Service
Service
Service
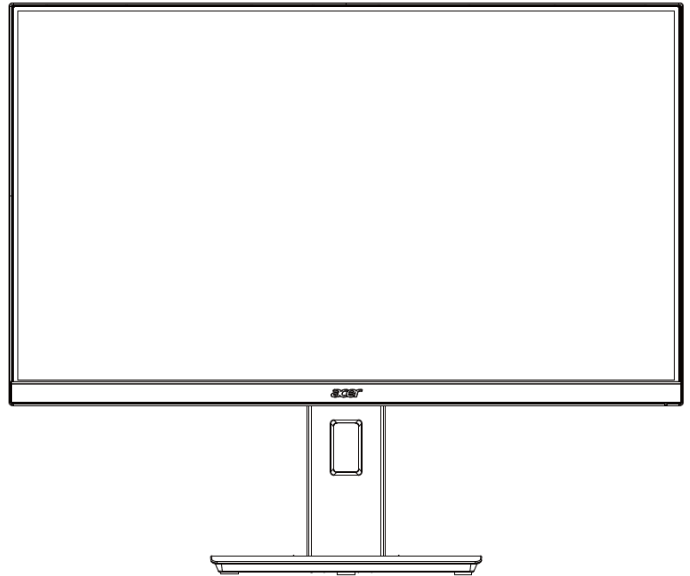
Acer Monitor B227Q

LIFECYCLE EXTENSION GUIDE

Contents

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all ACER Company Equipment. The service procedures recommended by ACER and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. ACER could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, ACER has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by ACER must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.
Hereafter throughout this manual, ACER Company will be referred to as ACER.

WARNING
Use of substitute replacement parts, which do not have the same, specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from ACER. ACER assumes no liability, express or implied, arising out of any unauthorized modification of design.

Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:
DANGER-Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION -The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit
-Must mount the module using mounting holes arranged in four corners.
-Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
-Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
-Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
-Make certain that treatment person's body is grounded through wristband.
-Do not leave the module in high temperature and in areas of high humidity for a long time.
-Avoid contact with water as it may a short circuit within the module.
-If the surface of panel becomes dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)1.

1. Exploded view diagram with list of items
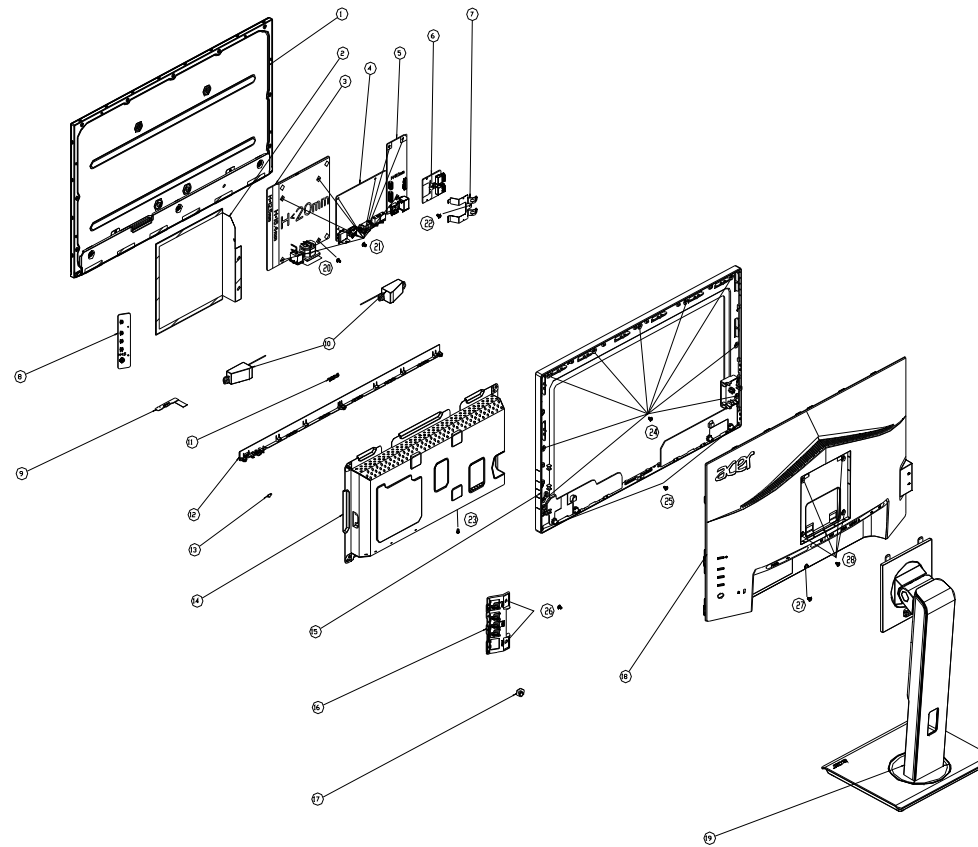
Item	Description	TPV Part No.	ACER Part No.
1	LCD M215HAN01.100, 1L0 (Z19) SZ AUO	750GBU215A110JN000	#N/A
3	ADAPTER BOARD	PLPCHH541KQB3	#N/A
4	MAIN BOARD	CBPRLW5C0Q1	#N/A
5	USB BOARD	USBLQA4	#N/A
6	USB BOARD	USBLQA6	#N/A
8	KEY BOARD	KEPCLQA6	55.TCCM2.003
9	LED BOARD	LEPCLQA2	55.TCCM2.004
	CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	

2. Mechanical Instruction

Tools Required

List the type and size of the tools that would typically can be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

Tool Description:

- Screwdriver (Phillip-head, Hexagonal head)
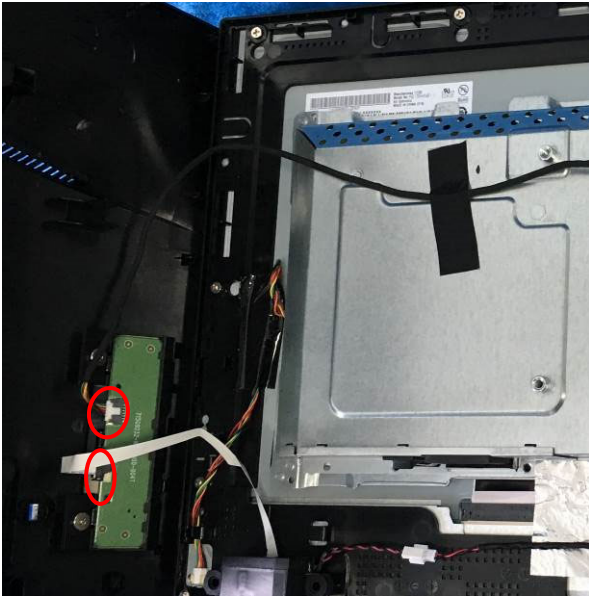
- Penknife

2.1 Disassembly Procedures:

S1. Push the button to remove the stand –base ASS'Y and unscrew the screw on rear cover.
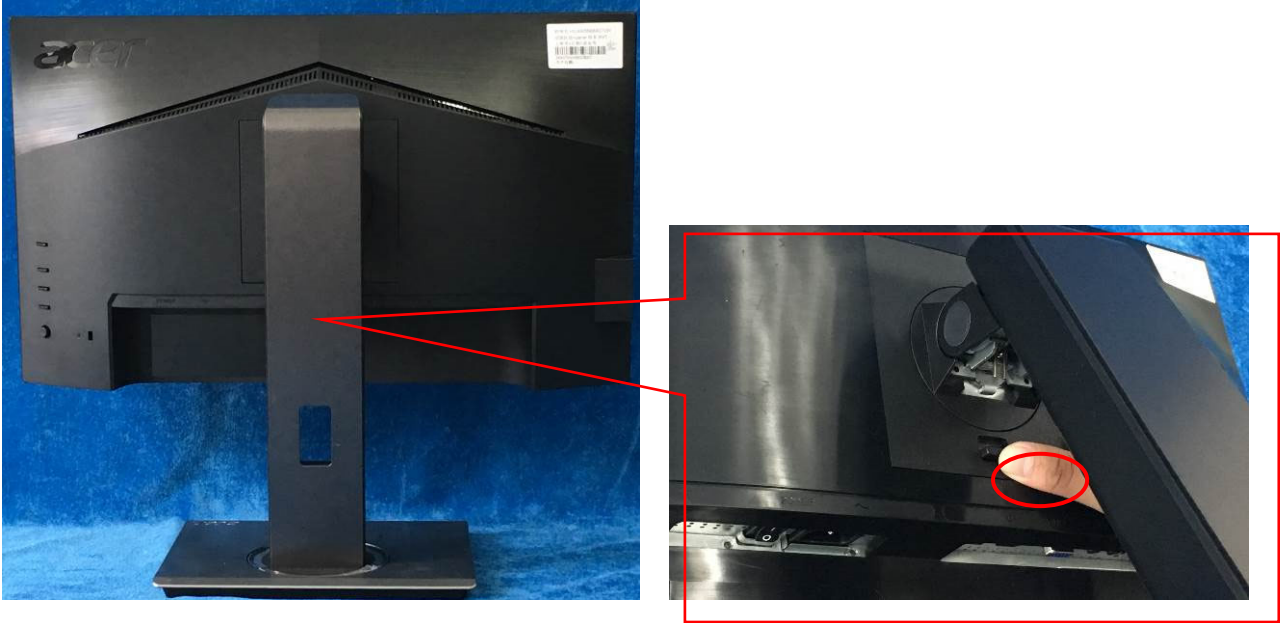
S2. Remove the rear cover. Use a tool (like picture using) to open all latches. (Be careful the position of the key board.)

S3. Disconnect the cable (main board to Key board / LED board / Key board) and remove the screws to remove the key board from the rear cover.
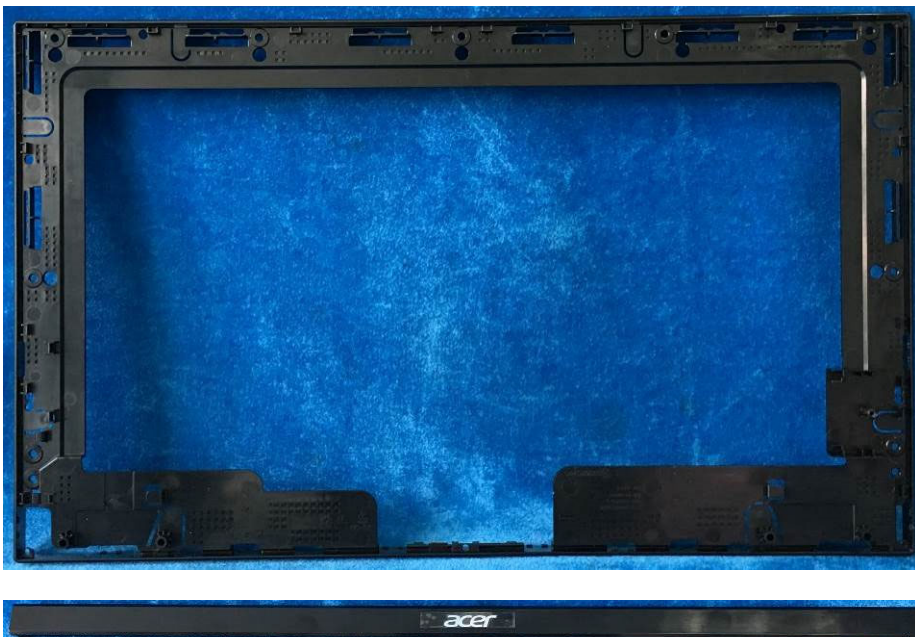

S4.Tear up all tapes and disconnect the LVDS cable (main board to panel), the cables (power board to panel and the main board to key board). Remove the LED board and the Speakers. Remove the screw to remove the USB board.
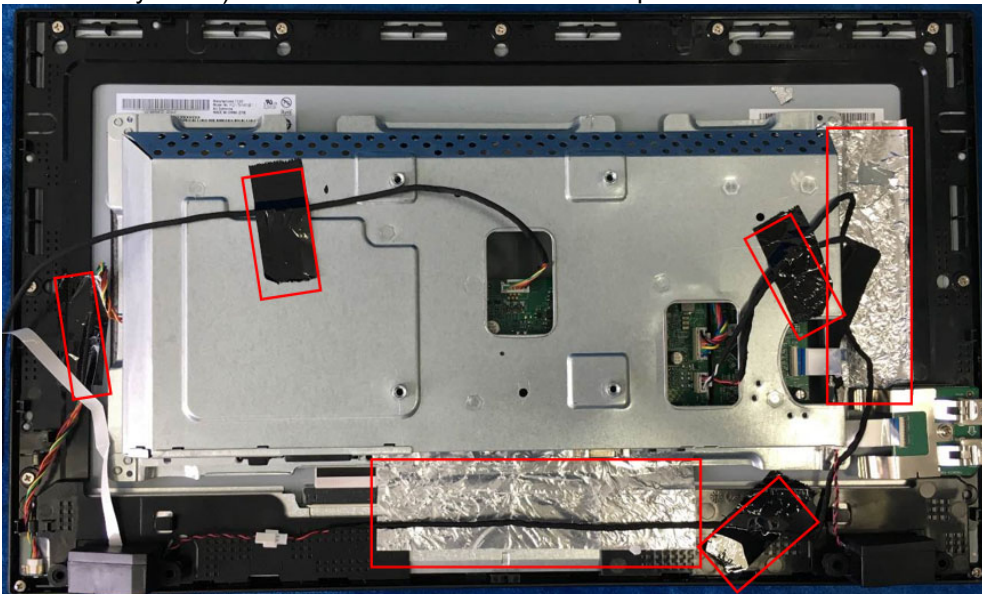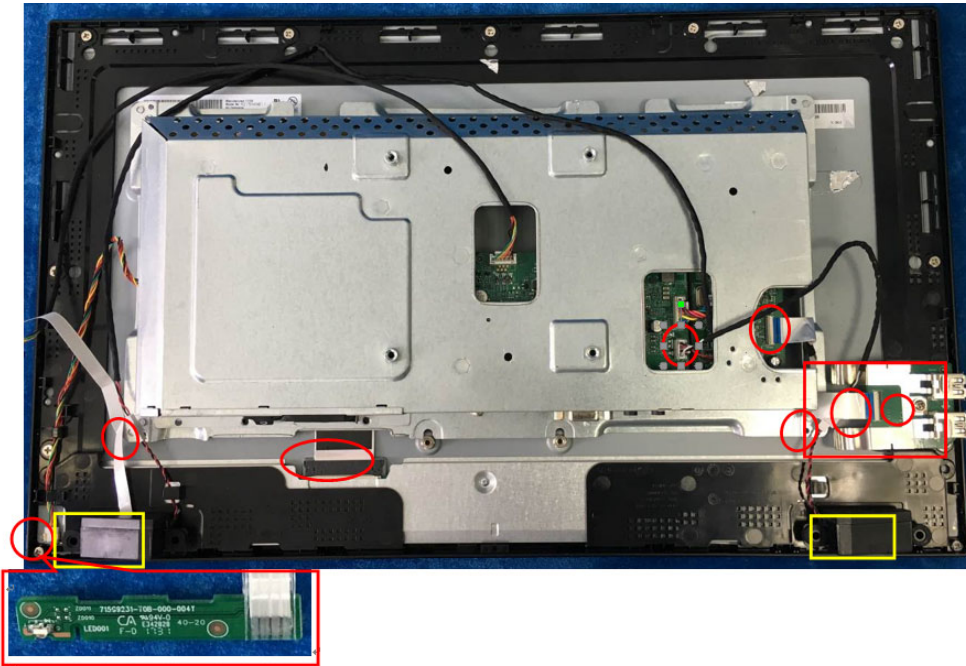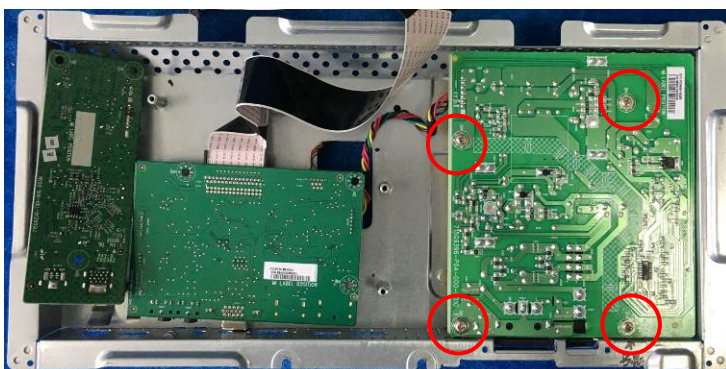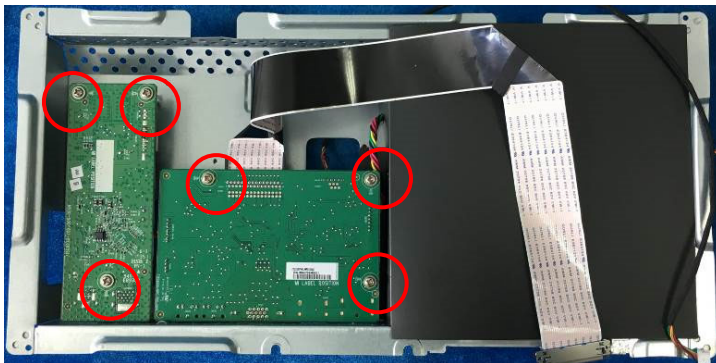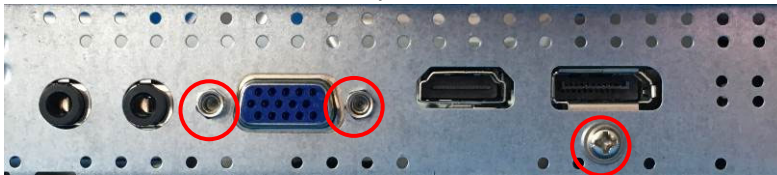
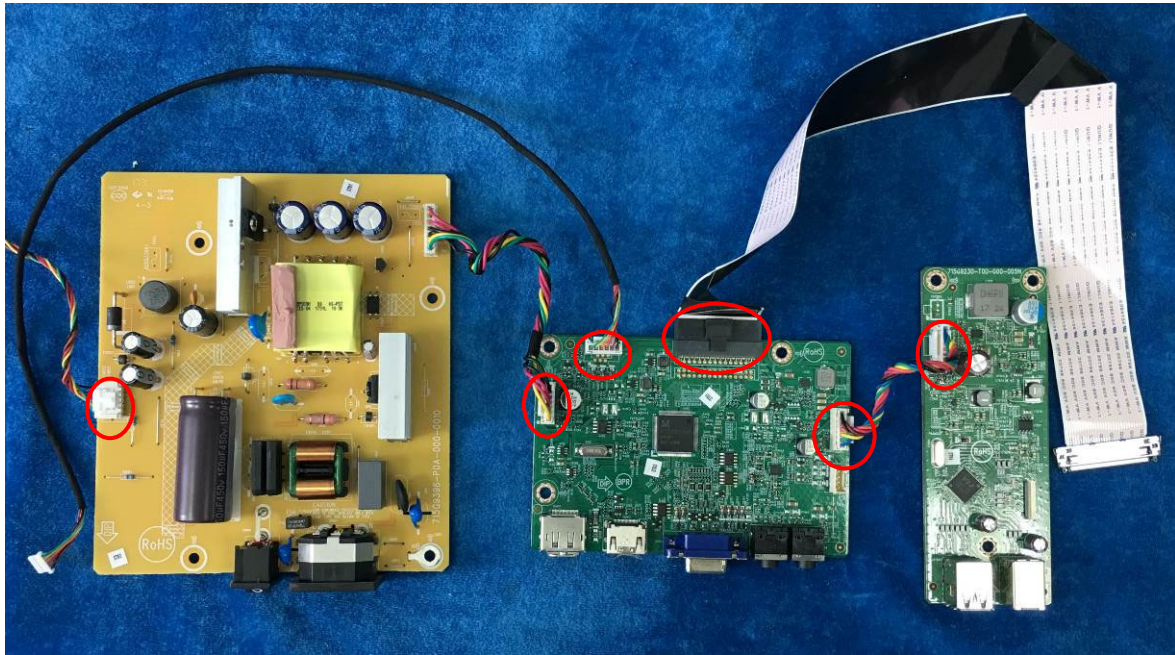S5. Remove the screws to separate the panel and the Middle Frame and the DECO BEZEL.

S6. Firstly, unscrew the screws of the main board/USB board and pull out the two screw bolt to remove the mylar.
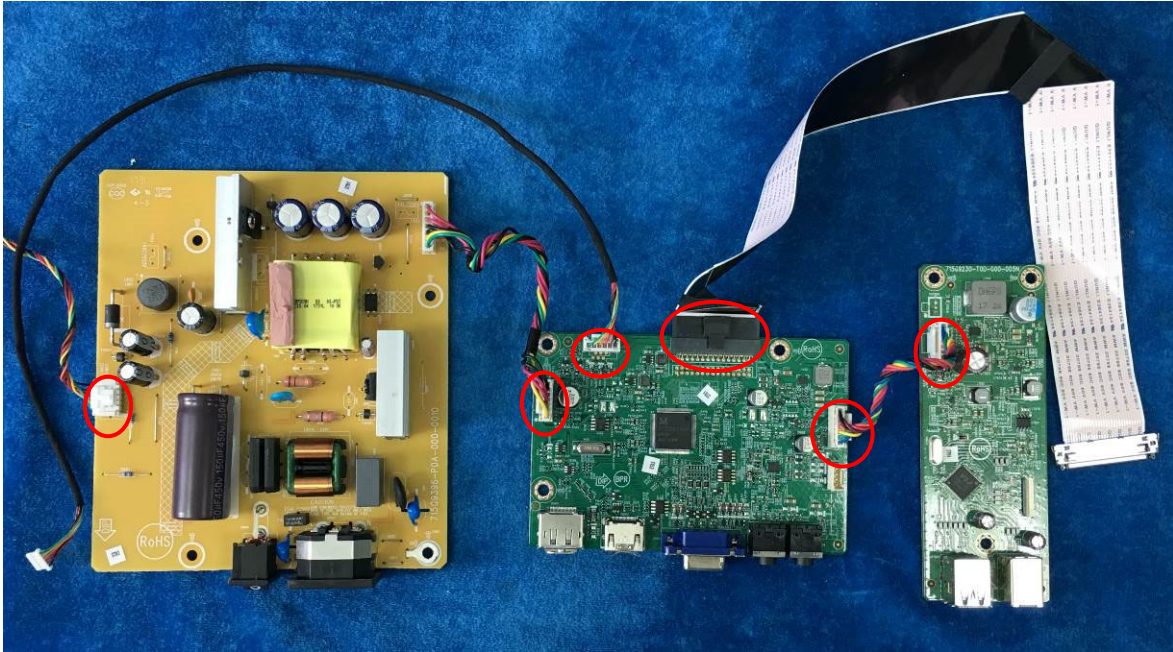Then unscrew the screws of the power board to remove them from mainframe.

S7. Remove the main board and power board. Disconnect the cables.

2.2 Assembly Procedures:

4.1 Assembly Procedures:

S1. Prepare a main board, a power board, an USB board and some essential cables. Connect every cable as the below picture.
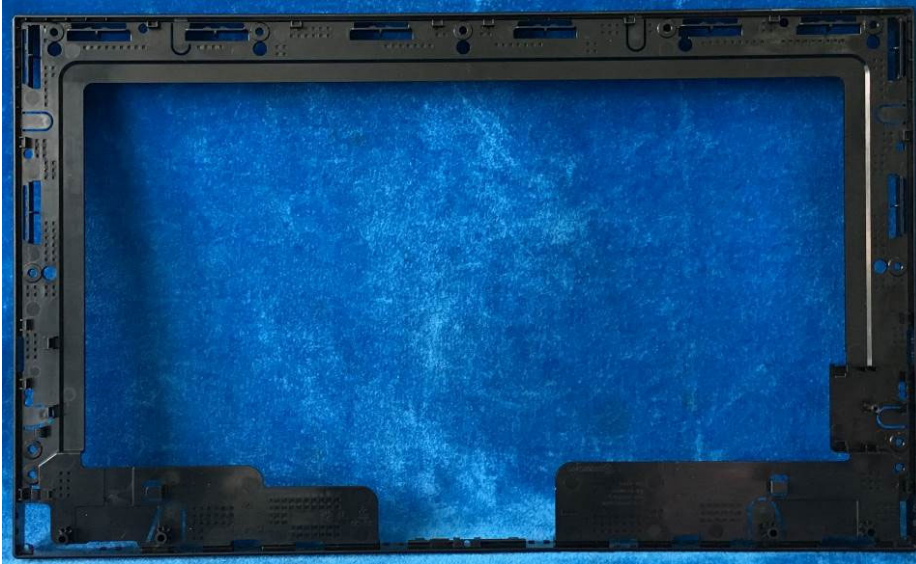

S2. Use a screwdriver to tighten the screws till the power board with shield are firmly attached then put the mylar with main board aim at the two screw bolts of mainframe and tighten the screws of main board and USB board.
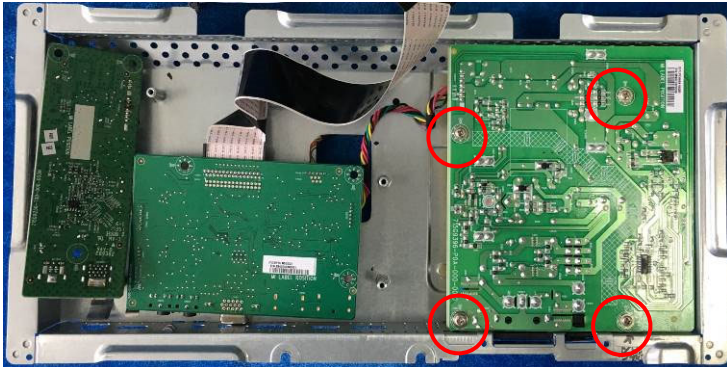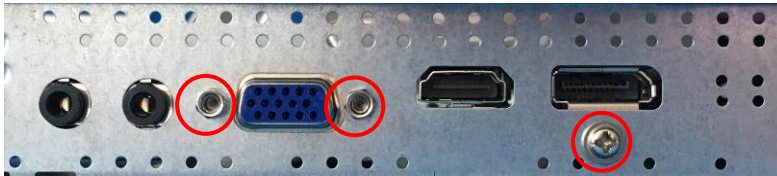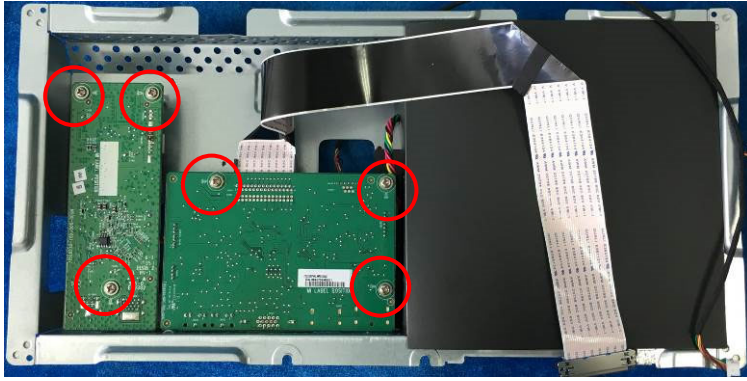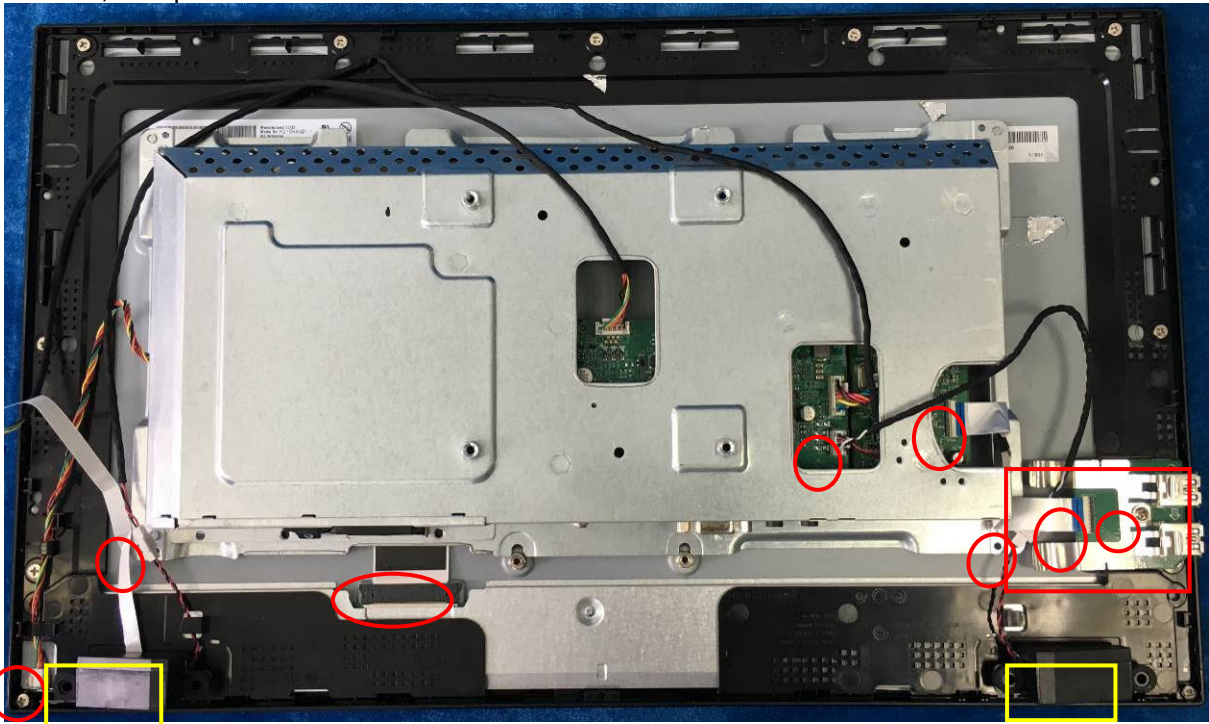
S3. Assemble the MIDDLE FRAME, DECO bezel and the panel. Use a screwdriver to tighten the screws.

S4. Connect cables (mainboard to panel, mainboard to speakers and the power board to panel). Assemble the LED board, the speakers and the USB board.

S5. Put the Mylar slice（Note：refer to last page）marked the information of mainframe position on the panel. Mylar slice edge must be against the bezel. Put the mainframe along the mark. Holding the mainframe while you are removing the Mylar and pasting the tapes.
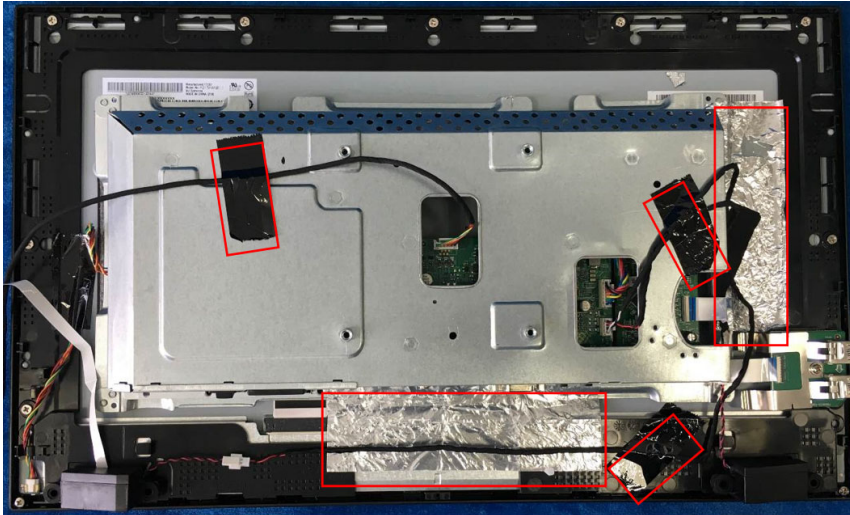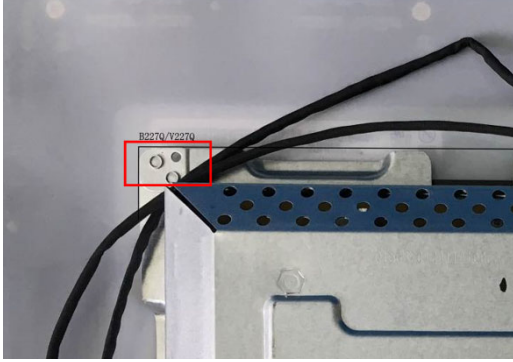
S6.Prepare a rear cover and a key board and use the screws to lock the key board.

S7. Connect the pin (LED board / Key board) and the pin (Key board to mainboard). Use the screws to lock the rear cover.
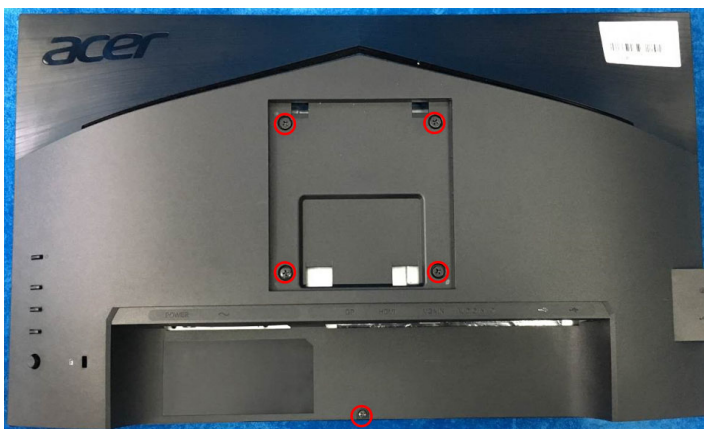
S8. Assemble the stand and base ASS'Y.

3. Firmware Upgrade Process
1.Materials list

ISP JIG: 715GT089-C

VGA cable
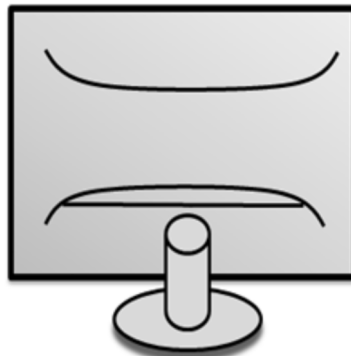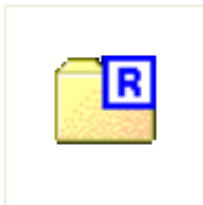TPV P/N: 089G728 GAA DB

PC

Monitor

USB cable
TPV P/N: 089G1758 X

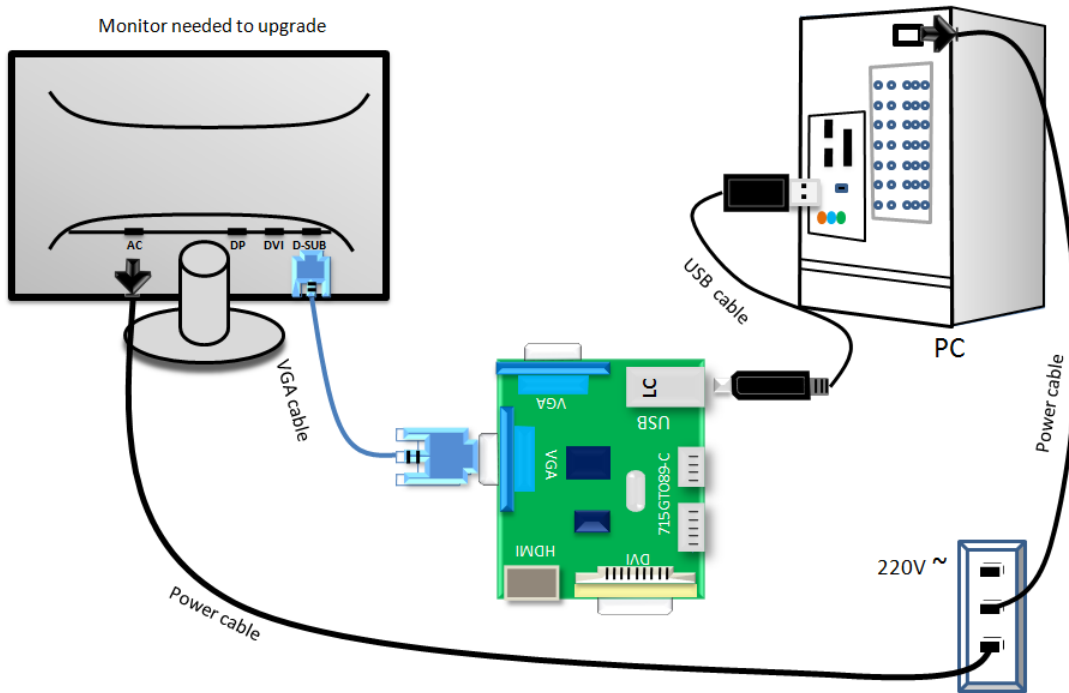FTC100103(MSTAR) usb
drive.rar
USB port driver

RTDTool.exe
ISP tool:

Acer_B227Q_RT
D2525AR_AHDP
HUB_AUO_M21
5HAN01_1_7F...
New F/W

2.Connection

Monitor needed to upgrade

3.Install USB driver.

3.1. hen insert the USB cable to PC USB port, will pop up a Hardware Wizard to help you install the USB driver if you use this ISP board first time.it can auto install success by itself

Remark: The USB driver files path: D:\FTC100103(Mstar)\FTCUSB.INF

After installation the USB serial port driver, please check the port. Look the properties of "my Computer"
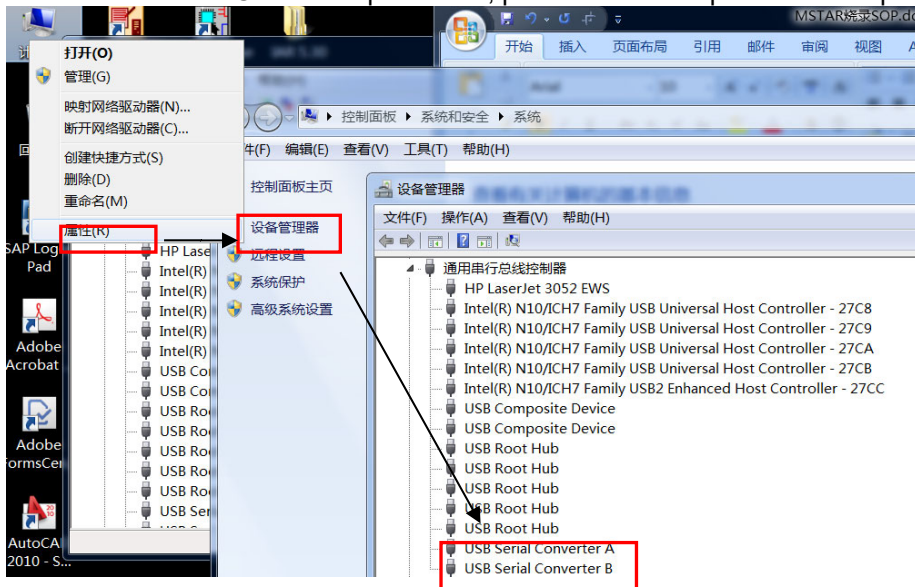
4. Install RTD tool.

Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the EDID writing tool before running the F/W Upgrade tool.

4.1. RTDTool.exe double- clicks the icon to run it.

   Note: Must to install driver firstly

4.2. Choose the FTDIUSB communication way.
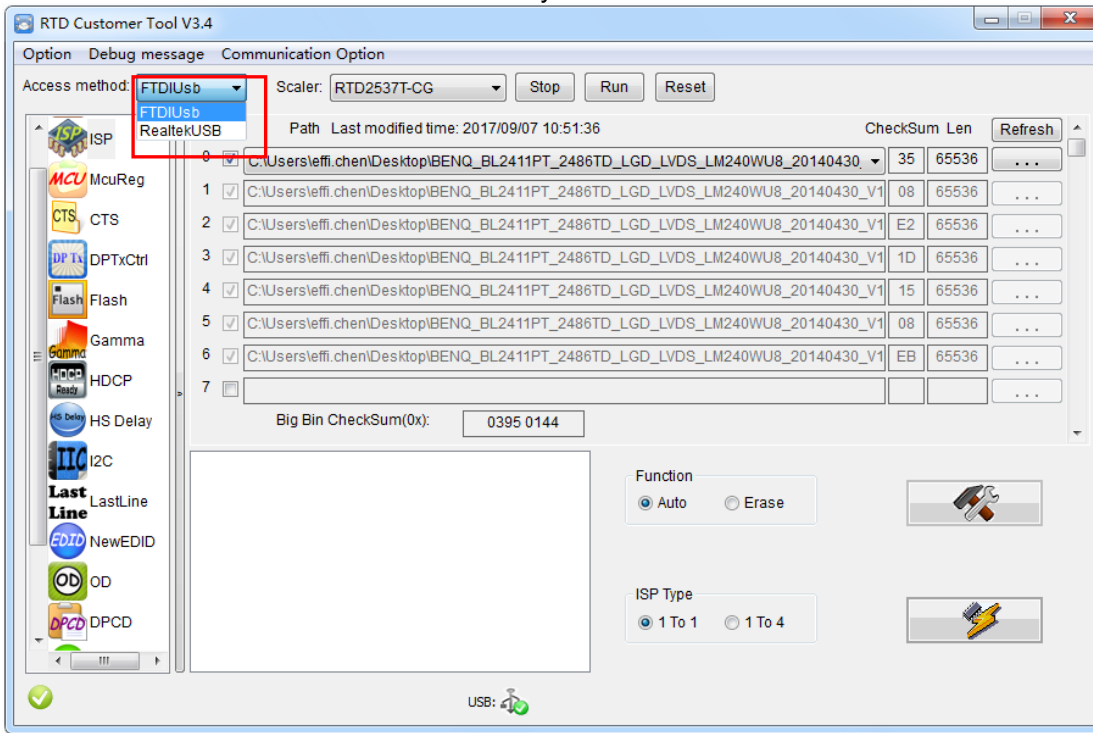
4.3 Click "ISP" and "ISP Option" to set the "Erase Setting" as below.
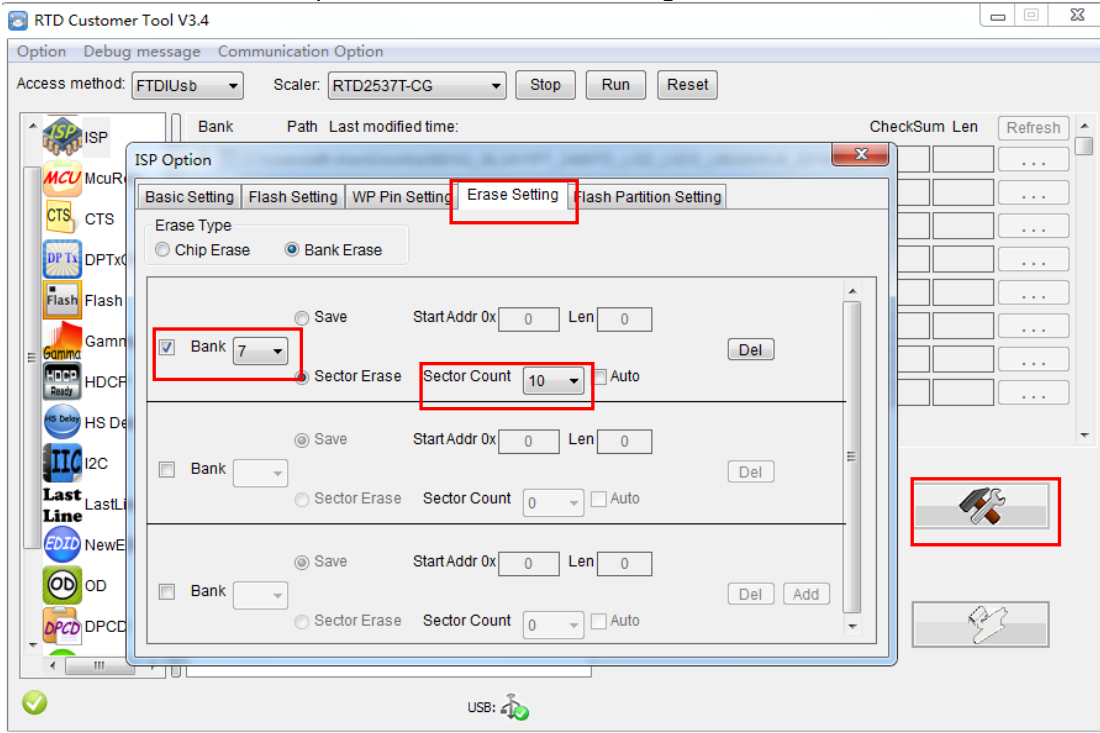
4.4 Close the "ISP Option" window and click the "BigBin" to load the correct F/W.
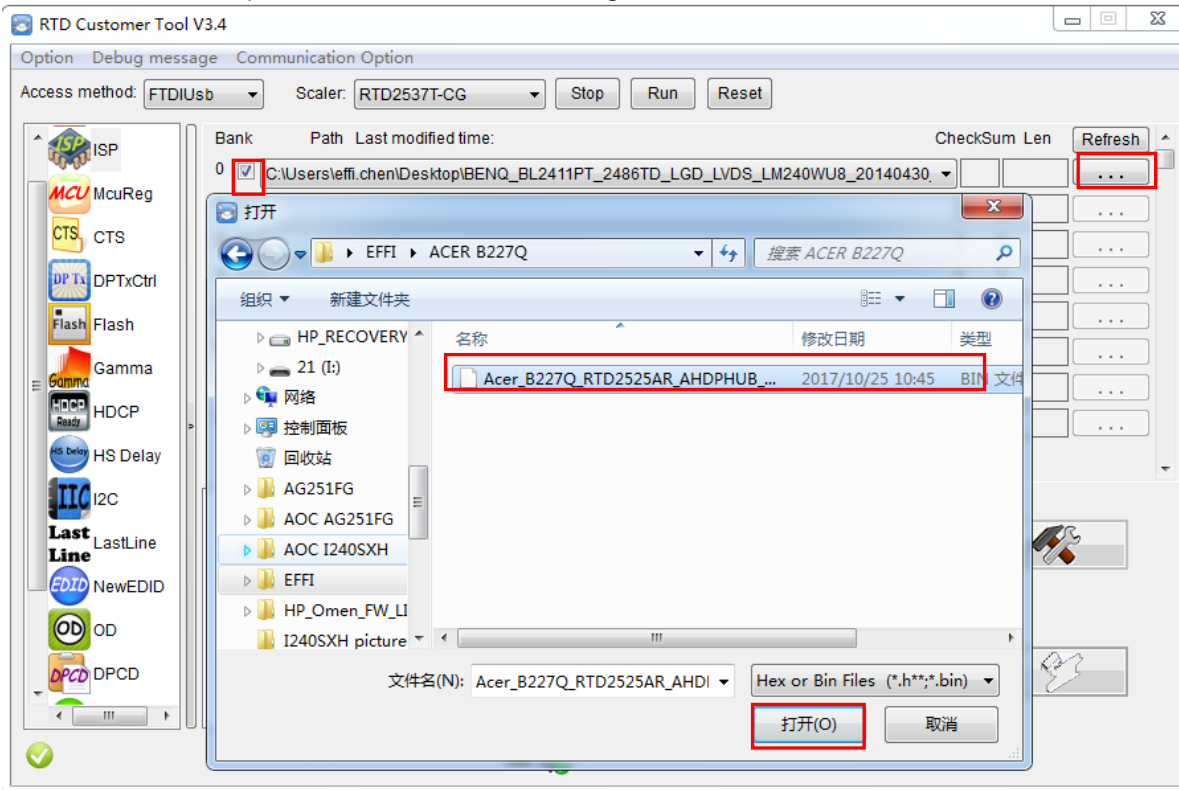
4.5 Click to start programming.
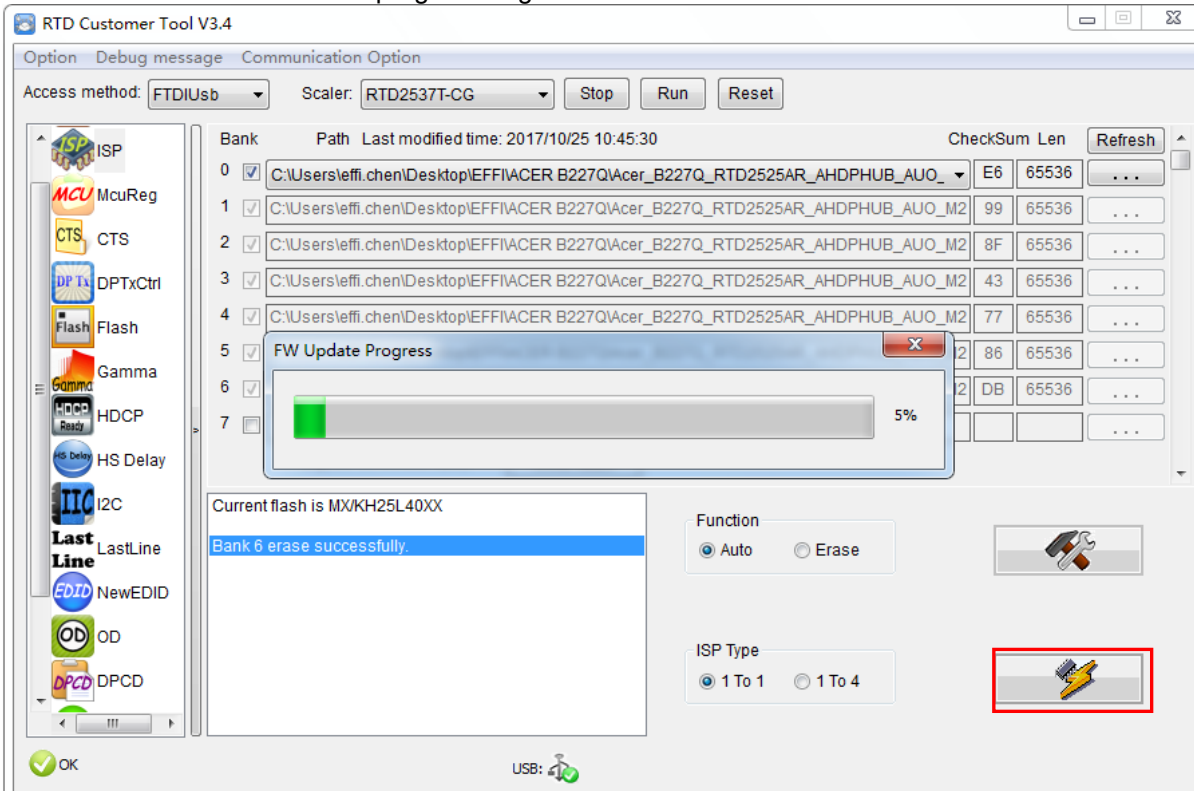
4.6 After about 20 minutes, there will pop up message as below figure which promotes the upgrade successful.
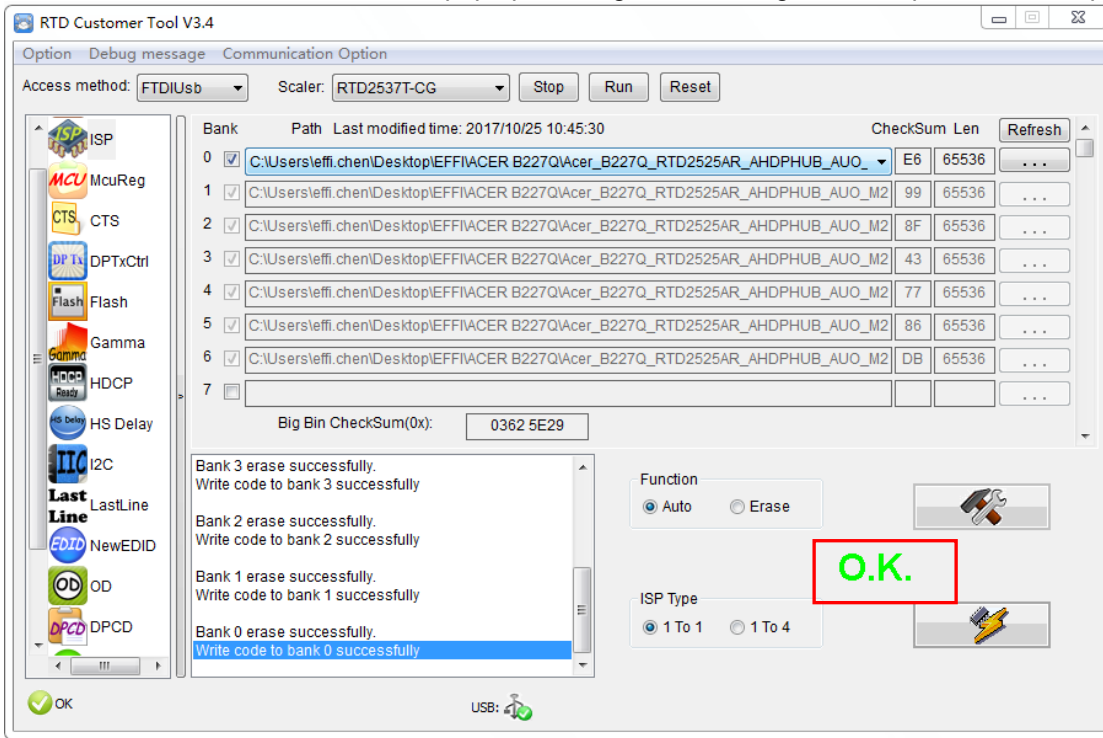
5. Check the FW version after upgrade.

5.1. The way to open factory menu.

(1) Connect VGA source to monitor and turn it on.

(2) The way to factory menu: DC off and pressing the "1" key and DC on, when the screen lights, release the "1" key to open the menu with "F" and sele

(3) ct "F" to open factory menu.

```
Model: B227Q
Chips: RTD2525AR
Panel: AUO-M215HAN01.1
Date : 20171025  Version: 0.03          ┌─────────────────────────┐
                                        │ Check this F/W version. │
AutoColor                               └─────────────────────────┘
Gain     R 189 G 189 B 179
Offset   R 109 G 109 B 110

         BRI  99    CON  50

Warm     R 128 G 128 B 128
Normal   R 125 G 122 B 128
Cool     R 111 G 110 B 128
Slight   R 128 G 128 B 115
Light    R 128 G 128 B 109
Medium   R 128 G 128 B  99
Strong   R 128 G 128 B  91


DFM    :        OFF
Burn In:        OFF
NVRAM Initial
Force Logo Off OFF
HW AutoColor    FAIL
SSC  9     LVDS Current  2
Exit
```
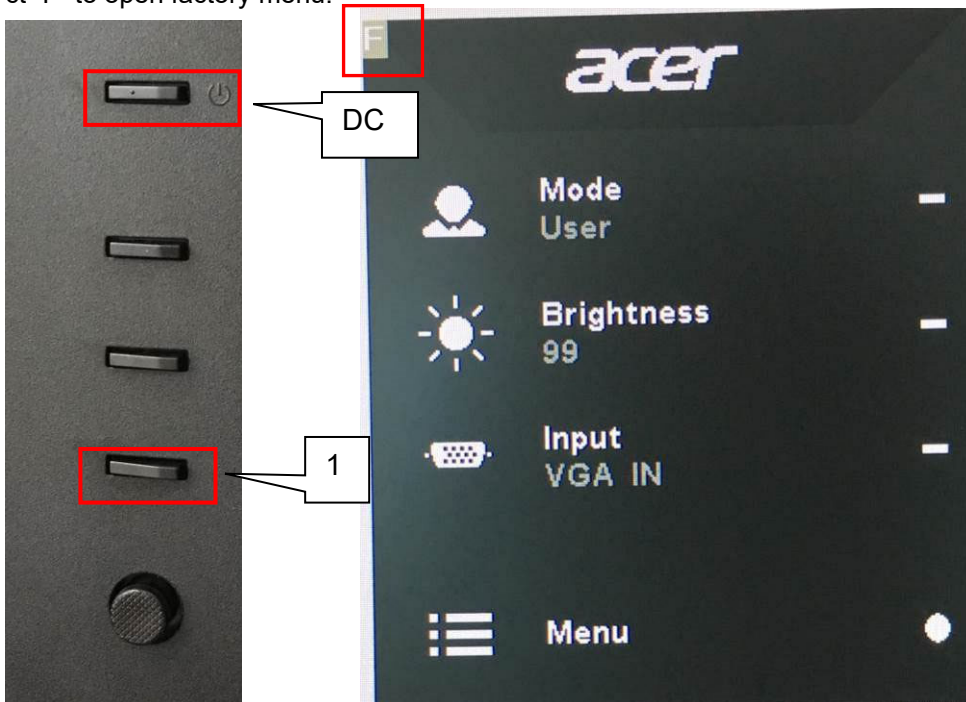
(4) Do "Auto Color" in factory mode.

```
Model: B227Q
Chips: RTD2525AR
Panel: AUO-M215HAN01.1
Date : 20171025 Version: 0.03

AutoColor        PASS
Gain     R 174 G 171 B 156
Offset   R 111 G 110 B 113

         BRI  99    CON  50

Warm     R 128 G 128 B 128
Normal   R 125 G 122 B 128
Cool     R 111 G 110 B 128
Slight   R 128 G 128 B 115
Light    R 128 G 128 B 109
Medium   R 128 G 128 B  99
Strong   R 128 G 128 B  91


DFM    :        OFF
Burn In:        OFF
NVRAM Initial
Force Logo Off OFF
HW AutoColor    FAIL
SSC  9     LVDS Current  2
Exit
```

5.2. Do factory reset in user menu.
(1)Restart the monitor after open factory menu. And then open the user menu.
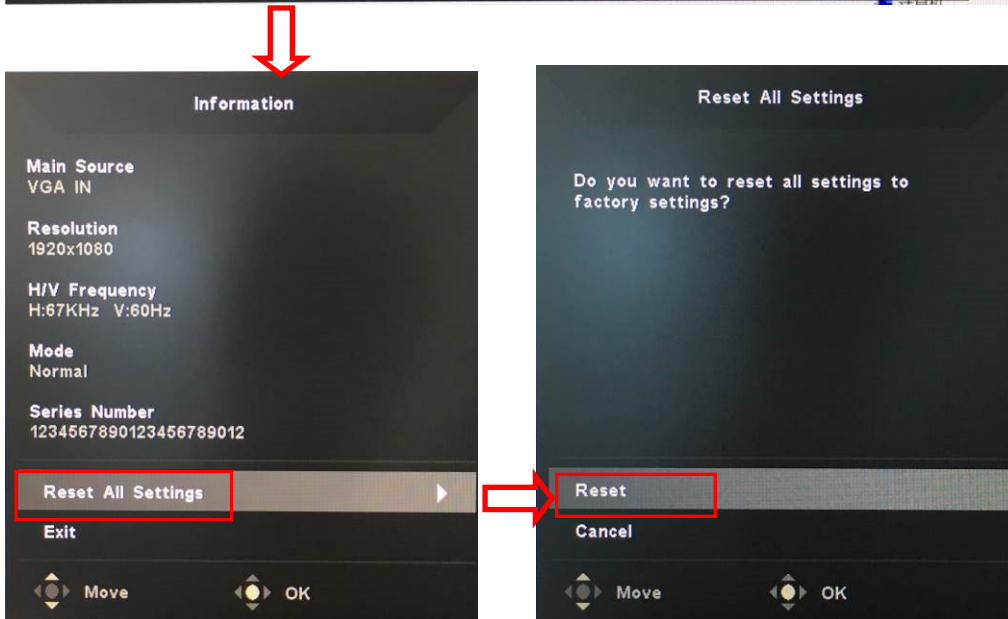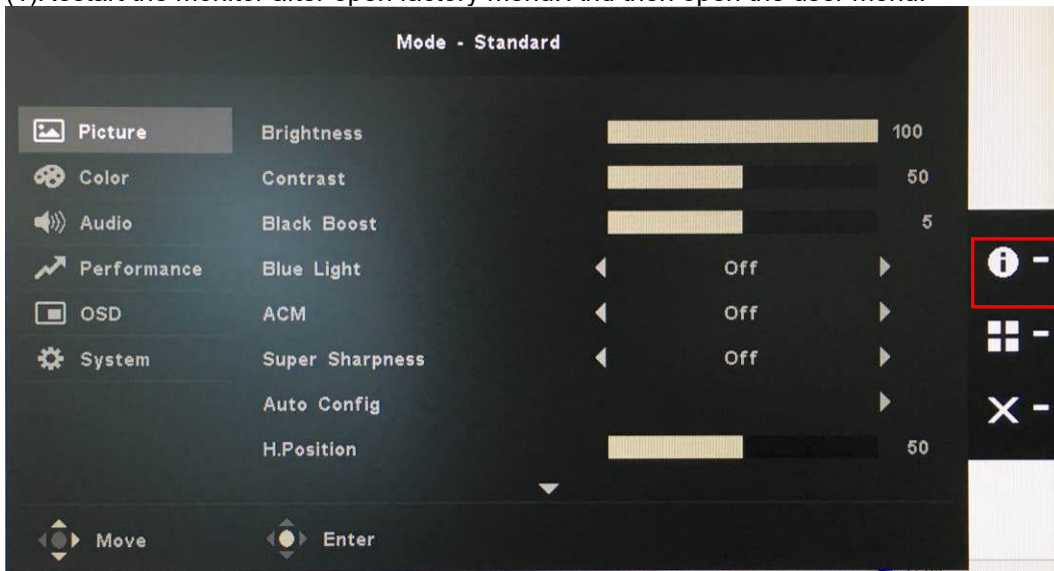
(2)Factory reset will turn off "Burn in" mode which screen color switches among red, green, blue and black.

6. Troubleshooting.
6.1. Can't Entry ISP Mode!!
(1) Check the cables and ISP JIG are connected fluently.
(2) Click the "Dis Con" and click "Connect" again.
(3) AC off the monitor for a while and retry it.
(4) Change other vervion ISP program.
(4)Change ISP JIG or cable.
(5)Change PC.

Writing EDID Process
1.Materials list

ISP JIG: 715GT089-C

VGA CABLE
TPV P/N: 089G728 GAA DB

USB CABLE
TPV P/N: 089G1758 X

PC
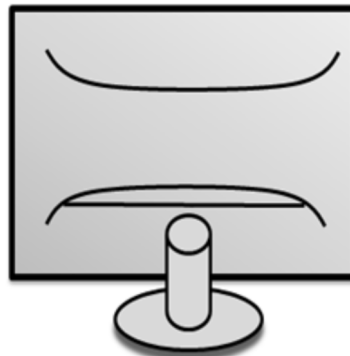
Monitor

FTC100103(MSTAR) usb drive

USB port driver
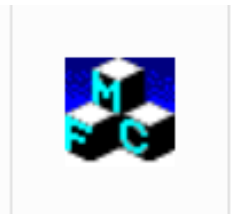
TPVDDC_V066_20170512.exe

ISP tool
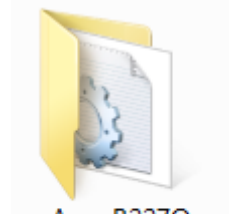
Acer B227Q EDID_A03_2017 1020

EDID

2. Connection(DC on the monitor)

Monitor needed to upgrade
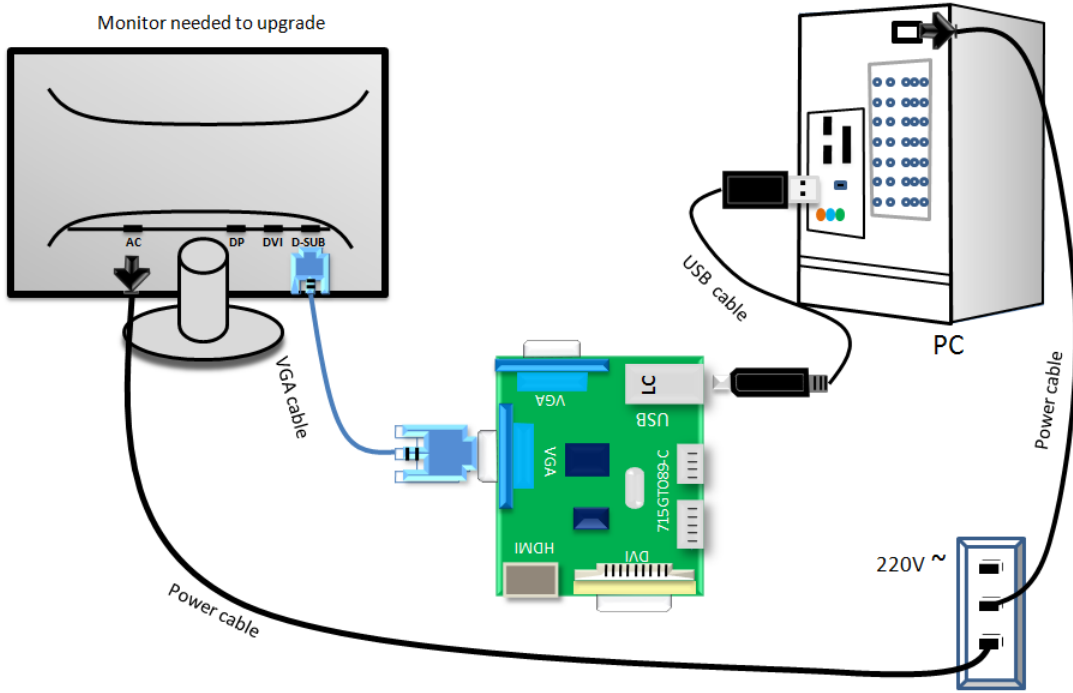
3. Install driver.
4. Prepare the EDID written.

4.1. Change the EDID files name as below rule.

VGA EDID ⟶ WA.dat
DP EDID ⟶ WP.dat   HDMI EDID ⟶WH.dat

4.2. Copy these files to one folder named as ACER B227Q must contains "config.ini" file.
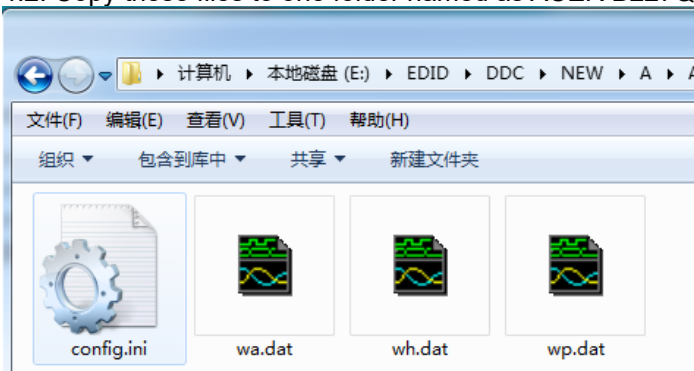
4.3. Copy ACER B227Q to DDC folder and put DDC and ISP tool together.

4.4 Set the config as below.

[TPVDDCD1g]
PokavokeFlag=0
Language=1
CELL1=1
ConnectSFISFlag=0
UserID=
Board=1
[Setting]
CheckYear=2016
ScanningBarcode=0

5. Run the ISP tool
Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the F/W Upgrade tool before running the EDID writing tool.

TPVDDC_V066_20170512.exe
TPVDDC Microsoft 基础类应用...
1.0.1.1
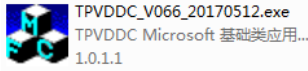
5.1. Double-click the icon   to open the tool.

TPVDDC Ver: 0.66

Debug Permissions

1. Select EDID
LoadEDID

Information
☐ Debug Information:

2. Basic Settings
Burn Way: ⦿ Only Connect VGA ○ Only Connect HDMI
                 ○ Multi-Interface   ○ Only Connect DVI
Write SN: ☑ Write SN
Connect Port: ○ Analog ○ Digital ⦿ Analog+Digital
                 ○ HDMI   ○ HDMI2   ○ Analog+HDMI
                                              Time: |0   S

Manufacture: ProductCode: ModelName:

SN: Year: Week:

3. Input Year Month Day
Input Year-Month-Day: [   ] - [   ] - [   ]

4. Input SN
Input SN: [   ]

Check SN: [   ] |0

Write EDID

Read EDID

OtherSetting

Remark Information:

>> Please connect VGA1!

25

5.2. Select the EDID folder.
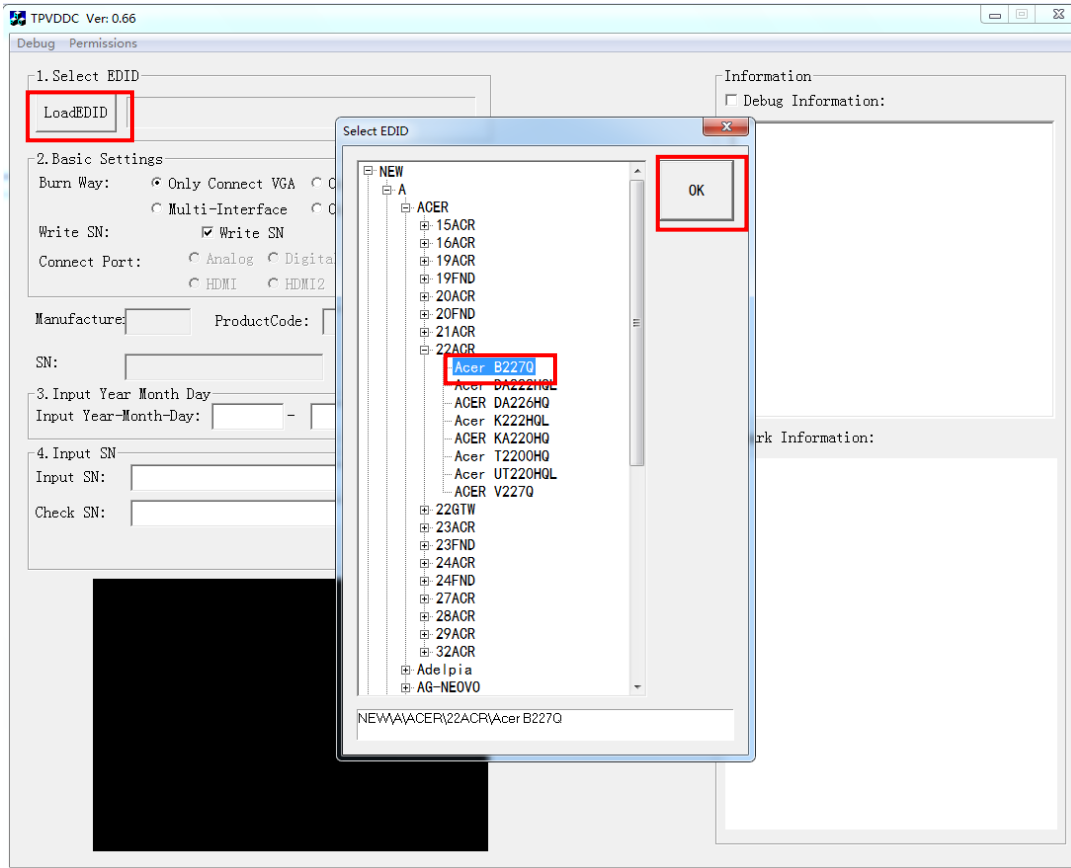
5.3 Tick the "Only connect VGA and "Write SN", and then click "Debug Information".
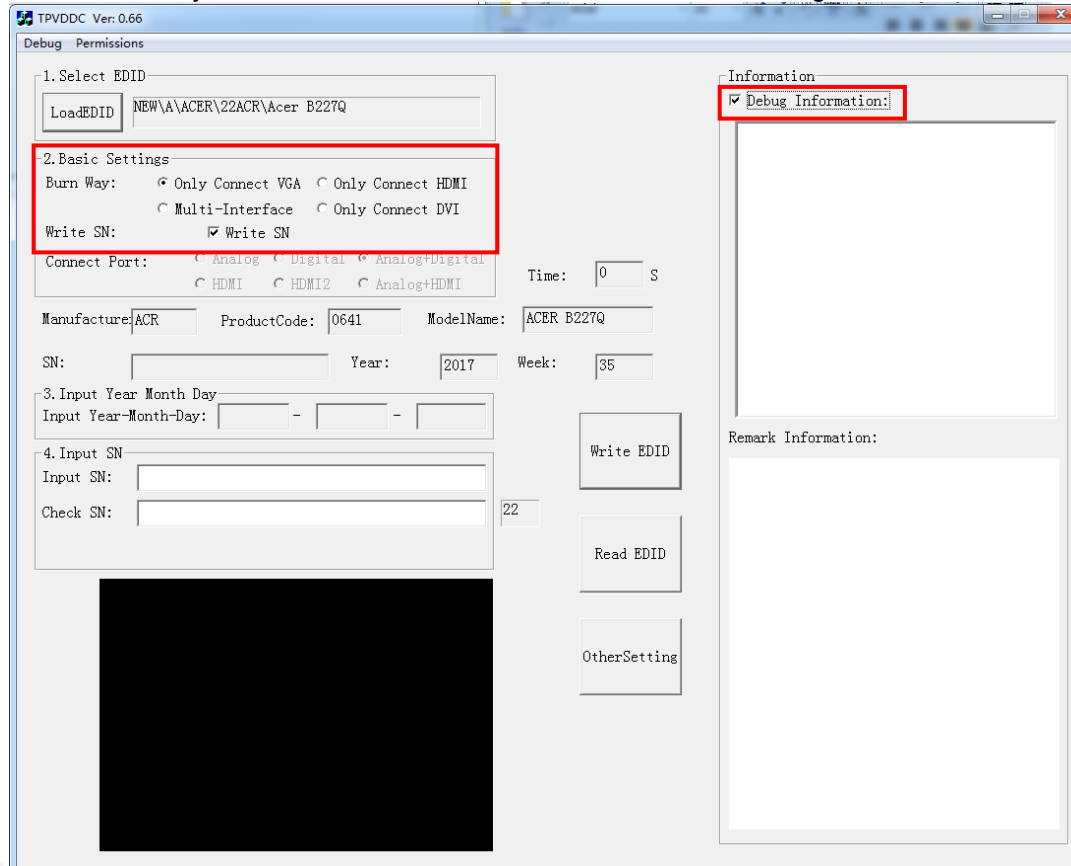
5.4 Set "other setting" and type the 22 digit S/N.
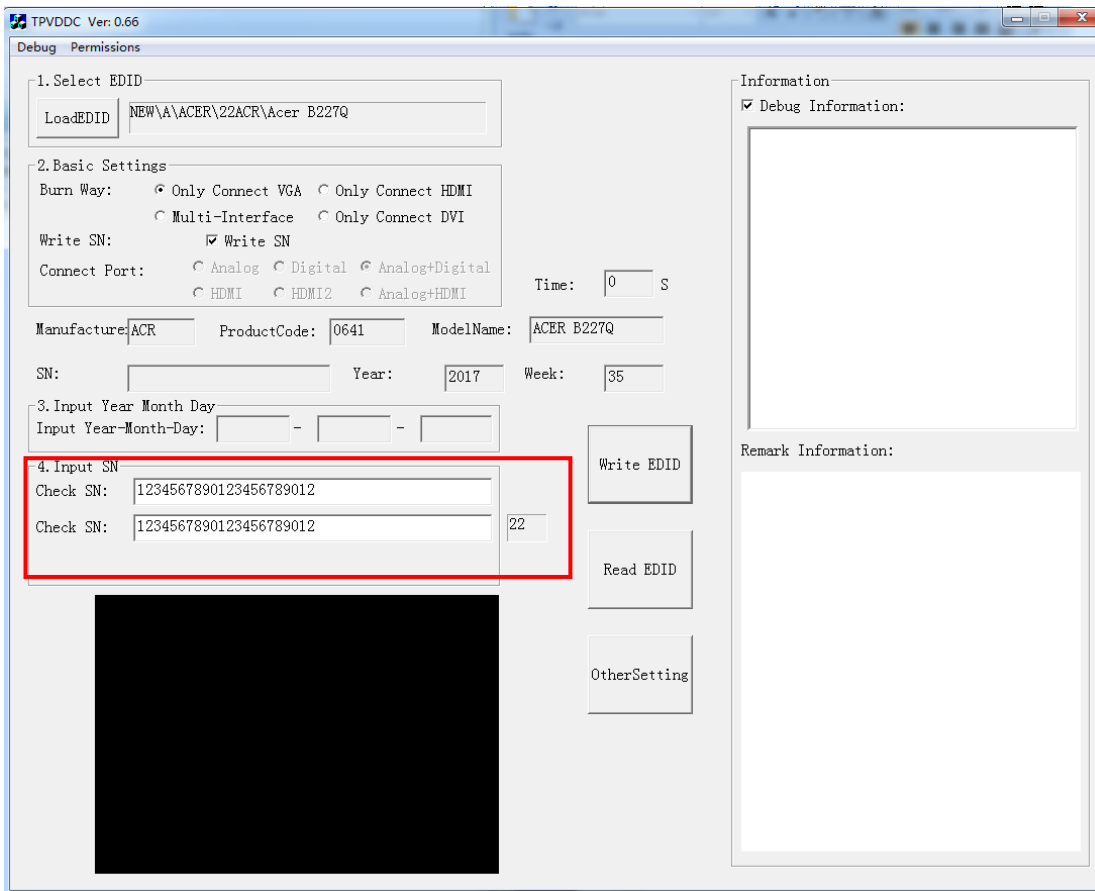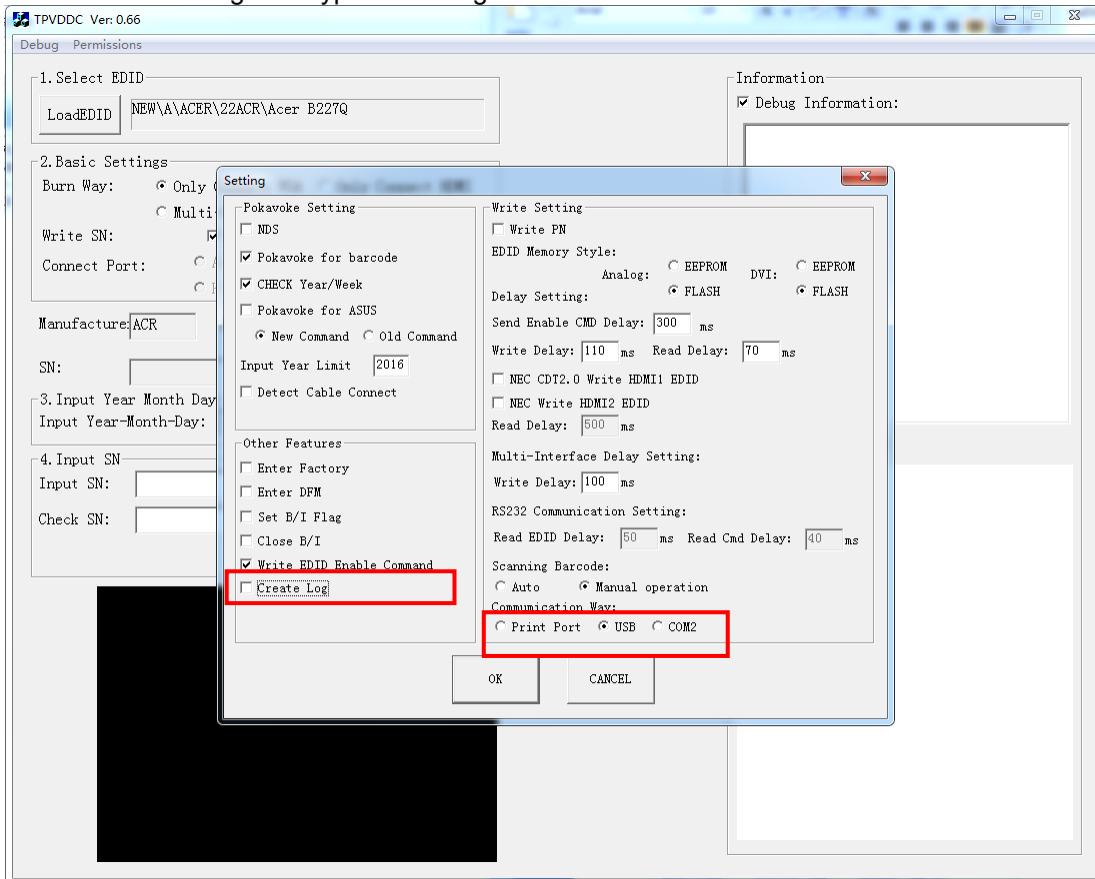
5.5 Start to writing. Click "write EDID" to start writing. When The green "PASS" appear, the process is finished.

5.6 After writing the EDID pass, you must read the EDID to ensure the EDID data had been write into the monitor. Choose one of the port to read.
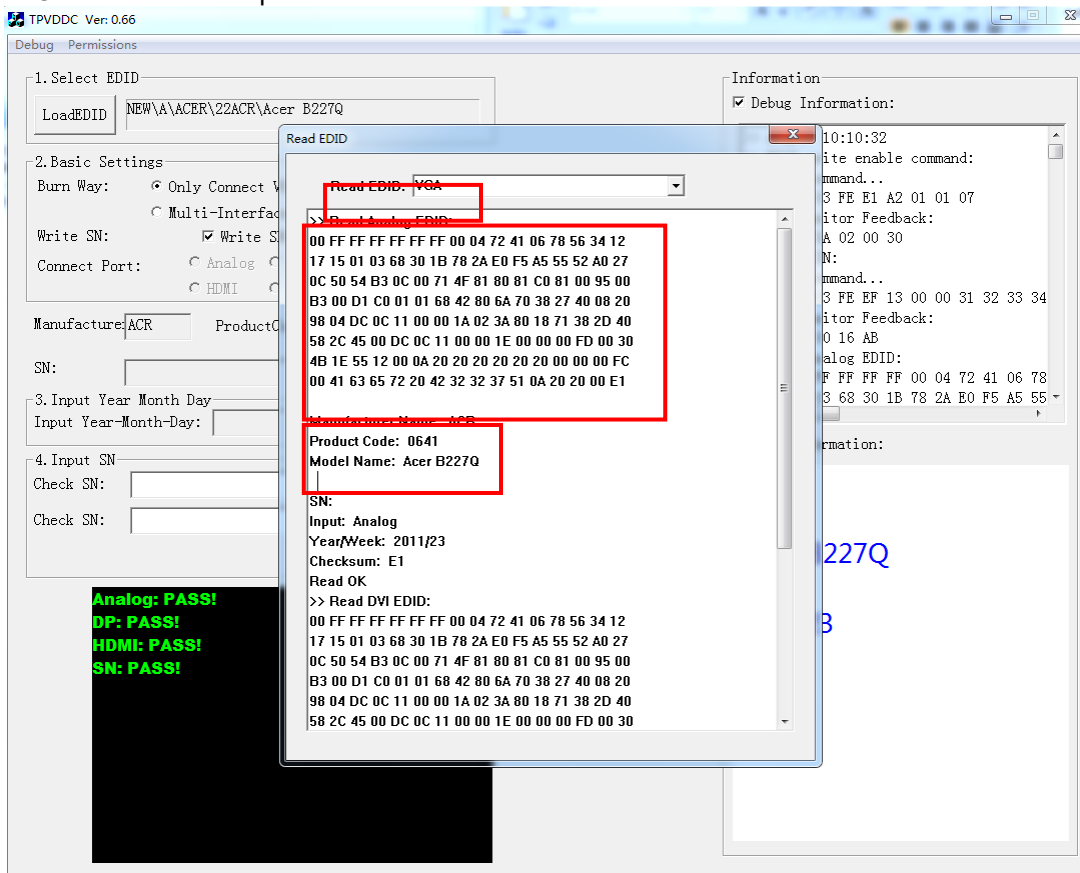
1. If it appears all "00" when read the EDID data, you need reconnect the ISP tool or install the the driver of the ISP tool again.
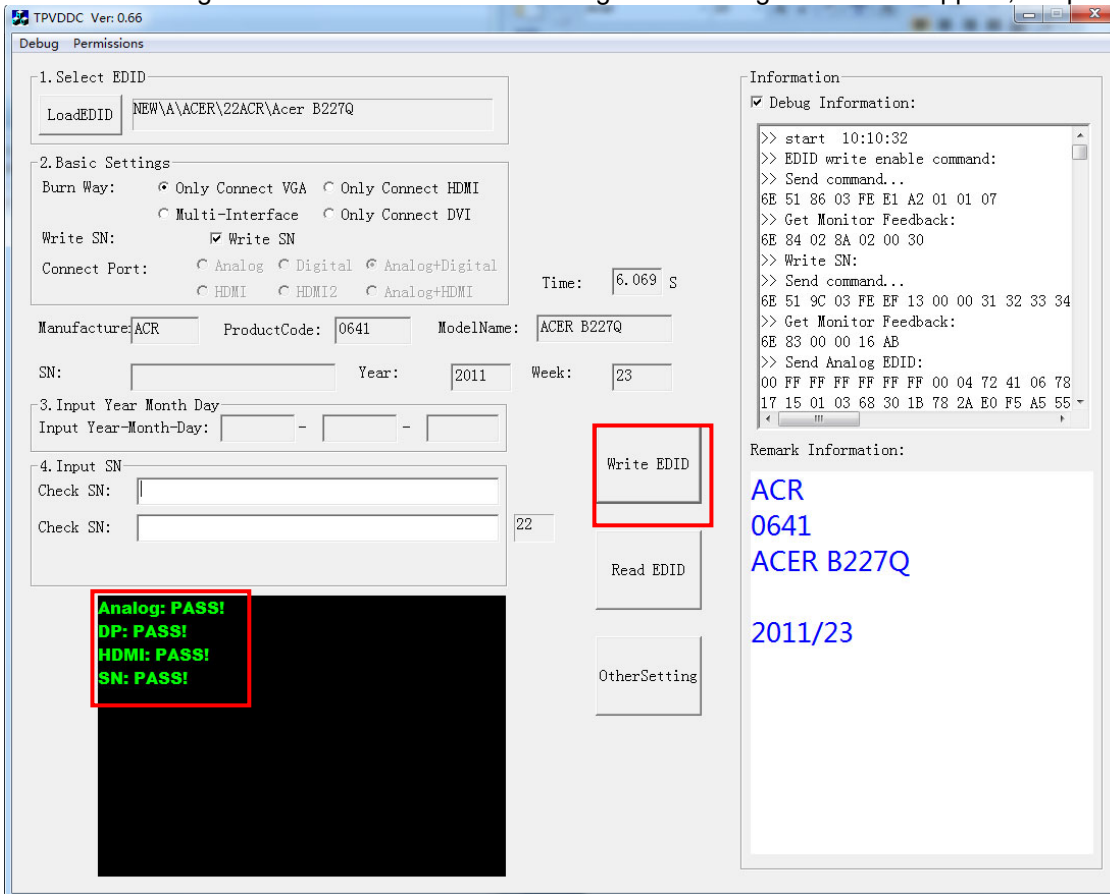Note: While reading the DP EDID data, you must light up the monitor or connect a signal to the monitor. If after doing this setp the EDID still shows all "00", but others port can show the EDID data, the EDID data of DP uaually include in FW,can't read out it.
2. If it appears all "FF", it shows that the EDID data of the Main board is empty, you must writing the EDID again.

6. Troubleshooting.
6.1. Can't write!
    (1) AC on the monitor and turn on it.(Restart the monitor)
    (2)Take apart the monitor and connect the 7pin of EEPROM to GND to diable write protection then write EDID one by one.
    (3) Set the Burn in on last to try again.
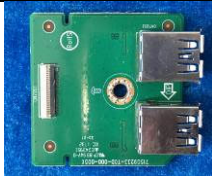
4. FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of ACER B227Q Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your ACER office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional ACER office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional ACER office on how to return it.

Picture	Description	TPV Part No.	ACER Part No.
	MAIN BOARD	756GQHCB0BA144000Q	NA
	POWER BOARD	PLPCHH541KQB3	NA
	KEY BOARD	KEPCLQA6	55.TCCM2.003
	LED BOARD	LEPCLQA2	55.TCCM2.004
	USB BOARD(USBLQA4)	756GQHUS0BA005000Q	NA
	SIDE USB BOARD	USBLQA6	NA

	PANEL	750GBU215A110JN000	NA
	SPEAKER 4OHM 2.5W 63x22MM-50MM (LEFT)	378G0025689CLA	23.TCCM2.001
	SPEAKER 4OHM 2.5W 63x22MM-50MM (RIGHT)	378G0025689CRA	23.TCCM2.002
	CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	NA
	CABLE 30P-30P 180MM(USB BOARD TO SIDE USB BOARD)	395G176K0305170000	NA
	CABLE 200MM (PB TO PANEL)	395G801406DJ61	50.T1BM2.002
	CABLE 4P-2P+2P 500/400MM(MB TO SPEAKER)	395GH20004WM049000	50.TCCM2.002

	Description	Part Number 1	Part Number 2
	CABLE 6P 500MM(MB TO KEY BOARD)	395GH20006XM208000	50.TCCM2.003
	CABLE 7P 80MM(MB TO USB BOARD)	395GH20007TM035000	50.TA8M2.004
	BEZEL ASSY W LOGO	705GQHCS034451	NA
	MIDDLE FRAME	Q34G8555AEM01S0100	NA
	REAR COVER	Q34G8556AEM01S0100	NA
	FUNCTION KEY	Q33G0892AEM01S0100	NA
	FUNCTION KEY BUTTON	A33G2238AEM01L0100	60.TCCM2.007
	STAND BASE ASSY	Q37G083720120100FH	NA

	BKT USB	Q85G033320110100YM	NA
	MAINFRAME	Q15G320120110100FJ	NA
	USB CABLE 1800MM	089G-175M02-C	50.T28M2.003
	DP-CABLE-1800	089G-187BAA500	50.LW7M2.002
	D SUB CABLE 1800MM	089G-728GAA-2A	50.LZJM2.003
	HDMI CABLE 1800MM	389G1848CAA502	50.T27M2.010

	POWER CORD 1800MM(EUROPE)	389G404A18NISG	27.T1BM2.001
	AUDIO CABLE 1800MM	389G017356G53R	50.LXPM2.012

5. Trouble shooting instructions

Before sending your LCD monitor for servicing, please check the troubleshooting list below to see if you can self-diagnose the problem.

VGA IN/HDMI1.4/DP Mode (Optional)

Problem	LED status	Remedy
No picture visible	Blue	Using the OSD menu, adjust brightness and contrast to maximum or reset to their default setting.
	Off	Check the power switch. Check if the AC power cord is properly connected to the monitor.
	Amber	Check if the video signal cable is properly connected at the back of monitor. Check if the computer system is switched on and in power saving/standby mode. If OSD Lock is On, the LED status set Amber.

Note: Acer monitor is purposed for video and visual display of information obtained from electronic devices.