



Maintenance and Service Guide

L7014 model

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 March 2021

Document Part Number: 844156-L7010t-MSG-V1

Assembly part number: 844156-001

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
	Front components	4
	Rear components	4
	Locating the serial number and product number.....	6
3	Illustrated parts catalog	7
	How to order parts.....	8
4	Removal and replacement procedures	9
	Preparation for disassembly.....	9
	RC	10
	Connector repair	13
	AC SOCKET CN1.....	15
	Micro USB CN102.....	15
	DP connector CN501.....	16
	Function test	16
	Support and troubleshooting	17

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 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.

2 Monitor features

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

Features

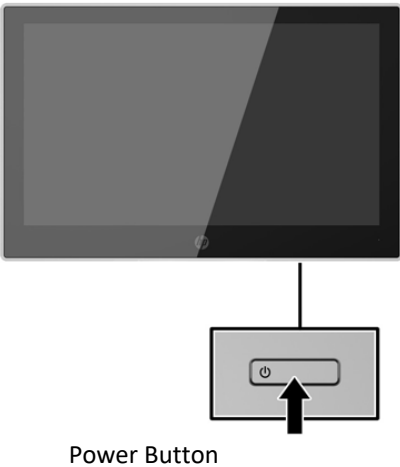
The monitor features include the following:

- 35.6 cm (14-inch) touch or non-touch monitor with 1366 x 768 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio
- Wide viewing angle to allow viewing from a sitting or standing position, or moving from side-to-side
- 5-point projective capacitive touch on touch models
- 45 W external power supply available from HP
- 100 mm x 100 mm VESA mounting support
- DC power input
- DisplayPort video signal input
- USB Type-B upstream port on touch models
- 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
- HP Display Assistant for adjusting monitor settings and enabling theft deterrence feature (refer to the *HP Display Assistant User Guide* on the optical disc included with your monitor or at <http://www.hp.com/support>).
- Software and documentation disc that includes monitor drivers and product documentation
- 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 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.



Rear components

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

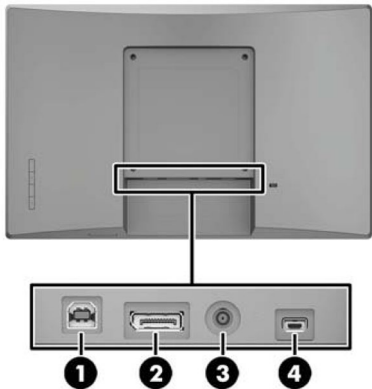


Table 1-1: Rear components and their descriptions

Component		Function
(1)	USB 2.0 Type-B upstream port (touch monitors only)	Connects a USB cable from the computer to the monitor (required for touch functionality).
(2)	DisplayPort	Connects the DisplayPort cable from the monitor to the computer.
(3)	DC power connector	Connects the power cable from the 12 V powered USB port on the computer or the external power supply to the monitor.
(4)	Mini USB port	This port is only used by service technicians to update the firmware on the monitor.

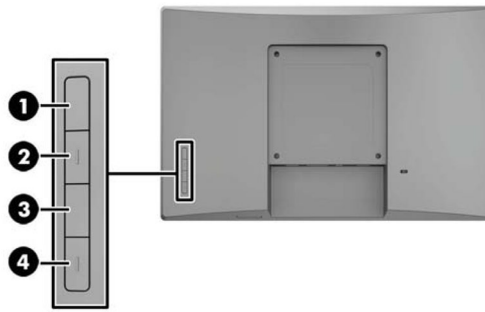
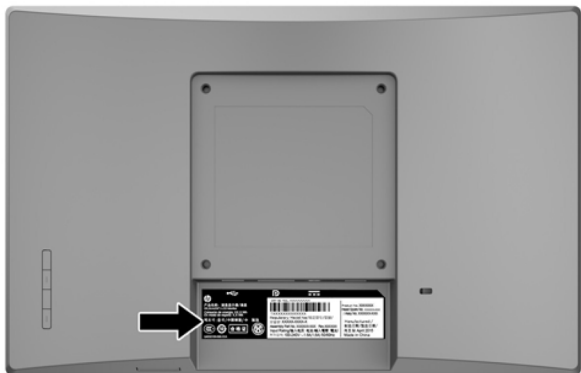


Table 1-2: Rear components and their descriptions

Control		Function
(1)	Menu button	Opens and closes the OSD. NOTE: To activate the Menu button and the Function buttons, press any of the buttons so that the button labels appear on the screen.
(2)–(4)	Function buttons	Use these buttons to navigate through the OSD. The navigation indicators next to the buttons will appear on the screen when the OSD is open. NOTE: You can reconfigure the Function buttons in the OSD to quickly select the most commonly used operations.

Locating the serial number and product number

The serial number and product number are located on a label on the rear of the display head. You may need these numbers when contacting HP about the monitor model.



For worldwide models (except India):



型号: L7014
HP L7014 Monitor
产品名称: 液晶显示器/
液晶顯示器
35.6cm(14") LCD Monitor
제 조 국 : 중국 / 中国制造 /
中國製造



合格证

Q40G014N-690-05B



Serial No.: XXXXXXXX

TXXXXXXXXXXXXX
Regulatory Model No./規定型号/型號/
모델명: HSTND-9211-A
Assembly Part No. 844156-700 Rev.LTM111
Input Rating/輸入电压 电流/輸入電壓 電流/
外置電源供電模式/ :19.5V 2.31A

Product No. T6N31AA
Head Spare No. 844428-001
Manufactured /
製造日期/製造日期/
제 조 일: April 2015
Made in China
Input Rating/輸入电压 电流/
輸入電壓 電流/PC供電模式/
:12V 1.8A



Voir le manuel d'utilisateur pour les courants d'alimentation applicable.
For applicable power supplies see user manual.
适用的电源适配器请参阅说明书。

警語: 使用過度恐傷害視力

FUENTE DE ALIMENTACION
ENTRADA:100-240Vac 1.4A&1.1A 50-60 Hz
SALIDA:19.5VDC 2.31A 45W



Advertencia:
"El uso de una fuente inadecuada puede conllevar riesgo eléctrico para la unidad y/o el usuario."





MSIP-REM-hpi-HSTND-9211-A
TPV Electronics(Fujian) Co., Ltd.
서비스센터 : 1588-3003

HP Inc.
CAN ICES-3(B)/NMB-3(B)
Q40G014N-690-06B

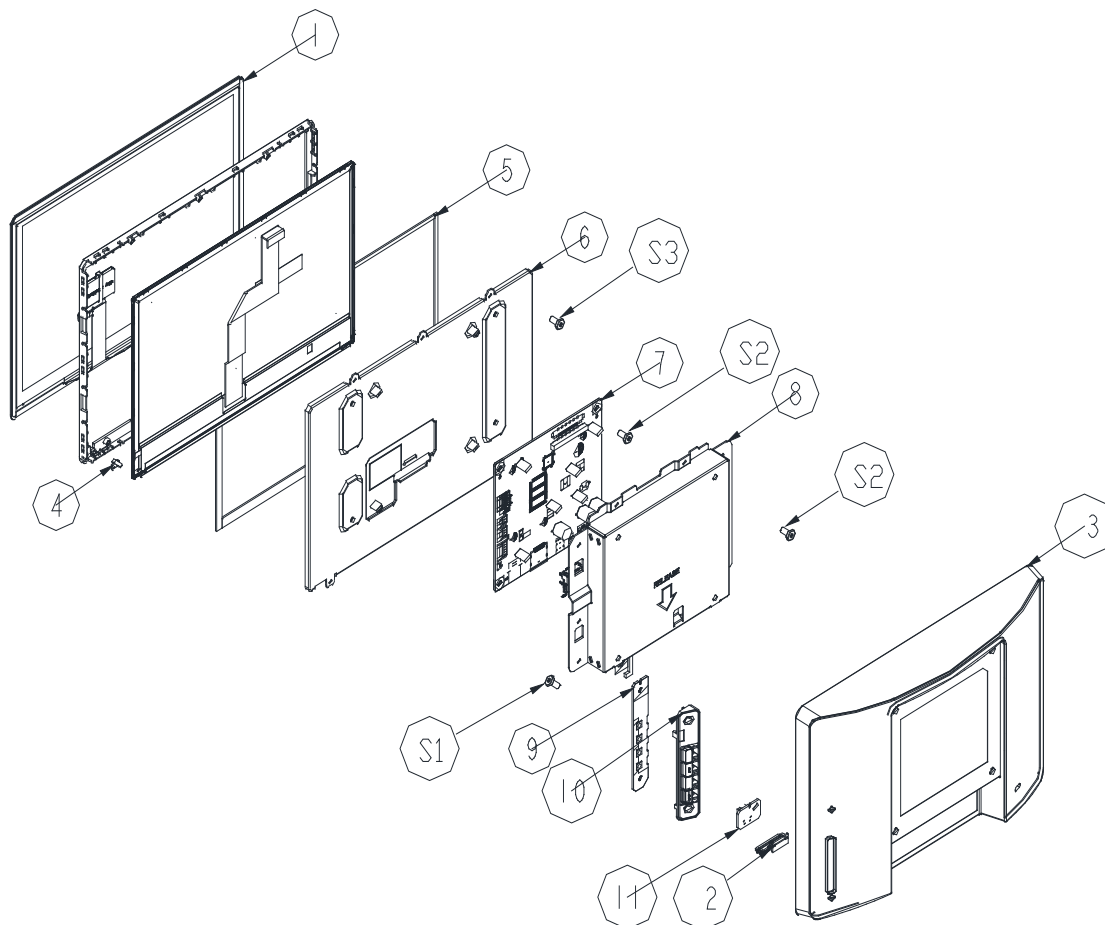


Consumo de energía: 7.44 Wh
En modo de espera: 0.45 Wh

6

3 Illustrated parts catalog

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



Item	Part No.		
1	PANEL		
2	KEY_POWER		
3	REAR_COVER L10WT-Yhp5-s5		
4	LENS_POWER		
5	SPONGE		
6	MAINFRAME		
7	MAIN BOARD-CBPCGDRHPQ1		
8	SHIELD_MAINBOARD		
9	KEY BOARD	No.	Description
10	KEY	S1	Screw(key board /rear cover)
11	KEY BOARD	S2	Screw(MAIN BOARD/SHIELD)
		S3	0Q1G 930 5120(SHIELD/MAINFRAME)

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: [Capacitors | RS Components \(rs-online.com\)](#)
- Digi-Key: [Digikey Electronics](#)

Connectors by manufacturer

Component description	Location identifier	Component distributor	Distributor part number
MICRO USB	CN102	RS	629105150521 (Wurth Elektronik)
DisplayPort	CN501	Farnell	DP1RD20JQ1R400 (JAE)
AC SOCKET	CN1	Digi-Key	PJ-096H

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>.

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.

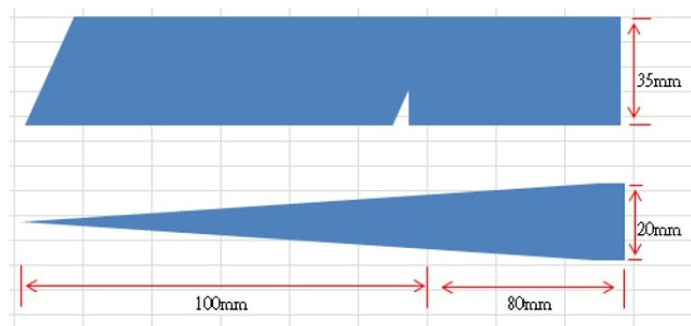
4 Removal and replacement procedures

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.

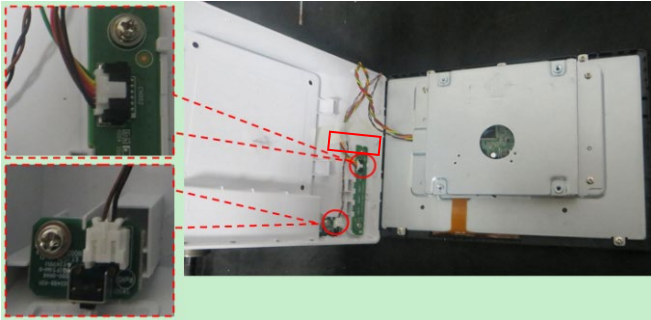
- 1) Read the “Important safety information” and “Important service information and precautions” sections in the “Getting started” chapter of this guide.
- 2) Clean the room for disassembly.
- 3) Identify the disassembly area.
- 4) Check the position that the monitors are to be placed along with the 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:

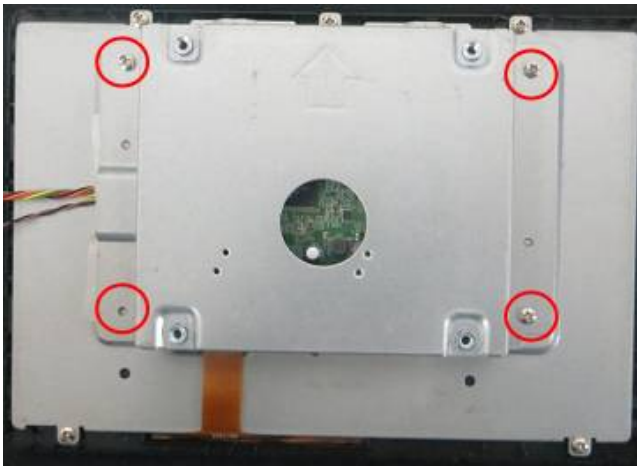
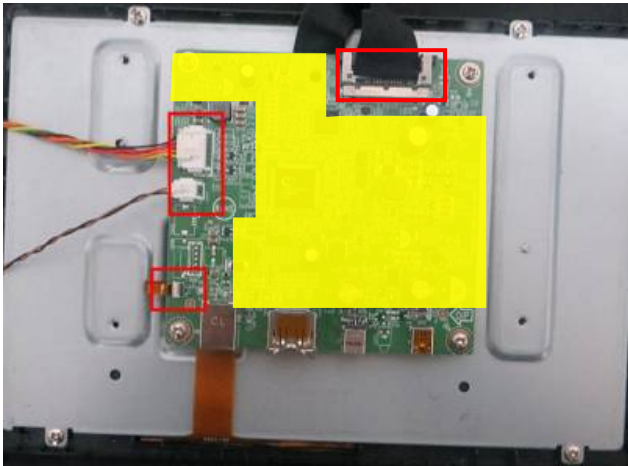
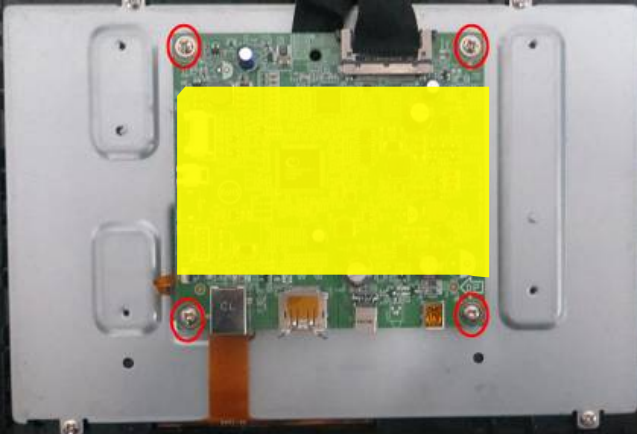


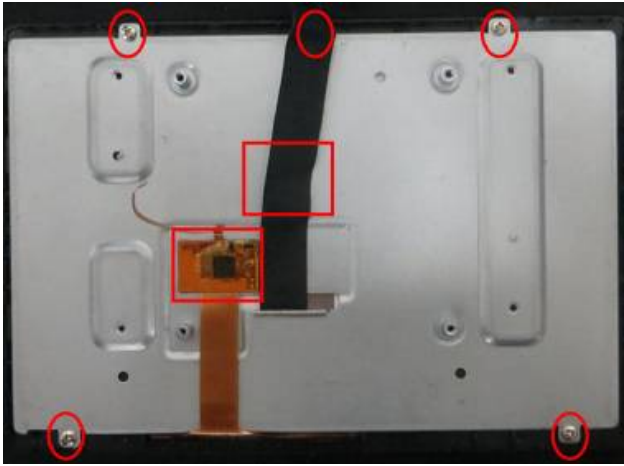
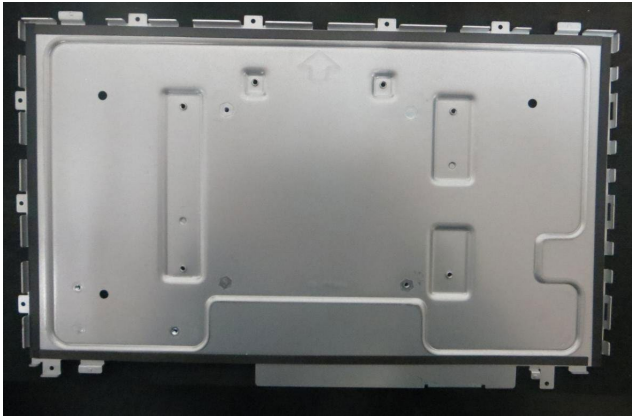
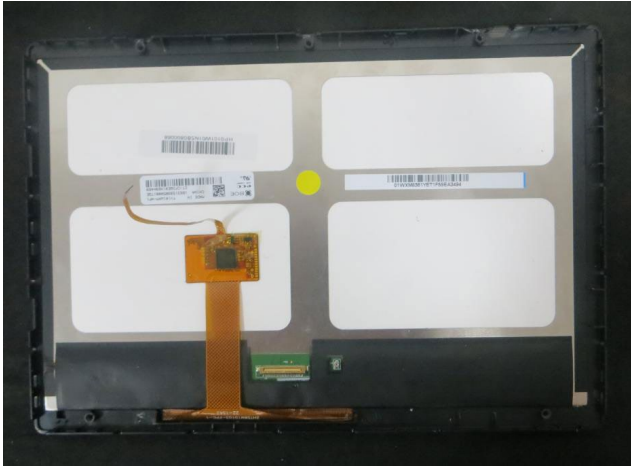
RC

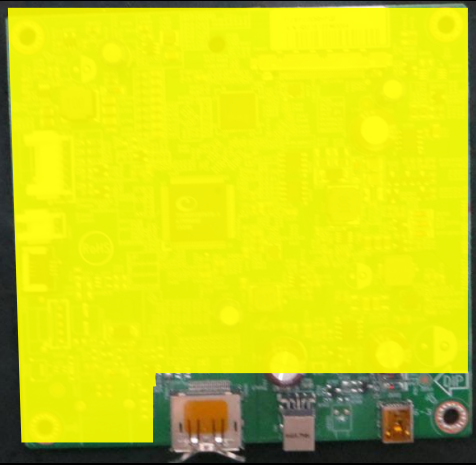
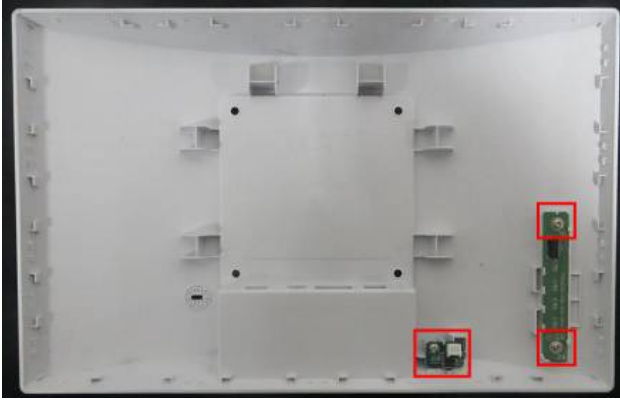
Before removing the RC, follow these steps:

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

Step	Figure	Description
Remove the screws		Remove the screws to remove the rear cover
Remove the rear cover		Remove the rear cover (Don't scratch the four corners).
Remove the the tapes and the pins		Remove the tapes and the pins.

Remove the screws to remove the shield_mainboard		Remove the screws to remove the shield_mainboard
Remove the pins		Remove the pins
Remove the screws		Remove the screws

Remove the screws and the tapes to remove the mainframe	 A photograph of the back of a silver metal mainframe. Six screws are circled in red: two at the top corners, two at the bottom corners, and one in the center. A black tape is also circled in red. A red rectangle highlights a small electronic component on a flex cable in the center.	Remove the screws and the tapes to remove the mainframe
The mainframe	 A photograph of the silver metal mainframe component, showing its rectangular shape and various mounting points.	The mainframe
Panel	 A photograph of the panel component, which is a rectangular frame with four white rectangular areas. It has a flex cable attached to the bottom center and a yellow dot in the center. There are two labels with barcodes on the top left and top right.	Panel

The main board		The main board
Remove the screws to remove the key boards		Remove the screws to remove the key boards

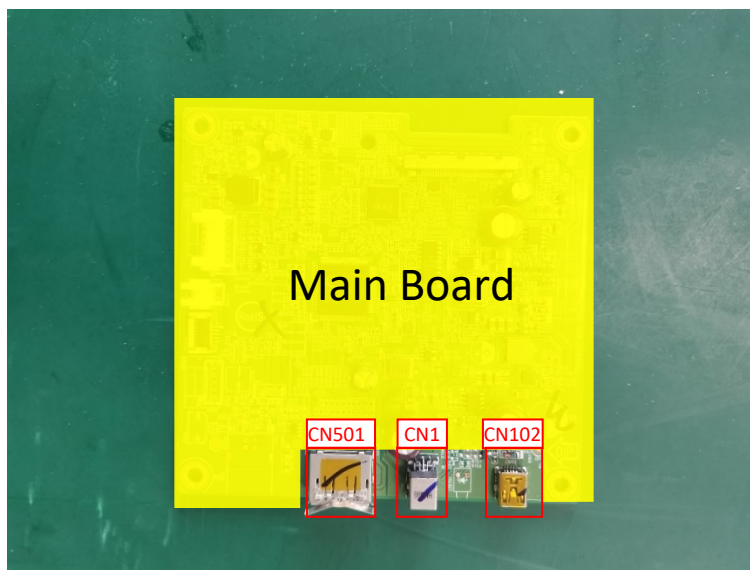
Connector repair

This procedure includes Micro USB, DisplayPort and AC Socket.

The connectors are on the main board (board part number CBPCGDRHPQ1).

The connectors identifiers are as follows:

Connector	Location
MICRO USB	CN102
DisplayPort	CN501
AC SOCKET	CN1



Before repairing connectors, follow these steps:

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

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.

AC SOCKET CN1

Repair the AC Socket 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 CN1 out of the through holes.

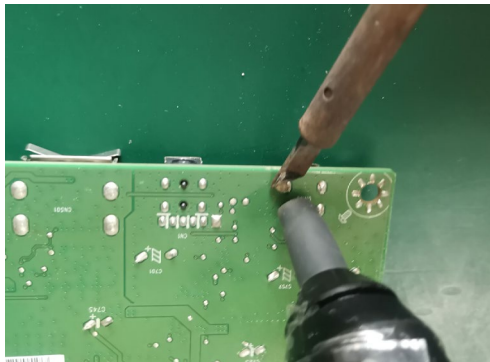


- 2) Lift the AC Socket connector from the PCB.
- 3) Place the new component on the PCB. Be sure that it matches the PCB footprint.
- 4) Solder the new component.

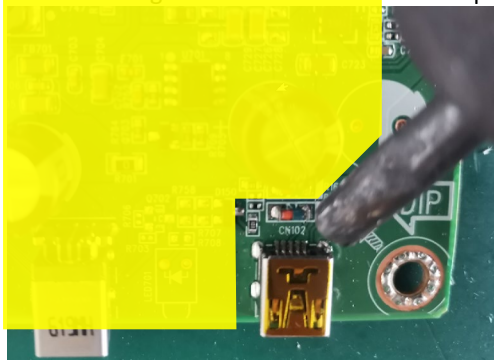
Micro USB CN102

Repair the USB 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 USB 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 CN501

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 DP 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
D-SUB test	Confirm whether image displays and sound plays correctly on the monitor	Computer or D-SUB 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 flashing.	Power cord is disconnected.	Connect the monitor power cord.
	Power button is turned off.	Press the monitor 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.
	Computer power is turned off.	Turn on power to the computer.
	Video cable is not connected.	Connect the DisplayPort video cable between the computer and monitor. Be sure the computer power is off while you connect the video cable.
	System is in sleep mode.	Press any key on the keyboard or move the mouse to exit sleep mode.
	Video card is incompatible.	Replace the video card or connect the DisplayPort cable to the computer's onboard DisplayPort.
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.
Input Signal Not Found is displayed on screen.	Monitor video cable is disconnected.	Connect the DisplayPort video cable between the computer and monitor. Be sure that the computer power is off while you connect the video cable.
	No video signal.	Be sure the computer has sent out a video signal.
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 .
OSD Lockout is displayed.	The monitor's OSD Lockout function is enabled.	Press and hold the Menu button on the monitor bezel for seconds to disable the OSD Lockout function.
Power Button Lockout is displayed.	The monitor's power button lockout function is enabled.	Press and hold the monitor power button for seconds to disable the power button lockout function.