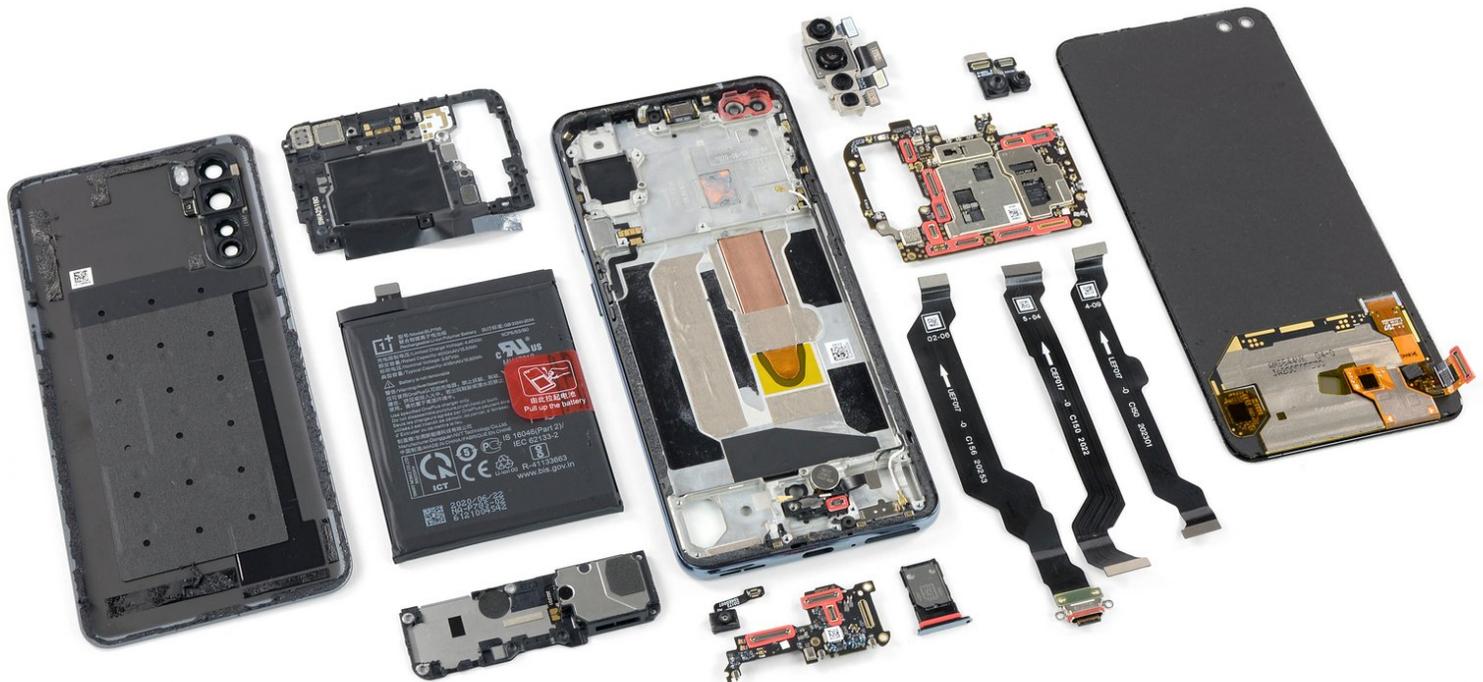




OnePlus Nord Teardown

An iFixit teardown of the OnePlus Nord Android phone performed in August of 2020, where we explore the Nord's new design and assess its repairability.

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INTRODUCTION

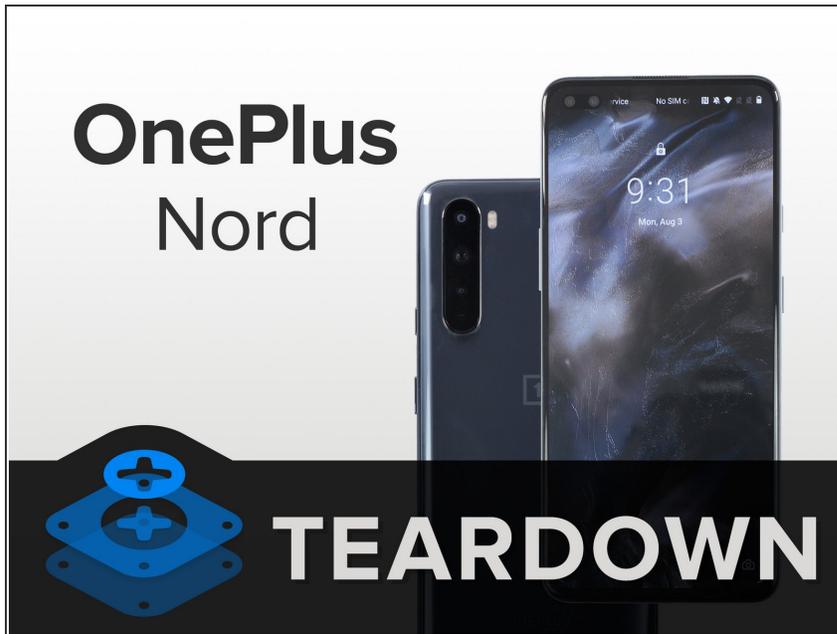
After years of flirting with flagship prices, OnePlus gets back to their flagship-killer roots with the new OnePlus Nord—a mid-range device with a spec sheet that punches well above its price point. But how does it fare on the repairability scales, and what other secrets lay inside? OnePlus wouldn't say, so we'll let a teardown do the talking.

Can't get enough teardown? Here's where to get more: Subscribe to our [newsletter](#) or follow us on [Facebook](#), [Instagram](#), or [Twitter](#) for the latest teardown news.

TOOLS:

- [iFixit Opening Picks set of 6](#) (1)
 - [Suction Handle](#) (1)
 - [Spudger](#) (1)
 - [ESD Safe Tweezers Blunt Nose](#) (1)
 - [Phillips #00 Screwdriver](#) (1)
 - [Heat Gun](#) (1)
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Step 1 — OnePlus Nord Teardown



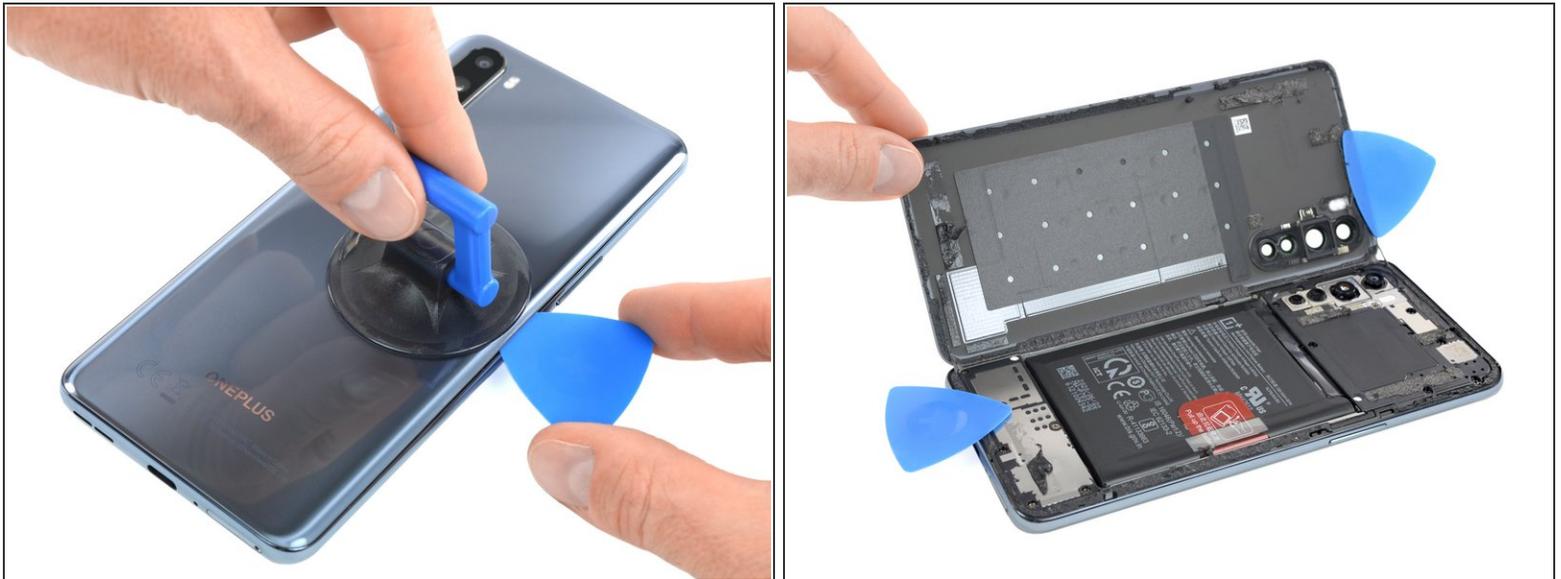
- The primary spec that's meant to "wow" you is the €399 (£379) starting price (roughly \$490ish equivalent in the USA, where it's not for sale, yet). But these other specs deserve a look as well:
 - 6.44" Fluid AMOLED with 2400x1080 pixels and a 90 Hz refresh rate
 - Qualcomm Snapdragon 765G with Adreno 620 GPU
 - 8 GB of LPDDR4X RAM and 128 GB of storage
 - 4,115 mAh worth of battery
 - Four rear cameras and two front-facing cameras
 - Under-display fingerprint sensor
- Are you ready for a teardown expedition? Let's get [goin'](#).

Step 2



- To get your teardown's worth, you need a baseline for comparison. Consider last year's [OnePlus 7T](#) (left), which looks so superficially similar we're gonna have to make sure we remember to tear down the correct phone. What's different?
 - First to stick out at you is that camera bump—not only is the underlying hardware different, but it's all migrated to a straight-line configuration on the Nord's left edge.
 - The earpiece speaker grille also shrunk, and the Nord peers at you with dual hole-punch selfie cams, rather than a teardrop notch.
 - The bottom edge looks similar (minus some antenna lines) and features a USB-C port, a redesigned speaker port, the SIM tray, and a ~~headphone~~ jack microphone hole.
- With the 7T safely set aside, this teardown officially gets underway.

Step 3



- Good news—this opening procedure doesn't require heat! Our pick/suction handle combo performs with gusto, so we skip the bonfire for now.
- There are also no booby trap cables or hidden components—our journey is off to a good start.
- ⓘ There's no wireless charging to be found here—but who needs that when you can charge from 0–70 % in 30 minutes with the stock 30 W charger?
 - Wireless charging does have its benefits—namely, reducing wear on the charge port—but it's so dreadfully inefficient that we're having a hard time warming up to it, other than as a backup feature. Still, the [iPhone SE \(2020\)](#) did manage to pack in wireless, and at a lower price.

Step 4



- We don't need a map to guess that the battery connector hides behind this motherboard cover. (But for less experienced fixers, a map would sure be nice.)
- After removing eleven standard [Phillips screws](#), the motherboard cover—with an NFC antenna and flash attached to it—comes off.
- ☑ Standard screw types definitely make this easier, and they're all the same size and length, which greatly reduces the potential for reassembly error.
- This is one advantage that Android phones routinely flex over their Apple counterparts, which use a sometimes bewildering mix of proprietary and exotic screws in every size and length you can shake your fist at.

Step 5



- Easy peasy removable battereezy— Like [other OnePlus models before](#), the Nord comes with a handy pull tab for convenient battery removal.
- This can still stress the battery a fair bit, so for safety reasons you probably shouldn't re-use it after removal—only yank it out if you have a replacement ready.
- Labeled BLP785, this source of fresh energy provides the Nord with 15.92 Wh (4,115 mAh @ 3.87 V).
 - ⓘ That not only exceeds its mid-range rival, the [Samsung Galaxy A51](#) (15.4 Wh), it even beats the [iPhone 11 Pro Max](#) (15.04 Wh). But it still lags behind its big brother, the monstrous [OnePlus 8 Pro](#) (17.45 Wh).
- Now our curiosity is all charged up. What else have you got, Nord?

Step 6



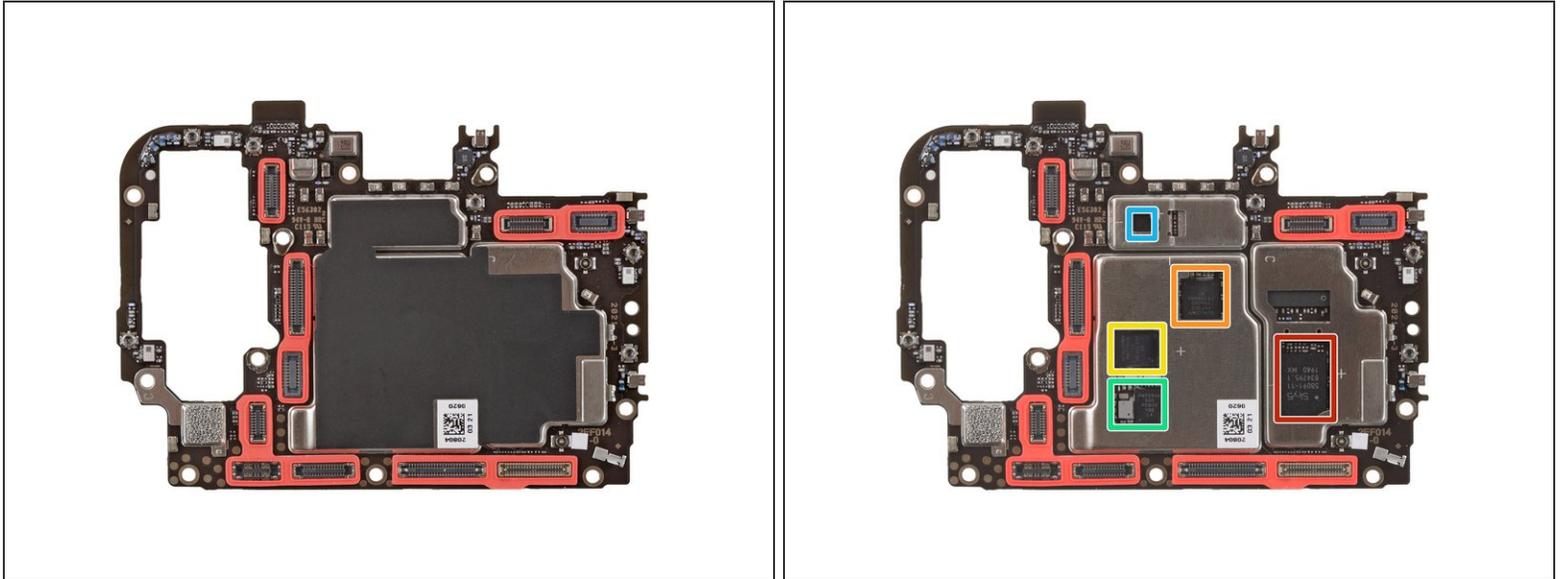
- The rear cameras pop out in a gaggle:
 - 48 MP $f/1.75$ optically stabilized main camera using a Sony IMX586 sensor—reportedly the same as in the OnePlus 8
 - 8 MP $f/2.25$ ultra-wide camera with a 119° field of view
 - 5 MP $f/2.4$ depth camera
 - 2 MP $f/2.4$ macro camera
- The front cameras make their exit together:
 - 32 MP $f/2.45$ main camera using a Sony IMX616 sensor with *only* EIS (Electronic Image Stabilization).
 - 8 MP $f/2.45$ ultra-wide camera with a 105° field of view

Step 7



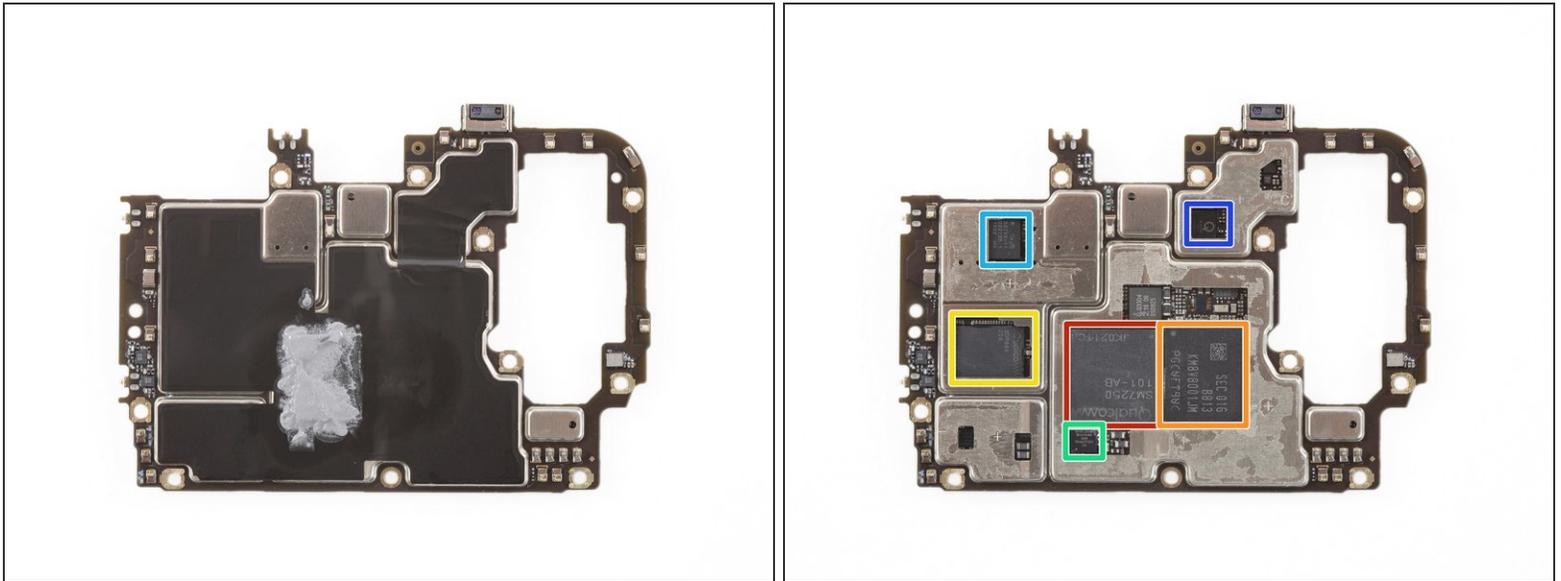
- Although the OnePlus Nord carries no official IP rating, it does use rubber connector gaskets found in the IP68-certified OnePlus 8 Pro—so it *may* have inherited some water and dust resistance.
 - ⓘ Gaskets are cheap, but the actual IP testing and certification costs a pretty penny, which OnePlus decided to forego this time. Good on them for including a little protection, even if it's not advertised as such.
- Remove two Phillips screws and the motherboard lifts out next, revealing some thermal paste on the back.
 - ⓘ The thermal paste is plopped onto the graphite foil covering the chips, which have additional thermal paste of their own underneath. On the opposite side, the paste transfers heat into a copper element running behind the motherboard and down between the battery and display.

Step 8



- Finally some precious stones chips:
 - [Skyworks SKY58094-11](#) Multimode Multiband Tx-Rx Front- End Module (FEM)
 - Qualcomm PM7250 power management chip
 - Qualcomm PM7150A power management chip
 - Qualcomm PM7250B power management IC
 - Qualcomm QET5100 Envelope Tracker

Step 9



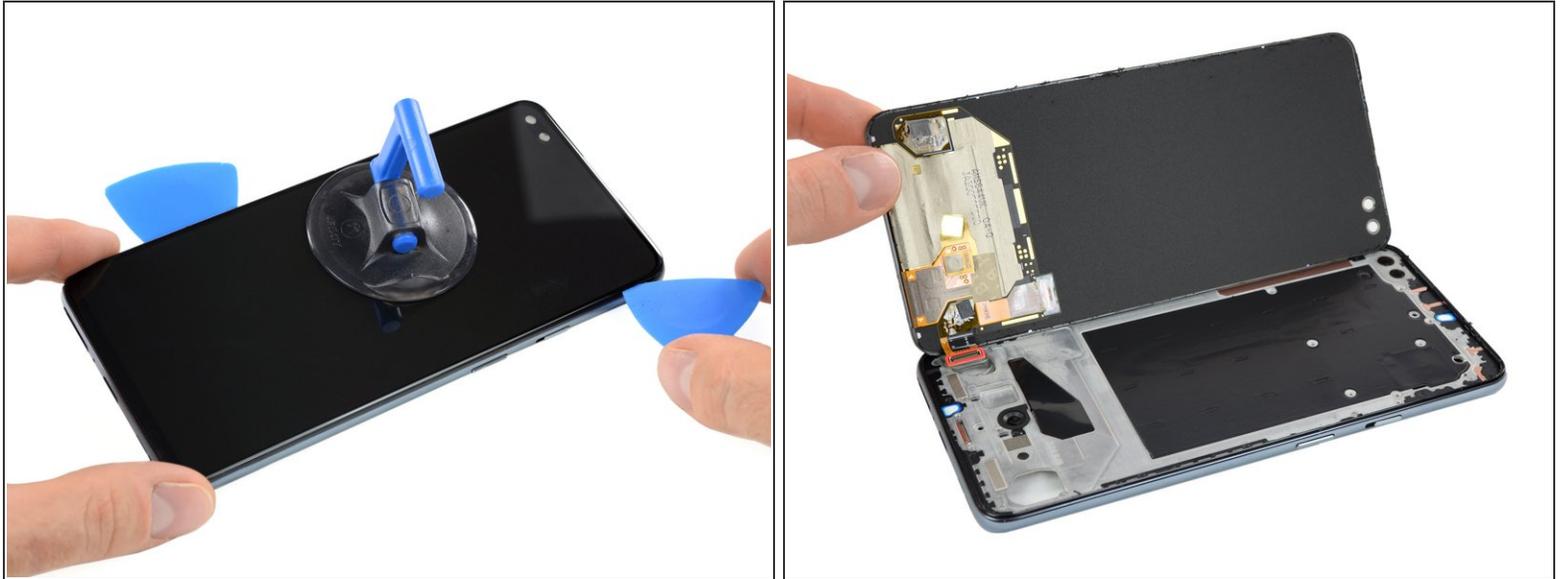
- But the real gems are on this side:
 - Qualcomm SDM765 Snapdragon 765G
 - Samsung [MCP storage / memory combination chip](#), home to 128 GB of UFS 2.1 storage and 8 GB of LPDDR4X DRAM
 - ⓘ Neat trick! Too bad there's no external SD card slot for boosting storage.
 - Snapdragon [865 5G Mobile Platform](#)
 - Qualcomm [WCD9385 Aqstic audio](#) codec
 - [Skyworks SKY5 3735-11](#) diversity receive module
 - [Qualcomm Atheros WCN3998](#) Wi-Fi 6-ready Chipset with Bluetooth 5, WPA3 Security, and Digital FM

Step 10



- We head south, and with the bottom cover removed, we find a jungle of cables and rubber gaskets.
 - ⓘ Rule #19 in the scout's handbook: Never forget the SIM card tray. Rule #21: Use as many tools simultaneously as you can.
- All those components are individually replaceable: From the USB-C port through the interconnect cables, over to the vibration motor, finger print sensor, and its breakout cable.
- ⓘ On the daughterboard, we spot one connector that has no rubber gasket around it—the display connector. But don't panic—the cable from the display carries the gasket.

Step 11



- The display is quite a challenge to remove, glued tightly inside the plastic bezel. But with [some heat](#) and thin-tooled slicing, we eventually succeed.
- No more treasures under this lid—just a (somewhat oddly tilted) rectangular cutout for the fingerprint sensor. We assemble our belongings—*leave no trace!*—and head back to camp.

Step 12



- This is the complete selection of treasures gathered during our journey.
- We have seen one rather accessible battery, lots of rubber gaskets, some interesting thermal solutions, and many replaceable components.
- OnePlus has definitely put itself back on the mid-range map. Let's wrap up and see where it landed on the repairability scale.

Step 13 — Final Thoughts

REPAIRABILITY SCORE:



- The OnePlus Nord earns a **6 out of 10** on our repairability scale (10 is easiest to repair):
 - You only need one Phillips driver for any repair.
 - Almost all components are modular and can be individually replaced.
 - The battery can be replaced once you removed the motherboard shield. It's only lightly adhered and comes with a pull tab for easy removal.
 - The primary access point for all repairs, the rear panel, is glued in place—but can be removed without heat.
 - Display replacements, which are the most common repairs, are not prioritized.