



Maintenance and Service Guide

OMEN by HP 25 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".

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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.

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:

- 62.23 cm (24.5 in) diagonal viewable area with 1920 × 1080 resolution, plus full-screen support for lower resolutions
- Tilt capability and easy viewing from sitting or standing position, or while moving from one side of the monitor to the other
- TN technology providing wide viewing angles with colors that maintain their integrity
- HDMI (High-Definition Multimedia Interface) video input
- DisplayPort video input
- Security cable slot
- Audio headphone/variable line-out jack
- Convenient headphones storage hook on monitor stand
- Plug and Play capability if supported by your operating system
- On-screen display (OSD) adjustments in 10 languages for easy setup and screen optimization
- My Display software for adjusting monitor settings through Windows
- HDCP (High-bandwidth Digital Content Protection) used on digital inputs
- In select regions, software and documentation optical disc provided with the monitor that includes monitor drivers and product documentation
- VESA mounting capability for attaching the display to a wall mount device or swing arm
- USB 3.0 hub with one upstream port and two downstream ports

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**.

Side and bottom components on the rear panel

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



Rear of monitor showing location of controls and connectors

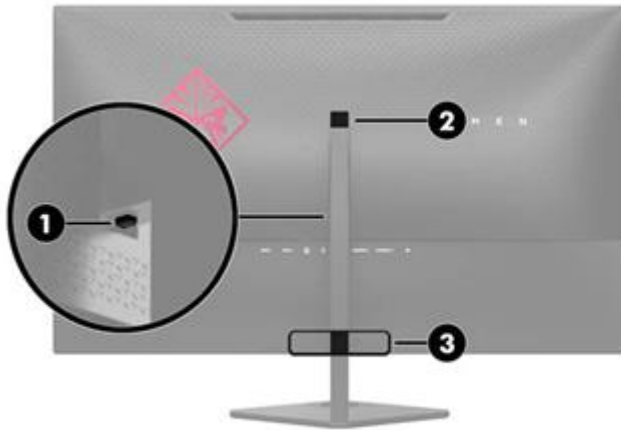
Table 1-1: Front components and their descriptions

Component	Function
1 Power button	When the monitor is off, press the button to turn on the monitor.
2 OK button	Press to open the OSD menu, select a menu item from the OSD, or close the OSD menu. An indicator is activated above the OK button when the OSD menu is open.
3 Function buttons	Use these buttons to navigate through the OSD menu based on the indicators above the buttons that are activated when the OSD menu is open.
4 Security cable slot	Connects a security cable from the monitor to a stationary object
5 USB 3.x (2) (downstream)	Connect optional USB devices to the monitor.
6 USB 3.x (upstream)	Connects the USB hub cable from the source device to the monitor.
7 Power connector	Connects an AC adapter.
8 HDMI ports (2)	Connect the HDMI cables from source devices to the monitor.
9 DisplayPort	Connects the DisplayPort cable from the source device to the monitor.
10 Audio headphone/variable line-out jack	Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television

audio cable.

Stand components

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



Rear of the monitor showing of stand components

Table 1-2: Rear components and their descriptions

Component	Function	
1	Stand release button	
2	Headphone storage hook	Connects headphone
3	Cable management	

Locating the rating label

The rating label on the monitor provides the product number and serial number. You may need these numbers when contacting HP about the monitor model. The rating label is located on the bottom of the display head.



Label location

For worldwide models (except India):

Barcode label

For worldwide models (except India):



Barcode label for Worldwide region

For India:



Barcode label for India region

Spec label

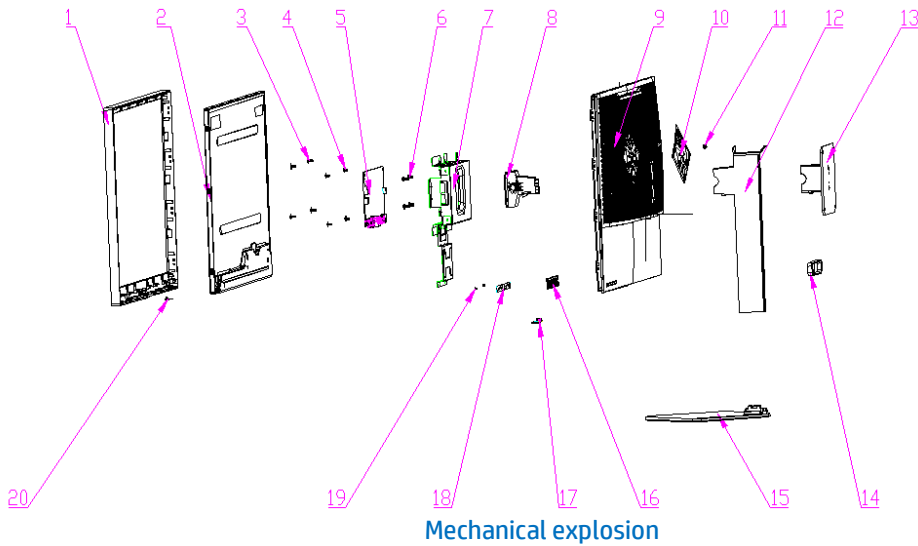
For worldwide region



Spec label for Worldwide region

3 Illustrated parts catalog

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



Item	Description	Qty
1	FRONT BEZEL, OMEN by HP 25, HF	1
2	panel	1
3	SCREW, I, CROSS T, T3*5 ZN	4
4	SCREW, P, CROSS M3*6, ZN-CC	4
5	PCBA, IF/B, W/OSP, LP25Q3-71L/OMEN by HP 25	1
6	SCREW, I, CROSS, M4*6, BLK-Zn, HF (NYLOK)&nbs	4
7	ASSY, CHASSIS, OMEN, HF	1
8	ASSY, STAND HINGE, OMEN, HF	1
9	REAR COVER, OMEN, HF	1
10	REAR VOODOO LOGO, OMEN, HF	4
11	REAR OMEN LOGO, OMEN, HF	1
12	ASSY, ARM OF STAND, OMEN, HF	4
13	ASSY, WALL MOUNT, OMEN, HF	1
14	CABLE MANAGEMENT OF ARM, OMEN, HF	1
15	ASSY, BASE OF STAND, OMEN, HF	1
16	KEY BUTTON, OMEN, HF	1

17	PCBA	1
18	PCBA	1
19	SCREW, I, CROSS, T2*3, Zn-Cc, ROHS	2
20	LENS, OMEN, HF	1

How to order parts

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

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

- Farnell: [Farnell UK - Electronic Components Distributor](#)
- RS Component: [Capacitors | RS Components \(rs-online.com\)](#)
- Digi-Key Component: [Digi-Key Electronic United Kingdom](#)

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
DisplayPort	CN401	Farnell	47272-0001
HDMI	CN301, CN302	Farnell	208658-1051
Headphone	CN101	Digi-Key	54-00177(Notes: the chassis and rear cover need to be modified to make the connector opening larger)
USB upstream	CN701	Farnell	897-46-009-90-300000
USB A	CN702, CN703	Farnell	48405-0003 (Notes: the chassis and rear cover need to be modified to make the connector opening larger)
DC jack	CN801	Digi-Key	PJ-096H

NOTE: The connector may need to be modified to meet functionality, regulatory and safety requirements if it is not an exact match.

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

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.

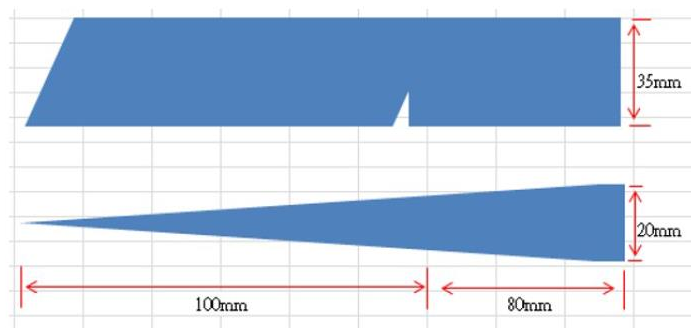
4 Removal and replacement procedures

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:



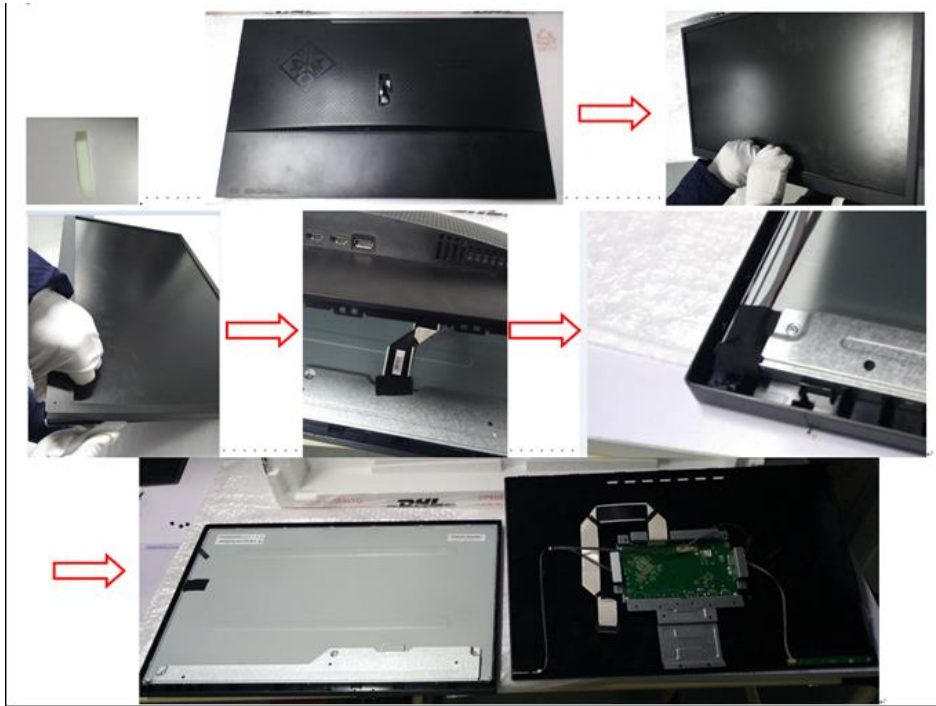
RC

Before removing the RC, follow these steps:

- ▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 9.

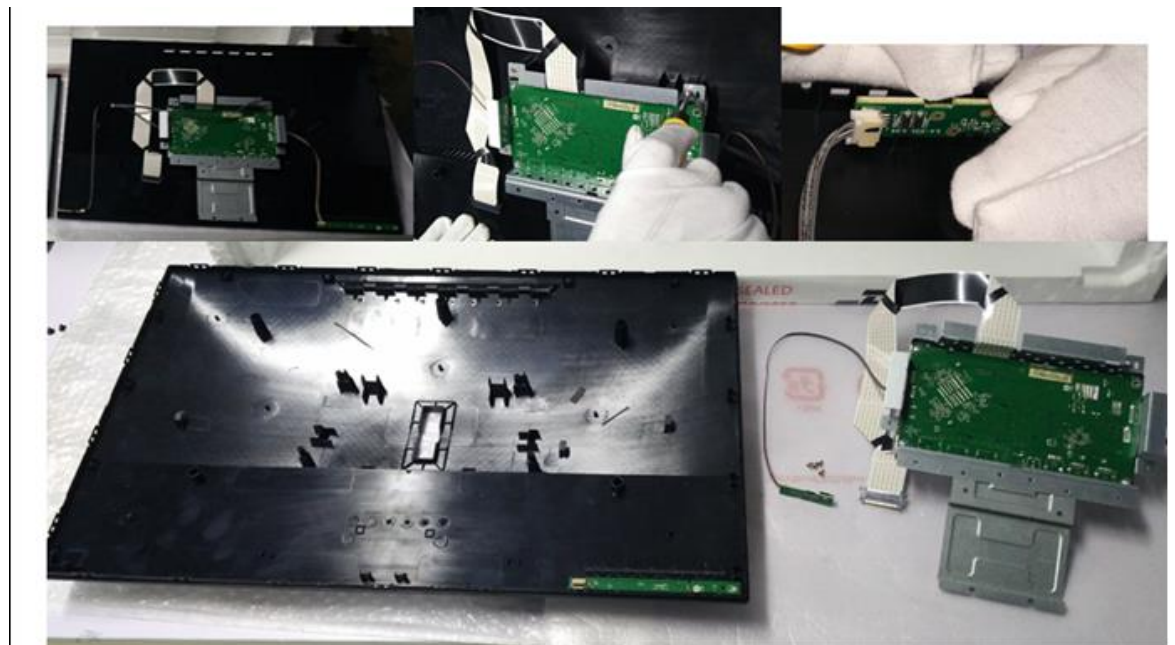
Remove the RC:

- 1) Use hand and a tool to separate back cover assy from monitor as below picture, but pay attention to avoid the LVDS cable and Lightbar cable.



Monitor separate step

- 2) Unlock 4 screws and pull out the Audio board and Keypad cable then separated the chassis assy form the back cover assy.



PCBA and rear cover separate step

- 3) Unlock 2 screws fixed Keypad and Bucket then the keypad is separated.



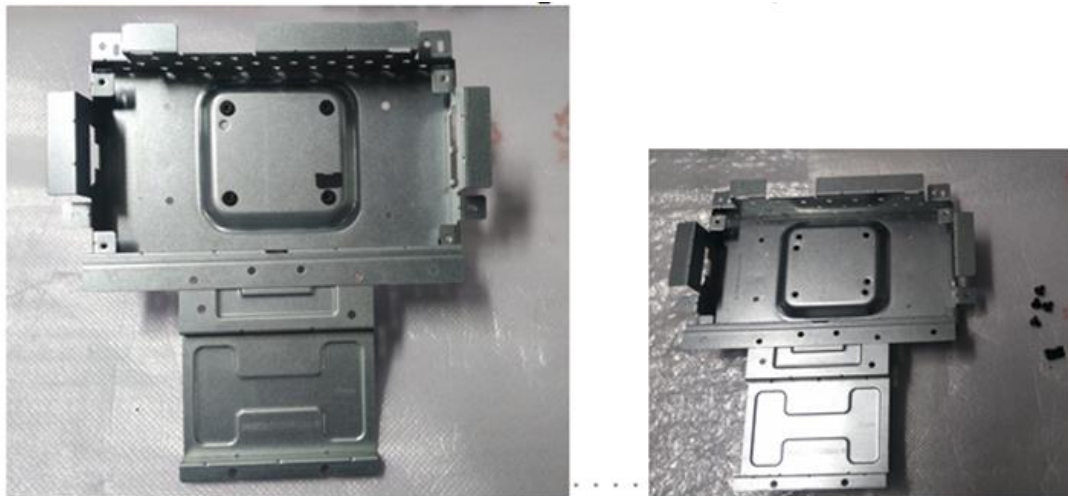
KP board separate step

- 4) Pull out all cables except the LVDS and unlock 4 screws fixed Main board and chassis then separate th



PCBA and chassis separate step

- 5) Unlock 4 screws fixed the hinge and chassis ,take out the small mylar then separate the hinge.



Chassis screw separate step

Connector repair

This procedure includes HDMI, DisplayPort, DC jack, headphone, USB upstream and USB connectors.

The connectors are on the main board (board part number 790N41300***H01) and USB side board (board part number 790N40300***H0*).

The connectors' identifiers are as follows:

Connector	Location
HDMI	CN301,CN302
DisplayPort	CN401
USB upstream	CN701
USB	CN702,CN703
DC jack	CN801



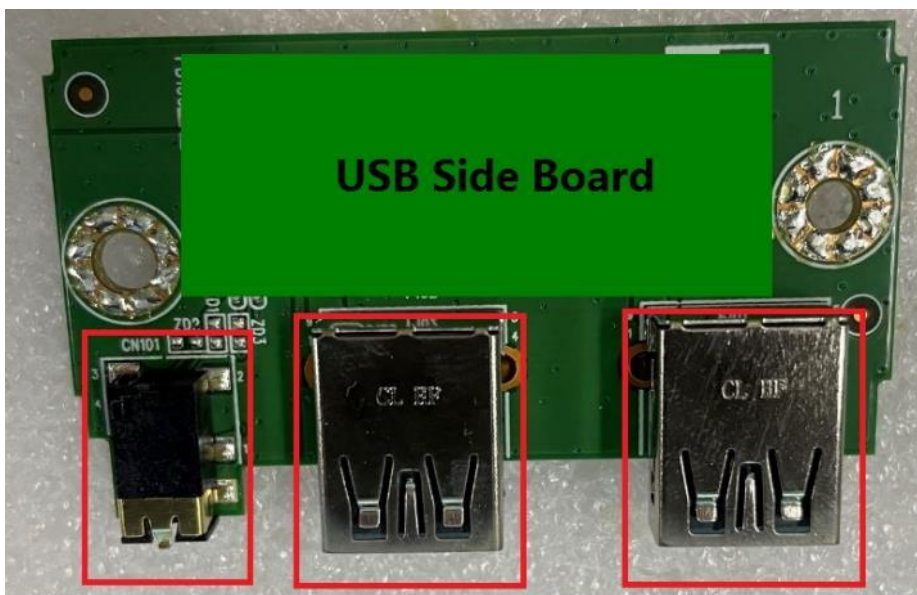
Connector location showing of main board

Connector	Location
Headphone	CN101



CN101

Audio Jack location of audio board



CN101

P102

P101

Connector location showing of USB side board

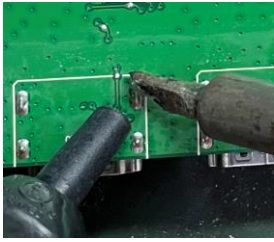
Before repairing connectors, follow these steps:

- ▲ Prepare the monitor for disassembly. See [Preparation for disassembly](#) on page 9.

HDMI connector CN301, CN302

Repair the HDMI connector:

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



HDMI connector repairing

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



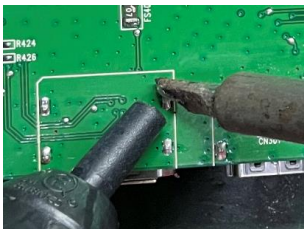
HDMI connector repairing

- 3) Lift the CN301, CN302 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 CN401

Repair the DP connector:

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



DP connector repairing

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



DP connector repairing

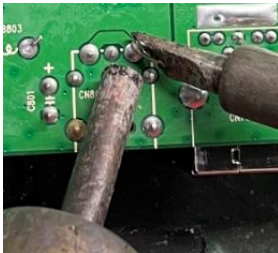
- 3) Lift the CN401 connector from the PCB.

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

DC jack connector CN801

Repair the DC jack 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 CN201 out of the through holes.



DC Jack connector repairing

- 2) Lift the CN801 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.

USB upstream connector CN701

Repair the USB upstream 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 CN602 out of the through holes.



USB upstream connector repairing

- 2) Lift the CN701 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.

USB connector CN702, CN703

Repair the USB 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 P101, P102 out of the through holes.



USB connector repairing

- 2) Lift the CN702, CN703 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.

Headphone connector CN101

Repair the Headphone connector:

- 1) Use a hot air gun to heat the bottom side of PCB below the headphone connector.



Headphone connector repairing

- 2) Lift the CN101 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

USB test	Confirm whether transmitting data between computer and USB devices.	Computer and USB devices
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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 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.
Image appears blurred, indistinct, or too dark.	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
	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 displayed on screen.	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting.
The monitor is	The monitor's power saving control is disabled.	Open the OSD menu and

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

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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