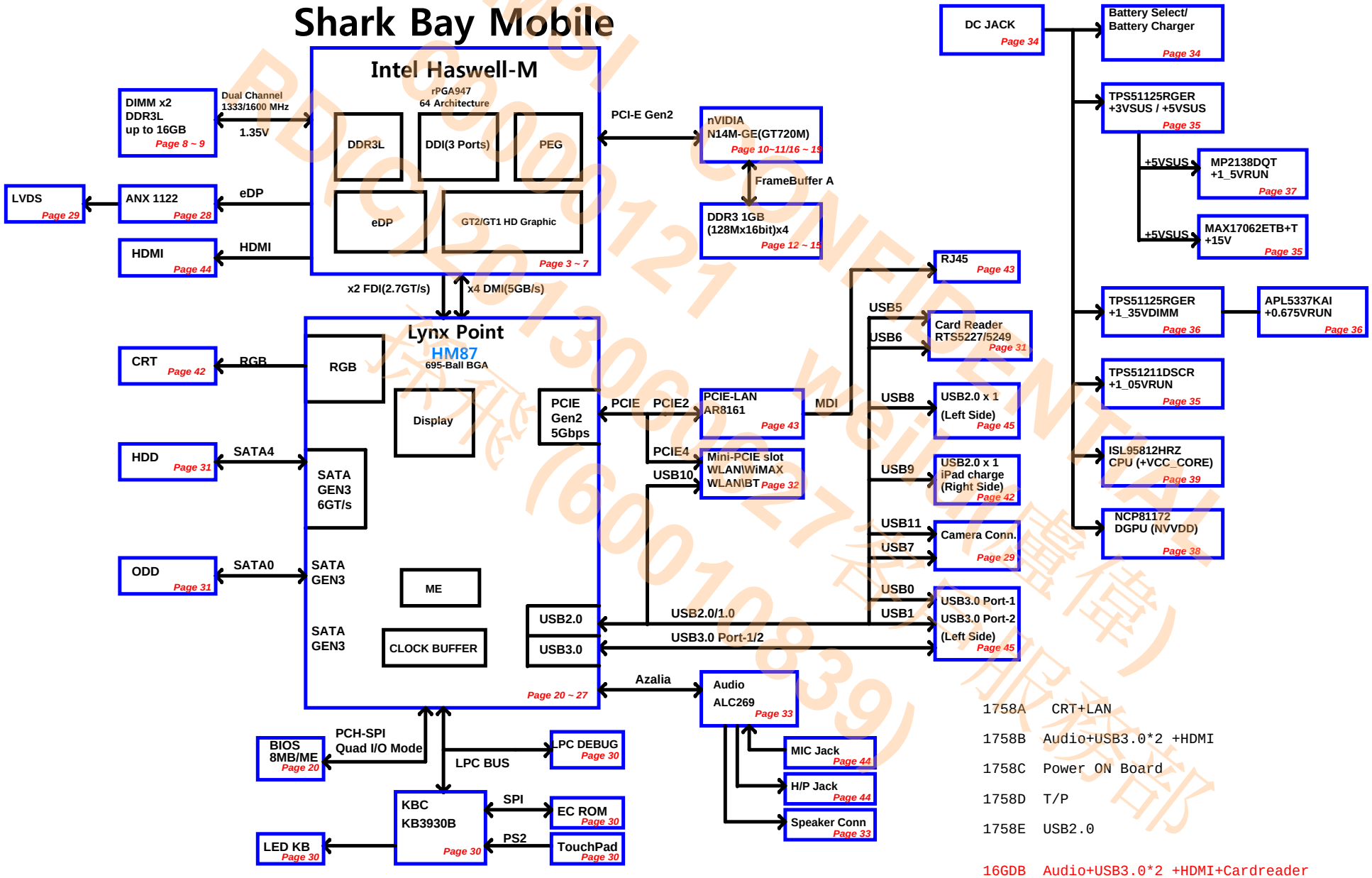
# MS-16GD ver:0A




1758A CRT+LAN

1758B Audio+USB3.0*2 +HDMI

1758C Power ON Board

1758D T/P

1758E USB2.0

16GDB Audio+USB3.0*2 +HDMI+Cardreader

16GDD N/A

Block Diagram

MS-16GD

# SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

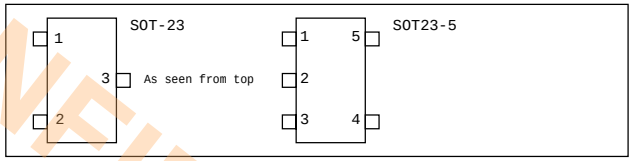
## Voltage Rails

| Voltage | Description | Control Signal |
|---|---|---|
| PWR_SRC | AC ADAPTER OR BATTERY IN | |
| +5VALW | 5.0V always on power rail | PWR_SRC |
| +3VALW | 3.3V always on power rail | PWR_SRC |
| +5VSUS | 5.0V power rail | SUS_ON |
| +3VSUS | 3.3V power rail | SUS_ON |
| +1_35VDIMM | 1.35V DDR3L power rail (off in S4-S5) | PM_SLP_S4# |
| +0_675VRUN | 0.675V DDR3L Termination voltage (off in S3-S5) | PM_SLP_S3# |
| +5VRUN | 5.0V switched power rail (off in S3-S5) | PM_SLP_S3# |
| +3VRUN | 3.3V switched power rail (off in S3-S5 / M0) | PM_SLP_S3# |
| +1_5VRUN | 1.5V switched power rail (off in S3-S5) | PM_SLP_S3# |
| +VCC_CORE | 1.2V Core Voltage for Processor | VR_ON |
| +1_05VRUN | 1.05V rail for Processor | PM_SLP_S3# |
| NVVDD | 0.6~1.2V(VBoot:0.9V)Core Voltage for nVIDIA N14E-GE DGPU | GPIO11_GPUVID |
| +3V3_NV | 3.3V PEX power rail (off in Optimus OFF) | DGPU_PWR_EN# |
| FBVDDQ | 1.35V FB / GDDR5 power rail (off in Optimus OFF) | GPU_PWRGD |
| PEX_VDD | 1.05V PLL power rail (off in Optimus OFF) | GPU_PWRGD |

### Net Naming Conventions

```
Suffix
#  =  Active Low Signal
Prefix
H  =  Host
M  =  DDR Memory
TP =  Test Point (does not connect anywhere else)
```

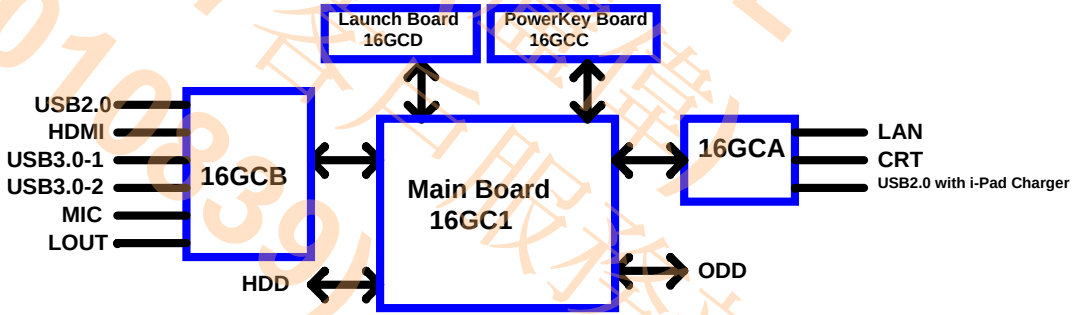
### PCB Footprints




## POWER STATES

| STATE \ SIGNAL | SLP_S3# | SLP_S4# | SLP_S5# | +V*ALW | +*VSUS | +*VRUN | Clocks |
|---|---|---|---|---|---|---|---|
| S0( Full ON) | HIGH | HIGH | HIGH | ON | ON | ON | ON |
| S3( Suspend to RAM) | LOW | HIGH | HIGH | ON | ON | OFF | OFF |
| S4( Suspend to Disk) | LOW | LOW | HIGH | ON | OFF | OFF | OFF |
| S5 (Soft OFF) | LOW | LOW | LOW | ON | OFF | OFF | OFF |

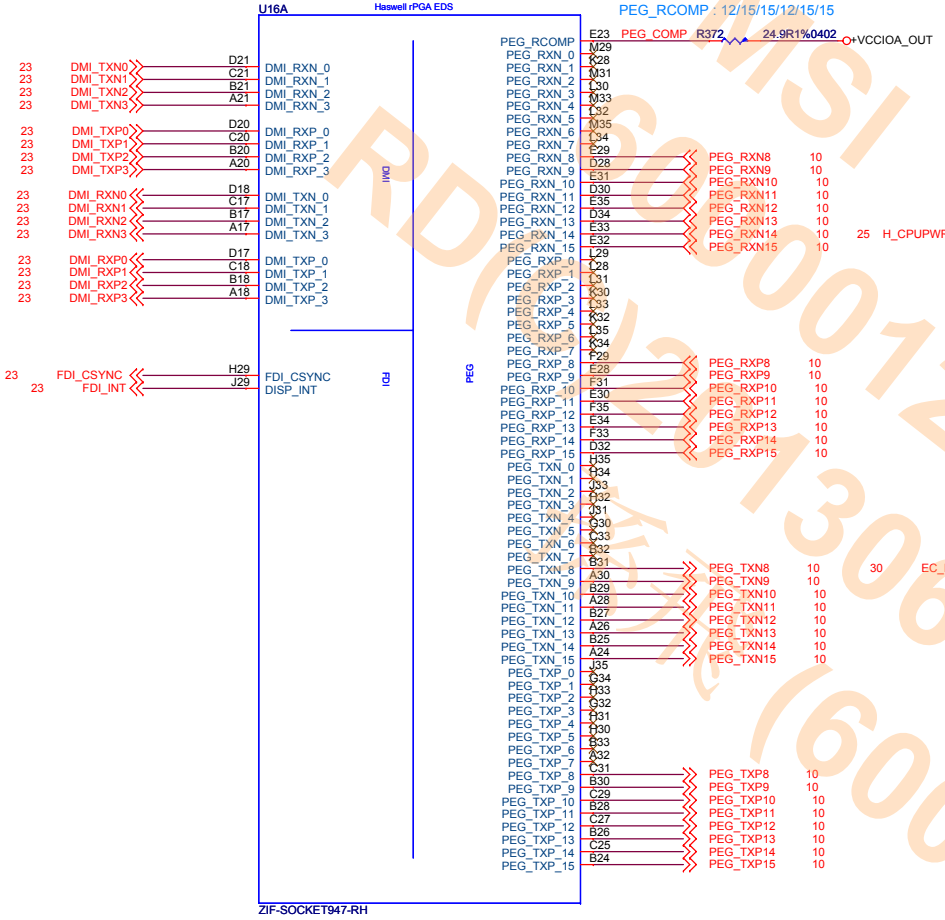
Note : WHEN AC MODE , System turn on then +V*SUS will always keep high



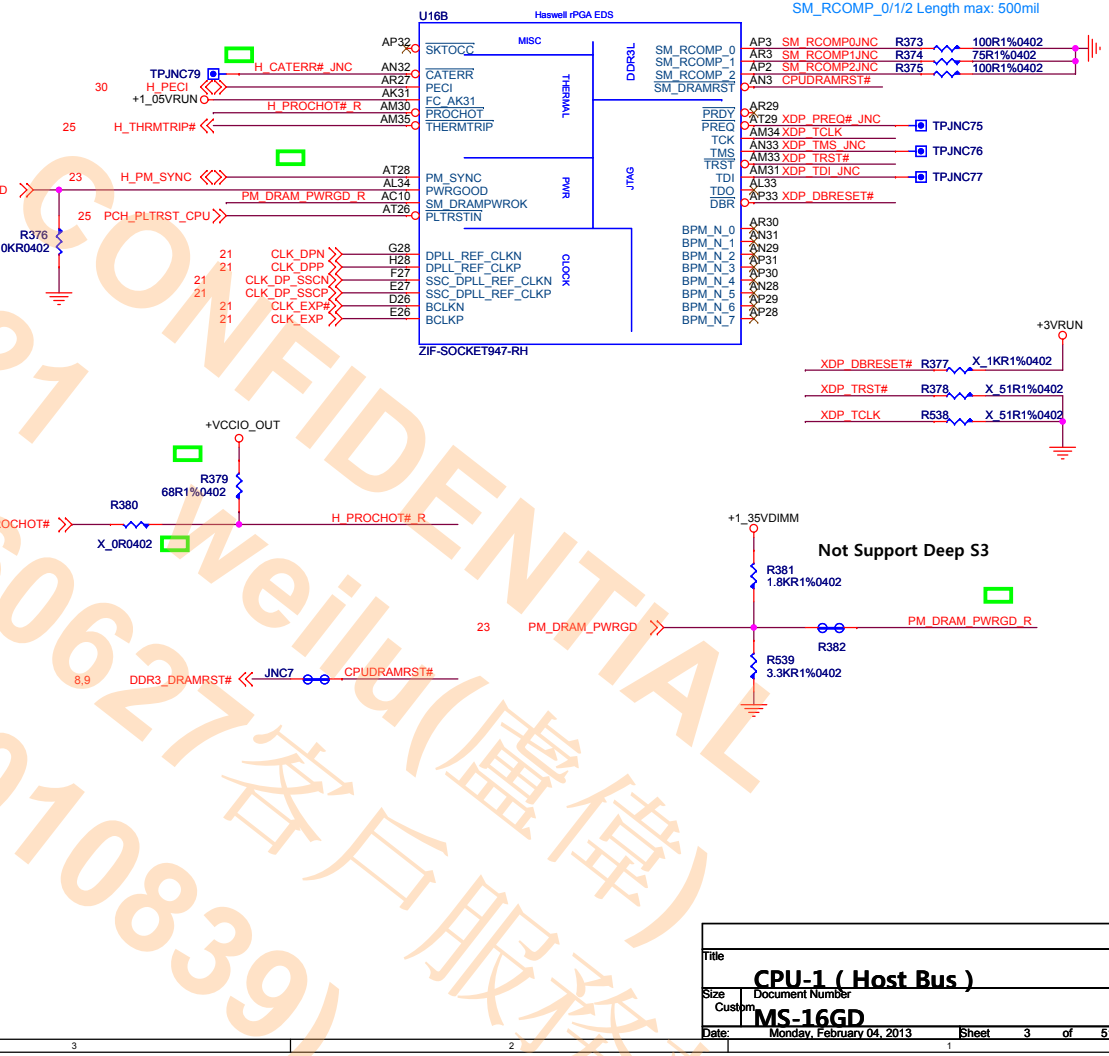



| | | | |
|---|---|---|---|
| Title: Platform | | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 2 of 51 | | |

# Haswell ( DMI,PEG,FDI )



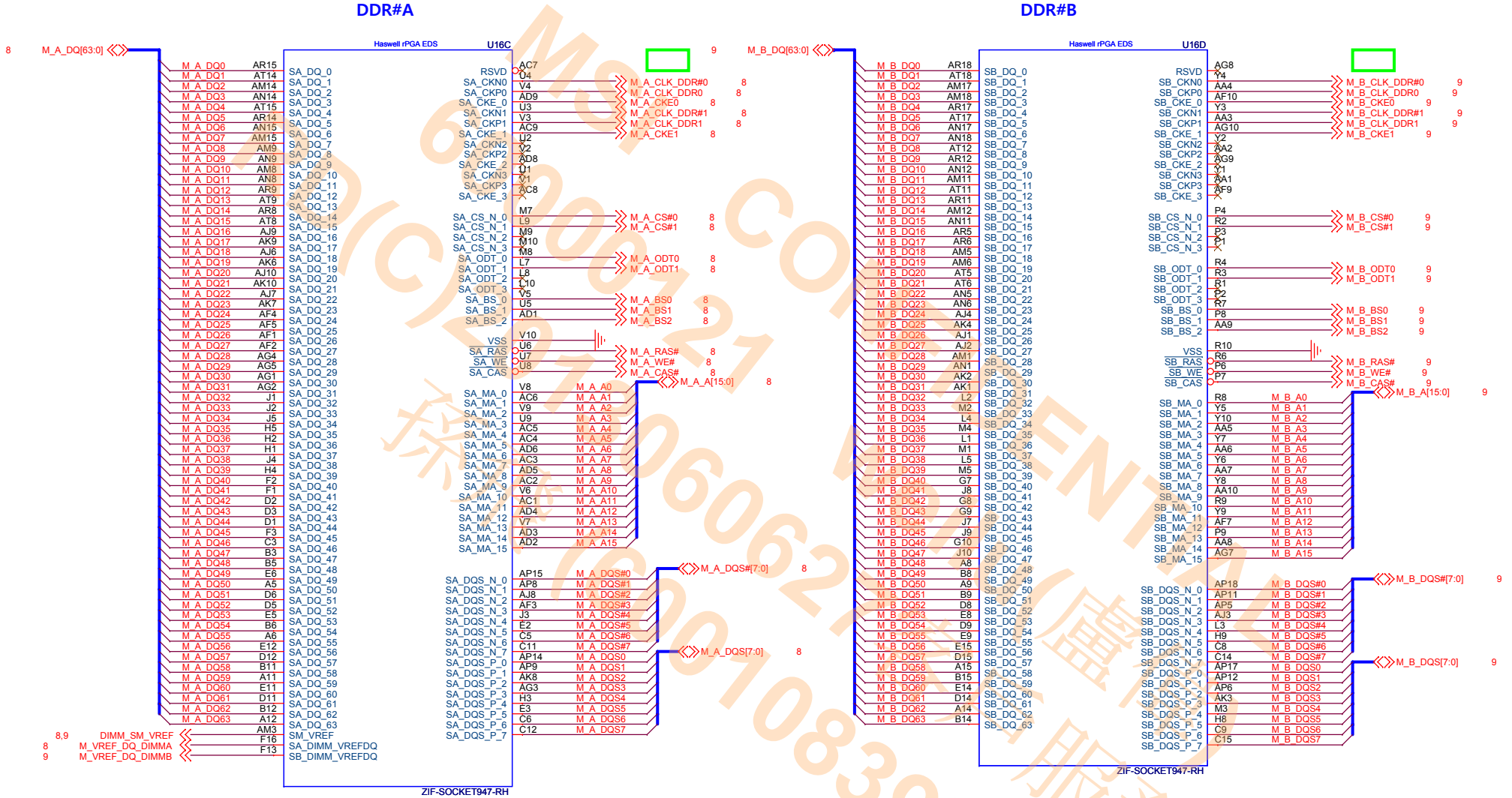

# Haswell ( CLK,MISC,JTAG )





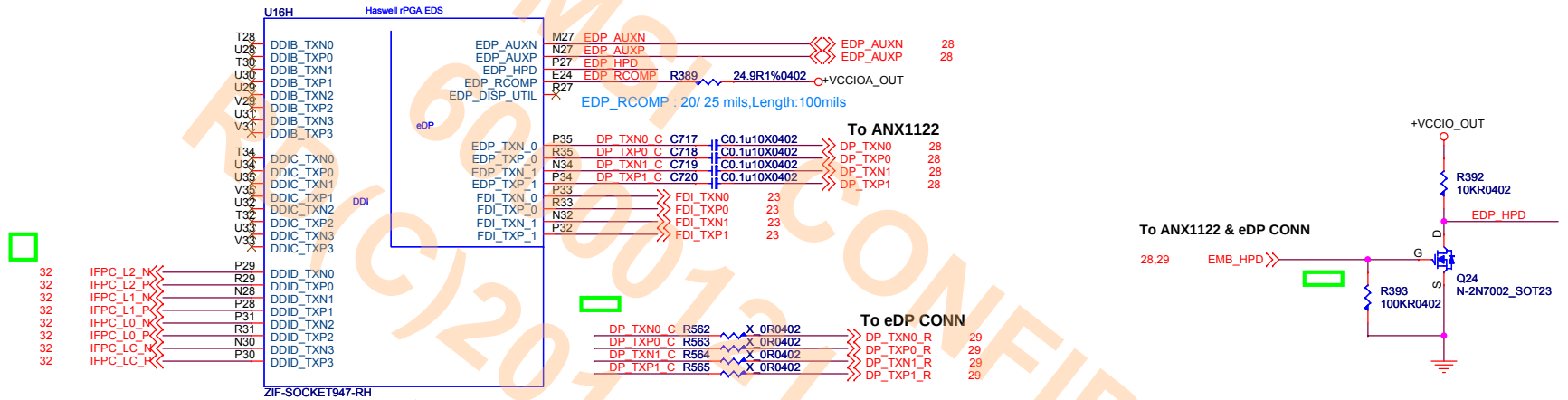

| | | |
|---|---|---|
| Title | CPU-1 ( Host Bus ) | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 3 of 51 | |

# Haswell ( DDR3L )

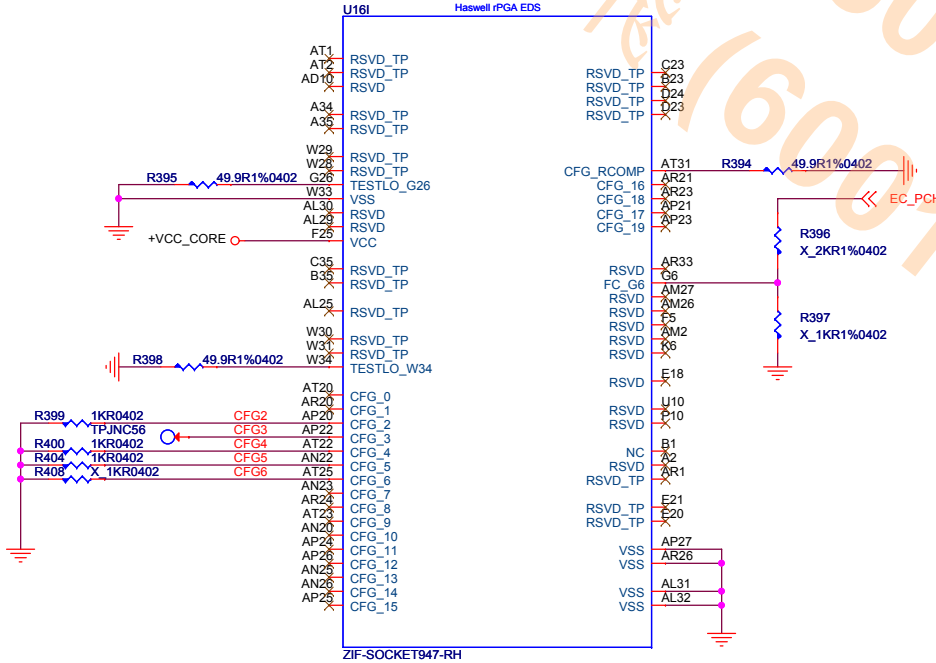


| Title | CPU-2 ( DDR3L ) | | |
|---|---|---|---|
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
| Date: | Monday, February 04, 2013 | Sheet 4 of 51 | |

# Haswell ( Display )




# Haswell ( Reserved )




| PCI Express* Static x16 Lane Numbering Reversal | |
|---|---|
| CFG2 | 1 = Normal operation<br>0 = Lane numbers reversed. |

| MSR Privacy Bit Feature | |
|---|---|
| CFG3 | 1 = Debug capability is determined by IA32_Debug_Interface_MSR (0xC80) bit[0] setting<br>0 = IA32_Debug_Interface_MSR (0xC80) bit[0] default setting overridden |

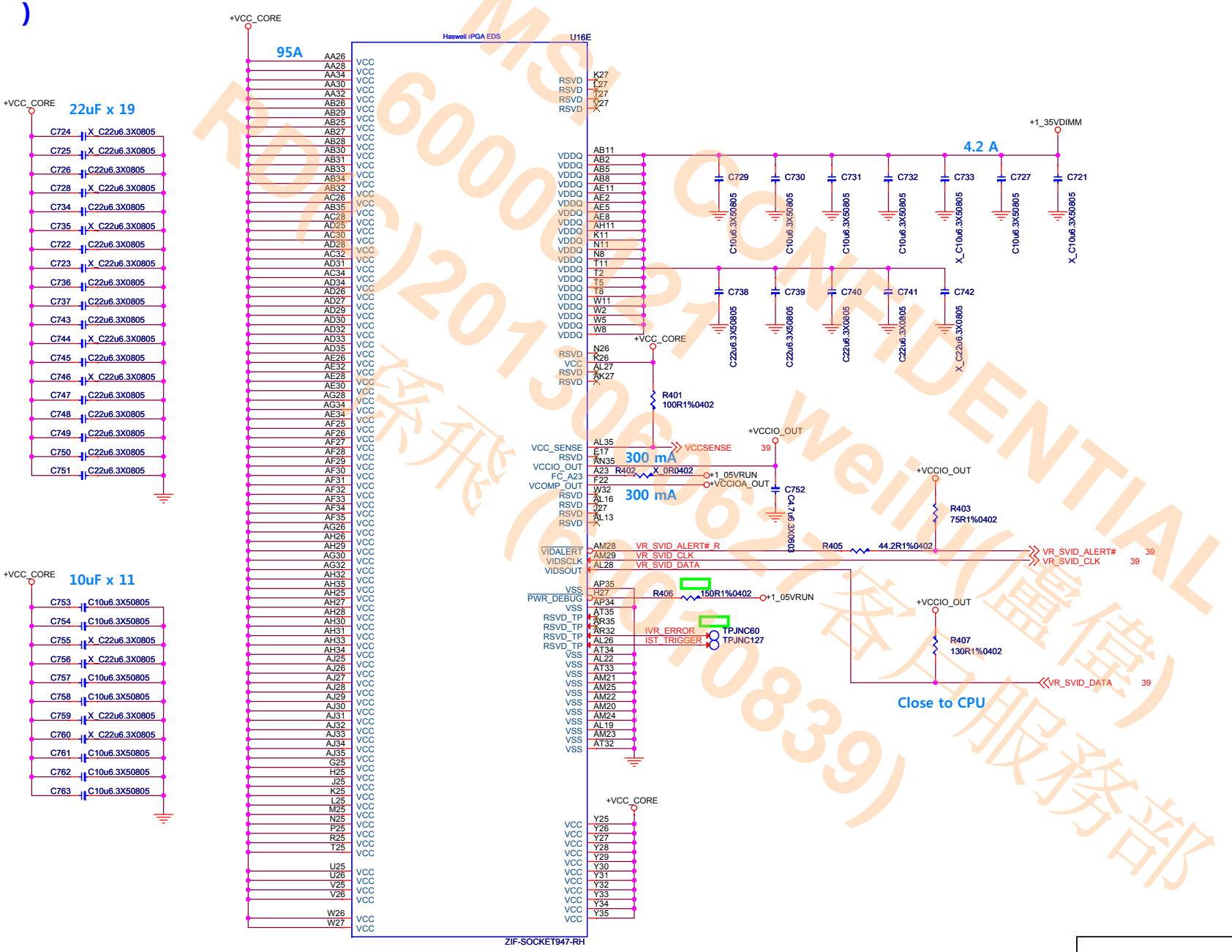
| eDP enable | |
|---|---|
| CFG4 | 1 = Disabled<br>0 = Enabled |

| PCI Express* Bifurcation | |
|---|---|
| CFG[5:6] | 00 = 1 x8, 2 x4 PCI Express<br>01 = reserved<br>10 = 2 x8 PCI Express<br>11 = 1 x16 PCI Express |

| PEG DEFER TRAINING | |
|---|---|
| CFG7 | 1: (Default) PEG Train immediately following xxRESETB de assertion<br>0: PEG Wait for BIOS for training |

| | | | |
|---|---|---|---|
| Title | CPU-3 ( Display/Reserved ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 5 of 51 | | |

# Haswell ( POWER )





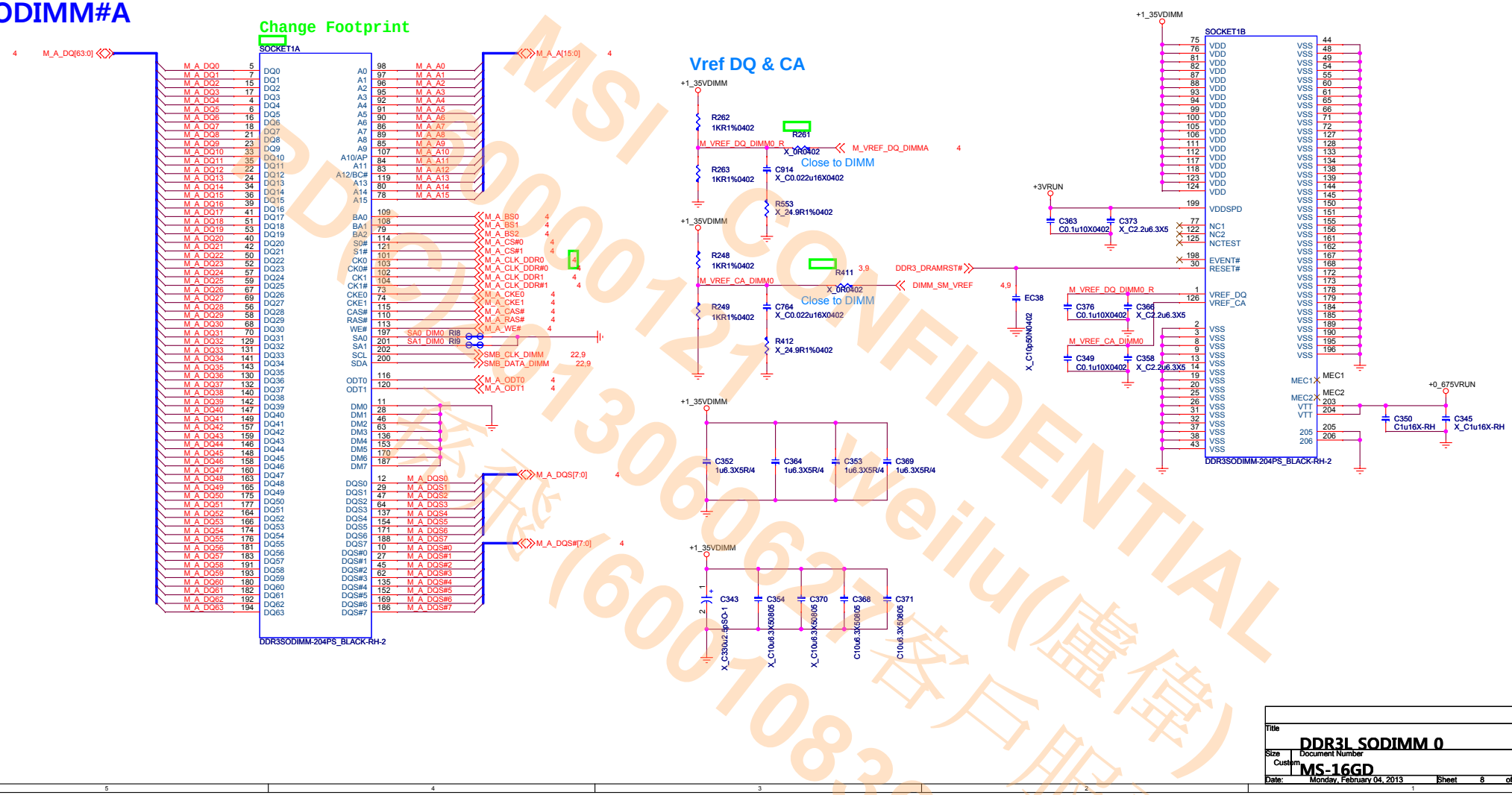

| | | | |
|---|---|---|---|
| Title | CPU-4 ( Power ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 6 of 51 | | |

# Haswell ( GND )

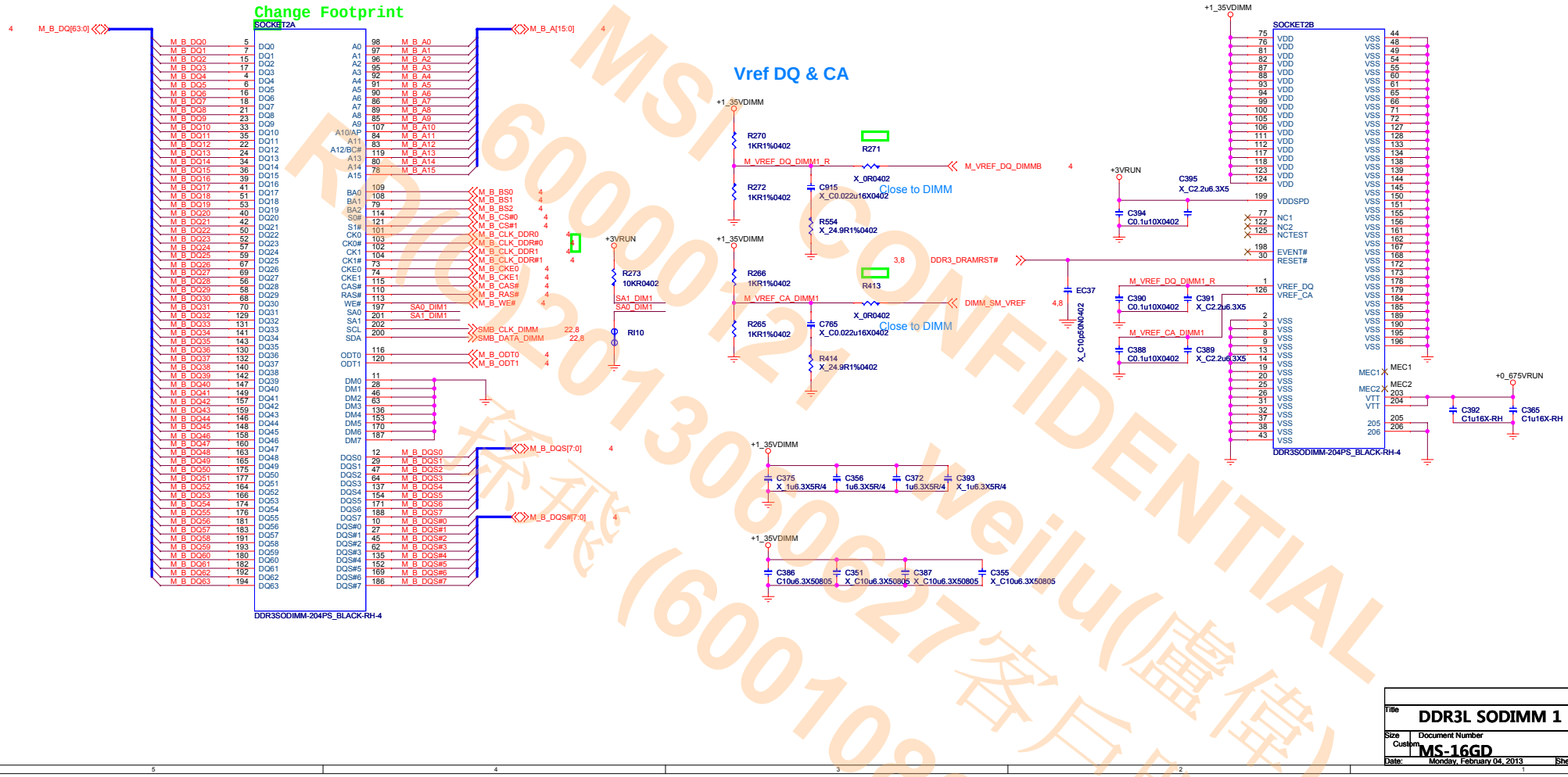



| | | | |
|---|---|---|---|
| Title | CPU-5 ( GND ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 7 of 51 | | |

# SODIMM#A



# SODIMM#B

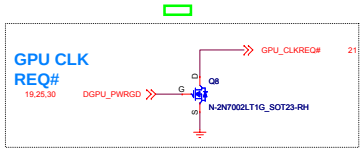


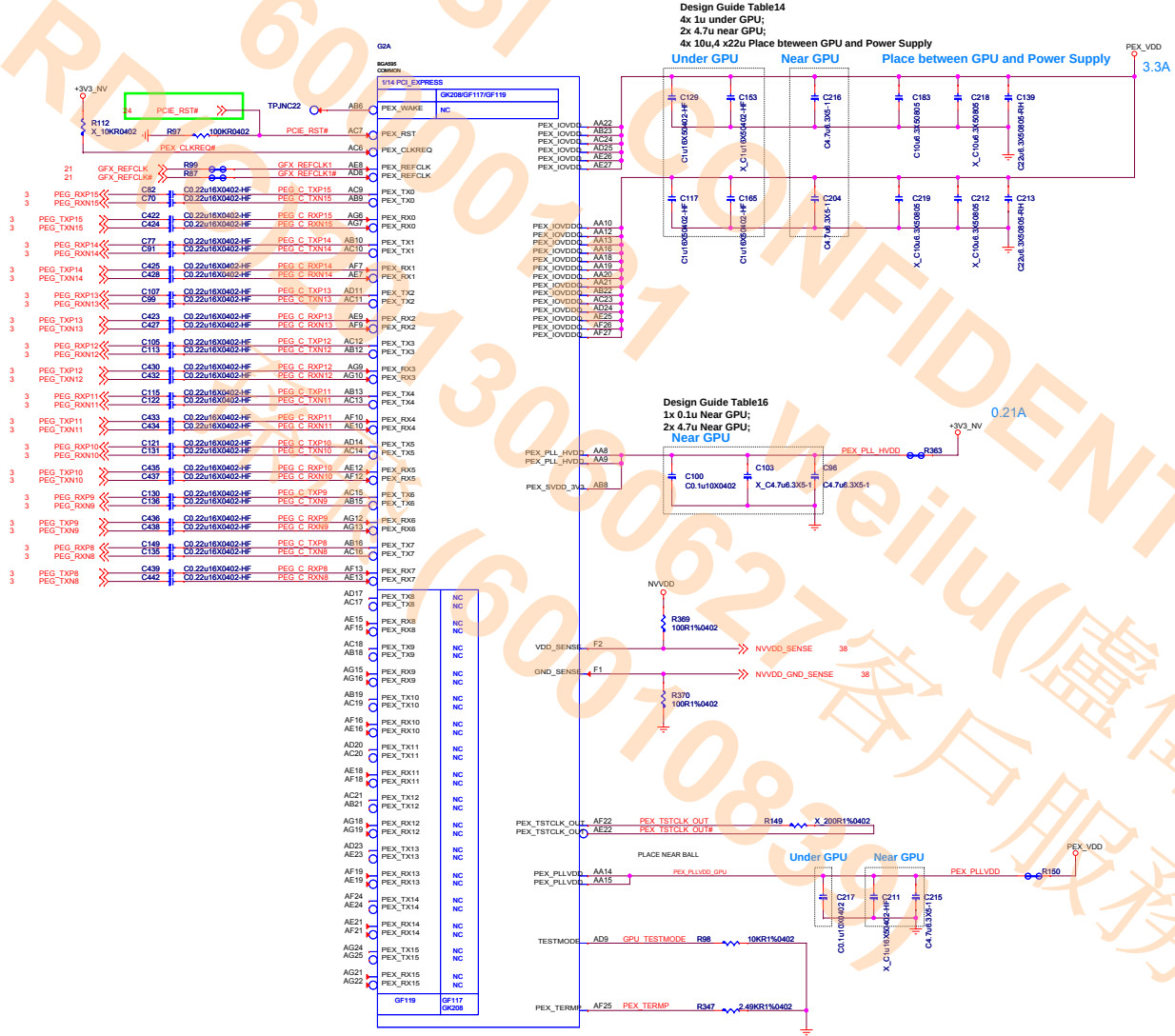

Title: DDR3L SODIMM 1

Size: Custom | Document Number: MS-16GD | Rev: 0B

Date: Monday, February 04, 2013 | Sheet 9 of 51

# N14M-GE( PCI-Express Gen2 x8 Interface)

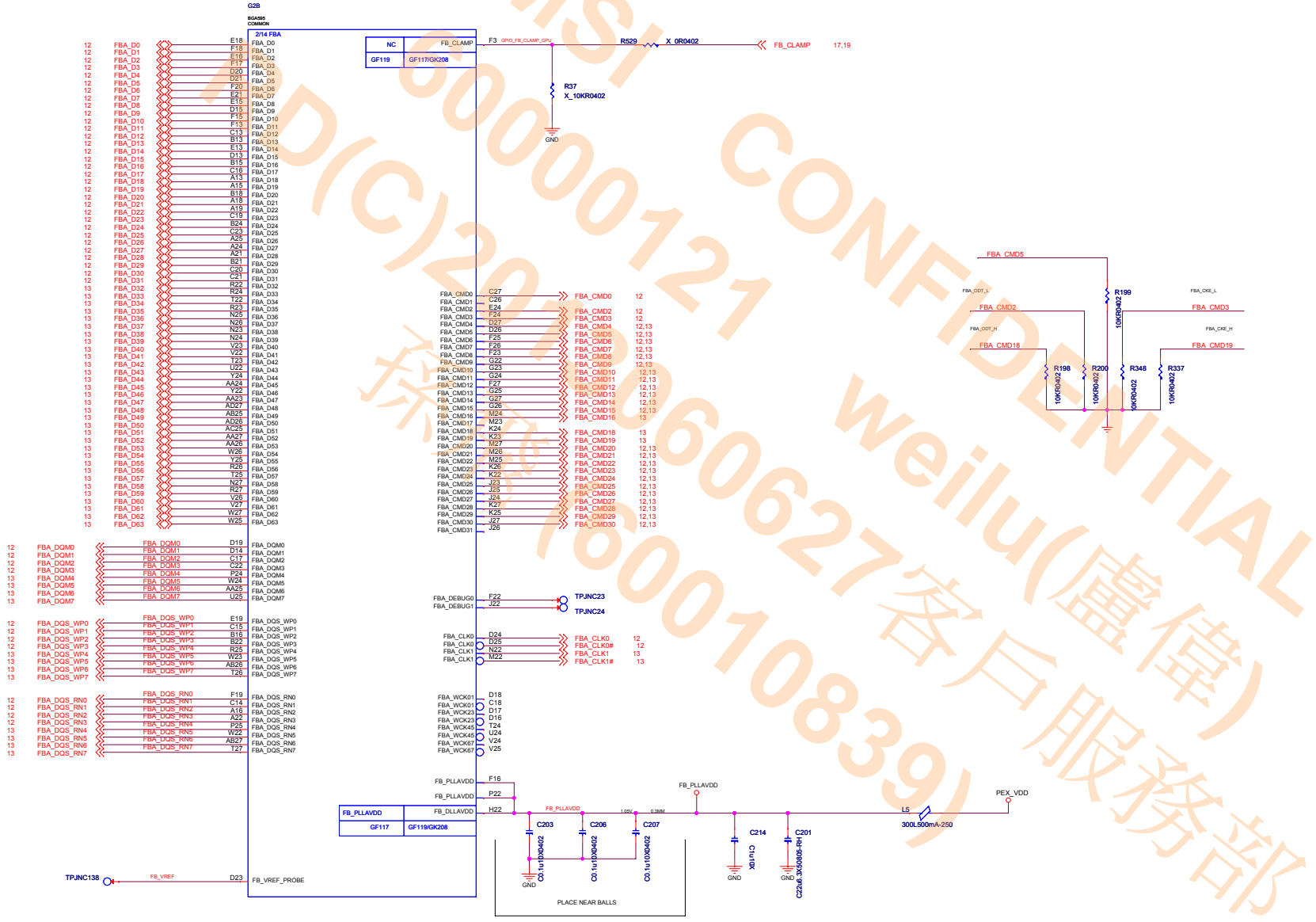





| | | | |
|---|---|---|---|
| Title | N14E-GE_PCI-E Host | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
| Date: Monday, February 04, 2013 | Sheet 10 of 51 | | |

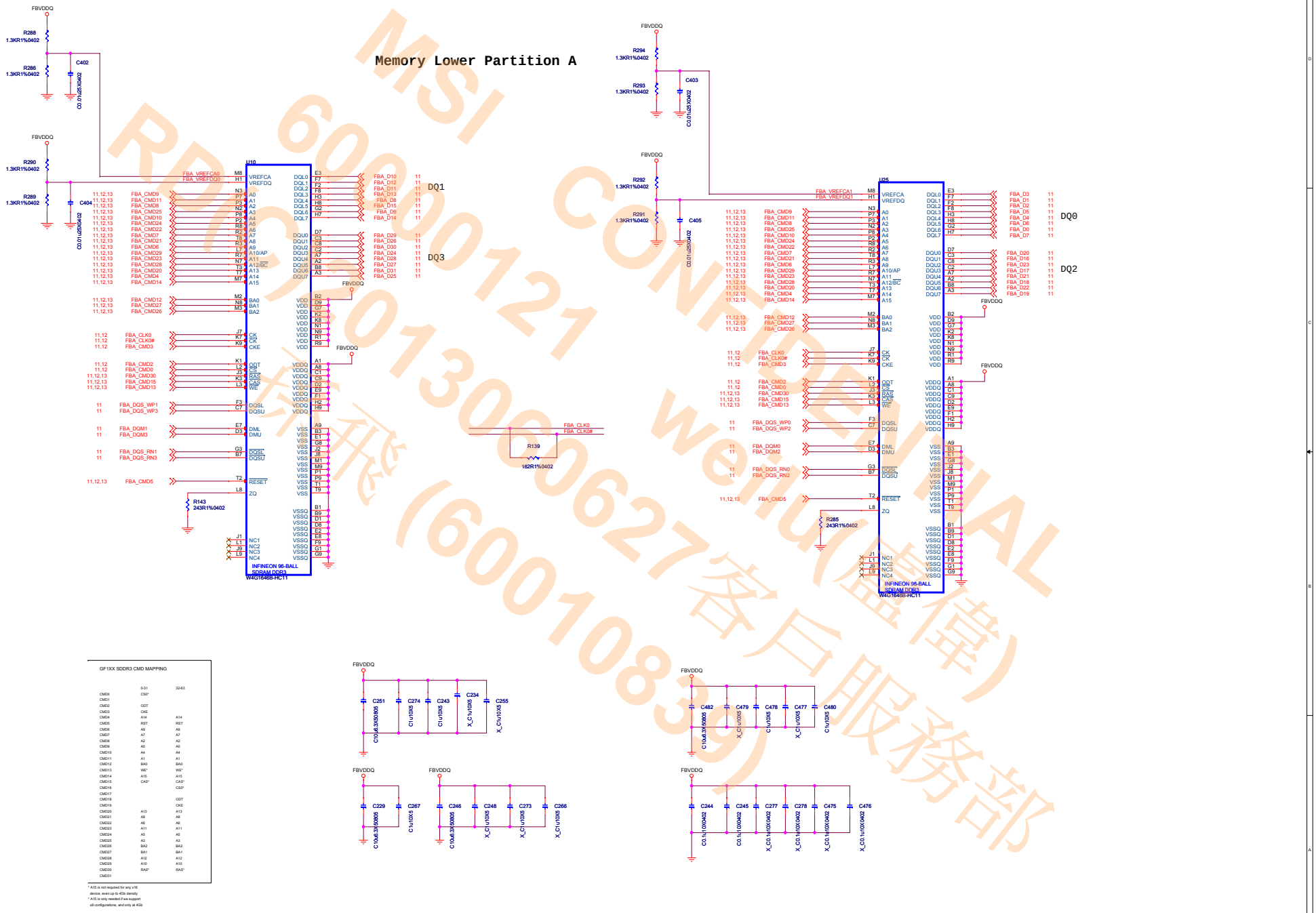
# N14M-GE( Frame Buffer Interface )






| | | | |
|---|---|---|---|
| Title | N14M-GE_MEM IF A/B | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
| Date: | Monday, February 04, 2013 | Sheet 11 of 51 | |

# N14M-GE( DDR3 Frame A-1 )






| | |
|---|---|
| Title | N14E-GE_GDDR5 Frame A-1 |
| Size / Document Number | MS-16GD |
| Rev | 0B |
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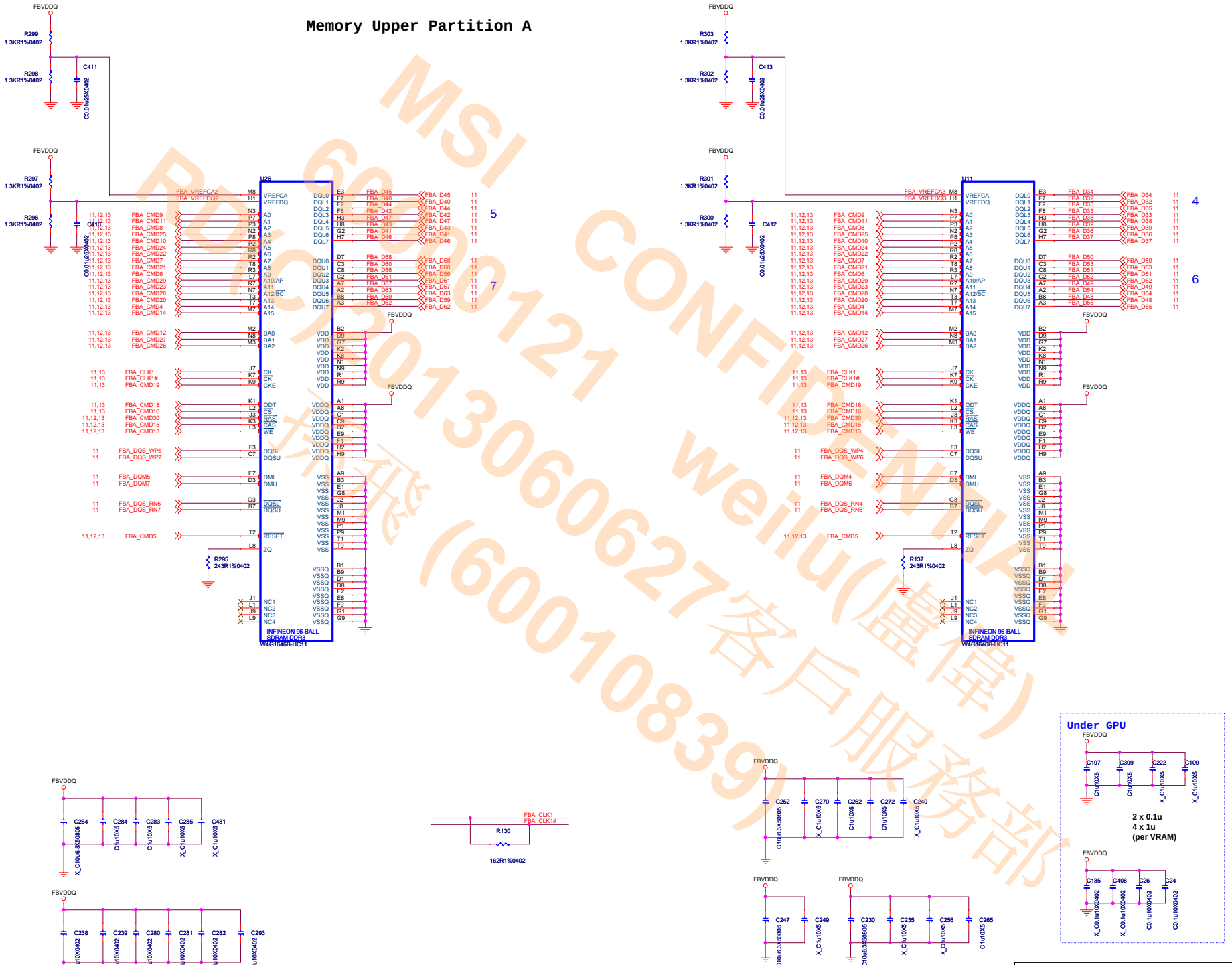
# Memory Upper Partition A






| | | | |
|---|---|---|---|
| Title | N14E-GE_GDDR5 Frame A-2 | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
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# DGPU POWER ON SEQUENCE




| | | |
|---|---|---|
| Title | Reserve | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 14 of 51 | |

Title: **Reserve**

Size: Custom | Document Number: **MS-16GD** | Rev: 0B

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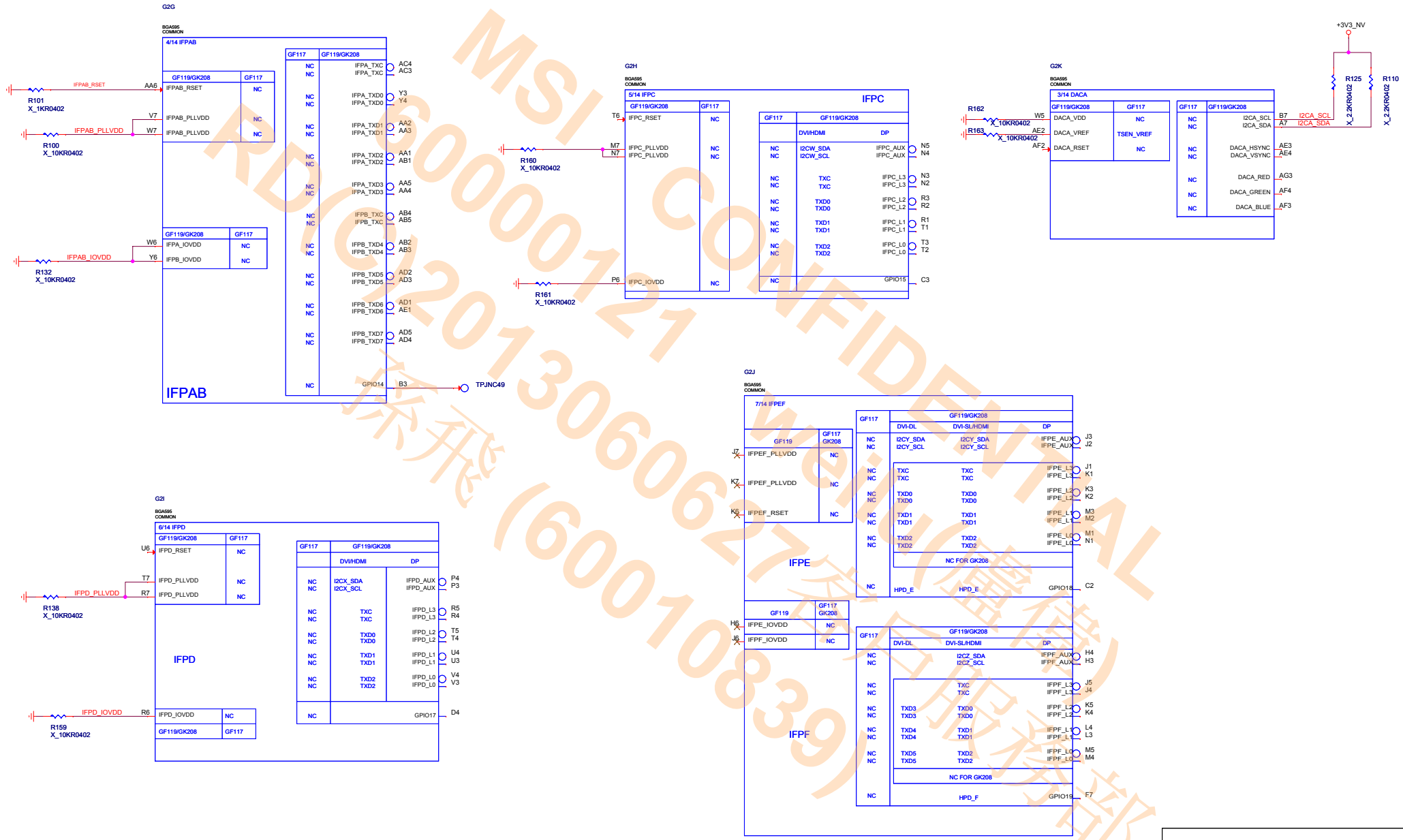
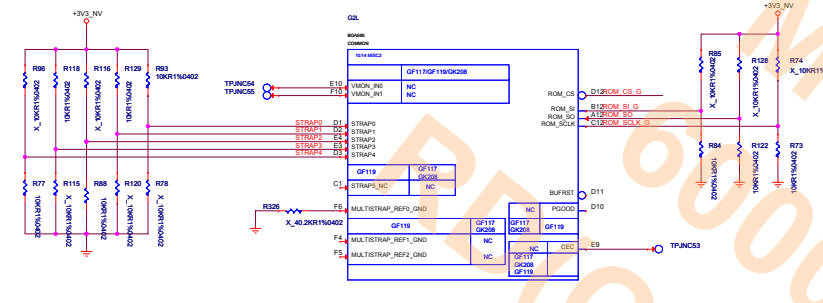





| | | |
|---|---|---|
| Title | N14E-GE_Display IF | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 16 of 51 | |

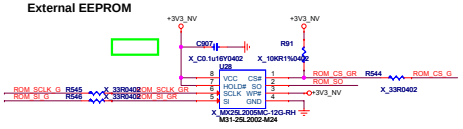
# N14M-GE( Thermal & GPIO )



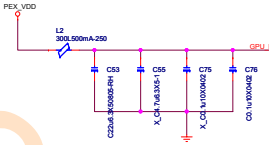

MULTISTRAP_REF0_GND R326 GK208 N14M_GE_S NO STUFF

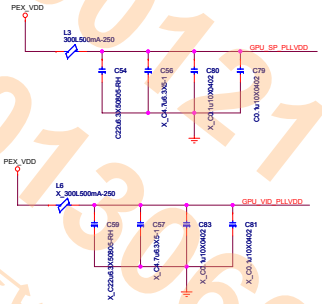
GF117 N14P_GV2_S STUFF

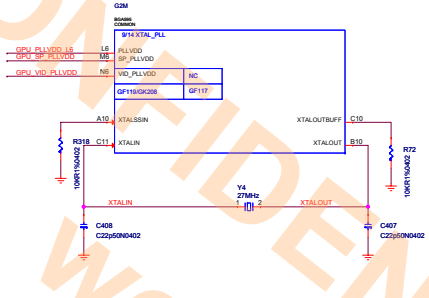
## External EEPROM

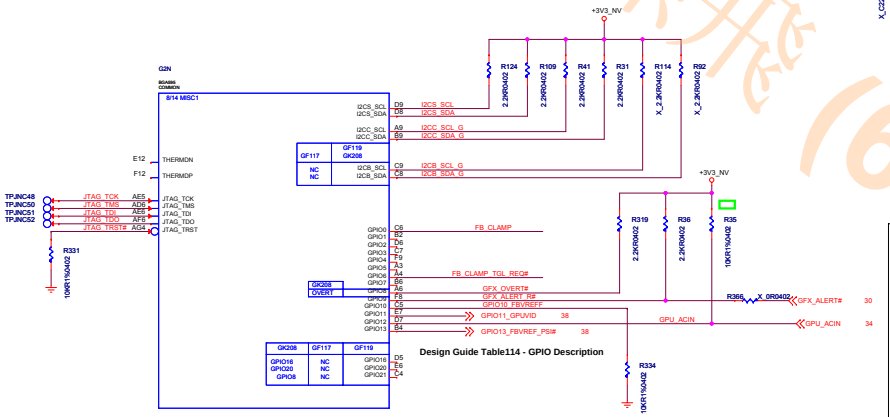



M31-25L2002-M24



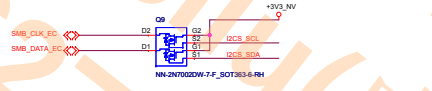



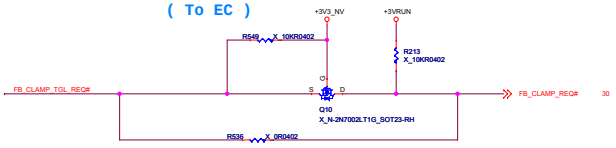




**Design Guide Table114 - GPIO Description**

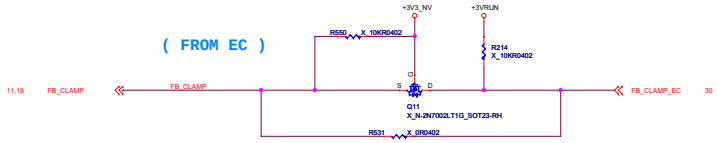
| GPIO | GK208 | GF117 |
|---|---|---|
| GPIO 0 | DEBUG Service | FAN_PWM/FB_CLAMP/DEBUG Service |
| GPIO 1 | MEM_VDD_CTL/FAN_PWM | NVVDD_VID2 |
| GPIO 2 | LCD brightness control (LCD_BLPWM) | UNUSED |
| GPIO 3 | LCD Power enable (LCD_PPEN) | UNUSED |
| GPIO 4 | LCD Backlight enable (LCD_BLEN) | UNUSED |
| GPIO 5 | NVVDD PWM_VID_BOOT_EN | NVVDD VID0 |
| GPIO 6 | Remote Sensor Error Correction | NVVDD VID1 |
| GPIO 7 | LVDS_Switch/3D VISION/STEREO | UNUSED |
| GPIO 8 | GPU Overtemp | GPU Overtemp |
| GPIO 9 | GPU thermal Alert | GPU Thermal Alert |
| GPIO 10 | FB Vref Control | UNUSED |
| GPIO 11 | NVVDD PWM_VID | MEM_VDD_CTL |
| GPIO 12 | PWR_Level AC Detect | PWR_Level AC Detect |
| GPIO 13 | NVVDD PSI | UNUSED(No Need to Set in VBIOS) |
| GPIO 14 | HPD IFPAB (DPIIM) | N/A on Package |
| GPIO 15 | HPD IFPC (DP) | N/A on Package |
| GPIO 16 | FAN_PWM | N/A on Package |
| GPIO 17 | HPD IFPD (eDP) | N/A on Package |
| GPIO 18 | UNUSED | N/A on Package |
| GPIO 19 | HPD IFPF (DPIIM) | N/A on Package |
| GPIO 20 | UNUSED | N/A on Package |
| GPIO 21 | UNUSED | N/A on Package |




( To EC )

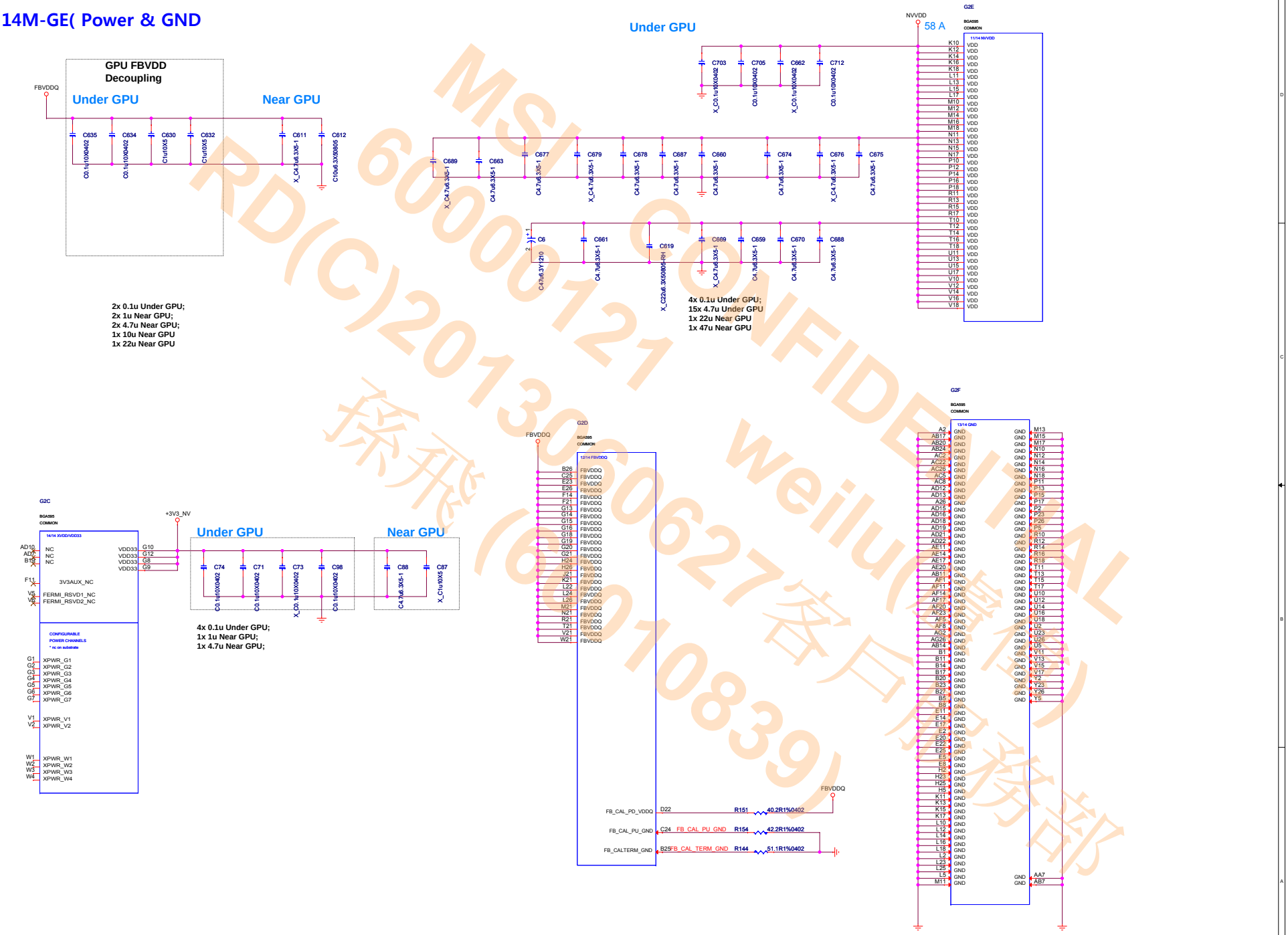



( FROM EC )




| | | | |
|---|---|---|---|
| Title | N14E-GE_Thermal & GPIO | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
| Date: | Monday, February 04, 2013 | Sheet 17 of 51 | |

# N14M-GE( Power & GND )



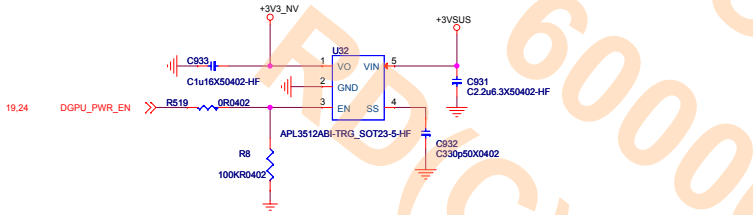


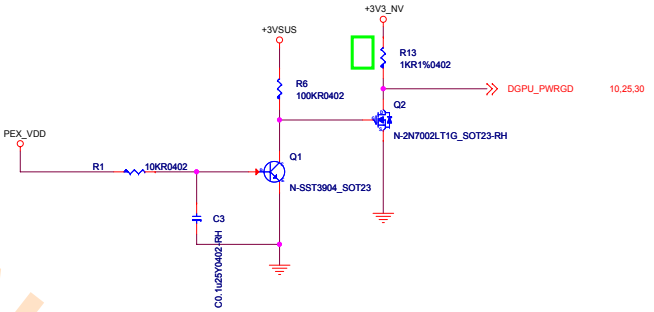

| | | | |
|---|---|---|---|
| Title | N14E-GE_Power & GND | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
| Date: | Monday, February 04, 2013 | Sheet 18 of 51 | |

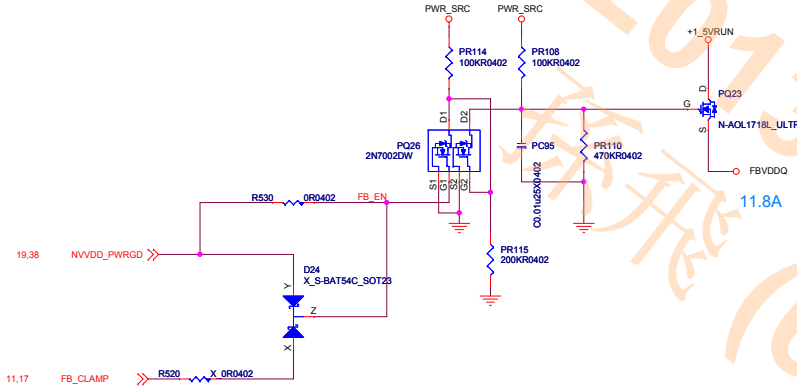
PCH GPIO54 DGPU_PWR_EN → EC Control NVVDD_EN → DGPU PWM Control NVVDD_PWERGD

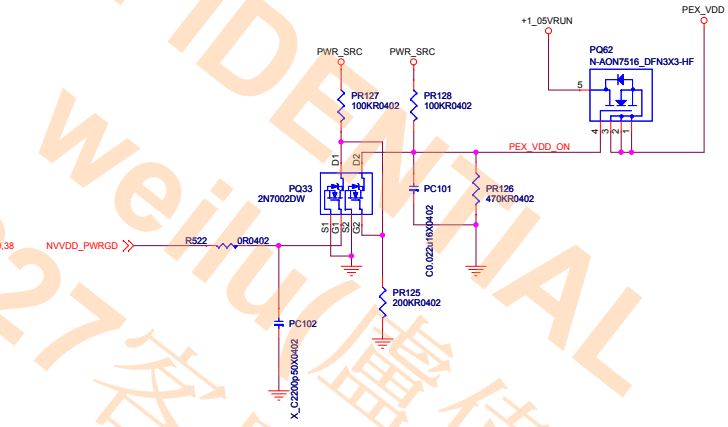
+3VSUS ----------> +3V3_NV --------> NVVDD ----------->PEX_VDD----------> DGPU_PWRGD
FBVDDQ

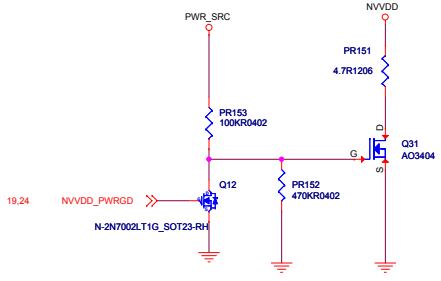
# N14M-GE( Power Control )

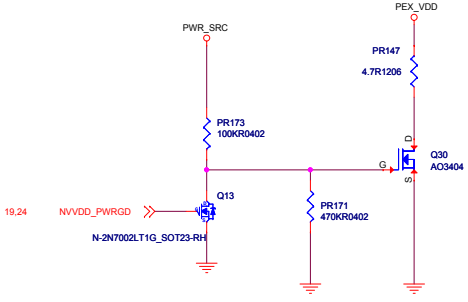


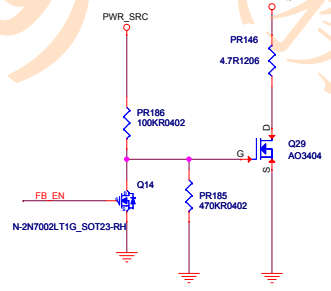






| | | | |
|---|---|---|---|
| Title | <Title> | | |
| Size | Document Number | | Rev |
| | CustomMS-16GD | | 0B |
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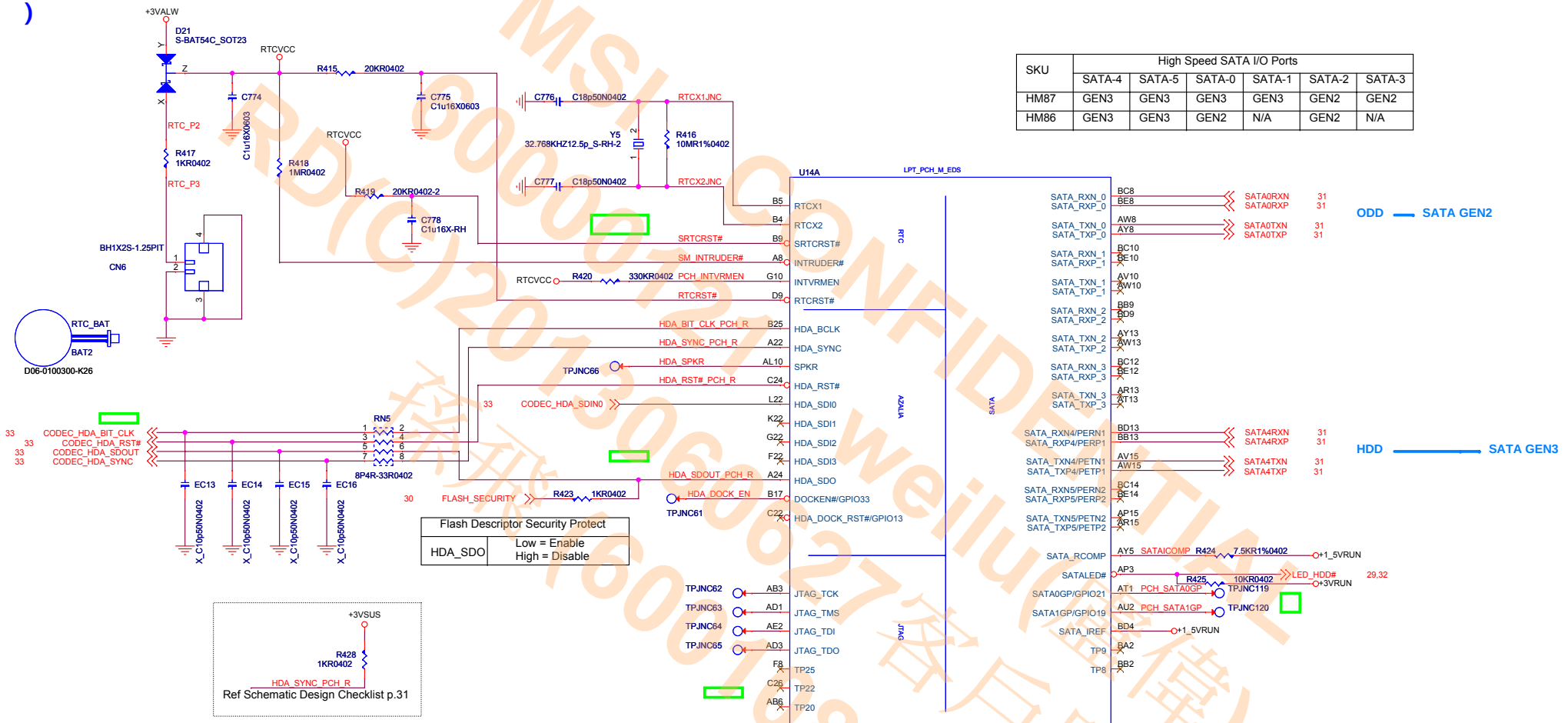
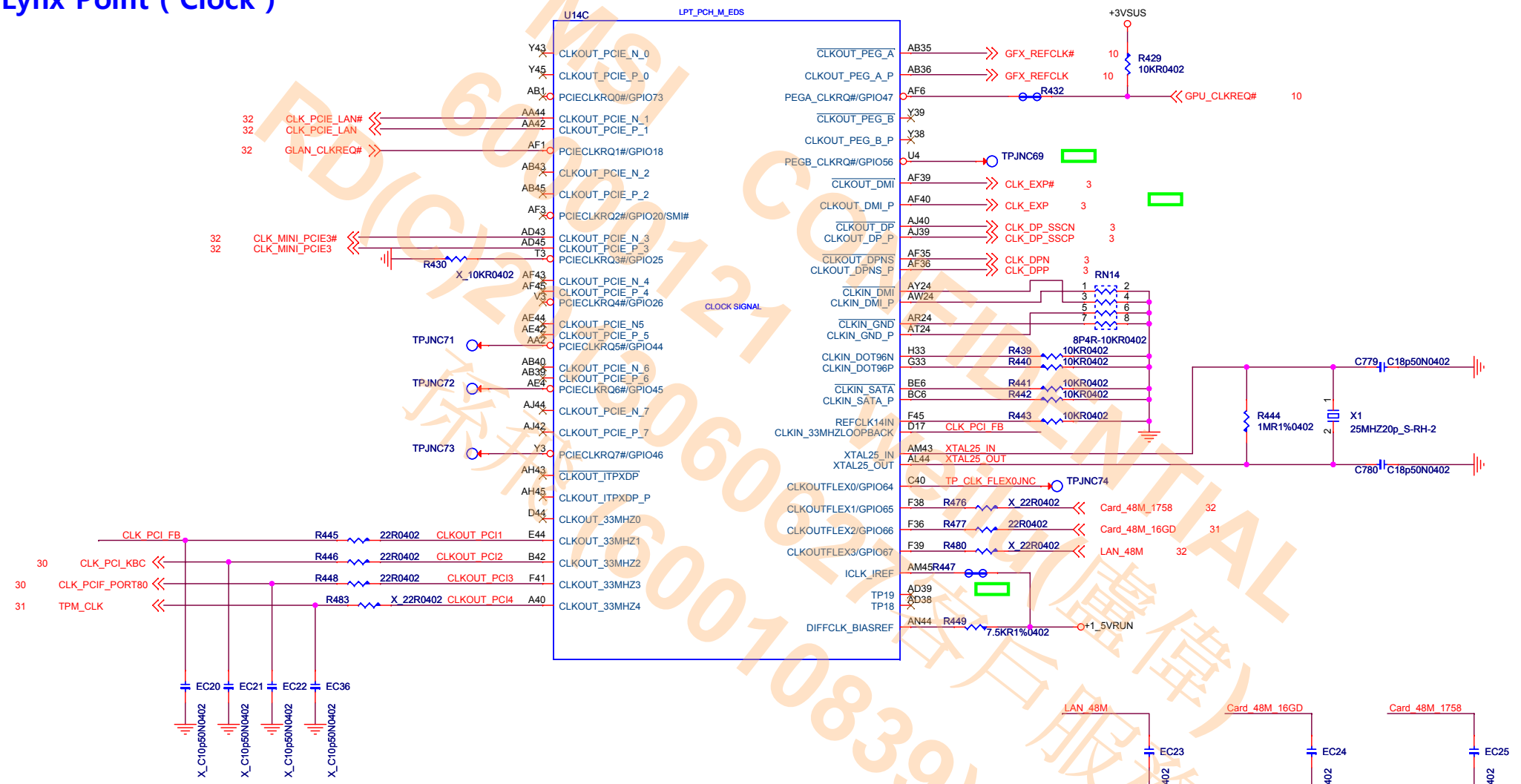
# Lynx Point ( HDA,JTAG,SATA )




| SKU | High Speed SATA I/O Ports | | | | | |
|---|---|---|---|---|---|---|
| | SATA-4 | SATA-5 | SATA-0 | SATA-1 | SATA-2 | SATA-3 |
| HM87 | GEN3 | GEN3 | GEN3 | GEN3 | GEN2 | GEN2 |
| HM86 | GEN3 | GEN3 | GEN2 | N/A | GEN2 | N/A |

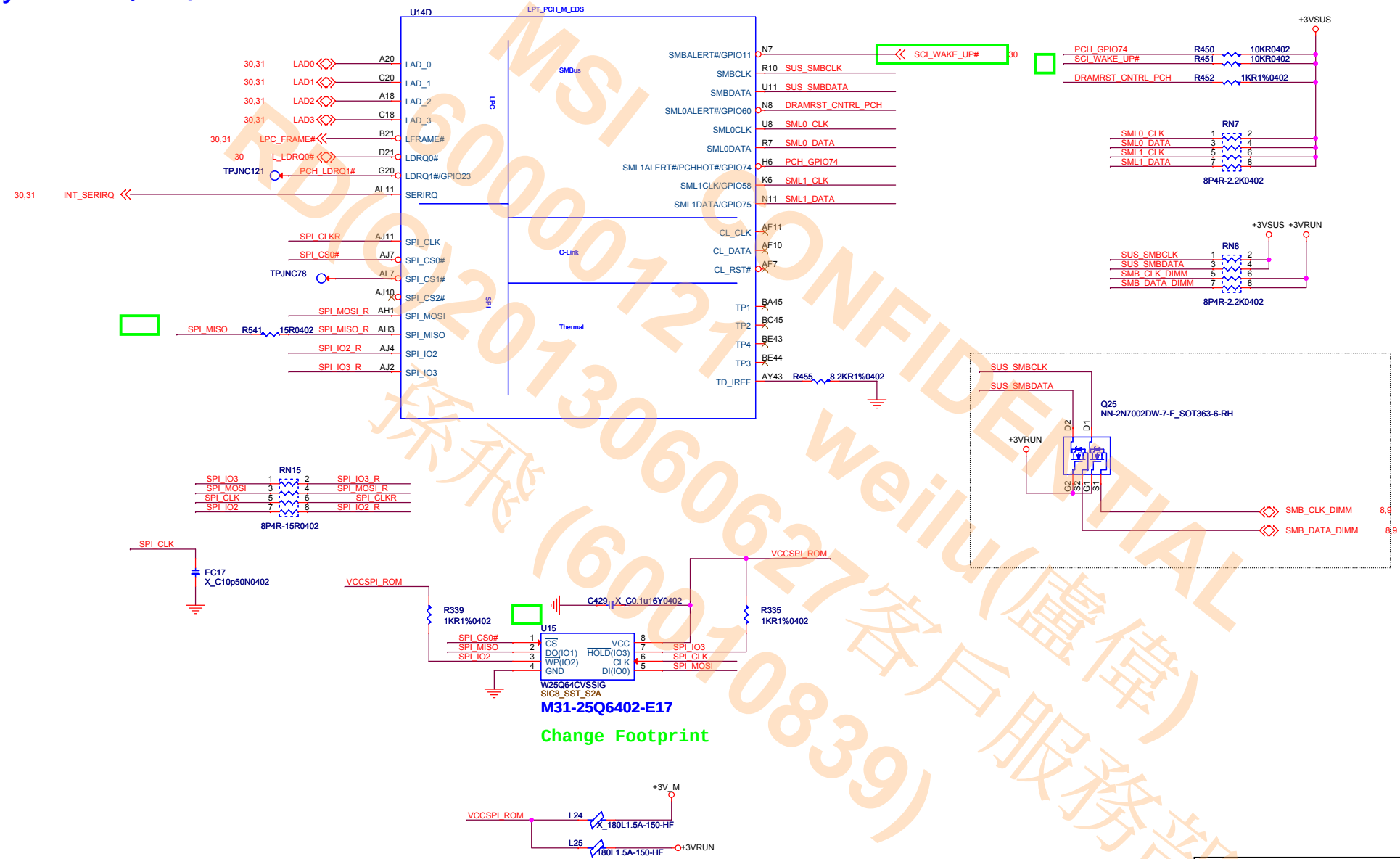
| | |
|---|---|
| Title | PCH-1 ( HDA/JTAG/SATA |
| Size: Custom | Document Number: MS-16GD |
| Rev | 0B |
| Date: Monday, February 04, 2013 | Sheet 20 of 51 |

# Lynx Point ( Clock )




| | | |
|---|---|---|
| Title | PCH-2 ( CLK ) | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 21 of 51 | |

# Lynx Point ( LPC,SMBUS )



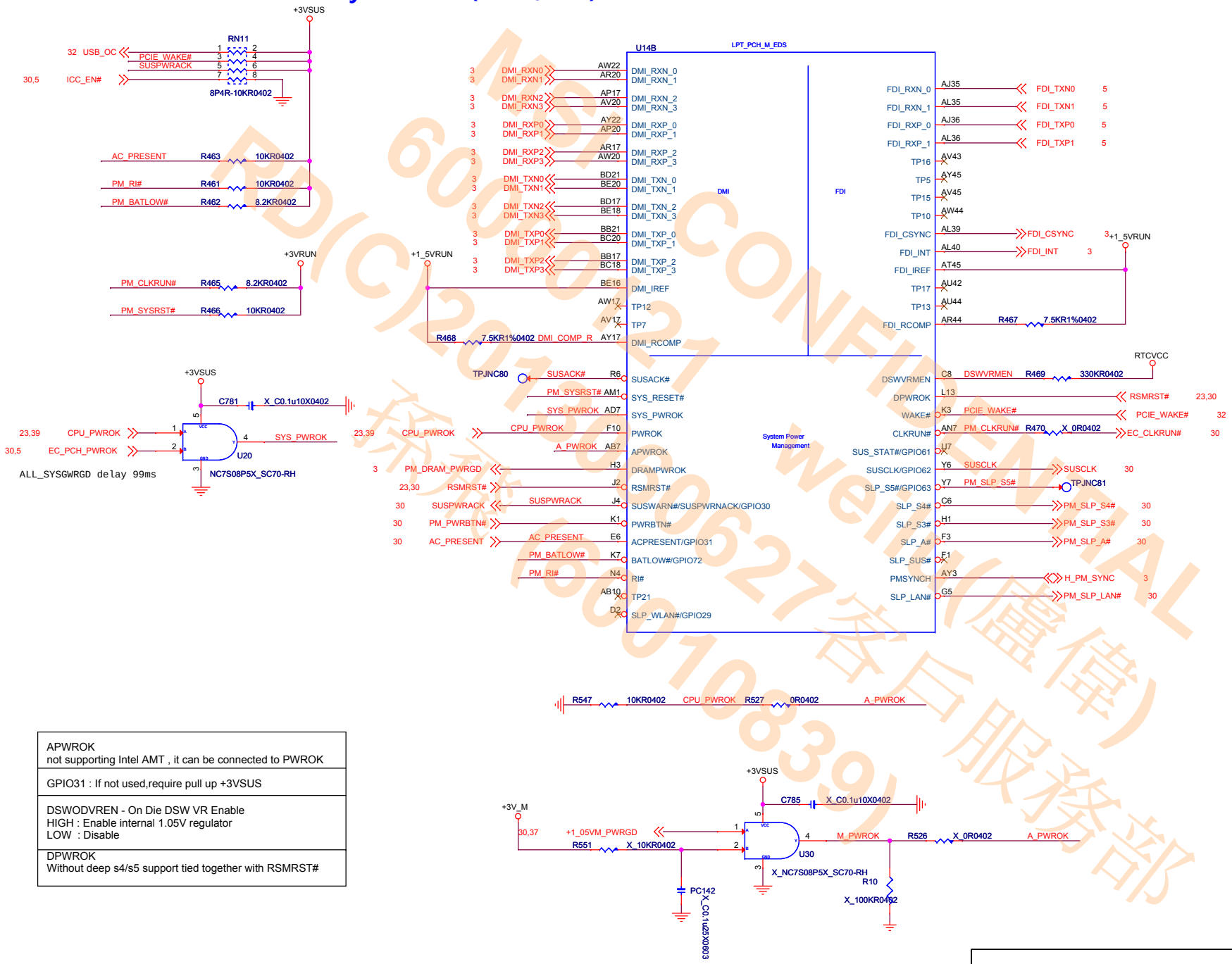

**M31-25Q6402-E17**

**Change Footprint**



| | | | |
|---|---|---|---|
| Title | PCH-3 ( LPC,SMBUS ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 22 of 51 | | |

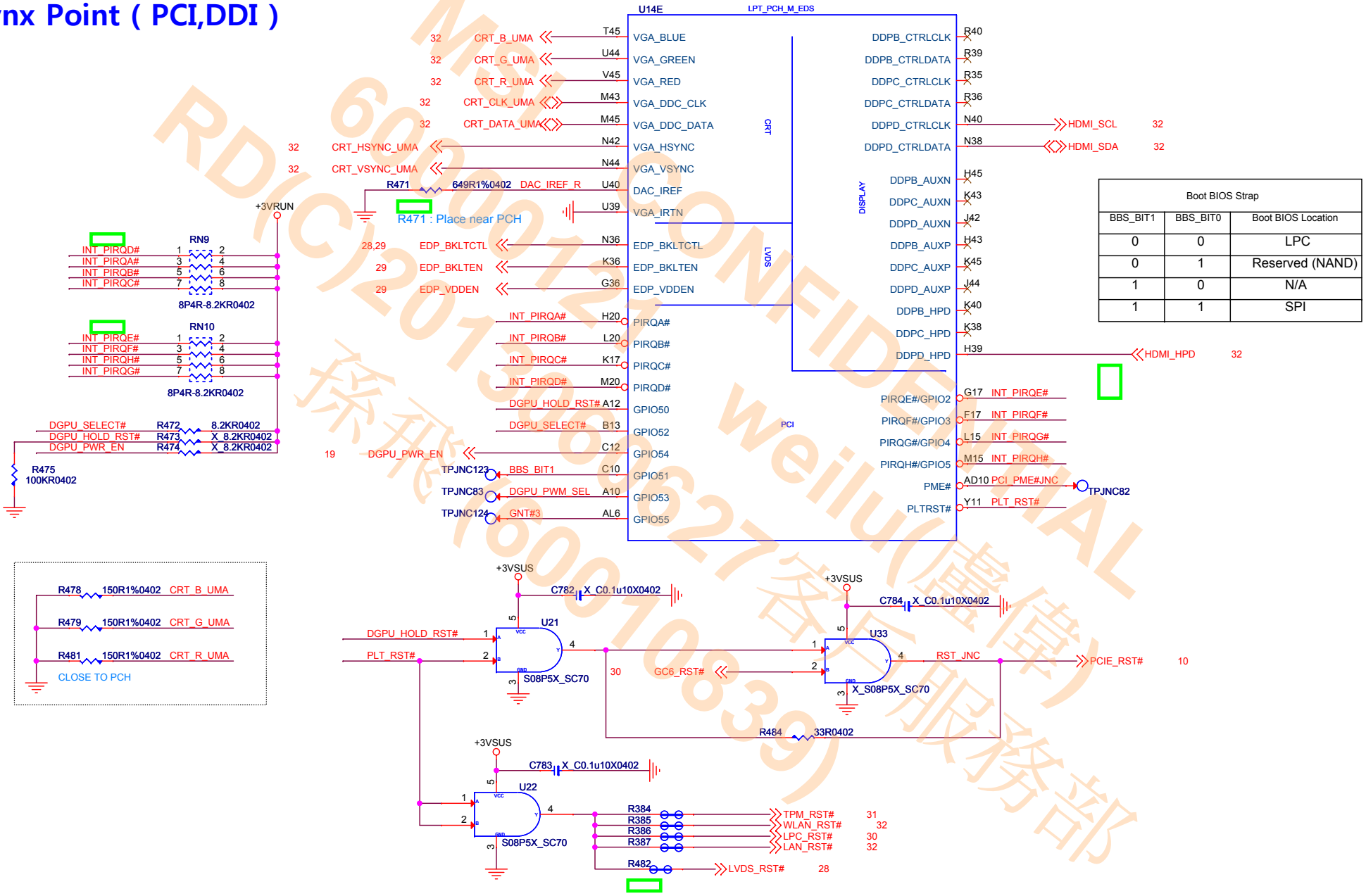
# Lynx Point ( DMI,FDI )




| |
|---|
| APWROK<br>not supporting Intel AMT , it can be connected to PWROK |
| GPIO31 : If not used,require pull up +3VSUS |
| DSWODVREN - On Die DSW VR Enable<br>HIGH : Enable internal 1.05V regulator<br>LOW : Disable |
| DPWROK<br>Without deep s4/s5 support tied together with RSMRST# |

| | | | |
|---|---|---|---|
| Title | PCH-4 ( DMI,FDI ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 23 of 51 | | |

# Lynx Point ( PCI,DDI )




| Boot BIOS Strap | | |
|---|---|---|
| BBS_BIT1 | BBS_BIT0 | Boot BIOS Location |
| 0 | 0 | LPC |
| 0 | 1 | Reserved (NAND) |
| 1 | 0 | N/A |
| 1 | 1 | SPI |

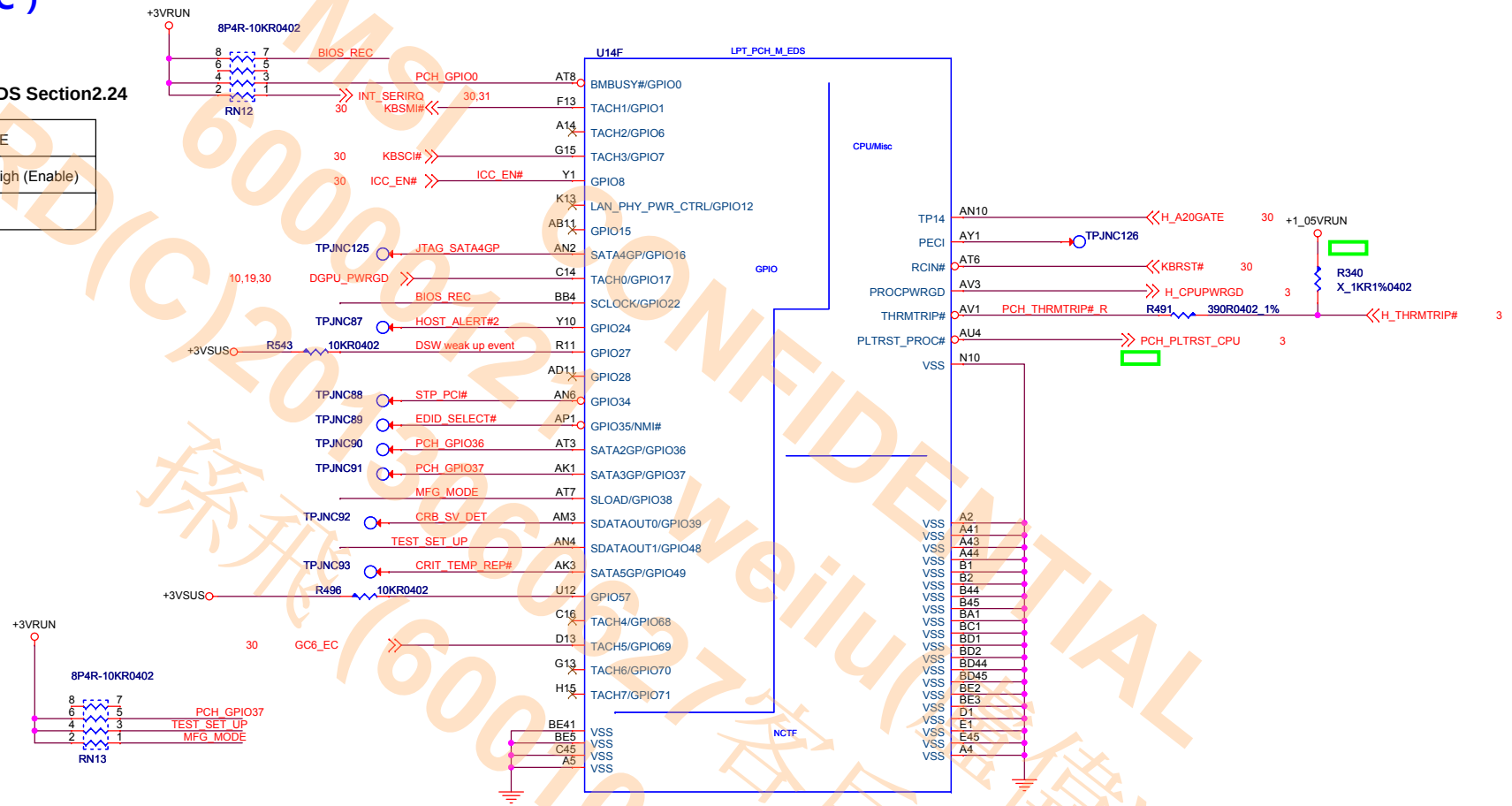


| | | | |
|---|---|---|---|
| Title | PCH-5 ( PCI,DDI ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
| Date: Monday, February 04, 2013 | Sheet 24 of 51 | | |

# Lynx Point ( GPIO,MISC )

**GPIO Setting : Ref 486708_LPT_EDS Section2.24**

| | |
|---|---|
| PLL ON DIE VR_ENABLE | |
| GPIO28 | Internal pull high (Enable) |
| | Low: Disable |






| | | | |
|---|---|---|---|
| Title | PCH-6 ( GPIO,MISC ) | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
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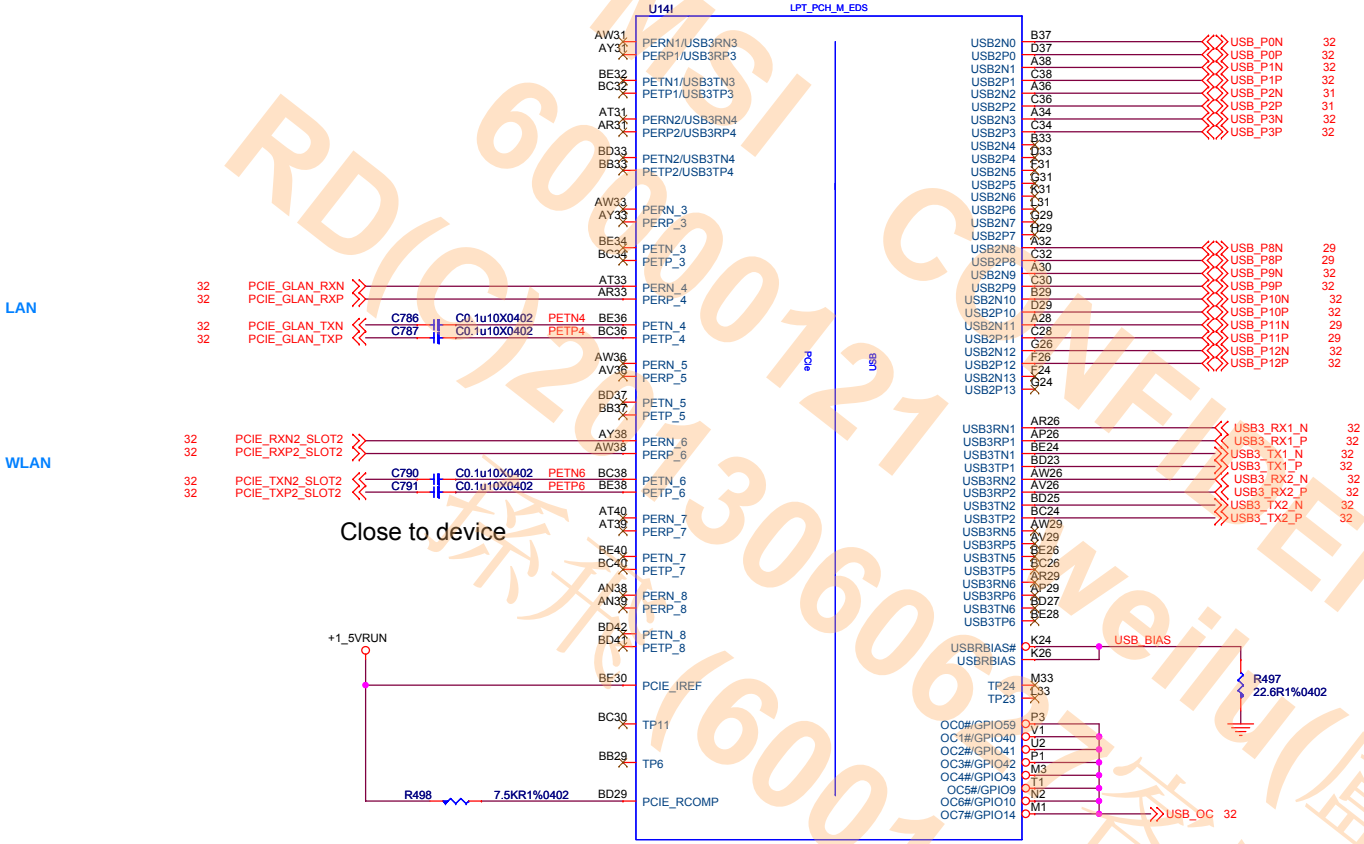
# Lynx Point ( PCIE,USB )




| USB | | | |
|---|---|---|---|
| USB 2.0 | USB 3.0 | Device | Note |
| 0 | 1 | USB 3.0 Port 1 | (16GDB/1758B) |
| 1 | 2 | USB 3.0 Port 2 | (16GDB/1758B) |
| 2 | | | (16GD1 Cardreader) |
| 3 | | | (1758B Cardreader) |
| 4 | | | NC |
| 5 | | | NC |
| 6 | | | |
| 7 | | | NC |
| 8 | | WebCam | EDP panel |
| 9 | | USB 2.0 Port | (16GDA/1758A) |
| 10 | | WLAN | |
| 11 | | WebCam | LVDS panel |
| 12 | | USB 2.0 Port | (1758E) |
| 13 | | | NC |
| | 3 | | NC |
| | 4 | | NC |
| | 5 | | NC |
| | 6 | | NC |



| | | | |
|---|---|---|---|
| Title | <Title> | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
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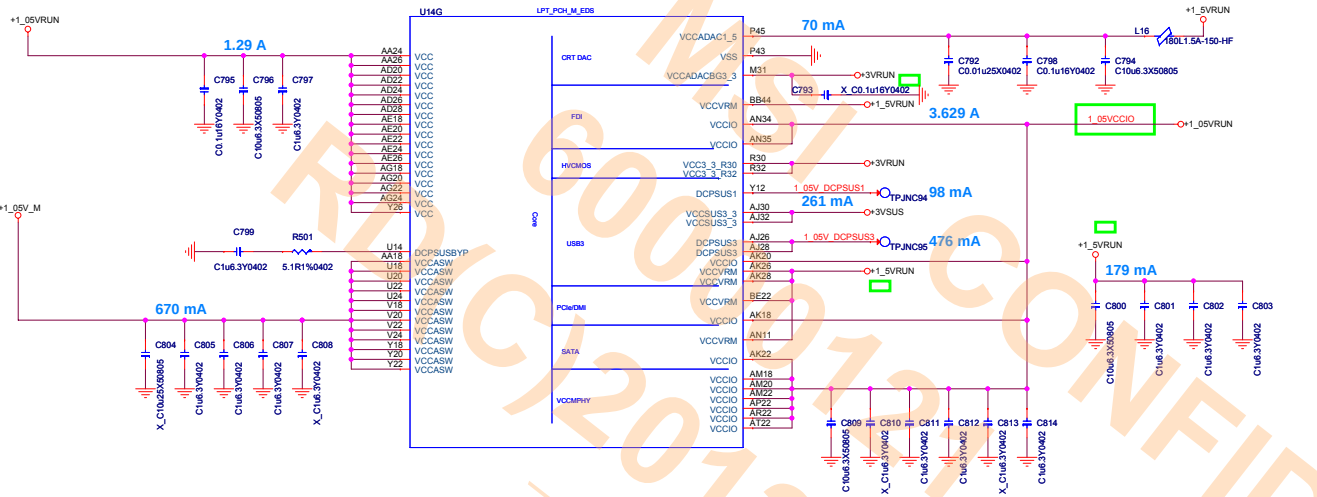
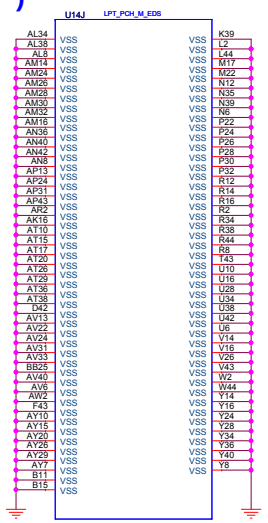
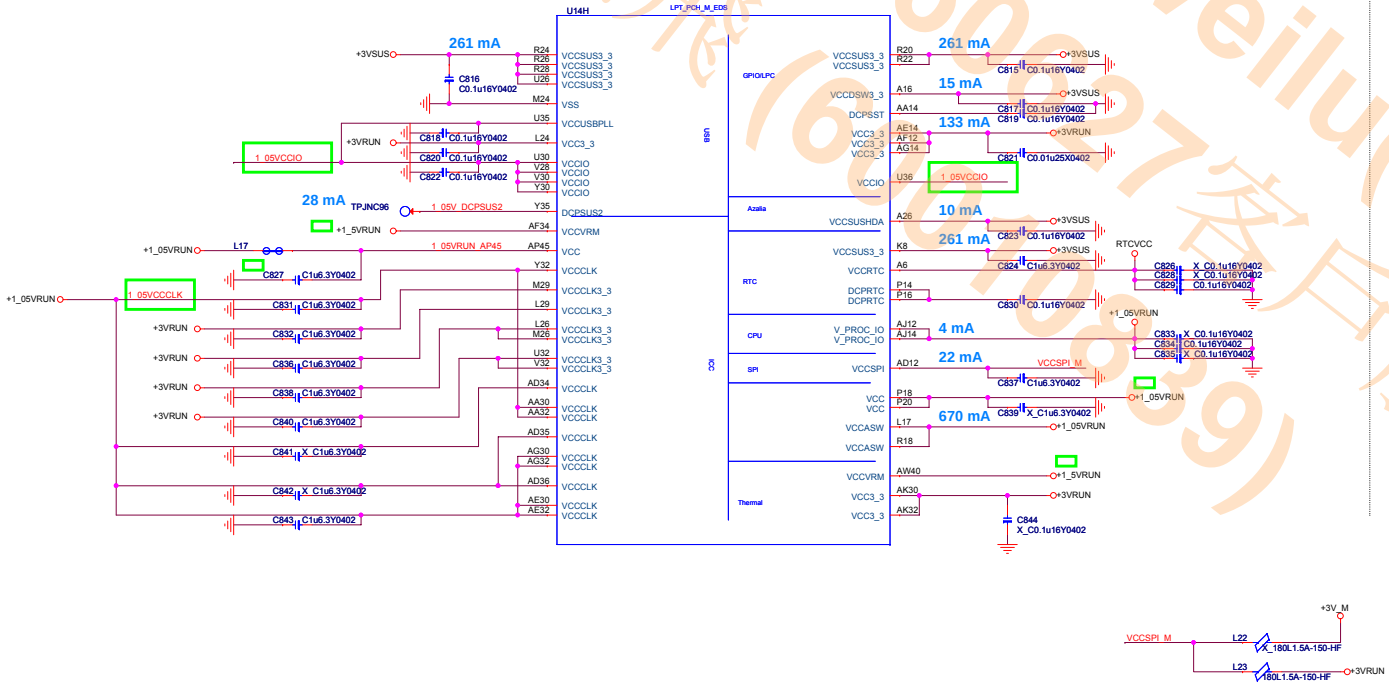
## Lynx Point ( Power )

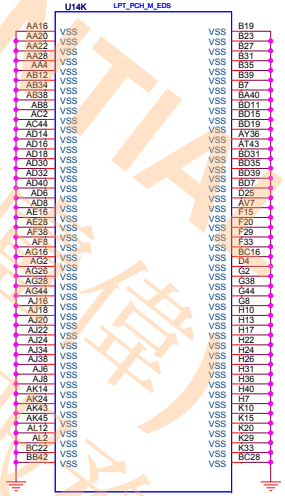



## Lynx Point ( GND )




## Lynx Point ( Power )







| | | | |
|---|---|---|---|
| Title | <Title> | | |
| Size | Document Number | | Rev |
| Custom | MS-16GD | | 0B |
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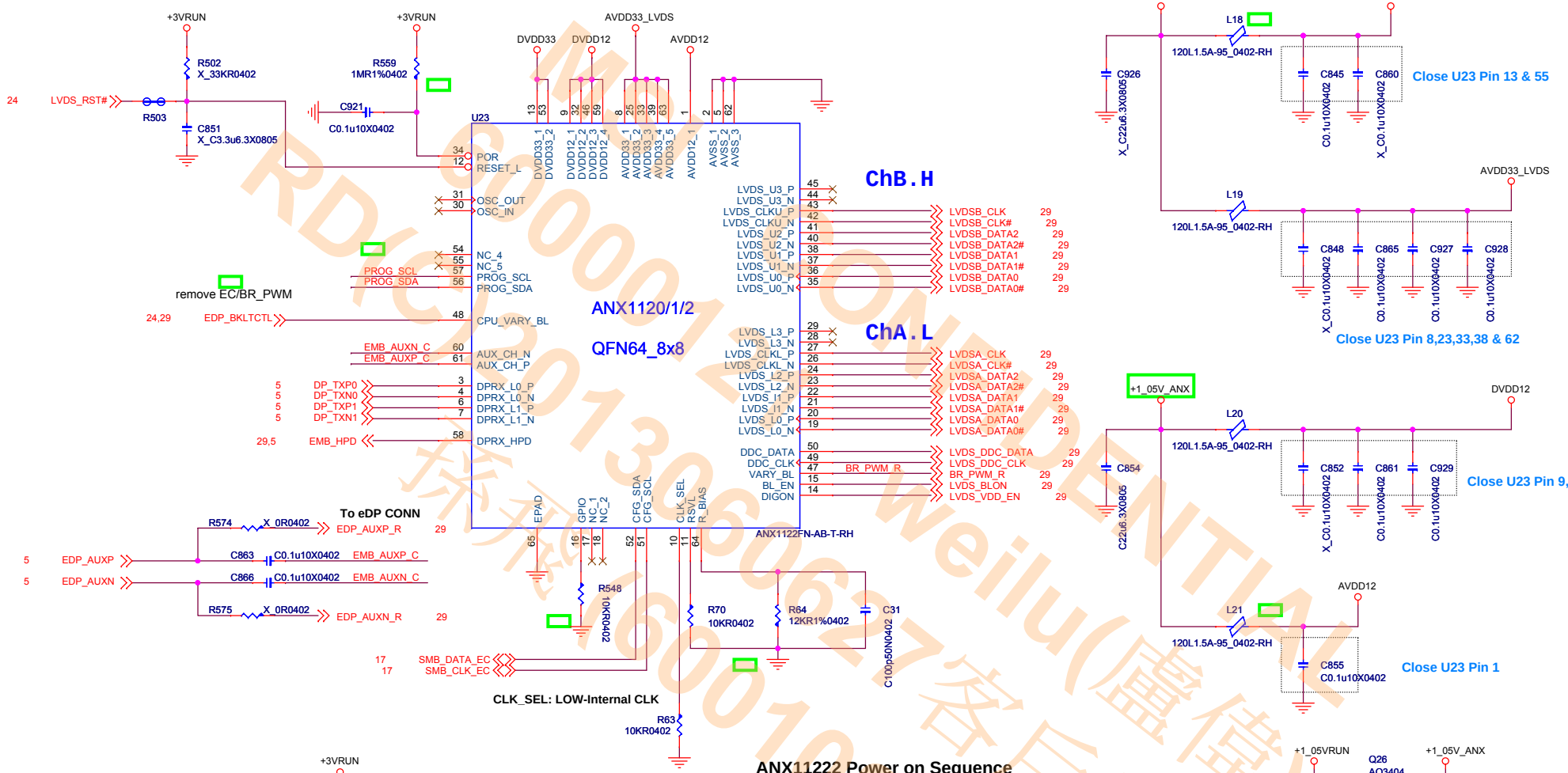
# eDP to LVDS






| | | | |
|---|---|---|---|
| Title | eDP to LVDS ( ANX11 | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
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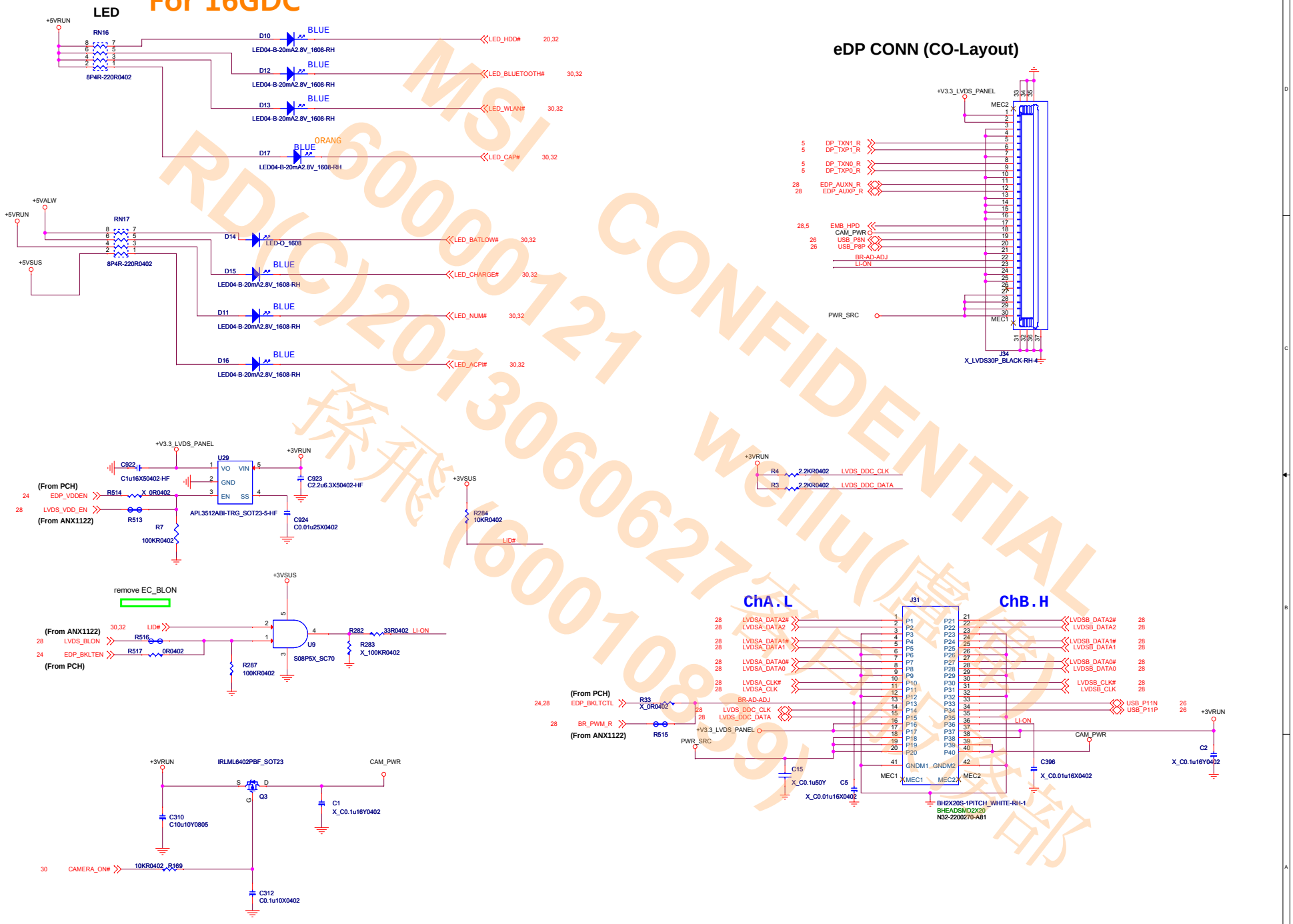
# For 16GDC






| | | | |
|---|---|---|---|
| Title | FAN/LED/LVDS | | |
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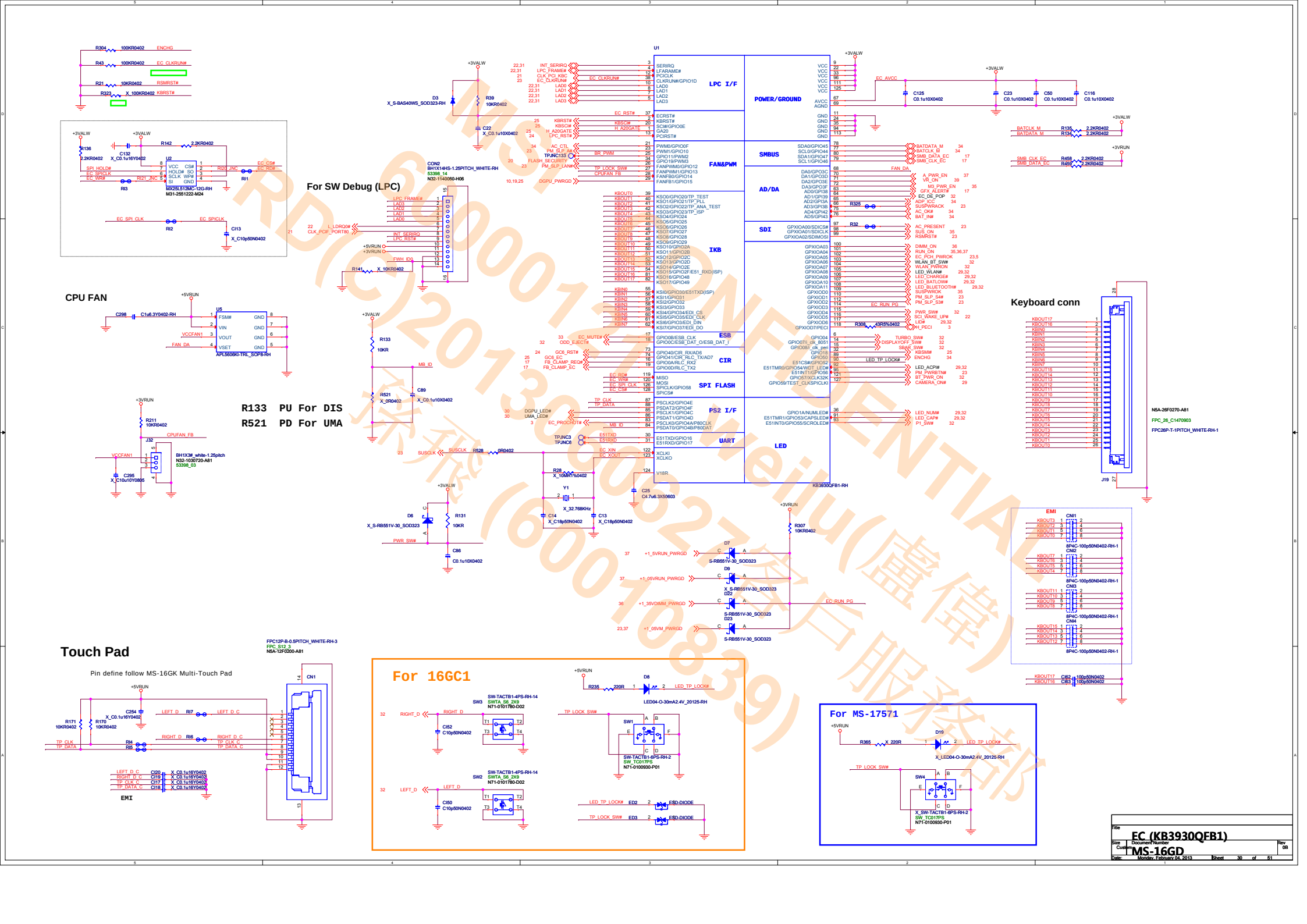
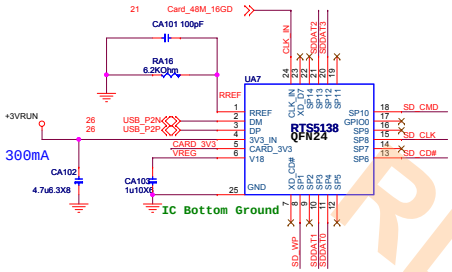
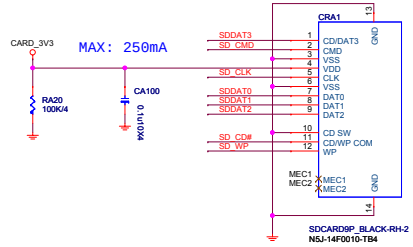

For SW Debug (LPC)
CPU FAN
R133 PU For DIS
R521 PD For UMA
Keyboard conn
Touch Pad
Pin define follow MS-16GK Multi-Touch Pad
For 16GC1
For MS-17571
U1
LPC I/F
POWER/GROUND
SMBUS
FAN&PWM
AD/DA
SDI
IKB
ESB
CIR
SPI FLASH
PS2 I/F
UART
LED
EMI
KB3930QFB1-RH
EC (KB3930QFB1)
MS-16GD

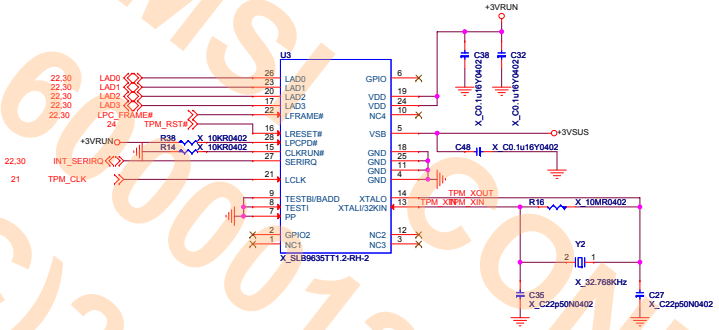
## Card Reader controller
## RTS 5138



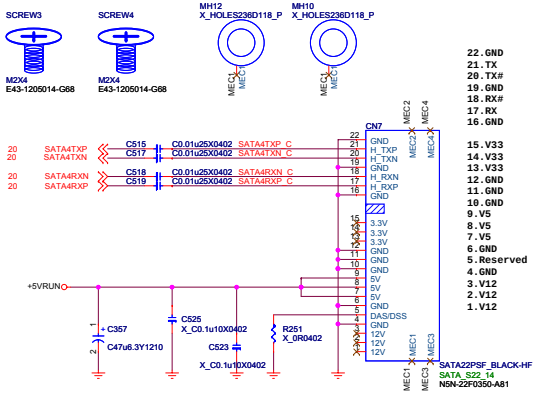

## Flash Card Socket



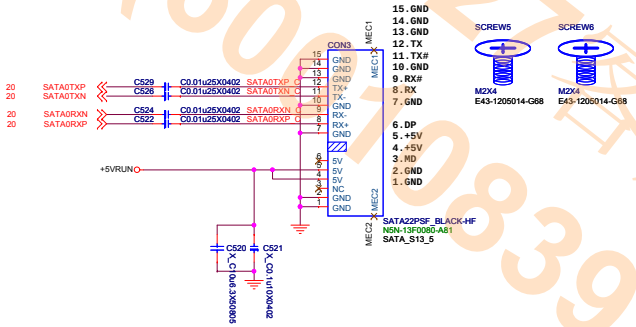

## TPM




## SATA HDD




## SATA ODD






| | | |
|---|---|---|
| Title | Card Reader/HDD/SSD/ODD | |
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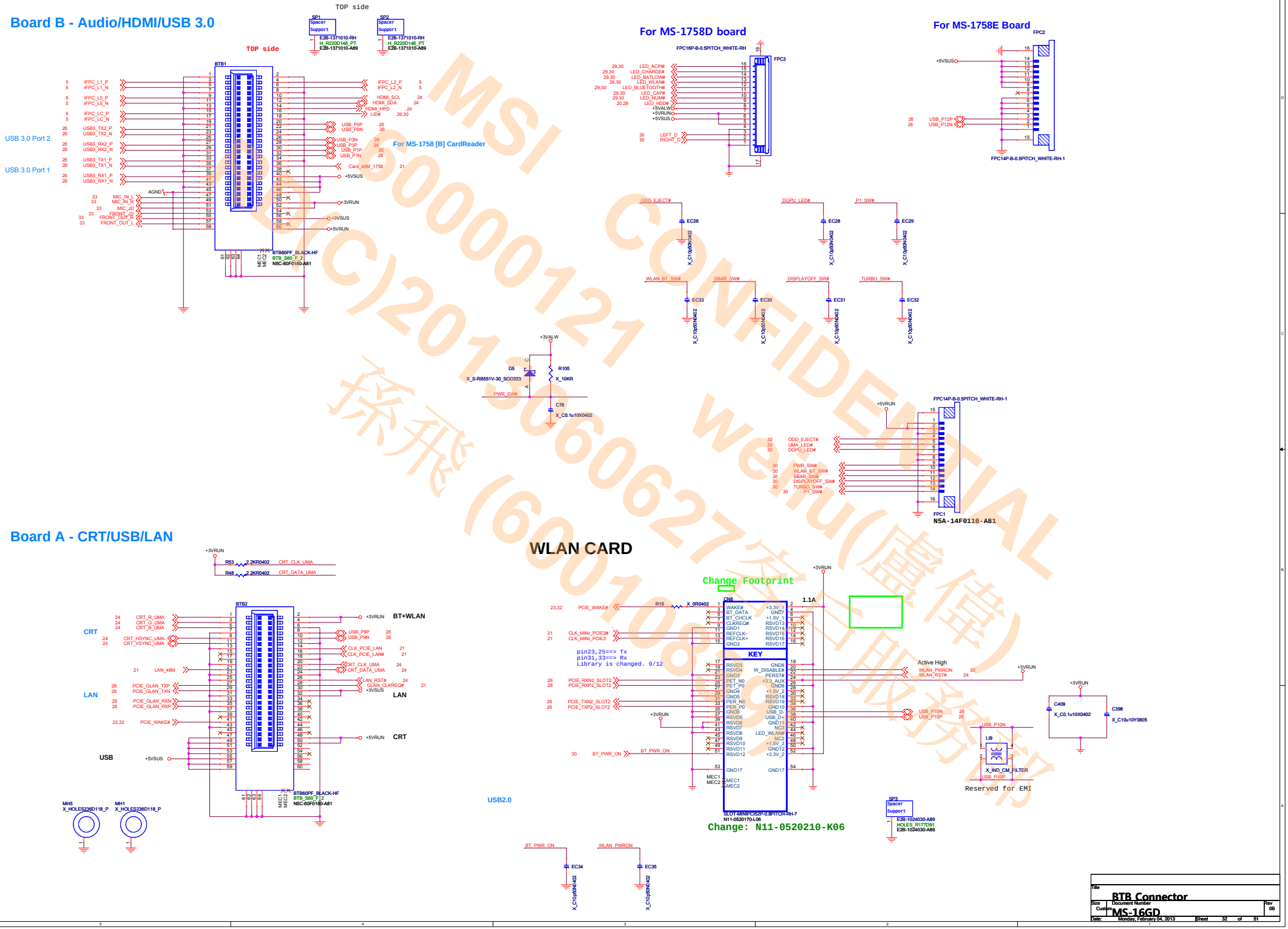

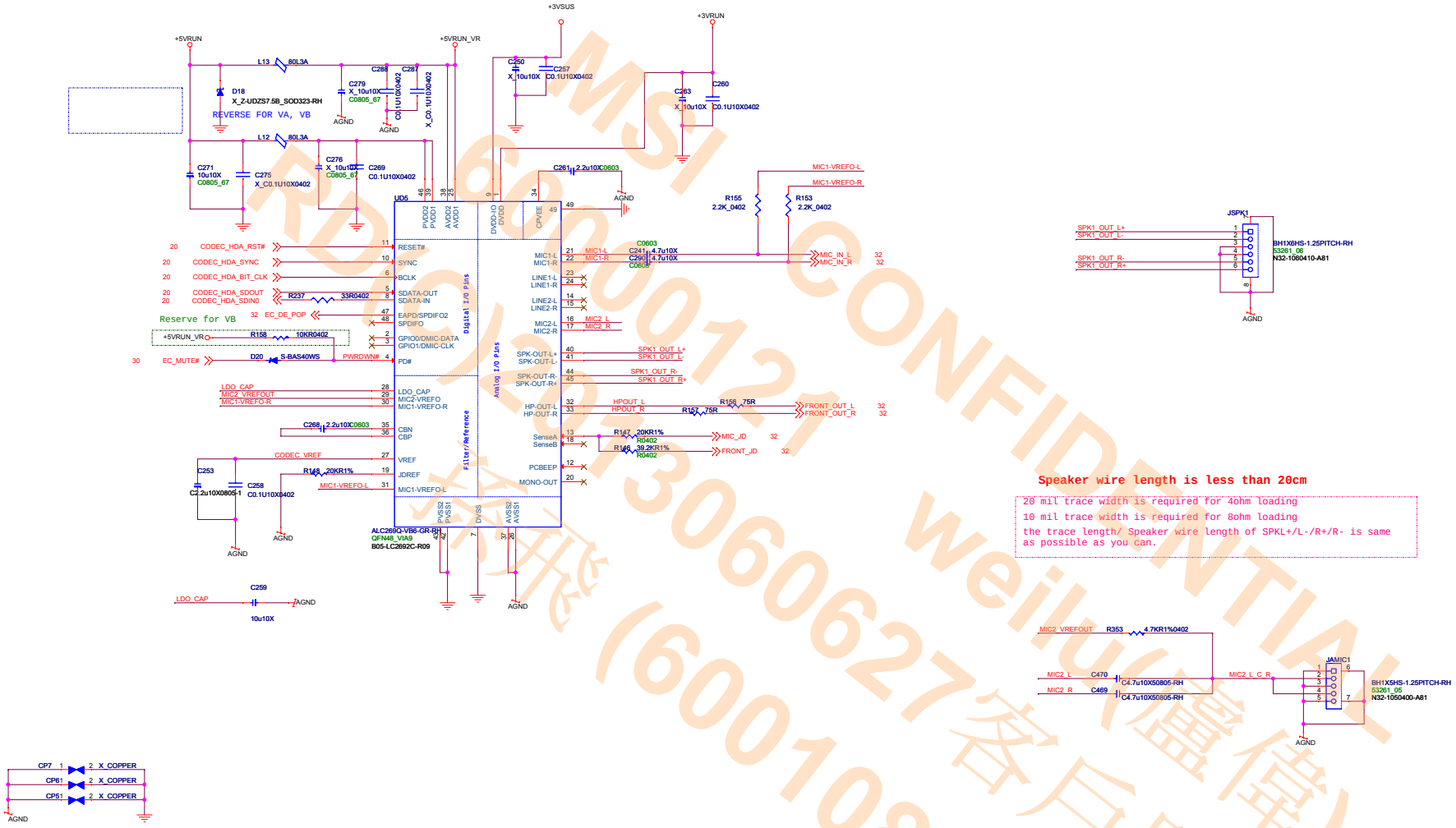


**Speaker wire length is less than 20cm**

20 mil trace width is required for 4ohm loading
10 mil trace width is required for 8ohm loading
the trace length/ Speaker wire length of SPKL+/L-/R+/R- is same as possible as you can.

| | | |
|---|---|---|
| Title | Audio CODEC/Audio AMP | |
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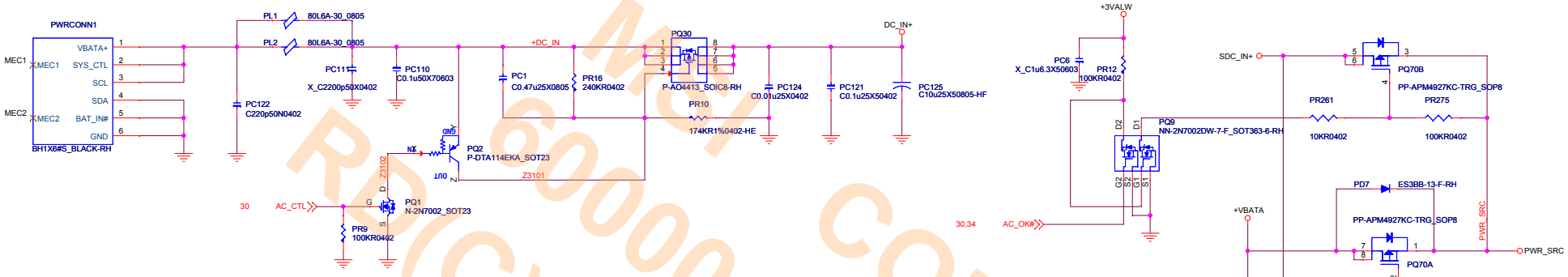
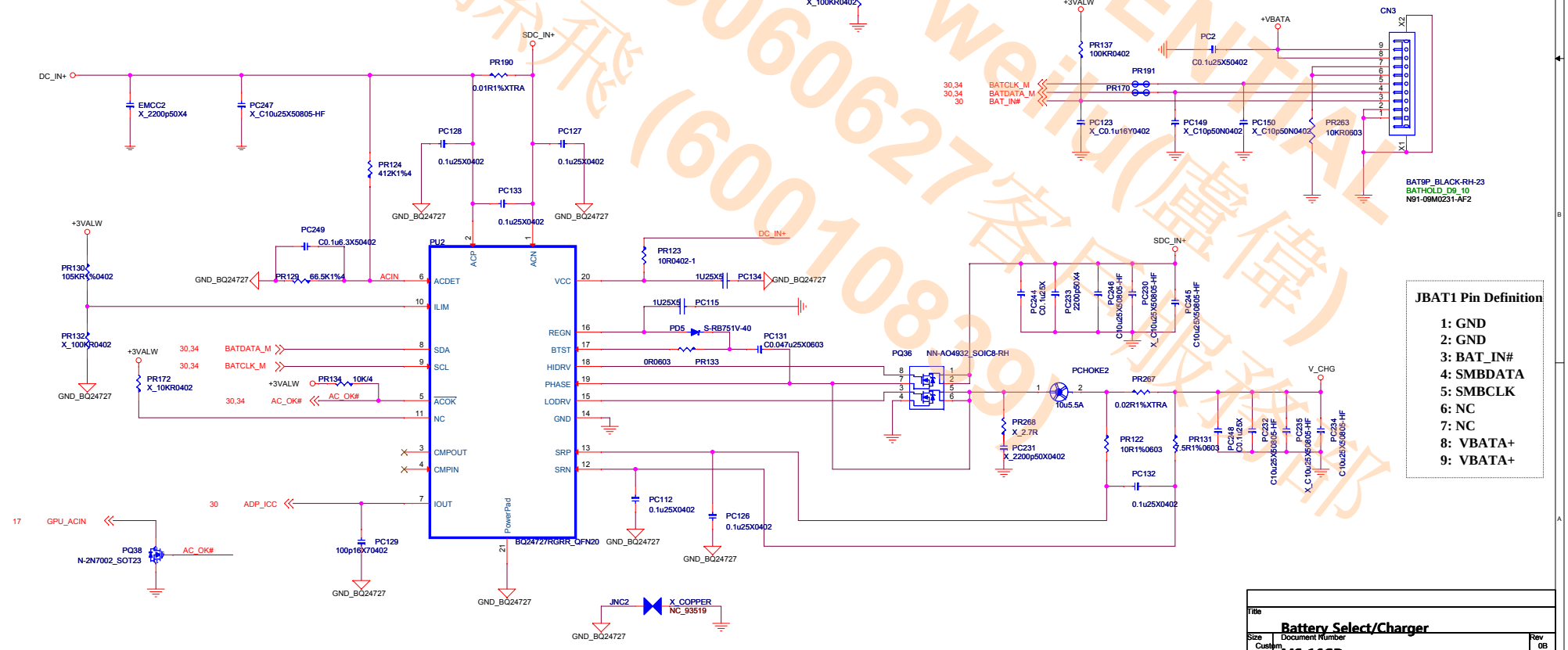
# Battery Select




# Battery Charger




**JBAT1 Pin Definition**

1: GND
2: GND
3: BAT_IN#
4: SMBDATA
5: SMBCLK
6: NC
7: NC
8: VBATA+
9: VBATA+

| | | |
|---|---|---|
| Title | Battery Select/Charger | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
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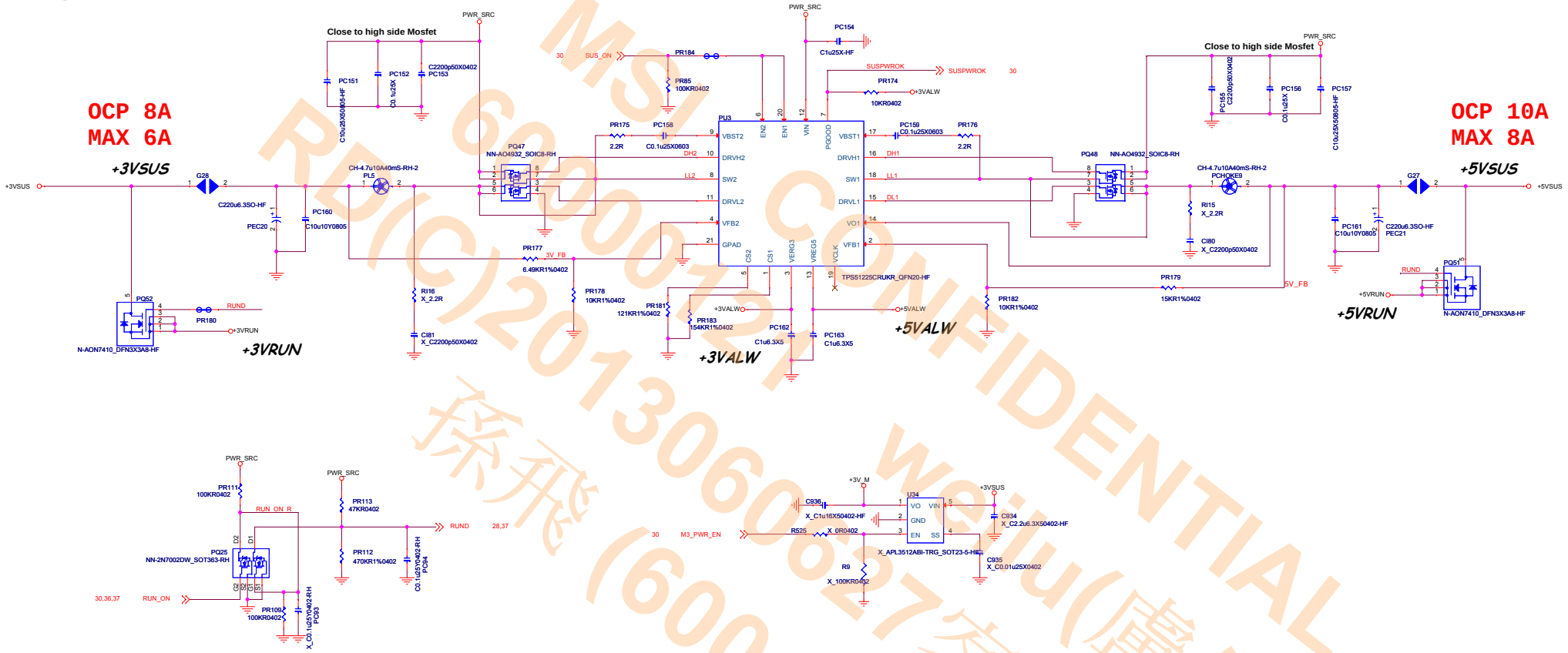
# System Power






| | | | |
|---|---|---|---|
| Title | System Power | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
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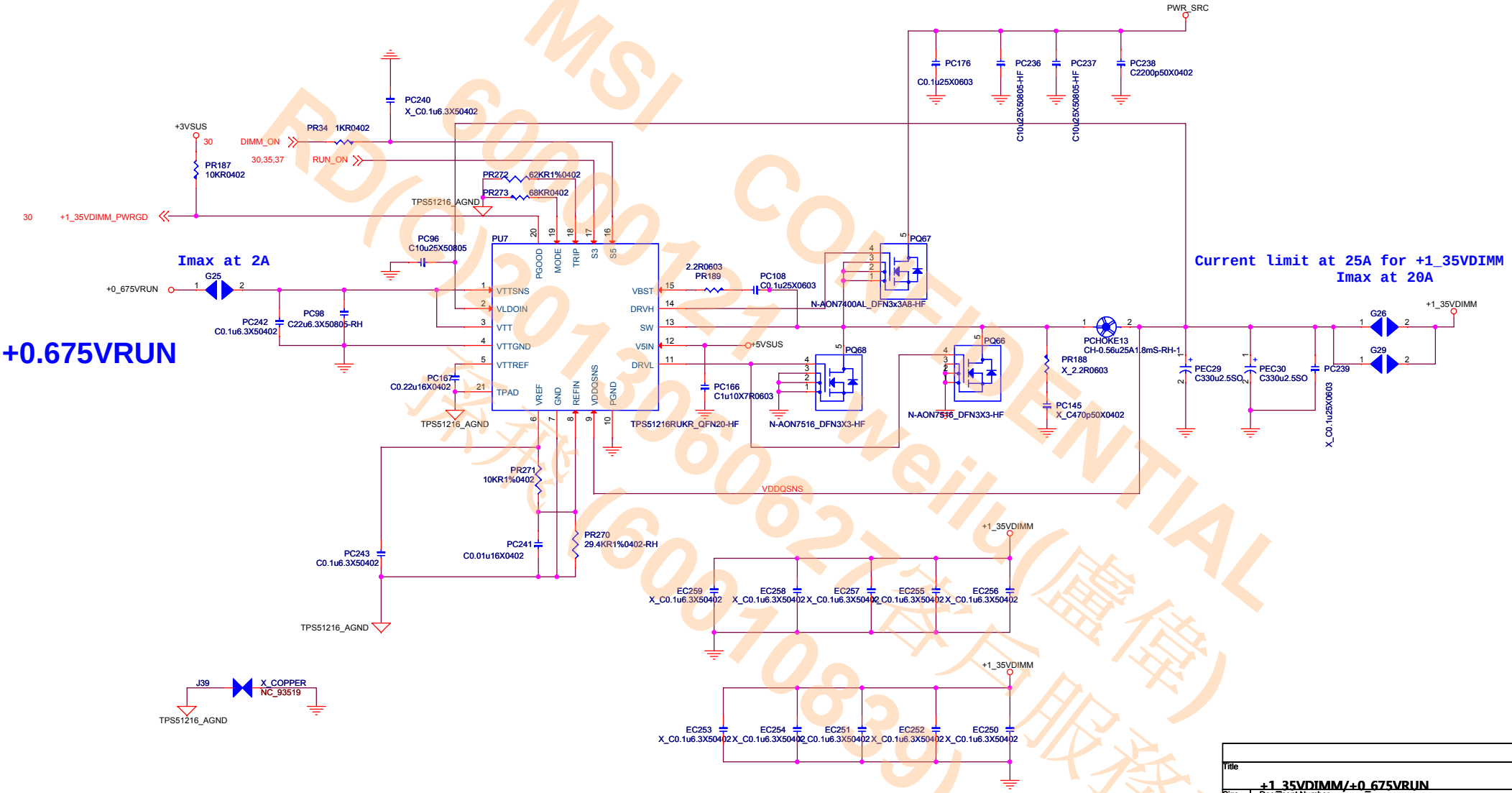
# +1.35VDIMM

# +0.675VRUN




| | | |
|---|---|---|
| Title | +1_35VDIMM/+0_675VRUN | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
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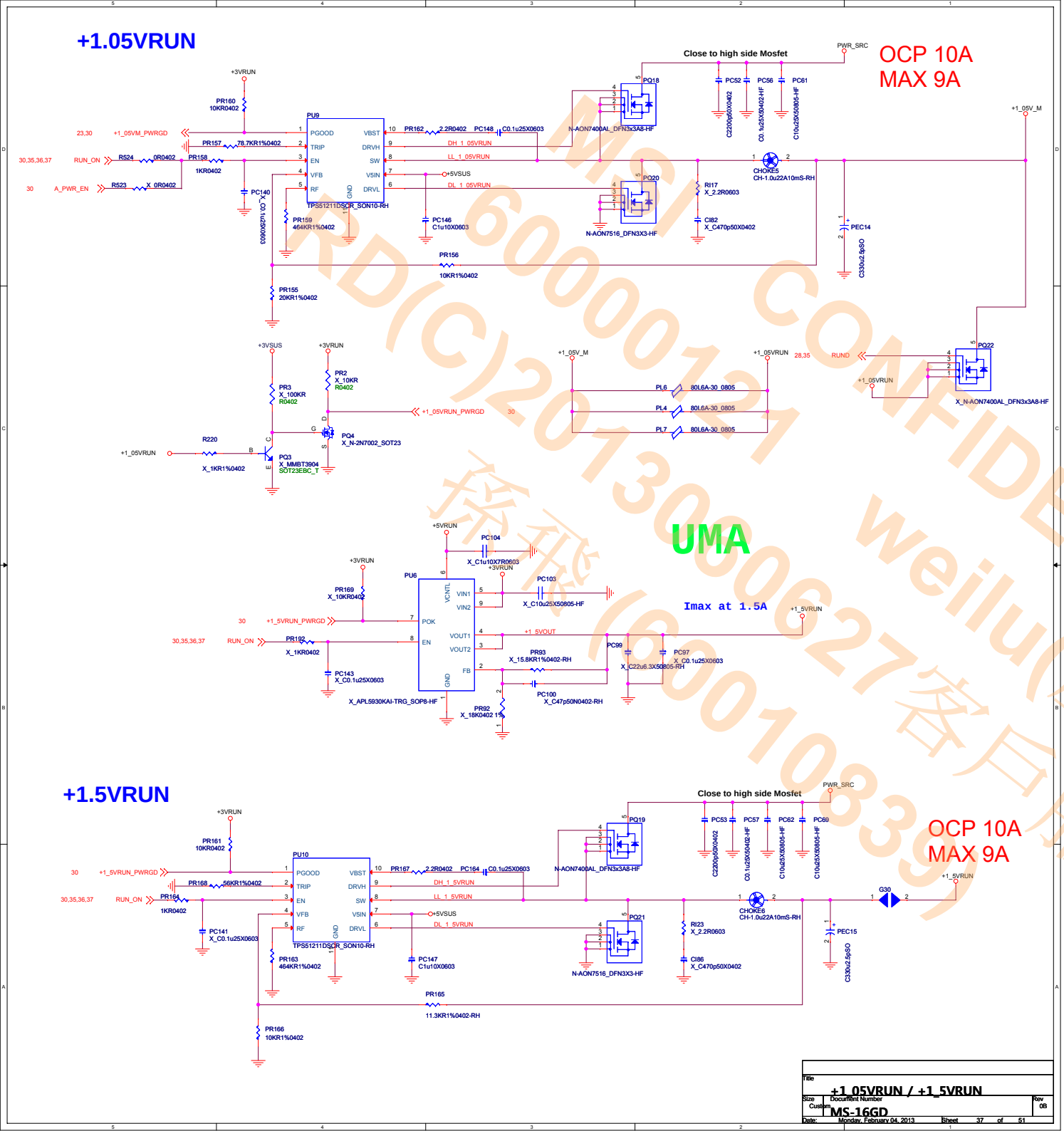
+1.05VRUN
Close to high side Mosfet
PWR_SRC
OCP 10A
MAX 9A
+3VRUN
PR160 10KR0402
PU9
PGOOD
TRIP
EN
VFB
RF
VBST
DRVH
SW
V5IN
DRVL
GND
TPS51211DSCR_SON10-RH
PR157 78.7KR1%0402
PR158 1KR0402
PR162 2.2R0402
PC148 C0.1u25X0603
PQ18
N-AON7400AL_DFN3x3A8-HF
PC52 C2200p50X0402
PC56 C0.1u25X0402-HF
PC61 C10u25X5080S-HF
+1_05V_M
CHOKE6 CH-1.0u22A10mS-RH
PQ20
N-AON7516_DFN3X3-HF
RI17 X_2.2R0603
CI82 X_C470p50X0402
PEC14 C330u2.5pSO
PC140 C0.1u25X0603
PR159 464KR1%0402
PC146 C1u10X0603
PR156 10KR1%0402
PR155 20KR1%0402
23,30 +1_05VM_PWRGD
30,35,36,37 RUN_ON
30 A_PWR_EN
R524 0R0402
R523 X_0R0402
+5VSUS
DH_1_05VRUN
LL_1_05VRUN
DL_1_05VRUN
+3VSUS
PR3 X_100KR R0402
PR2 X_10KR R0402
+1_05VRUN_PWRGD
PQ4 X_N-2N7002_SOT23
R220 X_1KR1%0402
PQ3 X_MMBT3904 SOT23EBC_T
+1_05V_M
PL6 80L6A-30_0805
PL4 80L6A-30_0805
PL7 80L6A-30_0805
+1_05VRUN
28,35 RUND
PQ22
X_N-AON7400AL_DFN3x3A8-HF
UMA
Imax at 1.5A
+5VRUN
PC104 X_C1u10X7R0603
PU6
VCNTL
VIN1
VIN2
POK
EN
VOUT1
VOUT2
FB
GND
X_APL5930KAI-TRG_SOP8-HF
PR169 X_10KR0402
PR192 X_1KR0402
PC143 X_C0.1u25X0603
PC103 X_C10u25X50805-HF
+1_5VOUT
PR93 X_15.8KR1%0402-RH
PC99 X_C22u6.3X50805-RH
PC97 X_C0.1u25X0603
PC100 X_C47p50N0402-RH
PR92 X_18K0402 1%
+1_5VRUN
+1.5VRUN
Close to high side Mosfet
PWR_SRC
OCP 10A
MAX 9A
+3VRUN
PR161 10KR0402
PU10
PR168 56KR1%0402
PR164 1KR0402
PC141 X_C0.1u25X0603
PR163 464KR1%0402
PC147 C1u10X0603
PR165 11.3KR1%0402-RH
PR166 10KR1%0402
PR167 2.2R0402
PC164 C0.1u25X0603
PQ19
N-AON7400AL_DFN3x3A8-HF
PC53 C2200p50X0402
PC57 C0.1u25X0402-HF
PC62 C10u25X5080S-HF
PC69 C10u25X5080S-HF
PQ21
N-AON7516_DFN3X3-HF
RI23 X_2.2R0603
CI86 X_C470p50X0402
CHOKE6 CH-1.0u22A10mS-RH
PEC15 C330u2.5pSO
G30
30 +1_5VRUN_PWRGD
30,35,36,37 RUN_ON
+1_5VRUN
Title
+1_05VRUN / +1_5VRUN
Size Custom
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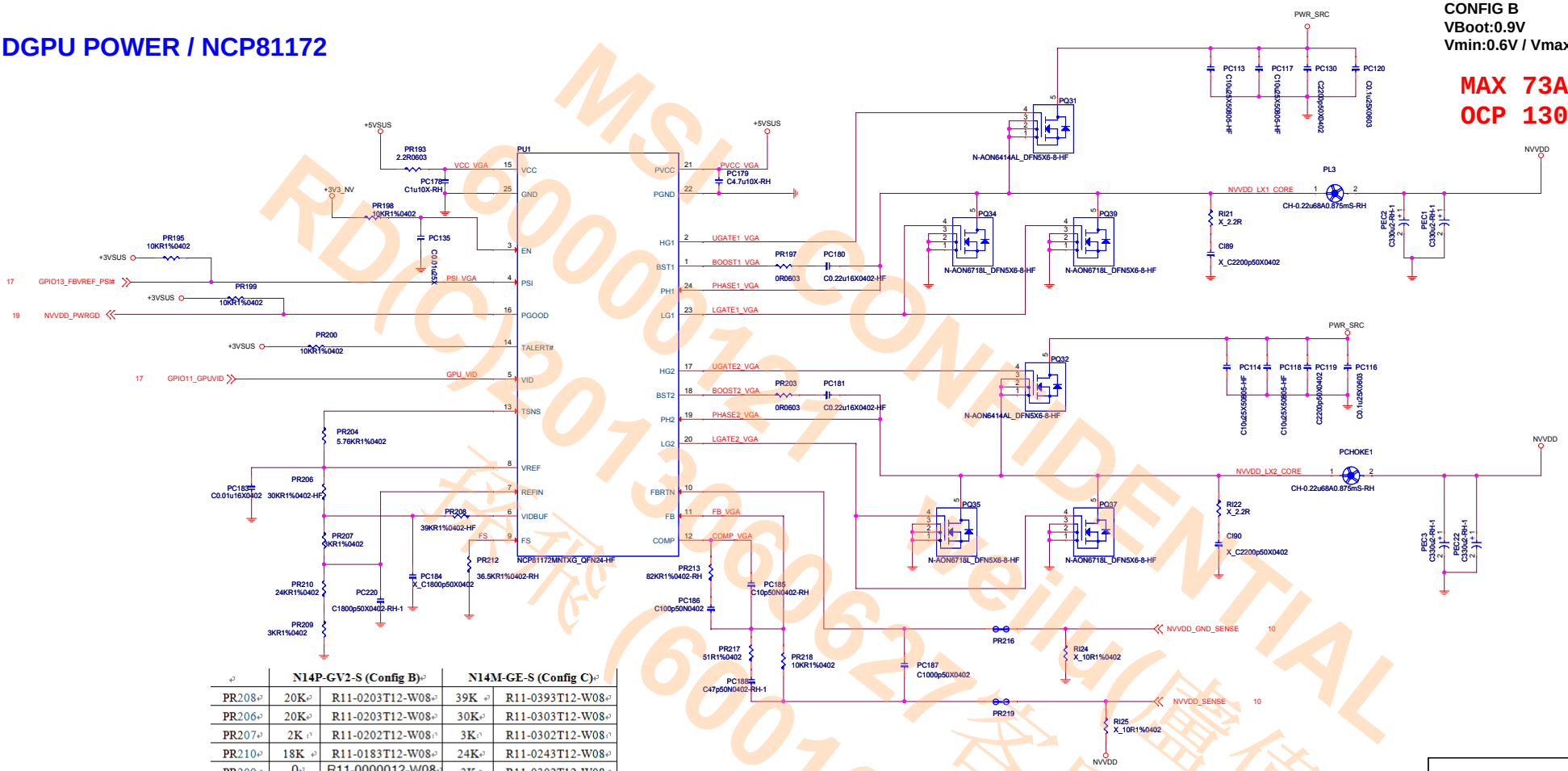
# DGPU POWER / NCP81172

CONFIG B
VBoot:0.9V
Vmin:0.6V / Vmax:1.2V

**MAX 73A**
**OCP 130A**




| | N14P-GV2-S (Config B) | | N14M-GE-S (Config C) | |
|---|---|---|---|---|
| PR208 | 20K | R11-0203T12-W08 | 39K | R11-0393T12-W08 |
| PR206 | 20K | R11-0203T12-W08 | 30K | R11-0303T12-W08 |
| PR207 | 2K | R11-0202T12-W08 | 3K | R11-0302T12-W08 |
| PR210 | 18K | R11-0183T12-W08 | 24K | R11-0243T12-W08 |
| PR209 | 0 | R11-0000012-W08 | 3K | R11-0302T12-W08 |
| PC184 | 2700pF | C11-2722812-W08 | 1800pF | C11-1822822-W08 |
| PC220 | 2700pF | C11-2722812-W08 | 1800pF | C11-1822822-W08 |

Title: DGPU Power
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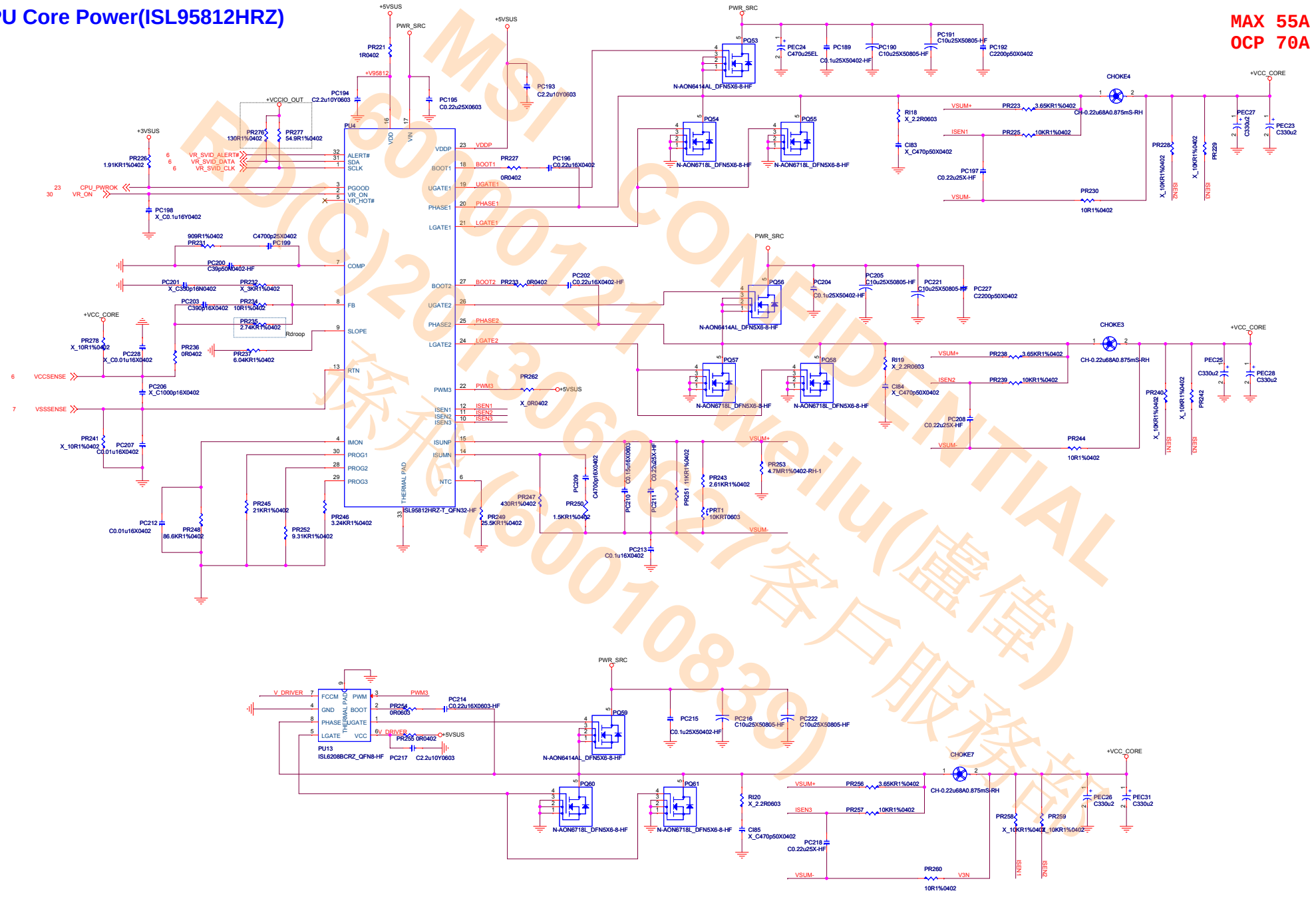
# CPU Core Power(ISL95812HRZ)

**MAX 55A**
**OCP 70A**






| | |
|---|---|
| Title | CPU Power |
| Size: Custom | Document Number: MS-16GD |
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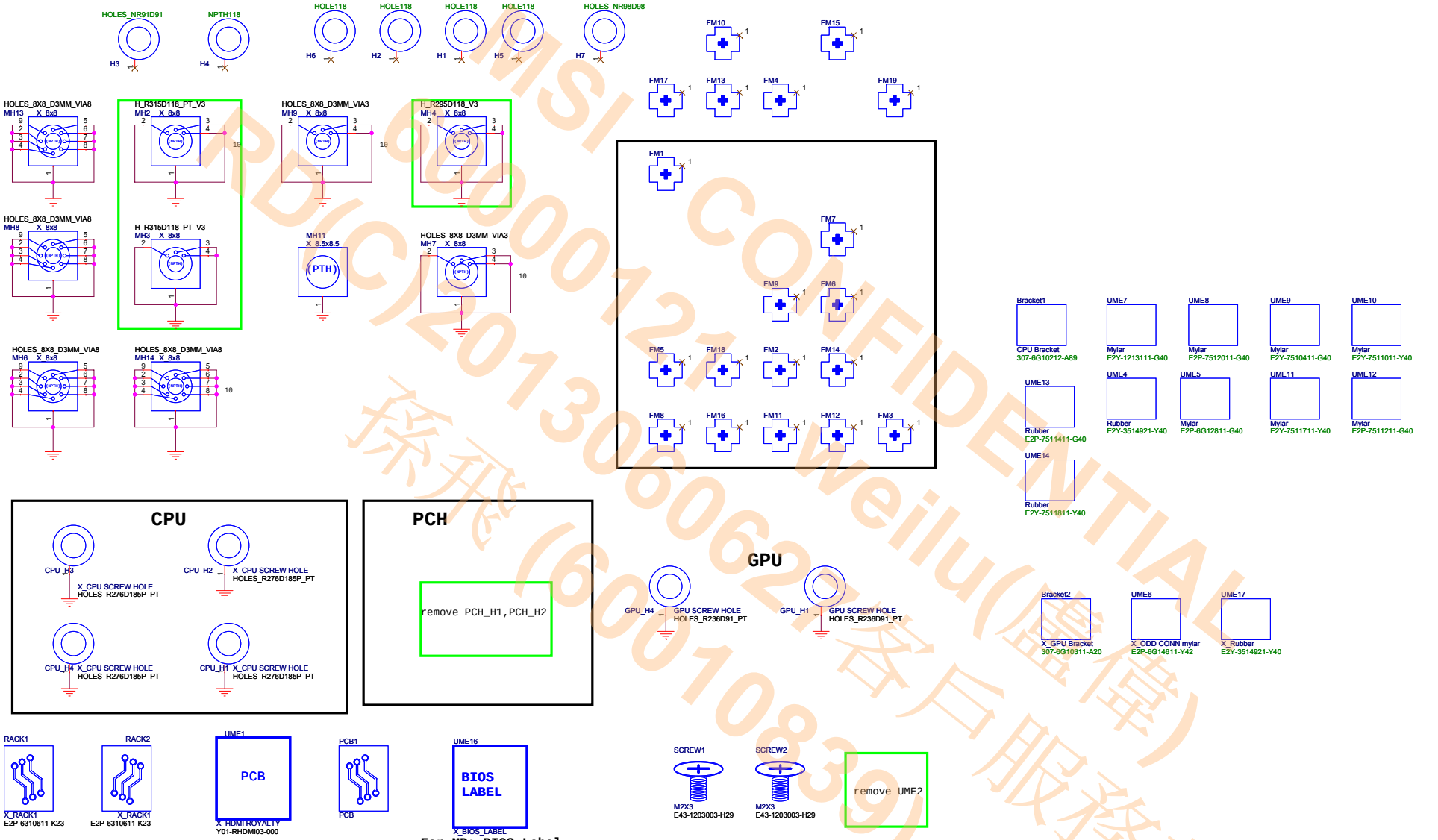




| | | | |
|---|---|---|---|
| Title | Screw/ME | | |
| Size: Custom | Document Number: MS-16GD | | Rev: 0B |
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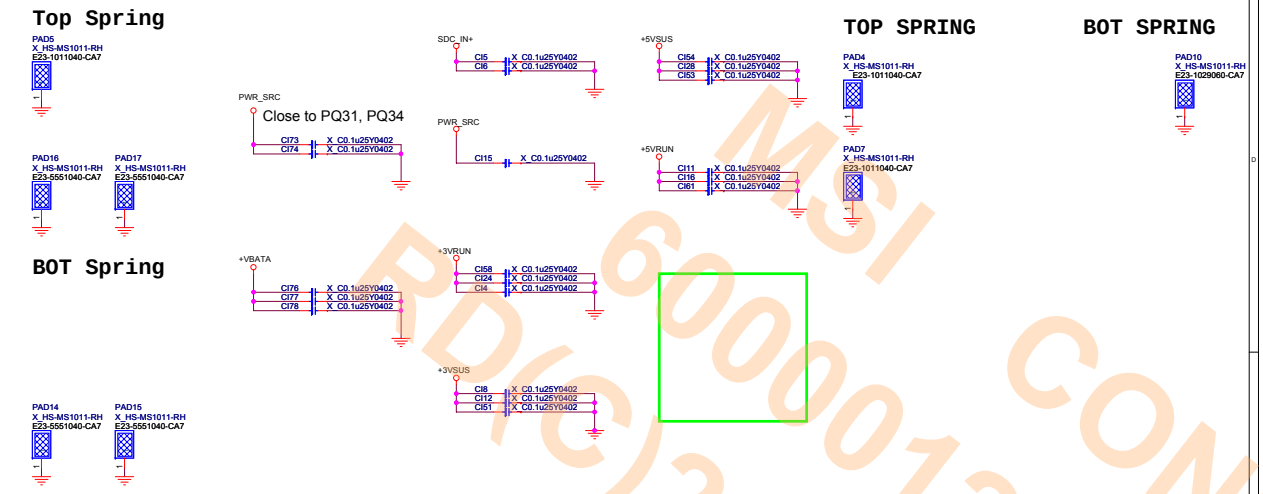


80 OHM

J6 L1_DIFF_5/4.5/5_80_Ohm+
J9 L1_DIFF_5/4.5/5_80_Ohm-
J18 L4_DIFF_5/4/5_80_Ohm+
J17 L4_DIFF_5/4/5_80_Ohm-
J26 L6_DIFF_5/4.5/5_80_Ohm+
J25 L6_DIFF_5/4.5/5_80_Ohm-

85 OHM

J14 L1_DIFF_4/4/4_85_Ohm+
J7 L1_DIFF_4/4/4_85_Ohm-
J12 L3_DIFF_4/4/4_85_Ohm+
J8 L3_DIFF_4/4/4_85_Ohm-
J27 L4_DIFF_4/4/4_85_Ohm+
J29 L4_DIFF_4/4/4_85_Ohm-
J30 L6_DIFF_4/4/4_85_Ohm+
J28 L6_DIFF_4/4/4_85_Ohm-

90 OHM

J13 L1_DIFF_4/5/4_90_Ohm+
J15 L1_DIFF_4/5/4_90_Ohm-
J11 L3_DIFF_4/5/4_90_Ohm+
J10 L3_DIFF_4/5/4_90_Ohm-
J1 L6_DIFF_4/5/4_90_Ohm+
J2 L6_DIFF_4/5/4_90_Ohm-

100 OHM

J23 L4_DIFF_4/10/4_100_Ohm+
J33 L4_DIFF_4/10/4_100_Ohm-
J21 L6_DIFF_4/10/4_100_Ohm+
J22 L6_DIFF_4/10/4_100_Ohm-

40 OHM

J36 L3_8mil_40_Ohm
J37 L4_8mil_40_Ohm
J38 L6_6.5mil_40_Ohm

45 OHM

J36 L1_5mil_45_Ohm
J20 L3_6mil_45_Ohm
J5 L4_6mil_45_Ohm
J4 L6_5mil_45_Ohm

50 OHM

J40 L1_4mil_50_Ohm
J16 L3_4.5mil_50_Ohm
J24 L4_4.5mil_50_Ohm
J41 L6_4mil_50_Ohm

X_H1X2M_BLACK-RH

| | | | |
|---|---|---|---|
| Title | EMI | | |
| Size | Document Number | | Rev |
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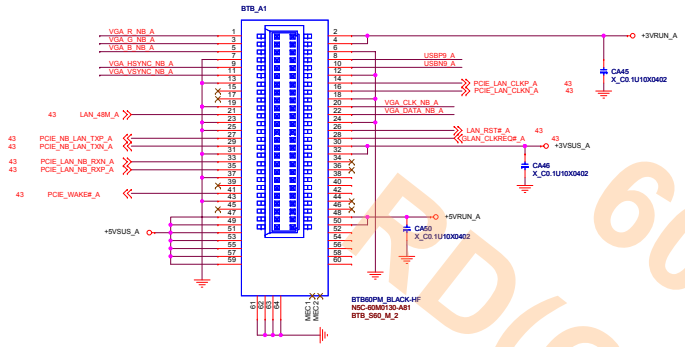
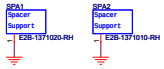
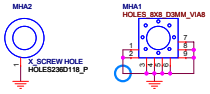
## 60PIN BTB I/O Connector(VGA, LAN, USB)




## BTB STANDOFF (16GMA)

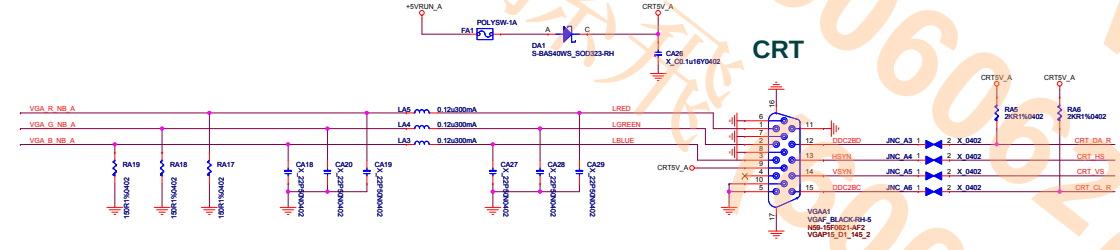


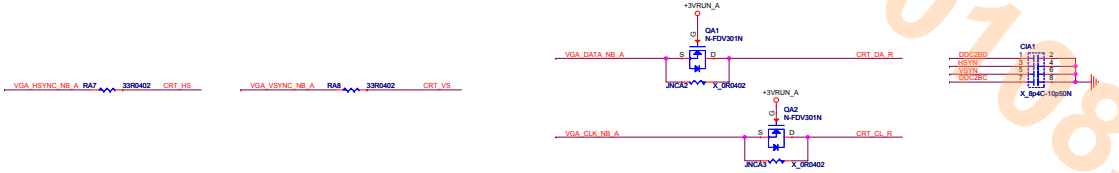

## SCREW HOLE



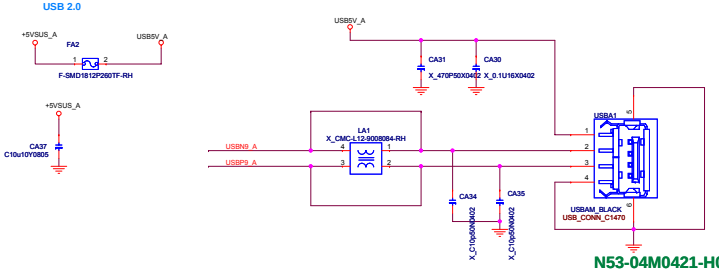


## CRT




## USB 2.0 CNT




N53-04M0421-H06

| | | | |
|---|---|---|---|
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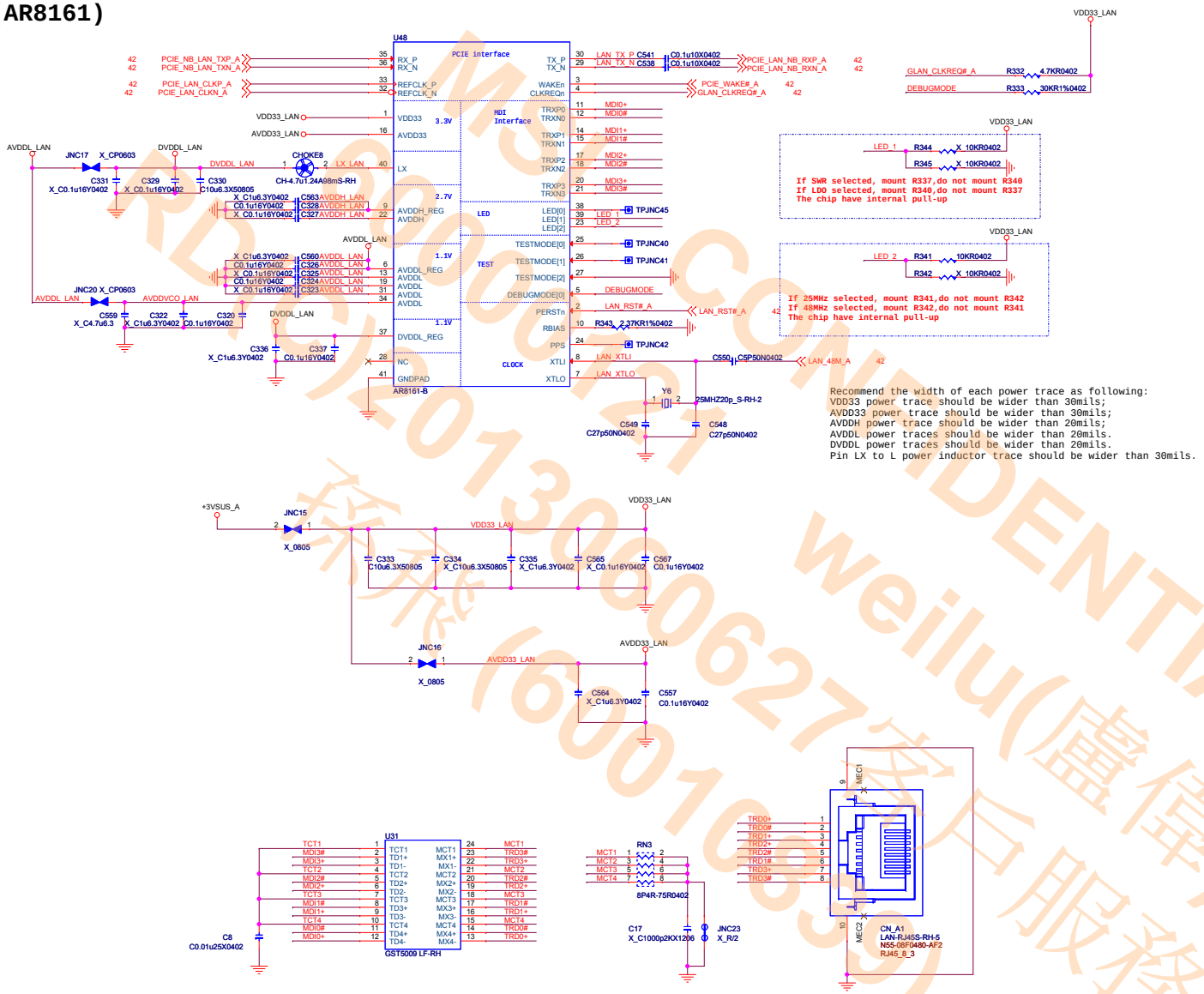
# GIGA LAN(AR8161)




Recommend the width of each power trace as following:
VDD33 power trace should be wider than 30mils;
AVDD33 power trace should be wider than 30mils;
AVDDH power trace should be wider than 20mils;
AVDDL power traces should be wider than 20mils.
DVDDL power traces should be wider than 20mils.
Pin LX to L power inductor trace should be wider than 30mils.

| | | | |
|---|---|---|---|
| Title | [A] GIGA LAN(BEN2205B) | | |
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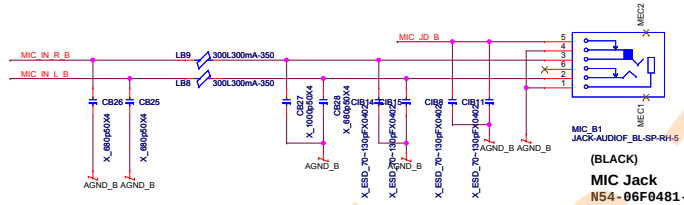
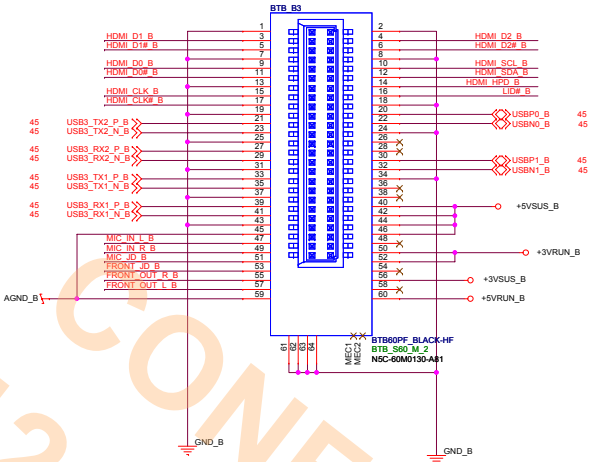
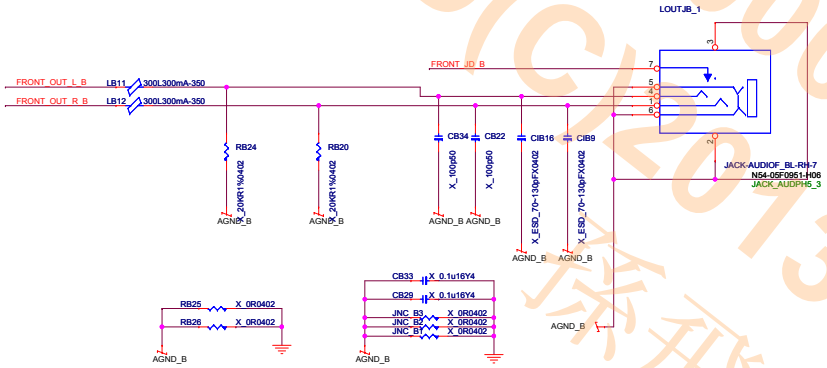
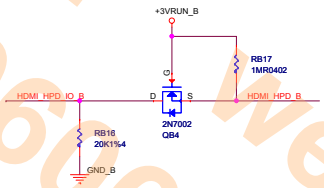
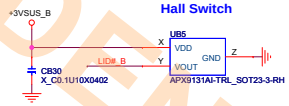
# 16GCB board to board CONN1: HDMI,Audio, LED,LID

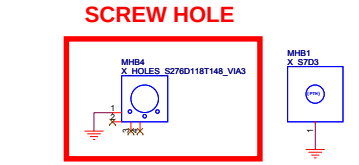


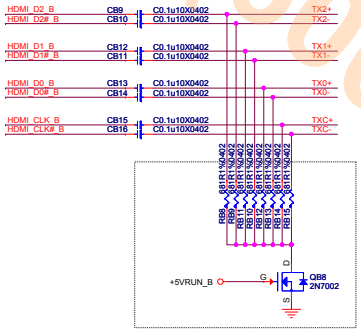



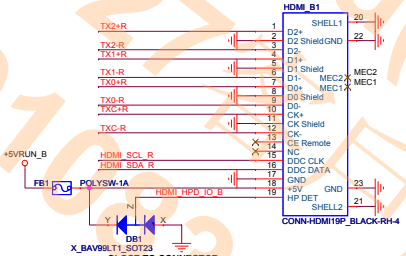



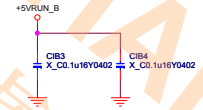



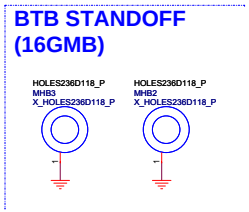



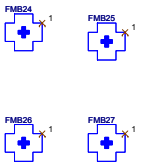



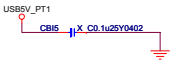


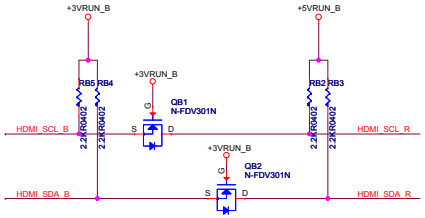
## Mylar for EMI

## ASM CFG = 60


MYLAR_B For EMI Audio connector 裸膠 布裕隔 mylar
MYLAR_B2 For EMI Audio connector 裸膠 綢裂斯銀
MYLAR_B3 For EMI USB & HDMI Connector 裸, 膠 綢裂 5*50mm

## EMI Cap






| | | | |
|---|---|---|---|
| Title | [B] BTB CNT/Audio/HDMI | | |
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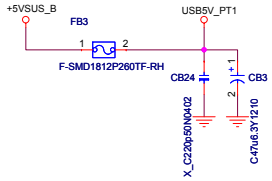
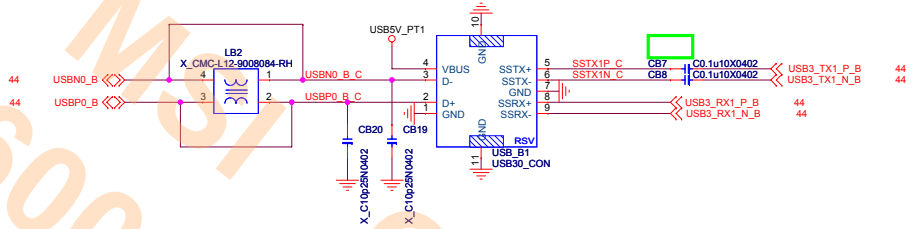
# USB 3.0 CNT1

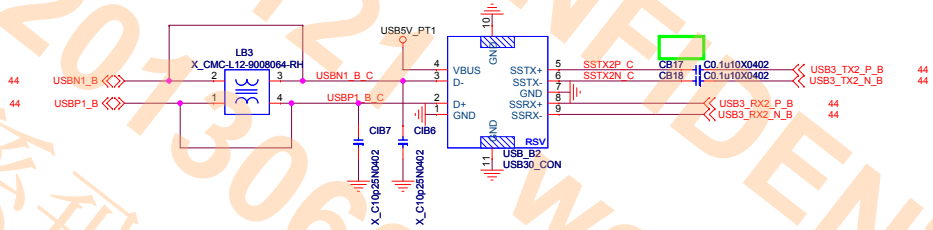



(USB3.0 Left Side - UP)




# USB 3.0 CNT 2

(USB3.0 Left Side - Down)






| | | |
|---|---|---|
| Title | [B] USB3.0x2/USB2.0x1/LED KB | |
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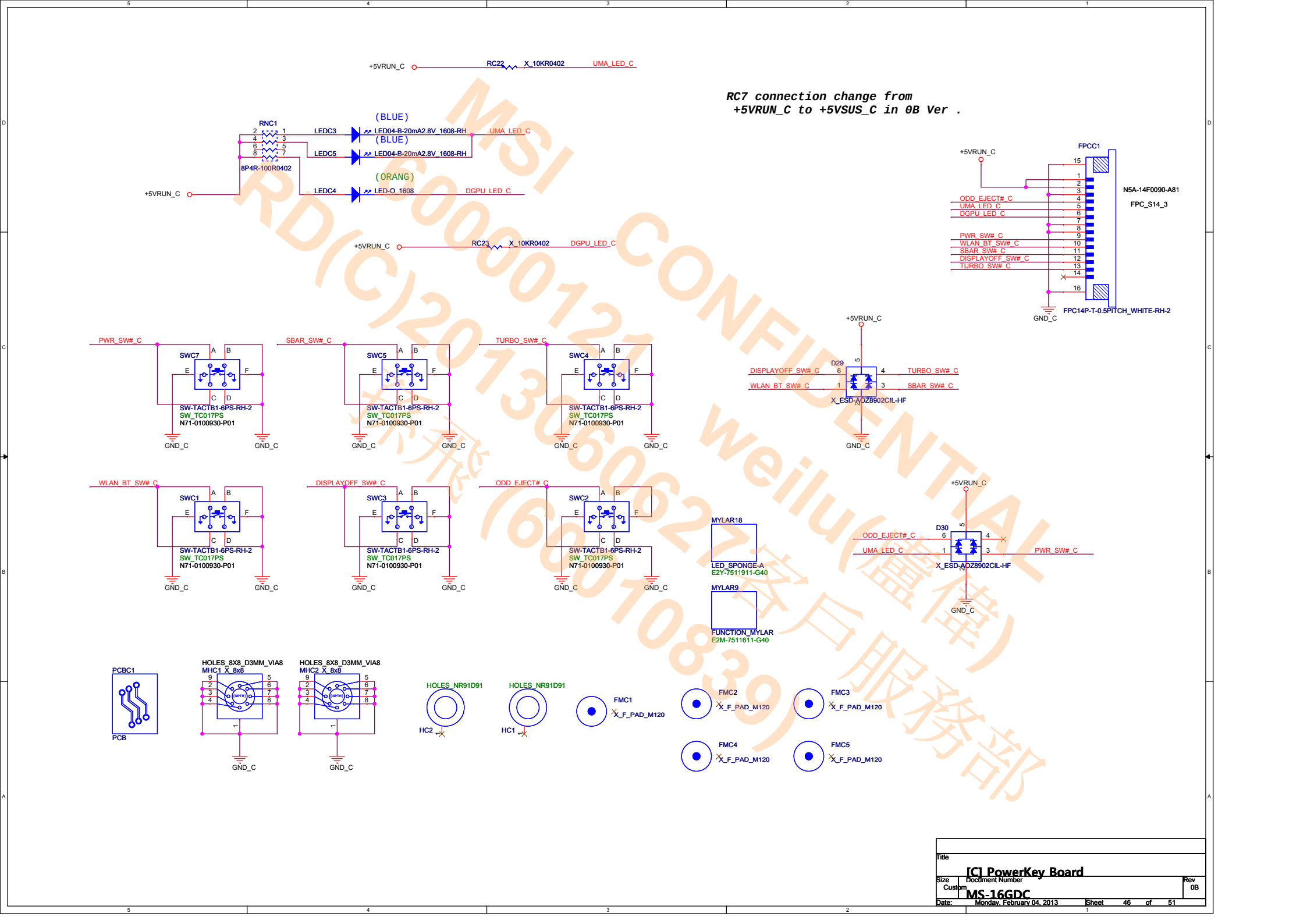




| | | | |
|---|---|---|---|
| Title | [C] PowerKey Board | | |
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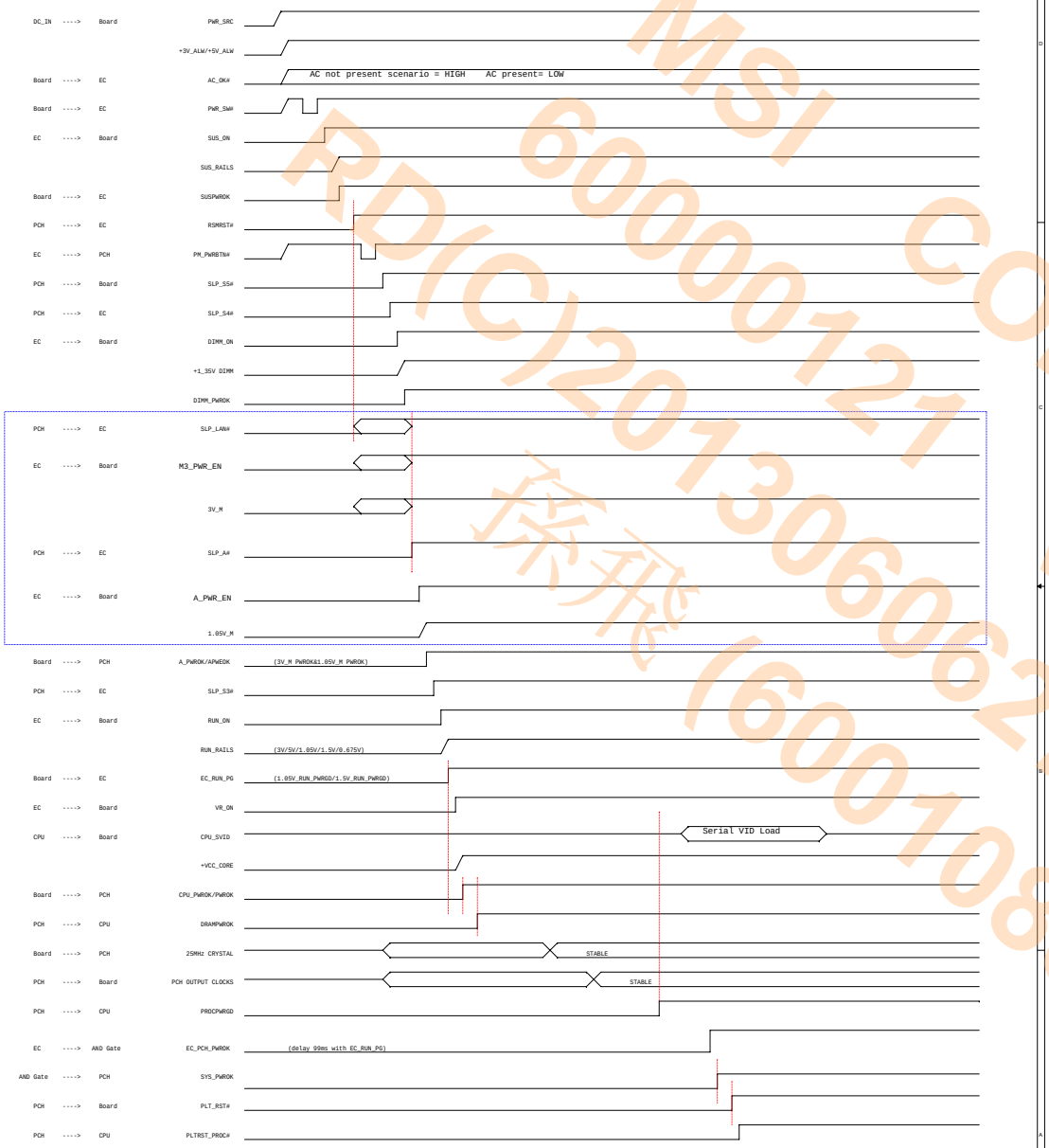
# POWER ON SEQUENCE FOR AC MODE




| | | | |
|---|---|---|---|
| Title | <Title> | | |
| Size | Document Number | | Rev |
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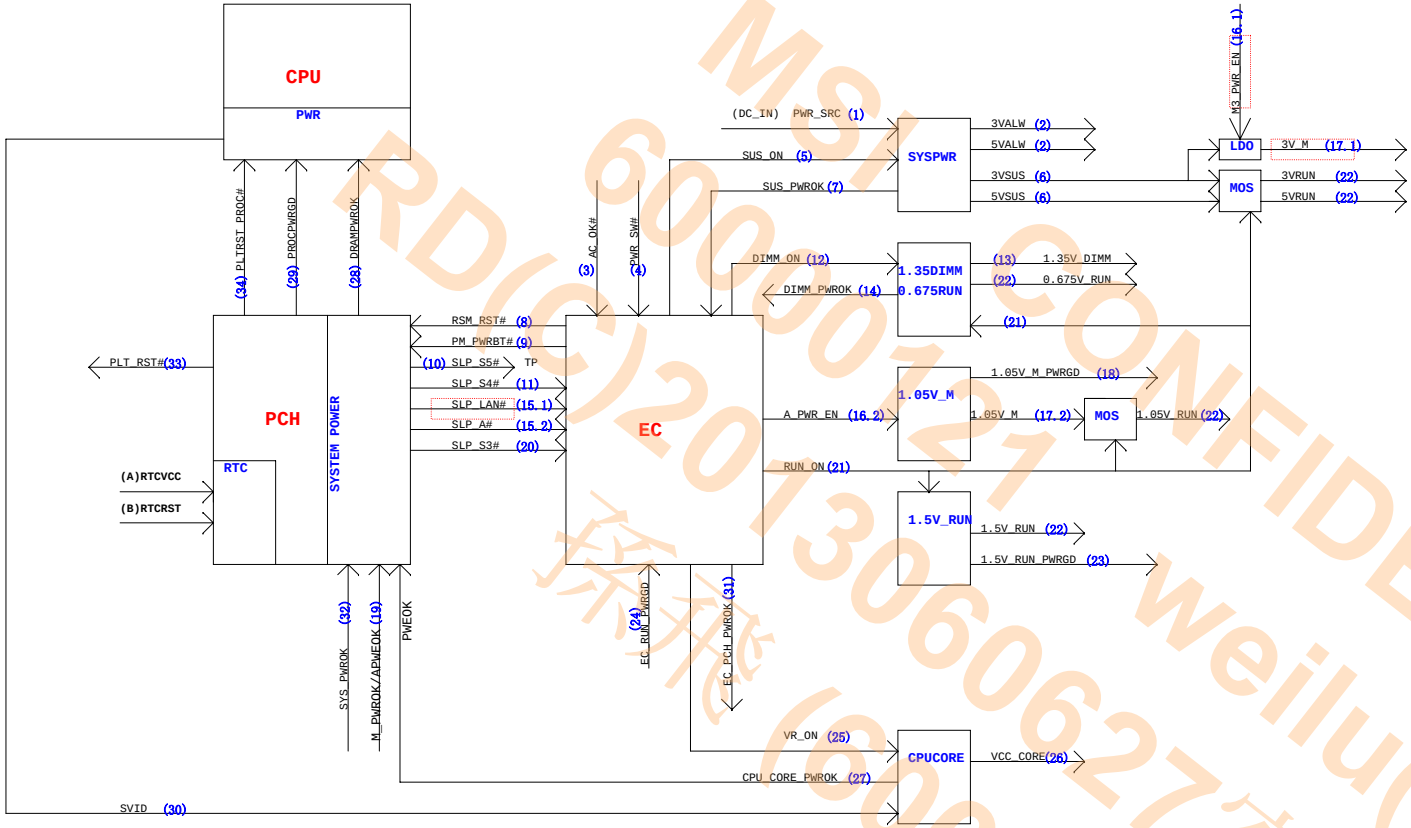
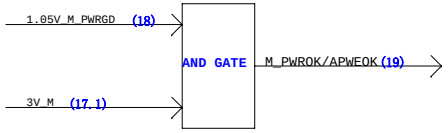
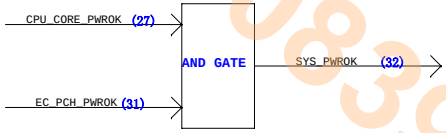
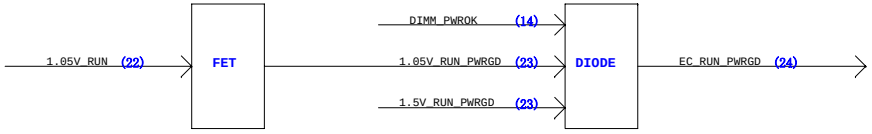
# Power Sequence

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|---|---|---|---|
| Title | <Title> | | |
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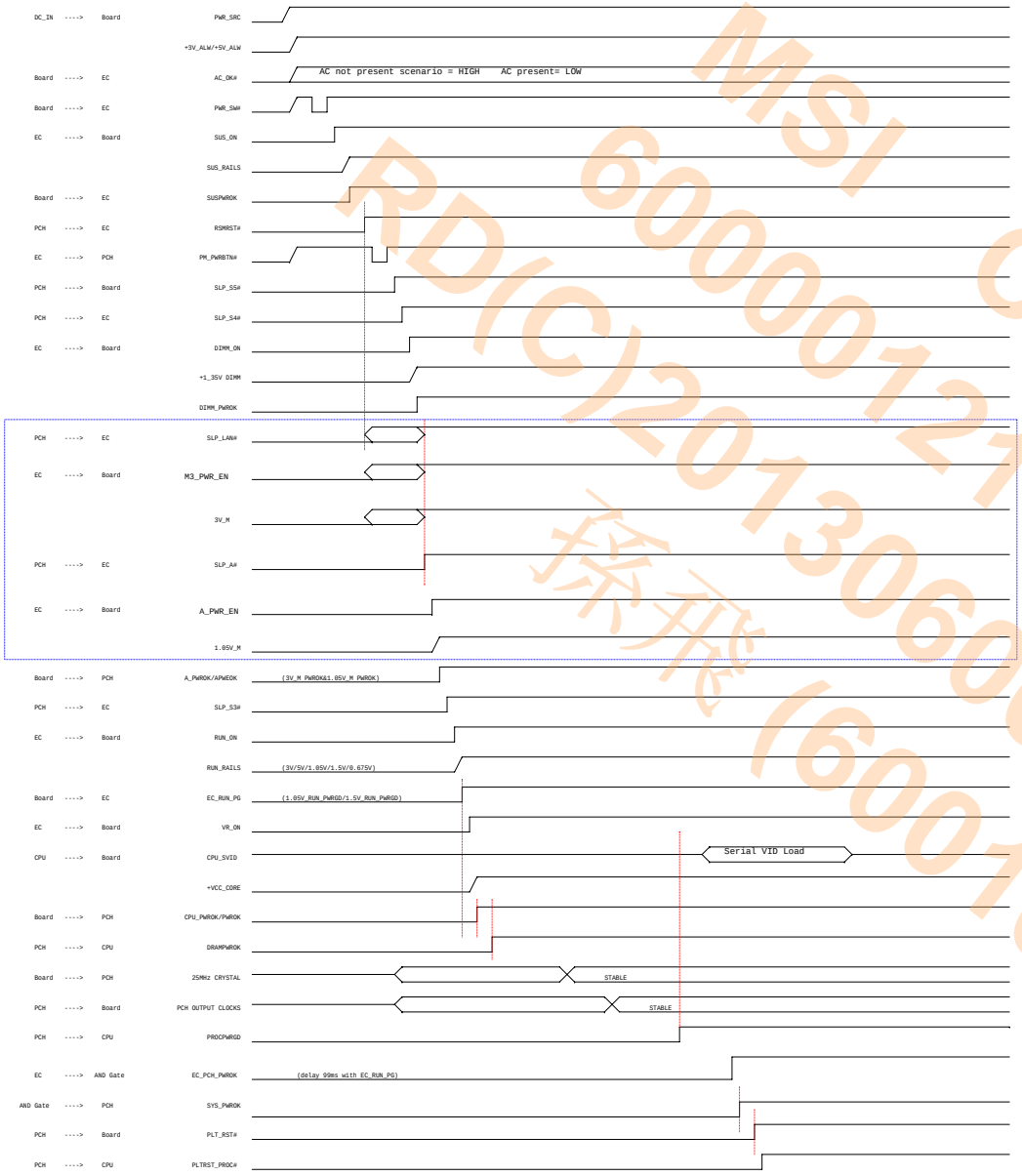
# POWER ON SEQUENCE FOR AC MODE




| | | |
|---|---|---|
| Title | <Title> | |
| Size: Custom | Document Number: MS-16GD | Rev: 0B |
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