

Model Name : H410M H

Rev 1.1

SHEET

TITLE

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|----|----------------------------|
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| 02 | BOM & PCB MODIFY HISTORY |
| 03 | BLOCK DIAGRAM |
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| 05 | CPU_LGA1151-B-DDR4 |
| 06 | CPU_LGA1151-C |
| 07 | CPU_LGA1150-D |
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| 09 | DDR4 CHANNEL B |
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| 12 | PCH_MISC |
| 13 | PCH SATA,PCIE,SATA_EXPRESS |
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SHEET

TITLE

| | |
|----|----------------------------|
| 29 | ISL95866 PWM-IRON |
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| 39 | KB_MS |
| 40 | DVI CONN |
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| 42 | RTD2168 - DP to VGA - Conn |
| 43 | REALTEK 8111G |
| 44 | USB_LAN CONNECTOR-81118 |
| 45 | Realtek ALC887 |
| 46 | REAR AUDIO JACK |
| 47 | ADUIO LED |
| 48 | R_USB30_1 |
| 49 | R_USB30_2 |
| 50 | HDMI (MASK) |
| 51 | Redriver-R_USB31 (NA) |
| 52 | F_USB30 |
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| 55 | COM, TPM |
| 56 | EMI-ESD |
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Gigabyte Technology

| | | |
|-------------|-----------------------------|---------------|
| Title | | |
| Cover Sheet | | |
| Size | Document Number | Rev |
| Custom | H410M H | 1.1 |
| Date: | Thursday, November 12, 2020 | Sheet 1 of 56 |

Model Name : H410M H

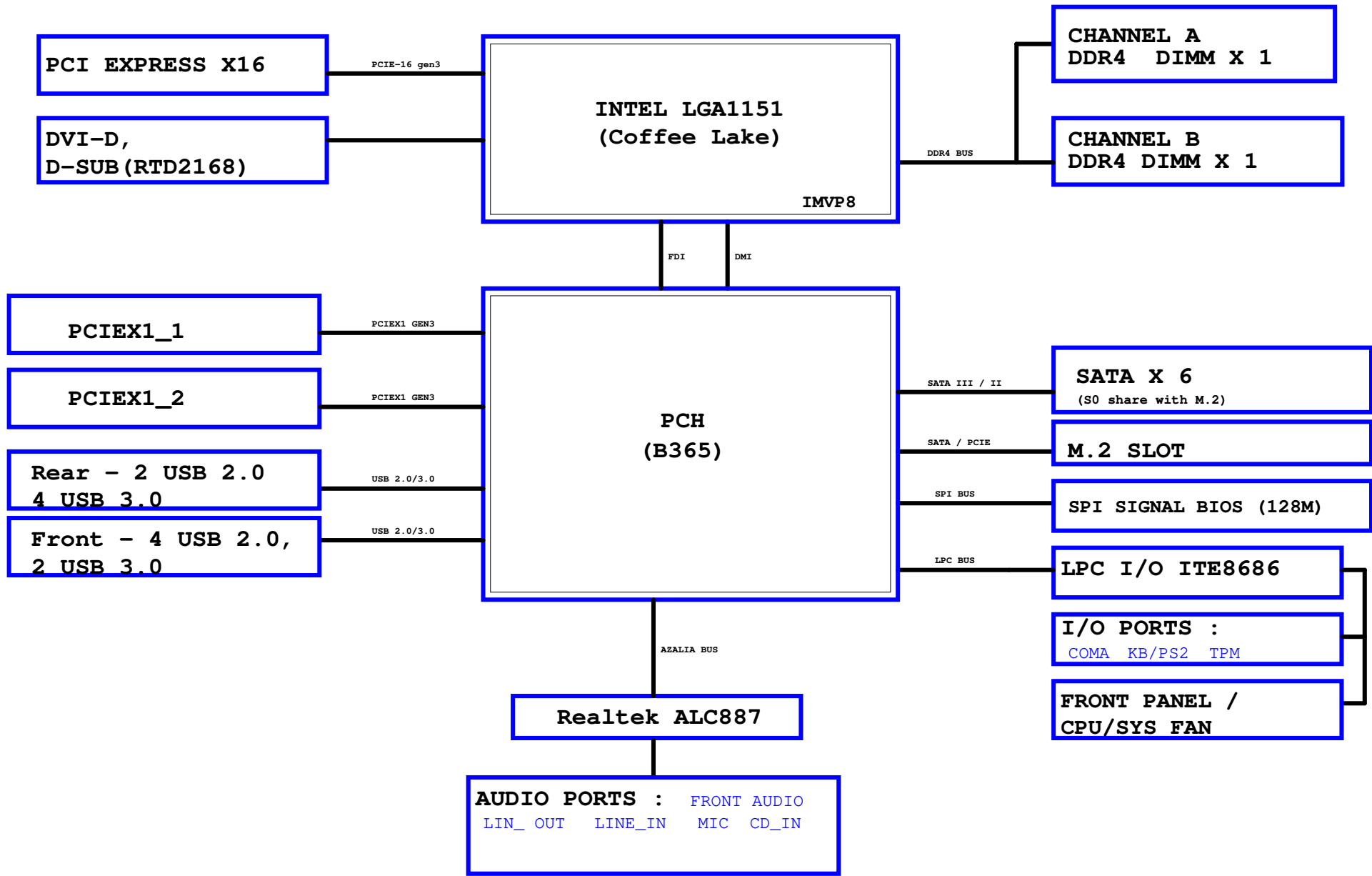
Component value change history

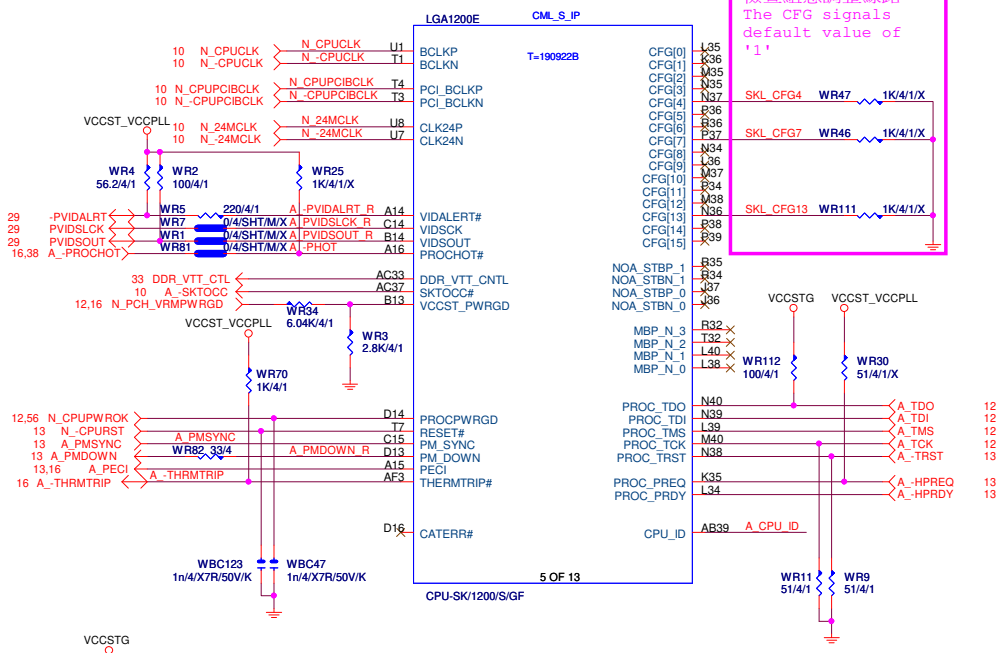
| Data | Change Item | Reason |
|------------|--|------------------|
| 2018/11/08 | NEW BOM | 9MB365M2V-00-01 |
| 2018/12/19 | 1. PCH 料號10HB1-03B365-10R 2. Remove NR83 for漏電VCC3 3. Remove BIOS socket 4. 42A, 60A, 80A改為42M, 60M, 80M 5. DCQ1, DDQ1, NPQ2, NPQ1, Q30 改為10IF9-070606-01R, 10IF9-070703-01R 6. MAU3改SY8063??? 7. Add EMIC3 0.1u/4 | 9MB365M2V-00-10A |
| | | |

Circuit or PCB layout change

| DATE | Change Item | Reason |
|------------|---|----------|
| 2018/11/07 | 1.由B360M D2V Rev 1.0 來修改 2.PCH from B360 change to B365 (PCH Copy H110M-S2 V2 Rev 0.1) 3.Add Net N_GPPC_G6, 接在NRN4, 如果要單獨一個電阻請告知 4.M.2M PCIE lane 由PCIE21~PCIE24改為PCIE9~PCIE12 Remove M.2M switch 5.M2M_32G rename to M2M | Rev 0.1 |
| 2018/12/19 | 1. DDPB跟DDPC Clock/Data對調 2. M2M 孔位改*M 3. FPD2, FPQ5改正面 4. Add EMIC3 close NR47 | Rev 1.0 |
| 2020/03/19 | 1.SPI_TPM footprint change to TPM2X6_CUT3-Z490_I 2.NRN12 pin8 remove | Rev 1.01 |
| 2020/11/16 | 1.AUDIO ALC887 Change to ALC897 | Rev 1.1 |
| | | |

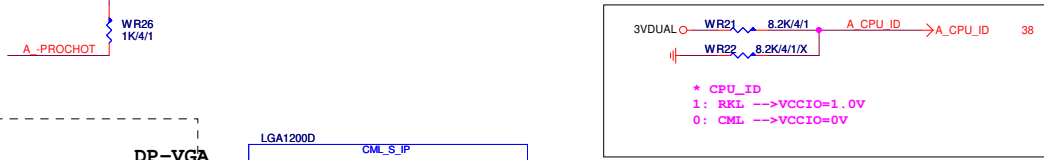
BLOCK DIAGRAM



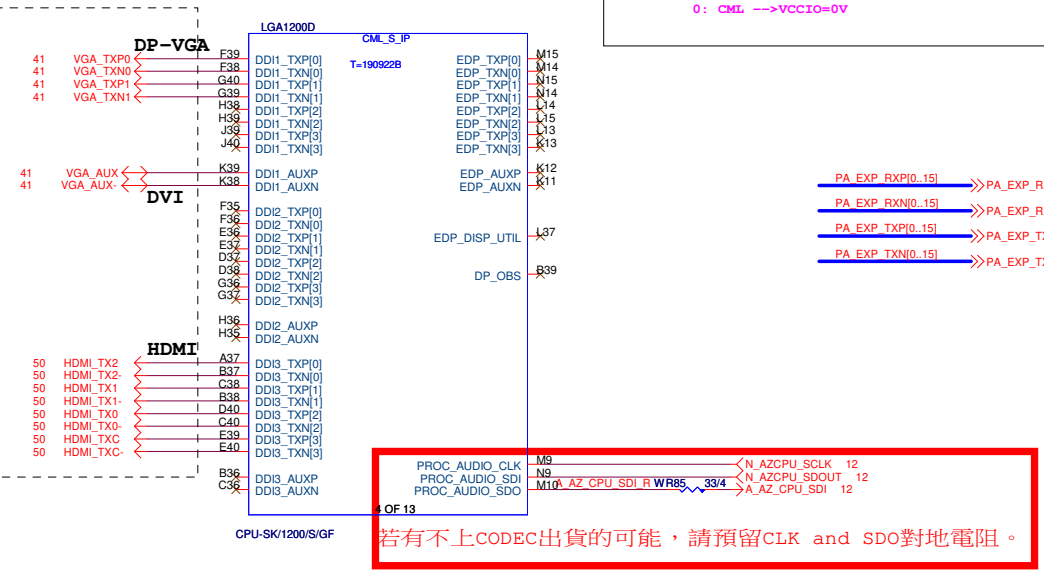


檢查組態調整線路
The CFG signals
default value of
'1'

CFG[4]: 0=eDP enable / 1=eDP disable
CFG[7]: 1=PEG Train immediately following RESET
0=PEG Wait for BIOS
CFG[13]: 1=VCCSA Fixed Mode / 0=SVID Mode

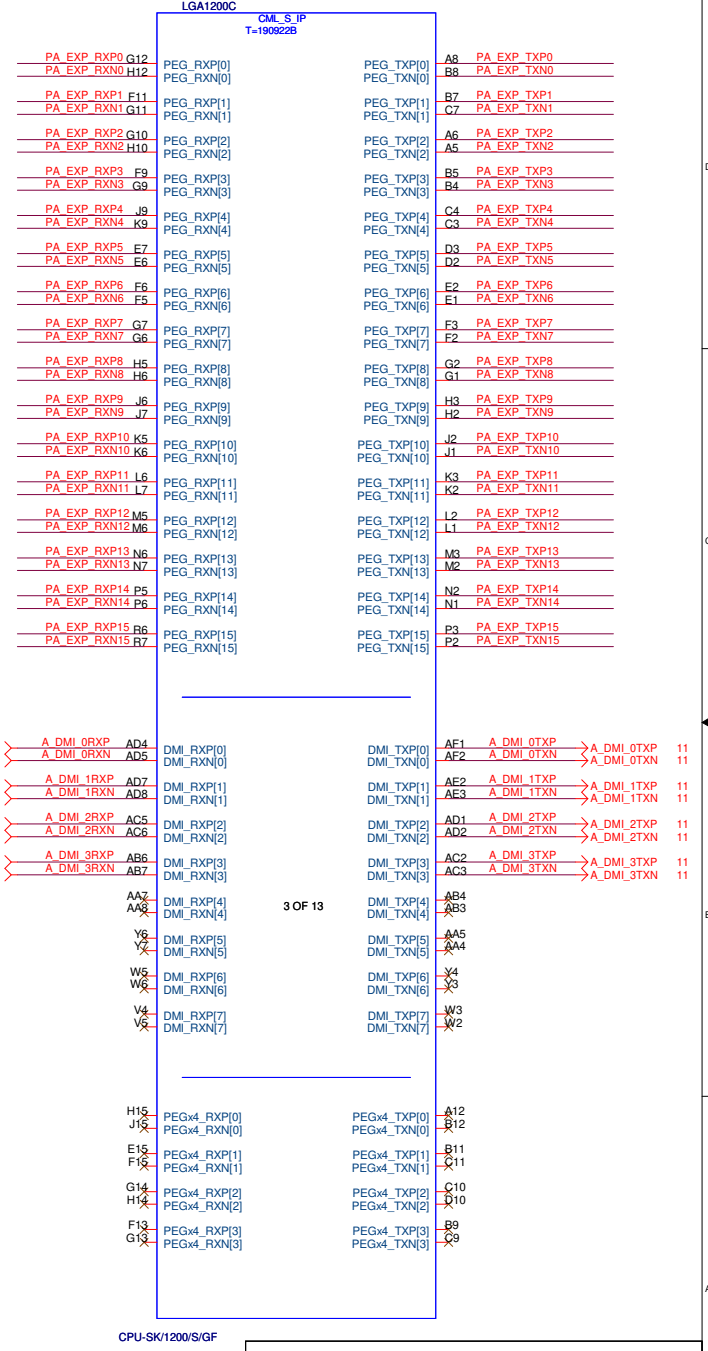


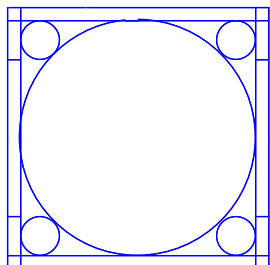
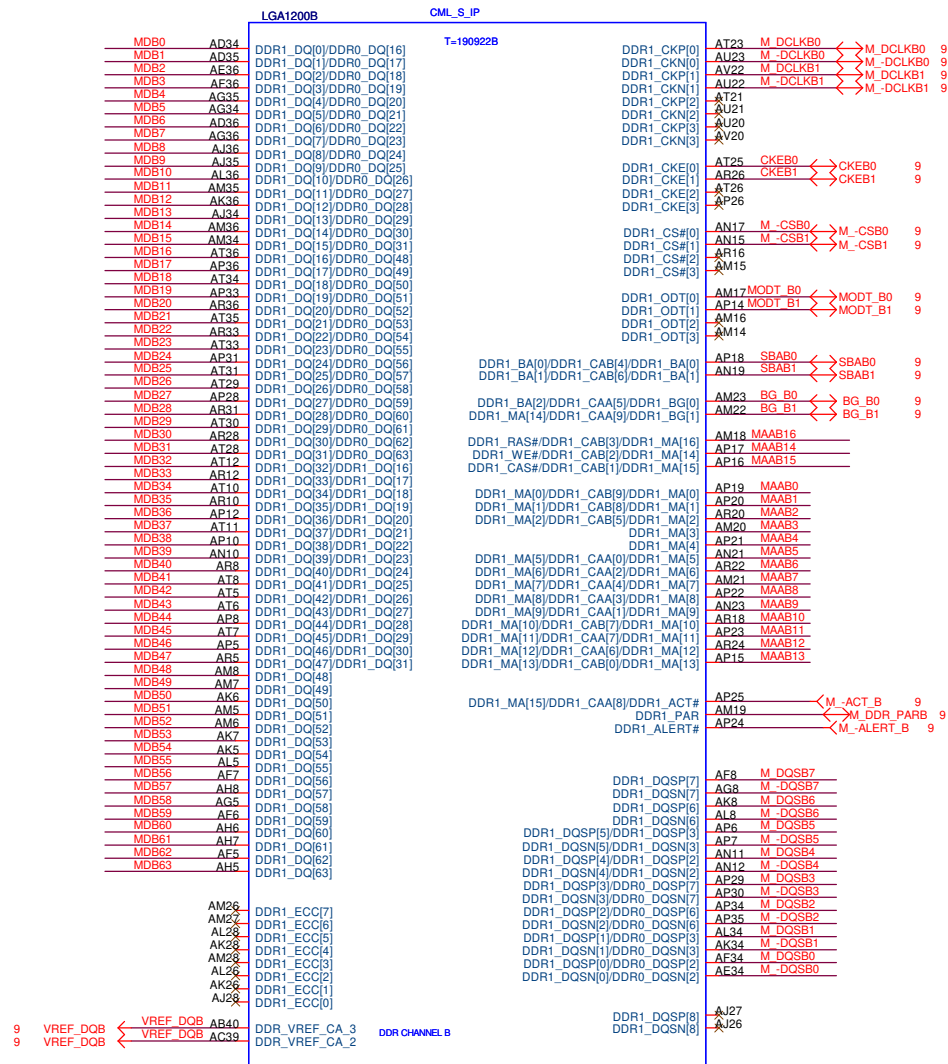
3VDUAL -> WR21 8.2K/4/1 -> A_CPU_ID -> CPU_ID 38
WR22 8.2K/4/1/X
* CPU_ID
1: RKL -->VCCIO=1.0V
0: CML -->VCCIO=0V



PROC_AUDIO_CLK
PROC_AUDIO_SDI
PROC_AUDIO_SDO
M9
M10
M11
N_AZCPU_SCLK 12
N_AZCPU_SDOOUT 12
A_AZ_CPU_SDI R WR85 33/4
A_AZ_CPU_SDI 12

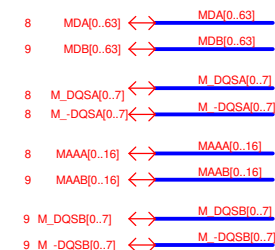
若有不上CODEC出貨的可能，請預留CLK and SDO對地電阻。



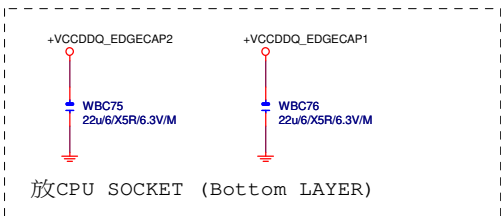
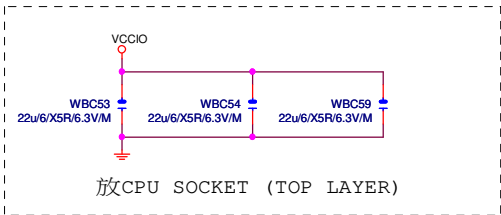
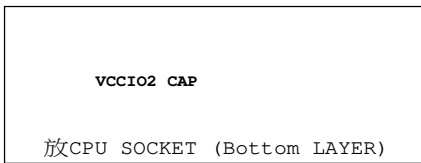
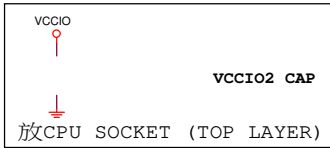
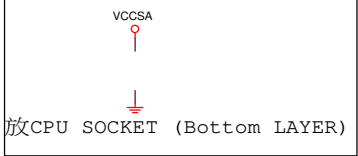
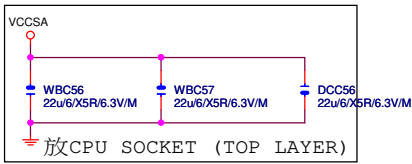


黑色cover

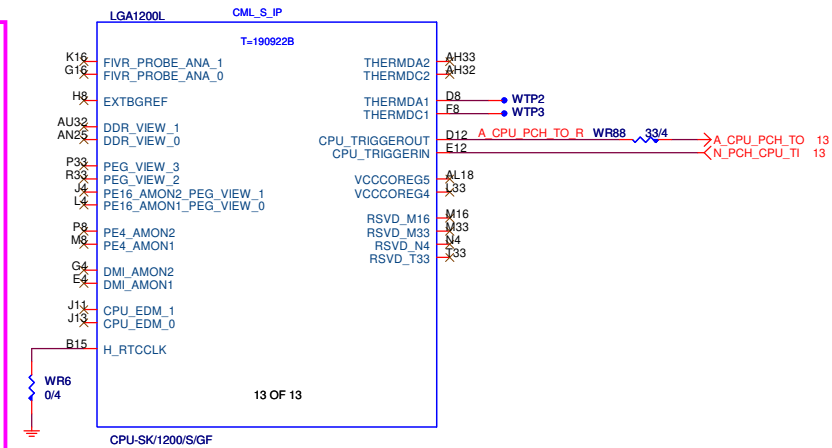
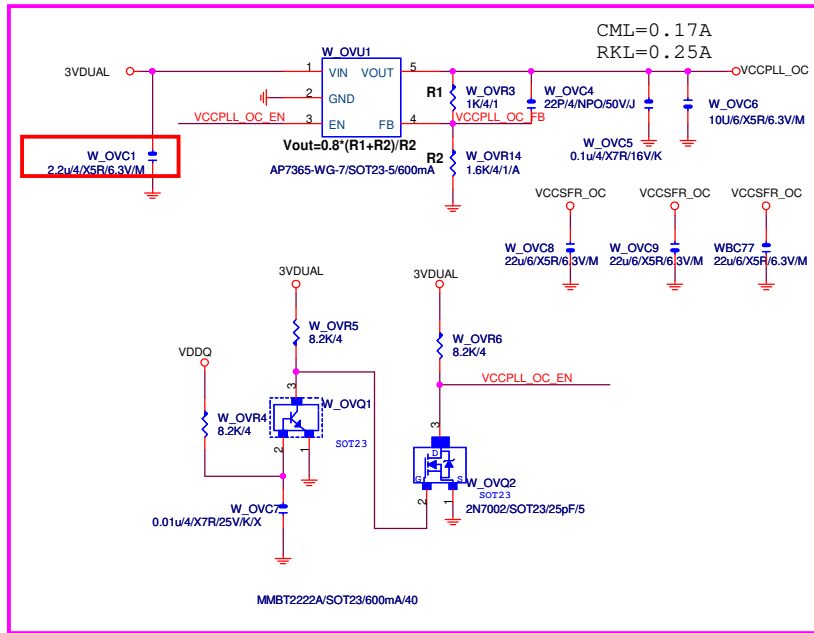
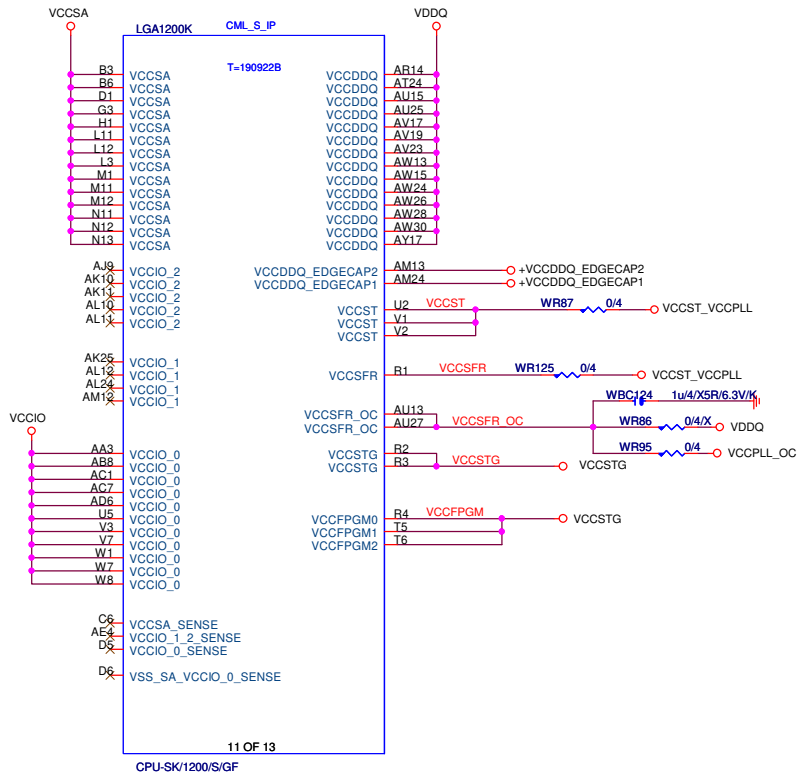
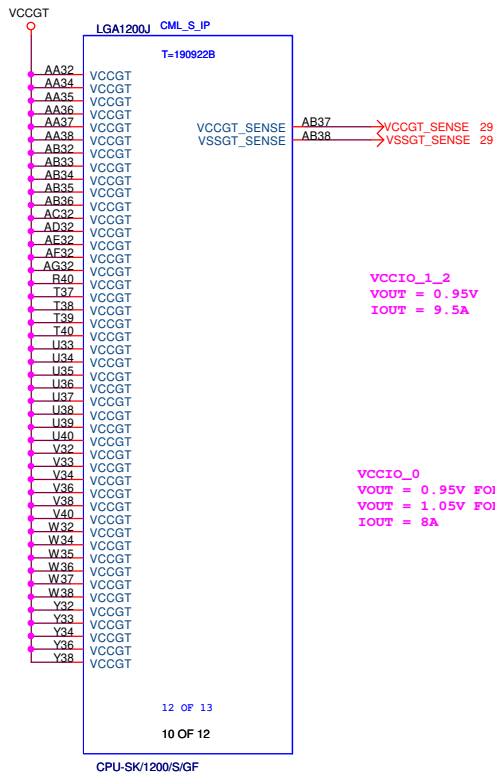
LGA1200
ILM_BP_CR/115X/BKNI/12KRC-SF0001-81R_12KRC-SF0001-82R

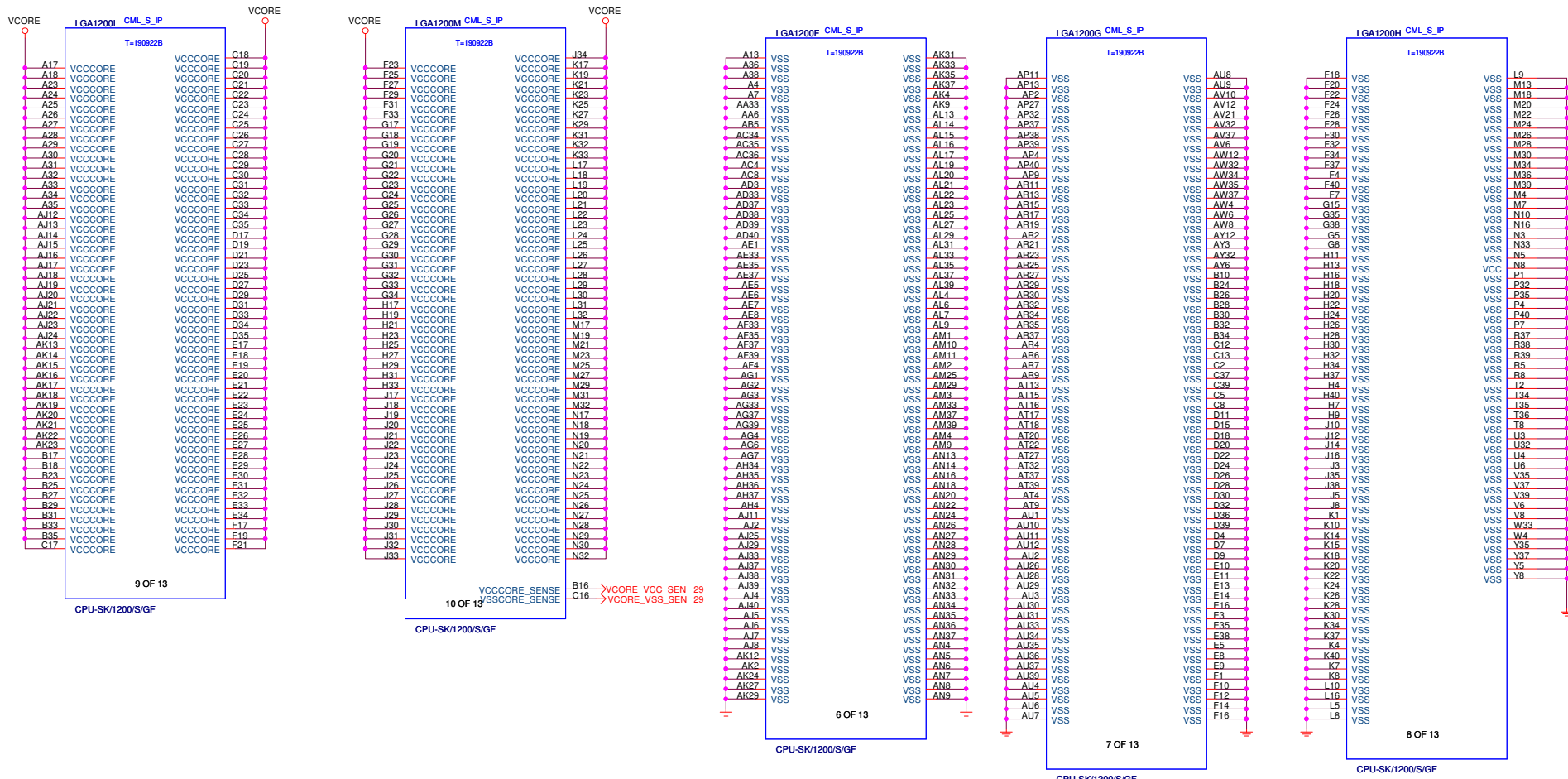


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|---------------------|---------------------------|---------------|
| Gigabyte Technology | | |
| CPU LGA1200-B | | |
| Size | Document Number | Rev |
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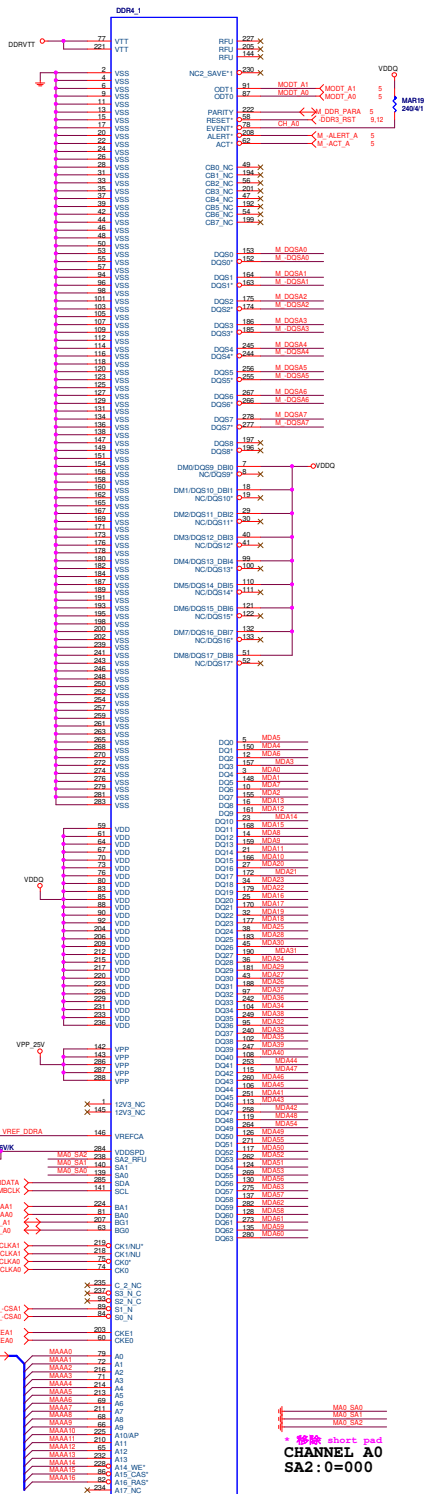
*CML增加,RKL才會用到



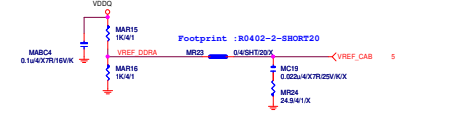


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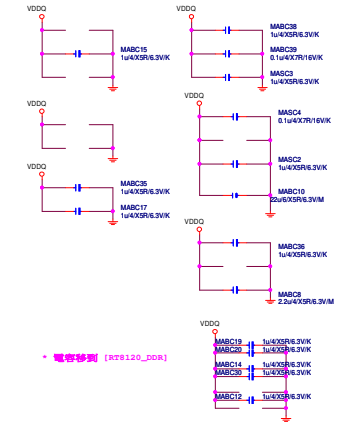
* 刪 Vcore 電容



CHANNEL A0
SA2:0=000

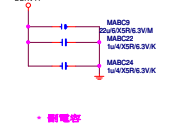


DDR12V Decouple

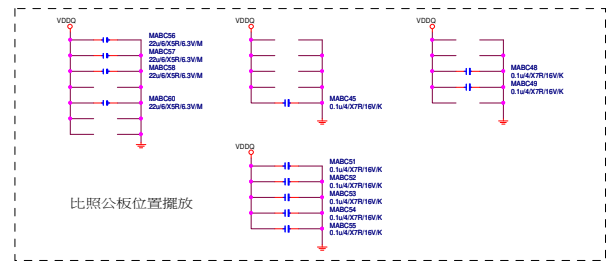


* 電容移動 (R0402_2D0R)

DDRVT Decouple

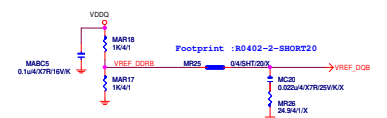
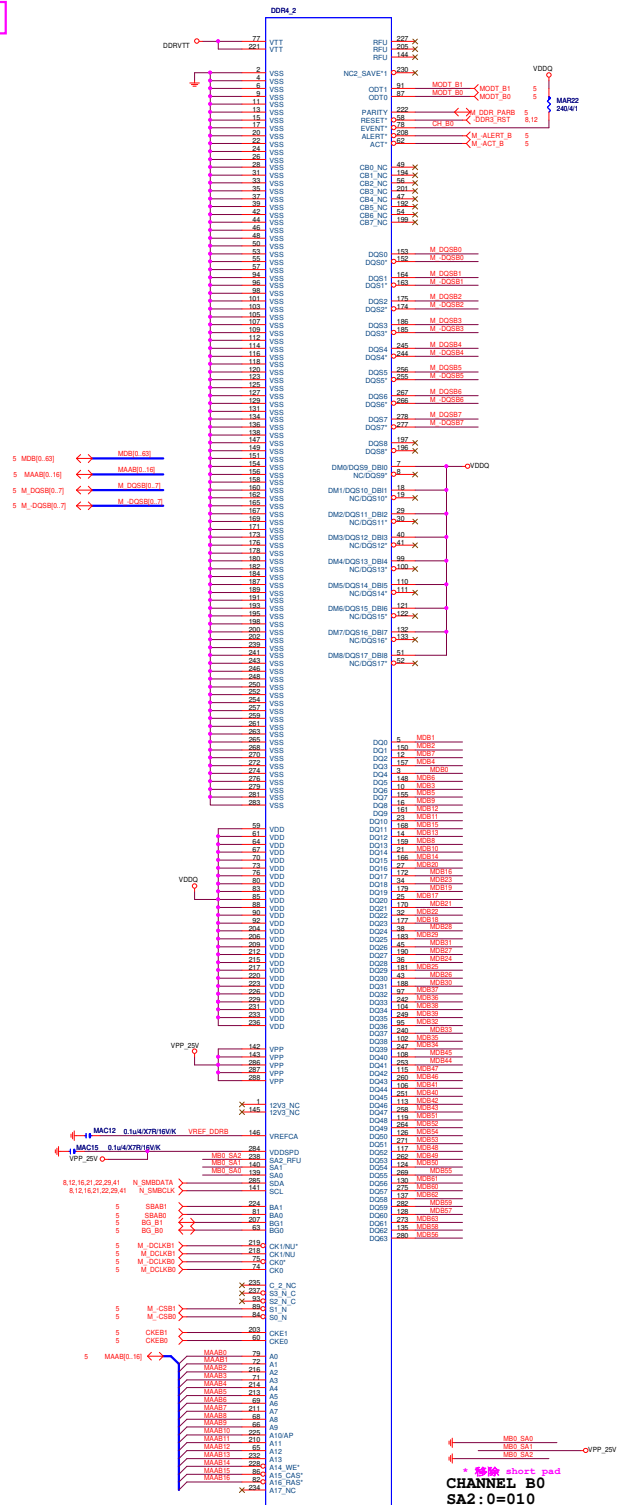


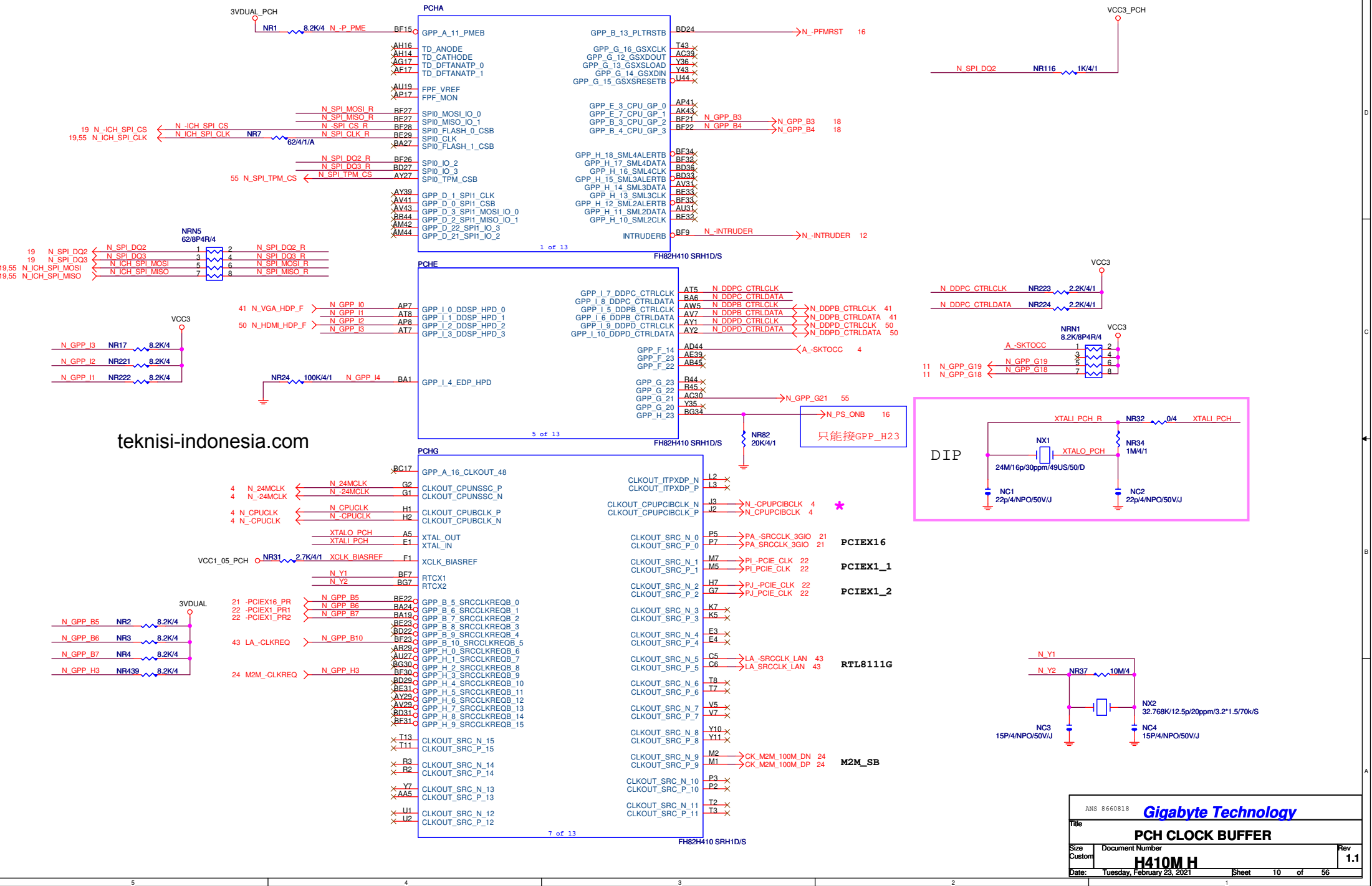
* 電容



比照公板位置擺放

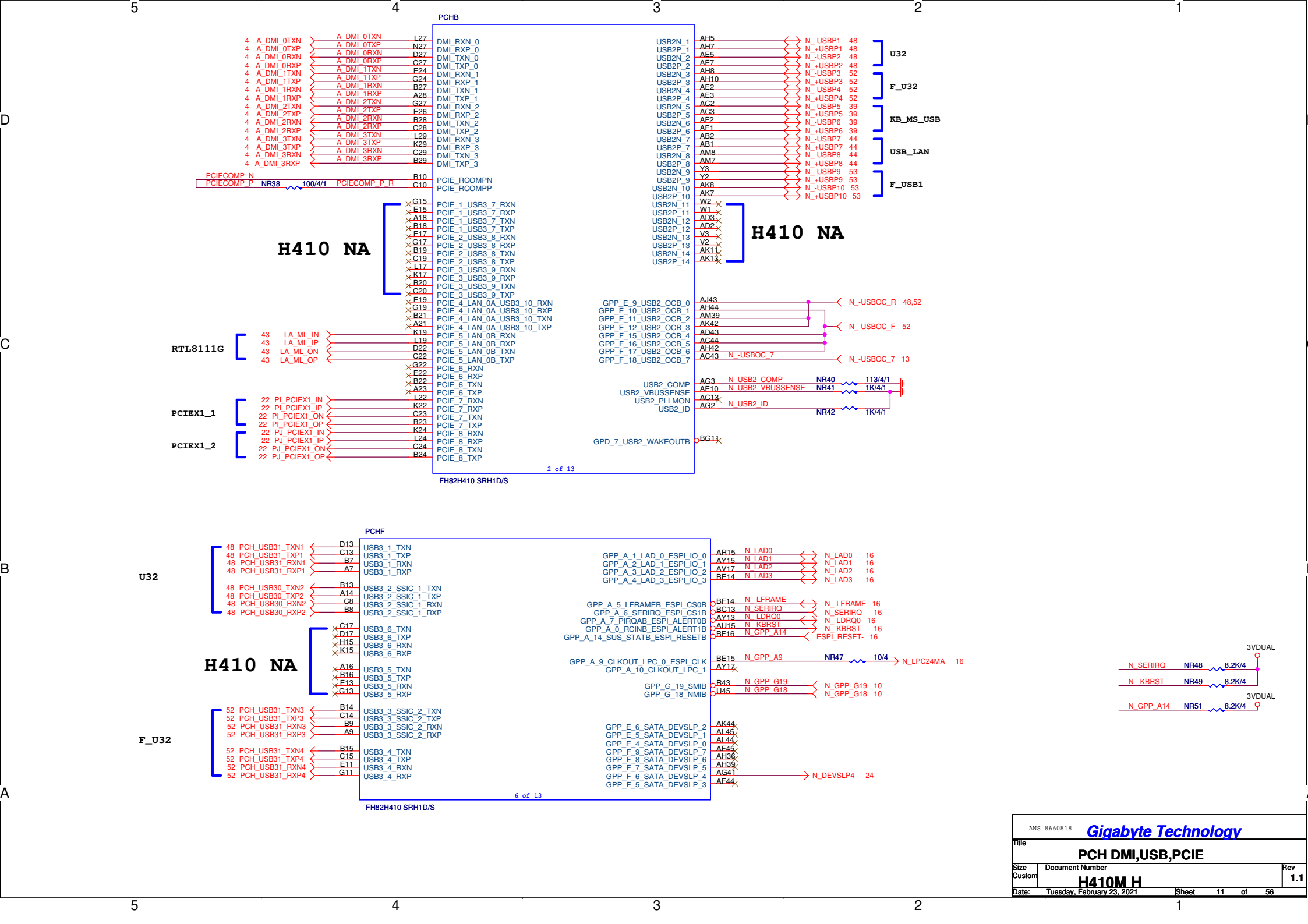
| | | |
|---------------------|-----------------|-----|
| Gigabyte Technology | | |
| File | DDR4 CHANNEL A | |
| Doc | Document Number | Rev |
| Part | H410M H | 1.1 |

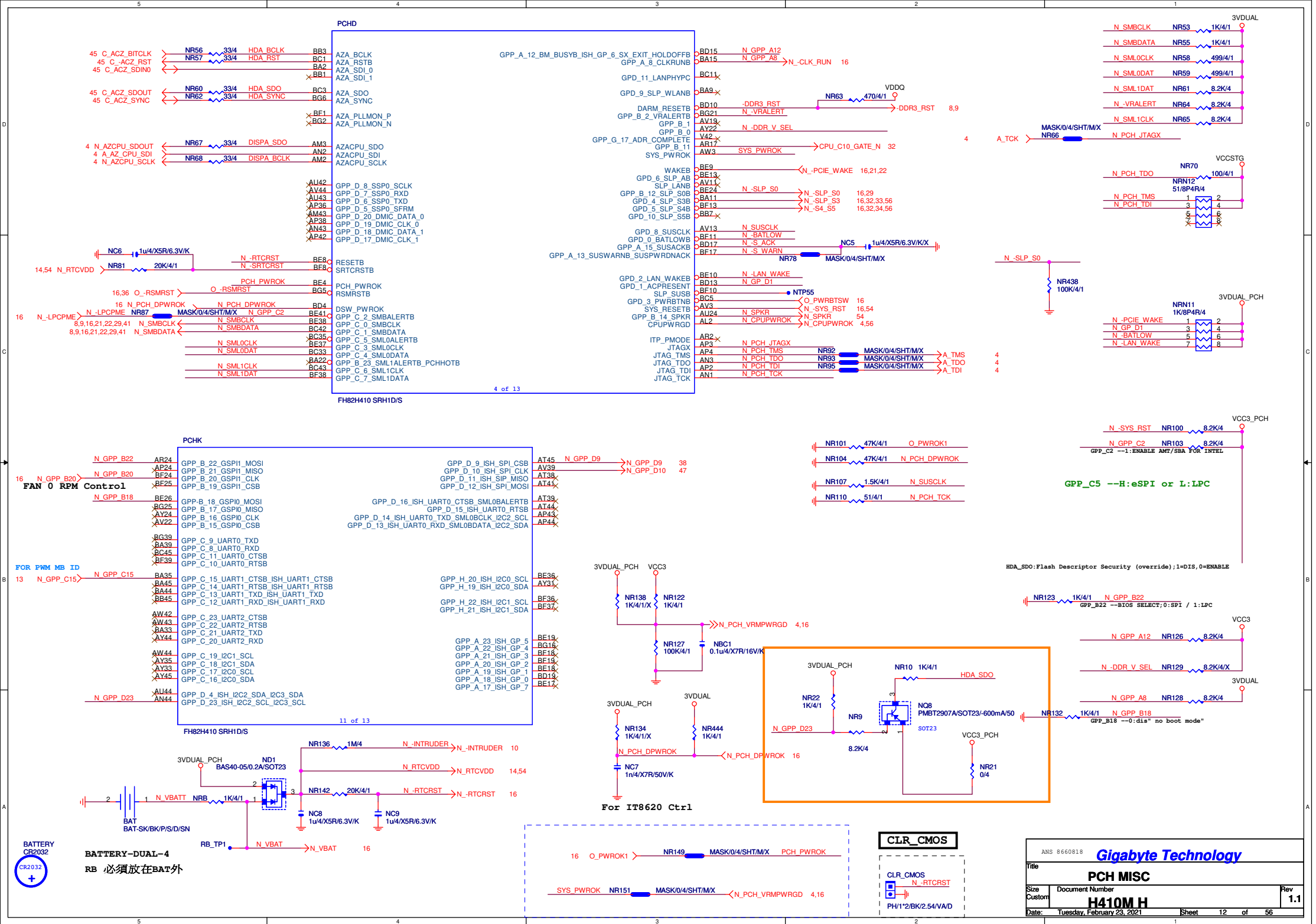


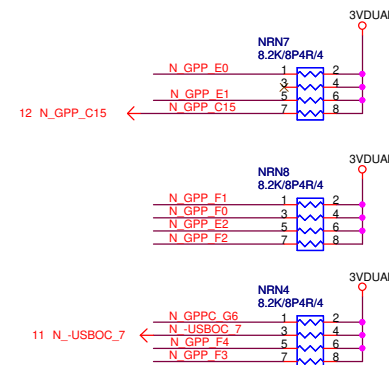
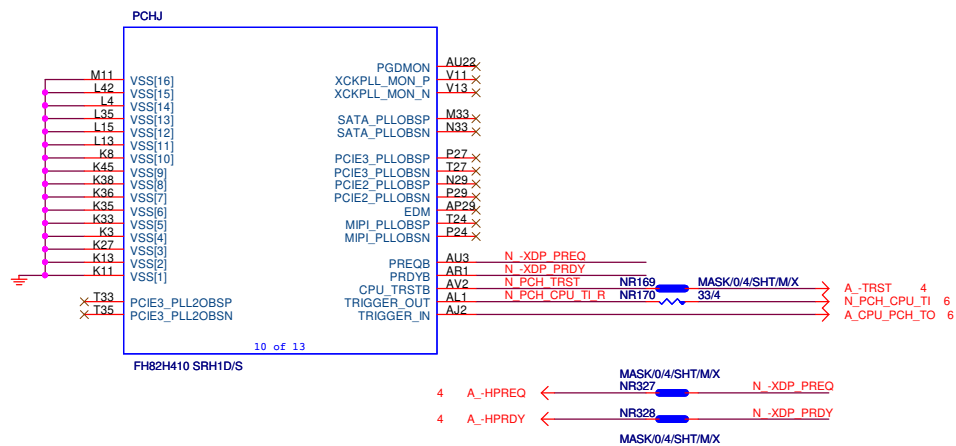
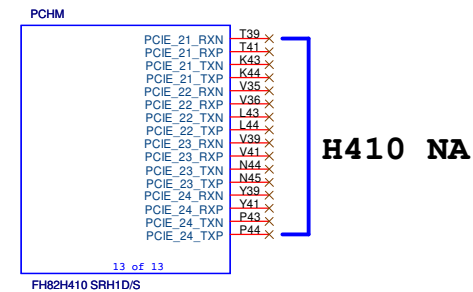
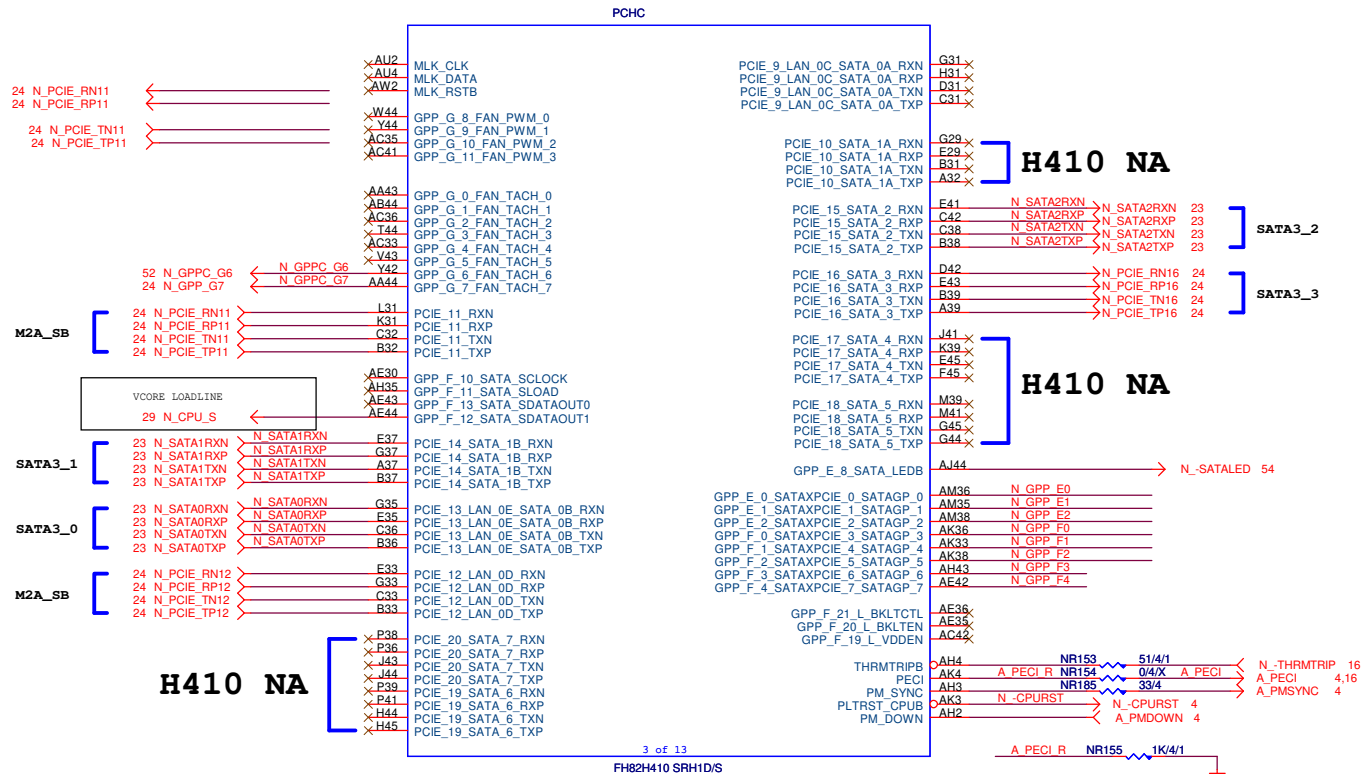


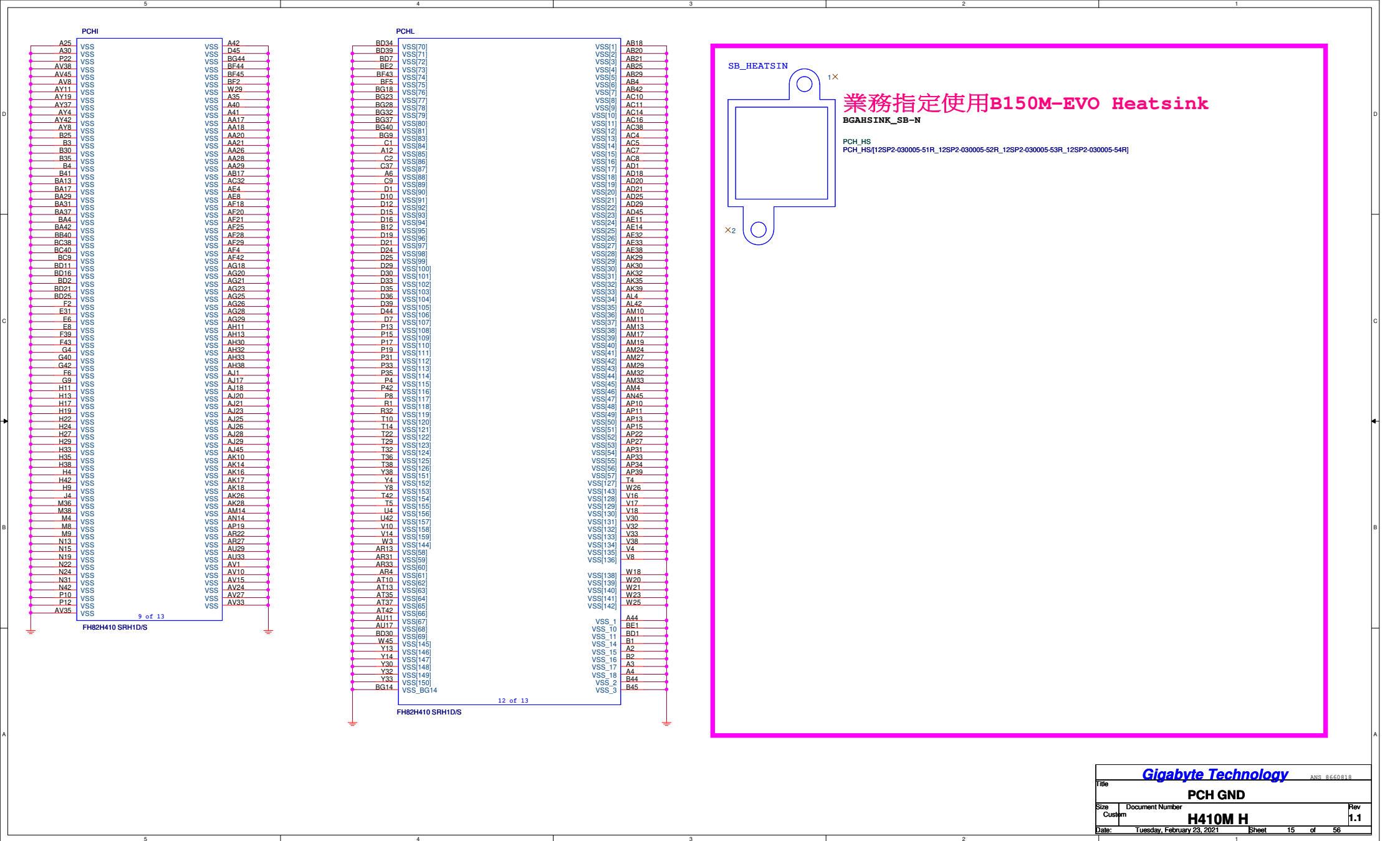
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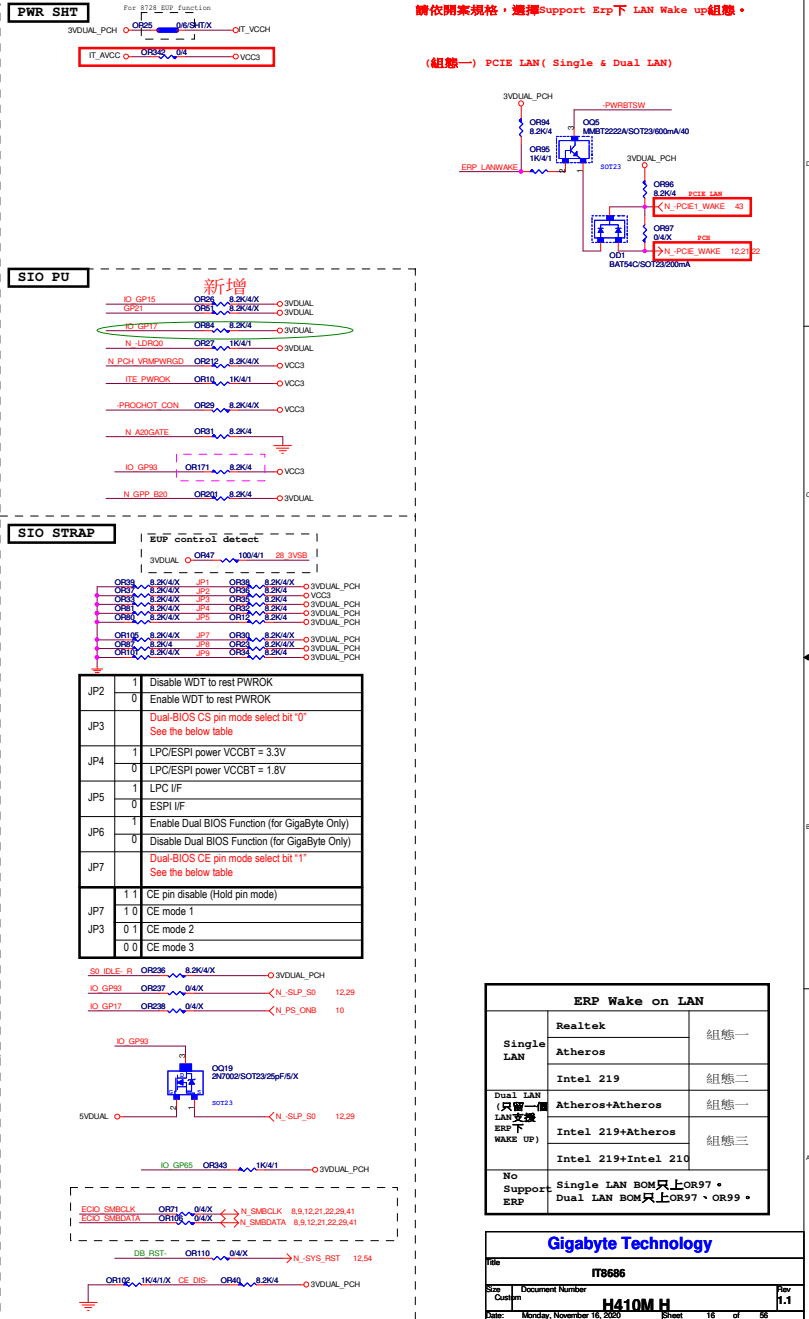
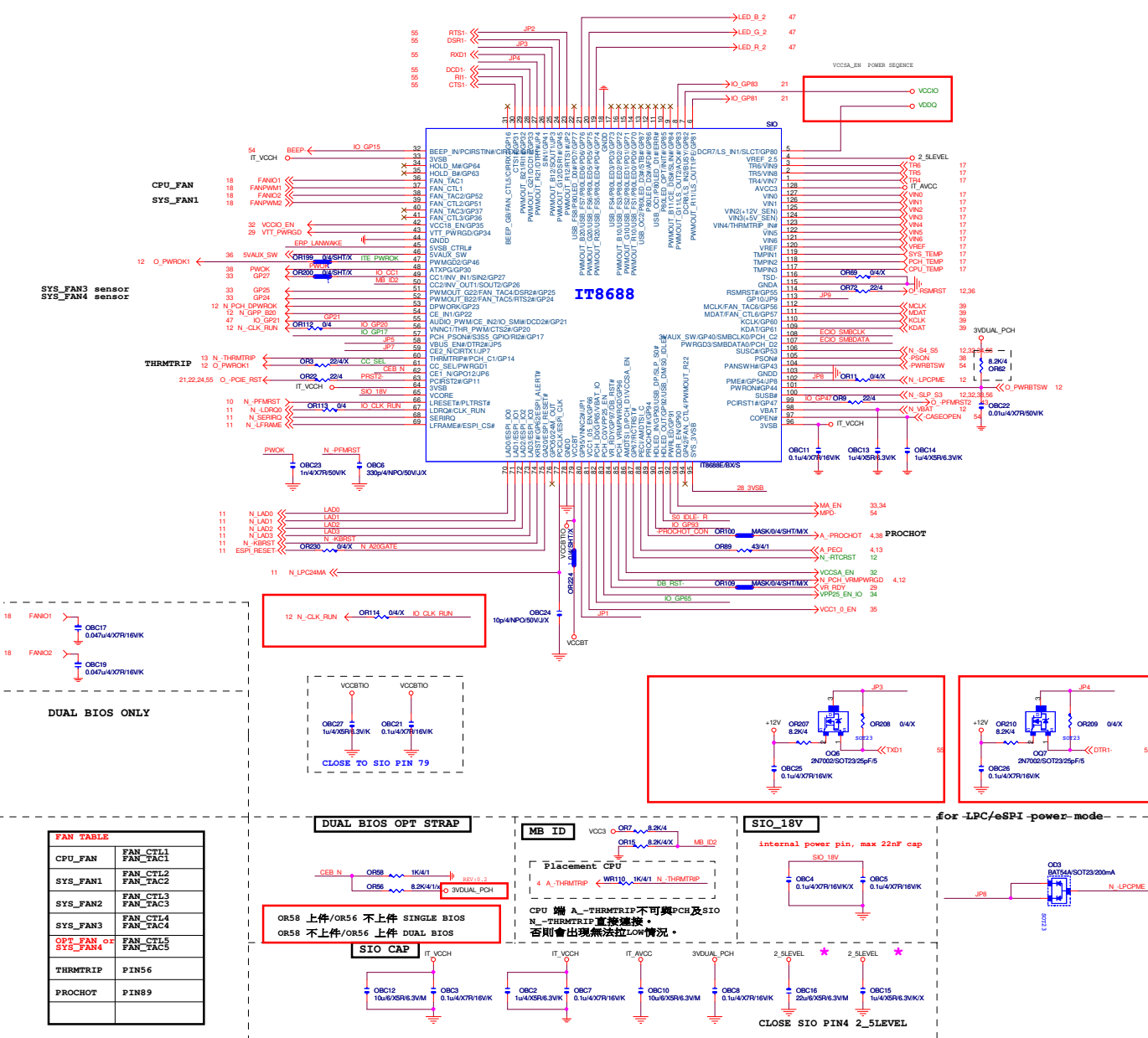
| | | | |
|-------------|----------------------------|---------------------|----------|
| ANS 8660818 | | Gigabyte Technology | |
| Title | | PCH CLOCK BUFFER | |
| Size | Document Number | Rev | 1.1 |
| Custom | H410M H | | |
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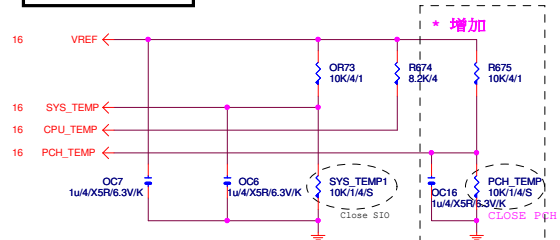




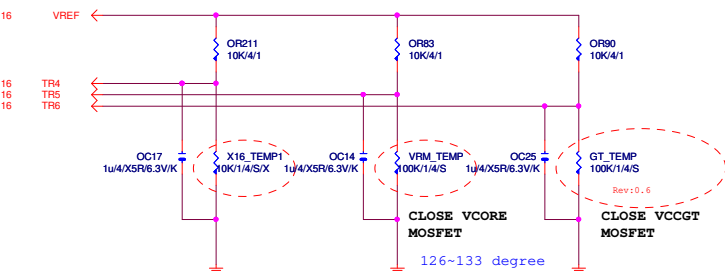




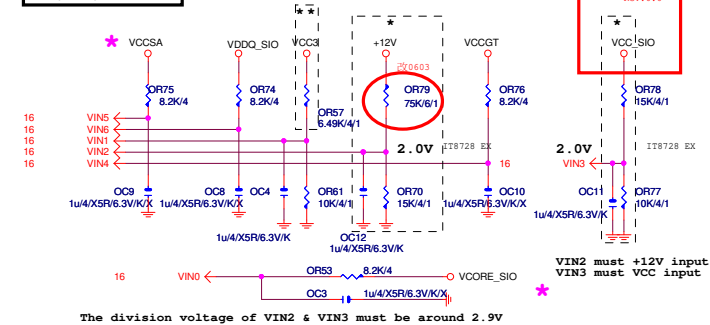
TEMP H/W MONITOR



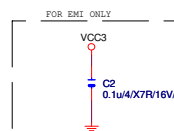
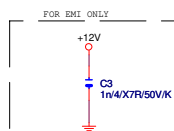
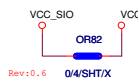
低階機種: 3個FAN時使用



VOLTAGE-- H/W MONITOR



(靠近ATX CONNECTOR)



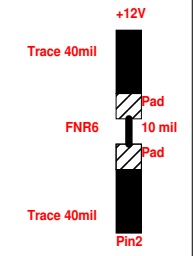
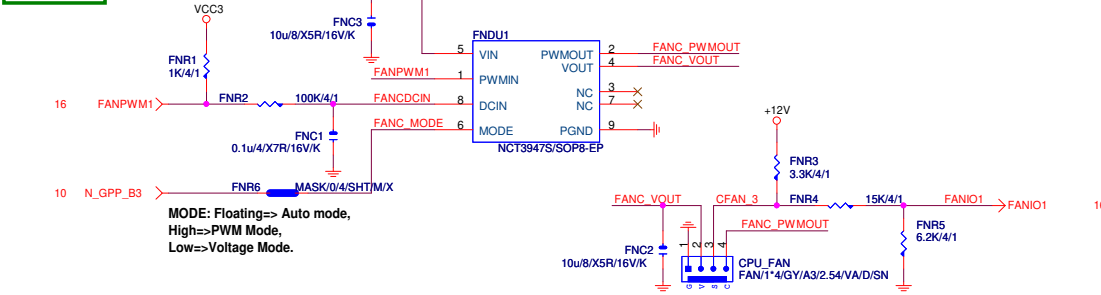
★Update 2015-04.24

Gigabyte Technology

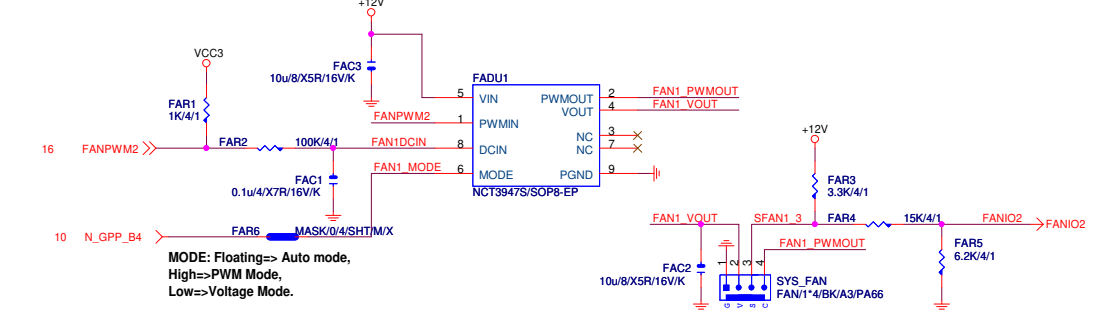
| | | | |
|--------|---------------------------|-------|---------------------|
| Title | | | HWM,KB/MS, FAN CTRL |
| Size | Document Number | Rev | |
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CPU SMART FAN

Rev: 0.8



A. SYSTEM FAN1

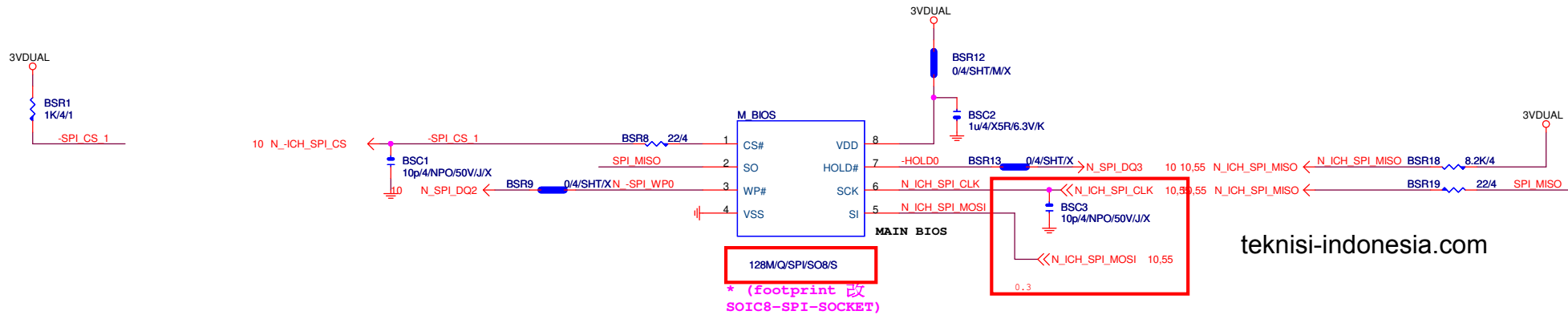


Gigabyte Technology

| | | | |
|----------|---------------------------|-------|----------|
| Title | | | |
| FAN CTRL | | | |
| Size | Document Number | Rev | |
| Custom | H410M H | 1.1 | |
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DUAL BIOS

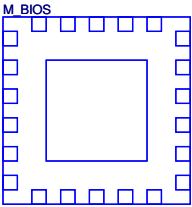
MOSI For DMI RX Termination Voltage



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| BOOT DEVICE | GNT0 | GNT1 |
|----------------|------|------|
| LPC | 0 | 0 |
| PCI | 0 | 1 |
| NAND | 1 | 0 |
| SPI | 1 | 1 |


1 means floating
0 means PD 1K



LCP/G-FL/1.27mm/200MIL/WHITE[10SL2-000008-31R]/X

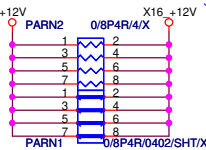
* 試産先上, PVT 移除

CEC_R0.3



| | | | |
|--------------------|-----------------------------|-------|----------|
| Title | | | |
| CEC relate circuit | | | |
| Size | Document Number | Rev | |
| Custom | H410M H | 1.1 | |
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+12 - protect
short-wire test



PA_EXP_RXP[0..15] >> PA_EXP_RXP[0..15] 4
PA_EXP_RXN[0..15] >> PA_EXP_RXN[0..15] 4
PA_EXP_TXP[0..15] >> PA_EXP_TXP[0..15] 4
PA_EXP_TXN[0..15] >> PA_EXP_TXN[0..15] 4

| | | | |
|--------------|-------|------------------|----------------|
| PA_EXP_TXP0 | PAC5 | 0.22u4/X5R6.3V/K | PA_EXP_TXP0_C |
| PA_EXP_TXN0 | PAC4 | 0.22u4/X5R6.3V/K | PA_EXP_TXN0_C |
| PA_EXP_TXP1 | PAC6 | 0.22u4/X5R6.3V/K | PA_EXP_TXP1_C |
| PA_EXP_TXN1 | PAC7 | 0.22u4/X5R6.3V/K | PA_EXP_TXN1_C |
| PA_EXP_TXP2 | PAC8 | 0.22u4/X5R6.3V/K | PA_EXP_TXP2_C |
| PA_EXP_TXN2 | PAC9 | 0.22u4/X5R6.3V/K | PA_EXP_TXN2_C |
| PA_EXP_TXP3 | PAC10 | 0.22u4/X5R6.3V/K | PA_EXP_TXP3_C |
| PA_EXP_TXN3 | PAC11 | 0.22u4/X5R6.3V/K | PA_EXP_TXN3_C |
| PA_EXP_TXP4 | PAC12 | 0.22u4/X5R6.3V/K | PA_EXP_TXP4_C |
| PA_EXP_TXN4 | PAC13 | 0.22u4/X5R6.3V/K | PA_EXP_TXN4_C |
| PA_EXP_TXP5 | PAC14 | 0.22u4/X5R6.3V/K | PA_EXP_TXP5_C |
| PA_EXP_TXN5 | PAC15 | 0.22u4/X5R6.3V/K | PA_EXP_TXN5_C |
| PA_EXP_TXP6 | PAC16 | 0.22u4/X5R6.3V/K | PA_EXP_TXP6_C |
| PA_EXP_TXN6 | PAC17 | 0.22u4/X5R6.3V/K | PA_EXP_TXN6_C |
| PA_EXP_TXP7 | PAC18 | 0.22u4/X5R6.3V/K | PA_EXP_TXP7_C |
| PA_EXP_TXN7 | PAC19 | 0.22u4/X5R6.3V/K | PA_EXP_TXN7_C |
| PA_EXP_TXP8 | PAC21 | 0.22u4/X5R6.3V/K | PA_EXP_TXP8_C |
| PA_EXP_TXN8 | PAC20 | 0.22u4/X5R6.3V/K | PA_EXP_TXN8_C |
| PA_EXP_TXP9 | PAC22 | 0.22u4/X5R6.3V/K | PA_EXP_TXP9_C |
| PA_EXP_TXN9 | PAC23 | 0.22u4/X5R6.3V/K | PA_EXP_TXN9_C |
| PA_EXP_TXP10 | PAC24 | 0.22u4/X5R6.3V/K | PA_EXP_TXP10_C |
| PA_EXP_TXN10 | PAC25 | 0.22u4/X5R6.3V/K | PA_EXP_TXN10_C |
| PA_EXP_TXP11 | PAC26 | 0.22u4/X5R6.3V/K | PA_EXP_TXP11_C |
| PA_EXP_TXN11 | PAC27 | 0.22u4/X5R6.3V/K | PA_EXP_TXN11_C |
| PA_EXP_TXP12 | PAC28 | 0.22u4/X5R6.3V/K | PA_EXP_TXP12_C |
| PA_EXP_TXN12 | PAC29 | 0.22u4/X5R6.3V/K | PA_EXP_TXN12_C |
| PA_EXP_TXP13 | PAC30 | 0.22u4/X5R6.3V/K | PA_EXP_TXP13_C |
| PA_EXP_TXN13 | PAC31 | 0.22u4/X5R6.3V/K | PA_EXP_TXN13_C |
| PA_EXP_TXP14 | PAC32 | 0.22u4/X5R6.3V/K | PA_EXP_TXP14_C |
| PA_EXP_TXN14 | PAC33 | 0.22u4/X5R6.3V/K | PA_EXP_TXN14_C |
| PA_EXP_TXP15 | PAC34 | 0.22u4/X5R6.3V/K | PA_EXP_TXP15_C |
| PA_EXP_TXN15 | PAC35 | 0.22u4/X5R6.3V/K | PA_EXP_TXN15_C |

PCIEX16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

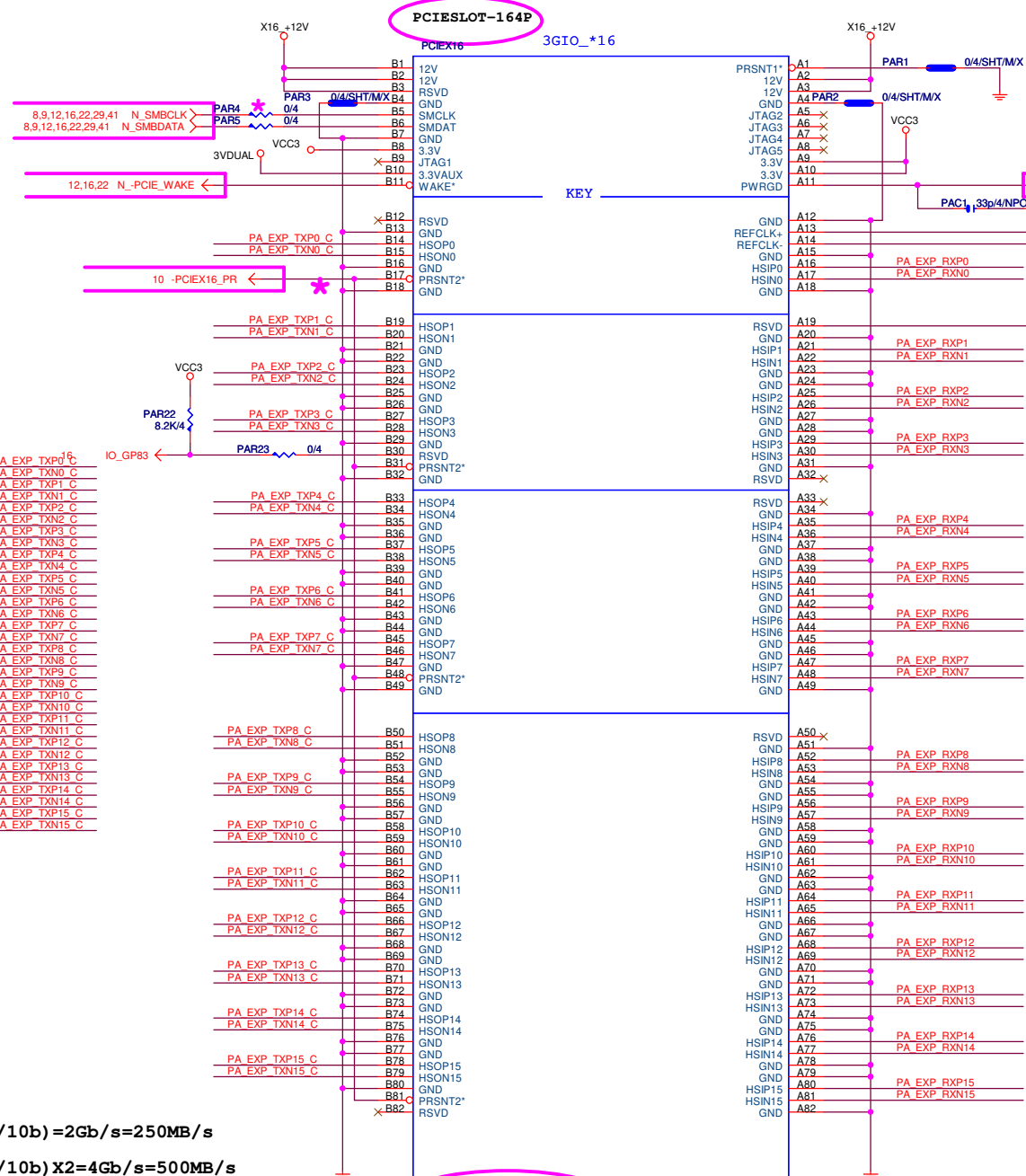
PCE-E X1(單向) BANDWITH=2.5GHz*(8b/10b)=2Gb/s=250MB/s

PCE-E X1(雙向) BANDWITH=2.5GHz*(8b/10b)X2=4Gb/s=500MB/s

PCE-E X16(單向) BANDWITH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

PCE-E X16(雙向) BANDWITH=2.5GHz*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--> 5GHZ

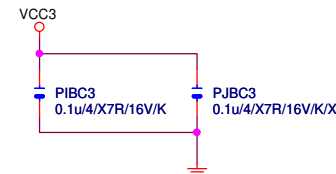
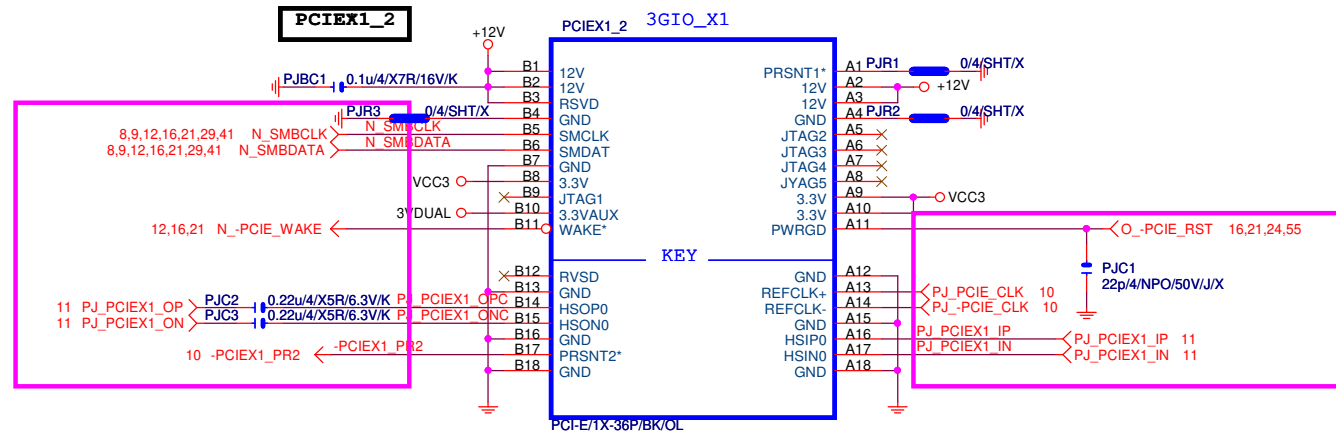
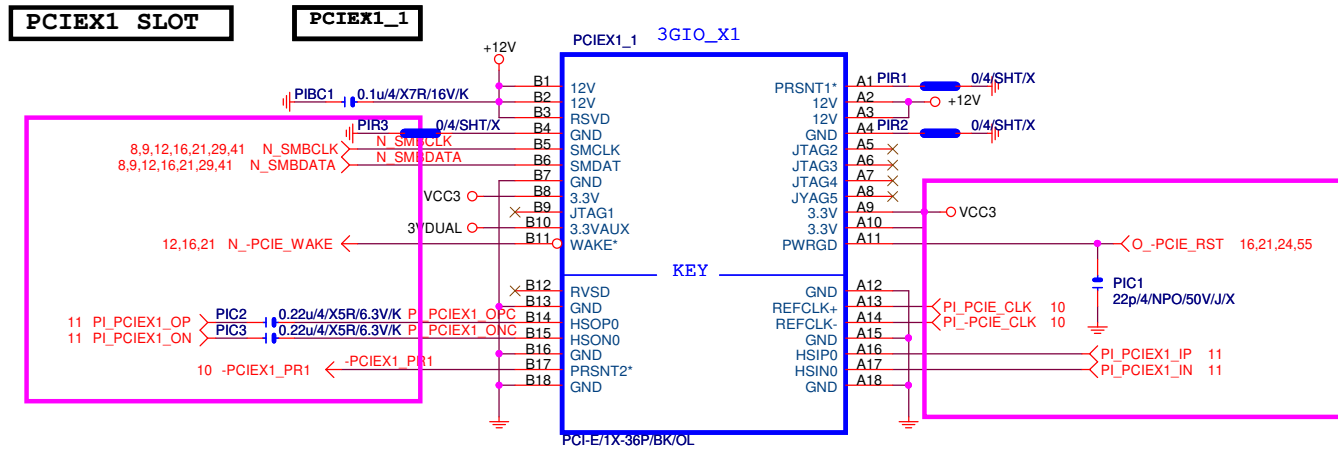


PCI-E/16X-164P/GY/LONG DOUBLE/HK/2

黑色SLOT

Gigabyte Technology

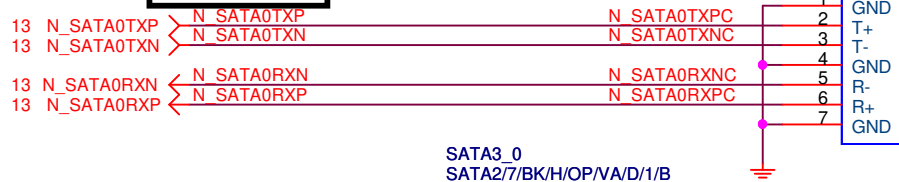
| | | | |
|------------------|---------------------------|-------|----------|
| Title | | | |
| PCI EXPRESS * 16 | | | |
| Size | Document Number | | Rev |
| Custom | H410M H | | 1: |
| Date: | Monday, November 16, 2020 | Sheet | 21 of 56 |



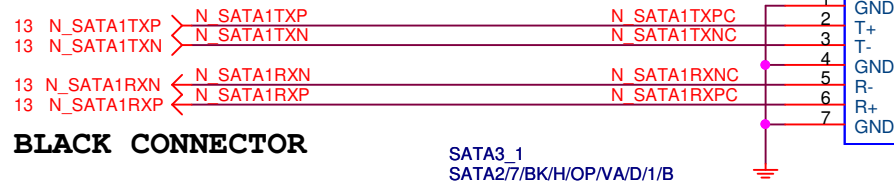
Gigabyte Technology

| | | |
|---------|---------------------------|----------------|
| Title | | |
| PCIE X4 | | |
| Size | Document Number | Rev |
| Custom | H410M H | 1.1 |
| Date: | Monday, November 16, 2020 | Sheet 22 of 56 |

SATA3 0/1



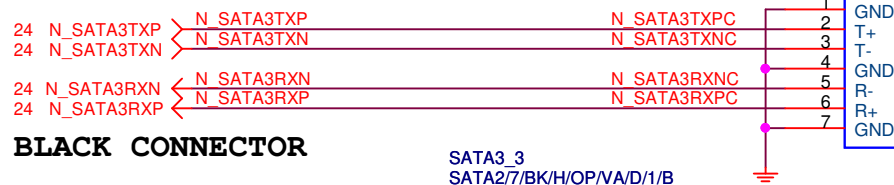
BLACK CONNECTOR



SATA3 2/3



BLACK CONNECTOR



SATA3 4/5

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SATA3_3
SATA2/7/BK/H/OP/VA/D/1/B

Gigabyte Technology

Title

SATA

Size
Custom

Document Number

H410M H

Rev
1.1

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Rev 0.4

M.2 Lane2 from PCH port17

M.2 Lane2 from PCH port16

支援SATA and M.2 function

需與M2_-CLKREQ對應

* Footprint : NGFF-M-75P-8CM-09MM-SMD

* Footprint : HOLE_165NP

舊的Switch,價格低

SATA Conn

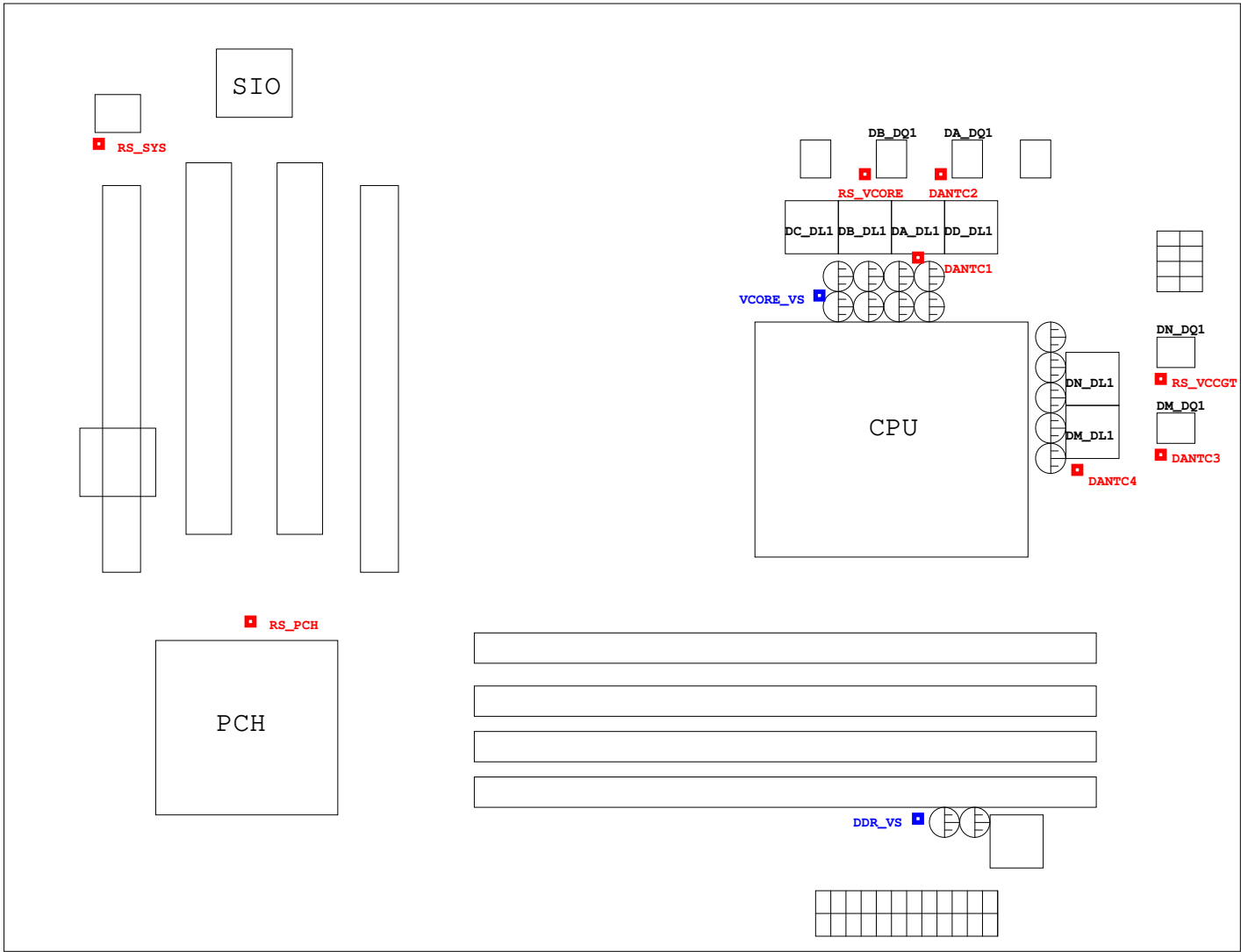
M.2 PCIe Mode

M.2 SATA Mode

| Function | SEL |
|-----------|-----|
| xI--> x0a | L |
| xI--> x0b | H |

Gigabyte Technology

| | | | | | | | |
|--------|---------------------------|--|-------|--------|----|----|--|
| Title | | | | M.2 X4 | | | |
| Size | Document Number | | | Rev | | | |
| Custom | H410M H | | 1. | | | | |
| Date: | Monday, December 07, 2020 | | Sheet | 24 | of | 56 | |



| 熱敏電阻 | 擺放靠近位置 | 走線方式 |
|----------|--------|--------------|
| DANTC1 | DA_DL1 | N/A |
| DANTC2 | DA_DQ1 | Differential |
| DANTC3 | DM_DQ1 | N/A |
| DANTC4 | DM_DL1 | Differential |
| RS_VCORE | DB_DQ1 | N/A |
| RS_VCCGT | DN_DQ1 | N/A |
| RS_PCH | PCH | N/A |
| RS_SYS | CU1 | N/A |

| | | | | | |
|---|---|---|---|---|---|
| | 5 | 4 | 3 | 2 | 1 |
| D | | | | | |
| C | | | | | |
| B | | | | | |
| A | | | | | |

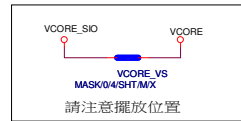
| | | | |
|---------------------|-----------------------------|--|----------------|
| Gigabyte Technology | | | |
| File | | | |
| IT8892E | | | |
| Size | Document Number | | Rev |
| Custom | H410M H | | 1.1 |
| Date: | Thursday, November 12, 2020 | | Sheet 26 of 56 |

Rev 0.1

Gigabyte Technology

| | | | |
|----------------|-----------------------------|-------|----------|
| Title | | | |
| ASM1085 POWER | | | |
| Size Custom | Document Number | | Rev |
| | H410M H | | 1.1 |
| Date: | Thursday, November 12, 2020 | Sheet | 28 of 56 |

REV: 0.1

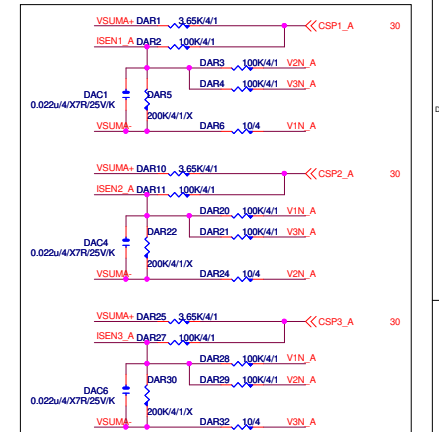
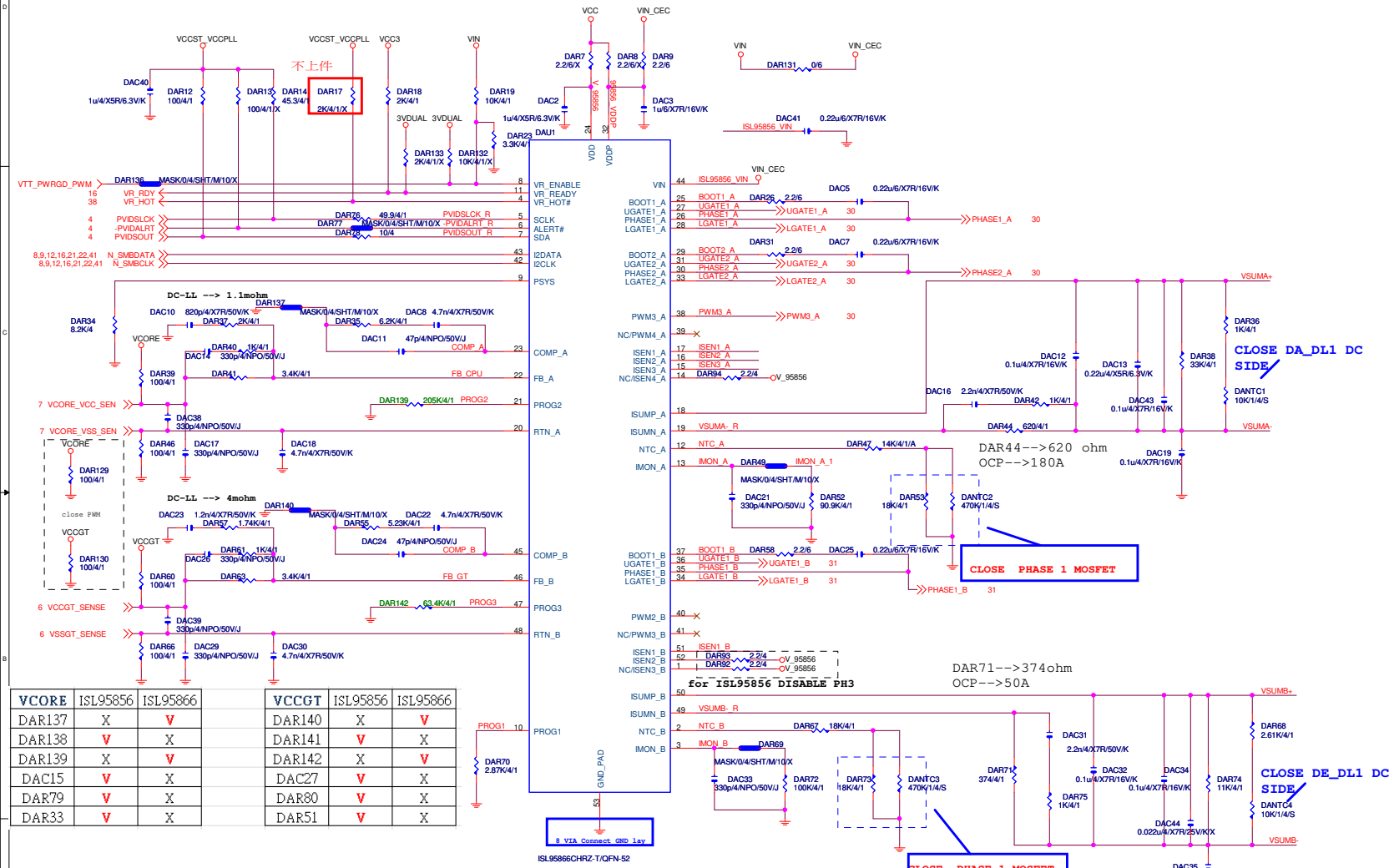
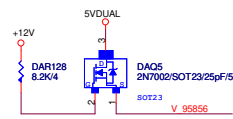


CEC:DAR133.DAR132 上件.DAR18.DAR19.DAR23.DAR131不上件

non CEC:DAR133.DAR132 不上件.DAR18.DAR19.DAR23.上件.

DAR131改short pad

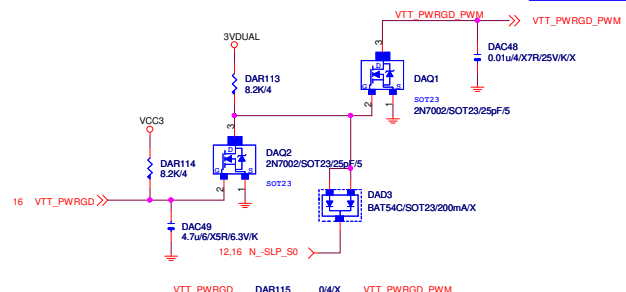
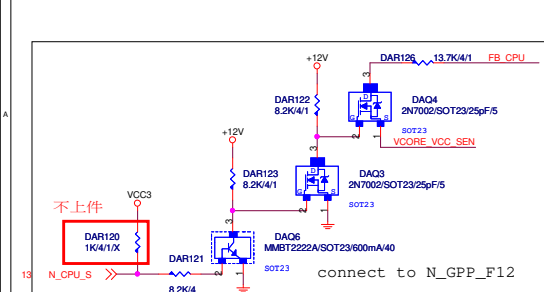
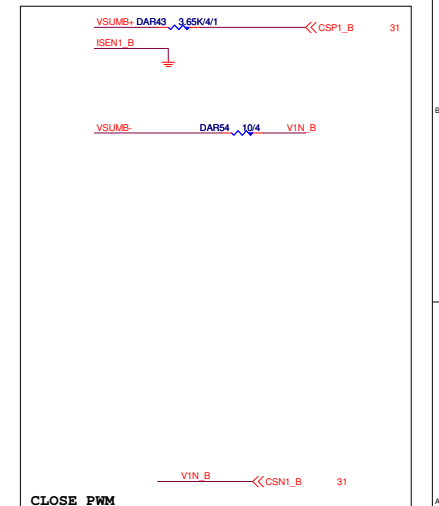
DAR131 short pad footprint:R0603-RH-SHORT30-MASK



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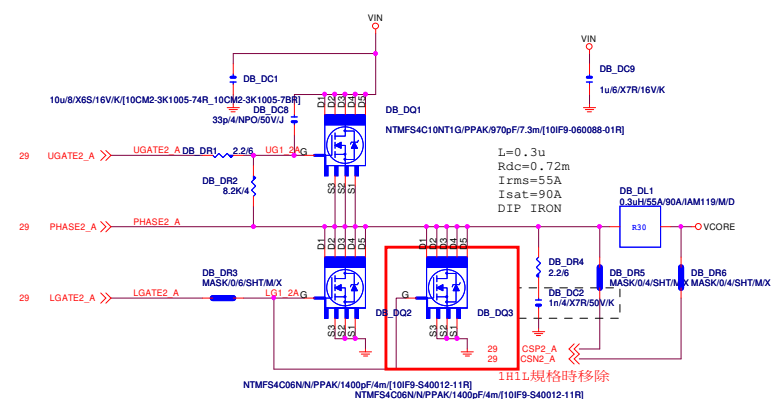
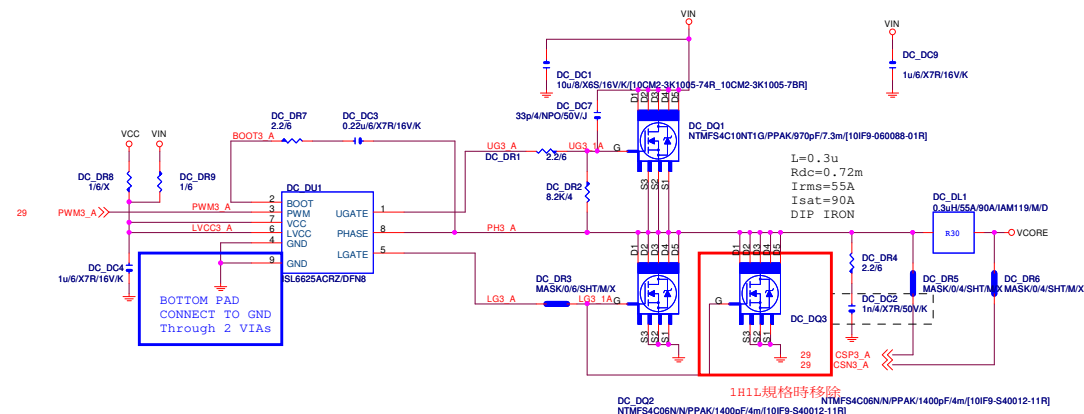
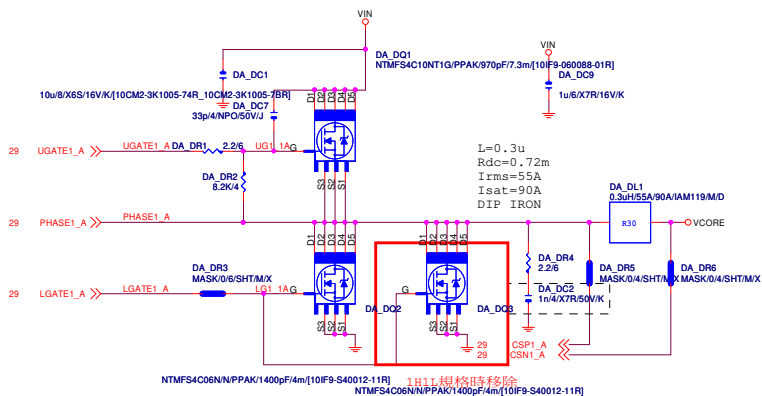
| | | |
|-------|--------|----|
| V1N_A | CSN1_A | 30 |
| V2N_A | CSN2_A | 30 |
| V3N_A | CSN3_A | 30 |

CLOSE PWM



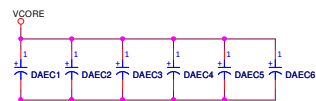
REV: 0.1

VCORE

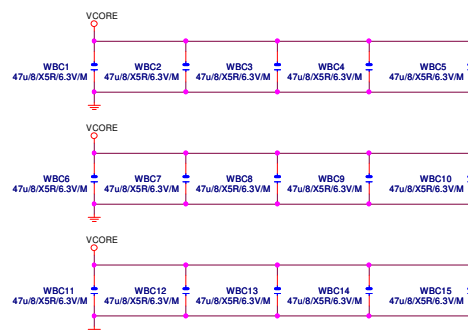


VCORE CAP

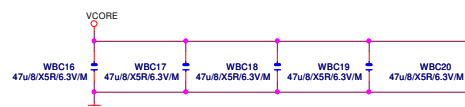
560u*6PCS
22u*20PCS



560u/FP/D/6.3V/69/A/7m
560u/FP/D/6.3V/69/A/7m
560u/FP/D/6.3V/69/A/7m
560u/FP/D/6.3V/69/A/7m
560u/FP/D/6.3V/69/A/7m
560u/FP/D/6.3V/69/A/7m

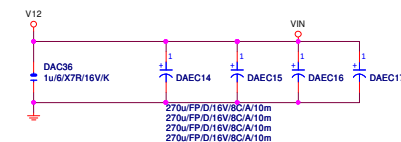


放CPU SOCKET (TOP LAYER)



VIN CAP

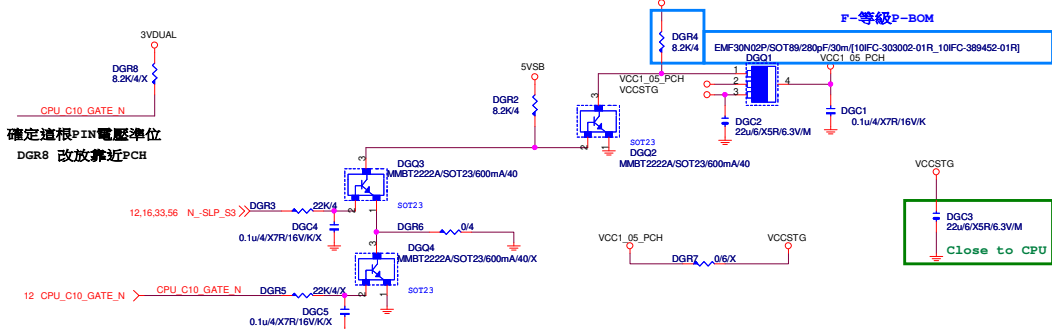
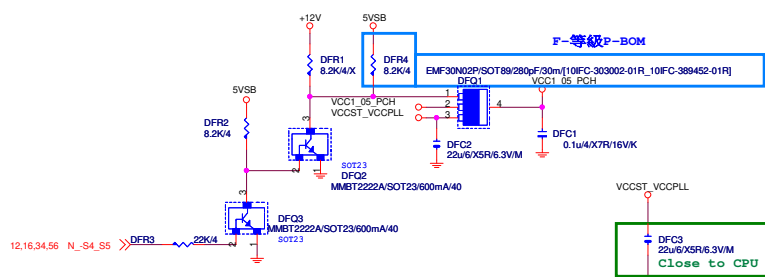
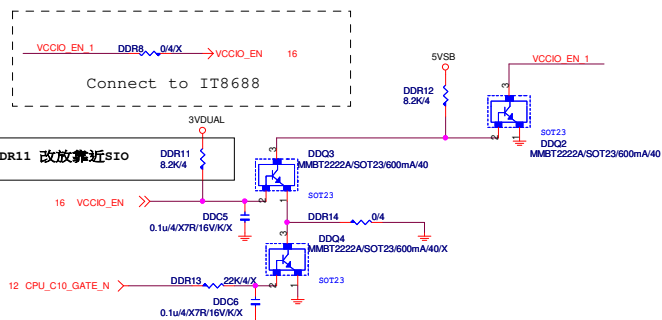
270u*4PCS



GIGABYTE

| | | | |
|---------------|---------------------------|-------|----------|
| Title | | | |
| ISL95866C MOS | | | |
| Size | Document Number | Rev | |
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VCCGT



DDR4

上件

VPP_25V使用8120.8068A.RT8237時上件

PWR SEQ

CLOSE TO DDR POWER PLANE

For power sequence require

VPP_25V使用8120時上件

DDR CAP 560u*4PCS 22u*2PCS

* 大電容 x4

MAEC4
560u/FP/D/6.3V/69/A/7m

MAU1上RT9045時上件(不可MASK)

DDRVTT CAP

* 大電容 x0

DDR VIN CAP
560u*2PCS

CHOKES與CAP料號可變

SUPPORT DDR4 1.2V

25A MAX

L=1u
DCR=2.5 mohm
Isat=35A
Idc=28A

請放置CHOKE一出來位置.先預留.
請自行確認ripple後再決定是否上件
ase請從最重的負載端點拉回

Remote sense 請從最重的負載端點拉回

DDRVTT

NCT3103S/SOP8/2A/[10GL2-203103-01R]

A MA

4 DDR_VTT_CTL MAR110 MASK0/4/SHT/M/10/X DDRVTT_EN
12, 6,32,56 N_SLP_S3 MAR111 MASK0/4/SHT/M/10/X DDRVTT_BOOT

GIGABYTE™

| | |
|-------|-------------------|
| Title | RT8237 DDR4 POWER |
|-------|-------------------|

| | |
|--------|-----------------|
| Size | Document Number |
| Custom | H410M H |

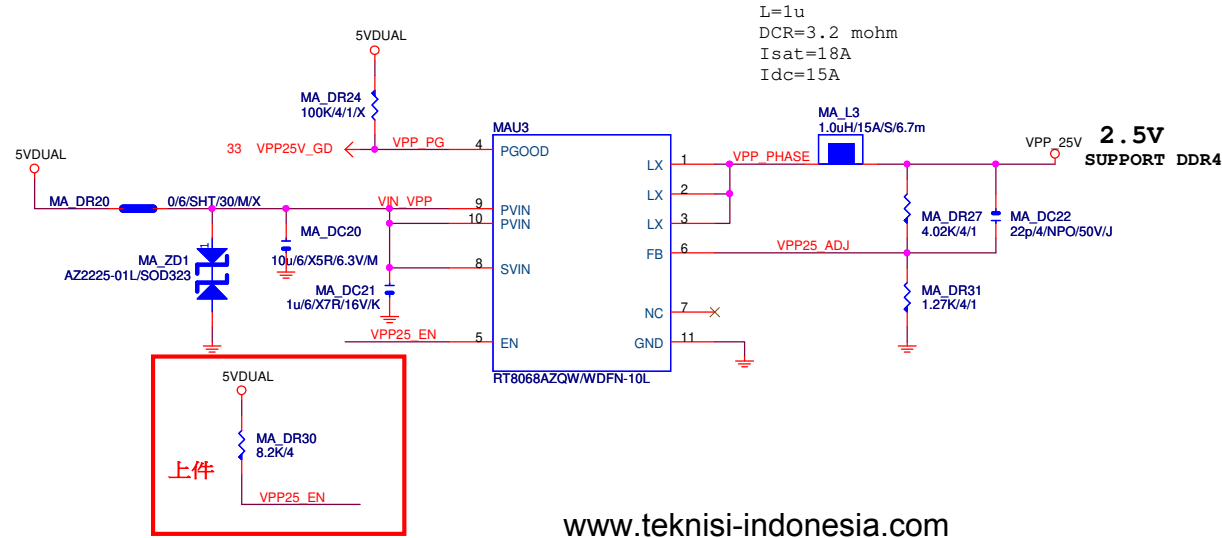
Date: Monday, November 16, 2020

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REV:0.1

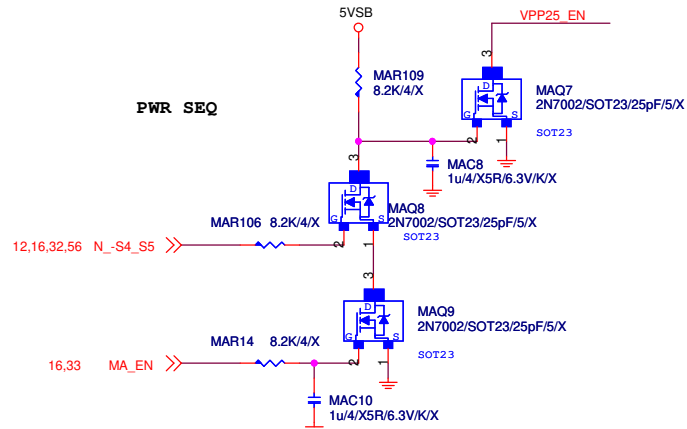
VPP 25V

CHOKE與CAP料號可變

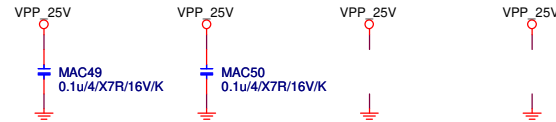


PWR SEQ

* 刪 MA_DR32

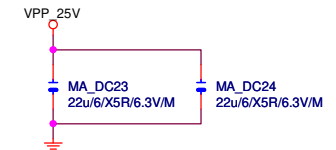


MASK/0/4/SHT/M/X
 MAR114
 16 VPP25_EN_IO
 VPP25_EN



VPP CAP 22u*1PCS

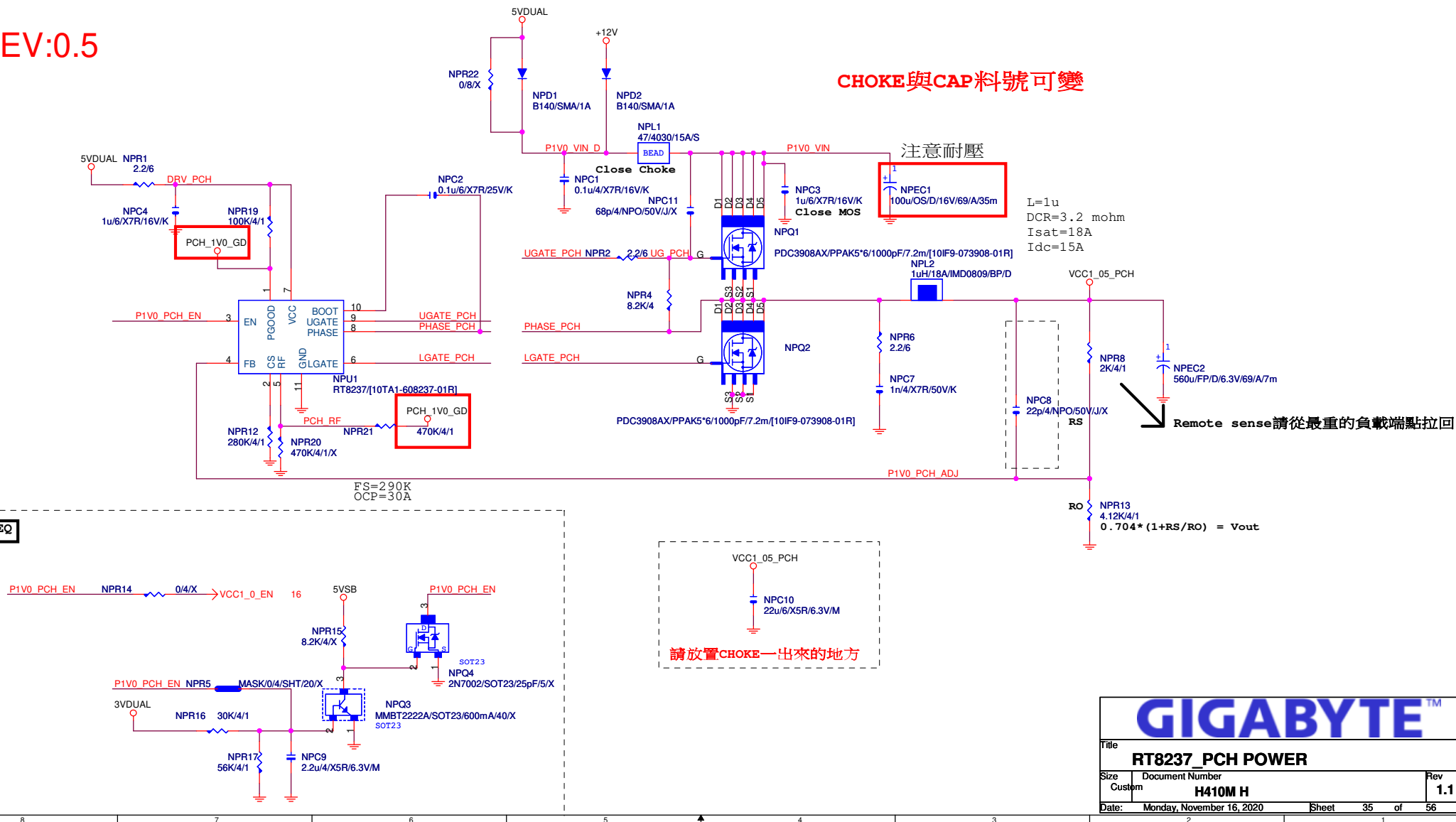
* 大電容 x0



| GIGABYTE™ | | | |
|---------------------------------|-------------------------|---------|--|
| Title RT8068A_VPP25 POWER | | | |
| Size Custom | Document Number H410M H | Rev 1.1 | |
| Date: Monday, November 16, 2020 | Sheet 34 of 56 | | |

REV:0.5

CHOKES與CAP料號可變



| GIGABYTE™ | | | |
|------------------|---------------------------|-------|----------|
| Title | | | |
| RT8237_PCH POWER | | | |
| Size | Document Number | Rev | |
| Custom | H410M H | 1.1 | |
| Date: | Monday, November 16, 2020 | Sheet | 35 of 56 |

REV: 0.51

16 5VAUX SW

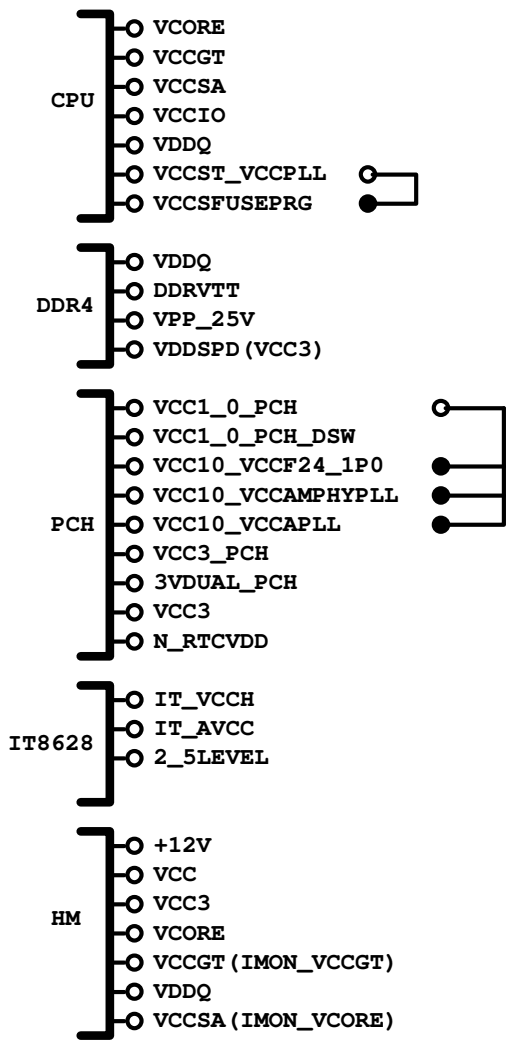


3VDUAL_PCH

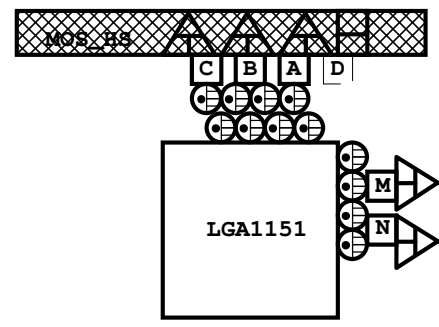
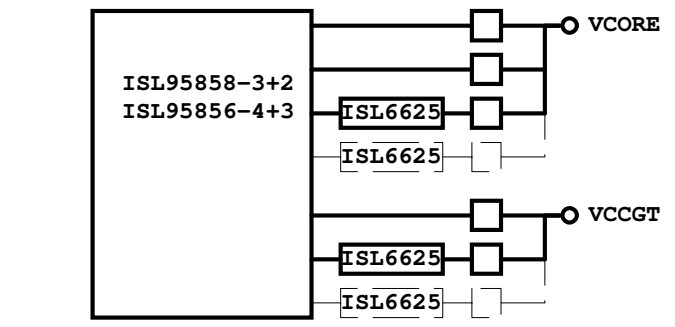


| | |
|----------|-------|
| O-RSMRST | (不上件) |
|----------|-------|

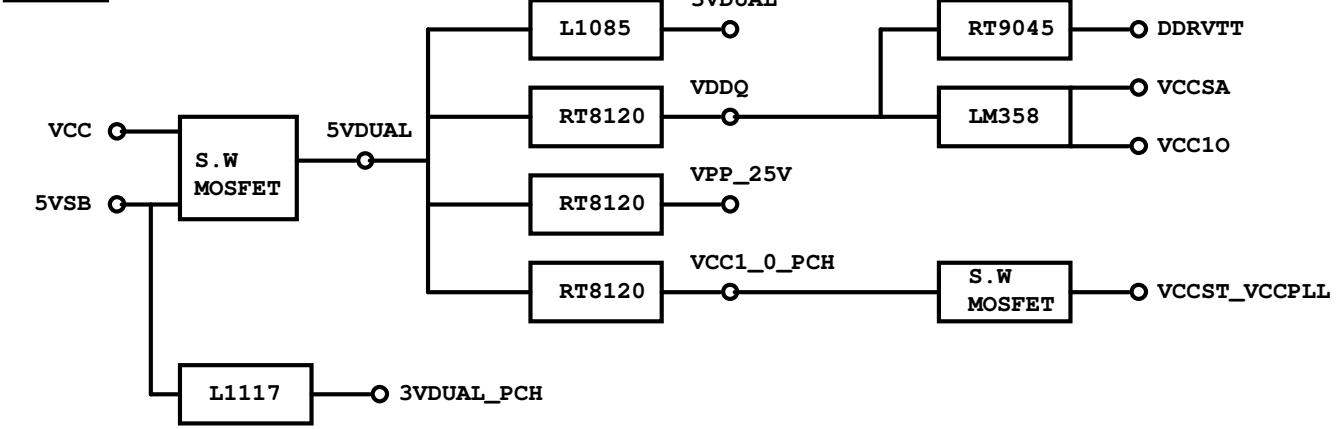
POWER BLOCK MAP



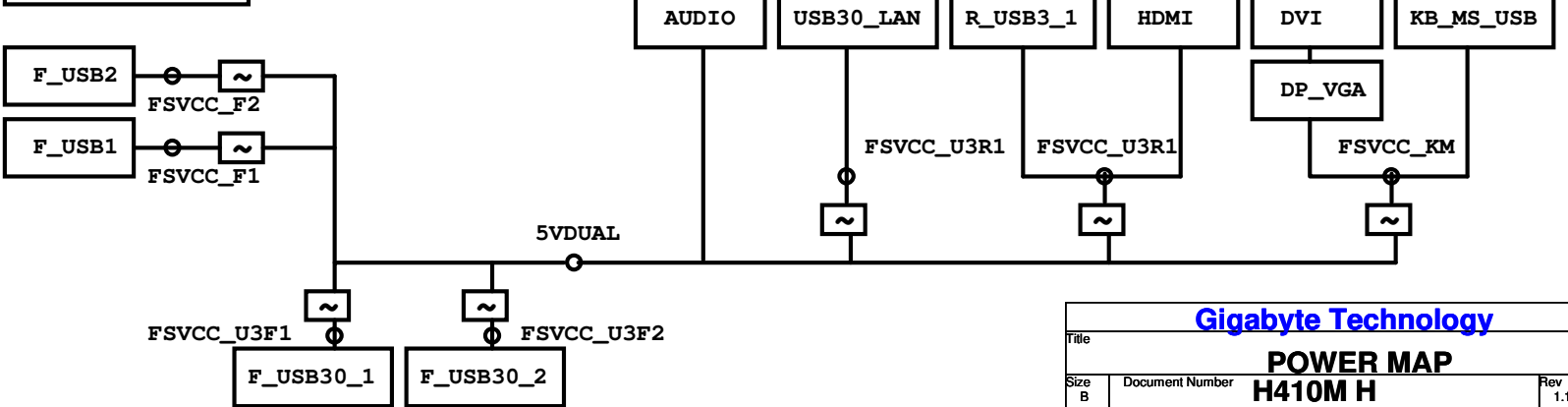
VCORE/VCCGT



POWER

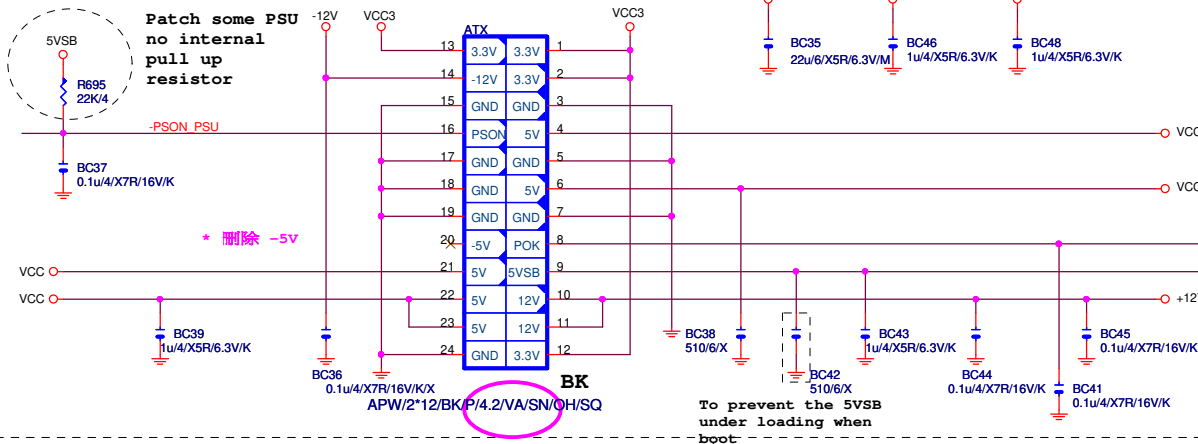


FUSE POWER F/R



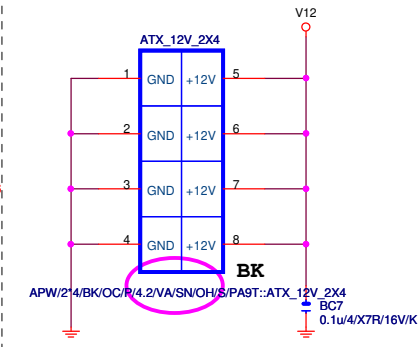
ATXX24 POWER CONNECTOR

2x12 (實心Pin)
FOOTPRINT: ATXPWR_24-SOLID

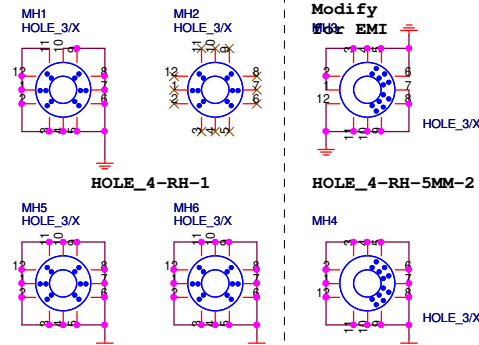


ATXX4 POWER CONNECTOR

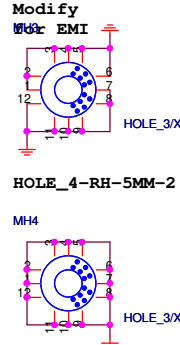
2x4 (實心Pin)
FOOTPRINT: ATXPW2X4-SOLID



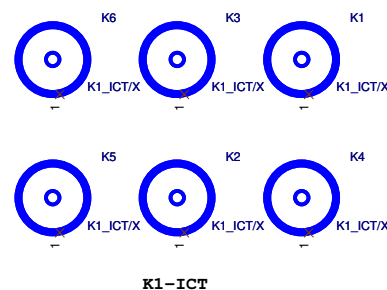
螺絲孔



14/12/24 Modify



固定孔/光學點

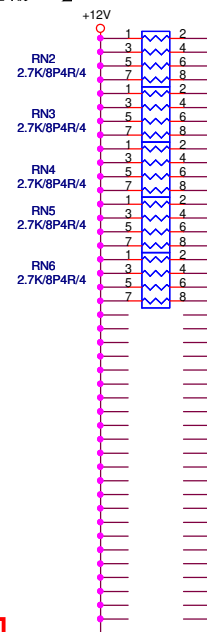


To prevent the 5VSB under loading when boot

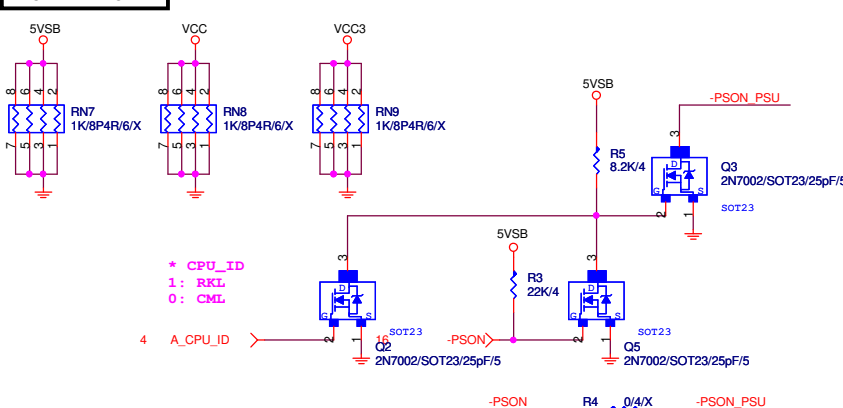
+12V DUMMY LOAD

【技術通報R&D技術通報153】

To fix 12V light load abnormal issue



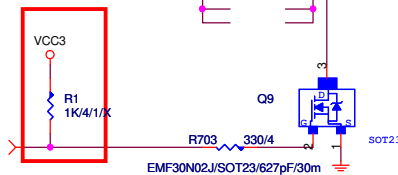
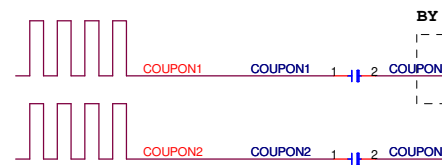
DUMMY LOAD



-PROHOT

4.16 A_PROHOT <-> A_PROHOTR2 MASK/0/4/SHT/M/X VR_HOT 29

COUPON

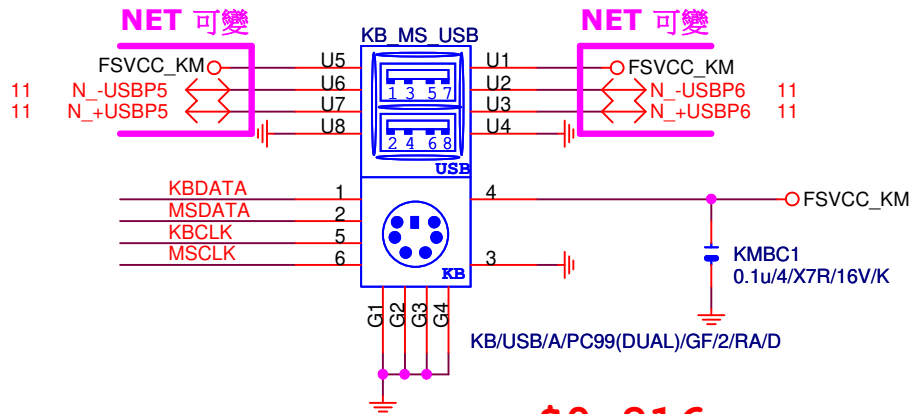


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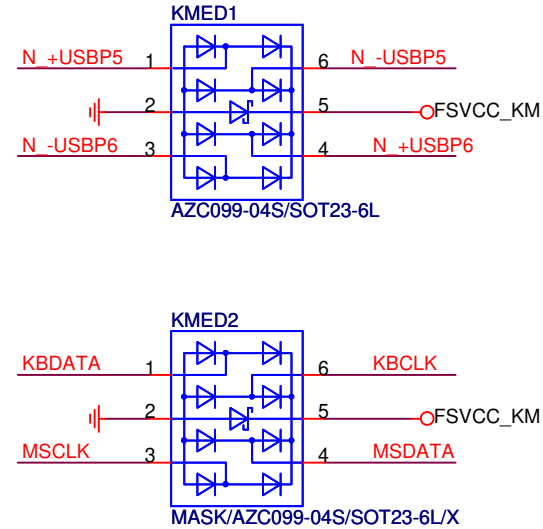
| | | | | | |
|--------|---------------------------|---------|---------------------|----|-----|
| Title | | | ATX POWER CONNECTOR | | |
| Size | Document Number | H410M H | | | Rev |
| Custom | | | | | 1.1 |
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KB_MS_USB

Rev: 0.2

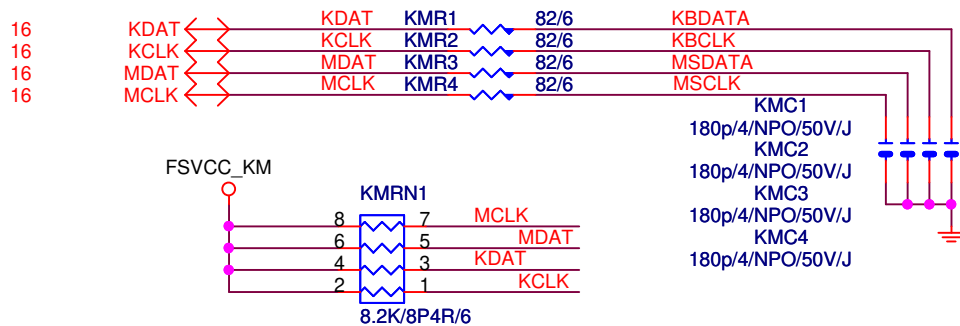


ESD

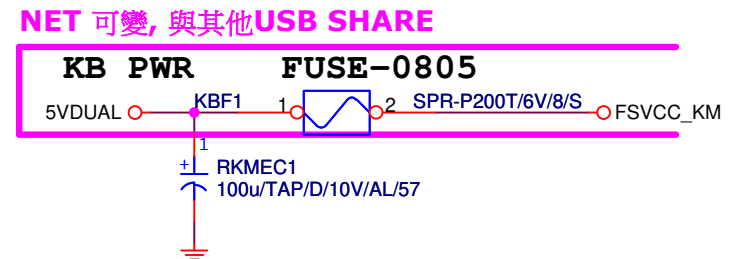


KB_MS_USB DAMPING/PU

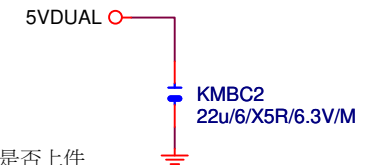
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KB_MS_USB PWR



USB OC PROTECT



Gigabyte Technology

Title

KB_MS

Size
A

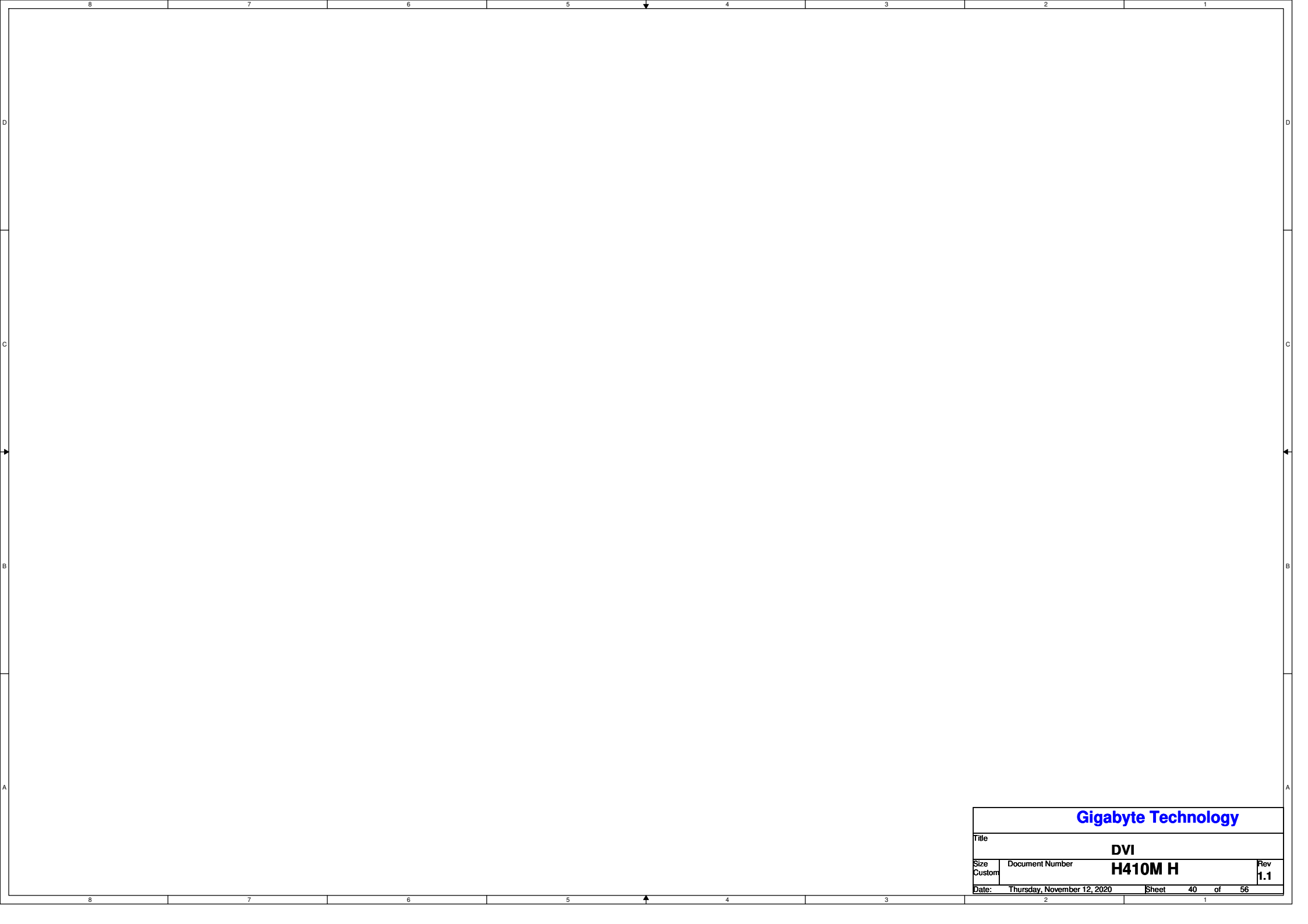
Document Number

H410M H

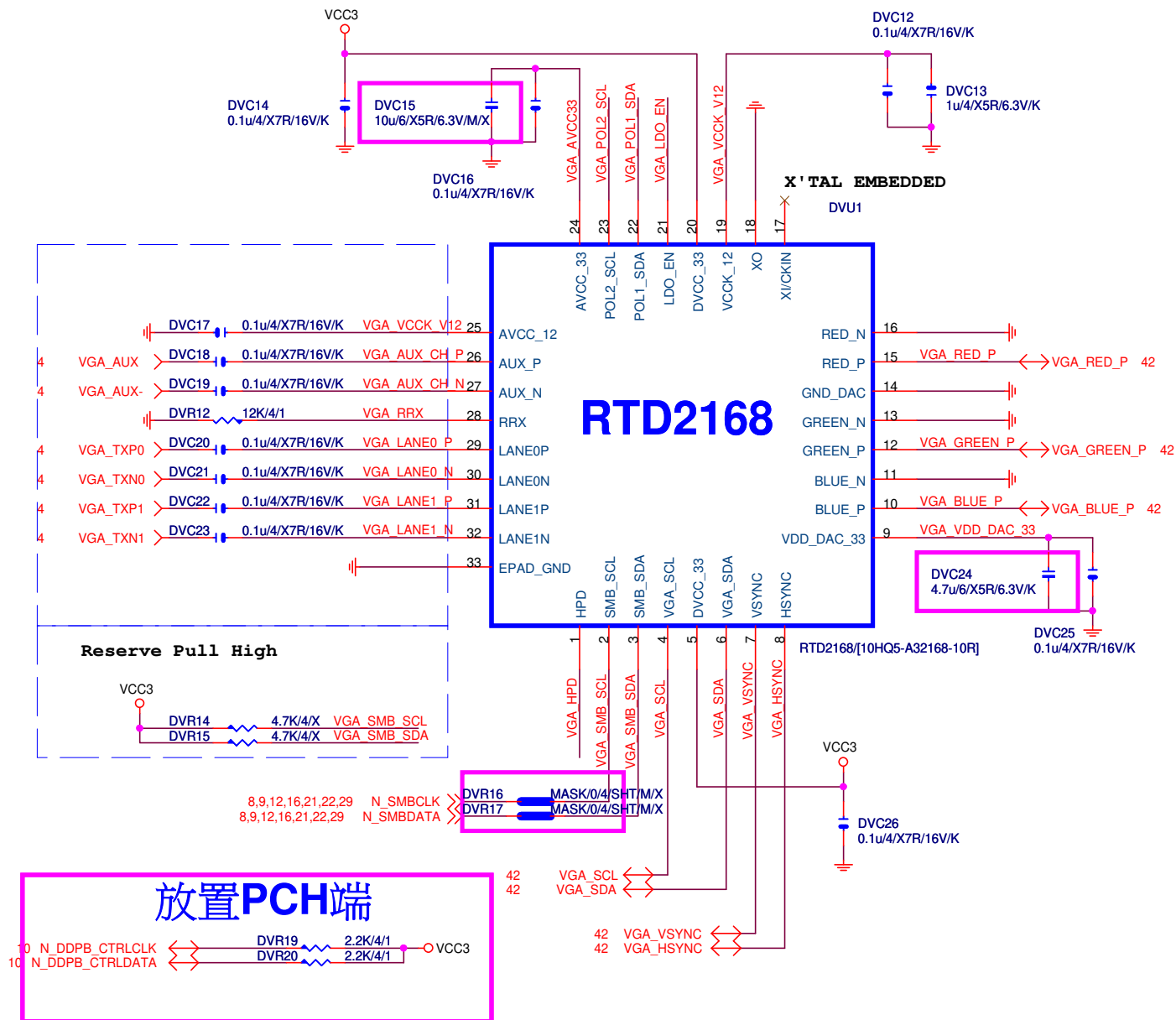
Rev
1.1

Date: Monday, November 16, 2020

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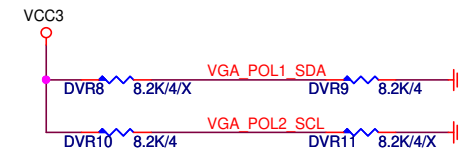
| | | | |
|---------------------|-----------------------------|-------|----------|
| Gigabyte Technology | | | |
| Title | | | |
| DVI | | | |
| Size | Document Number | | Rev |
| Custom | H410M H | | 1.1 |
| Date: | Thursday, November 12, 2020 | Sheet | 40 of 56 |
| | 2 | | 1 |



POWER

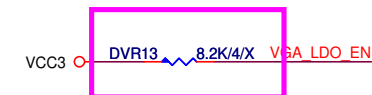


Power on latch



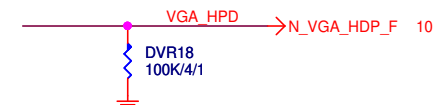
| | | | |
|---------------------|---|--------------------------|------------------------|
| | | POL1_SDA(PIN22) | |
| | | 0 | 1 |
| POL2_SCL (PIN23) | 0 | X | EP MODE |
| | 1 | ROM ONLY MODE | EEPROM MODE |

Embedded LDO

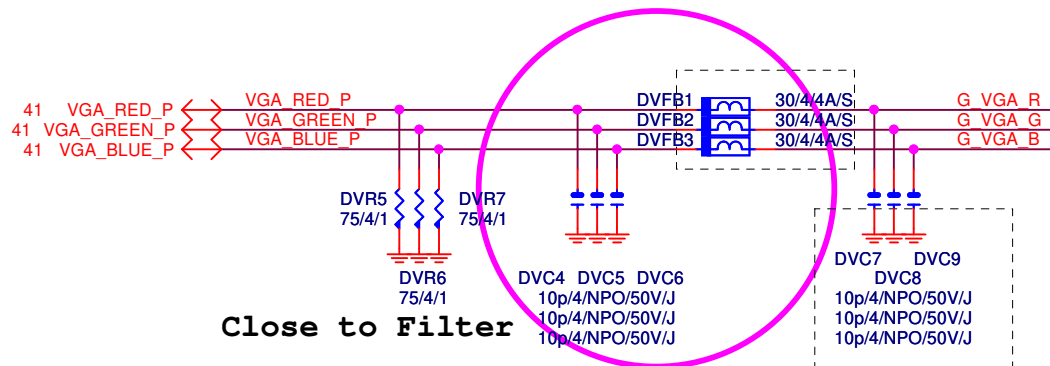
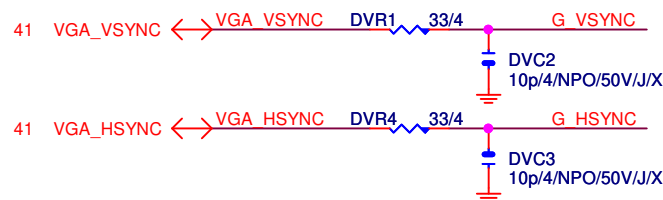
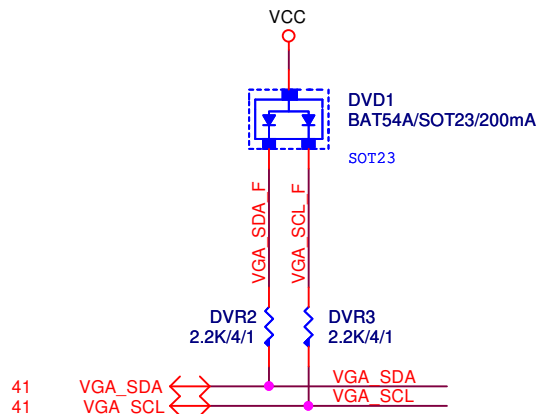


| LDO_EN(PIN21) | |
|-----------------------------|----------------------------|
| 0 | 1 |
| VCCK_V12 from External 1.2V | VCCK_V12 from Embedded LDO |

DP HPD

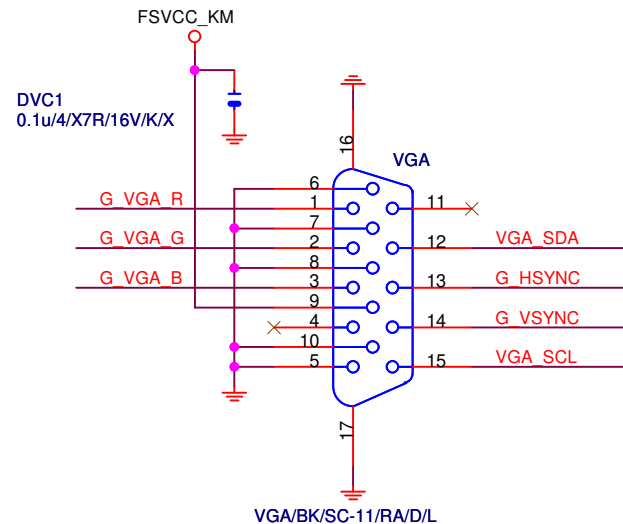


VGA SIGNAL R2.0

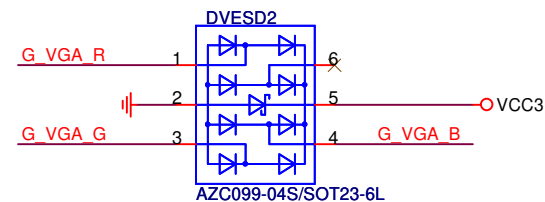
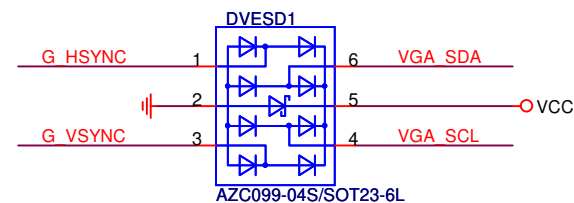


FOR EMI

VGA CONN.

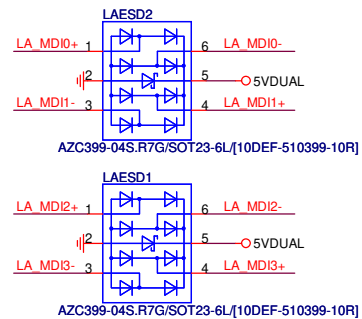


VGA ESD



Gigabyte Technology
DP-VGA RTD2168

| | | |
|--------|---------------------------|----------------|
| Title | | |
| Size | Document Number | Rev |
| Custom | H410M H | 1.1 |
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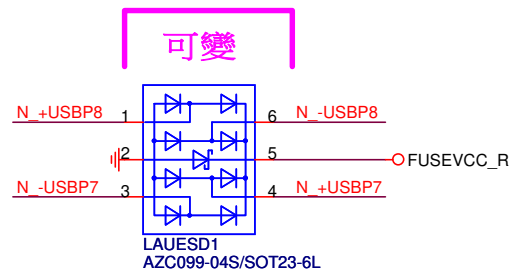


LA REGOUT
PIN24
LABC5
0.1u/4X7R/16V/K
LAR8
LA DVDD10
LA_DVDD10
(CLOSE LAU1 PIN24)

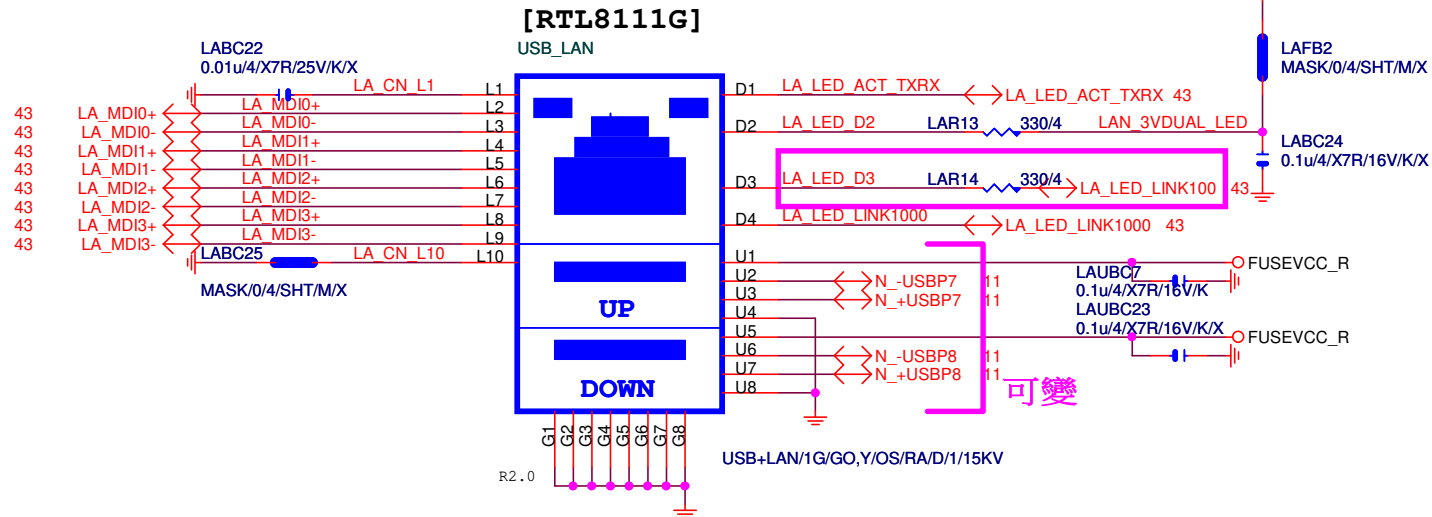
| | | | |
|--|---------------------------|-------|------------|
| <p align="center"><i>Gigabyte Technology</i></p> <p align="center"><i>Realtek RTL8111G</i></p> | | | |
| Title | | | |
| Size Custom | Document Number | | Rev |
| | H410M H | | 1.1 |
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R2.02

note:可變更USB NAME

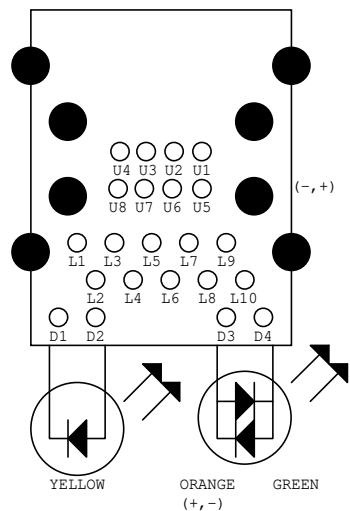


note:可變更USB NAME

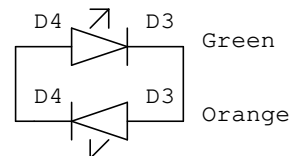


LA_MDI-->100歐姆:[20/4/8/4/20]

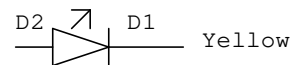
USB_LAN LAYOUT示意圖



Dual Color LED

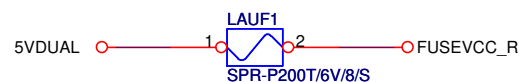


Single Color LED



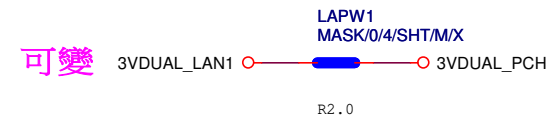
note:可變更FUSE

可變



Close to connector
USB_LAN 2-Port 2.0A
FUSE-0805

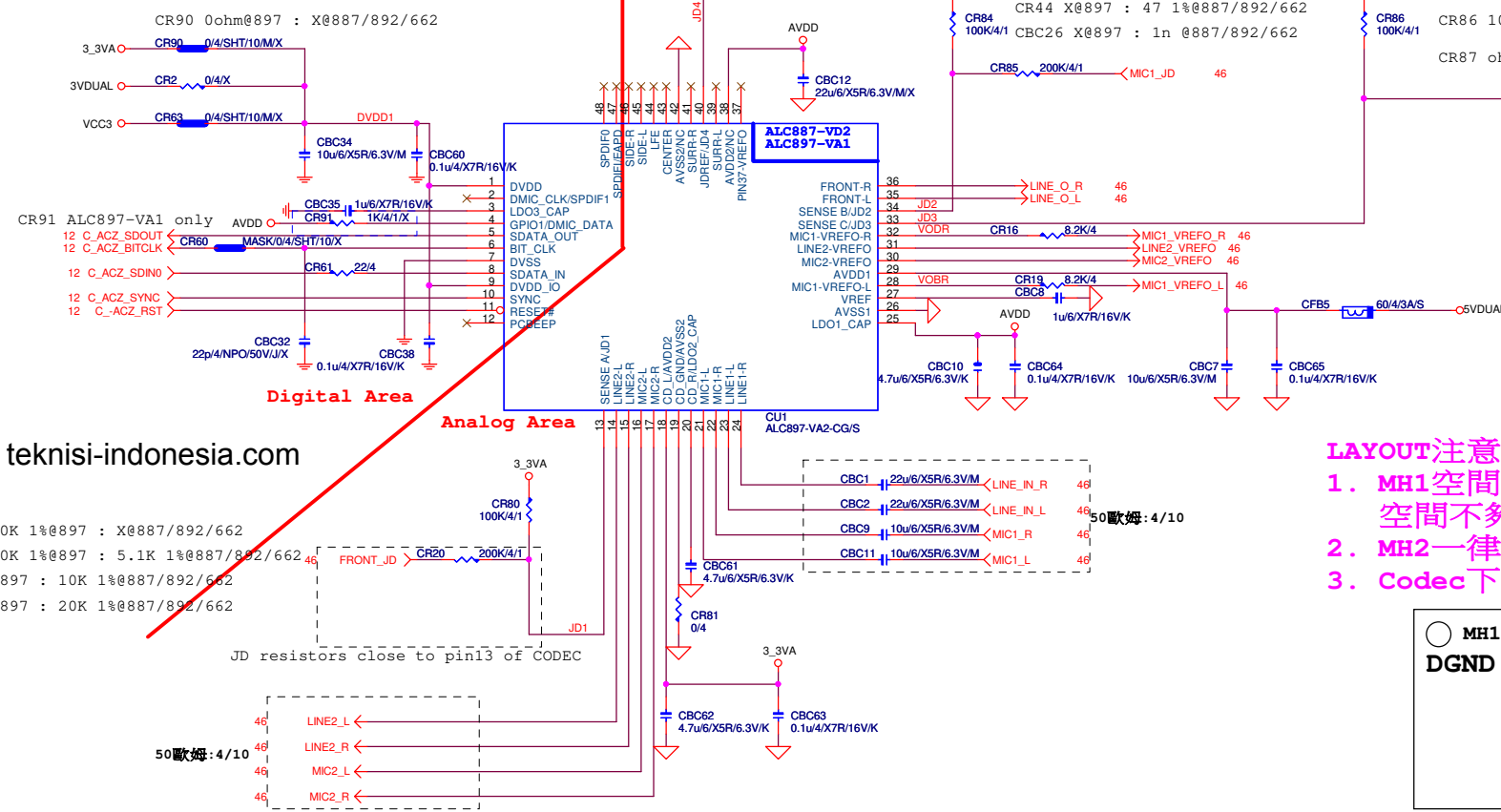
note: lan power連接及電流



Gigabyte Technology

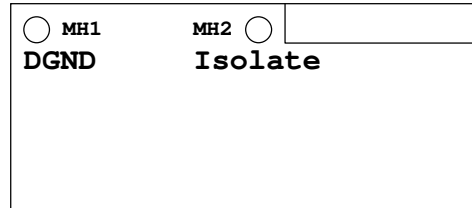
LAN CONNECTOR-RTL8111G

| | | |
|---------------------------------|-----------------------------------|------------|
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LAYOUT注意:螺絲孔下GND方式
 1. MH1空間夠,下DGND
 空間不夠,才改為Isolate
 2. MH2一律改為Isolate
 3. Codec下方,第二層必須參考GND

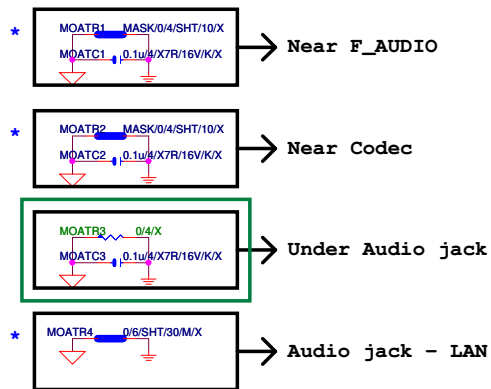


LAYOUT注意:要加
 GND切割線
 音效區域印刷

| | | 897 | 887/892/662 |
|-------|---------|-------------|-------------|
| Pin03 | LDO3 | 1uF | 10uF |
| Pin09 | DVDD-IO | 0.1uF | 1uF |
| Pin18 | AVDD2 | 4.7uF/0.1uF | NC |
| CR81 | AVDD2 | 0ohm | NC |
| Pin20 | LDO2 | 4.7uF | NC |
| Pin25 | LDO1 | 4.7uF | 22uF |
| Pin27 | VREF | 1uF | 10uF |
| Pin38 | AVDD2 | NC | 22uF |

BOM OPTION : 1. Chemicon音效電容
 2. 金屬外罩 Reserve (LAYOUT上件與否,依照各Model spec)
 3. LED Reserve (上件與否和LED顏色,依照各Model spec)

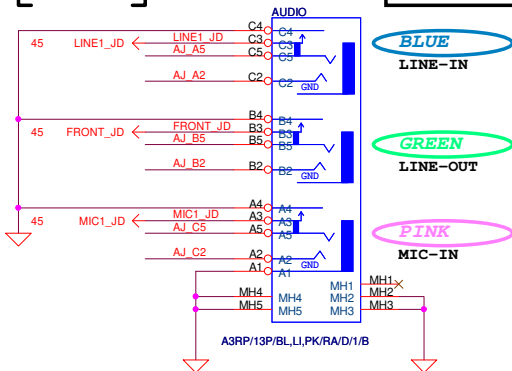
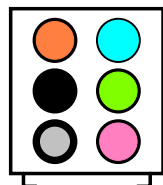
Rev 6.0



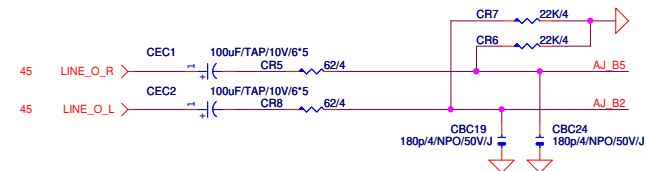
*量産前,MOATR1/MOATR2/MOATR40ohm改short pad

For HDMI SPDIF (依SPEC保留或移除)

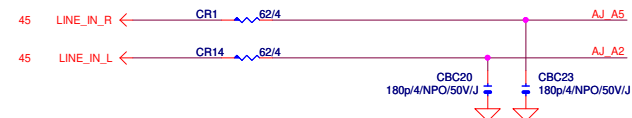
AZALIA JACK



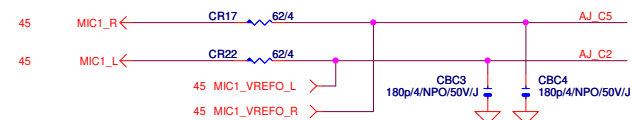
LINE-OUT



LINE-IN



MIC-IN

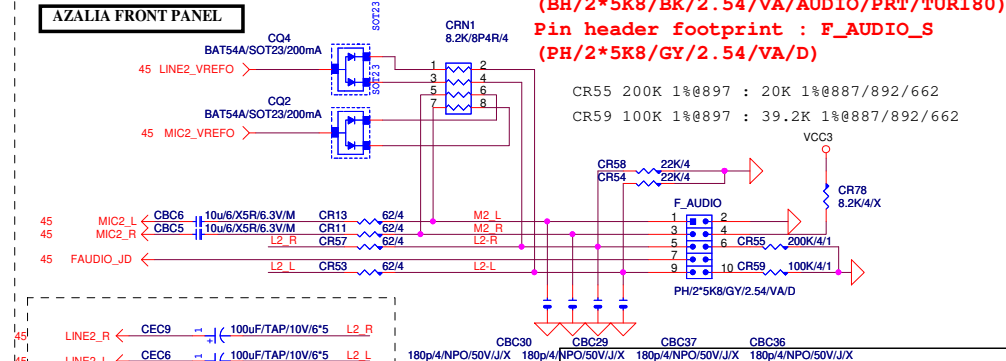


SURROUND

CEN/LFE

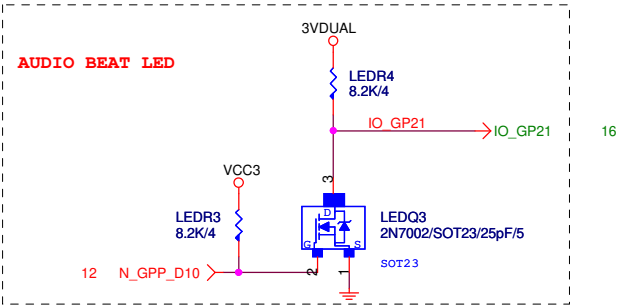
SURR BACK

AZALIA FRONT PANEL



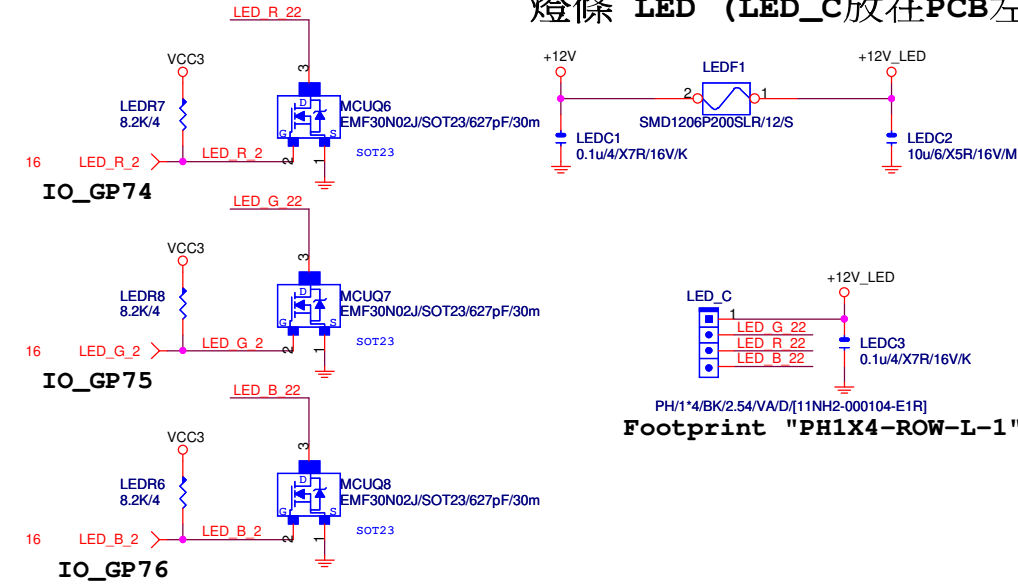
GIGABYTE

| Title | | |
|------------|---------------------------|----------------|
| AUDIO JACK | | |
| Size | Document Number | Rev |
| Custom | H410M H | 1.1 |
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第二區 LED CONTROL

燈條 LED (LED_C放在PCB左邊板邊位置)



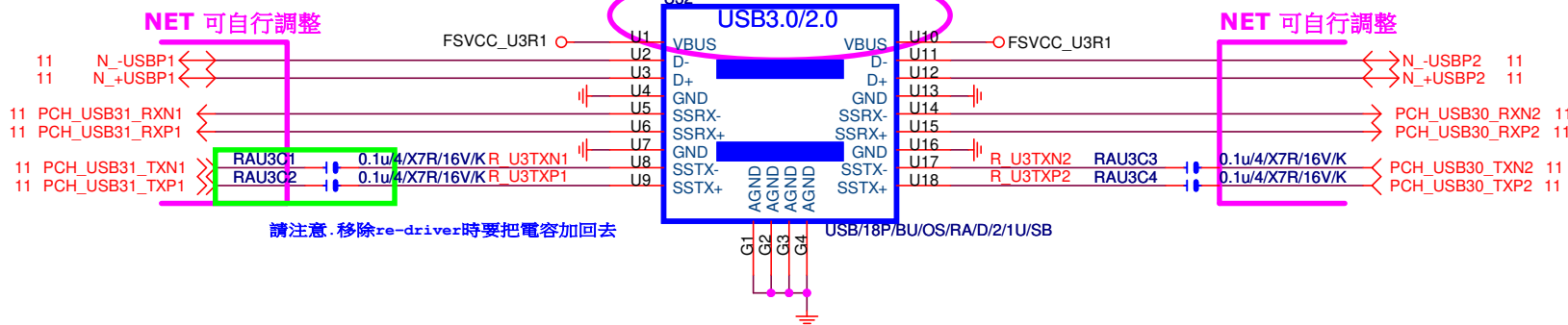
GIGABYTE™

Title: **Amient Single LED**

| | | |
|---------------------------------|---------------------------------|-----------------|
| Size: Custom | Document Number: H410M H | Rev: 1.1 |
| Date: Monday, November 16, 2020 | Sheet: 47 of 56 | |

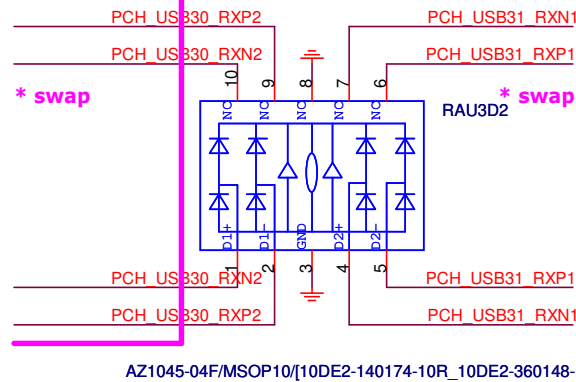
Rev: 0.7

ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可

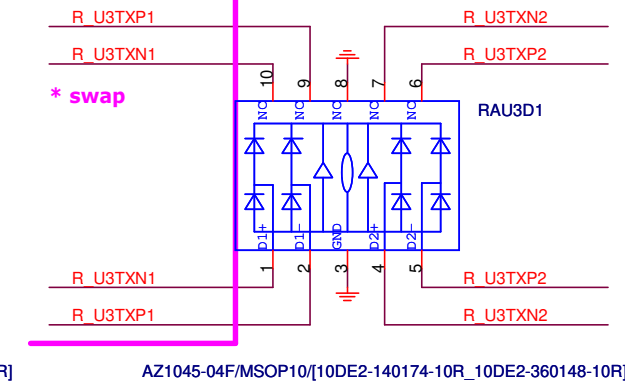


ESD

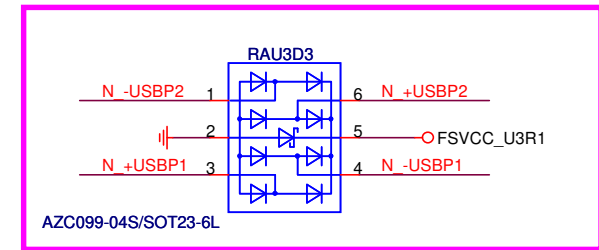
NET 可自行調整



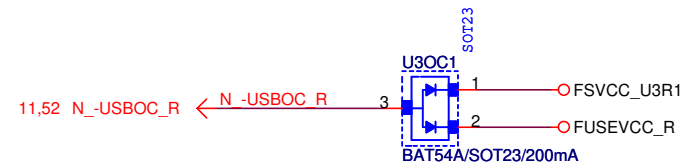
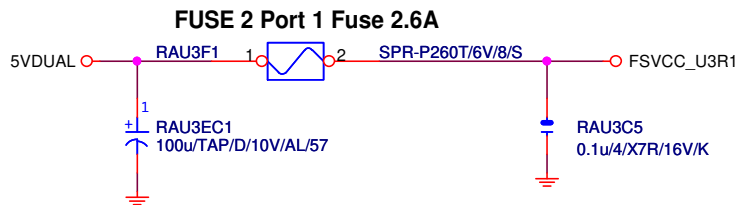
NET 可自行調整



NET 可自行調整

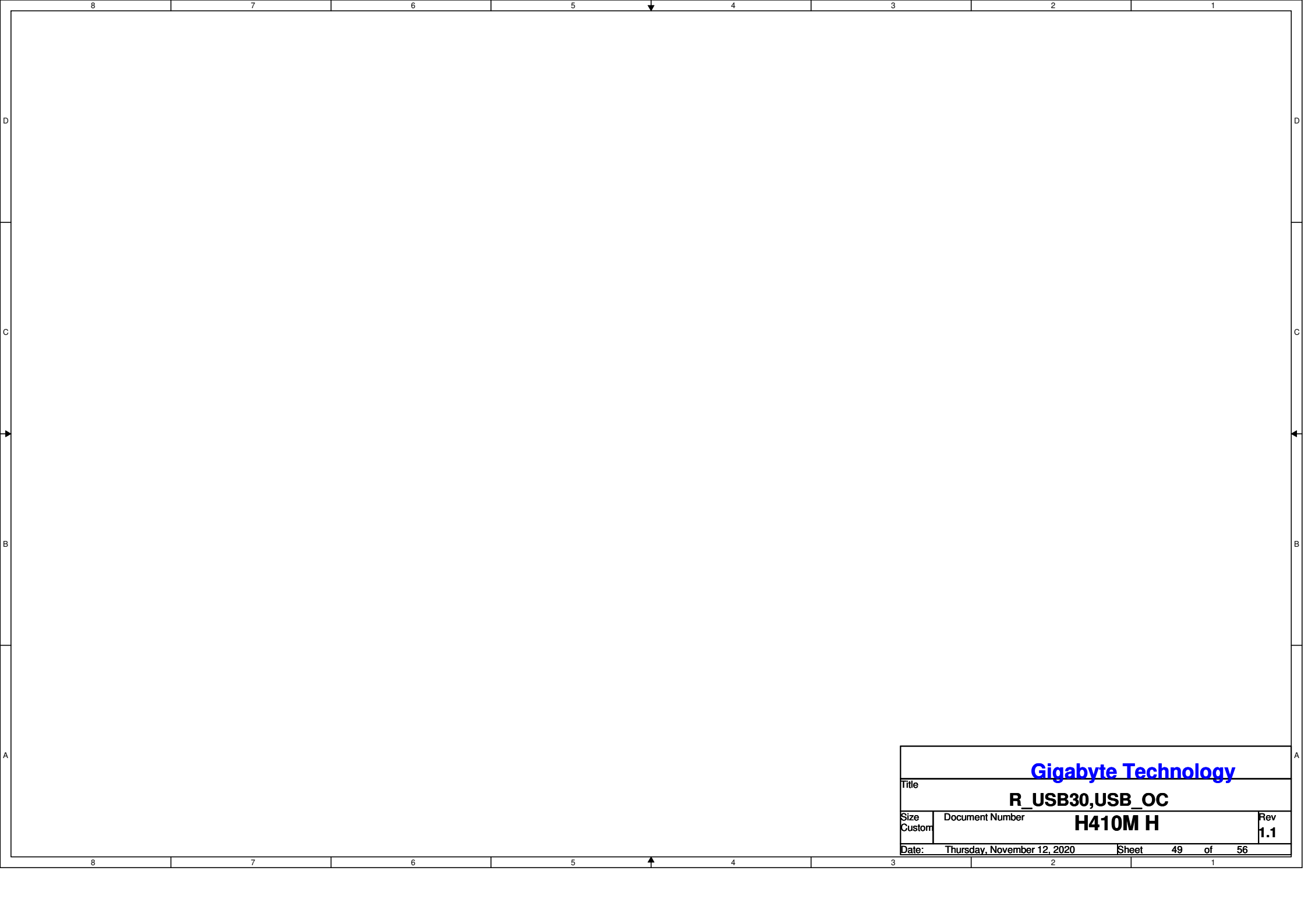


FUSE



Gigabyte Technology

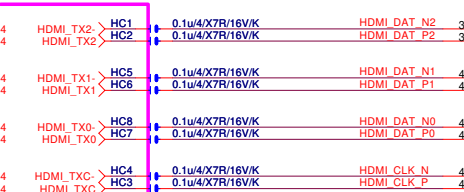
| | | |
|----------------|---------------------------|----------------|
| Title | | |
| R_USB30,USB_OC | | |
| Size | Document Number | Rev |
| Custom | H410M H | 1.1 |
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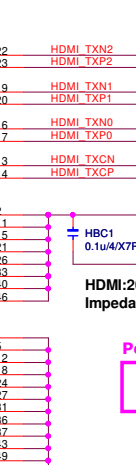
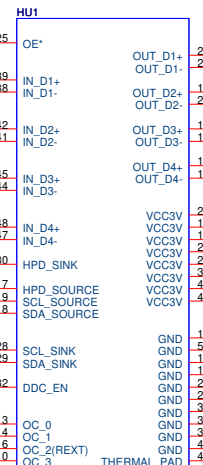
| | | | |
|---------------------|-----------------------------|-------|----------|
| Gigabyte Technology | | | |
| Title | | | |
| R_USB30,USB_OC | | | |
| Size | Document Number | | Rev |
| Custom | H410M H | | 1.1 |
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HDMI LEVEL SHIFT

NET 可變

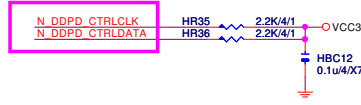


Port 自行調整



HDMI:20/4/6/4/20
Impedance=85 +/- 17.5%

Port 自行調整



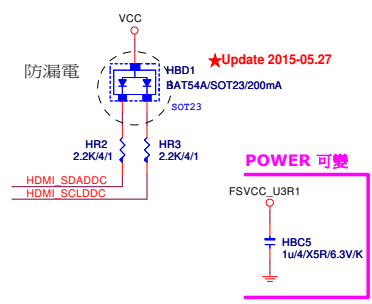
【技術通報R&D技術通報150】

HDMI eye diagram 1.4版(deep color)會fail
原因: 因目前的HDMI訊號過長,造成RISING TIME過慢,而會壓到eye diagram
改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)

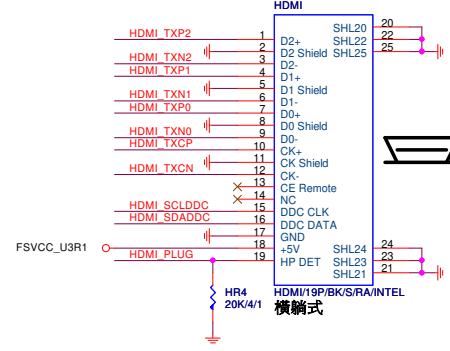
★Update 2015-04.30 change from PTN3360 to ASM1442K.

★Update 2015-04.30 change from PTN3360 to ASM1442K.

PTN3360:PIN 4/10/34/35 NC PIN,都不上值;只上HR12:10K
ASM1442:紅色框要上,HR12:3.16K



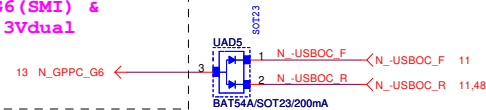
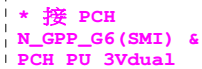
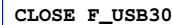
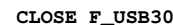
POWER 可變

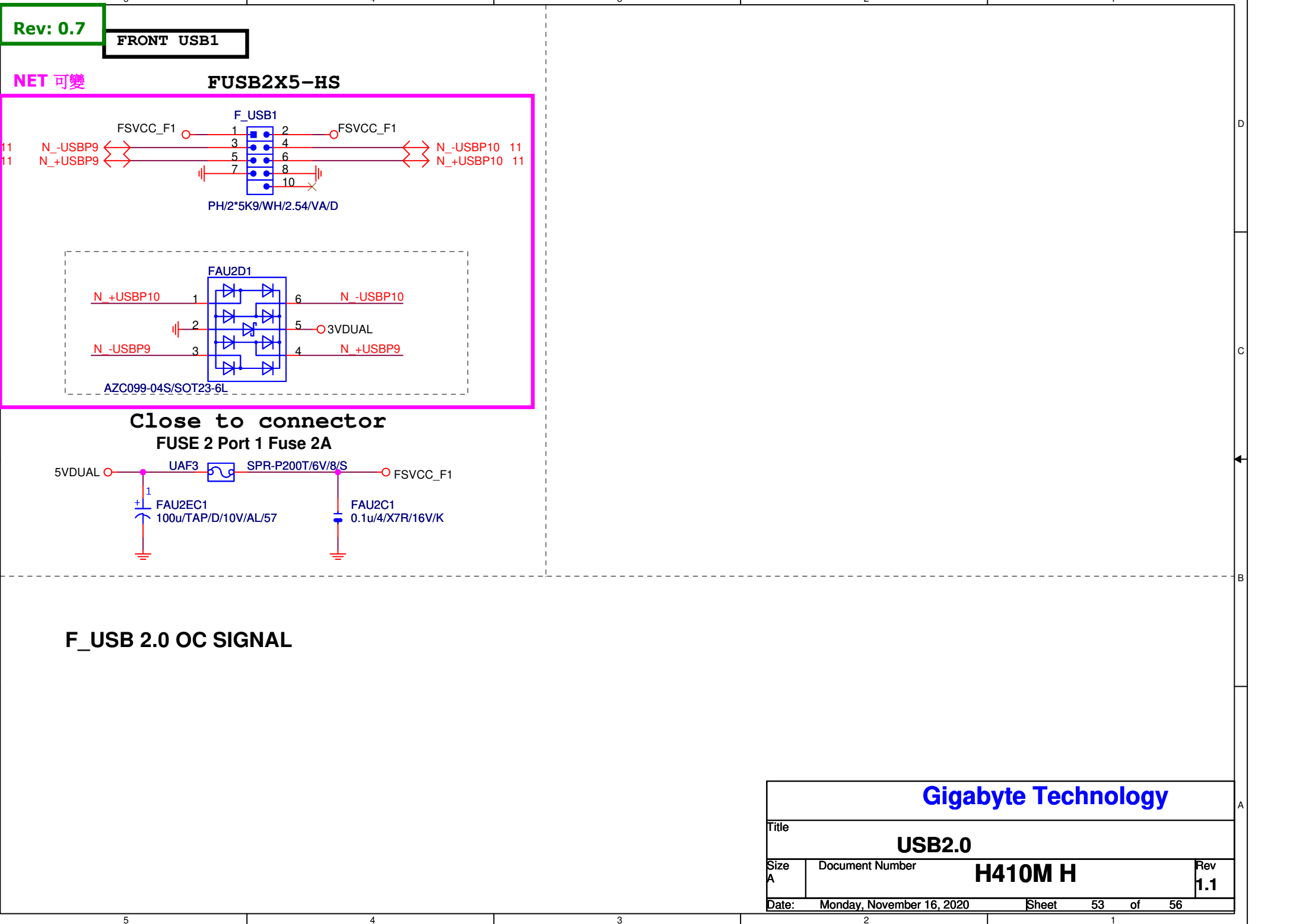


橫躺式

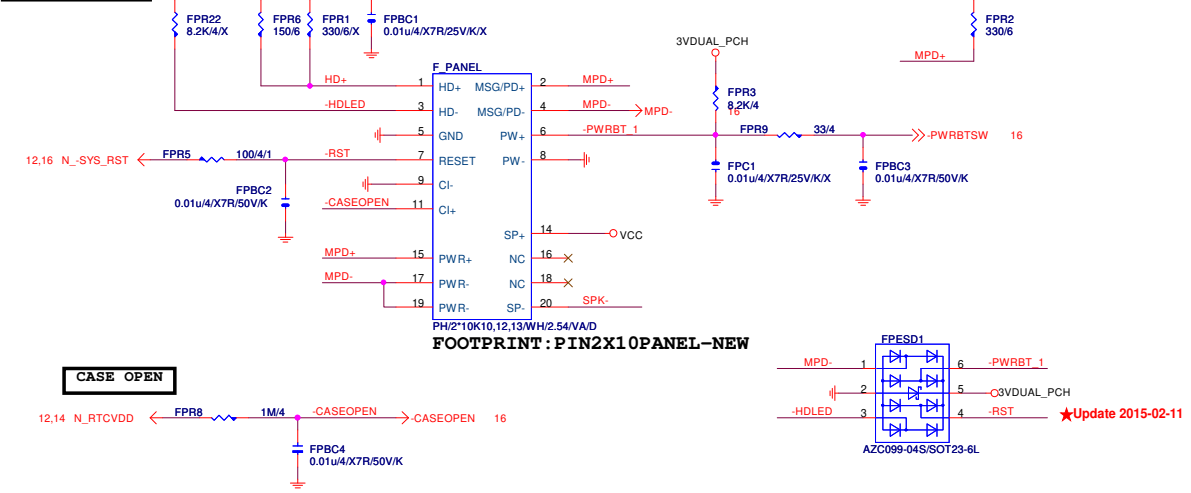
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| | | | |
|--|--------------------------------|-------------|-------------------|
| GIGABYTE™ | | | |
| Title PI3EQX1002B Redriver/DC-J | | | |
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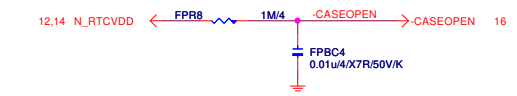




FRONT PANEL

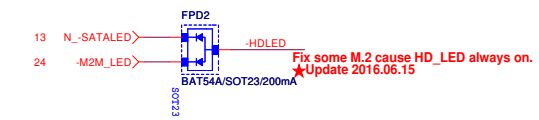


CASE OPEN

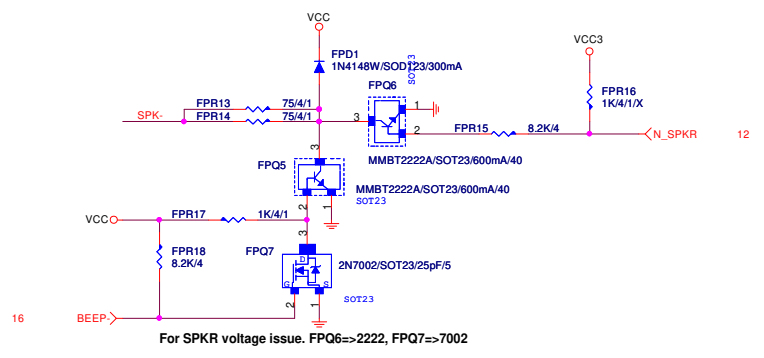


FRONT PANEL SHORT

SATA/M.2 LED

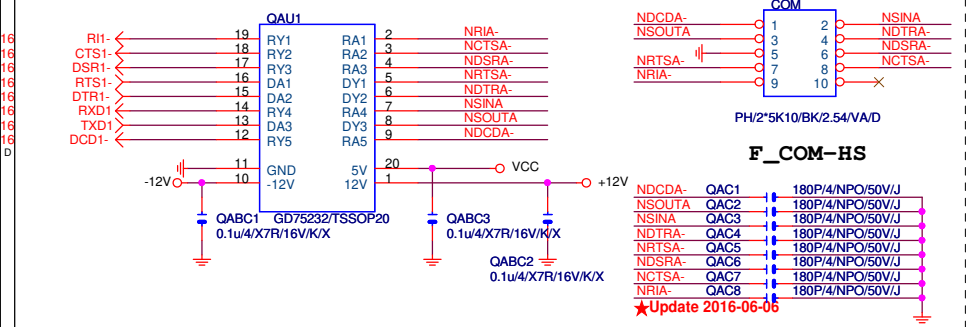


SPKR



COM PORT

Rev: 0.7

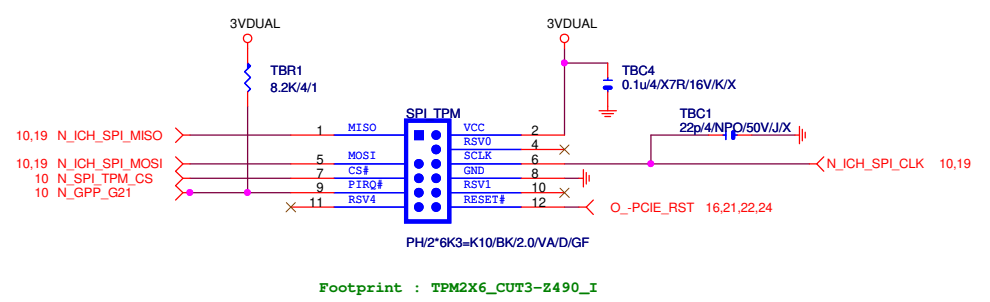


LPT PORT

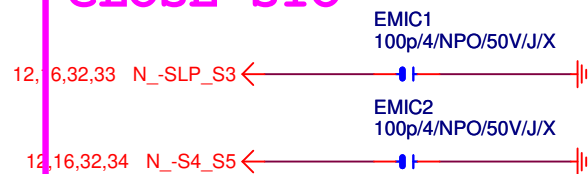
COM RI

N/A

TPM CONNECT



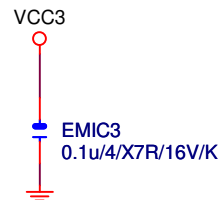
CLOSE SIO



CLOSE PCH



CLOSE NR47

**GIGABYTE™**

Title

EMI/ESDSize
A

Document Number

H410M H

Rev

1.1

Date: Monday, November 16, 2020

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