



Maintenance and Service Guide

OMEN OLED 27q model

SUMMARY

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

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Product notice

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

Table of Contents

1	Getting started.....	2
	Important safety information	2
	Important service information and precautions.....	2
	RoHS (2002/95/EC) requirements.....	3
	General descriptions	3
	Firmware updates.....	3
	Before returning the repaired product to the customer	3
2	Monitor features	4
	Features	4
	Front components	5
	Rear components.....	6
3	Illustrated parts catalog	8
	How to order parts	10
4	Removal and replacement procedures	11
	Preparation for disassembly	11
	Rear Cover.....	12
	Power board	17
	Connector repair.....	18
	HDMI1 connector CN504.....	20
	HDMI 2 connector CN503.....	21
	DP1 connector CN501	22
	AUDIO connector CN603.....	23
	Function test	24
	Support and troubleshooting.....	24
	Index	26

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.

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.

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

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. 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.

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:

- 67.31 cm (26.5 in) diagonal viewable screen area with 2560 × 1440 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio
- Quantum dot organic light-emitting diode (QD-LED)
- Wide color gamut to provide coverage of sRGB (99%), and Display P3 (99%) color spaces Dynamic and flexible RGB lighting
- Wide viewing angle to allow viewing from a sitting or standing position, or moving from side to side
- Tilt, swivel, and height adjustment capabilities
- Pivot capability to rotate the monitor head from landscape to portrait orientation
- Five on-screen display (OSD) with a center button and four directional buttons that you can reconfigure to quickly allow selection of the most commonly used operations
- On-screen display (OSD) adjustments in several languages for easy setup and screen optimization
- Color space presets for sRGB and Display P3
- Cable management feature for placement of cables and cords
- Plug and Play capability, if supported by your operating system
- Connectors
- DisplayPort™ video input (cable included)
- HDMI-Definition Multimedia Interface port (cable included)
- Audio-out (headphone) jack

Monitor stand

- Removable stand for flexible monitor head mounting solutions
- 100mm x 100 mm VESA® mounting capability for attaching the monitor to a wall mount device or swing arm

NOTE:For safety and regulatory information, see the Product Notices at HP Regulatory, Safety, Compliance, and Warranty Information. To access the latest user guide, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select Setup & User Guides.

Front components

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



Table 1-1: Front components and their descriptions

Component		Description
(1)	Power LED	Indicates that the monitor is powered on.

Rear components

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

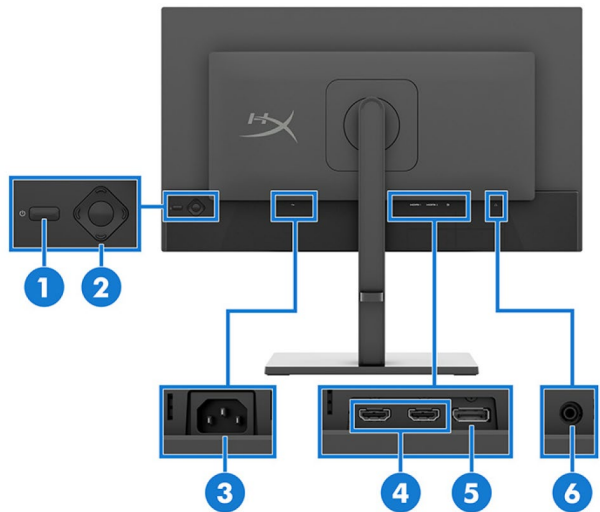


Table 1-2: Rear components and their descriptions

	Component	Description
(1)	Power button	Turns the monitor on or off.
(2)	Joypad	Press to open the OSD settings.
(3)	Power connector	Connects a power cord.
(4)	HDMI ports (2)	Connects the HDMI cable to a source device such as a computer.
(5)	DisplayPort	Connects a DisplayPort cable to a source device such as a computer.
(6)	Audio-out (headphone)	Connects optional powered stereo speakers, headphones, earbuds, or a television audio cable.

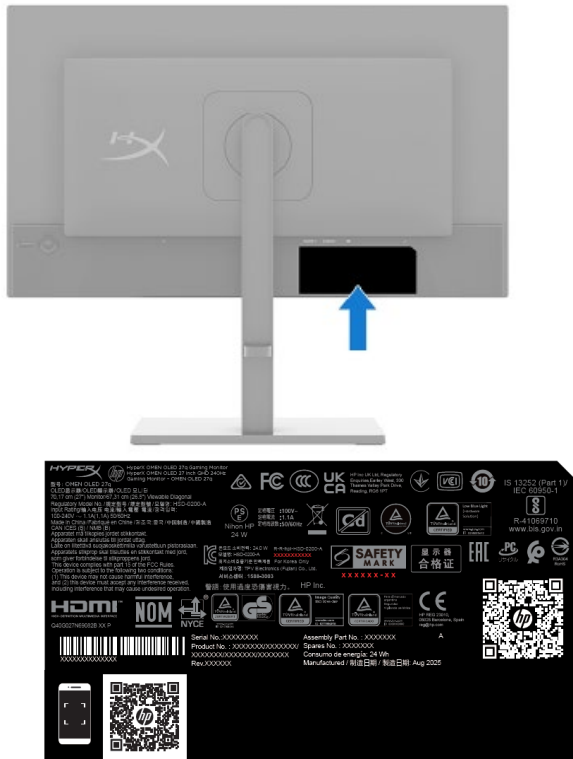
WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, see the *Regulatory, Safety, and Environmental Notices*.

To access this guide:

- Select the **Search** icon in the taskbar, type `HP Documentation` in the search box, and then select **HP Documentation**.

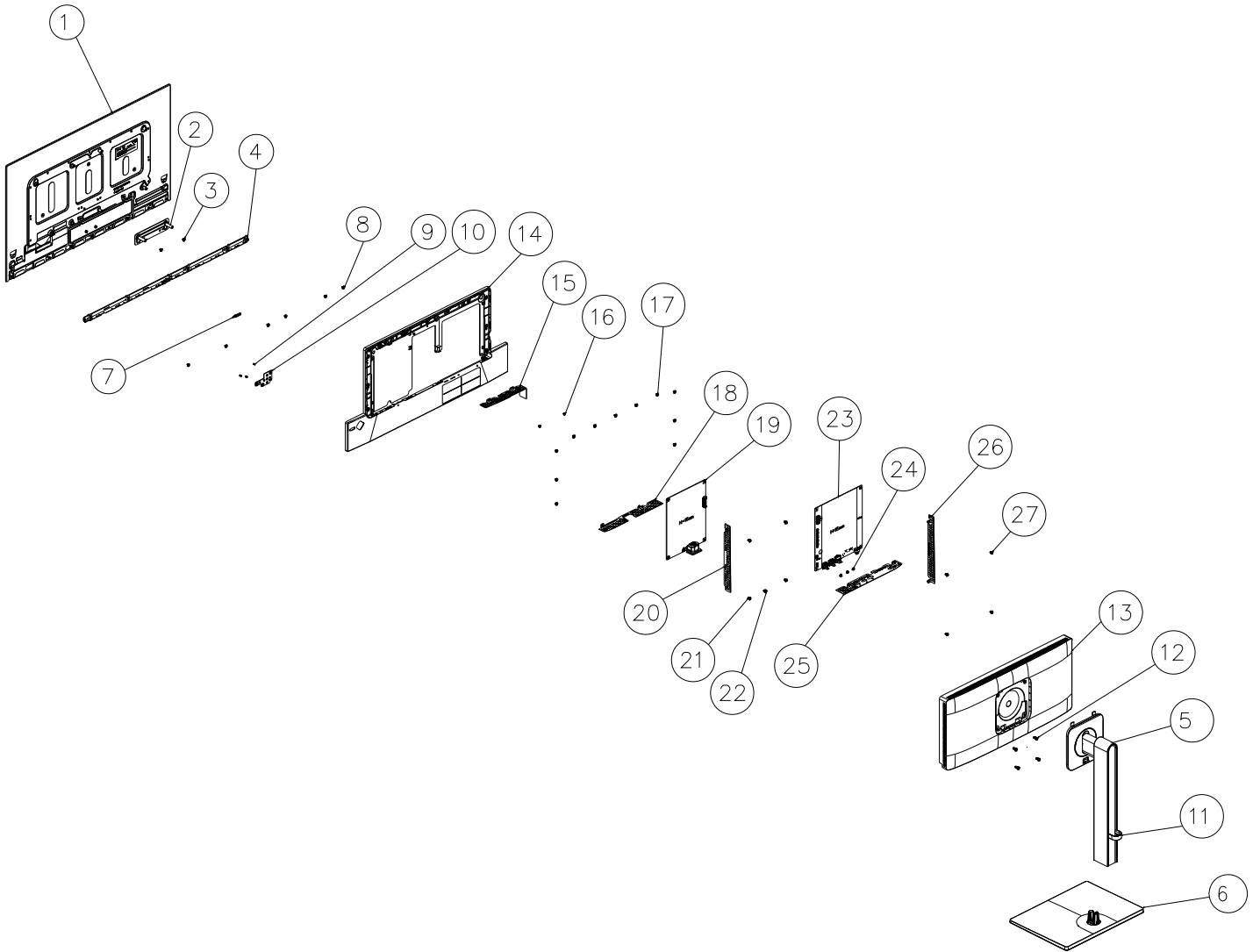
Locating the serial number and product number

Depending on the product, the serial number and product model 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 you contact HP for support.



3 Illustrated parts catalog

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



Item	Description	Qty
1	PANEL	1
2	BKT_VESA	1
3	SCREW M3*3.8 M3*3.8	2
4	DECO_BEZEL	1
5	STAND_ASS'Y	1
6	BASE_ASS'Y Other OT HS NA	1
7	LED BOARD	1
8	SCREW M3*3.8 M3*3.8	6
9	SCREW M2*3	3
10	KEY BOARD	1

11	HOLDER_CABLE ABS TX ES NA	1
12	SCREW M4 10	4
13	REAR_COVER	1
14	MIDDLE_FRAME	1
15	BKT_POWER_TOP	1
16	SCREW Q3 3.5	2
17	SCREW M3*3.8 M3*3.8	11
18	BKT_POWER_BTM	1
19	ADAPTER BOARD	1
20	BKT_POWER_L	1
21	SCREW M3 8	4
22	SCREW M4 6	1
23	MAIN BOARD	1
24	SCREW M3 4	3
25	BKT_IO SG	1
26	BKT_IO_SIDE	1
27	SCREW M3 8	4

How to order parts

The HP authorized repair center can purchase the power board from HP.

Power board

Description	HP spare part number	Manufacturer part number
PSU Omen OLED 27q 1 st source	Q03036-001	ADPCQ1980A15

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

- UK.RS Component: <https://uk.rs-online.com/web/>
- Farnell Component: <https://uk.farnell.com/>
- Digi-Key Component: [Digikey Electronics](https://www.digikey.com)

Capacitors by distributor

Component description	Location	Component distributor	Distributor part number
EC 470uF 20% 25V 10x12 5000 hr 1.7A ERF1	C9133/C9113/C9112	Digikey	25YXG470MEFC10X12.5 (Rubycon)

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
HDMI	CN504/CN503	Farnell	1-1747981-5 (TE CONNECTIVITY)
DP	CN501	RS	47272-0001 (Molex)
PHONE JACK	CN603	RS	913-1021(RS PRO)

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.

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

Internal and External Power Supplies are available for purchase from the following EU distributor: EET <https://www.eetgroup.com/en-eu/>

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

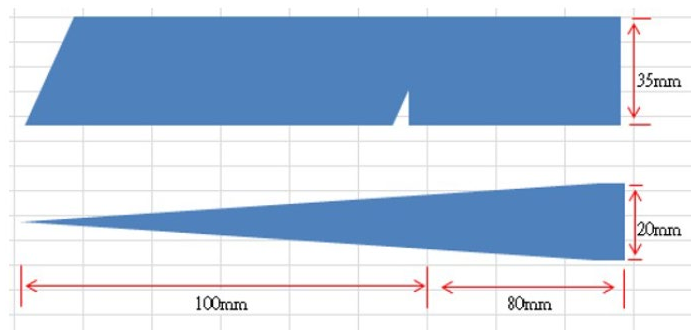
4 Removal and replacement procedures

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:



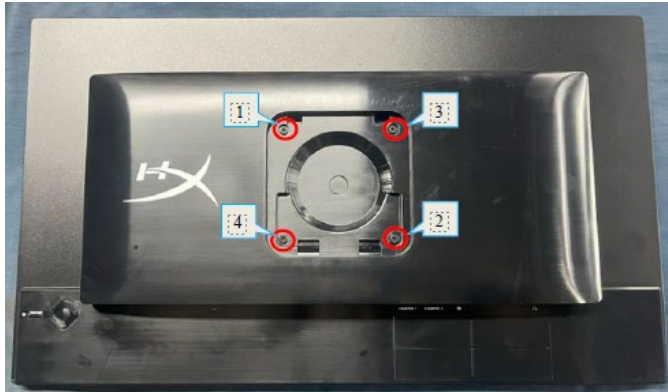
Rear Cover

Before removing the Rear Cover, follow these steps:

- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 11.

Remove the Rear Cover:

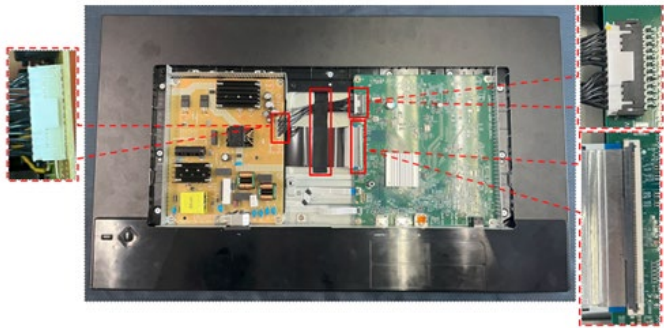
- 1) Release four screws from the rear cover.

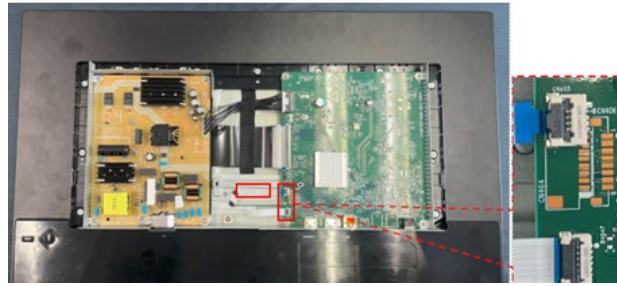


- 2) Pry the rear cover as the sequence shown below. And then remove the rear cover.

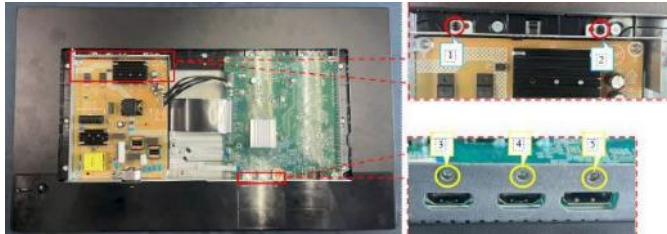


- 3) Remove the tape and disconnect the cables.

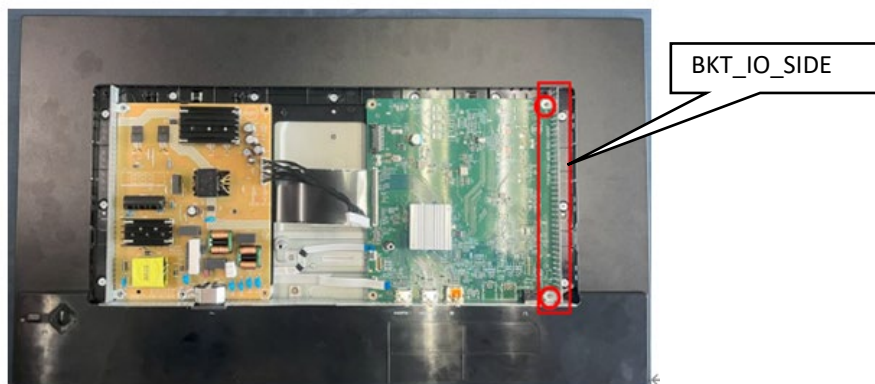
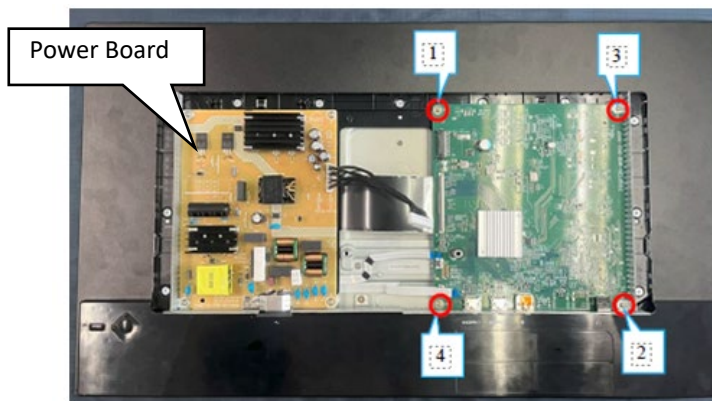


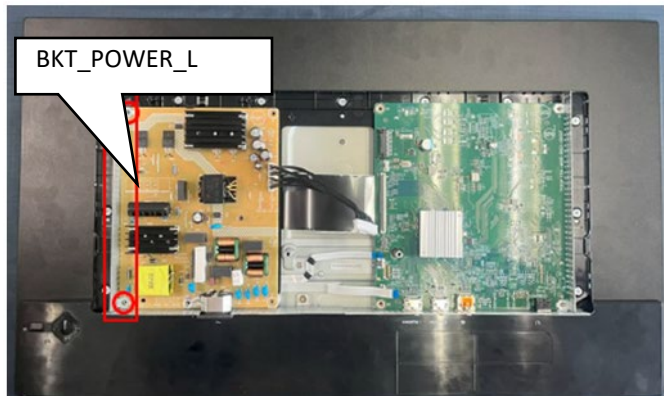
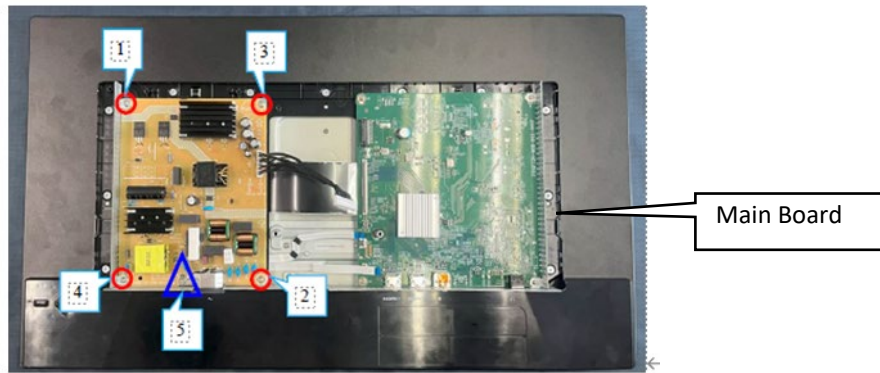


- 4) Release the 5pcs screw to remove the BKT_POWER_TOP and BKT_IO SG.

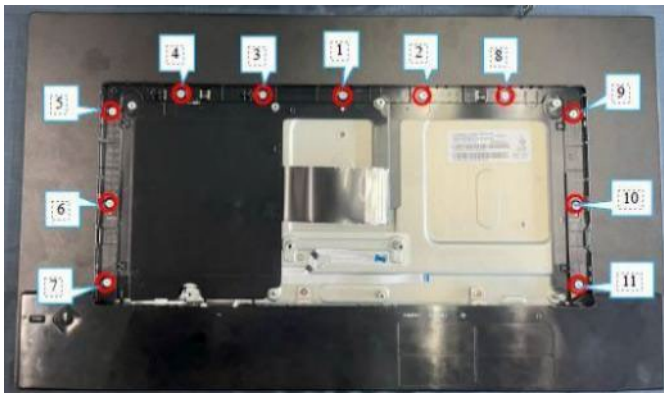


- 5) Release the 9 screws to remove the main board and the power board. Take out the BKT_IO_SIDE and BKT_POWER_L.





6) Release the 11pcs screws to separate the middle frame and the panel.



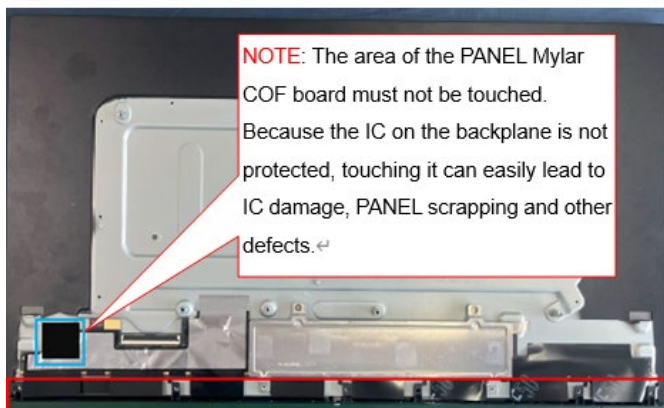
7) Remove the LED board.



- 8) Release the 2pcs screws to remove the BKT_VESA.

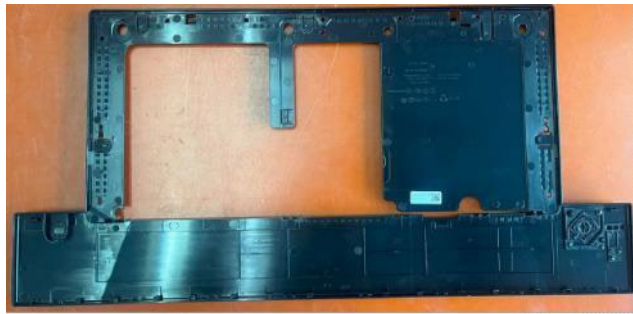


- 9) Release the 6pcs screws to remove the DECO_BEZEL.



10) Release the 3pcs screws to remove the KEY board from the middle frame.

Disconnect the key board cable.



Power board

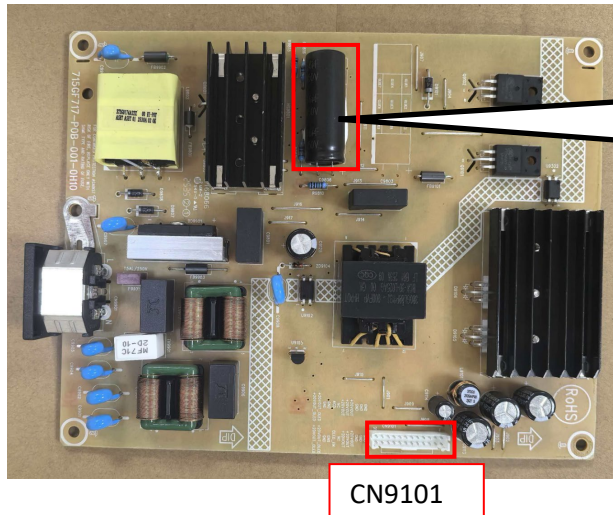
The power board part number is ADPCQ1980A15.

Before removing the power board, follow these steps:

- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 11.

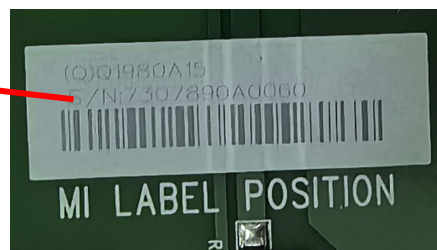
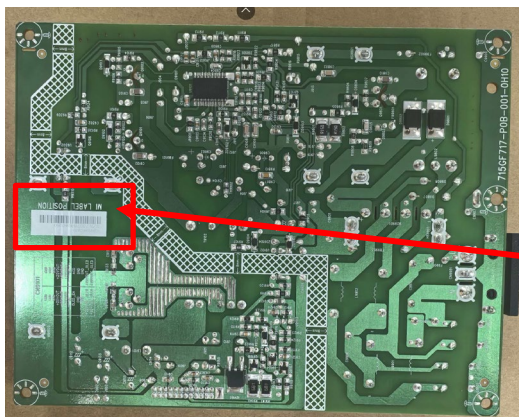
Remove the power board:

- 1) The HP omen OLED 27q power board connector position is as follows:



Warning: After unplugging the power supply, the capacitance is still charged, do not touch and discharge the capacitor.

Locate the part number location on the board



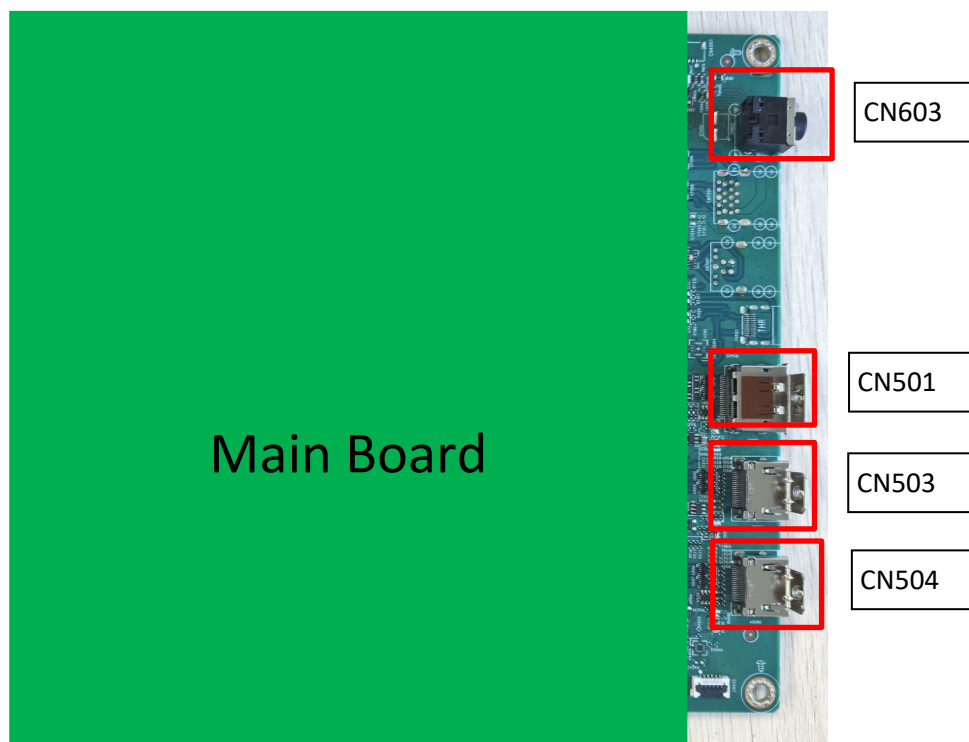
Connector repair

This procedure includes HDMI, DisplayPort and audio connectors.

The connectors are on the main board (board part number CBPR5RAH0Q3).

The connector identifiers are as follows:

Connector	Location
HDMI1	CN504
HDMI2	CN503
DP	CN501
Audio	CN603



Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 11.

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.**

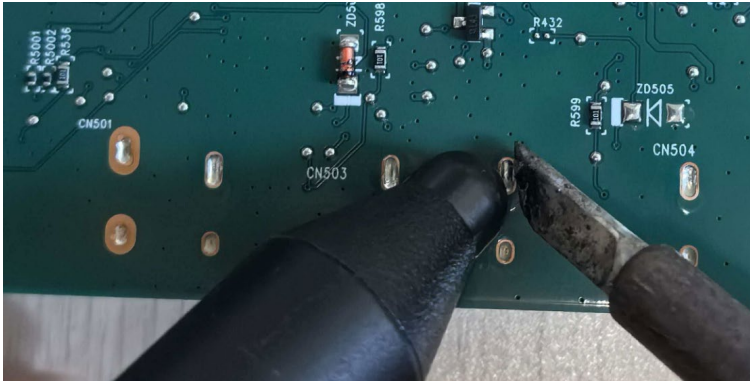
Note: (The requirement of professional repairers' regulation by ERP lot5)

- 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.

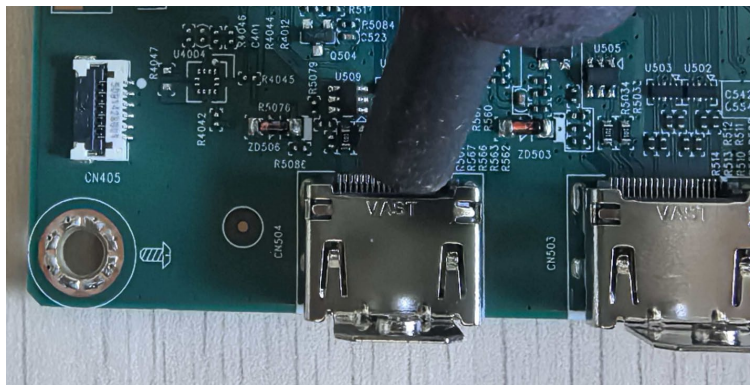
HDMI1 connector CN504

Repair the HDMI 1 connector:

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



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

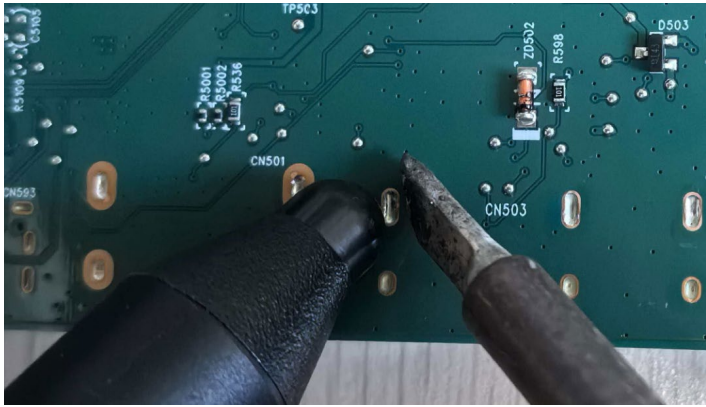


- 3) Lift the HDMI 1 connector from the circuit board.
- 4) Place the new component on the circuit board. Be sure that it matches the circuit board footprint.
- 5) Solder the new component.

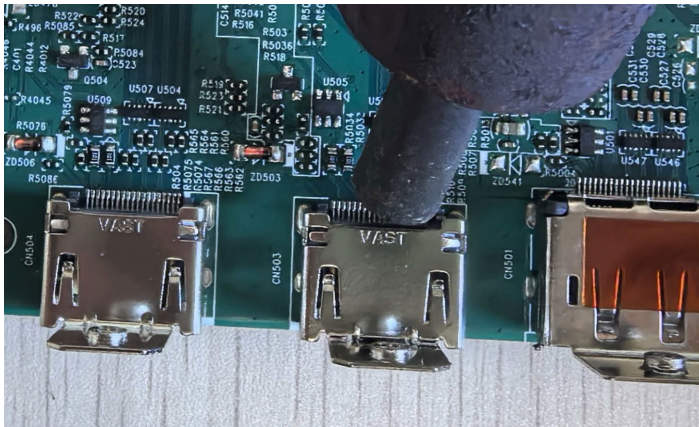
HDMI 2 connector CN503

Repair the HDMI 2 connector:

- 1) Use a soldering iron and a de-soldering 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 HDMI 2 connector from the circuit board.
- 4) Place the new component on the circuit board. Be sure that it matches the circuit board footprint.
- 5) Solder the new component.

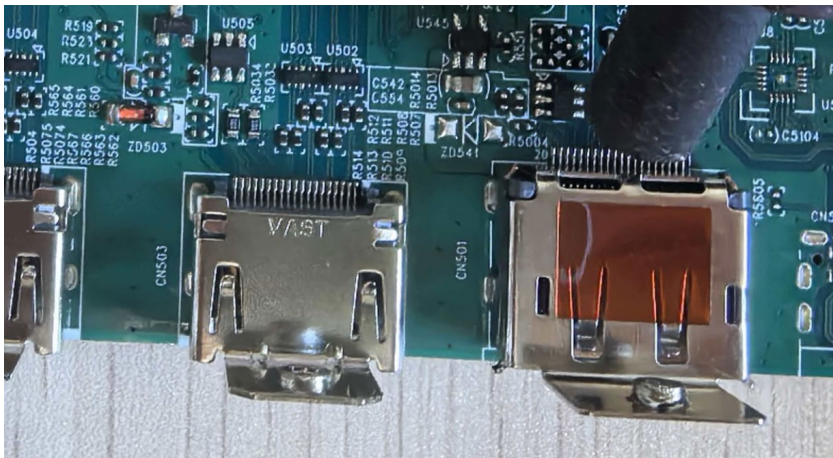
DP connector CN501

Repair the DP connector:

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



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

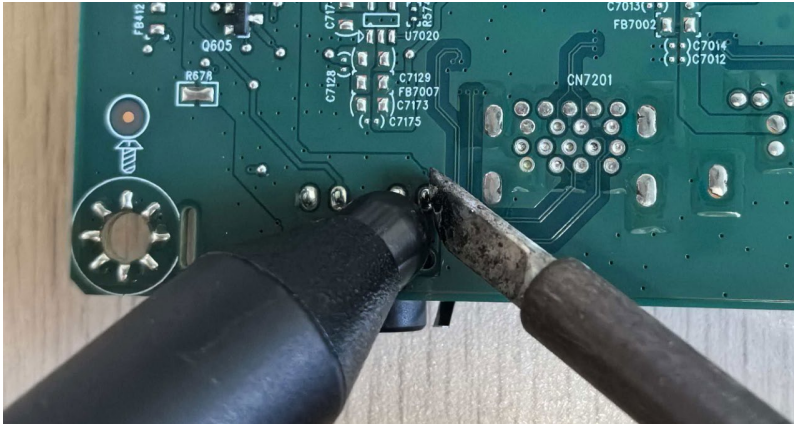


- 3) Lift the DP connector from the circuit board.
- 4) Place the new component on the circuit board. Be sure that it matches the circuit board footprint.
- 5) Solder the new component.

AUDIO connector CN603

Repair the AUDIO connector:

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



- 2) Lift the AUDIO connector from the circuit board.
- 3) Place the new component on the circuit board. Be sure that it matches the circuit board 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 or each problem, and the recommended solutions.

Table 4-2: Solving common problems

Problem	Possible cause	Solution
Screen is blank or video is blinking.	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. For more information, see Connecting the cables on page10 on UM.
	System is in Auto-Sleep Mode.	Press any key on the keyboard or move the mouse to inactivate the screen blanking utility.
	Video card is incompatible.	Perform one of the following actions: ●Open the OSD menu and select the Input menu. Set Auto-Switch Input to Off and manually select the input. ●Replace the video card or connect the video cable to one of the computer's on-board video sources.
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 connecting the video cable.

Input Signal Out of Range is displayed on screen.	Video resolution, refresh rate, or both, are set higher than the monitor supports.	Change the settings to a supported setting. See Preset display resolutions on page 30 on UM.
The monitor does not enter into a low-power sleep state.	The monitor's power saving control is disabled.	Open the OSD menu and select Power, select Auto-Sleep Mode, and then set auto-sleep to On.
"OSD Lockout" is displayed	The monitor's OSD lockout function is enabled.	Press and hold the Left button for 10 seconds to disable the OSD Lockout function.
"Power Button Lockout" is displayed.	The monitor's Power Button Lockout feature is enabled.	Press and hold the Power button for 10 seconds to unlock the power button function.
Monitor has trouble waking from Sleep mode		Display Power or USB Type-C inputs: Set the DisplayPort hot-plug detection to Always Active. Power mode monitors: Set the hot-plug detection to Always Active to switch the monitor to Performance mode.

Index

components

- rear, 5, 6

- connector repair, 18

- features, 4

- firmware updates, 3

- function test, 24

- how to order parts, 10

- illustrated parts catalog, 8

- parts, 8

- parts, ordering, 10

- power board removal, 17

- precautions, 2

- preparation for disassembly, 11

- RC removal, 12

- rear components, 5, 6

removal

- power board, 17

- RC, 12

- removal and replacement procedures, 11

- returning to customer, 3

- RoHS (2002/95/EC) requirements, 3

- safety information, 2

- serial number location, 7

- service information, 2

- spare parts, 8

- support and troubleshooting, 24

- troubleshooting, 24