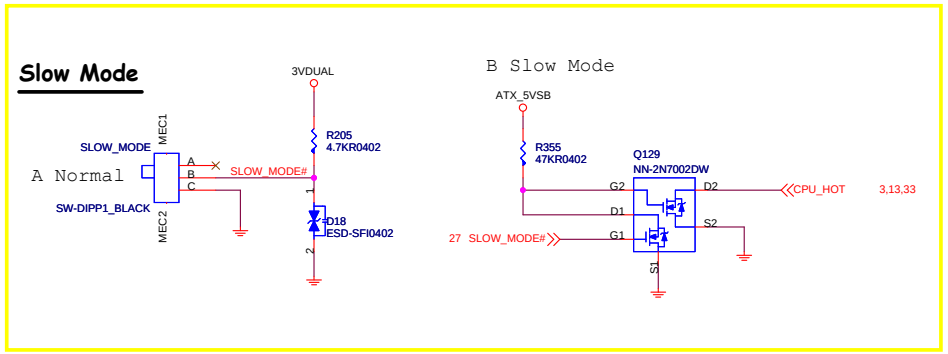
	1	0
STRAP_TIMING	TIMING AMD	GPIO Intel Cougar
DTRA#	FAN start duty is 40%	FAN start duty is 100%
SOUTA	4E (default)	2E
FANCTL1	PWM mode	DAC mode(default)
FANCTL2	PWM mode	DAC mode(default)
FANCTL3	PWM mode	DAC mode(default)
SOUTB	Enable 80 Port	Disable 80 Port(Default)
RTSA#	Default is alarm mode.	Force mode(disabled).

NOTE: LOCATE CLOSE S VRM mosfet ,for VRM mosfet temperature detect only

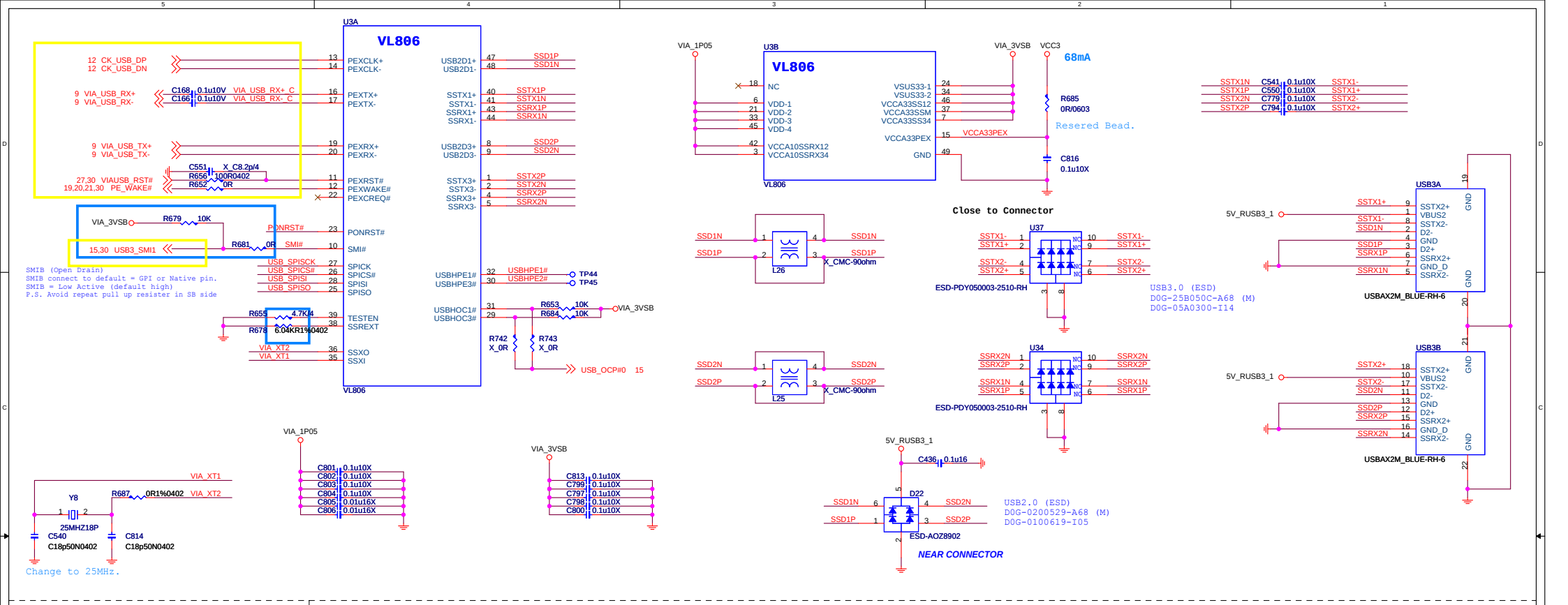




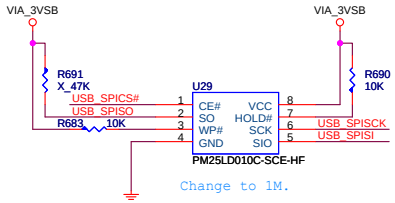


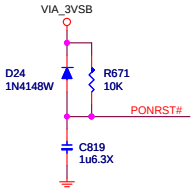


Micro Star Restricted Secret	
Title: COM&PS2	Rev: 4.1
Document Number: MS-7693	
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Tuesday, April 29, 2014 Sheet 28 of 44

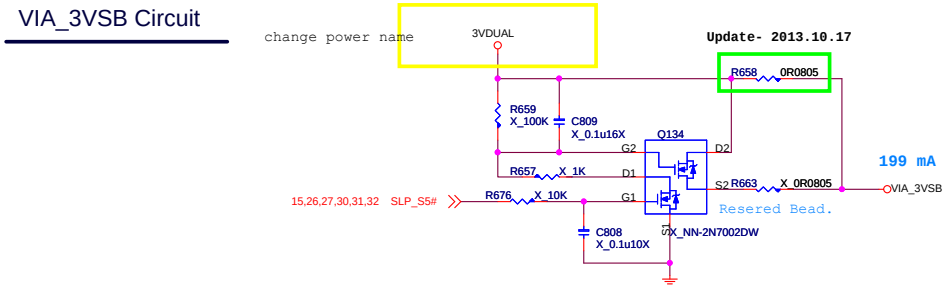


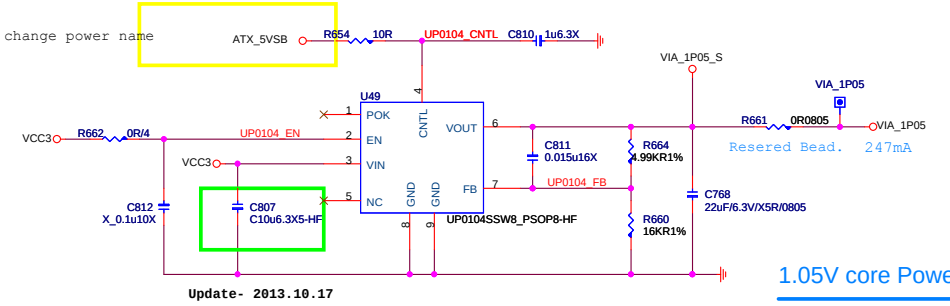
EEPROM





VIA_3VSB Circuit





1.05V core Power

Max Power disspation: (3.3 V-1.05V)*0.247A=0.55575W
VIA Core Power: VIA_1P05 247mA

Micro Star Restricted Secret		
Title: VIA USB3.0-1		Rev: 4.1
Document Number: MS-7693		
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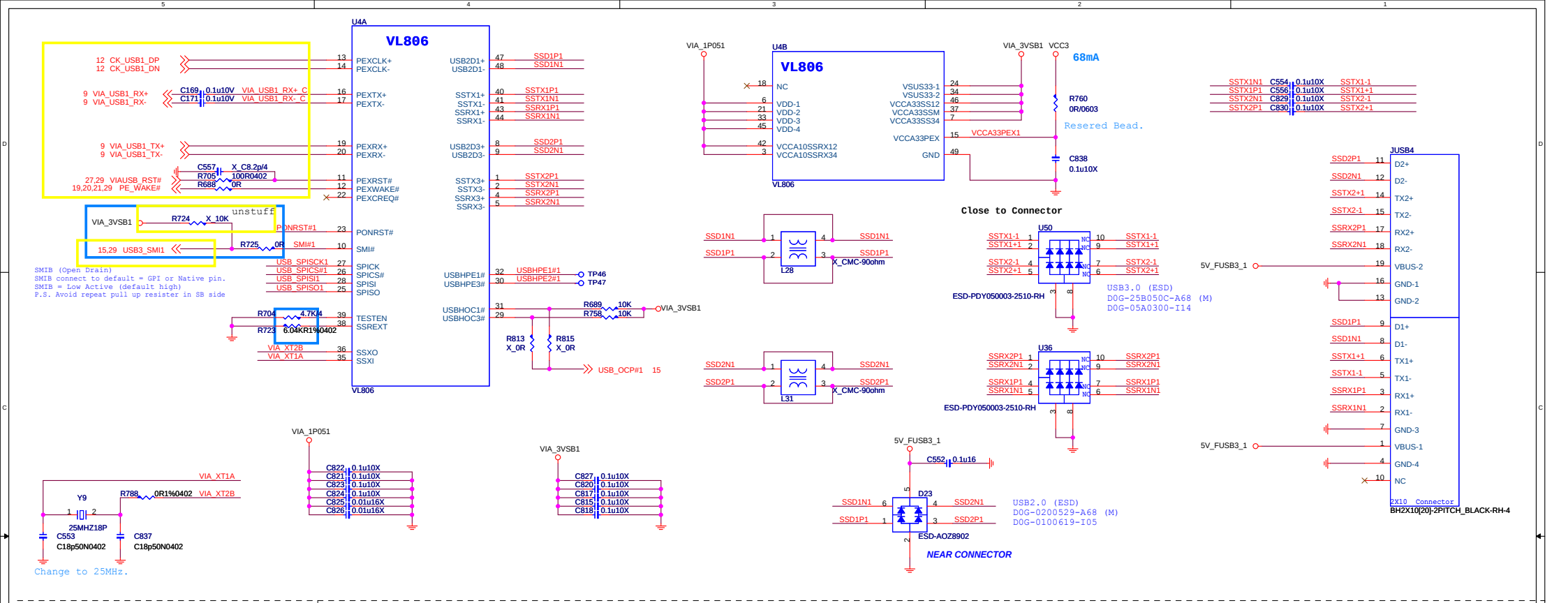
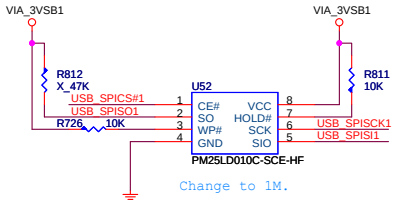
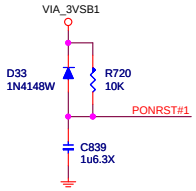
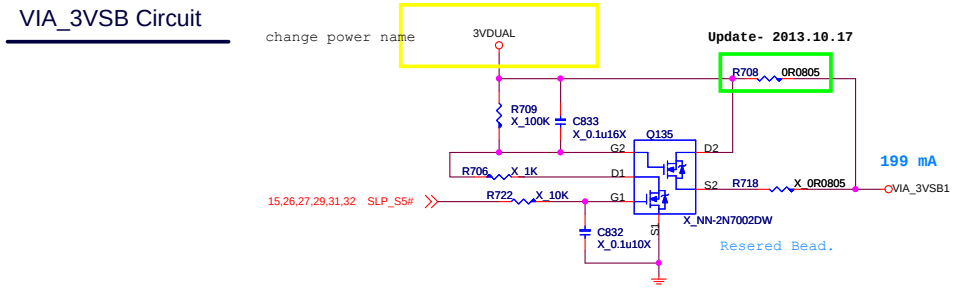


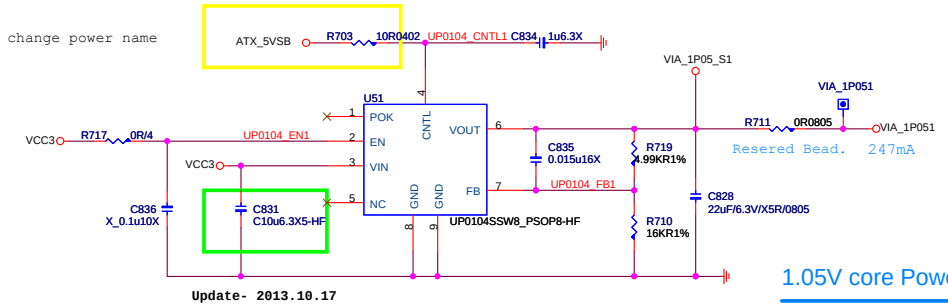
EEPROM





VIA_3VSB Circuit

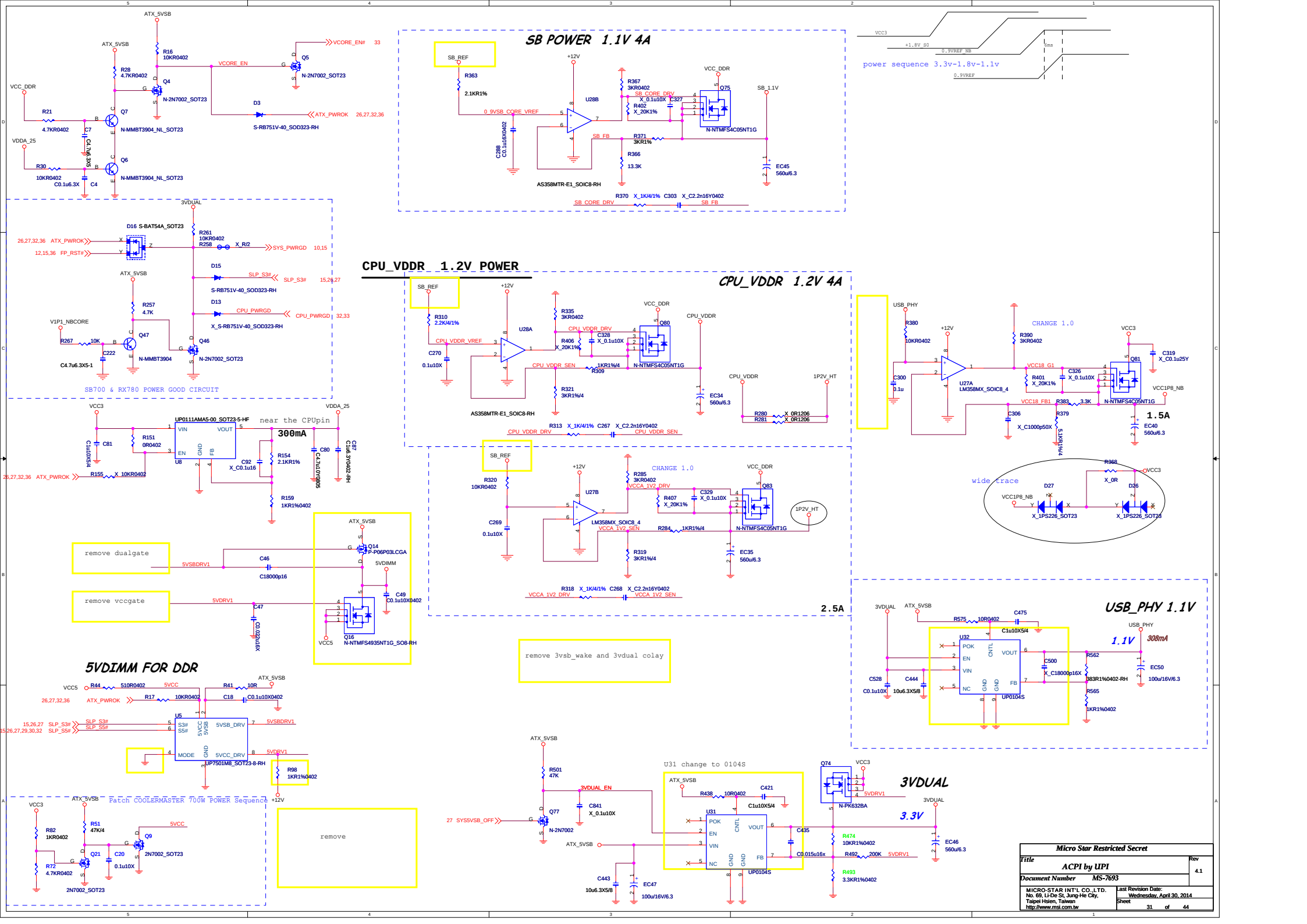




1.05V core Power

Max Power disspation: (3.3 V-1.05V)*0.247A=0.55575W
VIA Core Power: VIA_1P05 247mA

Micro Star Restricted Secret		
Title: VIA USB3.0-2		Rev: 4.1
Document Number: MS-7693		
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Tuesday, April 29, 2014	Sheet 30 of 44


SB POWER 1.1V 4A
power sequence 3.3v-1.8v-1.1v
CPU_VDDR 1.2V POWER
CPU_VDDR 1.2V 4A
SB700 & RX780 POWER GOOD CIRCUIT
near the CPUpin
300mA
1.5A
2.5A
CHANGE 1.0
wide trace
USB_PHY 1.1V
1.1V
308mA
5VDIMM FOR DDR
Patch COOLERMASTER 700W POWER Sequence
remove dualgate
remove vccgate
remove 3vsb_wake and 3vdual colay
remove
U31 change to 0104S
3VDUAL
3.3V
Micro Star Restricted Secret
ACPI by UPI
MS-7693
4.1
MICRO-STAR INT'L CO.,LTD.
No. 69, Li-De St., Jung-He City,
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http://www.msi.com.tw
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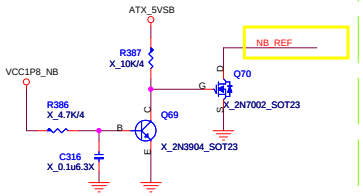
DDR VTT Power

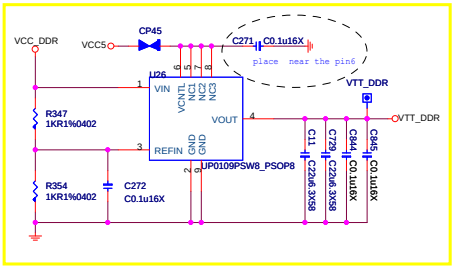
To CPU Copper trace width > 250mils , Fill island behind DIMM > 400mils .

RX780 power up sequence

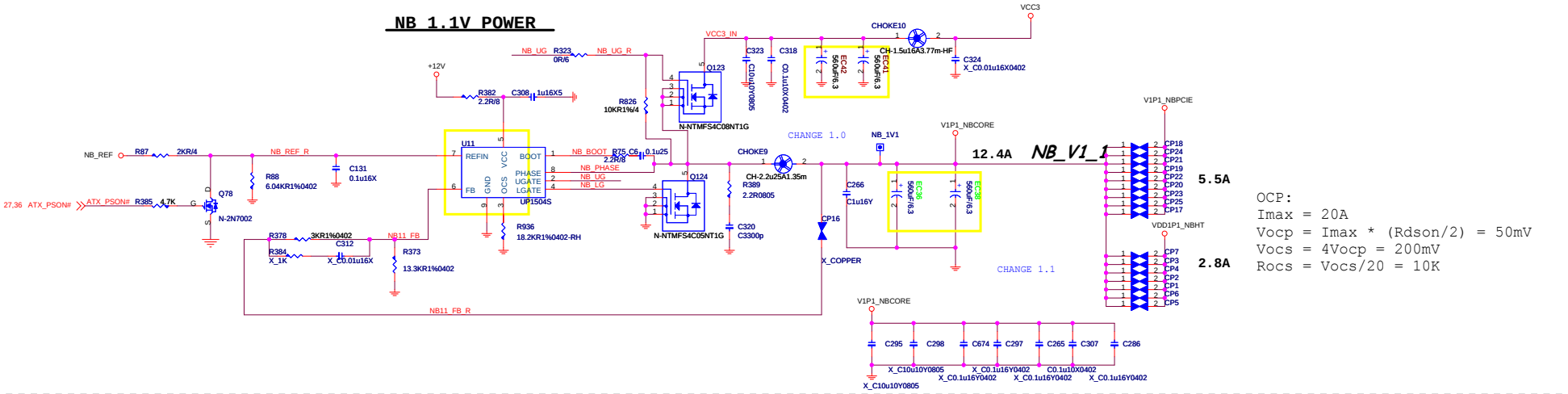
VCC3
VCC1.8_S0
1P2V_HT
VCC1_1

Reserve for RX980 POS





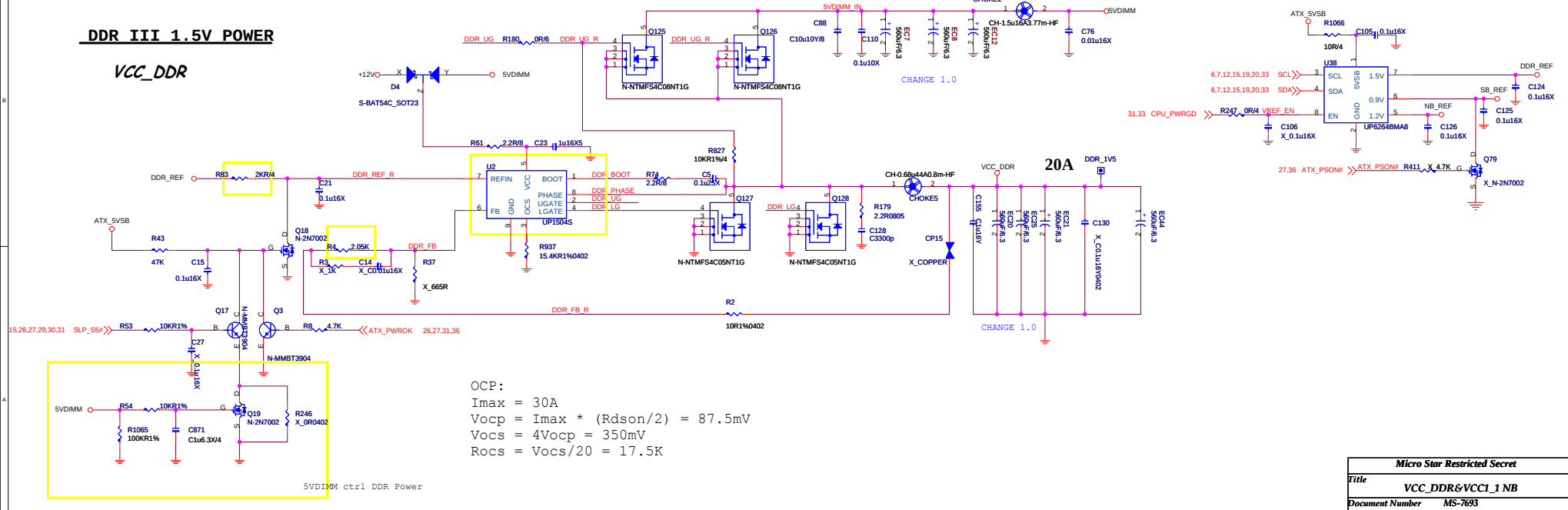
NB 1.1V POWER



OCP:
Imax = 20A
Vocp = Imax * (Rdson/2) = 50mV
Vocs = 4Vocp = 200mV
Rocs = Vocs/20 = 10K

DDR III 1.5V POWER

VCC_DDR



OCP:
Imax = 30A
Vocp = Imax * (Rdson/2) = 87.5mV
Vocs = 4Vocp = 350mV
Rocs = Vocs/20 = 17.5K

Micro Star Restricted Secret		
Title: VCC_DDR&VCC1_1 NB		Rev: 4.1
Document Number: MS-7693		
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VID1/SEL always keep pull low for SVI mode.

U6 UP6214 - AM3 (4+2) SVID CONTROLLER

UP1601PQGK_VQFN48-HF

CORE Remote Sense Connections
Sense under the socket close to regulation point

NB Remote Sense Connections
Sense under the socket close to regulation point

NB Compensation Network

4.0 Remove

R52 change to 15k,IC pull high VR_HOT to protect MOS when MOS temp between 110-115

For AM3r2 35mV Vofs

UP1811 to NCT3933

UP1601 to control MOS temp

4.0 Remove loadline circuit

change name 12VIN

ADDRESS	0x2A	0X28	0x26	0x24	0x22	0x20
RH (KOhm)	OPEN	3.9	18	2.2	1.3	10
RL (KOhm)	10	1.3	13	3	3.9	OPEN
BUS_SEL	0%	25%	40%	60%	75%	100%

Micro Star Restricted Secret

Title: PWM- UP1601

Rev: 4.1

Document Number: MS-7693

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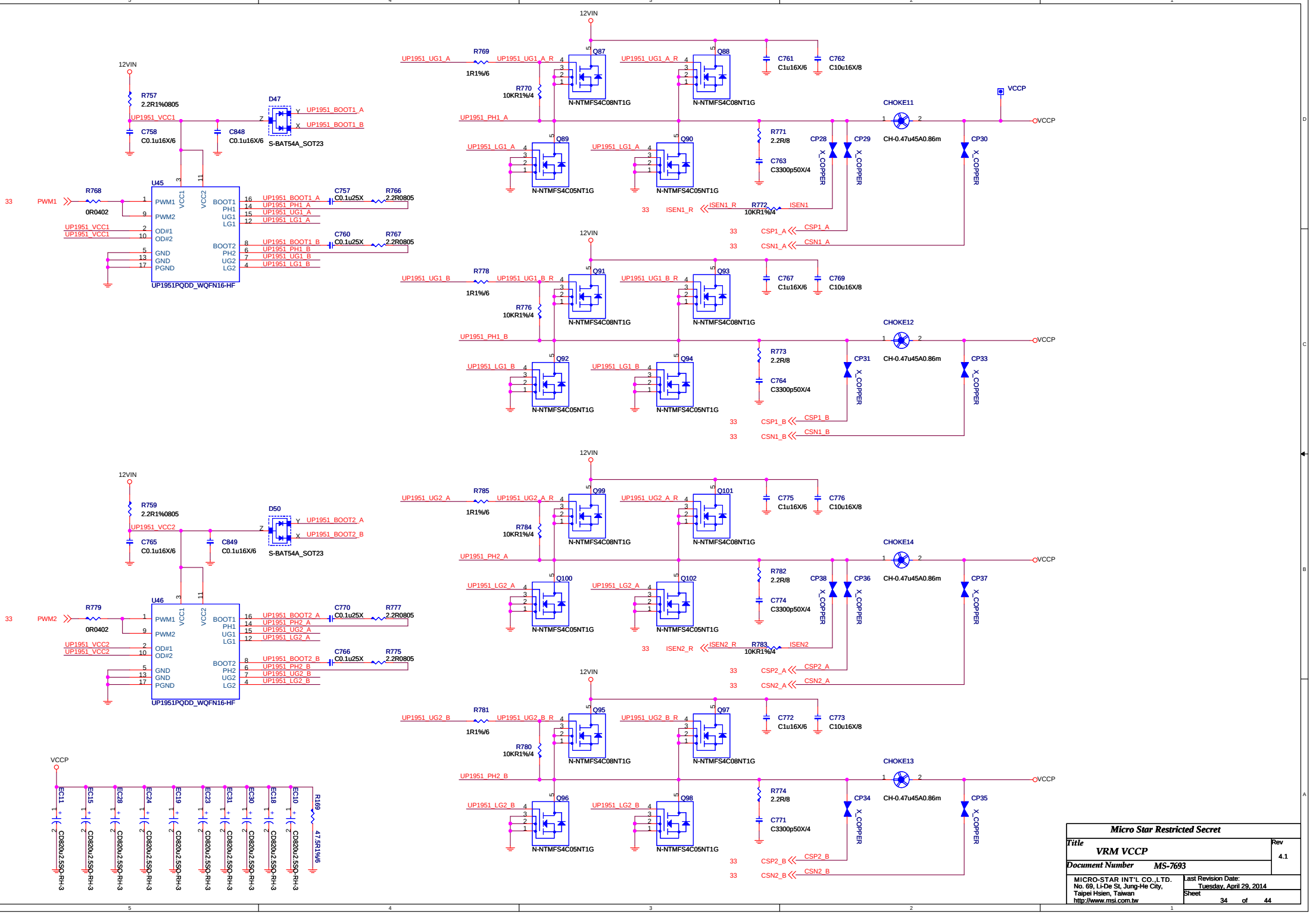

Micro Star Restricted Secret		
Title	*VRM VCCP*	Rev 4.1
Document Number	*MS-7693*	
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Tuesday, April 29, 2014	
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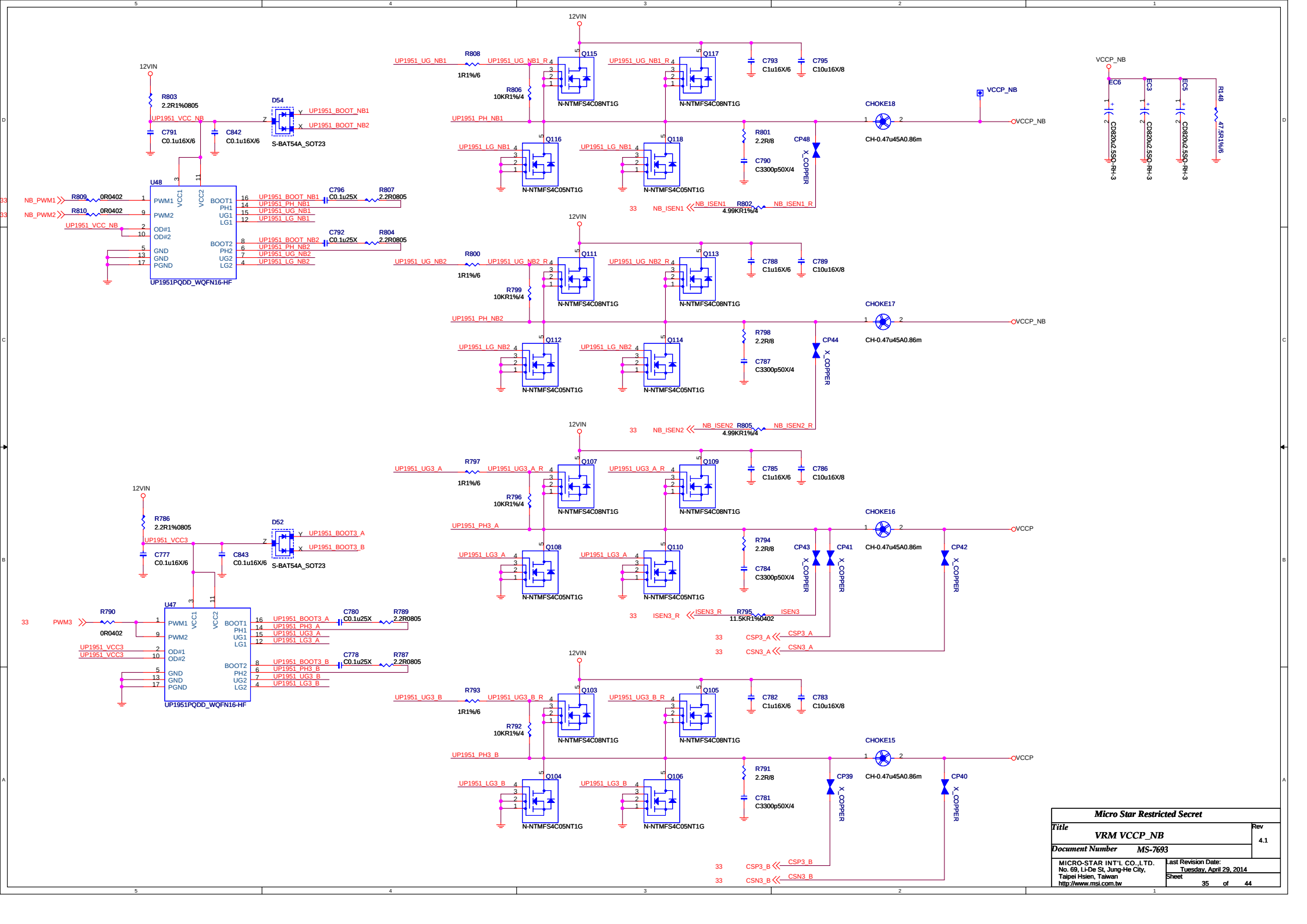

Micro Star Restricted Secret	
Title: VRM VCCP_NB	Rev: 4.1
Document Number: MS-7693	
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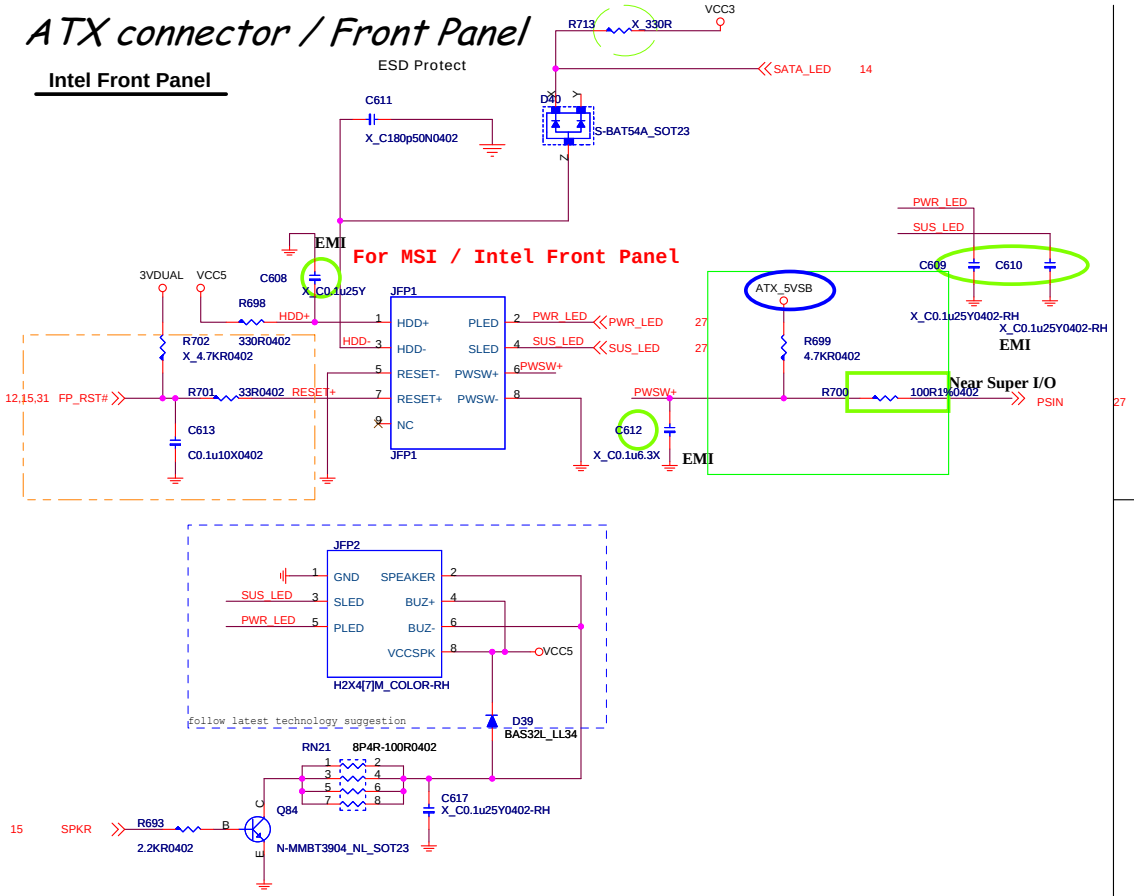
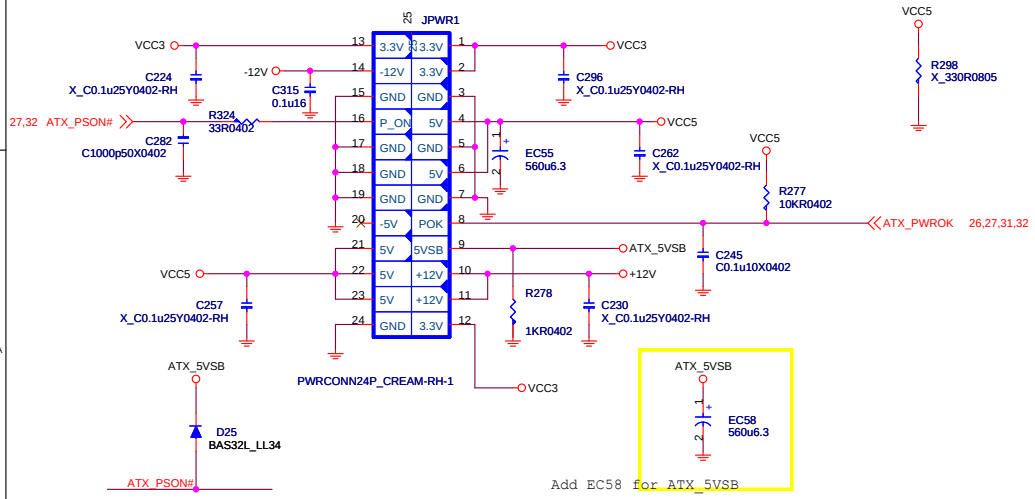
ATX connector / Front Panel

Intel Front Panel



ATX Connector



remove vcc5_sb

Micro Star Restricted Secret		
Title: ATX/Front Panel		Rev: 4.1
Document Number: MS-7693		
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Friday, April 25, 2014	
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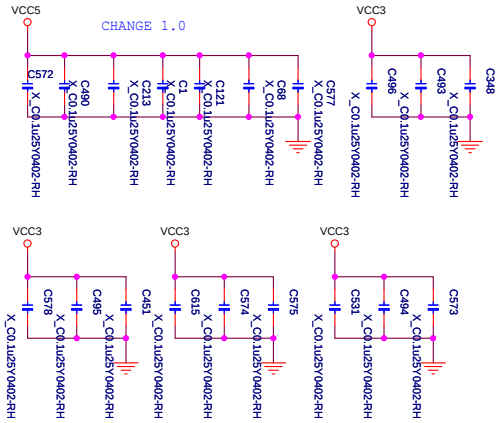

Micro Star Restricted Secret	
Title *EMI Cap*	Rev 4.1
Document Number *MS-7693*	
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HS_SB1
MEC1
MEC1
MEC2
MEC2
HS-040163C-RH

HS_NB1
MEC1
MEC1
MEC2
MEC2
HS-0405370-RH

PCB1
PD0-0769341-E48
PCB

VBAT1-S1
BAT-BCR2032P-RH

CPU1_1
E93-0000094-C22

Rubber1
PCB
X_rubber1/2

Rubber2
PCB
X_rubber1/2

Mounting Holes

MH3 X_MH001
MH4 X_MH001
MH5 X_MH001
MH7 X_MH001
CA17 C0.1u10X
CA26 C0.1u10X
MH6 X_MH001
MH1 X_MH001
MH2 X_MH001
MH8 X_MH001
MH9 X_MH001

Simulation

X_JS1
SIM2
X_PIN1*2

X_JS2
VCC5
SIM1
X_PIN1*2

3VDUAL — 3VDUAL
CPU_VDDR — CPU_VDDR
1P2V_HT — CPU_1P2V_HT
SB_1.1V — SB_1_1V
DVDDL — LAN_DVDDL

Optics Orientation Holes

FM8 X_FM
FM7 X_FM
FM6 X_FM
FM5 X_FM
FM4 X_FM
FM3 X_FM
FM2 X_FM
FM1 X_FM

change power name

HS_PWM
MEC2
MEC1
HS-0501740-RH

SBC2
Label
601-7680-03S
SBC2 label

PACK_LABEL
Label
601-7680-03S
X_LABEL

LA1
AMI_BIOS LABLE
BIOS_LABLE

AUDIO_CASE
MEC1
MEC1
MEC2
MEC2
HS-0000540-RH

Micro Star Restricted Secret		
Title: MANUAL PARTS		Rev: 4.1
Document Number: MS-7693		
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