



CORE-Z5



DISASSEMBLY - ASSEMBLY GUIDE

| | |
|---|-----------|
| Introduction..... | 5 |
| Warnings..... | 5 |
| ELECTROSTATIC DISCHARGES, WORKING ENVIRONMENT | 7 |
| DISASSEMBLY, ASSEMBLY AND EXCHANGE OF PARTS..... | 9 |
| Battery cover | 9 |
| Battery cover disassembly | 9 |
| Battery cover exchange | 9 |
| Battery cover assembly | 10 |
| Back housing..... | 11 |
| Back housing disassembly | 11 |
| Back housing exchange | 11 |
| Back housing assembly..... | 12 |
| Motherboard support..... | 13 |
| Motherboard disassembly | 13 |
| Motherboard exchange | 13 |
| Battery | 14 |
| Battery disassembly | 14 |
| Battery exchange | 15 |
| Battery assembly | 15 |
| Coaxial cables | 16 |
| Removing coaxial cables..... | 16 |
| Replacing coaxial cables..... | 16 |
| Reassembly of coaxial cables..... | 17 |
| Main board..... | 18 |
| Dismantling the mainboard | 18 |
| Replacement of the mainboard | 19 |
| Reassembly of the motherboard | 20 |
| Main daughterboard..... | 21 |
| Removing the main daughter board..... | 21 |
| Replacing the main daughterboard | 22 |
| Reassembling the main daughterboard | 22 |
| USB main flex | 23 |
| Removing the USB main flex | 23 |

| | |
|---|-----------|
| Reassembling the USB main flex | 24 |
| Audio Jack connector..... | 25 |
| Removing the jack connector..... | 25 |
| Reassembling the jack connector | 25 |
| Proximity sensor daughter board..... | 26 |
| Removing the proximity sensor daughter board | 26 |
| Replacing the proximity sensor daughter board..... | 26 |
| Front camera..... | 27 |
| Removing the camera | 27 |
| Replacing the camera | 27 |
| Flex side buttons | 28 |
| Programmable button 2..... | 29 |
| Removing the programmable flex button 2..... | 29 |
| Reassembling the programmable flex button 2..... | 29 |
| On/Off-Volume buttons | 30 |
| Removing the Flex On/Off-Volume buttons | 30 |
| Reassembling the Flex On/Off-Volume..... | 31 |
| Flex for buttons 1.3.4 | 32 |
| Removing flex..... | 32 |
| Reassembling the flex programmable buttons 1.3.4..... | 32 |
| Microphone | 34 |
| Removing the microphone | 34 |
| Reassembling the microphone..... | 34 |
| Speaker | 36 |
| Removing the speaker | 36 |
| Reassembling the speaker parleur | 37 |
| NFC antenna..... | 38 |
| Removing the antenna | 38 |
| Reassembling the antenna..... | 38 |
| Front casing | 39 |
| Changing the front casing | 39 |
| Information for recyclers | 40 |
| Technical documentation | 42 |

INTRODUCTION

Crosscall was founded more than 10 years ago on a commitment: to manufacture durable mobile phones, even under the most difficult conditions of use.

It is thanks to its years of experience and the special attention of its teams to design, industrialization and quality control that Crosscall offers its users a **5-year manufacturer's warranty** and spare parts available for 10 years. on all products from the new CORE range, which is exceptional in the world of telephony.

This document is a disassembly and reassembly guide for the **Crosscall CORE-Z5** smartphone.

It also explains what operations must be carried out when changing a part.

It is organized as follows:

- **Warnings and precautions to be taken before disassembling the device.**
- **Necessary equipment: List of essential tools for the disassembly/reassembly of the parts**
- **Change of parts:**
 - Structured as follows for each main room:
 - Disassembly of the part.
 - Exchange of the part: concerns the preparation of the new part.
 - Reassembly of the part.

WARNINGS

Beyond the impact on the warranty (see box below), opening the device and replacing parts can have an impact on the water resistance, resistance and autonomy of your product. , if this is not carried out in a center approved by CROSSCALL.

Before having a repair carried out, check whether or not it is guaranteed by referring to the general after-sales service conditions on our website and read the elements below.

WARRANTY IMPACT

Any modification or change made to your device outside of an authorized CROSSCALL repair center will void the warranty. If your device needs to be repaired, we advise you to entrust it to the CROSSCALL after-sales service (contact available on our website <https://crosscall.com/sav/>).

WATERPROOFING

Please note that telephones repaired outside an approved CROSSCALL center are no longer watertight.

BATTERY

The dangers of handling batteries.

To ensure your safety, CROSSCALL batteries and devices are tested according to international standards. The design of our devices also contributes to your safety: the battery is confined in a metal frame.

The battery is a part that can present risks for the person carrying out the repair if the latter does not have the required qualifications. Failure to remove the battery correctly may damage the device and cause personal injury.

A lithium battery is characterized by its **high energy density**. Before handling a battery, you should be aware of the following risks (non-exhaustive list).

The main risk is related to **poor handling** (shocks, blows, deterioration) which can pose a **significant security risk**.

Mechanical damage can lead to deformation of the cells inside the battery and cause internal shorts and **battery runaway**. The lithium battery then releases the energy it has stored in an uncontrolled manner.

Thermal runaway, with temperatures above 250°C, will lead to a strong generation of flammable gases inside the battery concerned and these gases will trigger the explosion of the battery casing. The metals then merge and burn.

The fumes given off are **toxic** and **highly corrosive**.

Contact with moisture can also cause short circuit.

Safety instructions

- Switch off the device before any intervention.
- Do not turn it back on before complete reassembly.
- Turn off the device before removing the battery. If you remove the battery while the device is on, the device may malfunction.
- Do not disassemble or puncture the battery, as this may cause an explosion or fire.
- Do not cause a short circuit.
- Do not reuse the battery if you have any doubts about its integrity following dismantling.
- Recycle the battery according to the standards in force.
- Do not throw it into fire



Please observe the waste disposal rules when disposing of the packaging, battery, device and its electronic parts. Drop them off at a collection point so that they can be properly recycled. Do not dispose of used electrical and electronic devices or batteries in an ordinary trash can. Please deposit the used lithium batteries in a place designed for this purpose.

ELECTROSTATIC DISCHARGES, WORKING ENVIRONMENT

During the disassembly / reassembly operation, it is advisable to wear an antistatic bracelet connected to the ground. If this is not possible, it is essential to wash your hands and discharge yourself of any static electricity build-up by touching a grounded metal object (ex. radiator) before proceeding with the disassembly / reassembly of the device.

Electrostatic discharge can permanently damage the electronics of the device.



Any work on the device must be carried out in a bright, clean and dust-free environment. The latter can deposit on parts related to photography and video and distort the focus. Metallic dust can also cause short circuits.

REQUIRED EQUIPMENT

| Description | Picture | Description | Picture |
|---|---|--------------------------------|---|
| ESD equipment |  | LOCTUO RTV165 silicone syringe |  |
| Antistatic tools for dismantling: nylon pointer, pick, etc. |  | SIM extractor |  |
| Antistatic tweezers |  | Glue applicator gun |  |
| Cutter |  | Tape screen protector |  |
| Philips screwdriver PH00 |  | Isopropyl alcohol |  |
| Torque screwdriver PH00 |  | Rag |  |

DISASSEMBLY, ASSEMBLY AND EXCHANGE OF PARTS

Battery cover

Battery cover disassembly

| | |
|---|--|
|  | <p>Retirer le cache de protection du connecteur USB</p> |
|  | <p>Insérer l'outil plastique entre le cache et la cosmétique arrière puis décoller le cache en le soulevant.</p> |
|  | <p>Le cache arrière peut être retiré</p> |

Battery cover exchange



Remove the protective film from the double-sided adhesive.

Battery cover assembly



Place and clip the battery cover onto the back cosmetics.

Press firmly on the entire surface of the battery cover to engage all the clips.



Press the back cover together to press the adhesive between the cosmetics.

Back housing

Back housing disassembly

| | |
|---|--|
|  | <p>Extract the SIM drawer by inserting the extractor into the drawer hole.</p> |
|  <p>M1.6x4.3F (X18)</p> | <p>Unscrew the 18 M1.6x4.3F screws circled in red.</p> |
|  | <p>The rear cosmetics can then be removed.</p> |

Back housing exchange

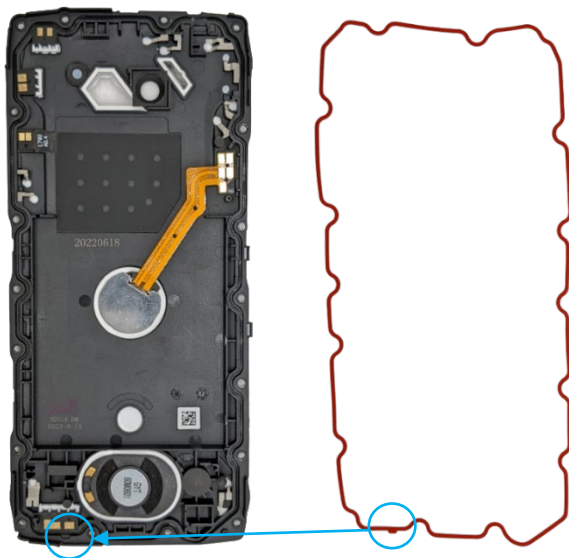


Remove the internal protective films.

Back housing assembly

Tools needed

- PH00 screwdriver
- Precision tweezers



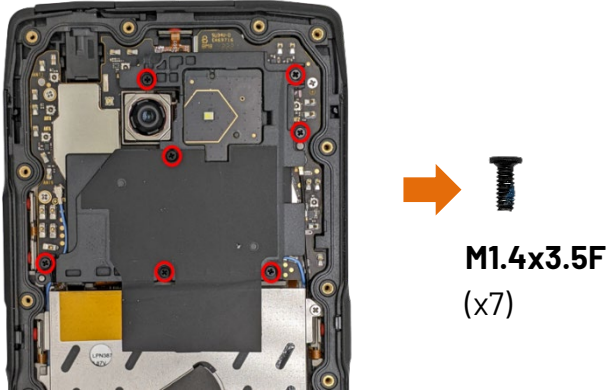
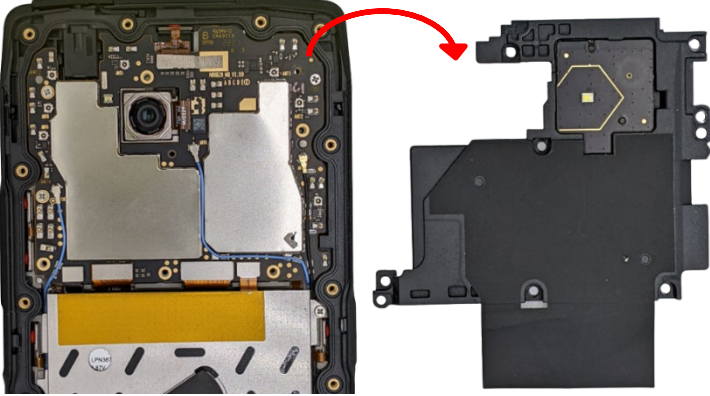
First place the marker to make it easier to fit the joint.



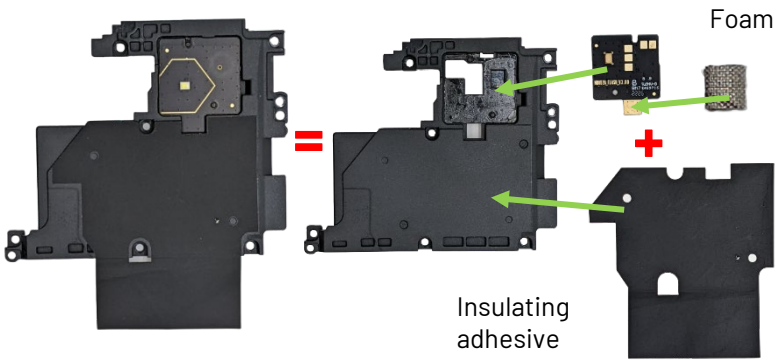
Place the rear cosmetic on the rear panel.
Screw in the 18 M1.6x4.3F screws using the screwdriver

Motherboard support

Motherboard disassembly

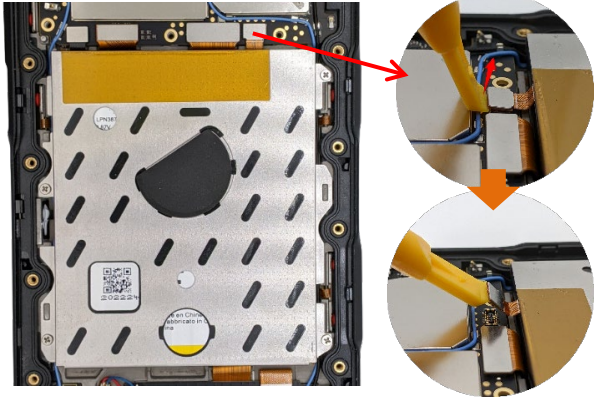
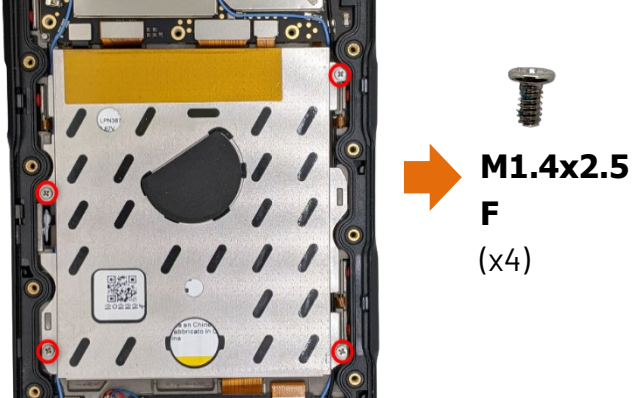

| | |
|--|---|
|  | <p>Unscrew the 7 M1.4x3.5F screws circled in red.</p> |
|  | <p>The motherboard support can be removed.</p> |

Motherboard exchange

| | |
|---|---|
| Tools required | <ul style="list-style-type: none">• Precision pliers |
|  | <p>Remove the micro/flash daughterboard, its conductive foam and the insulating adhesive.</p> |

Battery

Battery disassembly

| | |
|---|---|
|  | <p>Disconnect the battery connector by lifting it out using a dismantling tool.</p> |
|  | <p>Unscrew the 4 M1.4x2.5F screws circled in red.</p> |
|  | <p>The battery can be removed.</p> |

Battery exchange

Batterie = Cellule batterie + Blindage + Adhésif



The battery consists of 3 components: The battery cell, the shield and the double-sided adhesive.

The shield and adhesive can be removed and reused on a new battery cell.

Use a plastic disassembly tool to remove the shielding to avoid damaging the battery and causing a short-circuit.

Battery assembly

Tools required

- PH00 screwdriver

 (x4)
M1.4x2.5



Before positioning the new battery, check that the location is perfectly clean and smooth (no folds in the adhesive, no foreign objects such as screws).

Place the battery in its slot and tighten the 4 M1.4x2.5F screws.

No specific torque is required, just tighten until the screws lock.



Connect the battery connector.

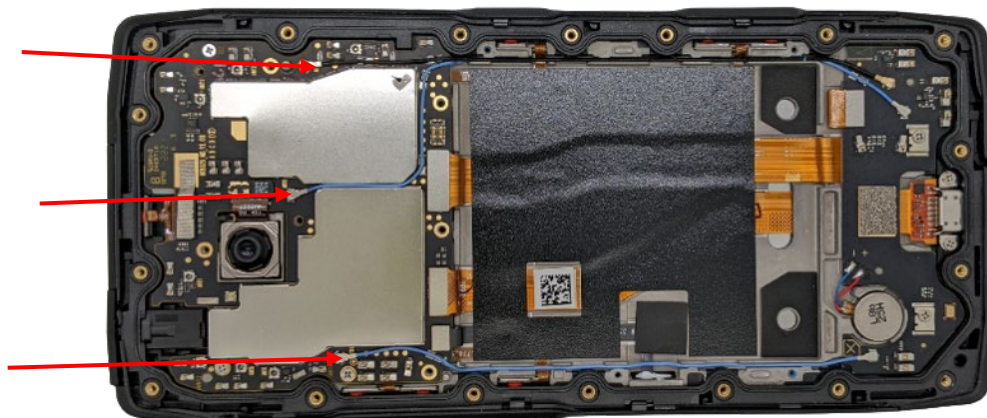
Coaxial cables

3 cables :

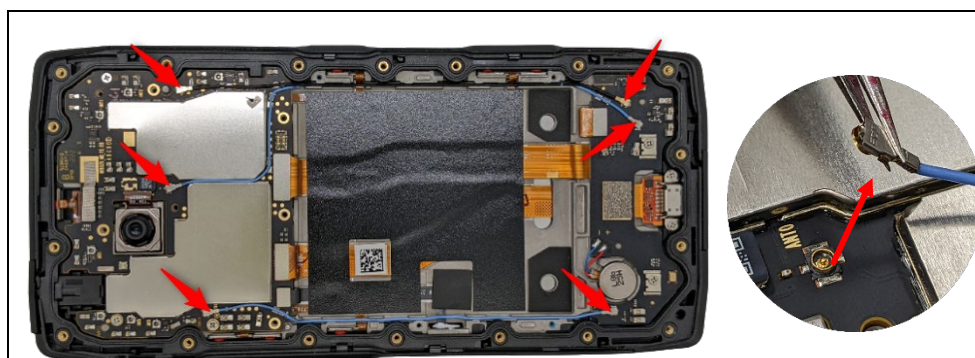
1 black 118 mm

1 blue 149.5 mm

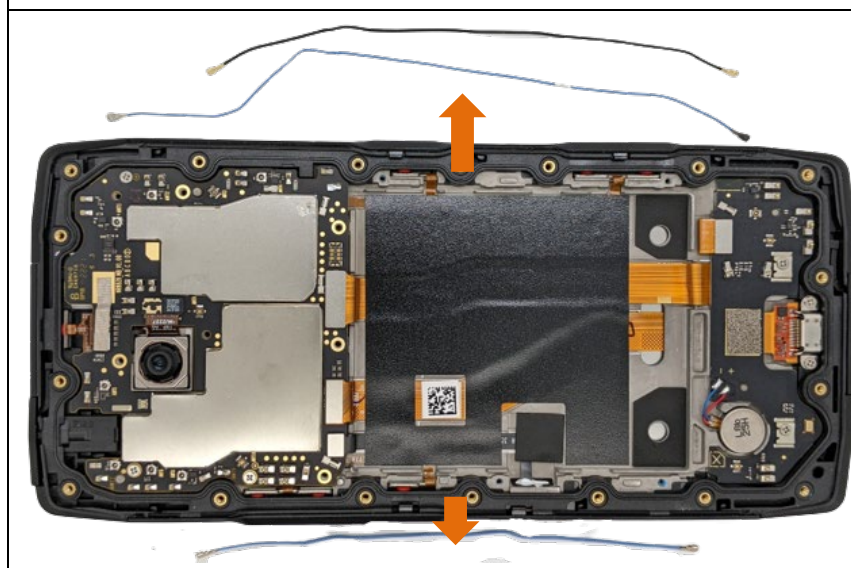
1 blue 111 mm



Removing coaxial cables

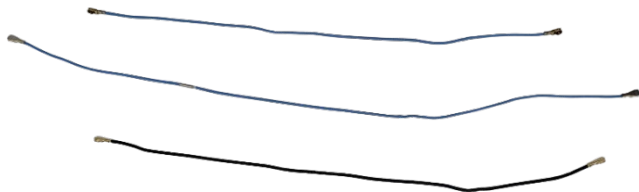


Unplug the 6 connectors on the motherboard and daughterboard using a pair of pliers.

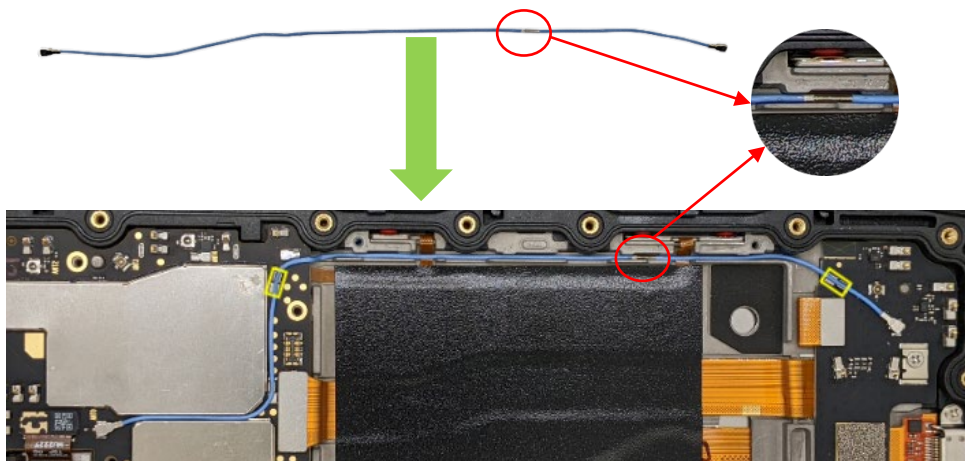
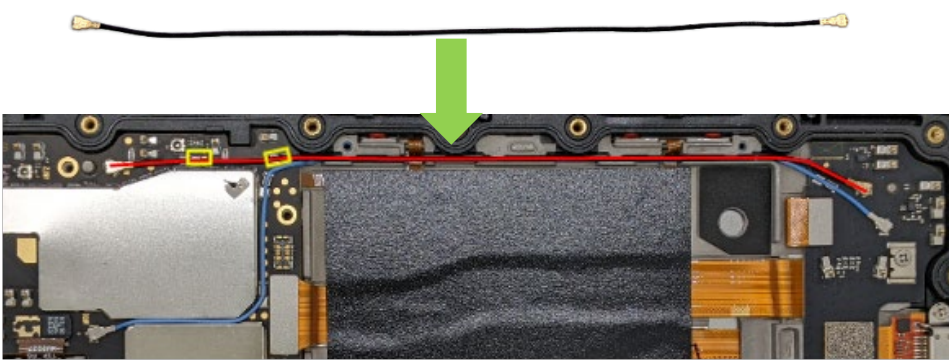
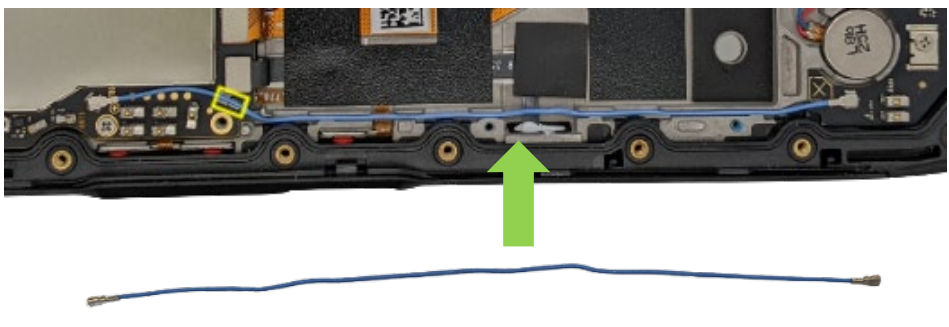


Remove the 3 cables from their housings.

Replacing coaxial cables

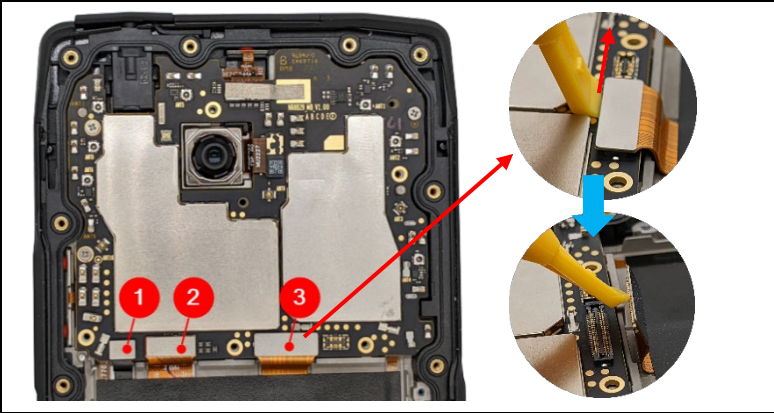
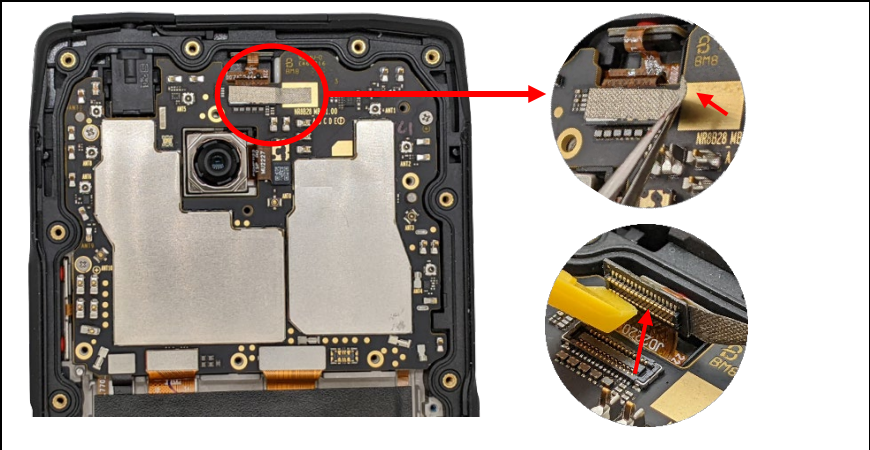
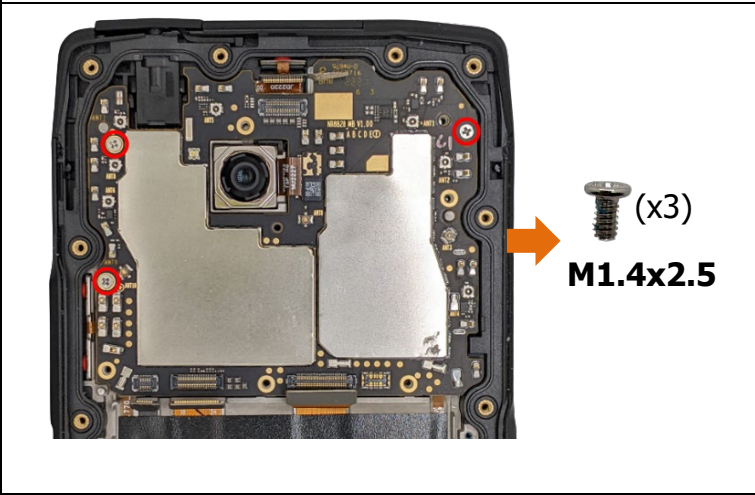
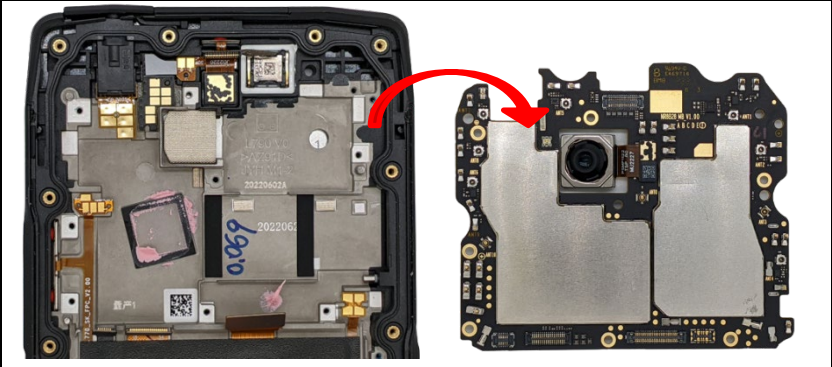
| | |
|---|--|
|  | <p>No specific action is required when changing these parts.</p> |
|---|--|

Reassembly of coaxial cables

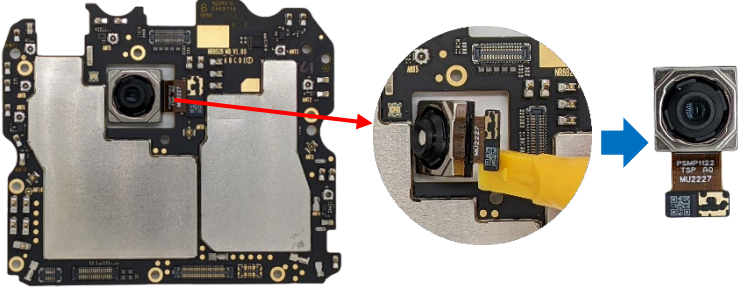
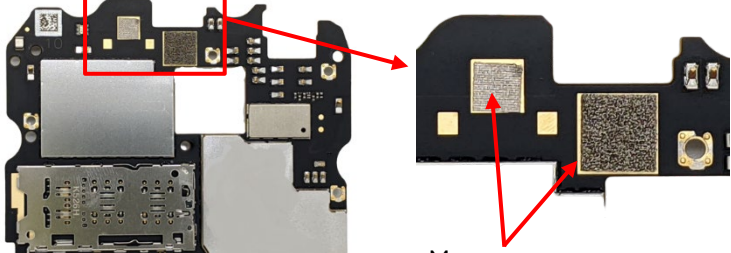
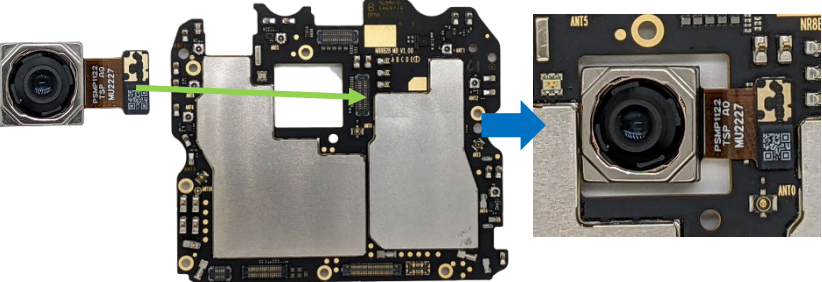
| | |
|--|--|
|  | <p>First insert and connect the longer blue cable as shown in the photo, in the side trunking and in the 2 guides shown in yellow. Make sure the cable runs in the same direction as the earth contact (circled in red).</p> |
|  | <p>Then lay the black cable along the red line in the photo. Insert it in the same trunking over the blue cable and into the 2 guides framed in yellow.</p> |
|  | <p>Lay and connect the last blue cable as shown in the photo.</p> |

Main board

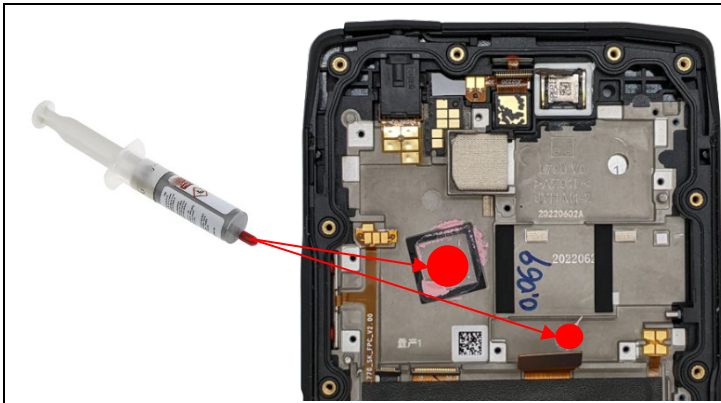
Dismantling the mainboard

| | |
|--|---|
|  | <p>Unplug the 3 flex connectors using an antistatic tool.</p> <ul style="list-style-type: none">1- Side buttons2- LCD + Touch3- USB main flex |
|  | <p>Peel off the conductive adhesive and disconnect the front camera connector.</p> |
|  | <p>Unscrew the 3 M1.4x2.5F screws circled in red.</p> |
|  | <p>The main board can be removed.</p> |

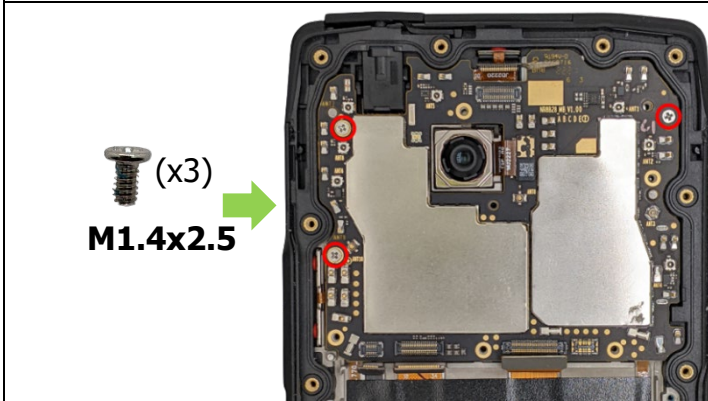
Replacement of the mainboard

| | |
|--|---|
|  | <p>Use an anti-static tool to remove the rear camera from the old motherboard.</p> |
|  <p>Mousses</p> | <p>Sur l'autre côté de la nouvelle carte mère, vérifier la présence des 2 mousses conductrices.</p> |
|  | <p>Connect the camera to the new motherboard.</p> |

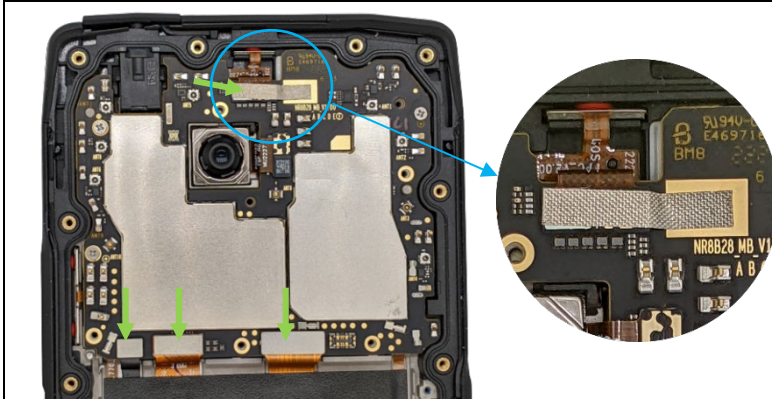
Reassembly of the motherboard



Apply thermal paste in the 2 places marked in red on the photo.



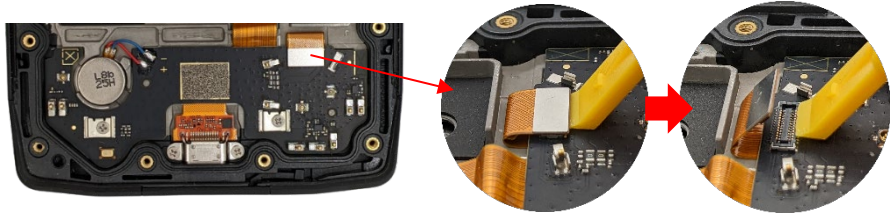
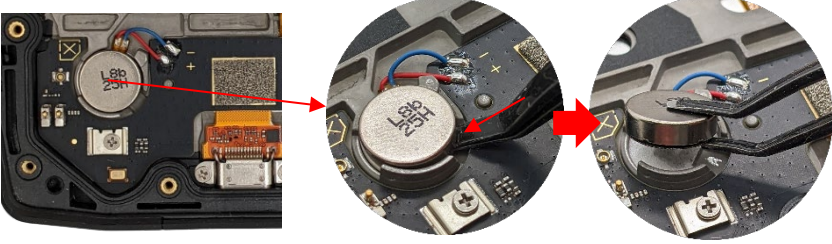


Insert the motherboard into its slot and tighten the 3 M1.4x2.5F screws circled in red.



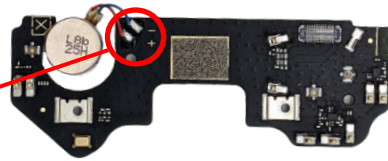
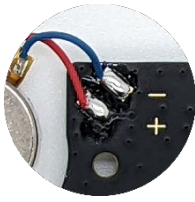
Connect the 4 flexes marked with a green arrow.
Stick the conductive adhesive back onto the front camera connector.

Main daughterboard

Removing the main daughter board

| | |
|---|--|
|  | <p>Unplug the connector on the daughterboard using an antistatic removal tool.</p> |
|  | <p>Remove the vibrator by inserting a flat pair of tweezers from underneath.</p> |
|  | <p>Unscrew the 2 M1.4x2.5F screws.</p> |
|  | |

Replacing the main daughterboard



Recover the vibrator from the old daughterboard or use a new vibrator if necessary.

Reattach it to the new card, making sure the polarity is correct (red +, blue -).

Reassembling the main daughterboard



Place the daughterboard and vibrator in their respective slots, aligning the 2 guide pins (marked with a green arrow) with the holes on the daughterboard.

 (x3)
M1.4x2.5



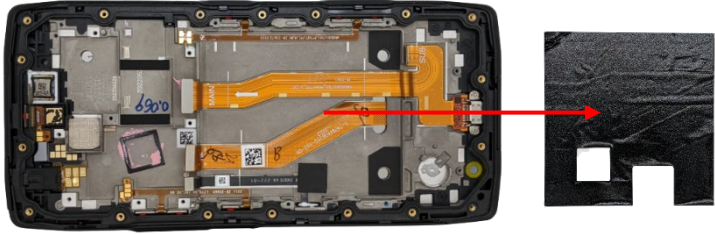
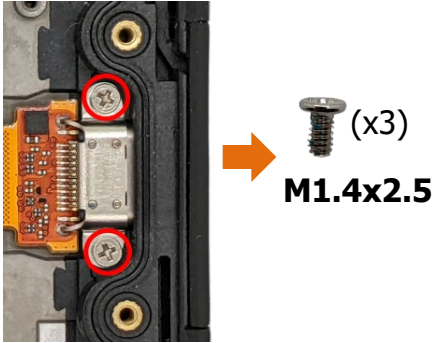

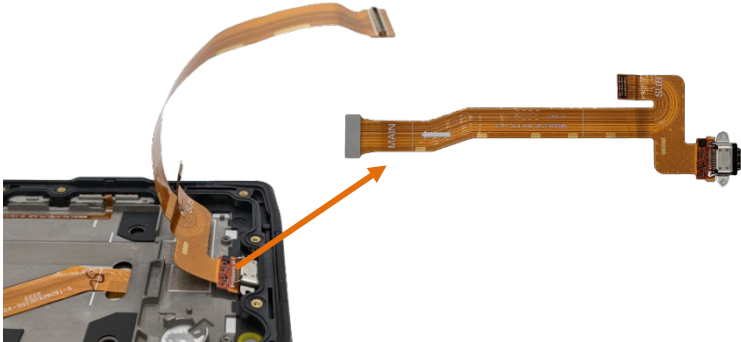
Screw in the 2 M1.4x2.5F screws.



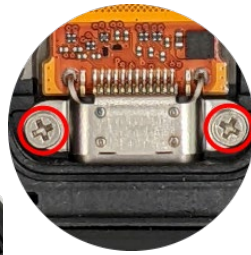
Connect the main flex connector to the daughterboard.

USB main flex

Removing the USB main flex

| | |
|---|--|
|  | <p>Remove the black insulating tape covering the flexes.</p> |
|  | <p>Unscrew the 2 M1.4x2.5F screws on the USB connector.</p> |
|  | <p>Remove the flex by carefully pulling on it.</p> |
|  | <p>Continue to peel it off by pulling gently along its entire length. The flex can be removed completely .</p> |

Reassembling the USB main flex

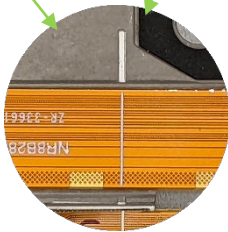
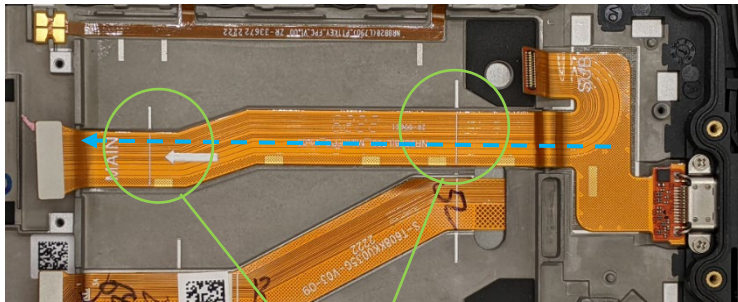


(x3)

M1.4x2.5

Insert the USB connector into its slot, then screw in the 2 M1.4x2.5F screws circled in red.

Tighten until the screws lock.



Then glue the flex back together along its entire length. It must be fitted precisely so that there is no stress when the connectors are plugged in.

Position the flex from the USB connector towards the motherboard connector (blue dotted arrow).

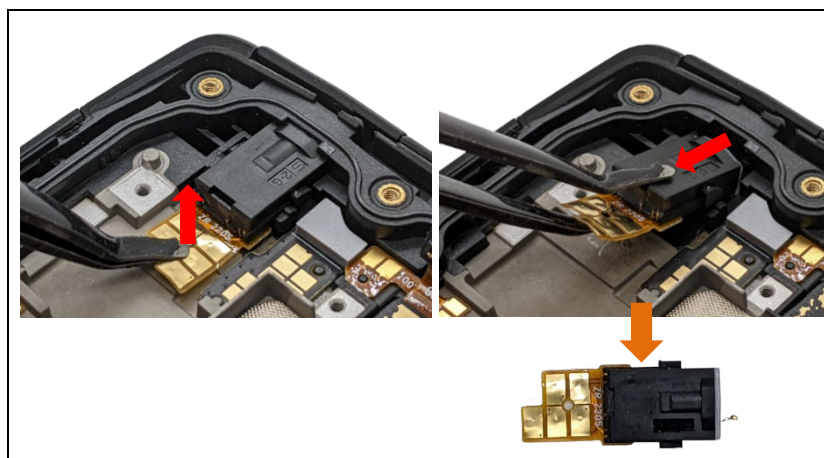
Align the white marker on the flex with the marker on the cosmetic (green boxes).



Re-apply the black insulating adhesive to the flexes.

Audio Jack connector

Removing the jack connector



Lift the connector contacts with pliers and pull back to release the module.

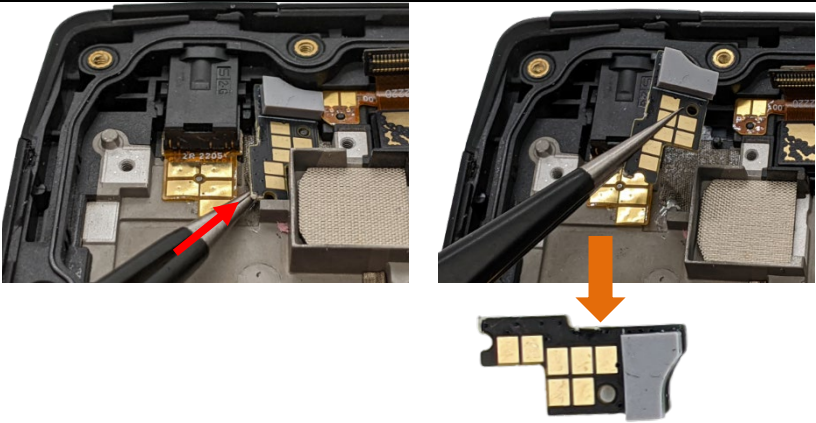
Reassembling the jack connector



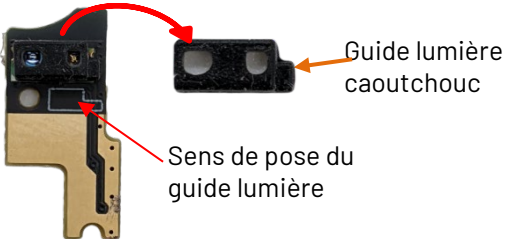
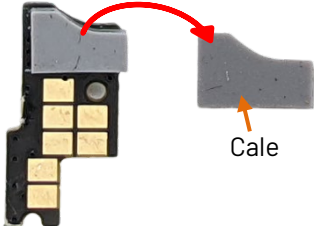
Insert the jack connector in the direction indicated by the green arrow. Press the connector and contacts together. Check that the pin is aligned with the hole in the flex (blue arrow).


Proximity sensor daughter board

Removing the proximity sensor daughter board

| | |
|---|---|
|  | <p>Lift the sensor card by inserting a pair of pliers, as shown opposite by the red arrow. Remove the card.</p> |
|---|---|


Replacing the proximity sensor daughter board

| | |
|---|---|
|  | <p>Take the rubber light guide from the component on the old card and place it back in the direction indicated by the white mark printed on the card.</p> |
|  | <p>Take the rubber shim and stick it onto the new daughter board.</p> |


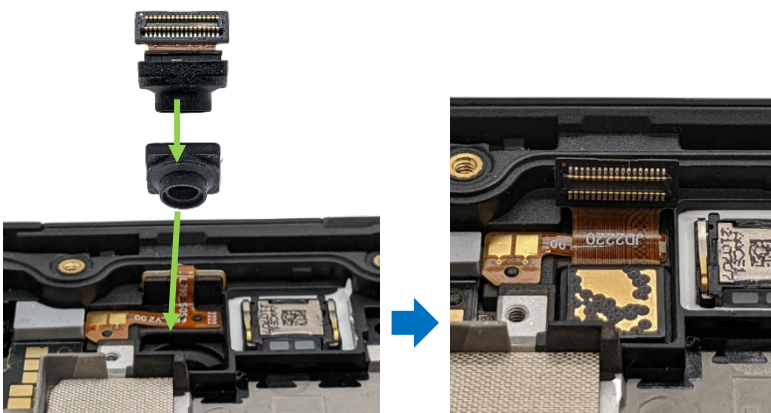
| | |
|---|--|
|  | <p>Check that the light guide and rubber spacer are in place, then replace the card in its slot. It is held in place by double-sided adhesive tape. Check that the 2 guide studs coincide with the holes on the board (blue arrows).</p> |
|---|--|

Front camera

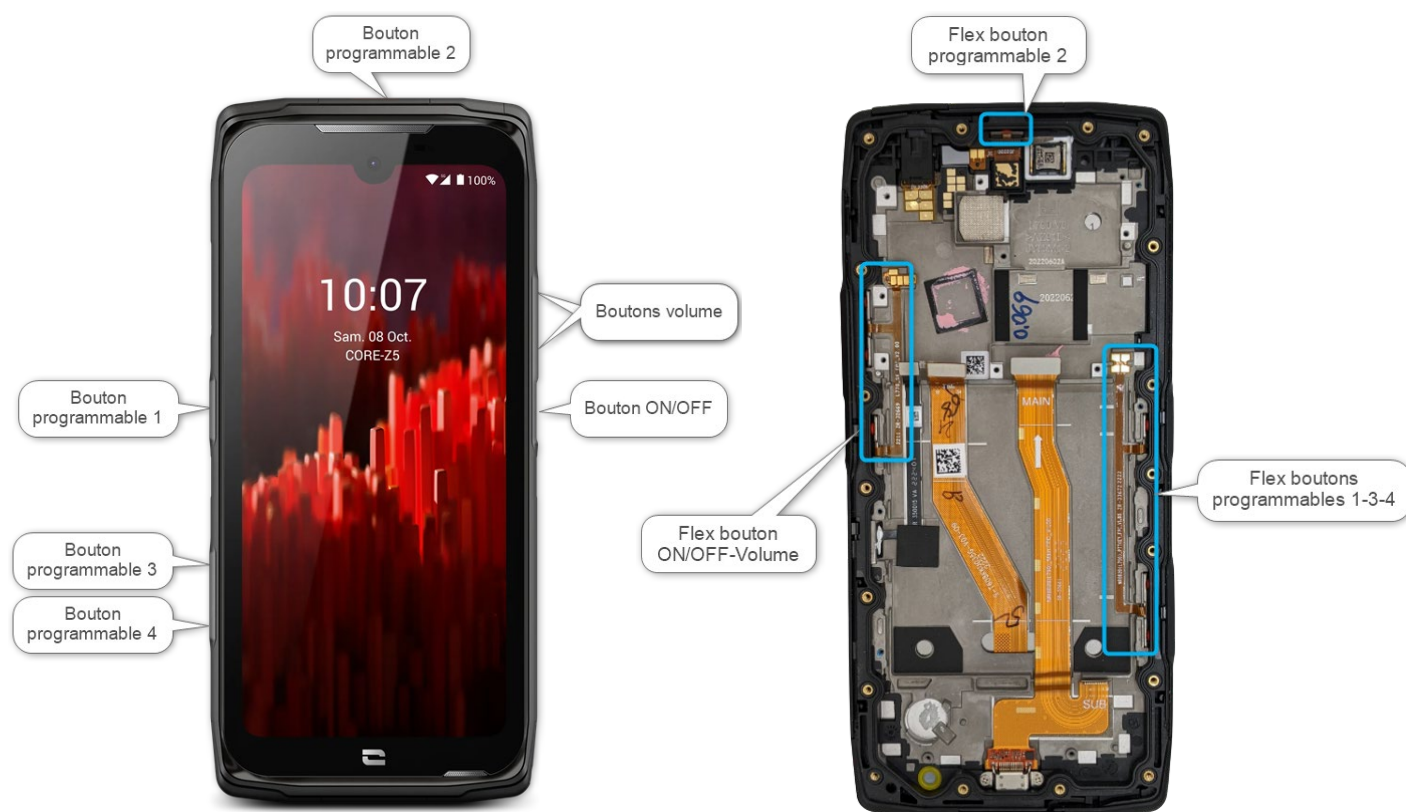
Removing the camera

| | |
|---|---|
|  | <p>Extract the camera using a pair of tweezers.</p> |
|---|---|

Replacing the camera

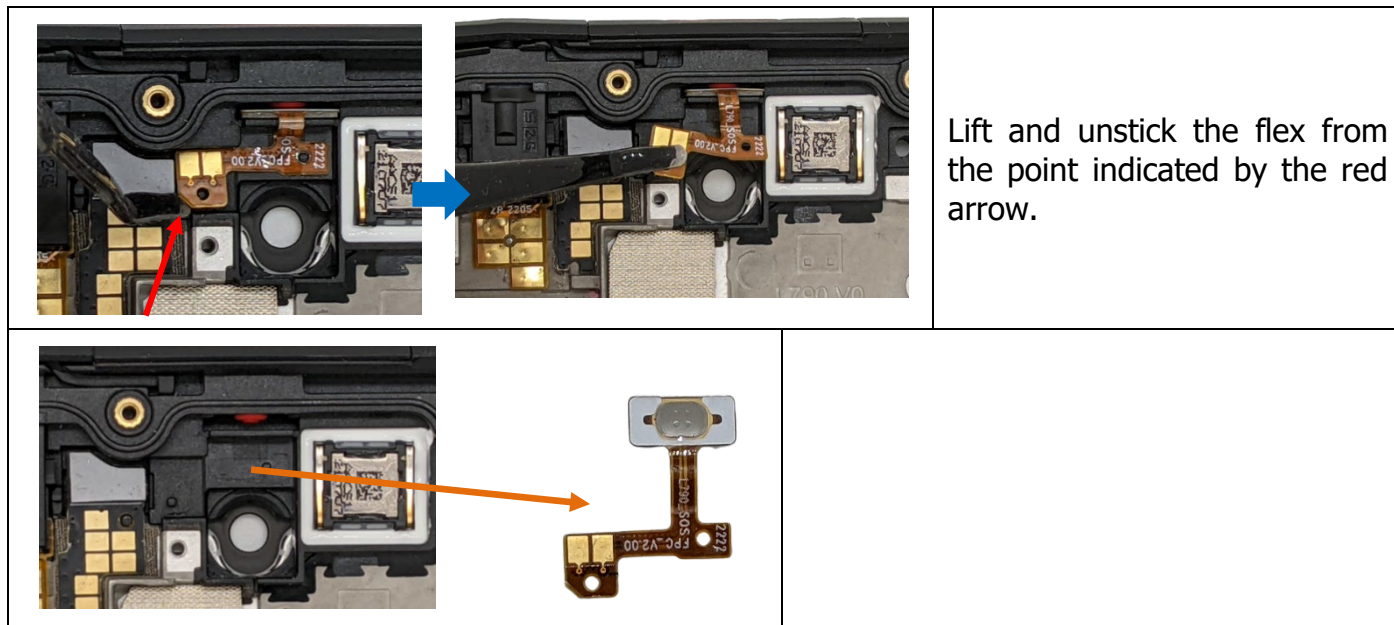
| | |
|---|--|
|  | <p>Remove the silicone seal from the camera. Recover the conductive adhesive. Replace this part if it is no longer adhesive.</p> |
|  | <p>Insert the silicone seal and the camera into their slots. Add conductive adhesive when reassembling the motherboard.</p> |

Flex side buttons

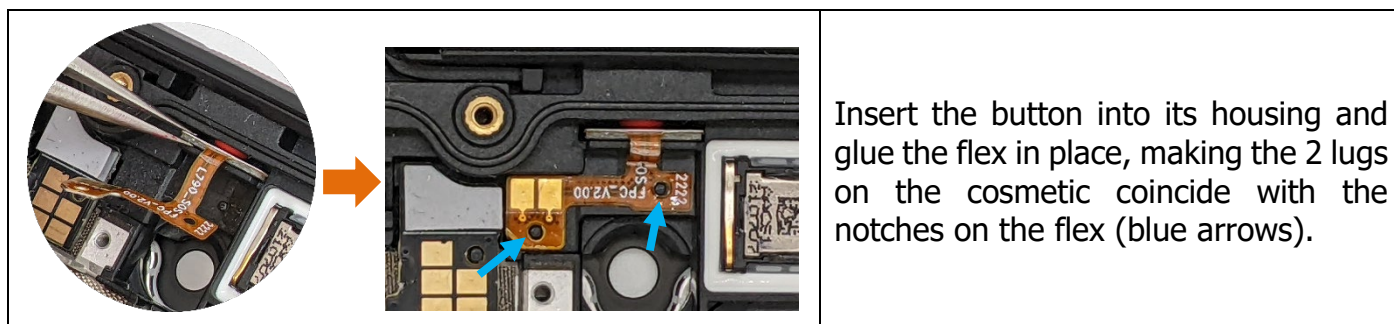


Programmable button 2

Removing the programmable flex button 2

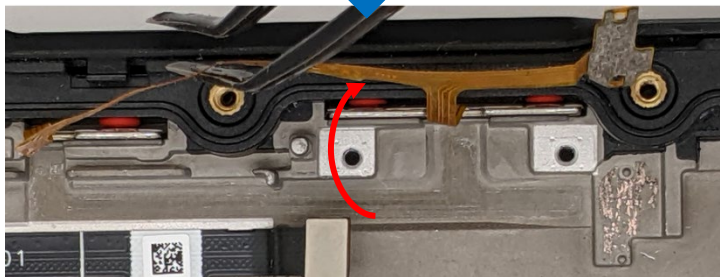


Reassembling the programmable flex button 2



On/Off-Volume buttons

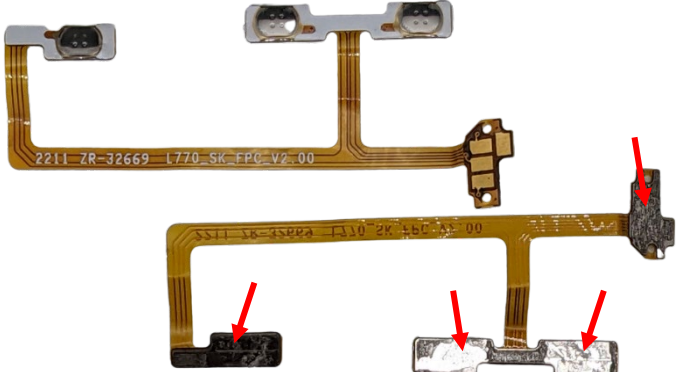
Removing the Flex On/Off-Volume buttons



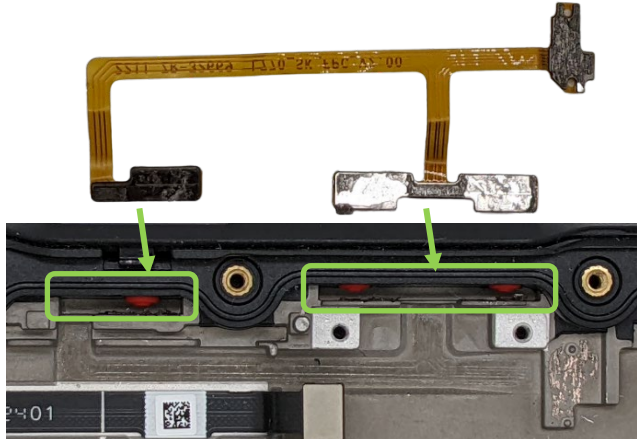
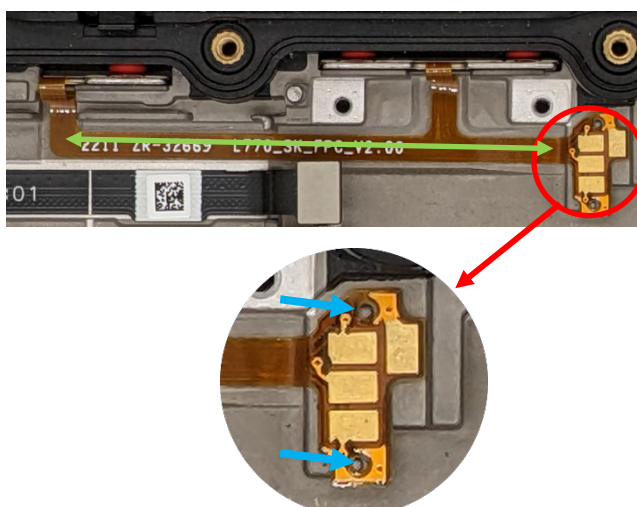
Use the pliers to remove the flex along its entire length.



Remove the buttons with a cutter and extract the flex.

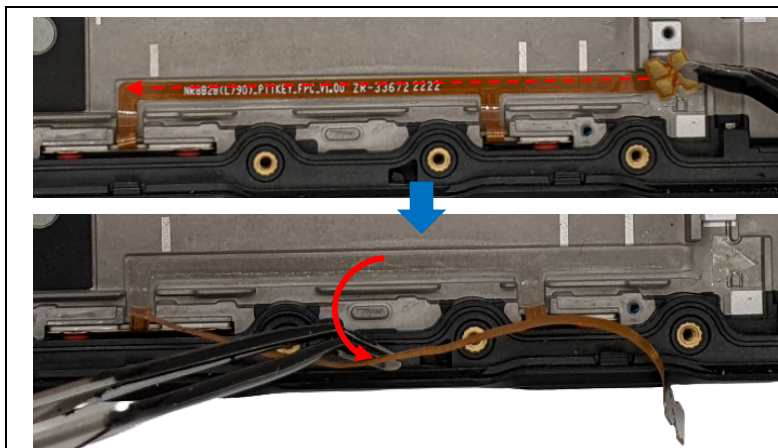
| | |
|---|--|
|  | <p>Peel off the protective films from the adhesives.</p> |
|---|--|

Reassembling the Flex On/Off-Volume

| | |
|---|--|
|  | <p>Insert the 3 buttons into their housings</p> |
|  | <p>Glue the contacts to the flex, making the 2 guide studs on the cosmetic coincide with the holes in the flex (blue arrows).</p> <p>Then glue the flex along its entire length (green arrow).</p> |

Flex for buttons 1.3.4

Removing flex

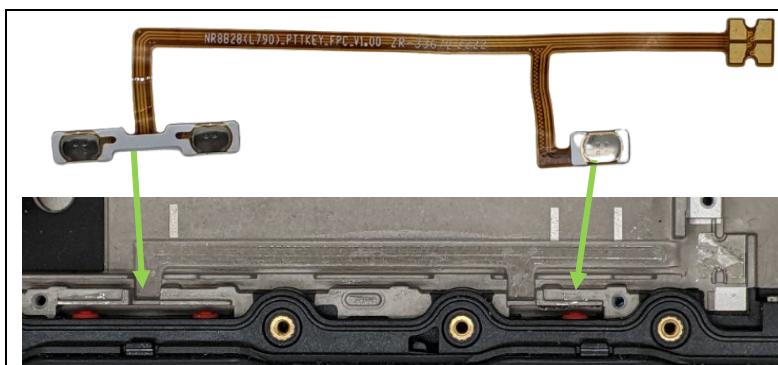


Use the pliers to remove the flex along its entire length.

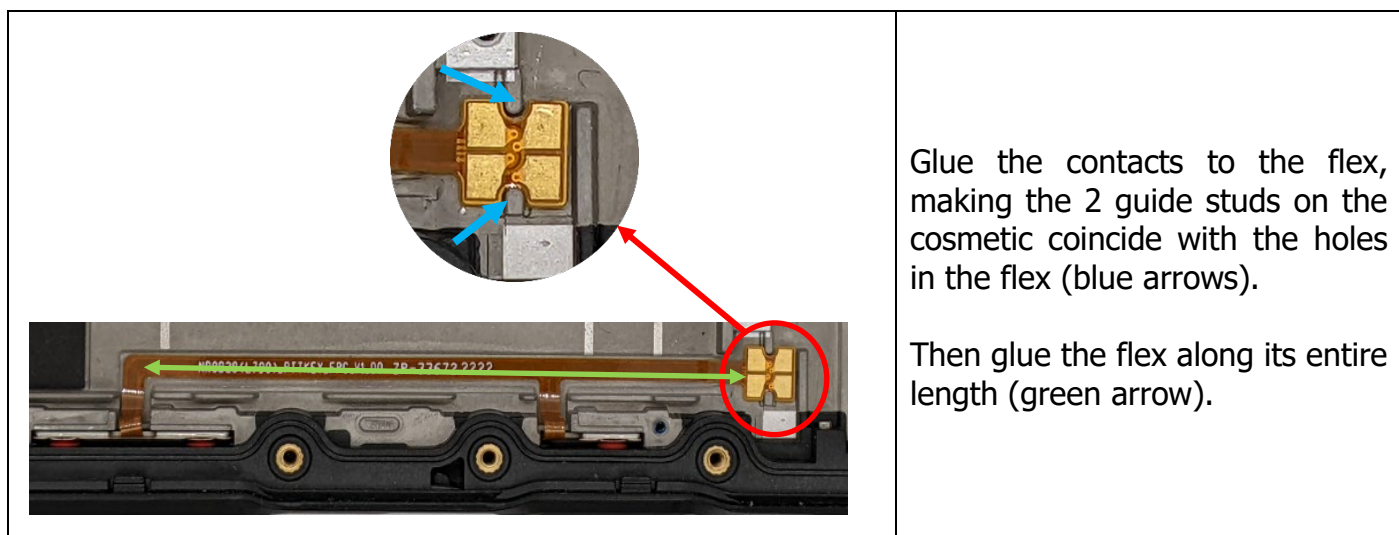


Remove the buttons with a cutter and extract the flex.

Reassembling the flex programmable buttons 1.3.4

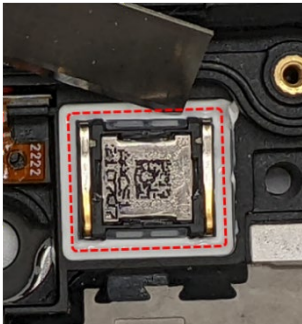
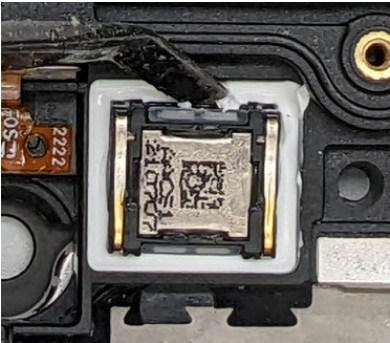
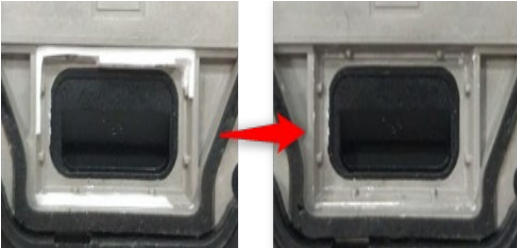


Insert the 3 buttons into their housings

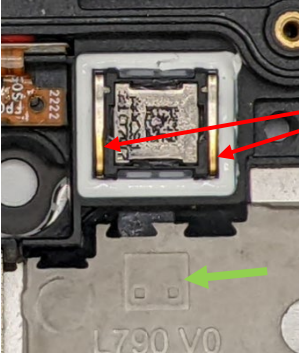


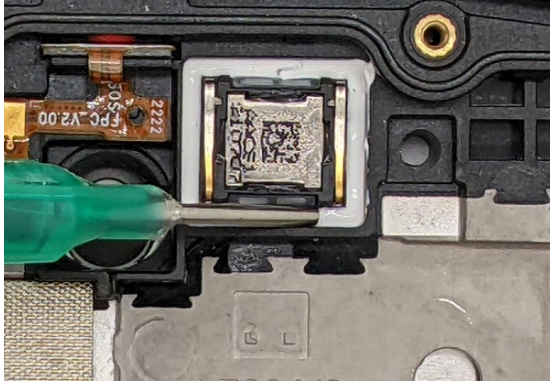
Microphone

Removing the microphone

| | |
|---|--|
|  | <p>Cut the silicone seal around the earpiece with a cutter.</p> |
|  | <p>Use the flat-nose pliers to remove the earpiece.</p> |
|  | <p>Be careful not to damage the membrane on the cosmetics during this operation.</p> |

Reassembling the microphone

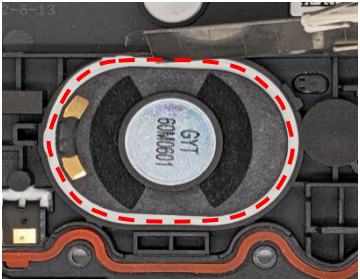


| | |
|---|---|
|  | <p>Place the earphone in its compartment, in the direction shown in the photo or on the symbol engraved on the cosmetic (in green), with the contacts facing downwards.</p> |
|---|---|



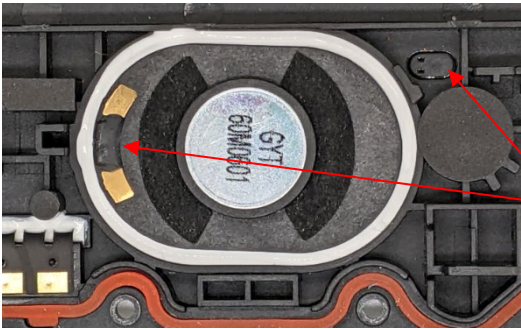
Apply LOCTUO RTV165 silicone sealant (recommended product - not sold by CROSSCALL) around the earpiece and allow to dry for a few minutes before reassembling the product.

Speaker

Removing the speaker

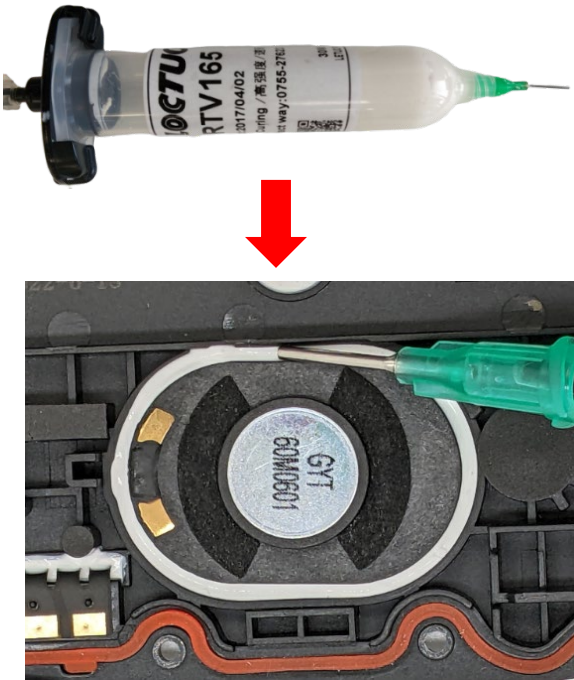
| | |
|---|--|
|  | <p>Cut the silicone seal around the loudspeaker with a cutter.</p> |
|  | <p>Use the flat-nose pliers to remove the speaker.</p> |
|  | <p>Be careful not to damage the membrane on the cosmetics during this operation.</p> |

Reassembling the speaker parleur



Orientation
du haut-
parleur

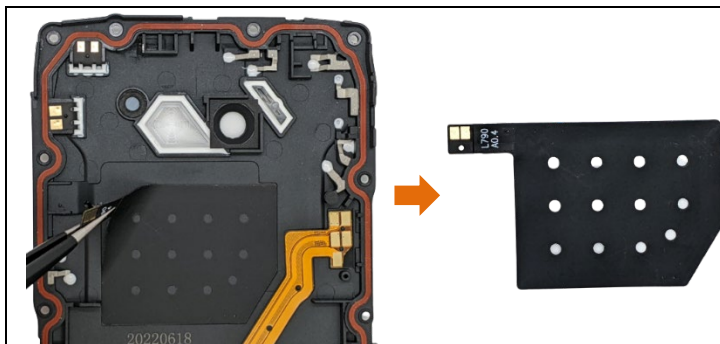
Place the speaker in its compartment, in the direction shown in the photo.



The contacts should face to the left as indicated by the indicator on the cosmetic.

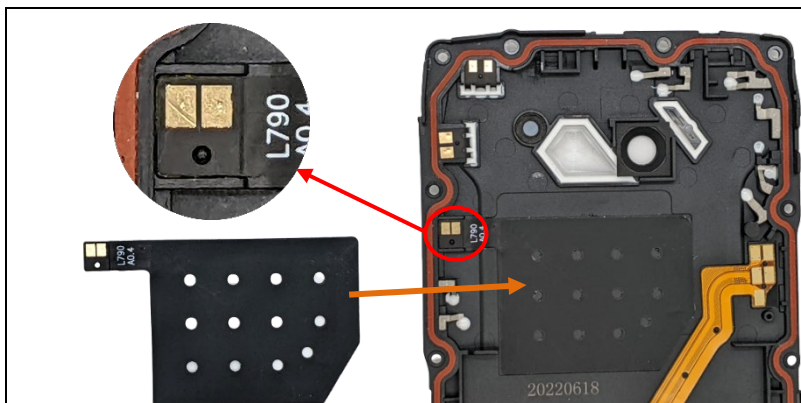
NFC antenna

Removing the antenna



Remove the NFC antenna using the tweezers.

Reassembling the antenna



Glue the new antenna, starting by aligning the lower part marked with the green arrows.

Glue the antenna completely in place, followed by the magnetic connector flex (explained in the previous paragraph).

Front casing

Changing the front casing



Remove the protective films from the new part.

INFORMATION FOR RECYCLERS

Below is a list of materials with their weight in the CORE-Z5 and the components in which they are found:

| MATERIAL / SUBSTANCE | CAS-NUMBER | WEIGHT (G) | % | COMPONENTS | % IN THE COMPONENT |
|----------------------|--|------------|----------|----------------------|--------------------|
| ALUMINIUM | 7429-90-5 | 45,59 | 18% | Frame | 86% |
| | | | | Battery | 6% |
| | | | | Camera decoration | 83% |
| | | | | Speaker | 14% |
| | | | | SIM slot | 32% |
| | | | | Customisable buttons | 100% |
| ARGENT | 7440-22-4 | 0,14 | 0,1% | Screen | <1% |
| | | | | Main board | <1% |
| | | | | Battery | <1% |
| COBALT | 7440-48-4 | 16,30 | 7% | Battery | 40% |
| CUIVRE | 7440-50-8 | 17,77 | 7% | Motherboard | 49% |
| | | | | Daughterboard | 57% |
| | | | | Chassis | 2% |
| | | | | Speaker | 4% |
| | | | | SIM drawer | 14% |
| DYSPROSIUM | 7429-91-6 | 0,0015 | 0,0006% | Vibrator | <1% |
| ETAIN | 7440-31-5 | 1,40 | 0,6% | Main board | 10% |
| FER | 7439-89-6 | 13,75 | 6% | Screen | 12% |
| | | | | Speaker | 56% |
| | | | | Screws | 79% |
| | | | | Vibrator | 52% |
| | | | | USB-C | 61% |
| INDIUM | 7440-74-6 | 0,000030 | 0,00001% | Screen | <1% |
| | | | | Caméra | <1% |
| | | | | Main board | <1% |
| LITHIUM | 12190-79-3 21324-40-3 12031-63-9 12031-66-2 | 1,96 | 0,8% | Battery | 3% |
| MAGNESIUM | 7439-95-4 | 0,35 | 0,1% | Screen | <1% |
| NEODYME | 7440-00-8 | 0,48 | 0,2% | Speaker | 7% |
| | | | | Vibrator | 1% |
| | | | | Magnet | 25% |
| NICKEL | 7440-02-0 | 2,98 | 1% | Screen | 1% |

Any modification or change made to your appliance outside an approved centre will invalidate the warranty. If your appliance needs to be repaired, we advise you to take it to the CROSSCALL after-sales service (contact details available on our website <https://crosscall.com/sav/>).

| | | | | | |
|---------------------------------|-------------------------|----------|-----------------|--------------------|------|
| | | | | Battery | 0,5% |
| | | | | Speaker | 2% |
| OR | 7440-50-5 13967-50-5 | 0,021 | 0,009% | Motherboard | <1% |
| | | | | Battery | <1% |
| | | | | Speaker | <1% |
| | | | | Cameras | <1% |
| | | | | USB-C | <1% |
| PALLADIUM | 7440-05-3 | 0,0026 | 0,001% | USB-C | <1% |
| PET | 25038-59-9 | 6,28 | 3% | Screen | 12% |
| PLATINE | 7440-06-4 | 0,000050 | 0,00002% | FPC | <1% |
| POLYAMIDE | 25038-54-4 | 3,93 | 2% | Battery casing | 5% |
| POLYCARBONATE | 24936-68-3 | 29,83 | 12% | Rear casing | 100% |
| | | | | PCB protection | 100% |
| | | | | Battery protection | 100% |
| | | | | Sidebar | 100% |
| | | | | Buttons | 60% |
| POLYMERE (résine inclue) | / | 29,05 | 12% | Screen | 14% |
| | | | | Motherboard | 14% |
| | | | | Daughterboard | 19% |
| PRASEODYME | 7440-10-0 | 0,21 | 0,1% | Speaker | 4% |
| | | | | Vibrator | 4,0% |
| | | | | Magnet | 4% |
| RHODIUM | 7440-16-6 | 0,000090 | 0,00004% | X-Link | <1% |
| TANTALE | 7440-25-7 | 0,000020 | 0,00001% | Main board | <1% |
| TITANE | 7440-32-6 | 0,19 | 0% | Main board | <1% |
| | | | | Screen | <1% |
| | | | | Cameras | <1% |
| TUNGSTENE | 7440-33-7 | 0,114050 | 0,04580% | Vibrator | 14% |
| VERRE | 65997-17-3 | 22,33 | 9% | Screen | 29% |
| | | | | Frame (plastic) | 10% |
| | | | | Motherboard | 20% |
| ZINC | 7440-66-6 | 1,745200 | 0,70088% | Speaker | <1% |

TECHNICAL DOCUMENTATION

BILL OF MATERIAL



• BATTERY COVER PANEL



• BACK HOUSING ASSEMBLY



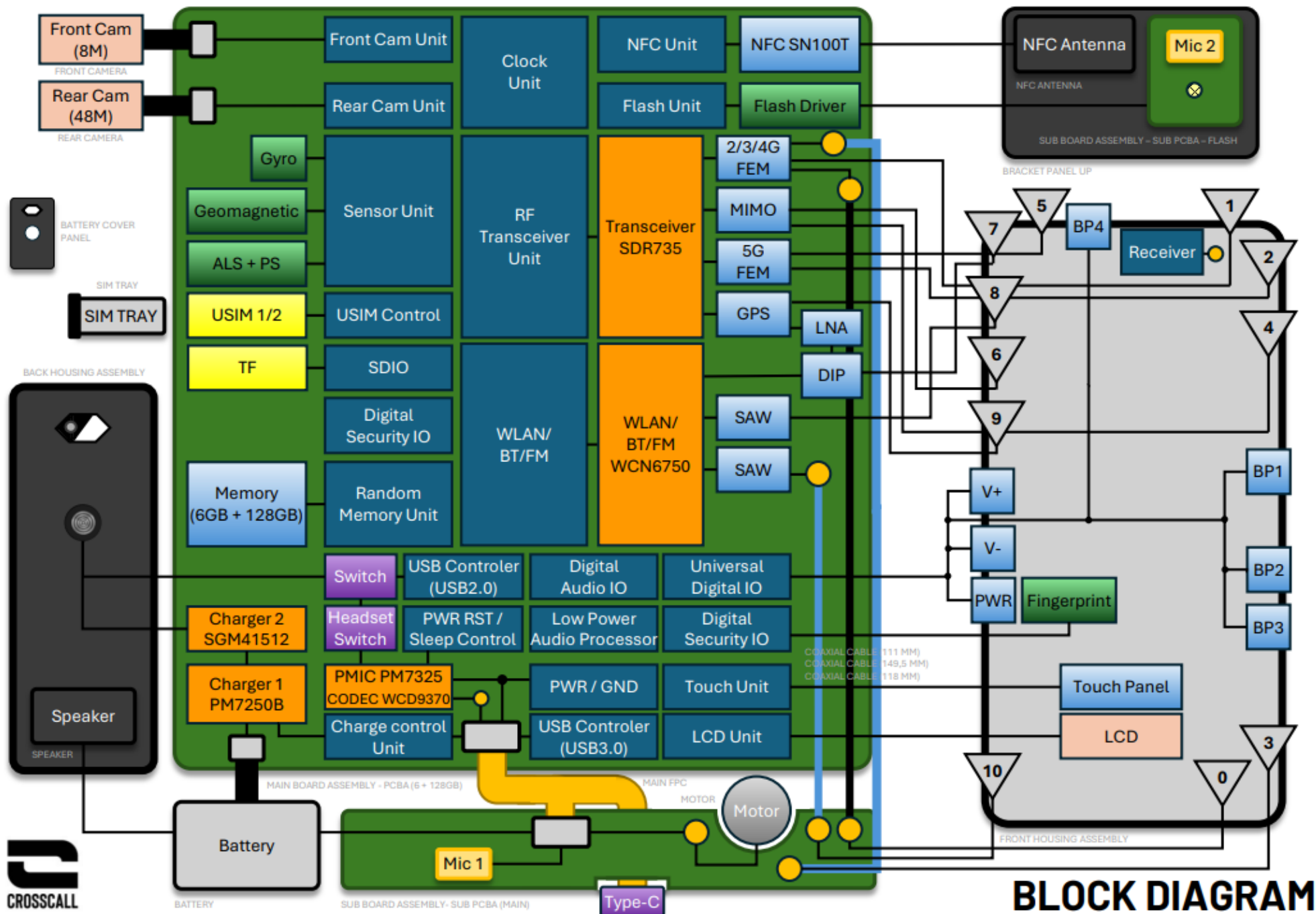
• FRONT HOUSING ASSEMBLY



- MAIN BOARD ASSEMBLY - PCBA (6 + 128GB)
- REAR CAMERA
- FRONT CAMERA
- BATTERY
- MAIN FPC
- COAXIAL CABLE (BLUE – 111 MM)
- COAXIAL CABLE (BLACK – 118 MM)
- COAXIAL CABLE (BLUE – 149,5MM)
- SUB BOARD ASSEMBLY- SUB PCBA (MAIN)
- SUB BOARD ASSEMBLY- SUB PCBA - ANTENNA
- MOTOR
- USB FPC
- EARPHONE FPC



- BRACKET PANEL
- NFC ANTENNA
- SUB BOARD ASSEMBLY - SUB PCBA – FLASH



BLOCK DIAGRAM

