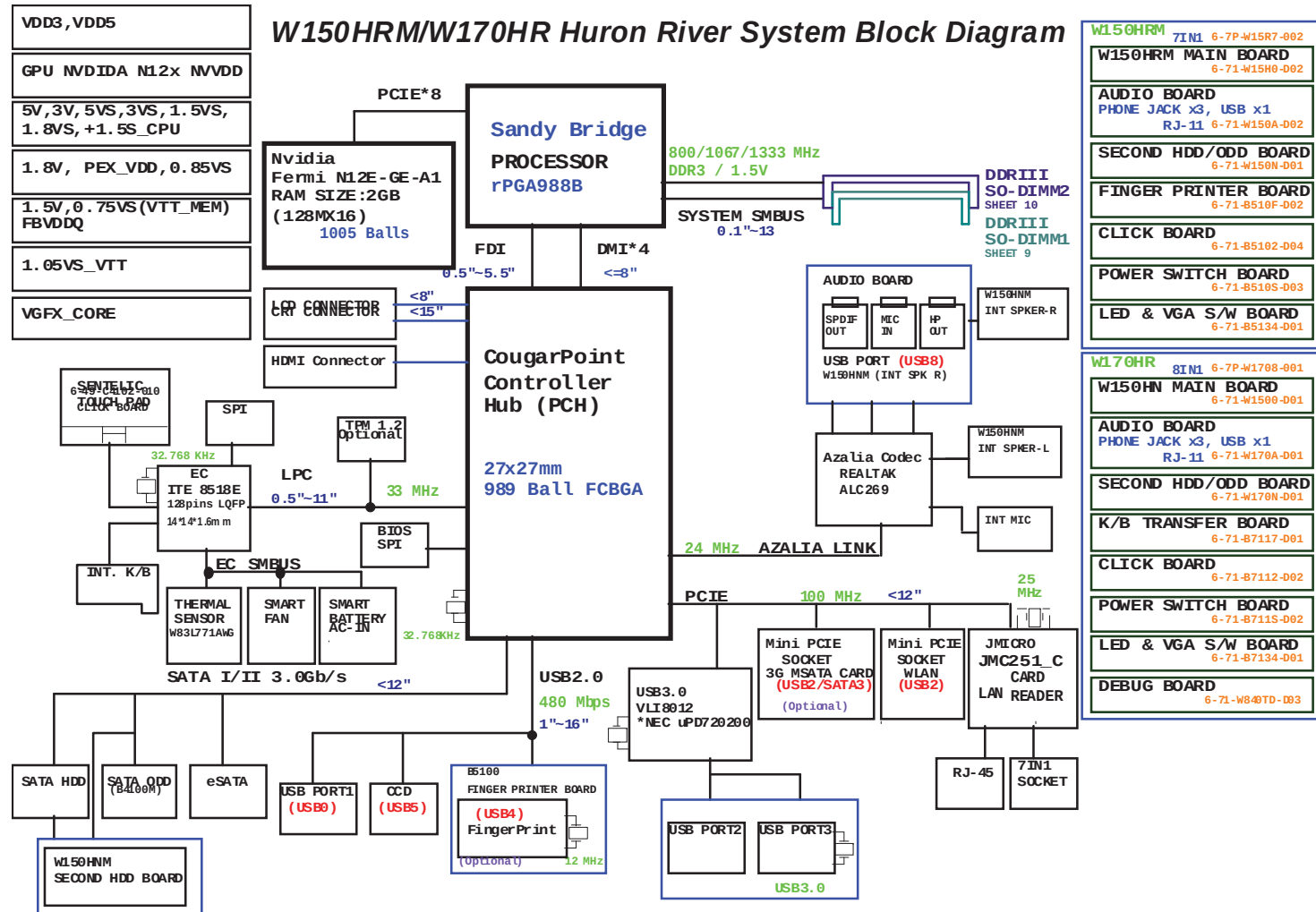
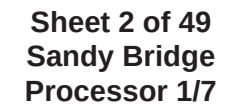


System Block Diagram

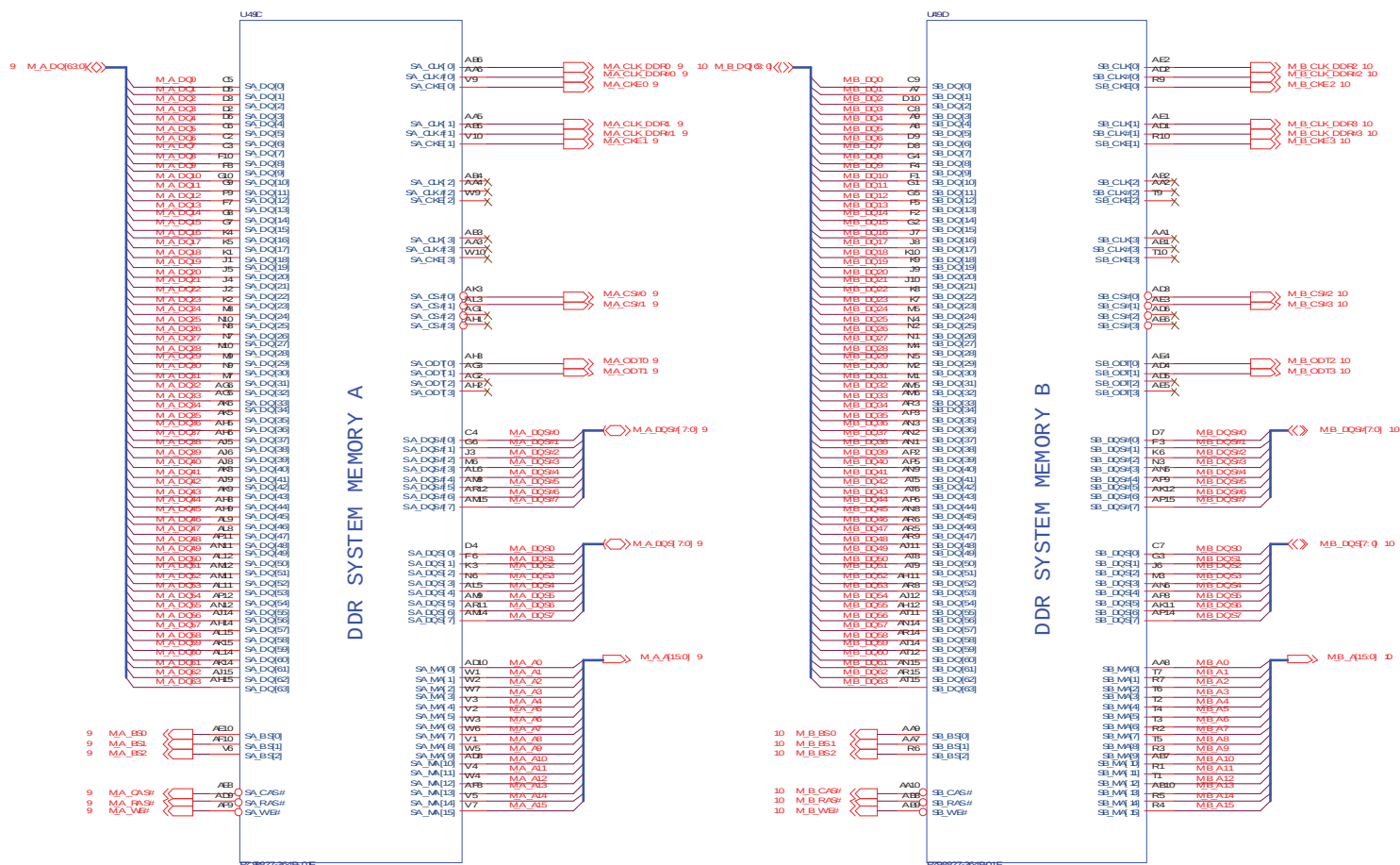
Sheet 1 of 49
System Block
Diagram



Sandy Bridge Processor 1/7 (DMI,PEG,FDI)



Sandy Bridge Processor 3/7 (DDR3)

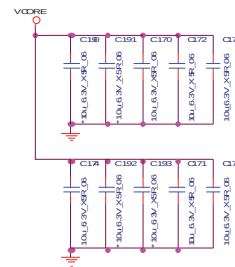
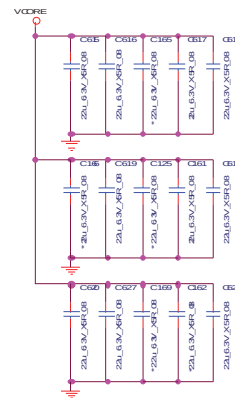


Sheet 4 of 49
Sandy Bridge
Processor 3/7

Sandy Bridge Processor 4/7 (POWER)

PROCESSOR CORE POWER

VCORE 48A



PEG AND DDR

CORE SUPPLY

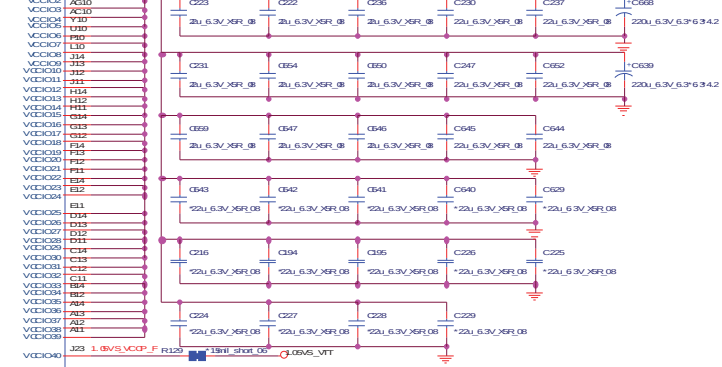
SVID

SENSE LINES

PROCESSOR UNCORE POWER

8.5A

0



CAD Note: H_CPU_SVIDALRT#_R,H_CPU_SVIDDAT_R
Place the PU resistors close to CPU

CAD Note: H_CPU_SVIDCLK_R
Place the PU

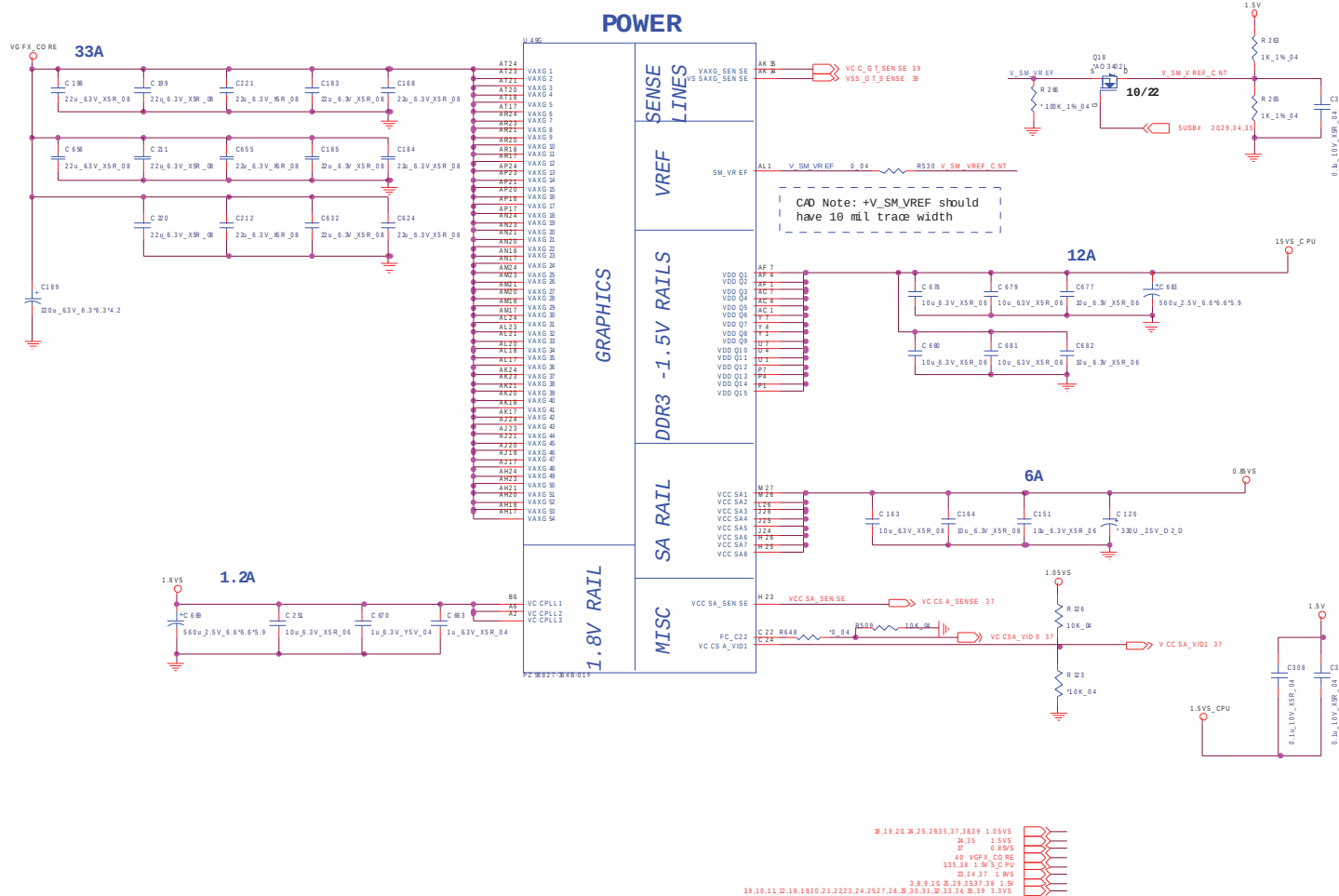
SVID Signals



<http://hobi-elektronika.net>

Sandy Bridge Processor 5/7

Sandy Bridge Processor 5/7 (GRAPHICS POWER)



Sheet 6 of 49
Sandy Bridge
Processor 5/7

CHANGE TO STANDARD

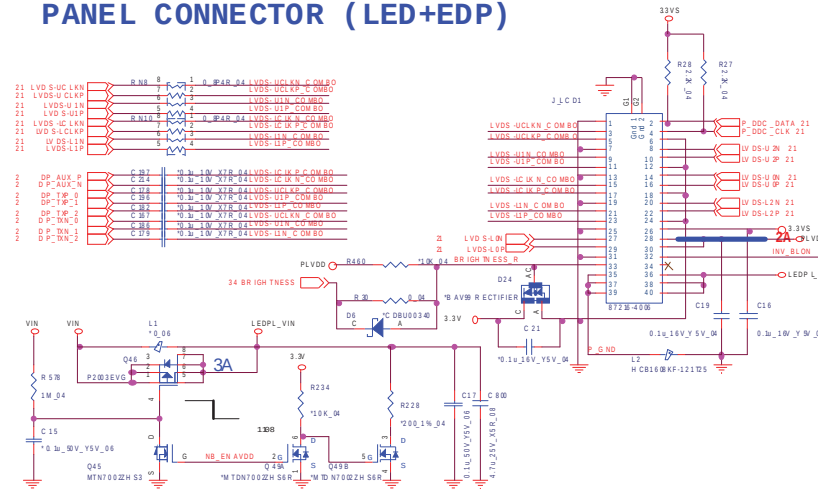


Schematic Diagrams

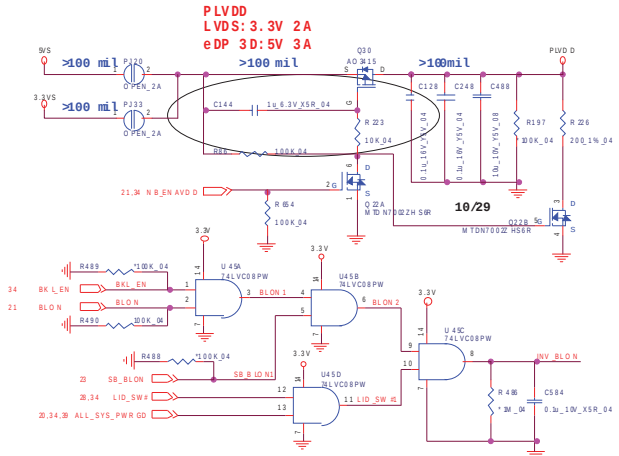
Panel, Inverter, CRT

Sheet 11 of 49
Panel, Inverter,
CRT

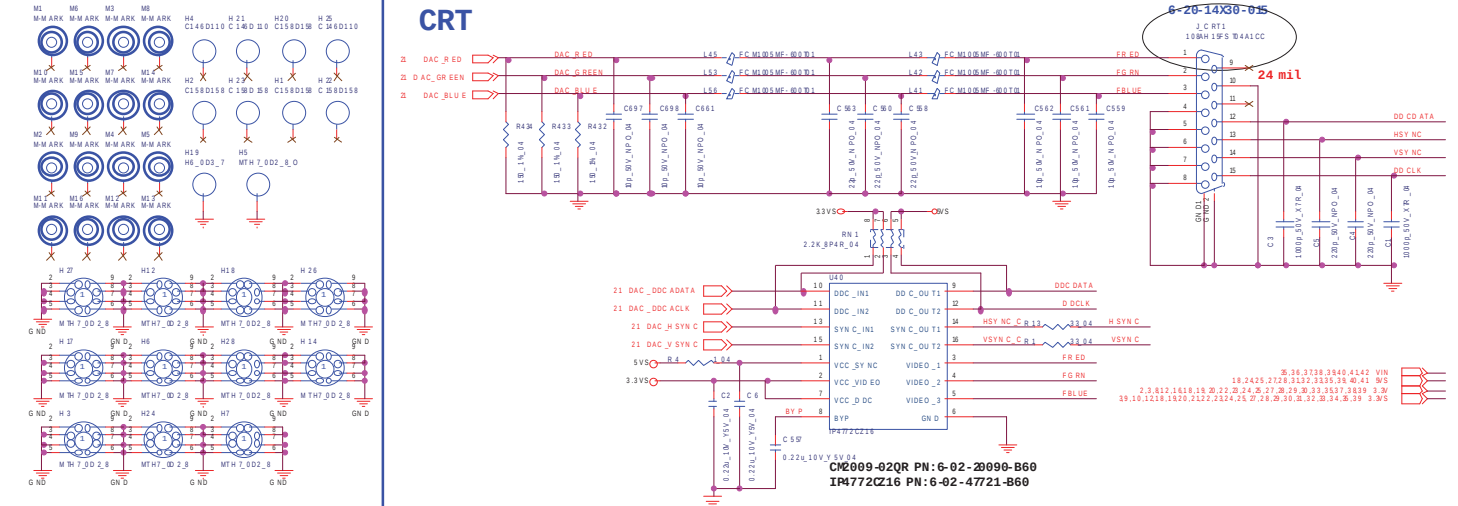
PANEL CONNECTOR (LED+EDP)



PANEL POWER



CRT



The schematic diagram illustrates the internal components and connections of a 286 computer system. Key elements include:

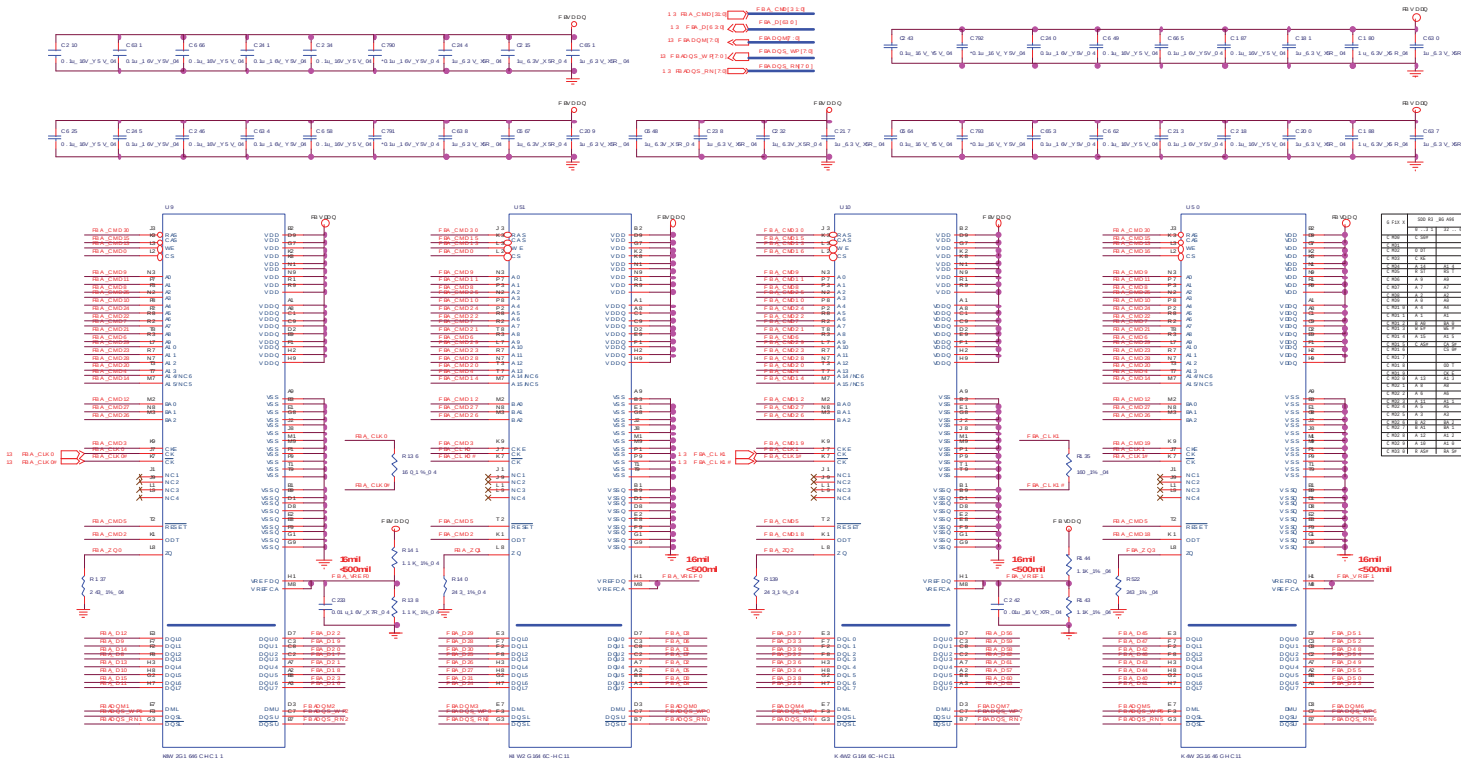
- Power Supply Section:** Shows the AC input, transformer, and rectifier circuit, with a 280V AC input and a 280V AC output. It includes a 280V AC input, a 280V AC output, and a 280V AC output.
- BIOS Section:** Features the BIOS chip (BIOS 286) and its connections to the system bus. It includes a 280V AC input, a 280V AC output, and a 280V AC output.
- Memory Section:** Shows the memory chips (RAM) and their connections to the system bus. It includes a 280V AC input, a 280V AC output, and a 280V AC output.
- Controller Section:** Includes the floppy disk controller (FDC 286) and the hard disk controller (HDC 286), along with their connections to the system bus.
- Peripheral Section:** Shows the serial and parallel ports, along with their connections to the system bus.
- Other Components:** Includes various other components like the 286 CPU, 286 bus, and 286 bus.

The diagram is a detailed representation of the system's hardware, showing the intricate connections between various components and the system bus. It is a valuable resource for understanding the internal architecture of a 286 computer system.

B.Schematic Diagrams

VGA Frame Buffer A

Frame Buffer Partition A

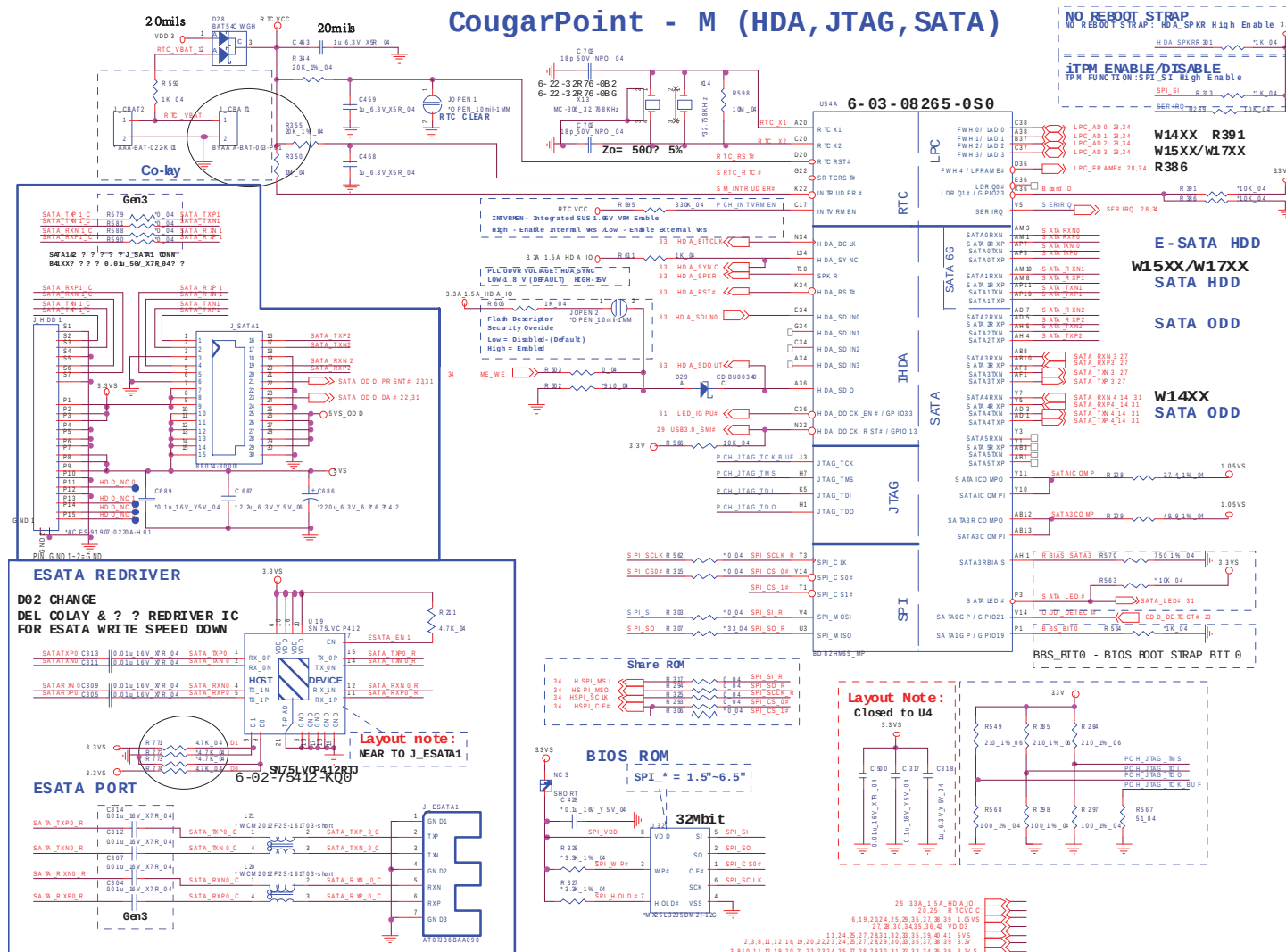


Sheet 14 of 49
VGA Frame Buffer A

B.Schematic Diagrams

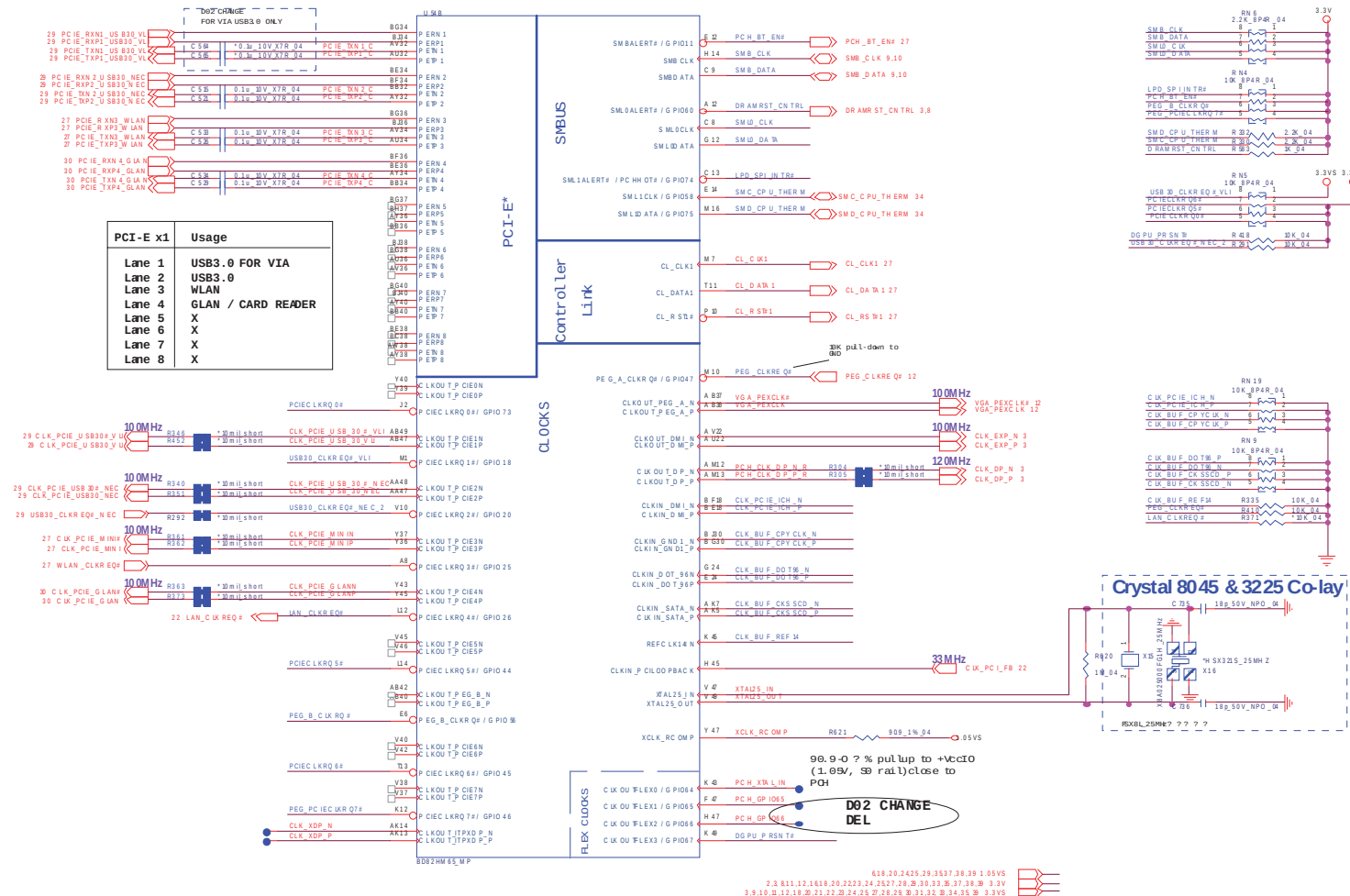
B.Schematic Diagrams

CougarPoint - M 1/9



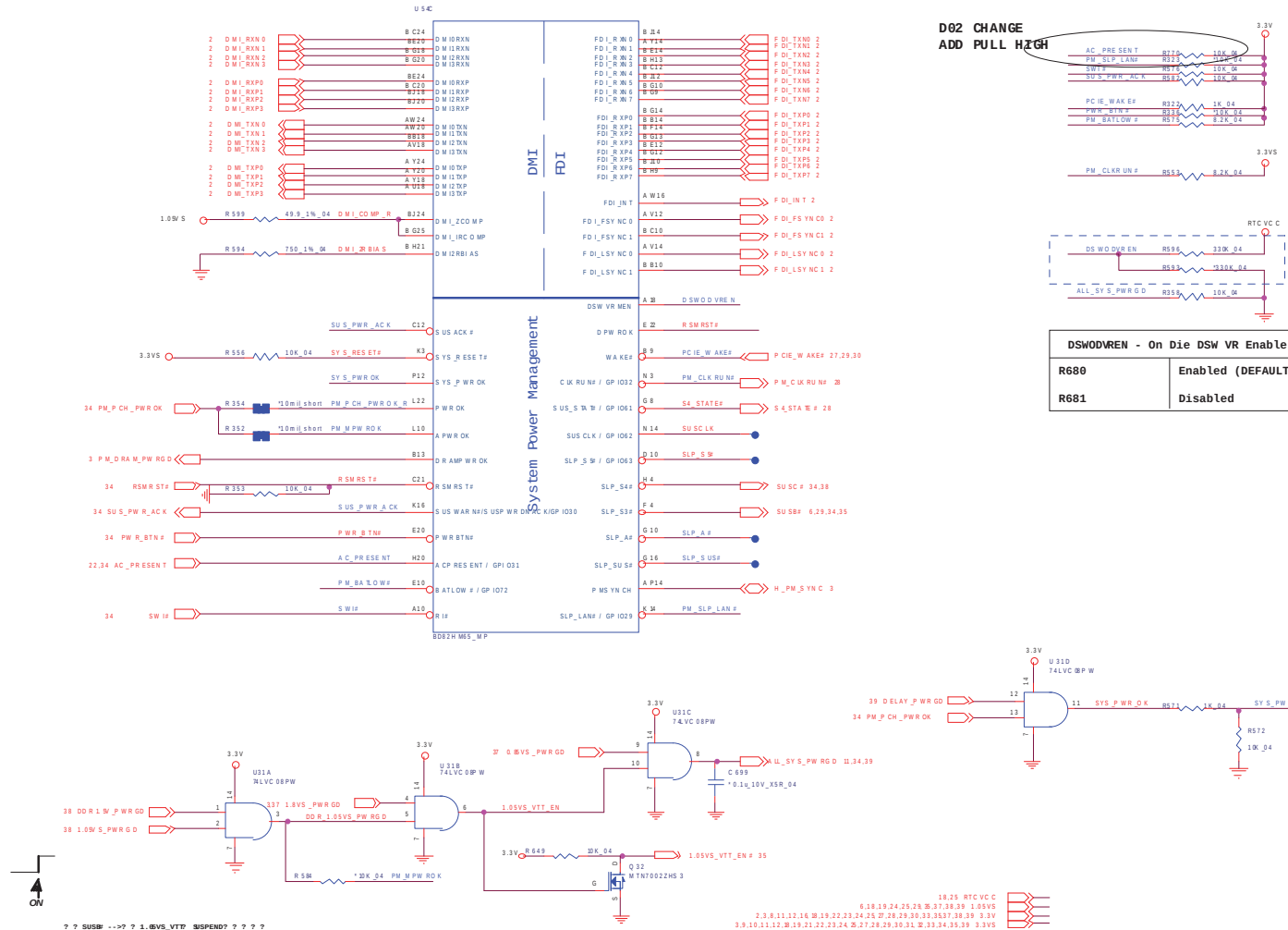
Sheet 18 of 49
CougarPoint - M 1/9

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CougarPoint - M 3/9

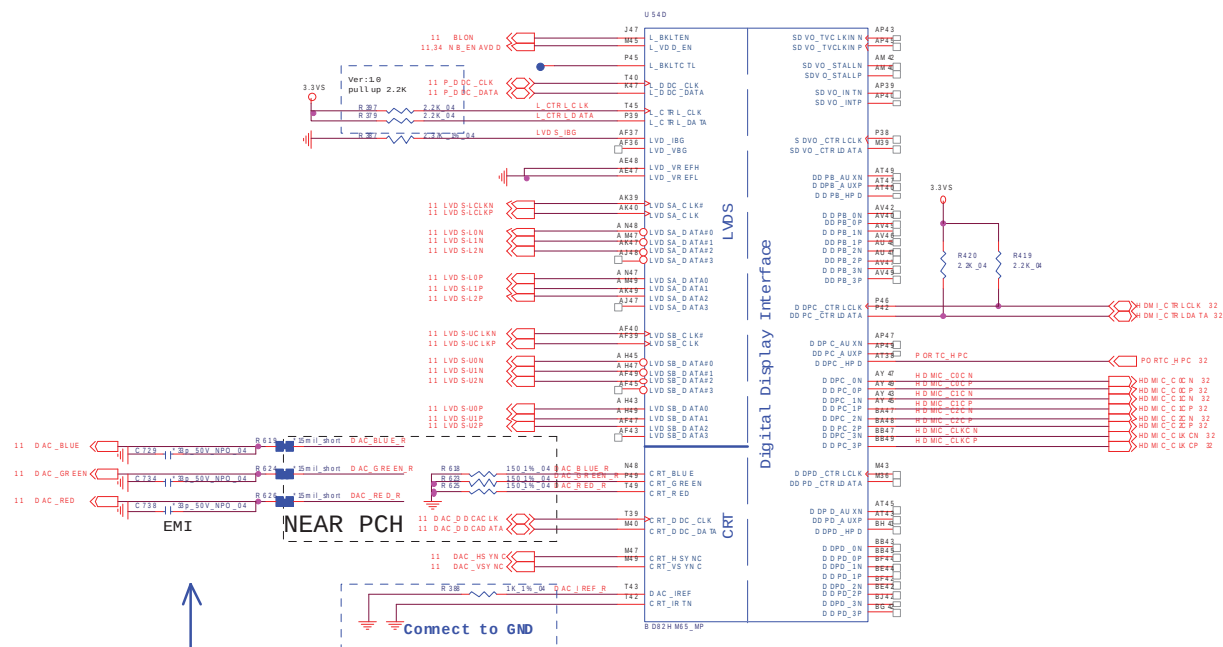
CougarPoint -M (DMI, FDI, GPIO)



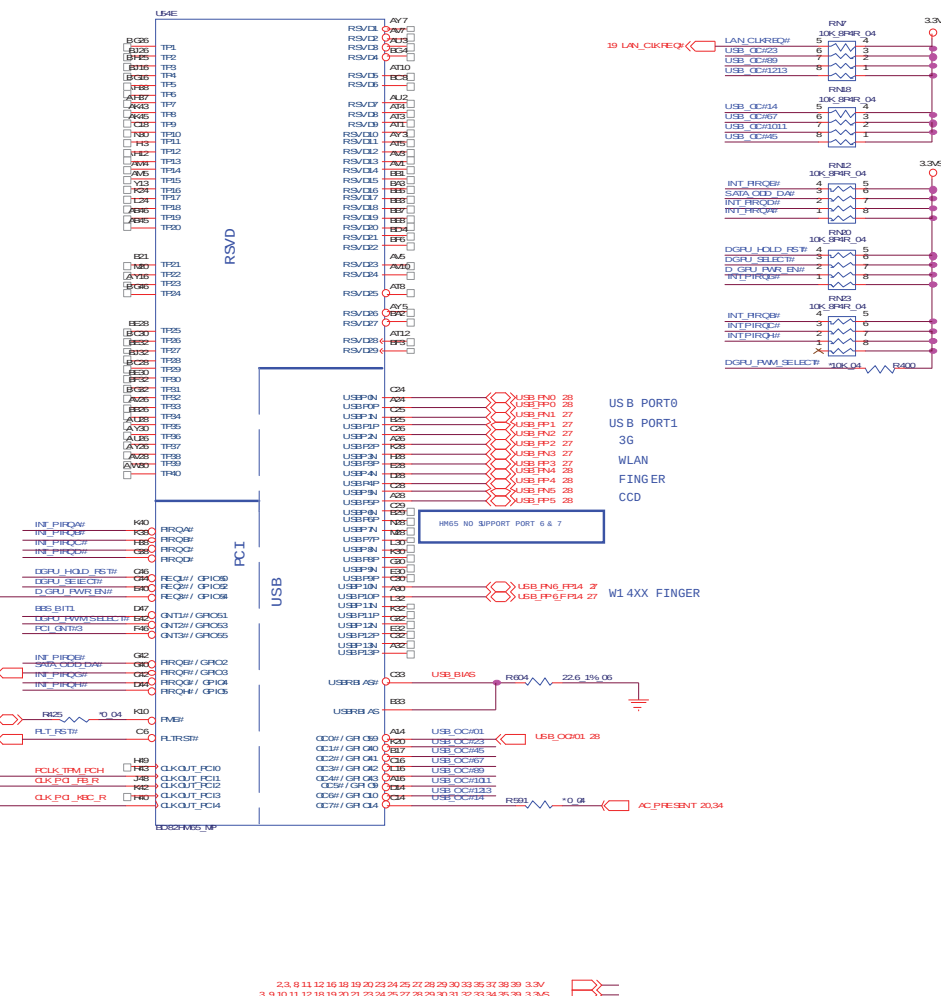
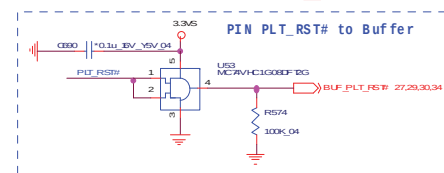
Sheet 20 of 49
CougarPoint - M 3/9

B.Schematic Diagrams

External Graphics (PCH Integrated Graphics Disable)



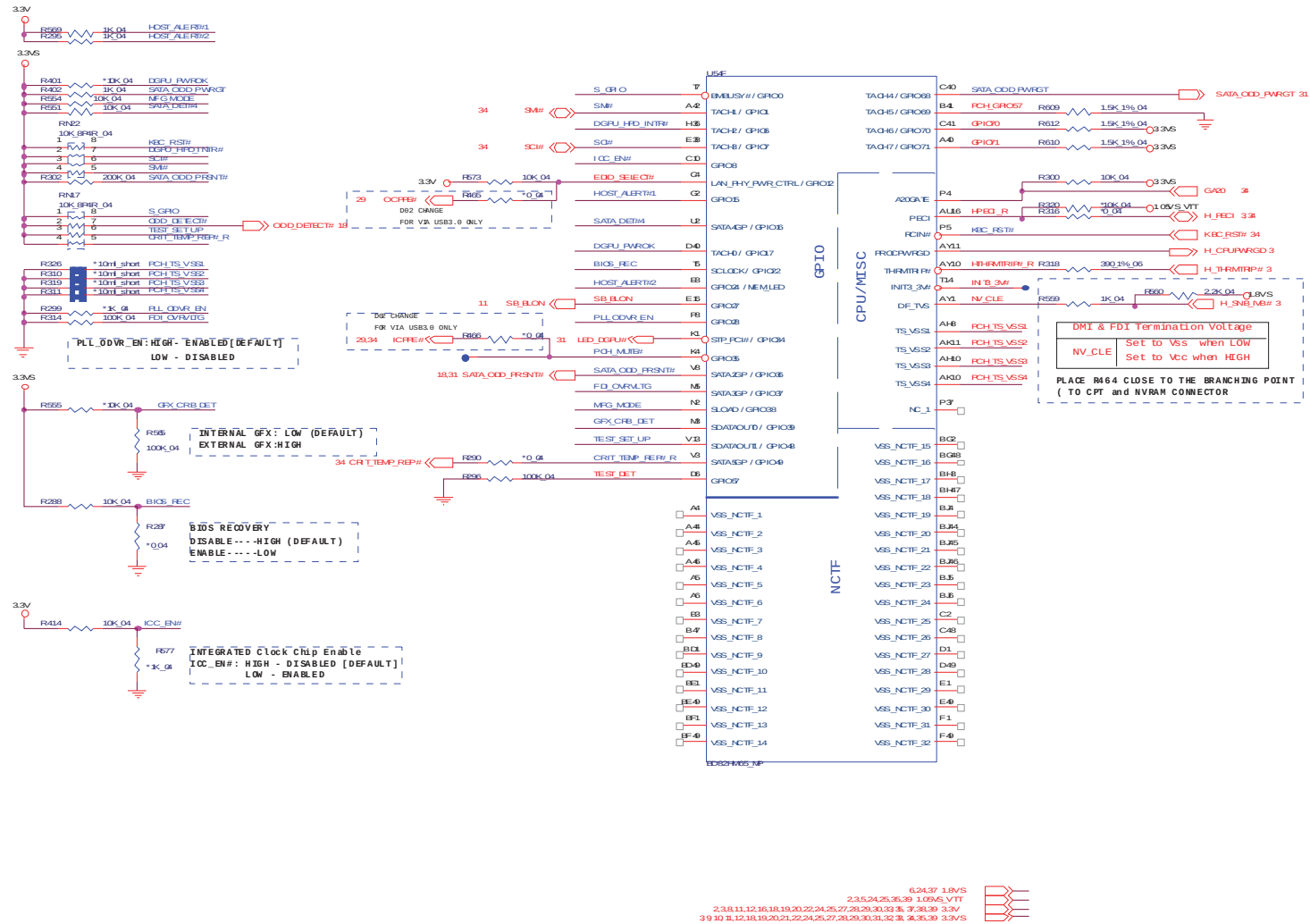
CougarPoint -M (PCI,USB,NVRAM)



CougarPoint - M 5/9 B - 23

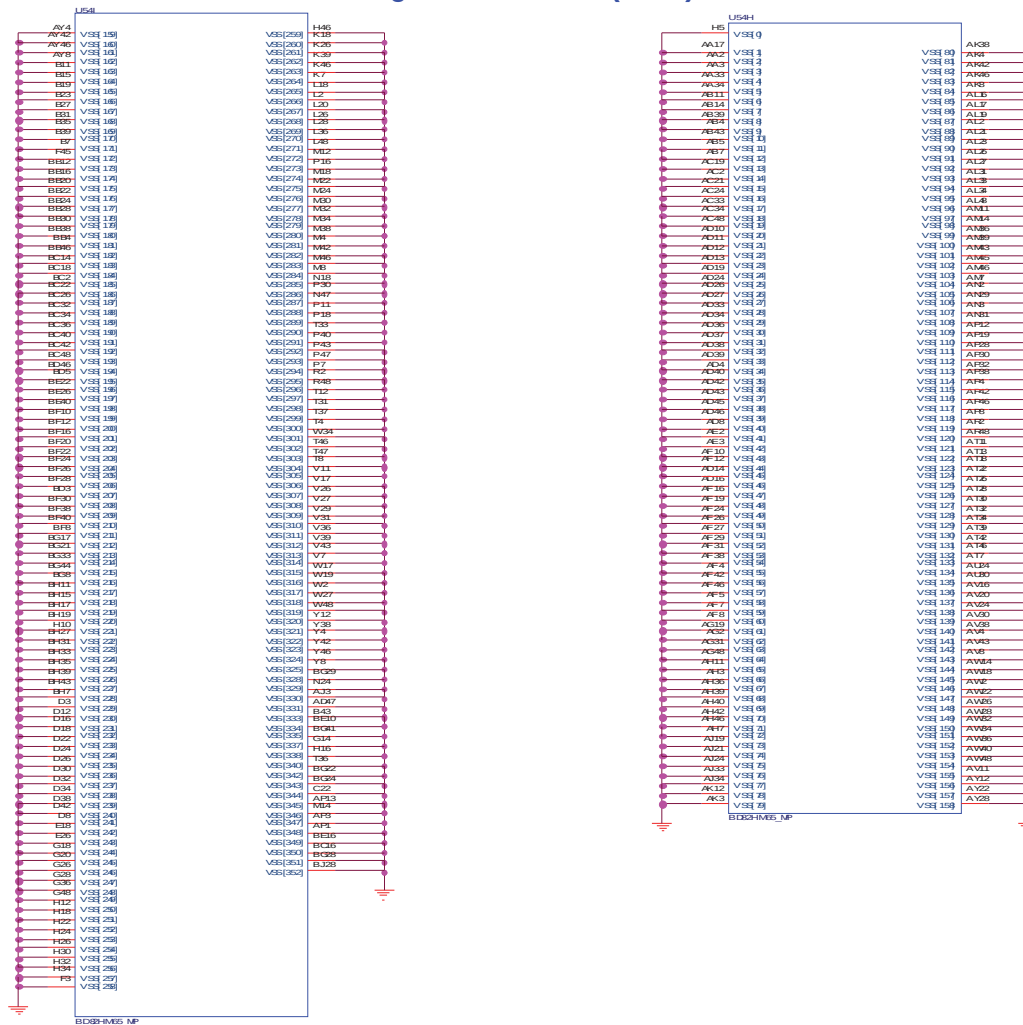
CougarPoint - M 6/9

CougarPoint - M (GPIO, VSS_NCTF, RSVD)



CougarPoint - M 9/9

CougarPoint -M (GND)



Voltage Rail	Voltage	SO	Icmax	Current (A)
V_CPU_IO	1.05	1	1	1 (mA)
VREF	5	1	1	1 (mA)
VREF_Sus	5	1	1	1 (mA)
Vcc3_3	3.3	0	0.266	
VccADAC3	1.05	1	1	1 (mA)
VccADPLLA	1.05	0	0.08	
VccADPLLB	1.05	0	0.08	
VccCore	1.05	1	1	1
VccDME	1.1	0	0.042	
VccIO	1.05	2	2.925	
VccASW	1.05	1	1	1
VccSPI	3.3	0	0.029	
VccDSW3_3	3.3	2	2	2 (mA)
VccDFTerm	1.8	0	0.19	
VccSus3_3	3.3	0	0.097	
VccSusHDA	3.3	1	1	1 (mA)
VccVBI	1.5	0	0.16	
VccCKDMI	1.05	0	0.02	
VccSSC	1.05	0	0.095	
VccDFFCLKN	1.05	0	0.055	
VccALVDS	3.3	1	1	1 (mA)
VccTX_LVDS	1.8	0	0.06	

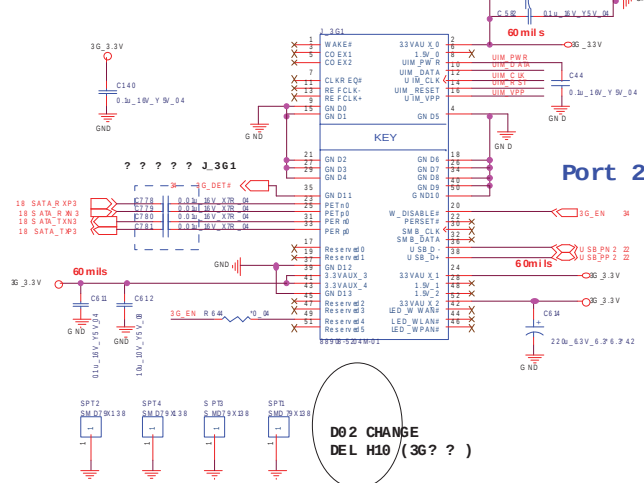
Sheet 26 of 49
CougarPoint - M 9/9

WLAN, 3G, Mini PCIE

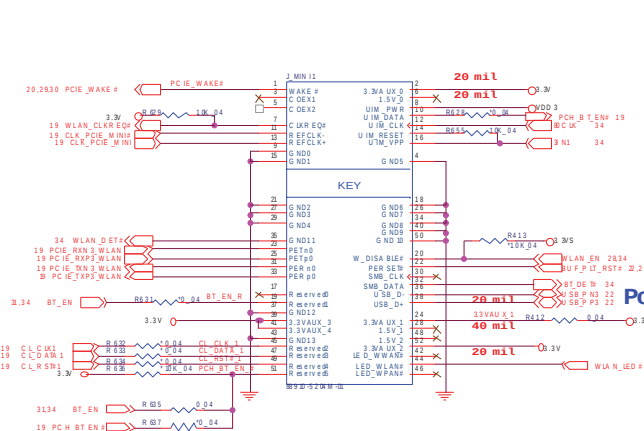
B.Schematic Diagrams

Sheet 27 of 49
WLAN, 3G, Mini
PCIE

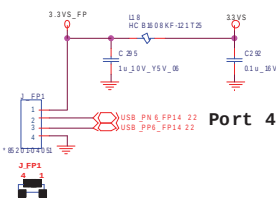
3G/MSATA MINI CARD



WLAN MINI CARD

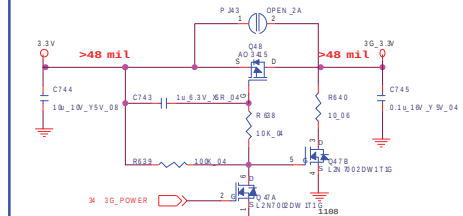


FP CONN
W140HN ONLY

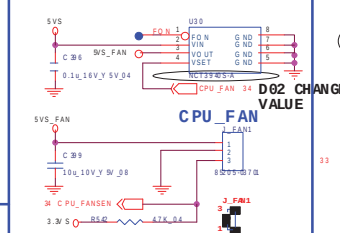


3G POWER

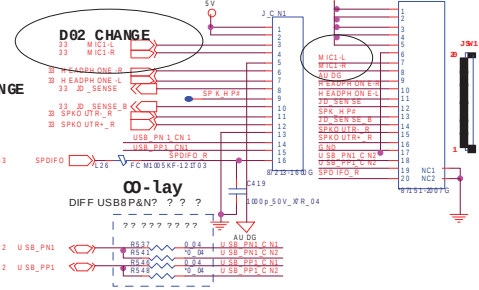
?? MSATA function? PJ43 SHORT, ? ? ? ? ?



CPU FAN CONTROL

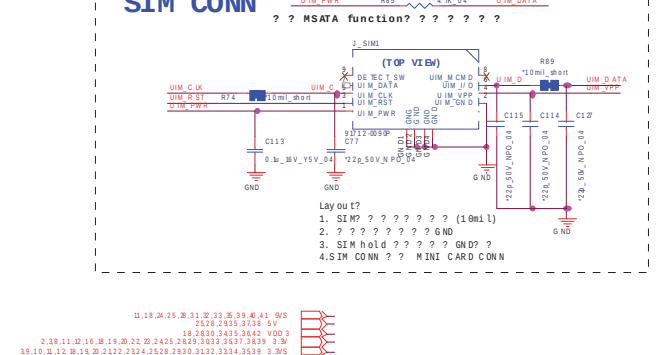


FOR AUDIO BOARD

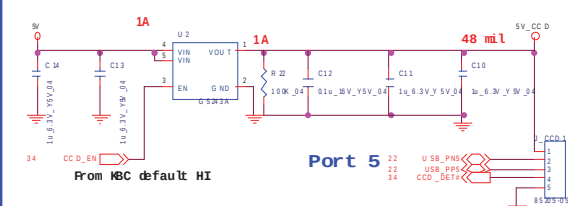


SIM CONN

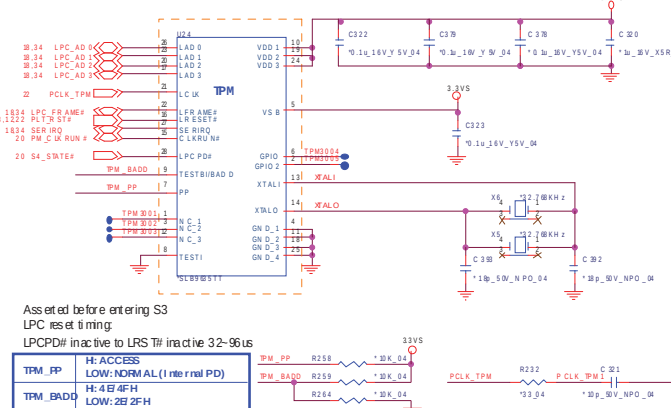
11.1M BWD 0.85 14.3% 0.4



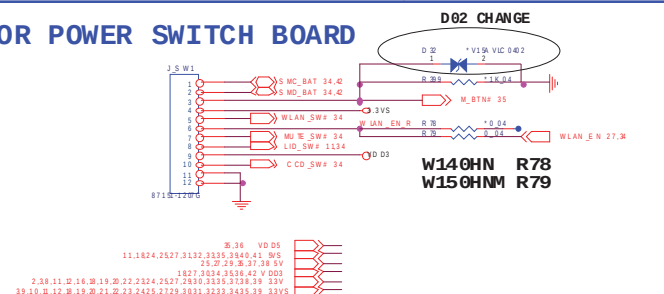
USB Charge PORT



TPM 1.2



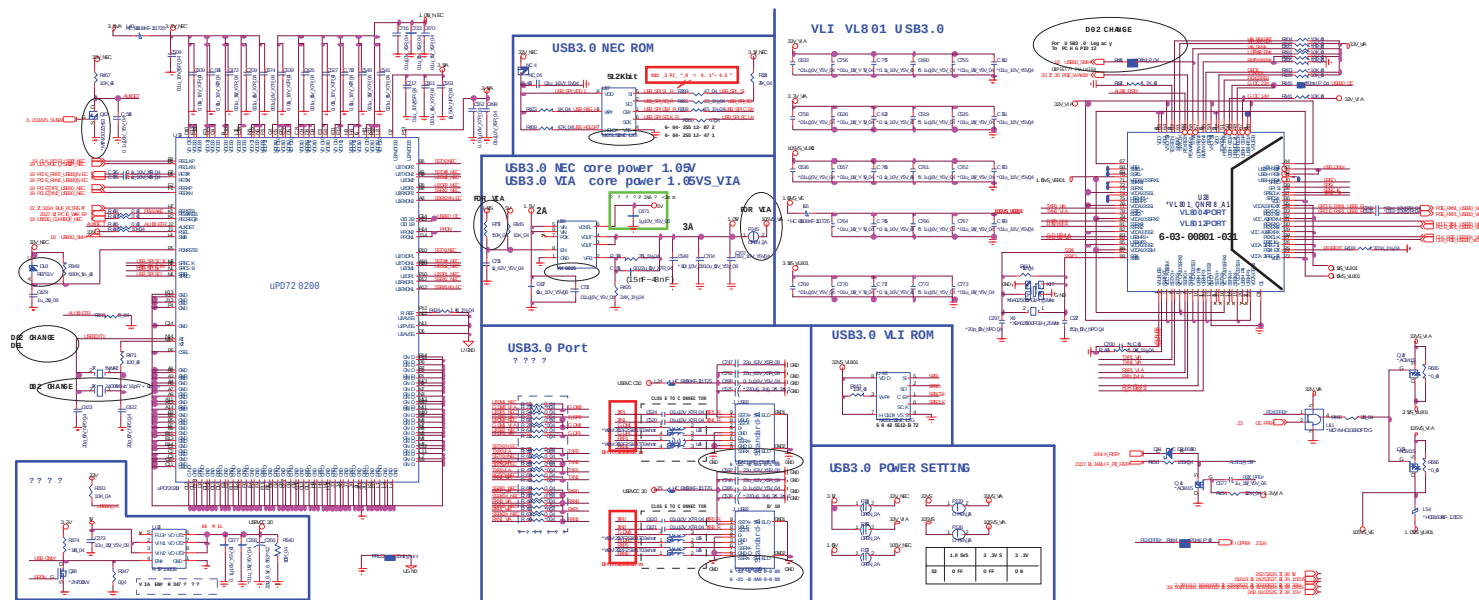
FOR POWER SWITCH BOARD



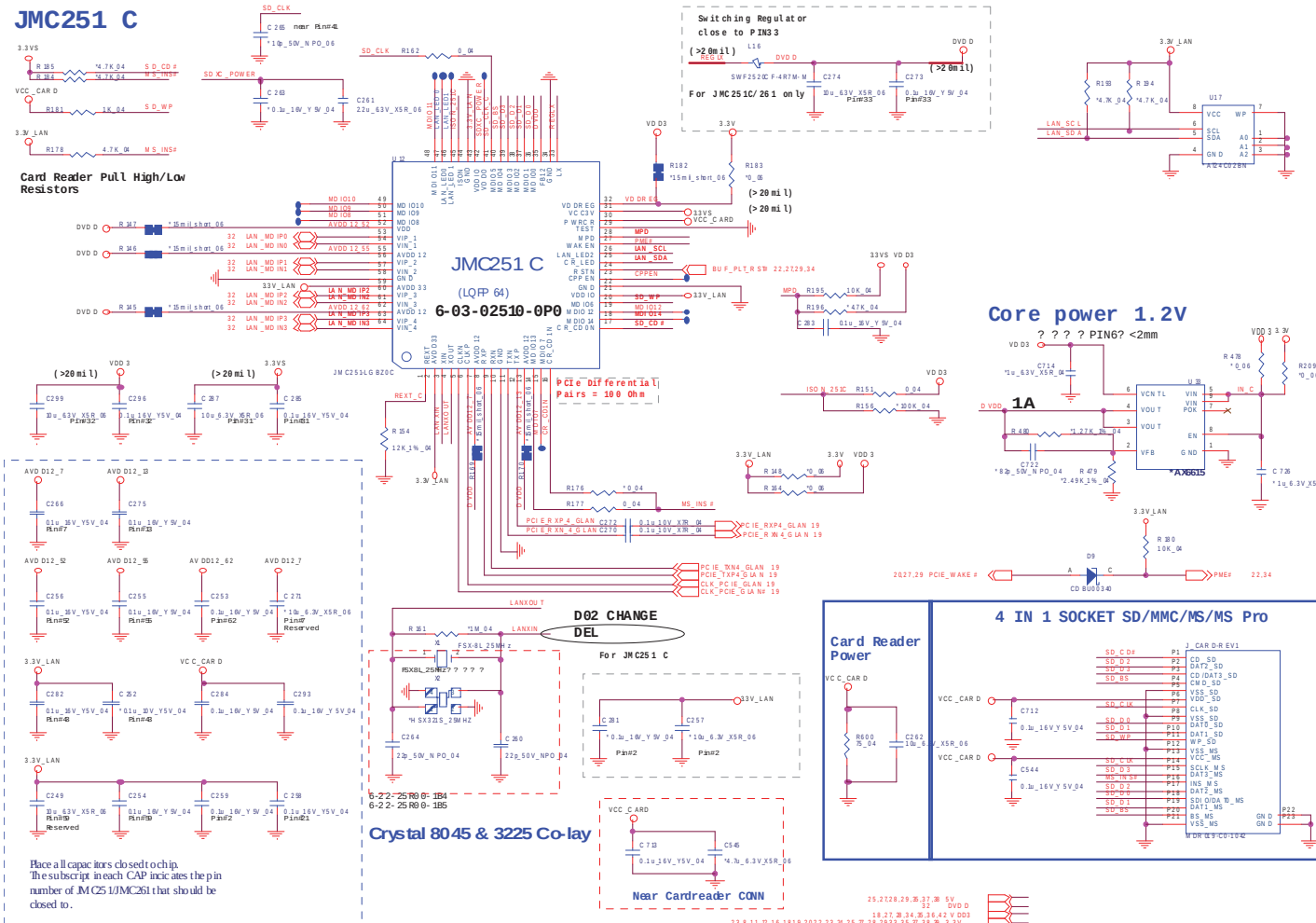
Schematic Diagrams

USB 3.0

Sheet 29 of 49
USB 3.0



Card Reader (JMC251C)

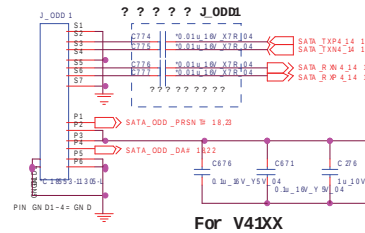


Sheet 30 of 49
Card Reader
(JMC251C)

Schematic Diagrams

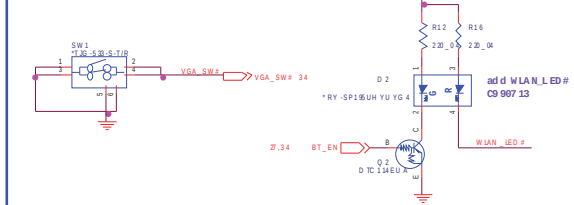
SATA ODD, LED, Hotkey, LID SW

SATA ODD W140XX ONLY



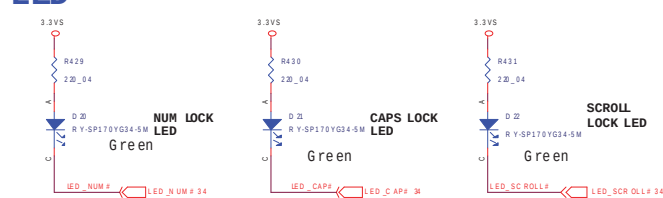
Zero Power ODD

W140XX ONLY

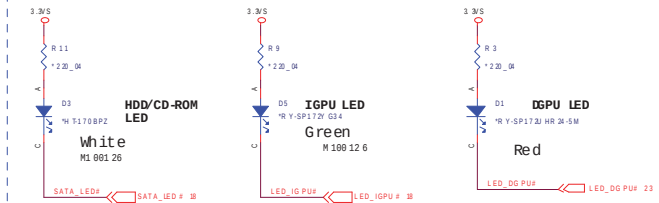
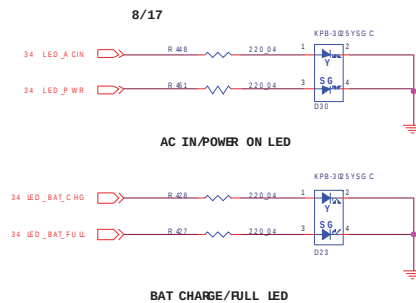


LED

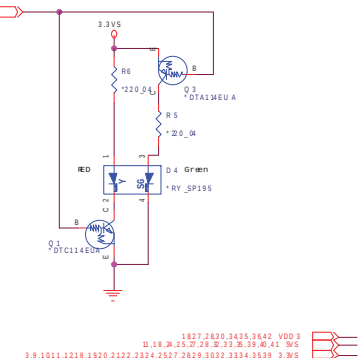
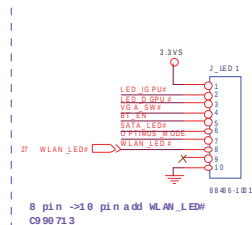
W140XX/W150XX/W170XX



W140XX/W150XX/W170XX



W150XX/W170XX LED CON

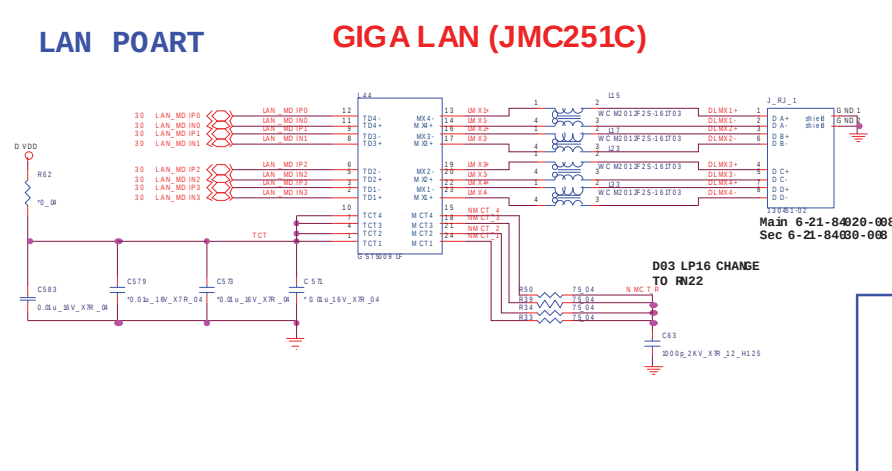


Sheet 31 of 49
SATA ODD, LED,
Hotkey, LID SW

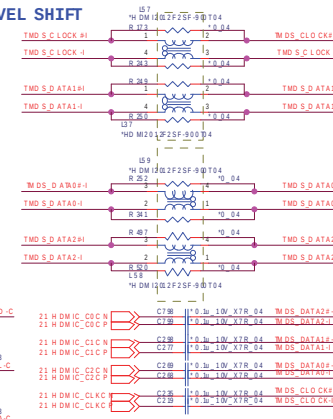
HDMI, RJ45

LAN POART

GIGA LAN (JMC251C)

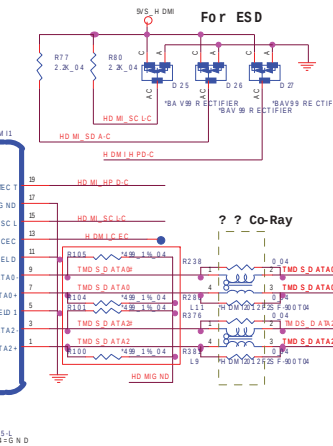
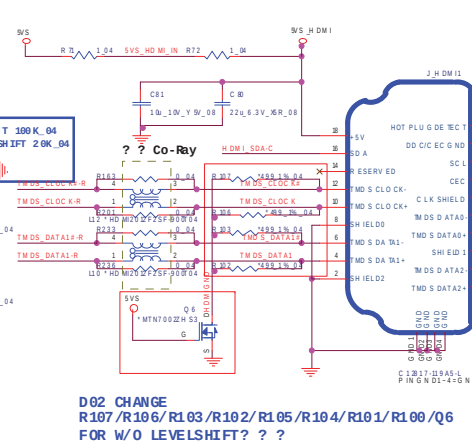
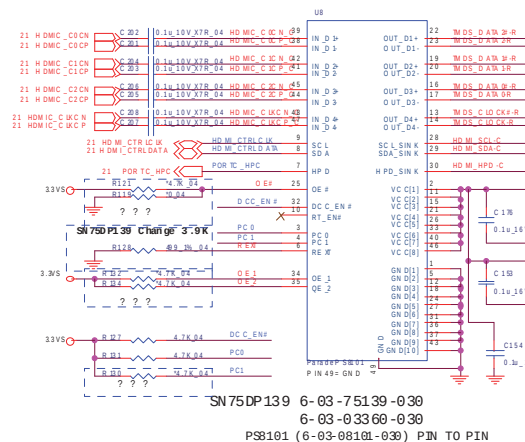


FOR W/O LEVEL SHIFT

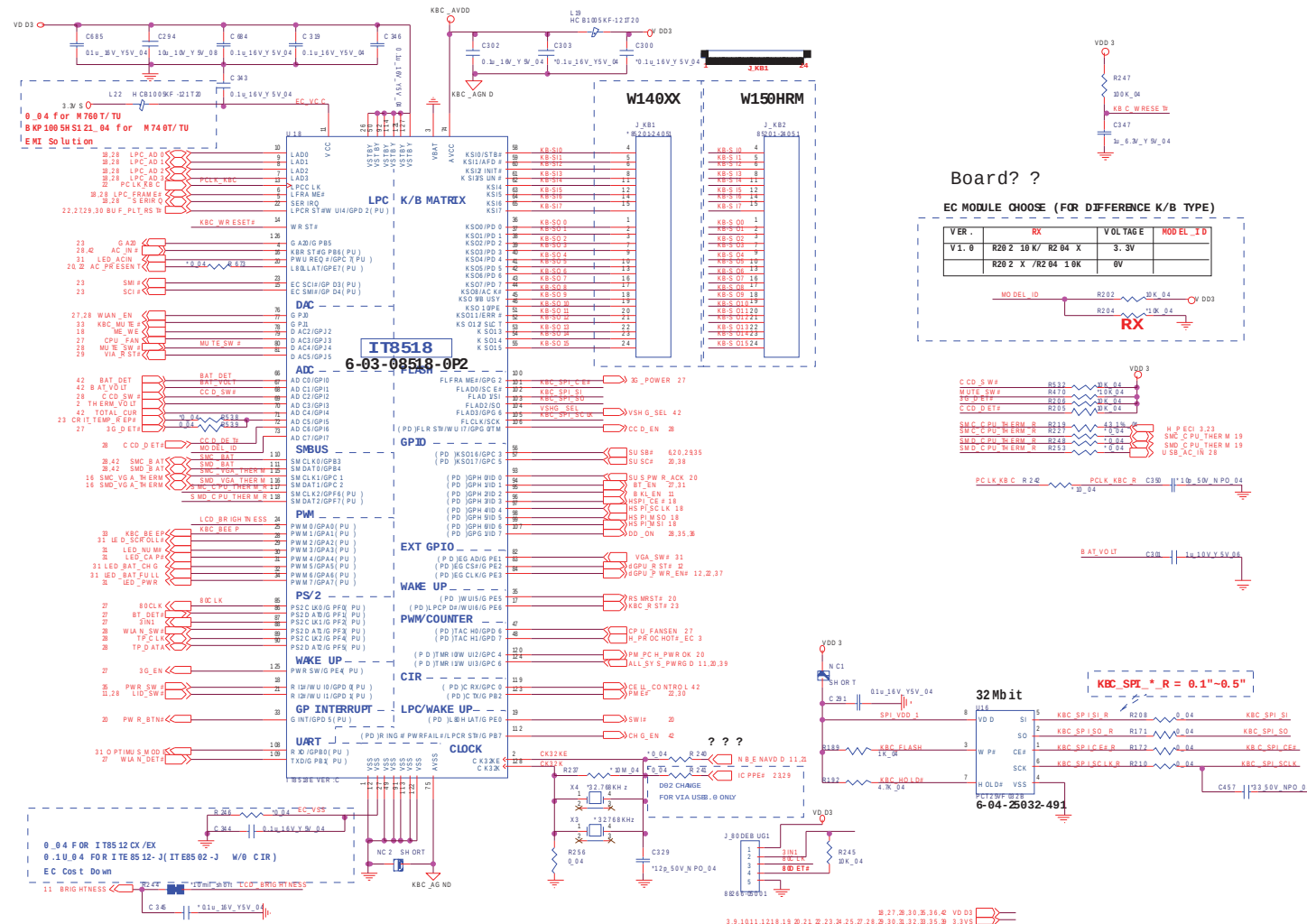
D02 CHANGE
? ? ?

FOR INTEL GRAPHIC

HDMI CONNECTOR

Sheet 32 of 49
HDMI, RJ45

KBC-ITE IT8518E



The image displays 12 circuit diagrams for various power planes and a pinout table. Each diagram shows a PMOS driver, NMOS load, and various passive components like resistors and capacitors. The diagrams are labeled with component values and test points. A table on the right lists pin numbers and their corresponding signals.

1.05VS_VTT

5V

5VS

1.5VS

1.5VS_CPU

3.3V

3.3VS

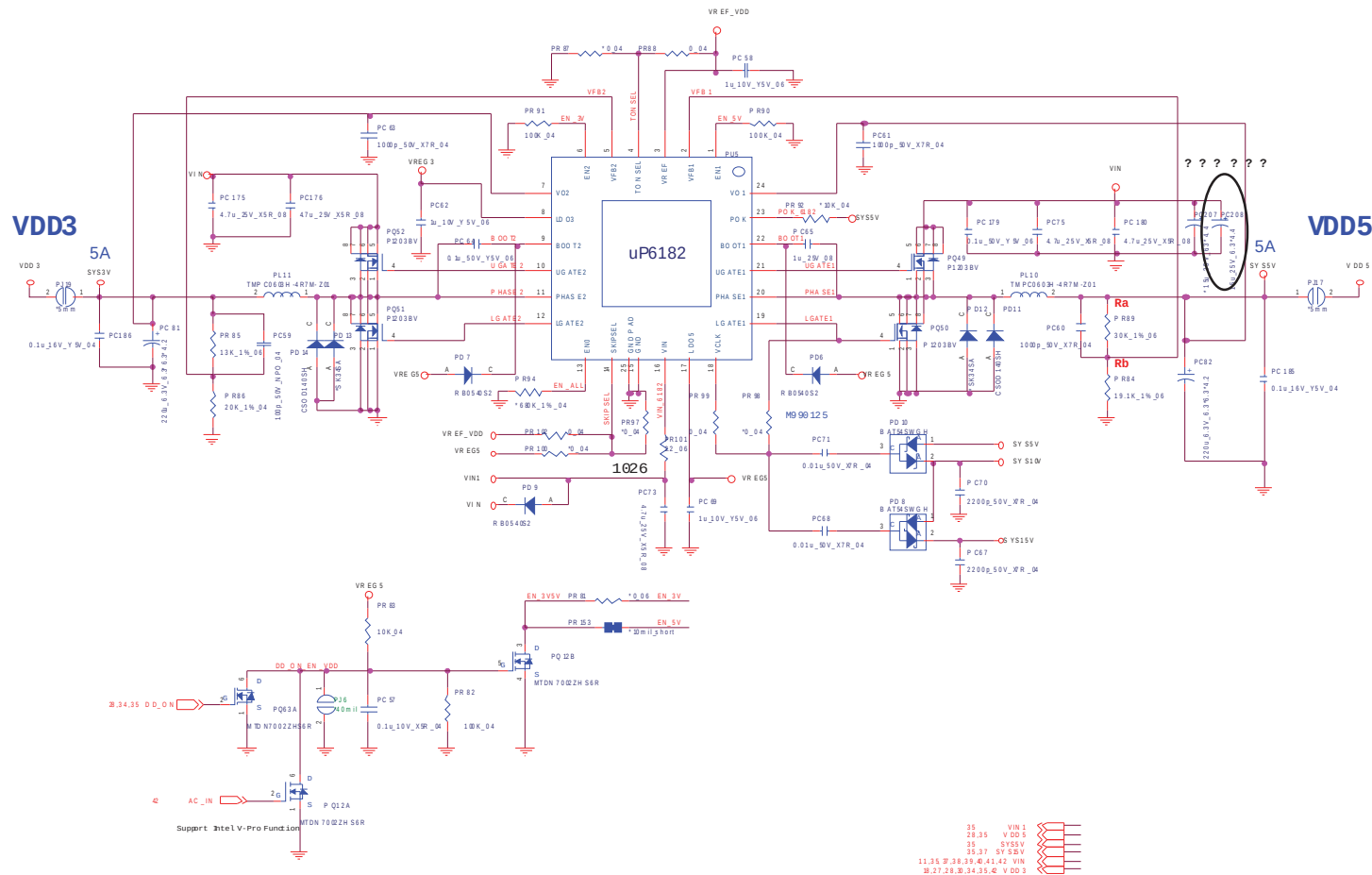
3A

20A

Pinout Table:

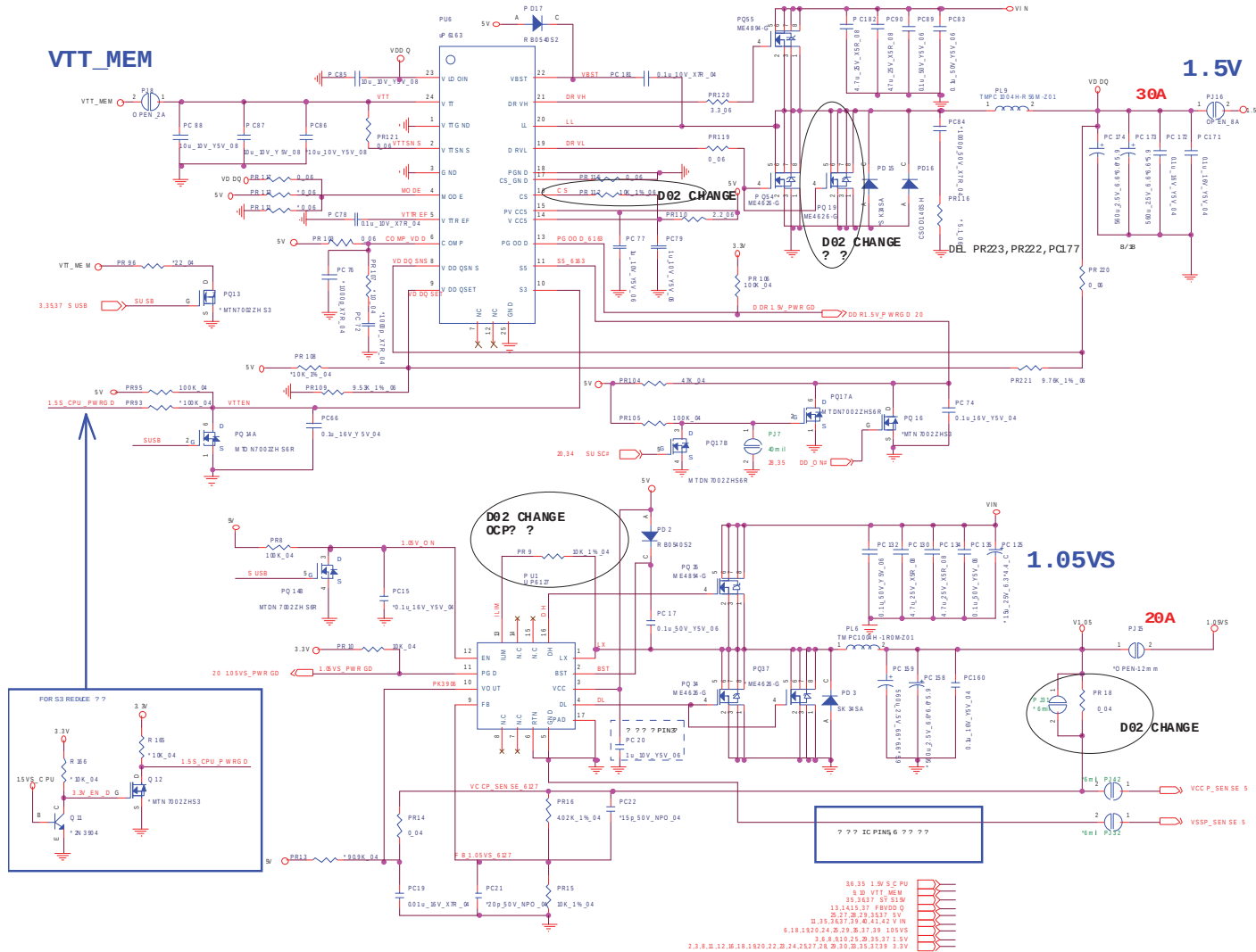
Pin	Signal
42	VA
36	VIN-1
2636	VDD-5
24	1.0VS
3.4.38	1.5VS_CPU
36	SV-SW
3637	SV-SISW
6.18.20.20.24.25.27.28.31	1.0VS_V
11.3637.3639.4641.42	VIN
3.6.8.110.3259.3388	3.3V
3.6.7.20.25.31.32.34.22	VDD-3
11.18.24.25	3.3V
2.3.3.234.333	1.0VS_VTT
23.8.112.1618.1820.2229.2425.2728.2830.3337.3639	3.3V
9.9.1811.1218.1820.2122.2324.2527.2829.3031.3233.3439	3.3VS

VDD3, VDD5 B - 37



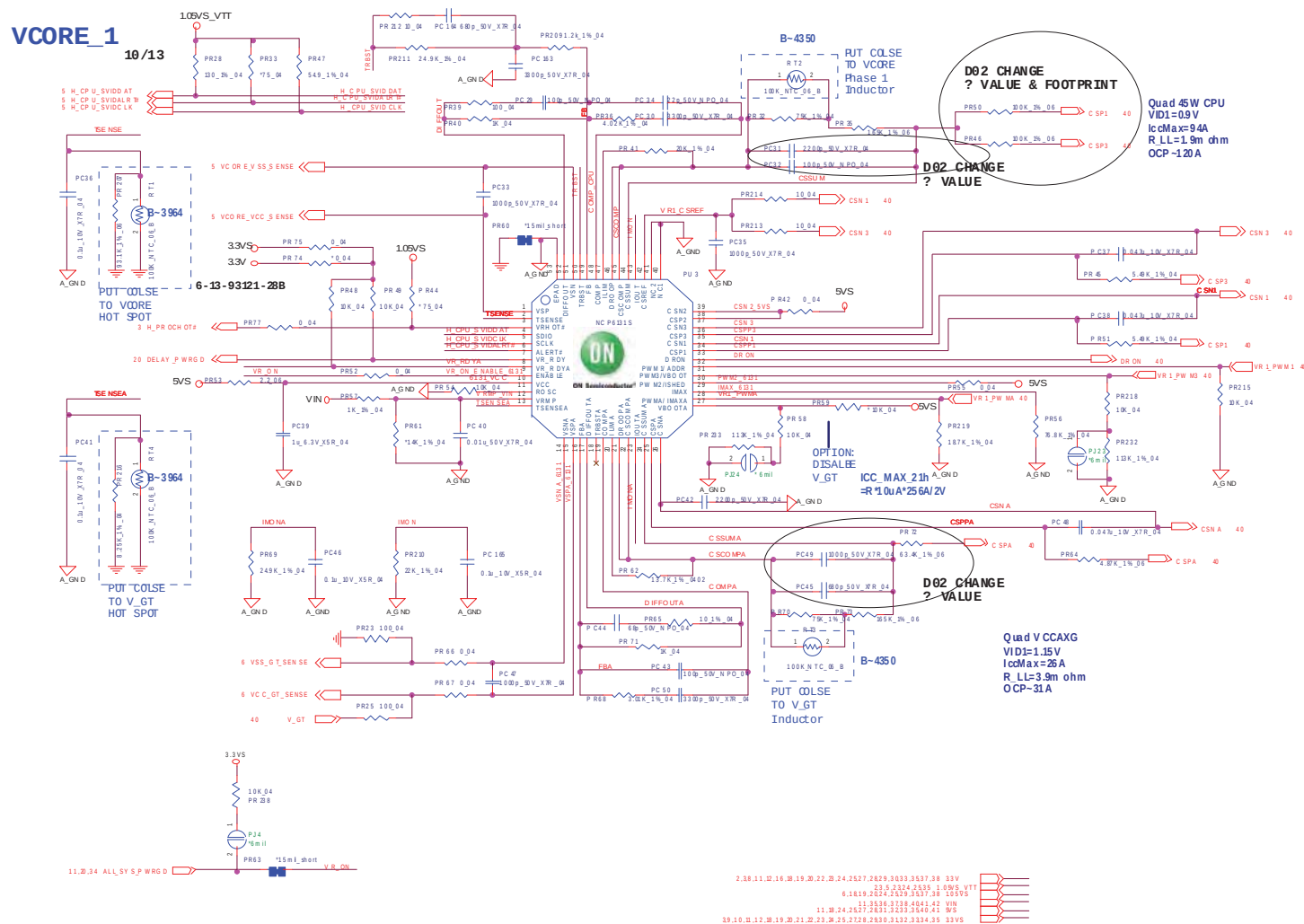
Power 0.85VS, 1.8VS, PEX_VDD

VTT_MEM

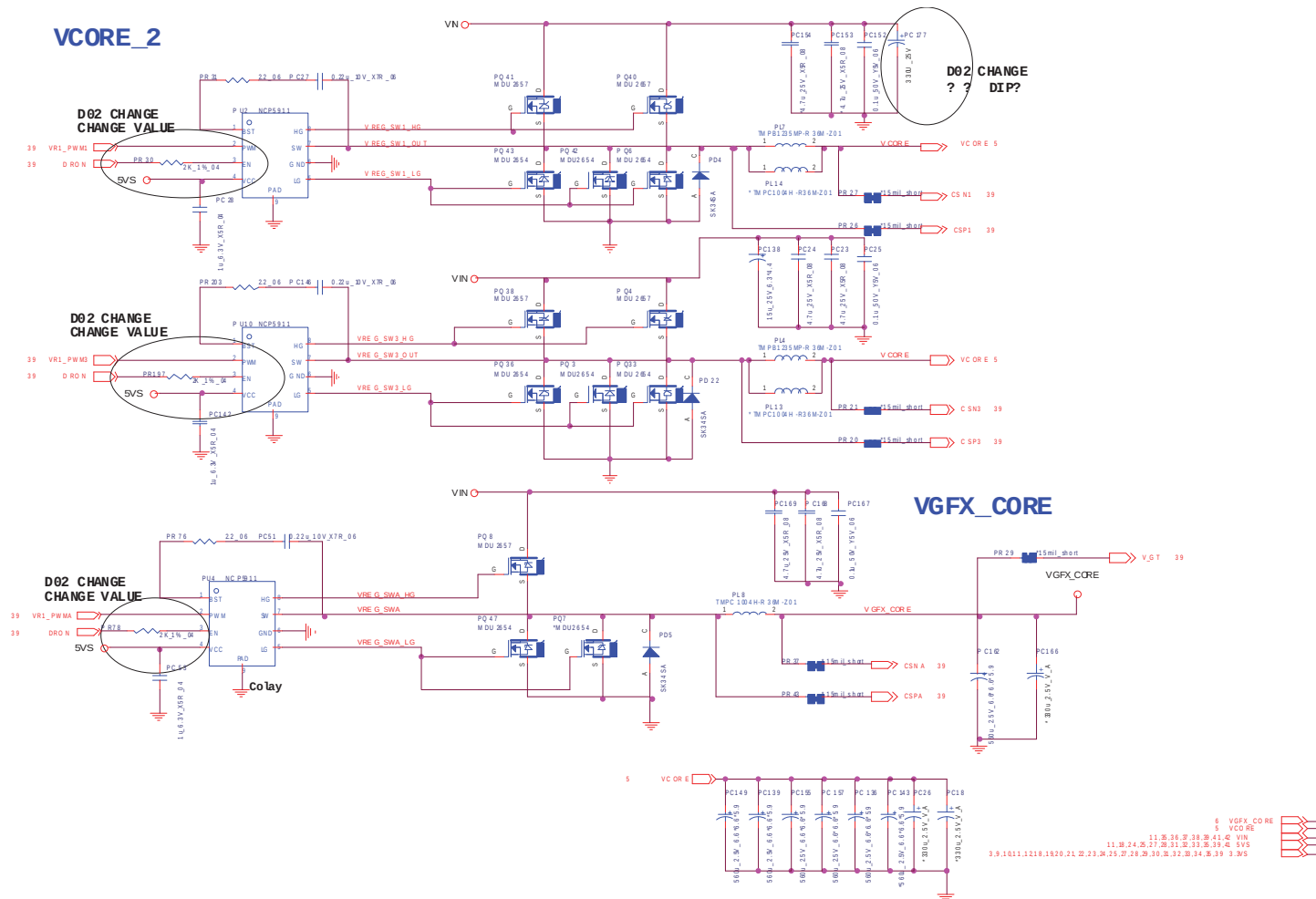


B.Schematic Diagrams

B - 40 Power V-Core1

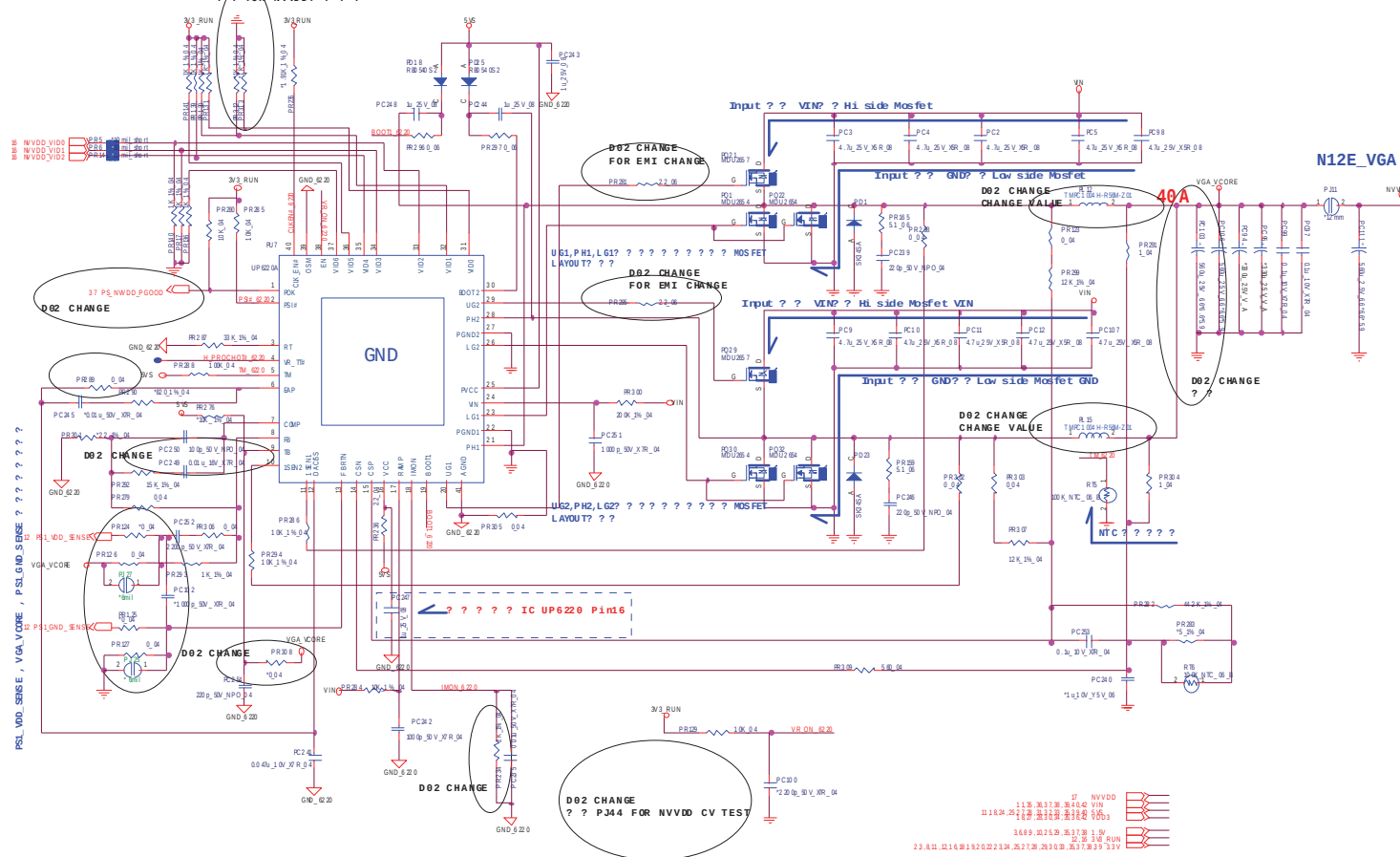


Power V-Core2 B - 41

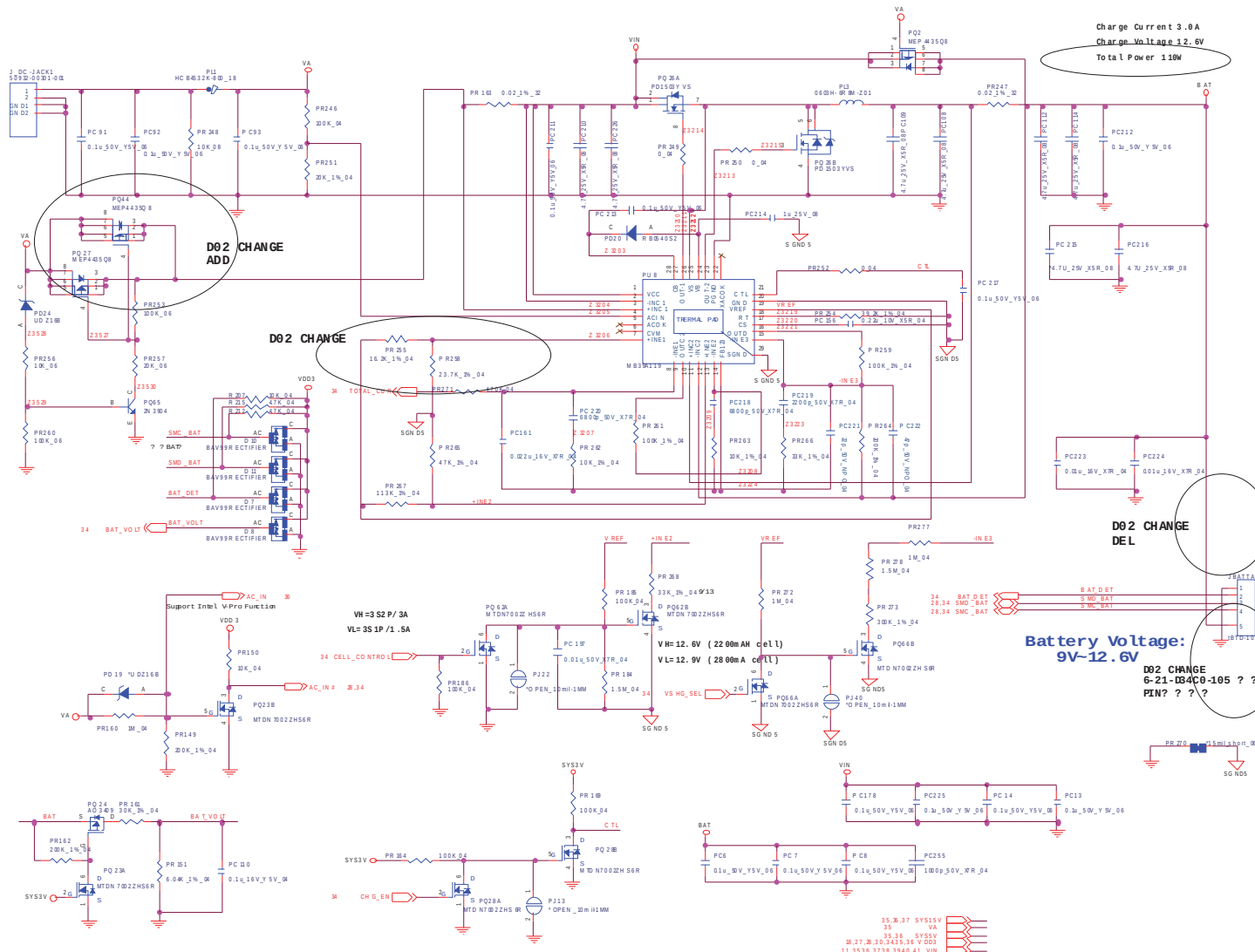


	0.8125V	0.8625V	0.9125V	
NVDD_VIOB	1	0	1	(GPIO5)
NVDD_VIOA	0	0	1	(GPIO6)
NVDD_VIOE	1	1	0	(GPIO7)

D02 CHANGE
? ? FOR NVVDD? ? ? ?



AC_IN, Charger



Sheet 42 of 49
AC_IN, Charger

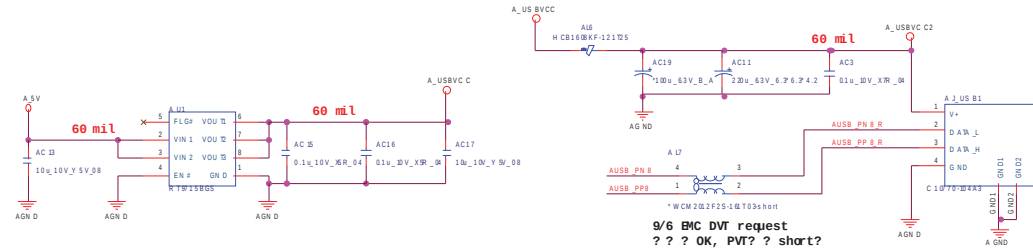
Battery Voltage:
9V~12.6V

D02 CHANGE
6-21-D34C0-105 ? ?
PIN? ? ? ?

Schematic Diagrams

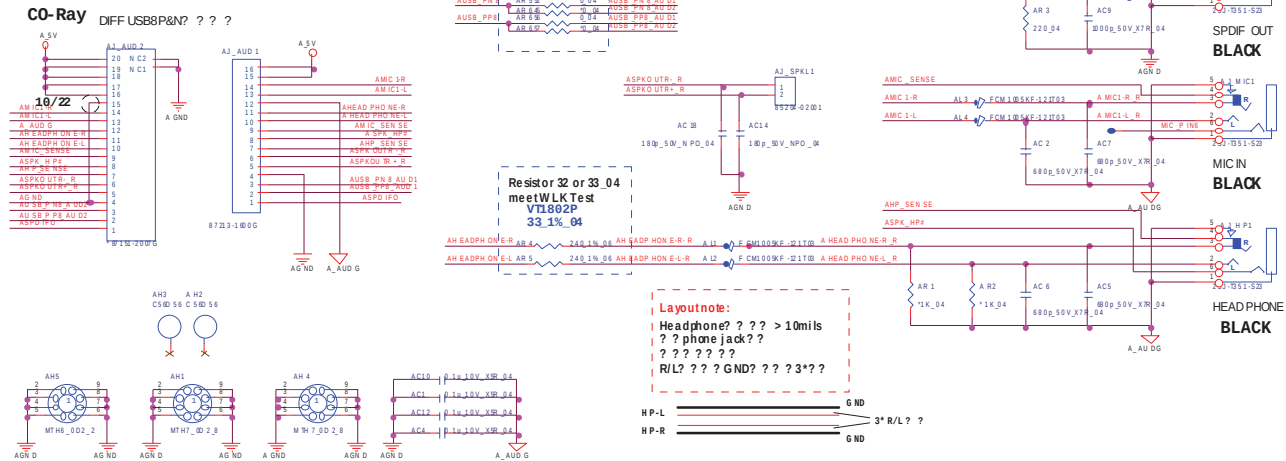
W150HNM Audio Board

USB PORT(PORT3)

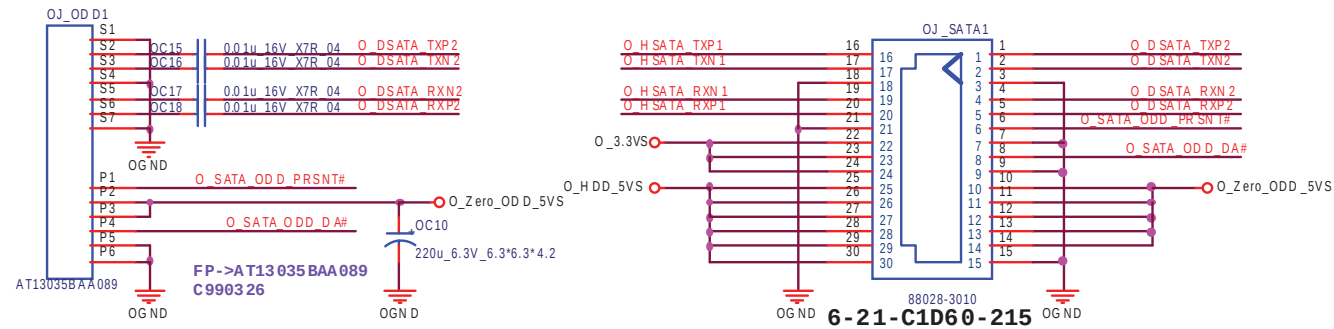


Sheet 43 of 49
W150HNM Audio
Board

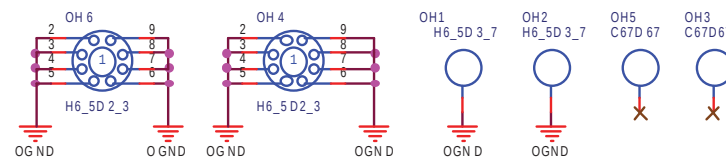
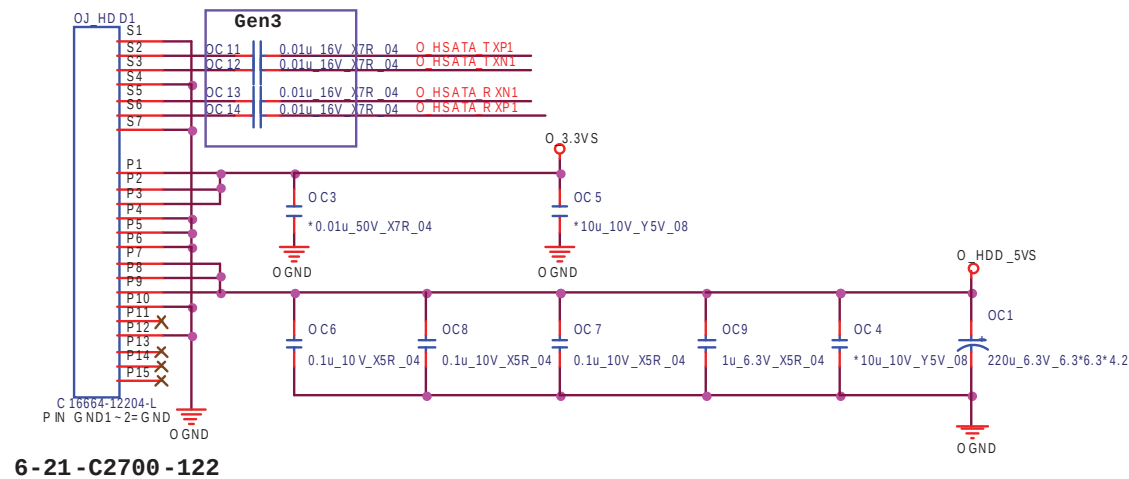
AUDIO BOARD



W150HNM Second HDD Board

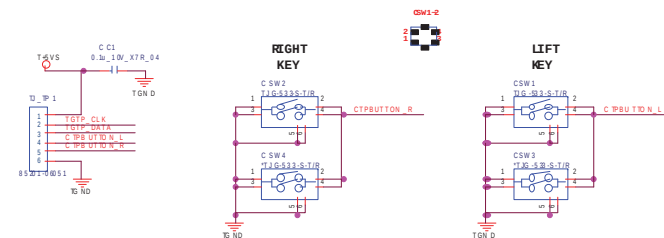
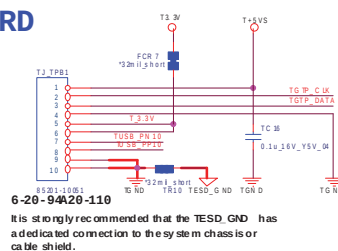
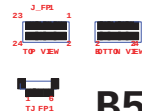


W150HNM Zero Power

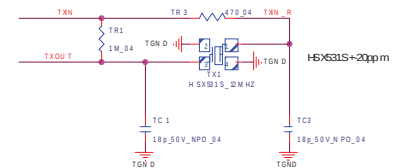
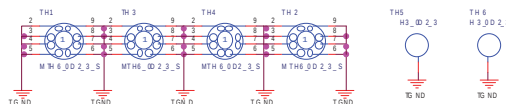
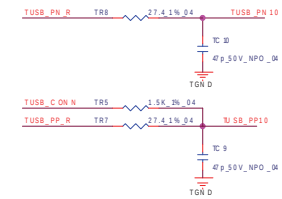
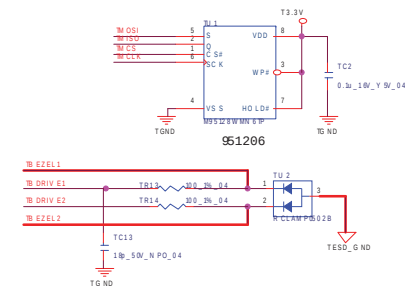
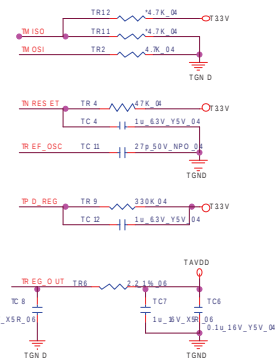
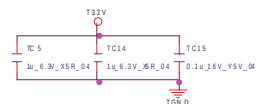


Sheet 44 of 49
W150HNM Second
HDD Board

V15XX CLICK BOARD

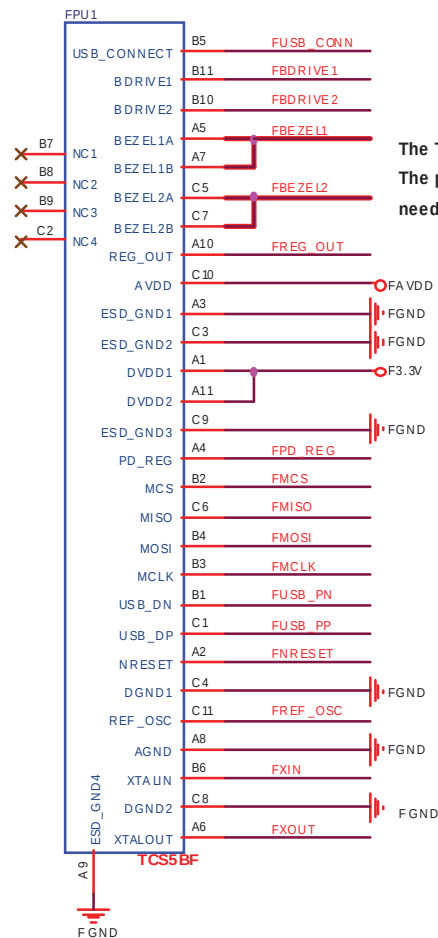
[illegible]

B5100M ONLY

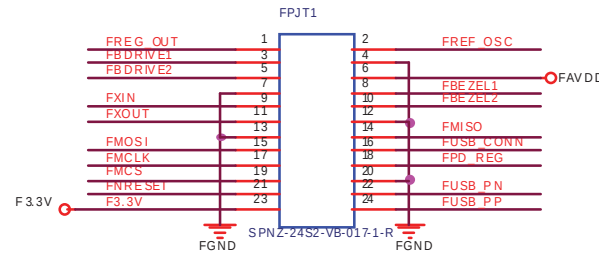


B5100 Fingerprint Board

V51XX FINGERPRINT BOARD

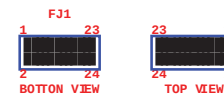


The TESD_GND trace has to be wide (>20mil)
The path be marked in **RED**
needs to be design to be short and at low impedance.



6-21-41710-212

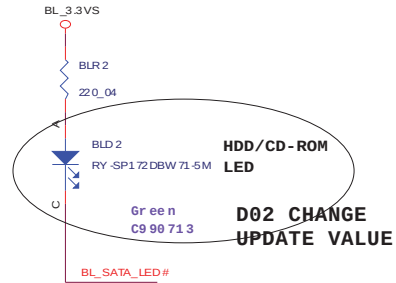
B5100M ONLY



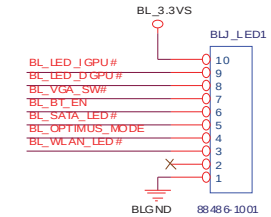
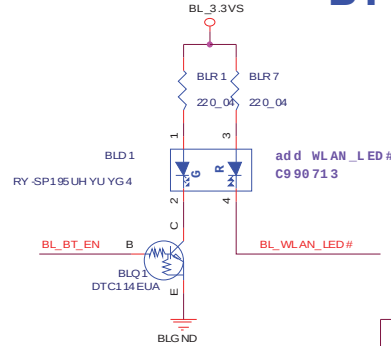
Sheet 46 of 49
B5100 Fingerprint
Board

B5130 LED & VGA SW Board

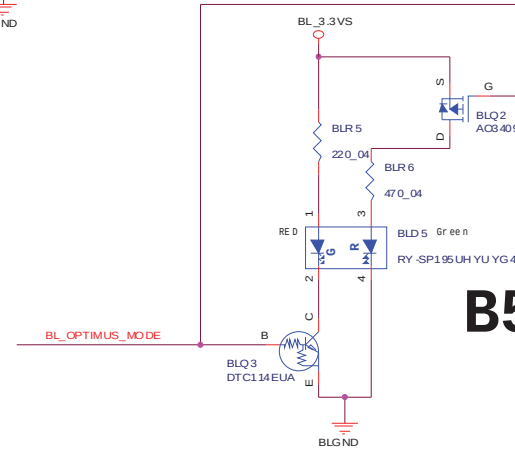
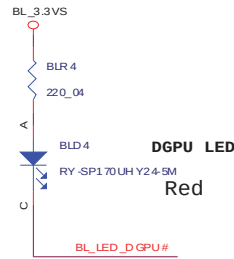
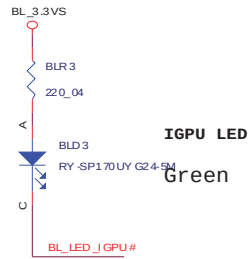
HDD LED



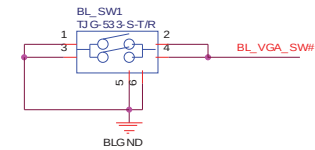
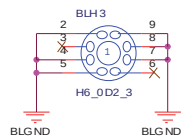
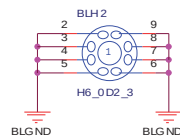
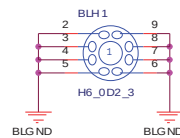
BT LED



Sheet 47 of 49
B5130 LED & VGA
SW Board

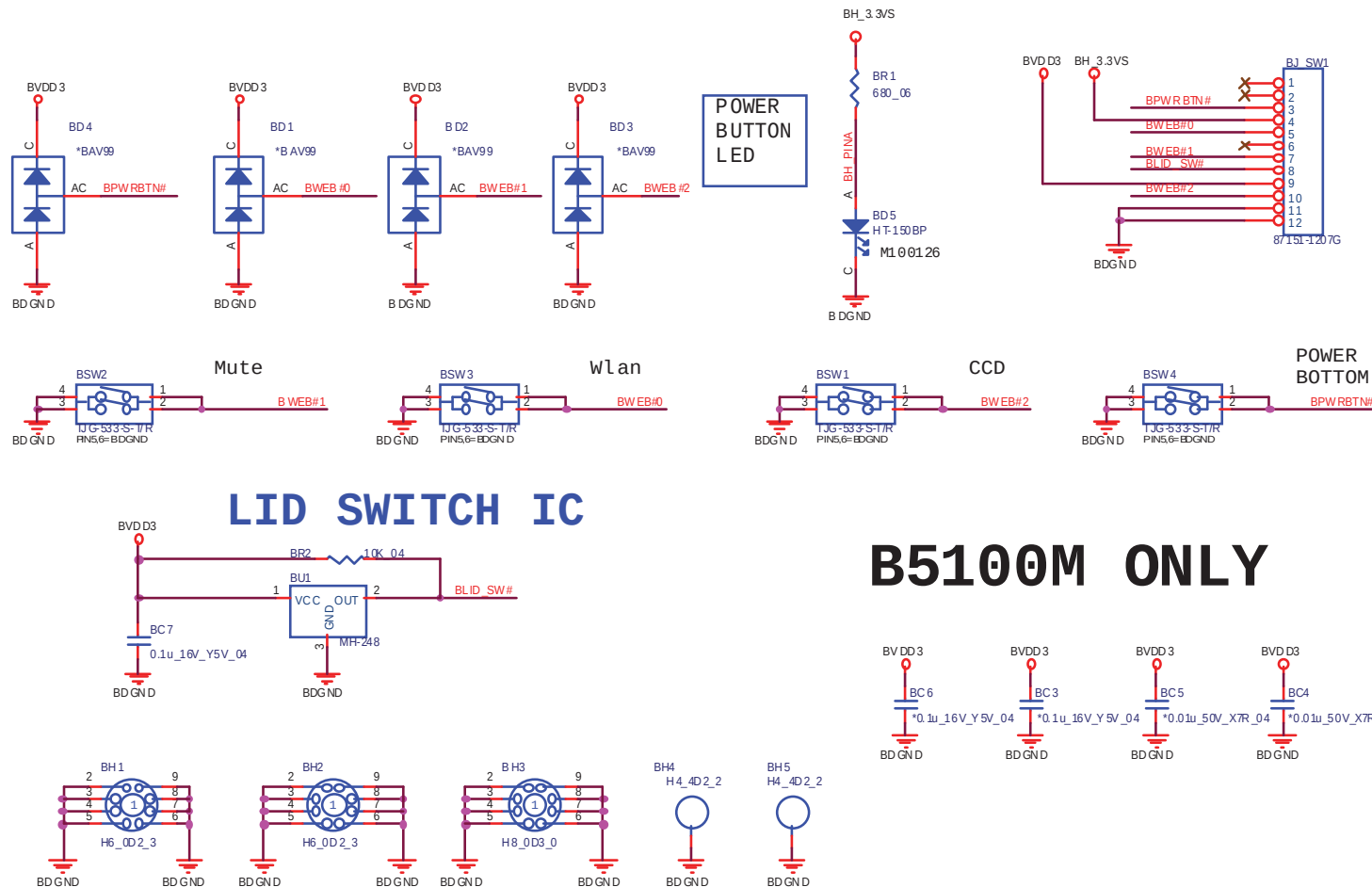


B5130M ONLY



B5100 Power Switch Board

V51XX POWER SWITCH BOARD



Sheet 48 of 49
B5100 Power
Switch Board

B5100M ONLY