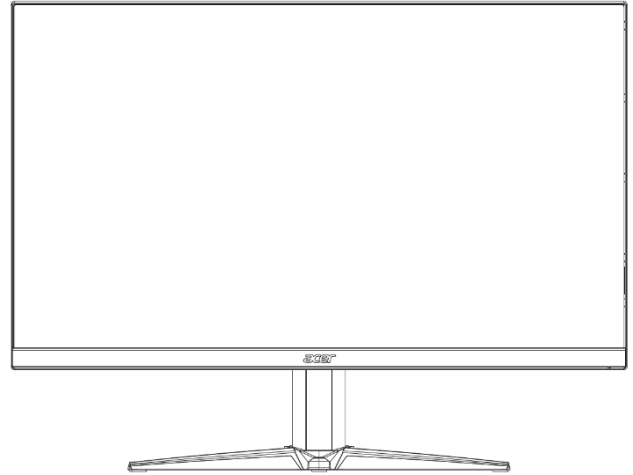


Service
Service
Service



Acer Monitor VG220Q

LIFECYCLE EXTENSION GUIDE

Contents

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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.

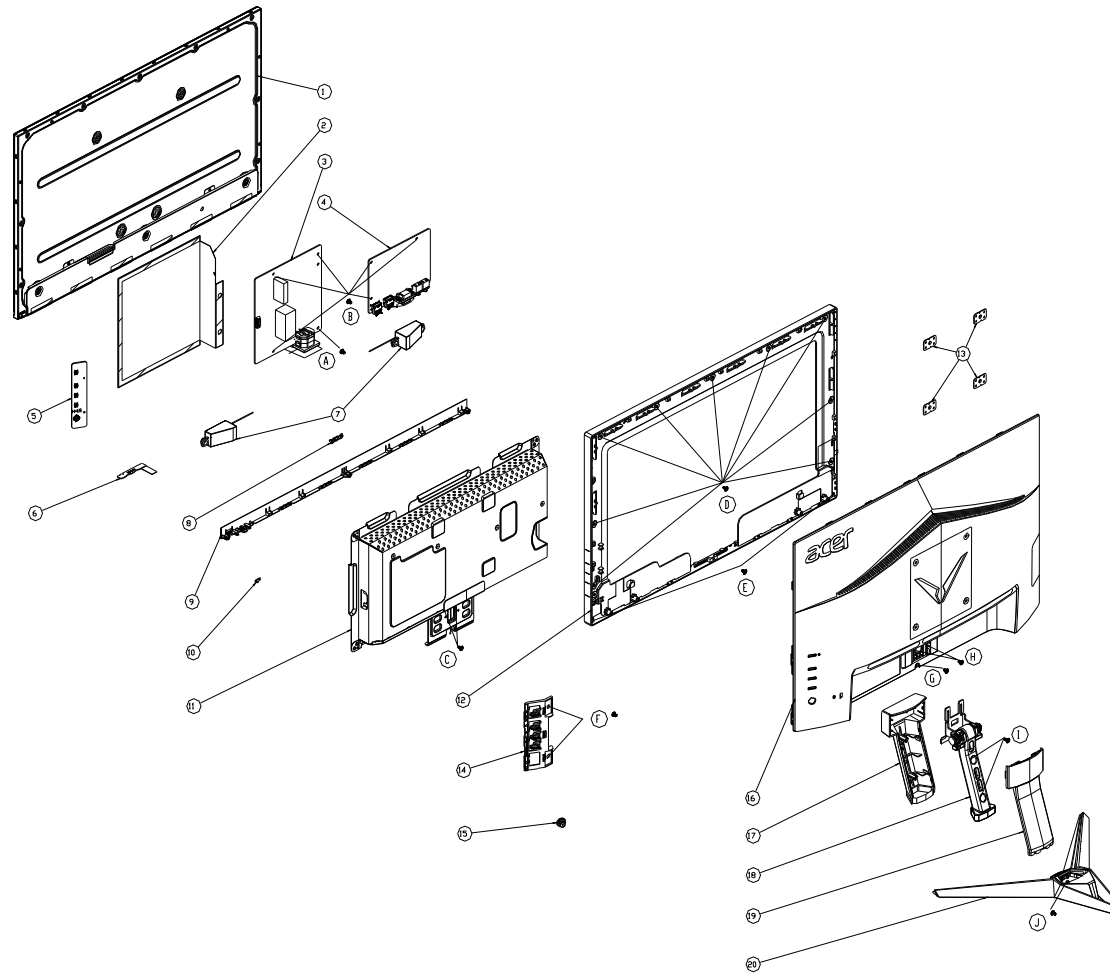
CAUTION -The use of optical instruments with this product will increase eye hazard.

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 G9541-P0A-X-000-0010	PLPCHB541KVG2	N/A
4	MAIN BOARD-CBPRITMC0Q6	756GQHCB0BA157000Q	N/A
5	KEY BOARD	KEPCLQA6	55.TCCM2.003
6	LED BOARD	LEPCLQA2	55.TCCM2.004
	CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	50.TBLM2.002

2. Mechanical Instruction

Tools Required

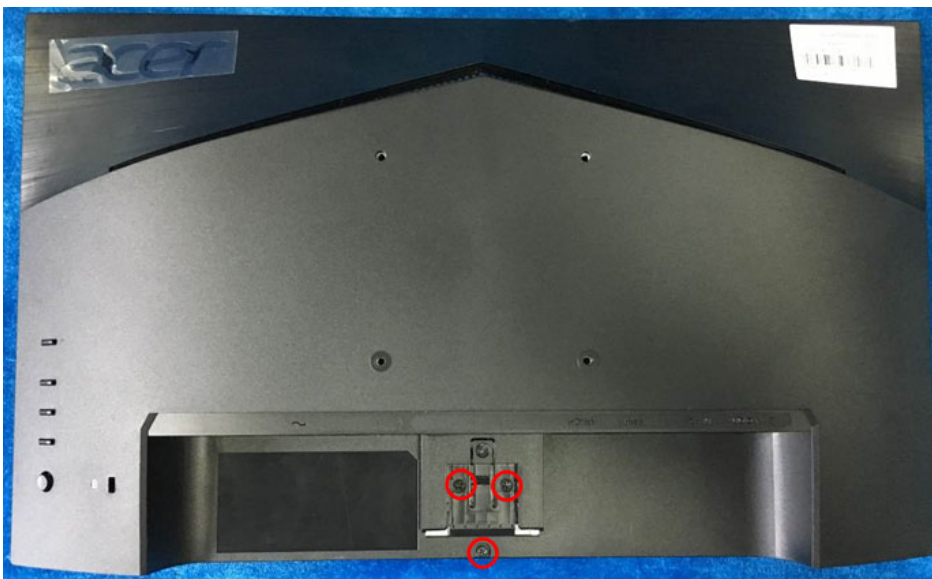
List the type and size of the tools that would typically can be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

Tool Description:

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

2.1 Disassembly Procedures:

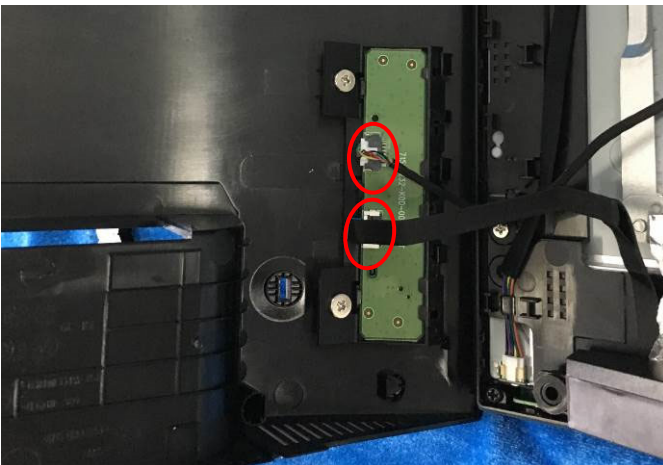
S1. Push the button to remove the stand –base ASS'Y and unscrew the screw on rear cover.



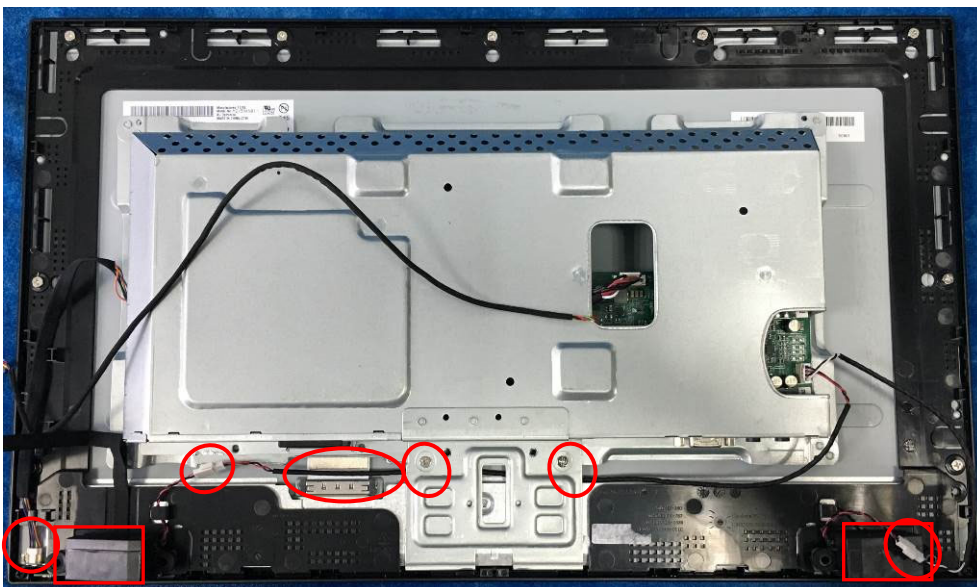
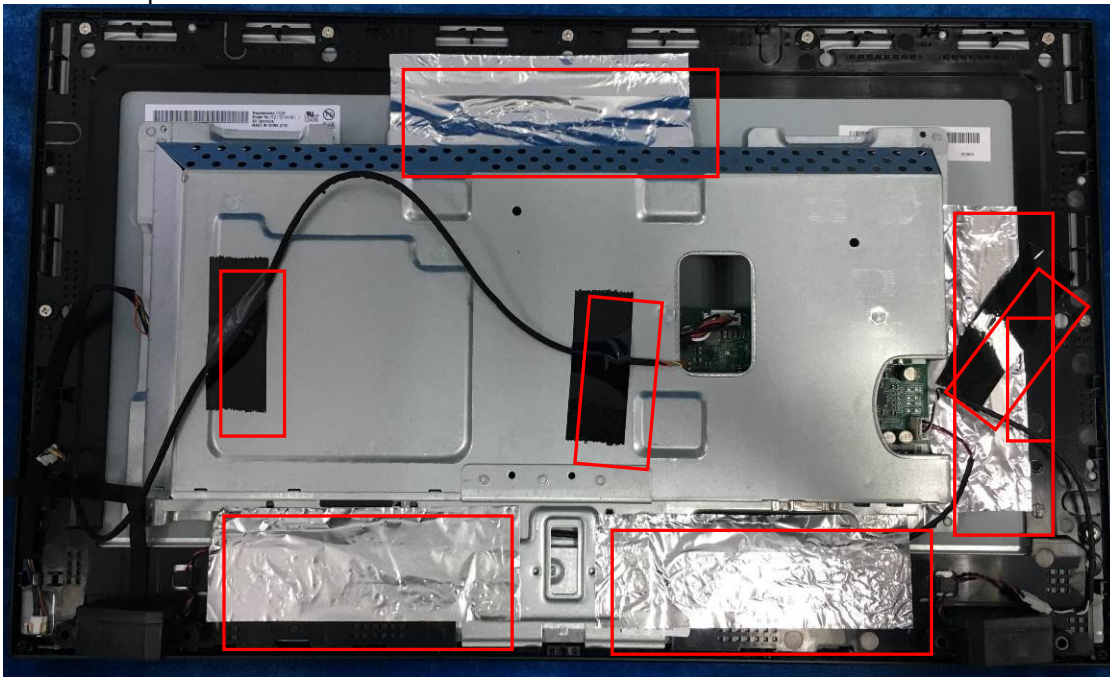
S2. Remove the rear cover. Use a tool (like picture using) to open all latches. (Be careful the position of the key board.)



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.

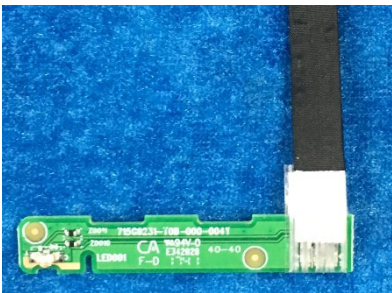


S4. Tear up all tapes and disconnect the LVDS cable (main board to panel), the cables (power board to panel). Remove the Speakers and unscrew the screws.

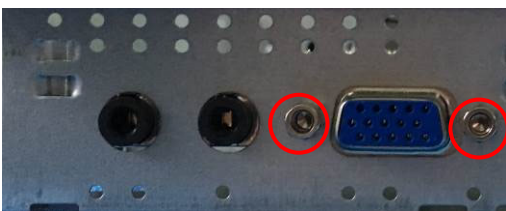


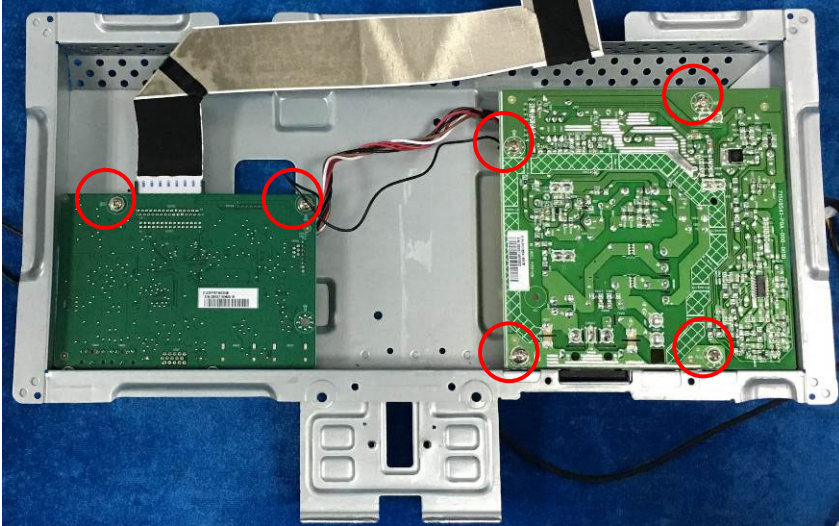
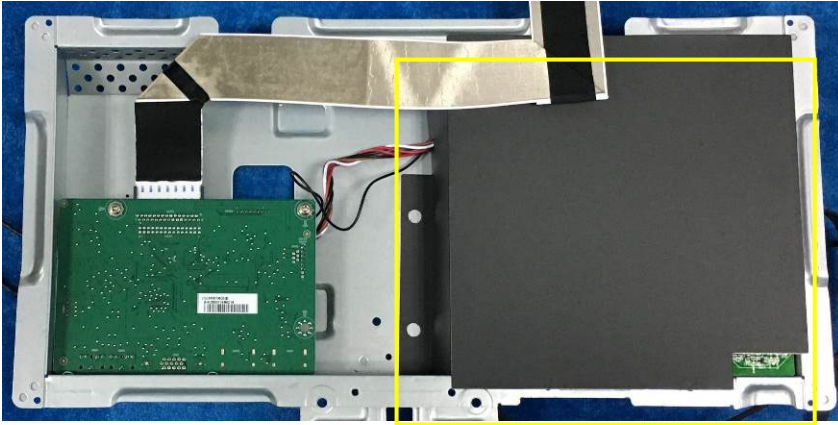
S5. Remove the screws to separate the panel and the Middle Frame, LED Board and the DECO BEZEL.



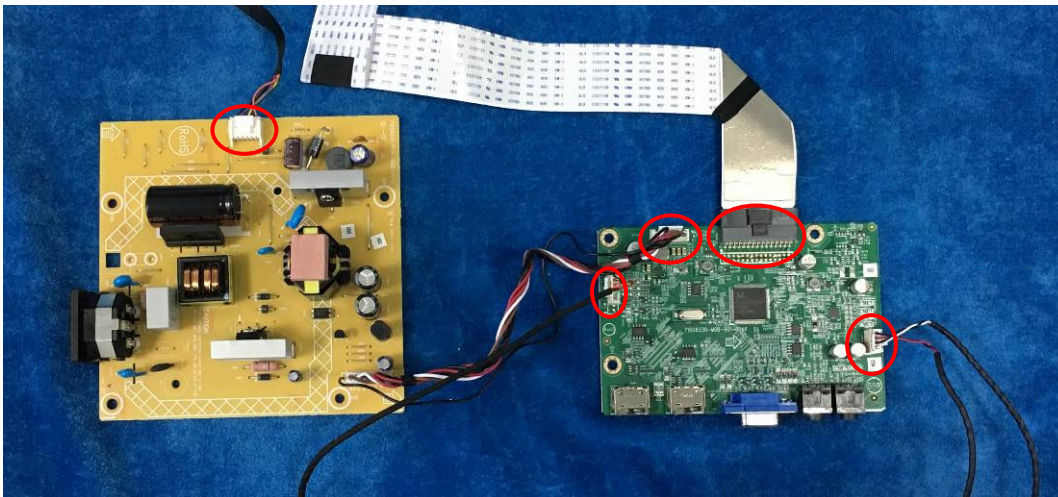


S6. Unscrew the screws of the main board remove the mylar. Then unscrew the screws of the power board and main board to remove them from mainframe.



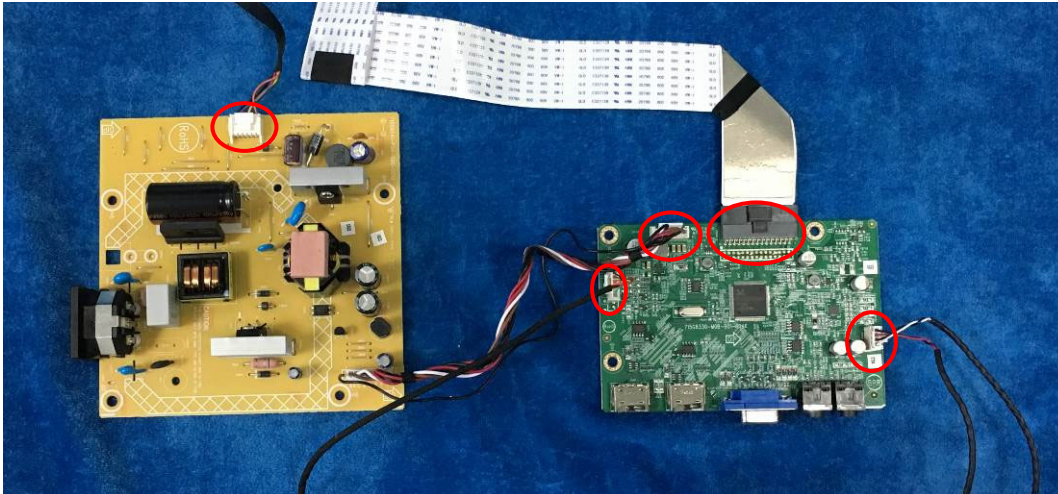


S7. Remove the main board and power board. Disconnect the cables.

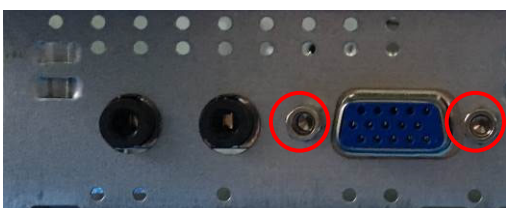
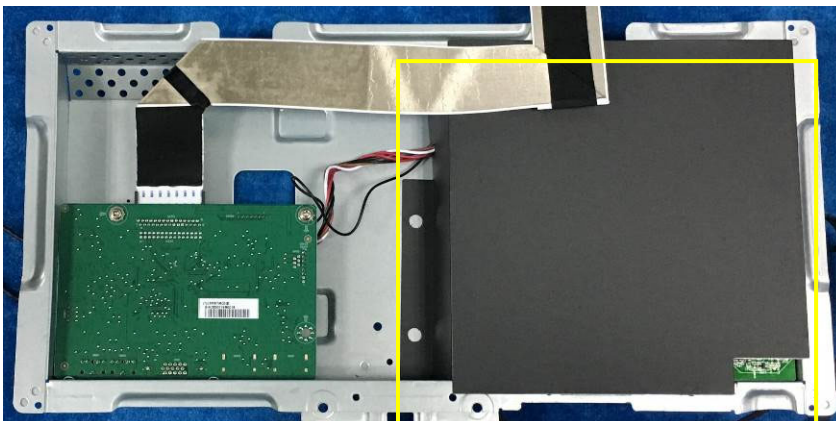
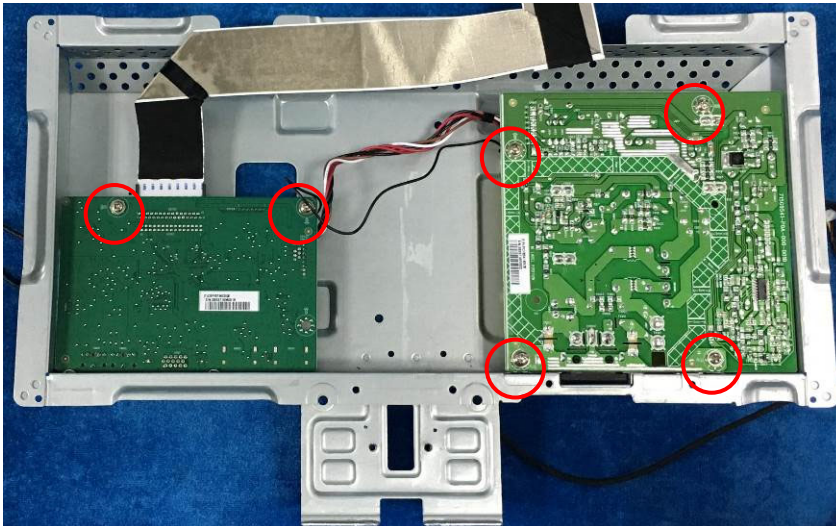


2.2 Assembly Procedures:

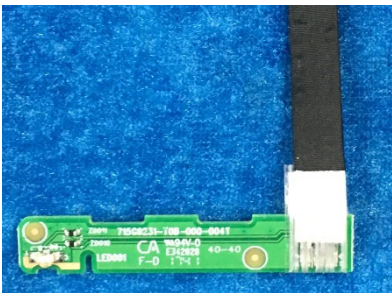
S1 Prepare a main board, a power board and some essential cables. Connect every cable as the below picture.



S2. Use a screwdriver to tighten the screws till the power board and main board with shield are firmly attached. Tape the Mylar. And use a Hex-head screwdriver to tighten the screws for locking the connector.

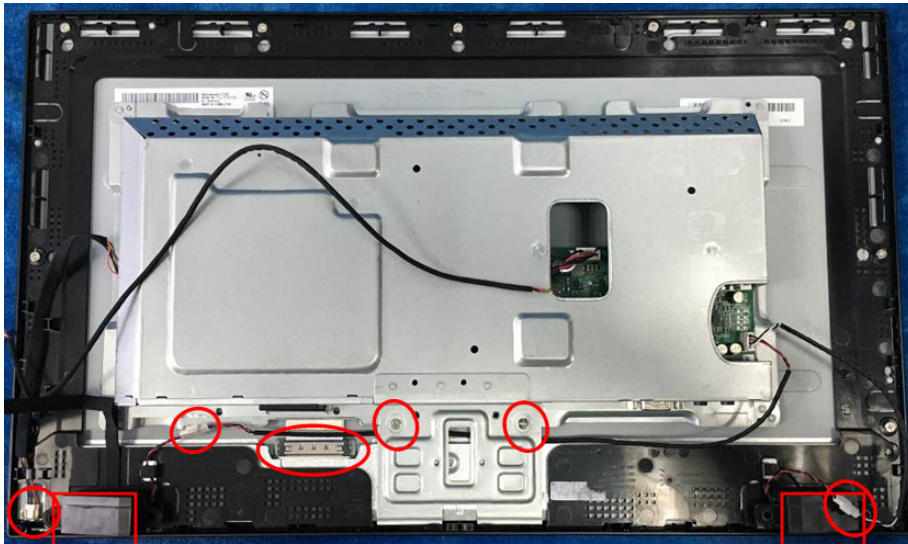


S3. Assemble the MIDDLE FRAME, DECO bezel, LED board and the panel. Use a screwdriver to tighten the screws.

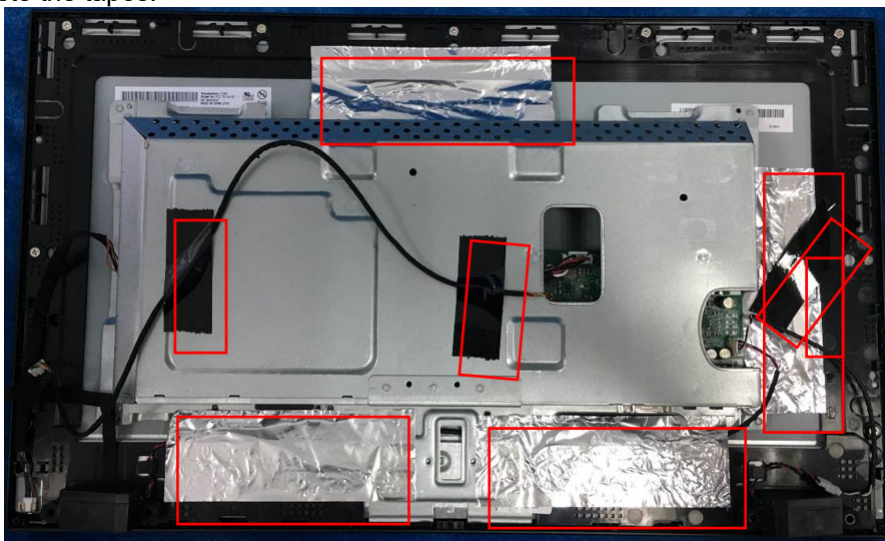




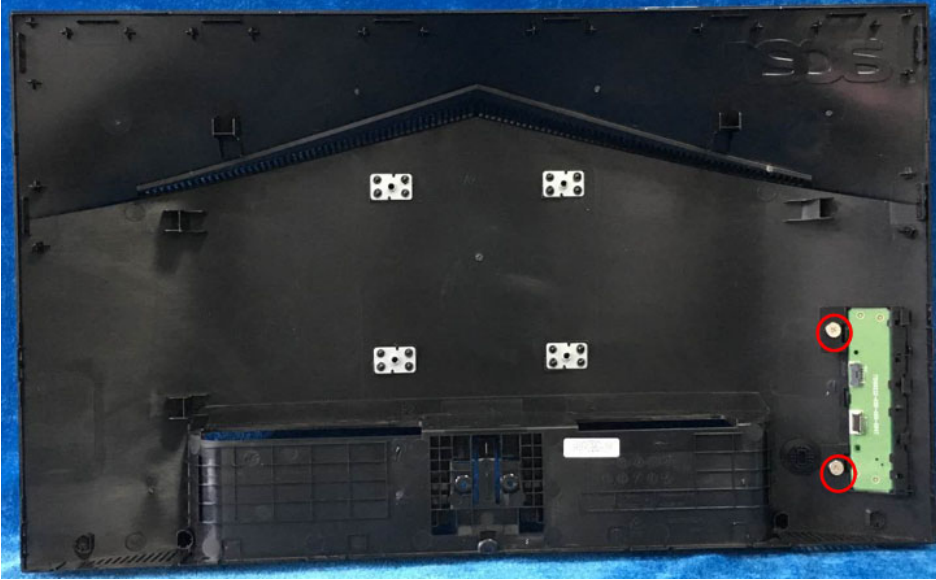
S4. Connect cables (mainboard to panel and the power board to panel). Assemble the speakers and screw the two screws.



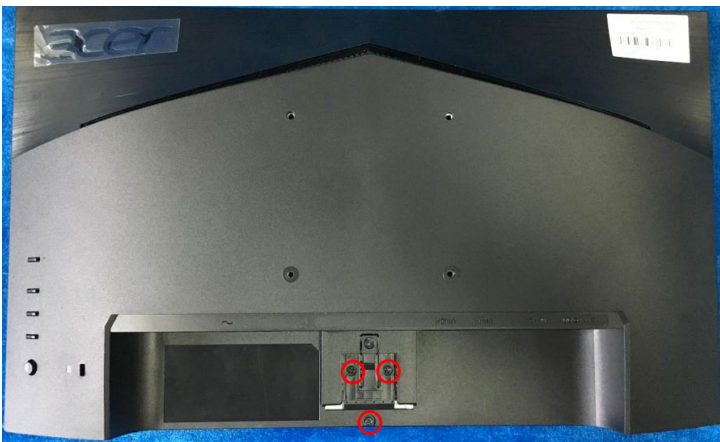
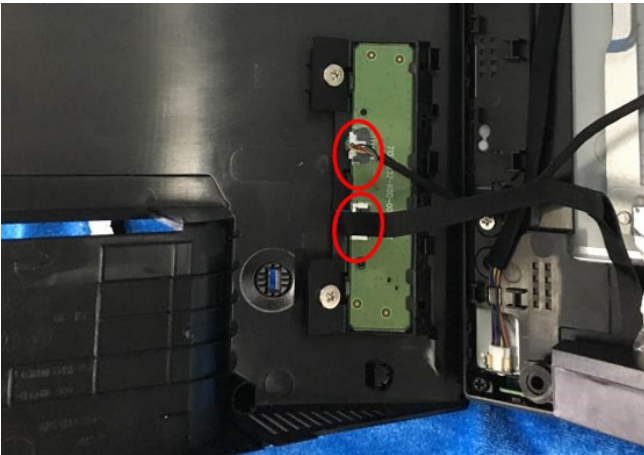
S5. Paste the tapes.



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.

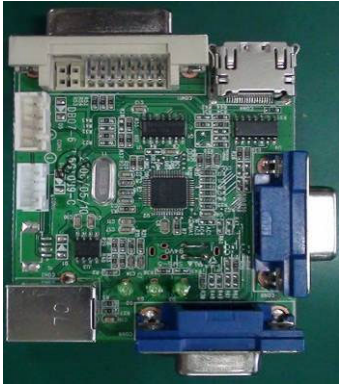


S8. Assemble the stand and base ASS'Y.



3. Firmware Upgrade Process

1. Materials



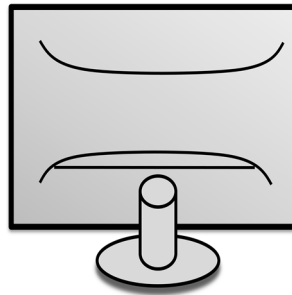
ISP JIG: 715GT089-C



VGA cable
TPV P/N: 089G728 GAA DB



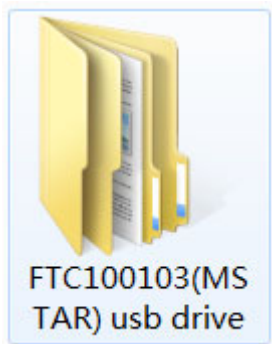
PC



Monitor



USB cable
TPV P/N: 089G1758 X

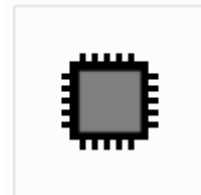


FTC100103(MS
TAR) usb drive

USB port driver



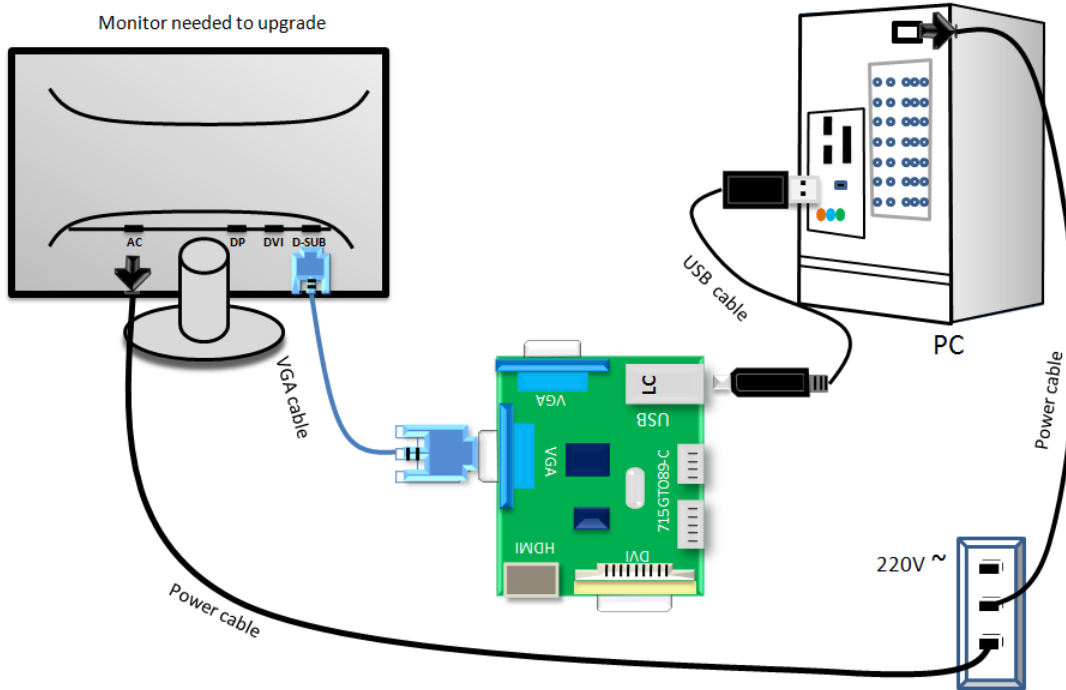
RTDTool.exe
ISP tool:



ACER_VG220Q_
RTD2522AR_A2
H_M215HAN01_
1_FULL_20171...

New F/W

2.Connection

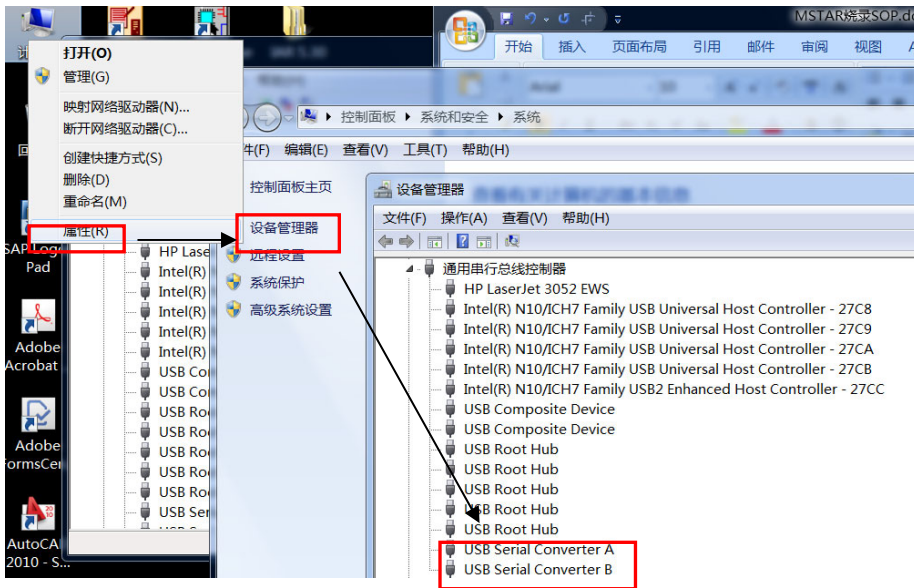


3.Install USB driver.

3.1. When 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.

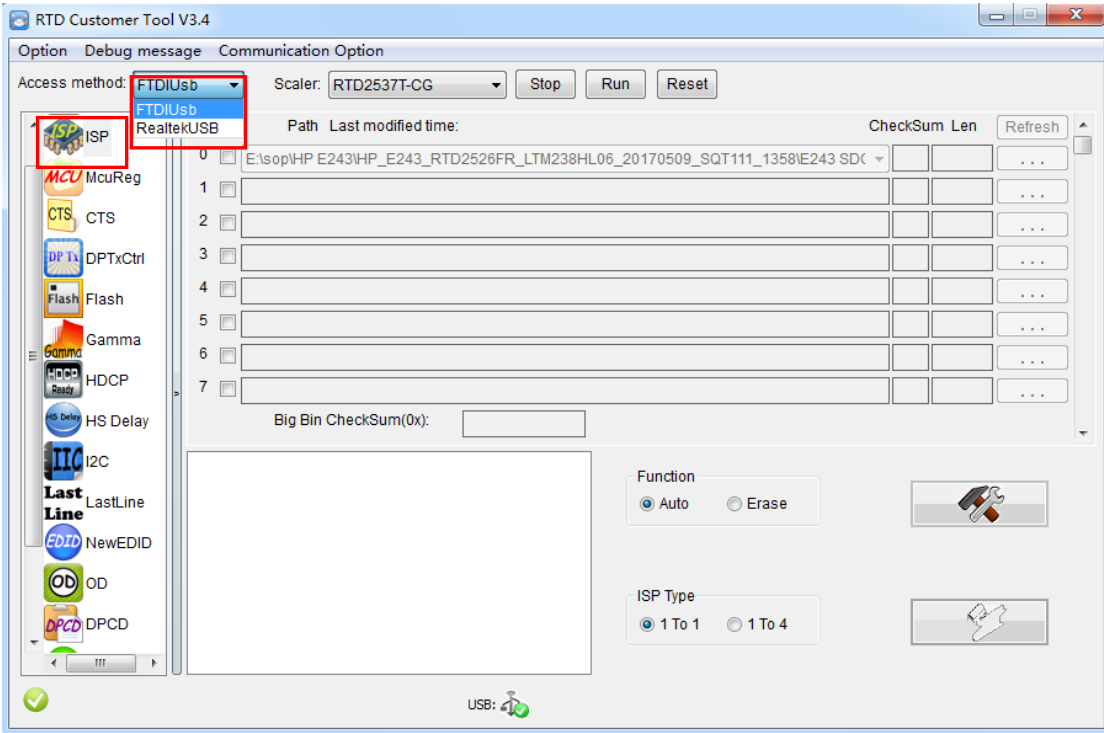
Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the EDID writing tool before running the F/W Upgrade tool.



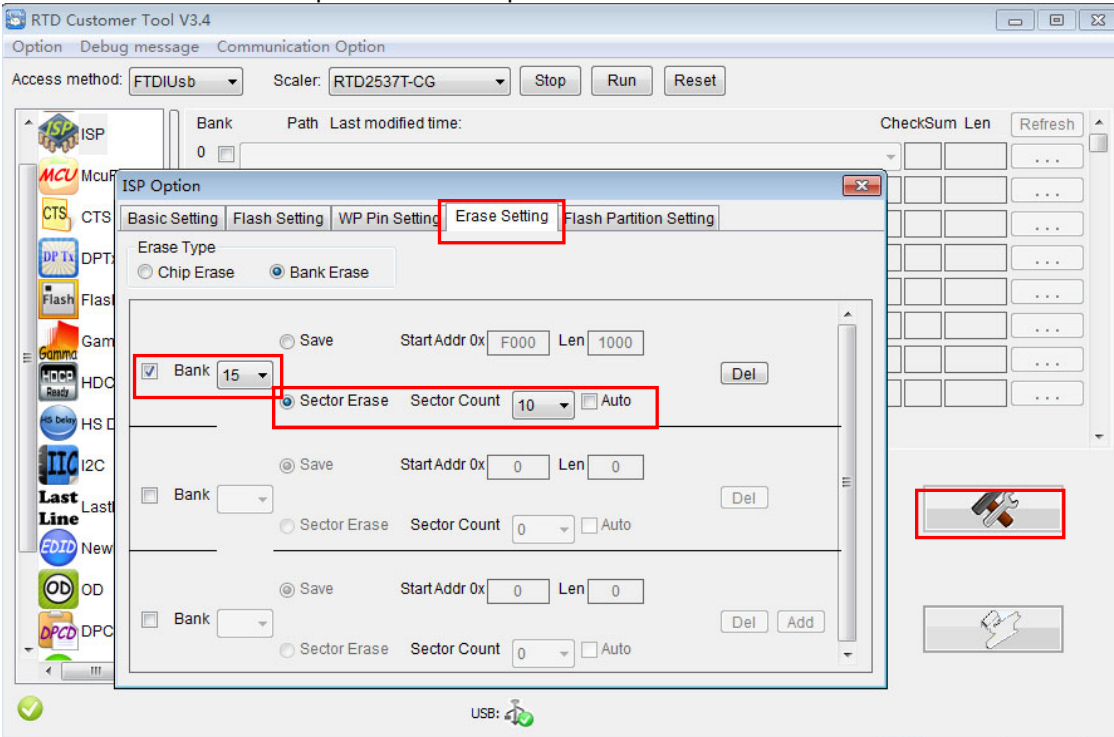
4.1. `RTDTool.exe` double- clicks the icon to run it.

Note: Must to install driver firstly

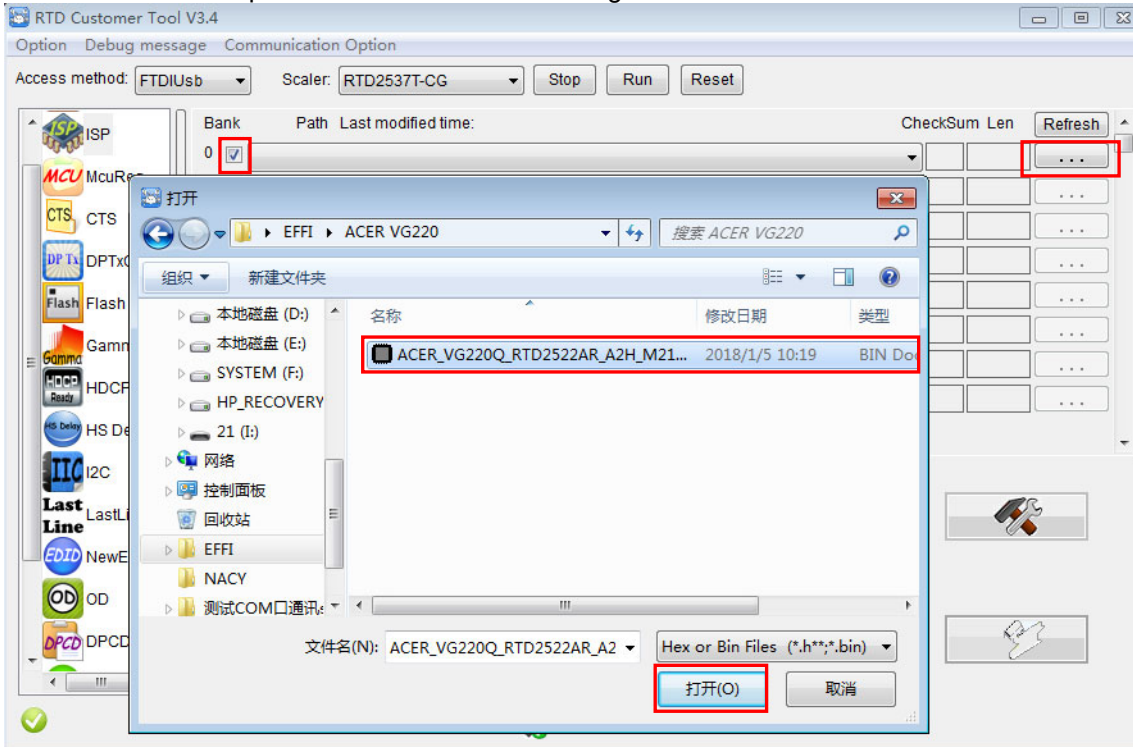
4.2. Choose the FTDIUSB communication way.



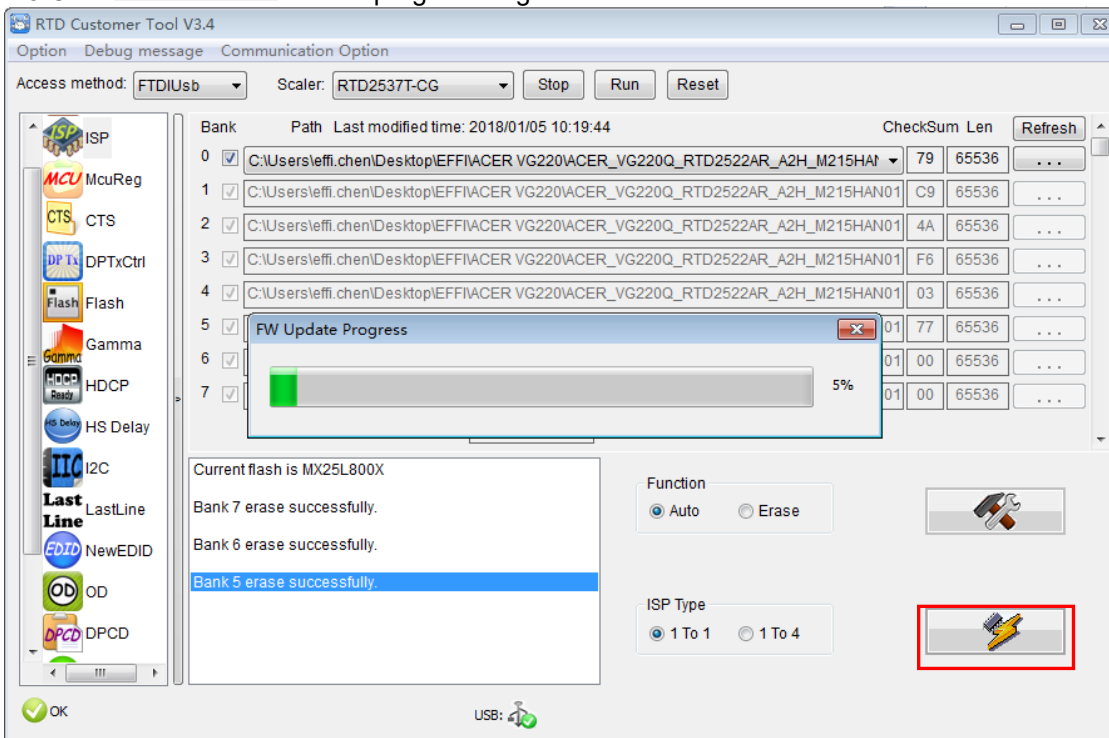
4.3 Click “ISP” and “ISP Option” to set the parameter.



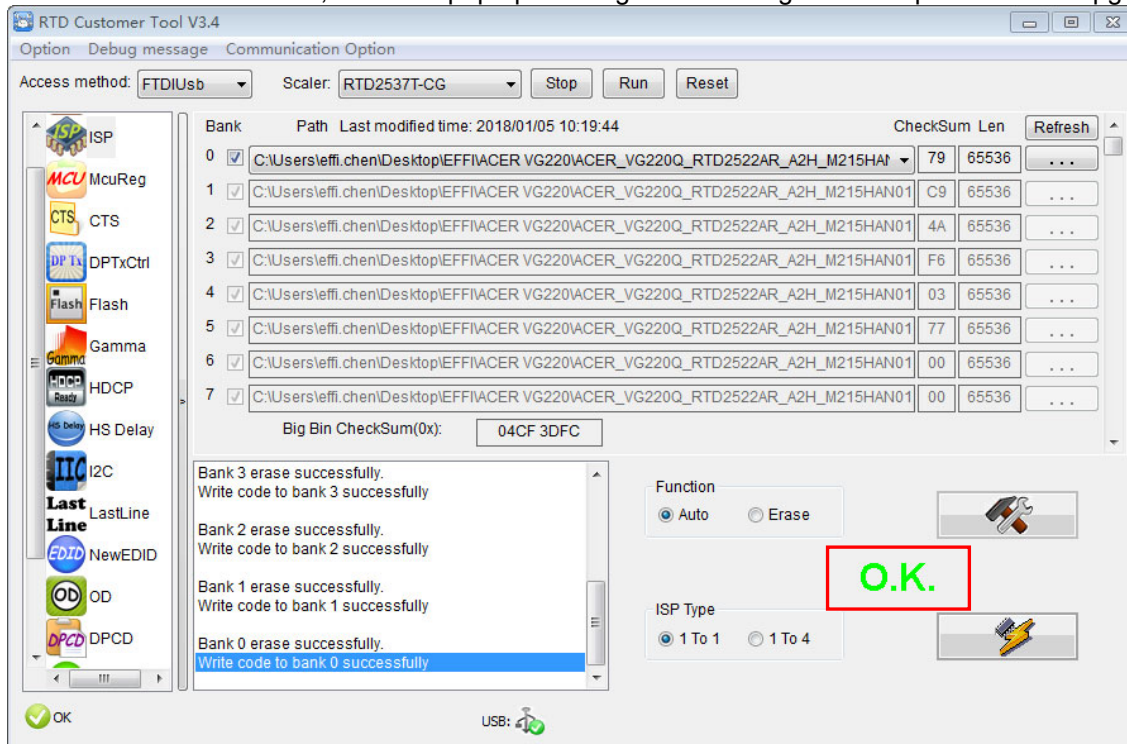
4.4 Close the “ISP Option” window and click the “BigBin” to load the correct F/W.



4.5 Click  to start programming.



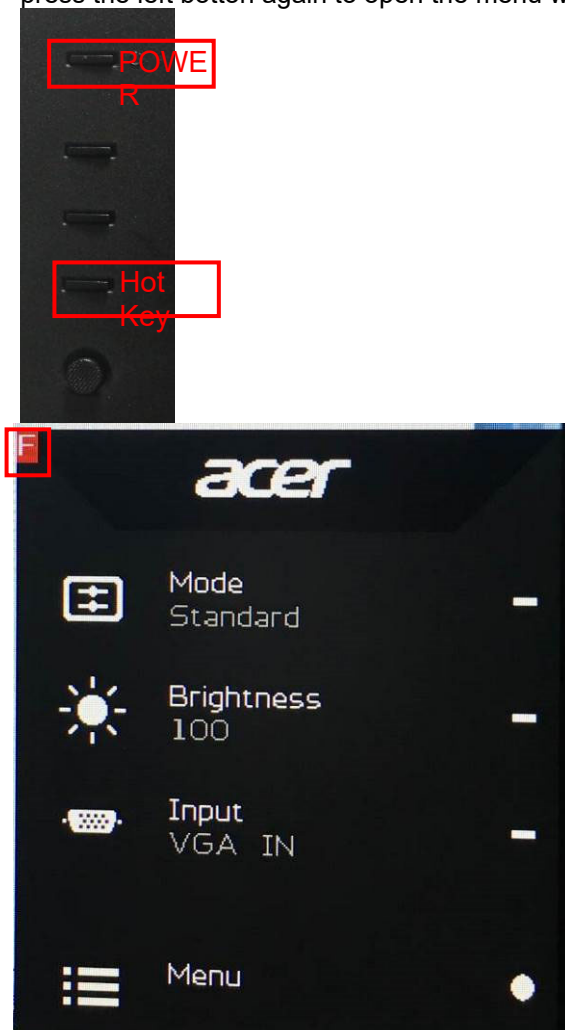
4.6 After about 20 minutes, there will pop up message as below figure which promotes the upgrade successful.



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: Pressing the hot key button and DC on, when the screen lights, release the key and press the left bottom again to open the menu with "F" and select "F" to open factory menu.




```
Model: VG220Q
Chips: RTD2522AR
Panel: AU0-M215HAN01.1
Date : 20171225 Version: 0.04

AutoColor
Gain      R 172 G 158 B 178
Offset    R 102 G 111 B 110

          BRI 100     CON  50

Warm      R 128 G 128 B 128
Normal    R 121 G 124 B 128
Cool      R 108 G 117 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  8     LVDS Current  2
Exit
```

Check this F/W version.

(3) Do "Auto Color" in factory mode.

```
Model: VG220Q
Chips: RTD2522AR
Panel: AU0-M215HAN01.1
Date : 20171225 Version: 0.04

AutoColor PASS
Gain      R 166 G 149 B 170
Offset    R 102 G 112 B 111

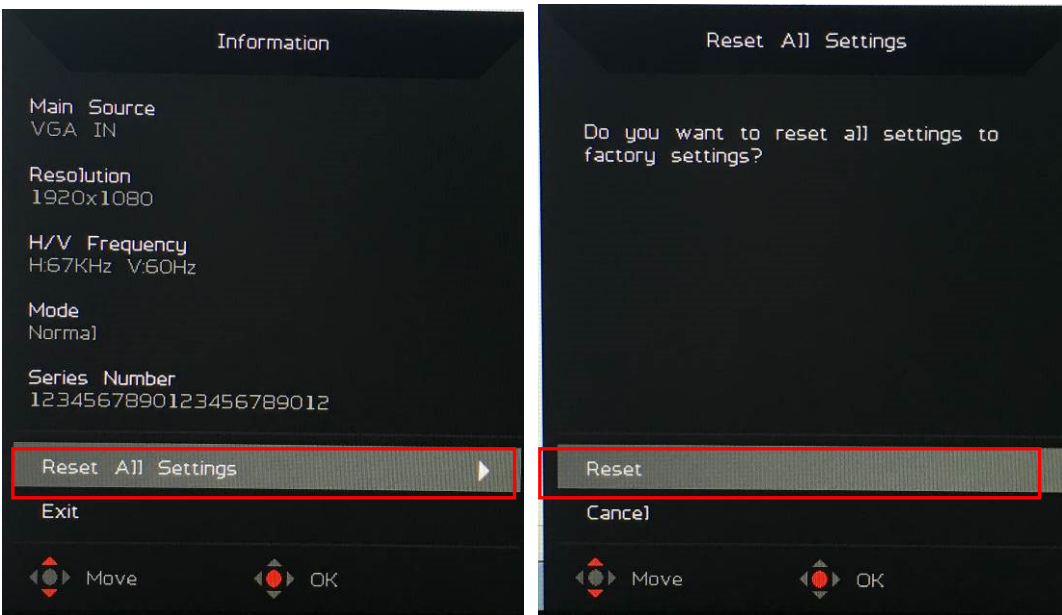
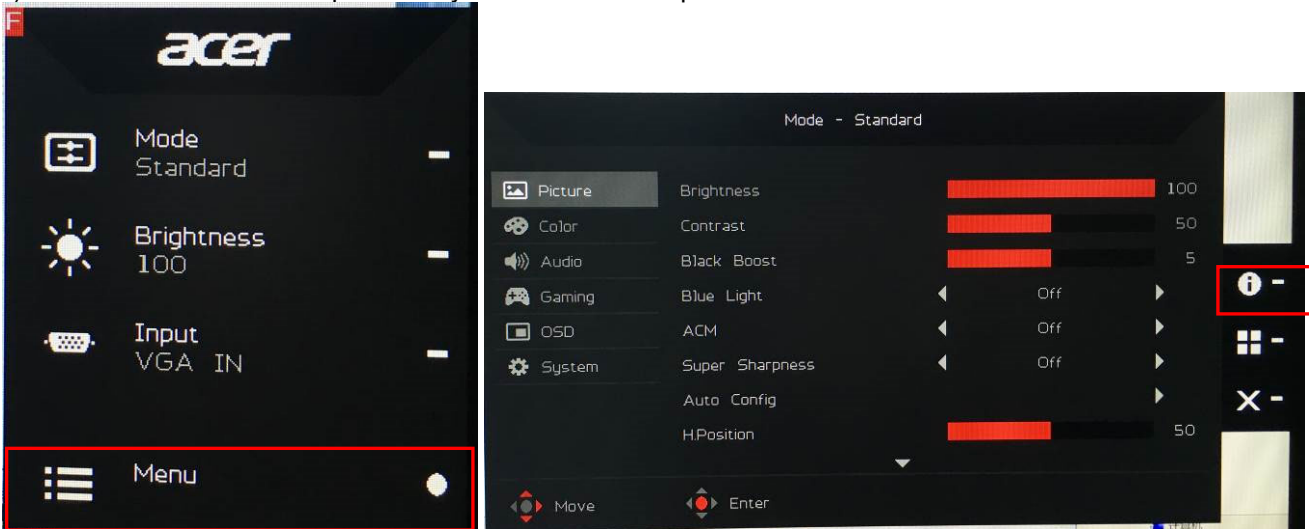
          BRI 100     CON  50

Warm      R 128 G 128 B 128
Normal    R 121 G 124 B 128
Cool      R 108 G 117 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  8     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.

4. Writing EDID Process

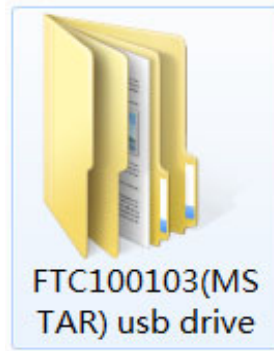
1. Materials list



VGA cable
TPV P/N: 089G728 GAA DB



USB cable
TPV P/N: 089G1758 X



FTC100103(MS
TAR) usb driver

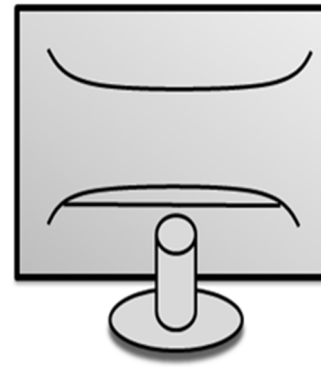
USB port driver



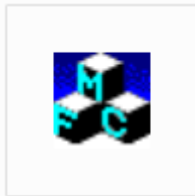
ISP JIG: 715GT089-B



PC

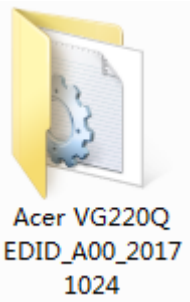


Monitor



TPVDDC_V066_
20170512.exe

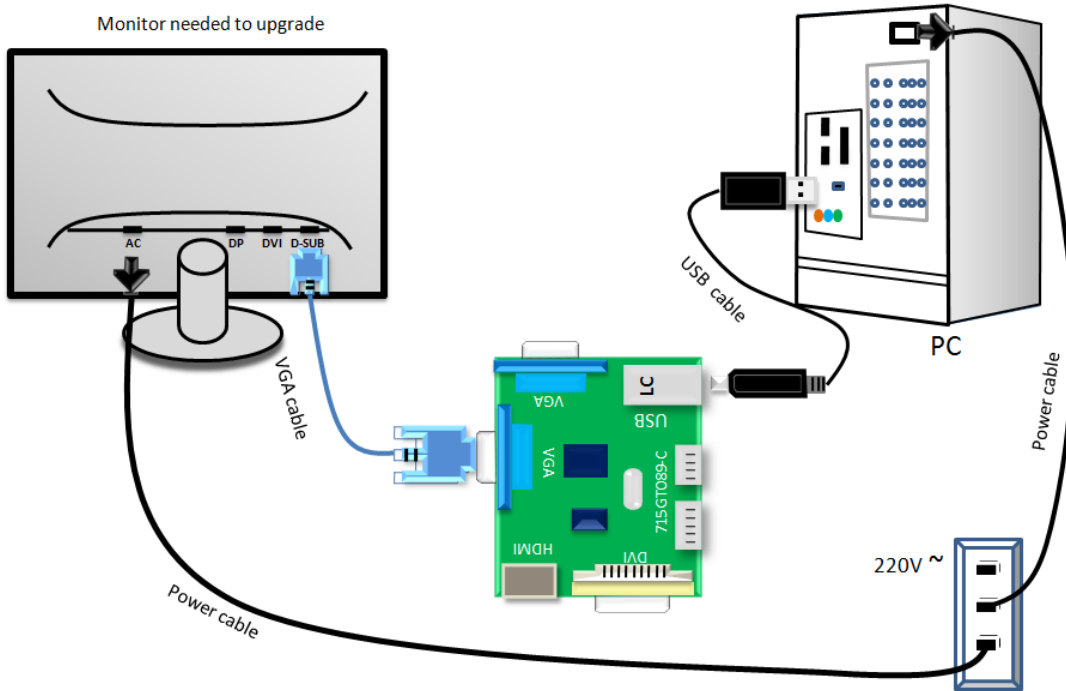
ISP tool



Acer VG220Q
EDID_A00_2017
1024

EDID

2. Connection(DC on the monitor)



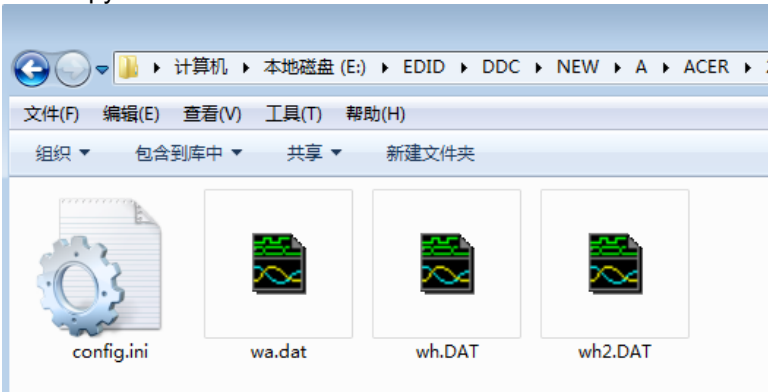
3. Install USB driver.

4. Prepare the EDID written.

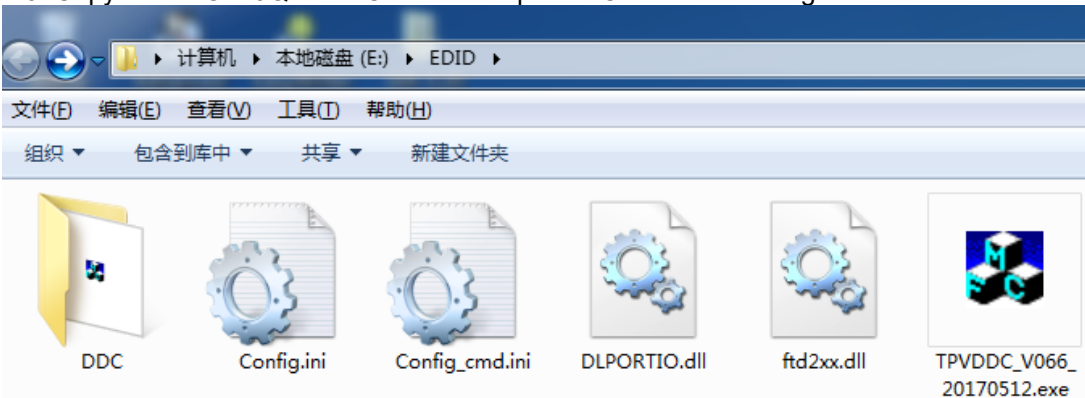
4.1. Change the EDID files name as below rule.

Analog EDID — WA.dat HDMI EDID WH.dat
 HDMI2 EDID — WH2.dat

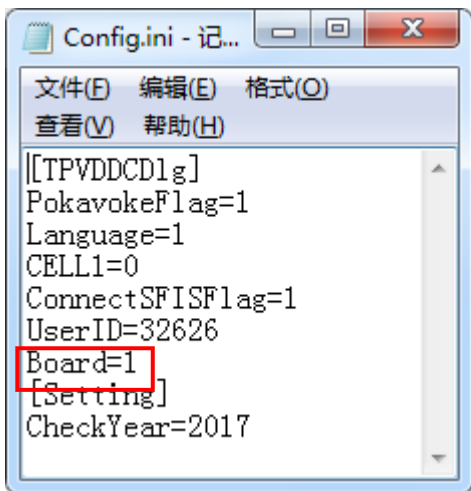
4.2. Copy these files to one folder named as Acer VG220Q which must contains "config.ini" file.



4.3. Copy Acer VG220Q to DDC folder and put DDC and ISP tool together.



4.4 Setting the Config as below.



5. Run the ISP tool

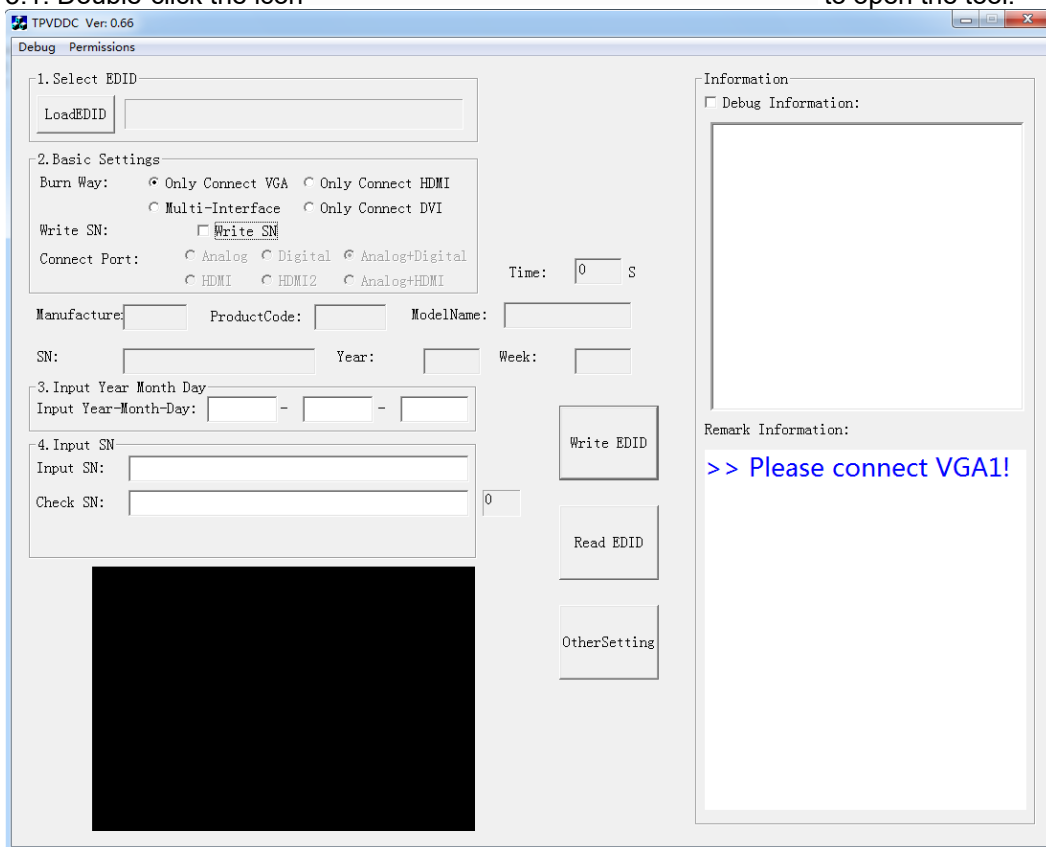
Note: If the F/W Upgrade use the same ISP tool as the EDID writing, you must close the F/W Upgrade tool before running the EDID writing tool.



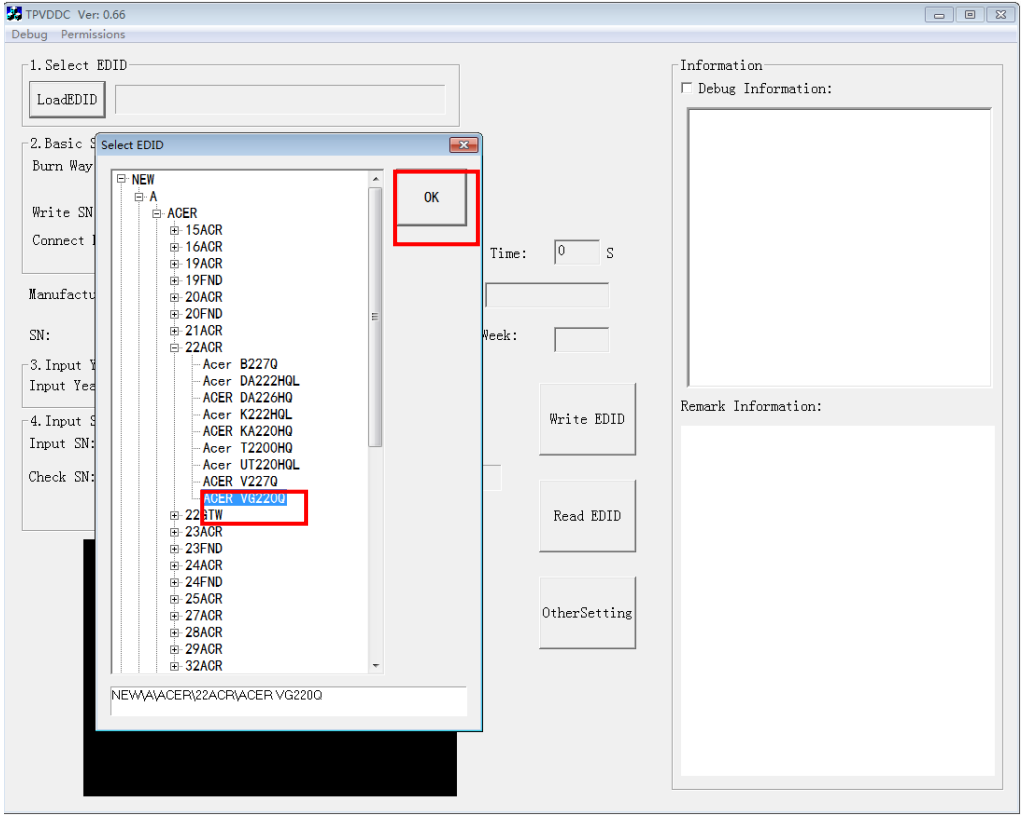
TPVDDC_V066_20170512.exe
 TPVDDC Microsoft 基础类应用...
 1.0.1.1

5.1. Double-click the icon

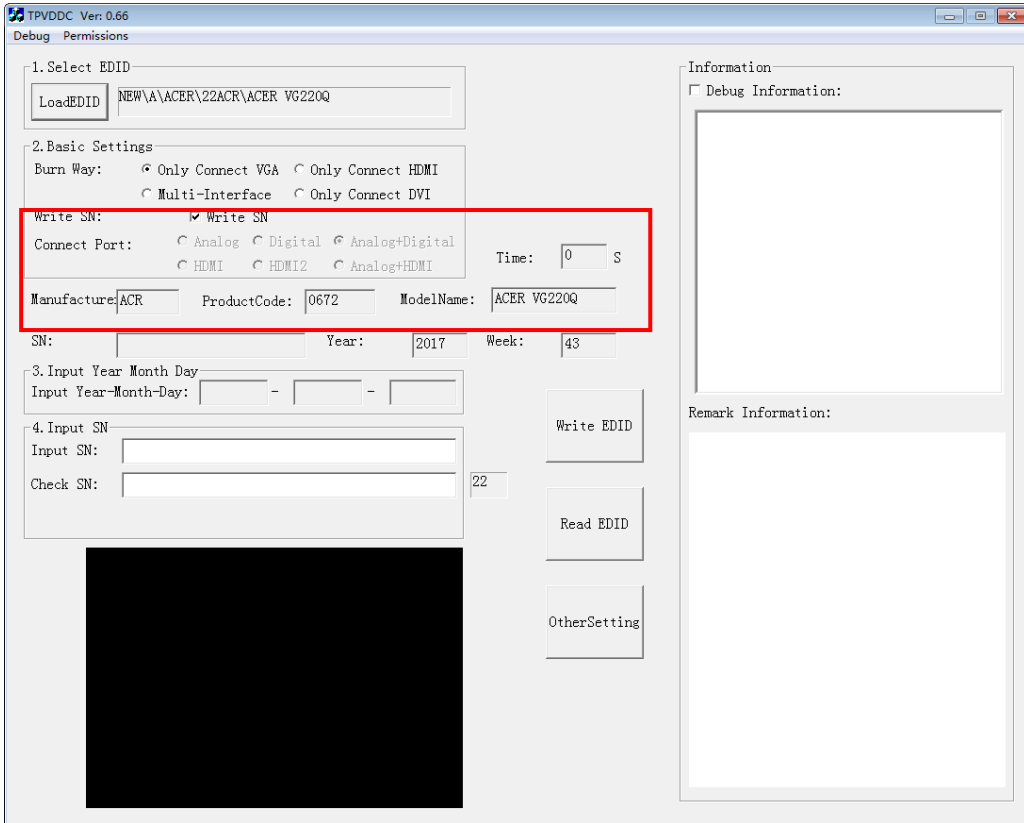
to open the tool.



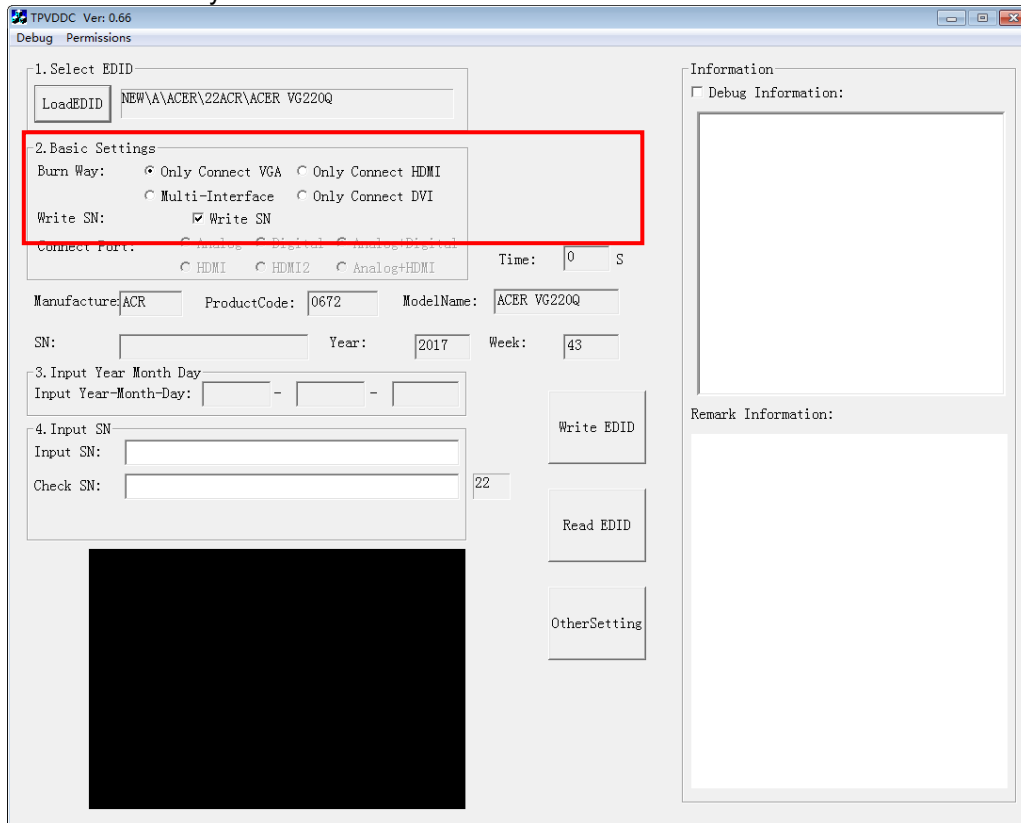
5.2. Select the EDID folder.



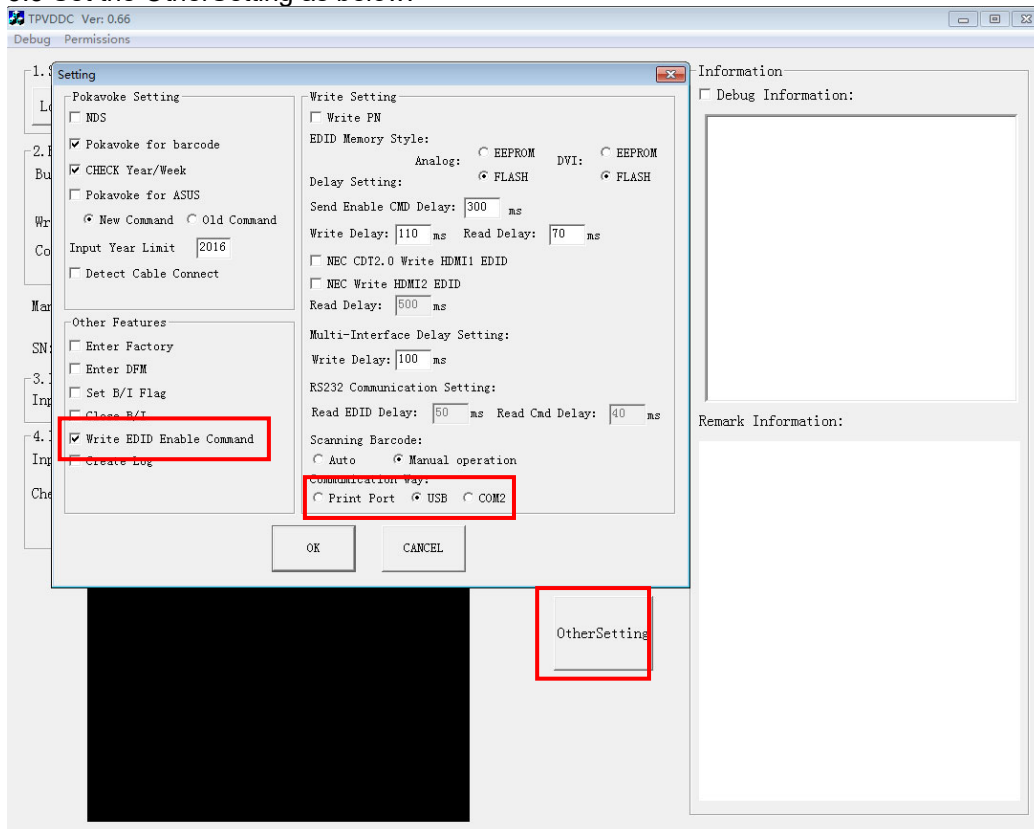
5.3. Load EDID successful.



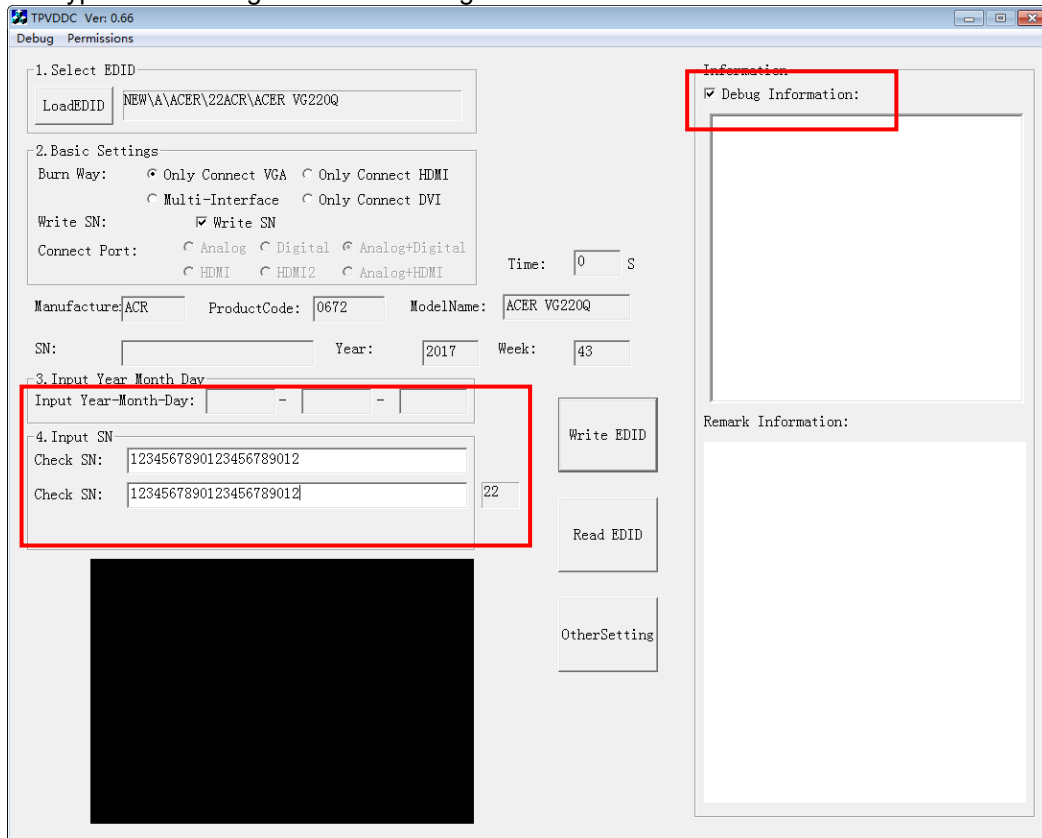
5.4 Tick the “Only connect VGA” and “Write SN”.



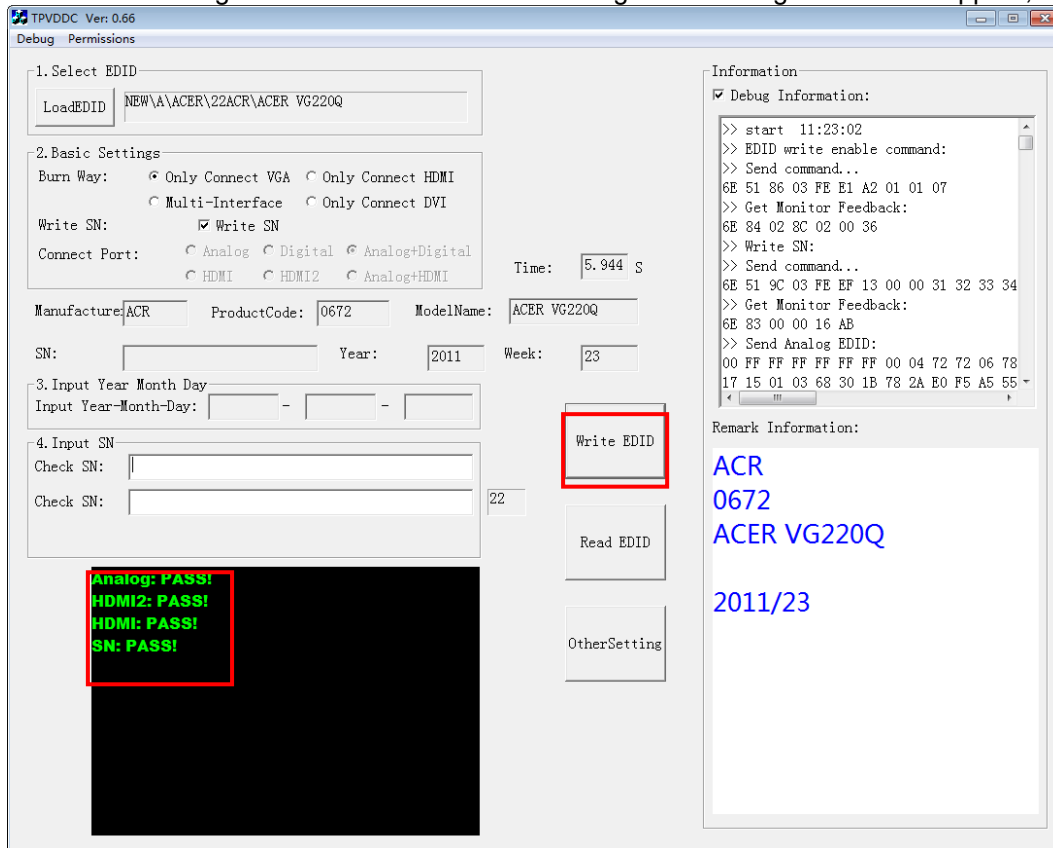
5.5 Set the OtherSetting as below.



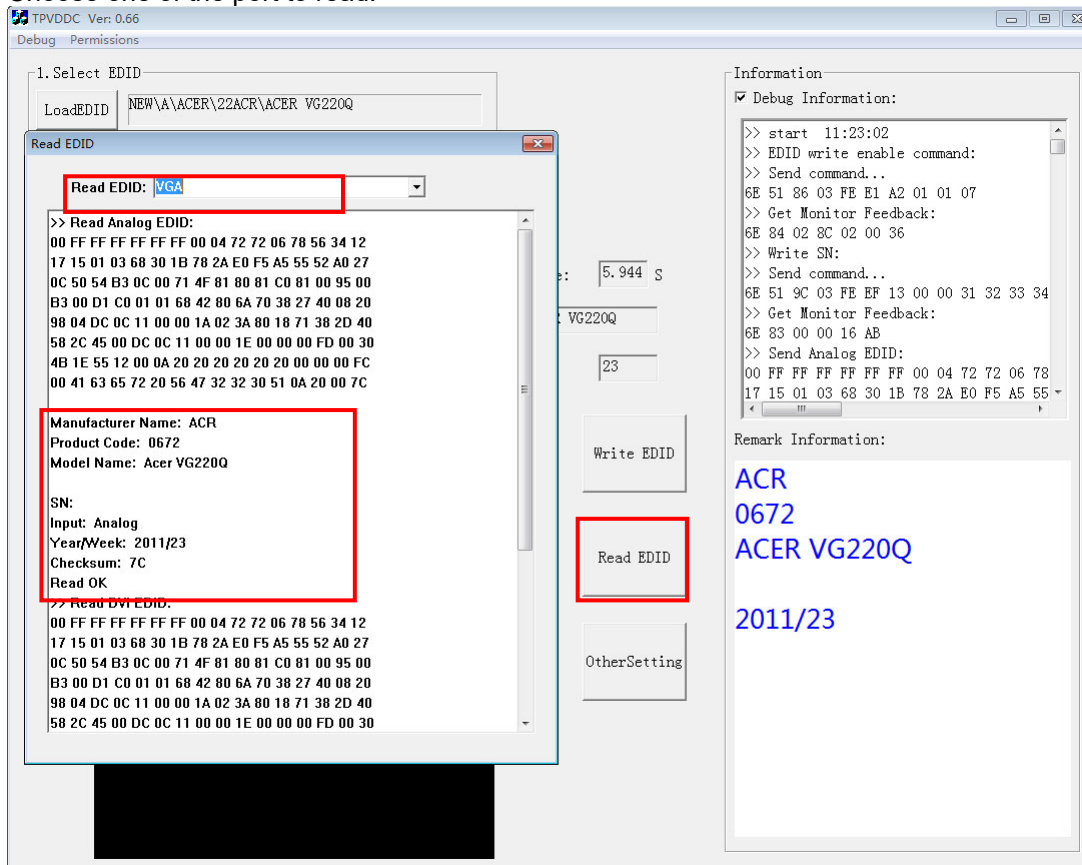
5.6 Type in the 22 digit S/N and "Debug Information".



5.7. Start to writing. Click "write EDID" to start writing. When The green "PASS" appear, the process is finished.



5.8 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 uually 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.

5. FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of ACER VG220Q 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	756GQHCB0BA157000 Q	NA
	POWER BOARD	PLPCHB541KVG2	NA
	KEY BOARD	KEPCLQA6	55.TCCM2.003
	LED BOARD	LEPCLQA2	55.TCCM2.004
	PANEL	750GBU215A110JN000	NA
	SPEAKER LEFT	378G0025689CLA	23.TCCM2.001

	SPEAKER RIGHT	378G0025689CRA	23.TCCM2.002
	CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	50.TBLM2.002
	CABLE 4P-2P+2P 500/80MM(MB TO SPEAKER)	395GH20004DM144000	NA
	CABLE 6P-6P 340MM(MB TO KEY BOARD)	395GH20006XM261000	NA
	CABLE 6P-6P 160MM(PB TO PANEL)	395GH20006TM264000	NA
	BEZEL ASSY W LOGO	705GQHCS034451	NA
	MIDDLE FRAME	Q34G8555AEM02S0100	NA
	REAR COVER	Q34G8556AEM05S0130	NA

	FUNCTION KEY BUTTON	A33G2238AEM01L0100	NA
	FUNCTION KEY	Q33G0892AEM01S0100	NA
	STAND HINGE ASSY	705GQHCS034501	NA
	BASE ASSY	705GQHCS034502	NA
	INSULATING-SHEET	Q52G18016730HF0ADG	NA
	MAINFRAME	Q15G320120160100FJ	NA
	D-SUB-CABLE-1800	089G-728CAA-2A	50.LZJM2.003

	<p>HDMI-CABLE-1800</p>	<p>389G1848GAA502</p>	<p>50.T27M2.010</p>
	<p>POWER CORD 1800MM(EUROPE)</p>	<p>389G404A18NISG</p>	<p>27.T1BM2.001</p>
	<p>AUDIO-CABLE-1800</p>	<p>389G017356G53R</p>	<p>50.LXPM2.012</p>

6. 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.

DP/HDMI 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.