Service Service



# Acer Monitor VG272 X LIFECYCLE EXTENSION GUIDE

# Contents

Important Safety Notice	3
1. Exploded view diagram with list of items	4
2. Mechanical Instruction	6
3. Firmware Upgrade Process	18
4. Writing EDID Process	28
5. FRU (Field Replaceable Unit) List	34
6. Trouble shooting instructions	37

### **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	TPV Part No.	Description	ACER Part No.
2	750GBU270HA30JN000	PANEL	N/A
6	LEPCLQA2	LED Board	55.TCCM2.004
7	KEPCLQA6	Key Board	55.TCCM2.003
16	PLPCHI541KV7D	Adapter Board	55.TDPM2.004
18	CBPCJE2C1QD	Main Board	N/A
	395GLM5140T556COAX	Cable 40P-51P 450MM(MB TO PANEL)	N/A

## 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.



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 cables to remove the rear cover.



S4. Unscrew the screws to remove the key board.





S5. Tear up all the tapes, disconnect the cables.





S6. Remove the screws to separate the panel and the Middle Frame/LED Board and the DECO BEZEL.





S7. Remove the Mylar and unscrew the all of the screws to remove the power board, main board from mainframe



S8. Remove the main board, USB board and power board. Disconnect the cables.



#### 2.2 Assembly Procedures:

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



S2. Use a screwdriver to tighten the screws till the power board, main board with shield are firmly attached. Put on the Mylar.







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









S4. Put the shield on panel; connect cables (mainboard to panel and the power board to panel). Assemble the speakers and side USB board. Pasting all tapes.



### S5. Pasting the tapes.



S6. Prepare a rear cover, Assemble the key board.







#### S7. Connect the pins.



S8. Assembly the stand base ass'y.



# **3. Firmware Upgrade Process** 1. Materials list and connection



#### 2.Install USB driver.

2.1 If you use this ISP board first time, you need to install mstar driver.



Welcome to the MStar deb	oug tool drive	er Setup W	iz Mistar
Please plug in the USB debug tool before	e continue		
WARNING: This computer program is pro Unauthorized duplication or distribution of or criminal penalties, and will be prosecu	otected by copyrigh f this program, or an ted to the maximum	t law and interna y portion of it, ma extent possible	tional treaties. ay result in severe civil under the law.
	Cancel	< <u>B</u> ack	<u>N</u> ext >
MStar debug tool driver			
Select Installation Folder			Mstar
Select Installation Folder	driver to the following	folder.	
Select Installation Folder The installer will install MStar debug tool of To install in this folder, click "Next". To inst	driver to the following tall to a different fold	folder. er, enter it below	or click "Browse".
Select Installation Folder	triver to the following	folder. er, enter it below	or click "Browse".
Select Installation Folder         The installer will install MStar debug tool of         To install in this folder, click "Next". To install         Eolder:         C:\Program Files\MStar\MStar	triver to the following tall to a different fold debug tool dri	folder. er, enter it below ver \	or click "Browse".
Select Installation Folder The installer will install MStar debug tool of To install in this folder, click "Next". To inst Eolder: C:\Program Files\MStar\MStar	driver to the following tall to a different fold debug tool dri	folder. er, enter it below ver \	or click "Browse".
Select Installation Folder The installer will install MStar debug tool of To install in this folder, click "Next". To inst Eolder: C:\Program Files\MStar\MStar	driver to the following tall to a different fold debug tool dri	folder. er, enter it below ver \	Exercise "Browse". Browse Disk Cost
Select Installation Folder         The installer will install MStar debug tool of         To install in this folder, click "Next". To install         Eolder:         C:\Program Files\MStar\MStar         Install MStar debug tool driver for yours	driver to the following tall to a different fold debug tool dri elf, or for anyone wh	folder. er, enter it below ver\ o uses this com	Exerction Control Cont
Select Installation Folder	driver to the following tall to a different fold debug tool dri telf, or for anyone wh	folder. er, enter it below ver\ o uses this com	Erowse Disk Cost
Select Installation Folder The installer will install MStar debug tool of To install in this folder, click "Next". To inst Eolder: C:\Program Files\MStar\MStar Install MStar debug tool driver for yours © Everyone @ Just me	driver to the following tall to a different fold debug tool dri	folder. er, enter it below ver\ o uses this com	Exercise Contractions of the second s

🖟 MStar debug tool driver	
Confirm Installation	Mstar
The installer is ready to install MStar debug tool driver on your computer.	
Click "Next" to start the installation.	
Cancel < Back	Next >
🖟 MStar debug t <mark>ool</mark> driver	
Installing MStar debug tool driver	Mstar
MStar debug tool driver is being installed.	
Please wait MSTAR USB Drivers Setup for Win2K/	
MSTAR Drivers Installation failed	
Montal Drivers instantation function	
Cancel < Back	Next >

🖟 MStar debug tool driver			
Installation Complete			Mstar
MStar debug tool driver has been succes Click "Close" to exit.	sfully installed.		
	Cancel	< Back	Close

2.2 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 to check the port. Look the properties of "my Computer".



#### 3. Install the ISP 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.

3.1 Copy the three file in one folder.



#### 3.4 Load the F/W you want to upgrade

M MStar	ISP Utility	V4.5.1.8.3								• 🔀
Sevice	S Load	😴 Read	Auto	С. Р. V.	Restore	HDCP	Erase	Config	Onnect	Dis Con
<b></b>	Read	C:\Use	rs∖hang,xia.		\Desktop\F	W\ACER_	MST9U3_	V6272X	_20190704_	<u>v</u> -
Che	👖 打开		Hex	nies			ne status			
	查找范围	3α): 🚺	FW				• + (	1		
	C.	名	称		^				修改日期	
	最近访问	的位	ACER_MS	T9U3_V0	6272X_201	90704_V0.	.02_A7F7		2019/7/5 1	.8:59
Elapsed	<mark>」</mark> 库	)								Ce
	▲ 计算机	l								硽
1	MA MA	• 文(	牛名(14):	CER	III IST9U3_VG21	2X_201907	04_V0.02_J	ATET -	打开《	•
•		文(	牛类型(T):	Binar	y File			•	取消	

3.5 Set the restore address and Config as below. (In order to prevent HDCP KEY data loss, please must load the file name contain the "" Reduce"" of the firmware)

MStar 🕅	ISP Utility	V4.5.1.8.3								
Sevice	Since And Andrews	<ul> <li>Read</li> </ul>	Auto	<b>.</b> P. V.	Restore	P HDCP	<u> </u>	Config	Sonnect	Dis Con
	This pages of the second se The second se	<b>ge set t</b> <del>back the</del> e this data	t <b>he Res</b> data store to firmwa	s <b>tore D</b> ed at spe re when	<b>ata</b> . cific addre ISP proces	ss before ssing.	chip eras	e.		
ſ	Rest	ore Enat	DIE			<b>–</b>	4KB			
L										
WP Pin & Elapsed Ti	CS Pin: De ime:	fault				USB 24	6KHz	C	Connect Sta	atus: Succe

3.6 Set parameter in "Auto" window. If you have set "Restore address", please tick "Restore Data".

🔰 MStar ISP Ut	ility V4.5.1.8	3.3							• <b>•</b>
S Device Loa	d Read	Auto	С. Р. V.	Restore	P HDCP	 Erase	Config	Sonnect	Dis Con
Src: C:\Users\ha	ng.xia.TPVA0	)C\Desktop\AC	ER VG271	P(MST, DP	,2HDMI)VA(	DC_ACER_N	истеціз_VC	G271P_2018	1128_E7E8.
ReConne	ect	🔽 Blank	:						
🔽 Read Fil	le	HDCP	Кеу	-					
Checksu	m : 0xE7E8	<b>8</b> Key #:1	[	F	Program File	Ready !!			<b>^</b>
C Restore	Data	🔽 Progra	am						
		🔽 Verify	7						
🔽 Erase D	evice	🔽 Exit I	SP						
C All Chi									-
File Are	ea								_
C Erase /	Area 🗌	First 512	KBytes	2	Run				
O Partial	Erase	Setup							
WP Pin & CS Pin	Default	Prog	ram butte	er is empt	y. If there	is WP tab	ie, please	read file fi	ırst.
Elapsed Time:					USB 16	8KHz	C	onnect Sta	tus: Succe

3.7 Processing of upgrade. After clicking "Run", the tool start to program. It is forbided to power off monitor or switch off connection during programming.

🔰 MStar I	SP Utility	V4.5.1.8.3	3							• 💌
Sevice	S Load	🍼 Read	Auto	<u>.</u> В. Р. V.	Restore		 Erase	Config	<b>e</b> Connect	Dis Con
Src: C:\U	sers\hang.x	ia.TPVAOC	\Desktop\F	WVACER_M	AST9U3_VG	272X_2019	0704_V0.02	_A7F7.bin 2	2019/7/513:	59:58
🗌 Re	Connect		🔽 Blan	k						
🔽 Rea	ad File		HDC	P Key	_					
Che	cksum :	0xA7F7	Key #	:1		Start time: 14 Program File	4:18:22 Beadull			^
🗌 Res	tore Dat	ta	🔽 Prog	am	li	Erase Messa	age : Erasing	1		
			🔽 Verif	ÿ		Erase UK. Blank Messa	age : Blankin	iq		
🔽 Era	ise Devic	e	🗹 Exit	ISP		Blank Fail at Blank Error.	Őx030000	-		
O A	II Chip									-
• F	ile Area									_
0 E	rase Area	•	First 512	KBytes	2	Run				
0 F	Partial Era	se g	ietup							
WP Pin & C	LS Pin: De	fault	Prog	gram butt	er is empt	y. If there	is WP tab	le, please	read file f	irst.
Elapsed Ti	me:					USB 22	2KHz	F	lash Status	:: 00

3.8 Successful upgrade. When upgrade successful, there will be green Pass letter appearing.

	Ji aac caccec			greenri	400 10110	n appea	
MStar ISP Utility V4.5.1.8.3							• X
Serie Load Read Au	to B. P. V.	Restore H	IDCP	 Erase	Config	Sonnect	Dis Con
Src: C:\Users\hang.xia.TPVAOC\Desk	topVACER VG271	P(MST, DP,2H	IDMI)VAOC	_ACER_N	IST9U3_V0	271P_2018	1128_E7E
🗆 ReConnect 🔽 I	Blank						
🔽 Read File	IDCP Key						
Checksum : 0xE7E8	Key #:1	Blar	nk Messagi Julio K	e : Blankin	g		*
🗖 Restore Data 🔽 🖬	rogram	Prog	gram Messi	age : Prog	ramming		
	erify	Prog Veri	gram UK. fy Message	e : Verifying	g		
🔽 Erase Device 🔽 I	xit ISP	Veri End	fy OK. Ltime: 14:0	5.21			E
C All Chip				0.21			-
File Area		,				_	
🔿 Erase Area 🛛 🗖 First 🗍	512 KBytes	<b>R</b>	un				
C Partial Erase Setup	1				P	288	
WP Pin & CS Pin: Default							
Elapsed Time:		l	JSB 174	KHz	F	ash Status	a: 00
							3
MStar ISP Utility V4.5.1.8.3	1 1		1	1			8
Sector         Sector         Zector         Zector <thzector< th=""> <thzector< th=""> <thzector< th="" th<=""><th>B. P. V. Res</th><th>store HDCP</th><th>Erase</th><th>Confi</th><th>g Conne</th><th>ct Dis Con</th><th></th></thzector<></thzector<></thzector<>	B. P. V. Res	store HDCP	Erase	Confi	g Conne	ct Dis Con	
Src: C:\Users\hang.xia.TPVAOC\Desktop	FWVACER_MST9L	J3_VG272X_201	90704_V0.0	02_A7F7.bi	n 2019/7/51	3:59:58	
🗆 ReConnect 🔽 Bla	nk						
Read File	CP Key		14.07.05			_	
Checksum : 0xA7F7 Key	#:1	Start time: Program Fi	14:27:35 le Ready !! _			~	
Restore Data V Pro	gram	Erase Mes Erase OK.	sage : Erasi	ng			
	ify	Blank Mes Blank Fail (	sage : Blank at 0x0A0000	king )			
✓ Erase Device ✓ Exit	: ISP	Blank Error	г.	-			
C All Chip						$\overline{\mathbf{v}}$	
	KButas	🐔 Run	1				
O Partial Erase	NDYIES	<u></u>	1				
Setup							
WP Pin & CS Pin: Default							-
Elapsed Time:		USB 2	222KHz		Flash Stat	us: 00	

#### 4. Check the FW version after upgrade.

- 4.1. The way to open factory menu.
- (1) Connect D 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) Select "F" to open factory menu.

	DC					
	3	Mode – Stan	dard			
	Pcture	Brightness			<b>6</b> 0	
	Color	Contrast				
	📫)) Audio	Black Boost				
	🕅 Gaming	Blue Light	•	Off	•	<b>i</b> -
	050	ACM	4	Off	•	- ==
	🗱 System	HDR				× -
0		Super Sharpness	4	Off	•	
	💿 Move	🤹 Enter				

Model	VG2	72 X	0000	0000
Chips	MST	9U26RQ2		
Pane1	AUO	M270HAN	03.0	
20190703	VO.	02		
BL Time	ОН	201	M	
117	D 100	0 100	D 100	
Warm	R 120	G 128	B 128	
Cool	R 107	G 115	B 128	
Normal	R 120	G 125	B 128	
01:	п 190	0 100	D 00	
Siight	K 120 D 199	G 120	В 90 В 00	
	K 128	G 120	Б 90 В 100	
Medium	K 128	G 128	B 108	
Strong	K 128	G 128	B 114	
DET Proi	abtroop	11		
Dri Dri	gntness	44		
DFM		Off		
Burn in		Off		
Exit				
ADAPTIV	E SYNC	OFF		
	HDMI	DP		

4.2. 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.

#### 5. Troubleshooting.

- 5.1. 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.
- (5)Change ISP JIG or cable.
- (6)Change PC.

### 4. Writing EDID Process

1. Materials list and connection

Config.ini

Config\_cmd.ini



28

ftd2xx.dll

TPVDDC\_V066\_

20170512.exe

DLPORTIO.dll

3.4 Set the config as below.

🧊 Config.ini - 记 😐 😐 💻 🗙	
文件(E) 编辑(E) 格式(O) 查看(V) 帮助(H)	
[TPVDDCD1g] PokavokeFlag=1 Language=1 CELL1=0 ConnectSFISFlag=1 UserID=32626 Board=1 [Setting] CheckYear=2017	*
	Ŧ

#### 4. 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.

IPVDDC Ver: 0.66 bug Permissions			
1. 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 Manufacture ProductCode: ModelNa SN: Year: 3. Input Year Month Day Input Year-Month-Day: 4. Input SN Input SN: Check	Time: Week: 0	0 S Write EDID Read EDID OtherSetting	Information □ Debug Information: Remark Information: >> Please connect VGA1!

#### 4.2. Select the EDID folder.



#### 4.4 Tick the "Only connect HDMI and "Write SN"



Setting		Information:
LoadEDID 2. Basic Se Burn Way: 2. Basic Se Burn Way: CHECK Year/Week Write SN: Connect Po Manufacture SN: 3. Input Year Input Year Input Year Input Year Check SN: Set B/I Flag Check SN: Consect Po Other Features Enter Factory Enter DFM Close B/I Close B/I Create Log	Write Setting Write PN EDID Memory Style: Analog: CEPROM DVI: CEPROM Delay Setting: CFLASH CFLASH Send Enable CMD Delay: 300 ms Write Delay: 110 ms Read Delay: 70 ms NEC CDI2.0 Write HDMI1 EDID NEC Write HDMI2 EDID Read Delay: 500 ms Multi-Interface Delay Setting: Write Delay: 100 ms RS232 Communication Setting: Read EDID Delay: 50 ms Read Cmd Delay: 40 ms Scanning Barcode: C Auto C Manual operation Memorisediene Way: Print Port C USE C COM2 OK CANCEL OtherSetting	Information: Please connect HDMI: e!

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



4.8 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.
- 2. If it appears all "FF", it shows that the EDID data of the Main board is empty, you must writing the EDID again.

#### 5. Troubleshooting.

5.1. 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 VG272 X 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	756GQICB0BA10 7000Q	N/A
	POWER BOARD	PLPCHI541KV7 D	55.TDPM2.004
	KEY-BOARD	KEPCLQA6	55.TCCM2.003
	LED-BOARD	LEPCLQA2	55.TCCM2.004
	LCD- M270HAN03.0U0-SZ- AUO	750GBU270HA3 0JN000	N/A

SPEAKER-4-OHM- 2.5W-63x22mm- 50mm-BOX	378G0025689CL A	23.TCCM2.001
SPEAKER-4-OHM- 2.5W-63x22mm- 50mm-BOX	378G0025689CR A	23.TCCM2.002
CABLE 40P-51P 450MM(MB TO PANEL)	395GLM5140T55 6COAX	N/A
CABLE 6P-6P 700MM(MB TO KEY BOARD)	395GH20006DM 280000	50.TDGM2.002
CABLE 4P-2P+2P 850/100MM(MB TO SPEAKER)	395GH20004WM 159000	50.TDGM2.003
CABLE 6P-6P 200MM(PB TO PANEL)	395G801406DJ6 1	50.T1BM2.002
MIDDLE_FRAME FOR AUO LCD- M270HAN03.0U0-SZ W AUDIO&DP&HDMI	A34G4630AEM0 4S0200	N/A
REAR COVER FOR AUO LCD- M270HAN03.0U0-SZ W AUDIO&DP&HDMI	Q34G9210AEM0 AS0130	60.TFVM2.002
KEY	A33G2236AEM0 1L0100	60.TBLM2.003

KEY_FUNCTION	A33G2238AEM0 1L0100	60.TCCM2.007
BASE_ASS'Y	Q37G085801100 000ZA	60.TEAM2.001
MAINFRAME FOR AUO LCD- M270HAN03.0U0-SZ W AUDIO&DP&HDMI	Q15G3316101N0 100GH	N/A
INSULATING- SHEET(WHITE PB)	Q52G18016140H F0AZA	47.TBLM2.001
INSULATING- SHEET(BLACK PB)	Q52G18017010H F0ADG	47.TBLM2.002

# 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.

# HDMI /DP Mode (Optional)