



Acer Chromebook™ Spin CP713-2W-5874 powered by an Intel® Core™ i5-10210U processor†Δ



HP Chromebook x360 14c-ca0053dx powered by an Intel Core i5-10110U processor†Δ

Intel Core processor-powered Chromebooks support your business

Two Chromebooks powered by Intel Core processors completed work-related tasks during video calls in less time than two Chromebooks powered by MediaTek Helio and AMD A6 processors

At Principled Technologies, we assessed the responsiveness of four Chromebooks:

- Acer Chromebook Spin 713 powered by an Intel Core i5-10210U processor
- HP Chromebook x360 14c powered by an Intel Core i3-10110U processor
- HP Chromebook 14A G5 powered by an AMD A6-9220C processor
- Lenovo Chromebook Duet powered by a MediaTek Helio P60T processor

We measured the time required for these Chromebooks to complete four different task sequences while connected to a four-way Google Meet™ call. In our tests, the Intel Core processor-powered Chromebooks saved time compared to the Chromebooks powered by AMD A6 and MediaTek Helio processors.



Up to **75% less time** editing photos*†Δ



Up to **42% less time** working with documents and spreadsheets*†Δ



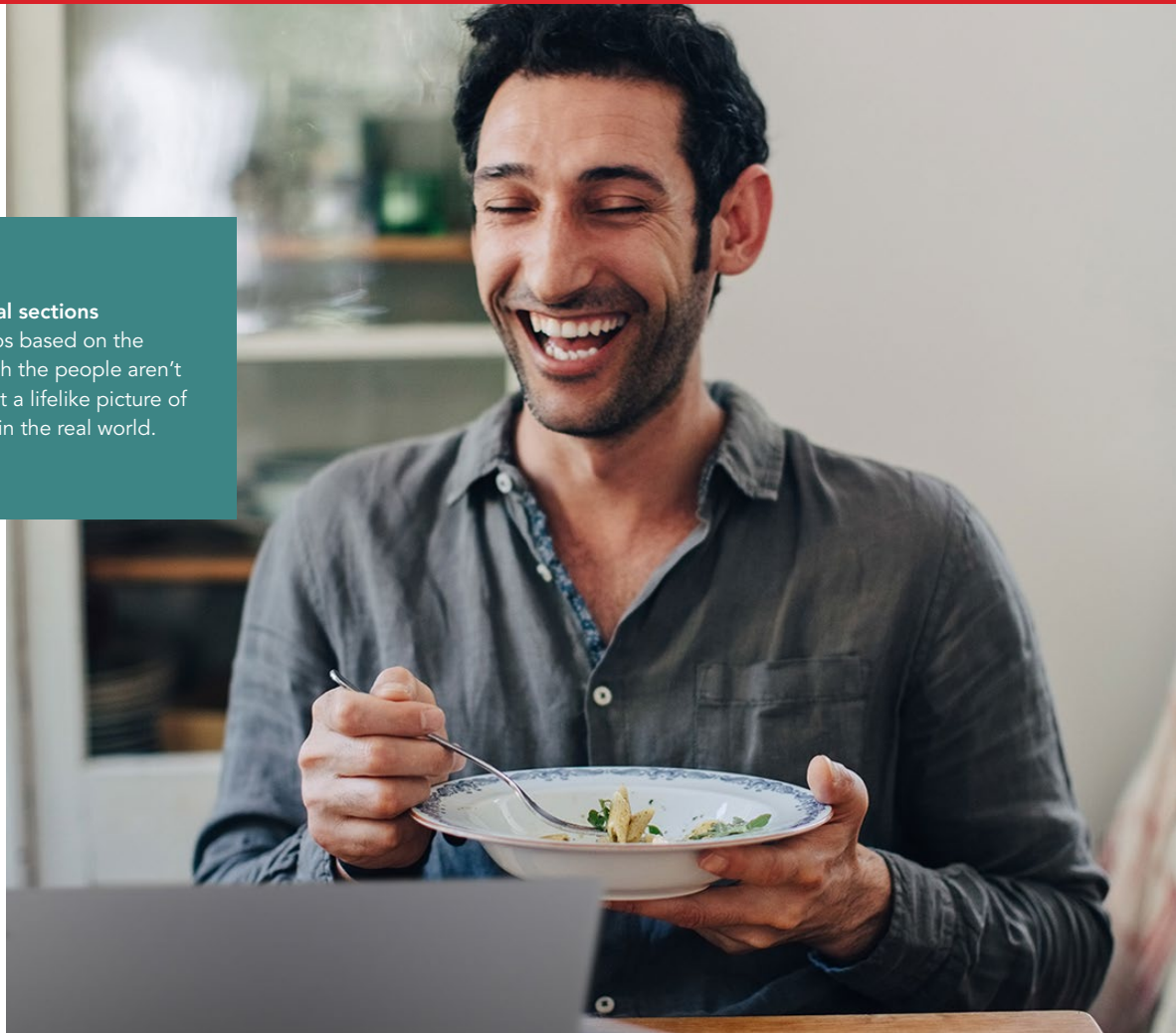
Up to **56% less time** collaborating on presentations*†Δ

* While connected to a four-way Google Meet call

† Acer Spin CP713-2W-5874 powered by an Intel Core i5-10210U processor and a HP Chromebook x360 14c-ca0053dx powered by an Intel Core i5-10110U processor compared to a HP 14A G5 TPM-Q216 with an AMD A6-9220C processor and a Lenovo Duet CT-X636F with MediaTek P60T processor

Δ See [the science behind this report](#) for detailed system configurations and benchmark results.

In this report, text in the **teal sections** represents fictional scenarios based on the results of PT testing. Though the people aren't real, the scenarios represent a lifelike picture of the benefits users may see in the real world.



How we tested

To compare the responsiveness of each Chromebook, we hand-timed four different task sequences in work-related apps. During the tests, each Chromebook was connected to a four-way Google Meet call. This reflects a real-world use case where employees need to work and collaborate while staying connected to their coworkers. Because multitasking is so common in the workplace, it pays to have a Chromebook that can handle the extra load.



[^] See [the science behind this report](#) for detailed system configurations and benchmark results.

Xiamin turns the doorknob to her usual home office space, but stops short of going inside. It feels more like a *living-room office* kind of day—so she sets up her Intel Core i5 processor-powered Chromebook on the living room coffee table and steals a bit of morning sunlight from her houseplants.

Energized and ready to take on the day, Xiamin uses her Chromebook to quickly join her team on Google Meet.



Complete daily tasks in less time while multitasking

The Chromebooks powered by Intel Core processors saved time in a variety of document and spreadsheet-based tasks. For example, when opening a Microsoft Excel document in Google Sheets™:

- **The Intel Core i5 CPU-powered Chromebook saved 27.4 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i5 CPU-powered Chromebook saved 18.2 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 23.1 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 13.9 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook

Save up to 34.6 seconds working with documents and spreadsheets during a Google Meet call with Google Meet, Google Drive™, and Google Sheets

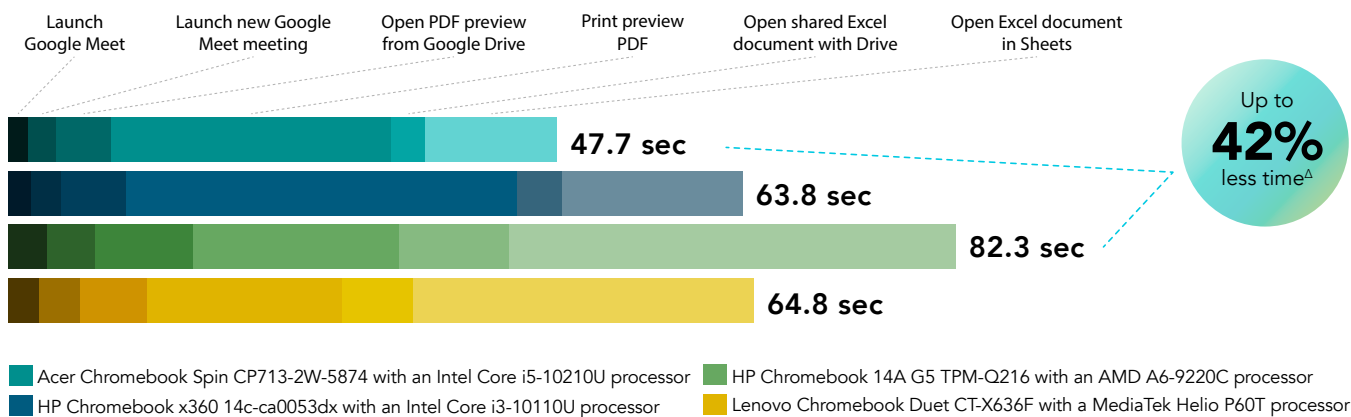


Figure 1: Time (in seconds) to complete a set of document and spreadsheet-related tasks while connected to a four-way Google Meet session. Less time is better. Source: Principled Technologies.

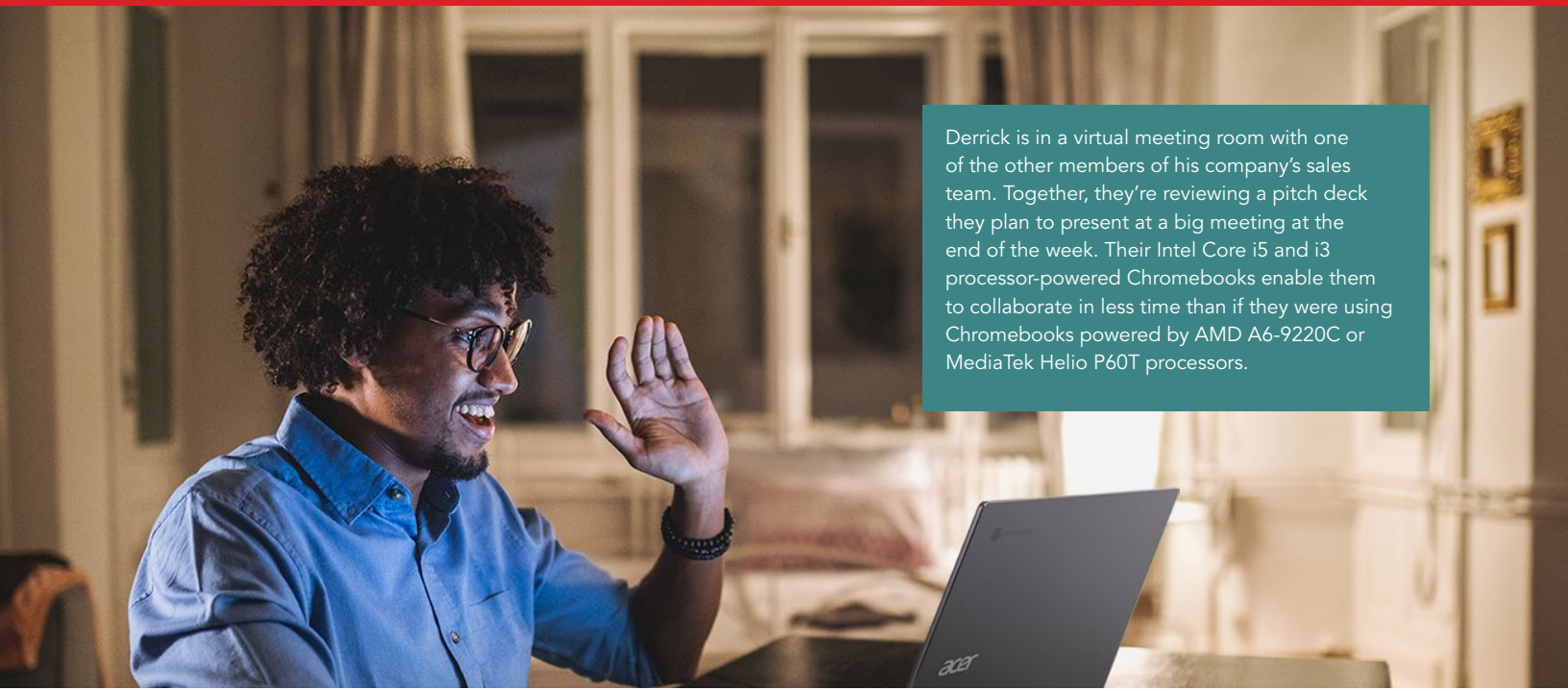
Google Meet

Google has made their premium video conferencing product free and available to the general public. According to Google, the app is used in schools, governments, and companies worldwide.¹

Google Workspaces

In October 2020, Google rebranded its G Suite app offerings as Google Workspace—but you'll still get the same productivity and collaboration tools you've used in the past, including Google Docs™, Google Slides™, Google Meet, Google Drive, and more.²

^A See [the science behind this report](#) for detailed system configurations and benchmark results.



Derrick is in a virtual meeting room with one of the other members of his company's sales team. Together, they're reviewing a pitch deck they plan to present at a big meeting at the end of the week. Their Intel Core i5 and i3 processor-powered Chromebooks enable them to collaborate in less time than if they were using Chromebooks powered by AMD A6-9220C or MediaTek Helio P60T processors.

Collaborate on sales pitches in less time

In our tests, the Chromebooks powered by Intel Core processors saved time when collaborating on a presentation during a meeting. For example, when opening a shared Google Slides presentation:

- **The Intel Core i5 CPU-powered Chromebook saved 12.1 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i5 CPU-powered Chromebook saved 7.2 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 11.7 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 6.8 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook

Save up to 34.6 seconds collaborating on presentations during a Google Meet call with Google Slides and Google Drive

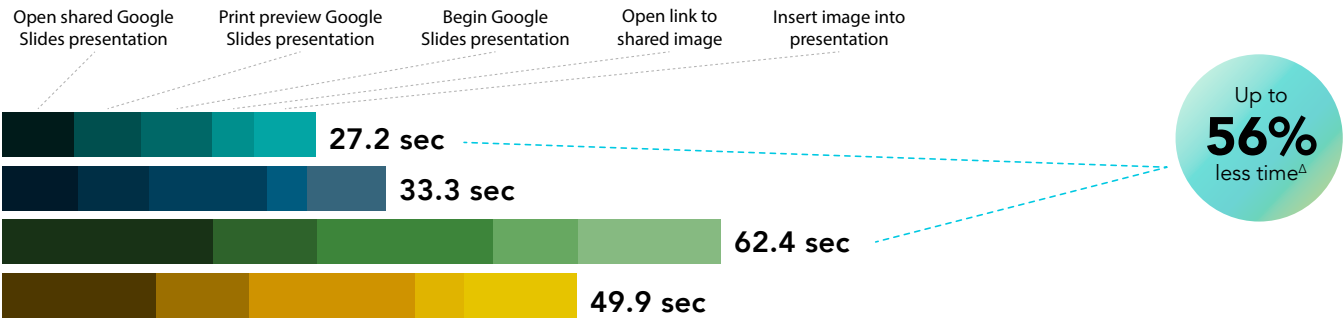


Figure 2: Time (in seconds) to complete a set of presentation-related tasks while connected to a four-way Google Meet session. Less time is better. Source: Principled Technologies.

[^]See [the science behind this report](#) for detailed system configurations and benchmark results.



Nadia has her hands full lately—she’s in charge of three big projects that all have deadlines coming up soon. She’s not worried, though. Nadia’s Intel Core i5 processor-powered Chromebook helps her keep in touch with all her collaborators and adjust the course of each project accordingly, enabling her to open and review critical documents in less time than it would take with an AMD A6-9220C or MediaTek Helio P60T processor-powered Chromebook.

Manage projects in less time while multitasking

In our tests, Chromebooks powered by Intel Core processors saved time when working with Microsoft Word documents. For example, while opening a Word document in Google Docs:

- **The Intel Core i5 CPU-powered Chromebook saved 8.7 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i5 CPU-powered Chromebook saved 6.8 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 8.3 seconds** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 6.4 seconds** vs. the MediaTek Helio P60T CPU-powered Chromebook

Save up to 15.0 seconds reviewing documents during a Google Meet call with Google Drive

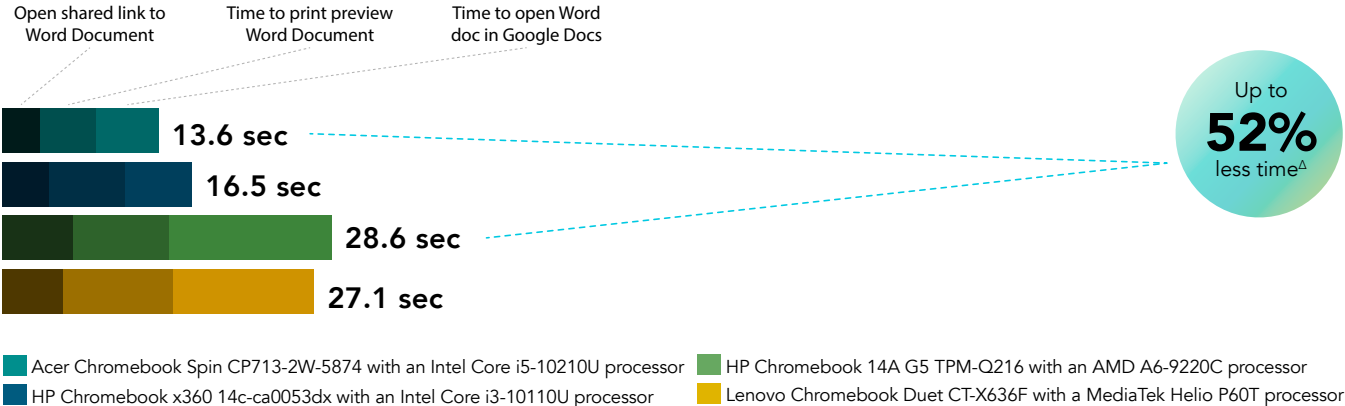
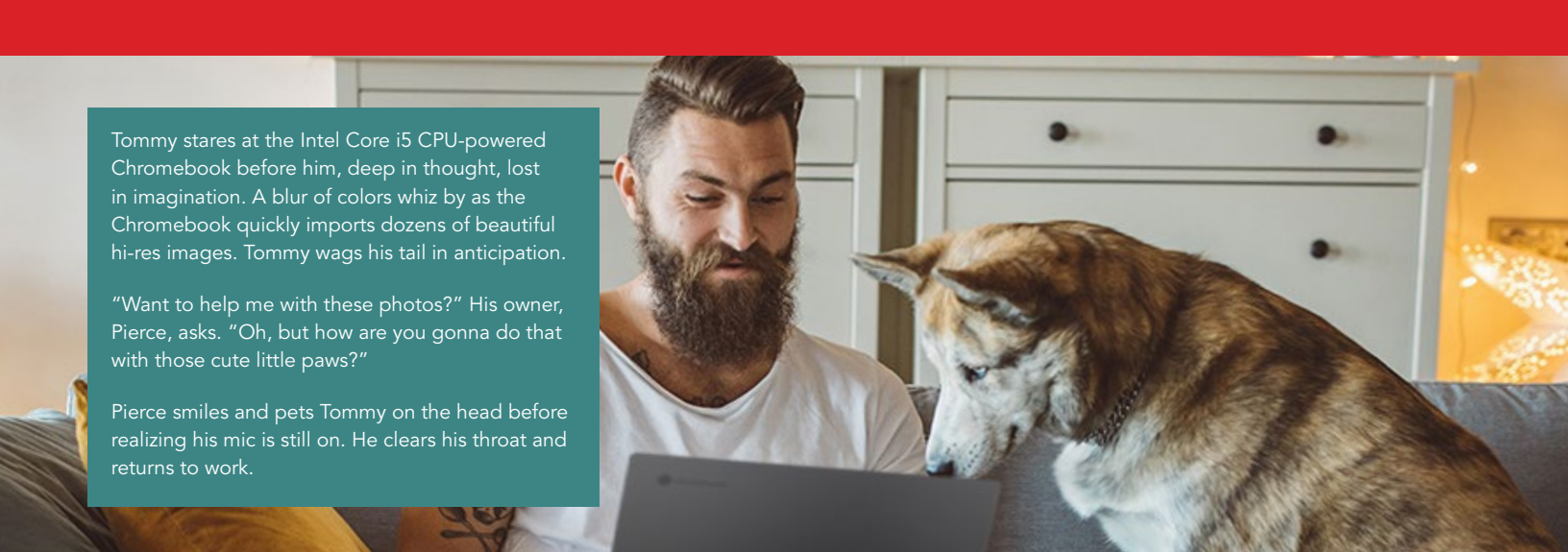


Figure 3: Time (in seconds) to complete a set of document-related tasks while connected to a four-way Google Meet session. Less time is better. Source: Principled Technologies.

^Δ See [the science behind this report](#) for detailed system configurations and benchmark results.



Tommy stares at the Intel Core i5 CPU-powered Chromebook before him, deep in thought, lost in imagination. A blur of colors whiz by as the Chromebook quickly imports dozens of beautiful hi-res images. Tommy wags his tail in anticipation.

“Want to help me with these photos?” His owner, Pierce, asks. “Oh, but how are you gonna do that with those cute little paws?”

Pierce smiles and pets Tommy on the head before realizing his mic is still on. He clears his throat and returns to work.

Create content in less time while multitasking

The two Intel Core CPU-powered Chromebooks we tested saved a significant amount of time in our photo editing scenario. For example, when exporting a set of 140 photos:

- **The Intel Core i5 CPU-powered Chromebook saved 3 min, 44 sec** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 3 min, 36 sec** vs. the AMD A6-9220C CPU-powered Chromebook
- **The Intel Core i5 CPU-powered Chromebook saved 2 min, 14 sec** vs. the MediaTek Helio P60T CPU-powered Chromebook
- **The Intel Core i3 CPU-powered Chromebook saved 2 min, 6 sec** vs. the MediaTek Helio P60T CPU-powered Chromebook

Save up to 8.2 minutes editing photos during a Google Meet call with Google System, Adobe Lightroom®, Adobe Photoshop® Express, and Google Tour Creator

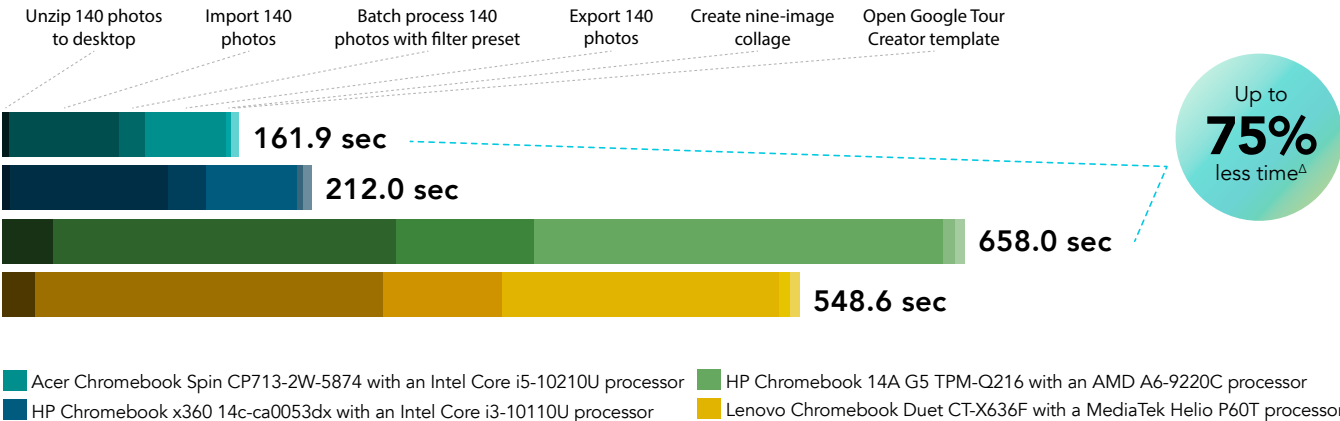


Figure 4: Time (in seconds) to complete a set of photo-related tasks while connected to a four-way Google Meet session. Less time is better. Source: Principled Technologies.

Adobe Lightroom
 Adobe Lightroom is a free photo editing and camera app that enables you to use customizable filters and other options to create your next photography project.³

Adobe Photoshop Express
 Photoshop Express is a free photo editing app for Android™ devices. The integrations in Photoshop Express enable you to pull photos from Google Photos and other image hosting apps and websites.⁴

^Δ See [the science behind this report](#) for detailed system configurations and benchmark results.

After a long day of editing photos, Pierce looks online for some new toys for Tommy. His Intel Core i5 processor-powered Chromebook loads pages and interactive web tools with ease. Finally, he finds the perfect toy and places an order. With any luck, it'll keep Tommy occupied and off-camera for Pierce's next co-working session.

Better web-based benchmark performance

In addition to the hand-timed multitasking scenarios, we tested each Chromebook with WebXPRT 3, a browser benchmark that uses HTML5 and JavaScript-based scenarios to compare how different devices handle real-world tasks in online apps and webpages. To learn more about WebXPRT 3, visit <https://webxpert.com>.

As Figure 5 shows, the Intel Core i5 and i3 processor-powered Chromebooks each achieved more than twice the score of the AMD A6-9220C and MediaTek Helio P60T processor-powered Chromebooks.

WebXPRT 3 benchmark score

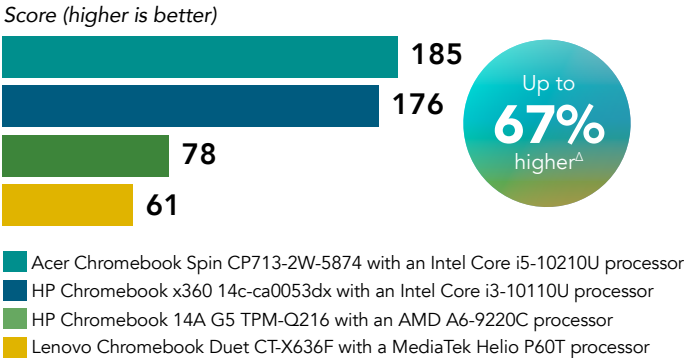


Figure 5: WebXPRT 3 web-based benchmark scores. A higher score is better. Source: Principled Technologies.



[^] See [the science behind this report](#) for detailed system configurations and benchmark results.



Conclusion

If you want your employees to be able to connect and work with each other throughout the day, they'll need Chromebooks capable of running productivity apps and video chat software at the same time. In our tests, Chromebooks powered by Intel Core i5-10210U and Intel Core i3-10110U processors saved time on a variety of tasks while connected to Google Meet sessions compared to Chromebooks powered by AMD A6-9220C and MediaTek Helio P60T processors.

To learn more about Chromebooks like the ones we tested, visit <https://intel.com/Chromebooks>.

- 1 Javier Soltero, "Google Meet premium video meetings—free for everyone," accessed January 24, 2021, <https://www.blog.google/products/meet/bringing-google-meet-to-more-people/>.
- 2 "Introducing Google Workspaces and a new set of offerings to better meet your needs," accessed January 24, 2021, <https://workspaceupdates.googleblog.com/2020/10/introducing-google-workspace.html>.
- 3 "Adobe Lightroom," accessed January 24, 2021, https://play.google.com/store/apps/details?id=com.adobe.lrmobile&hl=en_US.
- 4 "Adobe Photoshop Express," accessed February 11, 2021, <https://www.adobe.com/products/photoshop-express.html>.

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