Service Service Service



Acer Monitor B27 LIFECYCLE EXTENSION GUIDE

Contents

Important Safety Notice	3
1. Exploded view diagram with list of items	4
2. Mechanical Instruction	5
3. Firmware Upgrade Process	12
4. Writing EDID Process	18
5. FRU (Field Replaceable Unit) List	31
6. Trouble shooting instructions	31

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).

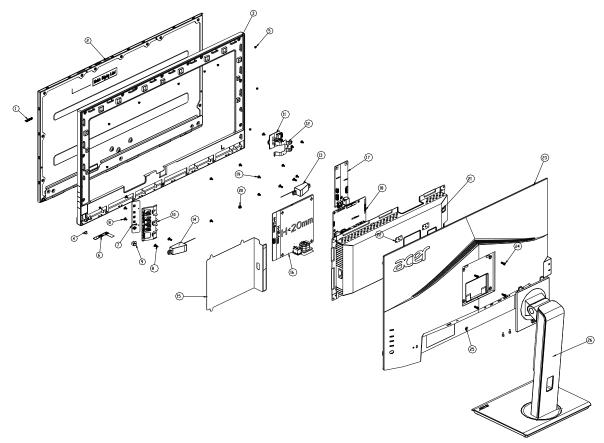
-Make certain that treatment person's body is grounded through wristband.

-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



ltem	Description	TPV Part No.	ACER Part No.
2	PANEL	750GBU270HA10JN000	NA
6	LED BOARD	LEPCLQA2	NA
7	KEY BOARD	KEPCLQA6	NA
11	USB BOARD	USBLQA6	NA
16	POWER BOARD	PLPCHH541KQB1	NA
17	USB BOARD	USBLQA4	NA
18	MAIN BOARD	756GQHCB0BA080000Q	NA
	CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	NA

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:

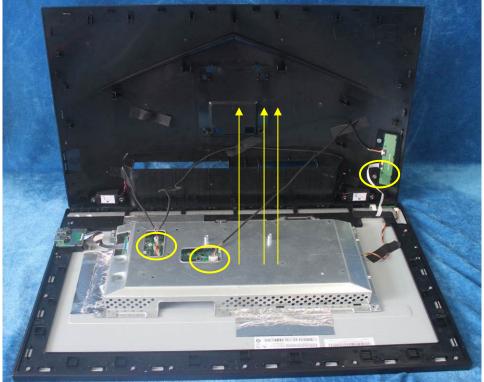
S1.Press the button to remove the stand ASS'Y and unscrew the screws on rear cover.



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



S3. Pull up the rear cover and disconnect the connectors.

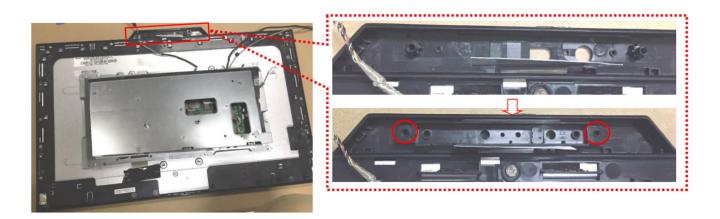


Tear up all tapes and disconnect the FFC cable (main board to panel), lamp power cable (power board to panel), USB cable(USB board to main board) and unscrew the screws to remove the mainframe and USB board.



Below For webcam model:



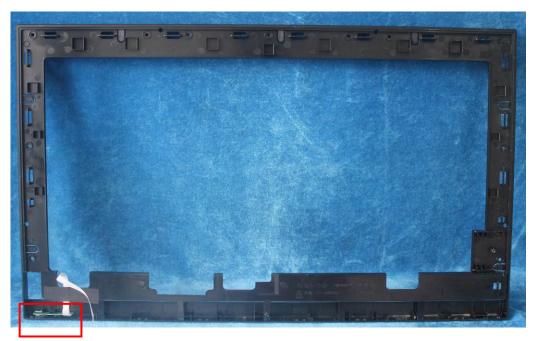


Unscrew the screws and disconnect the connector to remove the speakers and key board from the rear cover.

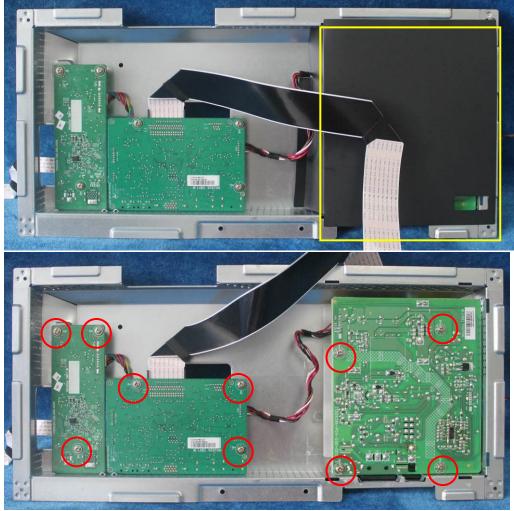


S4. Unscrew the screws to separate the panel and the bezel and remove the LED board from the bezel.





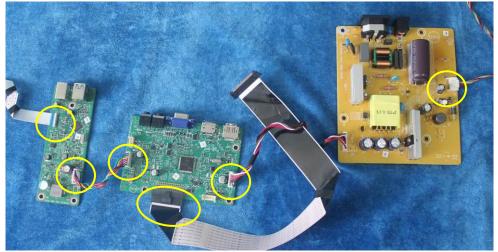
S5. Turn over the shield and remove the Mylar and unscrew the screws on main board, power board and USB board.



S6. Use a Hex-head screwdriver to tighten the screws and unscrew the screw for locking the D-SUB connectors.

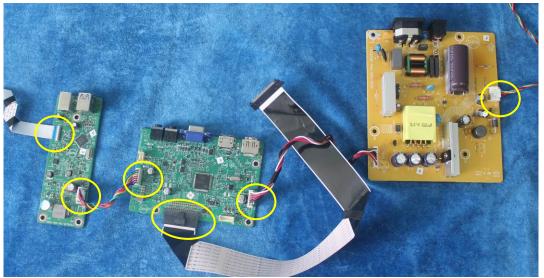


S7. Remove the main board and power board. Disconnect the cables.

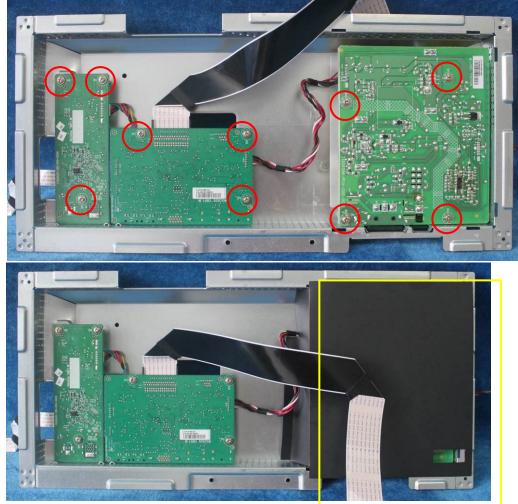


2.2 Assembly Procedures:

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



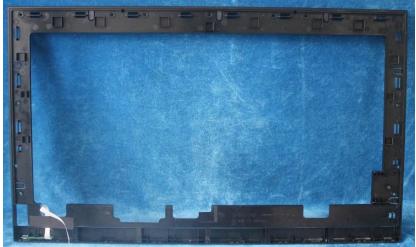
S2. Use a Philips-head screwdriver to tighten the screws till the power board, main board and USB board with shield are firmly attached. Tape the Mylar.



S3. Use a Hex-head screwdriver to tighten the screws for locking the connectors.



S4. Assemble the LED board to the bezel and assemble the panel to the bezel and screw all the screws.



For IR webcam Model Bezel



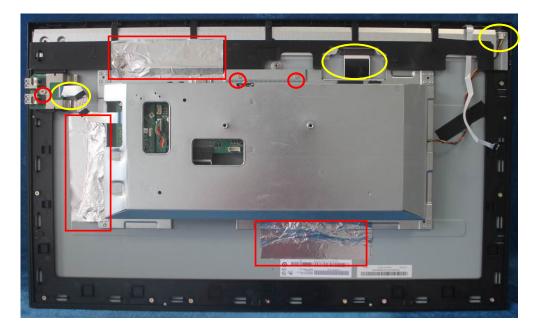




S5. Assemble the speakers and key board to the rear cover and screw the screws and the connector.



S6. Paste the tapes and connect lamp power cable (mainboard to panel, power board to panel, main board to key board), USB cable(USB board to main board) and screw the screw.



Below For webcam model:









S7. Prepare a rear cover to assemble it. Use the screws to lock the rear cover.



S8. Assemble the stand ASS'Y to rear cover.



3. Firmware Upgrade Process 1. Materials

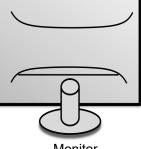


ISP JIG: 715GT089-C



VGA cable TPV P/N: 089G728 GAA DB

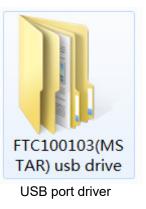








USB cable TPV P/N: 089G1758 X



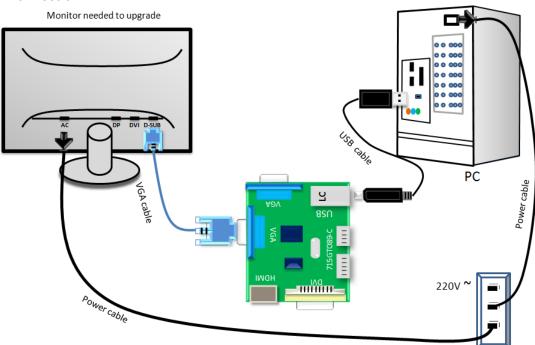


RTDTool.exe ISP tool:



Acer_B277_RTD 2525AR_AHDPH UB_AUO_M270 HAN01_1_7F0... New F/W

2.Connection



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.

🛐 RTD Customer Tool	l V3.4	· · · · · · · · · · · · · · · · · · ·	l		x		
Option Debug message Communication Option							
Access method: FTDIUsb Scaler: RTD2537T-CG Stop Run Reset							
	ekUSB	Path Last modified time:	CheckSum Len	Refresh	-		
	0	E:\sop\HP E243\HP_E243_RTD2526FR_LTM238HL06_20170509_SQT111_1358\E243 SD(-				
MCU McuReg	1 🗖						
CTS CTS	2 🔲						
DP Tx DPTxCtrl	3 🔳						
Flash Flash	4 🔳						
Gamma	5 🕅						
= Gamma	6 🕅						
HDCP Ready HDCP	, 7 🗖						
HS Delay		Big Bin CheckSum(0x):			-		
IIC 12C		Function					
Last Last Line		 Auto Erase 	-				
ОР		ISP Type					
DPCD DPCD		I To 1 💿 1 To 4	- Ce	3			
v		USB: 💫					

4.3 Click "ISP" and "ISP Option" to set the parameter.

RTD Customer Tool		l	
Option Debug mess	age Communication Option		
Access method: FTDI	Jsb Scaler: RTD2537T-CG Stop Run Reset		
	Bank Path Last modified time:	CheckSum Len	Refresh
-Orto-	ISP Option		
MCUMcuReg	Basic Setting Flash Setting WP Pin Setting Erase Setting Flash Partition Setting		
CTS CTS	Erase Type		
DPTx DPTxCtrl	Chip Erase Bank Erase		
Flash Flash	Save Start Addr 0x 0 Len 0		
Gamma	Ø Enter Del Del		
	Sector Erase Sector Count 10 Auto		
HS Delay			•
IIC 12C	Bank Del	=	
Last Line	Sector Erase Sector Count 0 - Auto	_ 4	
NewEDID			
OD OD	Bank Del Adu	d	
DPCD DPCD	© Sector Erase Sector Count 0 → Auto	- 6	13
	USB: 💫		

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

8 RTD Customer Tool V3.4	
Option Debug message Communication Option	
Access method: FTDIUSb + Scaler: RTD2537T-CG + Stop Run	Reset
Bank Path Last modified time:	CheckSum Len Refresh GD_LVDS_LM240WU8_20140430, CheckSum Len Refresh
MCU McuReg 1 2 打开 CTS CTS 2 2 日本の日本	
DPTN DPTxCtrl 3	 ◆ 4
Image: Flash Flas	修改日期 类型
Gamma	
HDCP 7 Acer_B277_RTD2525AR	
HS Delay	-
EFFI I240SXH picture	
Last LastLine	
EDID NewEDID	
● RTD_Customer_ ■ XB272 T 烧灵 ▼ 〈	
文件名(N): Acer_B277_RTD2525AR_	AHDPF - Hex or Bin Files (*.h**;*.bin) -
	打开(0) 取消
)

Contraction of the second seco 4.5 Click to start programming. 🔄 RTD Customer Tool V3.4 Option Debug message Communication Option Access method: FTDIUsb 🔹 Scaler: RTD2537T-CG ▼ Stop Run Reset Refresh Bank Path Last modified time: 2017/09/29 09:47:46 CheckSum Len **ISP** 0 📝 C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M27 → 24 65536 ... MCU McuReg 1 🕡 C:\Users\effi.chen\Desktop\NACY\B277_烧录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H, 60 65536 CTS CTS 2 📝 C:\Users\effi.chen\Desktop\NACY\B277_烧录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H.| 88 | 65536 DP Tx DPTxCtrl 3 ☑ C:\Users\effi.chen\Desktop\NACY\B277烧录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H. 72 65536 4 ☑ C:\Users\effi.chen\Desktop\NACY\B277 烧录\Acer B277 RTD2525AR AHDPHUB AUO M270H. 5E 65536 Flash Flash 5 🗸 FW Update Progress 74 65536 Gamma 6 🗸 H. E8 65536 7 🔳 5% HS Delay IIC 12C Current flash is MX/KH25L40XX Function Last Line Auto Erase OD OD ISP Type DPCD DPCD 💿 1 To 1 🛛 🔘 1 To 4 🚫 ок USB: 🛵

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

S RID Customer Too	
Option Debug mess	sage Communication Option
Access method: FTDI	Usb 🔹 Scaler: RTD2537T-CG 🔹 Stop Run Reset
^ @RISP	Bank Path Last modified time: 2017/09/29 09:47:46 CheckSum Len Refresh
- Challer	0 🗹 C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M27 → 24 65536
MCU McuReg	1 ☑ C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H 60 65536
CTS CTS	2 ⑦ C:\Users\effi.chen\Desktop\NACY\B277_燒录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H_8B_65536
DP Tx DPTxCtrl	3 ⑦ C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H 72 65536
Flash Flash	4 ☑ C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H 5E 65536
	5 ⑦ C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H 74 65536
E Gamma	6 ☑ C:\Users\effi.chen\Desktop\NACY\B277焼录\Acer_B277_RTD2525AR_AHDPHUB_AUO_M270H E8 65536
	, 7 🛛
HS Delay	Big Bin CheckSum(0x): 0363 323B
IIC 12C	Bank 3 erase successfully.
Last LastLine	Write code to bank 3 successfully
	Bank 2 erase successfully.
	Bank 1 erase successfully.
OD OD	Write code to bank 1 successfully
DPCD DPCD	Bank 0 erase successfully.
	Write code to bank 0 successfully
Ок	USB: 💫

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 botton again to open the menu with "F" and select "F" to open factory menu.



Panel:Al Date :20		ØHA			<u>: и</u>	. 45
AutoColo						
Gain						4
Offset	R 116	G	115	В	11	6
	BRI	80	CC) N	5	0
Warm	R 128	G	128	в	12	8
Normal	R 125	G	122	В	12	8
Cool	R 111				12	8
Slight	R 128	G	128	В	11	5
Light	R 128	G	128	В	10	9
Medium	R 128	G	128	В	9	9
Strong	R 128	G	128	В	9	1
DFM :		п	FF			
Burn In:			FF			
NVRAM IT	nitial					
Force Lo		f O	FF			
HW AutoC	Color	F	AIL			
SSC 9 Exit			urre	nt		2

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

		a5
AutoColo Sain Offset	R 168 6 156 8 149	
	BRI 80 CON 50	
Normal Cool Slight Light	R 128 G 128 B 128 R 125 G 122 B 128 R 111 G 110 B 128 R 128 G 128 B 115 R 128 G 128 B 109 R 128 G 128 B 99 R 128 G 128 B 91	
HW AutoC	itial go Off OFF	

- 5.2. Do factory reset in user menu.
 - (1)Restart the monitor after open factory menu. And then open the user menu.

		Information	Reset All Settings
acer		Main Source VGA IN	Do you want to reset all settings to factory settings?
Mode Standard	-	Resolution 1920x1080 H/V Frequency	· · · · · · · · · · · · · · · · · · ·
Brightness 80	-	H:84KHz V:75Hz Mode Normal	
Input VGA IN	- 0-	Series Number MML3451800204900014203	
		Reset All Settings	Reset
Menu	• ×-	Exit	Cancer
	Standard Brightness 80 Input VGA IN	Mode - Standard Brightness - 80 Input - VGA IN -	Mode Standard Brightness 80 Input VGA IN Mode Normal Menu Main Source VGA IN Resolution 1920x1080 H/V Frequency H:84KHz V:75Hz Mode Normal Series Number Reset All Settings Exit Automatical Reset All Settings

Check this F/W version.

(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



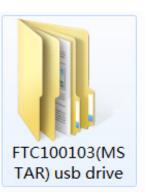
ISP JIG: 715GT089-B



TPVDDC_V066_ 20170512.exe ISP tool



USB cable TPV P/N: 089G1758 X



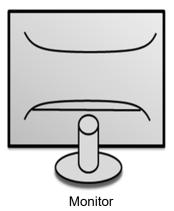
USB port driver



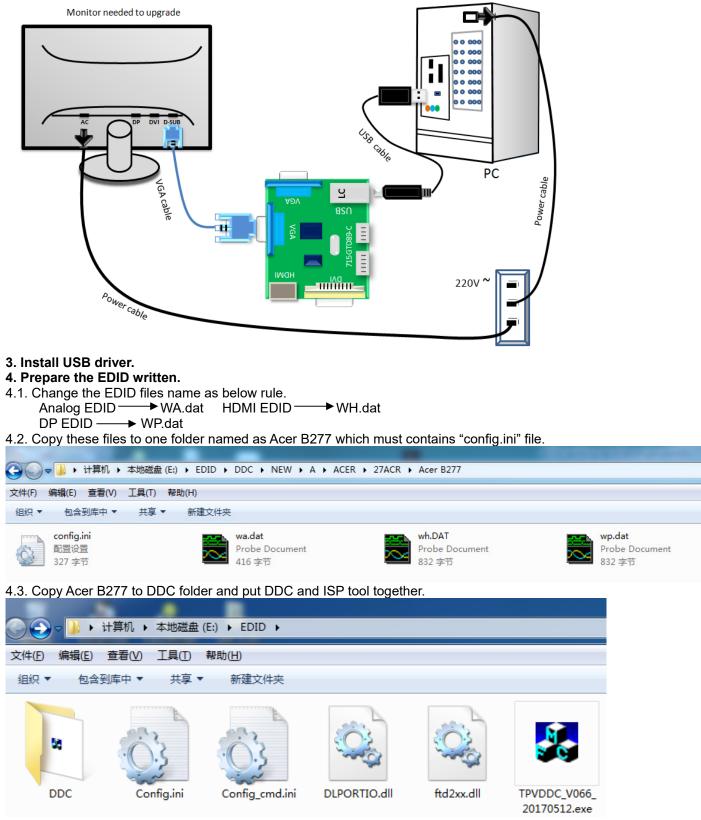
PC

Acer B277

EDID



2. Connection(DC on the monitor)



4.4 Setting the Config as below.

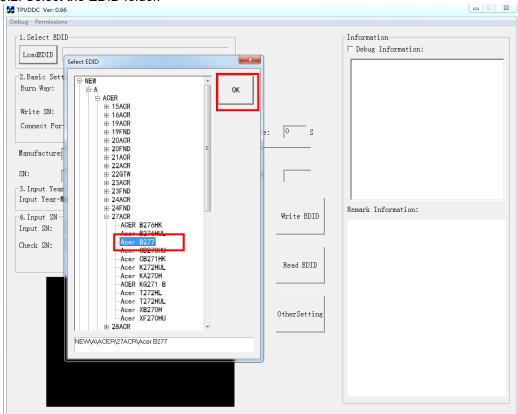


5. Run the ISP tool

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.

PVDDC Ver: 0.66 ug Permissions				
I. Select EDID LoadEDID 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 Ianufacture ProductCode: ModelNam SN: Vear: 3. Input Year Month Day Input Year Month Day Input SN Input SN Input SN: Check SN:	Time: e: Week:	0 S Write EDID Read EDID OtherSetting	Information Debug Information Remark Information > Please	

5.2. Select the EDID folder.



5.3. Load EDID successful.

TPVDDC Ver: 0.66	
Debug Permissions	
1. Select EDID	Information
LoadEDID NEW\A\ACER\27ACR\Acer B277	Debug Information:
Manufacture ACR ProductCode: 063D ModelName: ACER SN: Year: 2017 Week: 3.Input Year Month Day	Remark Information:
4. Input SN Input SN: Check SN: 22	Write EDID Read EDID
	OtherSetting

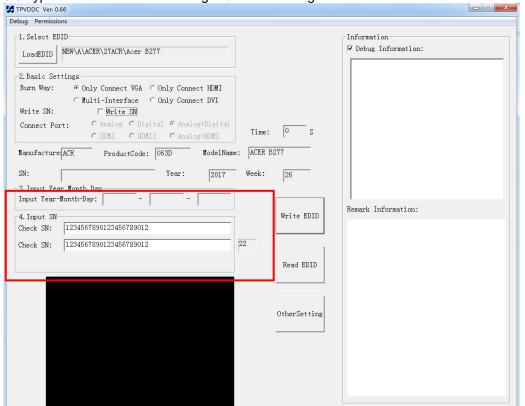
5.4 Tick the "Only connect VGA".

TPVDDC Ver: 0.66	
Debug Permissions	
-1. Select EDID	Information
LoadEDID NEW\A\ACER\27ACR\Acer B277	□ Debug Information:
-2.Basic Settings	
Burn Way: © Only Connect VGA © Only Connect HDMI	
C Multi-Interface C Only Connect DVI	
Write SN: T Write SN	
Connect Port: C Analog C Digital & Analog+Digital C HEWE C HEWE C Analog+UBWE Time: 0 S	
Manufacture ACR ProductCode: 063D ModelName: ACBR B277	
SN: Year: 2017 Week: 26	
3. Input Year Month Day	
Input Year-Month-Day:	
-4. Input SN	Remark Information:
Input SN:	
Check SN:	
Read EDID	
OtherSetting	

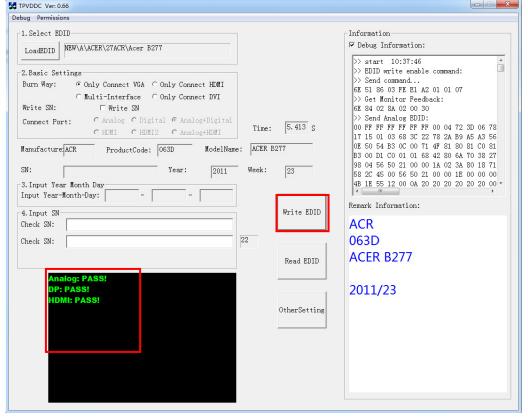
5.5 Set the OtherSetting as below.

TPVDDC Ver: 0.66		
ebug Permissions		
etting	×	Information
Pokavoke Setting NDS Pokavoke for barcode CHECK Year/Week Pokavoke for ASUS CNew Command C Old Command Input Year Limit 2016 Detect Cable Connect Other Features Enter Factory Enter DFM Set B/I Flag Close B/I Verice DID Enable Command Provide Dog	Vrite Setting Vrite Setting EDID Memory Style: Analog: CEPROM DVI: CEPROM Delay Setting: FLASH FIASH Send Enable CMD Delay: 300 ms Vrite Delay: 110 ms Read Delay: 70 ms NEC CDT2.0 Write HDMI1 EDID NEC Write HDMI2 EDID Read Delay: 500 ms Multi-Interface Delay Setting: Vrite Delay: 100 ms RS232 Communication Setting: Read EDID Delay: 50 ms Read Cmd Delay: 40 ms Scanning Barcode: C Auto C Manual operation COMMUNICATION VAY. Print Port C USB C COM2 OK CANCEL OtherSetting	Debug Information:

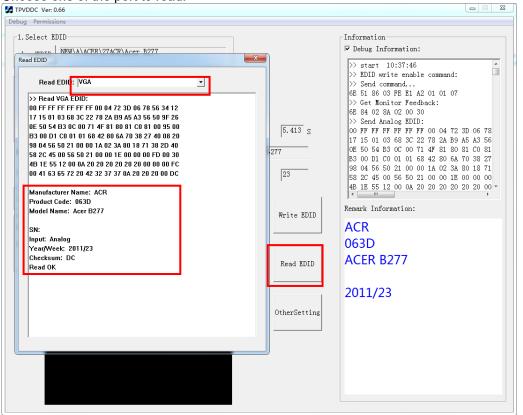
5.6 Type in the date and the 22 digit S/N and "Debug Information".



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 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.

5. FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of ACER B27 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	756GQHCB0BA080000Q	NA
	POWER BOARD	PLPCHH541KQB1	NA
	KEY BOARD	KEPCLQA6	NA
	LED BOARD	LEPCLQA2	NA
	USB BOARD(USBLQ A4)	756GQHUS0BA005000Q	NA
	SIDE USB BOARD	USBLQA6	NA

SPEAKER-4- OHM-2.5W- 63x22mm- 50mm-BOX LEFT	378G0025689CLA	NA
SPEAKER-4- OHM-2.5W- 63x22mm- 50mm-BOX RIGHT	378G0025689CRA	NA
CABLE 30P-30P 400MM(MB TO PANEL)	395G179Q30B8250000	NA
CABLE 30P-30P 180MM(USB BOARD TO SIDE USB BOARD)	395G176K0305170000	NA
CABLE 4P- 2P+2P 500/400MM(MB TO SPEAKER)	395GH20004WM049000	NA
CABLE 6P-6P 600MM(PB TO PANEL)	395GH20006GM209000	NA
CABLE 6P-6P 500MM(MB TO KEY BOARD)	395GH20006XM208000	NA

CABLE 7P-7P 80MM(MB TO USB BOARD)	395GH20007XM035000	50.TA8M2.004
MIDDLE FARME ASSY W LOGO	705GQHCS034447	NA
REAR COVER	A34G4569AEM01L0130	NA
FUNCTION KEY	A33G2236AEM01L0100	NA
BUTTON	A33G2238AEM01L0100	NA
STAND BASE ASSY	Q37G083710110100FH	NA

INSULATING- SHEET(BLACK)	Q52G18016090HF0AJY	NA
MAINFRAME	Q15G320010121100ZA	NA
BKT SIDE USB	Q85G033310110100YM	NA
USB 3.0 CABLE	089G 175M02 C	50.T28M2.003
DP CABLE	089G 187BAA500	50.LW7M2.002
D-SUB CABLE	089G 728GAA 2A	50.LZJM2.003

HDMI CABLE	389G1848CAA502	50.T27M2.010
AC POWER CORD	389G404A18NISG	27.T1BM2.001

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.

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.

HDMI/DP Mode (Optional)

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