

Macbook Pro Recommendation

1. Chip:

- **Apple M4 chip:** 10-core CPU with 4 performance cores and 6 efficiency cores, 10-core GPU, Hardware-accelerated ray tracing, 16-core Neural Engine, 120GB/s memory bandwidth
- **Media engine:** Hardware-accelerated H.264, HEVC, ProRes, and ProRes RAW Video decode engine Video encode engine ProRes encode and decode engine

2. Display:

- **Retina Display** 14.2-inch (diagonal) Liquid Retina XDR Display, XDR brightness: 1000 nits sustained full-screen, 1600 nits peak (HDR content only), SDR brightness: 1000 nits max, Wide color (P3), True Tone technology, ProMotion technology for adaptive refresh rates up to 120Hz

3. Battery and Power1:

- Up to 22 hours Apple TV app movie playback
- Up to 15 hours wireless web
- 70-watt-hour lithium-polymer battery
- 70W USB-C Power Adapter

4. Memory:

- 16GB unified memory - Configurable to: 16GB or 24GB

5. Storage:

- 256GB 256GB SSD Configurable to: 512GB, 1TB, or 2TB
- 512GB 512GB SSD Configurable to: 1TB or 2TB

6. Charging and Expansion:

- **Two Thunderbolt / USB 4 ports with support for:** Charging, DisplayPort, Thunderbolt 3 (up to 40Gb/s), USB 4 (up to 40Gb/s), USB 3.1 Gen 2 (up to 10Gb/s)

7. Keyboard and Trackpad:

- **Backlit Magic Keyboard with:** 78 (U.S.) or 79 (ISO) keys including 12 full-height function keys and 4 arrow keys in an inverted-T arrangement, Touch ID, Ambient light sensor, Force Touch trackpad for precise cursor control and pressure-sensing capabilities; enables Force clicks, accelerators, pressure-sensitive drawing, and Multi-Touch gestures
8. **Wireless:**
 - **Wi-Fi** 802.11ax Wi-Fi 6 wireless networking, IEEE 802.11a/b/g/n/ac compatible
 - **Bluetooth** Bluetooth 5.3 wireless technology
 9. **Camera:** 1080p FaceTime HD camera, Advanced image signal processor with computational video
 10. **Audio:** Stereo speakers with high dynamic range, Wide stereo sound, Support for Spatial Audio when playing music or video with Dolby Atmos on built-in speakers, Spatial Audio with dynamic head tracking when using AirPods (3rd generation), AirPods Pro, and AirPods Max, Studio-quality three-mic array with high signal-to-noise ratio and directional beamforming, 3.5 mm headphone jack with advanced support for high-impedance headphones
 11. **Display Support:**
 - **Simultaneously supports full native resolution on the built-in display at millions of colors and:** One external display with up to 6K resolution at 60Hz
 - **Thunderbolt 3 digital video output:** Native DisplayPort output over USB-C, VGA, HDMI, DVI, and Thunderbolt 2 output supported using adapters (sold separately)
 12. **Video Playback:** Supported formats include HEVC, H.264, and ProRes, HDR with Dolby Vision, HDR10, and HLG
 13. **Audio Playback:** Supported formats include AAC, MP3, Apple Lossless, FLAC, Dolby Digital, Dolby Digital Plus, and Dolby Atmos
 14. **Operating System:**
 - **macOS:** macOS is the most advanced desktop operating system in the world. macOS Ventura makes the things you do most on Mac even better, so you can work smarter, play harder, and go further.

Note: Newer versions don't have cd drives. User must purchase external cd drive if applicable.

Macbook Pro Laptop Equipment

1. 14-inch MacBook Pro

2. 74 W USB-C Power Adapter
3. USB-C Charger Cable (2 m)

Macbook Pro Laptop Accessories

1. Apple USB-C to USB Adapter
2. Apple USB-C Digital AV Multiport Adapter
3. Apple Thunderbolt to Gigabit Ethernet Adapter