

Chromebooks with MediaTek Kompanio Processors Excel At Minecraft



Up to **3X Faster**
App Launch Time



Up to **3.8X Faster**
Demo Lesson
Loading Time



Up to **5.2X Higher**
Frames Per Second
When Playing a Lesson



Up to **1.4X Longer**
Battery Life in
Multitasking Scenarios

Achieve More Engaging Minecraft Experiences For Your Students

Over 50 million students use Chromebooks for school and more than 35 million students and teachers across 115 countries are licensed to use Minecraft Education Edition, a popular video game that promotes active learning and allows students to explore and construct their virtual worlds, offering endless creativity and adventure. Minecraft can be tailored to different subjects and curriculum objectives, making it a valuable tool for teaching everything from math and science to history and literature.

Providing students with a seamless and swift Minecraft experience on Chromebooks is instrumental and can be significantly enhanced by using Chromebooks that are powered by efficient processors that are designed to optimize performance. With faster processing speeds and efficient resource utilization, students can enjoy quicker downloads, smoother gameplay, and enhanced graphics quality, ultimately unlocking the full potential of their gaming and learning experience on Chromebook devices.



*The showcased Minecraft UI is only for illustrative purposes

MediaTek, the No. 1 processor maker for Arm-based Chromebooks, is committed to providing students and teachers with stress-free, productive, and engaging classroom experiences. To fulfill this commitment, MediaTek crafts processors that boast exceptional power efficiency, ensuring true all-day battery life. Leveraging octa-core processor architectures, MediaTek further enhances productivity in multitasking scenarios helping students stay engaged even when running demanding workloads.



*The showcased Minecraft UI is only for illustrative purposes

Using Student Chromebooks powered by MediaTek Kompanio 520 and 528 processors provides your students with faster Minecraft app launch times, shorter load times for demo lessons, faster launch times for code builder sessions and stress-free all-day battery life – overall, Minecraft runs smoother and delivers a more realistic and immersive experience and all of this is true even when students play across multiple worlds, and when they multitask.



*The showcased Minecraft UI is only for illustrative purposes

Testing Method

We compared the performance of three Chromebooks with similar specifications¹ powered by the following processors:



MediaTek Kompanio 528
Processor



MediaTek Kompanio 520
Processor



Intel Celeron N4500
Processor

We tested these Chromebooks across three user scenarios:

Scenario 1 consisted of running Minecraft Education Edition in a single tasking scenario and measuring the performance of common tasks such as app launch time, demo lesson loading time, code builder window launch time and the number of Frames Per Second (FPS) the processor can drive on the device display. In addition, an average loading time for 12 lessons tested across 6 different Minecraft worlds was performed to ensure sufficient coverage across a broad range of use cases.

Scenario 2 consisted of running Minecraft Education Edition in a multitasking scenario with a Google Meet video conference. The Google Meet session included two participants with full-screen sharing and a video blur virtual background. In addition, this scenario included measuring the performance of common tasks such as app launch time, demo lesson loading time, code builder window launch time, task switch time, and the number of Frames Per Second (FPS) the processor can drive on the device display.

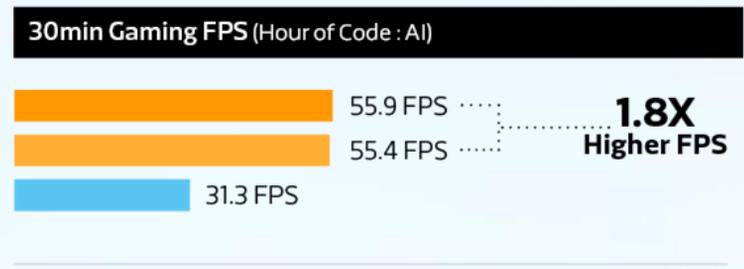
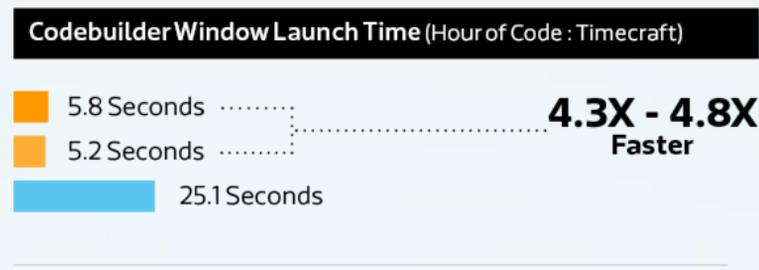
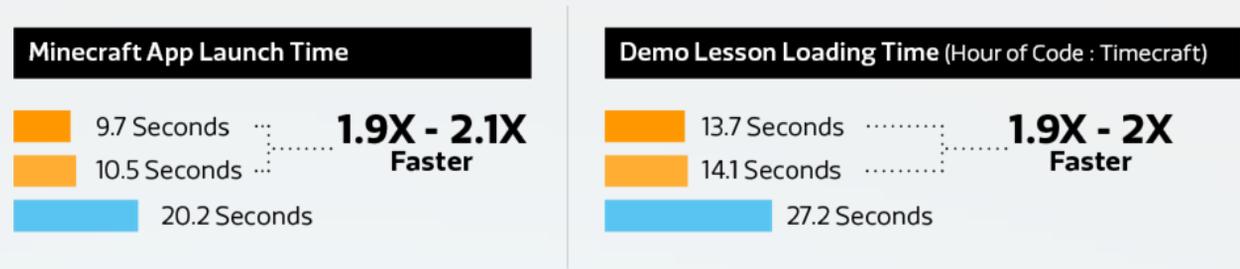
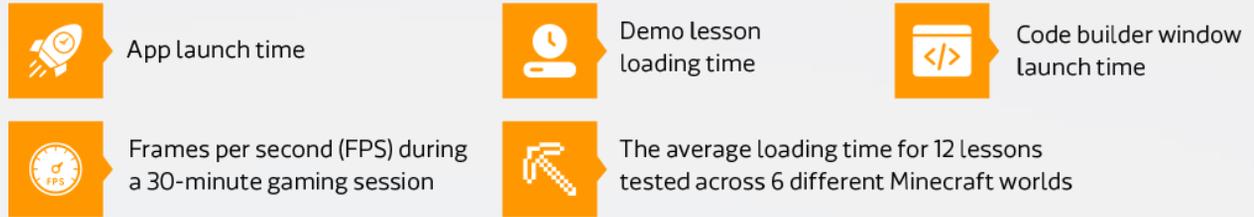
Scenario 3 consisted of measuring battery life performance of a 30-minute session with Minecraft Education Edition running in addition to a concurrent Google Meet video conference. Similar to the previous scenario, the Google Meet video conference session included two participants with full-screen sharing and a video blur virtual background.



1. All devices were equipped with 4GB RAM, 32/64GB storage & 11.6" HD (1366 x 768) display resolution

Scenario 1 Results | Minecraft Single Tasking Performance

Factors measured:



- MediaTek Kompanio 528 Processor¹
- MediaTek Kompanio 520 Processor²
- Intel® Celeron® N4500 Processor³

Figure 1: Comparing the performance of Chromebooks powered by the MediaTek Kompanio 520 and 528 processors to that of Chromebooks powered by the Intel® Celeron® N4500 processor during Minecraft EDU testing.

1. SW Version : R115.15474.70.0
 2. SW Version : R115.15474.70.0 / R115.15474.84.0
 3. SW Version : R115.15474.70.0 / R115.15474.84.0

Scenario 2 Results | Minecraft + Google Meet Multitasking Performance

Factors measured:



App launch time



Demo lesson loading time



Code builder window launch time



Frames per second (FPS) during a 30-minute gaming session



Task switching with lesson reloading time

Minecraft App Launch Time



Demo Lesson Loading Time (Hour of Code : AI)



Codebuilder Window Launch Time (Hour of Code : AI)



Task Switch : Lesson Reload Time (Hour of Code : AI)



30min Gaming FPS (Hour of Code : Escape Estate)



MediaTek Kompanio 528 Processor¹

MediaTek Kompanio 520 Processor²

Intel® Celeron® N4500 Processor³

Figure 2: Comparing the performance of Chromebooks powered by the MediaTek Kompanio 520 and 528 processors to that of Chromebooks powered by the Intel® Celeron® N4500 processor during Minecraft EDU Multitasking testing.

1. SW Version : R115.15474.70.0

2. SW Version : R115.15474.70.0

3. SW Version : R115.15474.70.0

Scenario 3 Results | Minecraft + Google Meet Battery Life Performance

Factor measured:



Minecraft EDU Lesson : Hour of Code : AI.

Simulated & Normalized⁴ Battery Life (hr)

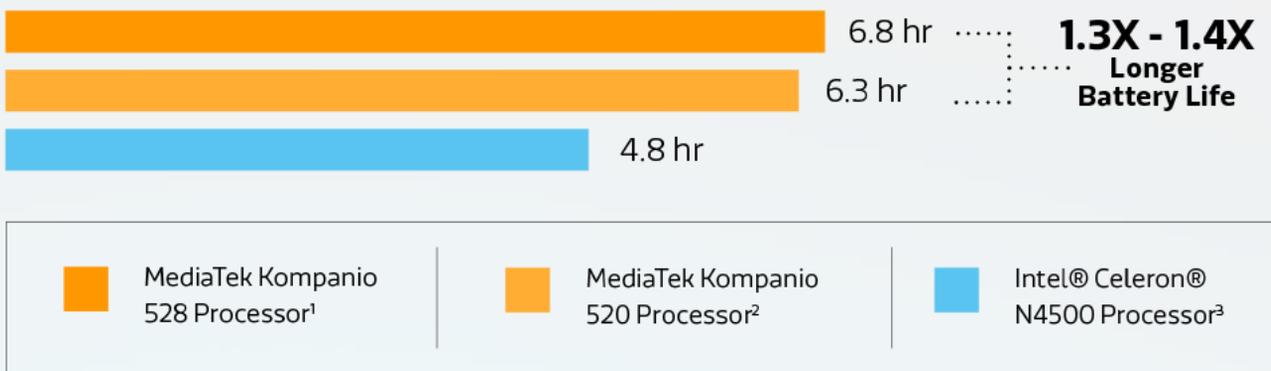


Figure 3: Comparing the performance of Chromebooks powered by the MediaTek Kompanio 520 and 528 processors to that of Chromebooks powered by the Intel® Celeron® N4500 processor during Minecraft EDU Multitasking testing.



*The showcased Minecraft UI is only for illustrative purposes

1. SW Version : R116.15509.81.0
2. SW Version : R116.15509.81.0
3. SW Version : R116.15509.81.0
4. Measurements are normalized to 47Wh battery size

Benchmarking Summary

Chromebooks powered by MediaTek Kompanio 520 and 528 Processors provide:

1. **Low application, lesson and code builder launch times** when playing Minecraft allowing students to dive right into their Minecraft adventures with minimal delay, maximizing their immersion and engagement in the virtual world.



Up to **3X Faster**
App Launch Time



Up to **3.8X Faster** Demo
Lesson Loading Time



5.6X Faster Code Builder
Window Launch Time

2. **Swift task-switching**, heightened productivity, and seamless multitasking, which significantly enhance students' Minecraft gaming experience.
3. **Higher FPS (Frames Per Second)** allowing students to experience smoother and more responsive gameplay, enabling them to navigate challenges, build structures, and collaborate seamlessly in Minecraft, enhancing their overall gaming and learning experience.
4. **Stress-free all-day battery life** for fewer interruptions and more productive and engaging learning and gaming sessions.



Up to **13.2X Faster** Task
Switching with Reduced
Lesson Reloading Time



Up to **5.2X Higher**
Frames Per Second
When Playing a Lesson



Up to **1.4X Longer**
Battery Life in
Multitasking Scenarios

5. **Superior multitasking performance** owing to MediaTek's octa-core architecture (versus 2 CPU cores on the competitor device) helping students stay engaged even when running demanding workloads.

Key Takeaways



MediaTek Kompanio 520 and 528 processors have proven to be exceptionally well-suited for Chromebooks, offering a range of advantages that significantly enhance students' experience, including when using applications like Minecraft for Education.

Here's why MediaTek Kompanio stands out:

- 1. Arm and Android Native Execution:** MediaTek Kompanio processors leverage Arm architecture, providing native support for Android applications. Since Minecraft Education Edition is an Android app, running it on a Chromebook with MediaTek Kompanio processors ensures seamless and optimized performance. This compatibility results in faster load times and smoother gameplay.
- 2. Octa-Core Architecture:** MediaTek Kompanio 520 and 528 processors incorporate an octa-core architecture, consisting of two high-performance cores and 6 efficiency cores designed to handle various tasks optimally. Students can switch between applications, run educational tools, and engage in gaming with remarkable speed and fluidity.
- 3. Enhanced Power Efficiency:** MediaTek's processors are designed to maximize battery life and support extended usage throughout the school day. Longer battery life means fewer interruptions and more productive stress-free learning or gaming sessions.
- 4. Improved Graphics:** MediaTek Kompanio processors also excel in delivering impressive graphics quality. This is particularly beneficial for Minecraft, where enhanced graphics can provide a more immersive and engaging gaming experience. Higher frame rates and smoother graphics contribute to a heightened sense of realism within the virtual world.

In summary, MediaTek Kompanio processors excel in the Chromebook ecosystem due to their Arm and Android native execution capabilities, octa-core architecture for superior multitasking, enhanced power efficiency, improved graphics, and reduced load times. These features collectively contribute to longer battery life, high productivity, and an overall enhanced experience when using Minecraft for Education.



[LEARN MORE ►](#)