

# Appendix B:Schematic Diagrams

This appendix has circuit diagrams of the *M540SE/M550SE* 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>VT8237 2/3 - Page B - 15</i>	<i>+1.8V, +VTT_MEM - Page B - 28</i>
<i>PROCESSOR 1/2 - Page B - 3</i>	<i>VT8237 3/3 - Page B - 16</i>	<i>VCORE - Page B - 29</i>
<i>PROCESSOR 2/2 - Page B - 4</i>	<i>MINI PCI, MINI Card, USB2.0*2, FP - Page B - 17</i>	<i>+1.05VS, 1.5V, 1.5VS - Page B - 30</i>
<i>VN896 1/4 - Page B - 5</i>	<i>SATA HDD, CD-ROM, H8 BEEP, CCD - Page B - 18</i>	<i>+VDD3, +VDD5 - Page B - 31</i>
<i>VN896 2/4 - Page B - 6</i>	<i>LAN PHY - Page B - 19</i>	<i>D/D BD (CRT, INVERTER, CCD, RJ-11) - Page B - 32</i>
<i>VN896 3/4 - Page B - 7</i>	<i>LPC ROM, TOUCH PAD, LED - Page B - 20</i>	<i>D/D BD (CHARGER, DC IN) - Page B - 33</i>
<i>VN896 4/4 - Page B - 8</i>	<i>H8-2111 - Page B - 21</i>	<i>AUDIO BD (PHONE JACK, USB, RJ-11) - Page B - 34</i>
<i>DDR2-1 - Page B - 9</i>	<i>MDC, USB BT, PWRGD, DDB CON - Page B - 22</i>	<i>HOT KEY BD (HOT KEY, LED, LID) - Page B - 35</i>
<i>DDR2-2 - Page B - 10</i>	<i>Audio VT1708A/ALC883 - Page B - 23</i>	<i>LED BOARD - Page B - 36</i>
<i>CLOCK GENERATOR - Page B - 11</i>	<i>AUDIO AMP, USB2.0*2 - Page B - 24</i>	<i>CLICK BOARD - Page B - 37</i>
<i>PANEL, FAN - Page B - 12</i>	<i>PCI ENE MR510 - Page B - 25</i>	<i>RJ-45 BOARD - Page B - 38</i>
<i>VIA LVDS VT-1634AL - Page B - 13</i>	<i>NEW CARD, 3-IN-1 SOCKET - Page B - 26</i>	<i>USB DONGLE BOARD - Page B - 39</i>
<i>VT8237 1/3 - Page B - 14</i>	<i>5V, 3V, 5VS, 3VS, 2.5V, 2.5VS - Page B - 27</i>	<i>FINGERPRINT BOARD - Page B - 40</i>

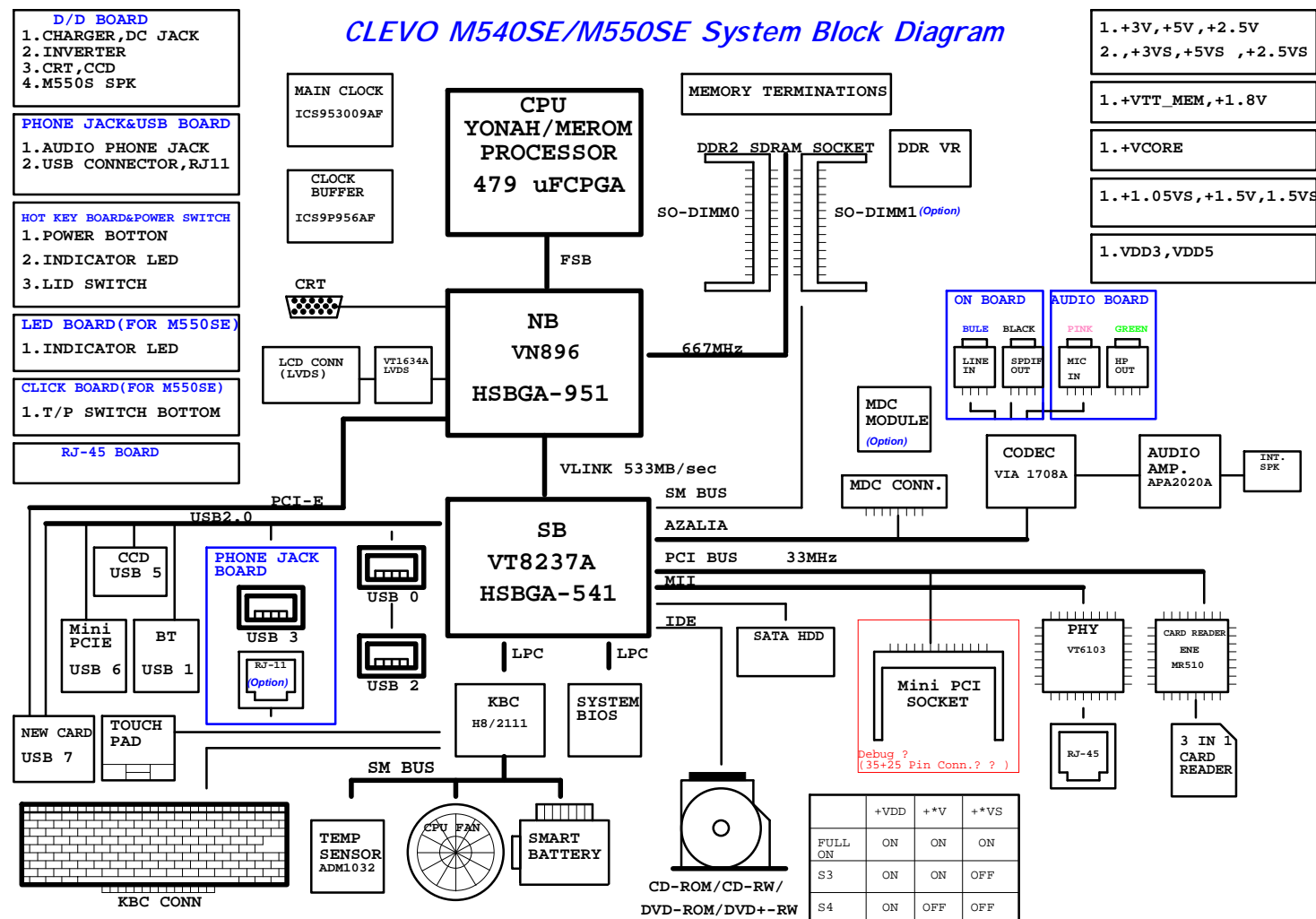
*Table B - 1*  
**Schematic  
Diagrams**



## Version Note

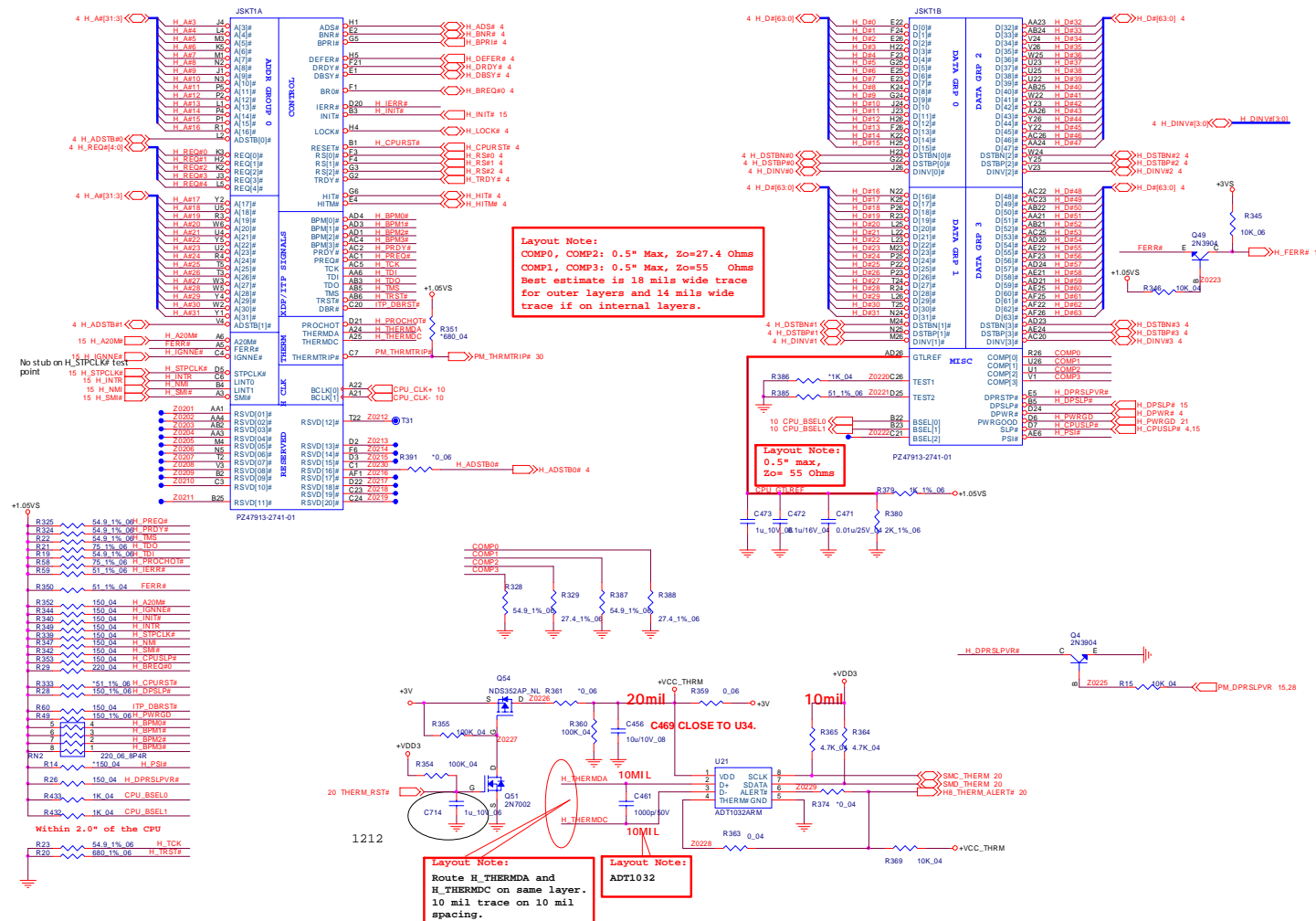
The schematic diagrams in this chapter are based upon version 6-71-M5E50-D02A. If your main-board (or other boards) are a later version, please check with the Service Center for updated diagrams (if required).

**Sheet 1 of 39**  
**System Block**  
**Diagram**



## B.Schematic Diagrams

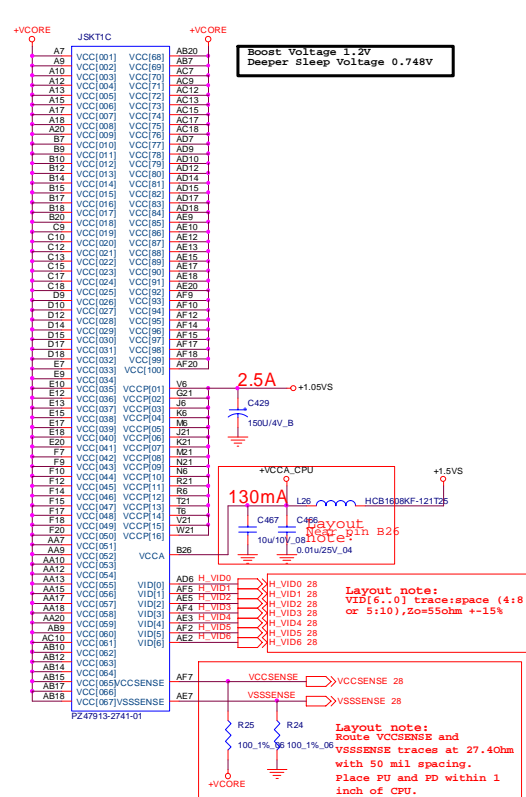
## B. Schematic Diagrams



## Schematic Diagrams

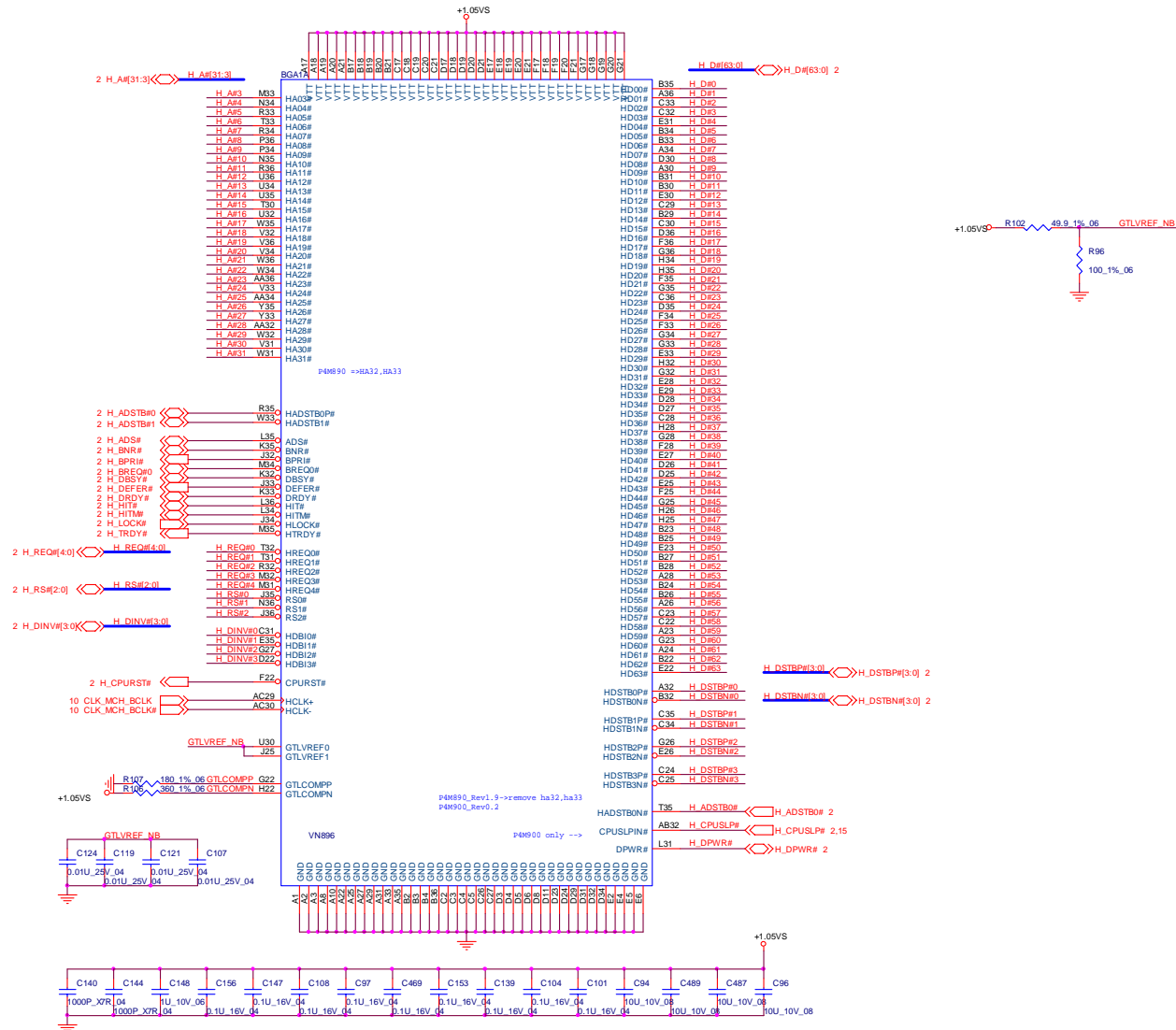
## PROCESSOR 2/2

Sheet 3 of 39  
PROCESSOR 2/2



## Schematic Diagrams

# VN896 1/4

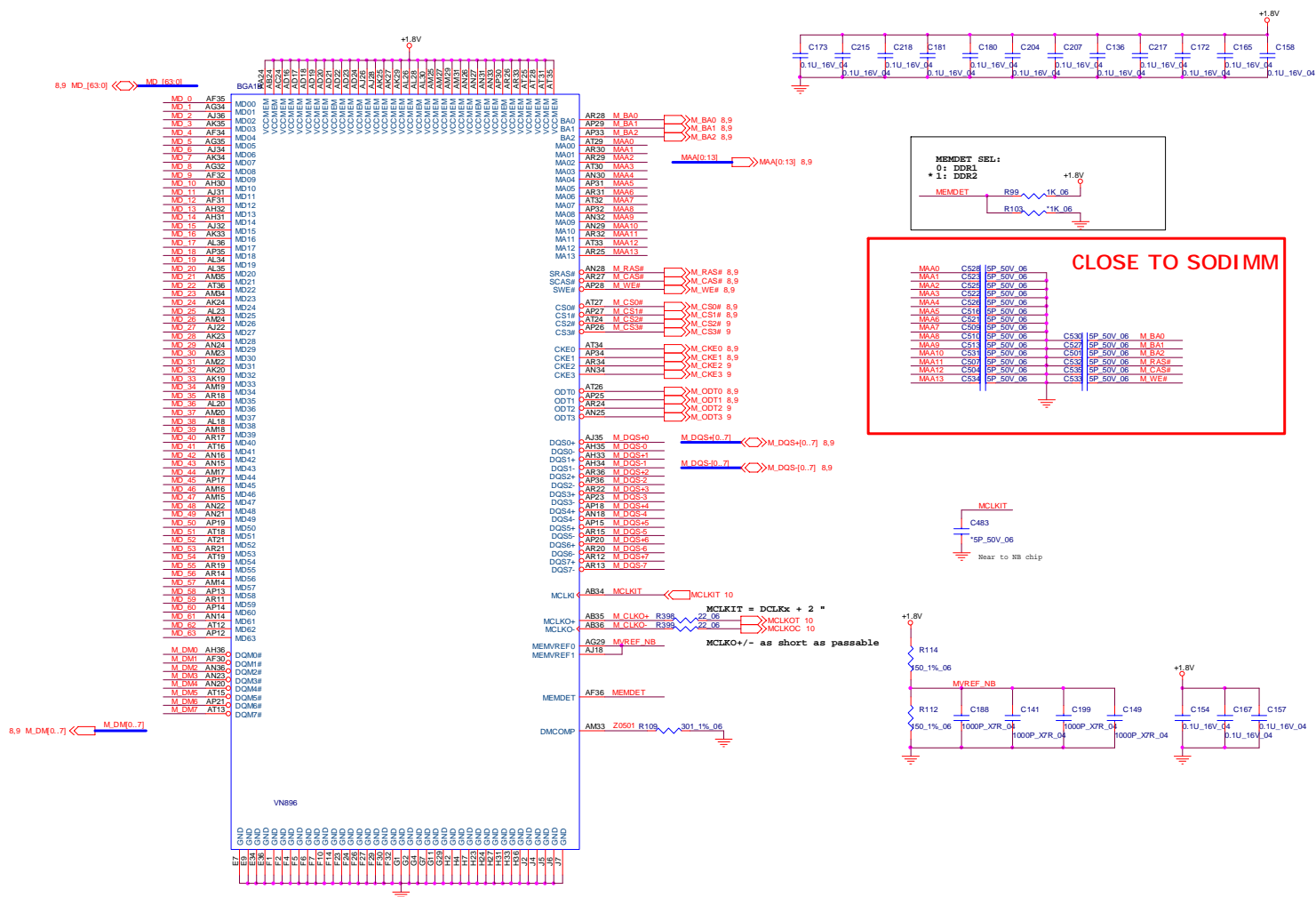


Sheet 4 of 39  
VN896 1/4

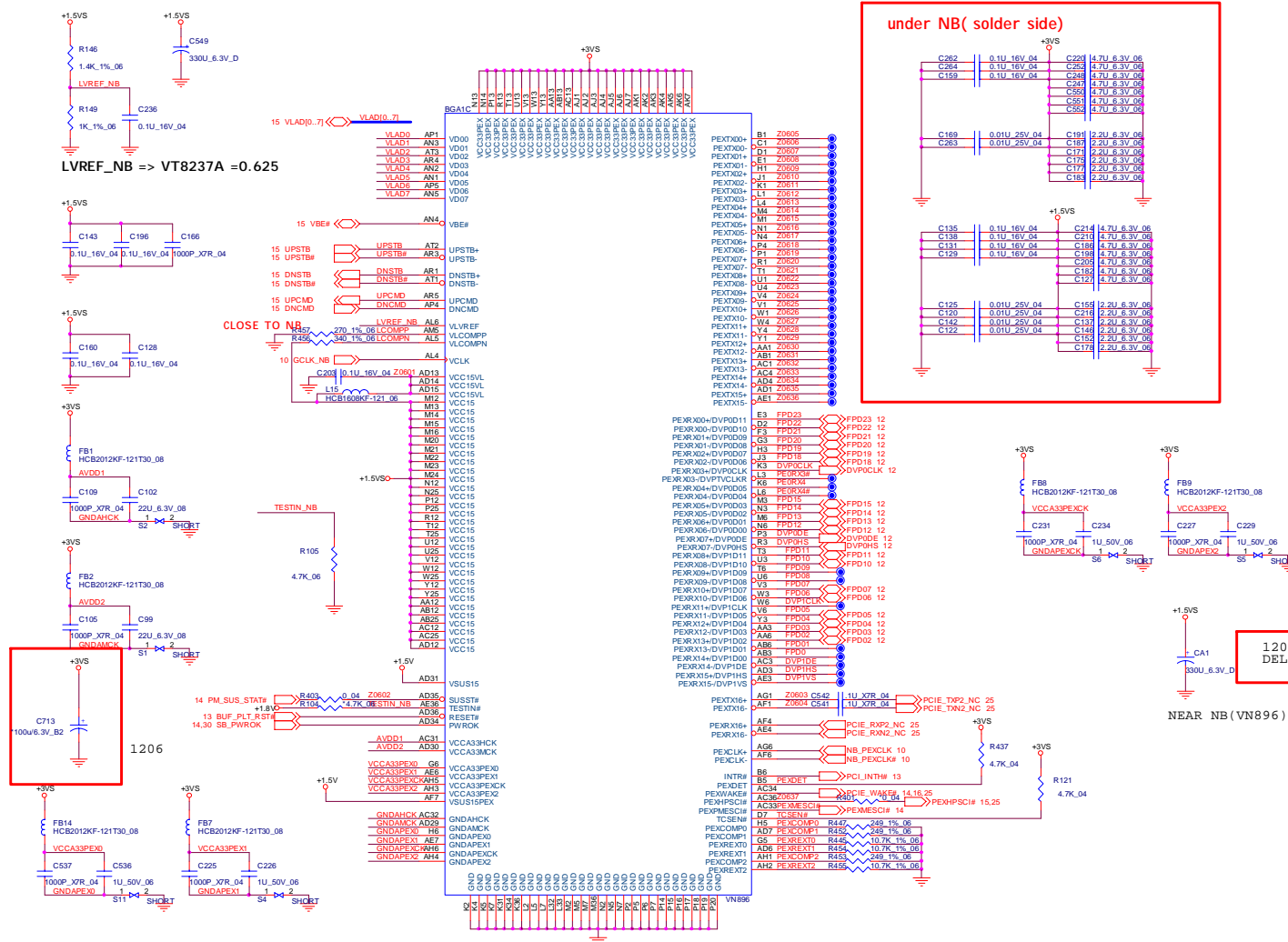
## B. Schematic Diagrams

## B.Schematic Diagrams

Sheet 5 of 39  
VN896 2/4

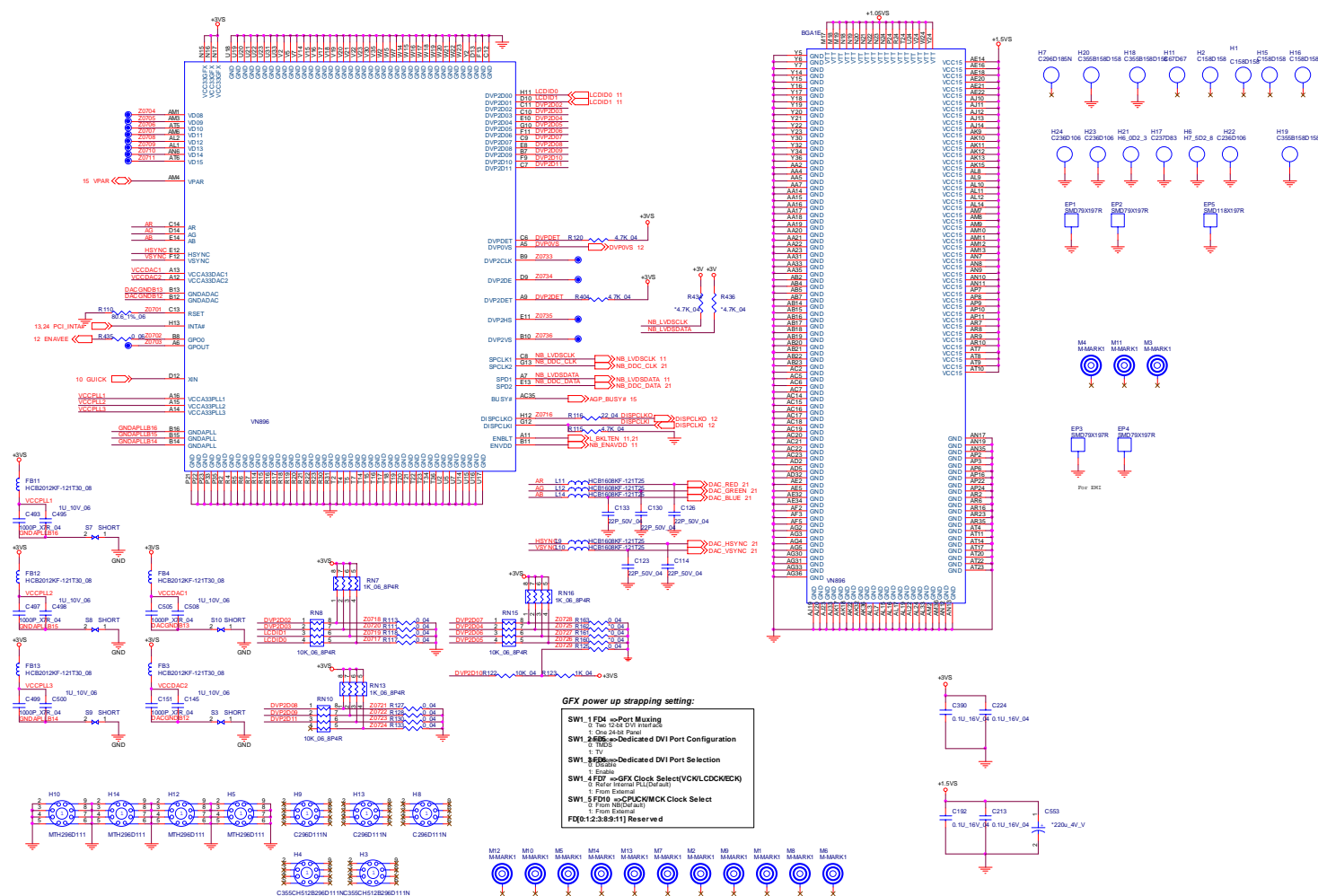


## VN896 3/4

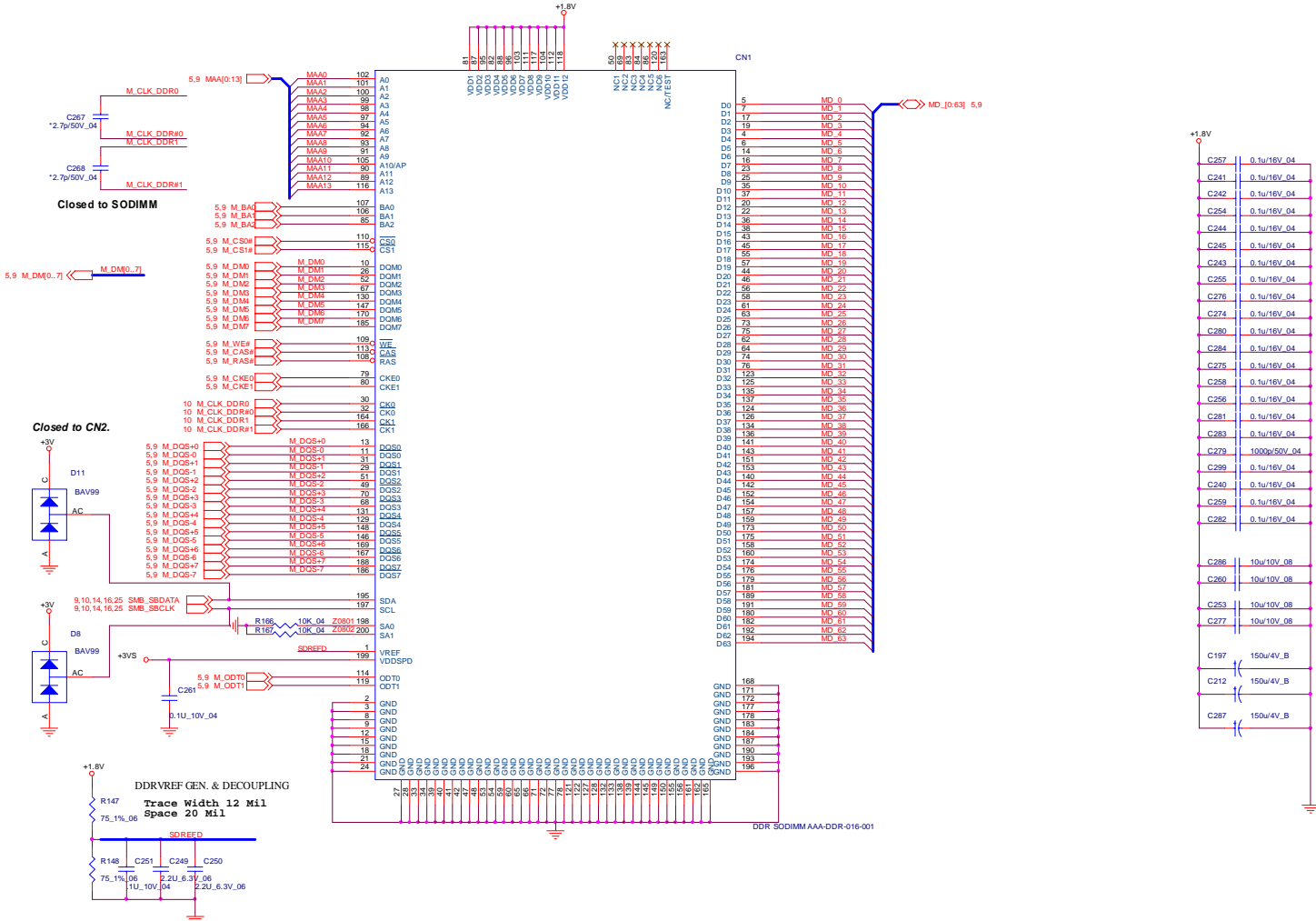


# VN896 4/4

Sheet 7 of 39  
VN896 4/4





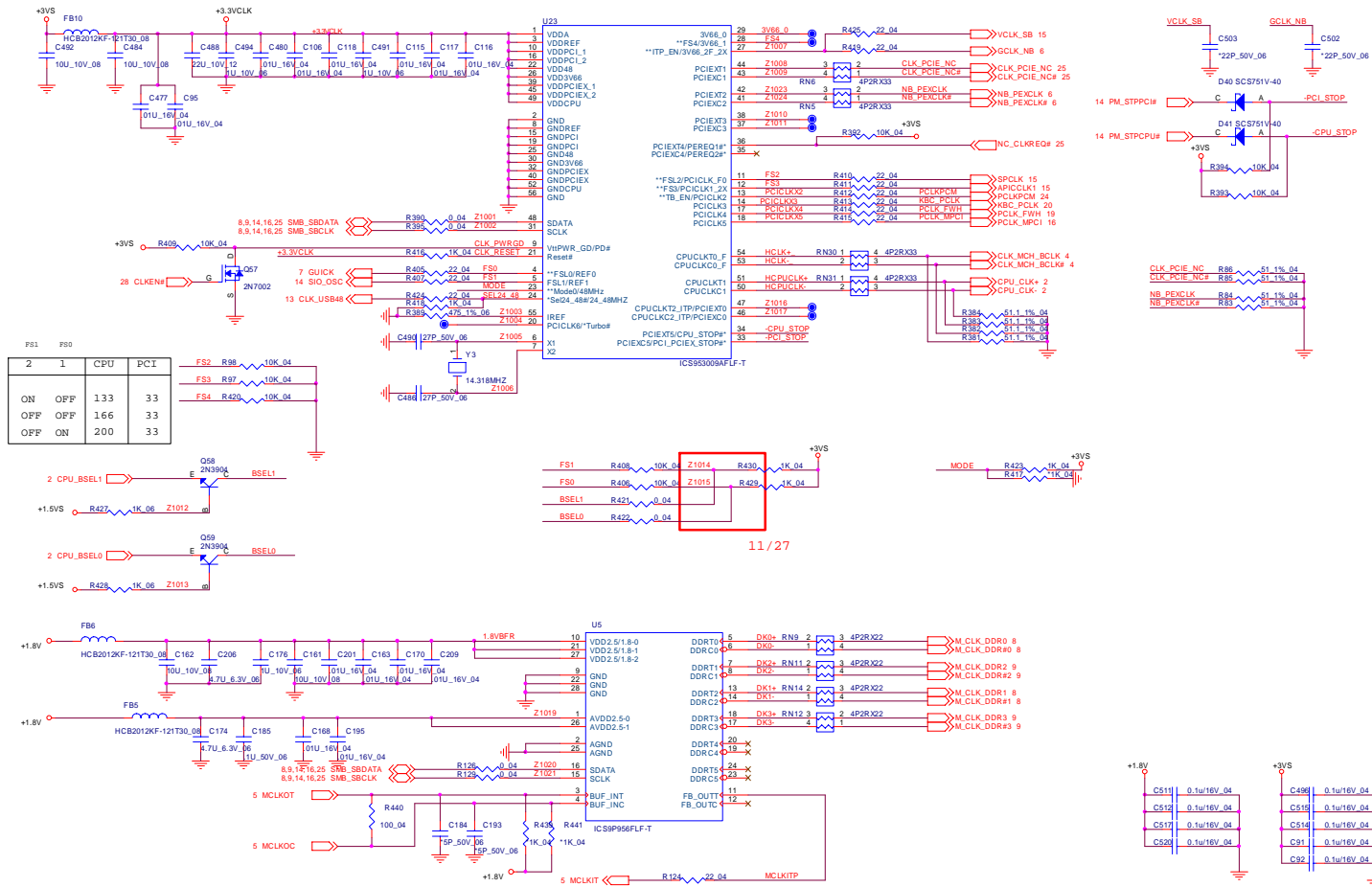


Sheet 8 of 39  
DDR2-1

## B.Schematic Diagrams

## DDR2-2

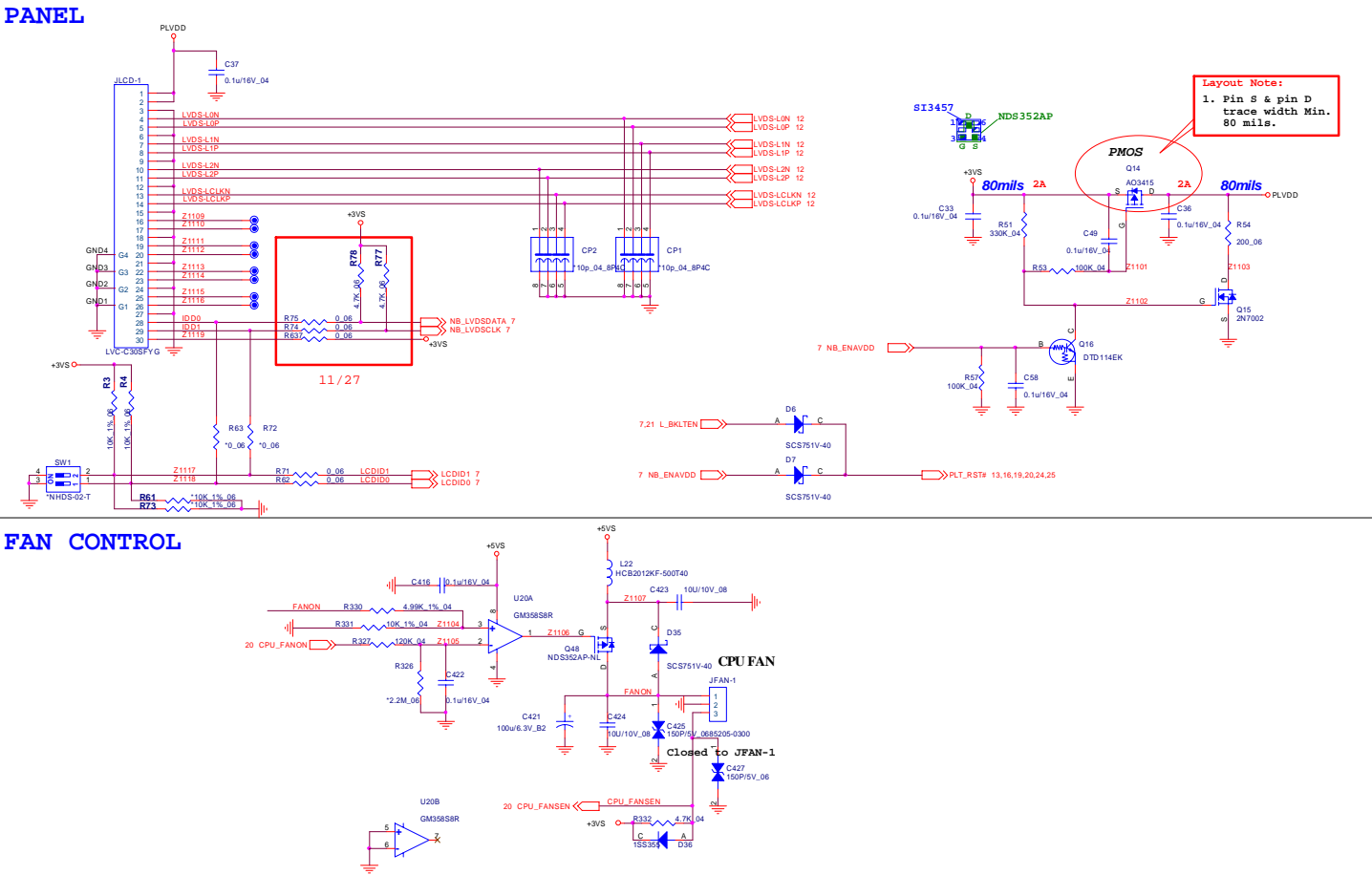
## B.Schematic Diagrams



Schematic Diagrams

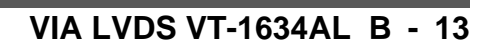
PANEL, FAN

Sheet 11 of 39  
PANEL, FAN



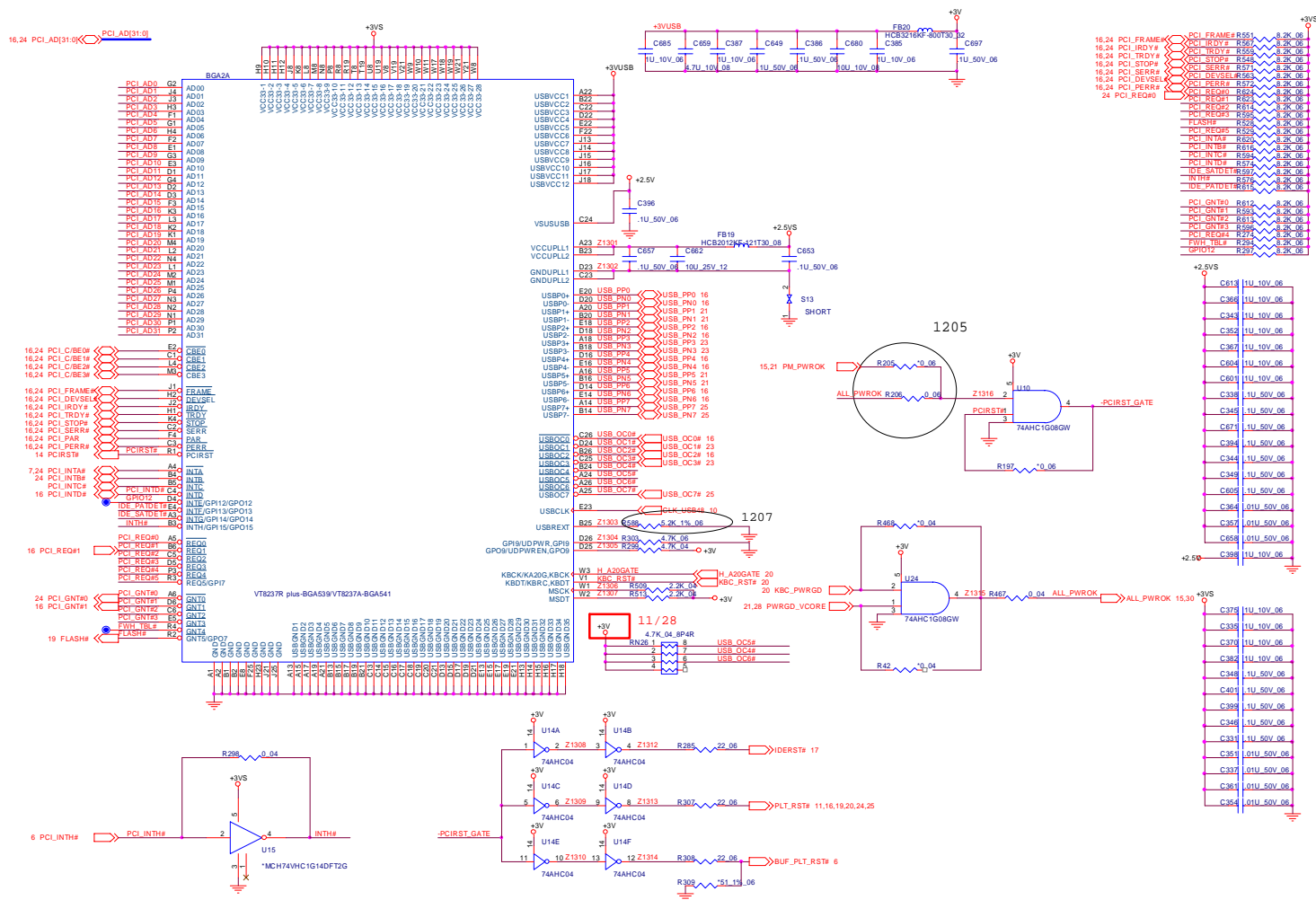
## B.Schematic Diagrams

Sheet 12 of 39  
VIA LVDS  
VT-1634AL

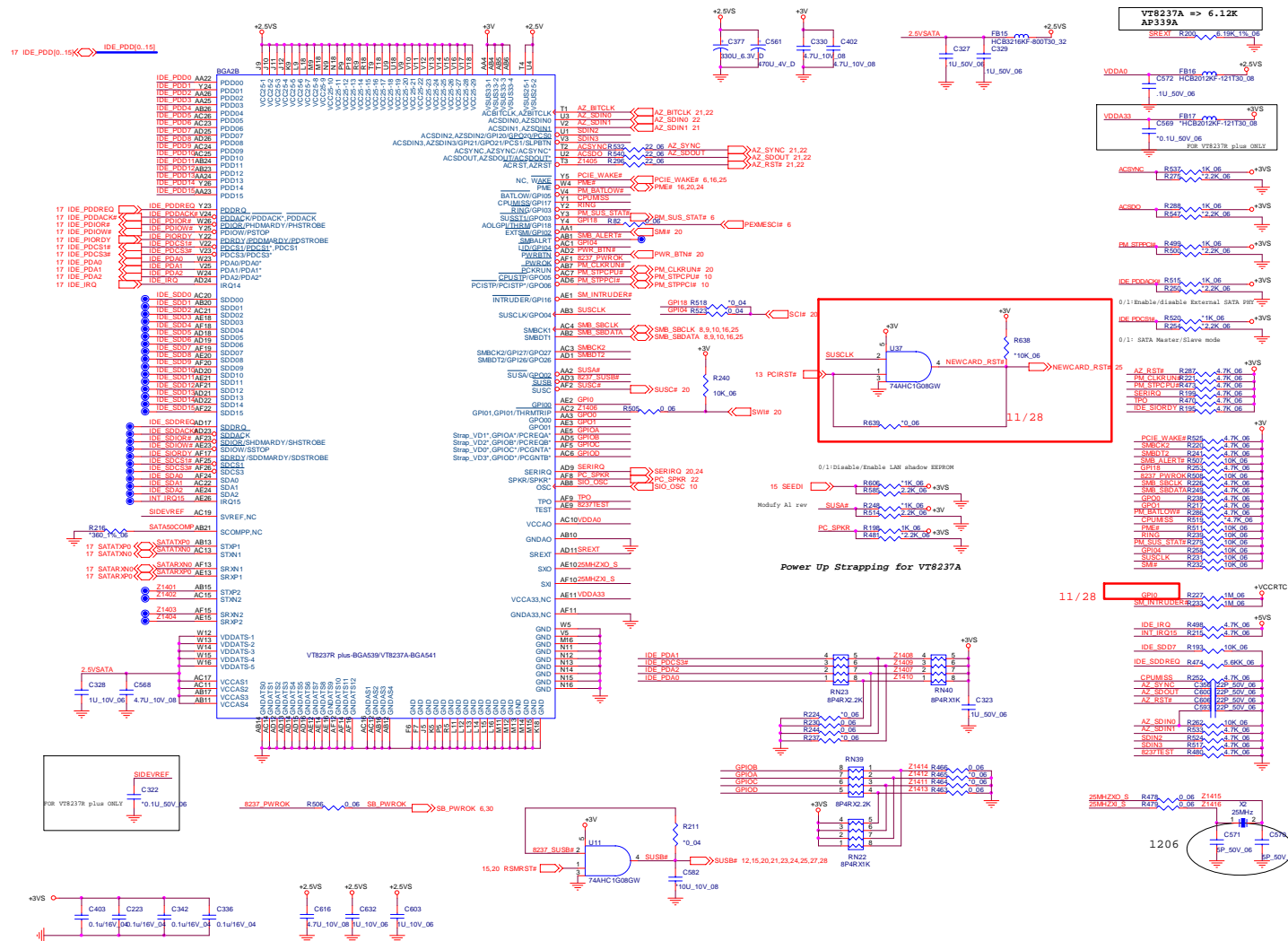


**VT8237 1/3**

## B.Schematic Diagrams

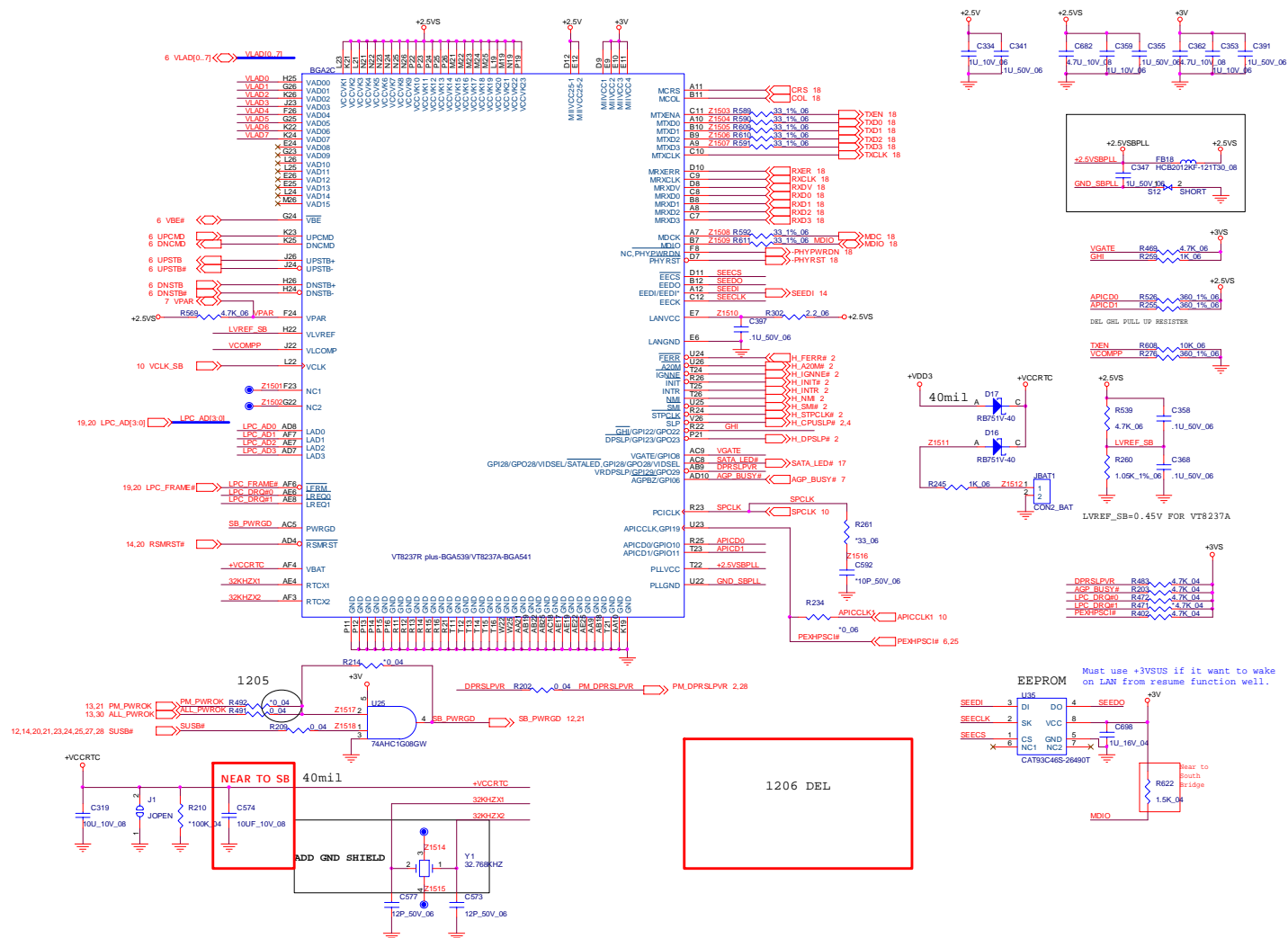


## VT8237 2/3



## B.Schematic Diagrams

Sheet 15 of 39  
VT8237 3/3

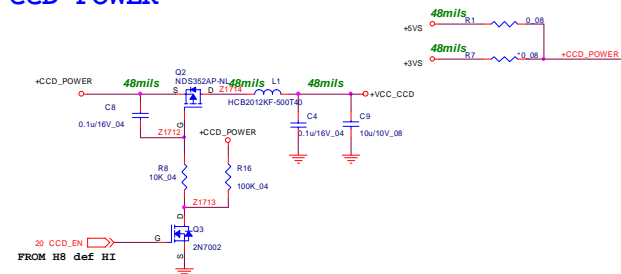
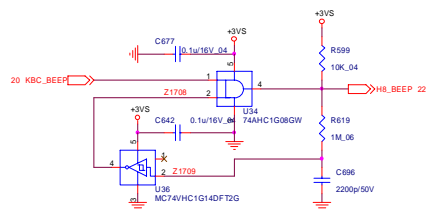
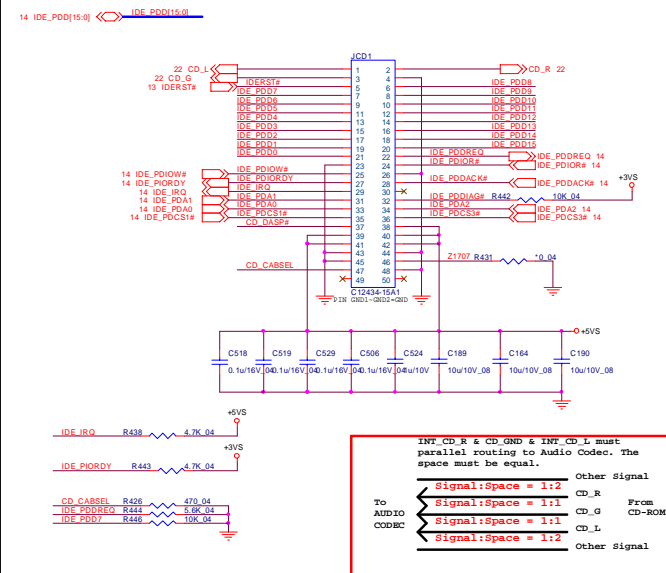
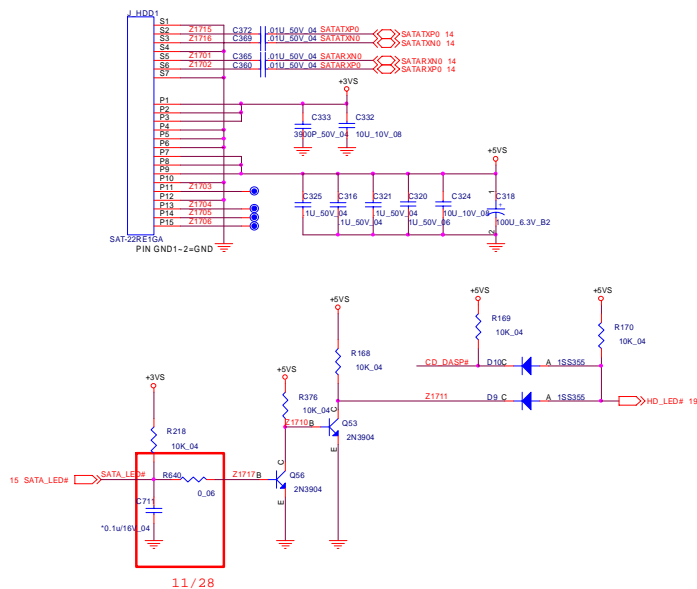




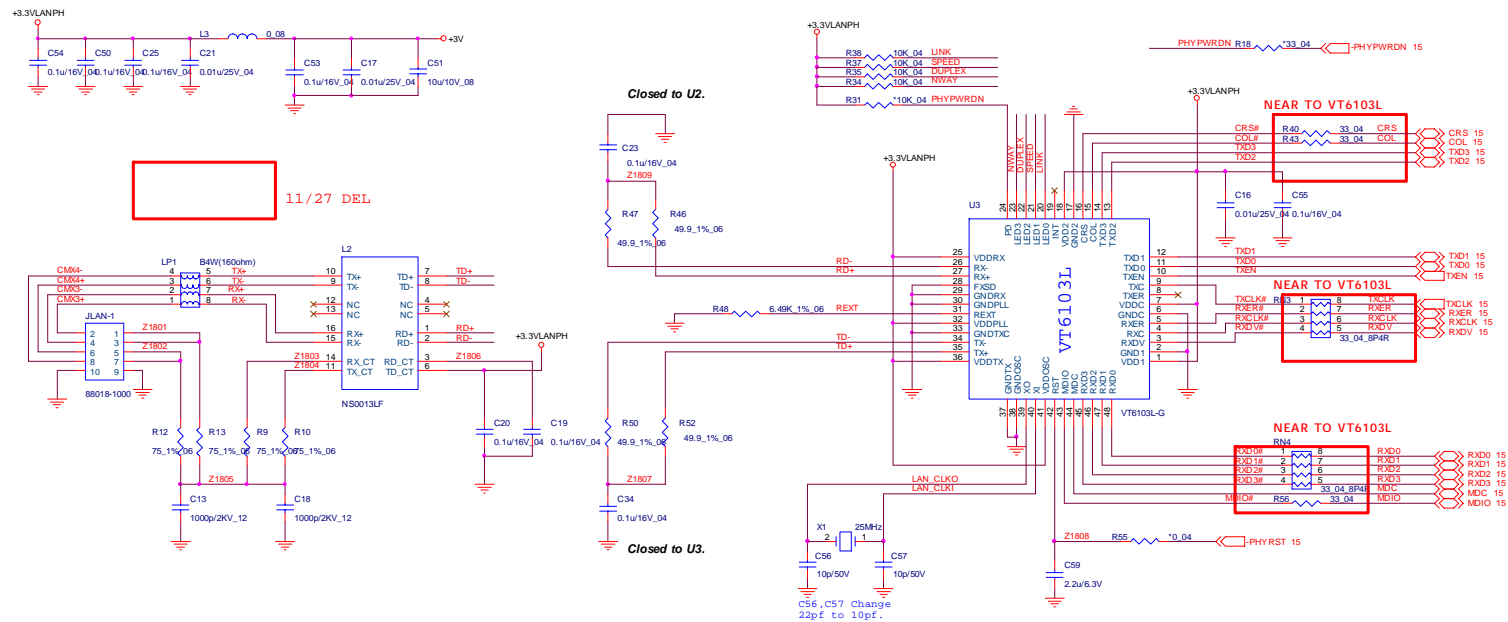
## Schematic Diagrams



Sheet 17 of 39  
SATA HDD,  
CD-ROM, H8 BEEP,  
CCD



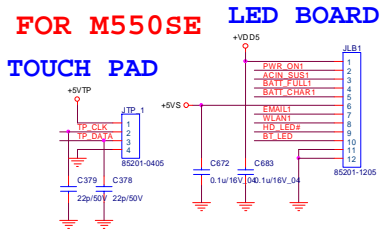
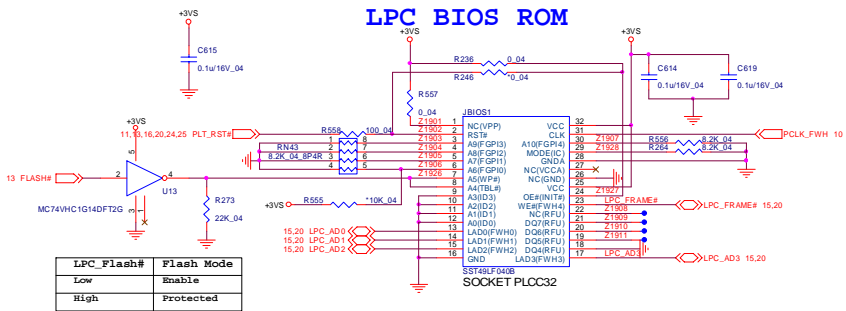
## LAN PHY

Sheet 18 of 39  
LAN PHY

Schematic Diagrams

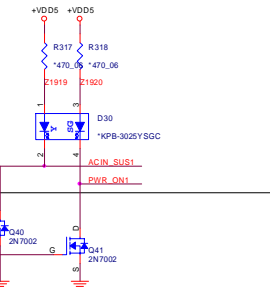
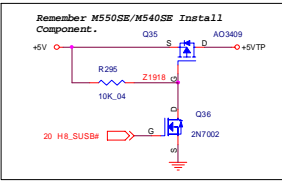
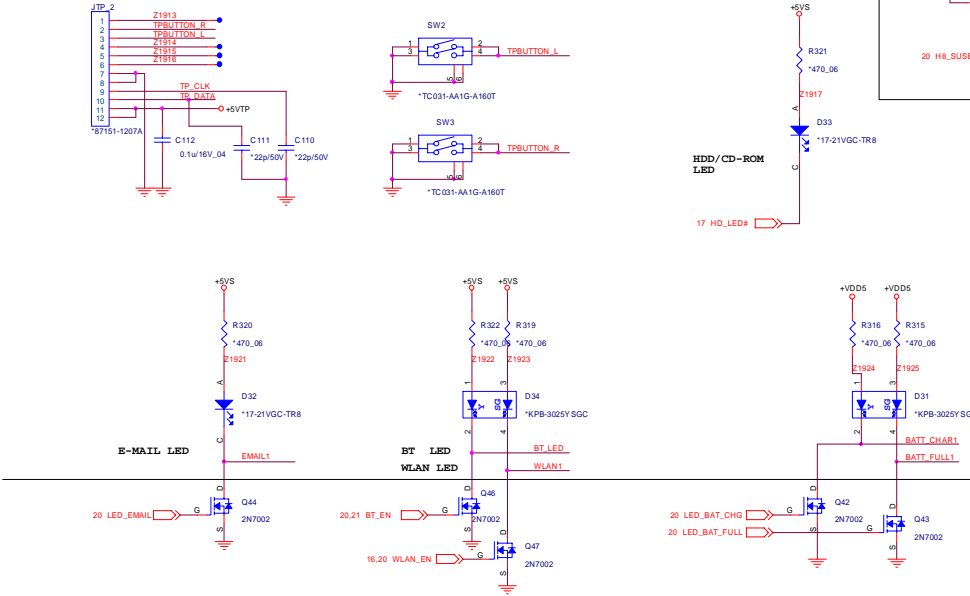
LPC ROM, TOUCH PAD, LED

Sheet 19 of 39  
LPC ROM,  
TOUCH PAD, LED

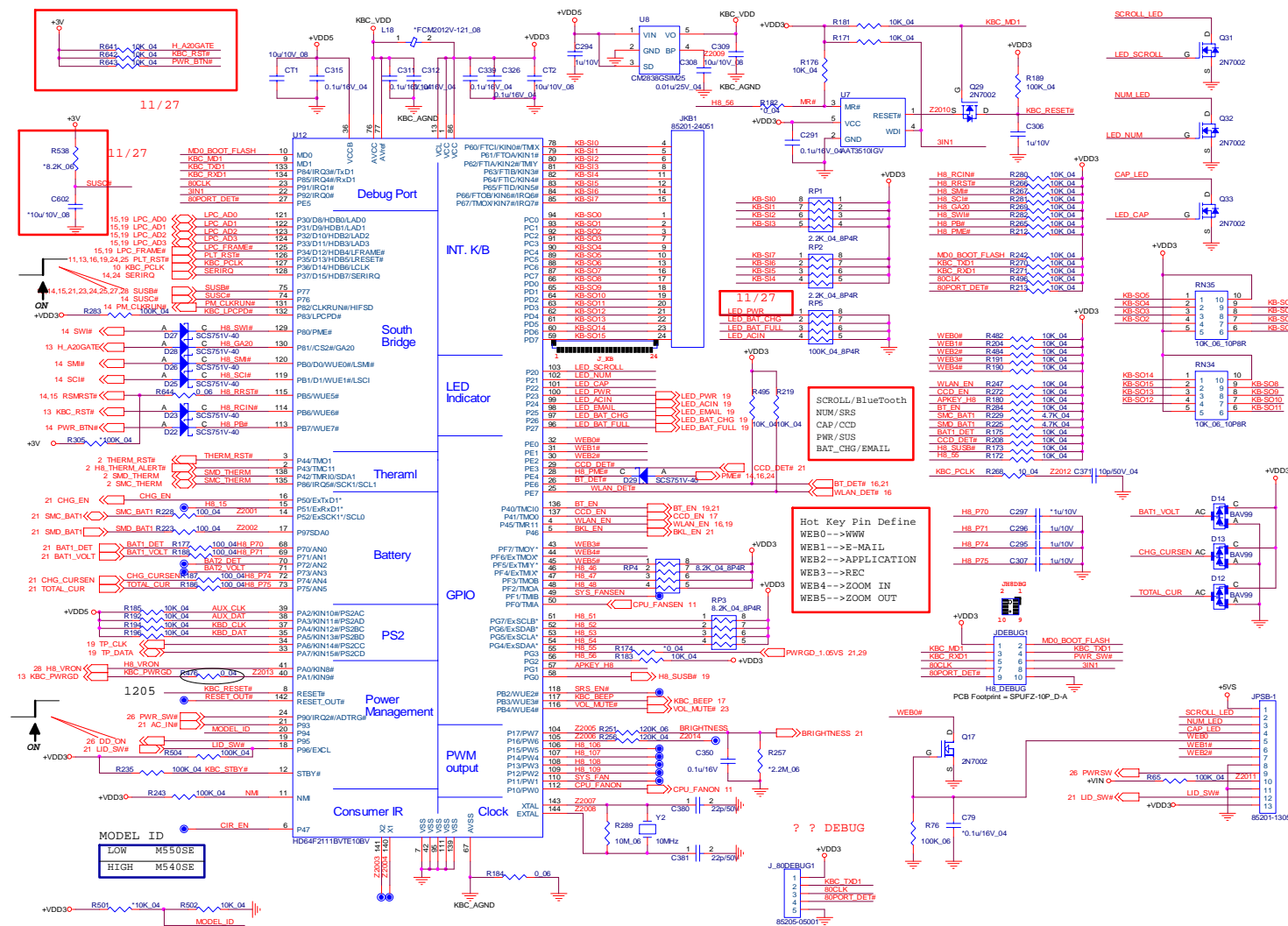


VENDOR	PART NUMBER
Synaptics	800409-5102

TOUCH PAD FOR M540SE LED



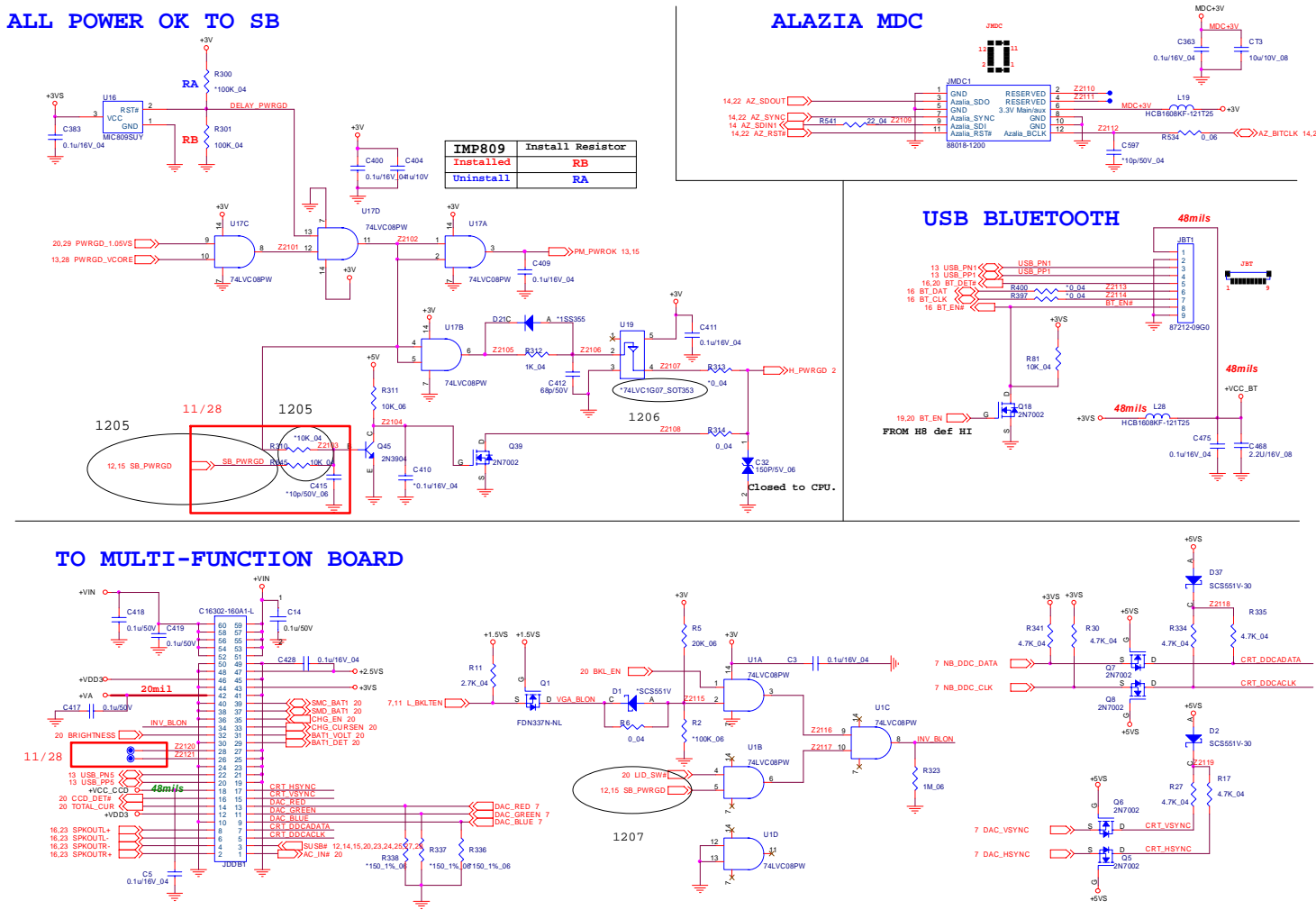
**H8-2111 B - 21**



Schematic Diagrams

MDC, USB BT, PWRGD, DDB CON

Sheet 21 of 39  
MDC, USB BT,  
PWRGD, DDB CON

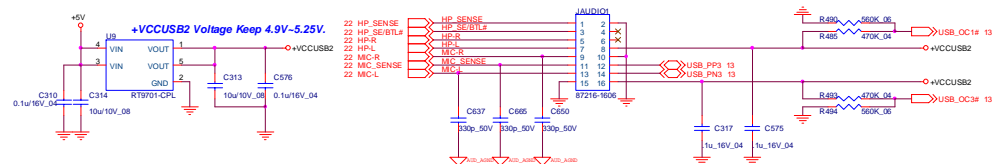


The image shows a complex PCB layout for a DAC system. It is divided into several functional areas:

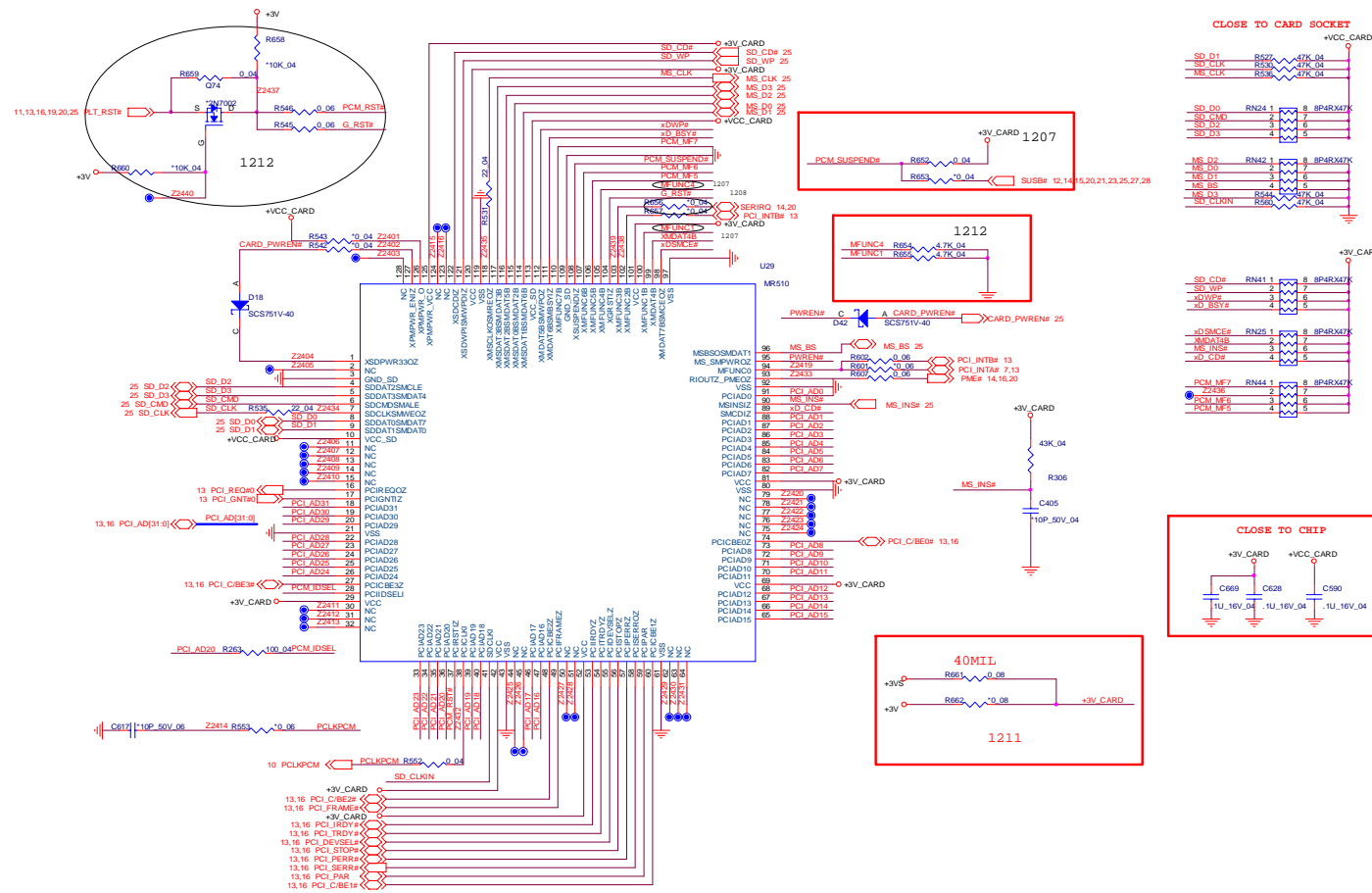
- Power Plane:** Located at the top, it features a central power plane with various decoupling capacitors (C638, C645, C646, C633, C623, C608, C678) and a ground plane.
- Digital Section:** On the left, it includes a digital-to-analog converter (DAC) IC (U33) and associated logic components like resistors (R549, R580, R561) and capacitors (Z2202, Z2203, Z2204).
- Analog Section:** On the right, it features an analog-to-digital converter (ADC) IC (U32) and associated components like resistors (R568, R577, R566) and capacitors (Z2225, Z2226).
- Power Regulation:** The bottom section shows a power regulator (U280) and a power plane with various decoupling capacitors (C659, C674, C675, C676, C677).
- Signal Processing:** The right side includes a signal processor (U281) and associated components like resistors (R573, R567, R568) and capacitors (Z2227, Z2228).

The layout includes numerous labels for components, values, and dimensions. A date stamp "11/28" is visible in the center-right area. The overall design is a high-density, multi-layer PCB layout.

Sheet 23 of 39  
AUDIO AMP,  
USB2.0\*2



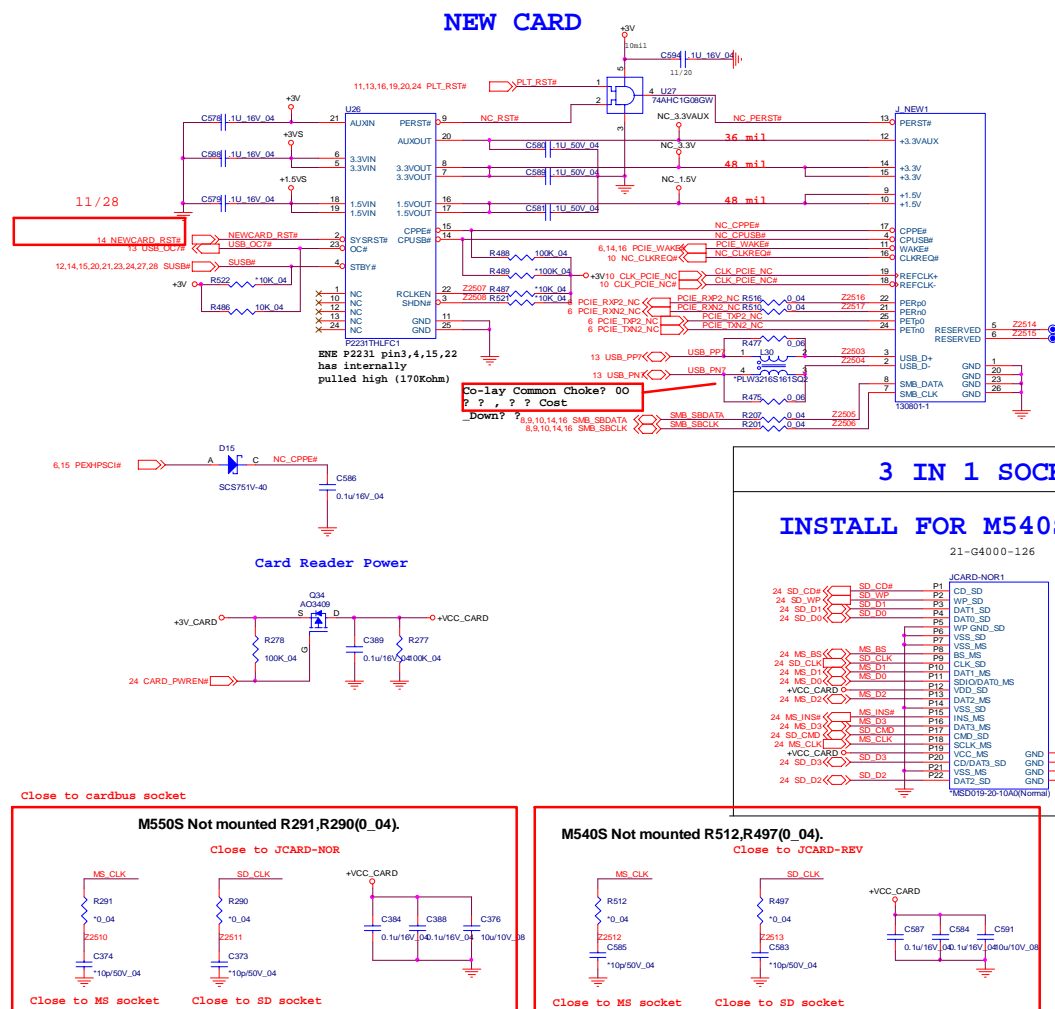




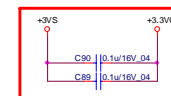
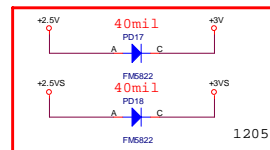
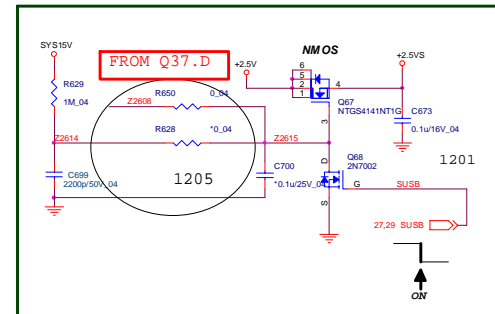
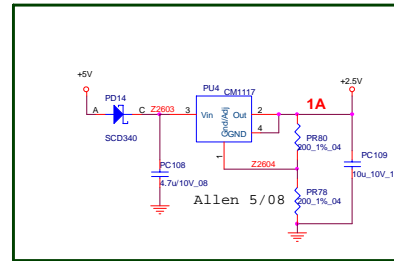
Sheet 24 of 39  
PCI ENE MR510

## B.Schematic Diagrams

Sheet 25 of 39  
NEW CARD,  
3-IN-1 SOCKET

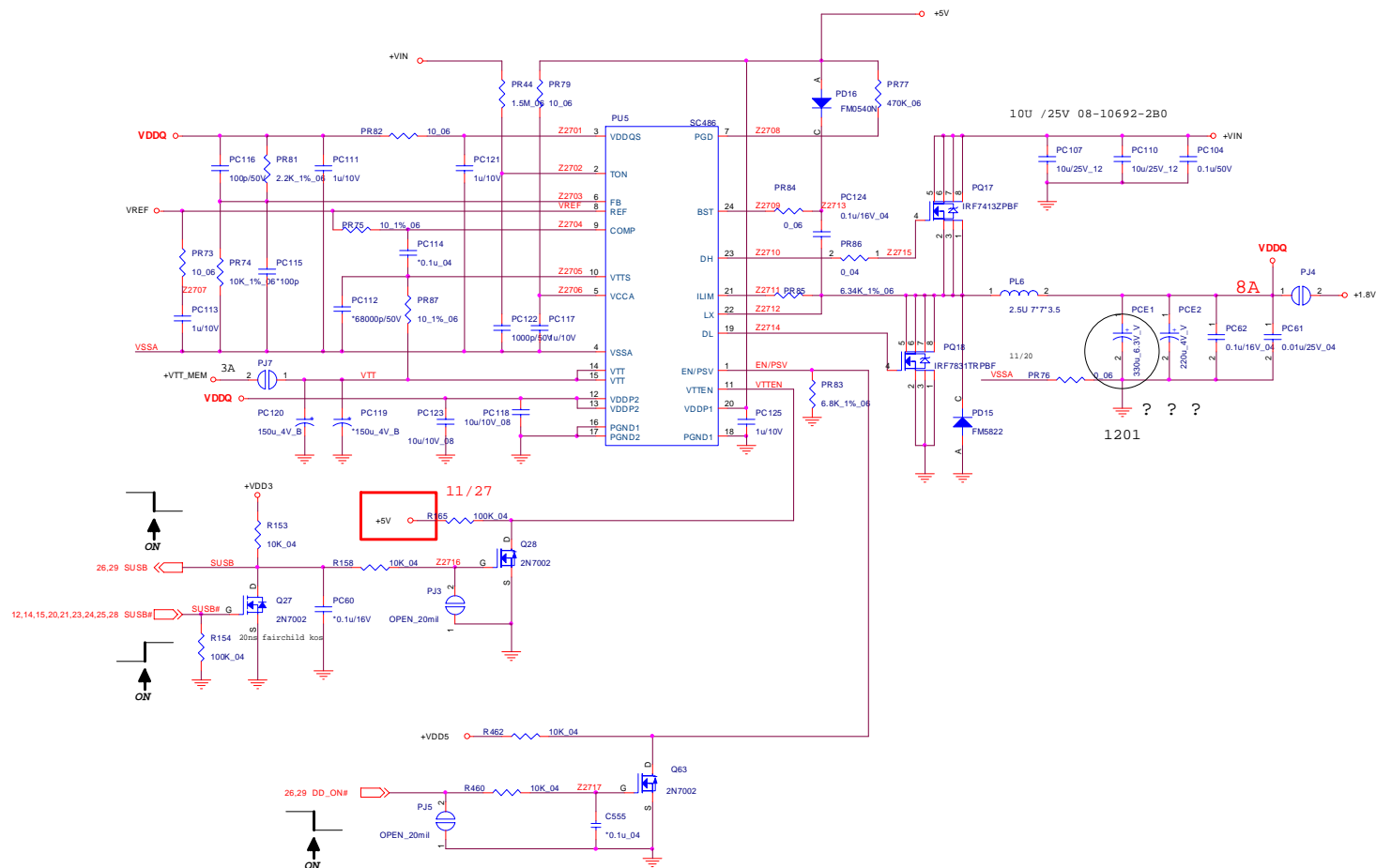


Sheet 26 of 39  
5V, 3V, 5VS, 3VS,  
2.5V, 2.5VS

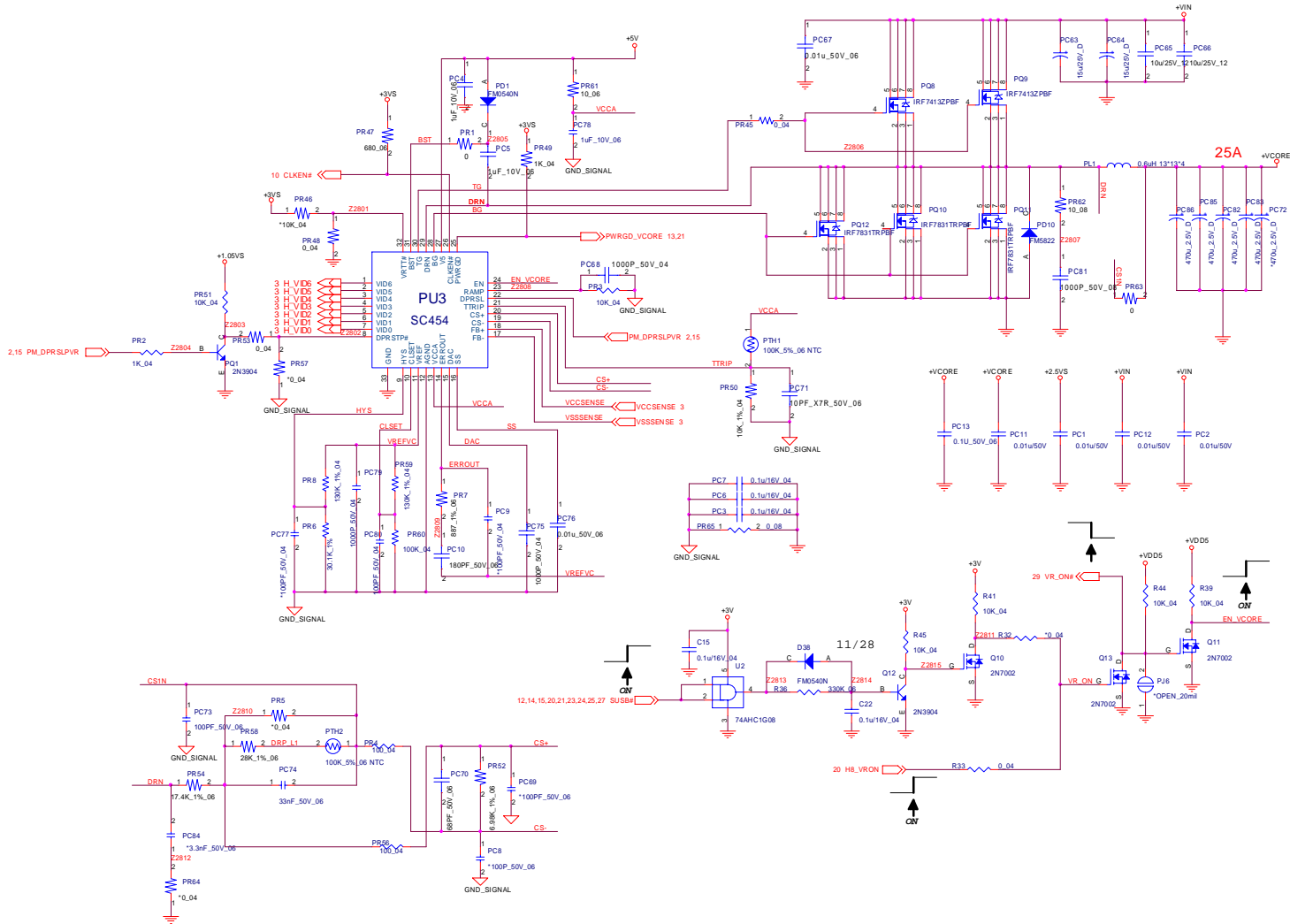


## B.Schematic Diagrams

Sheet 27 of 39  
+1.8V,+VTT\_MEM



# VCORE



**Sheet 28 of 39**  
**VCORE**

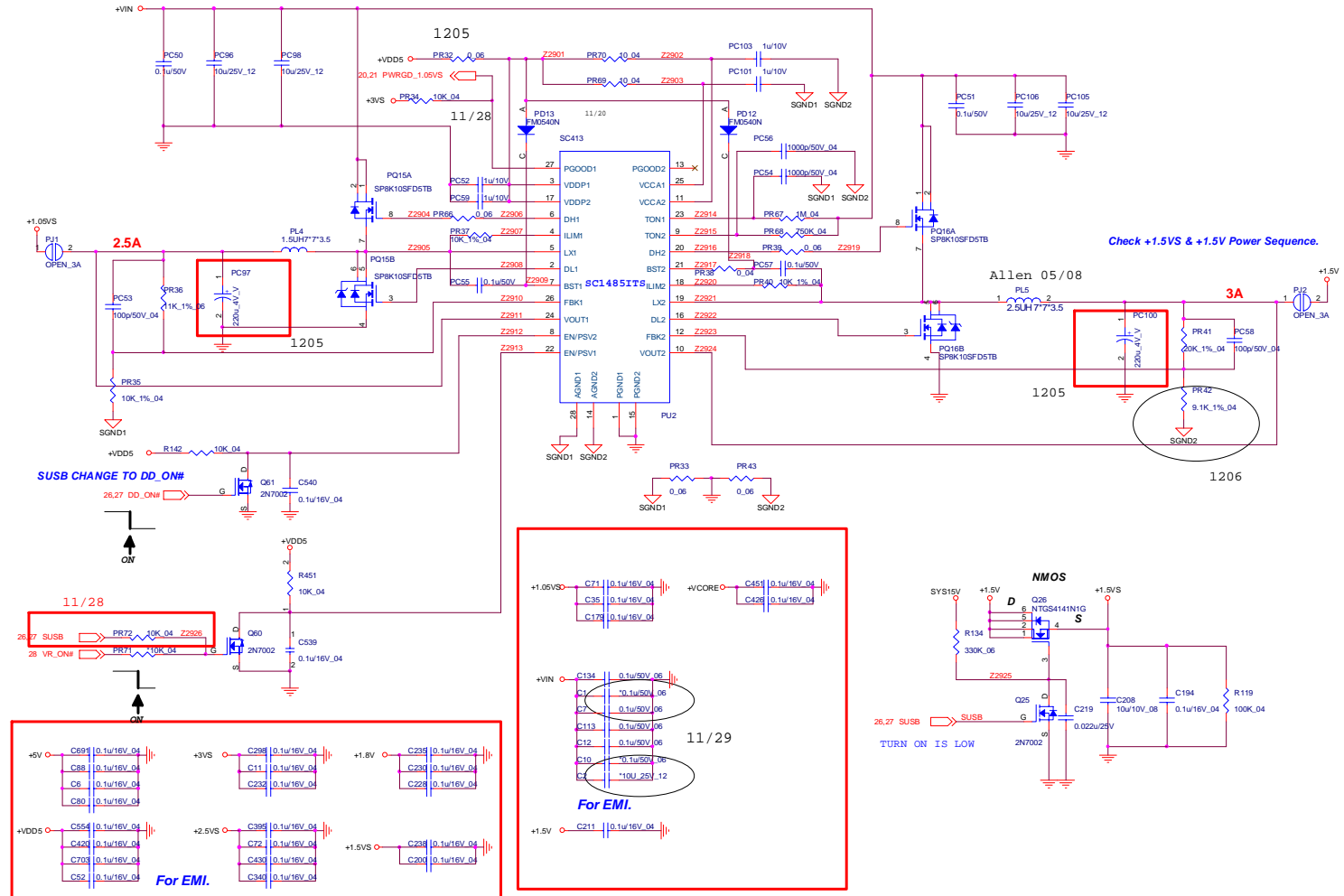
## B.Schematic Diagrams

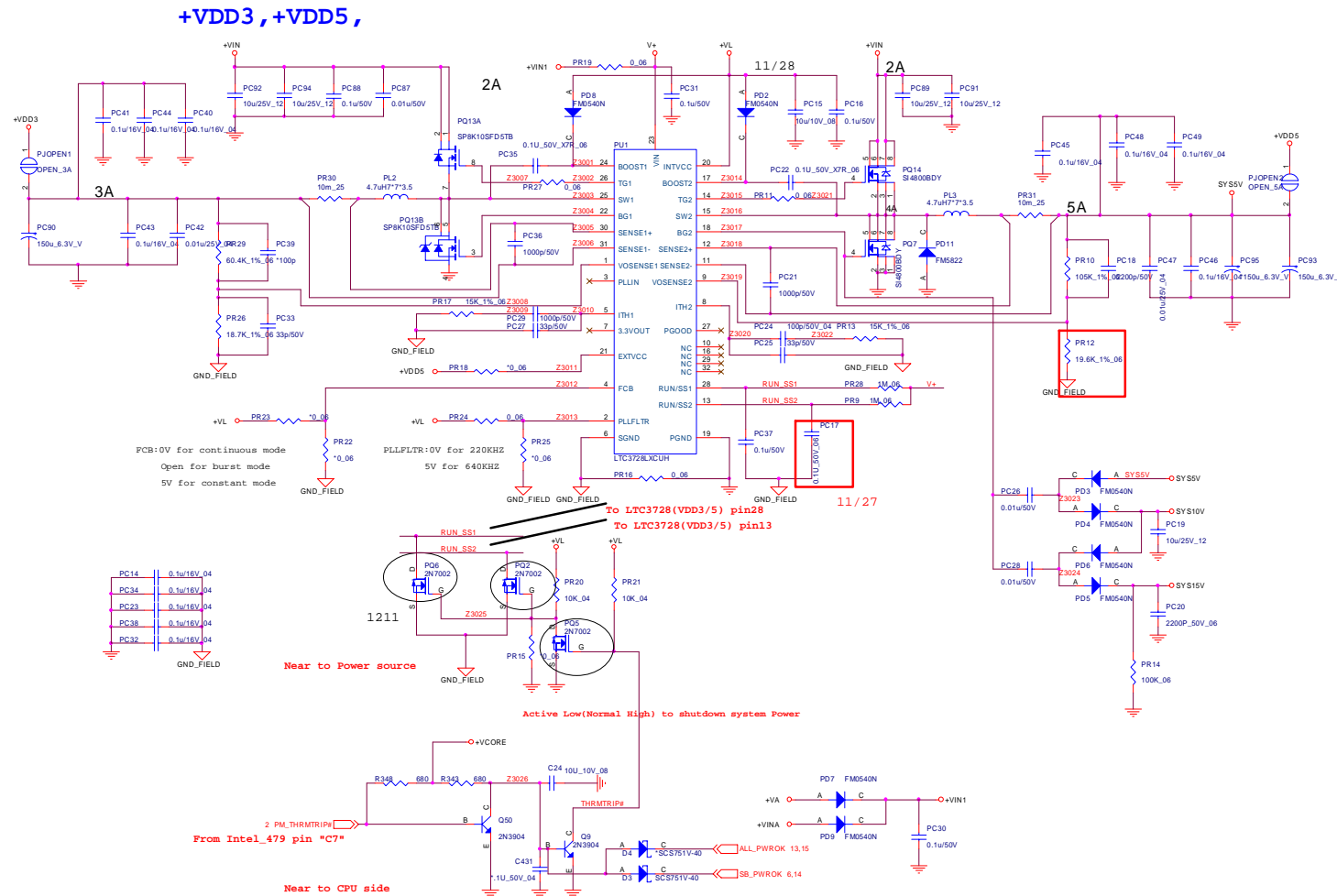
## Schematic Diagrams

**+1.05VS, 1.5V, 1.5VS**

B.Schematic Diagrams

Sheet 29 of 39  
+1.05VS, 1.5V,  
1.5VS

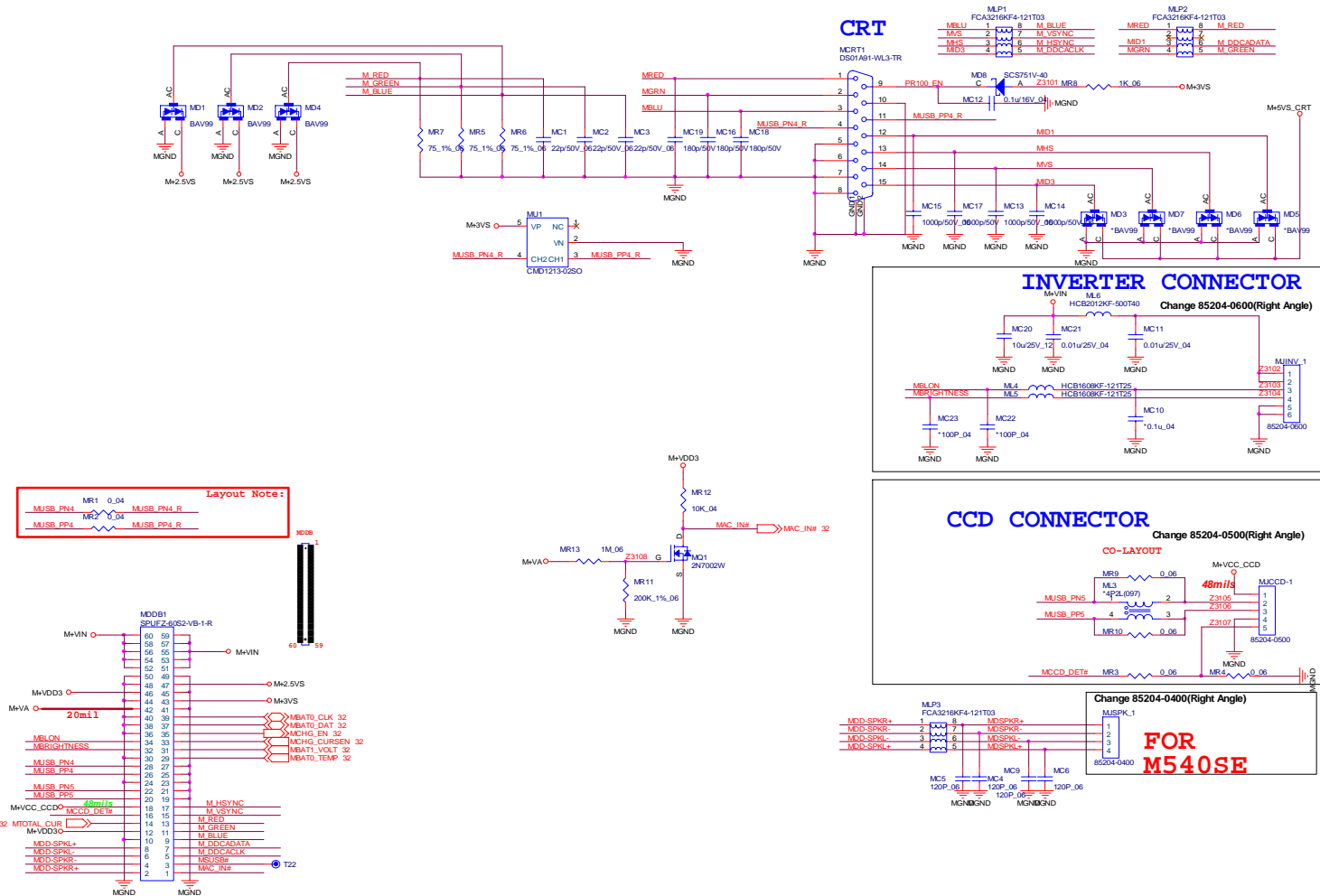


**+VDD3, +VDD5**Sheet 30 of 39  
+VDD3, +VDD5

## Schematic Diagrams

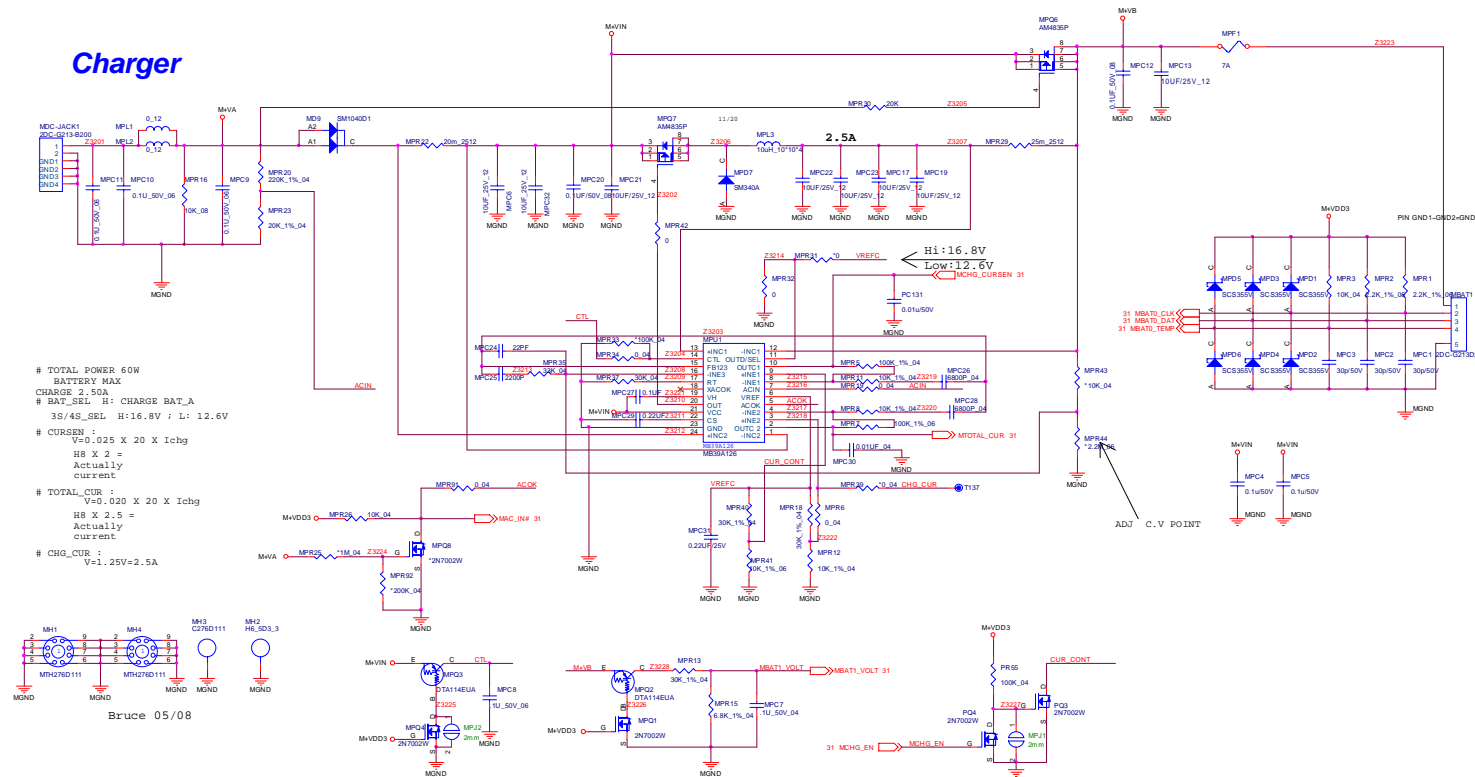
## D/D BD (CRT, INVERTER, CCD, RJ-11)

Sheet 31 of 39  
D/D BD (CRT,  
INVERTER, CCD,  
RJ-11)





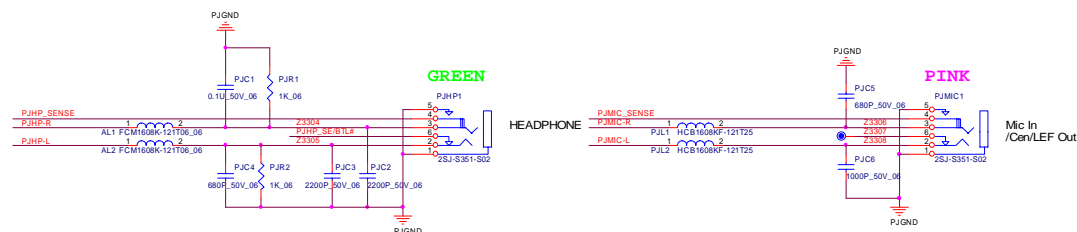
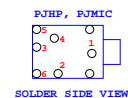
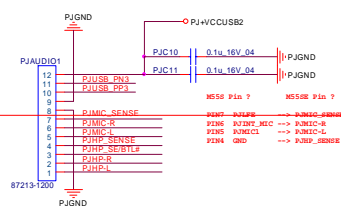
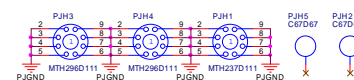
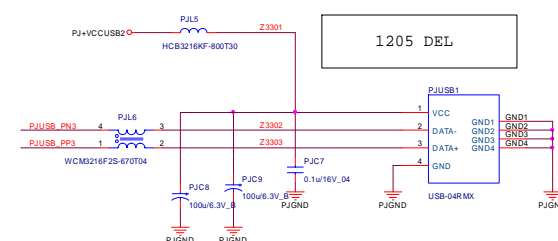
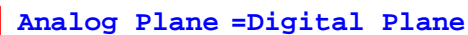
## D/D BD (CHARGER, DC IN)



Sheet 32 of 39  
D/D BD  
(CHARGER, DC IN)

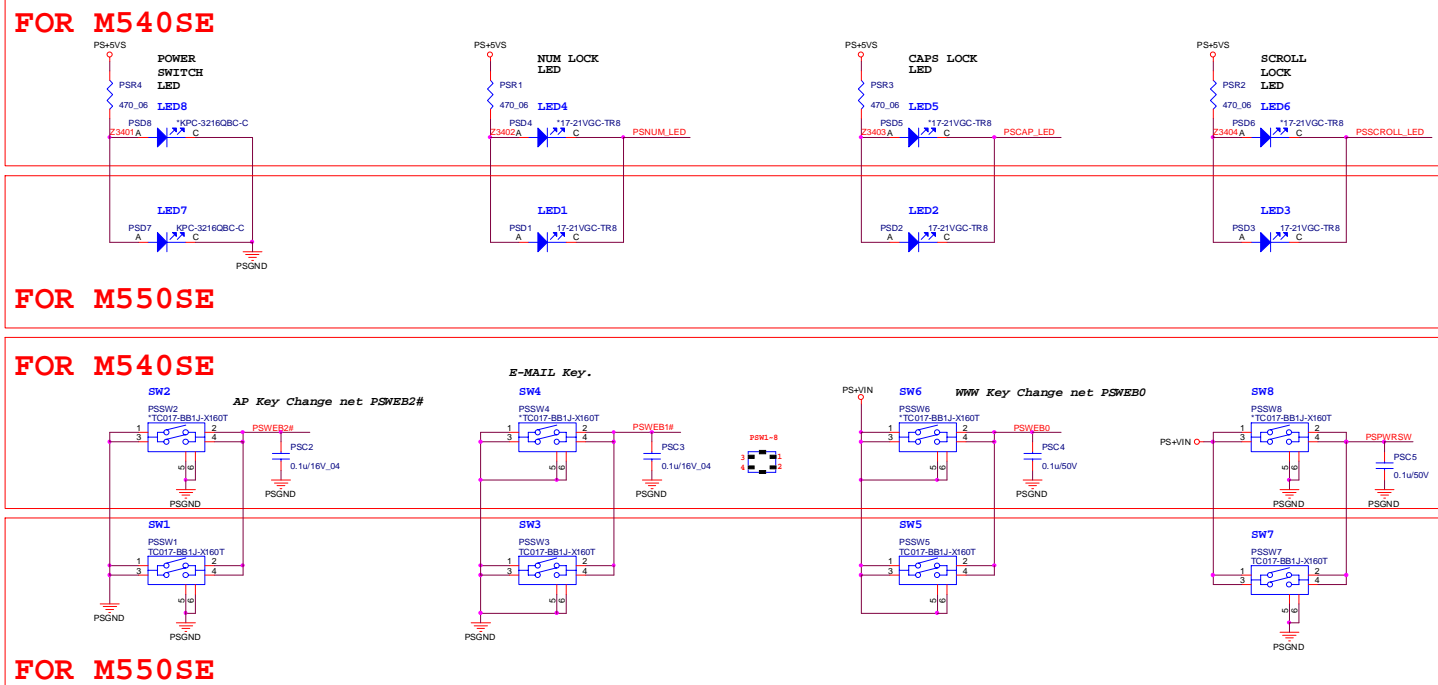
Analog Plane = Digital Plane

**B - 34 AUDIO BD (PHONE JACK, USB, RJ-11)**

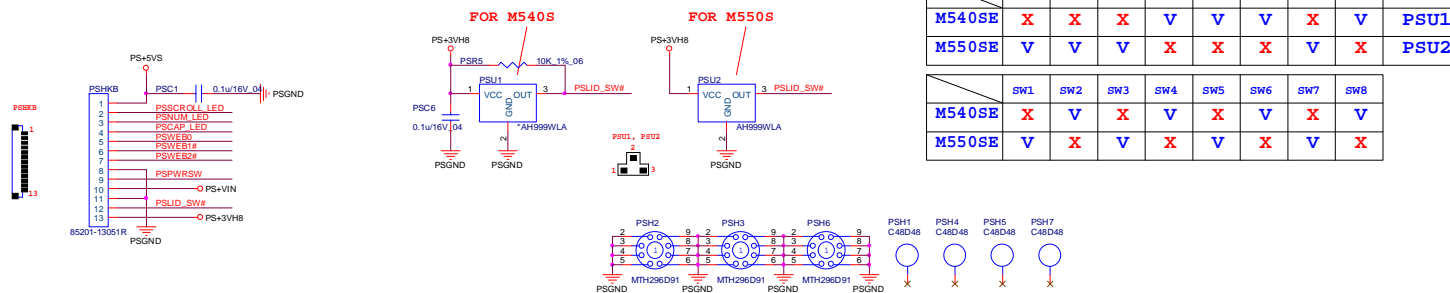


## HOT KEY BD (HOT KEY, LED, LID)

Sheet 34 of 39  
HOT KEY BD  
(HOT KEY, LED,  
LID)



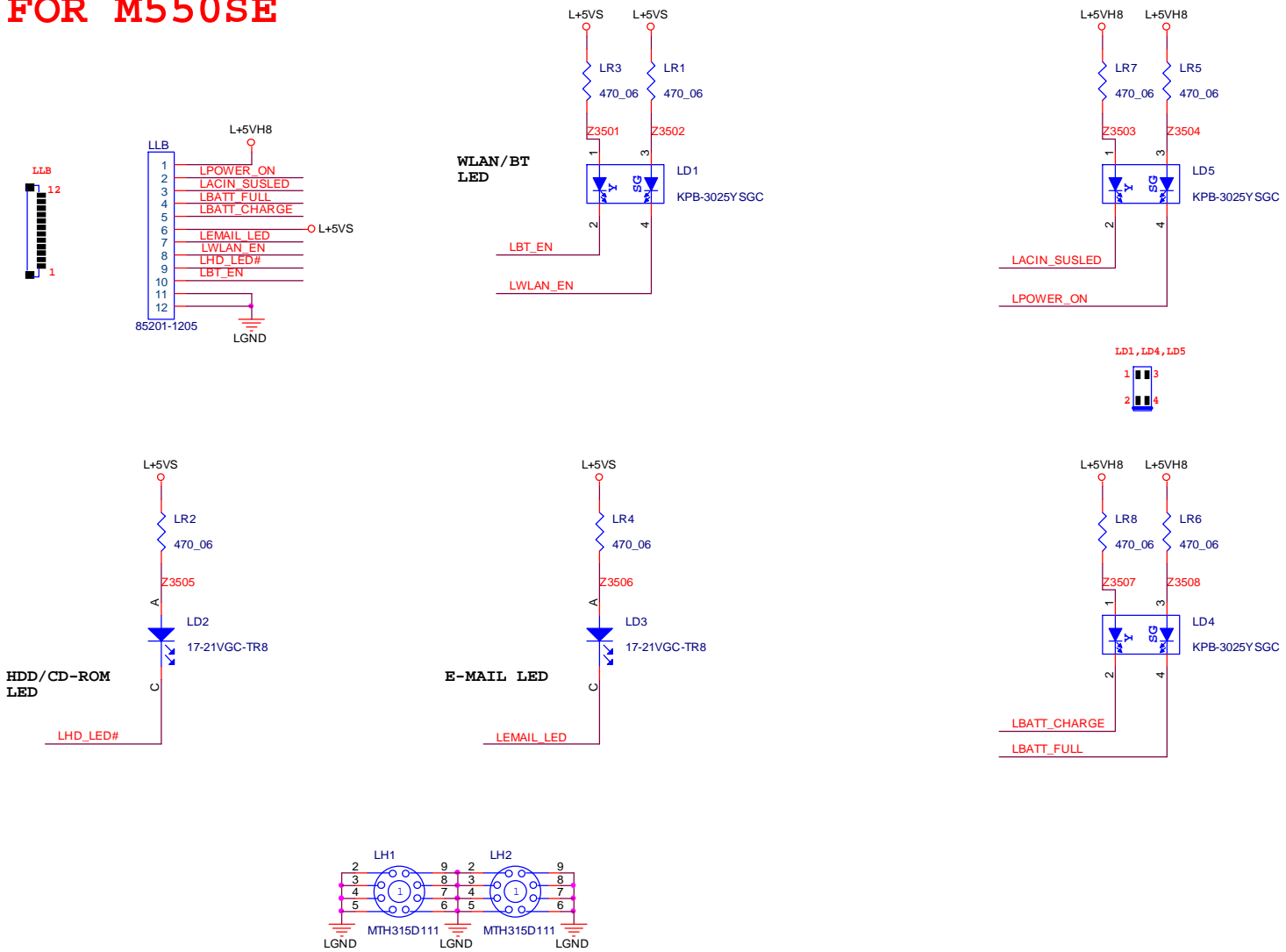
## LID SWITCH IC



Schematic Diagrams

LED BOARD  
FOR M550SE

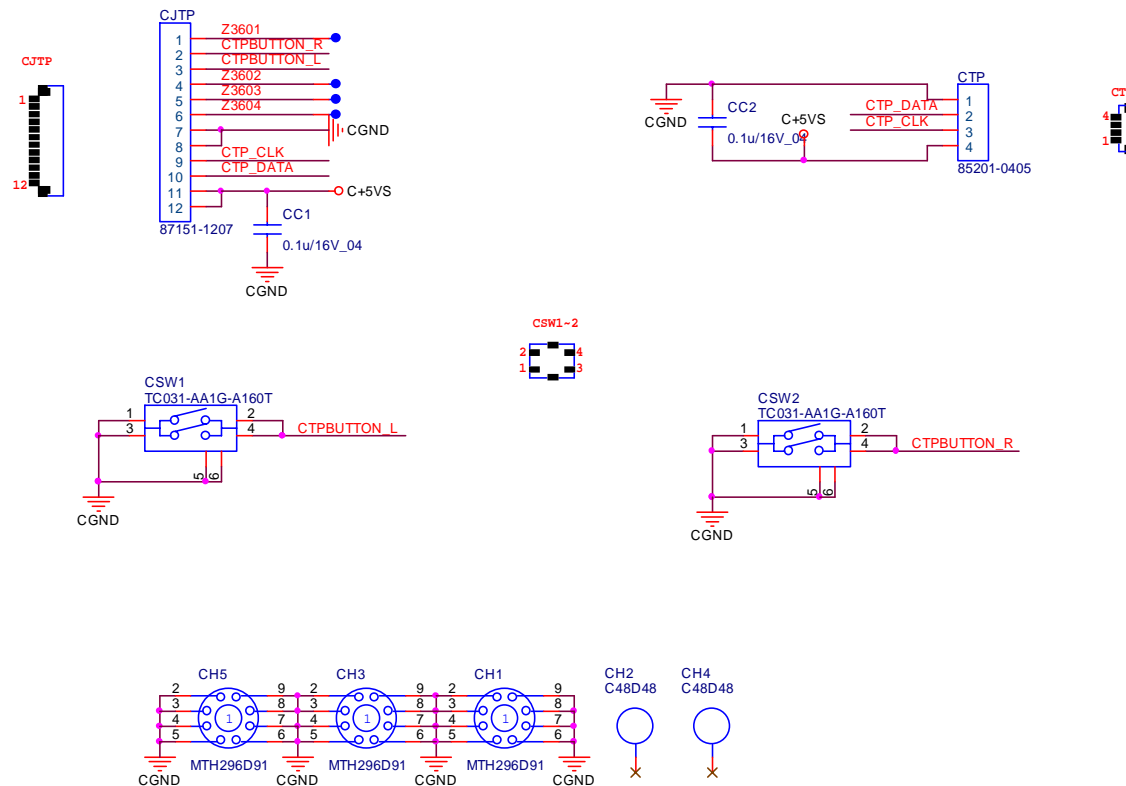
Sheet 35 of 39  
LED BOARD  
(FOR M550SE)



# CLICK BOARD

FOR M550SE

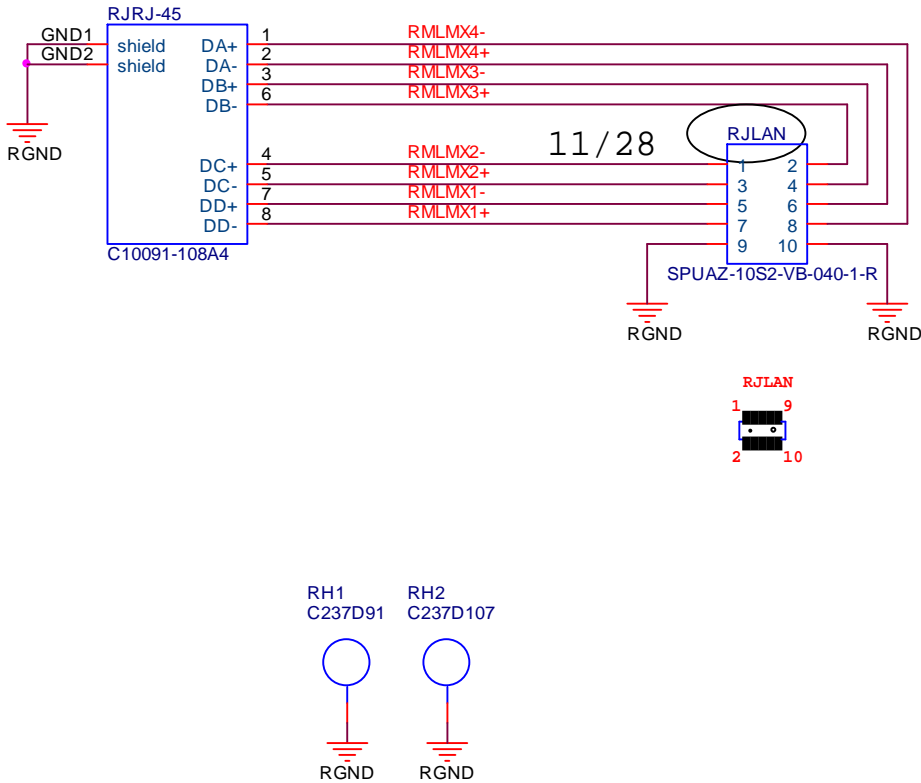
VENDOR	PART NUMBER
Synaptics	
E-LAN	800409-5102



Sheet 36 of 39  
CLICK BOARD  
(FOR M550SE)

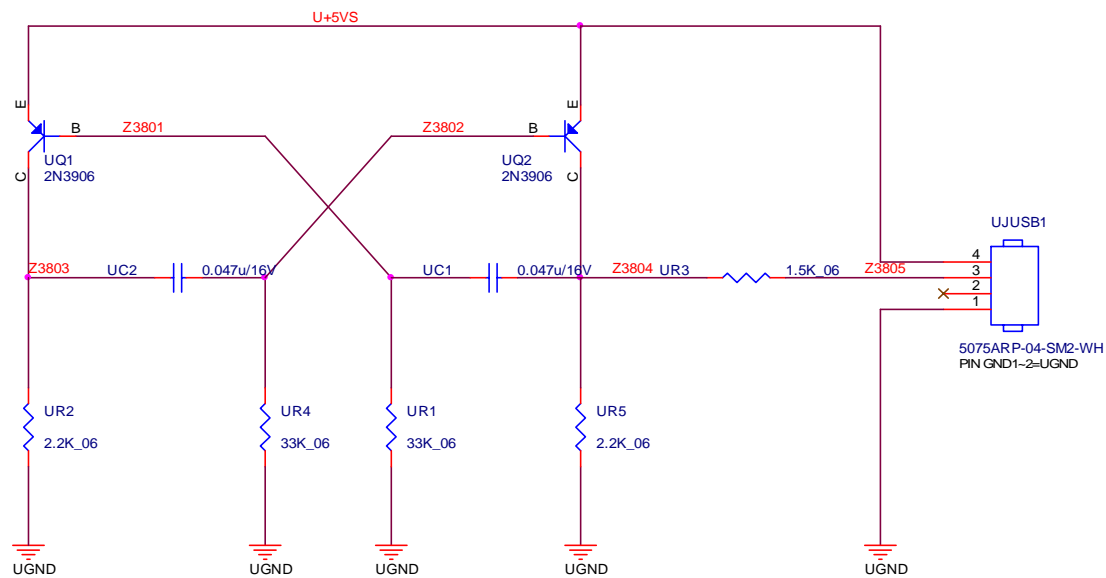
RJ-45 BOARD

Sheet 37 of 39  
RJ-45 BOARD



## USB DONGLE BOARD

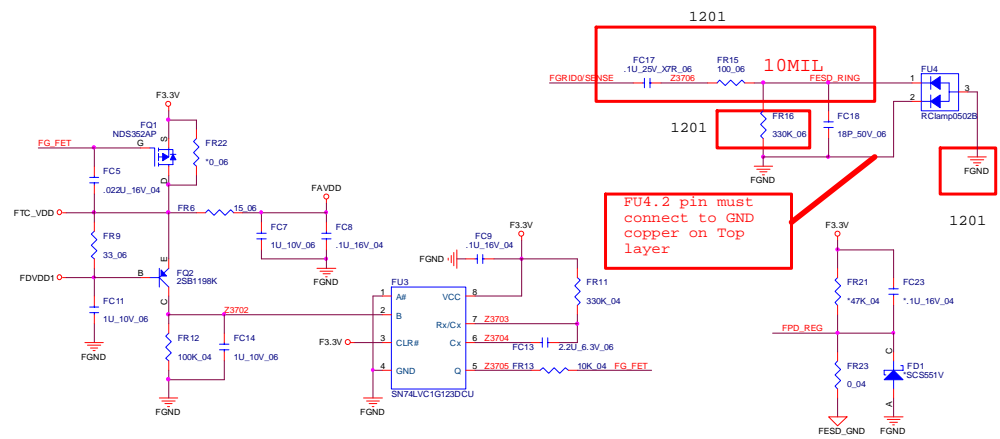
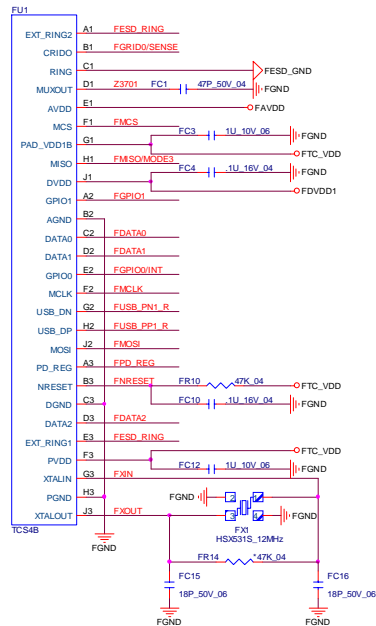
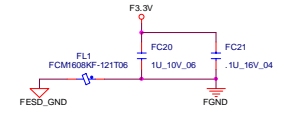
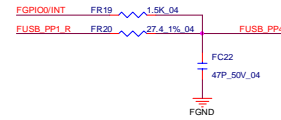
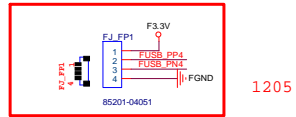
## USB DANGLE BOARD



Sheet 38 of 39  
USB DONGLE  
BOARD

## Schematic Diagrams

# FINGERPRINT BOARD



Sheet 39 of 39  
FINGERPRINT  
BOARD

B.Schematic Diagrams