Acer AL2216W
Service Guide

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Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen
Note	Gives bits and pieces of additional information related to the current topic.
Warning	Alerts you to any damage that might result from doing or not doing specific actions.
Caution	Gives precautionary measures to avoid possible hardware or software problems.
Important	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. this Service Guide provides you with all technical information relating to the BASICCONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. please not WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide, for ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and Service of customer machines.

WARNING: (FOR FCC CERTIFIED MODELS)

NOTE: this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, Which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

WARNING

Use only shielded signal cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

As an ENERGY STAR® Partner our company has determined that this product meets the ENERG STAR® guidelines for energy efficiency.

WARNING:

To prevent fire or chock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

PRECAUTIONS

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, Swimming pool or in a wet basement.

- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacture or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacture and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet area provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100-240V AC, Min. 3.5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.
- For use only with the attached power adapter (output 12V DC) which have UL,CSA listed license

SPECIAL NOTES ON LCD MONITORS

The following symptoms are normal with LCD monitor and do not indicate a problem.

NOTES

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness in the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

Table of Contents

Monitor Features

Chapter 1

1.1 Test Conditions

Item	Condition
Temperature	Normal room temperature (25±2°C)
Humidity	50±10%
AC input voltage	100V±2V, 120±2V, 60Hz / 240±2V, 50Hz
Brightness	Maximum with OSD setting
Contrast	Middle with OSD setting
Resolution setting	1680 x 1050 @60HZ
Color temperature	With OSD setting. (For TCO03 CCT test condition requirement, the brightness setting on OSD shall be adjusted to meet 125 nit.)
Measuring instrument	Minolta CS-1000T Spectrometer and Photometer CA-210 or equivalent
Others	Before measuring, “Auto Adjust” & “Auto Balance” must be done in advance

1.2 Features

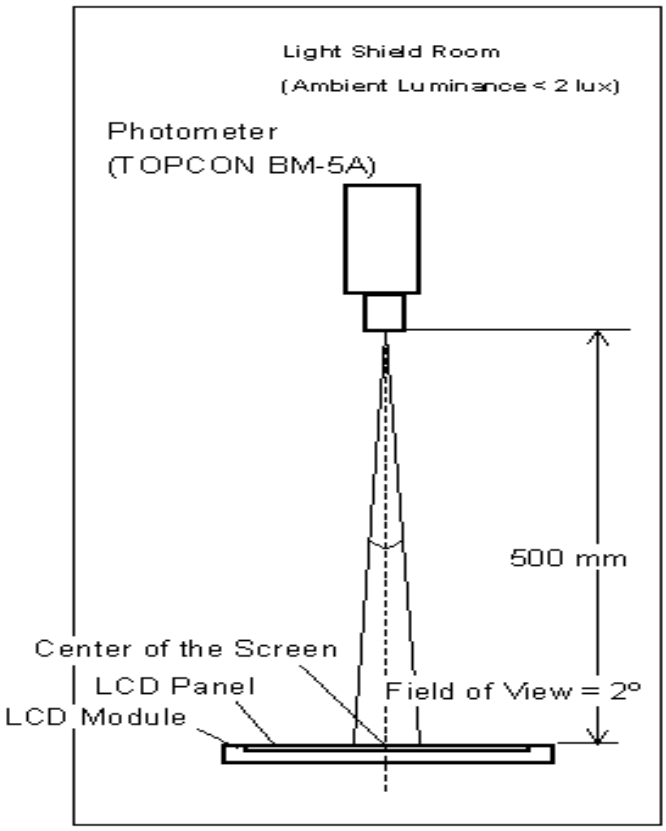
- 22” wide WSXGA+ TFT LCD Panel
- TN Mode Liquid Crystal
- D-SUB/ DVI-D Input
- Audio Function (Optional)
- Support to 75Hz Refresh Rate
- Support VESA-DCC 2B plug & play function
- Support VESA-DPMS & DVI DMPM Power Management Function
- Super Wide Viewing Angle
- High Brightness & Contrast Ratio
- High Brightness & Contrast Angular Dependent
- Fast LC Response Time
- Light Weight

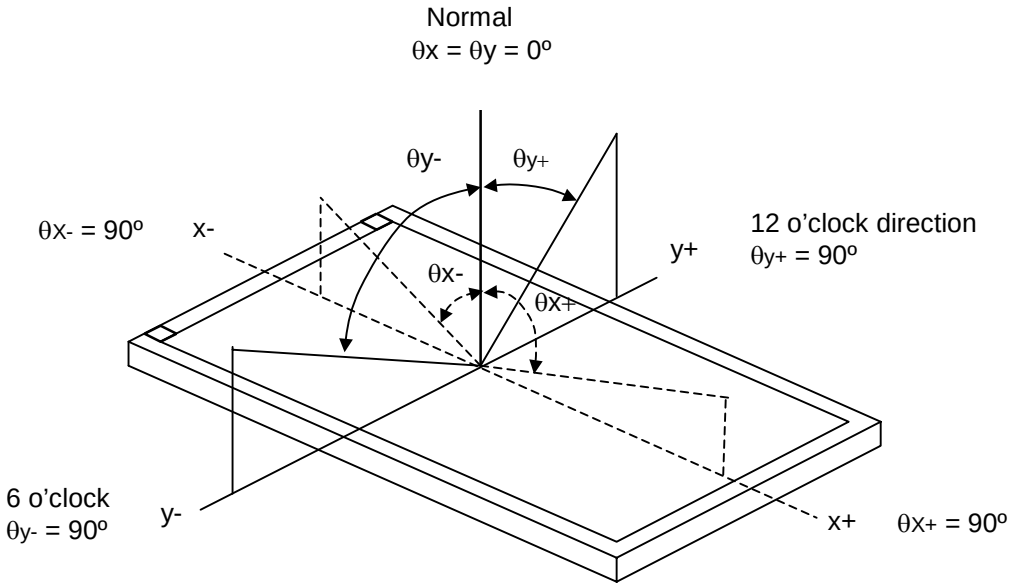
1.3 LCD panel Specification

Technical Specification

Item		Specification	Unit
LCD panel	Active Area	473.76 (H) x 296.1 (V) (22" wide diagonal)	mm
	Driver Element	a-si TFT Active Matrix	-
	Pixel Number	1680 x R.G.B. x 1050	pixel
	Pixel Pitch	0.282 (H) x 0.282 (V)	mm
	Pixel Arrangement	RGB Vertical Stripe	-
	Display Color	16.2M	color
	Transmissive Mode	Normally White	-
	Viewing Angle (H / V)	Typical 170 / 160	degree
	Brightness	Typical 300	cd/m^2
	Contrast Ratio	Typical 700	-
	LC Response Time (Tr+Tf)	5 (Tr: 2 + Tf: 3)	msec
Graphic	Separate Sync.	TTL Level	-
	Horizontal Sync.	Positive / Negative	-
	Vertical Sync.	Positive / Negative	-
	Input Connector	D-Sub mini 15 pins, DVI-D 24 pins	-
Performance	Auto Adjust	Clock, Phase, H Position & V Position	-
	Screen Scaling	VGA/SVGA/XGA/SXGA Full Screen Display	-
	Power Management	VESA DPMS, DVI DMPM, ENERGY STAR® Compliance	-
	Color Adjustment	User, 6500K, 7500K & 9300K	-
	OSD Language	English, French, German, Spanish, Italian, Japanese, Traditional Chinese, Simplified Chinese, Russian, Korean	-
Power source	Supplier (Model No.)	DELTA /DAC-19xxx	
	Power Input	AC100~240 (Worldwide)	V
	Input frequency	50 ~ 60	Hz
	Input Current	1600 (max)	mA
	Efficiency	AC input $100V_{AC}$ 80% (min)	
	Inrush Current (Cold Start at 25℃,Full Load)	120 Max./ $240V_{AC}$ / 50Hz	A
Power consumption	Operation Mode	< 48W (typ.)	W
	Power Saving Sleep Mode	< 2W @230VAC 50Hz	W
	Power Saving OFF Mode	< 1W @230VAC 50Hz	W
Tilt angle	Upward / Downward	20 / 0	degree
Physical	Dimension, weight	532 x 401.5 x 244 (W x H x T) , 4.5	mm, kg
DDC	Plug & Play	DDC 2B Compliance	-
Function	Function key	6keys	-
	Audio Amplifier Output	2W (max.)	W
	Speaker Rating	N.A.	W

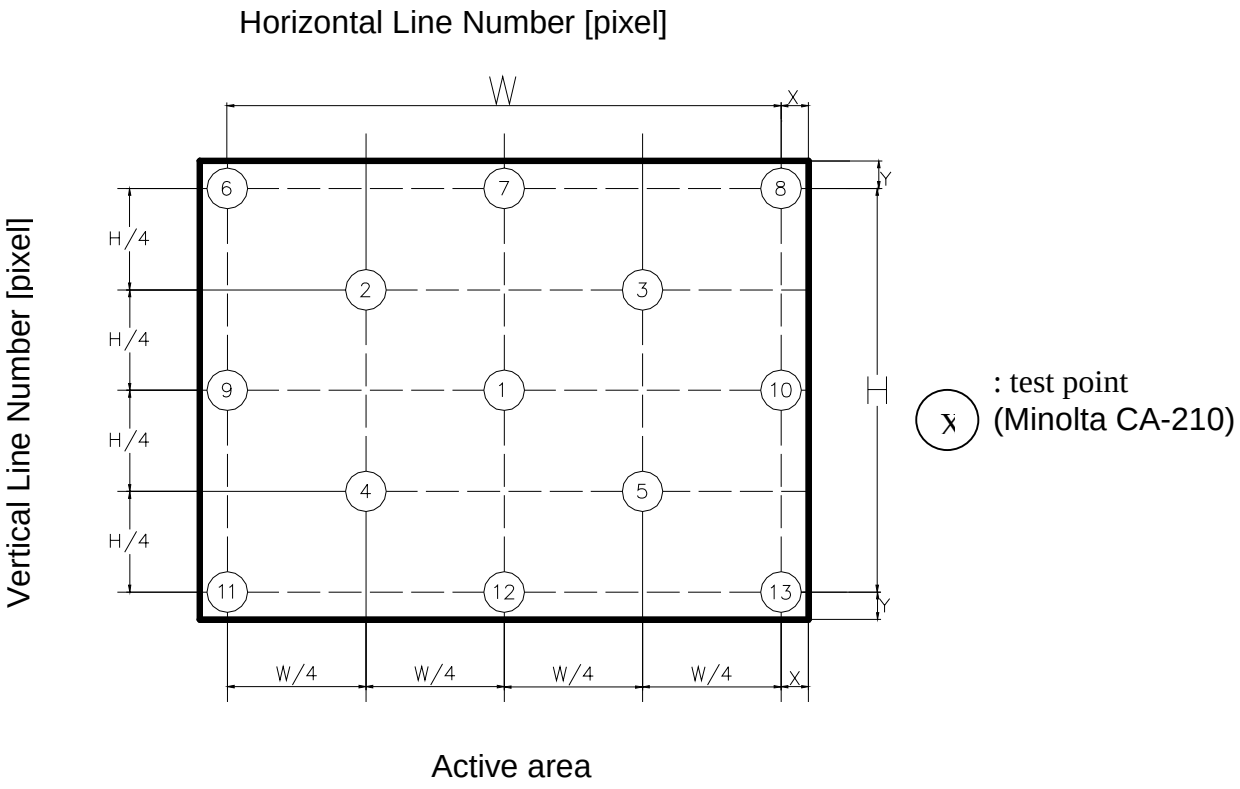
(1) Definition of Viewing Angle (θx, θy):





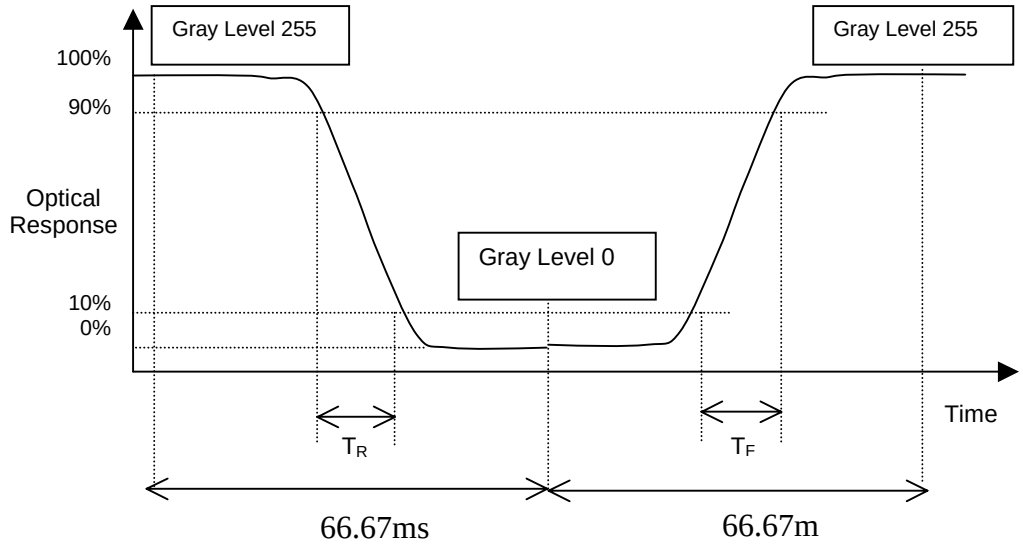
(2) Definition of Contrast Ratio (CR):

The contrast ratio can be calculated by the following expression and figure below.
Contrast Ratio (CR) = L255 / L0
L255: Luminance of gray level 255
L 0: Luminance of gray level 0
CR = CR (1)
CR (X) is corresponding to the Contrast Ratio of the point X at Figure in Note (5).



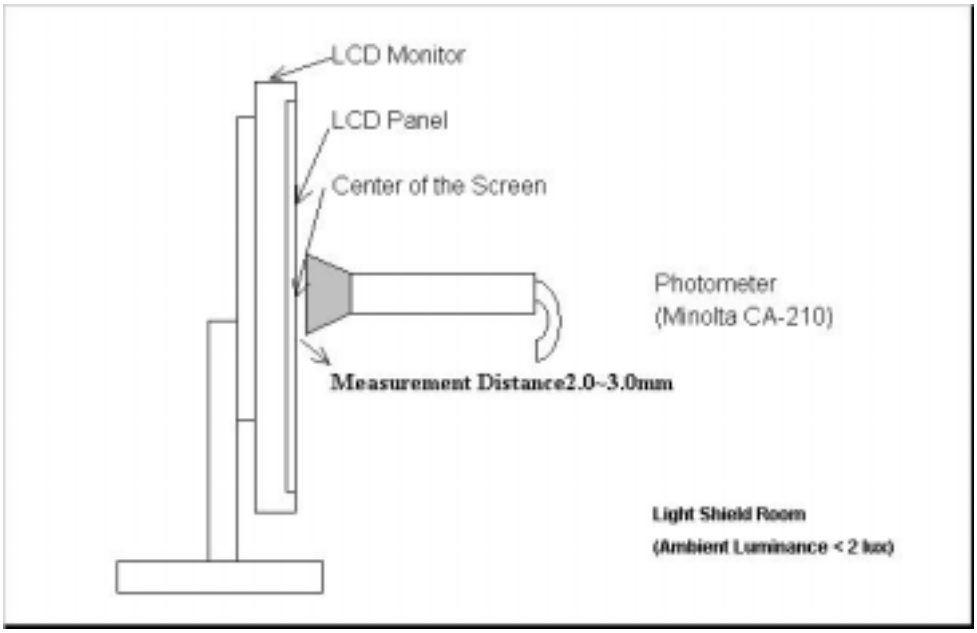
The position of measuring area corner: X=10.0mm ; Y=10.0mm
Luminance of center point: L=L(1)
Brightness Uniformity Measurement points: Thirteen specified points 1-13
Formula: Maximum [L (1), L (2), L (3), L (4), L (5), L (6), L (7), L (8), L (9), L (10), L (11), L (12), L (13)]/Minimum [L (1), L (2), L (3), L (4), L (5), L (6), L (7), L (8), L (9), L (10), L (11), L (12), L (13)]

(3) Definition of Response Time (T_R, T_F) and Measurement Method:



(4) Luminance, Chromaticity and CCT Measurement

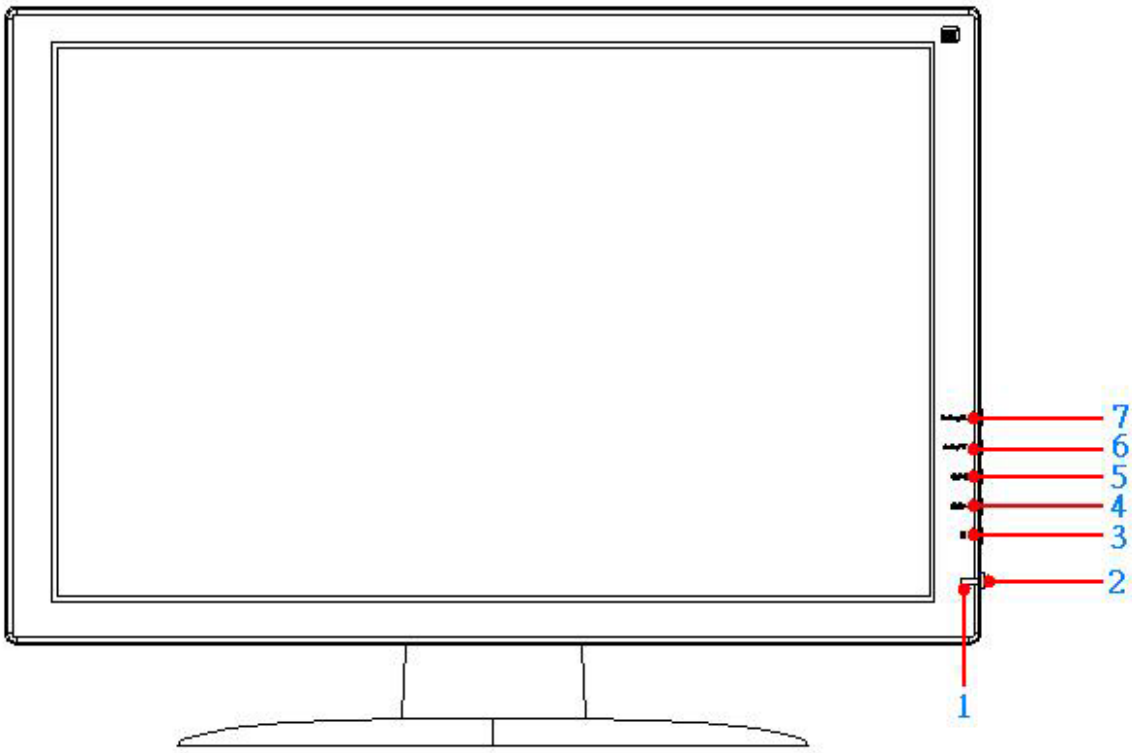
The LCD module should be stabilized at given temperature for 20 minutes to avoid abrupt temperature change during measuring. In order to stabilize the luminance, the measurement should be executed after lighting Backlight for 20 minutes in a windless room.



Chapter 2

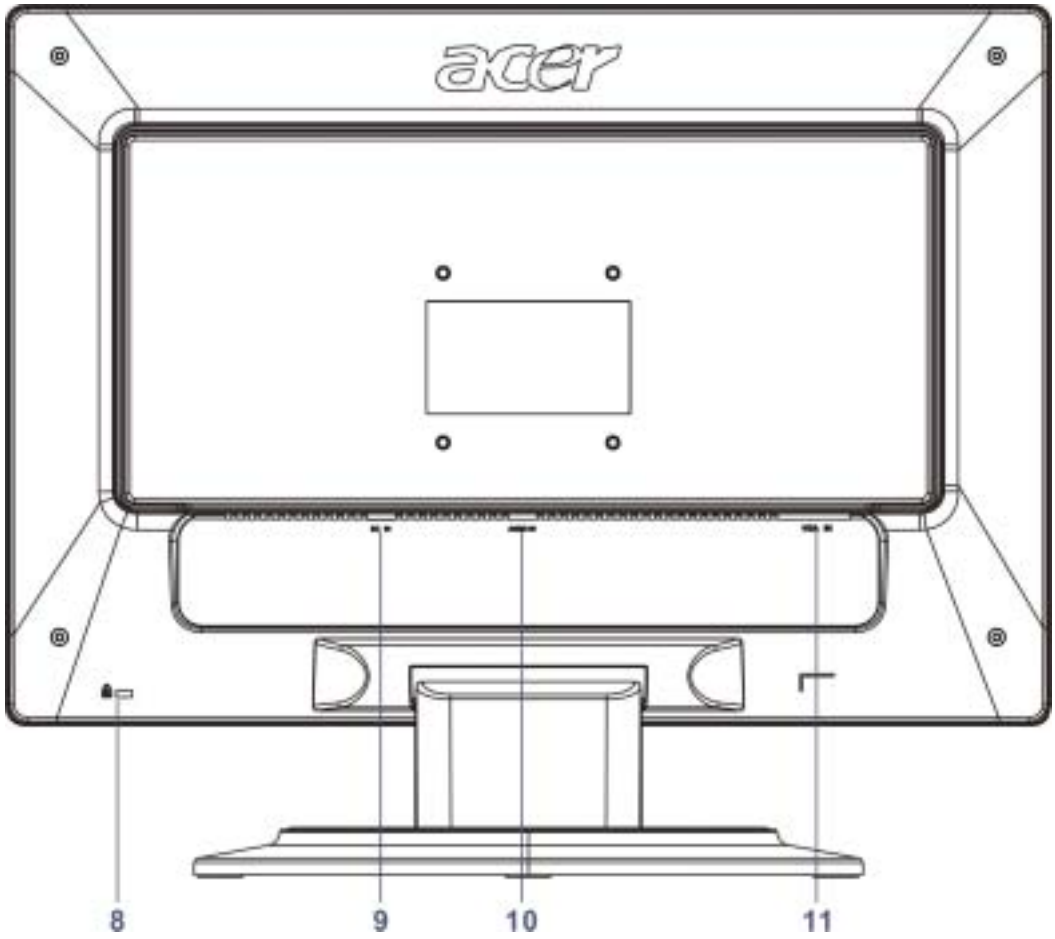
2.1 Function Name

2.1.1 Front



No.	Key		Descriptions
1`	LED Indicator	Green	Normal operation
		Orange	Power Management
2	⏻		Power on ／ Power off
3	☰		OSD control MENU button/Access Main/Sub-menu/Quick Menu Selection
4	☼/▶		＋/QUICK MENU Access (Brightness, Contrast and Volume)
5	◑/◀		－/QUICK MENU Access (Brightness, Contrast and Volume)
6	Auto/▼		Adjust Clock, Phase, H Position and V Position automatically / Exit
7	Turbo /▲		D-Sub, DVI Input Source Selection/Turbo Brightness Switch

2.1.2 Back



No.	Name	Descriptions
8	D-Sub	D-sub mini 15pin Connector
9	DVI-D	DVI-D 24pin Connector
10	AC-IN	AC Power Jack
11	Lock hole	Kensington

2.2 OSD Menu Description

1. **Power:** Press this key to control power ON/OFF of the Monitor.
   Green: normal display.
   Orange flicker: no signal input.
   Orange: power off.

2. **Auto/Exit:** When the input signal source is PC, used to execute auto adjustment
   >: Press this button for selection or adjustment when OSD is shown.

3. **+/☼ :** Used to select the OSD function; when there is OSD menu, used to increase function value.
   Enter brightness control function directly when there is no OSD menu.

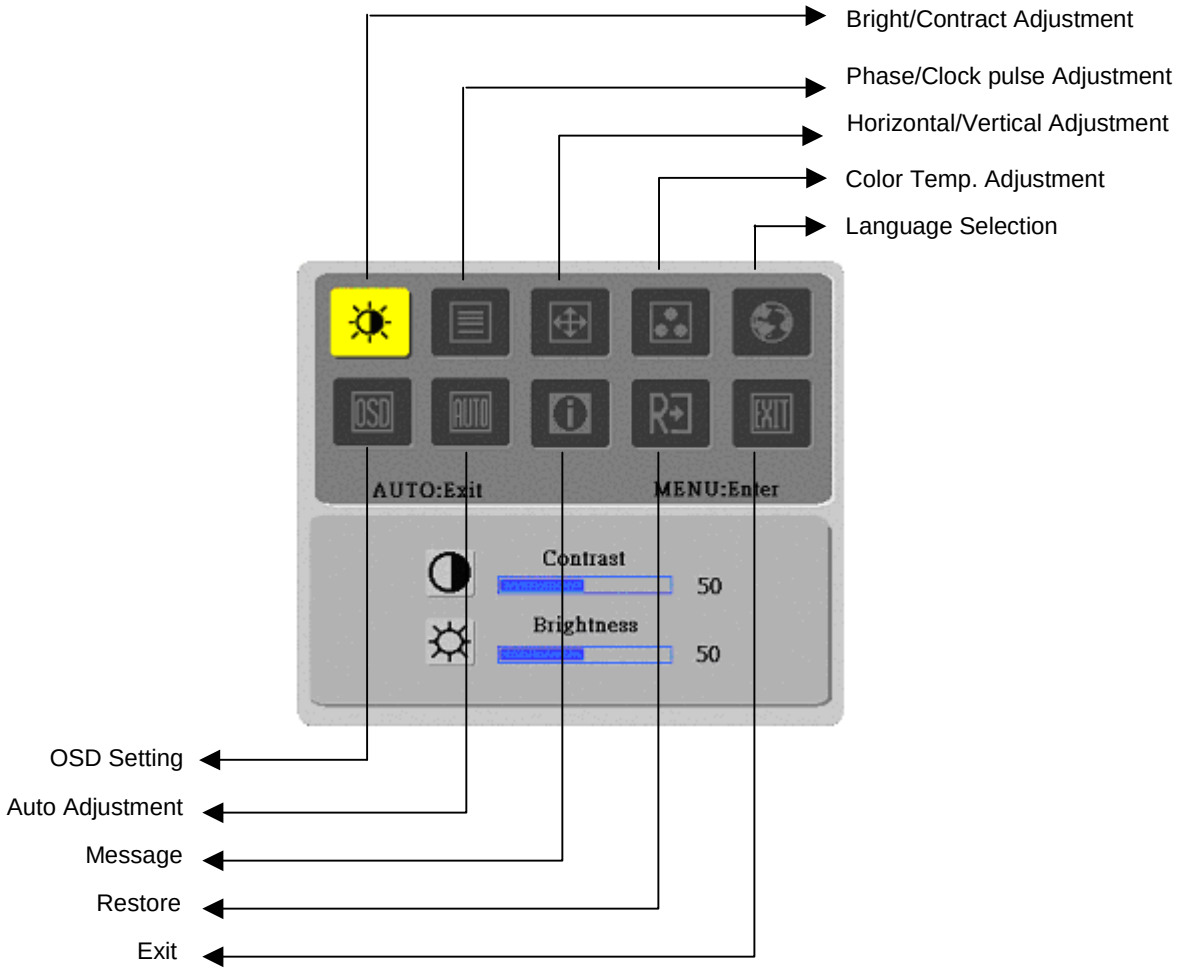
4. **—/◑:** Used to select the OSD function; when there is OSD menu, used to decrease function value.
   Enter contract control function directly when there is no OSD menu.

6. **Menu**: Use to display OSD menu; when there is OSD menu, used to execute OSD function or enter next layer of OSD menu; if executing OSD function, exit OSD function and save the value adjusted.

2.3 OSD Control

1. Click MENU to display the OSD window as shown in the following figure.
2. Click < or > to select the function to be adjusted as shown in the following figure.
3. Click the MENU to select the function to be adjusted.
4. Click < or > to change current settings.
5. To exit OSD, select "EXIT" to close the OSD window and save changes. To change other settings, repeat steps 2-4.

2.4 OSD Menu Screen



- The OSD disappears several seconds after you stop pressing the buttons while performing an adjustment.
- Any changes are automatically saved in the memory when the OSD disappears. Turning off the power should be avoided while using the menu.
- Adjustments for clock, phase and positions are saved for each signal timing. Except for these adjustments, all other adjustments have only one setting, which applies to all signal timings.
- The color will change from white to pink while the function is selected.

2.5 OSD Function Definition

Primary Directory Symbol	Secondary Directory Symbol	Secondary Directory Items	Description
		Contrast	Adjust the contrast between the foreground and background of an image on the screen
		Brightness	Adjust the background brightness of the screen
		Phase	Adjust the focus of the image (for analog input adjustment only)
		Clock Pulse	Adjust the clock pulse of the image (for analog input adjustment only)
		Horizontal	Move the image left and right on the screen (for analog input adjustment only)
		Vertical	Move the image up and down on the screen (for analog input adjustment only)
	N/A	Warm Color Temp.	Set up the color temp. to be warm white color
	N/A	Cold Color Temp.	Set up the color temp. to be cold white color
		User Definition/Red	Adjust red/green/blue gain
		User Definition/Green	
		User Definition/Blue	
	N/A	**English**	Select the language you want
	N/A	**繁體中文**	
	N/A	**Deutsch**	
	N/A	**Francis**	
	N/A	**Espanola**	
	N/A	**Italian**	
	N/A	**简体中文**	
	N/A	**日本語**	
		Horizontal	Move OSD left and right
		Vertical	Move OSD up and down
		OSD Time Display	Adjust OSD time display settings
	N/A	Auto Adjustment	Set up horizontal, vertical, sequence and focus automatically (for analog input only)
	N/A	Analog Digital	Select the input source you want (for DVI Input only)
	N/A	Message	Display resolution, H/V frequency and the input port used for current input timing function
	N/A	Restore	Restore to factory settings
	N/A	Exit	Close the OSD window and save changes

2.6 Plug and Play

- The new **VESA Plug and Play** function is used which eliminates the complicated and time-consuming installation process.

- You can use the **Plug and Play** system without encountering usual installation problems. Your computer system can easily identify and automatically adjust the monitor.
- The LCD Monitor uses **Display Data Channel (DDC)** to send **Extended Display Identification Data (EDID)** to the computer system, so the computer system can be set to monitor auto adjust.

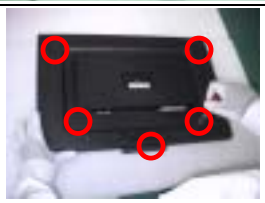
2.7 Power Saver

- Power control system, also called **(Power Saver)**, is installed inside the LCD Monitor.
- If the monitor has not been used for a certain period of time, the system will turn the monitor to low voltage mode to save power. Slight moving or any click will return to the original image.
- The VGA card inside the computer handles ***Power Saver***. You can use computer software to set the function.
- The LCD Monitor is compatible with EPA ENERGY STAR and NÜTEK if used with a VESA DPMS computer.
- To save power, turn off the power of the LCD monitor when not in use.

MACHINE DISASSEMBLY AND ASSEMBLY

Chapter 3

3.1 Disassembly Procedures

Picture	Description
	Push the hooks and stand bottom away
	Remove Hinge Cover
	Loosen and remove 4 screws to remove Stand Assay
	Completed
	Loose and remove 5 screws.
	Separate Bezel hooks to take Bezel and Rear Cover Apart.
	Lift up Rear Cover

	Completed
	Remove FFC
	Lift up LCD module and remove bezel.
	Completed
	Loose and remove 2 screws
	Remove Cover AD
	Completed
	Loose and remove 2 screws

	Remove 4 pieces of Backlight wires.
	Loose and remove 4 screws
	Loose and remove 2 screws
	Remove the PCBA Cover
	Completed
	Loose and remove 4 screws
	Remove Lips Board
	Completed

	Remove 2 pieces of FFC from AD PCBA and Backlight
	Loose and remove 4 screws
	Remove FFC
	Remove AD PCBA
	Completed
	Separate OSD PCBA.
	Take OSD PCBA apart

3.2 Assembly Procedures

	Place OSD PCBA.
	Push OSD PCBA
	Place LCD module
	Insert new AD PCBA
	Insert a piece of FFC to AD PCBA
	Fasten 4 fixed screws of AD PCBA
	Insert 2 pieces of FFC to AD PCBA and Backlight

	Completed
	Insert new Lips Board
	Fasten 4 fixed screws of Lips Board
	Completed
	Join the PCBA Cover
	Fasten 2 screws
	Fasten 4 screws
	Insert 4 pieces of Backlight wires.

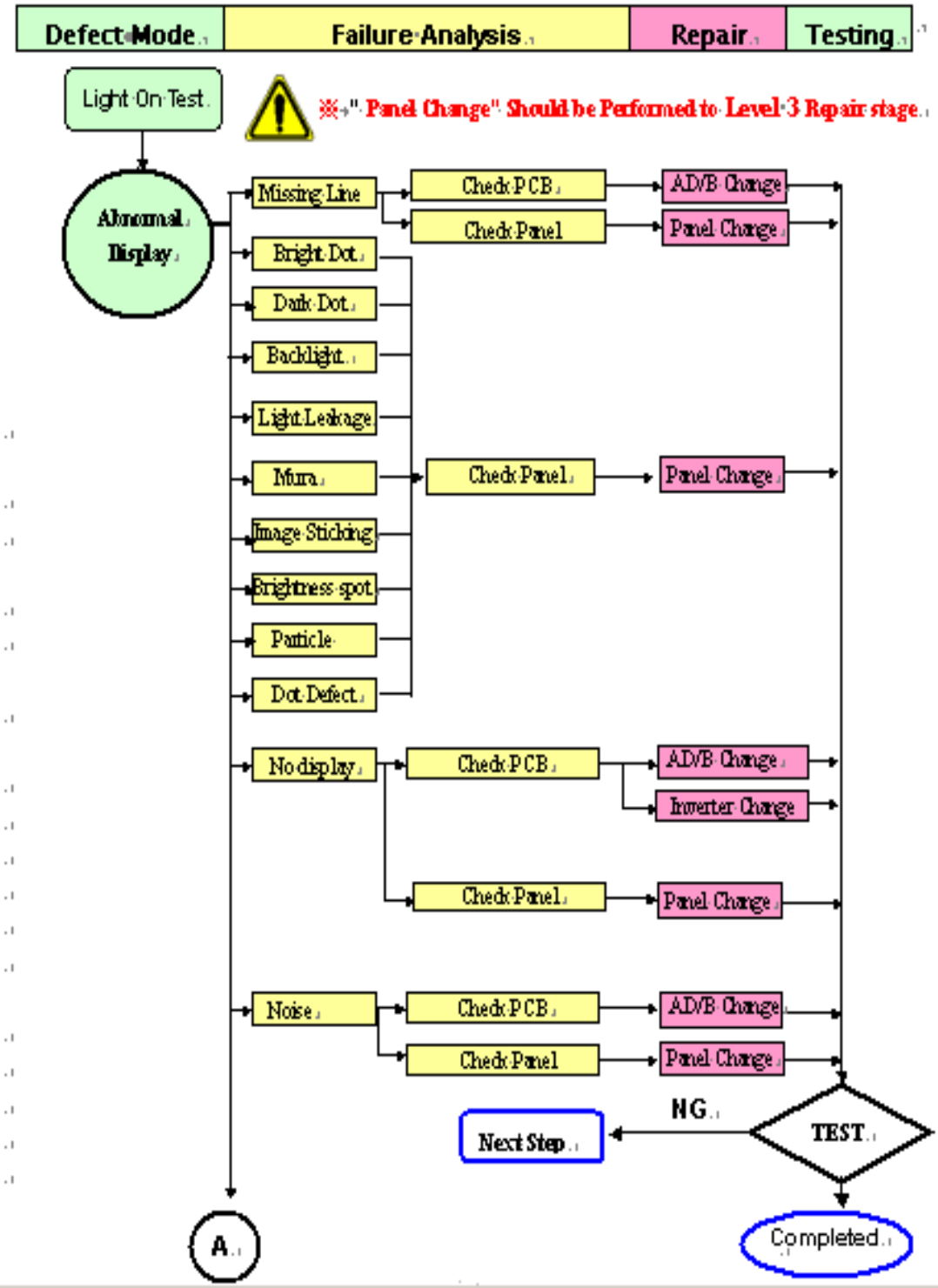
	Fasten 2 screws
	Completed
	Join hooks of Cover AD with Bezel
	Fasten 2 screws
	Completed
	Place LCD module to LCD Bezel.
	Insert a piece of FFC to OSD Board
	Completed

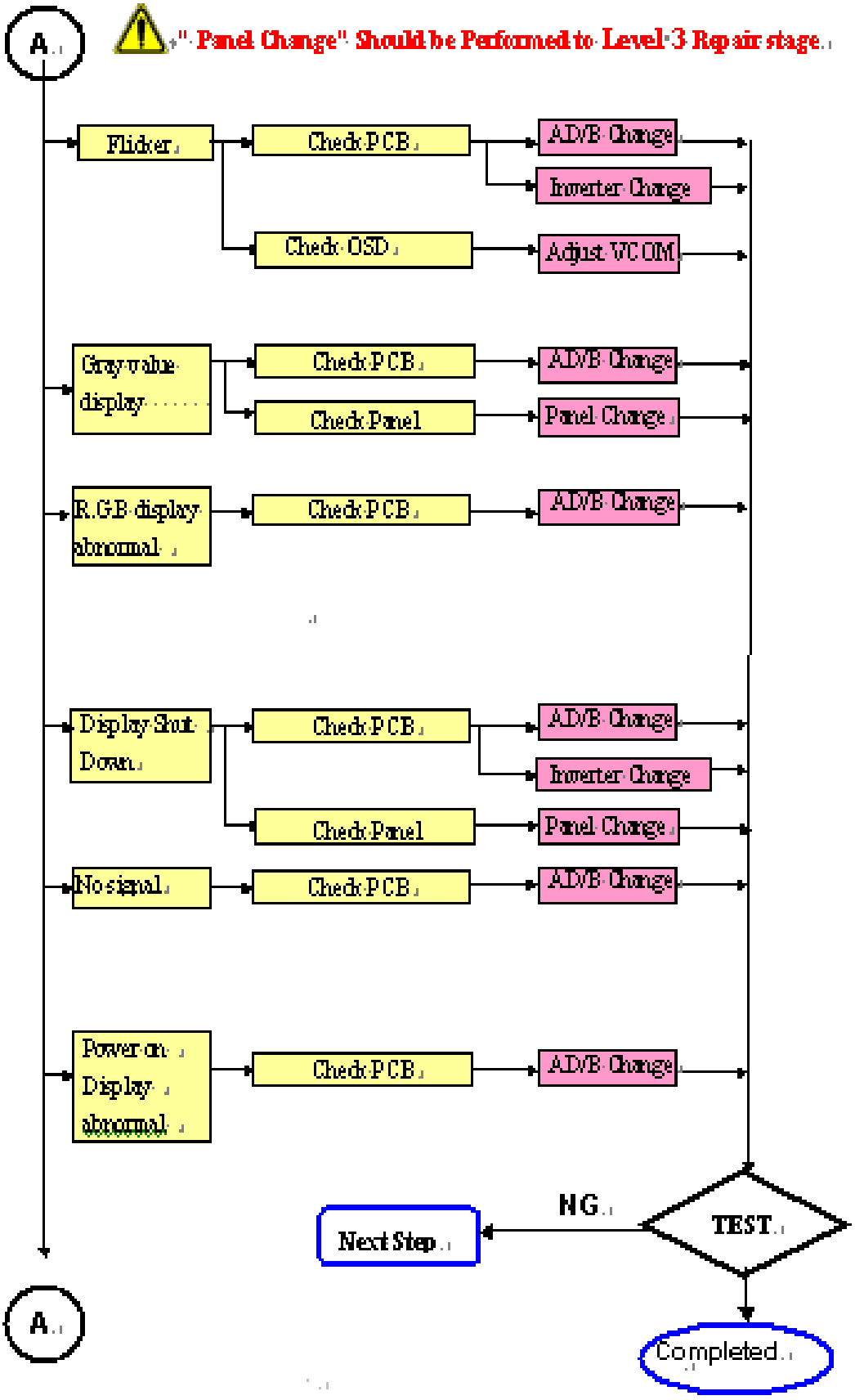
	Join hooks of Rear Cover with Bezel
	Fasten 5 screws
	Completed
	Place Stand Assay and fasten 4 screws
	Insert Stand Cover
	Have the hook latched

Troubleshooting

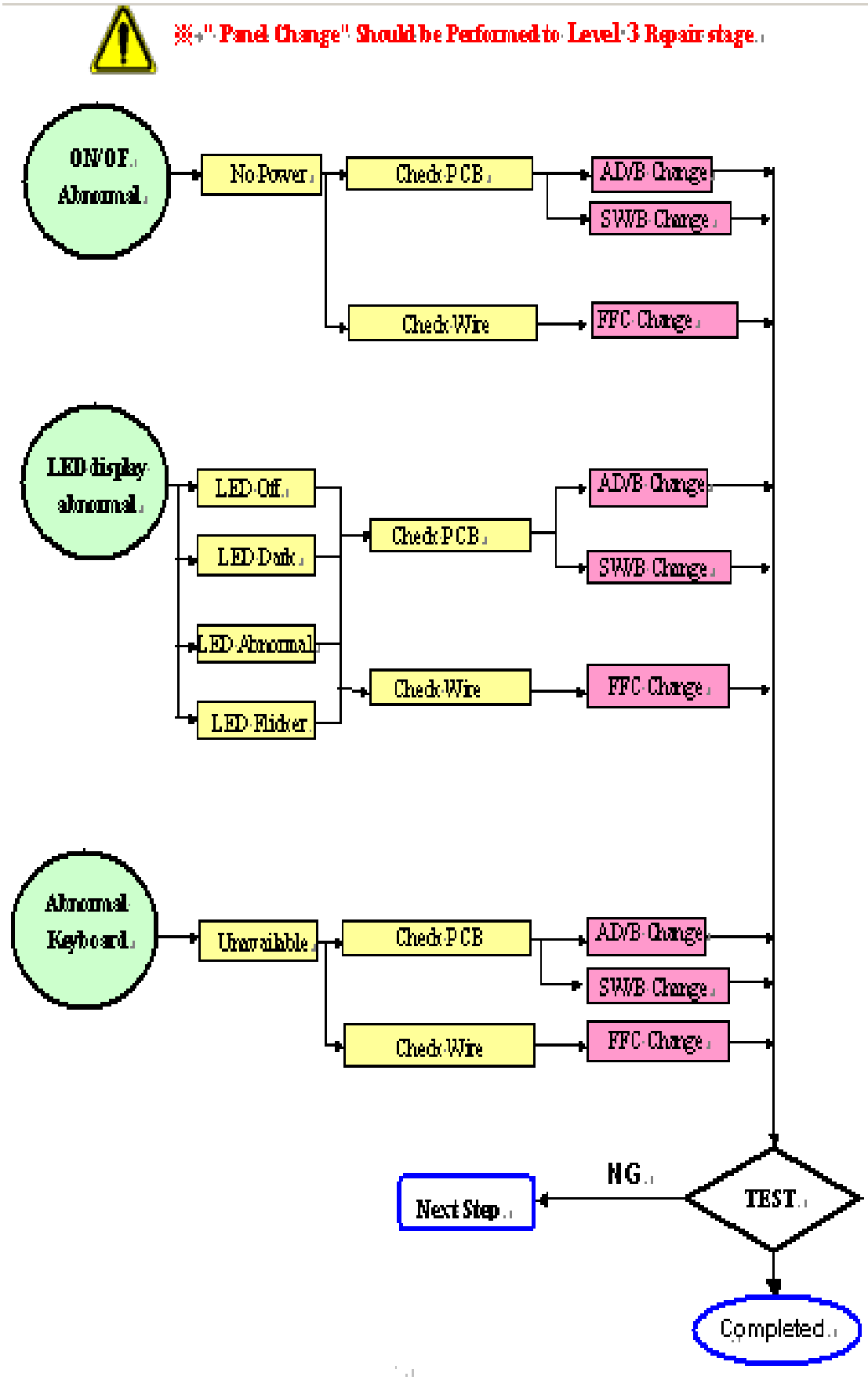
Chapter 4

4.1 Abnormal Display Troubleshooting

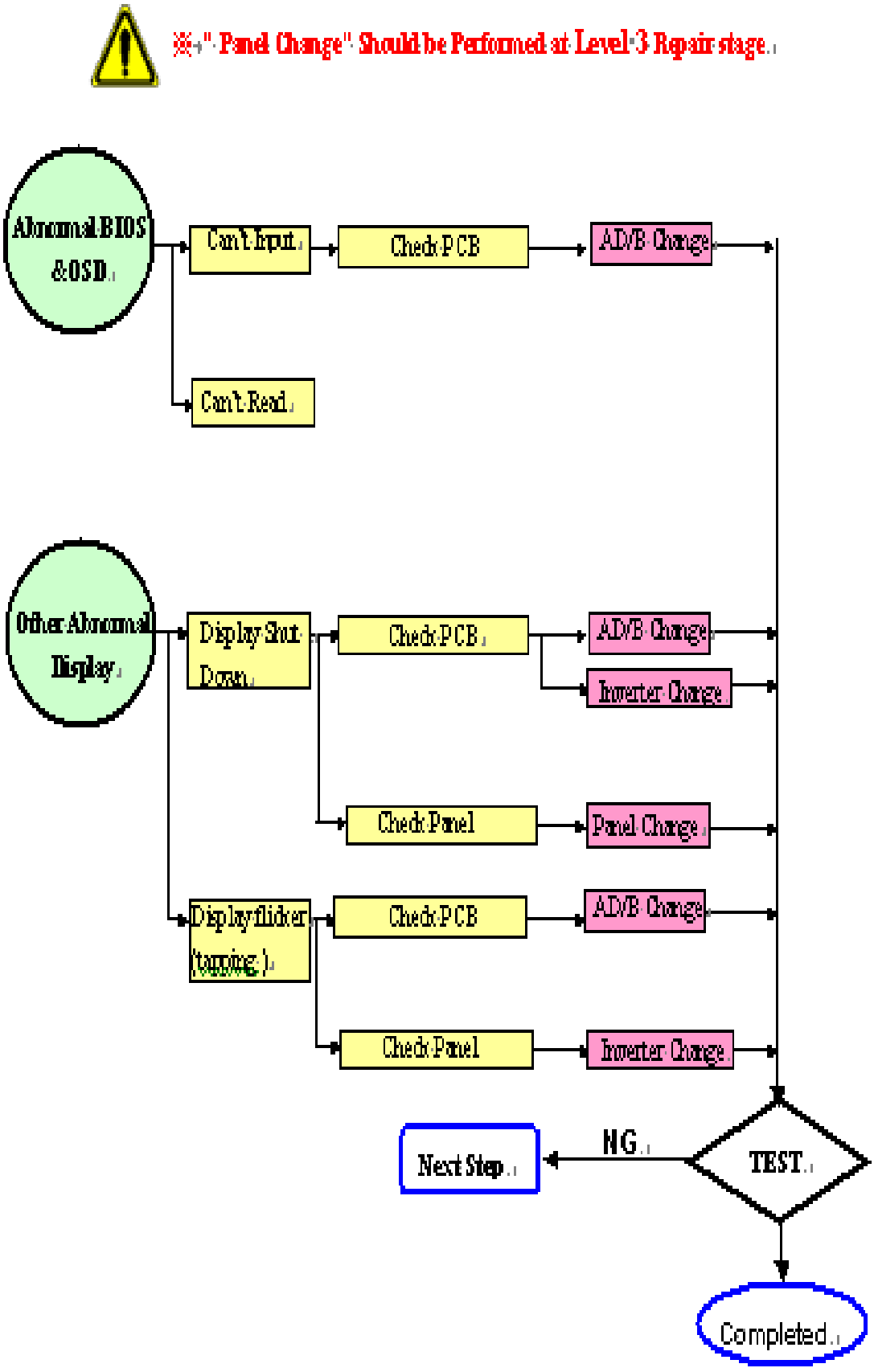



A
" Panel Change" Should be Performed to Level 3 Repair stage.
Flicker
Check PCB
A/B Change
Inverter Change
Check OSD
Adjust VCOM
Gray value display
Check PCB
A/B Change
Check Panel
Panel Change
R.G.B display abnormal
Check PCB
A/B Change
Display Shut Down
Check PCB
A/B Change
Inverter Change
Check Panel
Panel Change
No signal
Check PCB
A/B Change
Power on Display abnormal
Check PCB
A/B Change
TEST
NG
Next Step
Completed
A

4.2 Abnormal (ON/OFF, LCD display, Keyboard) Troubleshooting

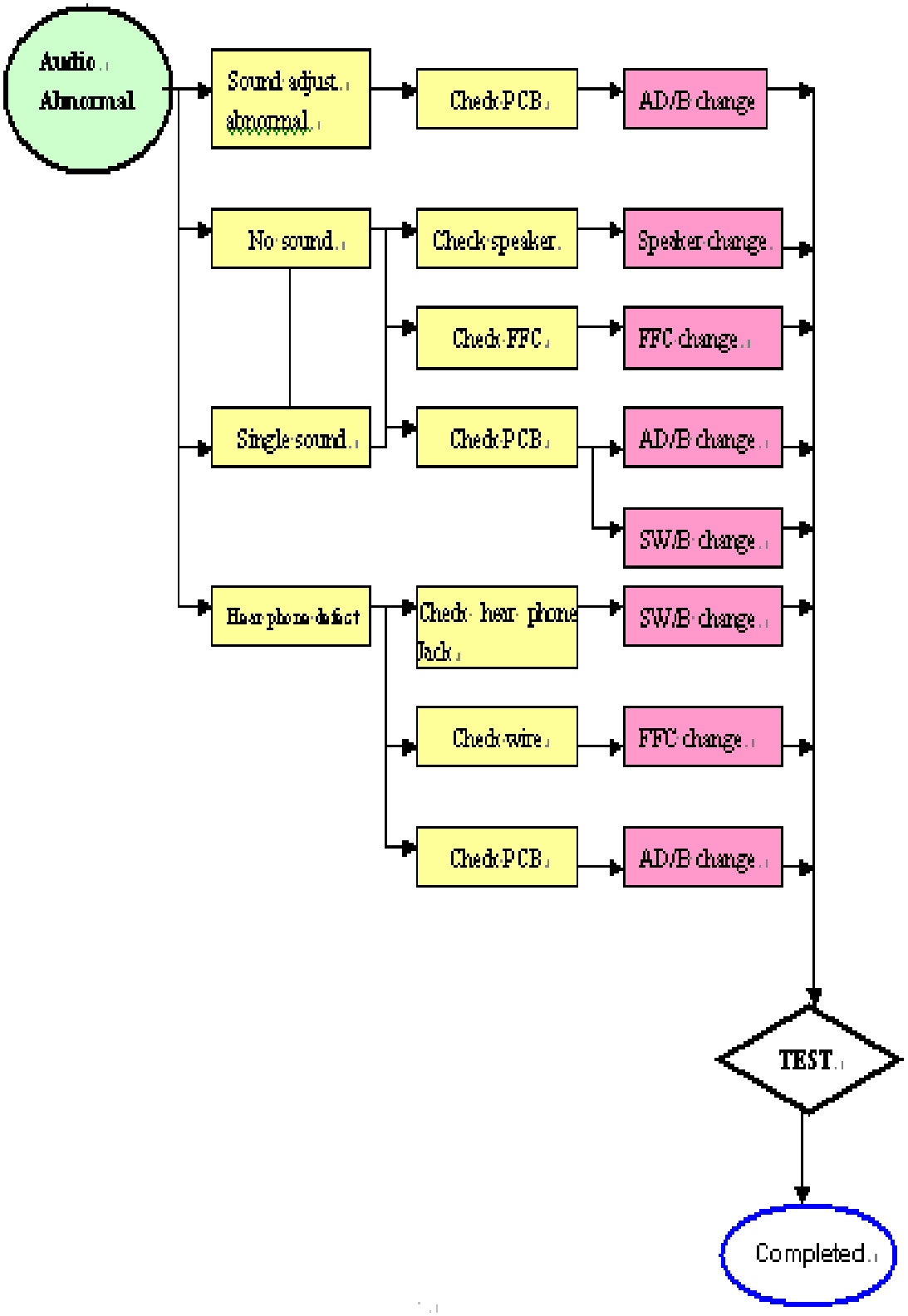


4.3 Abnormal (BIOS, OSD, Other Display) Troubleshooting



4.4

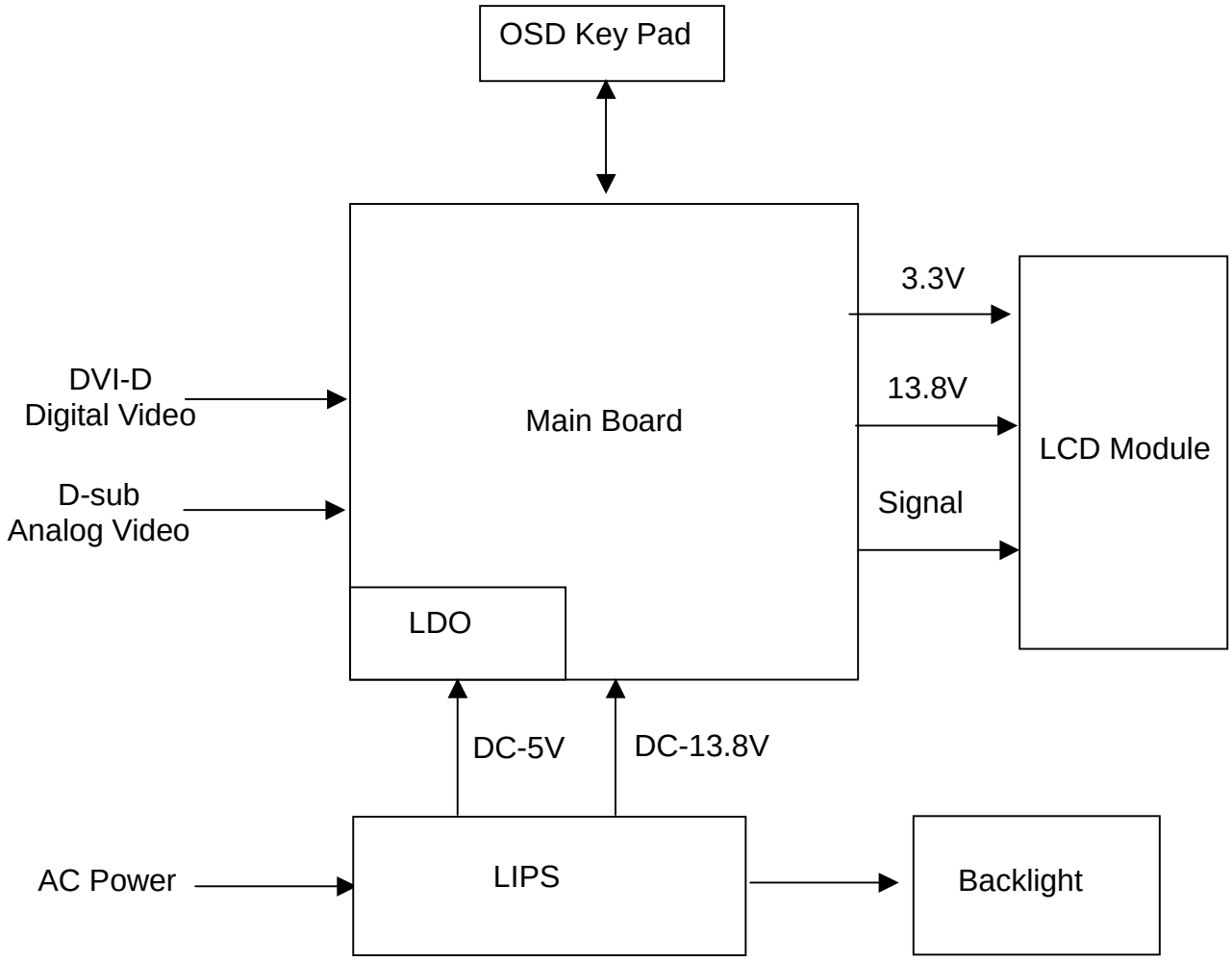
※+" Panel Change" Should be Performed at Level 3 Repair stage.



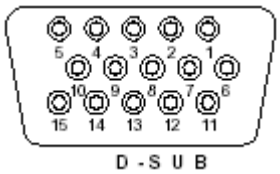
Connector Information

Chapter 5

5.1 Function Block Diagram



5.2 D-sub mini 15pin Connector



D - S U B

Pin No.	Pin Function	Pin No.	Pin Function
1	Red video input	9	NC
2	Green video input	10	Ground
3	Blue video input	11	No connection
4	NC	12	(SDA)
5	Ground	13	Horizontal sync (Composite sync)
6	Red video ground	14	Vertical sync
7	Green video ground	15	(SCL)
8	Blue video ground		

5.3 DC Connector

DC Power Jack, d=3.0mm

5.4 Audio Connector

Phone Jack, d=3.5mm

FRU (Field Replaceable Unit) List

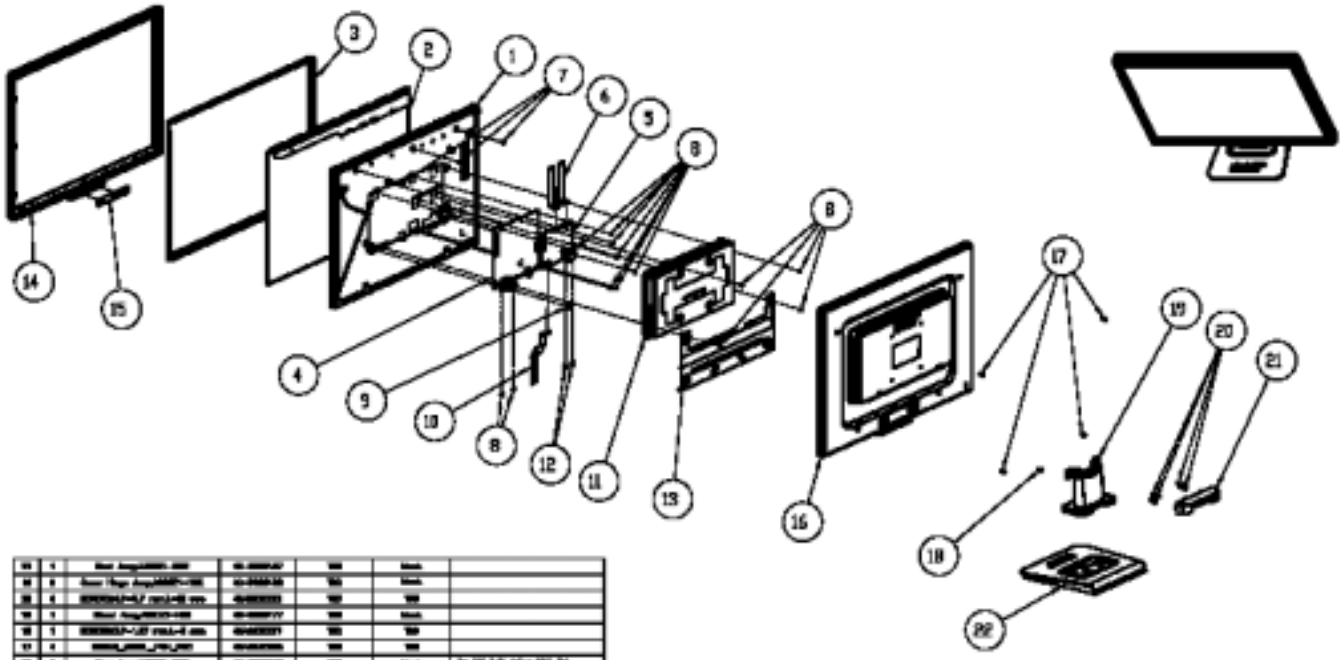
Chapter 6

Part List

Picture	Part name	Description	Vendor Part No.
	FUNCTION BUTTON BOARD	PCBA FOR ,A190A2-H,A190A2-H-K2,106-02,REV.01	35-D003068
	Lips	Lips Without Audio, DAC-19M009 BF	27-D008552
	Main Board	PCBA for ,A220Z1-Z01-H,A170E2-E03-H-S6,1101-01,Rev.04	35-D007790
	CABLES	FFC,15 Pins, A220Z1-H02,OSD_FFC	32-D009095
	CABLE	FFC,CFC2128/862P060068D,36 Pins	32-D008479
	MONITOR CABLE	Accessory Cable,D-Sub,BLACK	32F3018003

Picture	Part name	Description	Vendor Part No.
	STAND BASE	Stand Assy,A220Z1-H02,	40-D009177
	LCD FRONT BEZEL	Bezel Assy,A220Z1-H02	40-D009188
	LCD BACK COVER	Rear Assy,A220Z1-H02	40-D009181
	LCD STAND NECK	Stand Assy,A220Z1-H02	40-D009177
	Hinge Cover	Cover Hinge Assy,A220Z1-H02	40-D009185
	Support Plate	Support Plate,A220Z1-H02	41-D009178
	Cover AD	Cover AD Assy,A190A2	41-D008025

The Table of Explosion Diagram

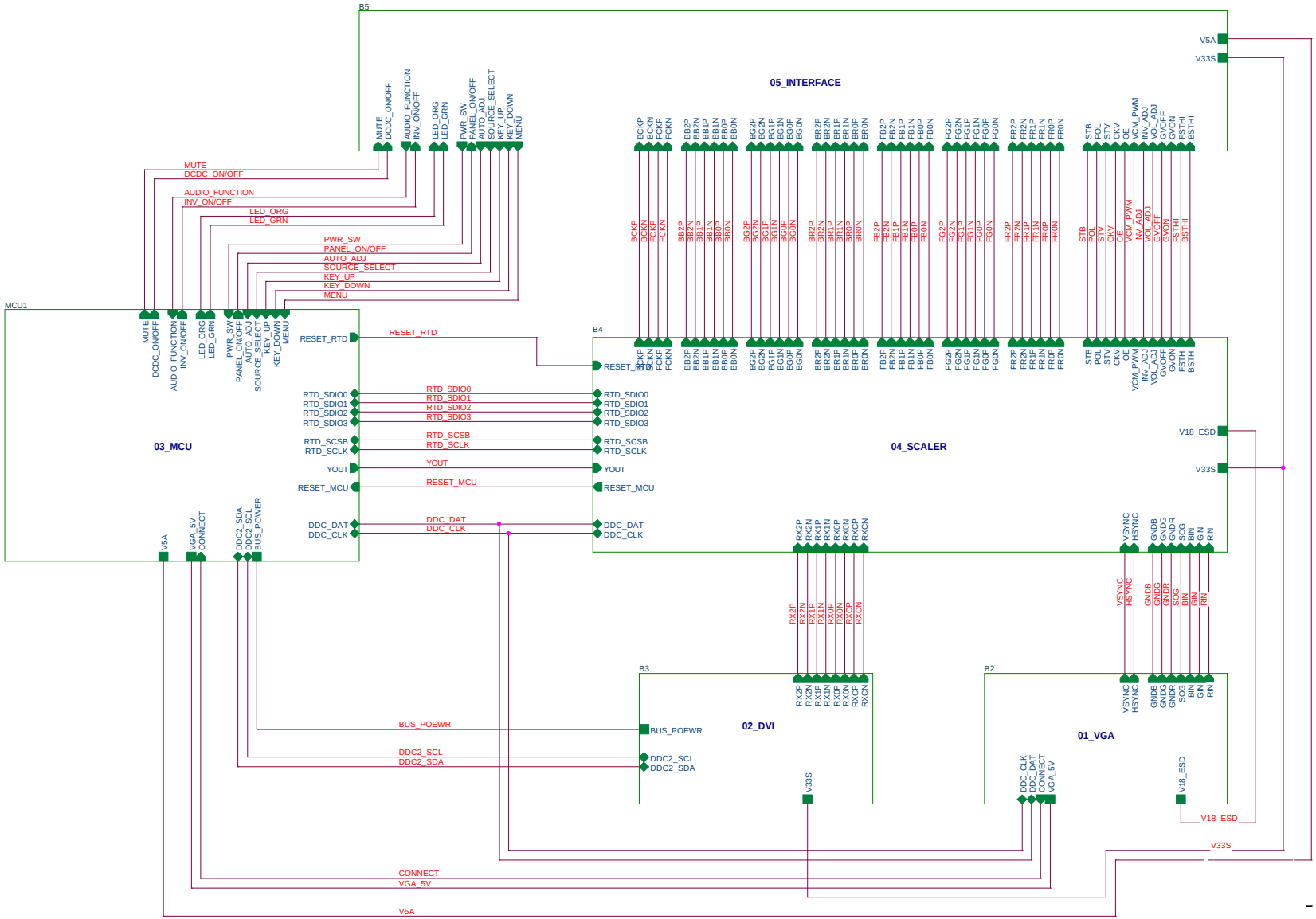


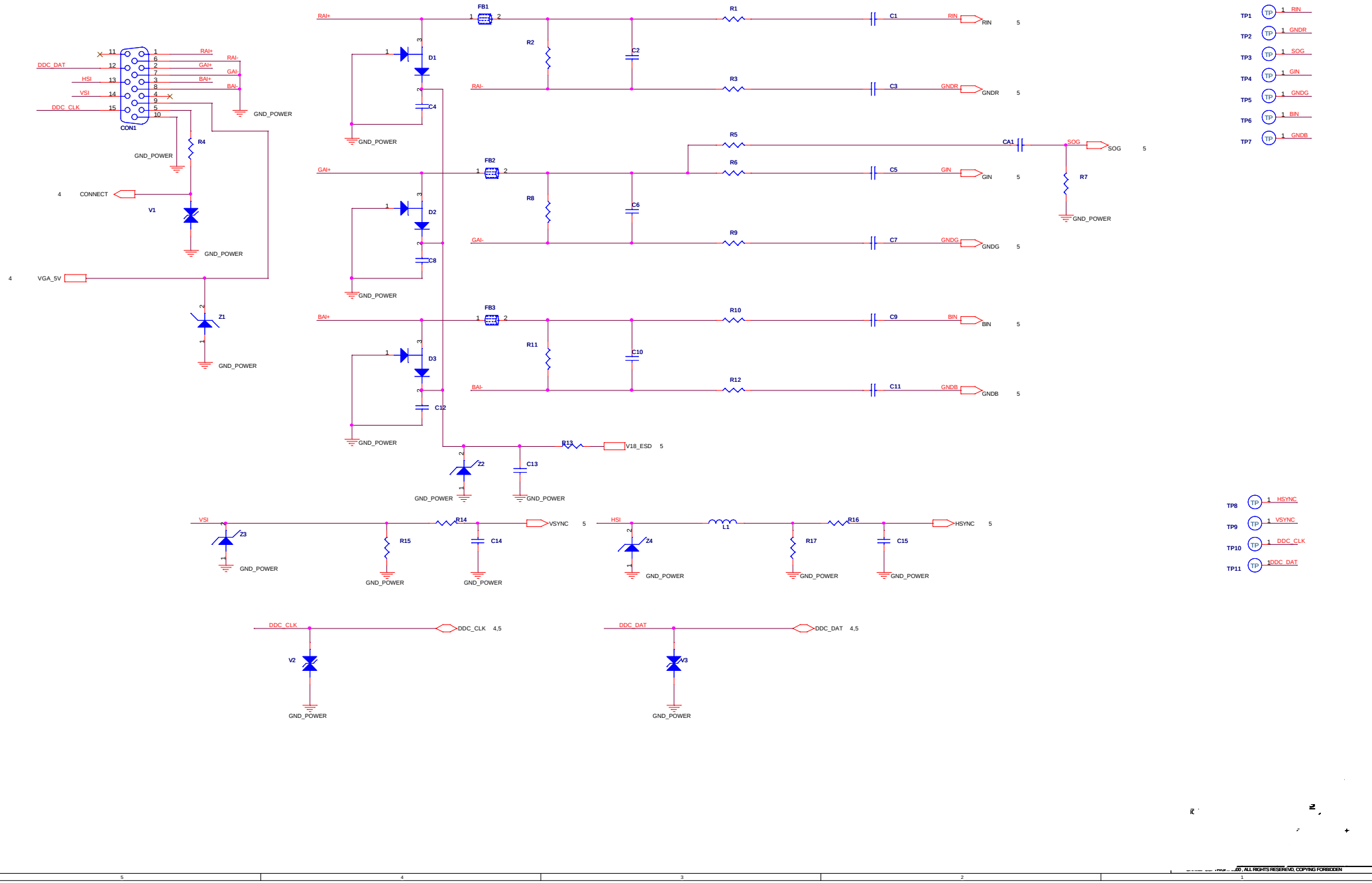
22	1	[illegible]	[illegible]	[illegible]	[illegible]	
21	1	[illegible]	[illegible]	[illegible]	[illegible]	
20	1	[illegible]	[illegible]	[illegible]	[illegible]	
19	1	[illegible]	[illegible]	[illegible]	[illegible]	
18	1	[illegible]	[illegible]	[illegible]	[illegible]	
17	1	[illegible]	[illegible]	[illegible]	[illegible]	
16	1	[illegible]	[illegible]	[illegible]	[illegible]	
15	1	[illegible]	[illegible]	[illegible]	[illegible]	
14	1	[illegible]	[illegible]	[illegible]	[illegible]	
13	1	[illegible]	[illegible]	[illegible]	[illegible]	
12	1	[illegible]	[illegible]	[illegible]	[illegible]	
11	1	[illegible]	[illegible]	[illegible]	[illegible]	
10	1	[illegible]	[illegible]	[illegible]	[illegible]	
9	1	[illegible]	[illegible]	[illegible]	[illegible]	
8	1	[illegible]	[illegible]	[illegible]	[illegible]	
7	1	[illegible]	[illegible]	[illegible]	[illegible]	
6	1	[illegible]	[illegible]	[illegible]	[illegible]	
5	1	[illegible]	[illegible]	[illegible]	[illegible]	
4	1	[illegible]	[illegible]	[illegible]	[illegible]	
3	1	[illegible]	[illegible]	[illegible]	[illegible]	
2	1	[illegible]	[illegible]	[illegible]	[illegible]	
1	1	[illegible]	[illegible]	[illegible]	[illegible]	
Item	QTY	Part Name	Part Number	Material	Color	Remark

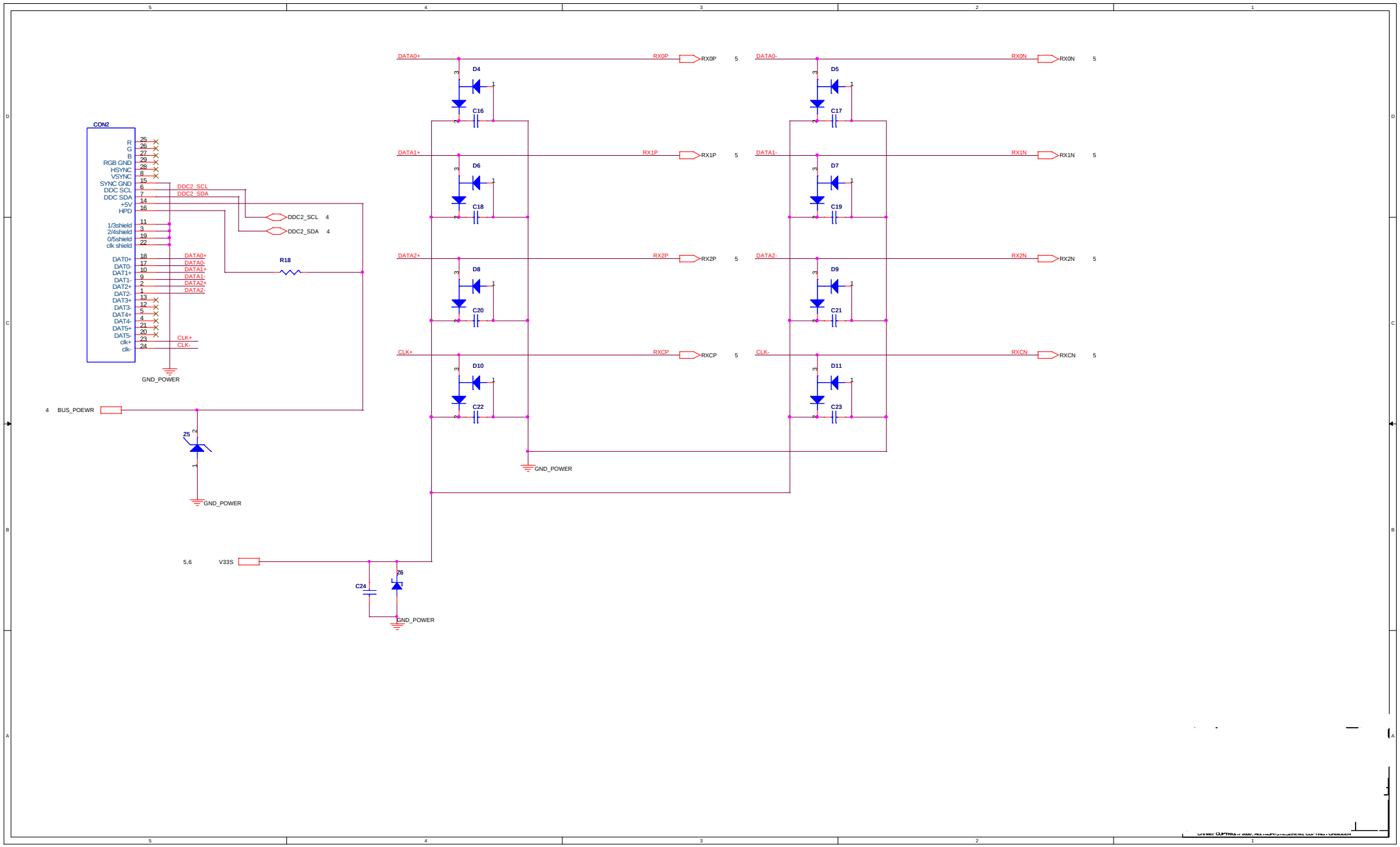
Item	Parts Name	Q'ty
1	Backlight Unit, A220Z1	1
2	PANEL_ASSY_A220Z1-L01	1
3	Metal Frame Front,M220Z1-L01	1
4	Lips Without Audio	1
5	PCBA for,A220Z1-Z01-T	1
6	FFC,CFC2128/862P060068D,36 Pins	2
7	SCREW,M3,P=0.5mm, L=2.5mm	3
8	SCREW,M3,P=0.5mm, L=4mm	13
9	SCREW,M4 ,P=0.7mm, L=8mm	1
10	FFC,15Pins,A220Z1-H02,OSD	1
11	Cover AD Assy,A190A2	1
12	SCREW,M4 ,P=0.7mm, L=11.8mm	2
13	Support Plate,A220Z1-H02	1
14	Bezel Assy,A220Z1-H02	1
15	PCBA for ,A190A2-H-K2	1
16	Rear Assy,A220Z1-H02	1
17	SCREW_M3*8L_PWH_PHC	4
18	SCREW,M3 ,P=1.27mm, L=8mm	1
19	Stand Assy,A220Z1-H02	1
20	SCREW,M4 ,P=0.7mm, L=15mm	4
21	Cover Hinge Assy,A220Z1-H02	2
22	Seat Assy,A220Z1-H02	1

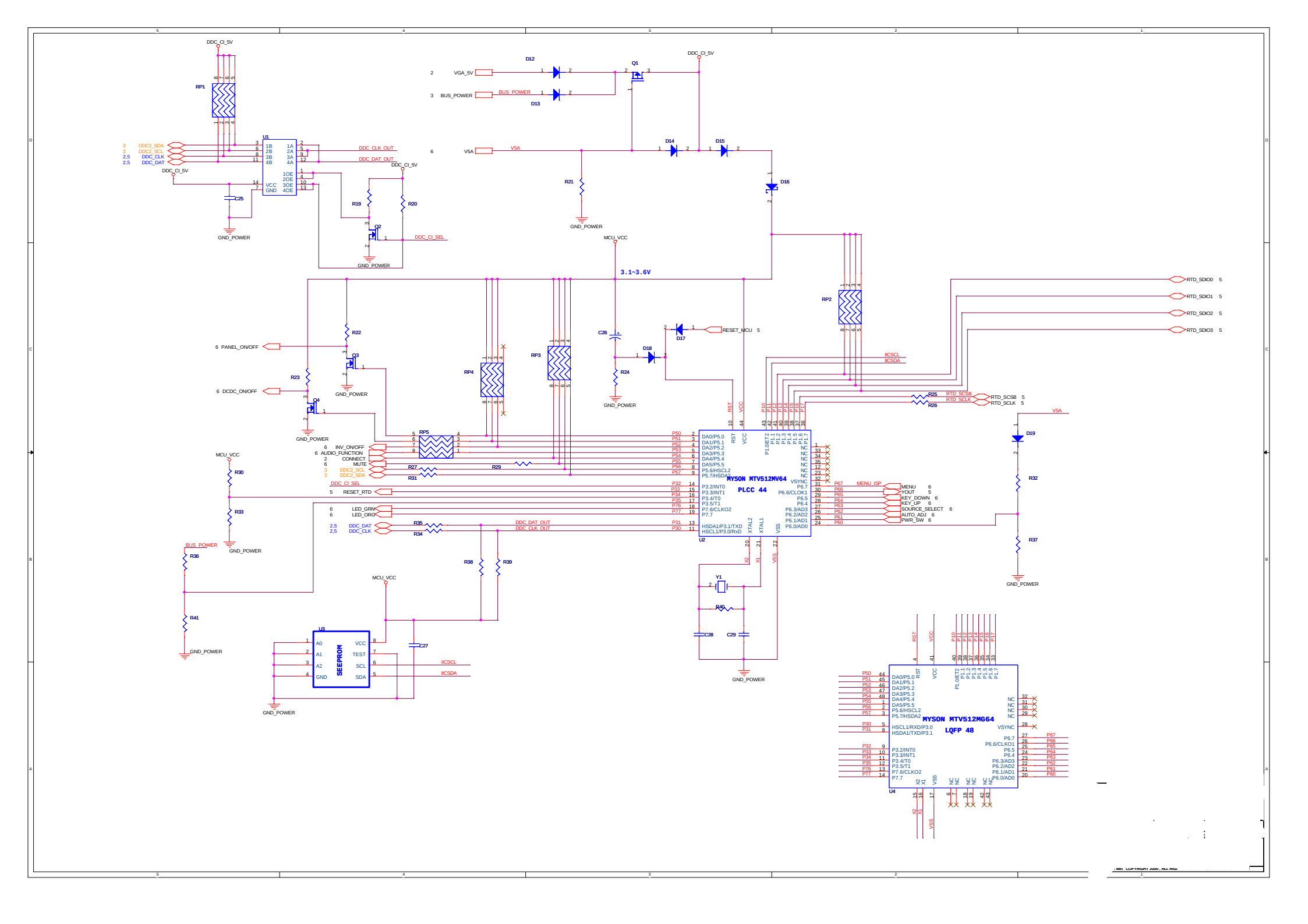
Schematic Diagram

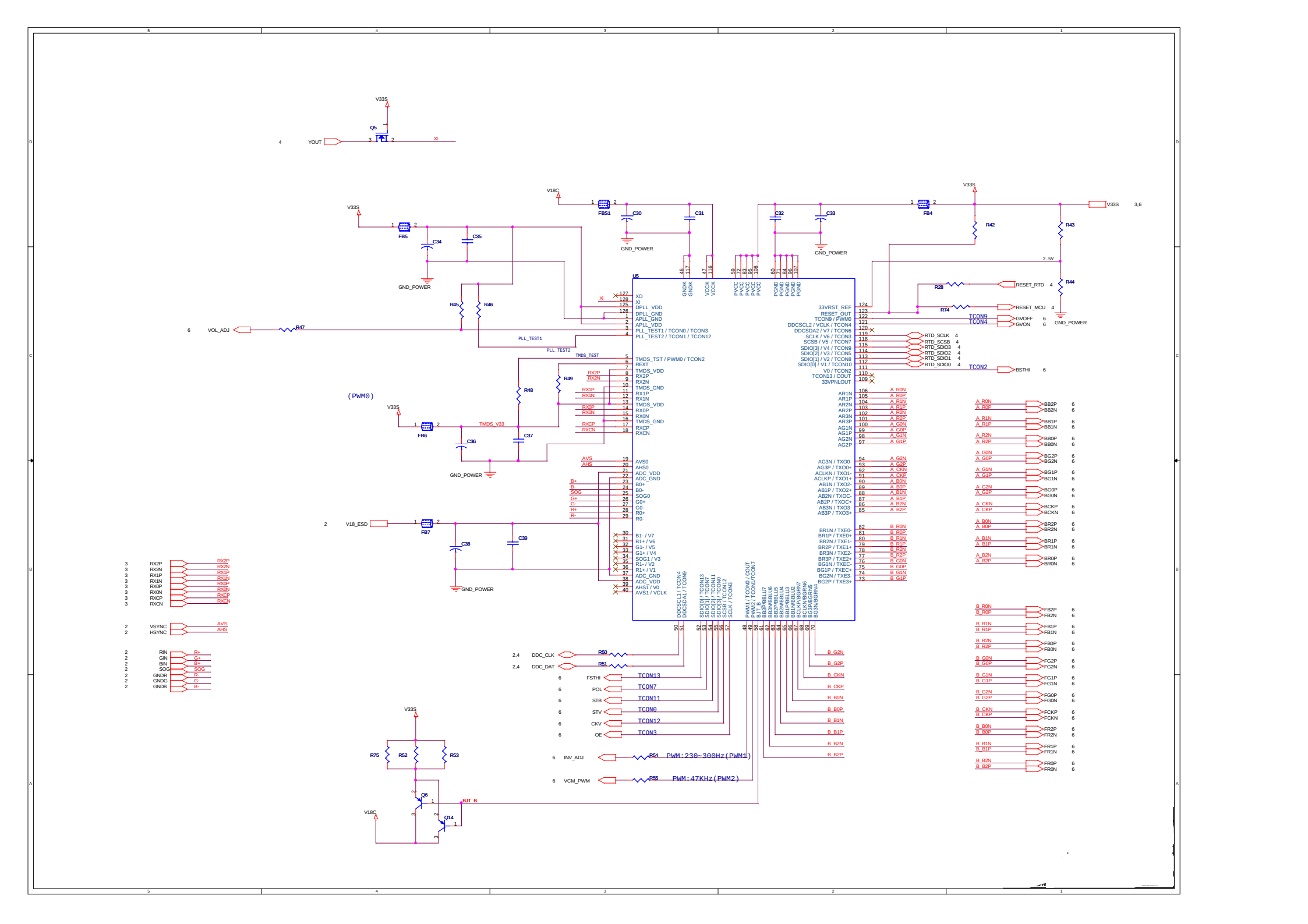
Chapter 7

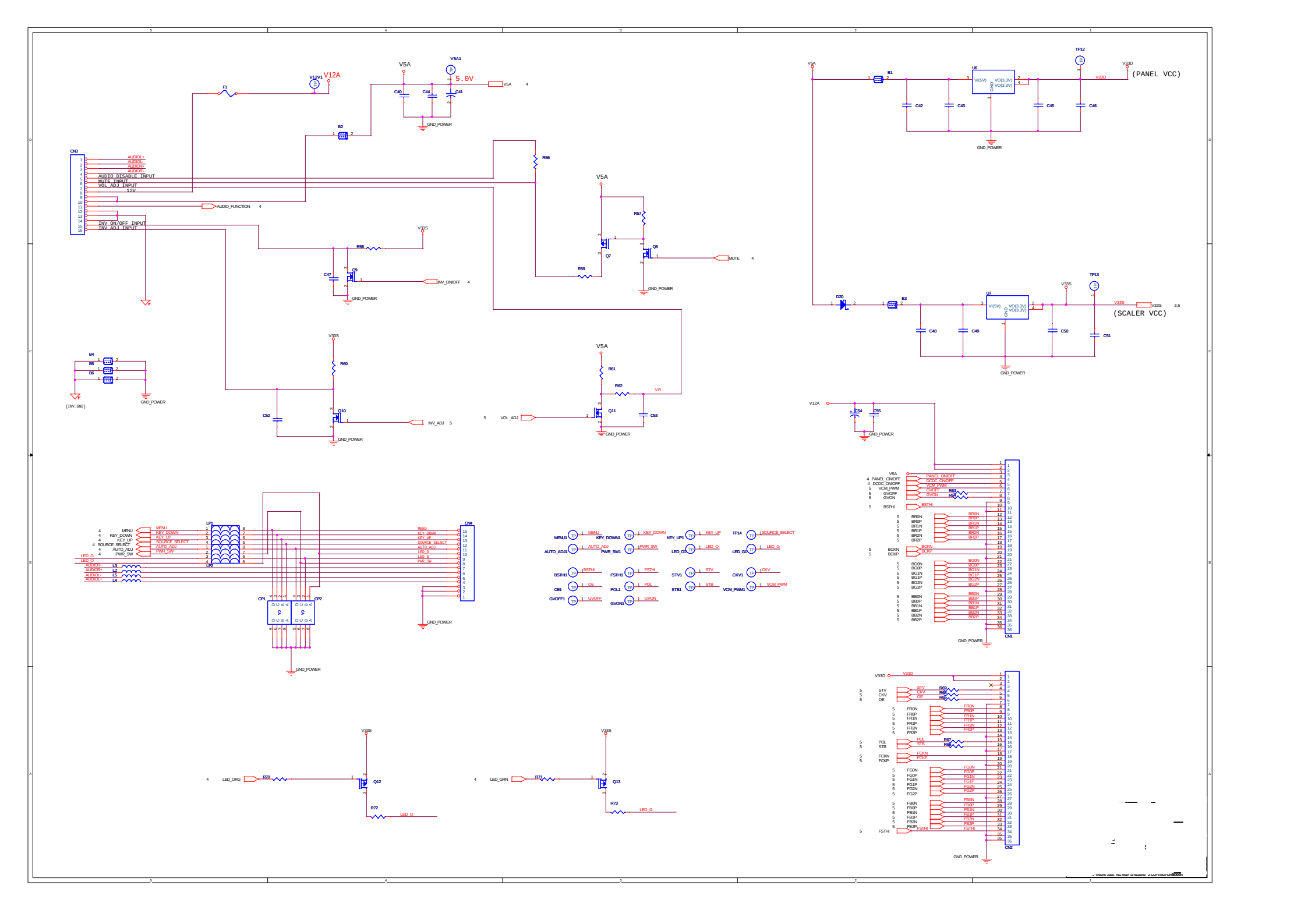

B5
05_INTERFACE
MCU1
03_MCU
B4
04_SCALER
B3
02_DVI
B2
01_VGA
MUTE
DCDC_ON/OFF
AUDIO_FUNCTION
INV_ON/OFF
LED_ORG
LED_GRN
PWR_SW
PANEL_ON/OFF
AUTO_ADJ
SOURCE_SELECT
KEY_UP
KEY_DOWN
MENU
RESET_RTD
RTD_SDIO0
RTD_SDIO1
RTD_SDIO2
RTD_SDIO3
RTD_SCSB
RTD_SCLK
YOUT
RESET_MCU
DDC_DAT
DDC_CLK
BUS_POEWR
DDC2_SCL
DDC2_SDA
CONNECT
VGA_5V
V5A
V33S
V18_ESD


CON1
DDC_DAT
HSI
VSI
DDC_CLK
RAI+
RAI-
GAI+
GAI-
BAI+
BAI-
GND_POWER
R4
CONNECT
V1
VGA_5V
Z1
FB1
FB2
FB3
D1
D2
D3
C4
C8
C12
R1
R2
R3
R5
R6
R8
R9
R10
R11
R12
C1
C2
C3
C5
C6
C7
C9
C10
C11
RIN
GNDR
GIN
GNDG
BIN
GNDB
CA1
SOG
R7
R13
V18_ESD
Z2
C13
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
HSYNC
VSYNC
Z3
R14
R15
C14
L1
Z4
R16
R17
C15
V2
V3
DDC_CLK
DDC_DAT


CON2
R
G
B
RGB GND
HSYNC
VSYNC
SYNC GND
DDC SCL
DDC SDA
+5V
HPD
1/3shield
2/4shield
0/5shield
clk shield
DAT0+
DAT0-
DAT1+
DAT1-
DAT2+
DAT2-
DAT3+
DAT3-
DAT4+
DAT4-
DAT5+
DAT5-
clk+
clk-
DDC2_SCL
DDC2_SDA
DATA0+
DATA0-
DATA1+
DATA1-
DATA2+
DATA2-
CLK+
CLK-
R18
GND_POWER
BUS_POEWR
Z5
V33S
C24
Z6
D4
D5
D6
D7
D8
D9
D10
D11
C16
C17
C18
C19
C20
C21
C22
C23
RX0P
RX0N
RX1P
RX1N
RX2P
RX2N
RXCP
RXCN


DDC_CI_5V
RP1
U1
DDC2_SDA
DDC2_SCL
DDC_CLK
DDC_DAT
DDC_CLK_OUT
DDC_DAT_OUT
C25
GND_POWER
R19
R20
Q2
DDC_CI_SEL
D12
D13
Q1
VGA_5V
BUS_POWER
V5A
D14
D15
D16
R21
MCU_VCC
3.1~3.6V
D17
C26
D18
R24
RESET_MCU
RP2
RP3
RP4
RP5
RTD_SDIO0
RTD_SDIO1
RTD_SDIO2
RTD_SDIO3
IICSCL
IICSDA
RTD_SCSB
RTD_SCLK
R25
R26
R22
Q3
R23
Q4
PANEL_ON/OFF
DCDC_ON/OFF
INV_ON/OFF
AUDIO_FUNCTION
CONNECT
MUTE
LED_GRN
LED_ORG
RESET_RTD
R27
R29
R31
R35
R34
R30
R33
R36
R41
R38
R39
U3
SEEPROM
A0
A1
A2
GND
VCC
TEST
SCL
SDA
C27
U2
MYSON MTV512MV64
PLCC 44
MENU_ISP
MENU
VOUT
KEY_DOWN
KEY_UP
SOURCE_SELECT
AUTO_ADJ
PWR_SW
Y1
R40
C28
C29
D19
R32
R37
U4
MYSON MTV512MG64
LQFP 48


V33S
Q5
YOUT
XI
V18C
FBS1
C30
C31
GND_POWER
C32
C33
FB4
R42
R43
V33S 3,6
2.5V
FB5
C34
C35
R45
R46
U5
GNDK
VCCK
PVCC
PGND
XO
XI
DPLL_VDD
DPLL_GND
APLL_GND
APLL_VDD
PLL_TEST1 / TCON0 / TCON3
PLL_TEST2 / TCON1 / TCON12
33VRST_REF
RESET_OUT
TCON9 / PWM0
DDCSCL2 / VCLK / TCON4
DDCSDA2 / V7 / TCON6
SCLK / V6 / TCON3
SCSB / V5 / TCON7
SDIO[3] / V4 / TCON9
SDIO[2] / V3 / TCON5
SDIO[1] / V2 / TCON8
SDIO[0] / V1 / TCON10
V0 / TCON2
TCON13 / COUT
33VPNLOUT
R28
R74
R44
RESET_RTD 4
RESET_MCU 4
GVOFF 6
GVON 6
TCON9
TCON4
TCON2
BSTHI 6
RTD_SCLK 4
RTD_SCSB 4
RTD_SDIO3 4
RTD_SDIO2 4
RTD_SDIO1 4
RTD_SDIO0 4
VOL_ADJ
R47
PLL_TEST1
PLL_TEST2
TMDS_TEST
TMDS_TST / PWM0 / TCON2
REXT
TMDS_VDD
RX2P
RX2N
TMDS_GND
RX1P
RX1N
TMDS_VDD
RX0P
RX0N
TMDS_GND
RXCP
RXCN
R48
R49
(PWM0)
FB6
TMDS_V33
C36
C37
AVS
AHS
AVS0
AHS0
ADC_VDD
ADC_GND
B0+
B0-
SOG0
G0+
G0-
R0+
R0-
V18_ESD
FB7
C38
C39
B1- / V7
B1+ / V6
G1- / V5
G1+ / V4
SOG1 / V3
R1- / V2
R1+ / V1
ADC_GND
ADC_VDD
AHS1 / V0
AVS1 / VCLK
DDCSCL1 / TCON4
DDCSDA1 / TCON9
SDIO[0] / TCON13
SDIO[1] / TCON7
SDIO[2] / TCON11
SDIO[3] / TCON0
SCSB / TCON12
SCLK / TCON3
PWM1 / TCON0 / COUT
PWM2 / TCON1/TCON7
AR1N
AR1P
AR2N
AR2P
AR3N
AR3P
AG1N
AG1P
AG2N
AG2P
AG3N / TXO0-
AG3P / TXO0+
ACLKN / TXO1-
ACLKP / TXO1+
AB1N / TXO2-
AB1P / TXO2+
AB2N / TXOC-
AB2P / TXOC+
AB3N / TXO3-
AB3P / TXO3+
BR1N / TXE0-
BR1P / TXE0+
BR2N / TXE1-
BR2P / TXE1+
BR3N / TXE2-
BR3P / TXE2+
BG1N / TXEC-
BG1P / TXEC+
BG2N / TXE3-
BG2P / TXE3+
A_R0N
A_R0P
A_R1N
A_R1P
A_R2N
A_R2P
A_G0N
A_G0P
A_G1N
A_G1P
A_G2N
A_G2P
A_CKN
A_CKP
A_B0N
A_B0P
A_B1N
A_B1P
A_B2N
A_B2P
B_R0N
B_R0P
B_R1N
B_R1P
B_R2N
B_R2P
B_G0N
B_G0P
B_G1N
B_G1P
B_G2N
B_G2P
B_CKN
B_CKP
B_B0N
B_B0P
B_B1N
B_B1P
B_B2N
B_B2P
BB2P
BB2N
BB1P
BB1N
BB0P
BB0N
BG2P
BG2N
BG1P
BG1N
BG0P
BG0N
BCKP
BCKN
BR2P
BR2N
BR1P
BR1N
BR0P
BR0N
FB2P
FB2N
FB1P
FB1N
FB0P
FB0N
FG2P
FG2N
FG1P
FG1N
FG0P
FG0N
FCKP
FCKN
FR2P
FR2N
FR1P
FR1N
FR0P
FR0N
RX2P
RX2N
RX1P
RX1N
RX0P
RX0N
RXCP
RXCN
VSYNC
HSYNC
RIN
GIN
BIN
SOG
GNDR
GNDG
GNDB
R+
G+
B+
SOG
R-
G-
B-
DDC_CLK
DDC_DAT
R50
R51
FSTHI
POL
STB
STV
CKV
OE
TCON13
TCON7
TCON11
TCON0
TCON12
TCON3
INV_ADJ
VCM_PWM
R54
R55
PWM:230~300Hz(PWM1)
PWM:47KHz(PWM2)
R75
R52
R53
Q6
BJT_B
Q14
V18C


V12A
V12V1
F1
V5A
V5A1
5.0V
C40
C44
C41
GND_POWER
B2
CN3
AUDIOL+
AUDIOL-
AUDIOR+
AUDIOR-
AUDIO DISABLE INPUT
MUTE INPUT
VOL ADJ INPUT
12V
AUDIO_FUNCTION
INV ON/OFF INPUT
INV ADJ INPUT
R56
R57
Q7
Q8
MUTE
R59
R58
V33S
C47
Q9
INV_ONOFF
R60
C52
Q10
INV_ADJ
R61
R62
VR
Q11
C53
VOL_ADJ
B4
B5
B6
[INV_GND]
(PANEL VCC)
TP12
V33D
B1
U6
VI(5V)
VO(3.3V)
GND
C42
C43
C45
C46
(SCALER VCC)
TP13
D20
B3
U7
C48
C49
C50
C51
V12A
C54
C55
CN1
PANEL_ONOFF
DCDC_ONOFF
VCM_PWM
GVOFF
GVON
BSTHI
BR0N
BR0P
BR1N
BR1P
BR2N
BR2P
BCKN
BCKP
BG0N
BG0P
BG1N
BG1P
BG2N
BG2P
BB0N
BB0P
BB1N
BB1P
BB2N
BB2P
CN2
STV
CKV
OE
R69
R68
R66
FR0N
FR0P
FR1N
FR1P
FR2N
FR2P
POL
STB
R67
R65
FCKN
FCKP
FG0N
FG0P
FG1N
FG1P
FG2N
FG2P
FB0N
FB0P
FB1N
FB1P
FB2N
FB2P
FSTHI
LP1
LP2
CP1
CP2
CN4
MENU
KEY_DOWN
KEY_UP
SOURCE SELECT
AUTO_ADJ
PWR_SW
LED_G
LED_O
L3
L2
L5
L4
MENU1
KEY_DOWN1
KEY_UP1
TP14
SOURCE_SELECT
AUTO_ADJ1
PWR_SW1
LED_O1
LED_G1
BSTHI1
FSTHI1
STV1
CKV1
OE1
POL1
STB1
VCM_PWM1
GVOFF1
GVON1
LED_ORG
R70
Q12
R72
LED_GRN
R71
Q13
R73