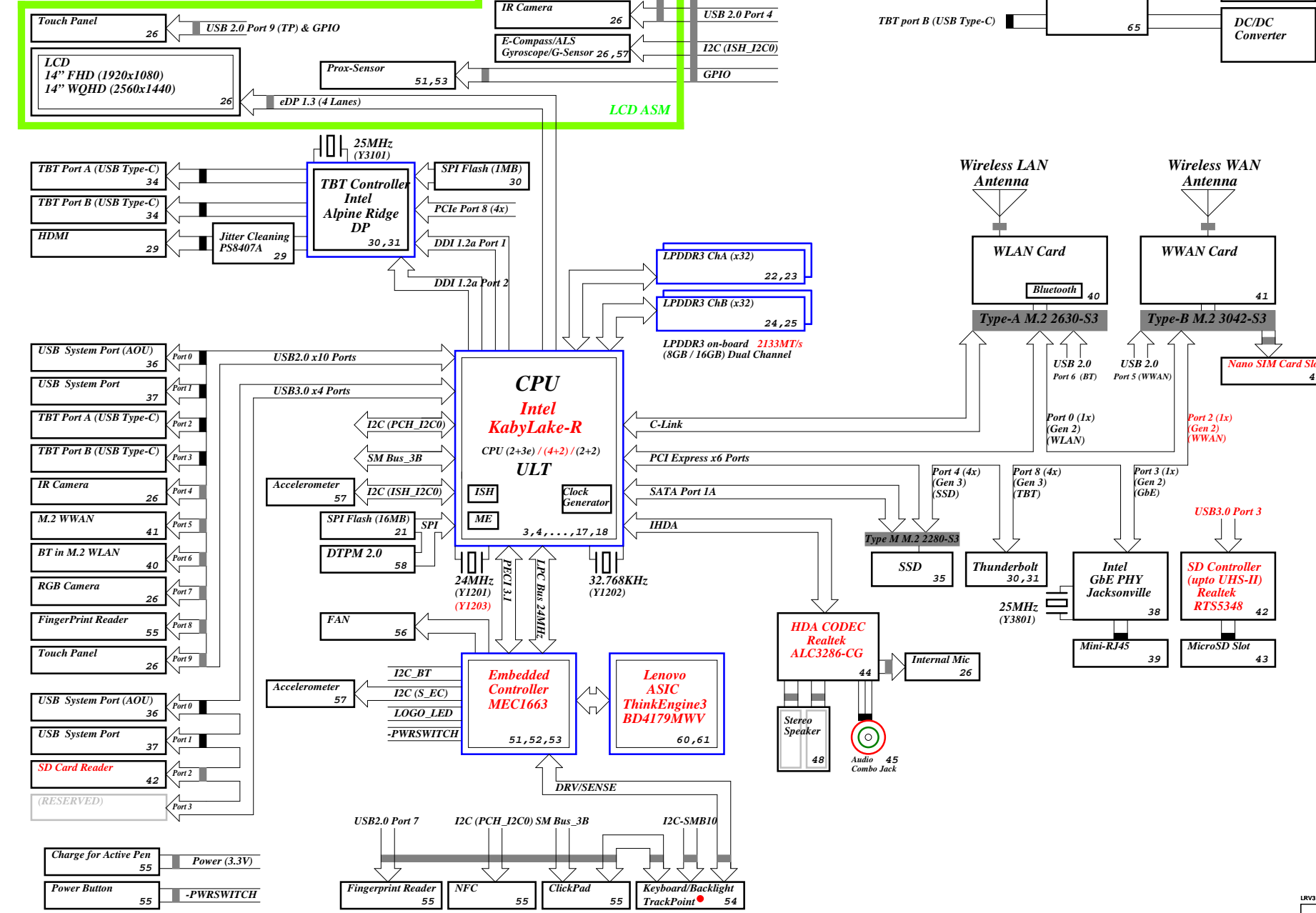


# Raven-3 Kabylake Block Diagram

Project Code: 4PD0CX010001  
PCB(Raw Card): 17800-SE

2017 Oct. ' 27



RV3\_PDV\_EC069  
RV3\_PDV\_EC097  
RV3\_PDV\_EC106  
RV3\_PDV\_EC107  
RV3\_EVT\_EC006  
RV3\_EVT\_EC058  
RV3\_EVT\_EC082

| PCB Layer Startup |  |
|-------------------|--|
| 1-8-1+ HDI        |  |
| L1:Component      |  |
| L2:GND            |  |
| L3:Signal 1       |  |
| L4:VCC            |  |
| L5:Signal 2       |  |
| L6:Signal 3       |  |
| L7:VCC            |  |
| L8:Signal 4       |  |
| L9:GND            |  |
| L10:Component     |  |

|                          |         |
|--------------------------|---------|
| Battery Charger/Selector | 65      |
| BQ25700ARSNR             |         |
| VINT30_IN                | VSYS15  |
|                          | BAT_PWR |

|                 |       |
|-----------------|-------|
| System DC/DC    | 66    |
| TPS51285B-IRUKR |       |
| VSYS15          | VCCSM |
|                 | VCC3M |

|                         |    |
|-------------------------|----|
| DC/DC IMVP8             | 67 |
| MP2949AGQKT-0047-C669-Z |    |
| MP2949AGQKT-0048-C669-Z |    |
| MP2949AGQKT-0049-C669-Z |    |

|                     |            |
|---------------------|------------|
| DC/DC VCCCPUCORE    | 68         |
| MP86901-CGLT-C669-Z |            |
| VSYS15              | VCCCPUCORE |
|                     | VCC3M      |

|                     |              |
|---------------------|--------------|
| DC/DC VCCGFXCORE_I  | 69           |
| MP86901-CGLT-C669-Z |              |
| VSYS15              | VCCGFXCORE_I |
|                     | VCC3M        |

|                     |       |
|---------------------|-------|
| DC/DC VCCSA         | 70    |
| MP86901-AGQT-C669-Z |       |
| VSYS15              | VCCSA |
|                     | VCC3M |

|                |          |
|----------------|----------|
| DC/DC VCCCPUIO | 72       |
| NB695GD-C669-Z |          |
| VCCSM          | VCCCPUIO |
|                | VCC3M    |

|                   |            |
|-------------------|------------|
| DC/DC VCCIR0SUS   | 73         |
| BD91364BMU-UE-ZE2 |            |
| VCCSM             | VCCIR0_SUS |
|                   | VCC3M      |

|                |         |
|----------------|---------|
| DC/DC VCCIR2A  | 75      |
| NB687GQ-C669-Z |         |
| VSYS15         | VCCIR2A |
|                | VCC3M   |

|                |         |
|----------------|---------|
| DC/DC VCC0R6B  | 75      |
| NB687GQ-C669-Z |         |
| VCCIR2A        | VCC0R6B |
|                | VCC3M   |

|               |         |
|---------------|---------|
| DC/DC VCCIR8A | 77      |
| BU90104GWZ-E2 |         |
| VCCSM         | VCCIR8A |
|               | VCC3M   |

|                 |            |
|-----------------|------------|
| DC/DC VCCIR8SUS | 78         |
| BU90104GWZ-E2   |            |
| VCCSM           | VCCIR8_SUS |
|                 | VCC3M      |

|                  |            |
|------------------|------------|
| DC/DC VCCPCHCORE | 79         |
| NB695GD-C669-Z   |            |
| VCCSM            | VCCPCHCORE |
|                  | VCC3M      |

|                 |        |
|-----------------|--------|
| DC/DC VCCOPC    | 80     |
| NB681AGD-C669-Z |        |
| VCCSM           | VCCOPC |
|                 | VCC3M  |

LRV3 MB

|  |                 |
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| BLOCK DIAGRAM  |                 |
| File   |                 |
| Size A2  | Document Number |
| Raven-3  |                 |
| Date: Wednesday, January 12, 2018  | Sheet 1 of 88   |

External Connector/Socket  
Internal Connector/Socket  
Internal Switch

RESISTOR

| Symbol name | Value    | Tolerance<br><br>(J: 5%, F: 1%, D: 0.5%, B: 0.1 %) | Rating<br><br>0402=> 1/16W, 25V<br>0603 => 1/16W, 75V<br>0805 => 1/10W, 100V | Size<br><br>2=>0402, 3=>0603, 5=>0805<br>6=>1206, 0=>1210 |
|-------------|----------|--|--|---|
| 10KR3       | 10K Ohm  | If no letter, it means J: 5%                       | 1/16W, 75V   | 0603  |
| 33D3R5      | 33.3 Ohm | If no letter, it means J: 5%                       | 1/10W, 100V  | 0805  |
| 1KR3F       | 1K Ohm   | F: 1%  | 1/16W, 75V   | 0603  |

The naming rule is value + R + size + tolerance  
For the value, it can be read by the number before R. (R means resistor)  
For the tolerance, it can be read from the last letter.  
For the rating, we don't show on the symbol name.  
For the size, R2=>0402, R3=>0603, R5=>0805,....

CAPACITOR

| Symbol name   | Value | Tolerance<br><br>(M: +/-20, K: +/-10, Z: +80/-20) | Rating | Size<br><br>2=>0402, 3=>0603, 5=>0805<br>6=>1206, 0=>1210 |
|---------------|-------|---|--------|---|
| SCD1U10V2MX-1 | 0.1uF | M/X5R   | 10V    | 0402  |
| SC10U6D3V5MX  | 10uF  | M/X5R   | 6.3V   | 0805  |
| SC2D2U16V5ZY  | 2.2uF | Z/Y5V   | 16V    | 0805  |

The naming rule is  
Capacitor type + value + rating + size + tolerance + material  
SCD1U10V2MX-1  
SC=> SMT Ceramic, TC=> POS cap or SP cap  
D1U => 0.1uF  
10V => the voltage rating is 10V  
2=> 0402, 3=>0603, 5=>0805  
M=>tolerance M, K, Z  
X=> X7R/X5R, Y=> Y5V  
-1 => symbol version, nonsense to EE characteristic

LRV3 MB



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Title

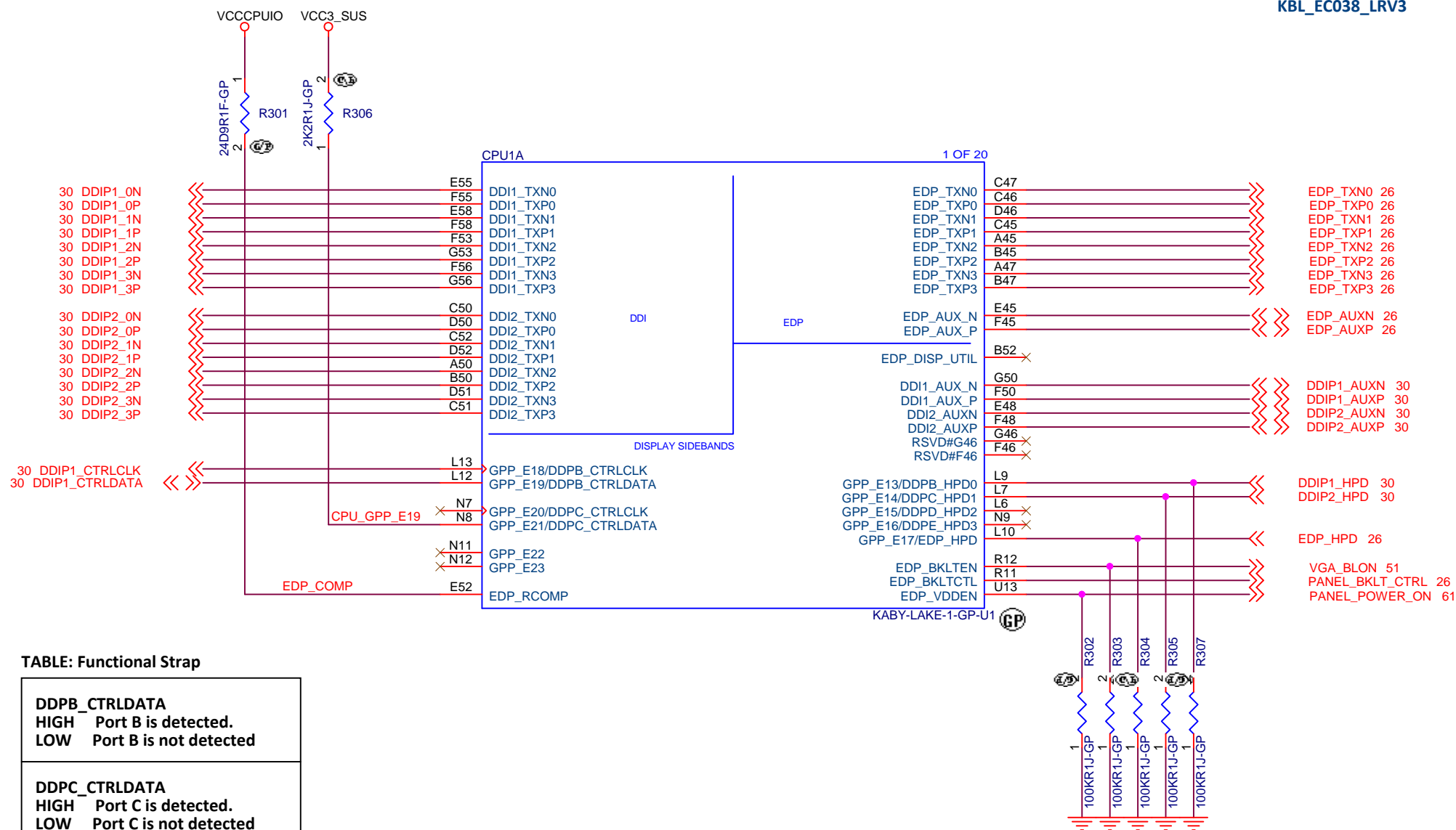
**Description**

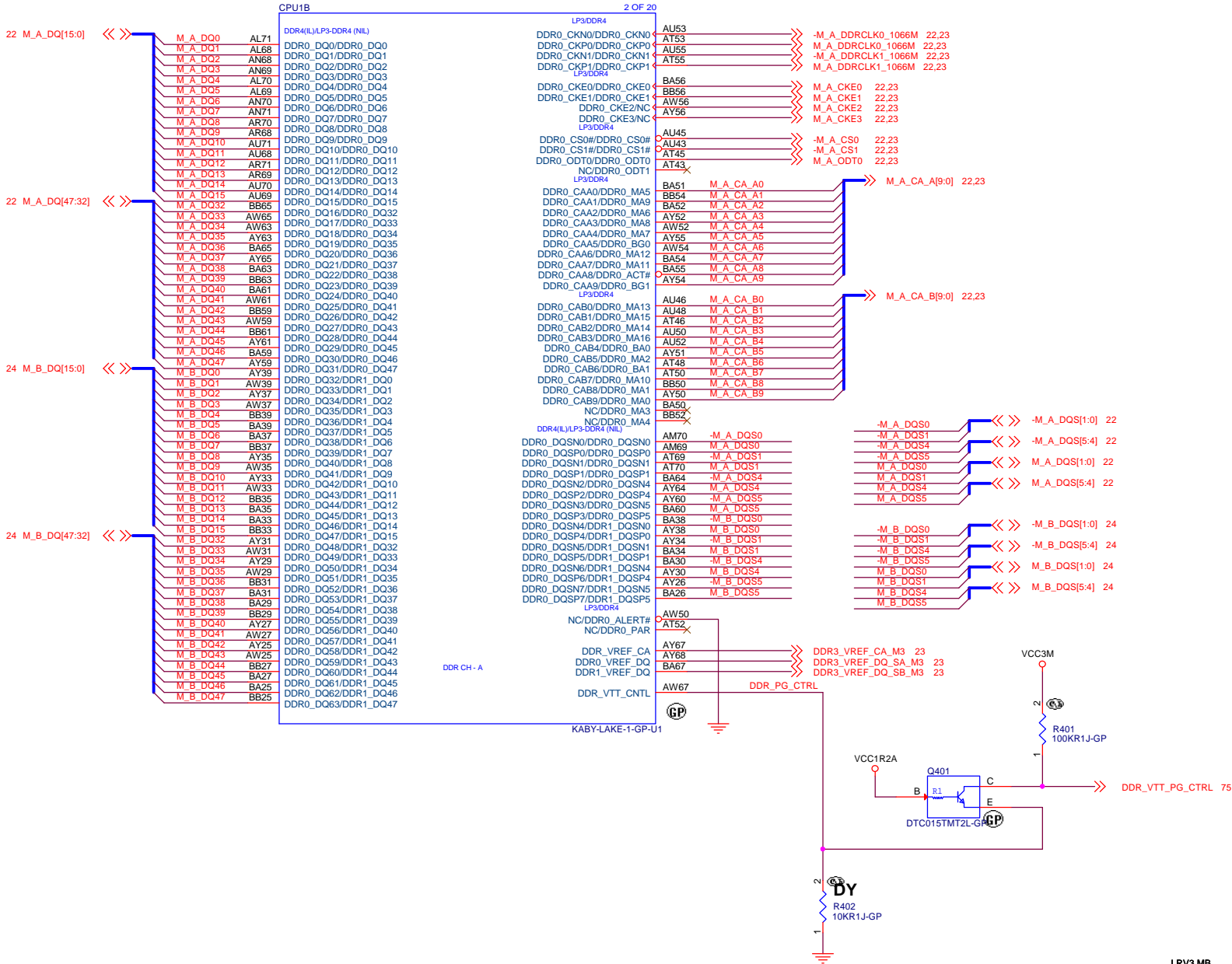
Size  
A4

Document Number  
**Raven-3**

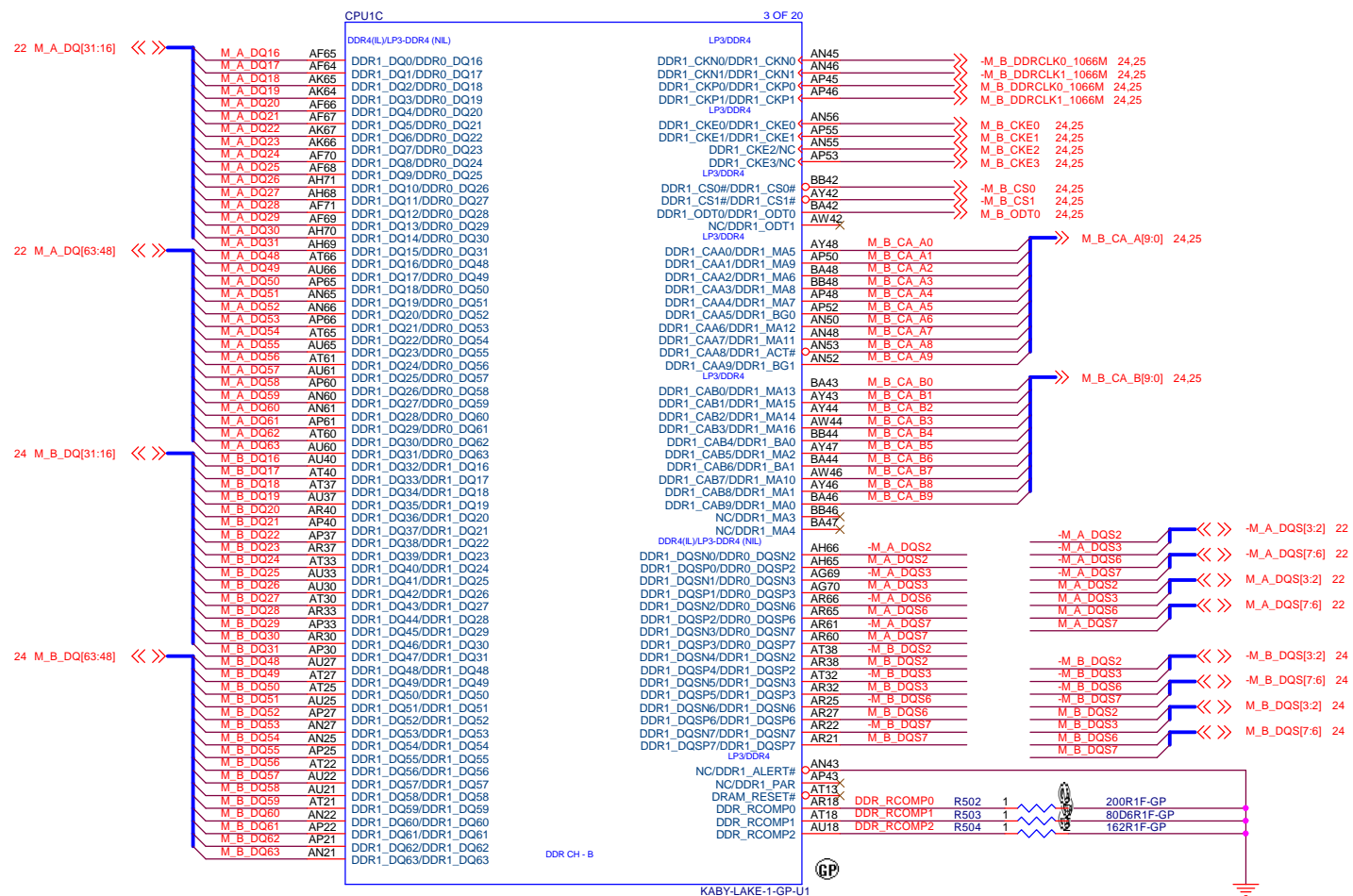
Rev  
**1**

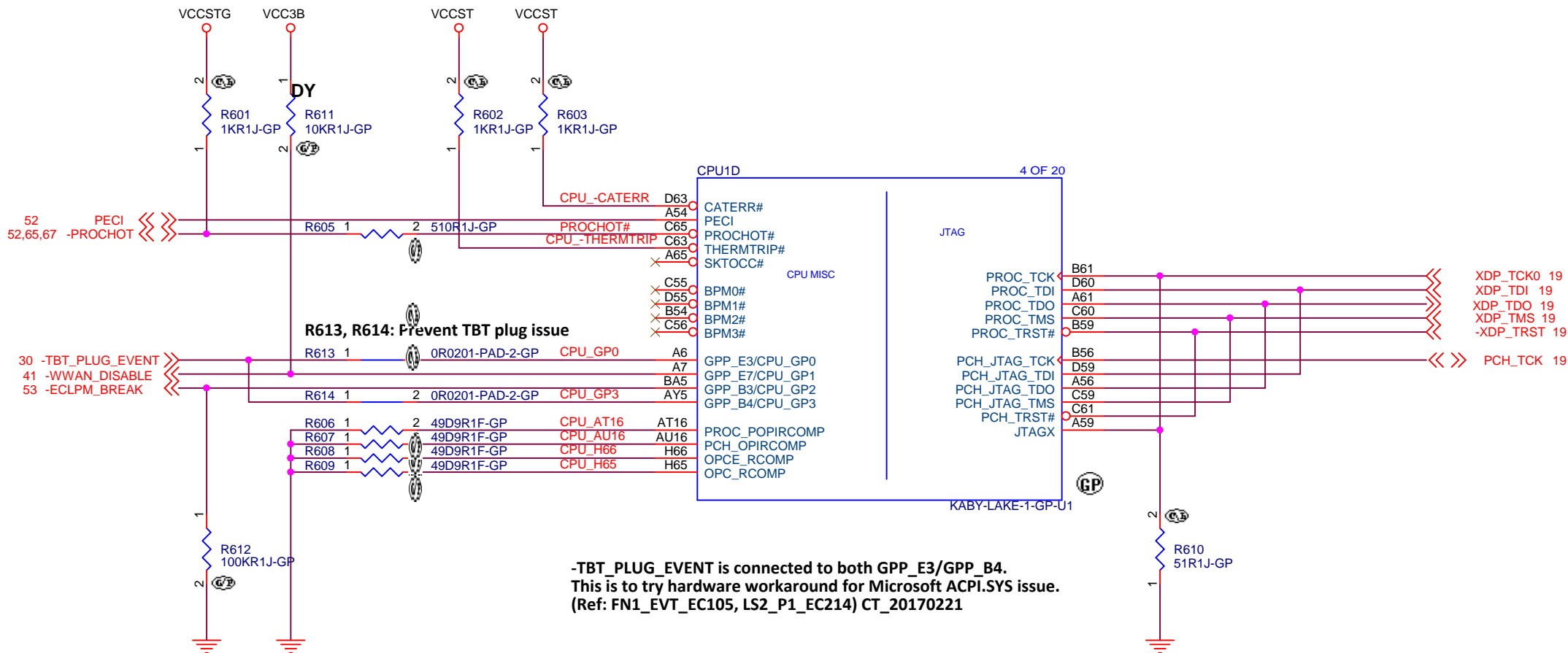
Date: Wednesday, January 17, 2018Sheet 2 of 89











-ECLPM\_BREAK = EC Low Power Mode Break

Equivalent role to -CS\_DTCT on Graf-1/1.5 but high/low logic is reversed

| Modern Standby State  | -ECLPM_BREAK | Embedded Controller |
|-----------------------|--------------|---------------------|
| Operation (S0)        | Low          | Normal Mode         |
| Modern Standby (S0ix) | High         | Low Power Mode      |

CT\_20170217

LRV3 MB

|  |                                |                     |              |
|--|--------------------------------|---------------------|--------------|
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| Title <b>CPU(4/16) : MISC/JTAG</b>   |                                |                     |              |
| Size A4  | Document Number <b>Raven-3</b> |                     | Rev <b>1</b> |
| Date: Wednesday, January 17, 2018  |                                | Sheet 6             | of 89        |

TABLE: Functional Strap

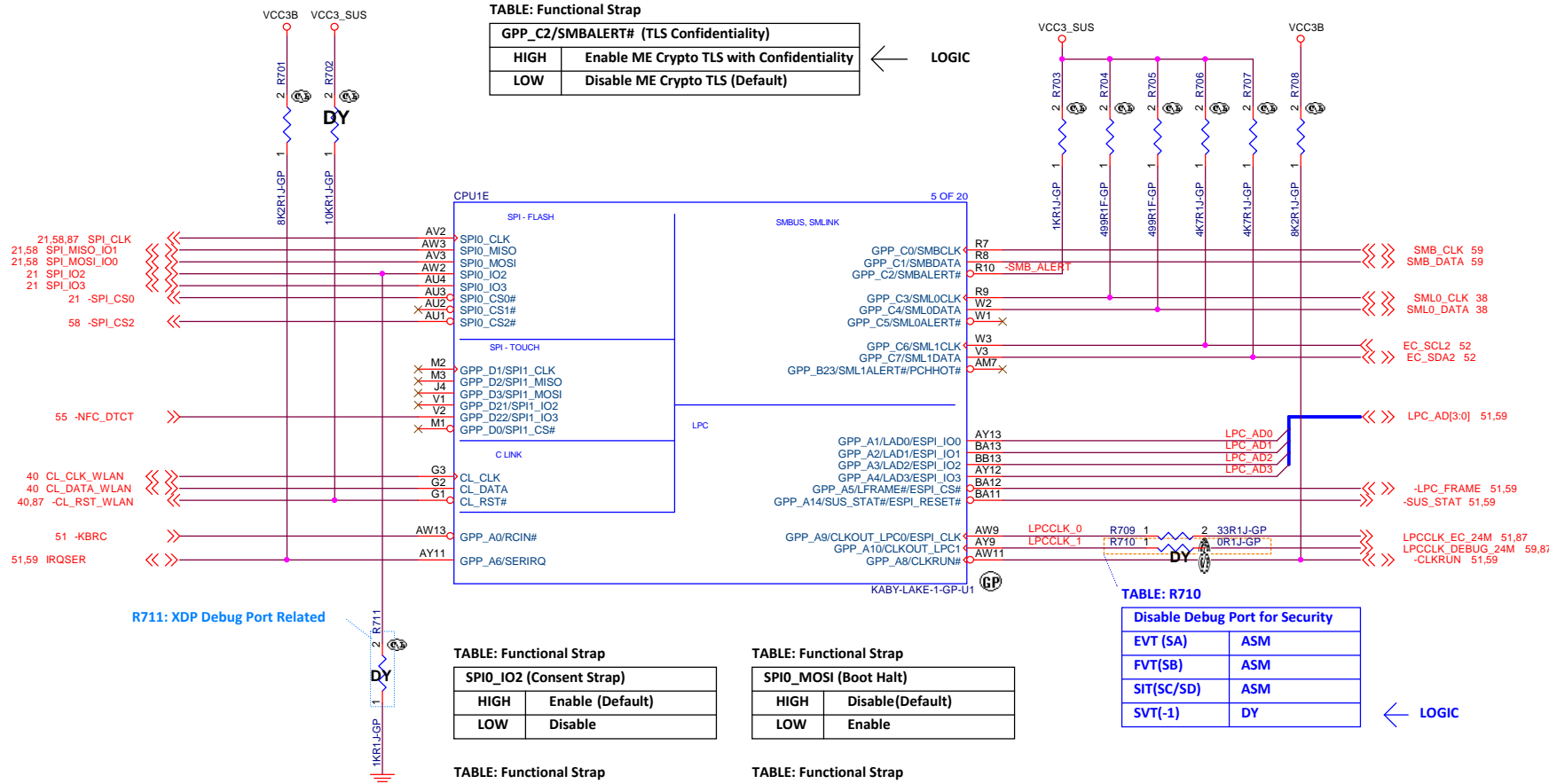
| GPP_C5/SML0ALERT# (LPC or eSPI) |                           |
|---------------------------------|---------------------------|
| HIGH                            | eSPI is selected          |
| LOW                             | LPC is selected (Default) |

← LOGIC

TABLE: Functional Strap

| GPP_C2/SMBALERT# (TLS Confidentiality) |   |
|--|---|
| HIGH                                   | Enable ME Crypto TLS with Confidentiality |
| LOW                                    | Disable ME Crypto TLS (Default)           |

← LOGIC



R711: XDP Debug Port Related

TABLE: R710

| Disable Debug Port for Security |     |
|---------------------------------|-----|
| EVT (SA)                        | ASM |
| FVT(SB)                         | ASM |
| SIT(SC/SD)                      | ASM |
| SVT(-1)                         | DY  |

← LOGIC

TABLE: Functional Strap

| SPI0_IO2 (Consent Strap) |                  |
|--------------------------|------------------|
| HIGH                     | Enable (Default) |
| LOW                      | Disable          |

TABLE: Functional Strap

| SPI0_MOSI (Boot Halt) |                  |
|-----------------------|------------------|
| HIGH                  | Disable(Default) |
| LOW                   | Enable           |

TABLE: Functional Strap

| SPI0_IO3 (A0 Personality Strap) |                  |
|---------------------------------|------------------|
| HIGH                            | Disable(Default) |
| LOW                             | Enable           |

TABLE: Functional Strap

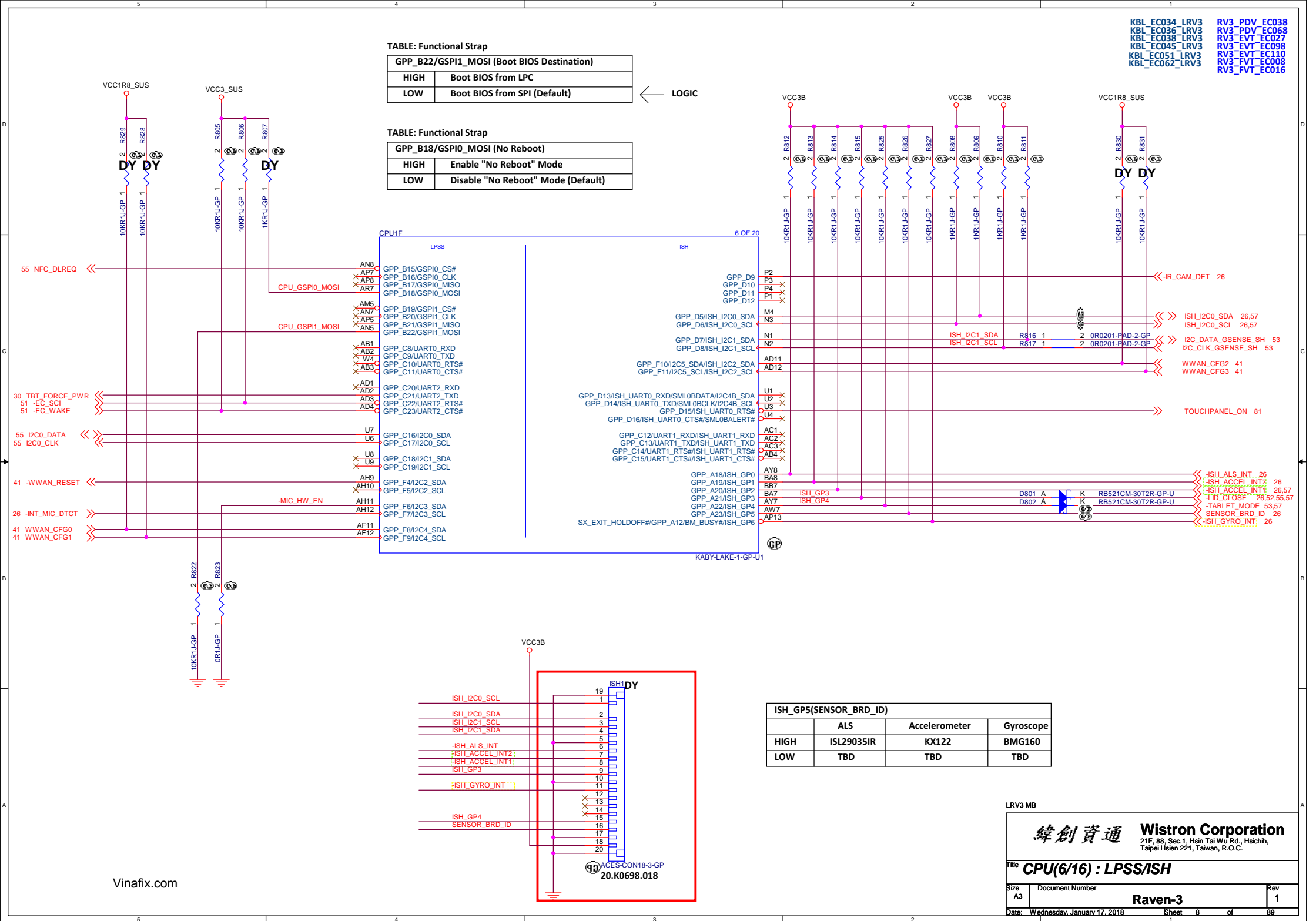
| SPI0_MISO (JTAG ODT Disable) |                  |
|------------------------------|------------------|
| HIGH                         | Enable (Default) |
| LOW                          | Disable          |

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Title CPU(5/16) : LPC/SPI/SMBUS

Size A3 Document Number Raven-3 Rev 1  
Date: Wednesday, January 17, 2018 Sheet 7 of 89



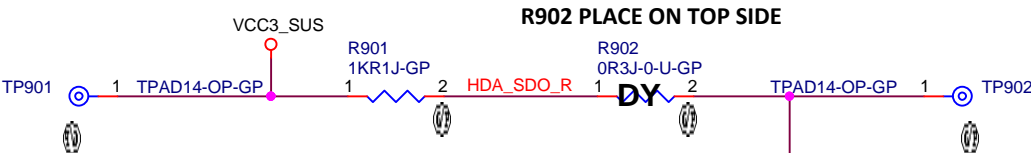


TABLE: Functional Strap

| HDA_SDO/I2S0_TXD                   |  |
|------------------------------------|--|
| Flash Descriptor Security Override |  |
| HIGH                               | Disable Flash Descriptor Security (Override) |
| LOW                                | Enable Flash Descriptor Security (Default)   |

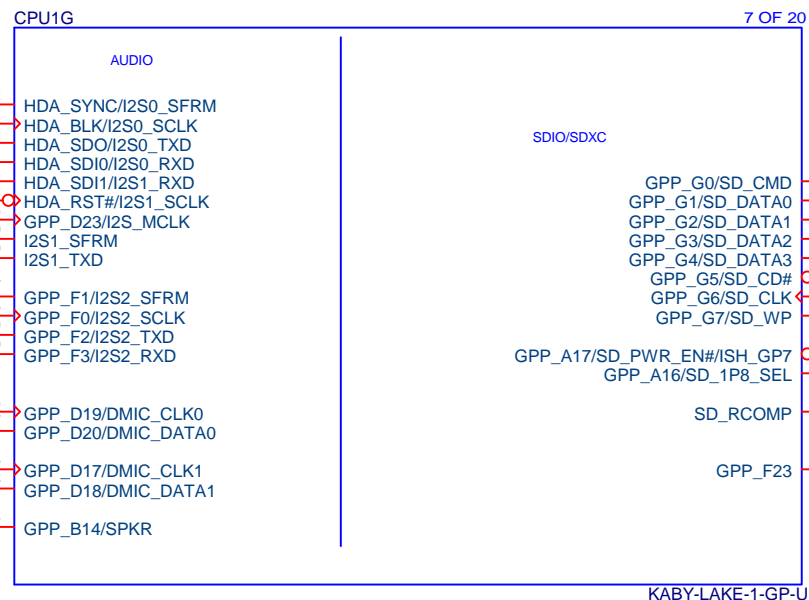
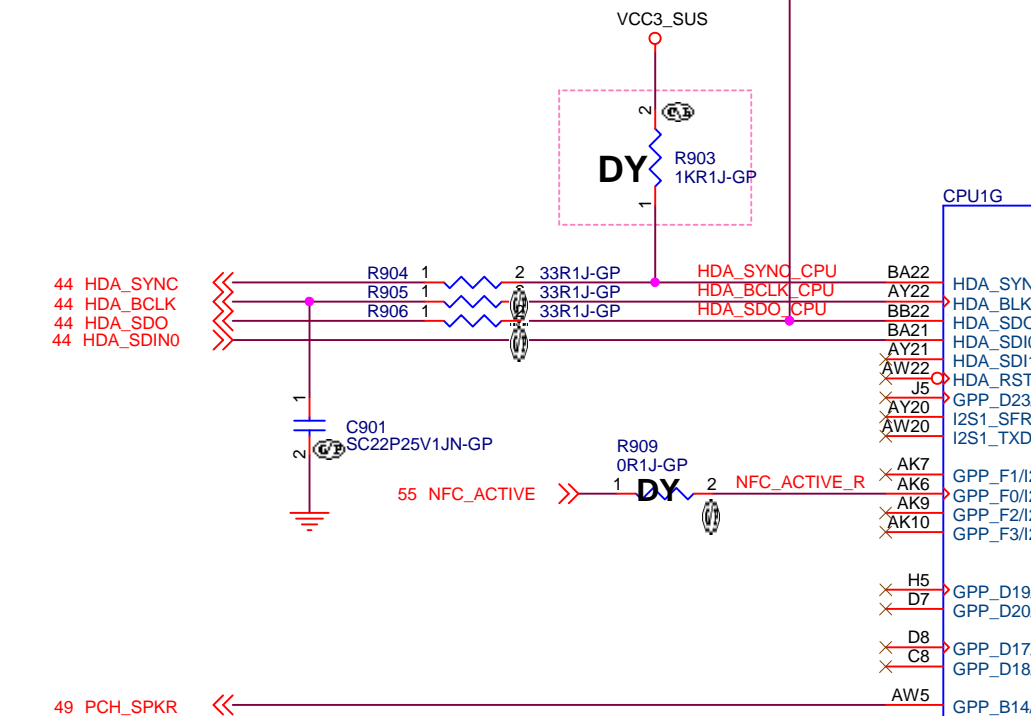


TABLE: Functional Strap

| GPP_B14/SPKR (Top Swap Override) |                                   |
|----------------------------------|-----------------------------------|
| HIGH                             | Enable "Top Swap" Mode            |
| LOW                              | Disable "Top Swap" Mode (Default) |

← LOGIC

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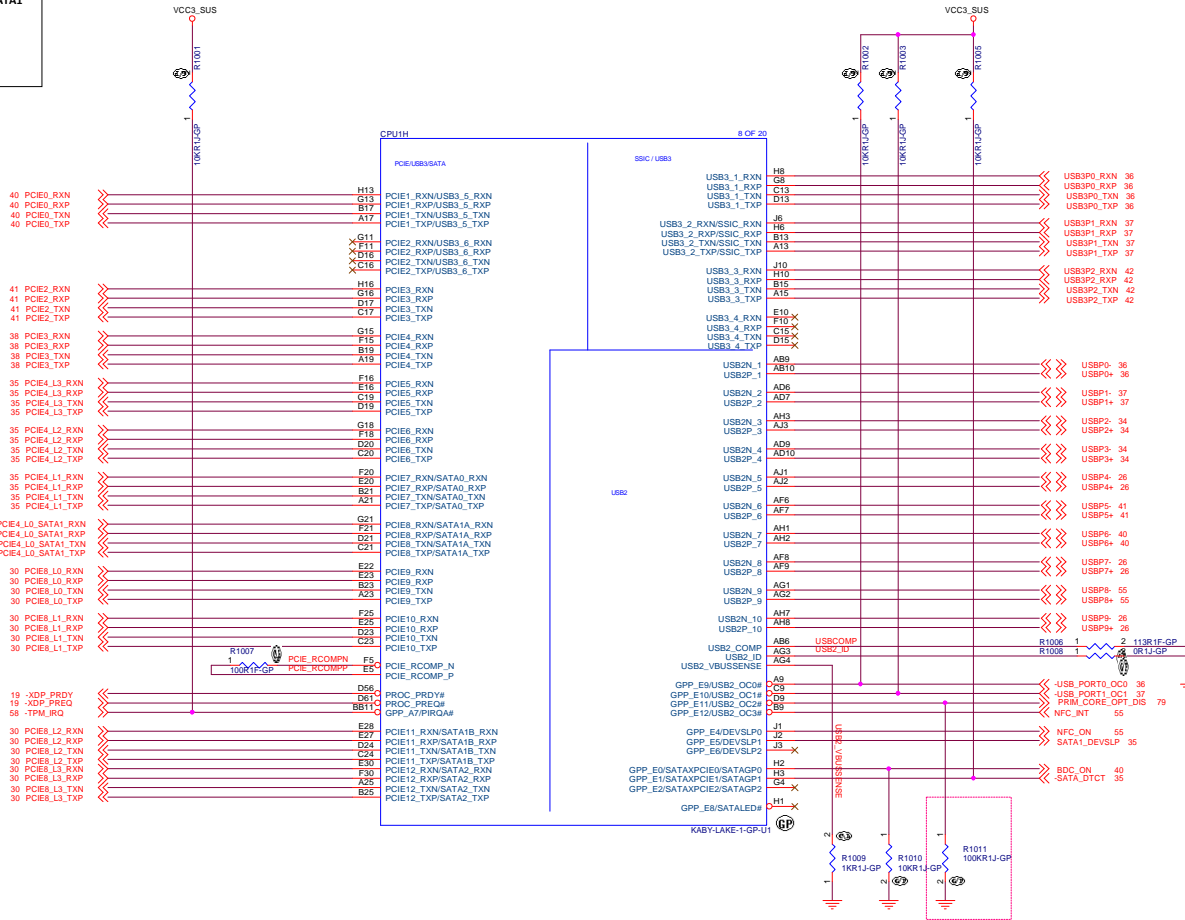
Title CPU(7/16) : AUDIO/SDXC

|                                   |                         |       |
|-----------------------------------|-------------------------|-------|
| Size A4                           | Document Number Raven-3 | Rev 1 |
| Date: Wednesday, January 17, 2018 | Sheet 9 of              | 89    |

| Flexible I/O Configuration |                    |               |                |
|----------------------------|--------------------|---------------|----------------|
| I/O                        | High Speed Signals | Configuration | Net Name       |
| Port 1                     | USB3 1             | USB3 1        | USB3P0         |
| Port 2                     | USB3 2/SSIC        | USB3 2        | USB3P1         |
| Port 3                     | USB3 3             | USB3 3        | USB3P2         |
| Port 4                     | USB3 4             | USB3 4        | N/A            |
| Port 5                     | USB3 5/PCIE 1      | PCIE 1        | PCIE0          |
| Port 6                     | USB3 6/PCIE 2      | PCIE 2        | N/A            |
| Port 7                     | PCIE 3 (GbE)       | PCIE 3        | PCIE2          |
| Port 8                     | PCIE 4 (GbE)       | PCIE 4 (GbE)  | PCIE3          |
| Port 9                     | PCIE 5 (GbE)       | PCIE 5 (x4)   | PCIE4_L3       |
| Port 10                    | PCIE 6             | PCIE 6 (x4)   | PCIE4_L2       |
| Port 11                    | PCIE 7/SATA 0      | PCIE 7 (x4)   | PCIE4_L1       |
| Port 12                    | PCIE 8/SATA 1A     | GPIO STRAP    | PCIE4_L0_SATA1 |
| Port 13                    | PCIE 9 (GbE)       | PCIE 9 (x4)   | PCIE8_L0       |
| Port 14                    | PCIE 10 (GbE)      | PCIE 10 (x4)  | PCIE8_L1       |
| Port 15                    | PCIE 11/SATA 1B    | PCIE 11 (x4)  | PCIE8_L2       |
| Port 16                    | PCIE 12/SATA 2     | PCIE 12 (x4)  | PCIE8_L3       |

| PCIE Port Assignment |                               |
|----------------------|-------------------------------|
| 0                    | M.2 WLAN Slot Port 0 for WLAN |
| 1                    | N/A                           |
| 2                    | M.2 WWAN Slot                 |
| 3                    | GbE PHY                       |
| 4 (x4)               | PCIE SSD                      |
| 8 (x4)               | Thunderbolt                   |

| SATA Port Assignment |           |
|----------------------|-----------|
| 0                    | (PCIE 7)  |
| 1A                   | SATA SSD  |
| 1B                   | (PCIE 11) |
| 2                    | (PCIE 12) |



| USB 3.0 Port Assignment |                           |
|-------------------------|---------------------------|
| 0                       | USB 3.0 System Port (AOU) |
| 1                       | USB 3.0 System Port       |
| 2                       | Media Card Controller     |
| 3                       | (Reserved)                |
| 4                       | (PCIE 1)                  |
| 5                       | (PCIE 2)                  |

| USB Port Assignment |                           |
|---------------------|---------------------------|
| 0                   | USB 3.0 System Port (AOU) |
| 1                   | USB 3.0 System Port       |
| 2                   | TBT Port A (Type-C)       |
| 3                   | TBT Port B (Type-C)       |
| 4                   | IR Camera                 |
| 5                   | M.2 WWAN Slot             |
| 6                   | M.2 WLAN Slot for BT      |
| 7                   | USB Camera                |
| 8                   | Fingerprint Reader        |
| 9                   | Touch Panel               |



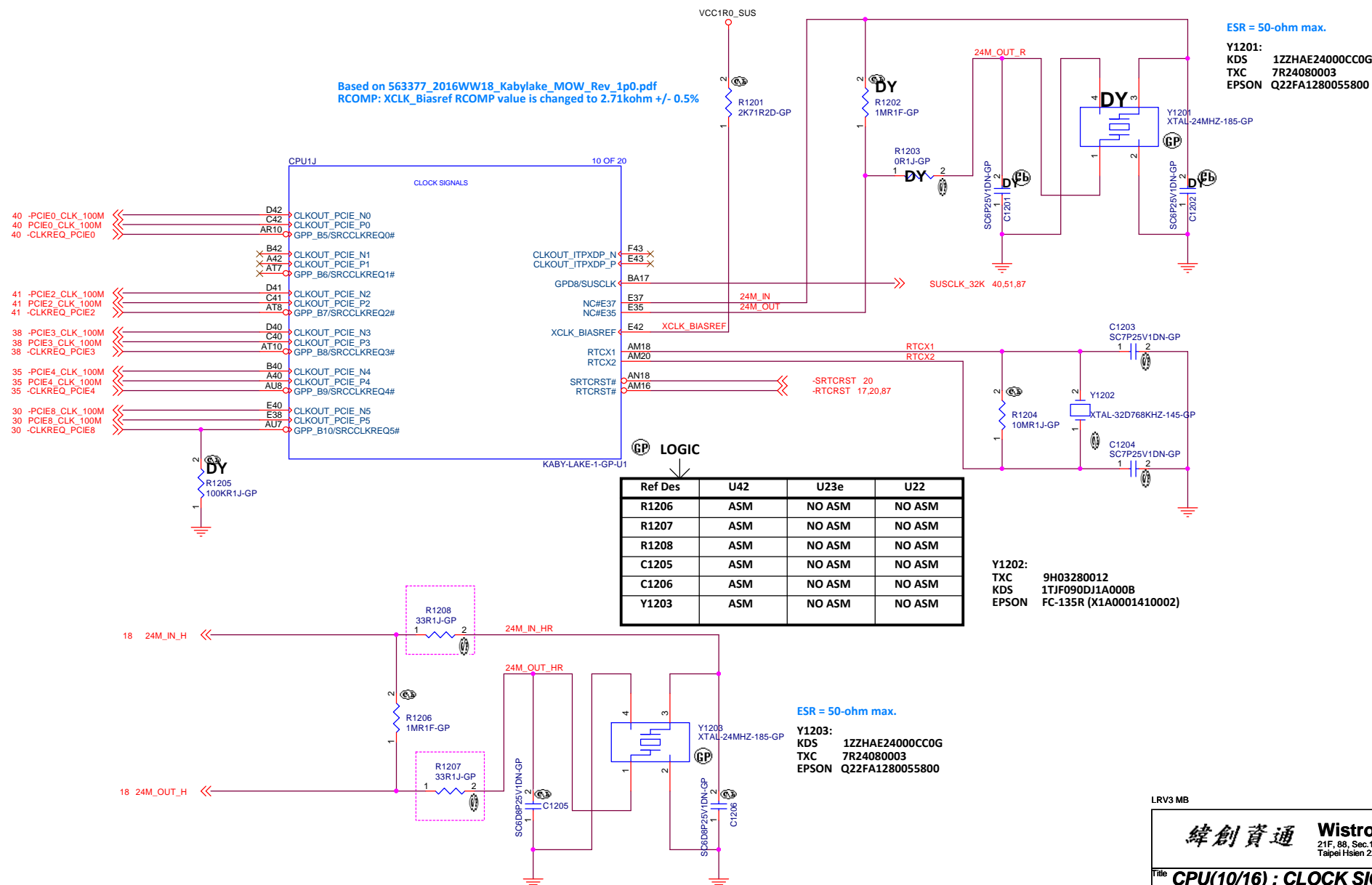
## LOGIC

KBL\_EC038\_LRV3  
KBL\_EC081\_LRV3

RV3\_PDV\_EC002  
RV3\_EVT\_EC009  
RV3\_EVT\_EC058

| Ref Des | U42    | U23e | U22 |
|---------|--------|------|-----|
| R1202   | NO ASM | ASM  | ASM |
| R1203   | NO ASM | ASM  | ASM |
| C1201   | NO ASM | ASM  | ASM |
| C1202   | NO ASM | ASM  | ASM |
| Y1201   | NO ASM | ASM  | ASM |

Based on 563377\_2016WW18\_Kabylake\_MOW\_Rev\_1p0.pdf  
RCOMP: XCLK\_Biasref RCOMP value is changed to 2.71kohm +/- 0.5%



Vinafix.com

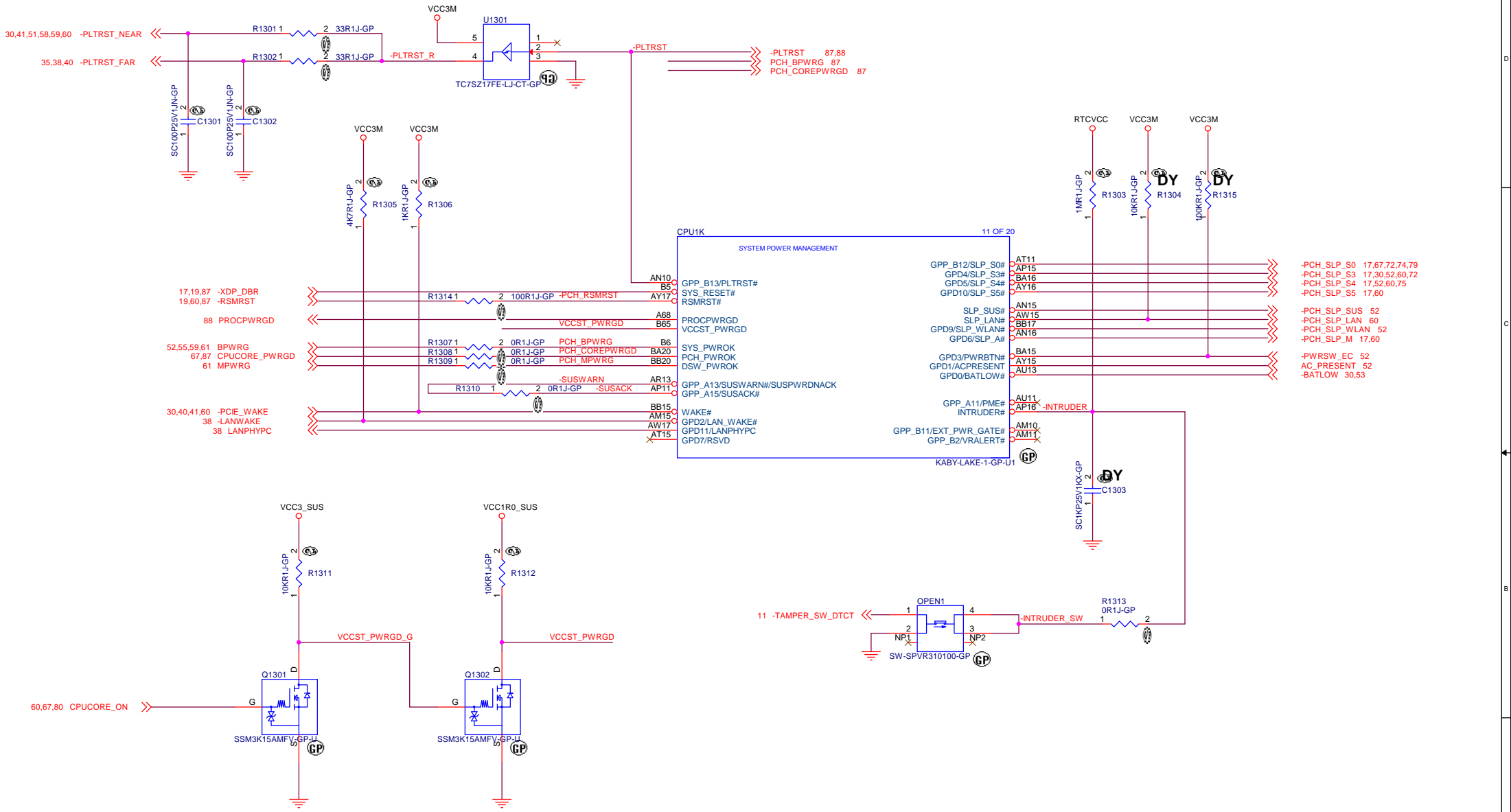
LRV3 MB

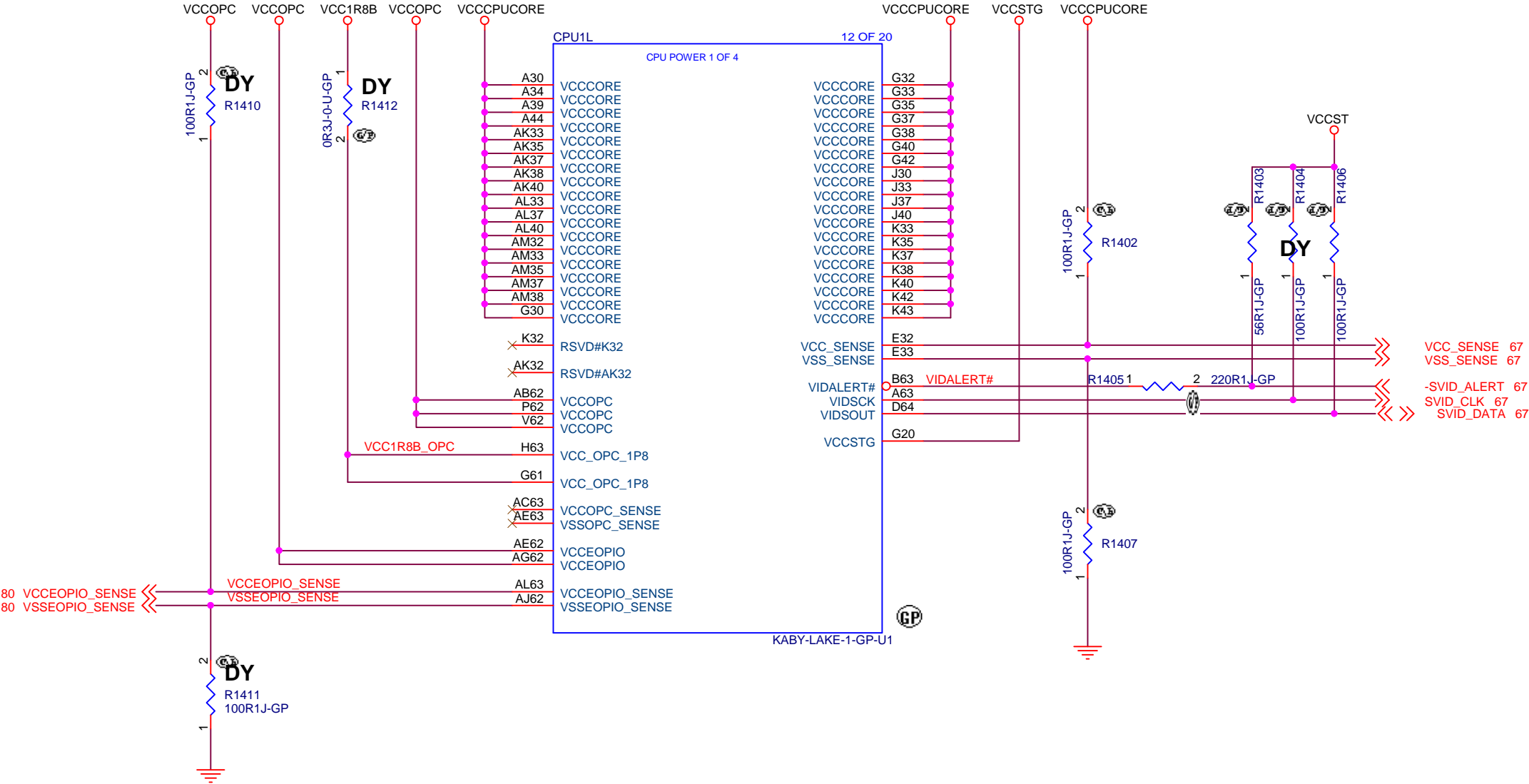
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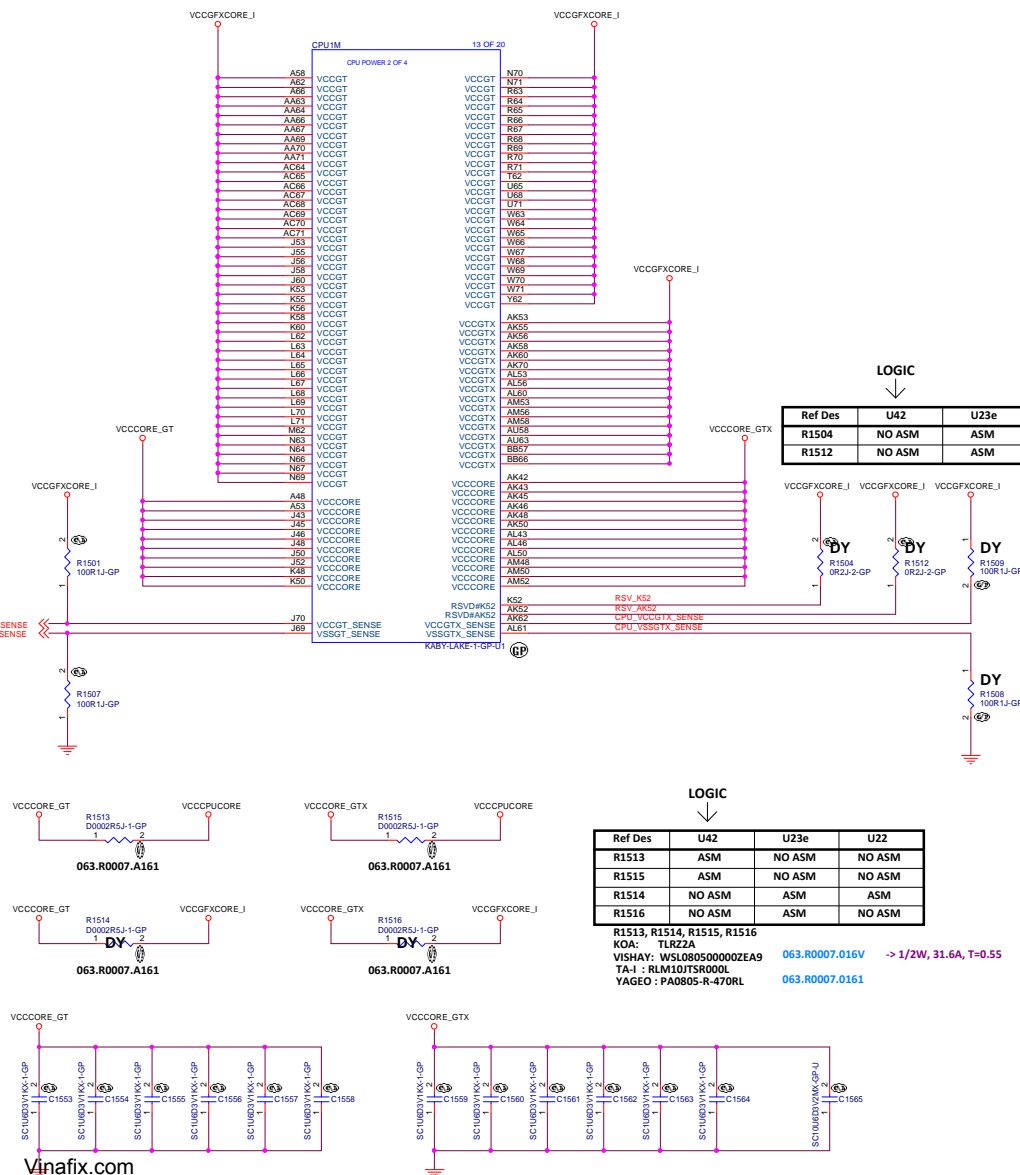
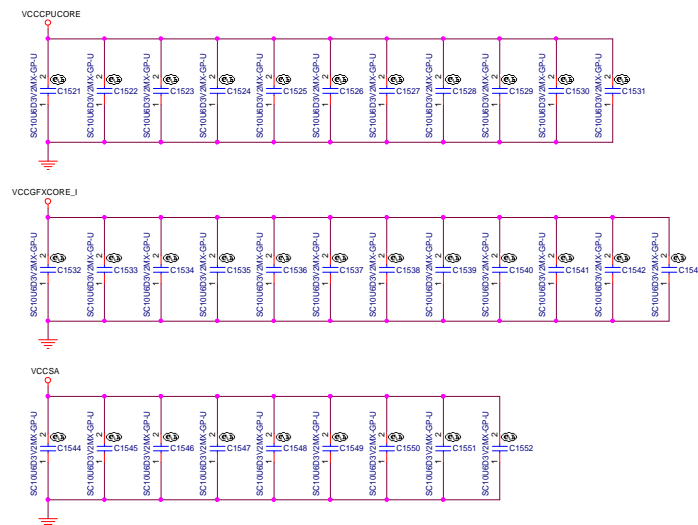
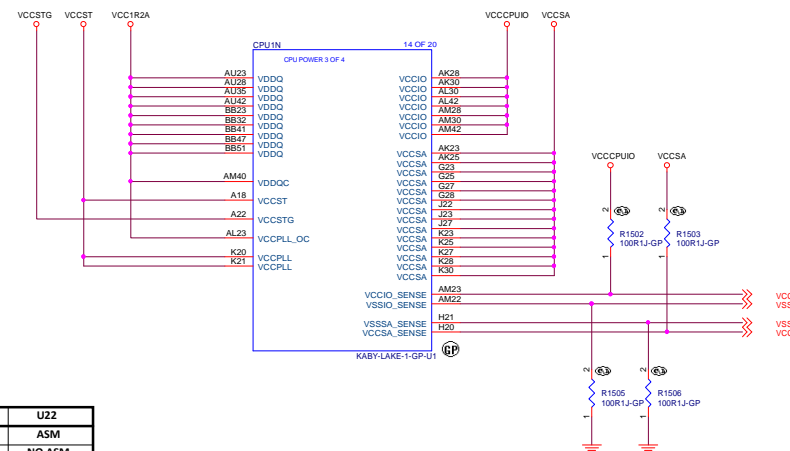
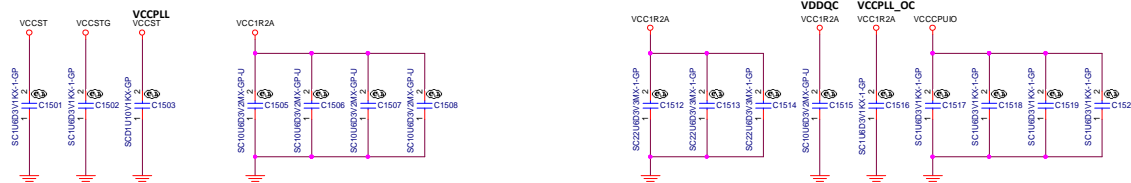
Title CPU(10/16) : CLOCK SIGNALS

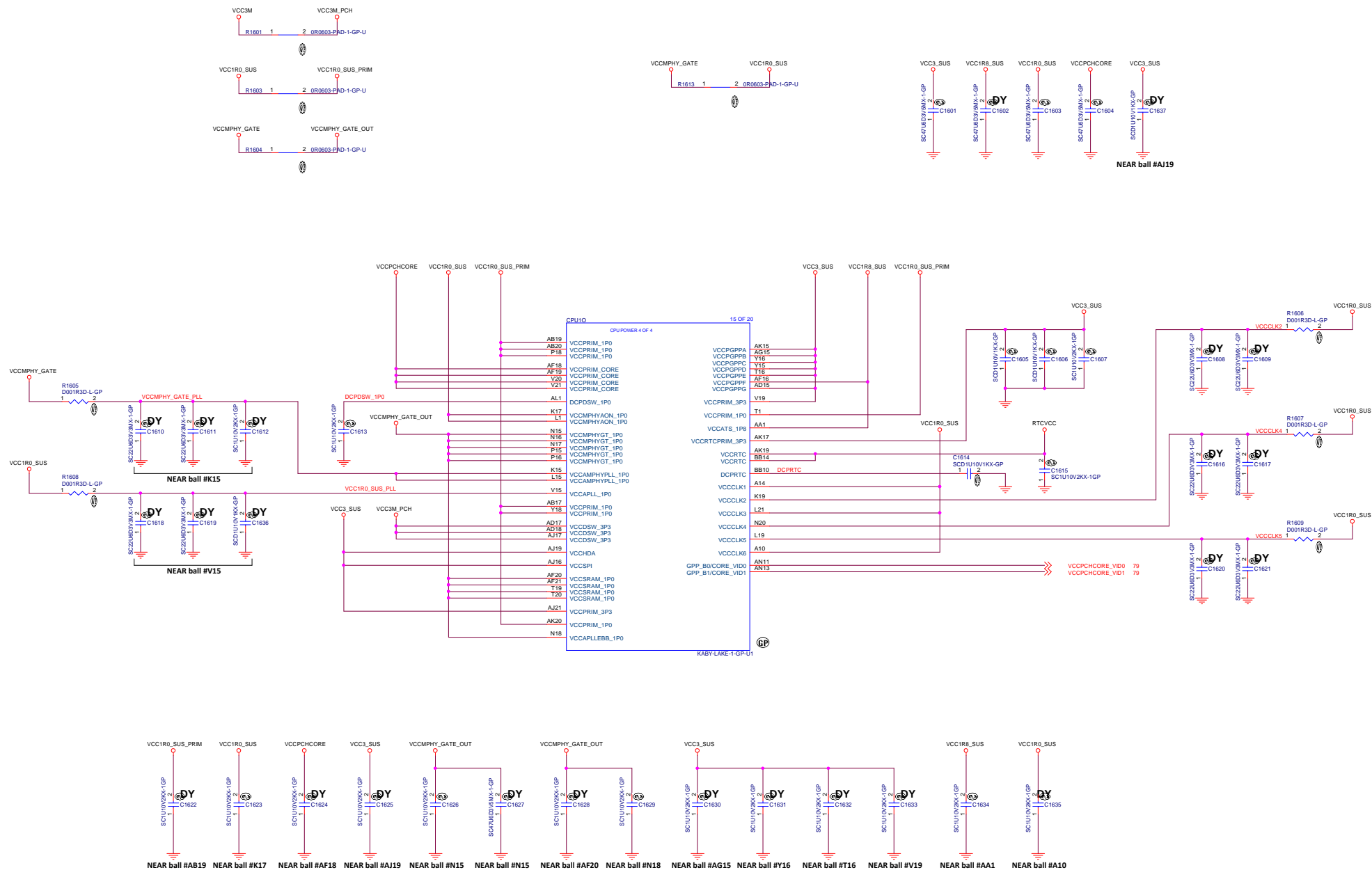
Size A3 Document Number Raven-3 Rev 1  
Date: Wednesday, January 17, 2018 Sheet 12 of 89

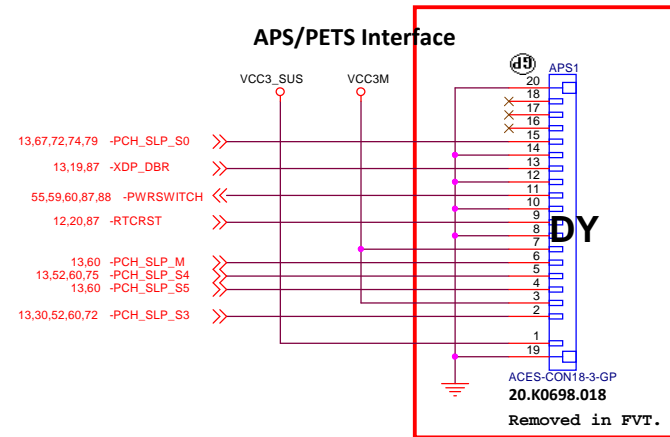
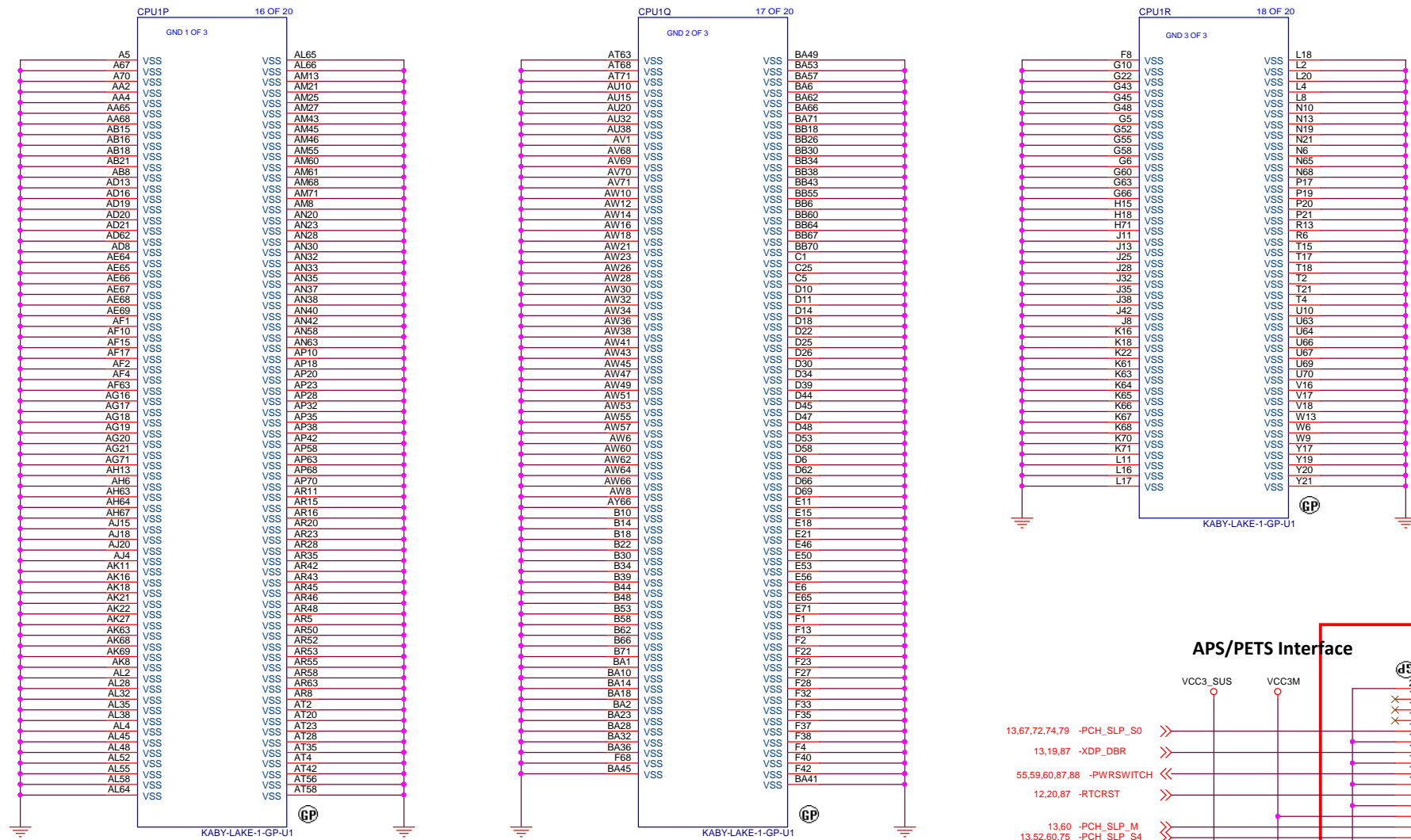






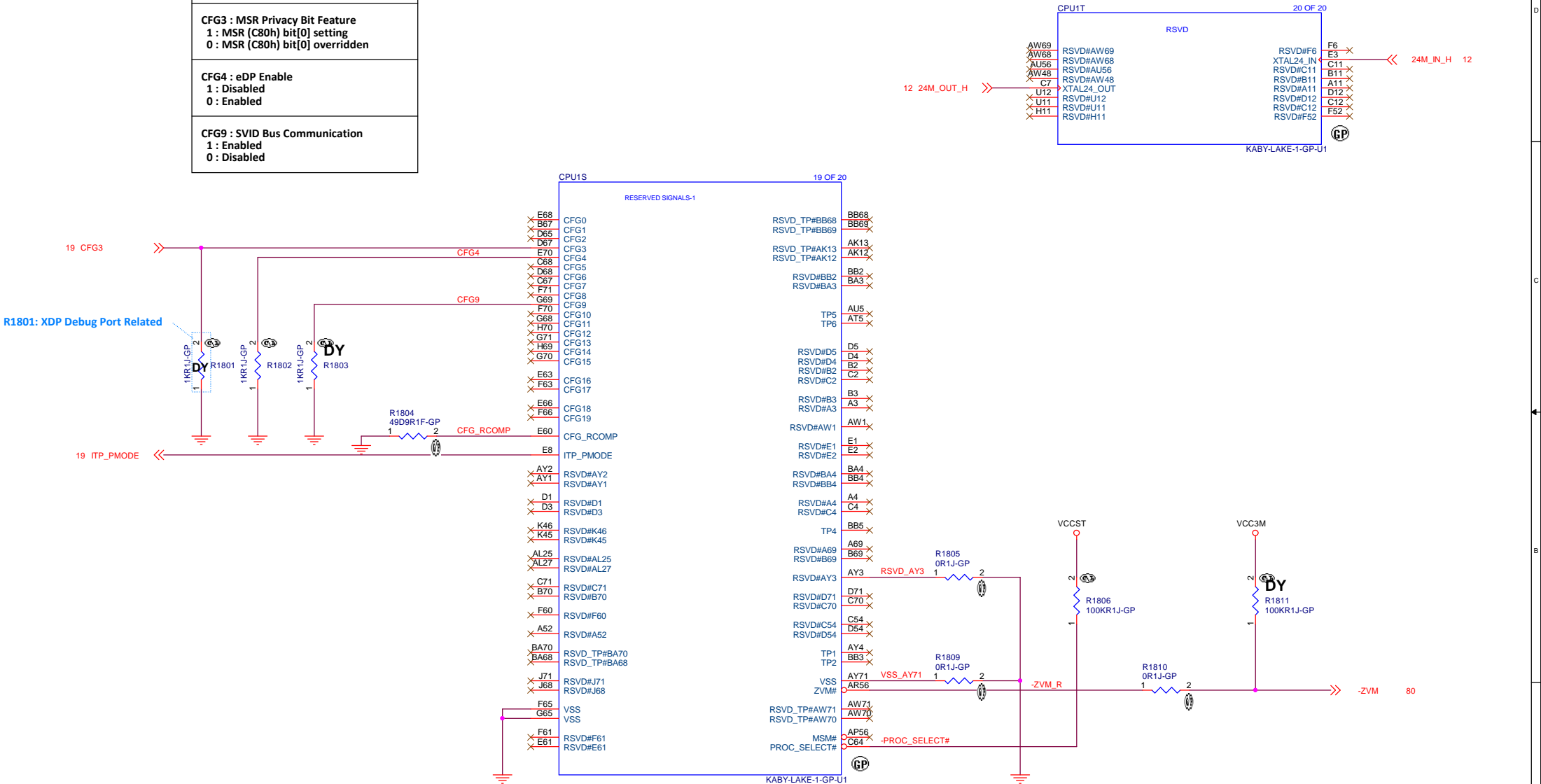






TABLE

|   |
|---|
| CFG0 : Stall Reset Sequence<br>after PCU PLL Lock until de-asserted<br>1 : No Stall<br>0 : Stall    |
| CFG3 : MSR Privacy Bit Feature<br>1 : MSR (C80h) bit[0] setting<br>0 : MSR (C80h) bit[0] overridden |
| CFG4 : eDP Enable<br>1 : Disabled<br>0 : Enabled  |
| CFG9 : SVID Bus Communication<br>1 : Enabled<br>0 : Disabled  |



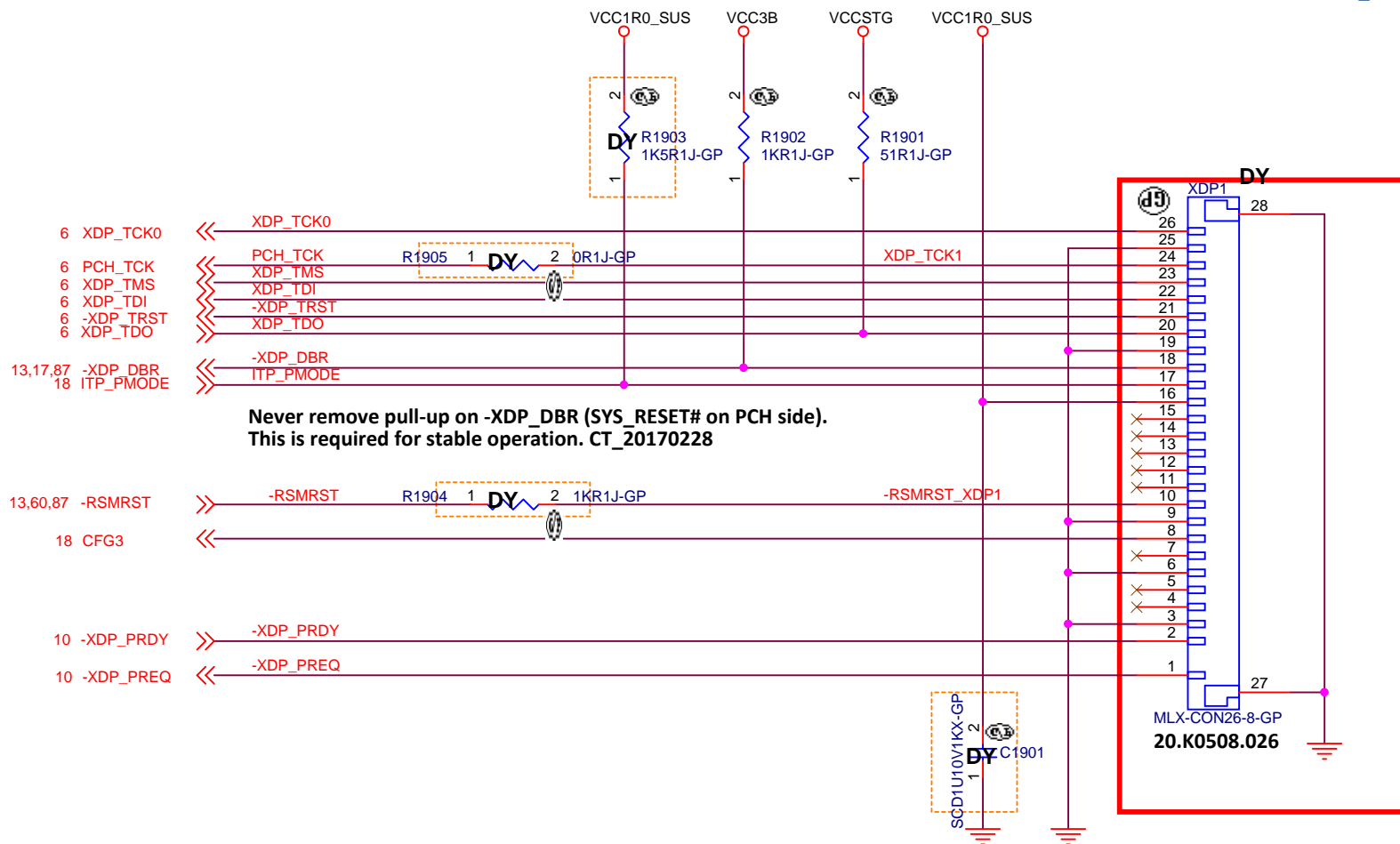
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Title CPU(16/16) : CFG/RESERVED

Size A3 Document Number Rev 1

Date: Wednesday, January 17, 2018 Sheet 18 of 89



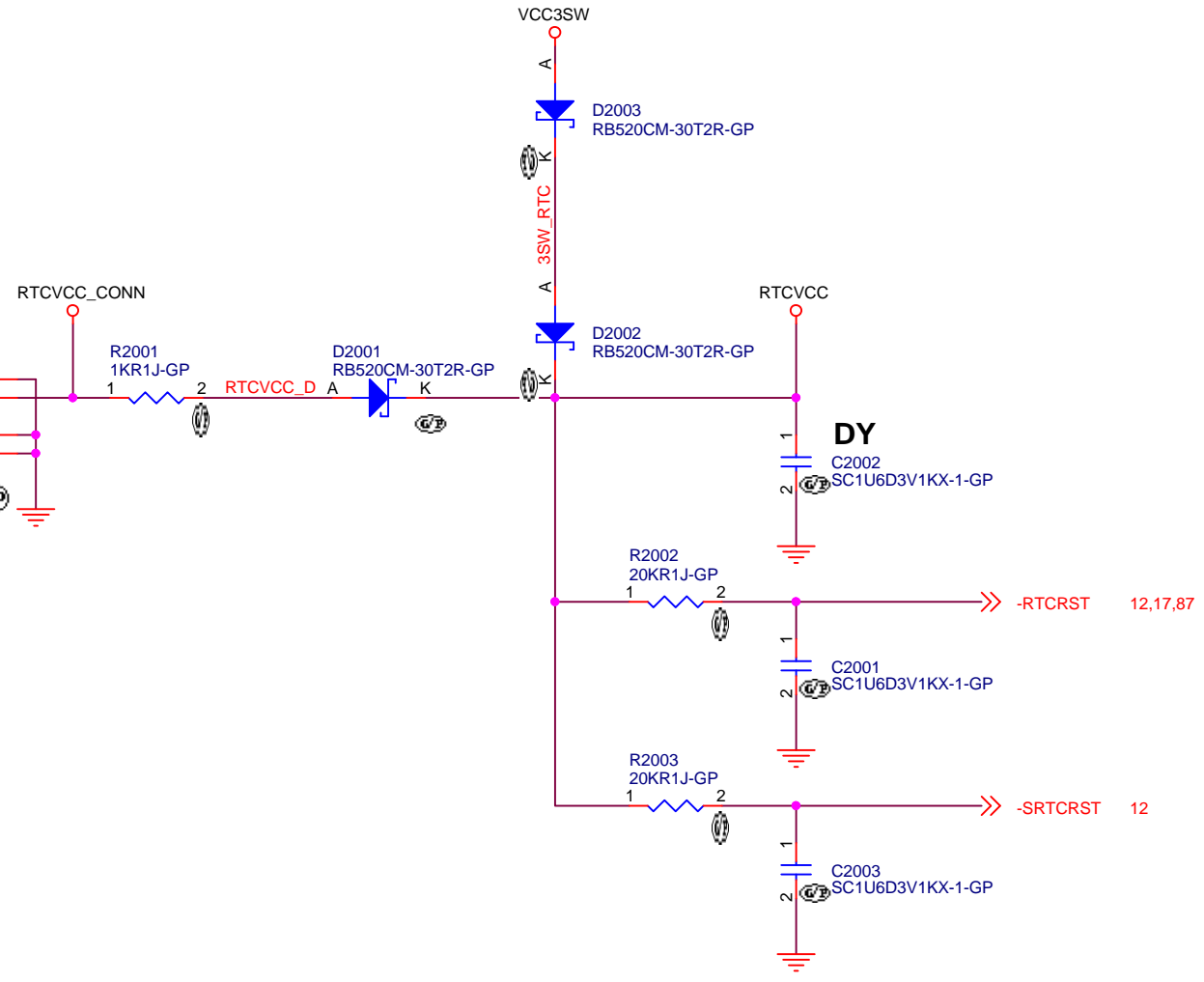
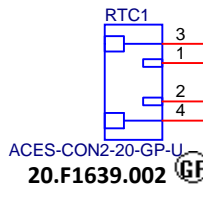
LOGIC  
↓

| Logic   | Ref Des | Merged | DCI2.0 |
|---------|---------|--------|--------|
| Page 7  | R711    | ASM    | NOASM  |
| Page 18 | R1801   | ASM    | NOASM  |
| Page 19 | XDP1    | ASM    | NOASM  |
|         | C1901   | ASM    | NOASM  |
|         | R1901   | ASM    | ASM    |
|         | R1902   | ASM    | ASM    |
|         | R1903   | ASM    | NOASM  |
|         | R1904   | ASM    | NOASM  |
|         | R1905   | ASM    | NOASM  |

LRV3 MB

|  |                         |
|--|-------------------------|
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| Title XDP CONNECTOR  |                         |
| Size A4  | Document Number Raven-3 |
| Date: Wednesday, January 17, 2018  | Rev 1                   |
| Sheet 19 of 89   |                         |

## RTC CONN



LRV3 MB

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Title **RTC BATTERY**

|                                   |                                   |                 |
|-----------------------------------|-----------------------------------|-----------------|
| Size<br>A4                        | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018 | Sheet 20 of 89                    |                 |



# 16MB SOIC8 (U2101)

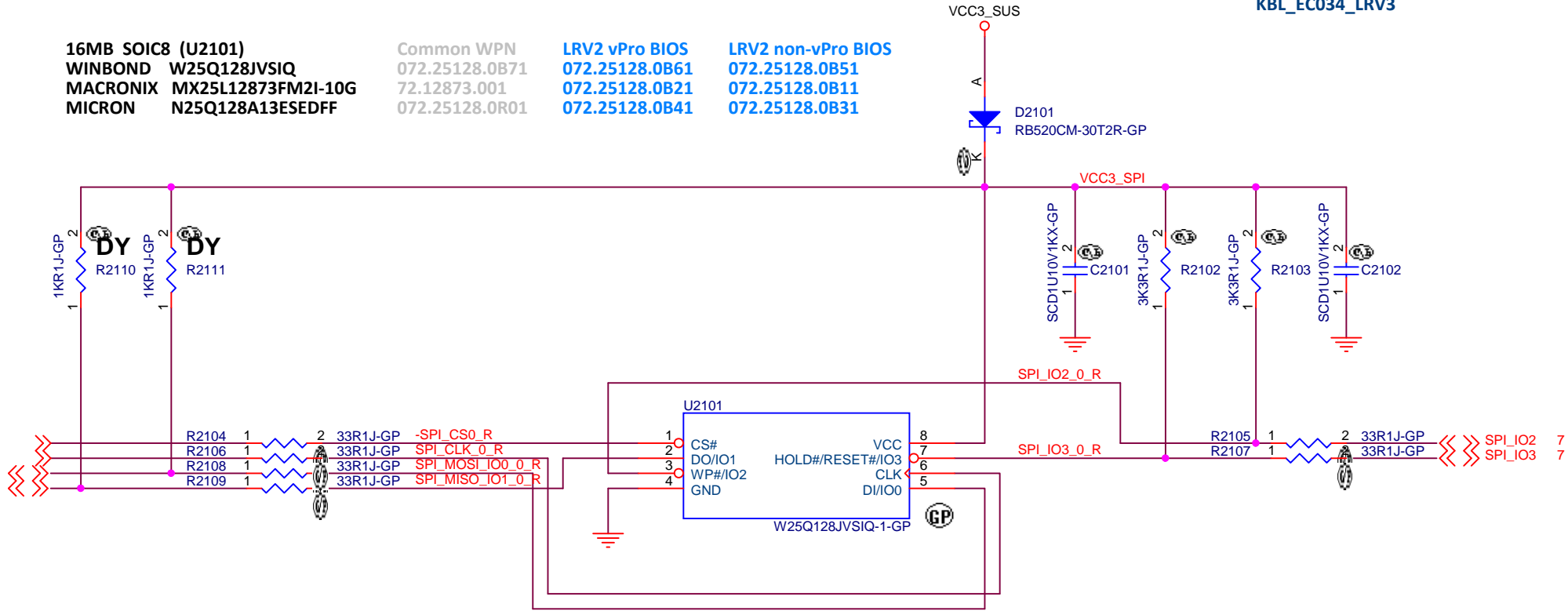
WINBOND W25Q128JVSQ  
MACRONIX MX25L12873FM2I-10G  
MICRON N25Q128A13EEDFF

Common WPN  
072.25128.0B71  
72.12873.001  
072.25128.0R01

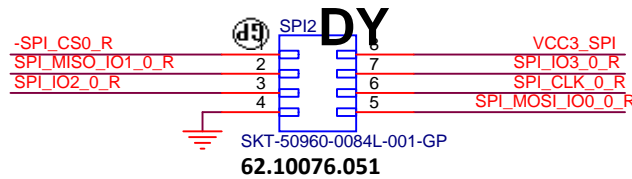
LRV2 vPro BIOS  
072.25128.0B61  
072.25128.0B21  
072.25128.0B41

LRV2 non-vPro BIOS  
072.25128.0B51  
072.25128.0B11  
072.25128.0B31

KBL\_EC033\_LRV3  
KBL\_EC034\_LRV3  
RV3\_EVT\_EC008



## SPI ROM Socket (SPI2)



## Co-Layout Design on U2101

TABLE: DediProg SF100

| SF100 PIN HEADER INTERFACE (TOP VIEW) |       |         |         |         |   |  |  |
|---------------------------------------|-------|---------|---------|---------|---|--|--|
| 1                                     | VCC   | D2101.K | GND     | GND     | 2 |  |  |
| 3                                     | CS#   | R2104.2 | R2106.2 | CLK     | 4 |  |  |
| 5                                     | MISO  | R2109.2 | R2108.2 | MOSI    | 6 |  |  |
| 7                                     | (KEY) | N/A     | N/A     | (RESET) | 8 |  |  |

LRV3 MB

緯創資通

**Wistron Corporation**

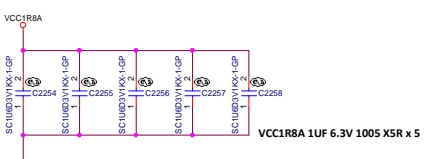
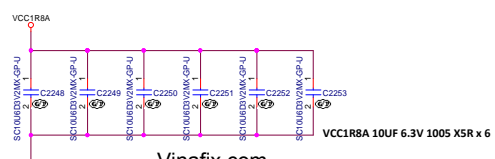
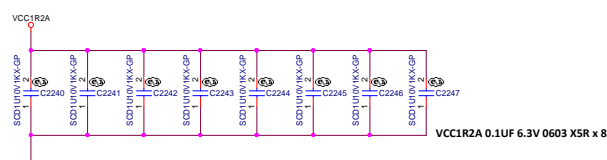
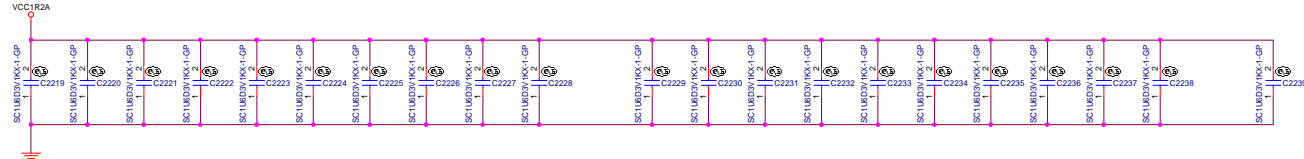
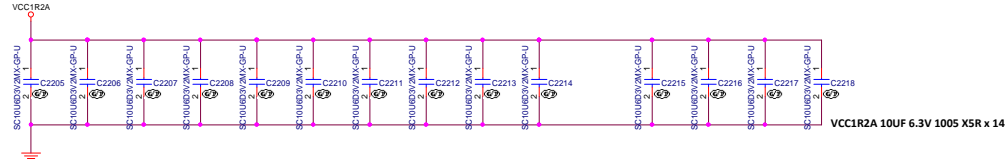
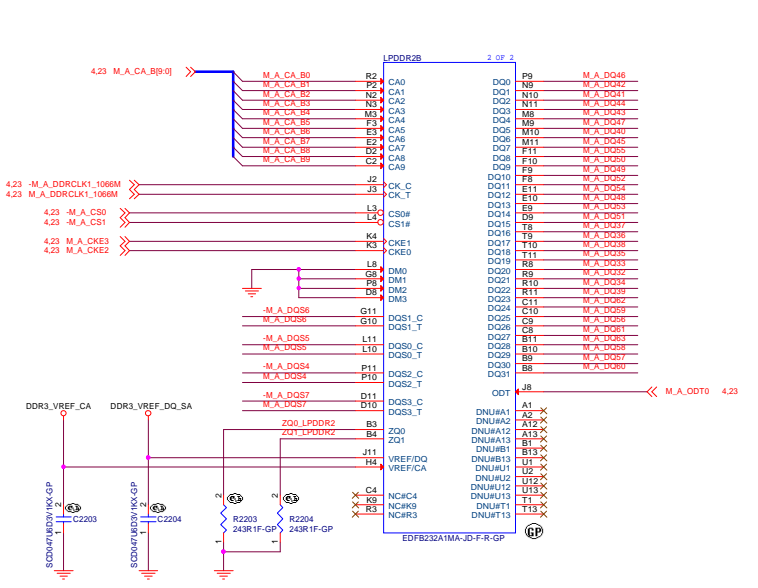
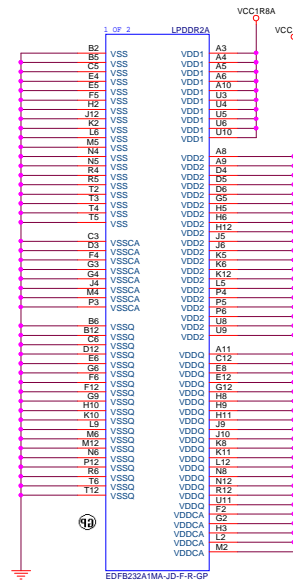
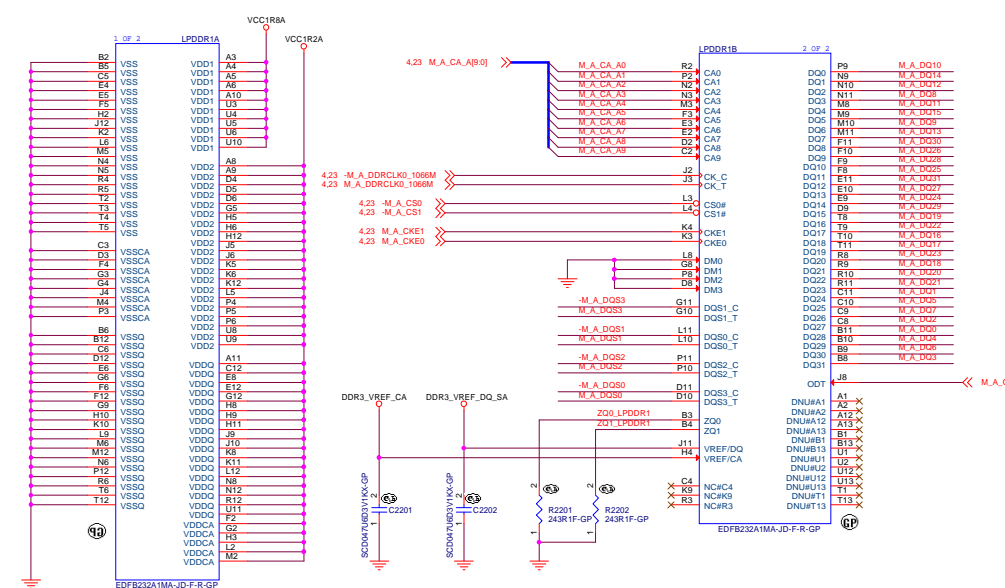
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title **SPI FLASH**

|                                   |                                   |                 |
|-----------------------------------|-----------------------------------|-----------------|
| Size<br>A4                        | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018 | Sheet 21 of 89                    |                 |



KBL\_EC004\_LRV3  
KBL\_EC005\_LRV3  
RV3\_PDV\_EC001  
RV3\_PDV\_EC009  
RV3\_PDV\_EC100  
RV3\_PDV\_EC107  
RV3\_PDV\_EC108  
RV3\_EVT\_EC007



### LPDDR3-2133

| Part Description     | Lenovo PN  | Supplier | Supplier PN              | Technology             | Package   |
|----------------------|------------|----------|--------------------------|------------------------|-----------|
| 16Gb x32 LPDDR3 2133 | SM30E51309 | Samsung  | K4E6E304EB-EGCG          | B-die / 20nm / 8Gb DDP | 11 x 11.5 |
| 16Gb x32 LPDDR3 2133 | SM30E51312 | SKHynix  | H9CCNNNB/TALAR-NVD       | A-die / 21nm / 8Gb DDP | 11 x 11.5 |
| 16Gb x32 LPDDR3 2133 | SM30E51315 | Micron   | MT52L512M32D2PF-093 WT:B | V01M / 20nm / 8Gb DDP  | 11 x 11.5 |
| 32Gb x32 LPDDR3 2133 | SM30E51310 | Samsung  | K4E6E304EB-EGCG          | B-die / 20nm / 8Gb QDP | 11 x 11.5 |
| 32Gb x32 LPDDR3 2133 | SM30E51313 | SKHynix  | H9CCNNNCLGALAR-NVD       | A-die / 21nm / 8Gb QDP | 11 x 11.5 |
| 32Gb x32 LPDDR3 2133 | SM30E51316 | Micron   | MT52L1G32D4PG-093 WT:B   | V01M / 20nm / 8Gb QDP  | 12 x 11.5 |

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Title

LPDDR3 CH-A (1/2)

Size

A2

Document Number

Raven-3

Date

Wednesday, January 17, 2018

Sheet

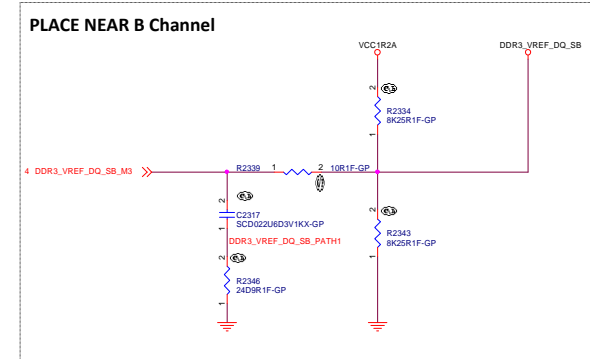
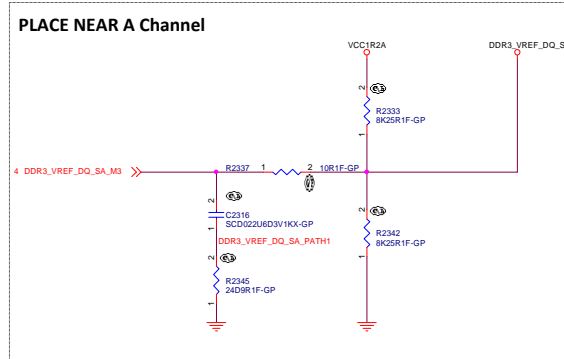
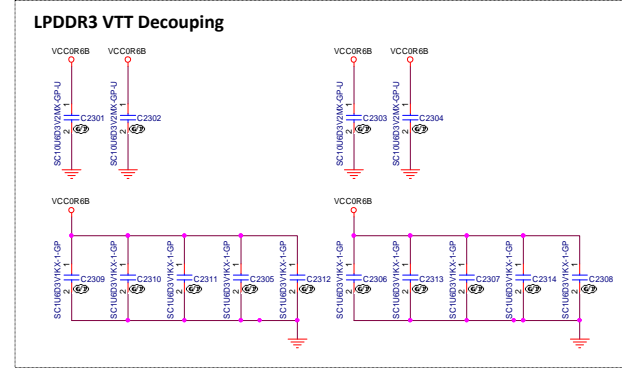
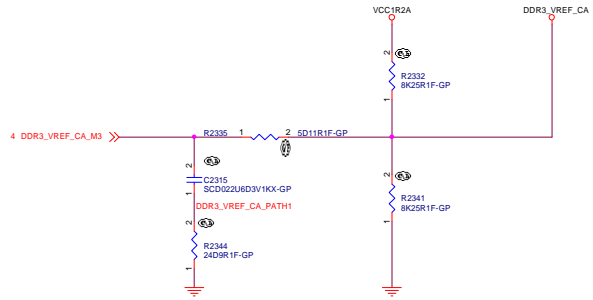
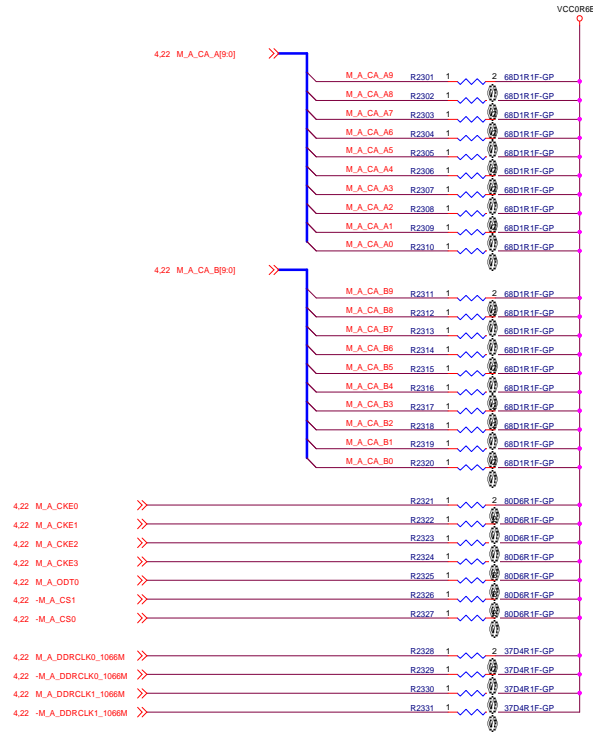
22

of

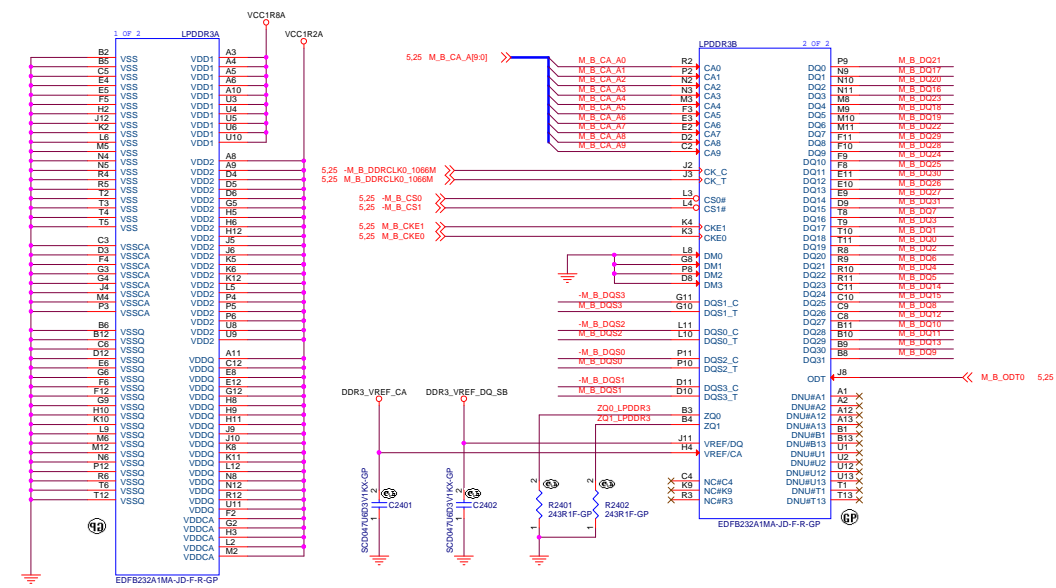
89

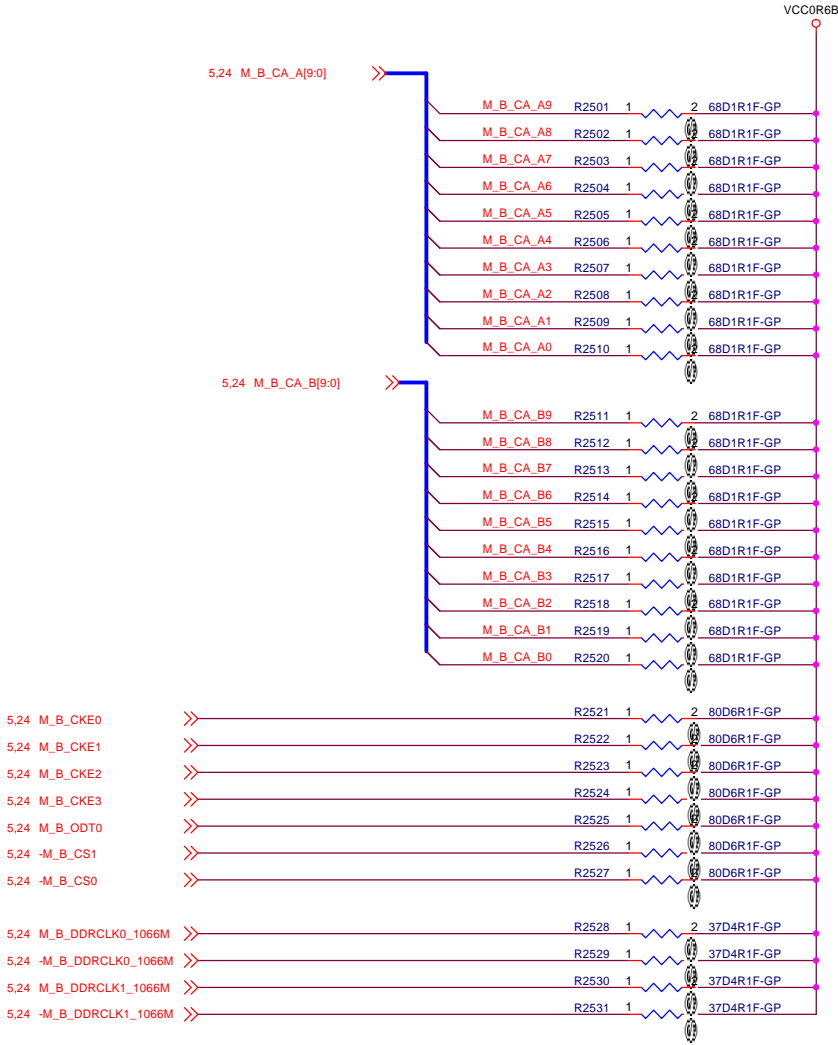
Rev

1



4 M\_B\_DQ[15:0] 4 M\_B\_DQS[1:0] 4 M\_B\_DQS[3:2] 4 M\_B\_DQS[5:4] 4 M\_B\_DQS[7:6]







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LRV3 MB

|  |                                   |                 |
|--|-----------------------------------|-----------------|
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| Title <b>BLANK</b>   |                                   |                 |
| Size<br>A4   | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018  |                                   | Sheet 27 of 89  |

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LRV3 MB

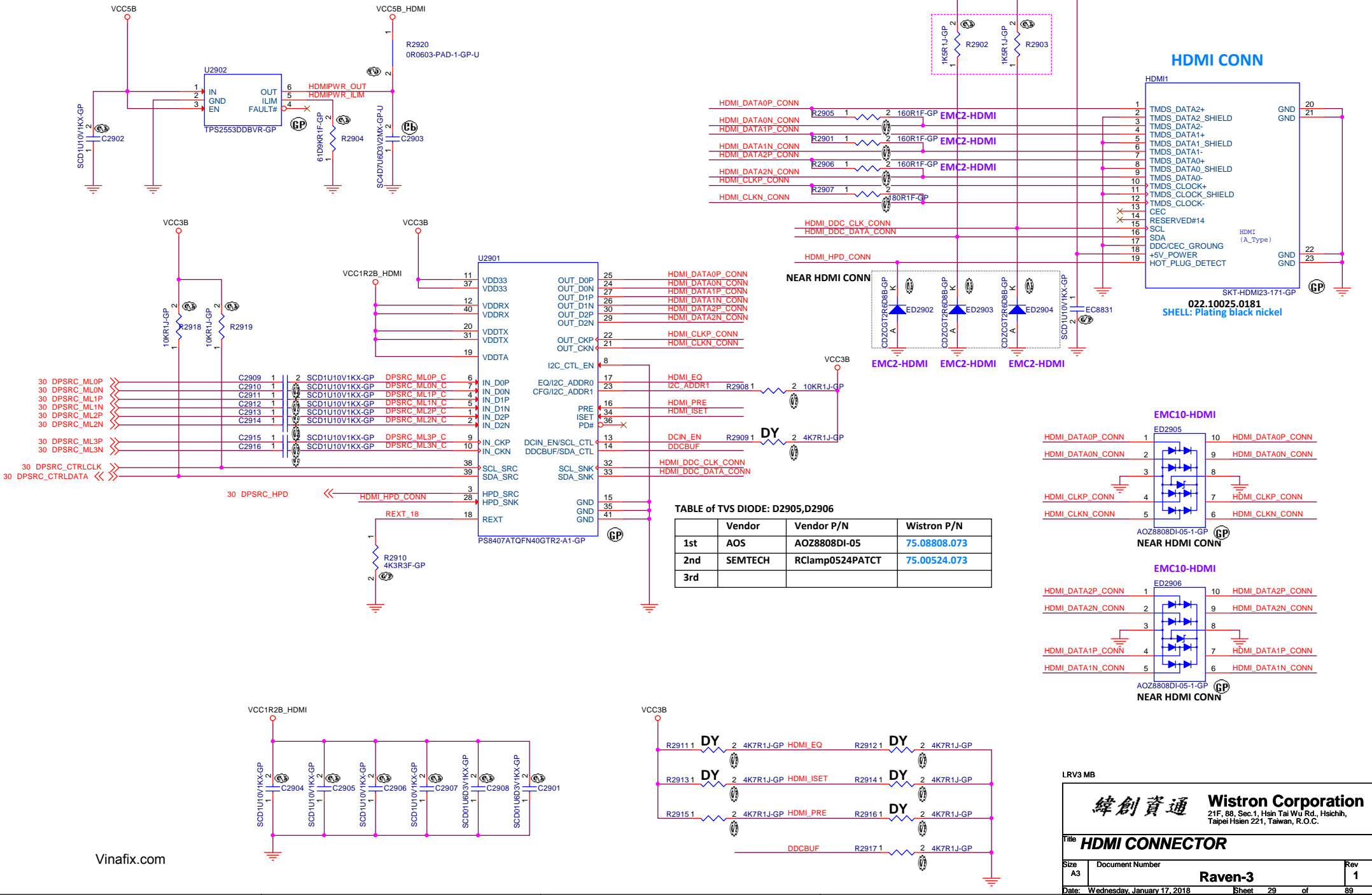
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|--|---|
| <div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br/>Taipei Hsien 221, Taiwan, R.O.C.</div> |   |
| Title <b>BLANK</b>   |   |
| Size<br>A4   | <div>Document Number</div> <div>Raven-3</div> |
| Date: Wednesday, January 17, 2018  | Rev<br>1                                      |
| Date: Wednesday, January 17, 2018  |   |
| Sheet 28   | of 89   |



# U2902

Main TI TPS2553DDDBVR 074.02553.009B  
2nd GMT G517AL1T81U 074.51711.007P

Current Limit Target : 400mA  
Requirement : 350mA  
HDMI Spec : 50mA - 500mA

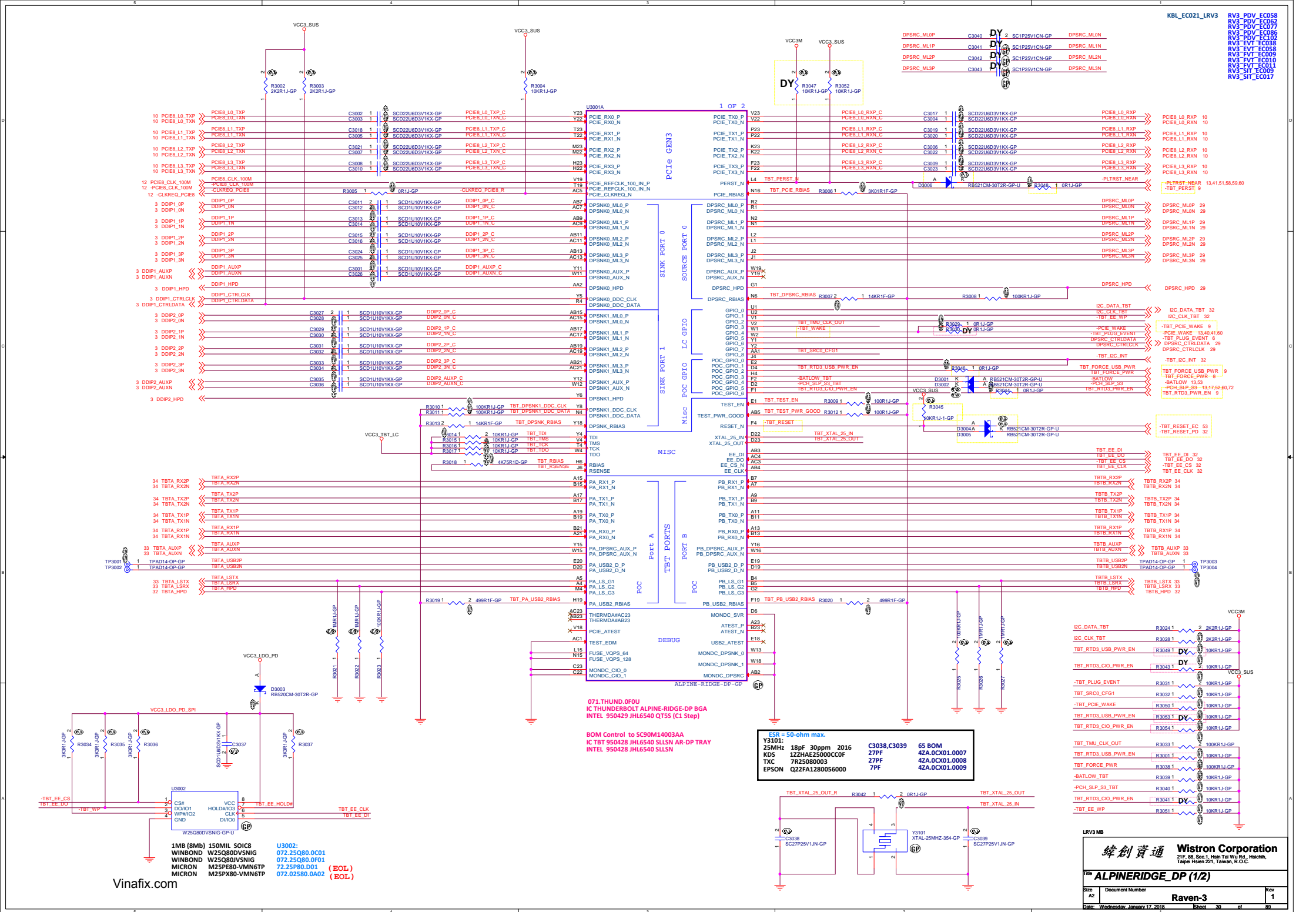


LRV3 MB

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

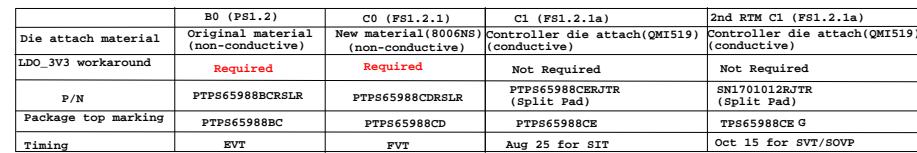
Title **HDMI CONNECTOR**

Size A3 Document Number **Raven-3** Rev 1  
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**BUSPOWER Config.**  
**BP\_NoWait**

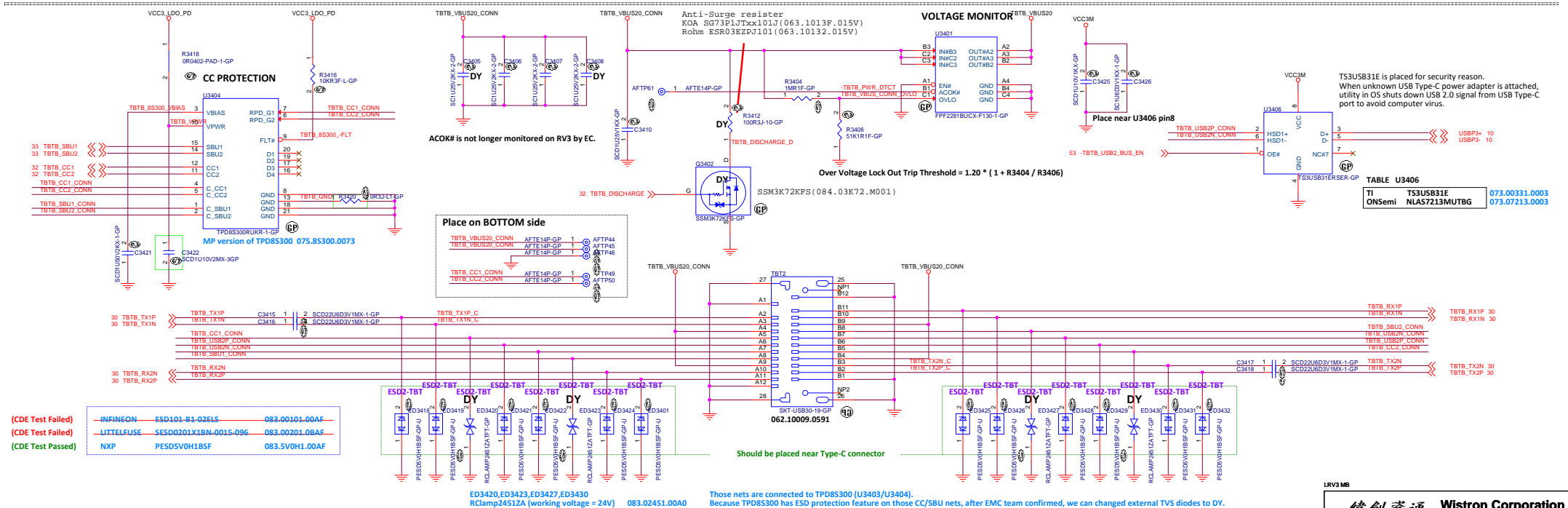
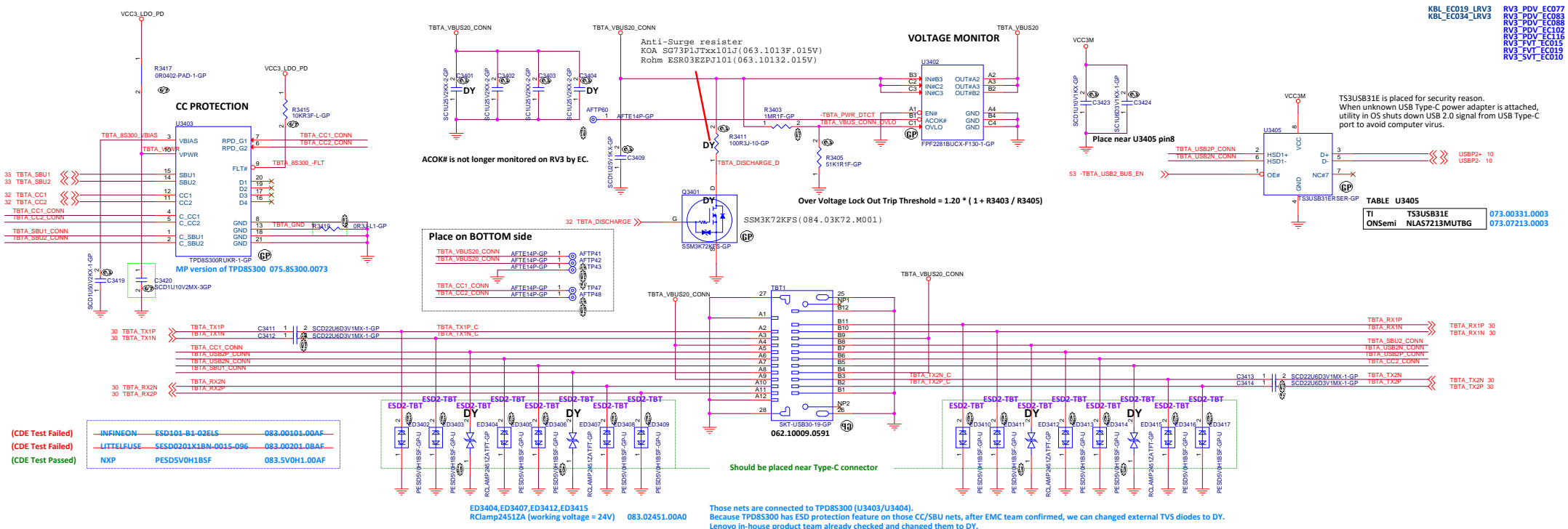


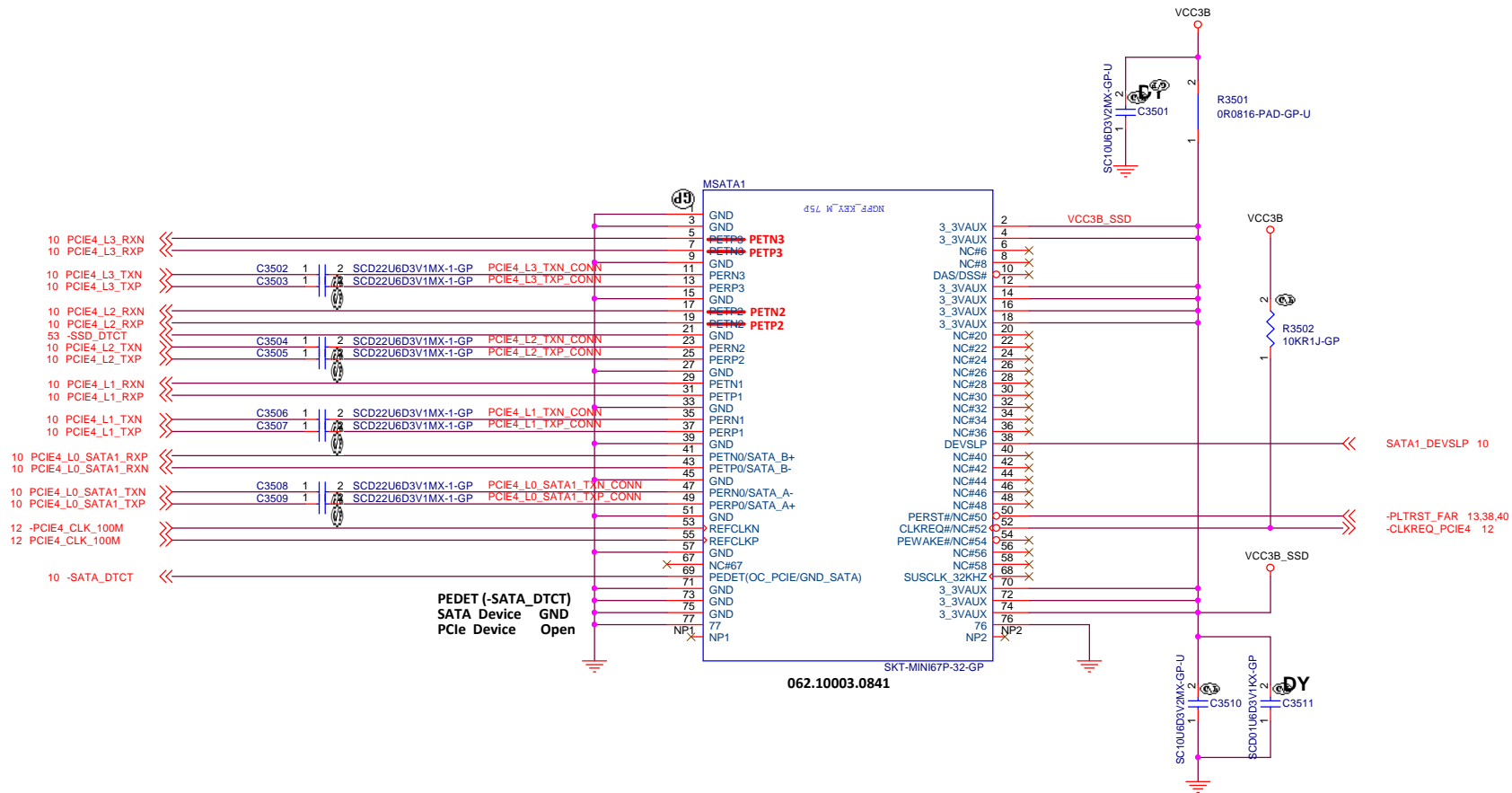
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Taipei Hsien 221, Taiwan, R.O.C.

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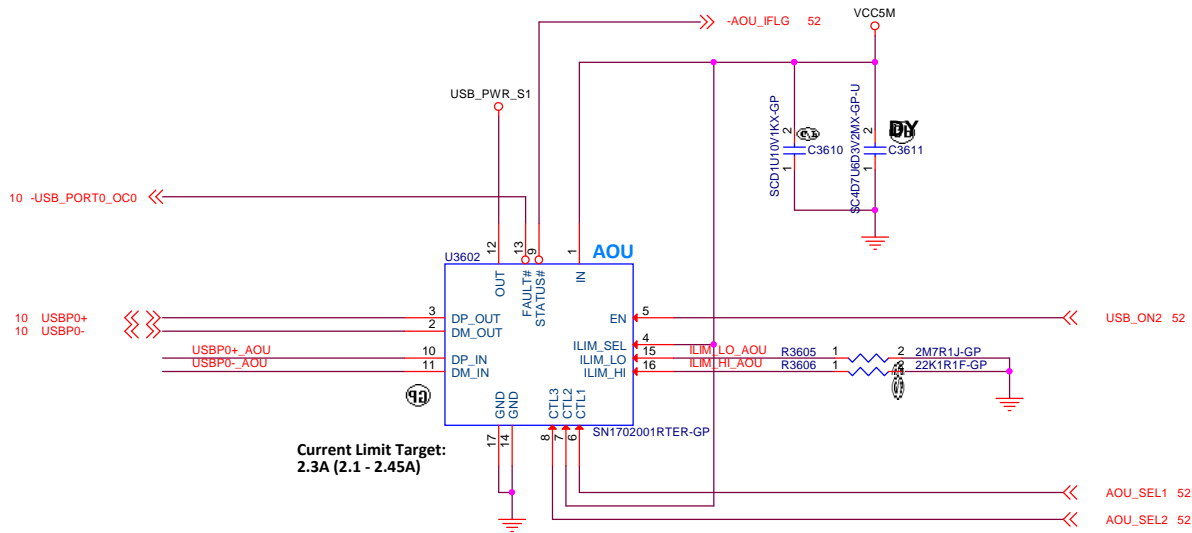
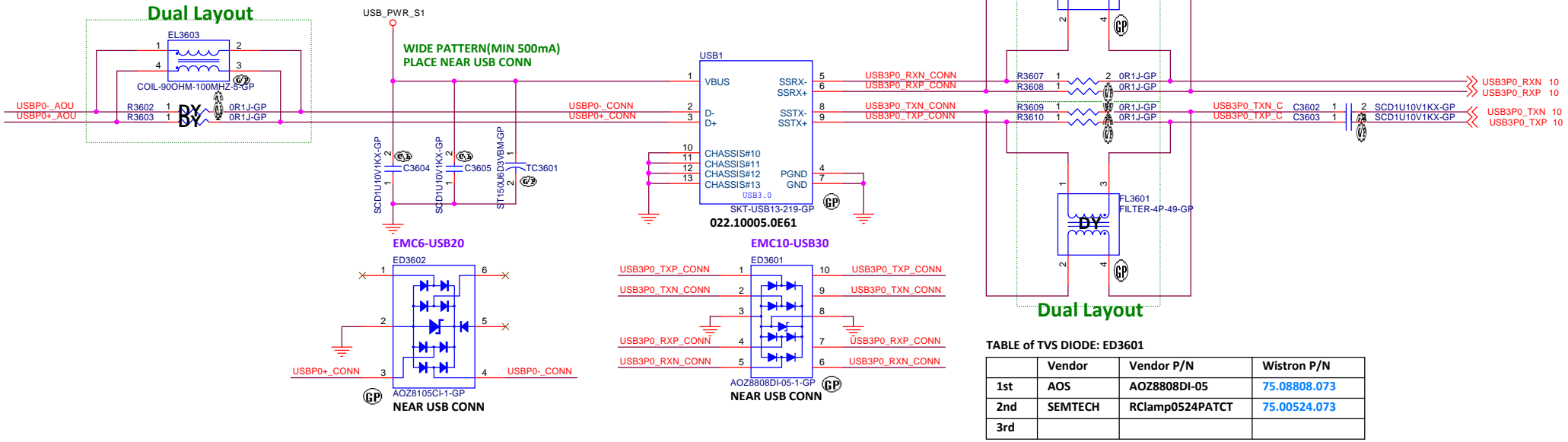
LRV3 MB

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

Title **M.2 SSD SLOT**

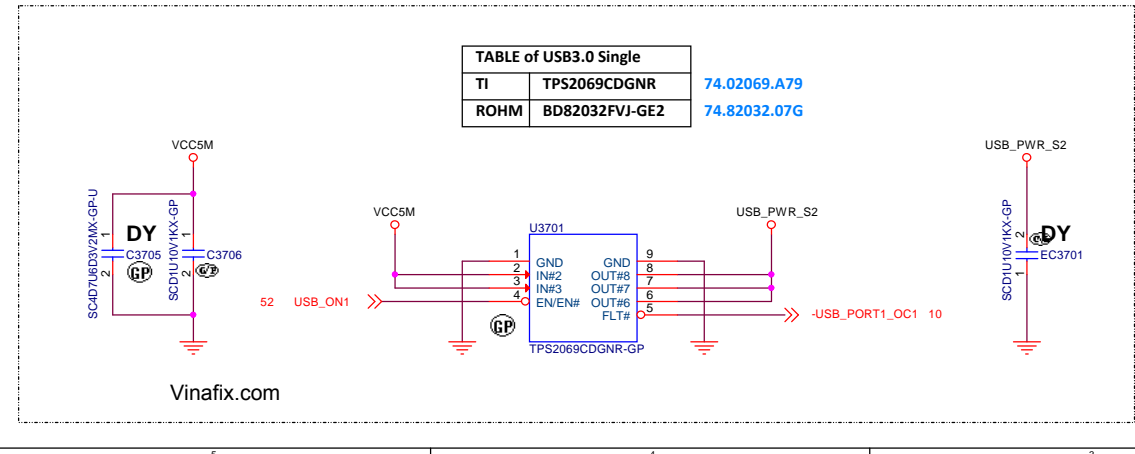
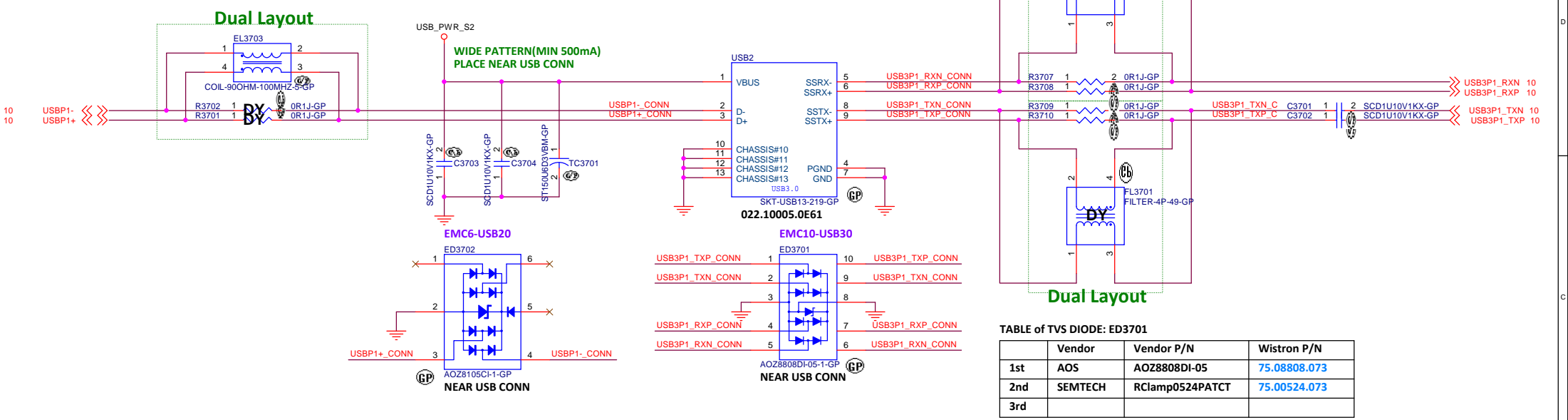
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|-----------------------------------|-----------------------------------|-----------------|
| Size<br>A3                        | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018 | Sheet 35 of 89                    |                 |





AOU USB power switch is single source, TI SN1702001RTER

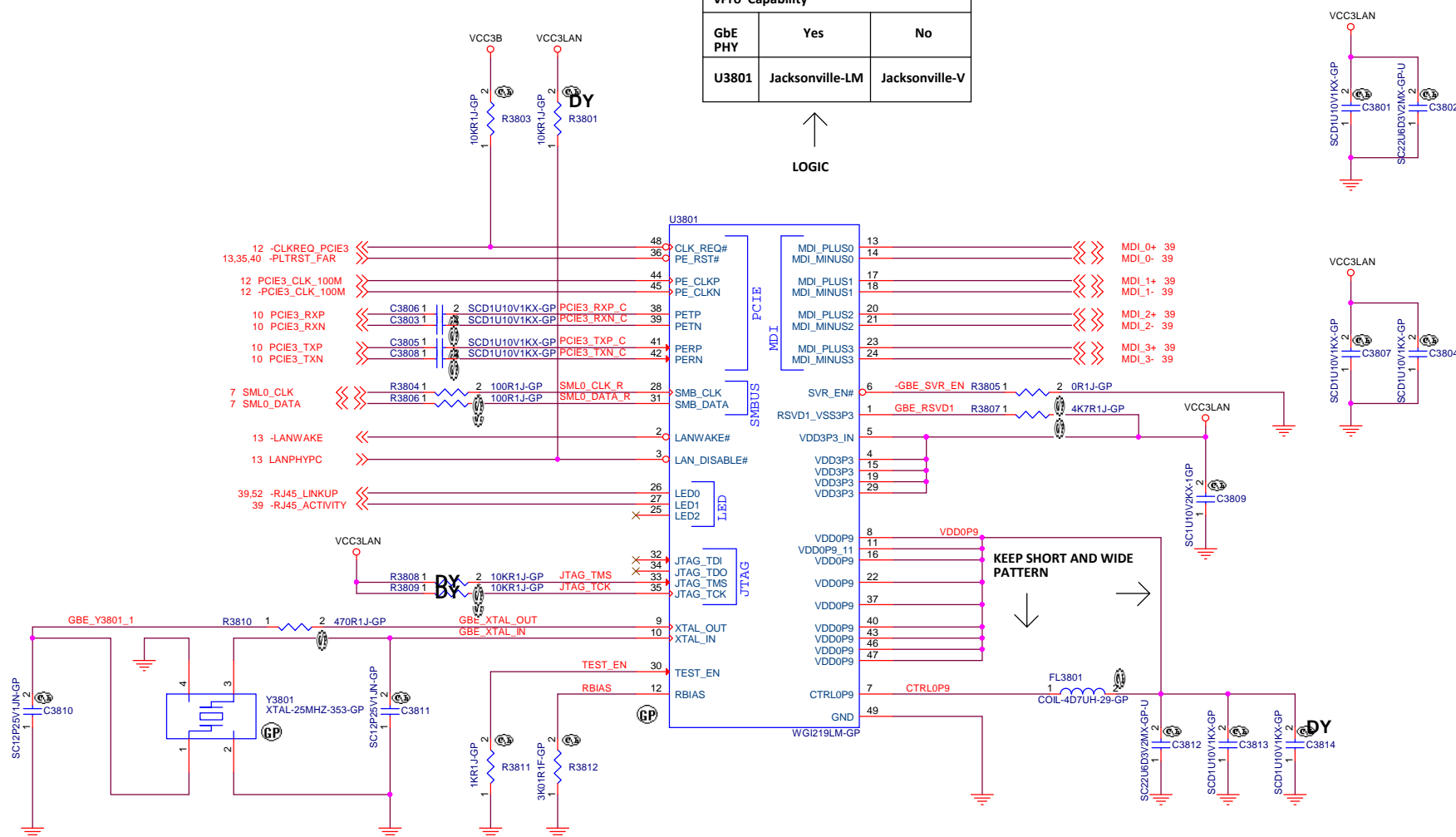




TABLE

| vPro Capability |                 |                |
|-----------------|-----------------|----------------|
| GbE PHY         | Yes             | No             |
| U3801           | Jacksonville-LM | Jacksonville-V |

LOGIC



LRV3 MB

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

Title **GBE JACKSONVILLE**

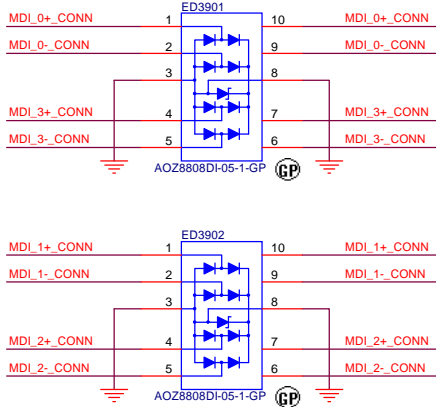
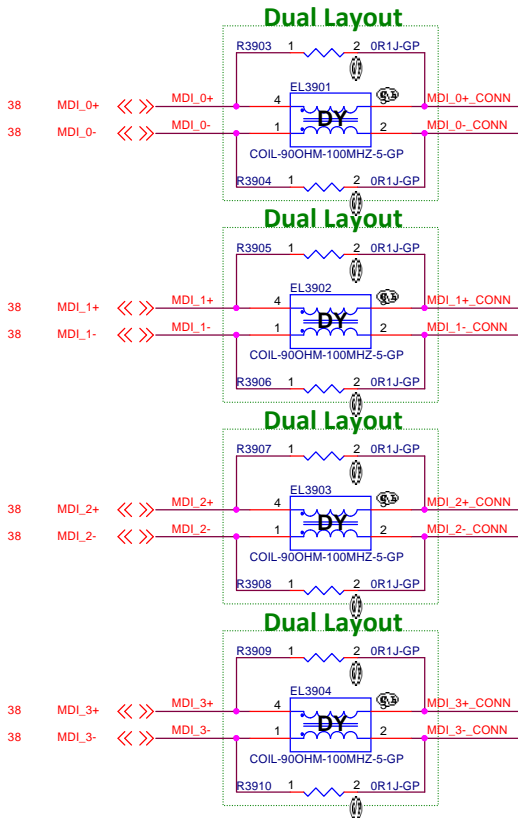
Size A3 Document Number

Raven-3

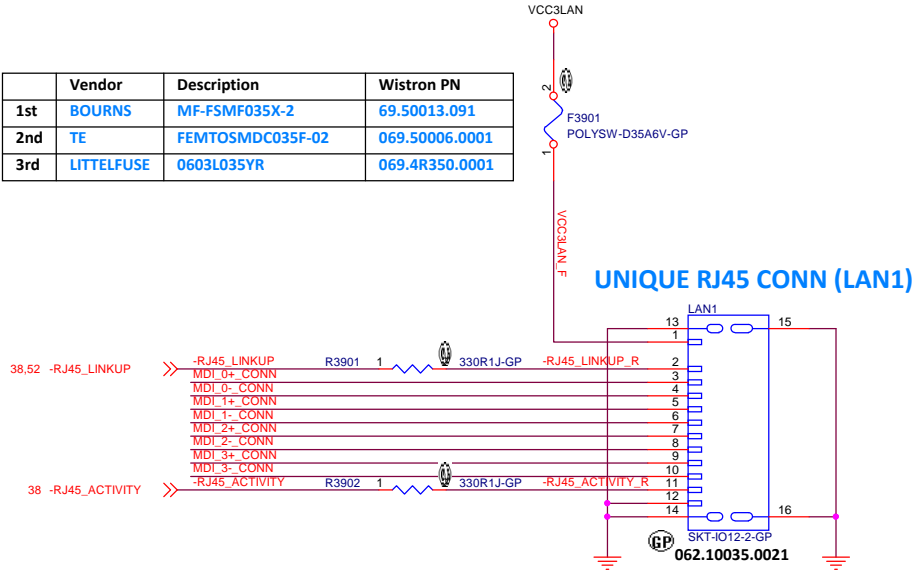
Rev 1

Date: Wednesday, January 17, 2018

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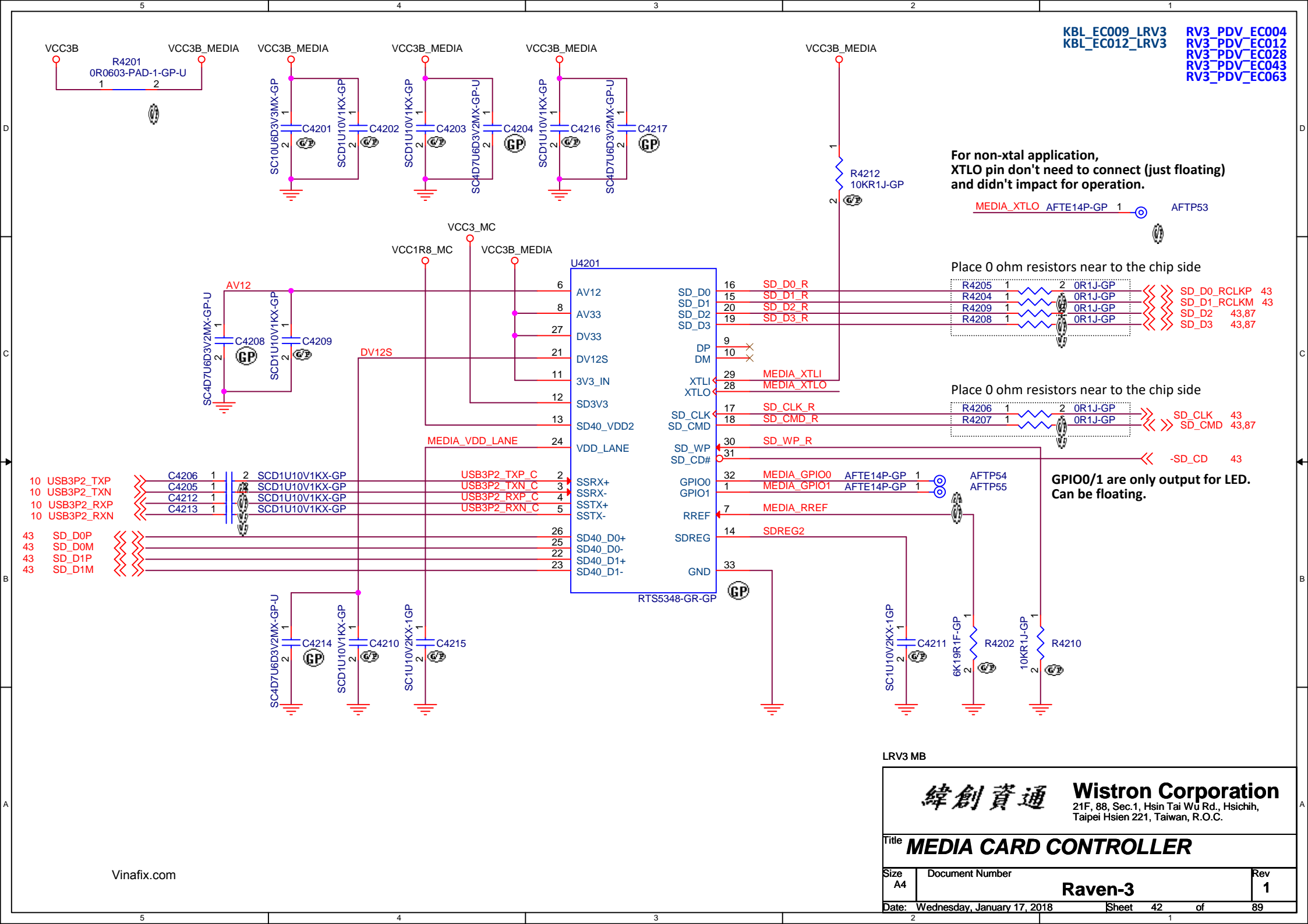


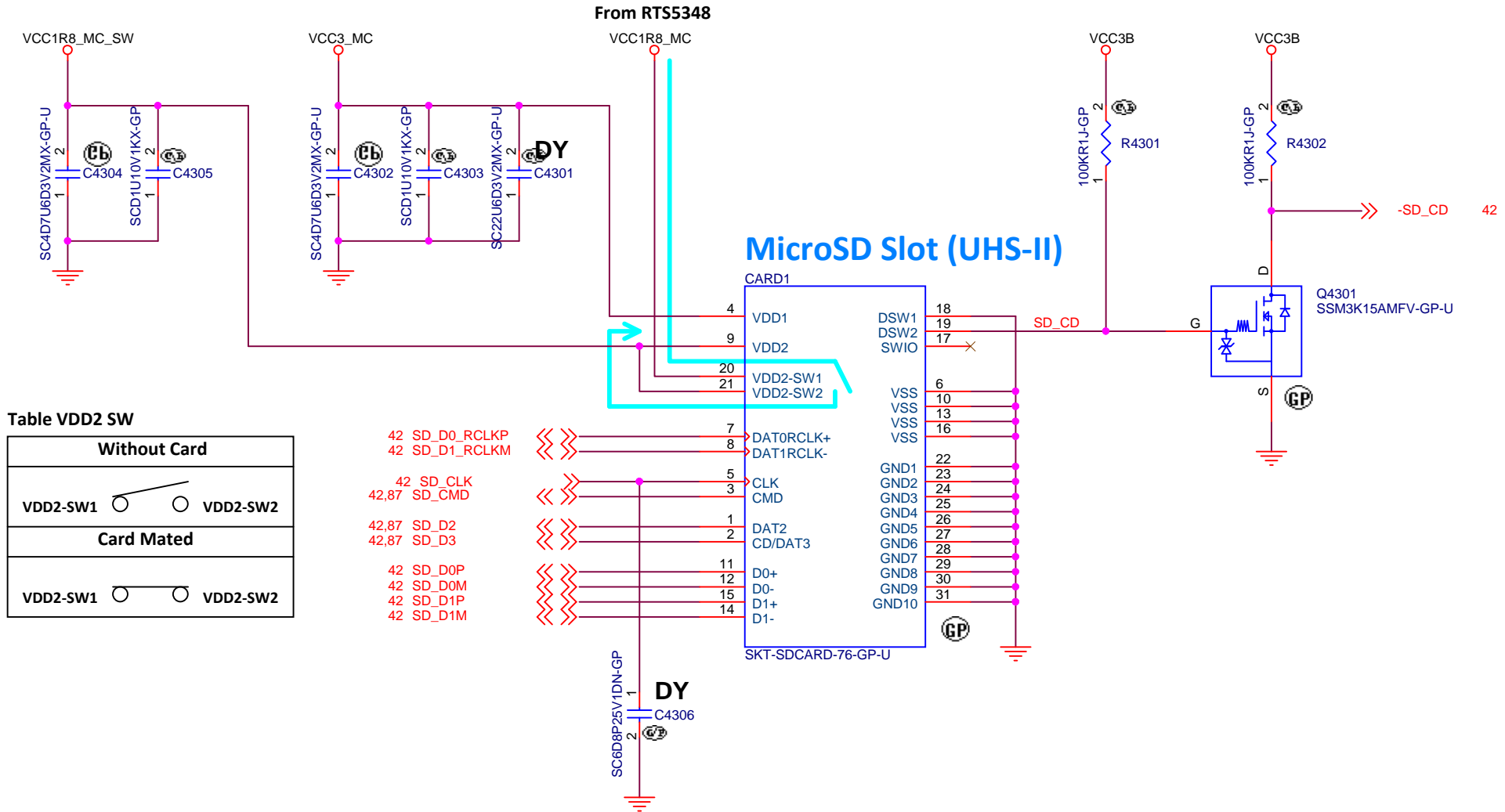
|     | Vendor     | Description      | Wistron PN     |
|-----|------------|------------------|----------------|
| 1st | BOURNS     | MF-FSMF035X-2    | 69.50013.091   |
| 2nd | TE         | FEMTOSMDC035F-02 | 069.50006.0001 |
| 3rd | LITTELFUSE | 0603L035YR       | 069.4R350.0001 |













### Table VDD2 SW

| Without Card |   |          |
|--------------|---|----------|
| VDD2-SW1     |  | VDD2-SW2 |
| Card Mated   |   |          |
| VDD2-SW1     |  | VDD2-SW2 |

**NEAR Audio Codec U4401**

VCC3B

R4416  
8R4002-PAD-1-GP

1 2

MIC\_VCC

R4416  
8R4002-PAD-1-GP

1 2

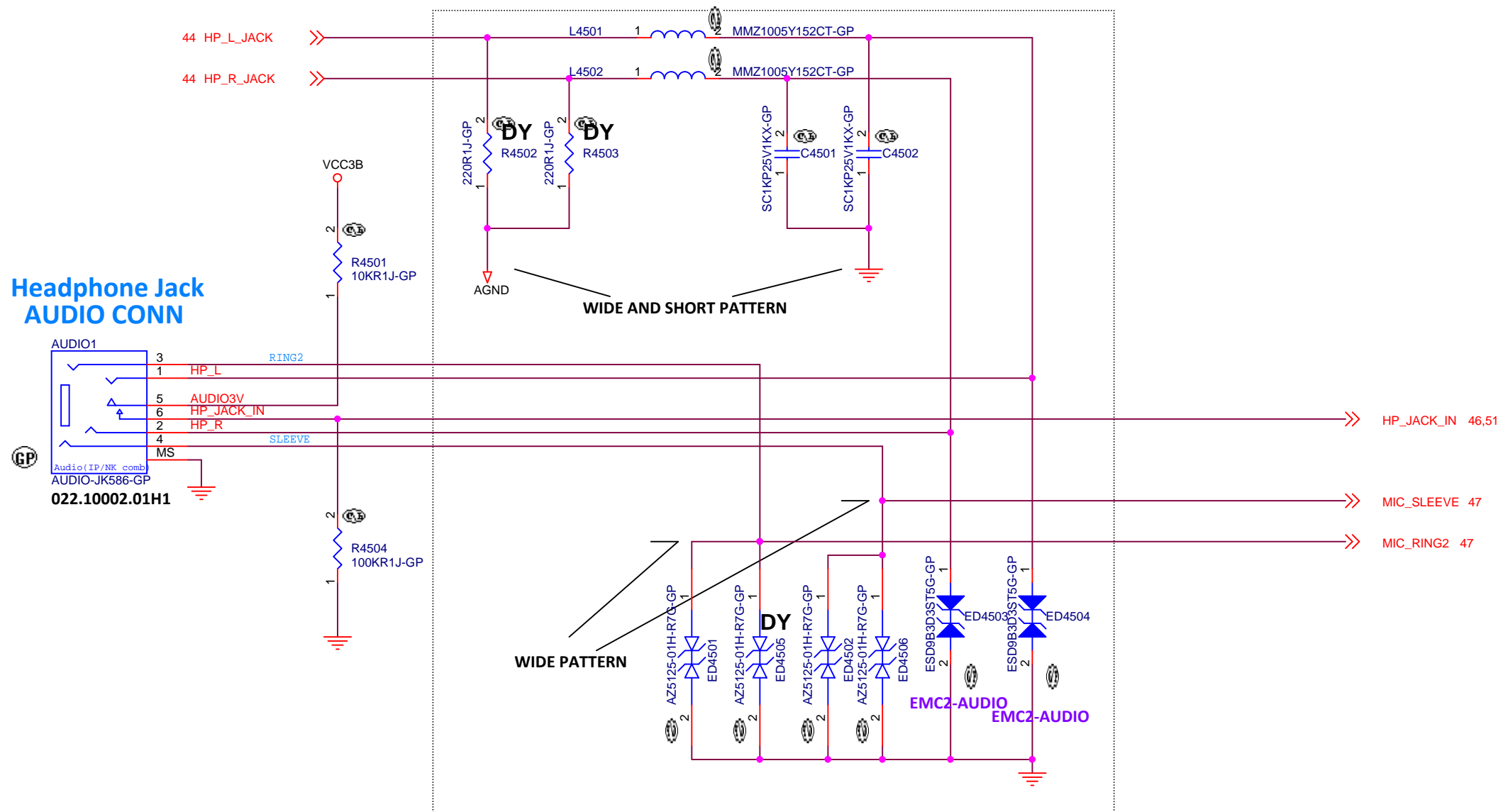
MIC\_GND





## NEAR AUDIO1 CONN

### Headphone Jack AUDIO CONN



LRV3 MB

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

Title **AUDIO CONNECTOR**

Size  
A4

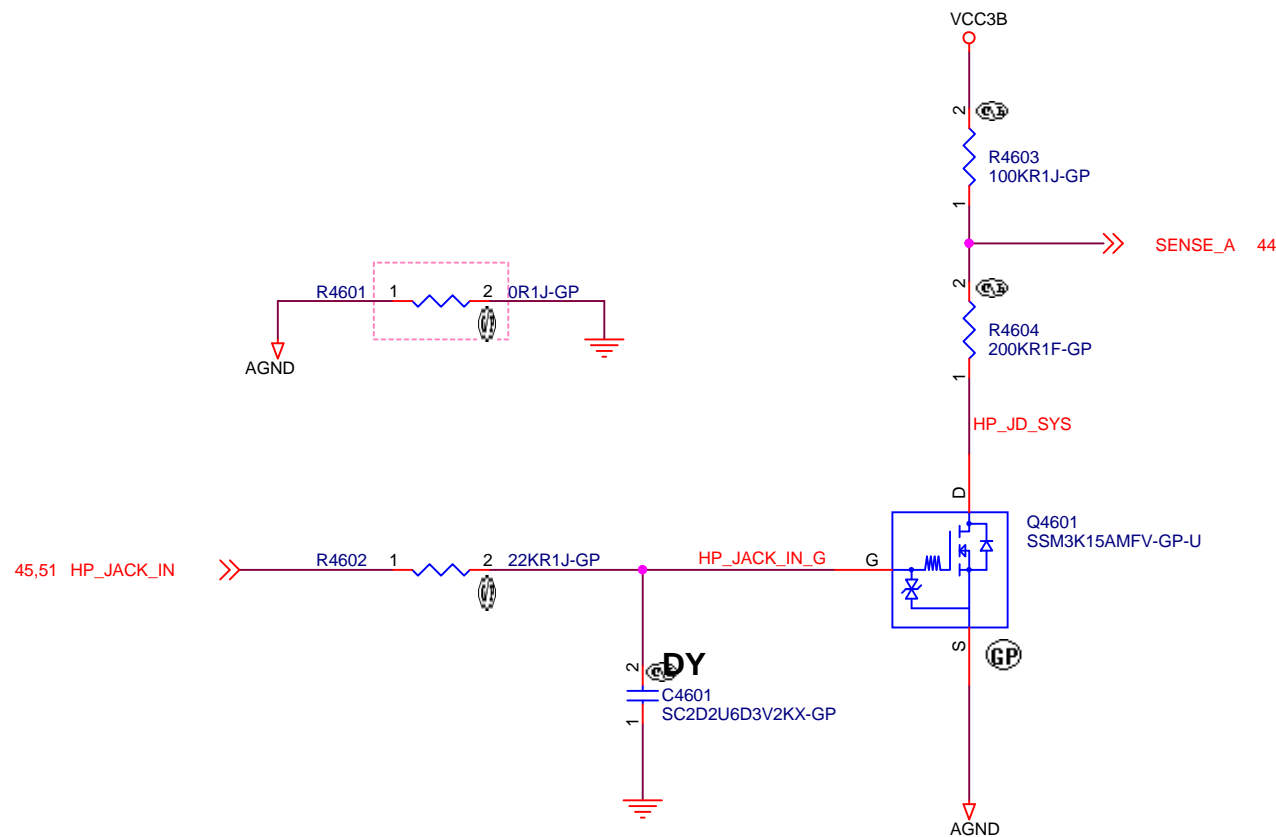
Document Number

**Raven-3**

Rev  
**1**

Date: Wednesday, January 17, 2018

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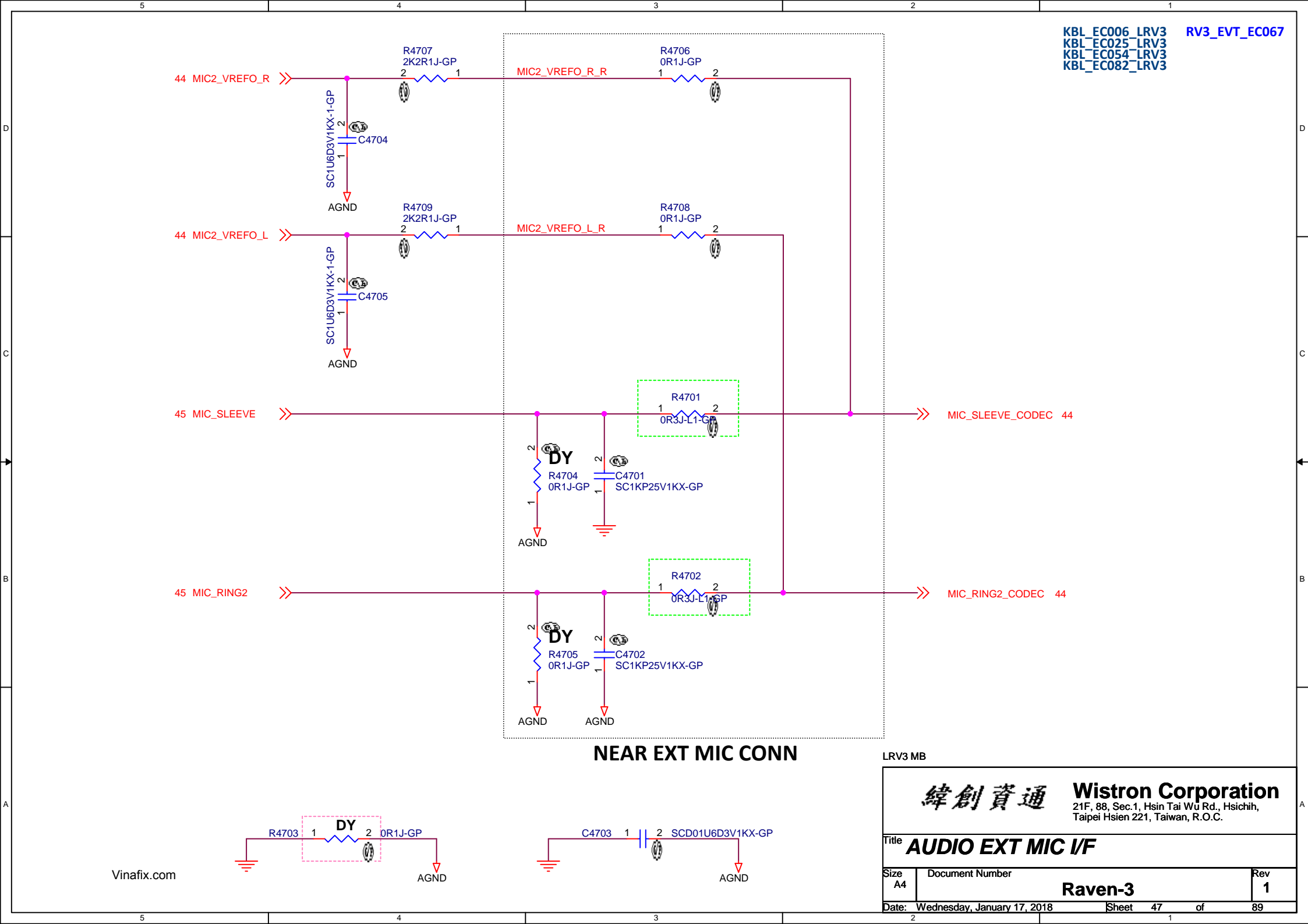
LRV3 MB

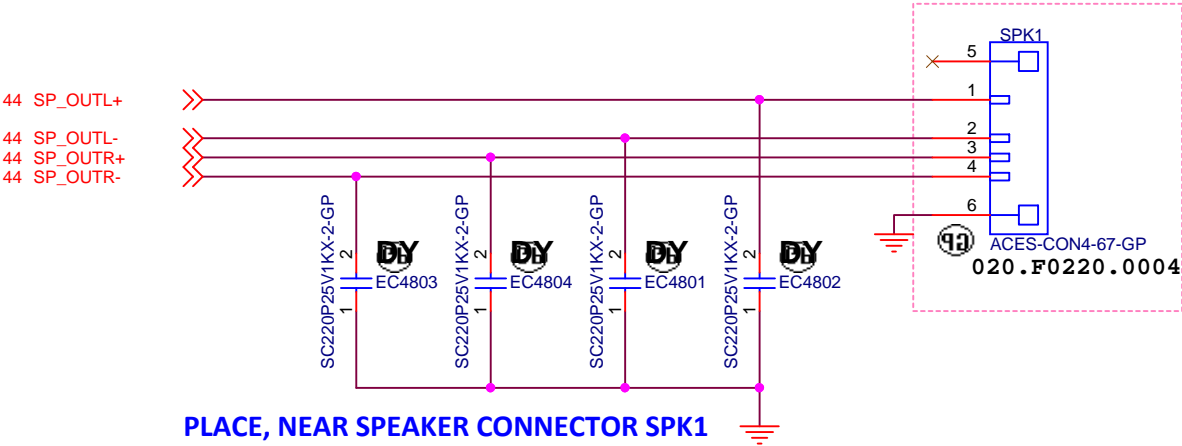
**緯創資通** **Wistron Corporation**  
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Title **AUDIO JACK SENSE**

|            |                                   |                 |
|------------|-----------------------------------|-----------------|
| Size<br>A4 | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
|------------|-----------------------------------|-----------------|

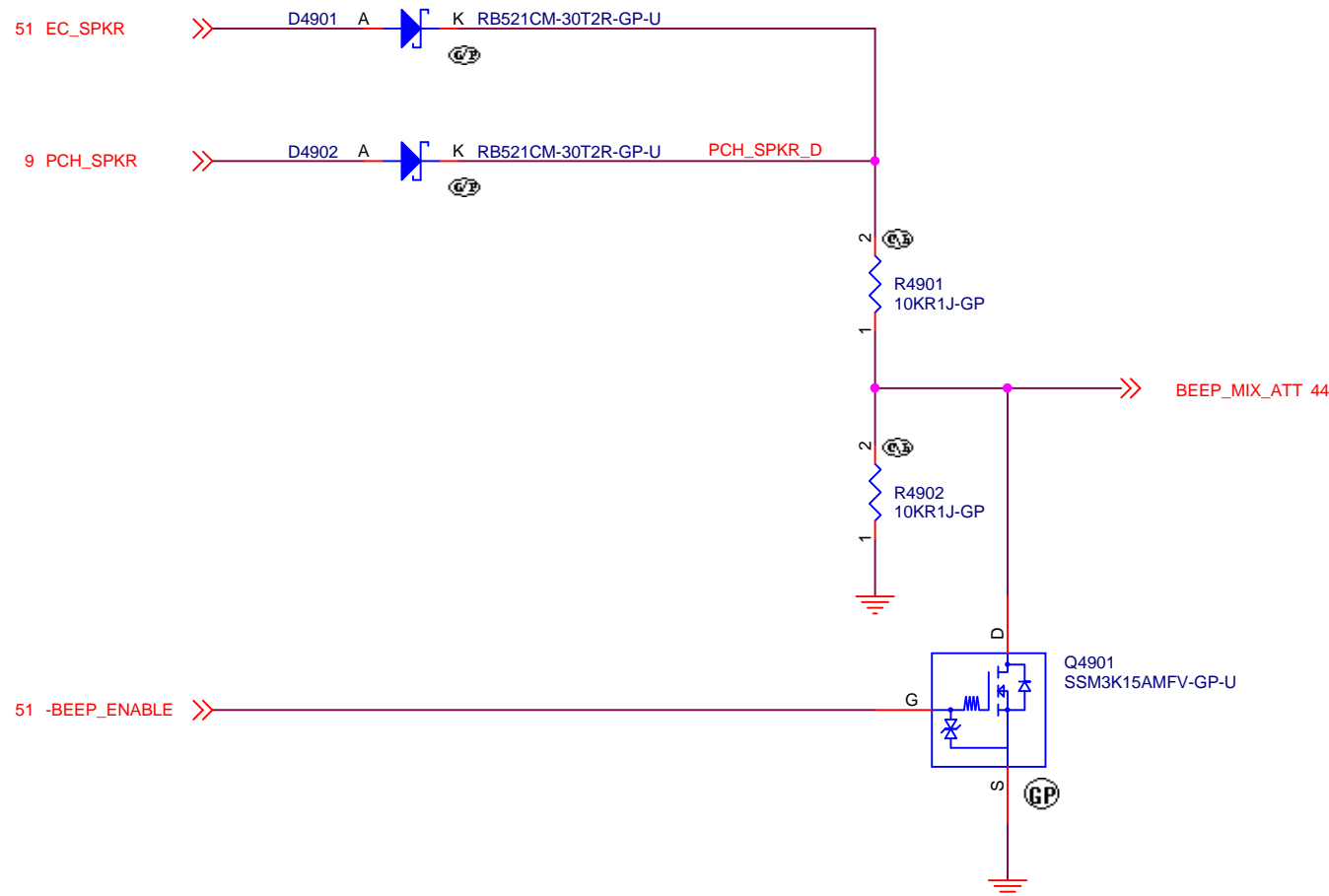
|                                   |                |
|-----------------------------------|----------------|
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|-----------------------------------|----------------|





LRV3 MB

|                                   |                                   |   |                 |
|-----------------------------------|-----------------------------------|---|-----------------|
| <b>緯創資通</b>                       |                                   | <b>Wistron Corporation</b>  |                 |
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| Title <b>AUDIO SPEAKER</b>        |                                   |   |                 |
| Size<br>A4                        | Document Number<br><b>Raven-3</b> |   | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018 |                                   | Sheet 48 of   | 89              |



LRV3 MB

緯創資通

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Title **AUDIO BEEP**

|            |                                   |                 |
|------------|-----------------------------------|-----------------|
| Size<br>A4 | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
|------------|-----------------------------------|-----------------|

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5

4

3

2

1

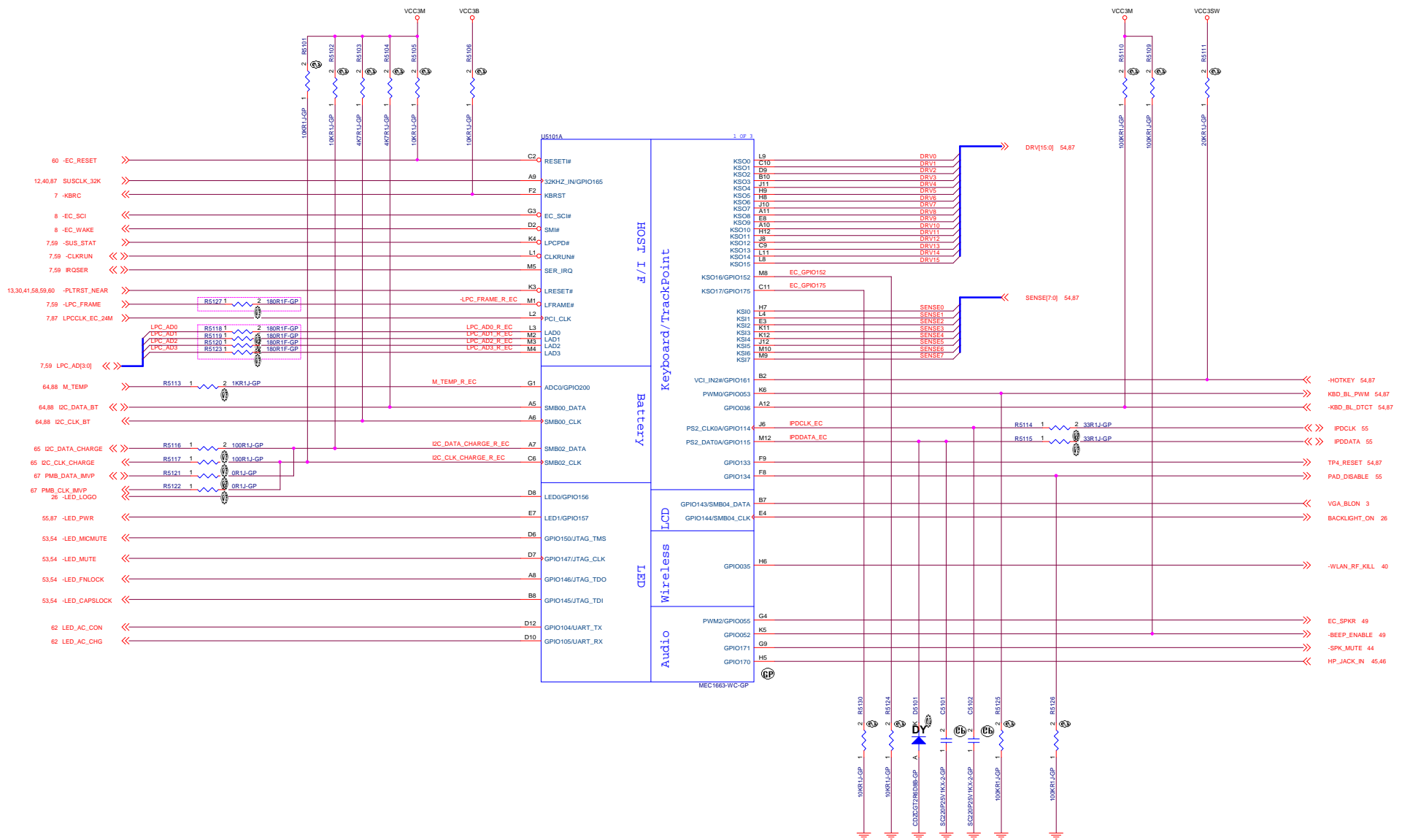
KBL\_EC001\_LRV3

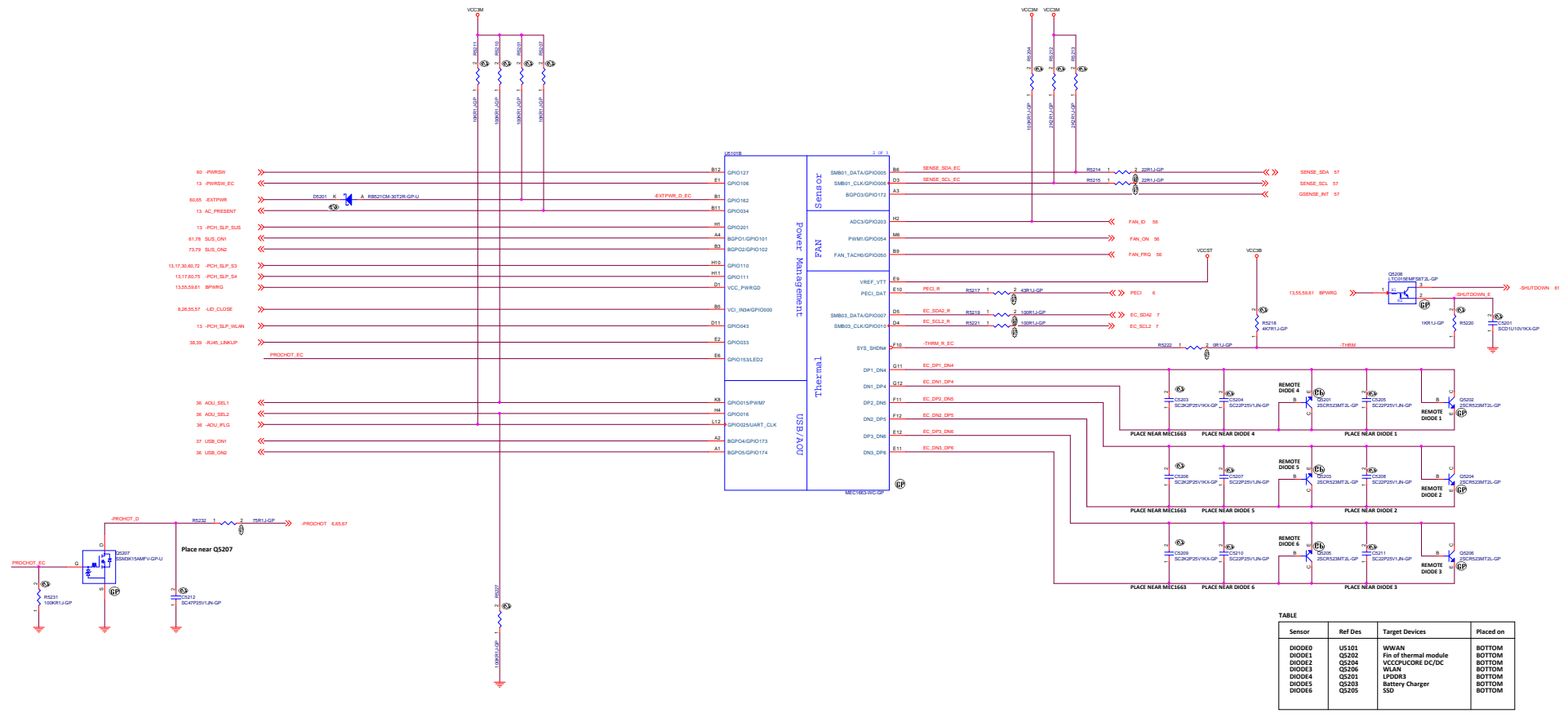
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RV3\_PDV\_EC013  
RV3\_EVT\_EC025  
RV3\_EVT\_EC072

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LRV3 MB

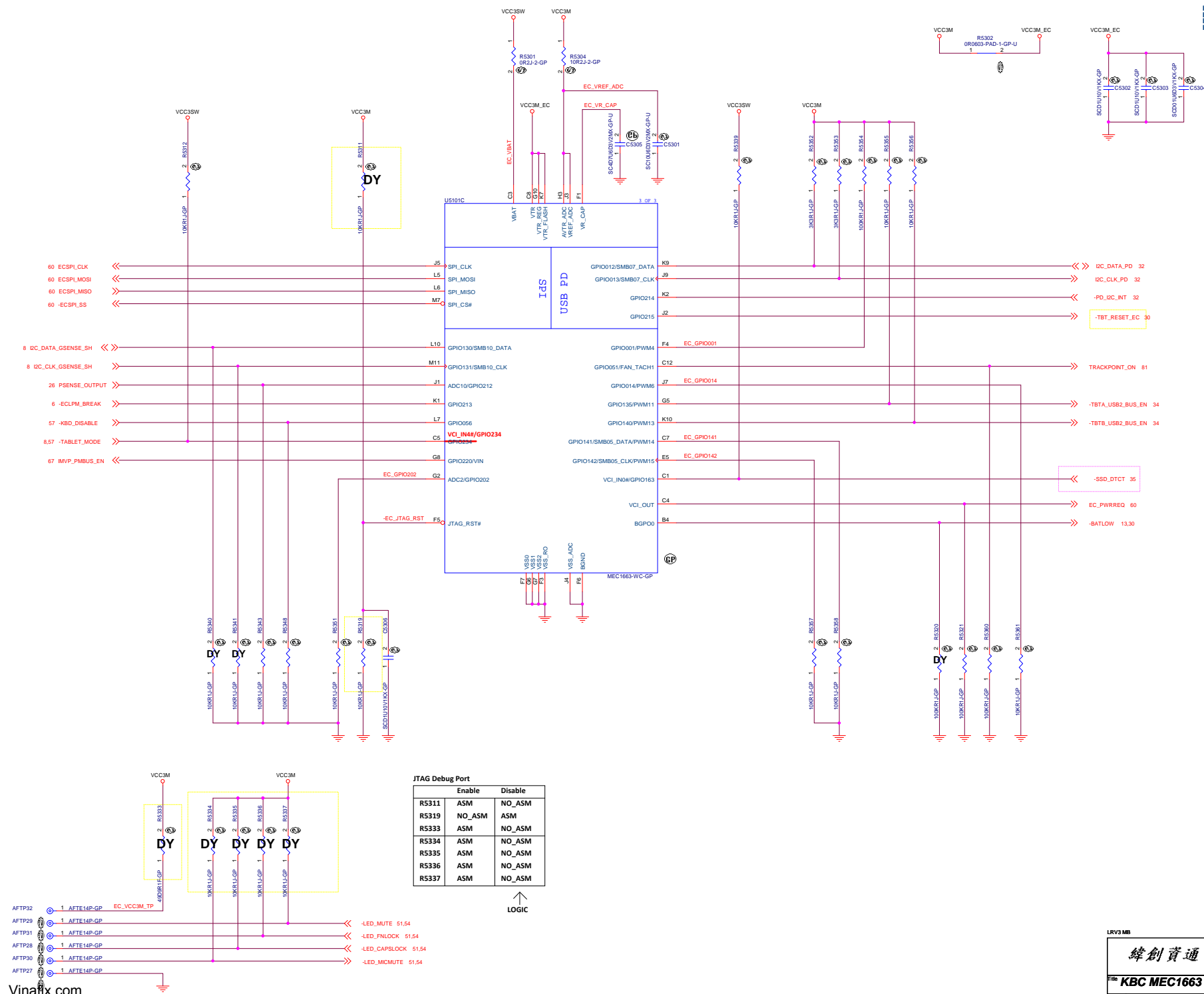
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| <div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br/>Taipei Hsien 221, Taiwan, R.O.C.</div> |                                   |                 |
| Title <b>BLANK</b>   |                                   |                 |
| Size<br>A4   | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018  |                                   | Sheet 50 of 89  |

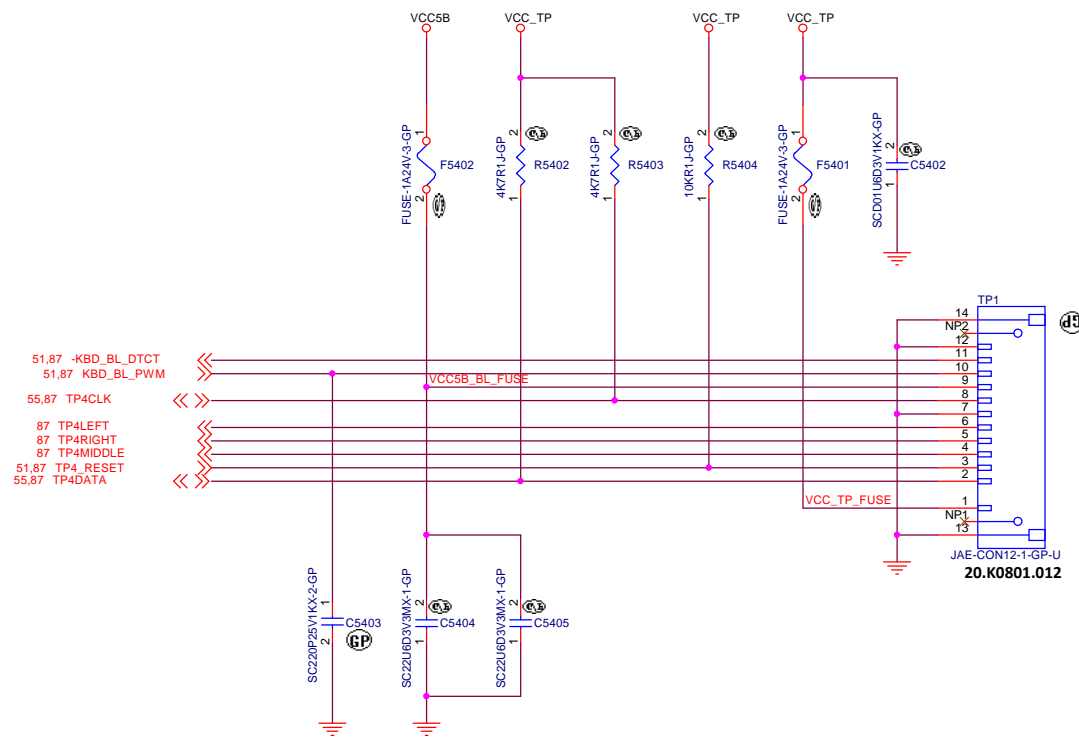
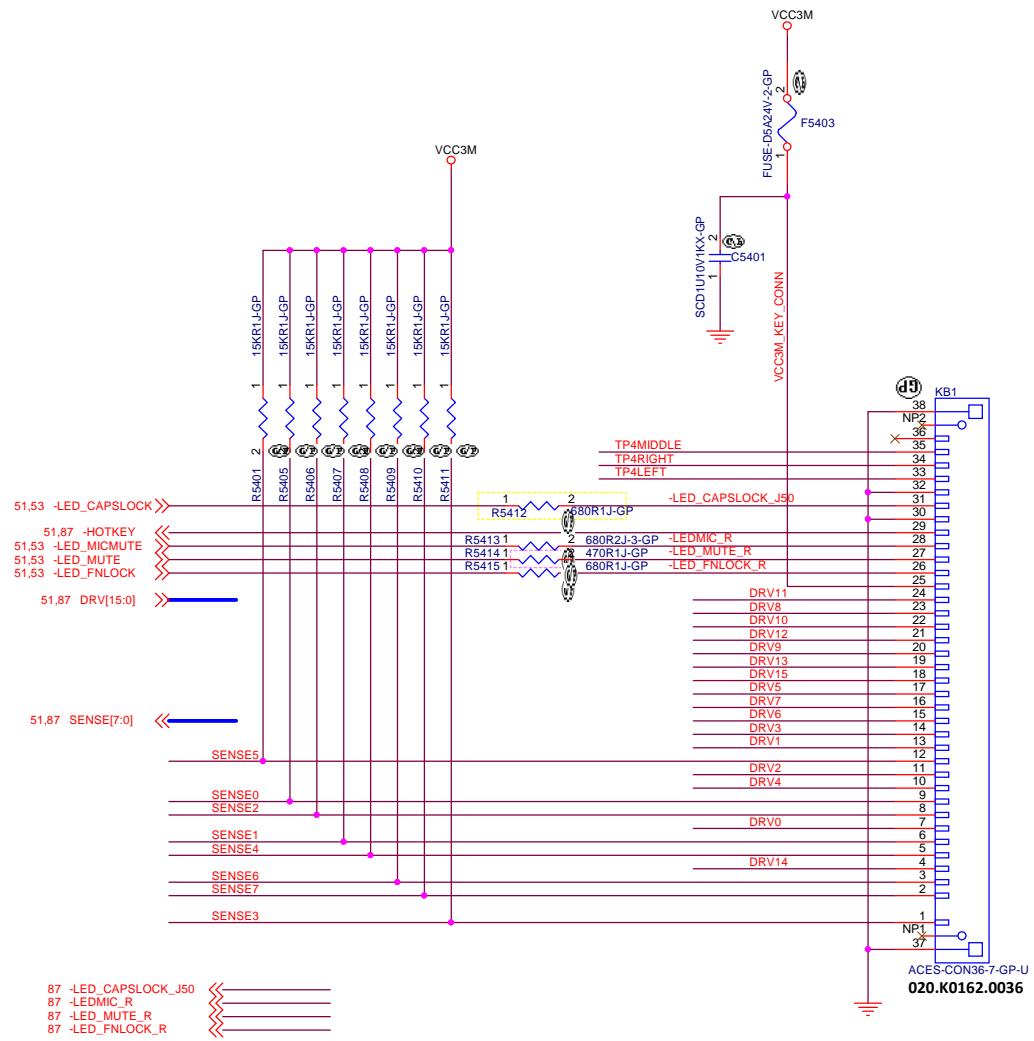


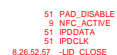




KBL\_EC020\_LRV3  
KBL\_EC031\_LRV3  
KBL\_EC065\_LRV3  
KBL\_EC072\_LRV3  
RV3\_PDV\_EC048  
RV3\_PDV\_EC059  
RV3\_PDV\_EC072  
RV3\_PDV\_EC078  
RV3\_PDV\_EC079  
RV3\_PDV\_EC090  
RV3\_PDV\_EC091  
RV3\_PDV\_EC094  
RV3\_EVT\_EC012  
RV3\_EVT\_EC009  
RV3\_SIT\_EC005

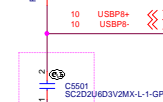






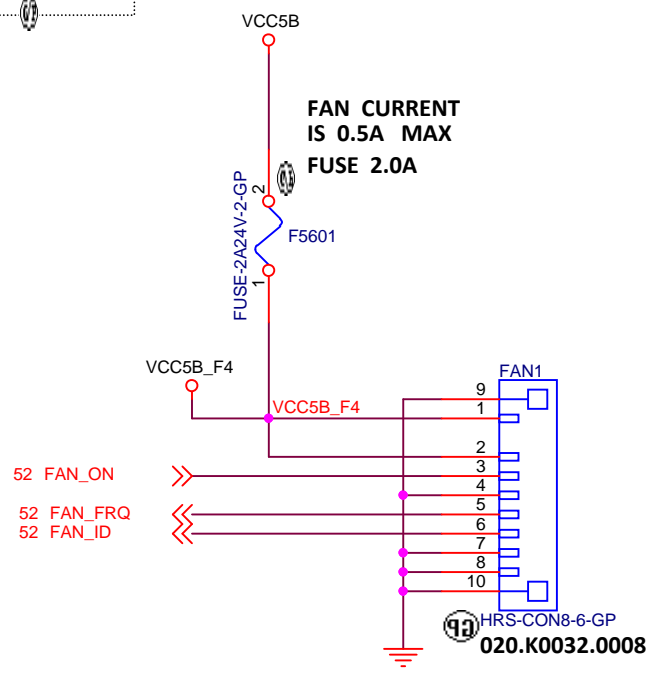
LRV3 MB

|   |  |  |                     |
|---|--|--|---------------------|
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| <b>Title</b> <b>TOUCHPAD/NFC/BUTTON/PEN/FPR</b>   |  |  |                     |
| <b>Size</b><br>A2   | <b>Document Number</b><br><br><b>Raven-3</b> | <b>Rev</b><br>1  |                     |
| <b>Date:</b> <b>Wednesday, January 17, 2018</b>   |  | <b>Sheet</b> <b>55</b>   | <b>of</b> <b>89</b> |



For USB I/F FPR  
**TO FPR**

|         |            |   |        |
|---------|------------|---|--------|
| FAN_ON  | AFTE14P-GP | 1 | AFTP38 |
| FAN_FRQ | AFTE14P-GP | 1 | AFTP39 |
| FAN_ID  | AFTE14P-GP | 1 | AFTP40 |

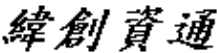


# PIN# NET NAME

- PIN1 VCC5B\_F4
- PIN2 VCC5B\_F4
- PIN3 FAN\_ON
- PIN4 GND
- PIN5 FAN\_FRQ
- PIN6 FAN\_ID
- PIN7 GND
- PIN8 GND

| FAN ID |                  | Inside of Thermal Module |
|--------|------------------|--------------------------|
| HIGH   | Secondary Source | Open                     |
| LOW    | Primary Source   | Tie down to GND          |

LRV3 MB



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Title
**FAN CONNECTOR**

Size  
A4

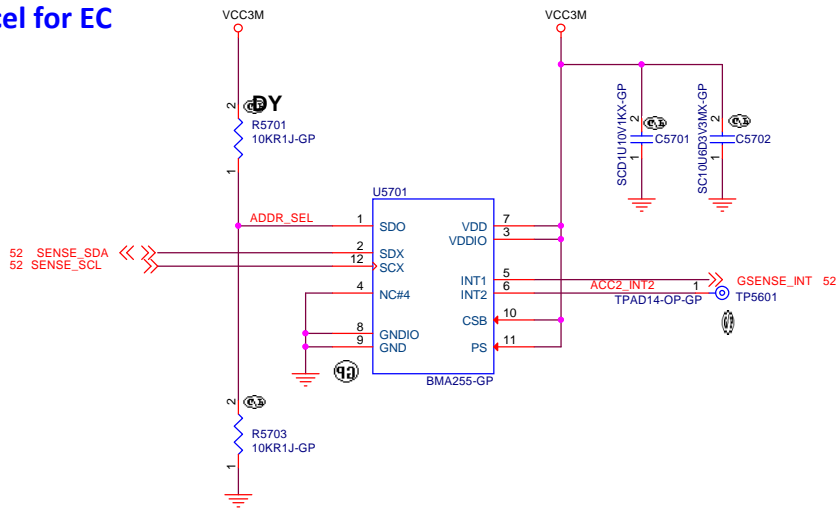
Document Number  
  
**Raven-3**

Date: Wednesday, January 17, 2018

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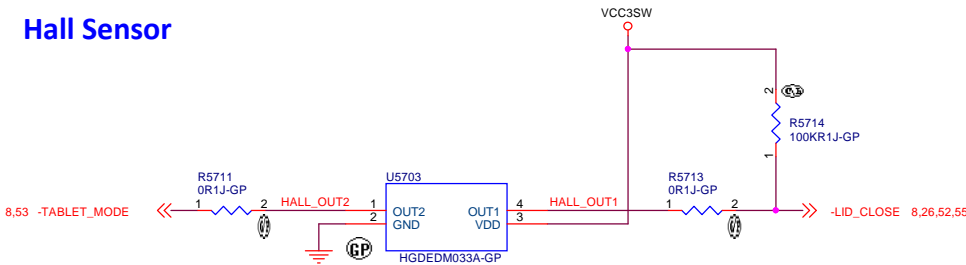
Rev  
**1**

Accel for EC

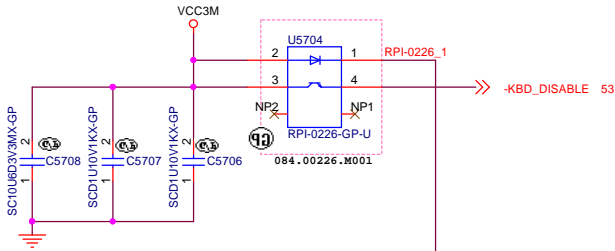


| TABLE   |          |                           |
|---|----------|---------------------------|
| Sensor IC                                     | ADDR_SEL | I2C Address               |
| 1st<br>074.00255.0080<br>BOSCH<br>BMA255      | H        | 30h (Write)<br>31h (Read) |
|   | L        | 32h (Write)<br>33h (Read) |
| 2nd<br>074.00022.0080<br>KIONIX<br>KX022-1020 | H        | 3Eh (Write)<br>3Fh (Read) |
|   | L        | 3Ch (Write)<br>3Dh (Read) |

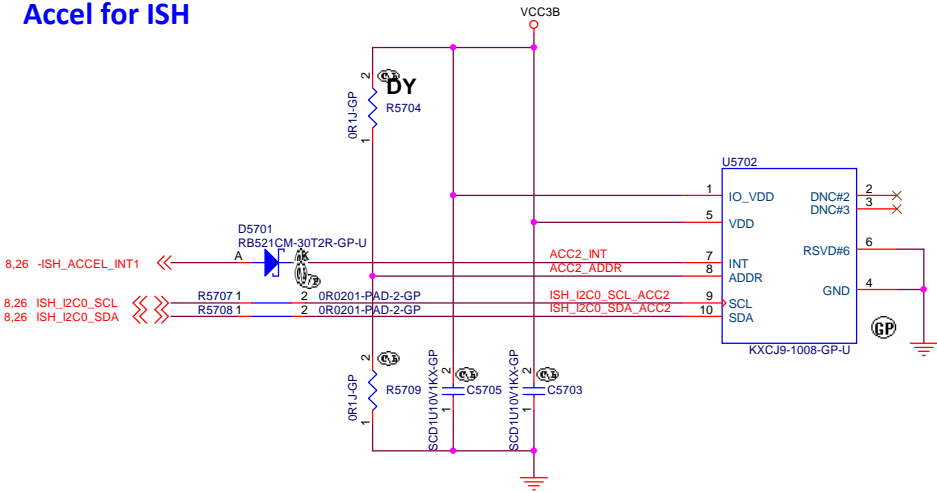
Hall Sensor



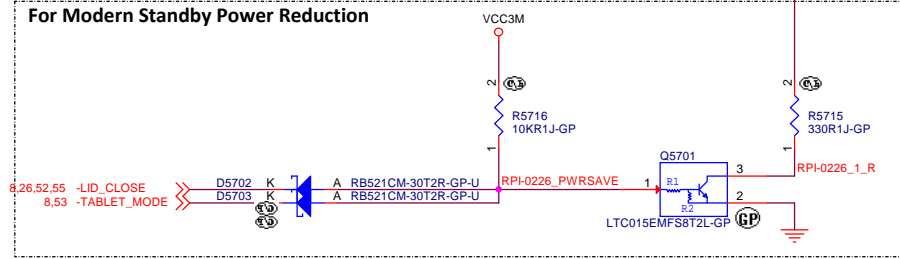
Photointerrupter for Wave Keyboard

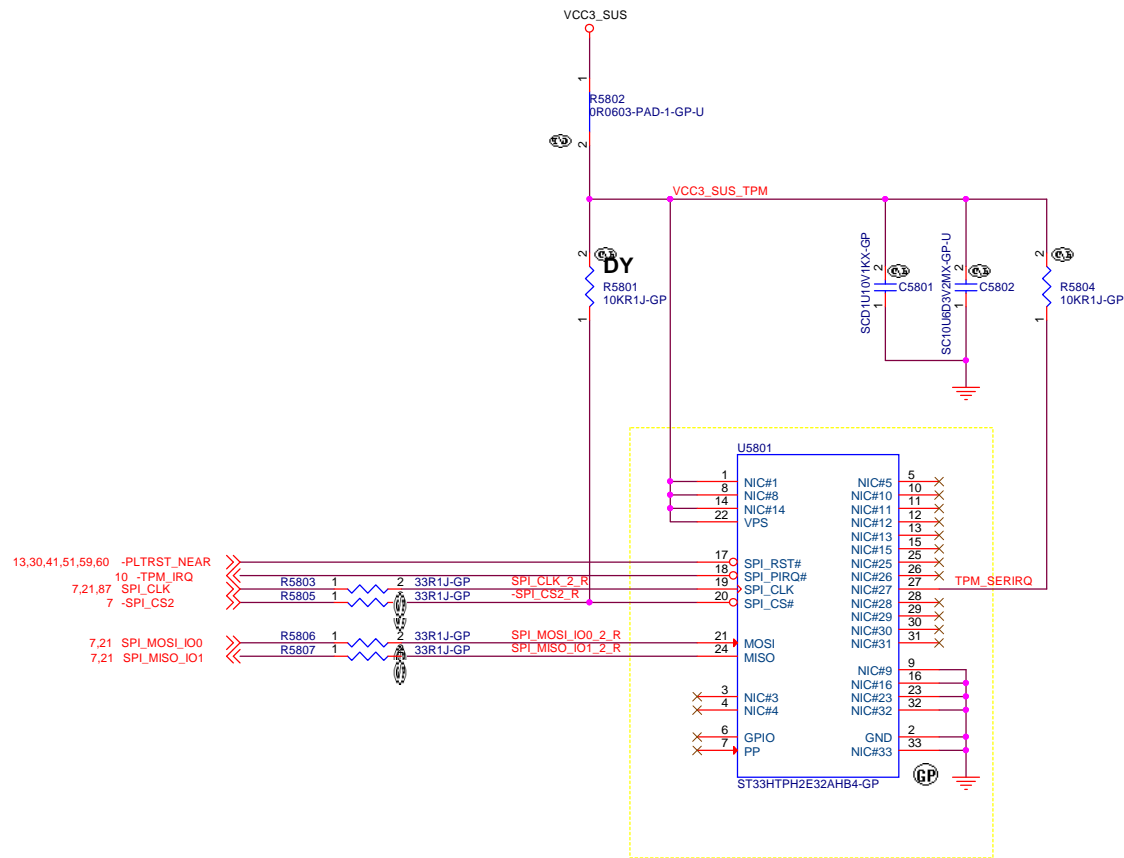


Accel for ISH



For Modern Standby Power Reduction



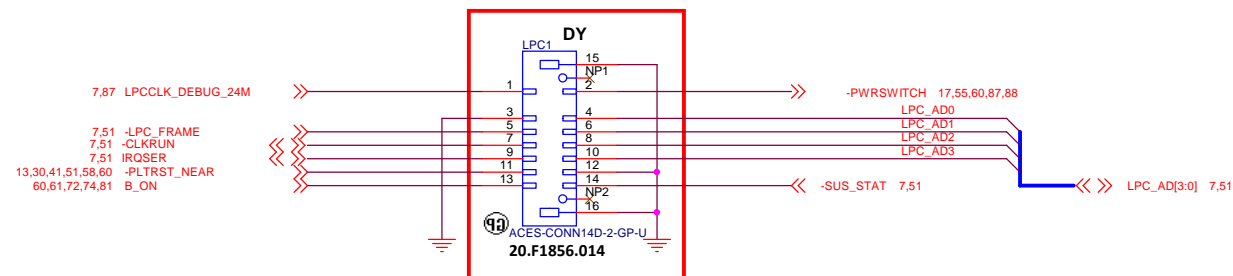


| TABLE 071.09670.0H03 |                    |                              |                            |
|----------------------|--------------------|------------------------------|----------------------------|
| Pin No               | TCG PTP Spec (v38) | Infineon SLB9670VQ2.0 FW7.63 | ST Micro ST33HTPH2E32A HB4 |
| 1                    | VDD                | VDD                          | NC                         |
| 2                    | GND                | GND                          | NC                         |
| 3                    | GPIO               | NC                           | NC                         |
| 4                    | GPIO               | NC                           | PP                         |
| 5                    | NC                 | NC                           | NC                         |
| 6                    | VNC/GPIO           | GPIO                         | NC                         |
| 7                    | GPIO/VDD           | PP                           | GPIO                       |
| 8                    | VDD                | VDD                          | NC                         |
| 9                    | GND                | GND                          | NC                         |
| 10                   | VNC/GPIO           | NC                           | NC                         |
| 11                   | NC                 | NC                           | NC                         |
| 12                   | NC                 | NC                           | NC                         |
| 13                   | VNC/GPIO           | NC                           | NC                         |
| 14                   | VDD                | NC                           | NC                         |
| 15                   | NC                 | NC                           | NC                         |
| 16                   | GND                | NC                           | NC                         |
| 17                   | SPI_RST#           | RST#                         | SPI_RST#                   |
| 18                   | SPI_PIRQ#          | PIRQ#                        | SPI_PIRQ#                  |
| 19                   | SPI_CLK            | SCLK                         | SPI_CLK                    |
| 20                   | SPI_CS#            | CS#                          | SPI_CS#                    |
| 21                   | MOSI               | MOSI                         | MOSI                       |
| 22                   | VDD                | VDD                          | VPS                        |
| 23                   | GND                | GND                          | NC                         |
| 24                   | MISO               | MISO                         | MISO                       |
| 25                   | NC                 | NC                           | NC                         |
| 26                   | NC                 | NC                           | NC                         |
| 27                   | NC                 | NC                           | NC                         |
| 28                   | NC                 | NC                           | NC                         |
| 29                   | VNC/GPIO           | NC                           | NC                         |
| 30                   | VNC/GPIO           | NC                           | NC                         |
| 31                   | VNC                | NC                           | NC                         |
| 32                   | GND                | GND                          | NC                         |

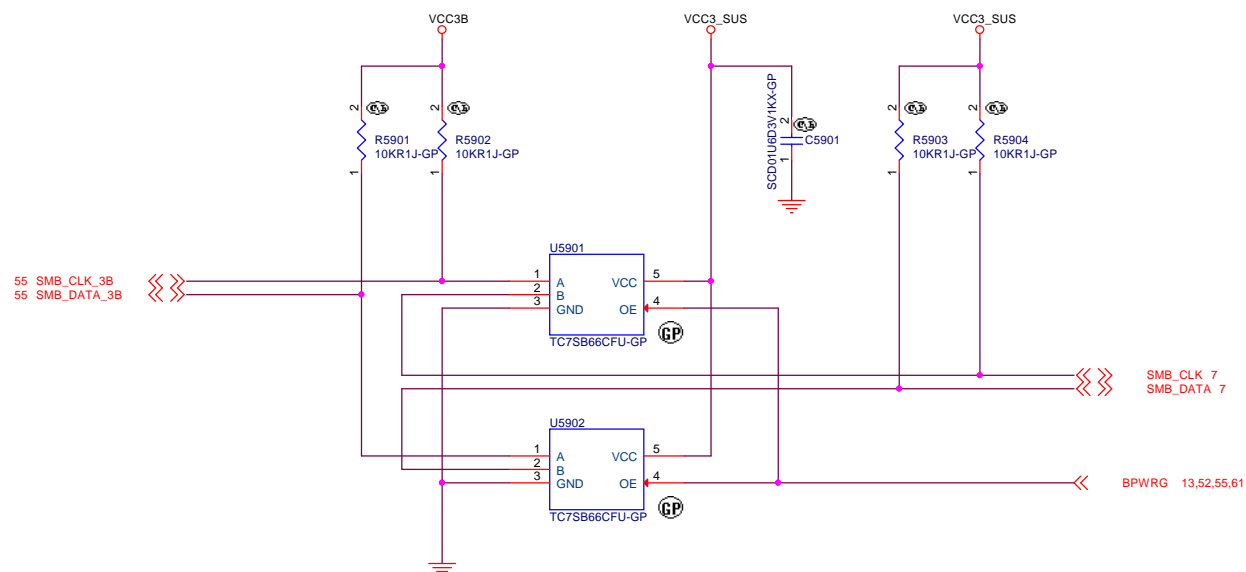
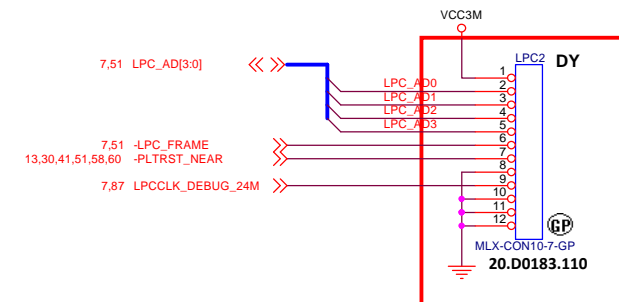
TABLE

| REF DES | ENABLE | DISABLE |
|---------|--------|---------|
| LPC1    | ASM    | NO_ASM  |
| R710    | ASM    | NO_ASM  |

LOGIC



### LPC for Debug Card Connector



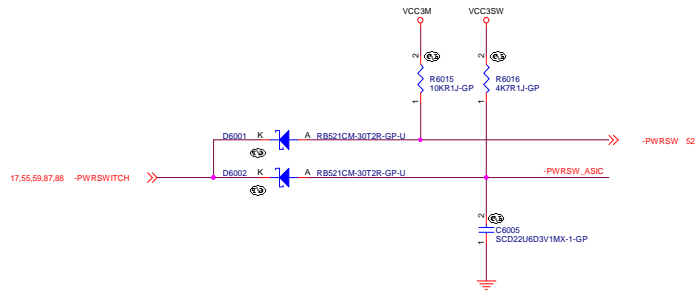
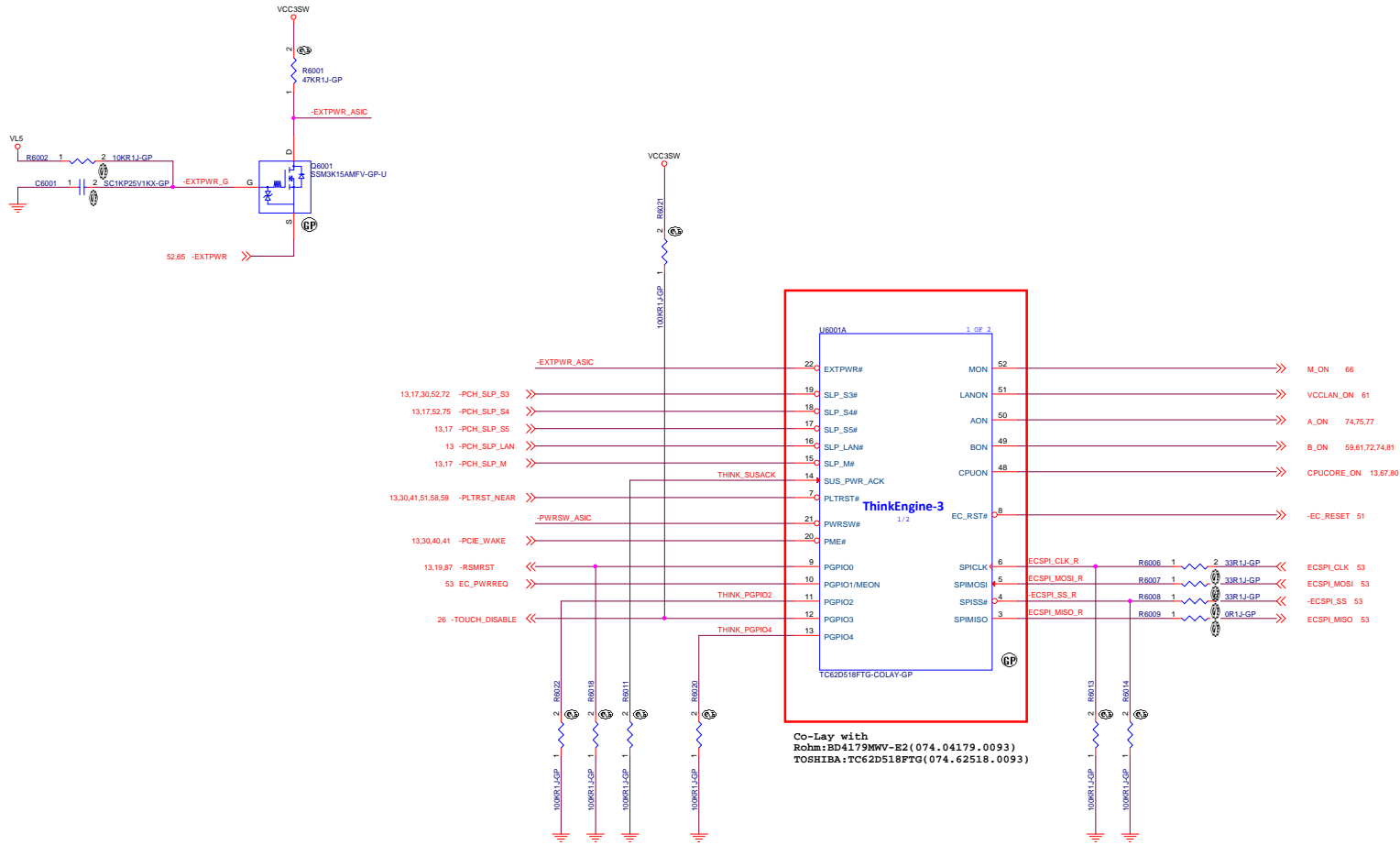
BUS SW for SMBUS is required to put pull-up resistors to VCC3\_SUS on PCH side. This is to avoid MEMANUF error occurred in Broadwell platform. See Intel-Lenovo AR tracker BDW #73, closed in 2013/11/20. (CT\_20170213)

LRV3 MB

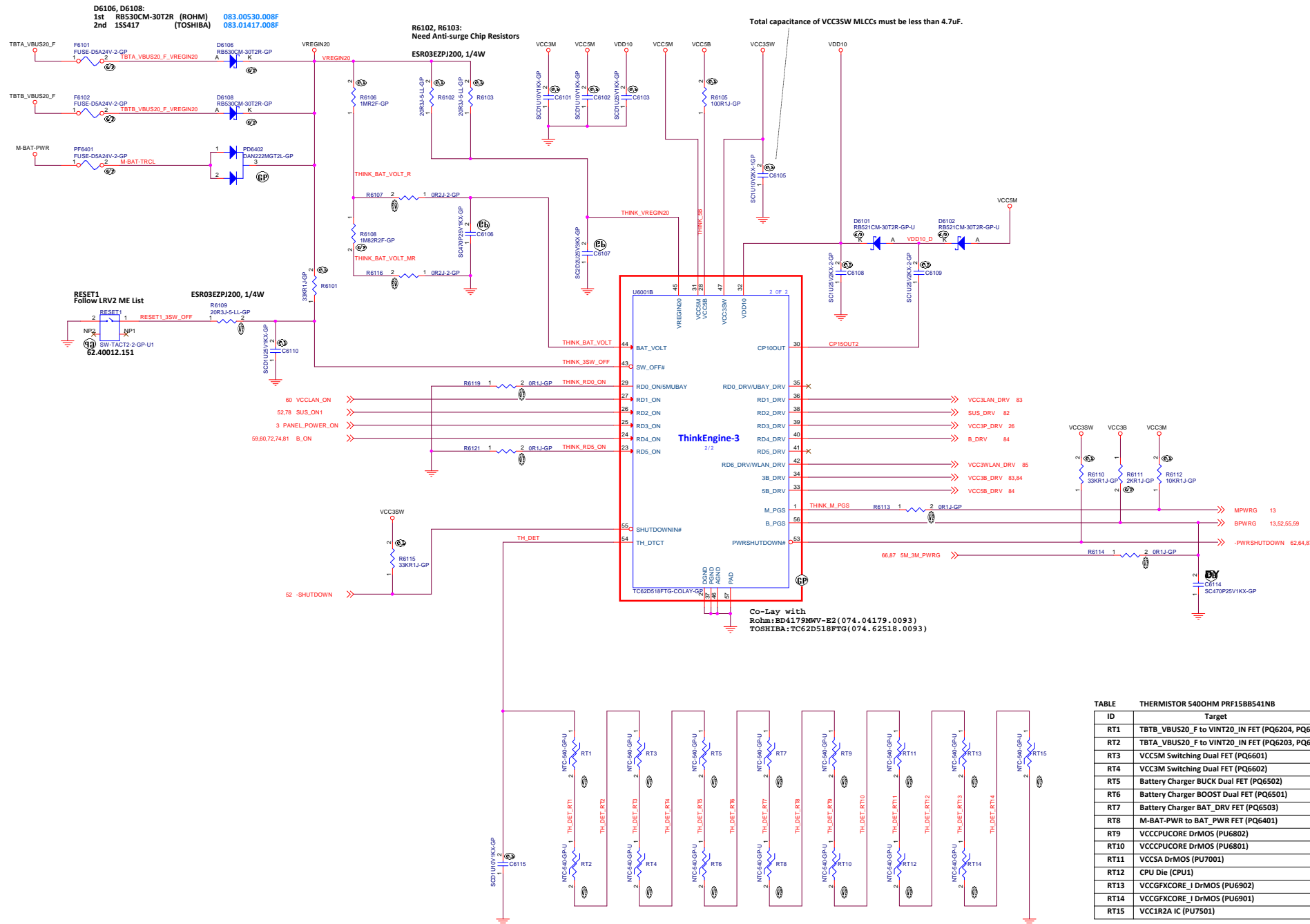
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Taipei Hsien 221, Taiwan, R.O.C.

Title **SMBUS SWITCH/LPC DEBUG PORT**

Size A3 Document Number **Raven-3** Rev **1**  
Date: Wednesday, January 17, 2018 Sheet 59 of 89



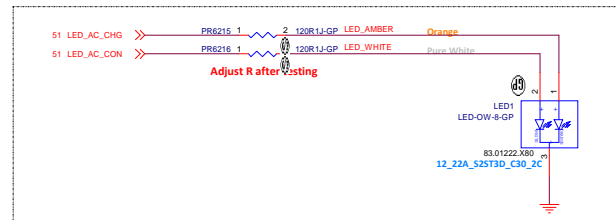
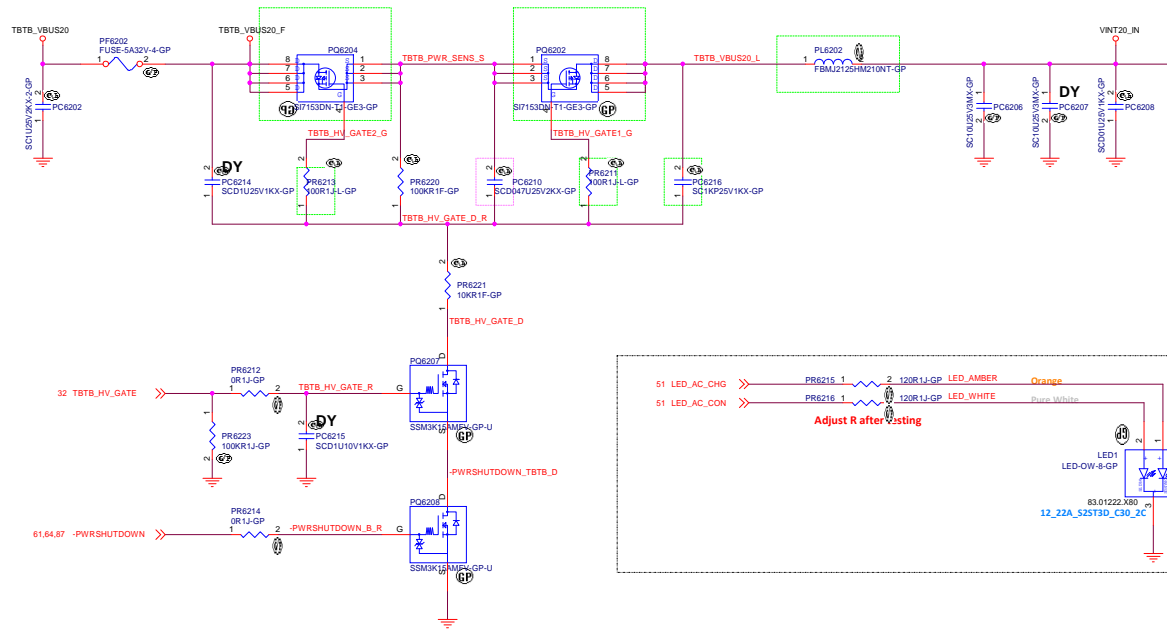
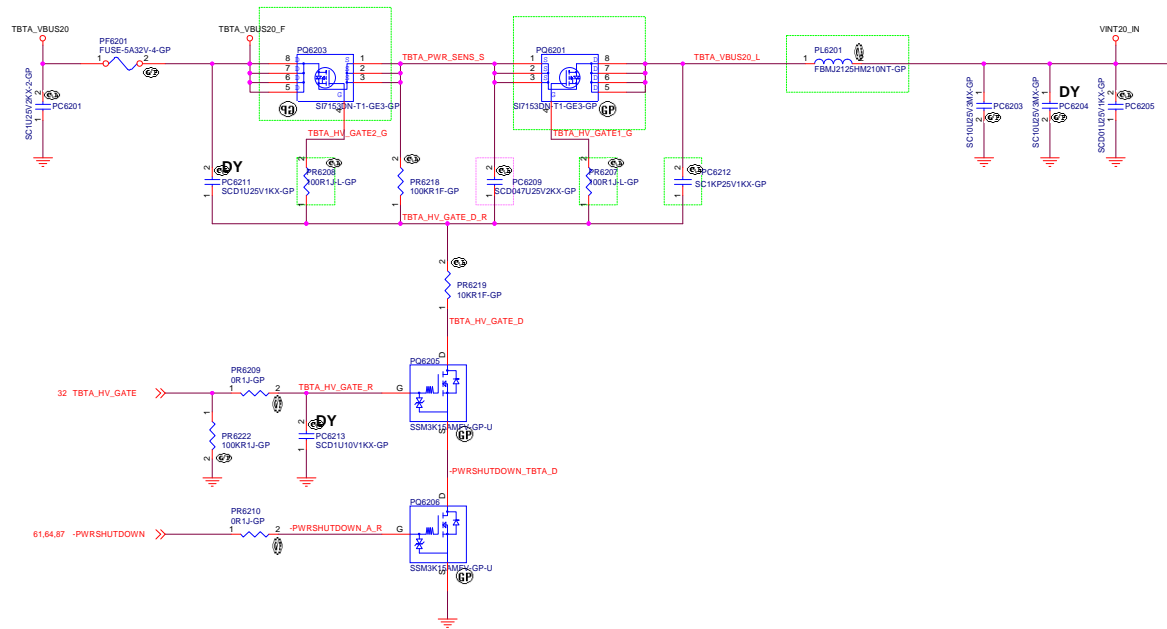




| TABLE THERMISTOR 5400HM PRF15B8541NB |   |
|--------------------------------------|---|
| ID                                   | Target  |
| RT1                                  | TBTA_VBUS20_F to VINT20_IN FET (PQ6204, PQ6202) |
| RT2                                  | TBTA_VBUS20_F to VINT20_IN FET (PQ6203, PQ6201) |
| RT3                                  | VCC5M Switching Dual FET (PQ6601)               |
| RT4                                  | VCC3M Switching Dual FET (PQ6602)               |
| RT5                                  | Battery Charger BUCK Dual FET (PQ6502)          |
| RT6                                  | Battery Charger BOOST Dual FET (PQ6501)         |
| RT7                                  | Battery Charger BAT_DRV FET (PQ6503)            |
| RT8                                  | M-BAT-PWR to BAT_PWR FET (PQ6401)               |
| RT9                                  | VCCPUCORE DrMOS (PU6802)                        |
| RT10                                 | VCCPUCORE DrMOS (PU6801)                        |
| RT11                                 | VCCSA DrMOS (PU7001)                            |
| RT12                                 | CPU Die (CPU1)                                  |
| RT13                                 | VCCGFXCORE_I DrMOS (PU6902)                     |
| RT14                                 | VCCGFXCORE_I DrMOS (PU6901)                     |
| RT15                                 | VCC1R2A IC (PU7501)                             |

Table  
PQ6201,PQ6202,PQ6203,PQ6204  
1st SI7153DN-T1-GE3 VISHAY 084.07153.0037  
2nd TPCC8104 TOSHIBA 84.08104.B37

EVT\_EC069 RV3\_PDV\_EC015 RV3\_FVT\_EC004  
RV3\_PDV\_EC049 RV3\_PDV\_EC071  
RV3\_PDV\_EC096 RV3\_PDV\_EC016  
RV3\_PDV\_EC039 RV3\_PDV\_EC042  
RV3\_PDV\_EC046 RV3\_PDV\_EC059  
RV3\_PDV\_EC069 RV3\_PDV\_EC117



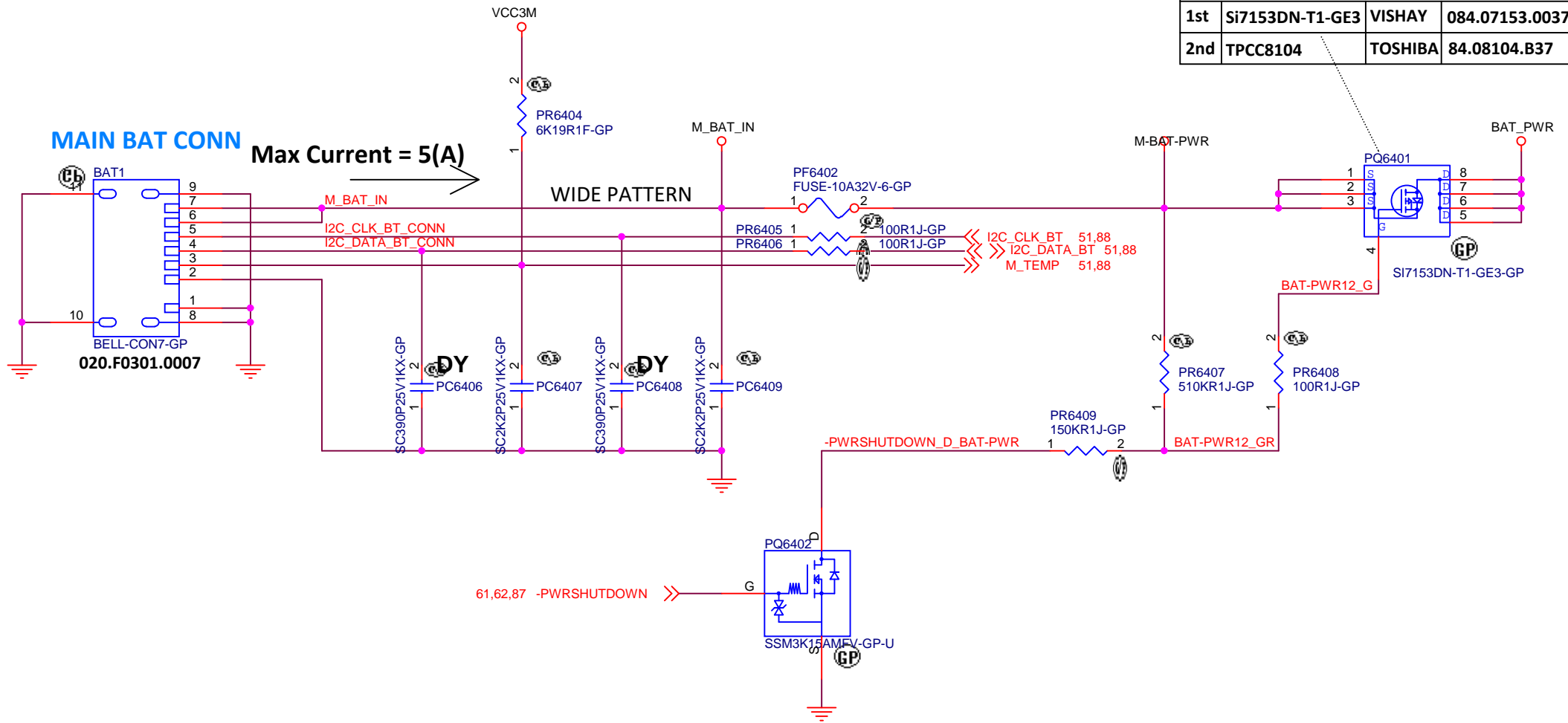
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LRV3 MB

|  |                                   |                 |
|--|-----------------------------------|-----------------|
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| Title <b>BLANK</b>   |                                   |                 |
| Size<br>A4   | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018  |                                   | Sheet 63 of 89  |

TABLE

| PQ6401 |                 |         |                |
|--------|-----------------|---------|----------------|
| 1st    | Si7153DN-T1-GE3 | VISHAY  | 084.07153.0037 |
| 2nd    | TPCC8104        | TOSHIBA | 84.08104.B37   |



LRV3 MB

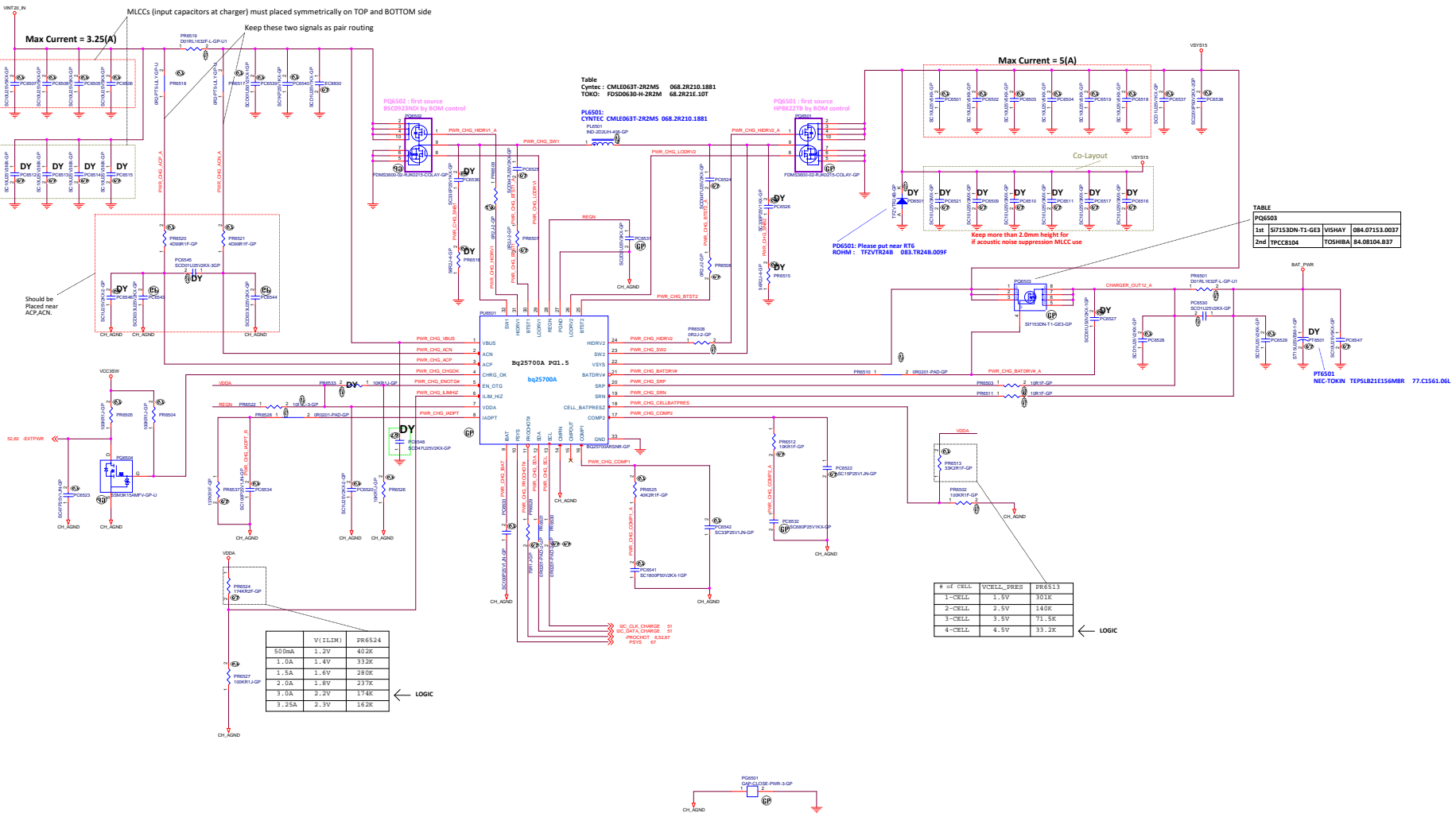
緯創資通

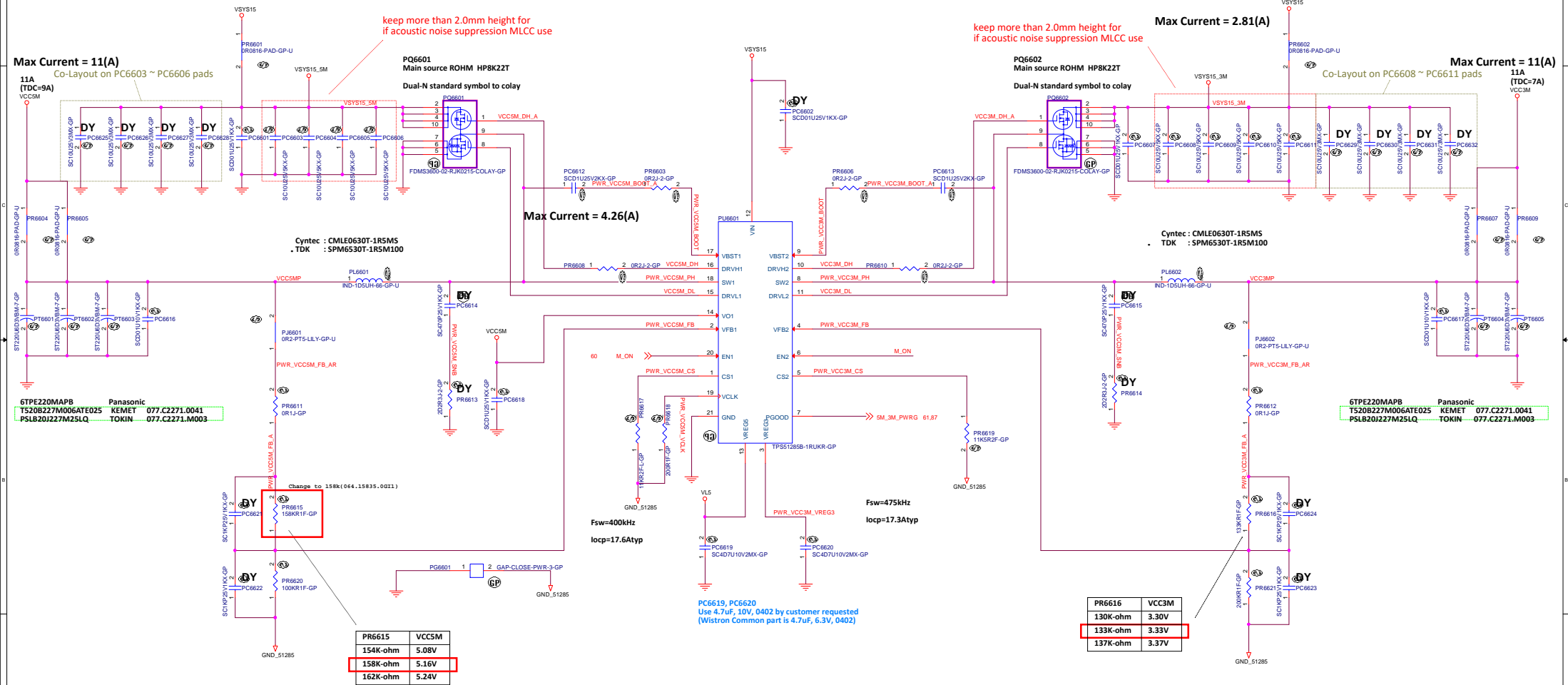
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title **BATTERY INPUT**

|            |                                   |                 |
|------------|-----------------------------------|-----------------|
| Size<br>A4 | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
|------------|-----------------------------------|-----------------|

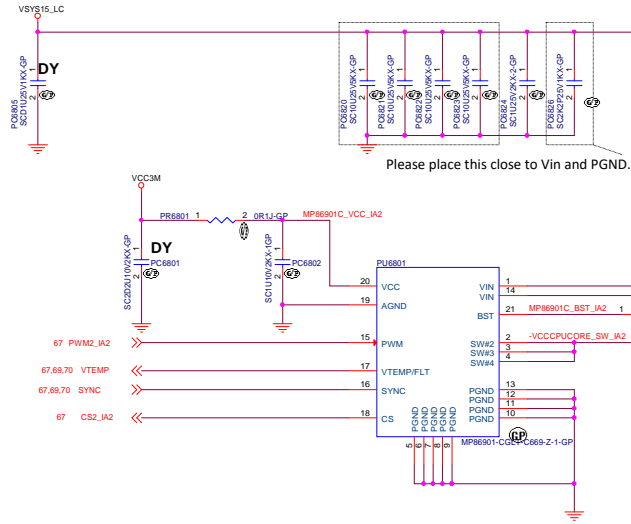
Date: Wednesday, January 17, 2018 Sheet 64 of 89







Max Current = 3.8(A)



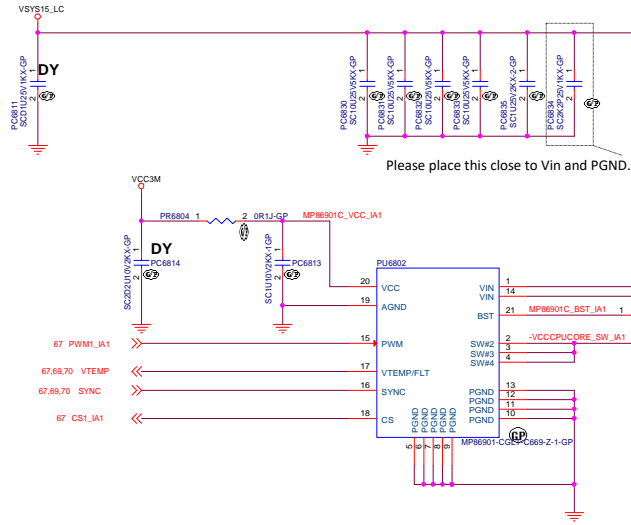
| Table: PT6801, PT6802 |                    |                |  |
|-----------------------|--------------------|----------------|--|
| PANASONIC             | ETPE330MA9L        | 077.23371.M001 |  |
| NEC-TOKIN             | PSGB20E337M9       | 80.3371V.A2L   |  |
| KEMET                 | T520B337M2R5ATE009 | 068.R1210.1001 |  |

| Table: PL6801 |                     |                |  |
|---------------|---------------------|----------------|--|
| NEC-TOKIN     | MPCH0730LR12        | 68.1211N.10A   |  |
| CYNTEC        | CMLE063T-R12MS0R657 | 068.R1210.1001 |  |

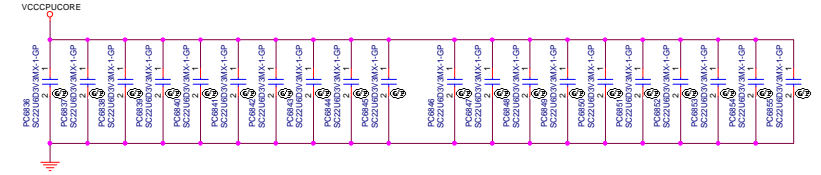
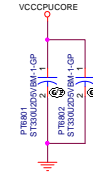
Max Current = 64(A) for RU-42

This is a bleeder resistor.  
This is not necessary here, if  
there is the bleeder resistor in  
other sheet.

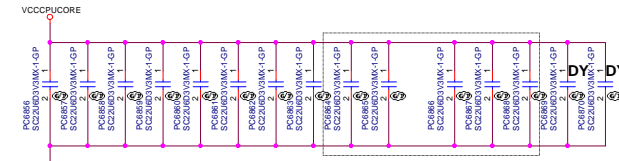
Max Current = 3.8(A)



| Table: PL6802 |                     |                |  |
|---------------|---------------------|----------------|--|
| NEC-TOKIN     | MPCH0730LR12        | 68.1211N.10A   |  |
| CYNTEC        | CMLE063T-R12MS0R657 | 068.R1210.1001 |  |

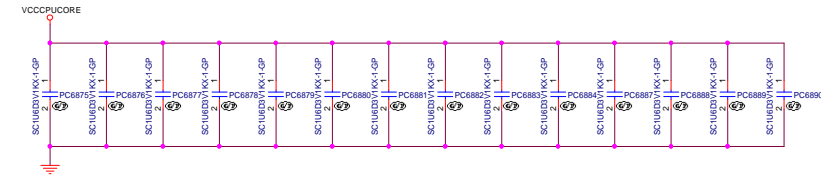


|        |                         |
|--------|-------------------------|
| R U-42 | 2pcs 330uF + 33pcs 22uF |
| U-23e  | 28pcs 22uF              |
| U-22   | 28pcs 22uF              |

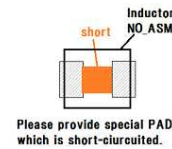
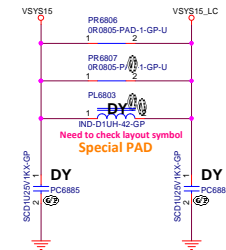


| Intel Config 4  |                  |             |             |
|-----------------|------------------|-------------|-------------|
|                 | R U-42           | U-23e       | U-22        |
| PU6801          | MP86901C         | No ASM (DY) | No ASM (DY) |
| PL6801          | IND_0.12uH       | No ASM (DY) | No ASM (DY) |
| PR6801          | 0.5%_1/20w       | No ASM (DY) | No ASM (DY) |
| PT6801          | 330uF_2.5V_M_9m  | No ASM (DY) | No ASM (DY) |
| PT6802          | 330uF_2.5V_M_9m  | No ASM (DY) | No ASM (DY) |
| PC6802          | 1uF_10V_X5R_M    | No ASM (DY) | No ASM (DY) |
| PC6804          | 1uF_25V_X5R_M    | No ASM (DY) | No ASM (DY) |
| PC6826          | 2200pF_25V_X5R_K | No ASM (DY) | No ASM (DY) |
| PC6824          | 1uF_25V_X5R_M    | No ASM (DY) | No ASM (DY) |
| PC6820 ~ PC6823 | 10uF_25V_X5R_M   | No ASM (DY) | No ASM (DY) |
| PC6864 ~ PC6868 | 22uF_6.3V_X5R_M  | No ASM (DY) | No ASM (DY) |

Default R U-42

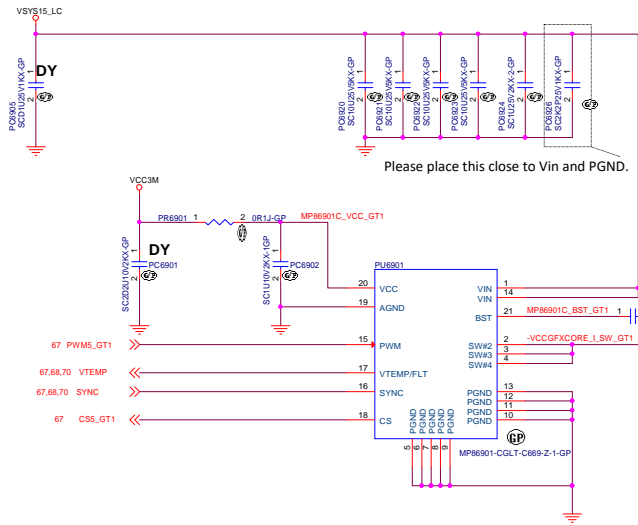


| Table: PL6803 |                    |                |  |
|---------------|--------------------|----------------|--|
| CYNTEC        | CMLB042T-R10MS     | 068.R1010.1071 |  |
| VISHAY        | IHL1616BZERR10M-11 | 068.R1010.1061 |  |





Max Current = 3.8(A)



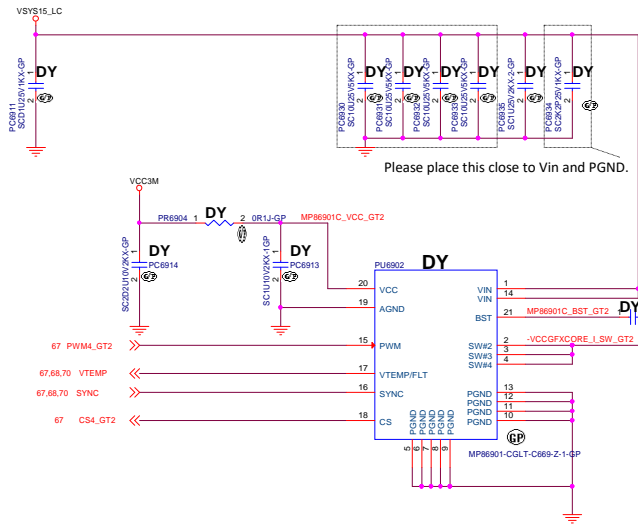
| Table: PT6901, PT6902 |                    |                |  |
|-----------------------|--------------------|----------------|--|
| PANASONIC             | ETPE330MA9L        | 077.23371.M001 |  |
| NEC-TOKIN             | PSGB20E337M9       | 80.3371V.A2L   |  |
| KEMET                 | T520B337M2R5ATE009 | 077.C3371.0051 |  |

| Table: PL6901 |                     |                |  |
|---------------|---------------------|----------------|--|
| NEC-TOKIN     | MPCH0730LR12        | 68.1211N.10A   |  |
| CYNTEC        | CMLE063T-R12MS0R657 | 068.R1210.1001 |  |

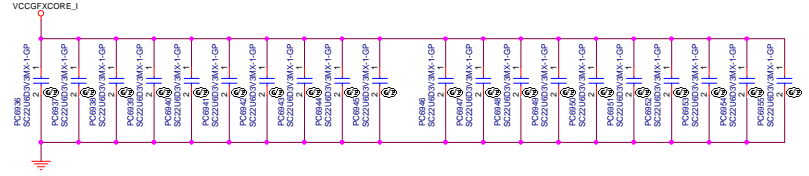
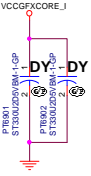
Max Current = 64(A) for U-23e

This is a bleeder resistor.  
This is not necessary here, if  
there is the bleeder resistor in  
other sheet.

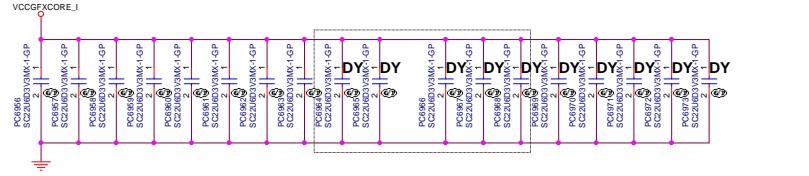
Max Current = 3.8(A)



| Table: PL6902 |                     |                |  |
|---------------|---------------------|----------------|--|
| NEC-TOKIN     | MPCH0730LR12        | 68.1211N.10A   |  |
| CYNTEC        | CMLE063T-R12MS0R657 | 068.R1210.1001 |  |



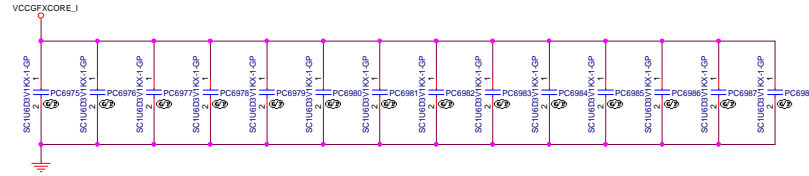
|        |                         |
|--------|-------------------------|
| R U-42 | 28pcs 22uF              |
| U-23e  | 2pcs 330uF + 33pcs 22uF |
| U-22   | 30pcs 22uF              |



Intel Config 4

|                 | R U-42          | U-23e            | U-22            |
|-----------------|-----------------|------------------|-----------------|
| PU6902          | No ASM (DY)     | MP86901C         | No ASM (DY)     |
| PL6902          | No ASM (DY)     | IND_0.12uH       | No ASM (DY)     |
| PR6904          | No ASM (DY)     | 0_5%_1/20w       | No ASM (DY)     |
| PT6901          | No ASM (DY)     | 330uF_2.5V_M_9m  | No ASM (DY)     |
| PT6902          | No ASM (DY)     | 330uF_2.5V_M_9m  | No ASM (DY)     |
| PC6913          | No ASM (DY)     | 1uF_10V_X5R_M    | No ASM (DY)     |
| PC6908          | No ASM (DY)     | 1uF_25V_X5R_M    | No ASM (DY)     |
| PC6934          | No ASM (DY)     | 2200pF_25V_X5R_K | No ASM (DY)     |
| PC6935          | No ASM (DY)     | 1uF_25V_X5R_M    | No ASM (DY)     |
| PC6930 ~ PC6933 | No ASM (DY)     | 10uF_25V_X5R_M   | No ASM (DY)     |
| PC6961 ~ PC6963 | 22uF_6.3V_X5R_M | 22uF_6.3V_X5R_M  | 22uF_6.3V_X5R_M |
| PC6964, PC6965  | No ASM (DY)     | 22uF_6.3V_X5R_M  | 22uF_6.3V_X5R_M |
| PC6966 ~ PC6968 | No ASM (DY)     | 22uF_6.3V_X5R_M  | No ASM (DY)     |

Default R U-42



Max Current = 0.71(A)



Please place this close to Vin and PGND.

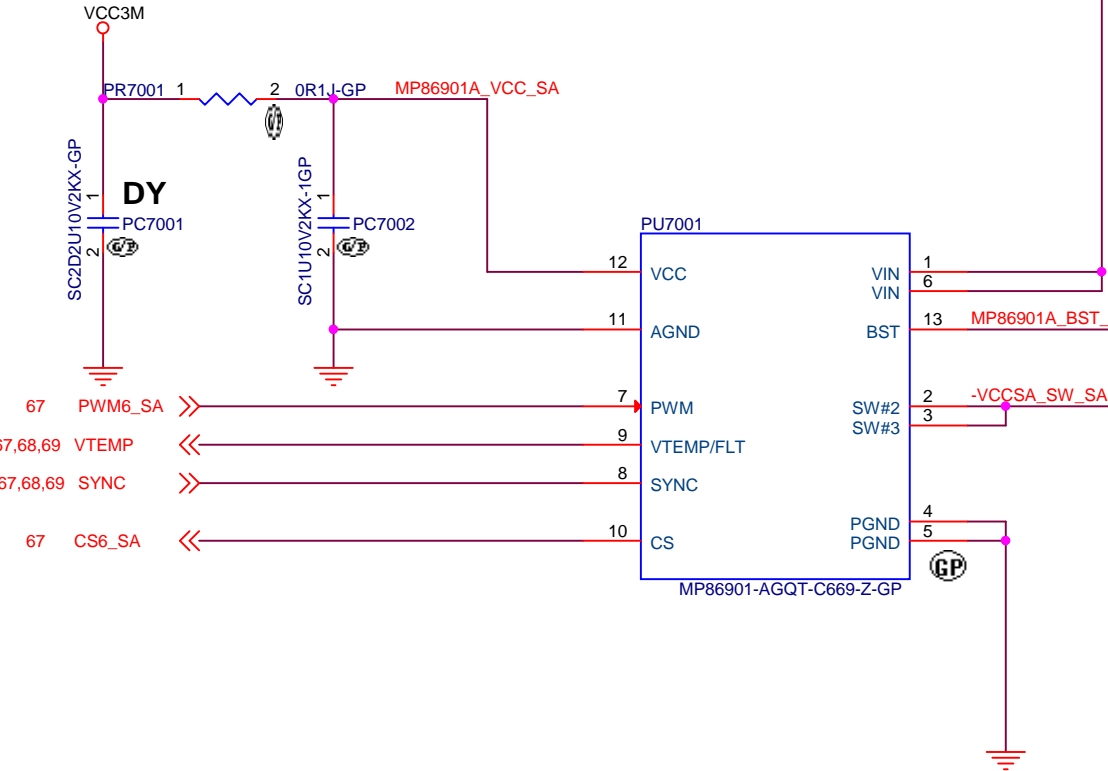
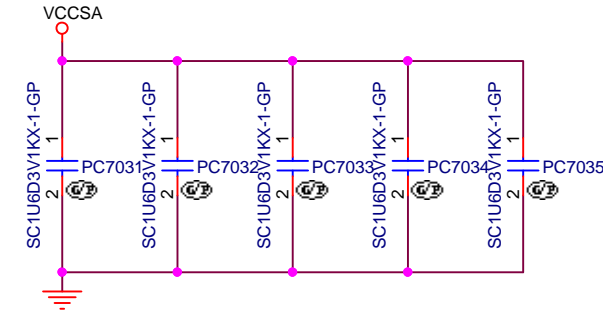
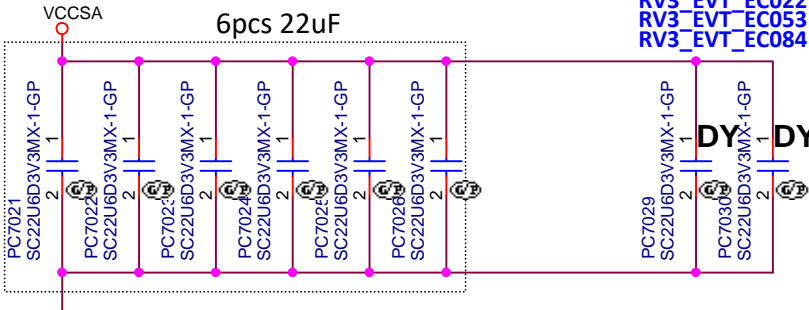


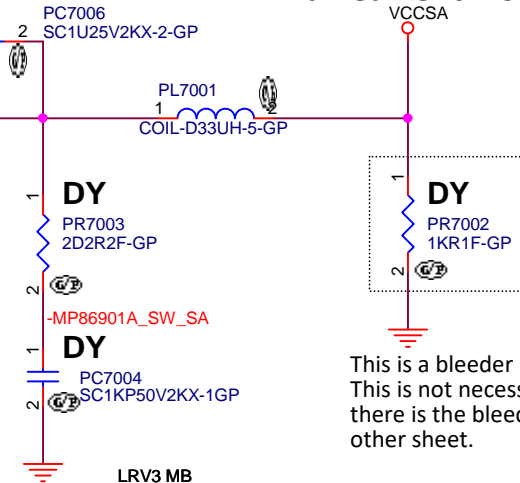
Table: PL7001

NEC TOKIN MPLCH0520LR33 (330nH) 68.R3310.20G  
CYNTEC CMLB051H-R33MS-88 068.R3310.1131

KBL\_EC007\_LRV3  
KBL\_EC013\_LRV3  
RV3\_PDV\_EC003  
RV3\_PDV\_EC027  
RV3\_PDV\_EC034  
RV3\_PDV\_EC052  
RV3\_PDV\_EC073  
RV3\_EVT\_EC022  
RV3\_EVT\_EC053  
RV3\_EVT\_EC084



Max Current = 6(A) for RU-42



This is a bleeder resistor.  
This is not necessary here, if  
there is the bleeder resistor in  
other sheet.

LRV3 MB

|  |                 |                     |       |
|--|-----------------|---------------------|-------|
| 緯創資通   |                 | Wistron Corporation |       |
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| Title DC/DC VCCSA (MP86901A)   |                 |                     |       |
| Size A4  | Document Number |                     | Rev 1 |
| Date: Wednesday, January 17, 2018  |                 | Sheet 70 of 89      |       |

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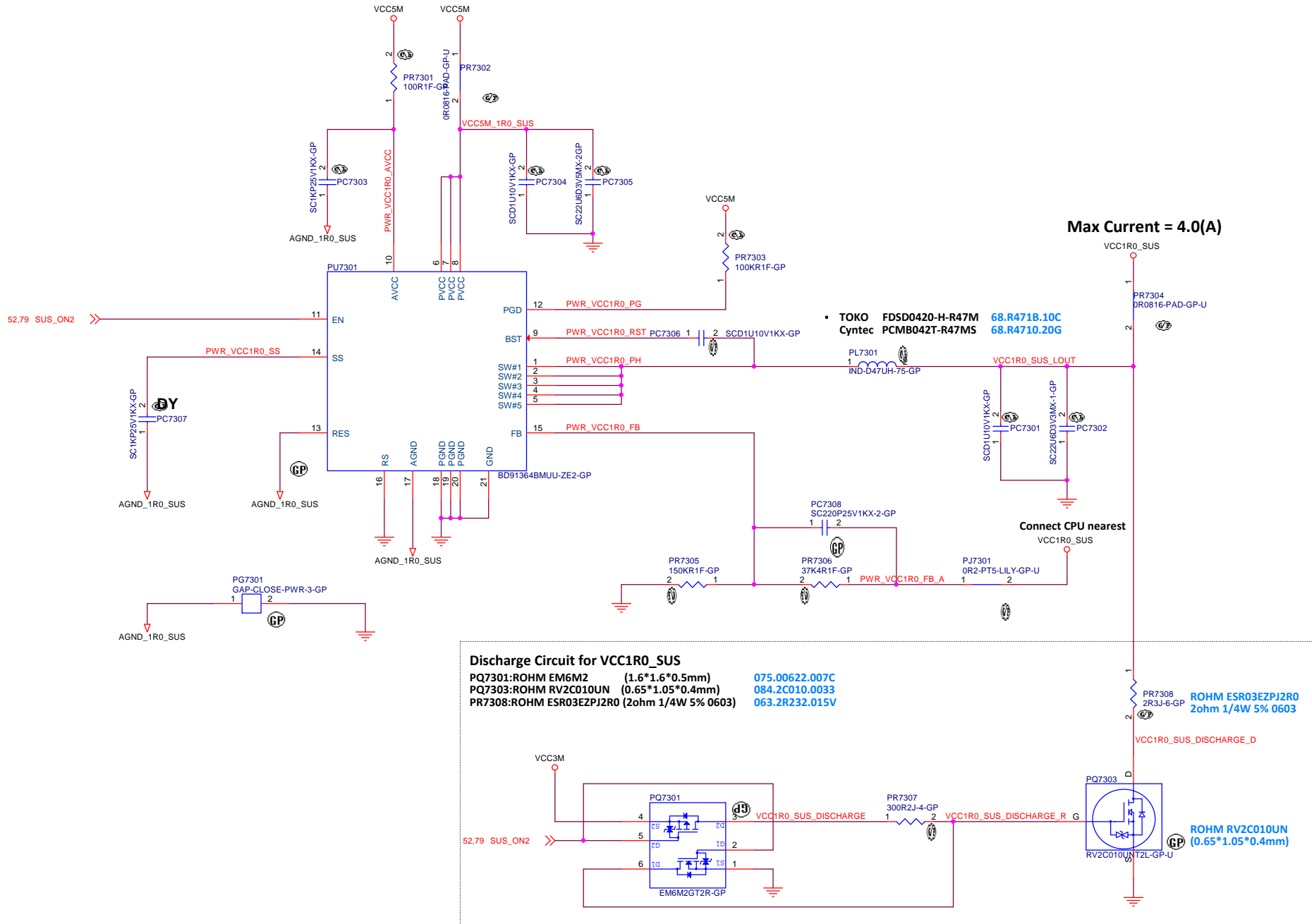
LRV3 MB

|  |                                   |                 |
|--|-----------------------------------|-----------------|
| <div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br/>Taipei Hsien 221, Taiwan, R.O.C.</div> |                                   |                 |
| Title <b>BLANK</b>   |                                   |                 |
| Size<br>A4   | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018  |                                   | Sheet 71 of 89  |



Max Current = 0.94(A)

Max Current = 4.0(A)

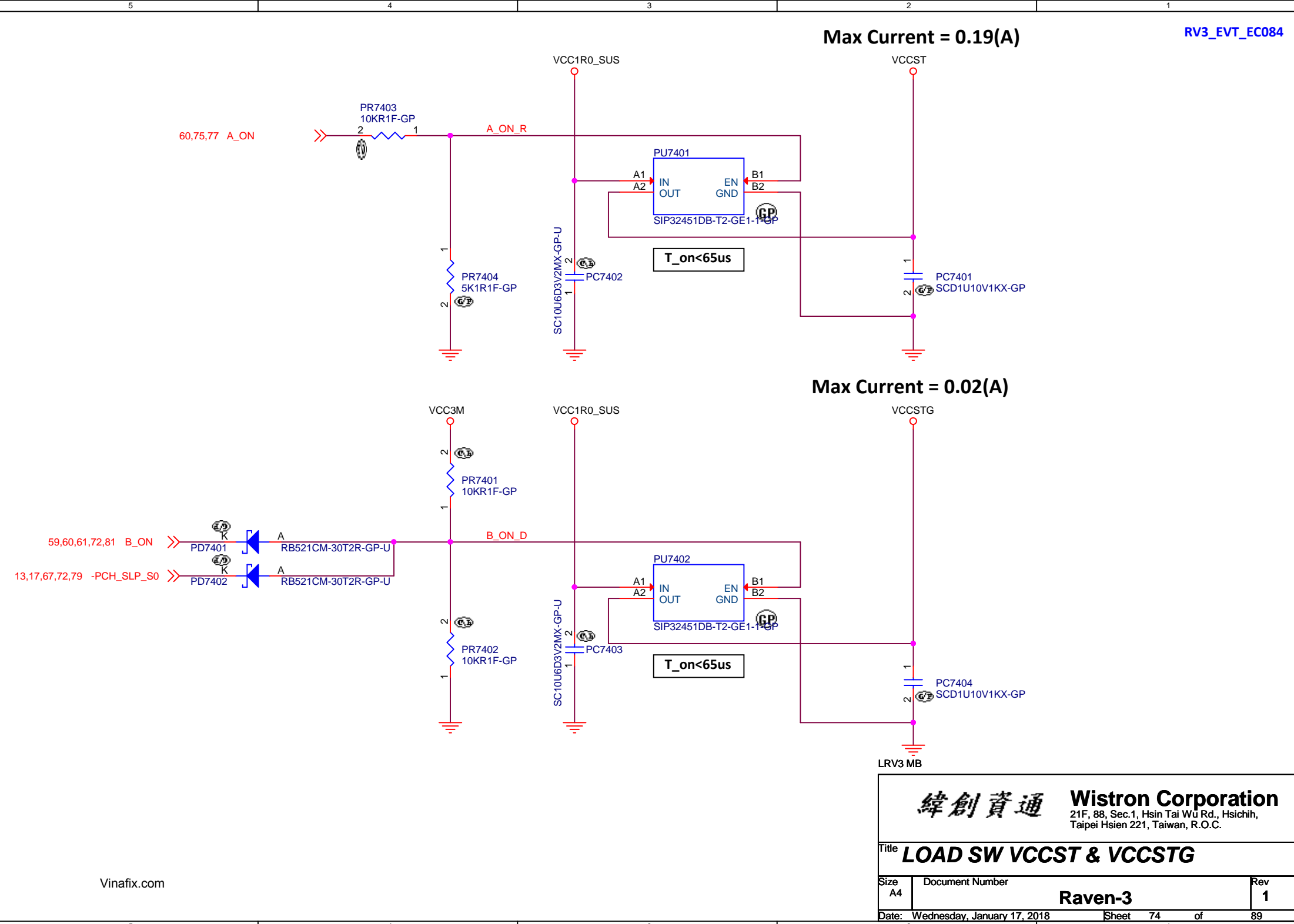


LRV3 MB

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

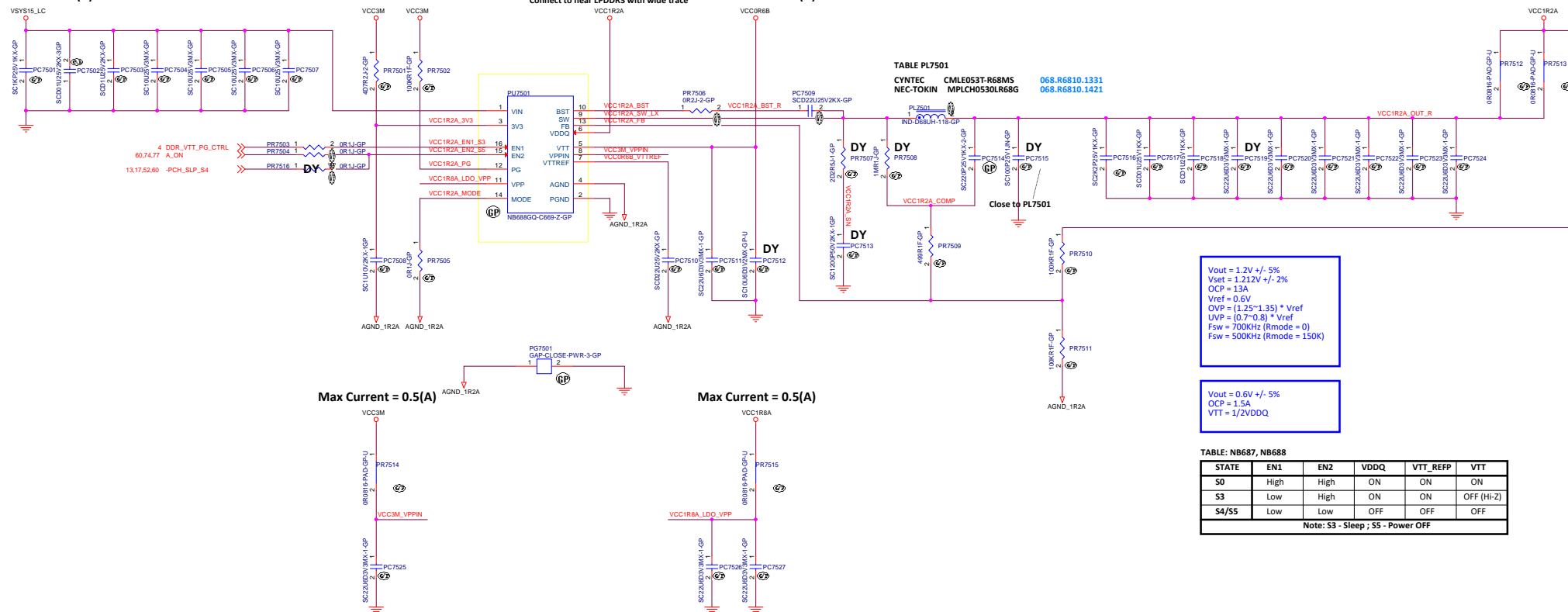
Title **DC/DC VCC1R0\_SUS (BD91364BM)**

|                                     |                                   |                 |
|-------------------------------------|-----------------------------------|-----------------|
| Size<br>A3                          | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date<br>Wednesday, January 17, 2018 | Sheet<br>73                       | of<br>89        |



Connect to near LPDDR3 with wide trace. **Max Current = 1.2(A)**

**Max Current = 7.62(A)**



| Component Name | EVT         | FVT*        | Remark  |
|----------------|-------------|-------------|---------|
| PU7501         | NB687       | NB688       |         |
| PC7525         | NO ASM (DY) | ASM         |         |
| PC7526         | NO ASM (DY) | ASM         |         |
| PC7527         | NO ASM (DY) | ASM         |         |
| PU7701         | ASM         | NO ASM (DY) | VCC1R8A |
| PC7702         | NO ASM (DY) | NO ASM (DY) | VCC1R8A |
| PC7703         | NO ASM (DY) | NO ASM (DY) | VCC1R8A |
| PL7701         | ASM         | NO ASM (DY) | VCC1R8A |
| PC7701         | ASM         | NO ASM (DY) | VCC1R8A |
| PC7704         | NO ASM (DY) | NO ASM (DY) | VCC1R8A |
| PR7702         | ASM         | NO ASM (DY) | VCC1R8A |

| STATE | EN0  | EN2  | VDDQ | VTT_REP | VTT     |
|-------|------|------|------|---------|---------|
| S0    | High | High | ON   | ON      | ON      |
| S3    | Low  | High | ON   | ON      | OFF (H) |
| S4/S5 | Low  | Low  | OFF  | OFF     | OFF     |

**Note: S3 - Sleep ; S5 - Power OFF**

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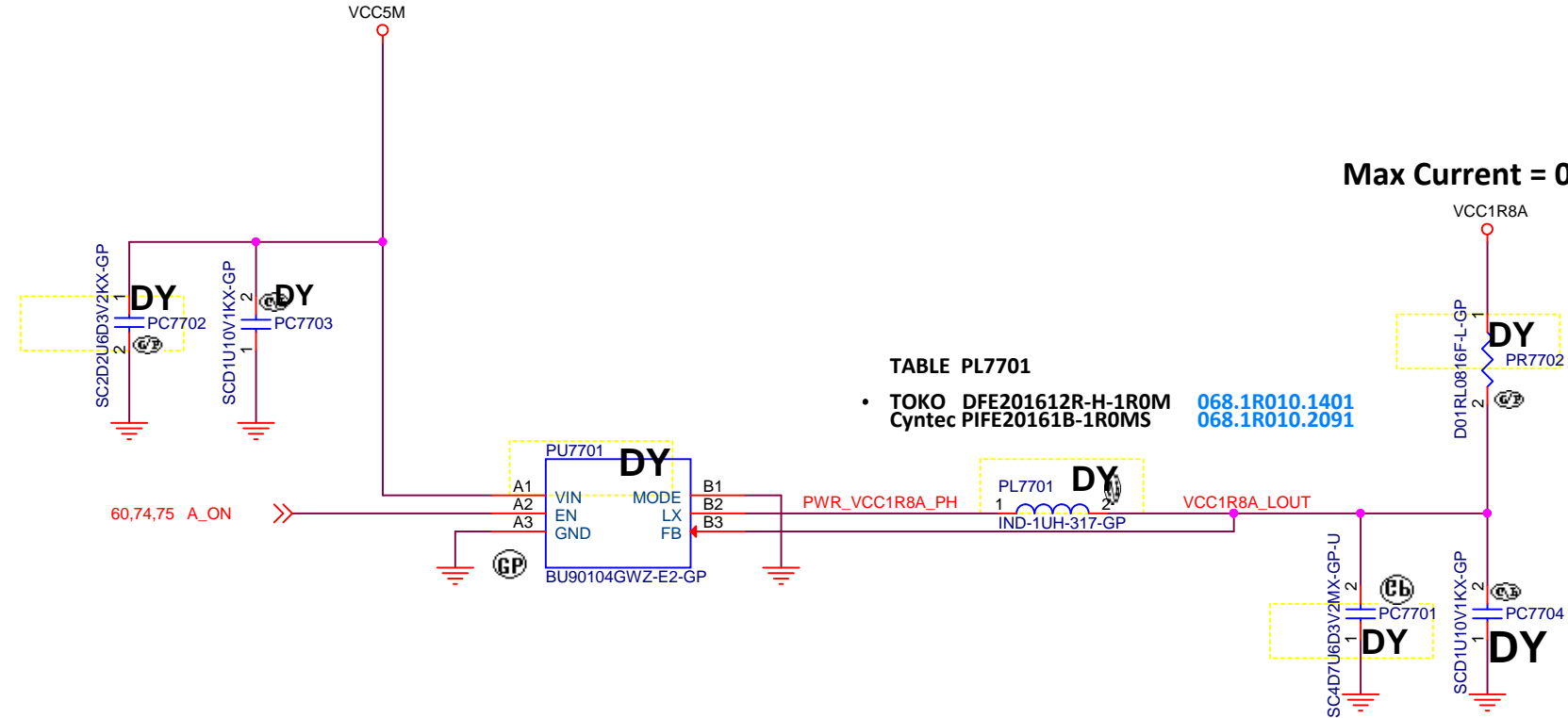
LRV3 MB

|  |                                   |                 |
|--|-----------------------------------|-----------------|
| <div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,<br/>Taipei Hsien 221, Taiwan, R.O.C.</div> |                                   |                 |
| Title <b>BLANK</b>   |                                   |                 |
| Size<br>A4   | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018  |                                   | Sheet 76 of 89  |



Max Current = 0.21(A)

Max Current = 0.5(A)



Page 75: VCC1R2A, VCC0R6B, VCC1R8A setting TABLE

LRV3 MB

|  |                                |                |                            |  |              |
|--|--------------------------------|----------------|----------------------------|--|--------------|
| <b>緯創資通</b>  |                                |                | <b>Wistron Corporation</b> |  |              |
| 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. |                                |                |                            |  |              |
| Title <b>DC/DC VCC1R8A (BU90104GWZ)</b>                                    |                                |                |                            |  |              |
| Size A4  | Document Number <b>Raven-3</b> |                |                            |  | Rev <b>1</b> |
| Date: Wednesday, January 17, 2018  |                                | Sheet 77 of 89 |                            |  |              |

Max Current = 0.15(A)

Max Current = 0.36(A)

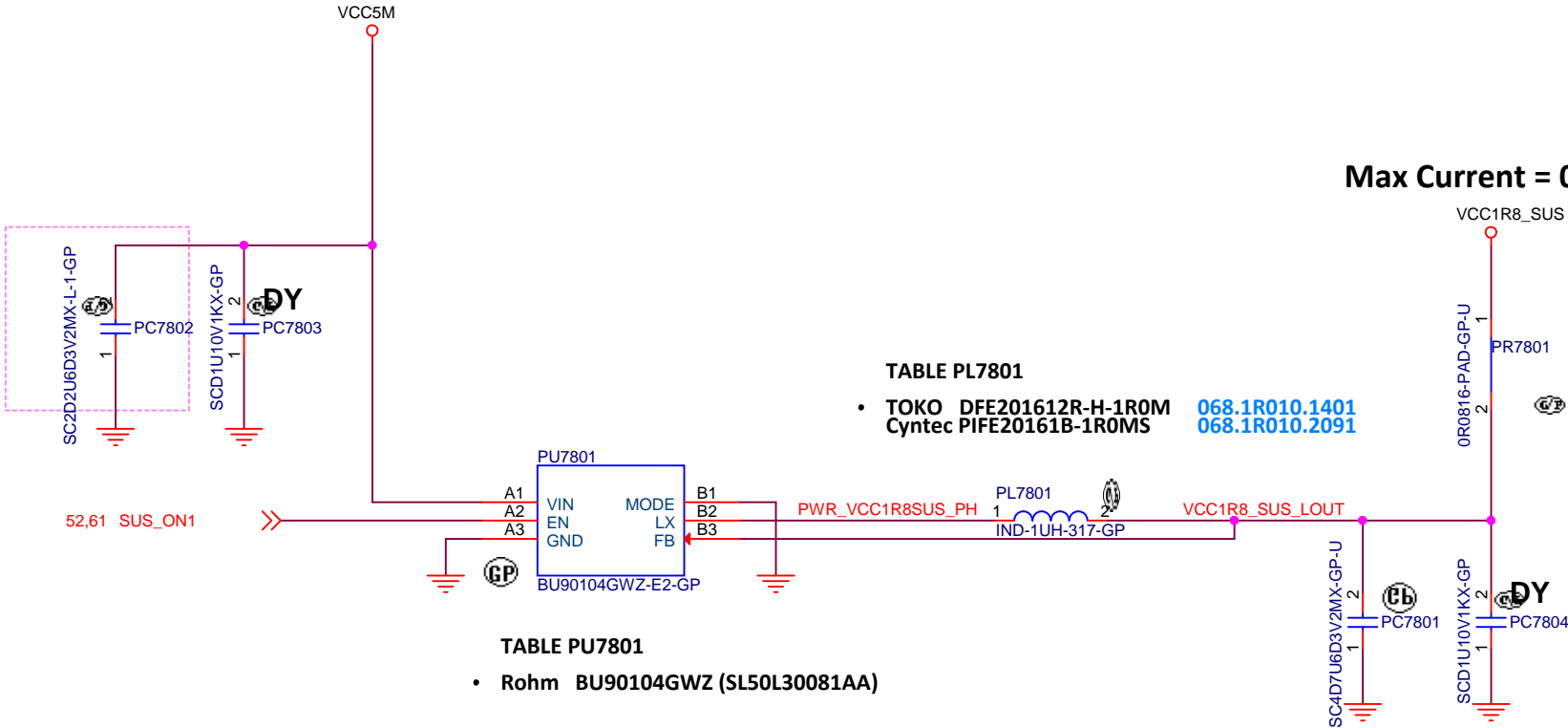


TABLE PL7801

- TOKO DFE201612R-H-1R0M 068.1R010.1401  
Cyntec PIFE20161B-1R0MS 068.1R010.2091

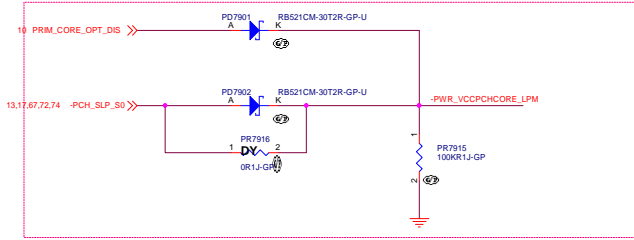
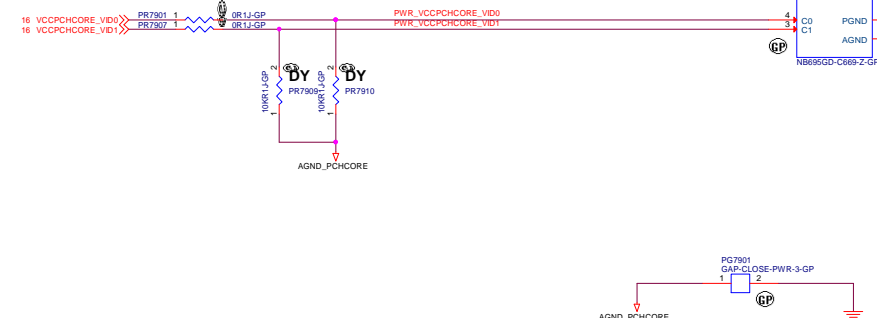
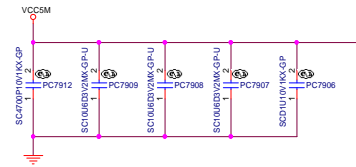
TABLE PU7801

- Rohm BU90104GWZ (SL50L30081AA)

LRV3 MB

|  |                 |                     |       |
|--|-----------------|---------------------|-------|
| 緯創資通   |                 | Wistron Corporation |       |
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| Title DC/DC VCC1R8_SUS (BU90104GWZ)  |                 |                     |       |
| Size A4  | Document Number |                     | Rev 1 |
| Date: Wednesday, January 17, 2018  |                 | Sheet 78 of 89      |       |

Max Current = 0.57(A)



Max Current = 2.57(A)

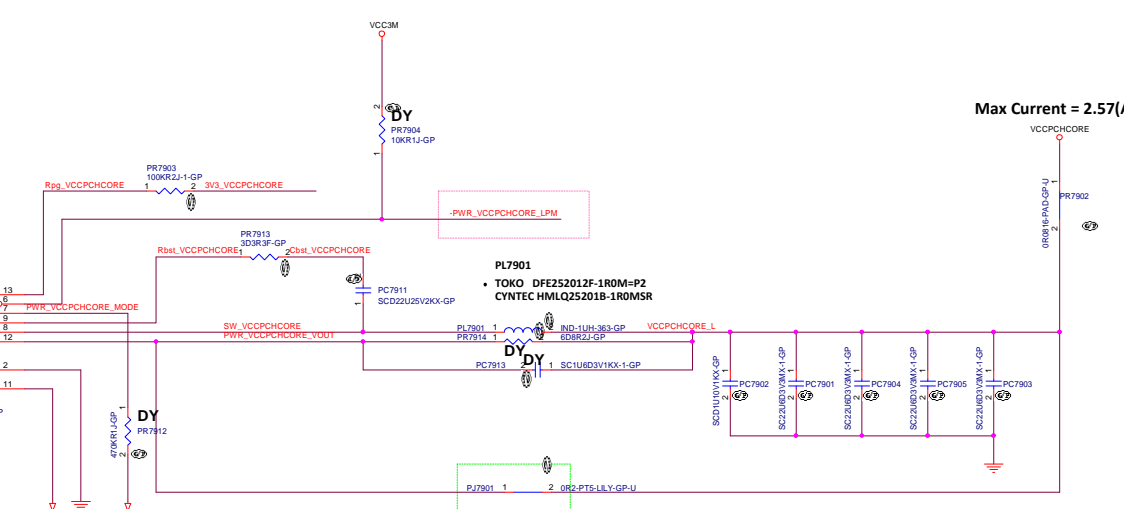


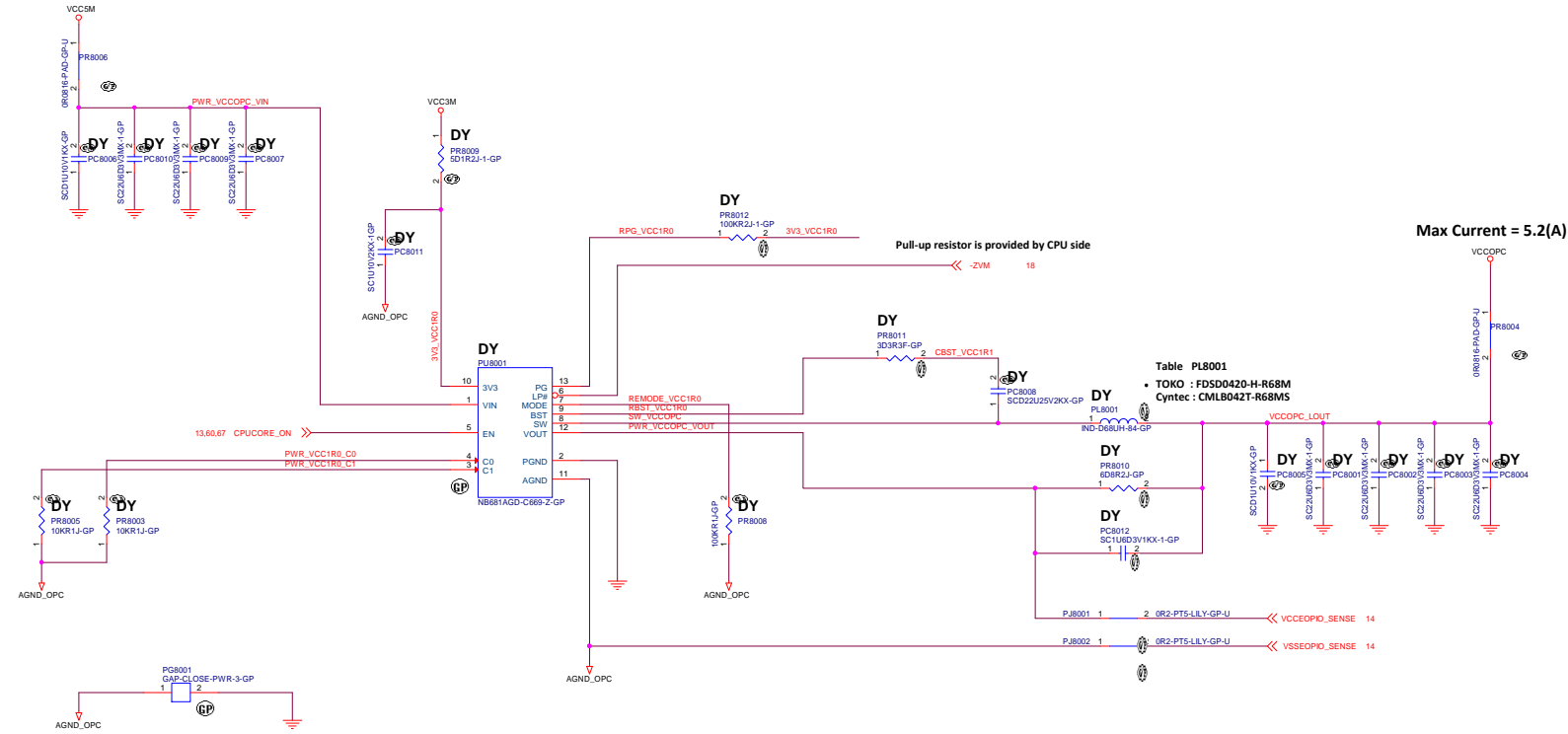
TABLE : NB695 MODE M2 (Float)

| LP# | C1 | C0 | VOUT   |
|-----|----|----|--------|
| 0   | X  | X  | 0.700V |
| 1   | 0  | 0  | 0.850V |
| 1   | 0  | 1  | 0.900V |
| 1   | 1  | 0  | 0.950V |
| 1   | 1  | 1  | 1.000V |

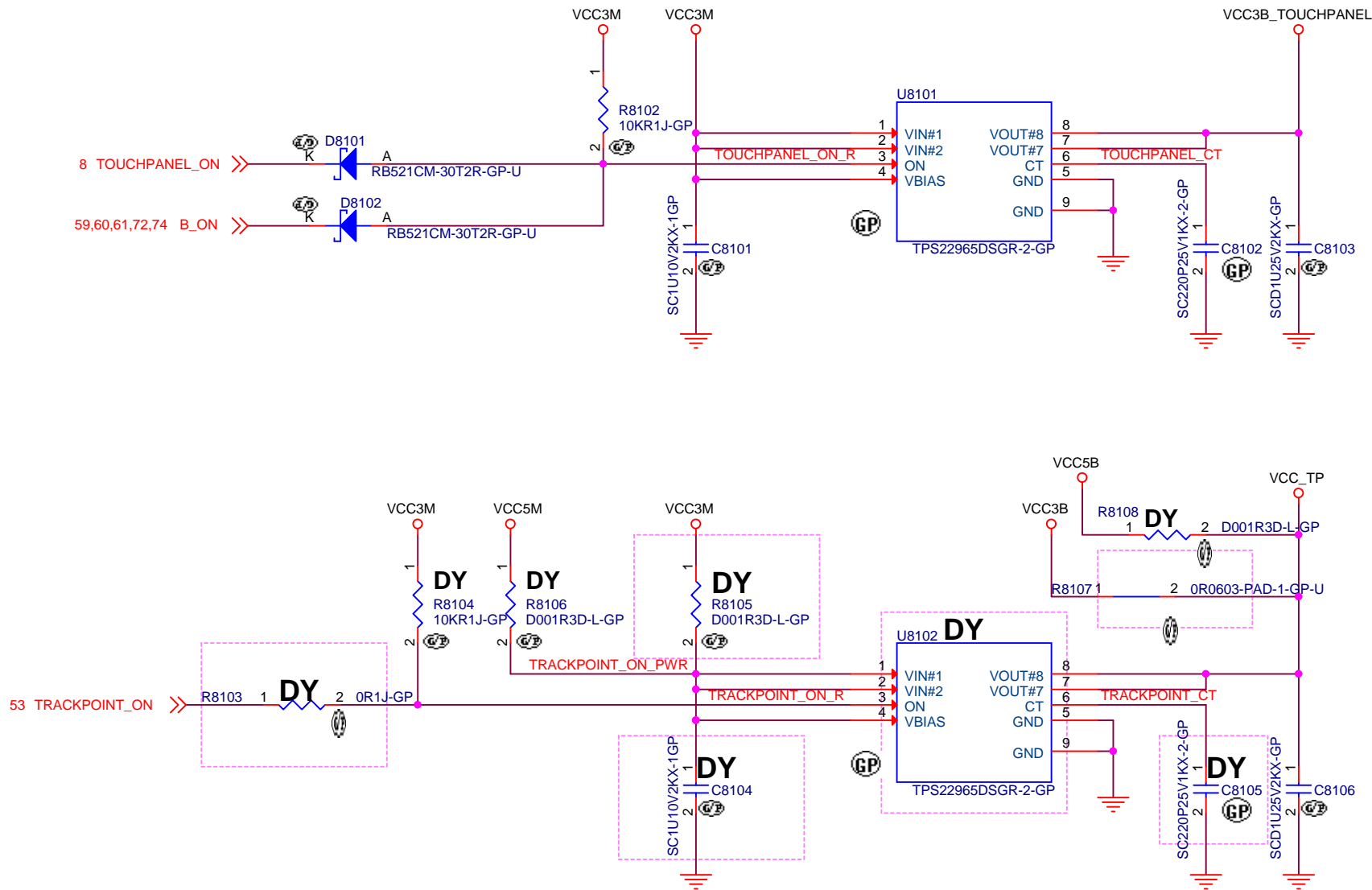
← SLP\_S0#

← LOGIC

Max Current = 1.22(A)



RV3\_PDV\_EC038  
RV3\_PDV\_EC072  
RV3\_PDV\_EC099  
RV3\_EVT\_EC012  
RV3\_EVT\_EC029  
RV3\_EVT\_EC087  
RV3\_SIT\_EC016



LRV3 MB

緯創資通

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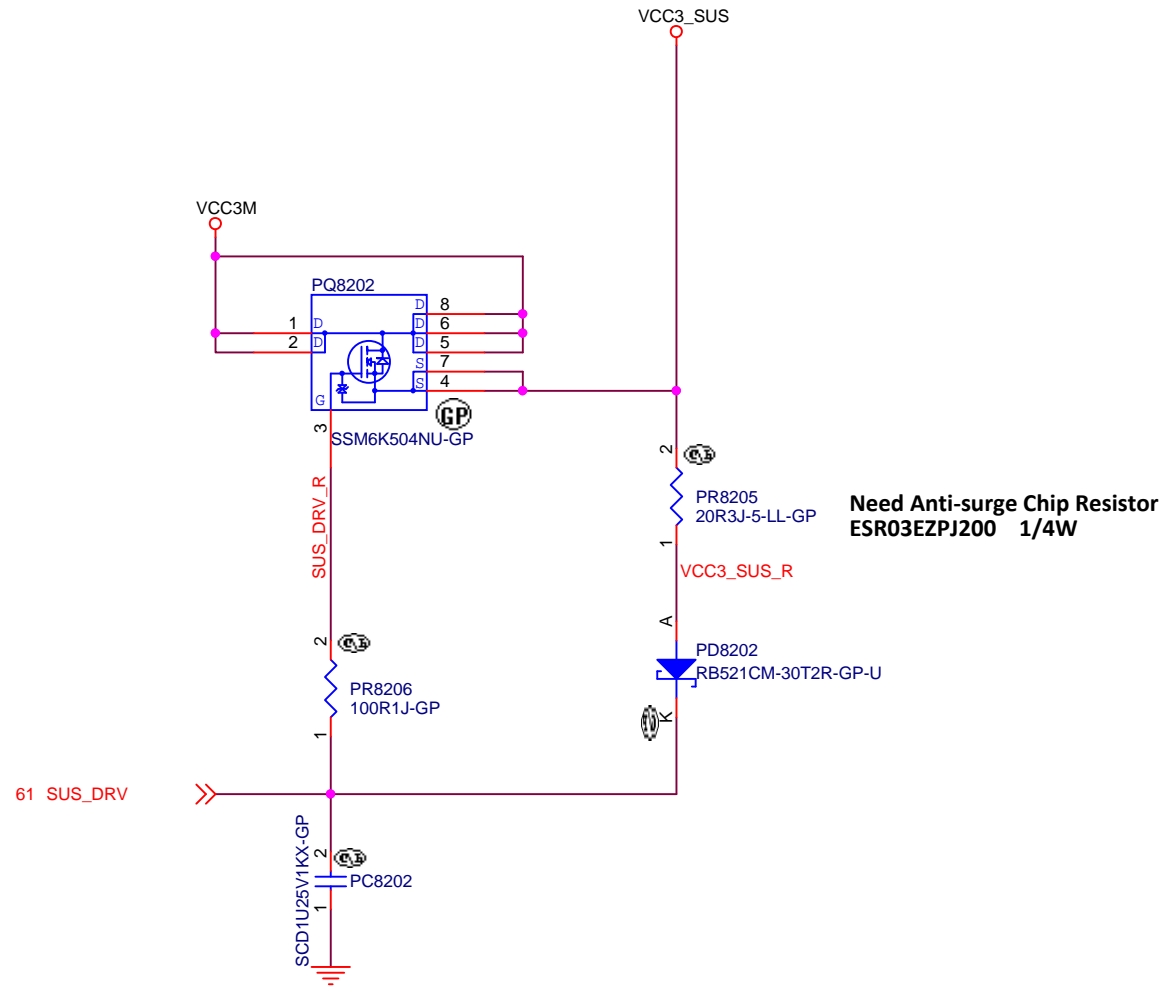
Title **LOAD SW VCC3B\_TOUCHPANEL/TP**

|            |                                   |                 |
|------------|-----------------------------------|-----------------|
| Size<br>A4 | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
|------------|-----------------------------------|-----------------|

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# VCC3\_SUS

Max Current = 1.1(A)



LRV3 MB

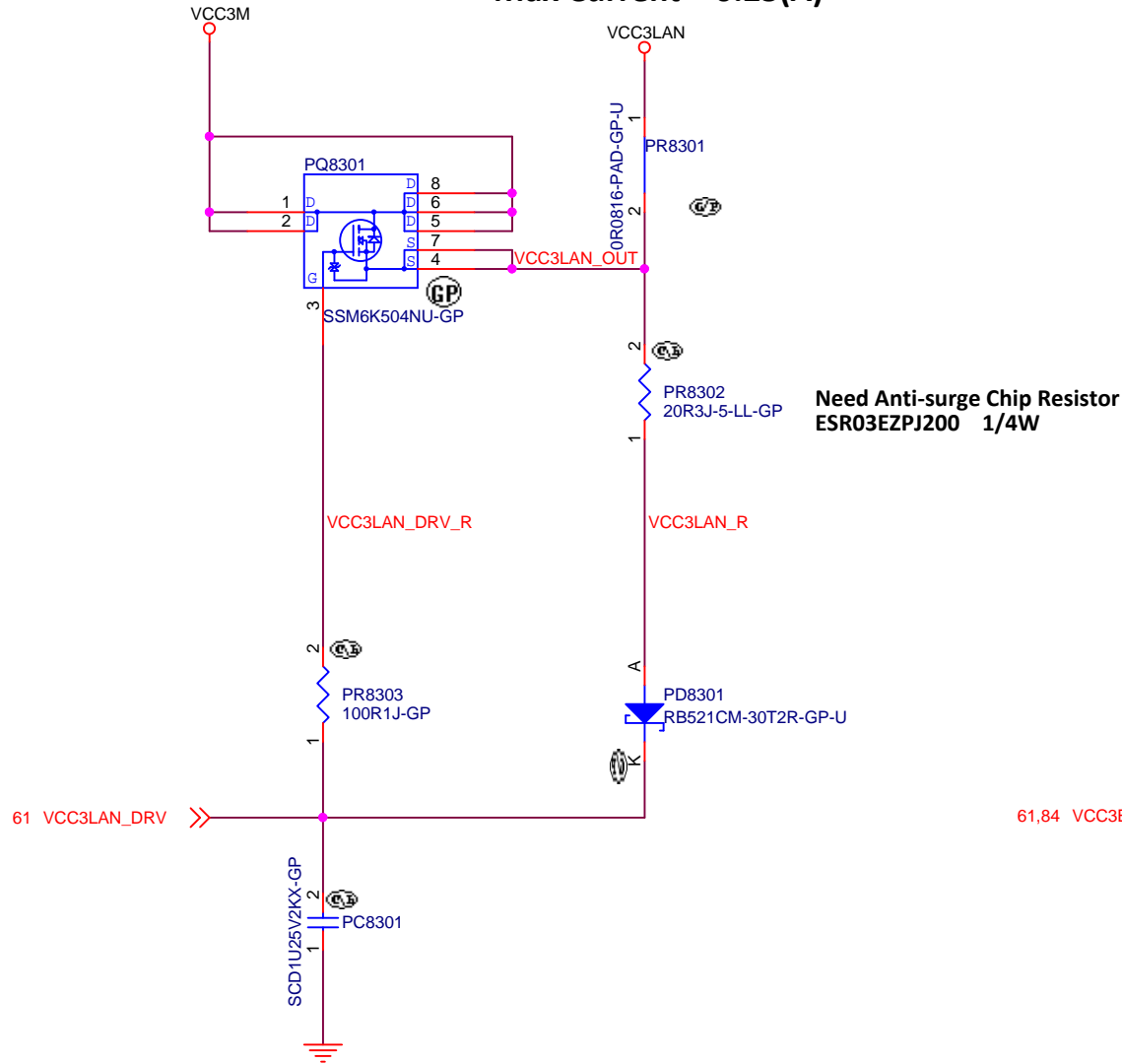
緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title **LOAD SW VCC3\_SUS**

|                                   |                                   |                 |
|-----------------------------------|-----------------------------------|-----------------|
| Size<br>A4                        | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
| Date: Wednesday, January 17, 2018 | Sheet 82 of 89                    |                 |

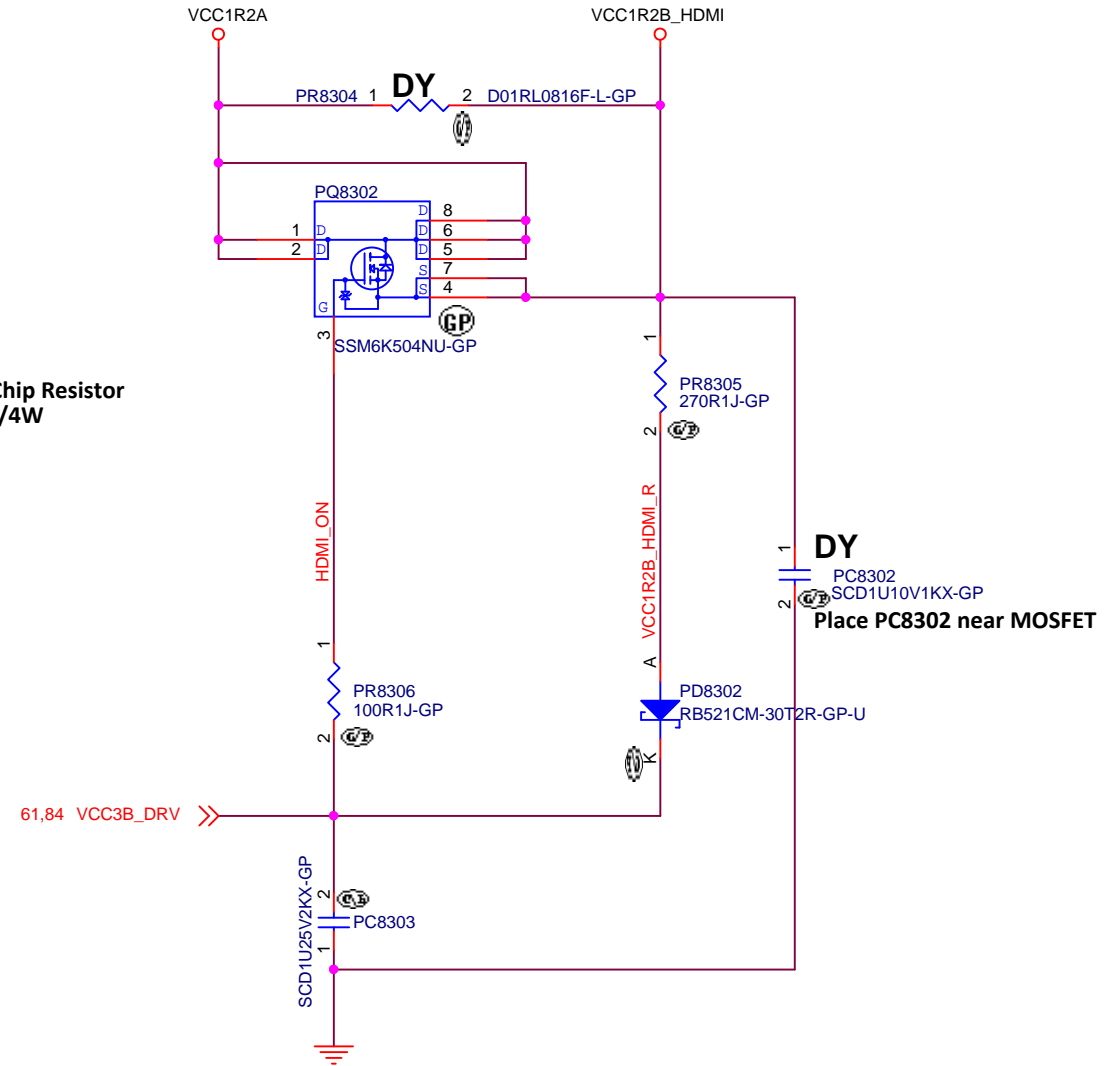
## VCC3LAN

Max Current = 0.25(A)



## HDMI

Max Current = 0.5(A)



LRV3 MB

緯創資通

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Title **LOAD SW LAN & HDMI**

Size  
A4

Document Number

**Raven-3**

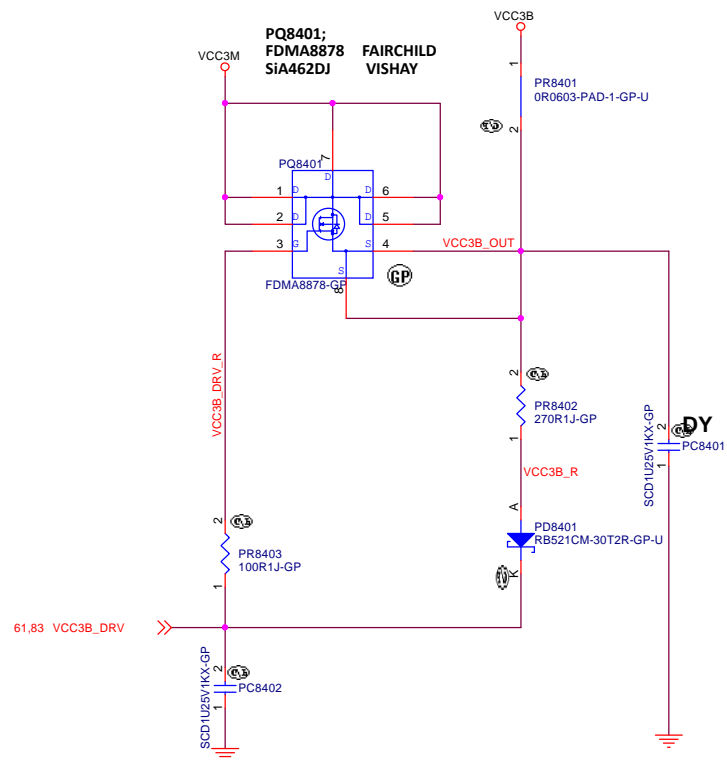
Rev  
**1**

Date: Wednesday, January 17, 2018

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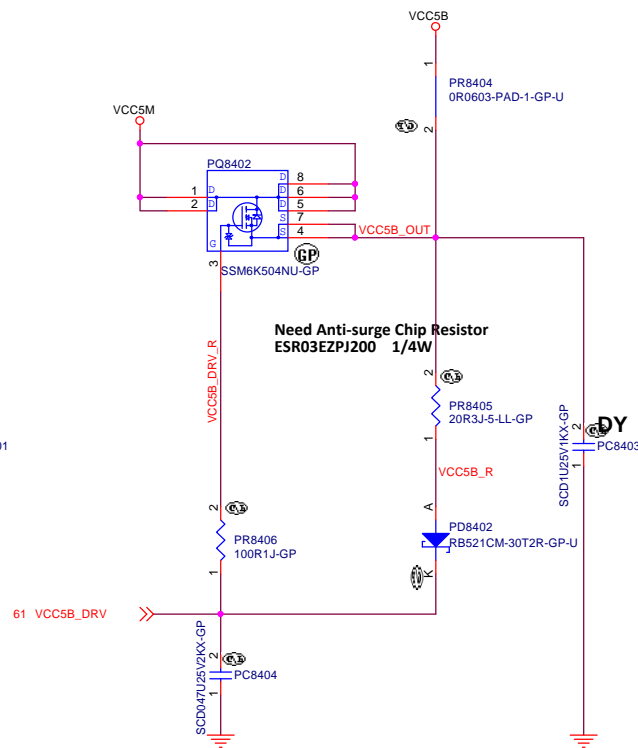
## VCC3B

Max Current = 7.3(A)



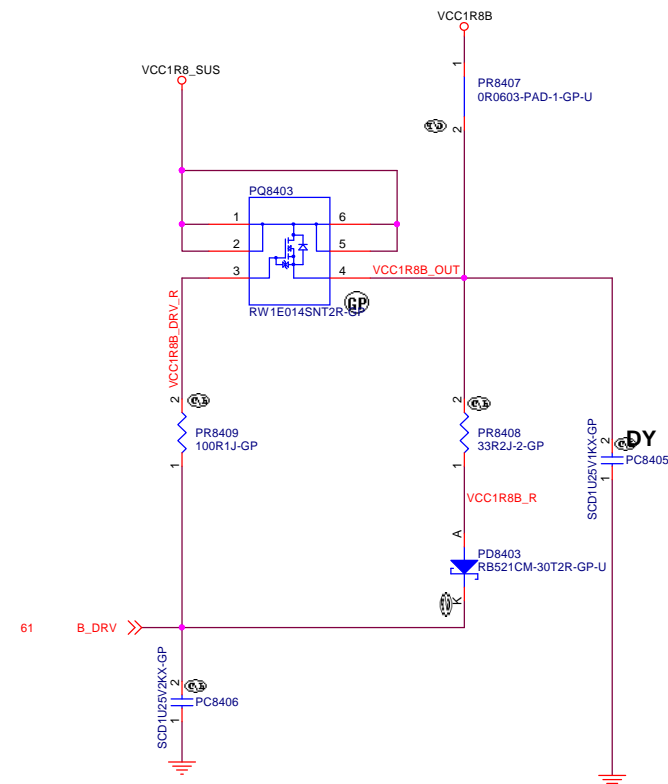
## VCC5B

Max Current = 4.2(A)



## VCC1R8B

Max Current = 50(mA)



----- GT3e -----

Page67: VCCOPC, VCC1R8B setting TABLE

LRV3 MB

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

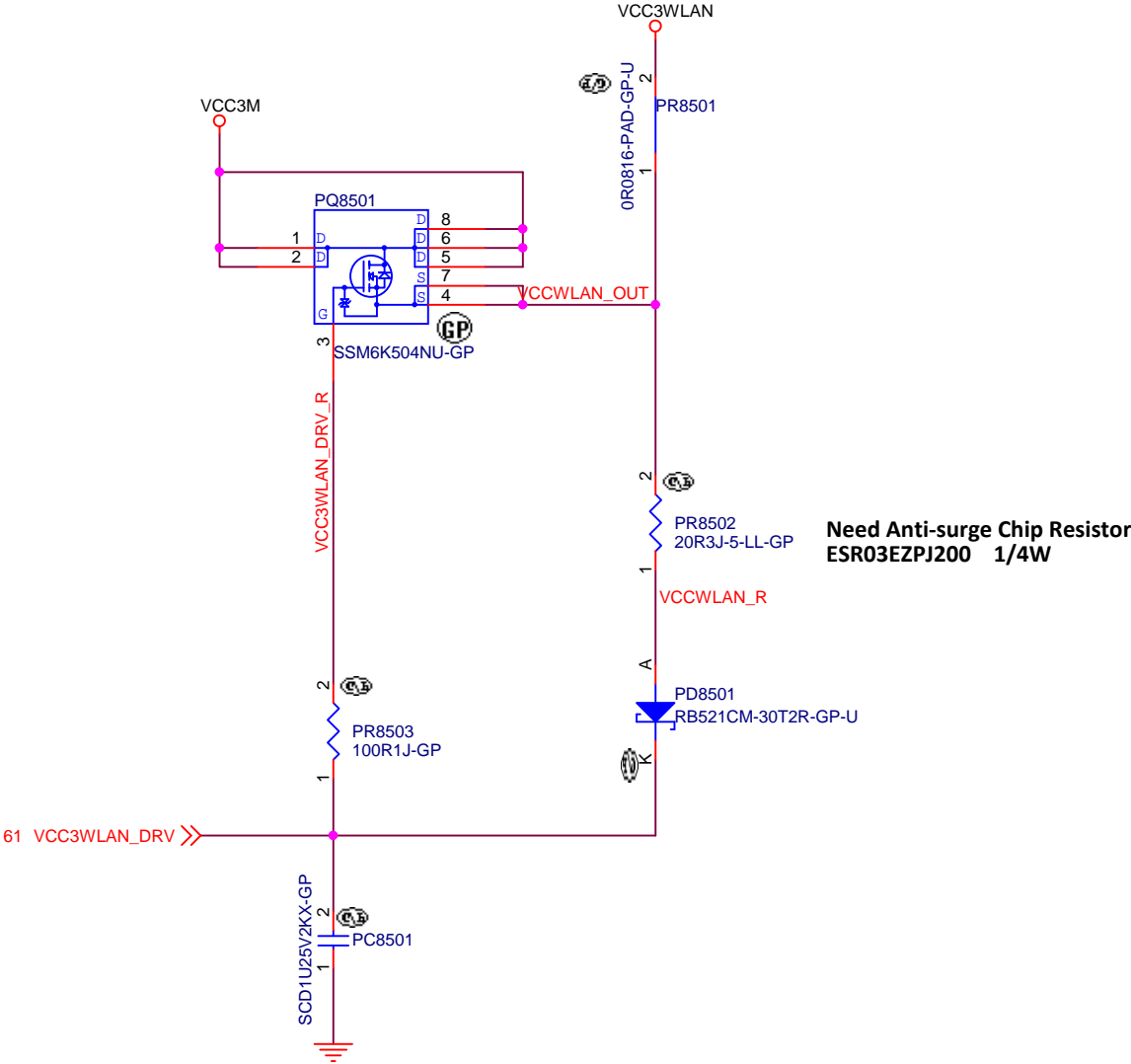
Title **LOAD SW B**

|                                   |                                   |                 |
|-----------------------------------|-----------------------------------|-----------------|
| Size<br>A3                        | Document Number<br><b>Raven-3</b> | Rev<br><b>1</b> |
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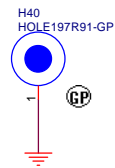


WLAN

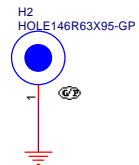
Max Current = 2.7(A)



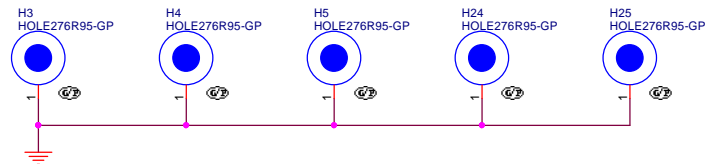
### ZZ.00PAD.I81



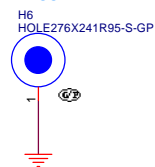
### ZZ.00PAD.3B1



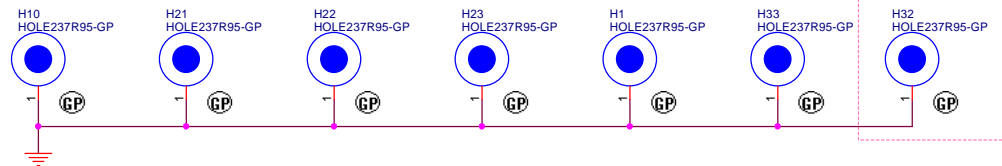
### ZZ.SCREW.701



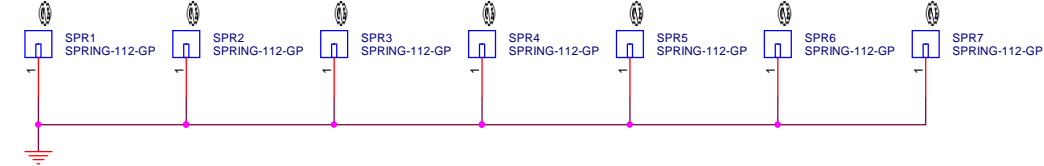
### ZZ.00PAD.DK1



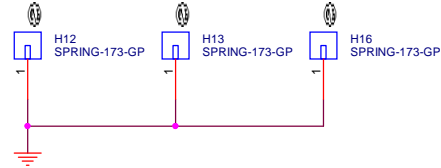
### ZZ.00PAD.921



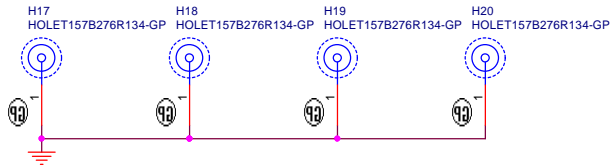
### 34.44401.001



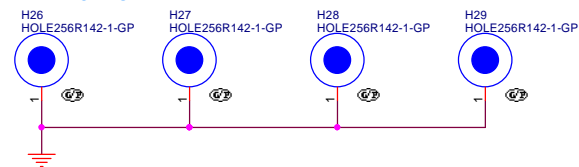
### 434.04P09.0001



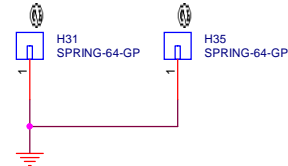
### ZZ.SCREW.091



### ZZ.PAD01.V91

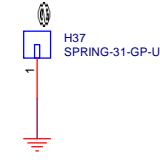


### 34.4H602.001

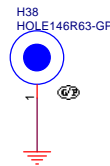


### KBL\_EC030\_LRV3

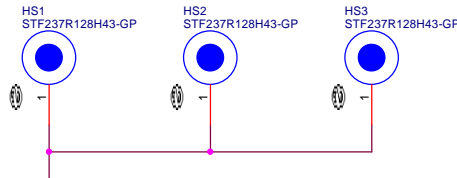
### 34.49U24.001



### ZZ.SCREW.G91



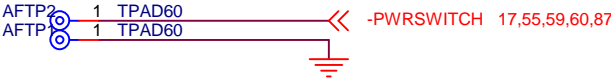
### 34.4LY01.101



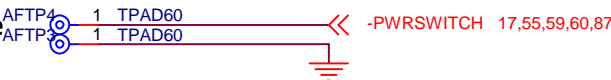


For Power Switch

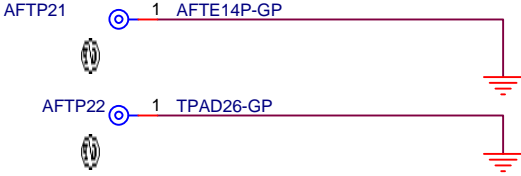
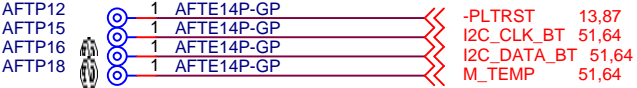
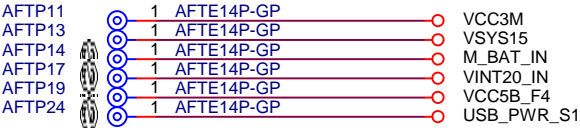
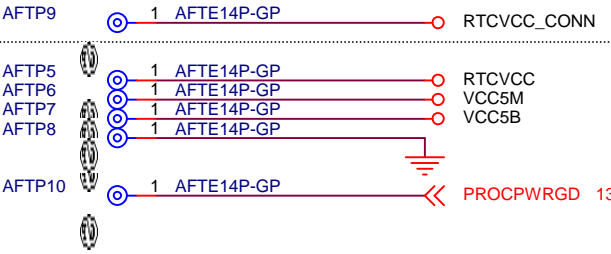
Top side



Bottom side



Top side



LRV3 MB

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TitleTEST POINTS

SizeA4

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