

Self-service Repair Manual for vivo V70

Contents

1 About this manual	2
1.1 Purpose	2
1.2 Caution	2
1.2.1 Repair notes	2
1.2.2 ESD precautions.....	3
2 Warranty	3
3 Tools	3
3.1 Hardware tools	3
3.2 Software update and software tools (to be confirmed after software release)	5
4 Repair guide.....	8
4.1 Spare parts.....	8
4.2 Device breakdown.....	10
4.3 Disassembly and assembly guide	11
4.3.1 Replace the back cover.....	11
4.3.2 Removal and Installation of Mainboard Bracket	15
4.3.3 Lower Speaker Replacement	17
4.3.4 Sub-Board Replacement (Main MIC & Charging Port).....	18
4.3.5 Removal and Installation of Mainboard.....	20
4.3.6 Removal and Installation of Upper Speaker	21
4.3.6 Battery Replacement.....	22
4.3.8 Display Component Replacement.....	26
4.3.9 Side Button Replacement.....	28

1 About this manual

1.1 Purpose

This manual is intended to guide DIY hobbyists with certain hands-on skills and repair experience in replacing official components of vivo phones.

1.2 Caution

All features, characteristics, specifications, and other device information provided in this manual, including but not limited to device advantages, design, pricing, components, performance, availability, and functionality, are subject to change without prior notice. vivo reserves the right to modify this manual or any descriptions herein at any time without the obligation to give notice of such modifications. Please read through this manual carefully before repair. If you do not meet the repair conditions, do not disassemble the device. You may visit a vivo customer service center for repairs.

1.2.1 Repair notes

Warning: Failure to follow the instructions herein or the use of non-official vivo components or improper tools may damage the device, its components, or other property; impair device functionality and water resistance; and in severe cases, cause fires or other safety hazards, leading to personal injury or death.

(1) vivo assumes no liability for any damage or defects resulting from repairs made by unauthorized carriers, yourself, or other non-professionals. vivo is not responsible for any device damage, personal injury, or other safety consequences caused by failure to follow this manual.

(2) Any damage or defects resulting from attempts to repair the device by anyone other than a vivo-certified service provider are not covered by the warranty.

(3) We recommend that you use only official tools for repairing. Most electronic components are sensitive to electromagnetic forces, and low-quality tools may easily damage your device. For tool details, see Section 3.1.

(4) We recommend that you use only official spare parts. Third-party spare parts may not function properly and may cause fires or personal injury.

(5) Some components, such as laser focusing/proximity/fingerprint sensors, rear cameras, touchscreen panels, and speakers, may require calibration to ensure their performance after repair.

(6) The water and dust resistance of a device repaired by yourself or other non-professionals cannot be guaranteed.

(7) If you need to access device fault data or obtain more detailed diagnostics, please visit a vivo customer service center.

(8) If you need to replace components that are unavailable on the market, please visit a vivo customer service center for further assistance.

(9) Before making repairs, back up important data stored in the device.

(10) Before making repairs, wear proper safety gear. vivo is not responsible for any injury due to failure to wear proper safety gear. For details of the required disassembly and assembly tools, see Section 3.1.

(11) Make repairs in a safe location.

(12) Before making repairs, make sure that the device is powered off and its battery is fully discharged.

(13) If the device is damaged, emits smoke, or produces a burning smell, stop repairing it immediately and contact vivo customer service. If a fire is started, extinguish it with a carbon dioxide or dry powder fire extinguisher, specialized foam, sand, soil, gravel, or a dedicated lithium-ion battery fire suppressant.

(14) When repairing the device, wear protective gear such as safety goggles, gloves, and masks.

(15) When removing the back cover, take care not to damage the device. Before reassembling the device, make sure that no free screws or foreign objects are left around the battery.

(16) During reassembly, inspect the back cover for abnormalities before reinstalling it. Avoid impact or pressure on the battery to prevent damage. If the battery is damaged, please visit a vivo customer service center.

1.2.2 ESD precautions

Electrostatic discharge (ESD) is a sudden flow of electric current between two charged objects due to contact, a short circuit, or dielectric breakdown. ESD negatively affects mobile devices, particularly their electronic components.

(1) We recommend that you wear anti-static wrist straps and gloves, and use anti-static mats when you repair the device.

(2) Increase airflow in the work area to reduce the likelihood of accidental ESD. In an environment with low humidity, such as an air-conditioned room, ESD is more likely to happen.

2 Warranty

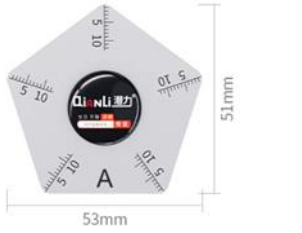
2.1 A 90-day warranty is provided for official spare parts. If any quality issues arise with them within that period, you may contact vivo for a replacement.

2.2 A device repaired by anyone other than a vivo-authorized service provider is not covered by the warranty, and you will bear the repair costs.

2.3 Any damage caused during self-service repairs will be your responsibility.

3 Tools

3.1 Hardware tools

Tool name	Photo	Usage
Metal pry pick (with a scale)		Disassembling the display module

False finger, black, 22 × 22 × 12 mm		Testing electro-optical fingerprint recognition
Heating pad (default temperature: 65°C)		Heating the back cover and screen

3.1.1 Tool purchase

Official purchase link:

<https://www.vivo.com/eu/view/support/aboutSelfServiceRepair?code=selfServiceRepair>

3.2 Software update and software tools (to be confirmed after software release)

3.2.1 Software update via FOTA

- To update software, go to Settings > System Update.
- If the system is already of the latest version, no update is needed.
- If a software update is available, you can set the time for automatic update.

Note:

1. Updating software via mobile data may incur additional fees.
2. If the latest software has been downloaded to the device, these options do not take effect.

3.2.2 Self-diagnosis

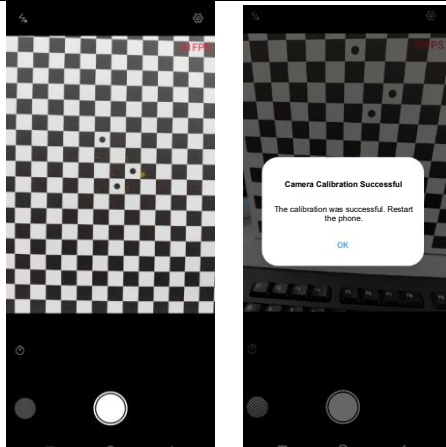
Before and after repair, perform a self-diagnosis to check if the device functions properly.

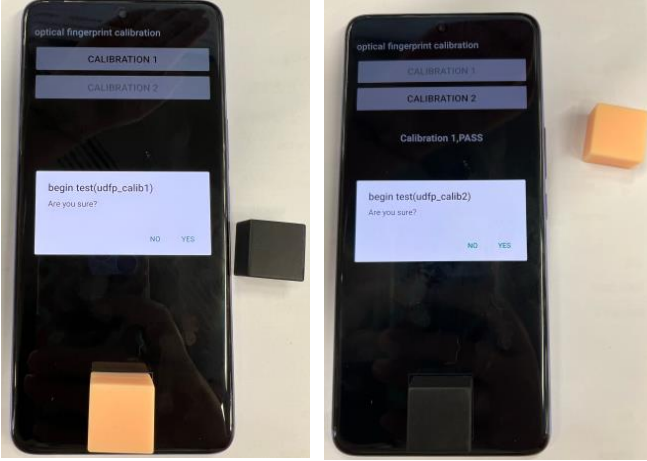
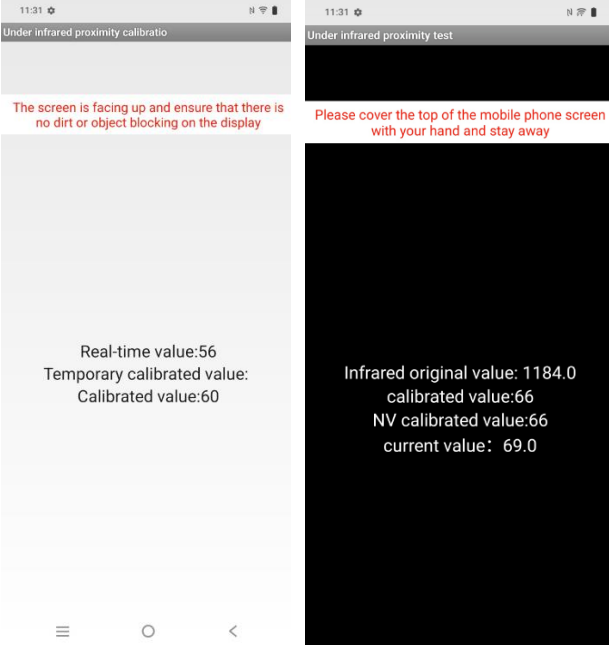
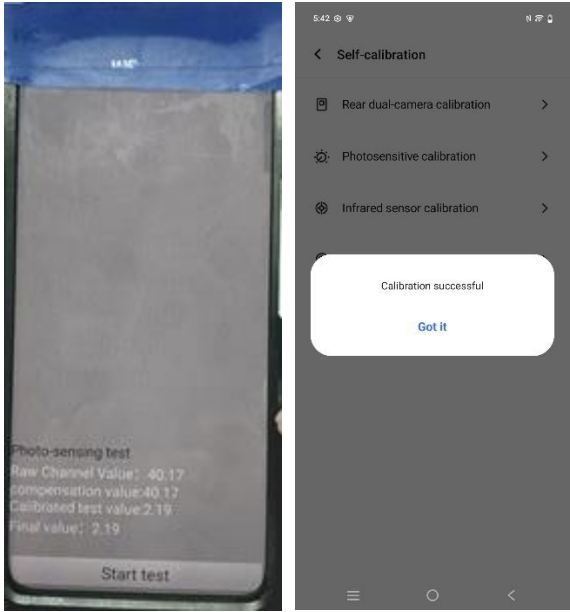
Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, and enter the calibration code "SELFREPAIR" to perform the check.

3.2.3 Self-calibration on the vivo Store / vivo.com app




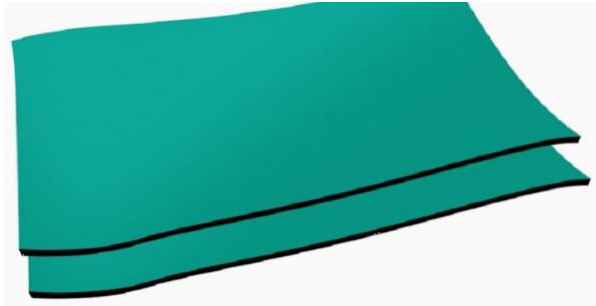
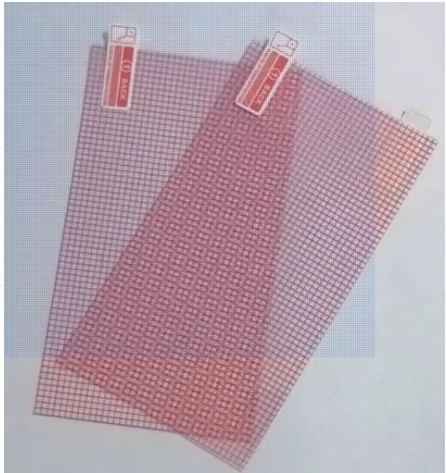
You can perform calibration after replacing the display or camera, such as the calibration of the rear cameras (for devices with two or more rear cameras), in-display fingerprint scanner, infrared proximity sensor, and ambient light sensor. The calibration ensures proper functionality of components after repairs.

The following table describes calibration items and instructions.

Calibration item	Instruction	Illustration	Description
Rear cameras	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Rear dual-camera calibration, and calibrate the cameras.		This calibration is required after M board disassembly or replacement

			of any rear camera.
In-display fingerprint scanner	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Screen finger calibration, and calibrate the fingerprint scanner.		This calibration is required after replacement of the display assembly, display module, or fingerprint module.
Infrared proximity sensor	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Infrared proximity sensor calibration, and calibrate the infrared proximity sensor.		This calibration is required after M board disassembly or replacement of the display assembly or display module.
Ambient light sensor	Open the vivo Store / vivo.com app, go to Support > Hardware Test > Self-calibration, enter the calibration code "SELFREPAIR", tap Photosensitive calibration, and calibrate the ambient light sensor.		This calibration is required after M board disassembly or replacement of the display assembly or display module.

3.3 Protective tools

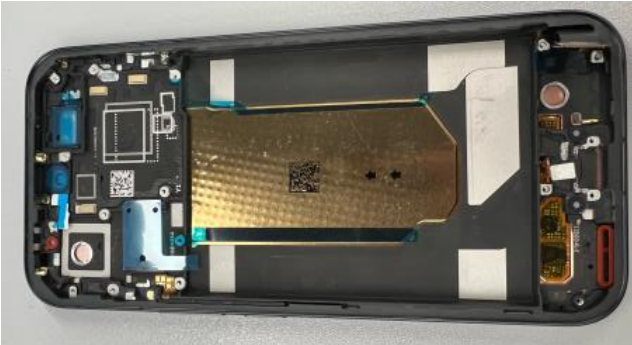


Tool name	Photo	Usage
Safety goggles		Preventing liquid/splinter splashes from hurting your eyes during repairs
Anti-static cut-resistant gloves		Preventing ESD damage and cuts during repairs
Anti-static wrist strap		Preventing ESD damage to the device during repairs
Anti-static mat		Preventing ESD damage to the device during repairs
Anti-shatter film		Preventing device damage or personal injury due to screen or back cover shattering



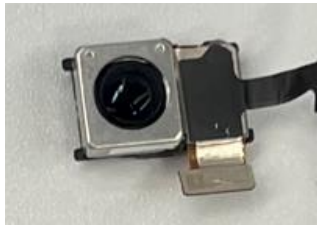


Fire bucket		Containing a burning battery
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Note: vivo does not provide all protective tools. You need to purchase them from other sources.

4 Repair guide

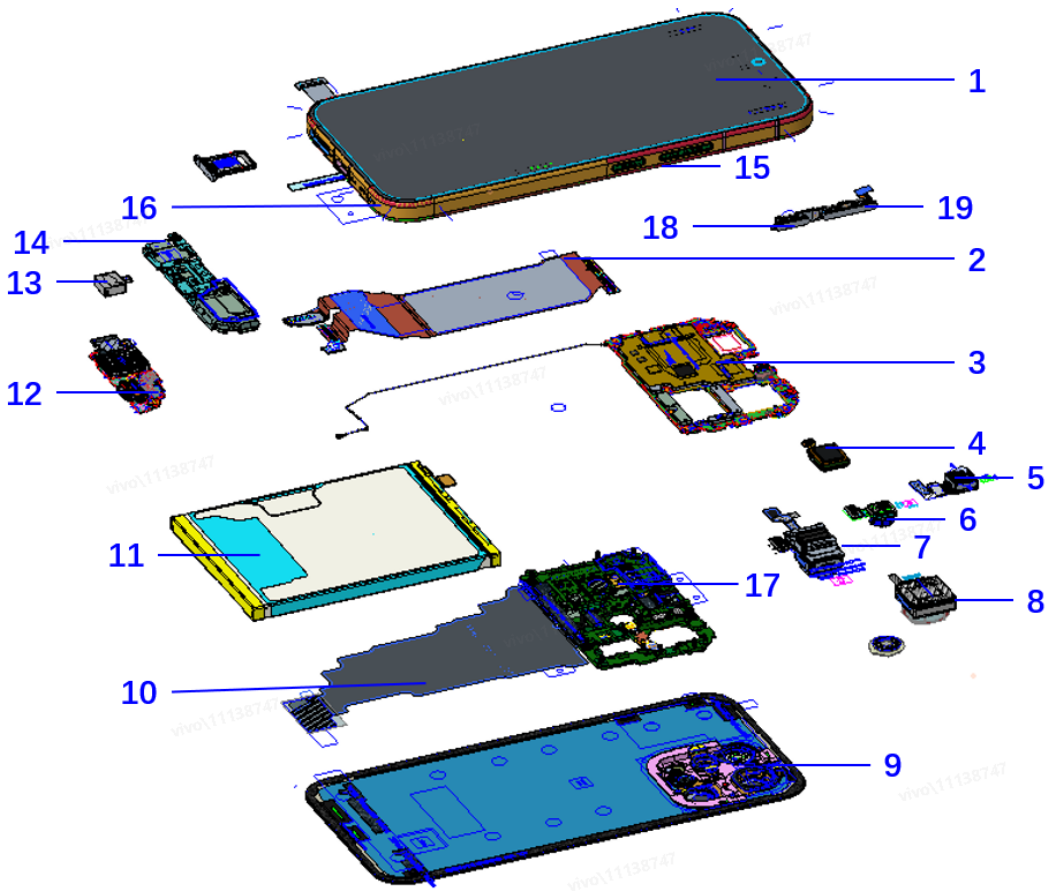
4.1 Spare parts

No.	Material name	Purchase code	Illustration
1	Display Component	5438720 5438721 5438722 5438723 5438724	
2	Battery Cover Component	5438732 5438733 5438734	
3	Battery Component	5438730 5438731	

4	Wide-Angle Camera	5438728	
5	Rear Main Camera	5438727	
6	Periscope Camera Component	5438729	
6	Front Camera	5438726	
7	Sub Board	4935819	
8	Lower Speaker	5438725	
10	Side Button	5438736 5438737 5438738	

11	SIM Card Tray	5438739 5438740 5438741	
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4.2 Device breakdown



No.	Description
1	Display Component
2	FMA Board
3	M Board
4	Upper Speaker Component
5	Front Camera Component
6	Rear Wide-Angle Camera Component
7	Rear Periscope Camera Component
8	Rear Main Camera Component

9	Battery Cover Component
10	Mainboard Bracket Component
11	Plastic-Coated Lithium Battery
12	ANA Board
13	Motor Component
14	Speaker Component
15	FK Board
17	Camera Flash
18	Power Button
19	Volume Button

4.3 Disassembly and assembly guide

- Perform the following steps before starting the repair:
- Back up your data.
- Fully discharge the battery.
- Power off the phone and disconnect all external data cables.
- Wear anti-static gloves.
- If you find issues such as cosmetic damage and adhesive overflow after assembly, you may visit a vivo official service center.

4.3.1 Replace the back cover

Difficulty: low

Duration: 6–10 minutes

Required spare parts: back cover assembly

Removal		
Procedure	Illustration	Notes

Step 1: Power off the device.
Insert a SIM card tray eject tool into the eject hole to remove the SIM card tray.



Step 2: Use a heating pad set to 65°C to heat the phone for 5 minutes.



Step 3: Place a suction cup on the bottom center edge of the back cover, lift upwards to create a gap, and then insert a prying pick into the gap. Do not pry all four sides at this stage—only insert the pick.



Notes:
Exercise caution when using a handled suction cup to avoid injury, as the suction cup may detach during use.

Step 4: Apply protective film to the battery cover to prevent it from cracking. Use a prying pick to work around the edges. Do not insert deeper than 5 mm.



To avoid damaging internal circuits, never insert the pick deeper than 5 mm.

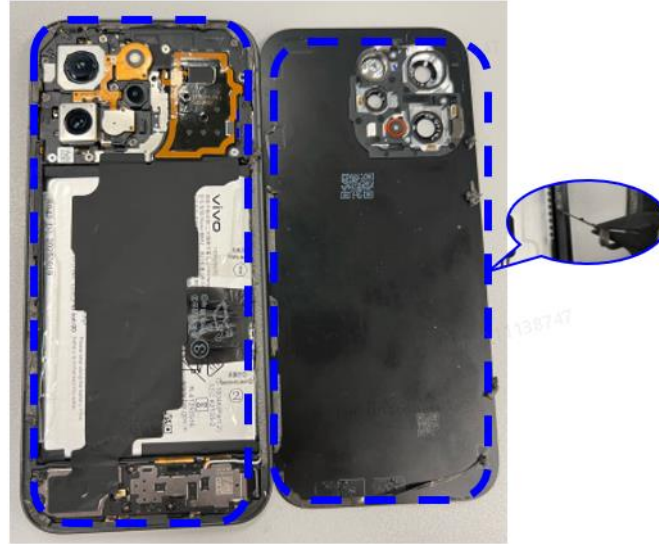
Step 5: Once the edges are cut open, gently lift the battery cover starting from the bottom. Apply force carefully to prevent the battery cover from cracking.



Step 6: Detach the battery cover.



Step 7: Use pointed anti-static tweezers or your fingers to remove all residual adhesive from the back cover and the back of the device.



Do not touch the rear cameras or the lens of the battery cover with your fingers or any foreign objects, and avoid damaging nearby components.

Installation

Procedure

There are two types of double-sided tape for the battery cover. Select and use them based on the battery cover color shown in Picture 1.

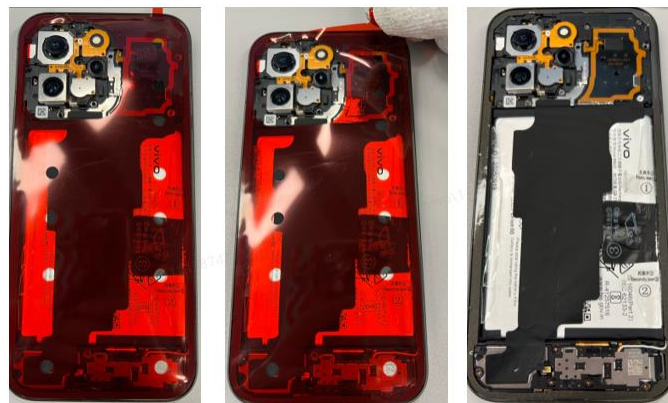
Step 1: Peel off the release film from the battery cover's double-sided adhesive. Align the adhesive with the frame and attach it in place, as shown in Picture 2.

For the black battery cover, attach a small piece of double-sided tape at the camera decorative ring area, as shown in Picture 3.

Illustration

整机颜色	使用双面胶图示
黑色	
其他颜色	

Picture 1



Picture 2

Notes



Picture 3

Step 2: Align the battery cover with the frame and press it into place. Wrap your fingers with lint-free cloth and press along the adhesive areas to activate bonding.



4.3.2 Removal and Installation of Mainboard Bracket

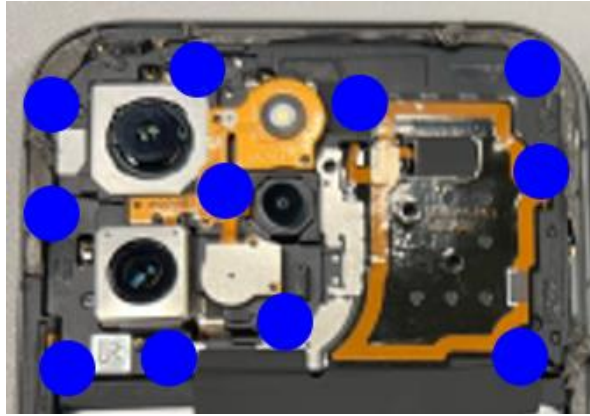
Repair Difficulty: Low

Estimated Time: 8–12 minutes

Required Spare Parts: Mainboard Bracket Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	

Step 2: Use a Phillips screwdriver to remove the 10 mainboard bracket screws, as shown in Picture 1. Separate the PGS from the speaker end, as shown in Picture 2.



Picture 1



Picture 2

Step 3: Lift the mainboard bracket from its bottom edge, and then remove it.



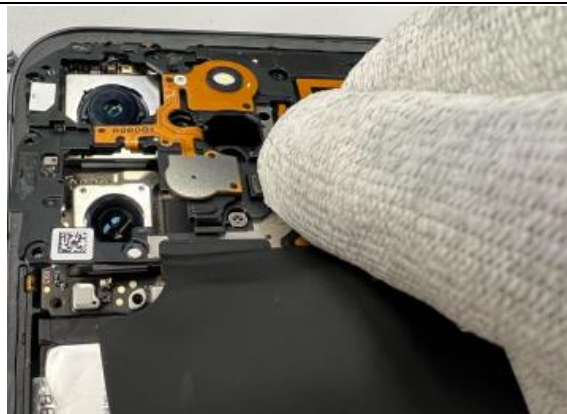
Installation

Procedure

Illustration

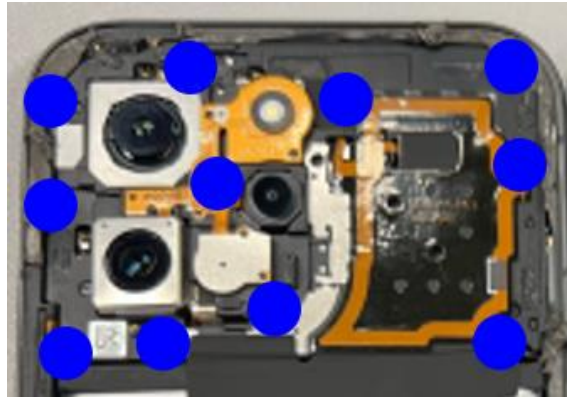
Notes

Step 1: First fit the top of the mainboard bracket into the frame, and then snap it onto the top of the mainboard and press it into place.



Ensure the camera module is properly aligned.

Step 2: Install the 10 mainboard bracket screws. Gently press the PGS sheet onto the speaker.








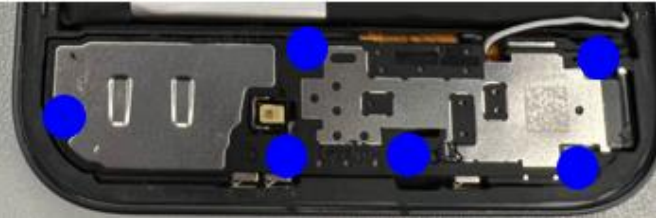

4.3.3 Lower Speaker Replacement

Repair Difficulty: Low

Estimated Time: 8–12 minutes

Required Spare Parts: Lower Speaker Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Disconnect the coaxial cable. Peel off the PGS sheet.	 	Notes: Do not puncture the battery.

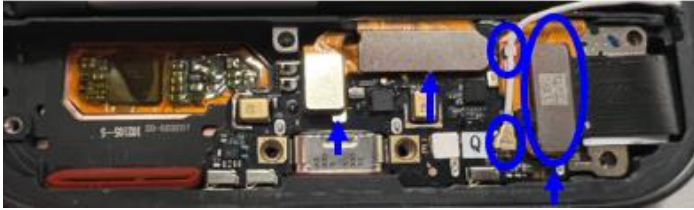


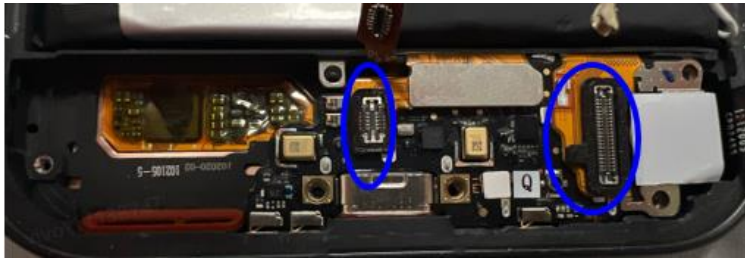
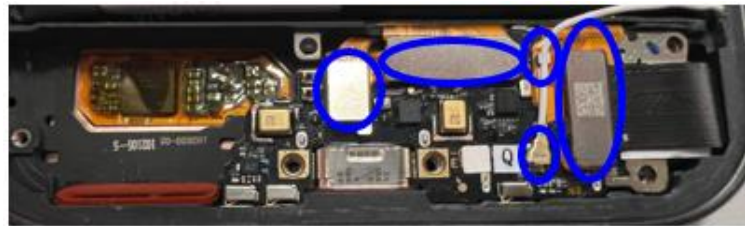
<p>Step 3: Remove the 6 screws from the speaker bracket.</p>		
<p>Step 4: Use pointed tweezers to lift the speaker as shown in the picture.</p>		
Installation		
<p>Procedure</p>	<p>Illustration</p>	<p>Notes</p>
<p>Step 1: Before installation, ensure the speaker is free of debris. First, insert the bottom end of the speaker into the main upper part, and then press the speaker firmly into place. Be careful not to press the speaker against the coaxial cable. Ensure the speaker lies flat without warping.</p>		
<p>Step 2: Install the screws.</p>		
<p>Step 3: Position the coaxial cable neatly into the cable groove of the speaker bracket.</p>		

4.3.4 Sub-Board Replacement (Main MIC & Charging Port)

Repair Difficulty: Low

Estimated Time: 9–13 minutes

Required Spare Parts: Sub-board module

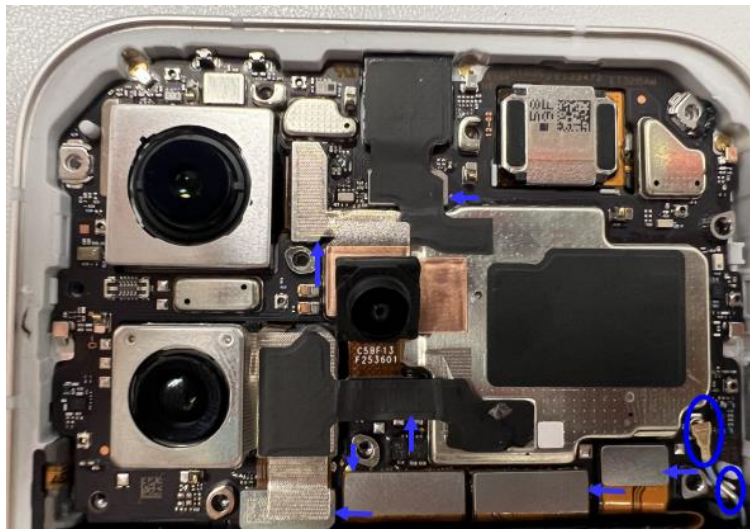

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the speaker (refer to the lower speaker removal steps).	Refer to section 4.3.3	
Step 3: Disconnect the component BTB connectors and coaxial cable at the indicated positions.		
Step 4: Use pointed tweezers to pry up the ANA board from the indicated location.		
Installation		
Procedure	Illustration	Notes
Step 1: Align the bottom edge of the sub board against the frame, press it into place, and ensure it lies flat without warping.		
Step 2: Attach the BTB connector from the FMA to the ANA board.		
Step 3: Connect the coaxial cable and all BTB connectors.		

4.3.5 Removal and Installation of Mainboard

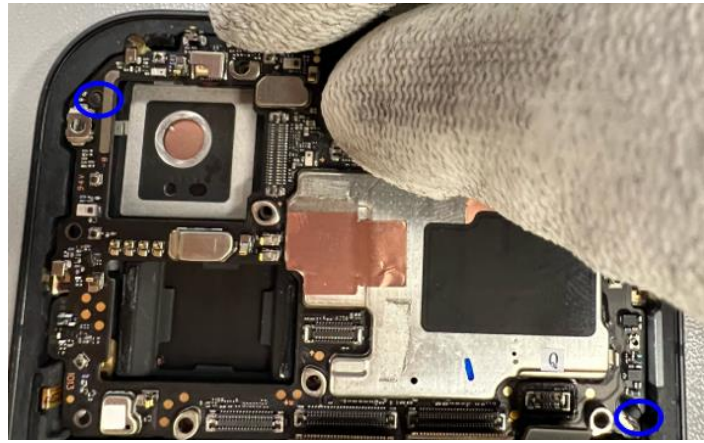
Repair Difficulty: Low

Estimated Time: 9–12 minutes

Required Spare Parts: Mainboard

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	
Step 3: Use pointed tweezers to disconnect the battery BTB connector, followed by other BTB connectors and coaxial cables. After removing the cameras, keep them free from dust and debris, and avoid direct contact to prevent any impact on image quality. Note: Do not remove the black coaxial cable.		After removing the cameras, keep them free from dust and debris, and avoid direct contact to prevent any impact on image quality.
Step 4: Use pointed tweezers to lift the mainboard as shown in the picture.		
Installation		
Procedure	Illustration	Notes

Step 1: Mount the mainboard onto the frame using the positioning posts, and then press it into place, and ensure it lies flat without warping.



Step 2: Install the cameras, connect all BTB connectors and coaxial cables, and apply all auxiliary materials.



Step 3: Calibrate.

After reassembly, calibrate the rear dual cameras, light sensor, and infrared sensor as specified in section 3.2.3.

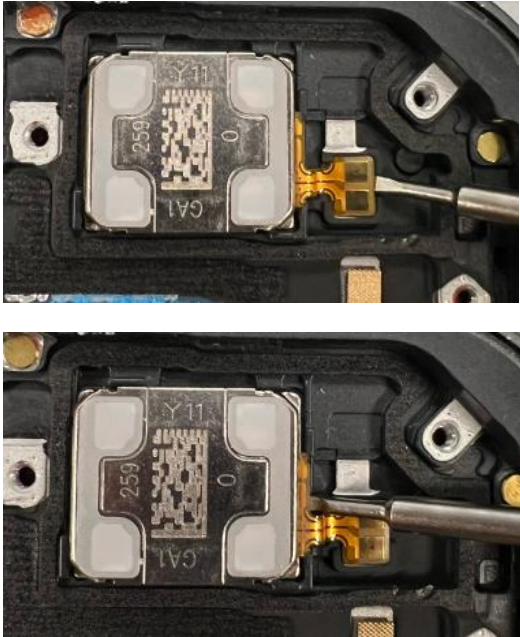
4.3.6 Removal and Installation of Upper Speaker

Repair Difficulty: Low


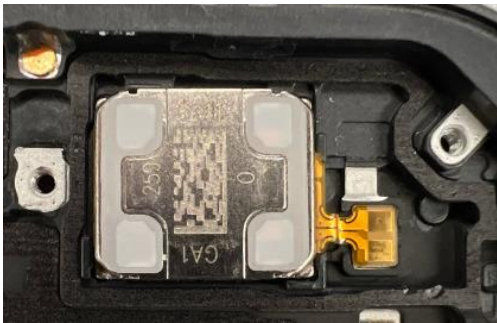
Estimated Time: 9–12 minutes

Required Spare Parts: Upper Speaker

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover	Refer to section 4.3.1	

removal steps).		
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	
Step 3: Remove the mainboard.	Refer to section 4.3.5	
Step 4: Remove the upper speaker. Pry off the reinforcement plate first with a flat-head screwdriver, and then remove the speaker itself.		To avoid damaging the screen, insert the flat-head screwdriver only shallowly when removing the speaker.

Installation

Procedure	Illustration	Notes
Step 1: Clean any residual adhesive from the speaker area on the main upper part, apply new upper-speaker double-sided tape to the frame, and then peel off the blue release film.		Be careful not to damage the screen while cleaning the adhesive.
Step 2: and press it firmly onto the corresponding position on the frame.		

4.3.7 Battery Replacement

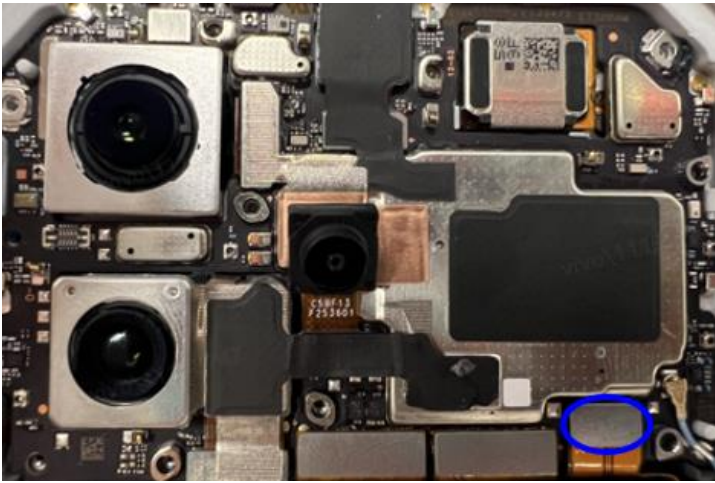

Repair Difficulty: Low

Estimated Time: 6 minutes–10 minutes

Required Spare Parts: Battery Component

Preparation before battery removal:

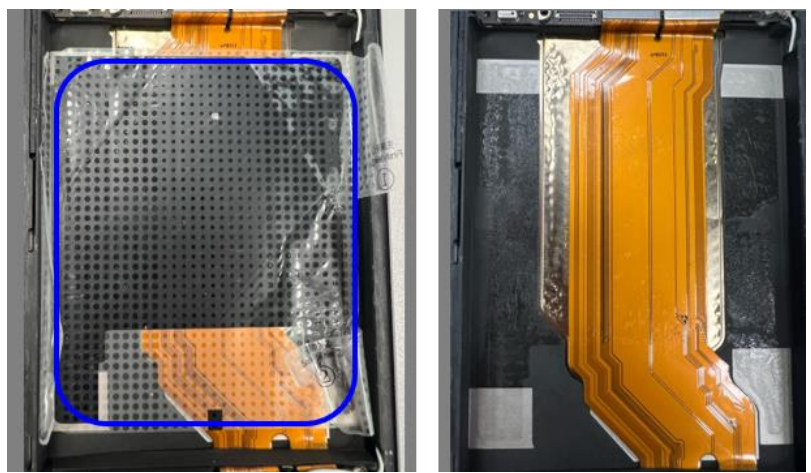
1. Ensure the battery is fully discharged.
2. Prepare a sand bucket to mitigate safety risks in case the battery ignites during removal.

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover (refer to the battery cover removal steps).	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket (refer to the mainboard bracket removal steps)	Refer to section 4.3.2	
Step 3: Disconnect the battery BTB connectors.		
Step 4: Lift the PET pull tab on the battery and slowly pull it at a 145° angle to detach the battery.		Ensure your hand do not obstruct the battery area during removal.
Installation		
Procedure	Illustration	Notes

Step 1: Inspect the battery for signs of swelling, deformation, or damage. If present, replace with a new battery.



Step 2: Clean any residual adhesive on the main upper part and battery, especially any black adhesive in the indicated areas. Peel off also the PET disc for the old battery.



Step 3: Take a new battery PET disc, leave the backing film on to help position the black pull tab, and then attach the black pull tab to the battery. After the black pull tab is fixed in place, attach the corresponding PET disc pull tab so it adheres firmly to the PET disc. Apply the double-sided battery tape to the battery.



Step 4: Before installation, ensure the battery and battery compartment are free from any foreign objects. Peel off all release films, place the battery into the compartment, and press firmly on the adhesive areas indicated with blue frames to activate the adhesive.




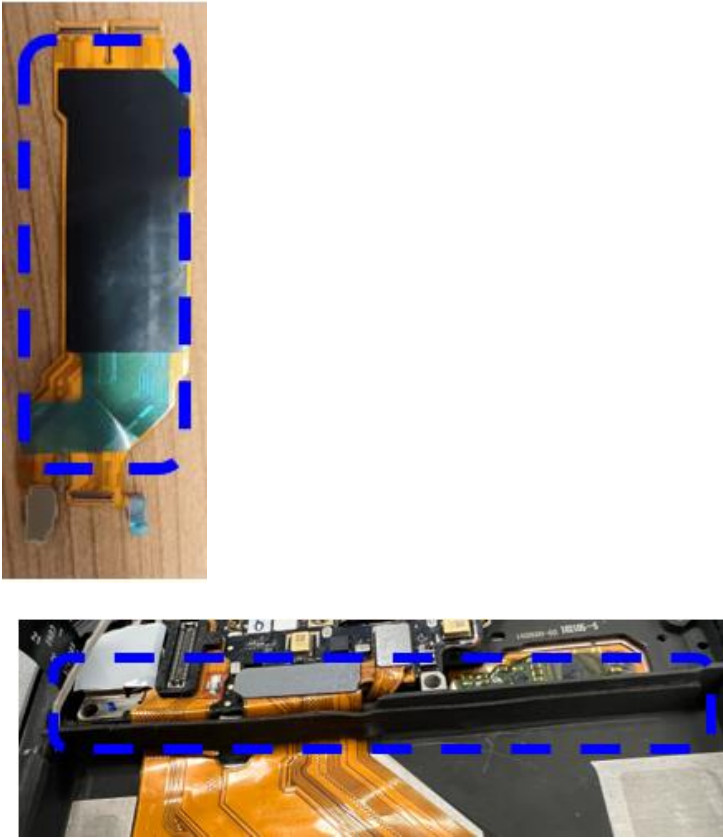
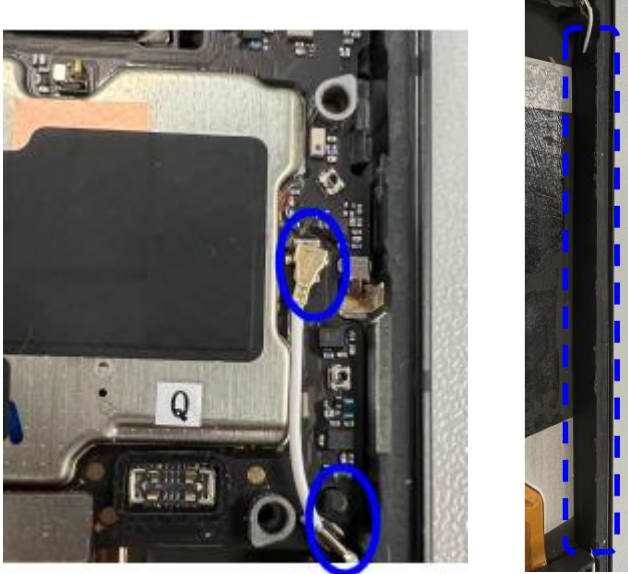
4.3.8 Display Component Replacement

Repair Difficulty: Neutral

Estimated Time: 15 minutes–20 minutes

Required Spare Parts: Display Component

Removal		
Procedure	Illustration	Notes
Step 1: Remove the battery cover.	Refer to section 4.3.1	
Step 2: Remove the mainboard bracket.	Refer to section 4.3.2	
Step 3: Remove the lower speaker support.	Refer to section 4.3.3	
Step 4: Remove the mainboard and cameras.	Refer to section 4.3.5	
Step 5: Remove the battery.	Refer to section 4.3.7	
Step 6: Remove the upper speaker.	Refer to section 4.3.6	
Step 7: Remove the sub-board.	Refer to section 4.3.4	
Step 8: Remove the motor.		
Installation		

Procedure	Illustration	Notes
<p>Step 1: Install the upper speaker, mainboard, cameras, motor, fingerprint module, and ANA board.</p>	<p>Refer to the installation steps in sections 4.3.6, 4.3.5, and 4.3.4</p>	
<p>Step 2: Install the FMA board. First, apply adhesive to the back of the FMA board. Then connect the BTB connectors at both ends of the FMA board to the mainboard, and attach the other end to the ANA board. Finally, press the FMA board onto the frame. Once it is in place, remember to add the soft pad to the bottom of the battery compartment.</p>		
<p>Step 3: Install the coaxial cable. First secure one end to the M board, route the cable neatly into the cable groove. Place the PET disc and press it firmly, and then reconnect the black coaxial cable to the ANA board.</p>		
<p>Step 4: Install the speaker, battery, mainboard bracket, and battery cover.</p>	<p>Refer to the installation steps in sections 4.3.3, 4.3.7, 4.3.2, and 4.3.1</p>	



<p>Step 5: Power on the device to verify that the screen lights up and functions correctly.</p>		
<p>Step 6: Calibrate.</p>	<p>After reassembly, calibrate the rear dual cameras, in-display fingerprint sensor, infrared sensor, and light sensor as specified in section 3.2.3.</p>	

4.3.9 Side Button Replacement

Repair Difficulty: Low

Estimated Time: 6 minutes–8 minutes

Required Spare Parts: Side Button

Removal		
Procedure	Illustration	Notes
<p>Step 1: Power off the device. Press and hold one end of the volume button, and then use metal flat-tip tweezers at the other end to carefully pry it up. Remove the power button using the same method.</p>		<p>Be careful not to injure yourself during the process.</p>
Installation		
Procedure	Illustration	Notes
<p>Step 1: Insert the new side button into the slot, keeping it approximately parallel to the frame as shown.</p>		

Step 2: Press each end of the button in turn to push it fully into the slot.

