

SERVICE MANUAL

notebook

NL40CU / NL41CU



Introduction

Figure 7
**Mainboard Top
Key Parts**

1. KBC-ITE IT5570

Mainboard Overview - Top (Key Parts)

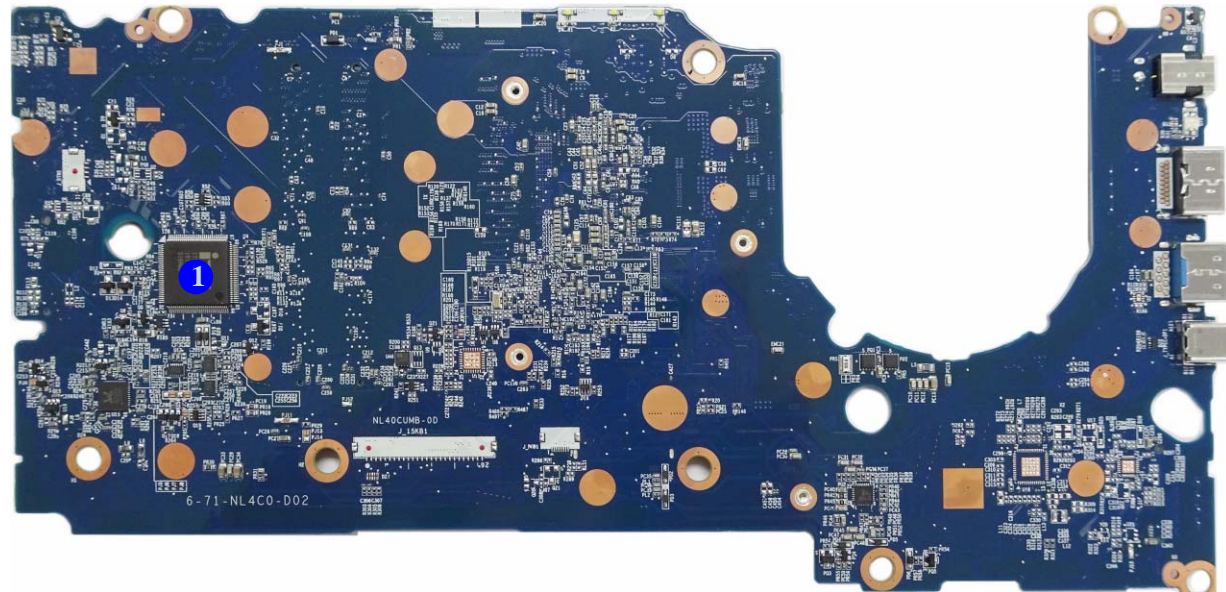
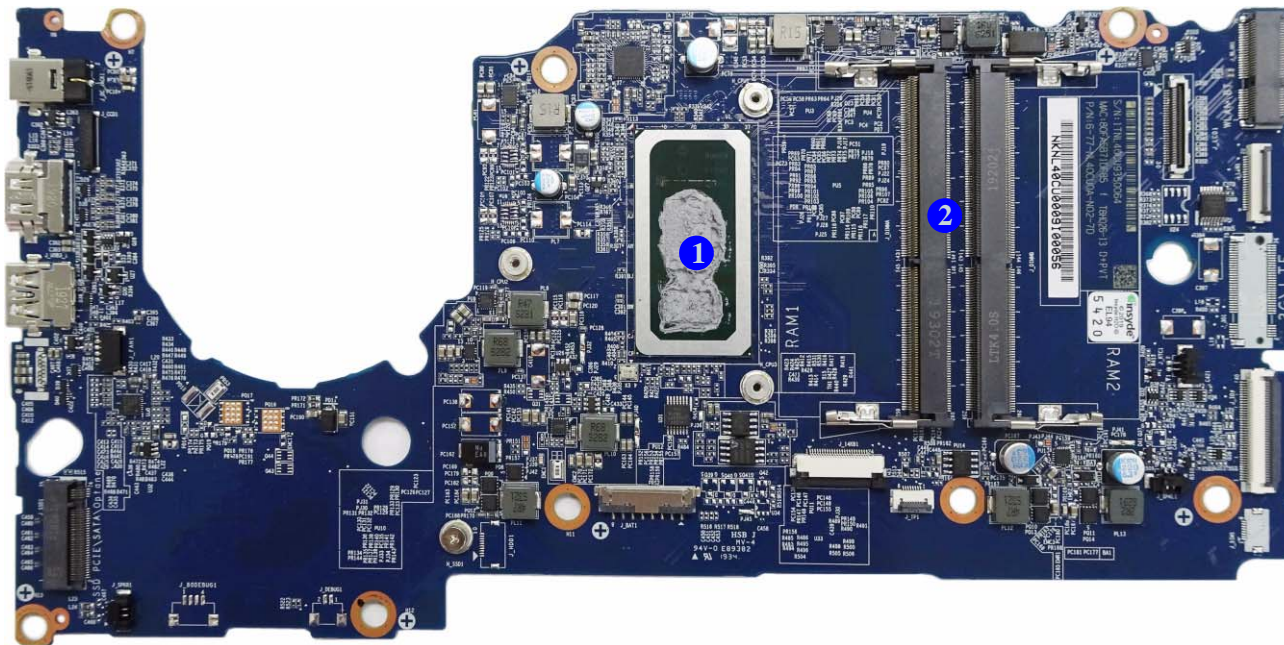


Figure 8
**Mainboard Bottom
Key Parts**

1. CPU
2. Memory Slots
DDR4 SO-DIMM



Introduction

Figure 9
**Mainboard Top
Connectors**

1. DC-In Jack
2. HDMI-Out Port
3. USB 3.1 Gen 2 Type-A Port
4. USB 3.1 Gen 2 Type-C Port

Mainboard Overview - Top (Connectors)

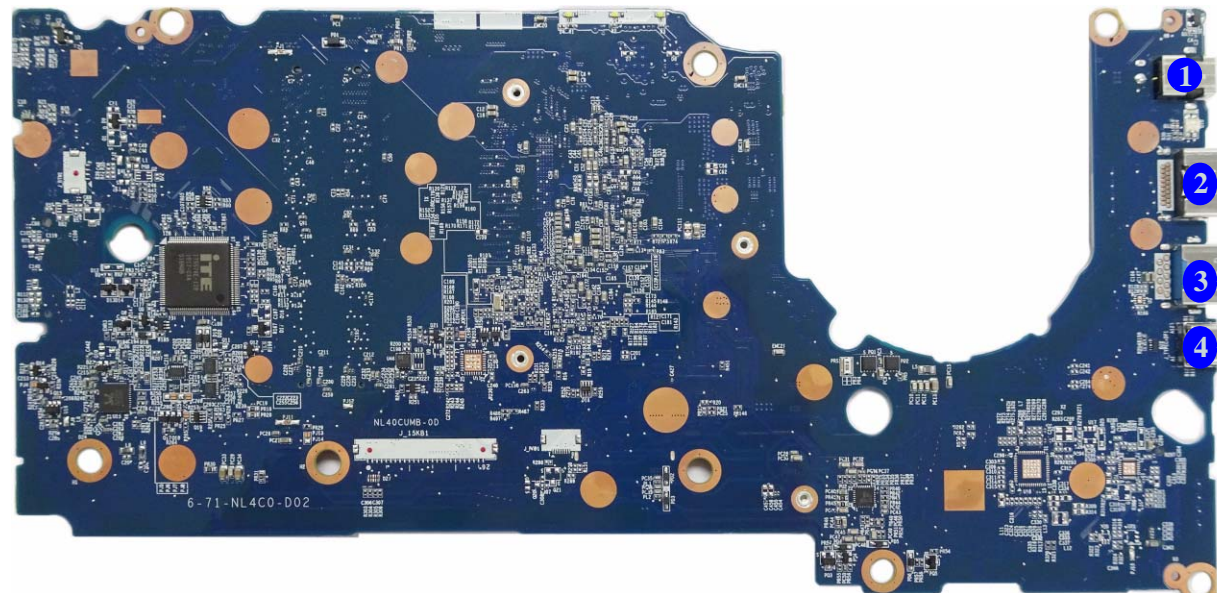
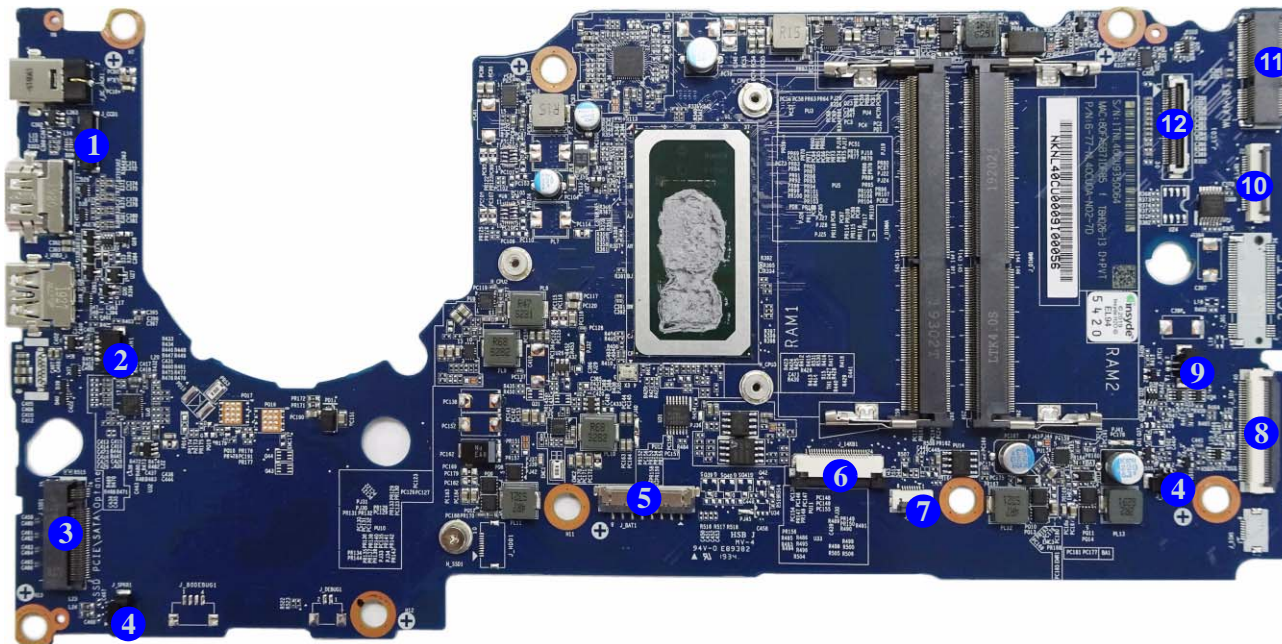


Figure 10
**Mainboard Bottom
Connectors**

1. CCD Cable Connector
2. Fan Connector
3. M.2 Card Connector
4. Speaker Connector
5. Battery Connector
6. Keyboard Connector
7. Touchpad Connector
8. USB Board Connector
9. CMOS Battery Connector
10. LAN Board Connector
11. WLAN/BT Connector
12. LCD Cable Connector



Appendix B: Schematic Diagrams

This appendix has circuit diagrams of the *NL40CU* / *NL41CU* notebook's PCB's. The following table indicates where to find the appropriate schematic diagram.

Diagram - Page	Diagram - Page	Diagram - Page
<i>System Block Diagram - Page B - 2</i>	<i>Panel - Page B - 18</i>	<i>VDDQ, VDDQ_VTT, 1.8VA - Page B - 34</i>
<i>Processor 1/12 - Page B - 3</i>	<i>USB / DP MUX ANX7440 - Page B - 19</i>	<i>Power PD Function - Page B - 35</i>
<i>Processor 2/12 - Page B - 4</i>	<i>ANX7411, Type-C - Page B - 20</i>	<i>VCore - Page B - 36</i>
<i>Processor 3/12 - Page B - 5</i>	<i>ASM1543 - Page B - 21</i>	<i>VCCIN, VCCGT, VCCSA - Page B - 37</i>
<i>Processor 4/12 - Page B - 6</i>	<i>LED KB, LED - Page B - 22</i>	<i>VCCIO, 2.5V - Page B - 38</i>
<i>Processor 5/12 - Page B - 7</i>	<i>SATA HDD, TPM - Page B - 23</i>	<i>Charger, AC IN - Page B - 39</i>
<i>Processor 6/12 - Page B - 8</i>	<i>Audio Codec - Page B - 24</i>	<i>RTL8411B - Page B - 40</i>
<i>Processor 7/12 - Page B - 9</i>	<i>KBC ITE IT5570 - Page B - 25</i>	<i>14" I/O Board - Page B - 41</i>
<i>Processor 8/12 - Page B - 10</i>	<i>WLAN - Page B - 26</i>	<i>15" I/O Board-1 - Page B - 42</i>
<i>Processor 9/12 - Page B - 11</i>	<i>M Key PCIE SSD - Page B - 27</i>	<i>15" I/O Board-2 - Page B - 43</i>
<i>Processor 10/12 - Page B - 12</i>	<i>3G/LTE - Page B - 28</i>	<i>Power Button Board - Page B - 44</i>
<i>Processor 11/12 - Page B - 13</i>	<i>USB Type-A - Page B - 29</i>	
<i>Processor 12/12 - Page B - 14</i>	<i>Conn, CCD, Fan, TP - Page B - 30</i>	
<i>DDR4 SO-DIMM_0 - Page B - 15</i>	<i>3V, 5V, 3VS, 5VS, 1.8V, 1.5VS - Page B - 31</i>	
<i>DDR4 SO-DIMM_1 - Page B - 16</i>	<i>VDD3, VDD5 - Page B - 32</i>	
<i>HDMI - Page B - 17</i>	<i>1.05VA, VCCST, VCCSTG - Page B - 33</i>	

Table B - 1
**SCHEMATIC
DIAGRAMS**

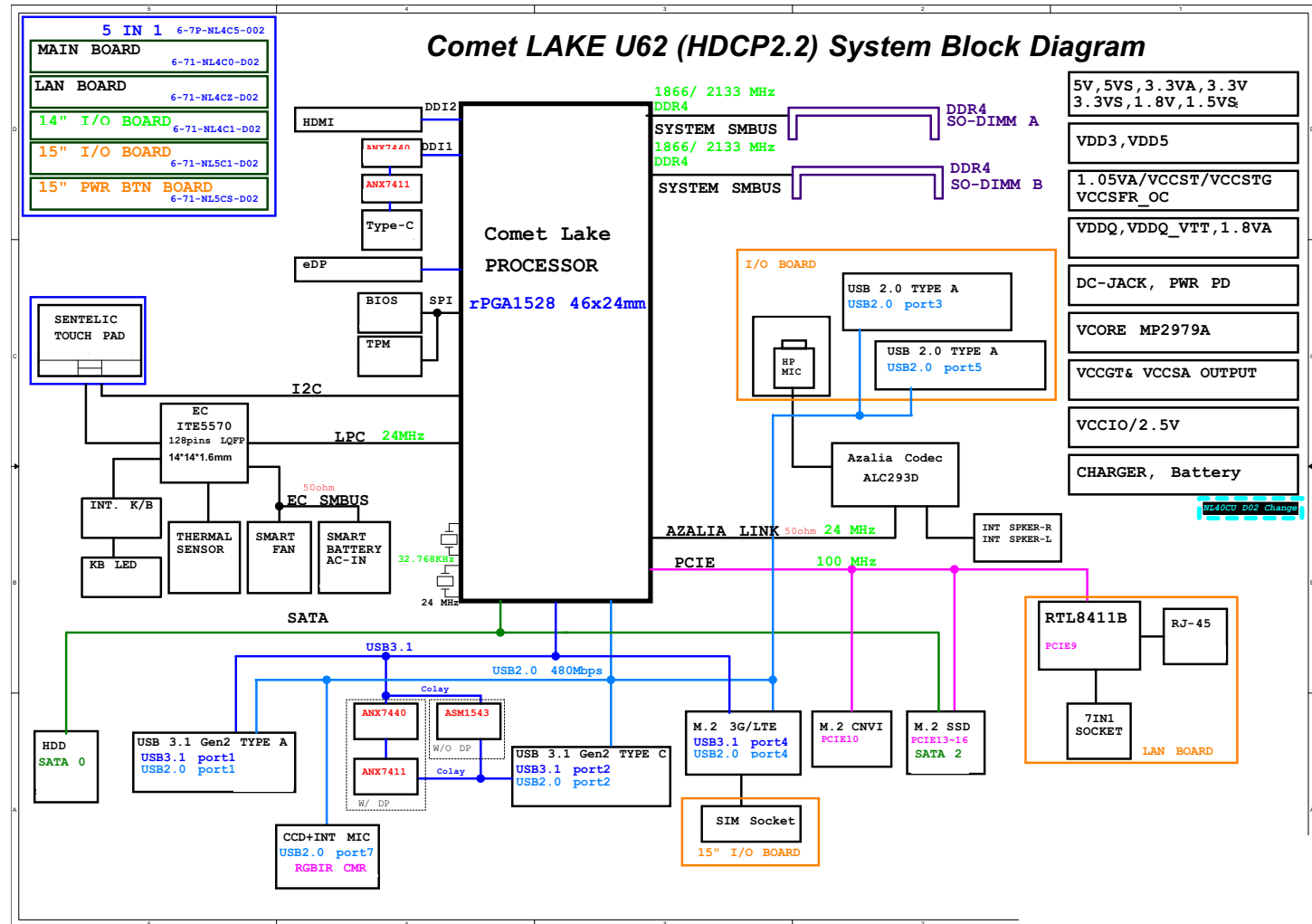


Version Note

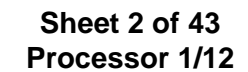
The schematic diagrams in this chapter are based upon version 6-7P-NL4C5-002. If your mainboard (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

System Block Diagram

Sheet 1 of 43
System Block
Diagram



B.Schematic Diagrams



Schematic Diagrams

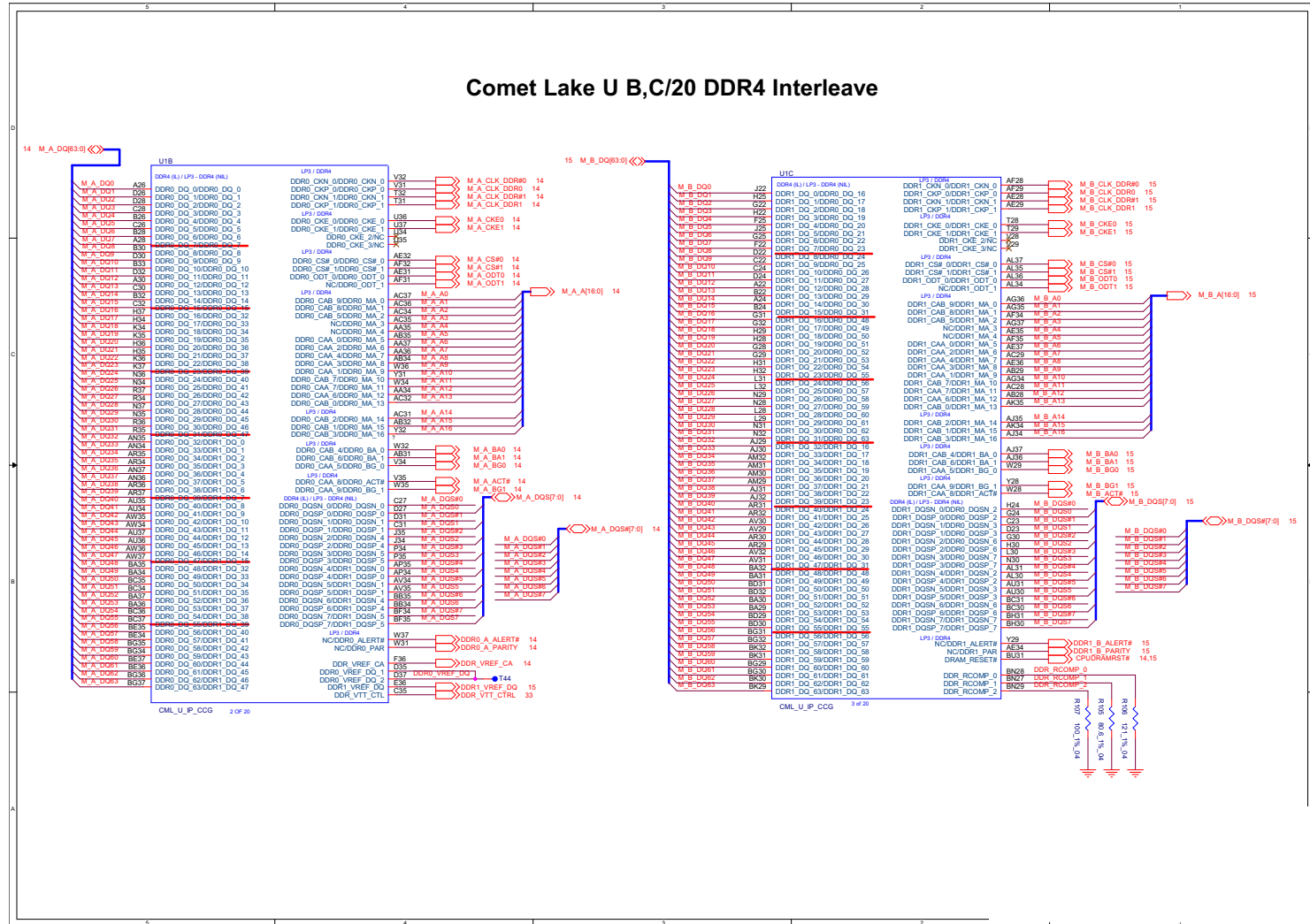
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Processor 2/12

B.Schematic Diagrams

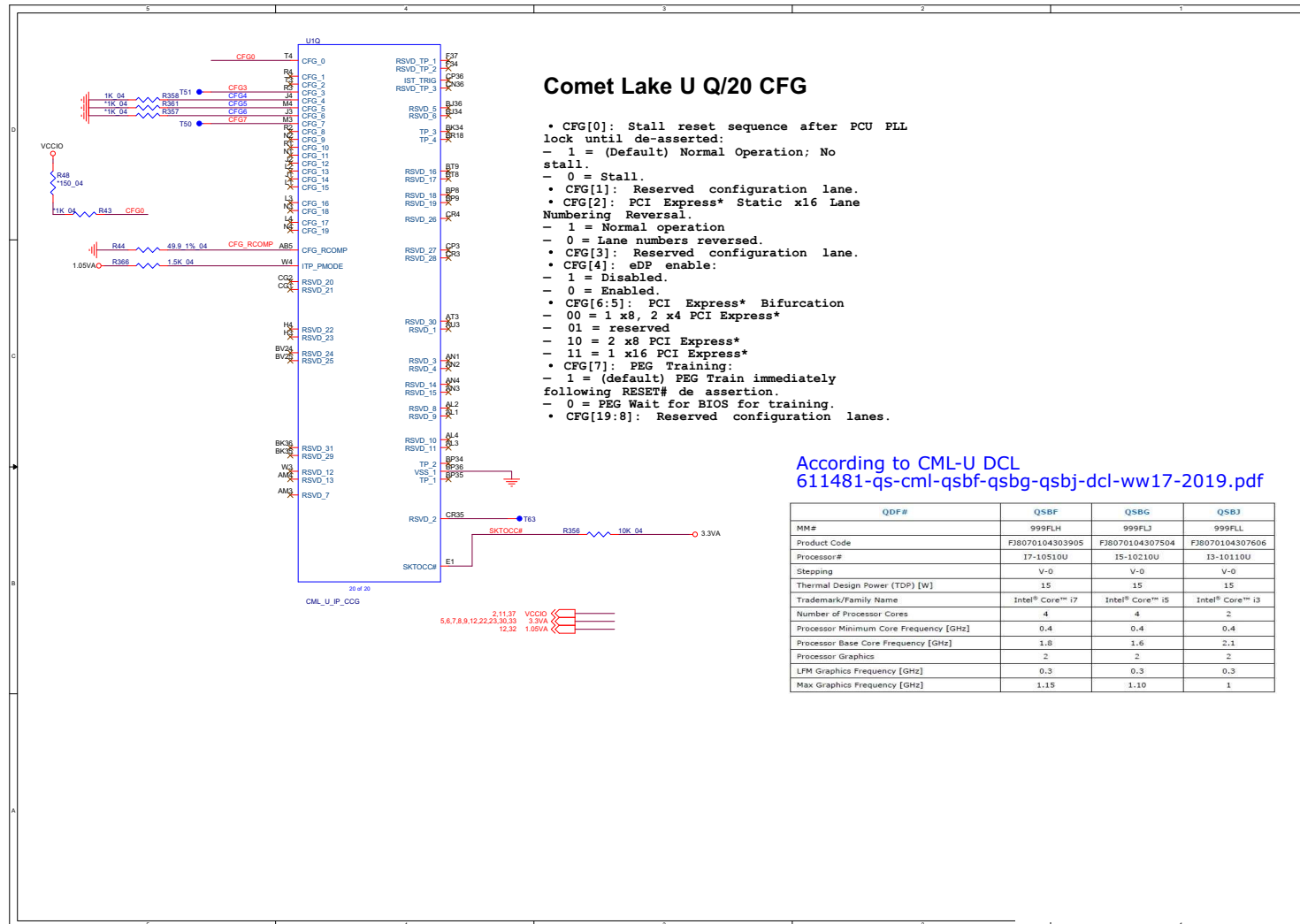
Sheet 3 of 43
Processor 2/12

Comet Lake U B,C/20 DDR4 Interleave



Processor 3/12

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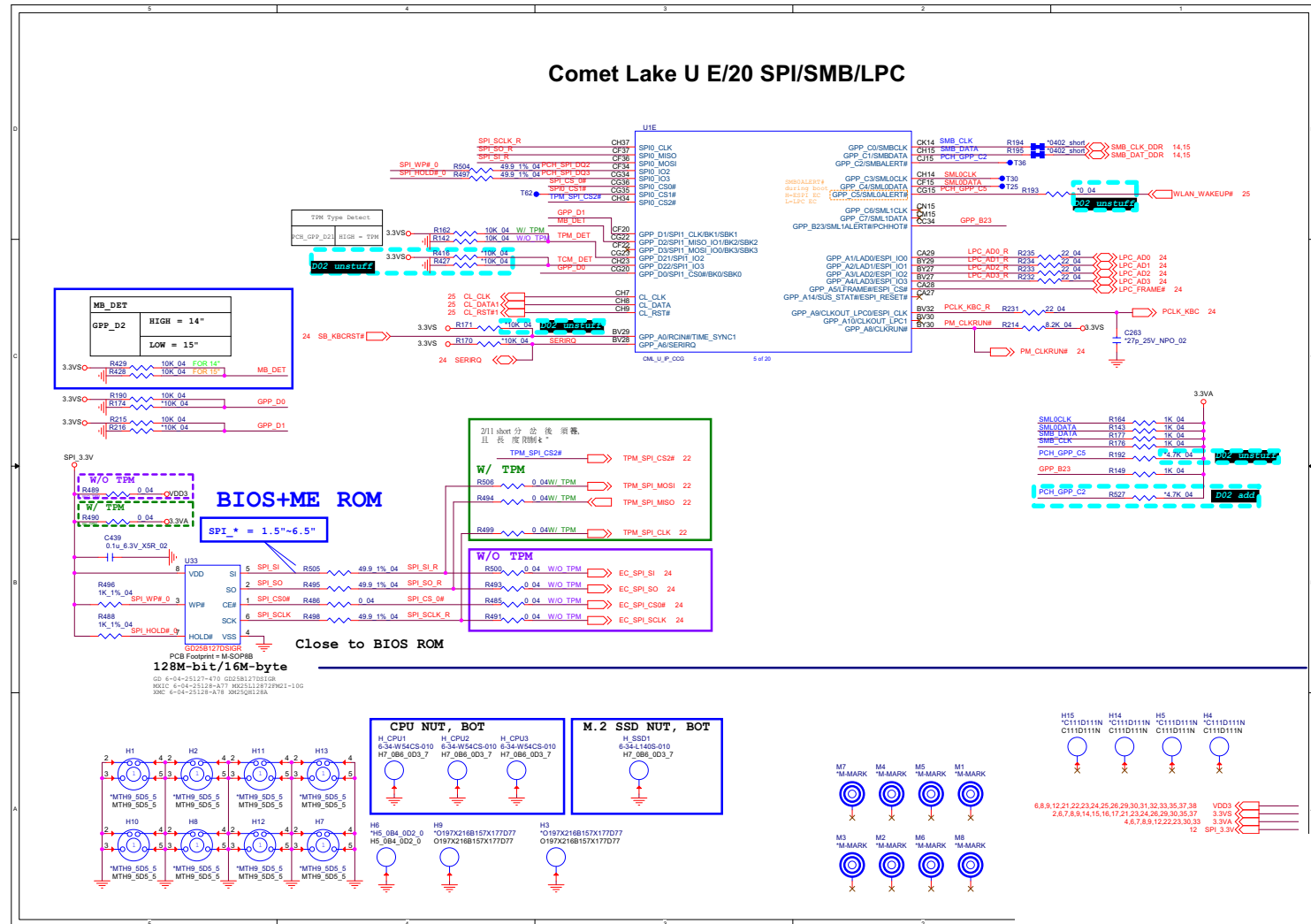
Sheet 4 of 43
Processor 3/12

Schematic Diagrams

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Processor 4/12

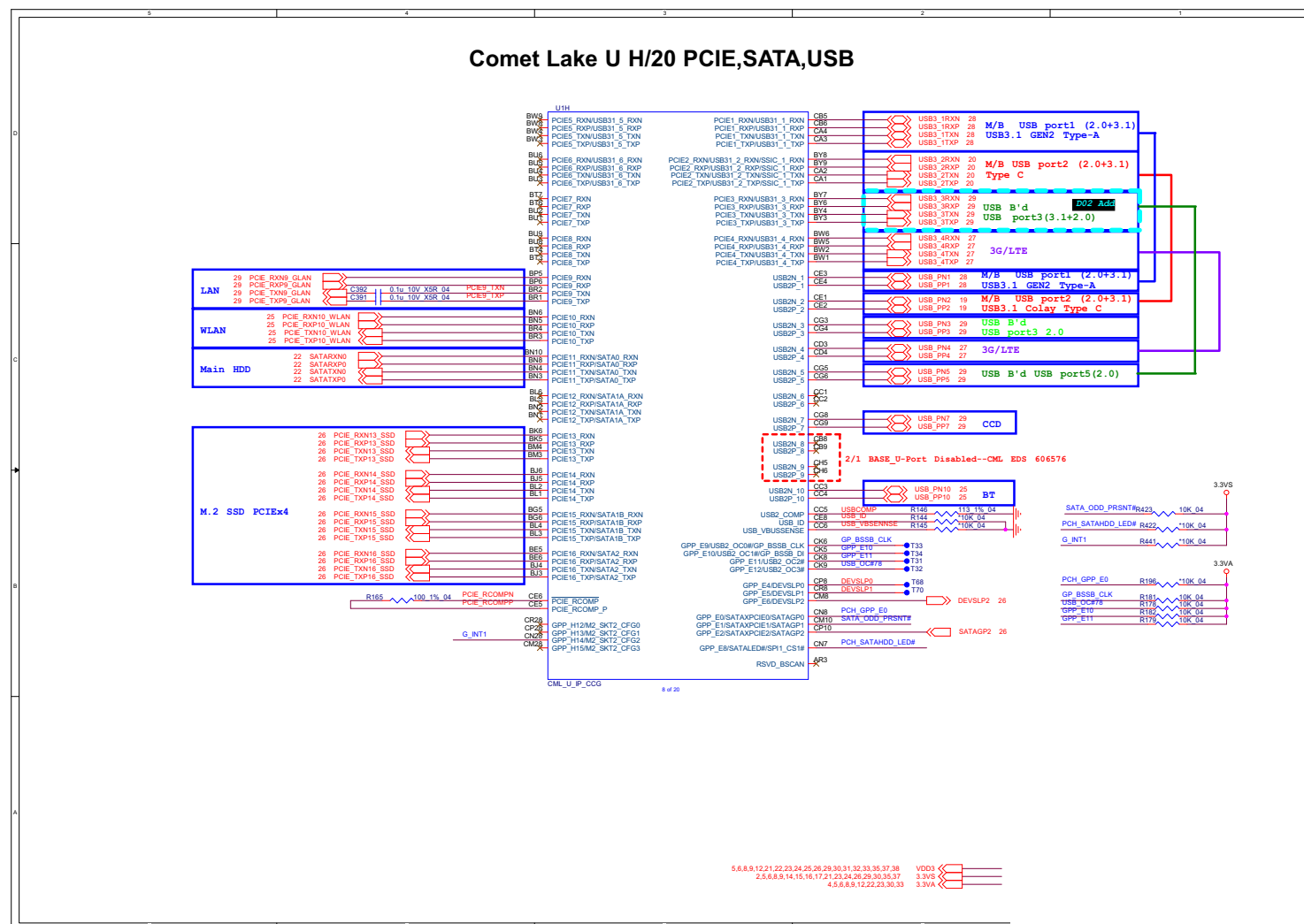
Sheet 5 of 43
Processor 4/12





Processor 6/12

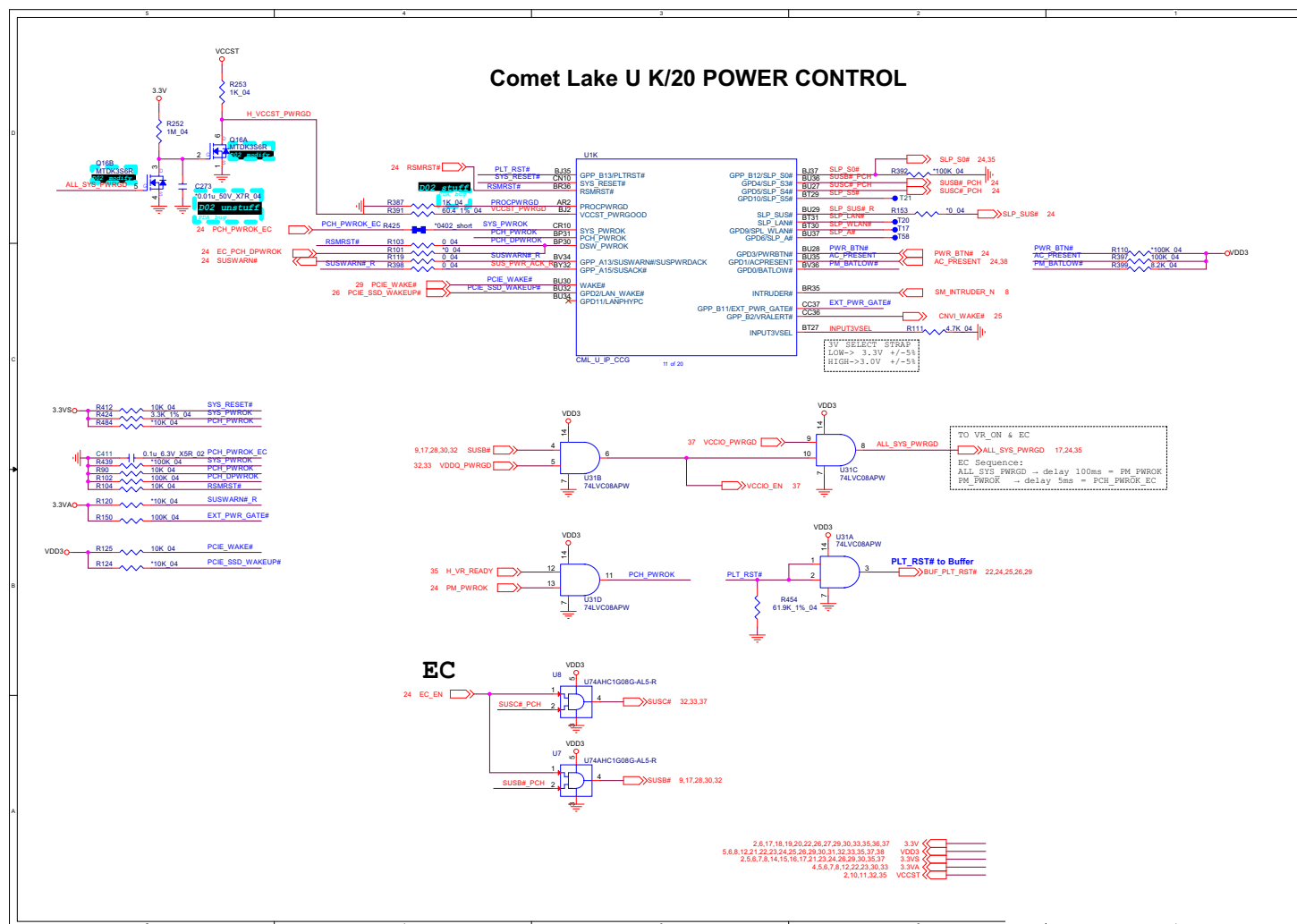
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Processor 6/12





Processor 8/12

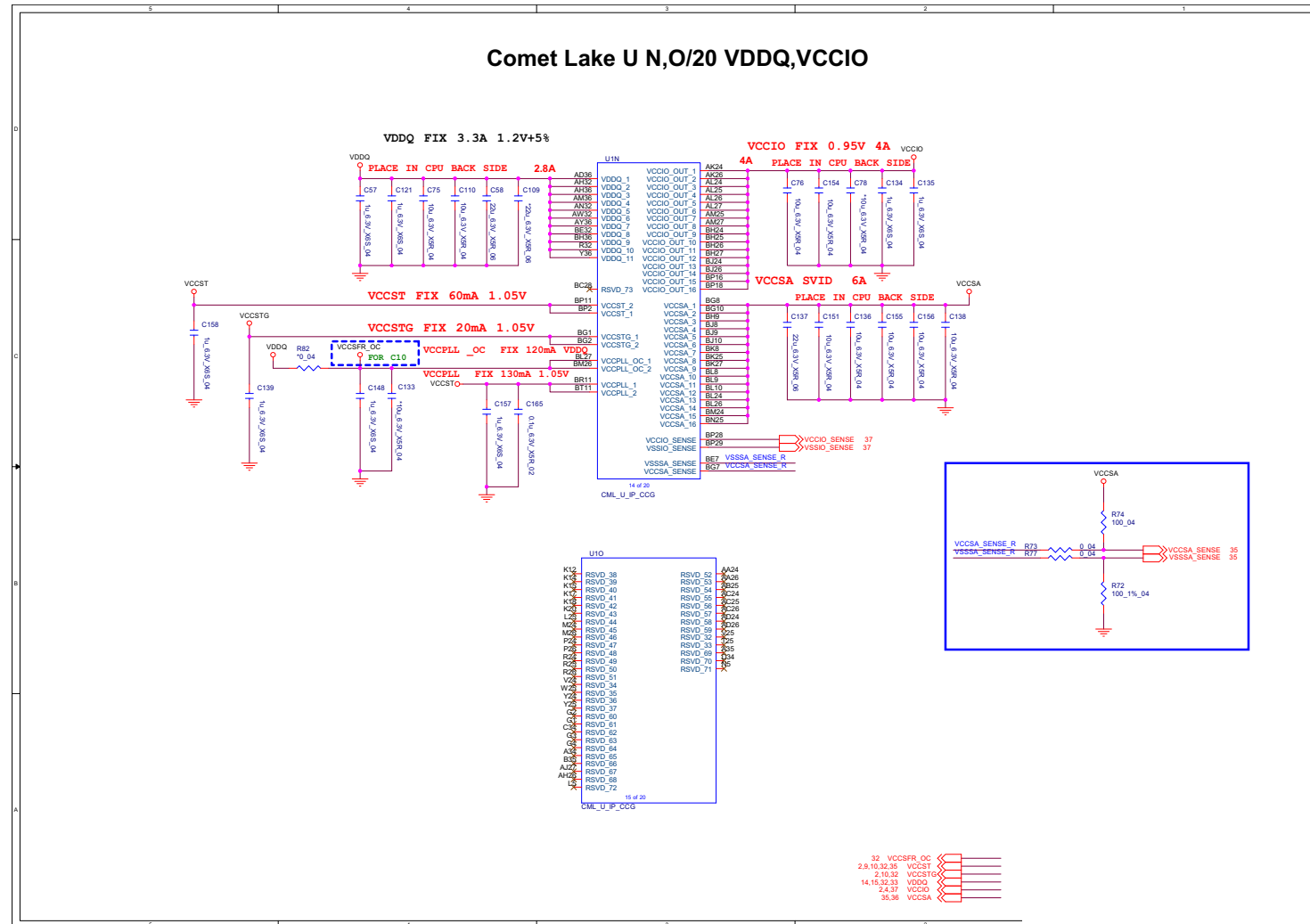
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Processor 8/12





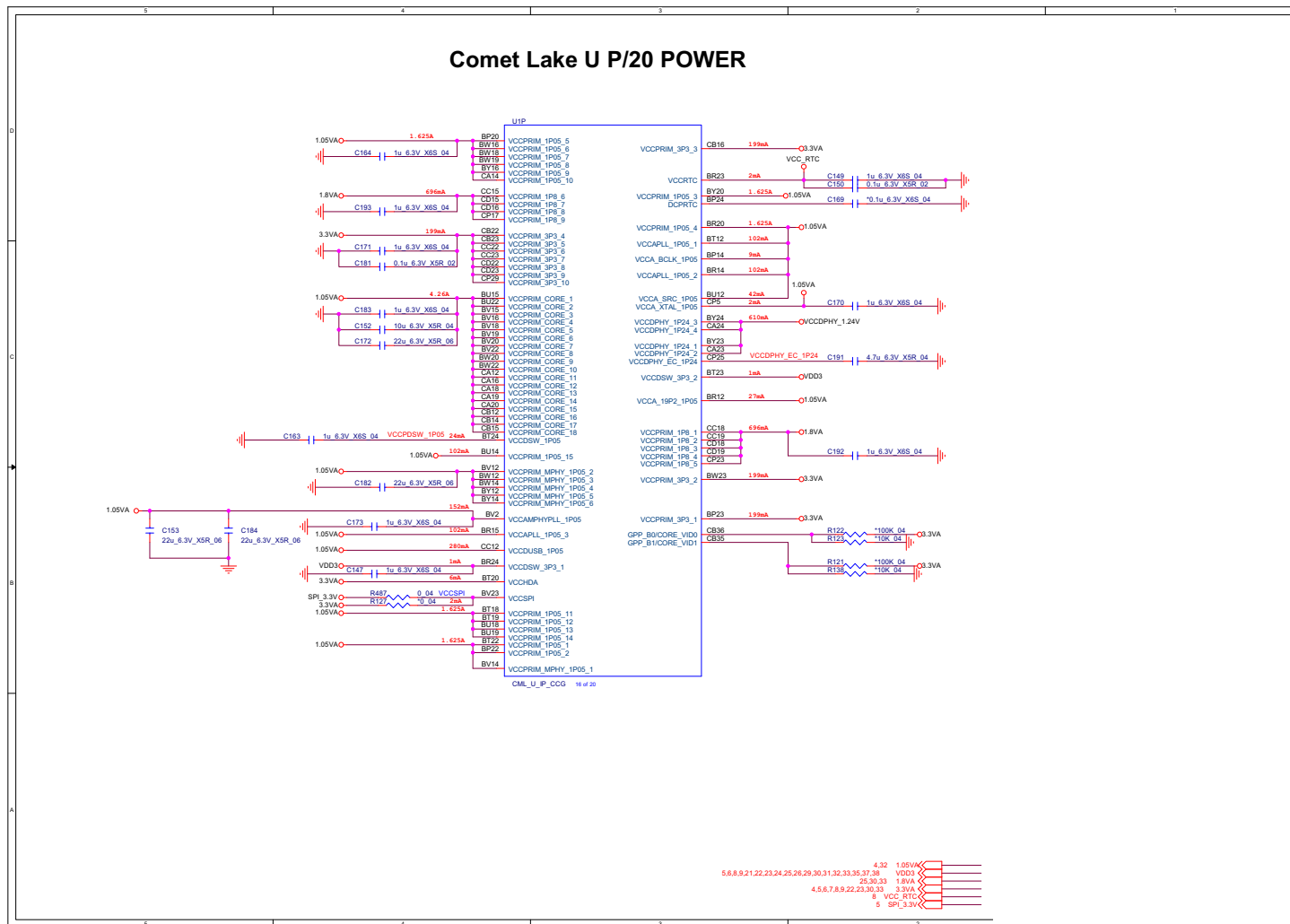
Processor 10/12

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Processor 10/12



Processor 11/12

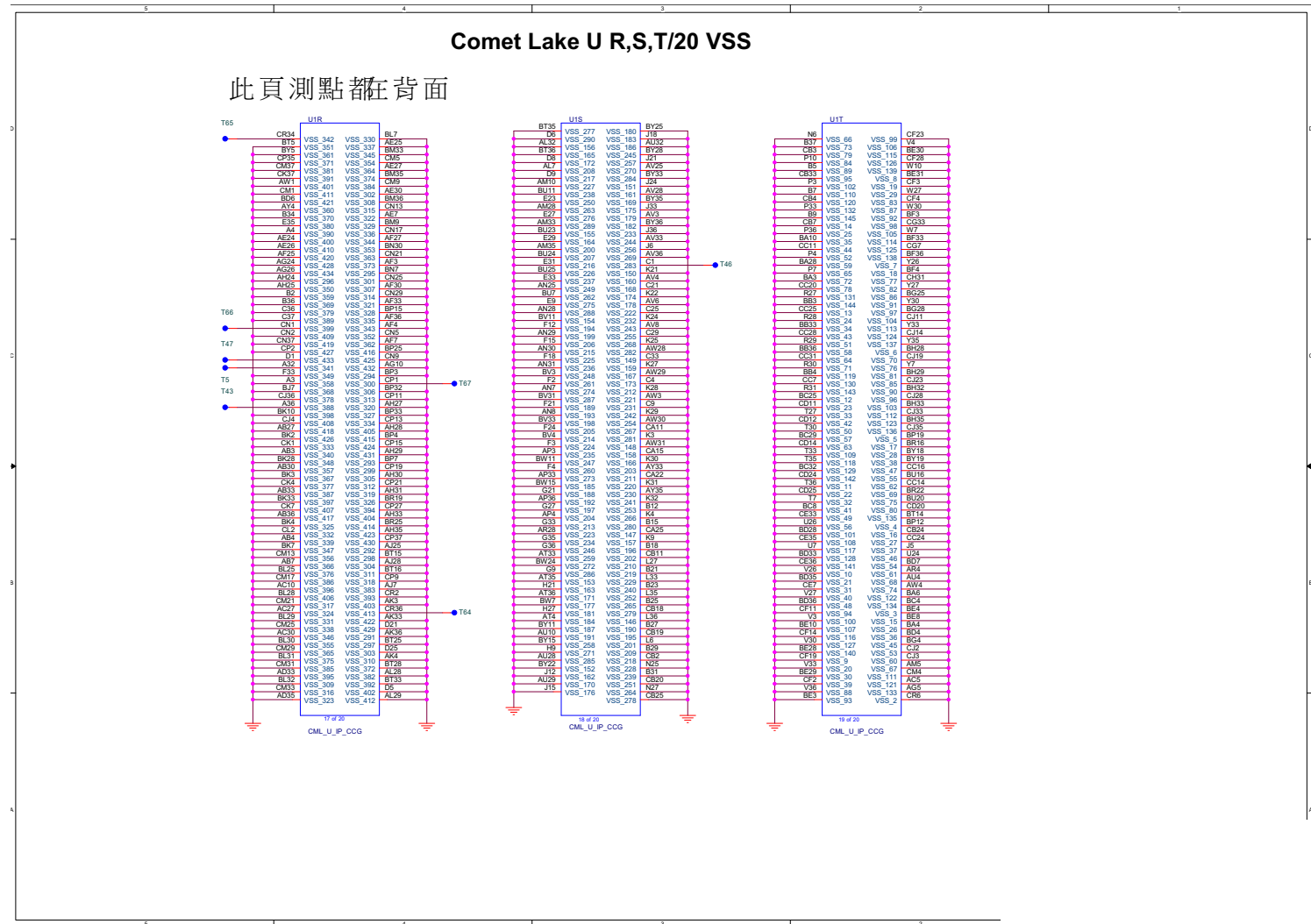
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Processor 11/12

Schematic Diagrams

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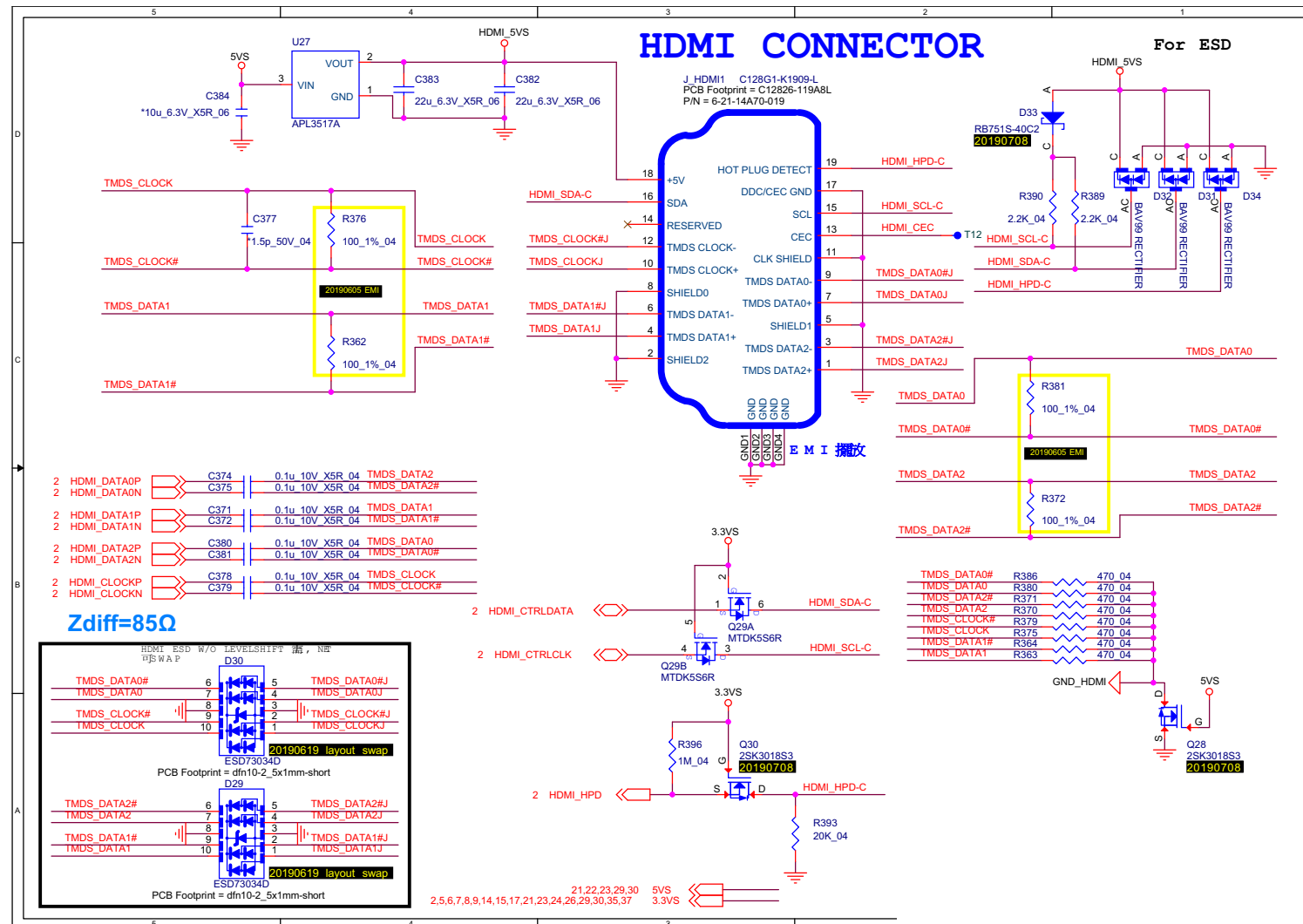
Processor 12/12



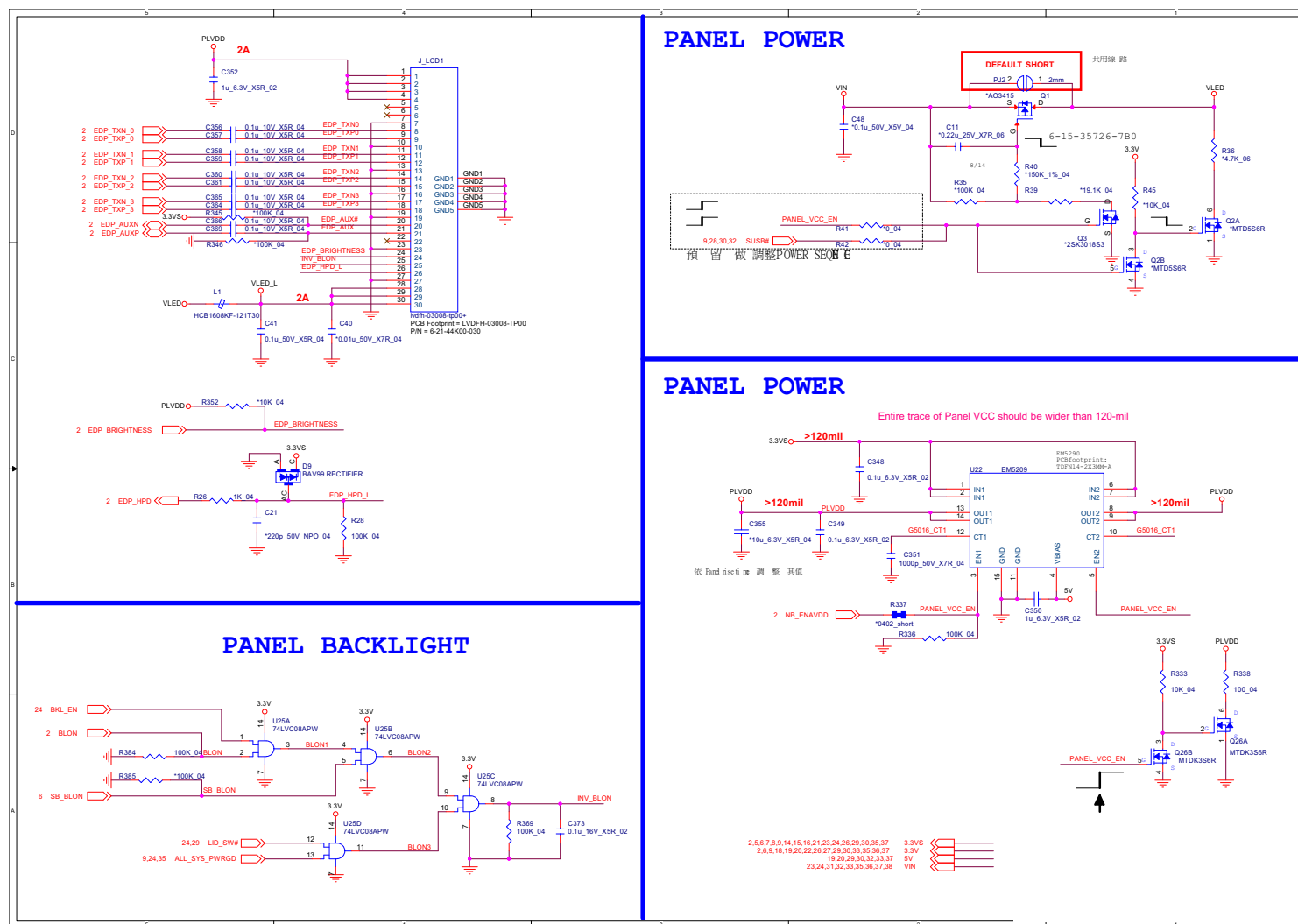


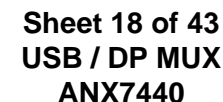
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DDR4 SO-DIMM_1

HDMI



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Panel



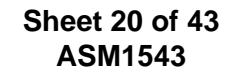


ANX7411, Type-C

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ANX7411, Type-C

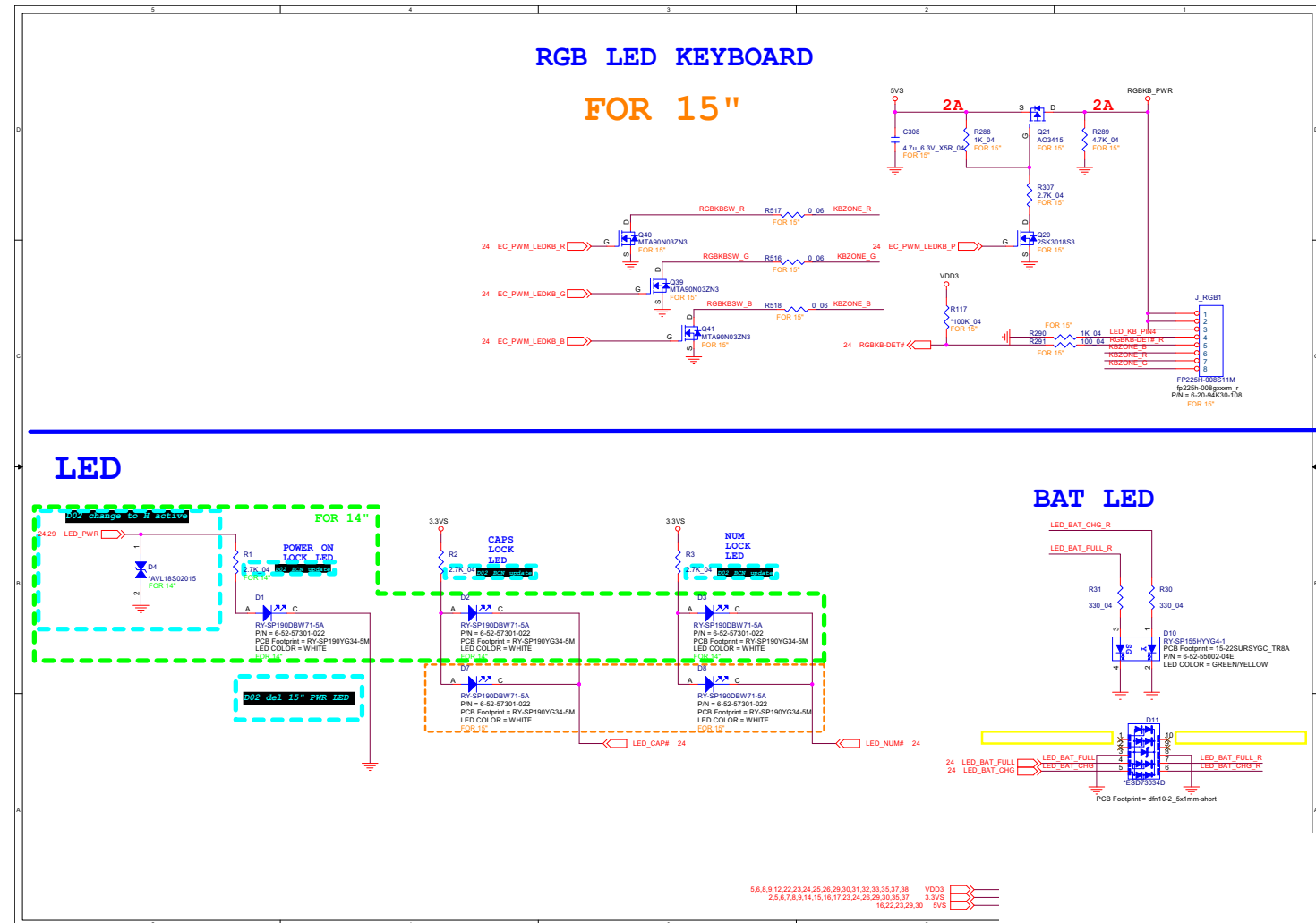


B.Schematic Diagrams

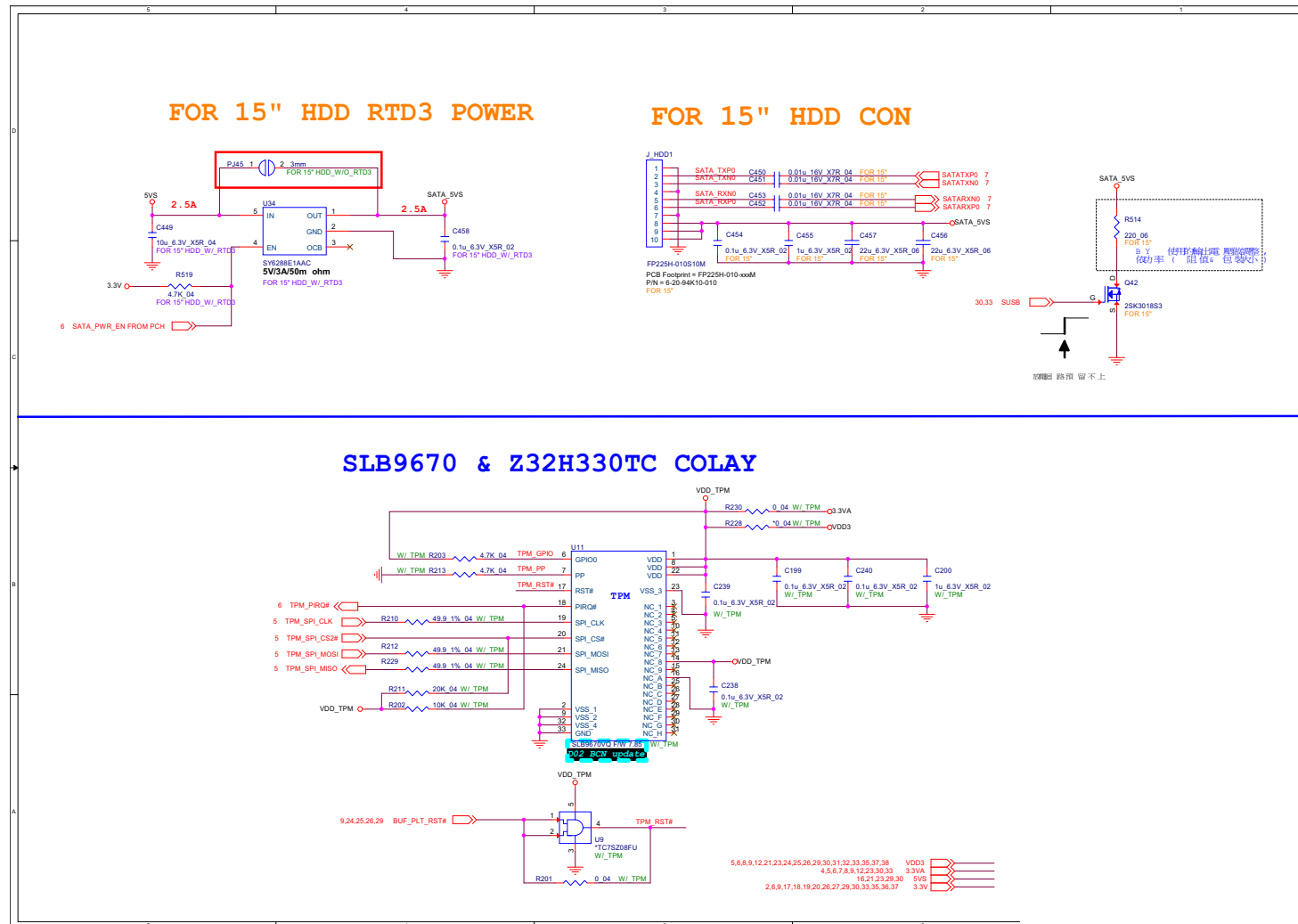


LED KB, LED

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LED KB, LED



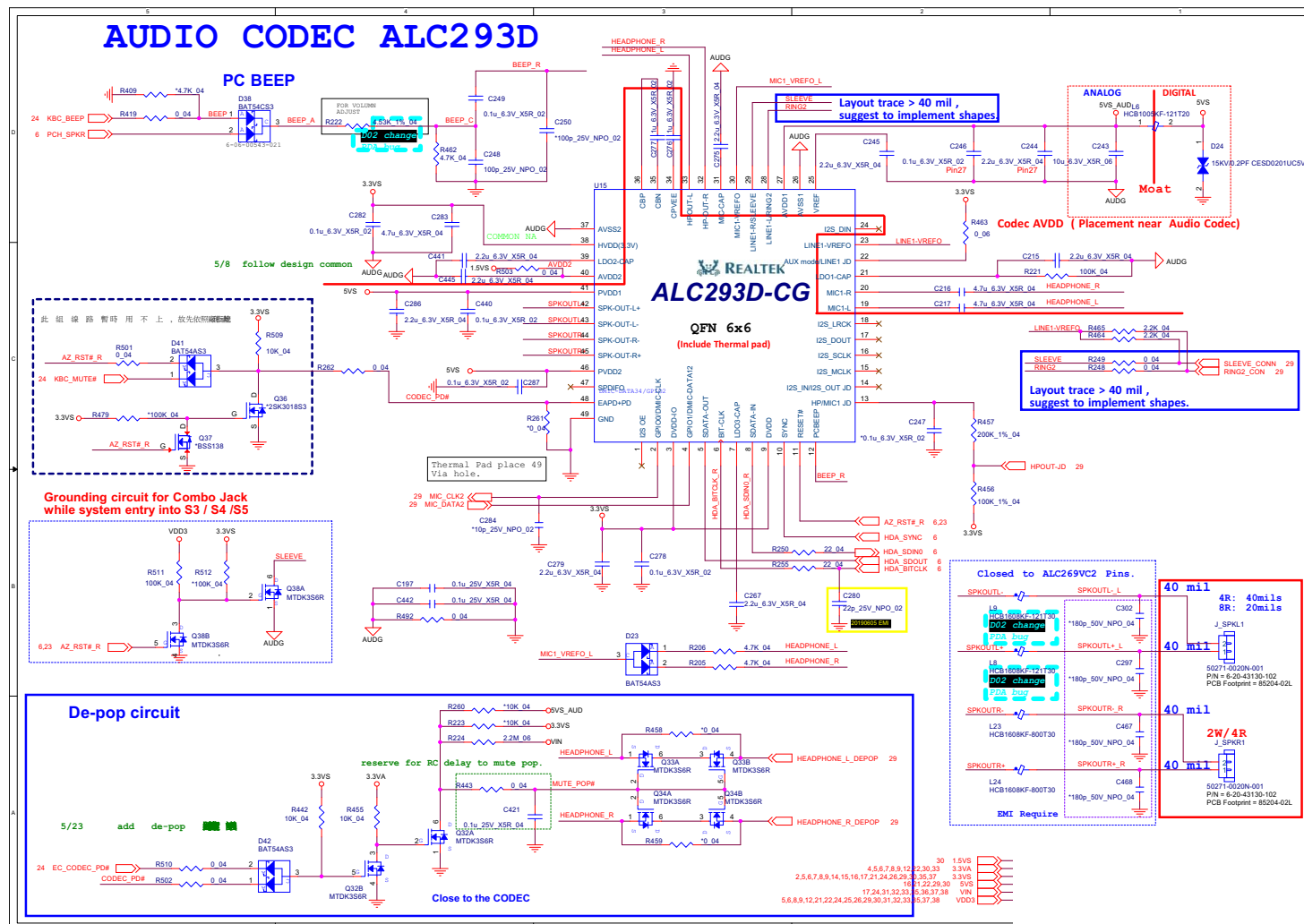
SATA HDD, TPM



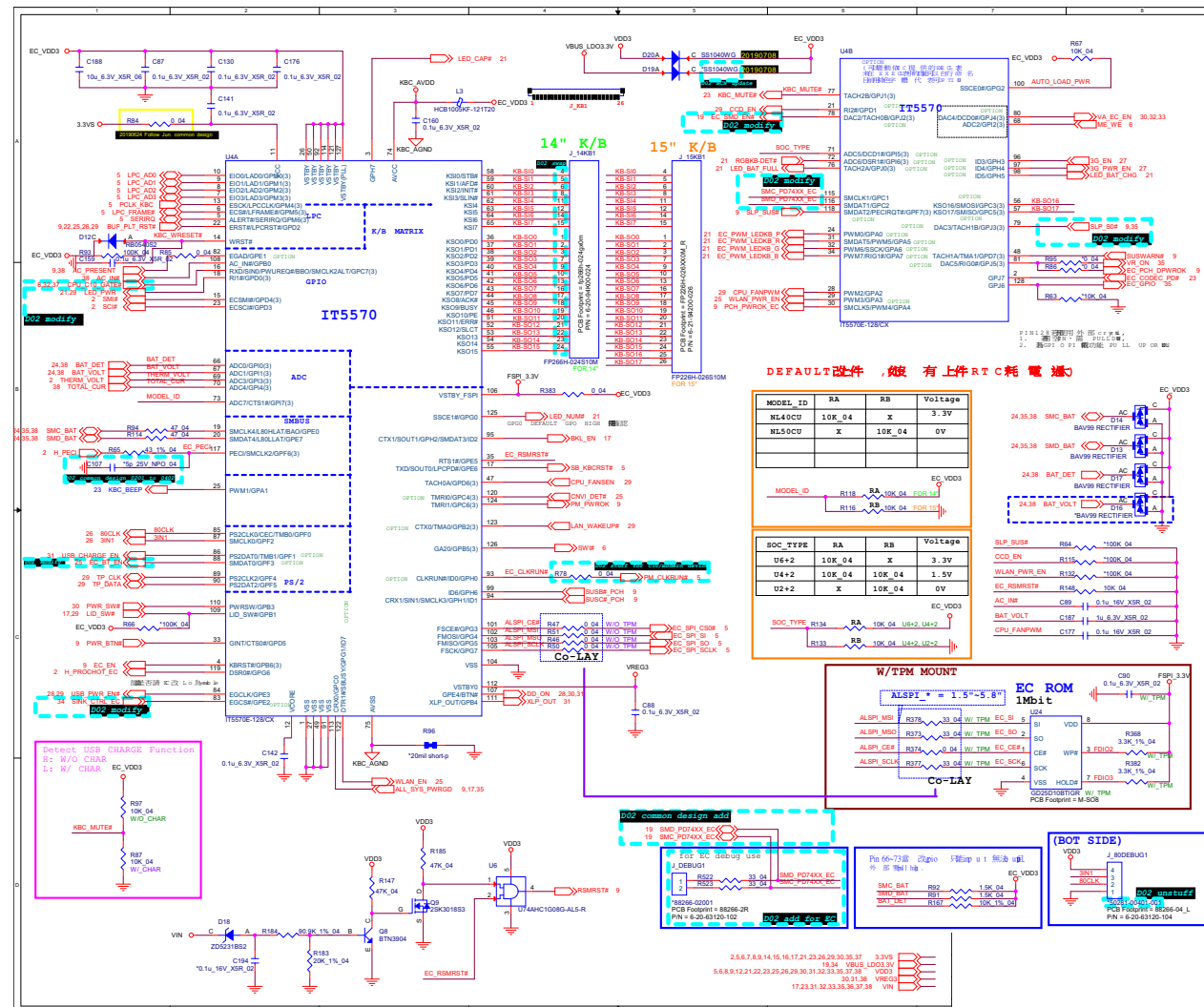
Sheet 22 of 43
SATA HDD, TPM

Audio Codec

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Audio Codec



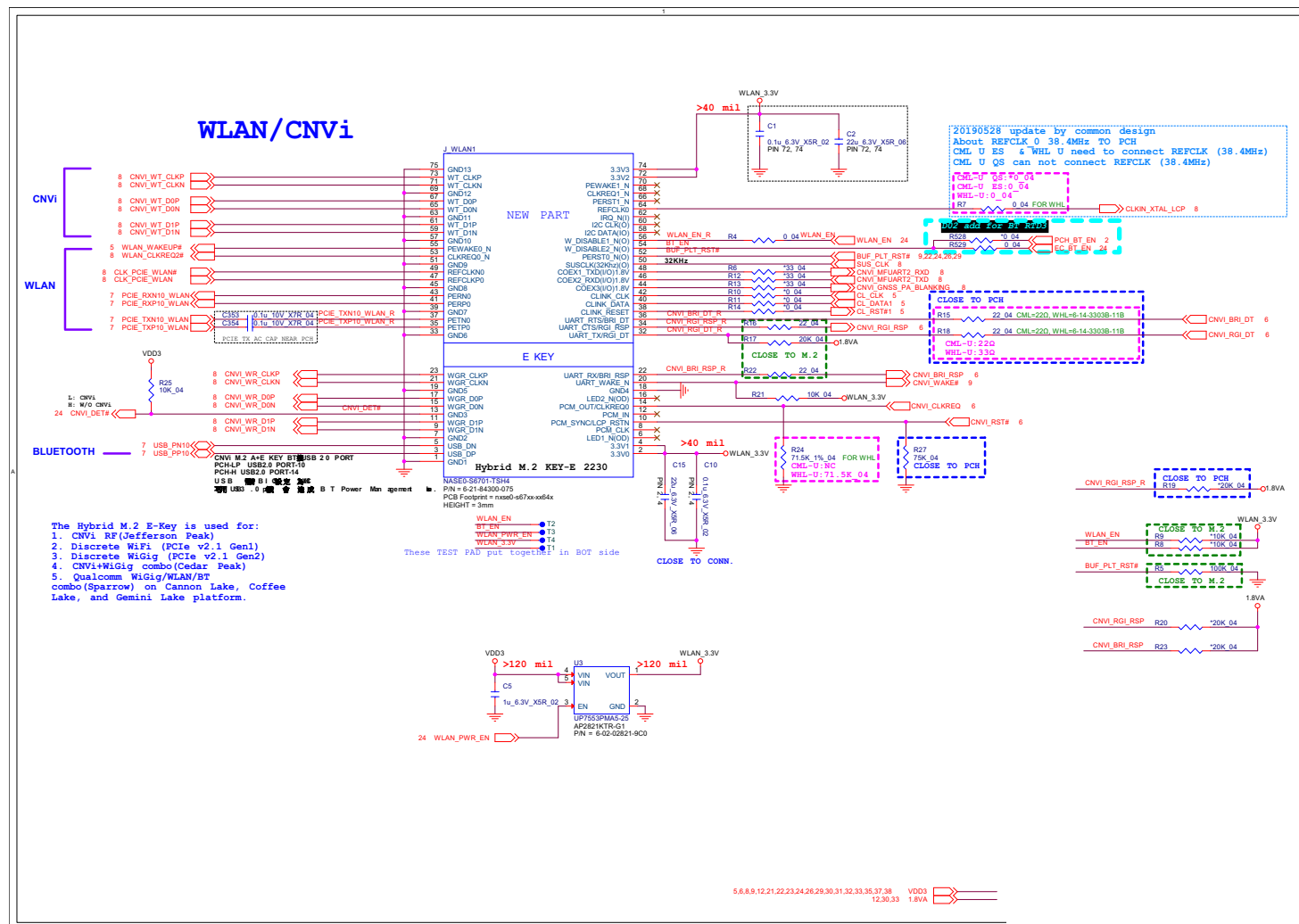
KBC ITE IT5570



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KBC ITE IT5570

WLAN

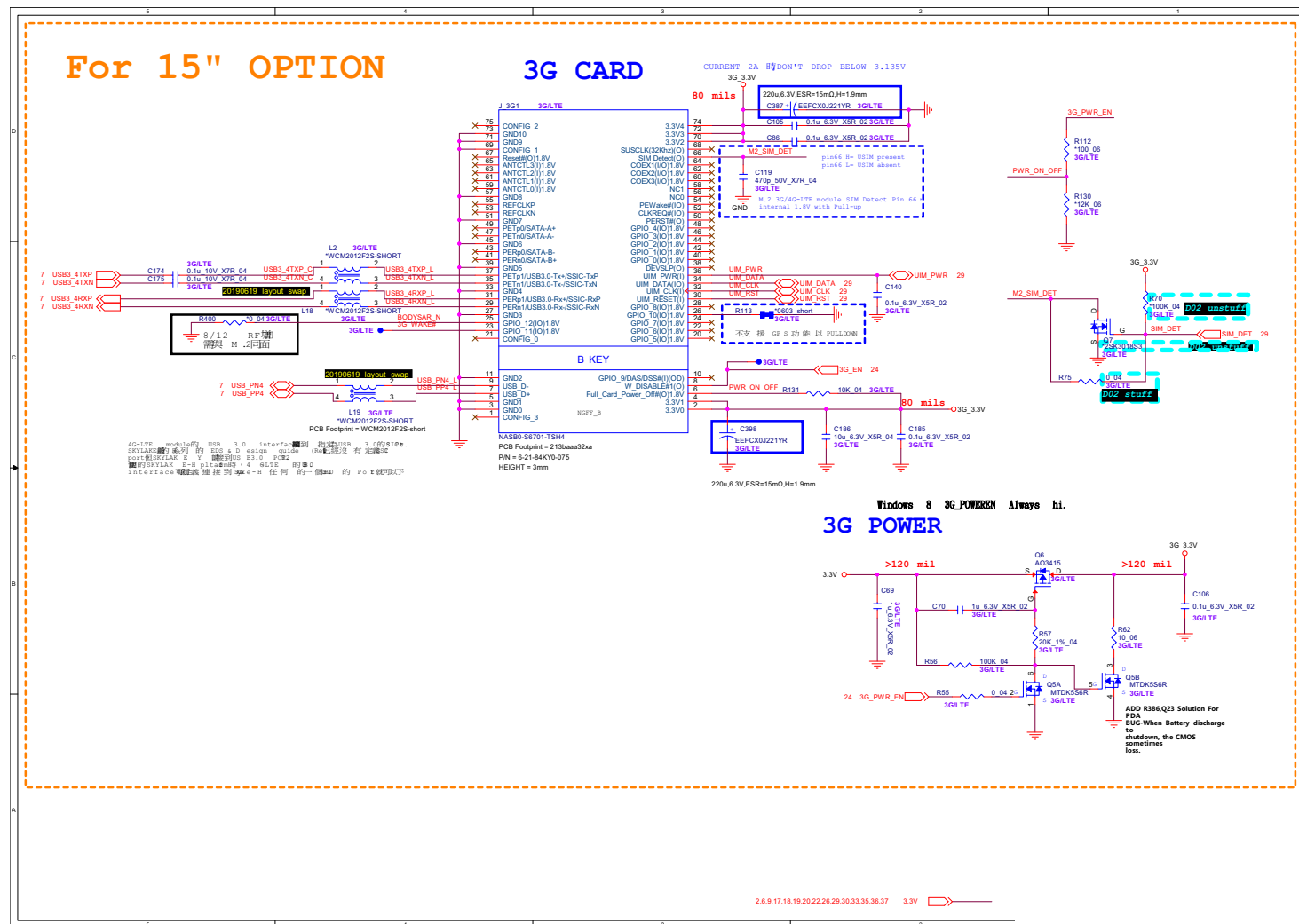
Sheet 25 of 43
WLAN





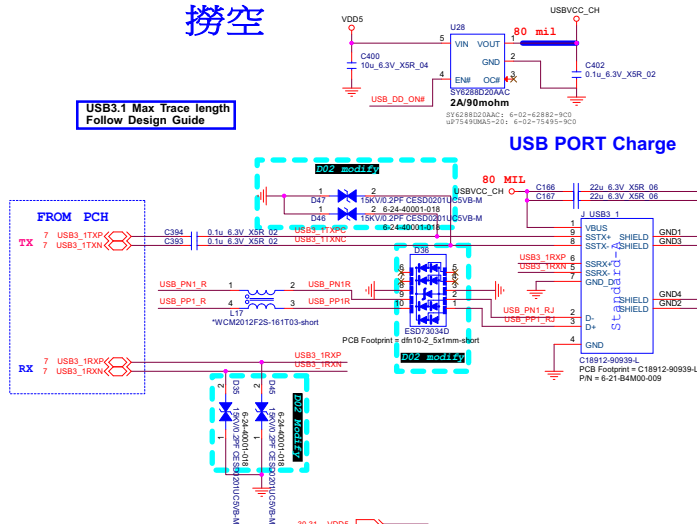
3G/LTE

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3G/LTE



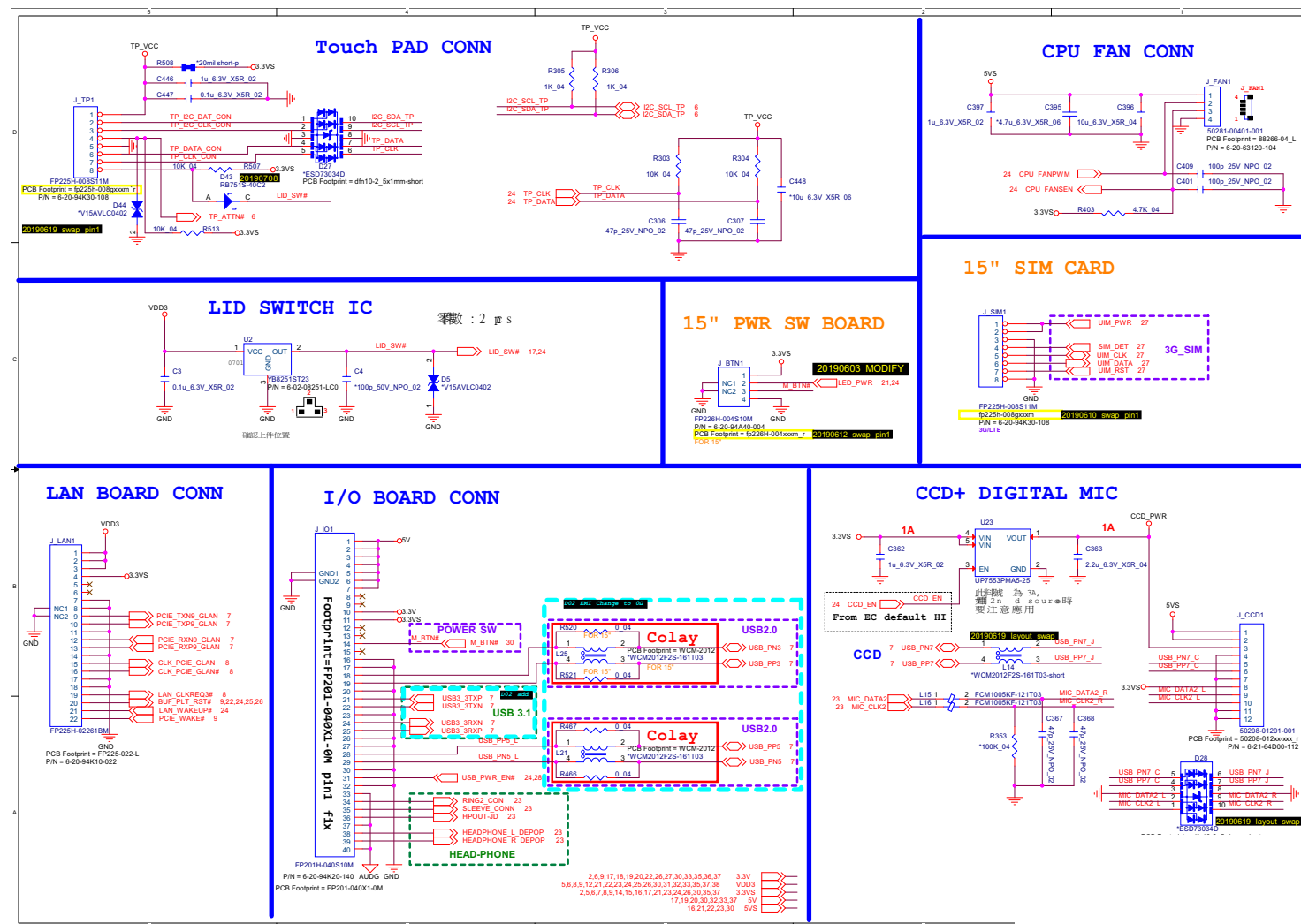
B.Schematic Diagrams

USB3.1 Gen2 Port1 TYPE-A

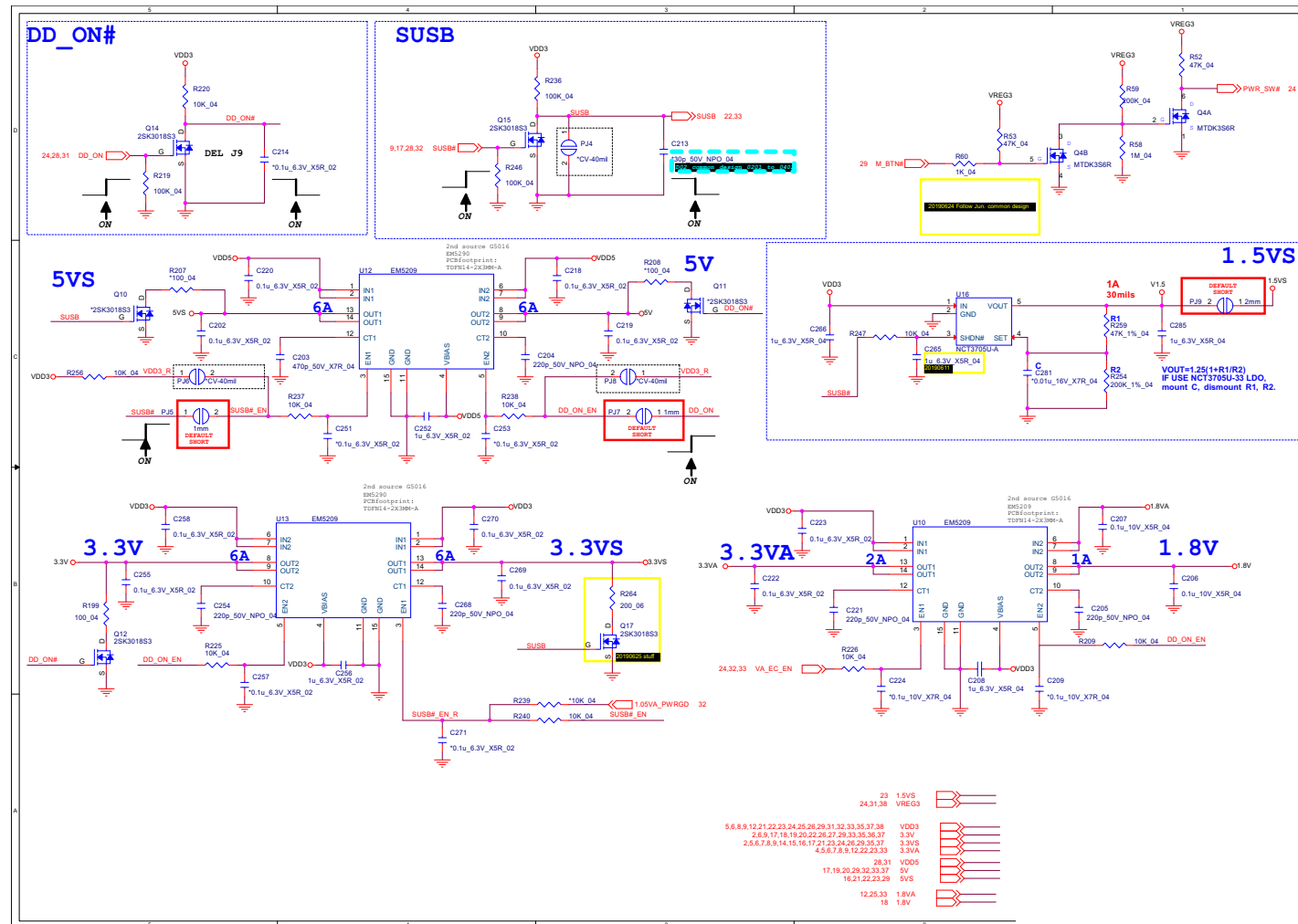


Conn. C

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Conn, CCD, Fan, TP



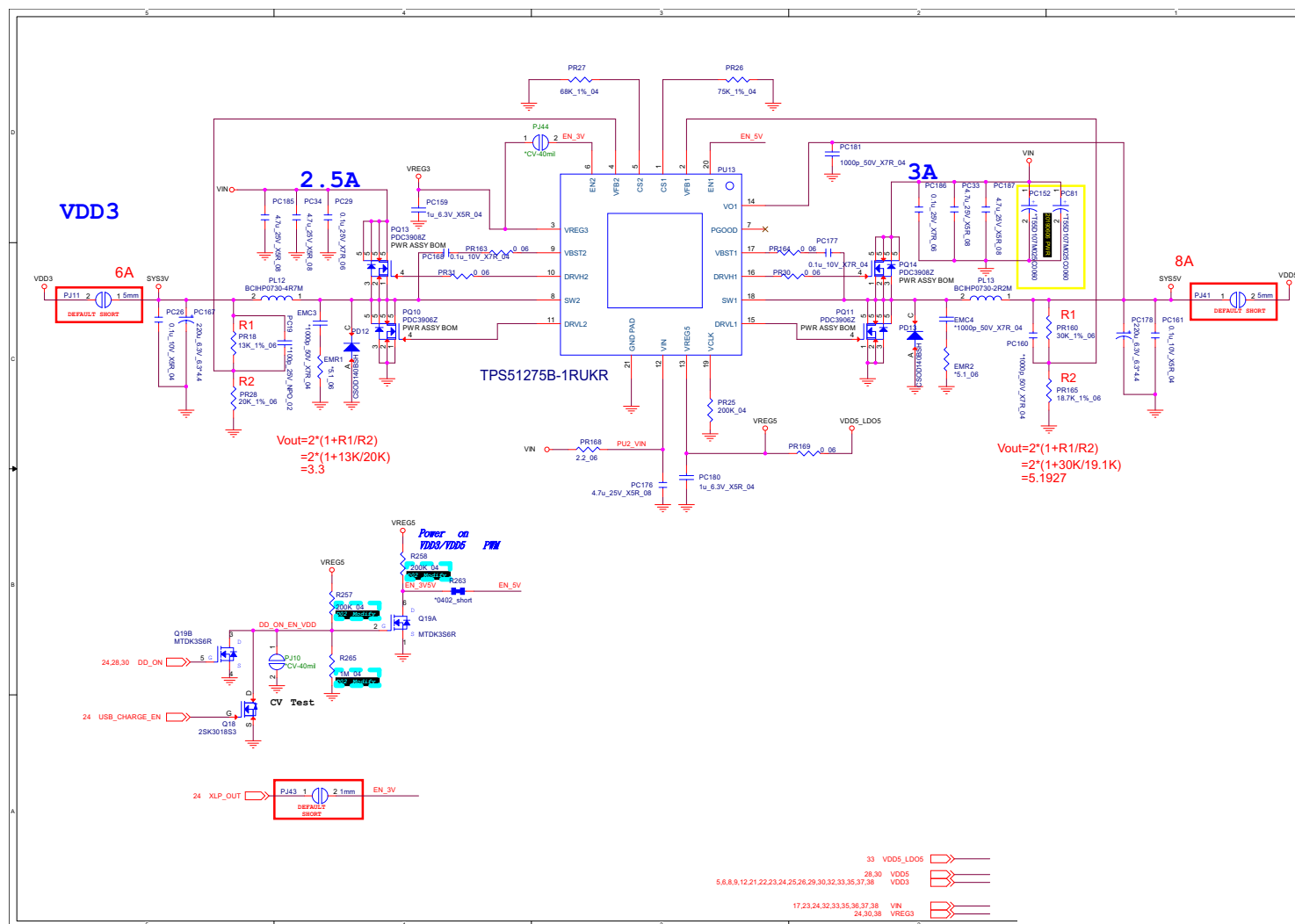
3V, 5V, 3VS, 5VS, 1.8V, 1.5VS



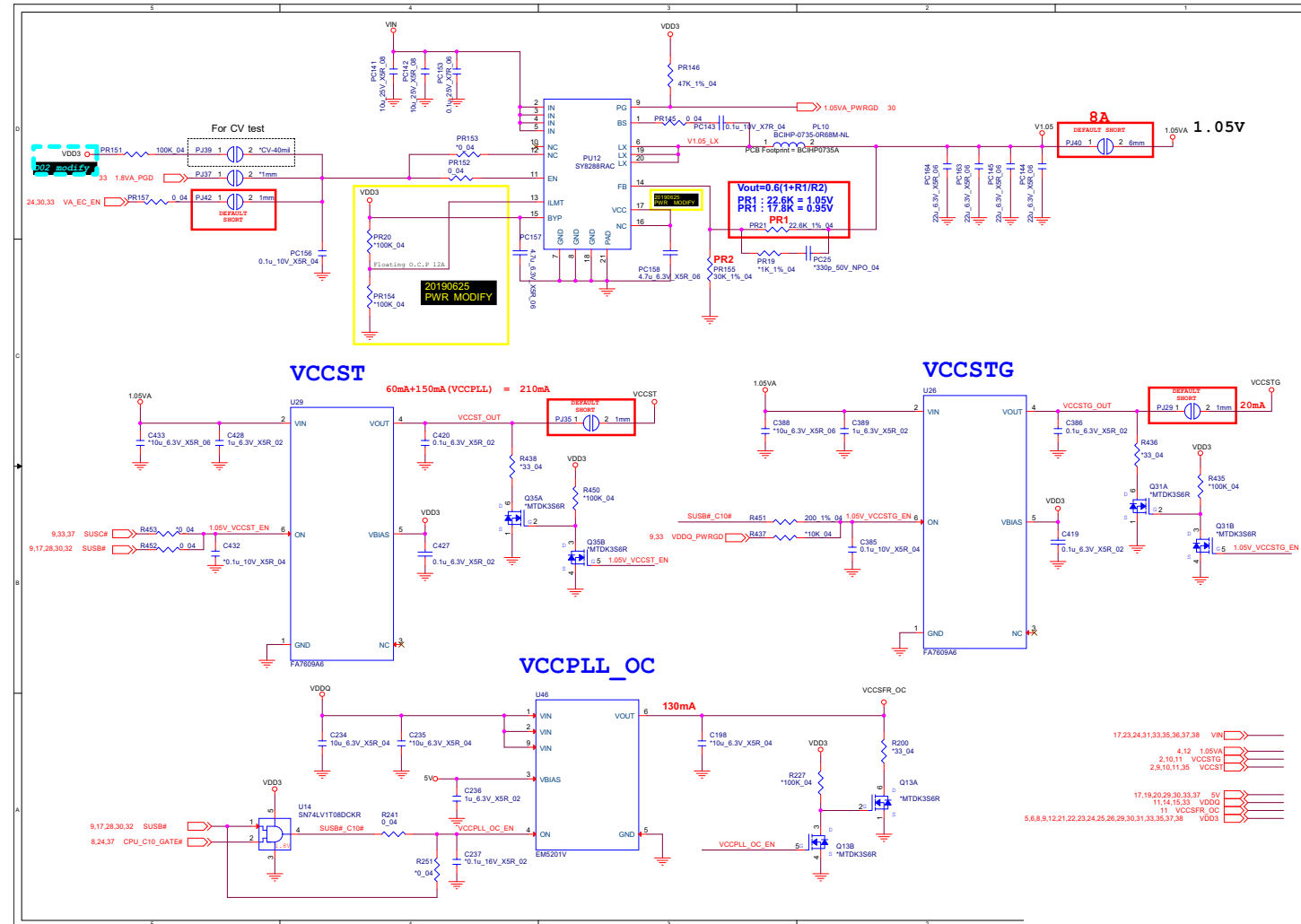
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3V, 5V, 3VS, 5VS,
1.8V, 1.5VS

VDD3, VDD5

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VDD3, VDD5



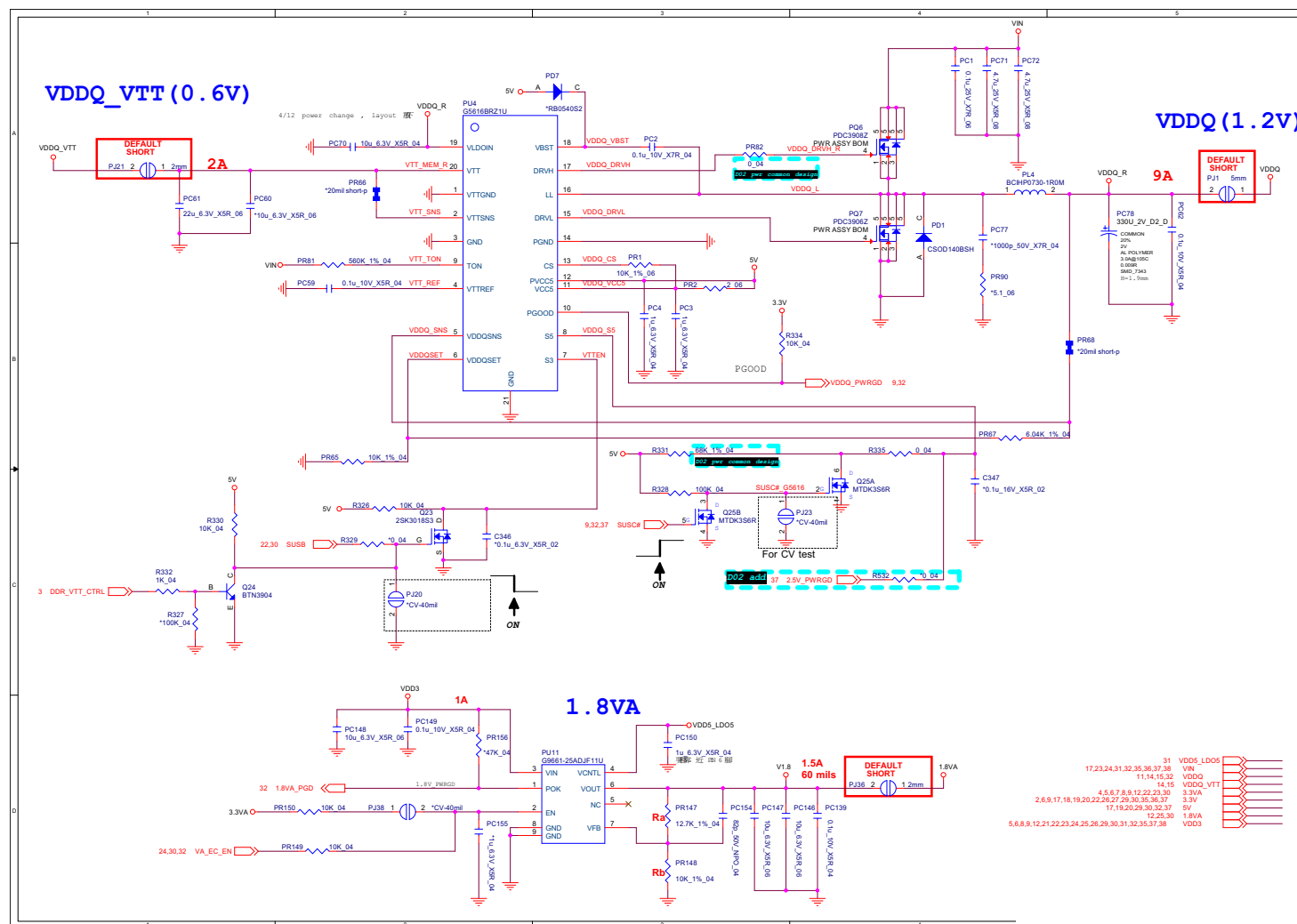
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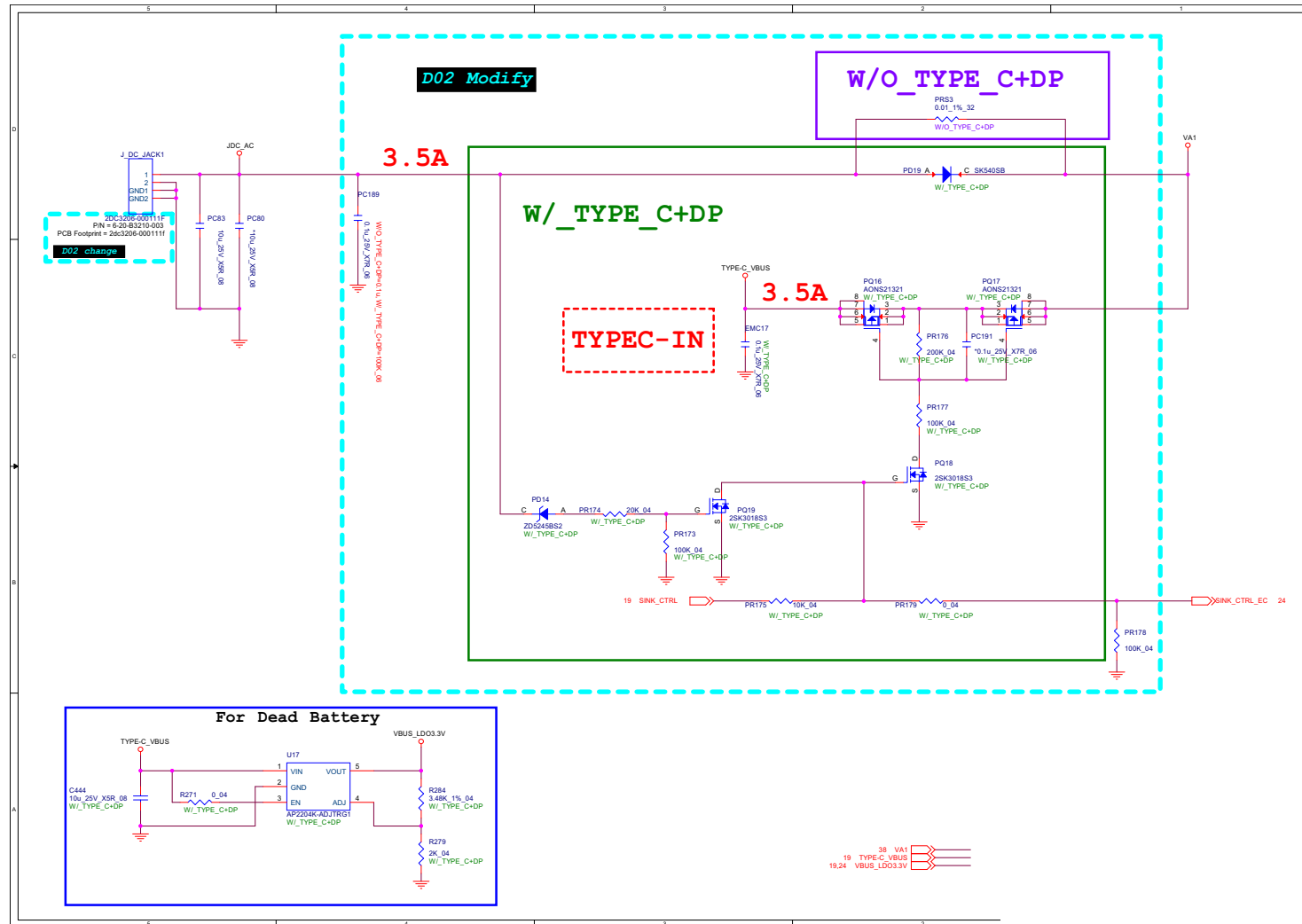
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1.05VA, VCCST,
VCCSTG

VDDQ, VDDQ_VTT, 1.8VA

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VDDQ, VDDQ_VTT,
1.8VA



Power PD Function

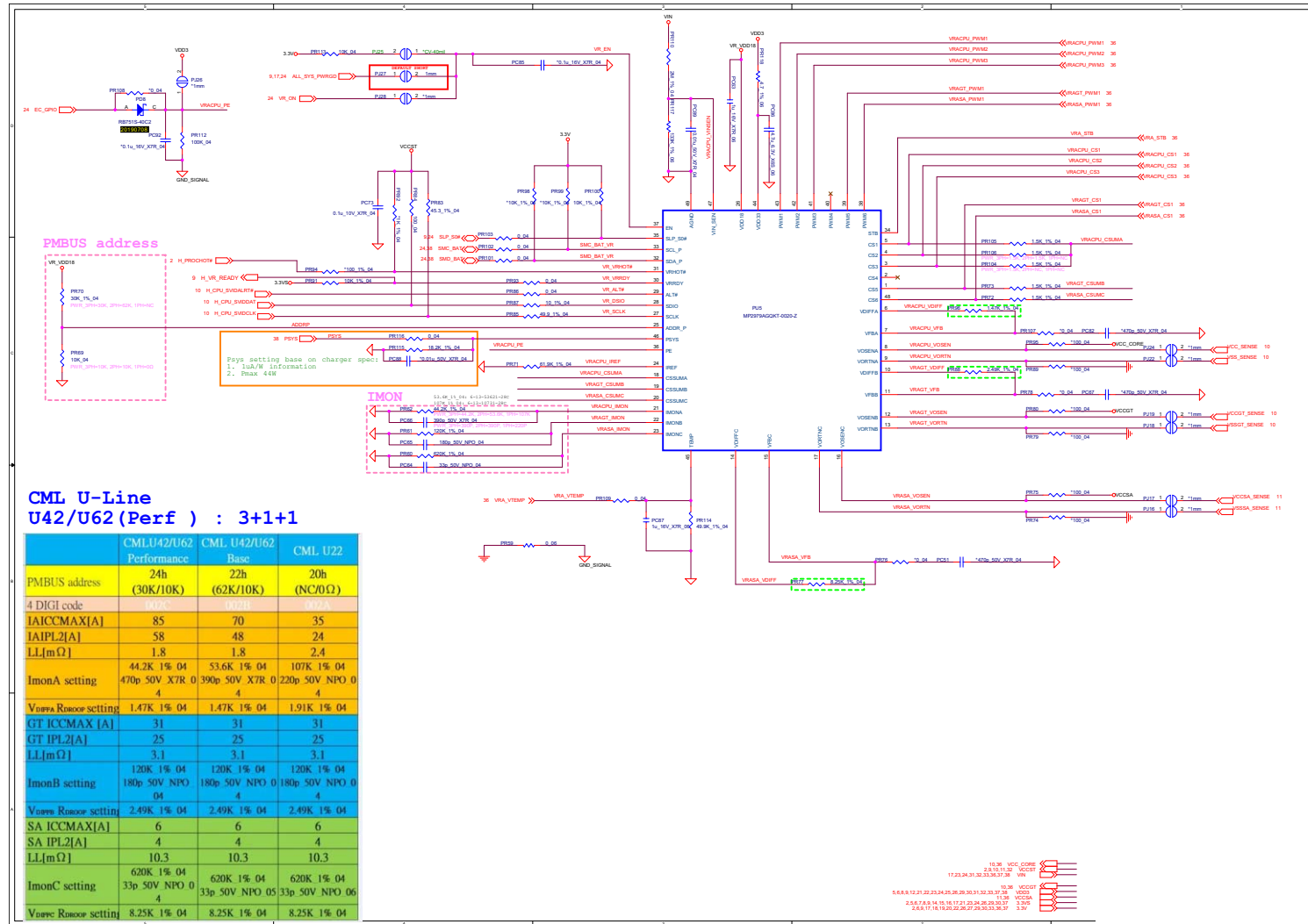


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Power PD Function

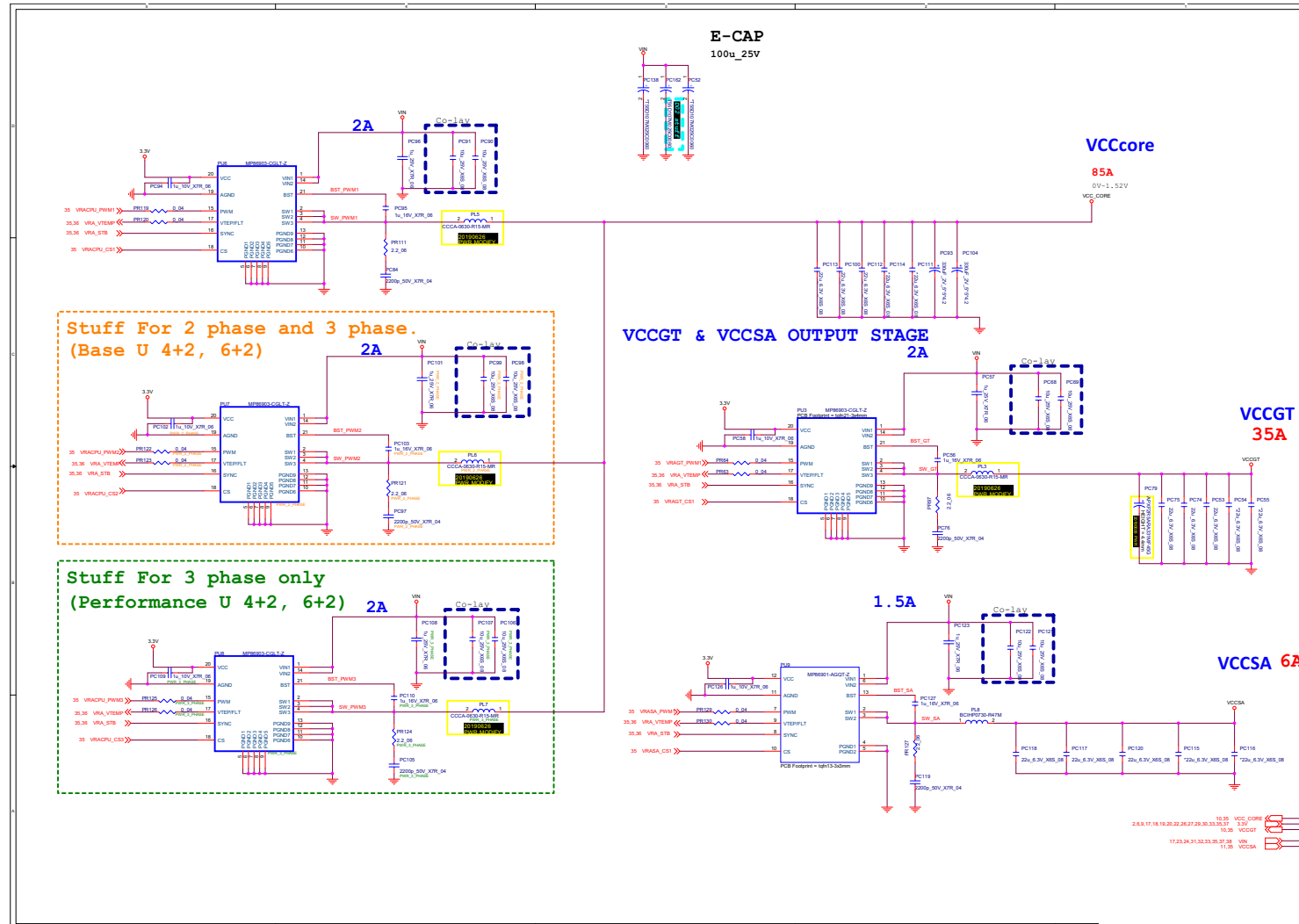
Schematic Diagrams

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VCore

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VCore



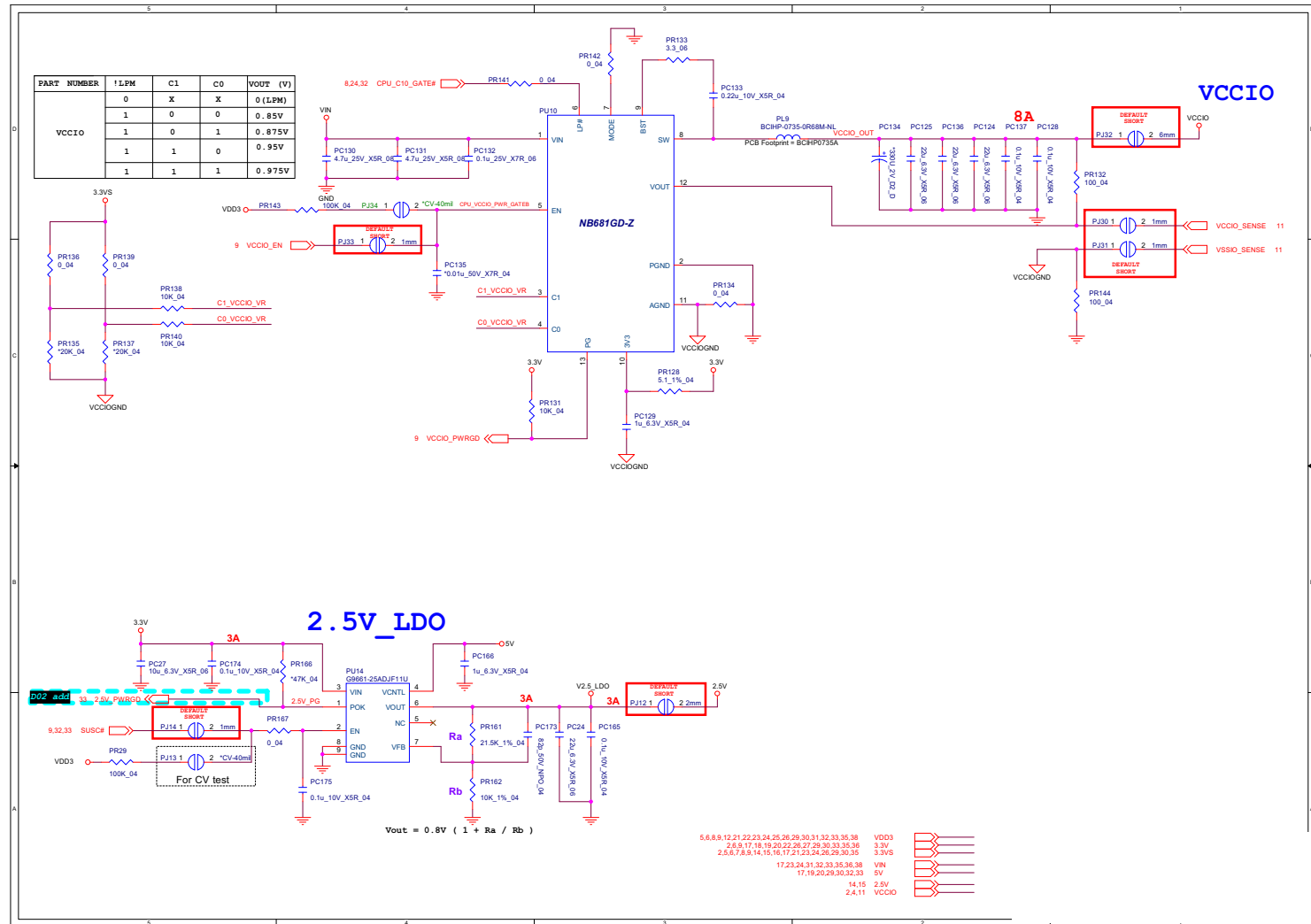
VCCIN, VCCGT, VCCSA



Schematic Diagrams

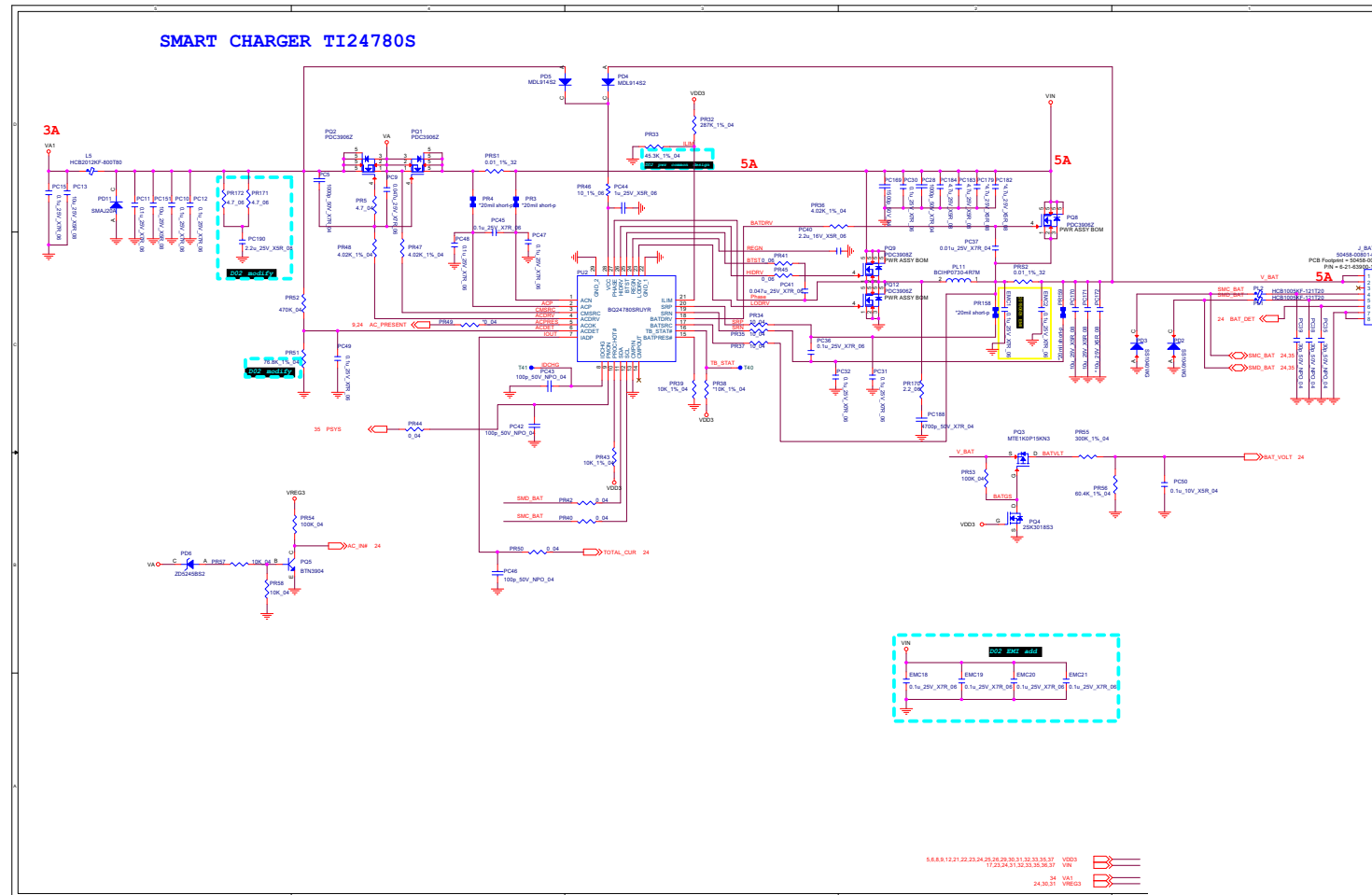
VCCIO, 2.5V

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VCCIO, 2.5V



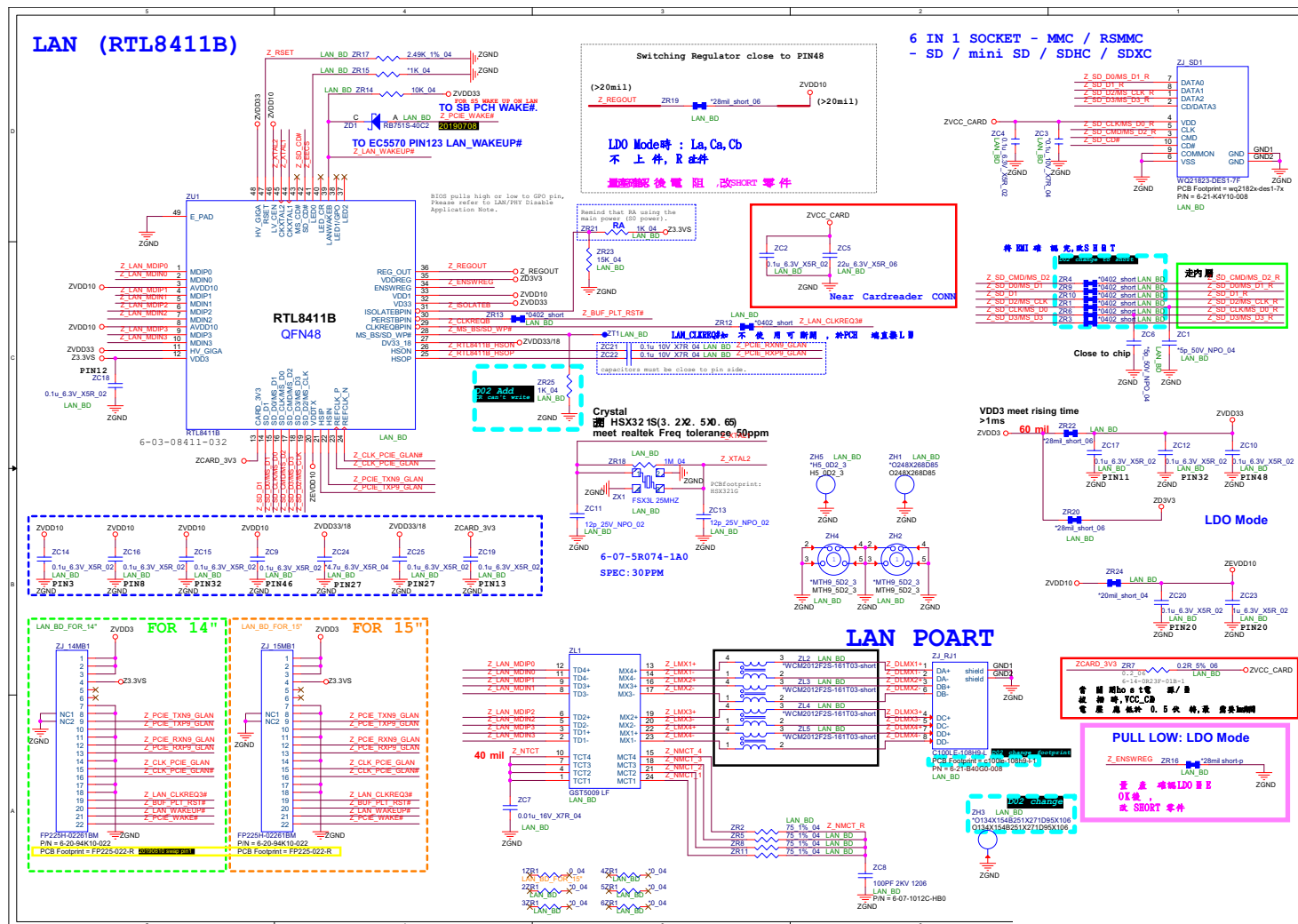
Charger, AC IN

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Charger, AC IN

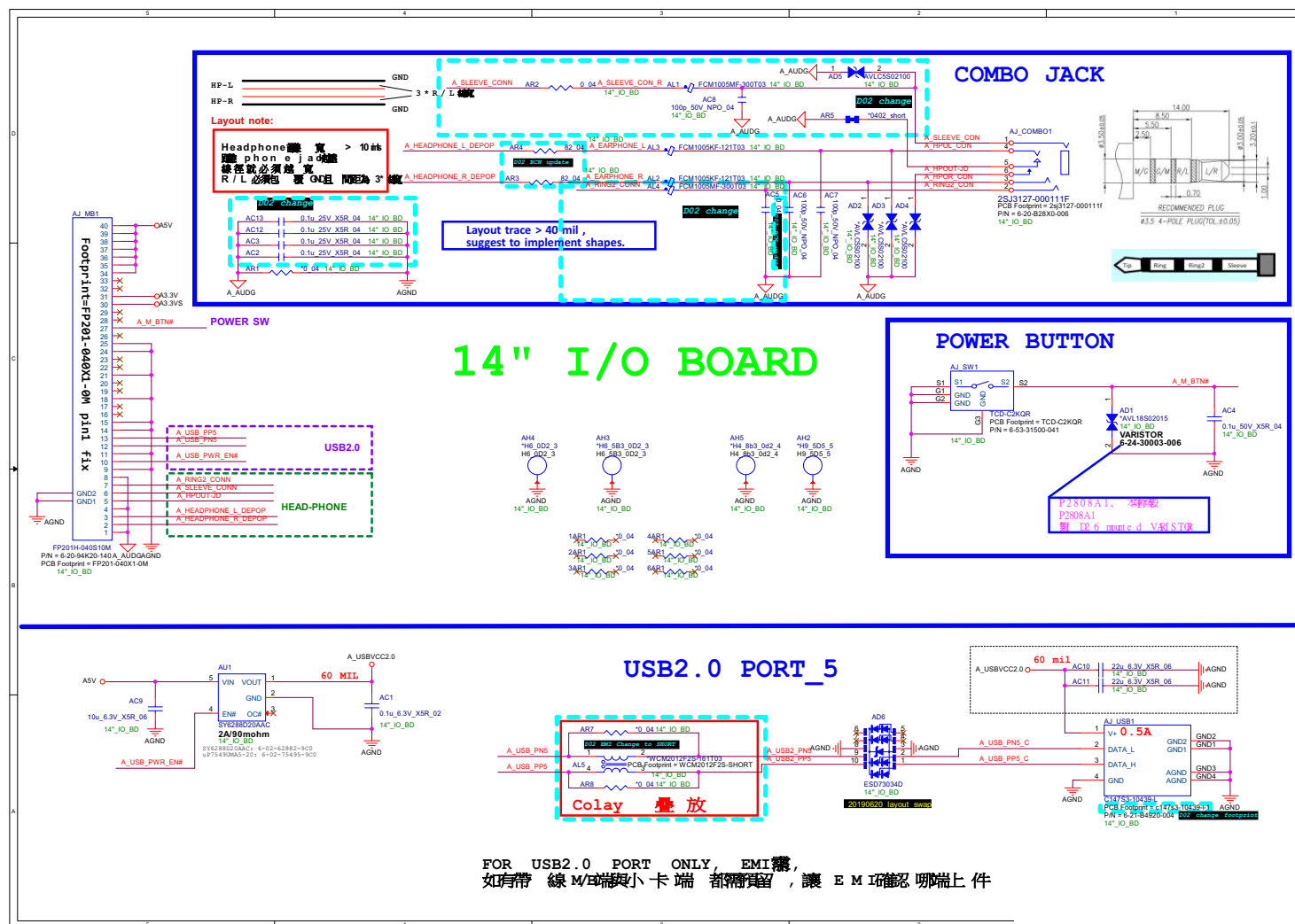
RTL8411B

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RTL8411B



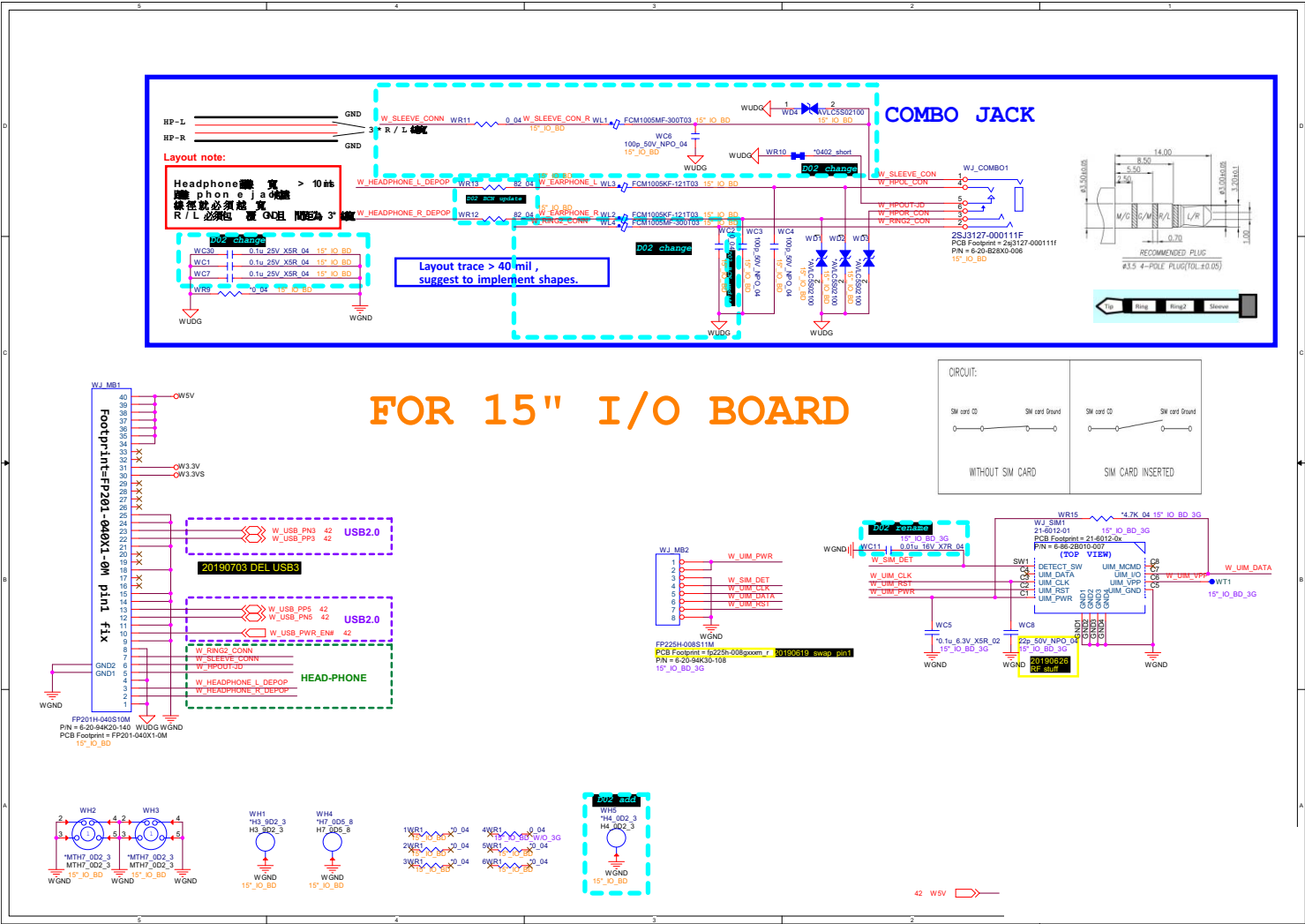
14" I/O Board

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Schematic Diagrams

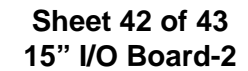
15" I/O Board-1



FOR 15" I/O BOARD

FOR 15" I/O BOARD

USB2.0 PORT_3 TYPE-A



Schematic Diagrams

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Power Button Board

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Power Button
Board