



# Maintenance and Service Guide

OMEN 27i model

## **SUMMARY**

This guide provides information about spare parts, removal and replacement of parts, diagnostic tests, problem troubleshooting, and more.

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Only trained service personnel familiar with this product should service it. Before performing any maintenance or service, be sure to read "Important Safety Information".

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First Edition: June, 2021

Document Part Number: L76944-OMEN  
27I-MSG-V1

Assembly part number: L76944-001



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# 1. Getting started

Read this chapter to learn about safety information and where to find additional HP resources.

## Important safety information

Carefully read the cautions and notes within this document to minimize the risk of personal injury to service personnel. The cautions and notes are not exhaustive. Proper service methods are important to the safe, reliable operation of equipment. Improper service methods can damage equipment.

The service procedures recommended and described in this service manual provide effective methods of performing service operations. Service engineers should have prior repair knowledge and experience as well as appropriate training for the product before performing service procedures.

- Be sure your working environment is dry and clean and meets all government safety requirements.
- Be sure that other persons are safe while you are servicing the product.
- Do not perform any action that can cause a hazard to the customer or make the product unsafe.
- Use proper safety devices to ensure your personal safety.
- Always use approved tools and test equipment for servicing.
- Never assume the product's power is disconnected from the main power supply. Check that it is disconnected before opening the product's cabinet.
- Modules containing electrical components are sensitive to electrostatic discharge (ESD). Follow ESD safety procedures while handling these parts.
- Some products contain more than one battery. Do not disassemble or expose a battery to high temperatures, such as throwing into fire, or the battery may explode.
- Refer to government requirements for battery recycling or disposal.

This information provides general service information for the monitor. Adherence to the procedures and precautions is essential for proper service.

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**IMPORTANT:** Only trained service personnel who are familiar with this HP product should perform service or maintenance for it. Before performing any service or maintenance, personnel must read the important safety information.

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**IMPORTANT:** You must disconnect the power cord from the power source before opening the monitor to prevent component damage.

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## Important service information and precautions

- Repair must be performed by professional service technicians in a repair center. End users should not perform these procedures.

- Please note during servicing that the primary side is the high voltage area.
- This monitor meets ROHS requirements. Be sure to use lead-free solder wire when soldering.
- If you must change a capacitor, be sure to match the polarity as printed on the PCB.
- If you must replace a capacitor, make sure the specification and part number match the BOM and location.
- If you must replace a capacitor, insert new parts carefully to avoid a short circuit caused by the near pin.
- Do not get the board wet. Water and moisture can cause a short circuit that causes malfunctions.
- To avoid damage, be sure to use lead-free solder.
- When soldering, work quickly to avoid overheating the circuit board.
- Keep the soldering iron tip clean and well tinned when replacing parts.
- After repair, perform a close inspection of the circuit board to confirm it is in good condition.
- After repair, perform a function test to confirm the power supply is working properly.

#### **ERP Lot5 requirement**

1. A professional repairer must have the technical competence to repair electronic displays and comply with the applicable regulations for repairers of electrical equipment in the Member States where the repairer operates. Reference to an official registration system as professional repairer, where such a system exists in the Member States, shall be accepted as proof of compliance.

2. A professional repairer must have insurance that covers liabilities resulting from repairs, regardless of whether required by the Member State.

## **RoHS (2002/95/EC) requirements**

### **Applied to all countries that require RoHS.**

The RoHS (Restriction of Hazardous Substance in Electrical and Electronic Equipment Directive) is a legal requirement by the EU (European Union) for the global electronics industry sold in the EU and other countries. Any electrical and electronics products launched in the market after June 2006 should meet this RoHS requirement. Products launched in the market before June 2006 are not required to be compliant with RoHS parts. If the original parts are not RoHS compliant, the replacement parts can be non-ROHS compliant. If the original parts are RoHS compliant, the replacement parts **MUST** be RoHS compliant.

If product service or maintenance requires replacing parts, confirm the RoHS requirement before replacement.

## **General descriptions**

This manual contains general information. There are two levels of service:

Level 1: Cosmetic/appearance/alignment service



Level 2: Circuit board or standard parts replacement

## Firmware updates

Firmware updates for the monitor are available at [support.hp.com](https://support.hp.com). If no firmware is posted, the monitor does not need a firmware update.

## Before returning the repaired product to the customer

Perform an AC leakage current check on exposed metallic parts to be sure the product is safe to operate without the potential of electrical shock. Do not use a line isolation transformer during this check.

Measurements that are not within specified limits present a possible shock hazard. You must check and repair the product before returning it to the customer.

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## 2. Monitor features

This chapter provides an overview of the monitor's features.

### Features

Depending on the model, your monitor might include the following features:

68.47 cm (27 inch) diagonal viewable area with 2560 × 1440 QHD resolution

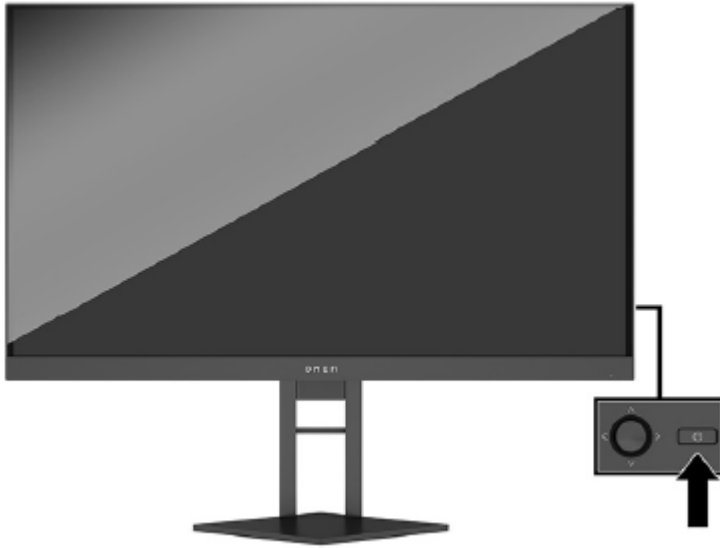
- Tilt and height-adjustment capabilities
- One DisplayPort 1.2 video input
- One High-Definition Multimedia Interface (HDMI) 2.0 video input
- Two USB 3.0 downstream ports
- One USB Type-B upstream port
- High-bandwidth Digital Content Protection (HDCP) used on all inputs
- Audio-out (headphone) jack
- HDMI, DisplayPort, and USB Type-A-to-USB Type-B cables included
- Plug and Play capability if supported by your operating system
- On-screen display (OSD) adjustments in 10 languages for easy setup and screen optimization
- Frames-per-second indicator displayed on the monitor screen, adjustable using the OSD menu
- Message timer displayed on the monitor screen, adjustable using the OSD menu
- Gaming crosshair displayed on the monitor screen, adjustable using the OSD menu
- Security cable slot on the rear of the monitor for an optional security cable
- User-configurable external lighting with full-range LEDs
- Convenient headphone storage hook on monitor stand
- VESA® mounting capability (100 × 100 mm) for attaching the display to a swing arm mount

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**NOTE:** For safety and regulatory information, refer to the Product Notices provided in your documentation kit. To access the latest user guides or manuals for your product, go to <http://www.hp.com/support> and follow the instructions to find your product. Then select **Manuals**.

## Front components

To identify the components on the front of the monitor, use this illustration and table.



Press the power button on the rear of the monitor to turn it on.

# Rear components

To identify the components on the rear of the monitor, use this illustration and table.

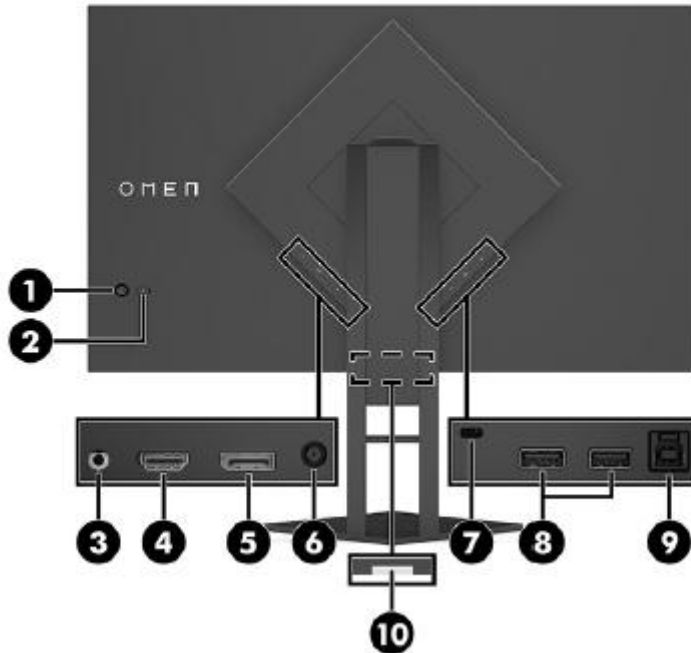


Table 1-1: Rear components and their descriptions

Component	Function
1 OSD joystick	Opens the OSD menu, selects an item from the menu, or closes the OSD menu.
2 Power button	Turns the monitor on or off.
3 Audio-out (headphones) jack	Connects optional headphones.
4 HDMI port	Connects an HDMI cable to a source device such as a computer or game console.
5. DisplayPort connector	Connects a DisplayPort cable to a source device such as a computer or game console
6 Power connector	Connects an AC adapter.
7 Security cable slot	connects an optional security cable to the monitor.
8 USB SuperSpeed ports (downstream) (2)	Connect USB cables to a peripheral device, such as a keyboard, mouse, or USB hard drive.
9 USB Type-B port (upstream)	Connects the USB hub cable to a source

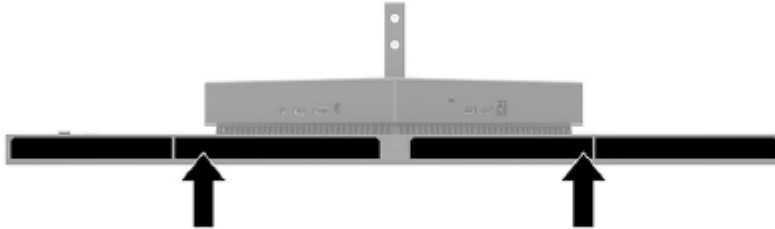
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device such as a computer or game console.

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# Locating the serial number and product number


Depending on the product, the serial number and product number are located on a label on the rear of the monitor or on a label under the front bezel of the monitor head. You might need these numbers when contacting HP about the monitor.










For worldwide models (except India):

Barcode label and spec label

Regulatory Model No./规定型号/型號/모델명: HSD-0048-L Assembly Part No. L76944-001 Input Rating/輸入电压 电流/輸入電壓 電流/ 정격입력 /Tegangan: 19.5V = 4.62A(最大輸入/最大輸入 90W/MAX. 90W)	Manufactured /制造日期/製造日期/ 제조일 :June-23-19 Rev.XXXXXX Consumo de energía en operación: XX,X Wh Spare No.L83629-001	Serial No.:XXXXXXXX  TXXXXXXXXXXXXX Product No. 8AC94AA
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 型号:OMEN 27i  
 OMEN 27i 27in IPS 165Hz 2K Gaming Monitor  
 液晶显示器/液晶顯示器  
 68.5cm(27") Monitor  
 Made in China  
 제조국:중국/中国制造/中國製造  
 HP Inc. F40G270W69025C-HF














CAN ICES-3(B)/NMB-3(B)  
 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.  
 警語: 使用過度恐傷害視力。  
 HP Inc UK Ltd, Regulatory Enquiries, Earley West, 300 Thames Valley Park Drive, Reading, RG6 1PT

For India:

Assembly Part No. L76944-001 Input Rating/輸入电压 电流/輸入電壓 電流/ 정격입력 /Tegangan: 19.5V = 4.62A(最大輸入/最大輸入 90W/MAX. 90W)	Manufactured /制造日期/製造日期/ 제조일 :June-23-19 Rev.XXXXXX Consumo de energía en operación: XX,X Wh Spare No.L83629-001	Serial No.:XXXXXXXX  TXXXXXXXXXXXXX Product No. 8AC94AA
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 IS 13252 (Part 1)/  
 IEC 60950-1  
 液晶显示器/液晶顯示器  
 68.5cm(27") Monitor  
 Regulatory Model No./规定型号/規定型號/  
 모델명: HSD-0048-L  
 F40G270W69029A-HF

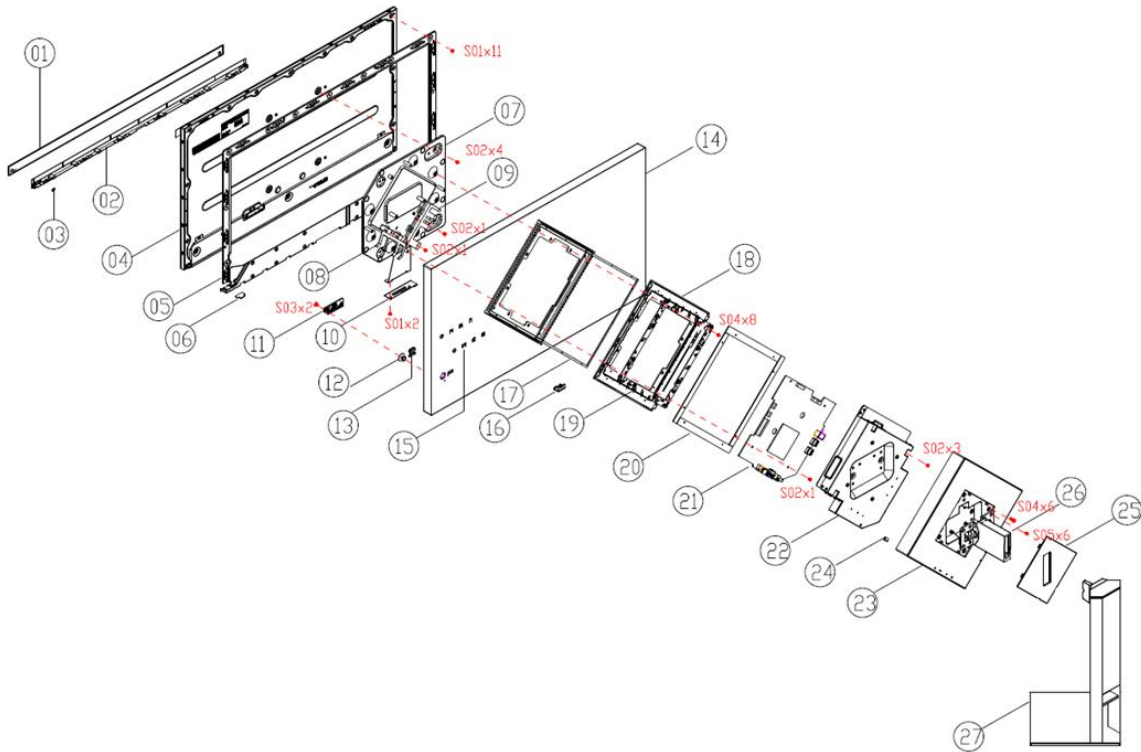




R-41070459  
 www.bis.gov.in  
 HP Inc UK Ltd, Regulatory Enquiries, Earley West, 300 Thames Valley Park Drive, Reading, RG6 1PT  
 Made in China/製造國: 中國/中國製造/中國製造

CAN ICES-3(B)/NMB-3(B)  
 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.  
 警語: 使用過度恐傷害視力。

# 3. Illustrated parts catalog

To identify the monitor major components, use this illustration and table.



item	part name	q'ty
1	DECO plate	1
2	DECO PLASTIC	1
3	POWER LED LENS	1
4	PANEL	1
5	MIDDLE FRAME	1
6	POWER LED BOARD	1
7	HINGE BKT	1
8	IO ESD FINGER	1
9	USB ESD FINGER	1
10	AMB BTM LED BOARD	1
11	FUNCTION KEY BOARD	1
12	FUNCTION KEY	1
13	POWER KEY	1
14	REAR COVER	1
15	HP LOGO	1
16	AMB BTM LED LENS	1
17	BTM REFELCTOR	4

18	AMB REAR LED LENS	1
19	AMB REAR LED BOARD	4
20	TOP REFLECTOR	4
21	SCALER BOARD	1
22	MAINFRAME	1
23	BUCKET	1
24	POWERLENS	1
25	VESA COVER	1
26	HINGE	1
27	STAND	1
S1	SCREW M3 L4	13
S2	SCREW M3 L5	10
S3	SCREW Q3 L6	2
S4	SCREW M4 L10	14
S5	SCREW M4 L8	6

## How to order parts

The HP authorized repair center can purchase the adaptor from HP.

### Power board

Description	HP spare part number	Manufacturer part number
OMEN 27i	L39754-003	F80GLA19567DE1

Capacitors and connectors are available for purchase from the following EU distributors:

- Farnell: [Farnell UK - Electronic Components Distributor](#)
- RS Component: [Capacitors | RS Components \(rs-online.com\)](#)
- DK : <https://www.digikey.com/>

### Capacitors by distributor

Component description	Location	Component distributor	Distributor part number
NA	NA	NA	NA

### Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
HDMI	J2	DK	SAM14939TR-ND SAM14939CT-ND SAM14939DKR-ND (HDMR-19-02-S-SM-TR)



Display Port	J3	DK	WM19271TR-ND WM19271CT-ND WM19271DKR-ND (0472720001)
PHONE JACK	M1	DK	839-54-00175TR-ND 839-54-00175CT-ND 839-54-00175DKR-ND (54-00175)
DC JACK	M2	DK	102-5565-2-ND 102-5565-1-ND (PJ-098H)
TYPE A	J4	DK	2092-KUSBX-AS1N9-1- BL30-ND (KUSBX-AS1N9-1- BL30)
TYPE A	J5	DK	2092-KUSBX-AS1N9-1- BL30-ND (KUSBX-AS1N9-1- BL30)
TYPE B	J6	DK	732-3158-ND (692221030100)

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**NOTE:** Rear cover and chassis need to be modified to hold connector. Connector may need modifications to meet functional, safety and regulatory requirements accordingly if it doesn't match exactly.

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You can purchase cables from the HP part store at <https://partsurfer.hp.com/Search.aspx>.

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**NOTE:** HP continually improves and changes product parts. For complete and current information about supported parts for your computer, go to <http://partsurfer.com>, select your country or region, and then follow the on-screen instructions.

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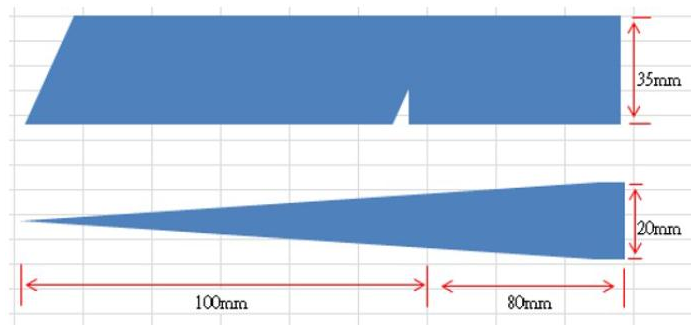
## 4. Removal and replacement procedures

Adherence to these procedures and precautions is essential for proper service.

### Preparation for disassembly

Use this information to properly prepare to disassemble and reassemble the monitor.

- 1) Read the “Important safety information” and “Important service information and precautions” sections in the “Getting started” chapter of this guide.
- 2) Clean the room for disassembly.
- 3) Identify the disassembly area.
- 4) Check the position that the monitors are to be placed along with the number of monitors. Prepare the area for material flow according to the disassembly layout.
- 5) Be sure to have the following equipment and materials:
  - Press fixture
  - Working table
  - Screwdriver
  - Knife
  - Gloves
  - Cleaning cloth
  - ESD protection
  - Scraper bar in the following dimensions:


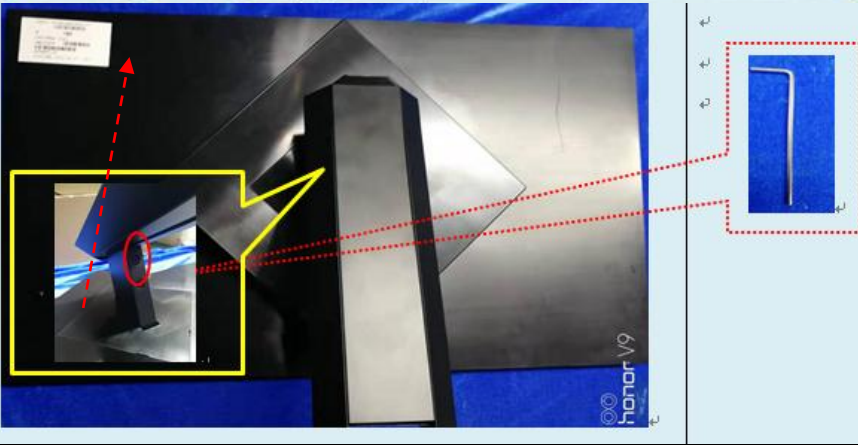
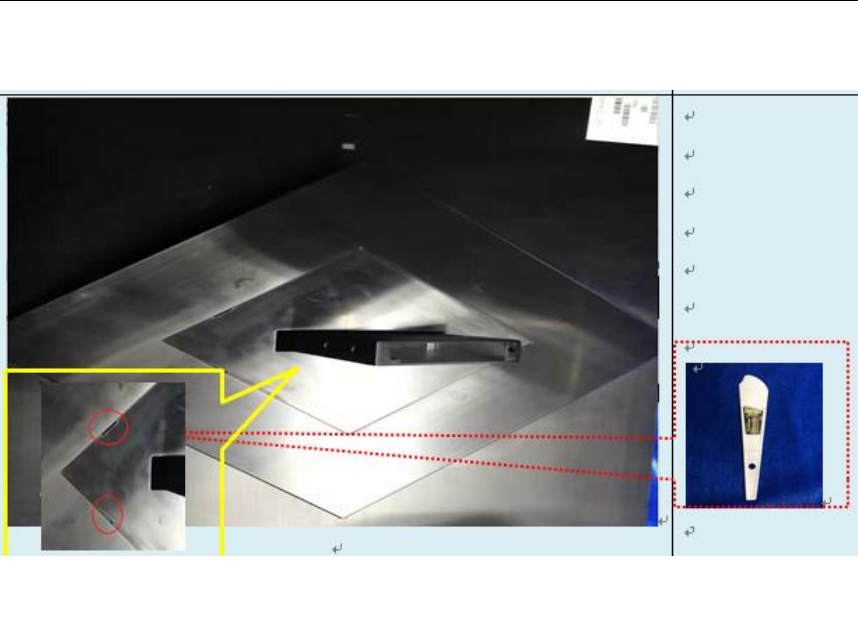


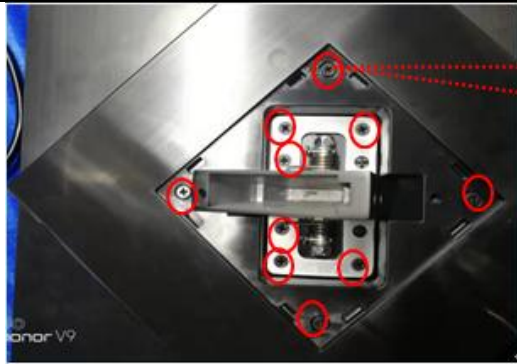

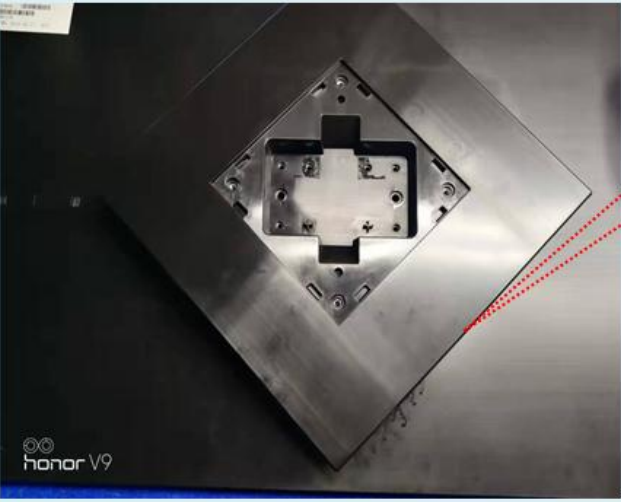

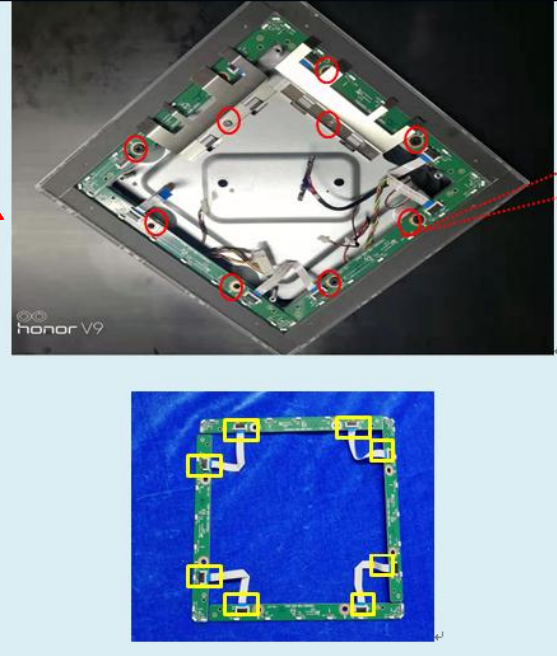

# RC

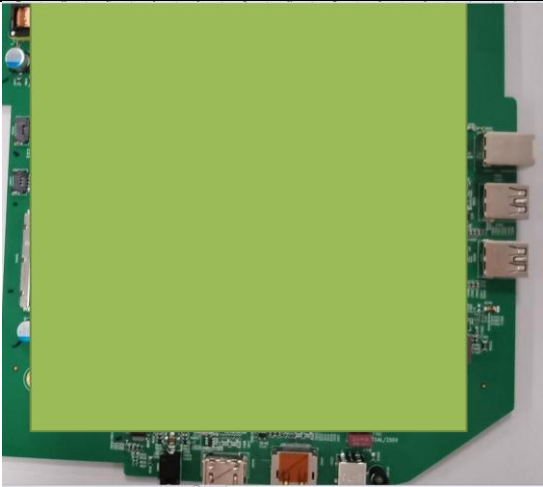
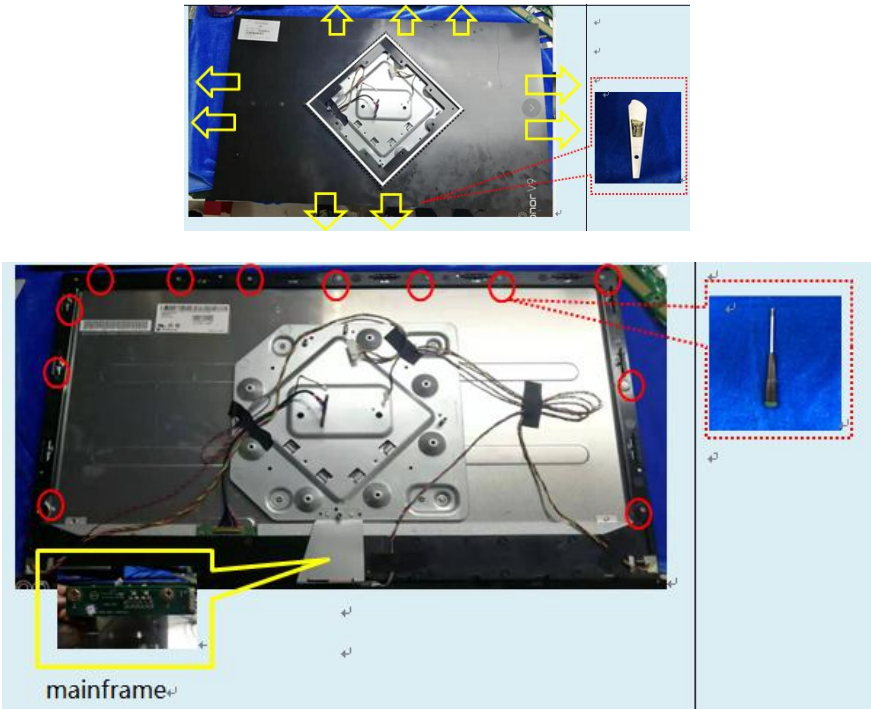

Before removing the RC, follow these steps:

- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 12.

Remove the RC:

Step	Figure	Description
		<p>Unplug the cable by hand.</p>
<p><b>Remove the HINGE ASS'Y</b></p>		<p>Remove the screws by the hex Screwdriver first and then remove the hinge assy</p>
<p><b>Remove the stand cover</b></p>		<p>remove the stand cover by the Scraper.</p>

<p><b>Remove the BACK_COVER</b></p>			<p>Remove the screws by the Screwdriver first,</p>
<p>Remove the mainframe</p>			<p>and then remove the BACK COVER by the Scraper</p>
			<p>disconnect the connectors by hand and use screw driver to remove the other boards.</p>

<p>mainboard</p>		
<p>Remove the rear cover and bezel deco</p> <p>Remove the middle frame to separate mainframe and panel</p>		<p>Remove the rear cover by the scraper</p> <p>Tear out all tapes and disconnect the connectors by hand and use screw driver to remove the middle frame to separate the mainframe and panel</p>
<p>Middle frame</p>		

panel		

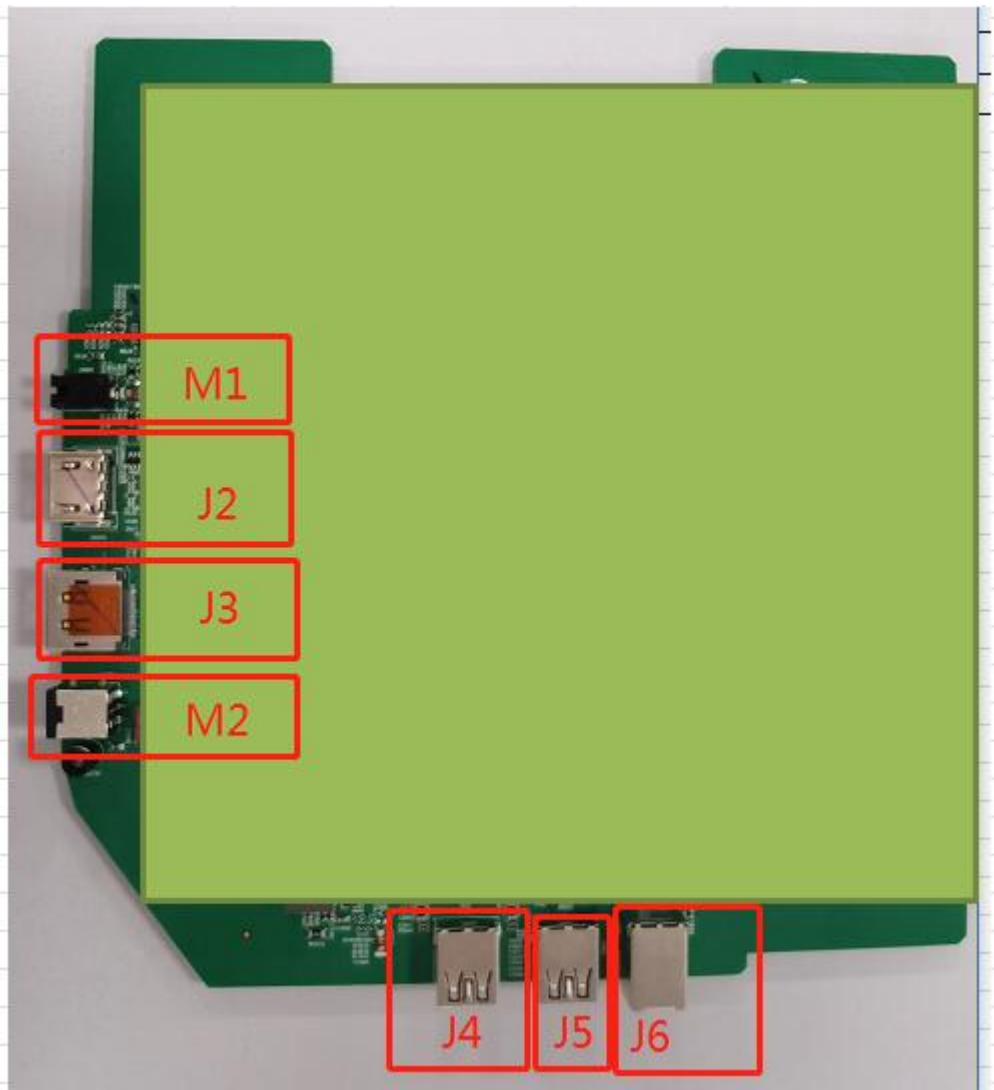
## Connector repair

This procedure includes HDMI, Display Port , USB and phone JACK connectors.

The connectors are on the main board (board part number CBPCNBAHPF2).

The connectors identifiers are as follows:

Connector	Location
HDMI	J2
Display Port	J3
PHONE JACK	M1
DC JACK	M2
TYPE A	J4
TYPE A	J5
TYPE B	J6



Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 12.

**IMPORTANT:**

- **Repair Condition: Connector repair is only for out of warranty.**
- Repairing must operate by professional repairers (Note) in repair center, not applicable for end user.
- Electrostatic protection is required when component replacement is required.
- The monitor meets ROHS, please use Lead-free solder wire for soldering.
- If Connector need to replace, must check specification and part number whether match the BOM and location.
- If connector need to replace, please insert new parts carefully because the near pin may cause short circuit by inappropriate operate.
- **DO NOT** allow any liquid on the board. Water and moisture may cause short-circuit to the electronic components and lead to malfunctions.
- The fusion point of Lead-Free solder is requested. Repairing with conventional lead wire may cause damage.
- Work quickly to avoid overheating the circuit board as soon as you confirm the steady soldering condition.
- Keep the soldering iron tip clean and well tinned and when replacing parts.
- A close inspection of the circuit board revealed look in good condition.

- **After repaired, must connect source to each port to check Main board function is ordinary.**

**Note:** (The requirement of professional repairers' regulation by ERP lot5)

1) The professional repairer has the technical competence to repair electronic displays and complies with the applicable regulations for repairers of electrical equipment in the Member States where it operates. Reference to an official registration system as professional repairer, where such system exists in the Member States concerned, shall be accepted as proof of compliance with this point.

2) The professional repairer is covered by insurance covering liabilities resulting from its activity, regardless of whether this is required by the Member State.

## PHONE JACK M1

Repair the audio connector:

- 1) Use a hot air gun to melt the solder on the pins. Pin solder with soldering iron and absorber. You can gently push down with the soldering iron once everything is molten to move the M1 out of the through holes.



- 2) Lift the M1 connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

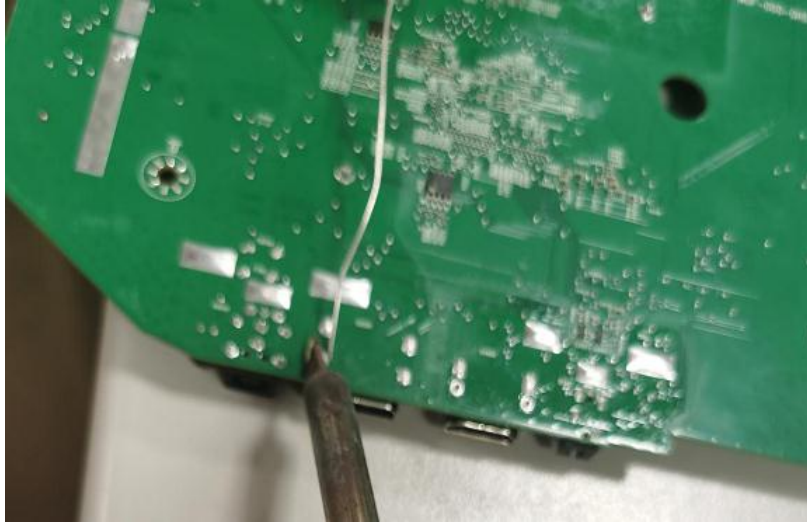
## DC JACK M2

Repair the audio connector:

- 1) Use a hot air gun to melt the solder on the pins. Pin solder with soldering iron and absorber. You can gently push down with the soldering iron once everything is molten to move the M2 out of the



through holes.



- 2) Lift the M2 connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

## HDMI connector J2

Repair the HDMI connector:

- 1) Use a soldering iron and a desoldering pump to remove as much solder as possible from the pin.



- 2) Use a hot air gun to melt the solder on the pins.



- 3) Lift the J2 connector from the PCB.
- 4) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 5) Solder the new component.

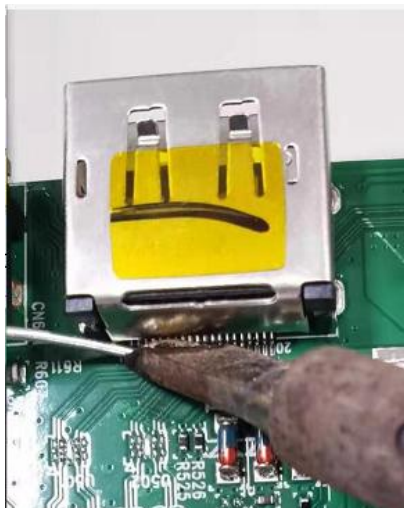
## DP connector J3

Repair the DP connector:

- 1) Use a soldering iron and a desoldering pump to remove as much solder as possible from the pin.



- 2) Use a hot air gun to melt the solder on the pins.



- 3) Lift the J3 connector from the PCB.

- 4) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 5) Solder the new component.

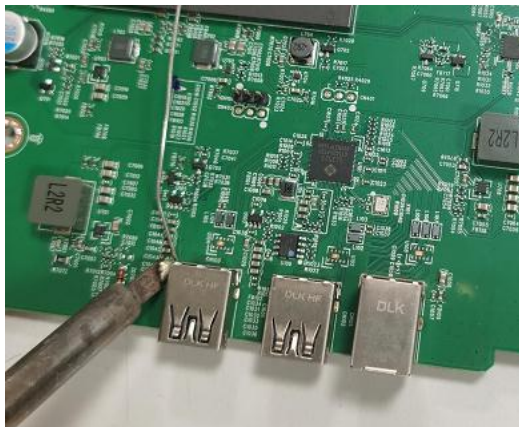
## TYPE A J4,J5

Repair the TYPE A connector:

- 6) Use a soldering iron and a desoldering pump to remove as much solder as possible from the pin.



- 7) Use a hot air gun to melt the solder on the pins.



- 8) Lift the J4 connector from the PCB.
- 9) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 10) Solder the new component.

## TYPE B J6

Repair the TYPE B connector:

- 1) Use a hot air gun to melt the solder on the pins. Pin solder with soldering iron and absorber. You can gently push down with the soldering iron once everything is molten to move the J6 out of the through holes.



- 2) Lift the J6 connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

## Function test

After repair, be sure to confirm that all functions are working.

**Table 4-1:** Function test

Test item	Operating description	Tool used
HDMI test	Confirm whether image displays and sound plays correctly on the monitor.	Computer or DVD player
DP test	Confirm whether image displays and sound plays correctly on the monitor.	Computer or DVD player
Audio test	Change volume and balance to confirm whether volume is smooth and loud enough.	Speaker

## Support and troubleshooting

The following table lists possible problems, the possible cause of each problem, and the recommended solutions.

**Table 4-2:** Solving common problems

<b>Problem</b>	<b>Possible cause</b>	<b>Solution</b>
Screen is blank or video is flashing.	Power cord is disconnected.	Connect the power cord.
	Monitor is off.	Power the power button. NOTE: If pressing the Power button has no effect, press and hold the power button for 10 seconds to disable the Power button lockout feature.
	Video cable is improperly connected.	Connect the video cable properly.
	System is in Sleep mode.	Press any key on the keyboard or move the mouse to exit Sleep mode.
	Video card is incompatible.	Open the OSD menu and select the Input Control menu. Set Auto-Switch Input to Off and manually select the input
Image appears blurred, indistinct, or too dark.	Brightness is too low.	Open the OSD menu and select Brightness to adjust the brightness scale as needed.
Check Video Cable is displayed on screen.	Monitor video cable is disconnected.	Connect the appropriate video signal cable between the computer and monitor. Be sure that the computer power is off while you connect the video cable.
Input Signal Out of Range is	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting.

---

displayed on  
screen.

---

The monitor is  
off, but it did not  
seem to enter  
into Sleep  
mode.

The monitor's power saving control is disabled.

Open the OSD menu and  
select Power Control >  
Auto-Sleep Mode and set  
auto-sleep to On.

---

On-Screen  
Menus are  
Locked is  
displayed.

The monitor's OSD lock function is enabled.

Press and hold the Menu  
button on the front bezel to  
10 seconds to disable the  
OSD lockout function.

---

Power Button is  
Locked is  
Displayed

The monitor's power button is locked.

Press and hold the power  
button for 10 seconds to  
disable the power button  
lock function.

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