Maintenance and Service Guide

U27 4k model

L95468

SUMMARY

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

© Copyright 2021 HP Development Company, L.P.

AMD is a trademark of Advanced Micro Devices, Inc. Bluetooth is a trademark owned by its proprietor and used by HP Inc. under license. NVIDIA is a trademark and/or registered trademark of NVIDIA Corporation in the U.S. and other countries. USB Type-C and USB-C are registered trademarks of USB Implementers Forum. DisplayPort and the DisplayPort logo are trademarks owned by the Video Electronics Standards Association (VESA) in the United States and other countries.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

First Edition: Mar 2022

Document Part Number: L95468-U27 4k-MSG-V1

Assembly part number: L95468-001

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 1
Important safety information 1
Important service information and precautions 1
RoHS (2002/95/EC) requirements 2
General descriptions 2
Firmware updates 2
Before returning the repaired product to the customer 2
2 Monitor features 3
Features 3
Rear components 4
Locating the serial number and product number 5
3 Illustrated parts catalog 6
How to order parts 7
4 Removal and replacement procedures 10
Preparation for disassembly 10
RC 10
Connector repair 15
HDMI connector P200 16
DP connector P300 17
Function test 18
Support and troubleshooting 18
Index 20

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 complaint, the replacement parts can be non-ROHS complaint. If the original parts are RoHS compliant, the replacement parts MUST be RoHS complaint.

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.

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

Features

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

- 68.58 cm (27 in) IPS monitor with 3840 × 2160 @ 30 Hz (wireless connection) or 60 Hz (wired connection) resolution, ultrawide backlit display, plus full-screen support for lower resolutions
- Antiglare panel with an LED backlight
- Wide viewing angle to allow viewing from a sitting or standing position, or when moving from side to side
- Wireless sharing from notebook computer to monitor
- HP Quick Pair app for initiating wireless pairing
- Three-sided borderless screen
- Tilt and swivel adjustment capability
- Height adjustment capability
- DisplayPort™ (DP) video input
- High-Definition Multimedia Interface (HDMI) video input (cable provided)
- Audio-in jack
- Audio-out (headphone) jack
- Plug and Play capability, if supported by your operating system
- Security cable slot provision on rear of monitor for optional security cable
- On-screen display (OSD) adjustments in several languages for easy setup and screen optimization
- High-bandwidth Digital Content Protection (HDCP) copy protection on all digital inputs
- VESA® mounting bracket for attaching the monitor to a wall-mount device or swing arm
- Low blue light mode settings to create a more relaxing and less stimulating image
- Energy saver feature to meet requirements for reduced power consumption

NOTE: For safety and regulatory information, refer to the Product Notices provided in your documentation kit. To access the latest user guide, go to http://www.hp.com/support, and follow the instructions to find your product. Then select User Guides.

Rear components

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

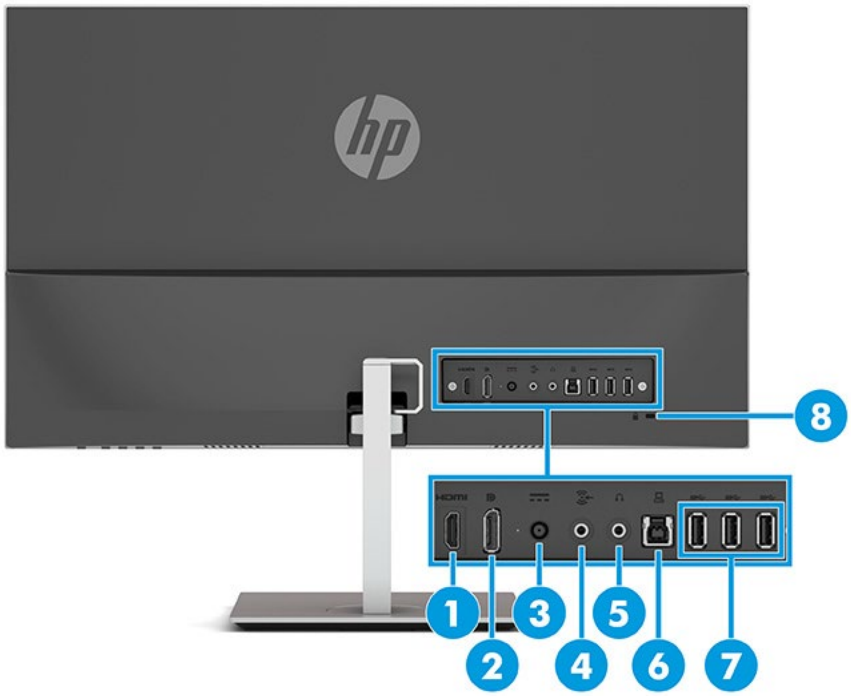


Table 1-1: Rear components and their descriptions

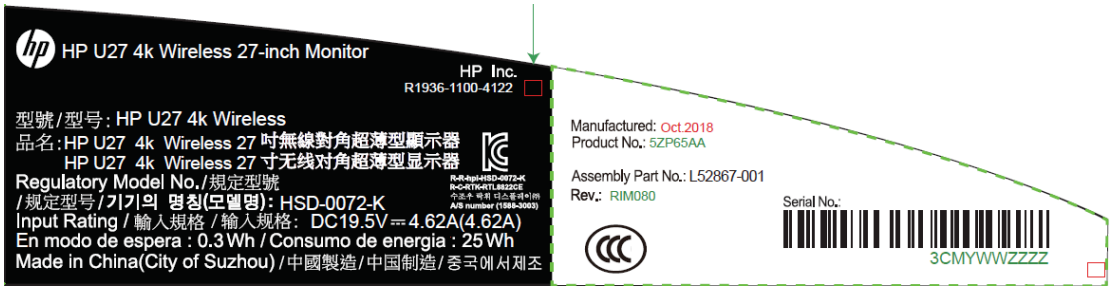
Component		Function
1	HDMI port	Connect HDMI cables to the HDMI connectors on source devices.
2	DisplayPort connector	Connects a DisplayPort cable to the DisplayPort connector on the source device.
3	Power connector	Connects an AC adapter.
4	Audio in	Connects an external audio device to the monitor.
5	Headphone jack	Connects headphones to the monitor.
6	USB type B port (upstream)	Connects the USB Type-B cable to a source device such as a computer or game console.
7	USB ports (3)	Connect a USB cable to a peripheral device, such as a keyboard, mouse, or USB hard drive.
8	Security cable slot	Connects an optional security cable.

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 for support.

For worldwide models (except India):

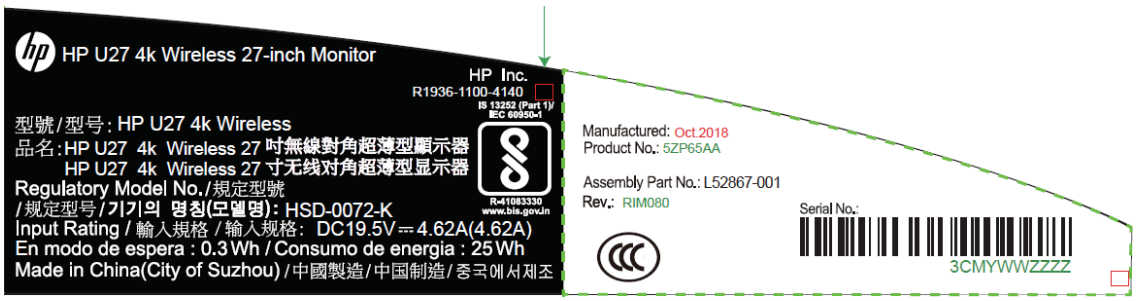
Barcode label



Spec label

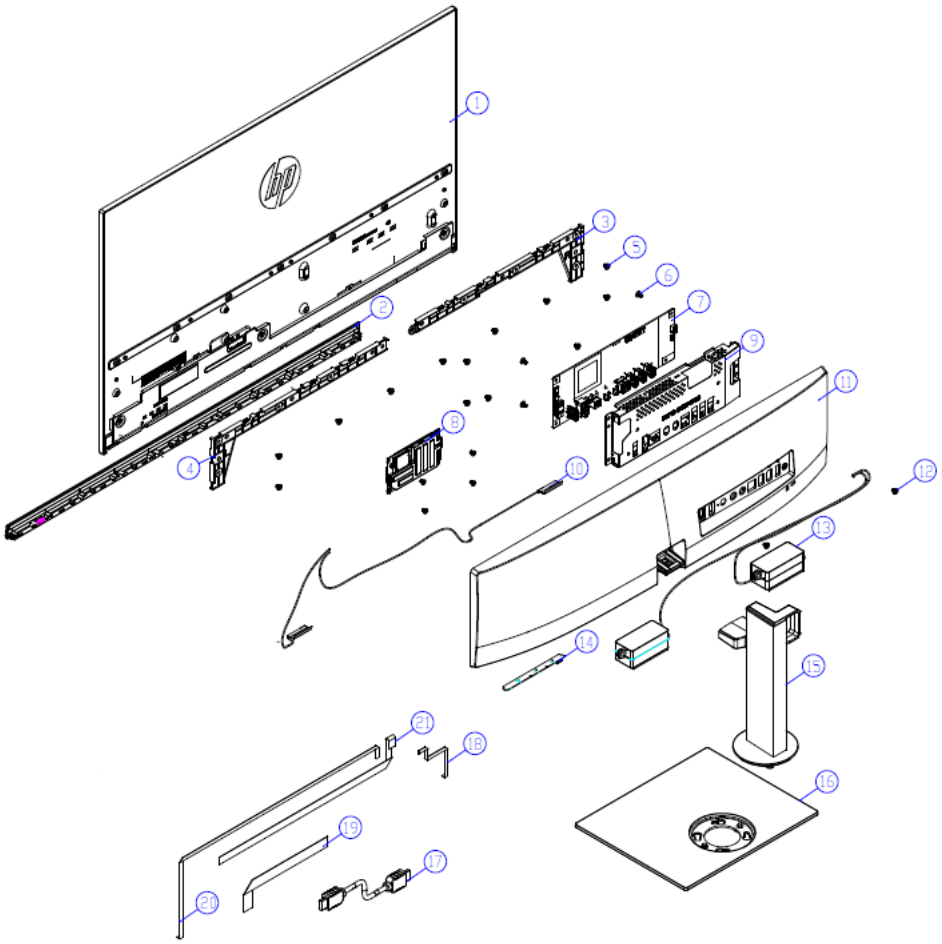
For India:

Bar code label



Illustrated parts catalog

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



Item	Description	Qty
1	LCM Bare, HP U27 4K Wireless	1
2	FRONT DECO(ABS 94-HB/SP-1430)(HP U27 4k WIRELESS)ASS'Y	1
3	REAR SUPPORT-R(ABS 94-HB/J13417B5)(ENCORE2-27F)	1
4	REAR SUPPORT-L(ABS 94-HB/J13417B5)(ENCORE2-27F)	1
5	MAC. SCREW-MI M3.0*4.0L, BLK-Ni	16
6	MAC. SCREW-MRF M3.0*6.0L, BLK-Ni	2
7	MAIN BD ASS'Y HP Beacon U27 4K Wireless (LM270WR3-RSAL1)	1
8	HP Miracast WIFI Module PCBA 90*52mm LA46HD225-1H FOR DVT	1
9	SHIELDING (SECC 0.5T)(HP U27 4k WIRELESS)	1
10	PIFA Antenna 1.37RF for WLAN 802.11 a/b/g L64AT014-CS-H BLK 200mm+500mm HF	1
11	REAR COVER(ABS 94-HB/Jack Black (6009-0337))(HP U27 4k WIRELESS)ASS'Y	1
12	MAC. SCREW-MI M3.0*6.0L, BLK-ZNNI(HEAD DIAMETER 7.0)	2
13	SPK 4W 4ohms 85*30*26mm (R550mm/L450mm) NB17-048027-001H LUXSHARE FOR Miracast HF	1

14	DISPLAY BD ASS'Y HP Beacon	1
15	NECK(AL/Silver(SP-1430))(HP U27 4k WIRELESS)FULFIL	1
16	BASE(ABS 94-HB/Silver(SP-1430))(HP U27 4k WIRELESS)FULFIL	1
17	HDMI(2.0) CABLE 150mm (1P*#30+EAHM)*5+4C*#30+AEB AL 85%	1
18	WH FFC 6P(0.5mm) 110mm(3FOLD+PRO)60V G/F (A8+A8) HF	1
19	WH FFC 30P(0.5mm) 200mm(3FOLD+PRO+3M)60V G/F W/CONN*2+AL(AA) HF	1
20	WH FFC 8P(0.5mm) 530mm(4FOLD+PRO)60V G/F (A8+A12/V-CUT) HF	1
21	WH FFC 20P(0.5mm) 380mm(3FOLD+PRO)60V G/F (A5+A10) HF	1

How to order parts

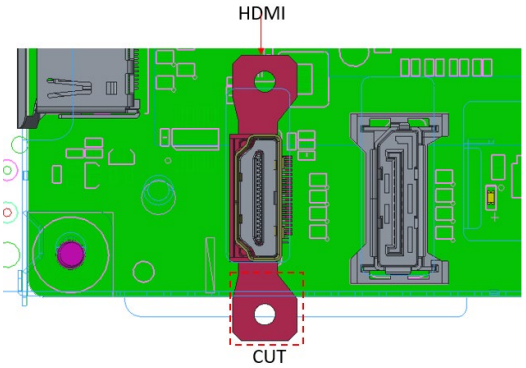
Connectors by manufacturer

- Digi-Key Component: Digi-Key Component United Kingdom

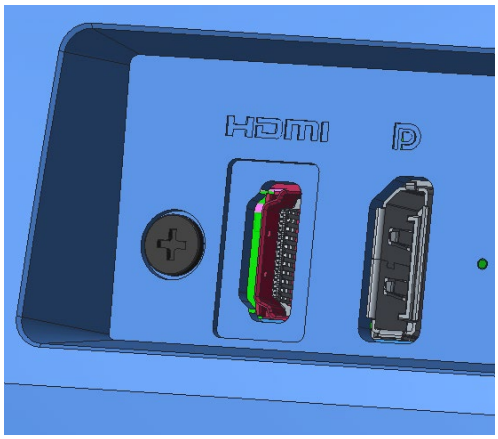
Component description	Location identifier	Component distributor	Distributer part number
HDMI	P200	Farnell	47659-1100
DisplayPort	P300	DigiKey	2041441-1
DC Power	P1	DigiKey	732-5935-ND
Audio in	AP1	DigiKey	STX-3680-5NB
Audio out	AP2	DigiKey	STX-3680-5NB
USB- B type	UP1	DigiKey	USB3 B-TOP or KUSBVX-BS1N9-BL30
USB- A type	UP2/UP3/UP4	Farnell	USB1086-GF-B

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

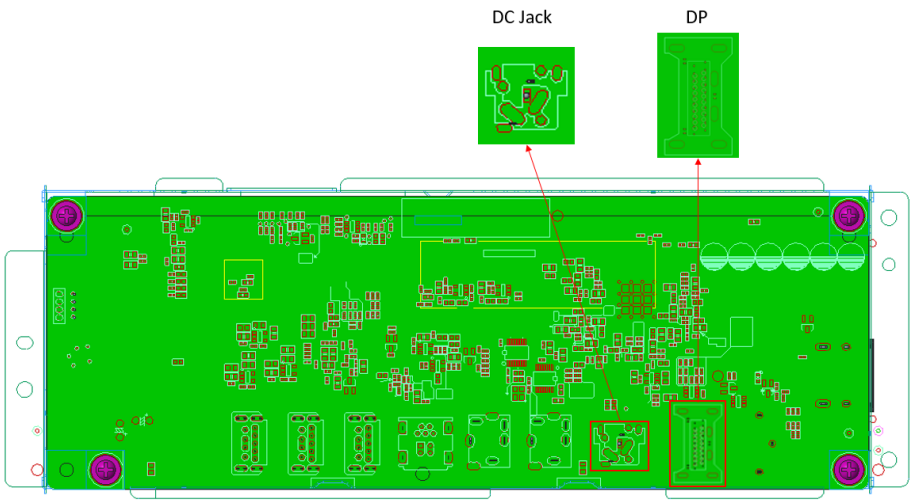
HDMI: If use the HDMI connector of Farnell 47659-1100, the RC (rear cover) need to be modified to meet functionality, regulatory and safety requirements because it is not an exact match.



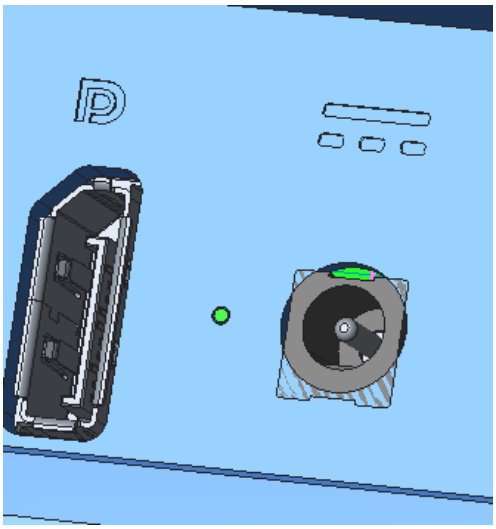
And it will be lower height than the surface of the rear cover



DisplayPort &DC power: If use the DisplayPort connector (2041441-1) or the DC power connector (732-5935-ND), the layout of the PCB (printed wire board) needs to be modified. The pin distance is different compares to original connector, and it cannot fit I/O (input/output) hole.



The DisplayPort will be lower height than RC surface, and the DC power is over the RC hole, need to modify the ID.



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.

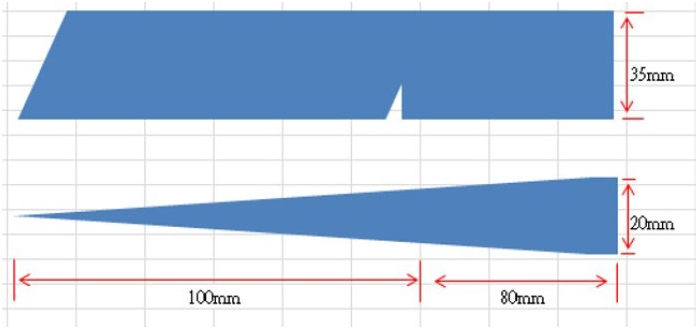
Internal and External Power Supplies are available for purchase from the following EU distributor: EET https://www.eetgroup.com/en-eu/

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:



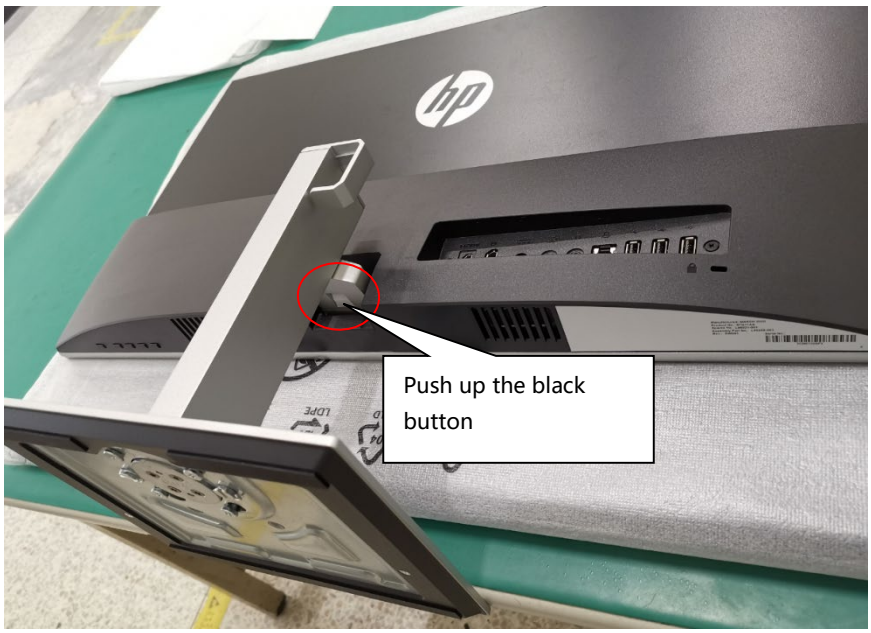
RC

Before removing the RC, follow these steps:

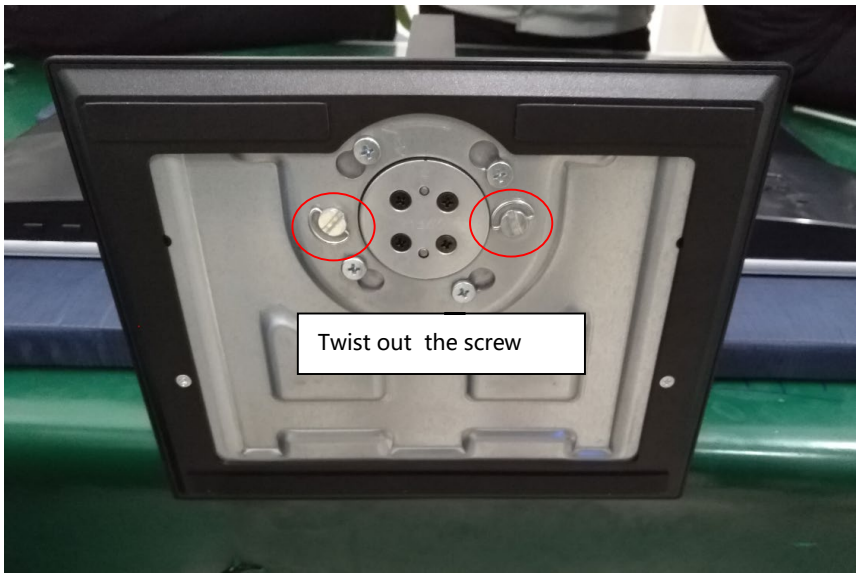
▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 10.

Remove the RC:

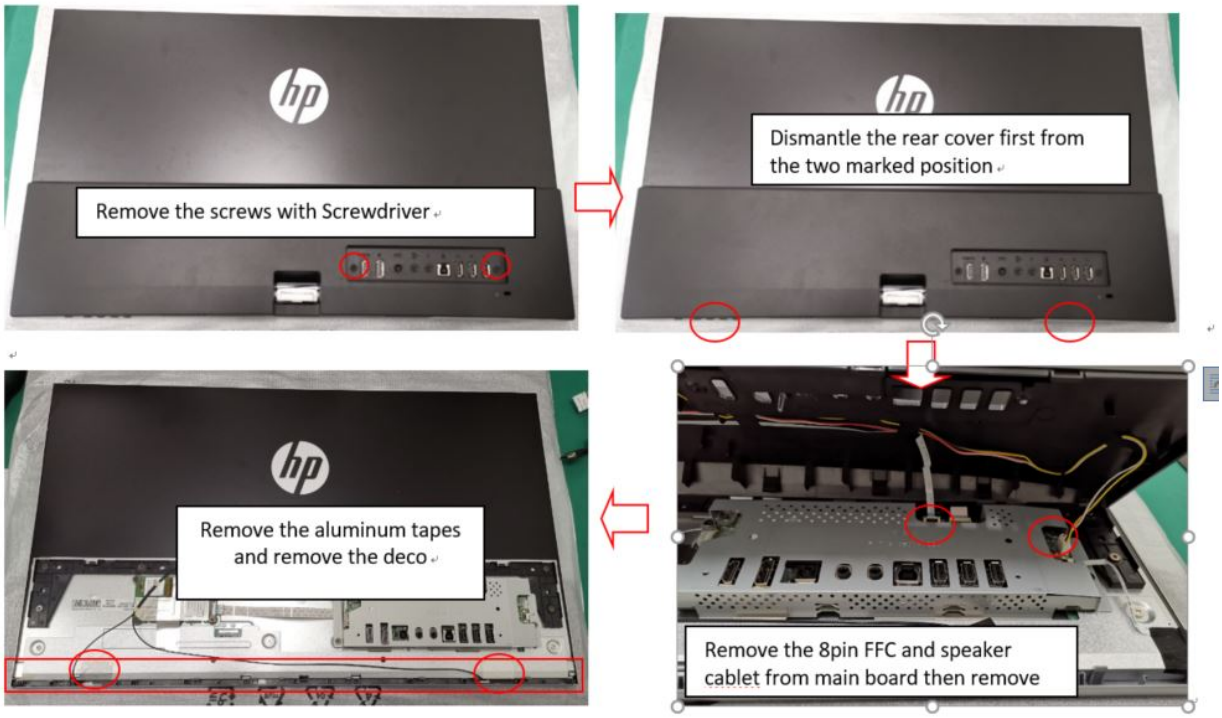
1. Lay the display on soft desk and push the button of stand to unlock the stand, then pull out the stand form the monitor head.



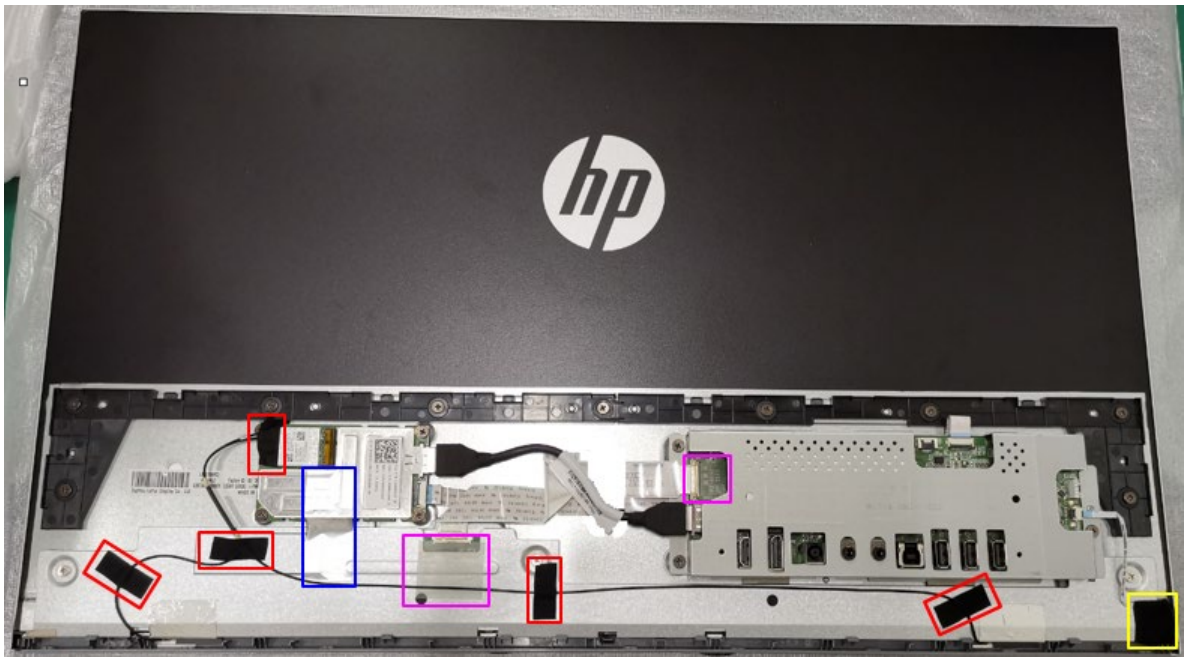
2. Twist out the screw and separate base and stand.



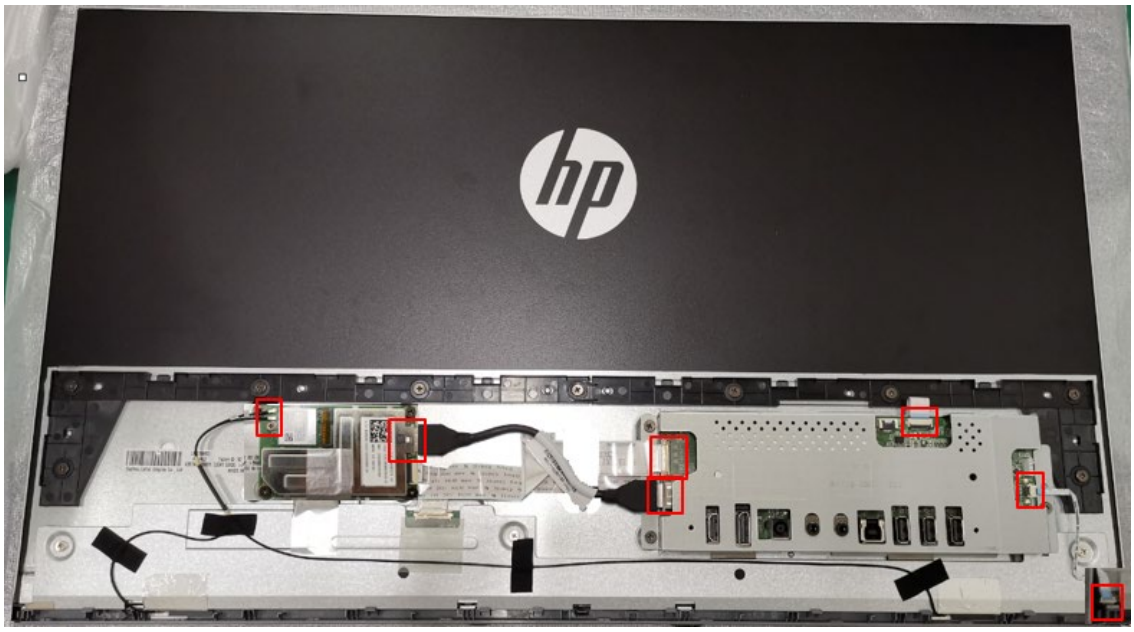
3. Strip the screws from rear cover, then move rear cover follow the below way.



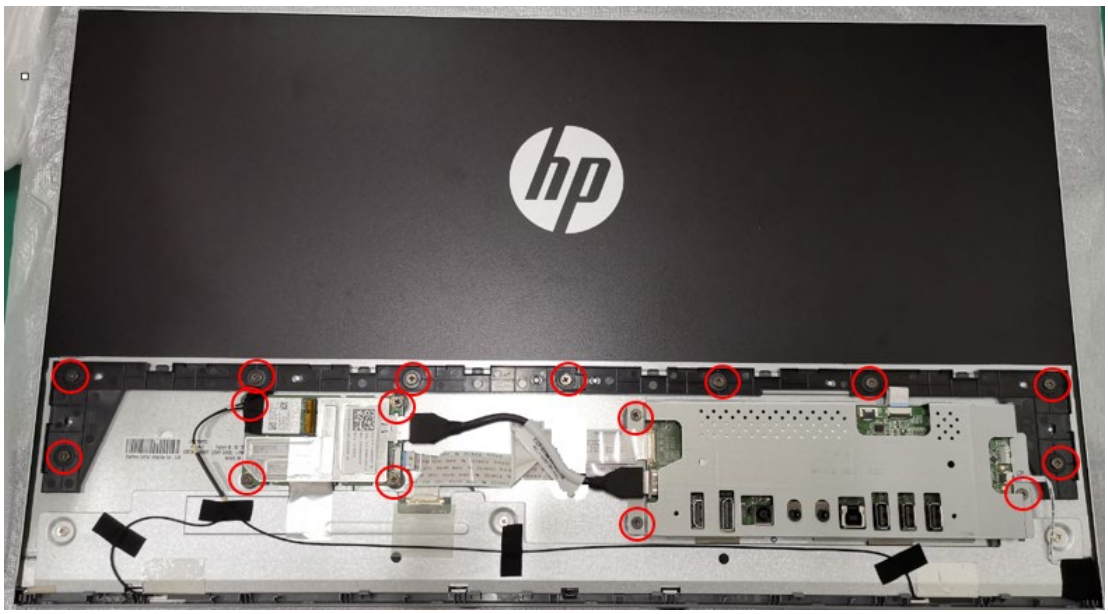
4. Remove the acetate tapes and aluminum tape from the LVDS/ LED/Antenna cable.



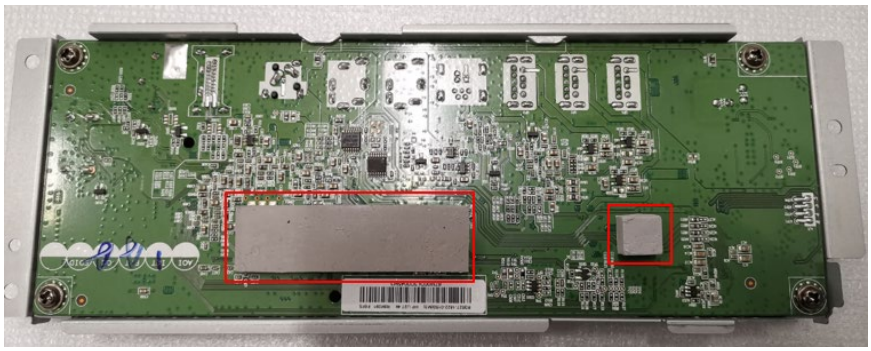
5. Pull out the HDMI/LVDS/ LED/ 20 pin FFC/Antenna cable to panel.



6. Strip sixteen screws from the rear cover 、shielding and wifi board.

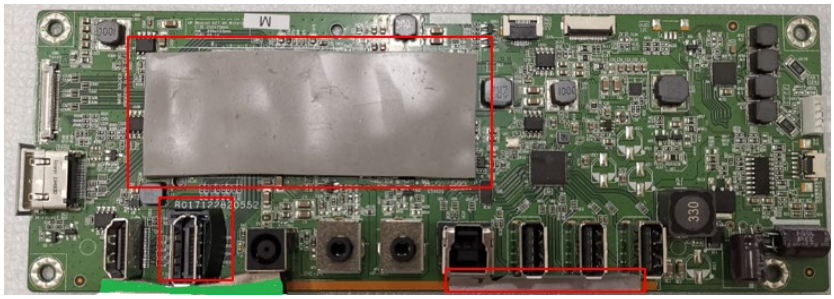


7. Remove two thermal Pad from MB.

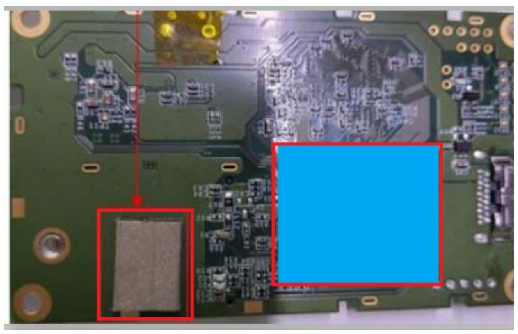


8. Strip four screws from the shielding.

9. Take out MB board from the shielding and remove 1PCS Thermal Pad，1PCS mylar and 1PCS aluminum tape.



10. Remove 1PCS gasket block and 1PCS heat sink from miracast board.



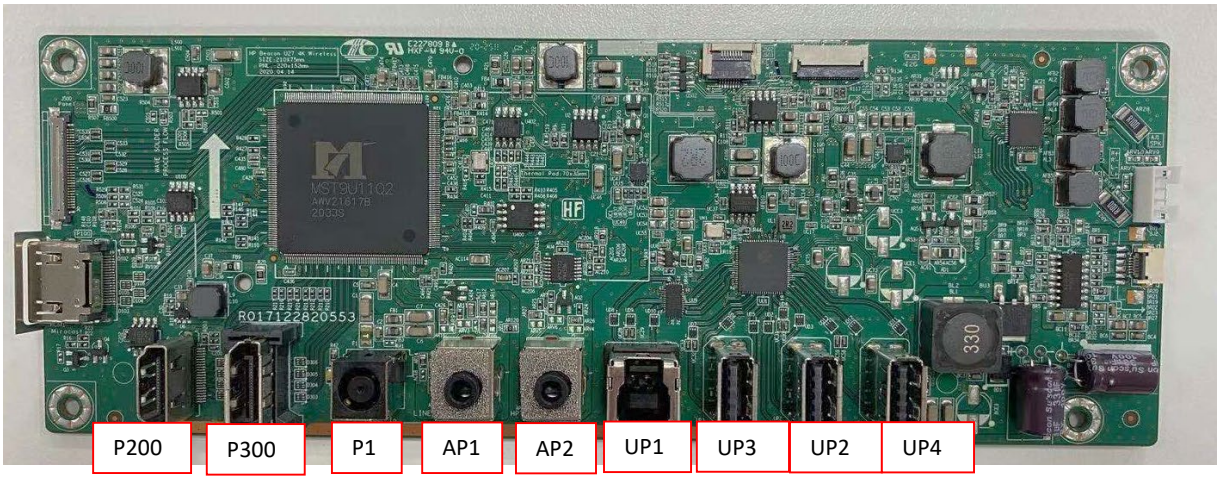
Connector repair

This procedure includes HDMI and DisplayPort connectors.

The connectors are on the main board (board part number R352718220150

The connectors identifiers are as follows:

Connector	Location
HDMI	P200
DisplayPort	P300
DC Power	P1
Audio In	AP1
Audio out	AP2
USB B type	UP1
USB A type	UP2/UP3/UP4



Before repairing connectors, follow these steps:

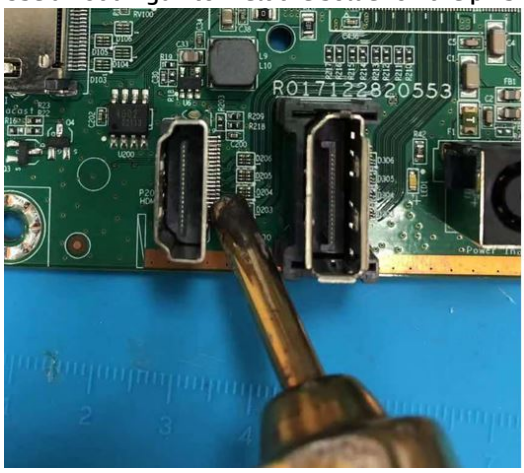
▲ Prepare the monitor for disassembly. See Preparation for disassembly on page 12.

HDMI connector P200

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.

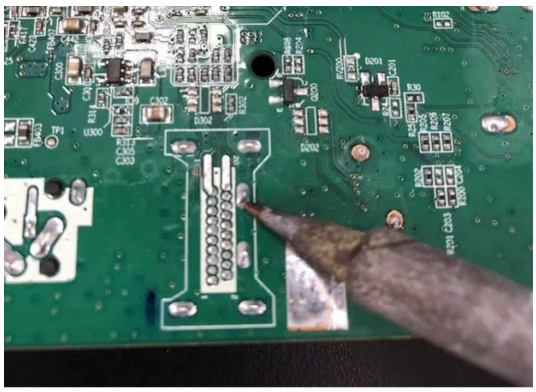


3) Lift the P200 connector from the PCB.
4) Place the new component on the PCB. Be sure that it matches the PCB footprint.
5) Solder the new component.

DP connector P300

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 P300 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

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. Confirm whether sound of music played smoothly through the headphone.	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 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 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 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.

Index

components
  rear, 4
connector repair, 15
features, 3
firmware updates, 2
function test, 18
how to order parts, 7
illustrated parts catalog, 6
menu button location, 4
parts, 6
parts, ordering, 7
power light location, 4
precautions, 1
preparation for disassembly, 10
RC removal, 10
rear components, 4
removal
  RC, 10
removal and replacement procedures, 10
returning to customer, 2
RoHS (2002/95/EC) requirements, 2
safety information, 1
serial number location, 5
service information, 1
spare parts, 6
support and troubleshooting, 18
troubleshooting, 18