Computer Purchasing Guide [Updated 11/2022]

Chromebooks

Pros: Great Battery life, low cost, ease of use, does productivity work efficiently.

Cons: Not ideal for GPU based workloads such as nonlinear video editing, CAD, and software development.

Use case: General Computing (eg. word processing, web browsing, media viewing)

Specs

	Minimum	Recommended
RAM	4gb	8gb
Screen Resolution	1366x768	1920x1080
Storage	16gb	32gb
End of auto-update	2025	2026+

Recommended Models

14" Screen: **Lenovo 14e gen 2**

11" Screen: **Lenovo 100e mk2**

> To see how long a specific Chromebook will continue to receive updates, please refer to Google's auto-update policy support page.

Windows Laptops

Pros: Can do almost any computing task, huge software catalog, large variety of form factors and models to choose from.

Cons: More expensive than Chromebooks, cheapest options can be a poor experience, Windows is less intuitive than ChromeOS. On average poorer battery life.

Use case: General Computing, CAD, programming, Video Editing, Graphics work

Specs

	Minimum (general use)	Recommended (graphics/gaming/Video editing)
RAM	8gb	16gb
Storage	256gb SSD	256+ SSD
CPU	Intel i3, or AMD Ryzen 3	Intel i5, Intel i7, AMD Ryzen 5, or 7
Graphics	Intel integrated	Ryzen Vega/RX, Nvidia GTX/RTX graphics
Operating System	Windows 10, or Linux	

Recommended Models (sorted from lowest to highest starting price)

Lenovo Ideapad Series *preferably with Ryzen CPU (low cost for good performance)

Acer Nitro 5 Series: affordable entry level to mid range gaming/CAD/Graphic design capable laptops)

Lenovo Thinkpad L,T,X,P lines

Dell XPS 13 and 15 lines: (Focus on portability and battery life over raw performance)

Asus TUF line (mid to high end gaming/CAD/Graphic design laptops)

Razer Blade line (high end gaming/CAD/Graphic design capable)

Mac Laptops (Apple)

Pros: generally good build quality (dependent on model), High end specs compared to low cost PC/Chromebook options, excellent battery life on M1 equipped devices

Cons: Higher cost of entry than PC alternatives, compatible with less existing software than windows, limited choice of devices. Limited ability to run major enterprise and engineering software (eg. Creo, Solidworks)

Use case: Using apple exclusive software (eg. garageband, iMovie), General Computing,programming, Non Linear Video Editing, Graphics work.

Recommended Models: Like a windows PC it depends on intended task.

General Computing	Graphics Work	Nonlinear Video Editing	Programming
M1/M2 Macbook Air	M1/M2 14" macbook Pro	M1 Max + 512gb storage	M1/M2 14" macbook Pro

Minimum recommended Specs:

8GB RAM recommended

256gb storage recommended

Glossary of terms

CPU: Central processing unit (aka processor). Runs programs and executes any general computing task. A faster CPU means things tend to open faster.

GPU: Graphics processing unit (aka video card). Used to render 3D images and do video work. Very important for CAD, graphic design, non-linear video editing, and, to an extent, software development.

RAM: Random-access memory. Temporary storage for running tasks. A common example of a RAM dependent task is having many tabs open at once in your web browser.

Non-Linear Video Editing: Professional video editing software such as Final Cut Pro or Adobe Premiere. Requires a high end computer and is vastly more demanding and capable than very

basic editors such as iMovie or Windows Movie Maker.

General Computing: Document / presentation / spreadsheet creation, email, anything that can be done in a web browser, etc.

Revision #31
Created 3 April 2020 17:43:16 by Michael Morse
Updated 18 November 2022 13:25:38 by Michael Morse