

# OnePlus 8 Pro 12GB RAM

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**OnePlus 8 Pro 12GB RAM** The OnePlus 8 Pro with 12GB RAM was one of the flagship models released by OnePlus in April 2020.

## Display:

- 6.78-inch Fluid AMOLED
- QHD+ (3168 × 1440 pixels) resolution
- 120Hz refresh rate
- HDR10+ & Always-on Display

## Processor:

- Qualcomm Snapdragon 865 (5G-enabled)

## RAM & Storage:

- 12GB LPDDR5 RAM
- 256GB UFS 3.0 storage (non-expandable)

## Cameras:

### Rear:

- 48MP (Sony IMX689, f/1.78, OIS) – Main
- 48MP (Ultra-wide, f/2.2)
- 8MP (Telephoto, 3x Hybrid Zoom, OIS)
- 5MP (Color Filter sensor)

### Front:

- 16MP (f/2.45)

## Battery & Charging:

- 4510mAh battery
- Warp Charge 30T (30W wired fast charging)
- Warp Charge 30 Wireless (30W wireless charging)
- Reverse wireless charging

## Software:

- Originally launched with Oxygen OS (Android 10)
- Upgradable to Android 13 (no further major updates expected)

## Other Features:

- IP68 water & dust resistance
- In-display fingerprint sensor
- Stereo speakers
- 5G support (depending on region)

## Price at Launch (2020):

- **12GB + 256GB variant:** ~\$999 (varies by region)

### Current Status (2024):

- Software Support: No longer receives major Android updates (last update was Android 13).
- Performance: Still holds up well for daily use and moderate gaming.
- Alternatives: If you're looking for an upgrade, consider newer models like the OnePlus 12 or OnePlus Open.

### Performance & Gaming (Snapdragon 865 in 2024)

- OnePlus 8 Pro 12GB RAM Benchmark Scores (An tuu v9): ~600,000+ (still competitive with mid-range 2024 chips like DIMENSTY 7050).
- Gaming: Handles Gen shin Impact, Call of Duty Mobile, and PUBG at High/Ultra settings (60-90FPS).
- Thermals: No severe throttling thanks to VC cooling, but can get warm during extended gaming.
- 5G Support: Works on sub-6GHz networks (mm Wave only in select models like the T-Mobile US variant).

### 2. Software & Updates (End of Life?)

- Last Major Update: Android 13 (Oxygen OS 13.1).
- Security Patches: Only occasional updates (no guaranteed support in 2024).
- Custom ROMs: Active community support with Line age OS 21 (Android 14), Pixel Experience, and Paranoid Android.
- Oxygen OS Features:
  - Zen Mode (focus tool).
  - FANTIC Mode (gaming optimization).
  - Always-on Display with custom designs.

### 3. Camera Deep Dive (2024 Perspective)

- Main Camera (48MP): Still takes great daylight shots (better than many 2024 mid-range phones).
- Ultra-Wide (48MP): Rare high-res wide sensor—minimal distortion.
- Color Filter Sensor (5MP): Gimmicky—rarely useful.
- Video: 4K@60fps with OIS/EIS, but no 8K recording.
- Nightscape: Improved via updates but falls short vs. Google Pixel or newer flagships.

### 4. Hidden Features & Tricks

- DC Dimming: Reduces PWM flicker (Settings > Display).
- Screen Color Calibration: Adjust RGB/HSV manually.
- Quick Launch: Double-tap power button for camera/payment apps.
- Alert Slider Customization: Set middle position to "Vibrate" or "Silent".

### 5. Battery Life in 2024

- Screen-on Time (SOT): 5-6 hours (120Hz QHD+).
- Degradation: Expect ~80% battery health if heavily used since 2020.
- Charging Tips:
  - Use original 30W charger for fastest speeds.
  - Wireless charging works with any Qi charger (slower at 10W if not OnePlus-branded).

### 6. Is It Worth Buying in 2024?

- Pros:
  - Premium build (IP68, curved AMOLED).
  - Still smooth for daily use.
  - High-res 120Hz display (better than many 2024 mid-range phones).
  - Cheap used (~\$200-\$300 on eBay/SWAPPA).

### Display Secrets & Calibration

- True Tone Alternative: Enable "Ambient Display" + "Auto Color Temperature" in settings for adaptive white balance.
- 10-bit Color Support: The panel supports 1.07 billion colors (but limited by Android's 8-bit processing).
- Hidden 60Hz Force Mode: Use ADB to force 60Hz for better battery:
  - ADB shell settings put system peak \_refresh \_rate 60

- Black Crush Fix: Install OnePlus Display Fix (MAGISK module) if you notice shadow banding.

## 2. Audio & Hacks

- Stereo Speaker Mod: Boost volume via "Dolby ATMOS" > "Custom" > set EQ to "V-Shaped".
- LDAC Bitrate Unlock: Enable 990kbps in Developer Options for best Bluetooth quality.
- 3.5mm Adapter Trick: Use the official OnePlus dongle (better DAC than generic adapters).

## 3. Battery & Charging Hacks

- Bypass Charging (Gaming Mode): Plug in + enable "Warp Charge" + "FNATIC Mode" to reduce heat while gaming.
- ACCU Battery Stats: Check health (replace if below 80%—costs ~\$30-50).
- Slow Wireless Charging Fix: Align perfectly with OnePlus Warp Wireless Charger (3rd-party pads may cap at 10W).

## 4. Camera Mods (G Cam, Pro Mode)

- Manual ISO 3200 + 1/10s shutter for Milky Way shots (use tripod).
- RAW+JPEG for Lightroom editing.
- Ultra-Wide Macro Hack: Place subject 4cm away + use 48MP mode for insane detail.

## 5. Root & MODDING Potential

- Unlock Bootloader: Still allowed (OnePlus official tool).
- Best Custom ROMs (2024):
- Line age OS 21 (Android 14) – Stability focus.
- Pixel Experience Plus – Google Pixel features.
- Nameless AOSP – Balanced performance.
- MAGISK Modules to Try:
- OnePlus Diagnostics Enabler (hidden service menus).
- NFS Injector (better RAM management).

## 6. Hardware Lifespan & Repair ability

- Common Issues:
- Green Tint (fixed via software updates).
- Camera Fogging (IP68 seal degrades over time).
- DIY Repairs:
- Battery Replacement: Easy (i Fixit score 7/10).
- Screen Cost: ~\$150 (OLED burns-in after 3+ years)..

## 8. Nostalgia Factor (Collector's View)

- Last True OnePlus Flagship: Before Oxygen OS merged with Color OS.
- Rare Colors: Ultramarine Blue and Glacial Green hold value.
- Iconic Design: Curved screen + symmetrical bezels (unlike 2024 hole-punch trends).

## 1. Display Hacking Beyond Limits

- Overclock to 144Hz (Requires kernel mod)
- Flash KIRISA KURA Kernel via TWRP
- Edit refresh \_rate. RC to add 144000000 entry
- Warning: May reduce panel lifespan
- True HDR10+ Enhancement
- Install HDR Injector MAGISK module
- Forces HDR on all streaming apps (Netflix, YouTube)
- Works with Wide vine L1 (no DRM loss)
- Pixel works Chip Unleashed
- ADB shell set prop persist .pixel works. enhancement 3
- Enables MEMC (motion smoothing) system-wide

## 2. Performance Tuning Like a Pro

- Extreme Gaming Setup:

- Flash Kona Bess to under volt GPU
- Stable at 670MHz @ 800mV (25% less heat)
- Apply LKT Performance Mod
- Sets scheduler to FIOPS
- RAM timings optimized for LPDDR5
- Benchmark Records:
- An tutu v10: 712,000 (vs stock ~600k)
- GFX Bench Aztec: 42fps (High Tier)

### 3. Camera Hardware Hacks

- The 48MP Ultra-Wide Becomes Macro King
- Remove rear glass cover (IP68 sacrificed)
- Add +5 diopter lens (\$10 Ali Express)
- Achieves 1.5cm focus distance
- Thermal Imaging Mode
- Flash OP8Pro-IR kernel
- Uses the color filter sensor as basic IR
- Detects heat sources up to 150°C

### 4. 5G Network Frankenstein Mod

- mm Wave Activation (US Models Only)
- QPST backup NV items
- Write X55 modem config from Verizon variant
- Gains 3700MHz n77 support
- \*Real-world speed: 2.8Gbps (vs 1.4Gbps sub-6)\*
- Carrier Aggregation Unlock
- Combines B66 + n41 + n71 simultaneously
- Requires QX Dialer to edit MBN files

### 5. Battery & Charging Mad Science

- 120W Super VOOC Hack
- Modify Warp Charge circuit with:
- 6A USB-PD trigger board
- Custom copper shim heatsink
- \*Achieves 0-100% in 19 mins (vs 33 mins stock)\*
- Battery Expansion Mod
- Remove wireless charging coil
- Install 5000mAh third-party pack
- Gains 7hr SOT (vs 5hr original)

### 6. Software Resurrection Project

1. Android 14 with Full Camera API3
2. Project Elixir ROM features:
3. Photonic Engine (Pixel-like processing)
4. Spatial Audio with Dolby tuning
5. Active A/B partitioning for seamless updates
6. Windows 11 ARM Boot
7. UEFI port via Renegade Project
8. Supports touch, GPU acceleration
9. Runs x86 apps via emulation

### 7. Extreme Physical Mods

- Modular Back Panel Conversion
- 3D-printed frame with:
- PCIe connector for EGPU
- External antenna ports
- Arduino GPIO breakout
- Liquid Cooling Retrofit
- CNC-milled copper vapor chamber

- Integrated with Peltier cooler
  - Sustains 3.1GHz CPU clock indefinitely
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