**RETURN ON INVESTMENT**

Achieve payback of the upgrade cost in **as few as 15 hours of resource-intensive tasks**

Value calculated using increased productivity based on the SPECworkstation 3 Energy subtest score

**EVERYDAY PERFORMANCE**

Accomplish day-to-day productivity tasks faster with up to **12% better system responsiveness**

Based on SYSmark 2018 and HDXPRT 4 overall performance scores

**RESOURCE-INTENSIVE WORK**

Get projects out the door faster with up to **82% better material preparation response times**

Based on SPECworkstation 3, Cinebench R20, and PugetBench overall performance scores

# Increase output and productivity with the Dell Precision 3551 mobile workstation

## Compared to the Dell Latitude 5511 laptop

A Dell™ Latitude™ laptop is a great fit for office productivity tasks like Zoom/Teams collaborations, presentations, and email. However, if you're also tackling design, media, or photography projects, consider upgrading to an entry-level Dell Precision™ mobile workstation instead. Why? Because mobile workstations are specifically designed to handle these types of resource-intensive work, which means you can knock items off your to-do list and move on to the next project sooner. This increased capability comes at a steeper price, but our research shows the performance benefits quickly outweigh the difference in cost.

To determine the return on investment (ROI) gains you could expect by choosing an entry-level Dell Precision mobile workstation instead of a Latitude laptop, we conducted benchmark and scenario-based testing on two 15-inch Windows 10 Pro computers: the Dell Precision 3551 mobile workstation and the Dell Latitude 5511 laptop. Then, we calculated how long it could take to pay back the additional cost of the entry-level workstation for each scenario.

Dell Precision 3551 mobile workstation

## Important projects deserve a system that goes above and beyond

The superior processor, advanced graphics, and additional memory an entry-level workstation provides could be just the boost you need to increase output and productivity. In this study, we compared the following 15-inch Windows 10 Pro systems, both equipped with the same 1TB PCIe® SSD storage drive during testing:*


**Dell Precision 3551 mobile workstation**
powered by a 10th Gen Intel® Core™ i9-10885H (8-core) processor with NVIDIA® Quadro™ P620 graphics and 64 GB of memory.

**Dell Latitude 5511 laptop**
powered by a 10th Gen Intel Core i7-10850H (6-core) processor with NVIDIA GeForce MX250 graphics and 16 GB of memory.

**ROI calculations:** As of December 9, 2020, the entry-level mobile workstation we tested cost $699.73 more than the premium laptop we tested.[1,2] Our ROI calculations are based on the average hourly compensation for workers classified by the Bureau of Labor Statistics as 'professional and technical services' workers. These include occupations such as architects, advertising and design professionals, and CAD workers. This average compensation is $57.18 per hour.[3] For a full breakdown of costs and projections, read the science behind the report.

*The SPECworkstation 3 benchmark requires 1 TB of storage space to run, and the Latitude laptop we tested shipped with a Class 40 256 GB SSD. Because we wanted to run this benchmark on both systems, we replaced the 256GB storage in the Latitude laptop with the Class 50 1TB storage drive from the Precision, and tested the systems sequentially. We chose this path to make the test as fair as reasonably possible given the requirements of the SPECworkstation 3 benchmark.

## Everyday performance

Whether you're browsing the web or creating a multi-page brochure, even a modest increase in system responsiveness can boost productivity. The scores in Figures 1 and 2 represent system performance from two different perspectives. The SYSmark 2018® scores reflect how each system handles day-to-day business tasks. And the HDXPRT scores reflect how Windows PCs handle other common media tasks, such as photo editing, video conversion, and music editing. Based on these everyday performance wins, you could recoup the upgrade cost in as few as 103 hours doing these tested tasks.

SYSmark 2018: **10% better responsiveness** during day-to-day tasks

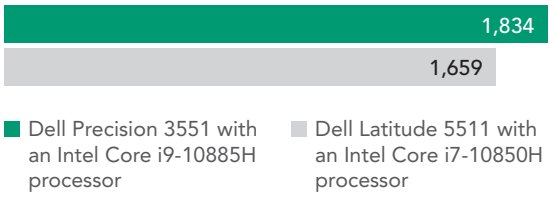



Figure 1: SYSmark 2018 overall performance qualification scores. Higher is better. Source: Principled Technologies.

HDXPRT 4: **12% better responsiveness** during common media tasks

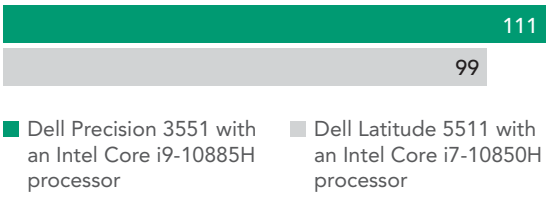



Figure 2: HDXPRT 4 overall scores. Higher is better. Source: Principled Technologies.

**SYSmark 2018** is an application-based benchmark that puts devices under test through real-world workloads running the same applications business users work with every day.[4]

**HDXPRT 4** is an application-based benchmark that gauges a Windows 10 device's performance by measuring how well it handles workloads that include real-world media tasks.[5]

# Specialized workloads

The SPECworkstation® 3 scores in Figure 3 reflect how quickly the systems handle the more resource-intensive tasks you might tackle, such as 3D modeling, rendering an MRI scan, and running a complex financial algorithm. Based on these benchmark results, you could achieve payback on the upgrade cost in as few as 15 hours and an average of 44 hours when tackling these specialized workloads.

SPECworkstation 3: Up to **82% better responsiveness** across diverse tasks

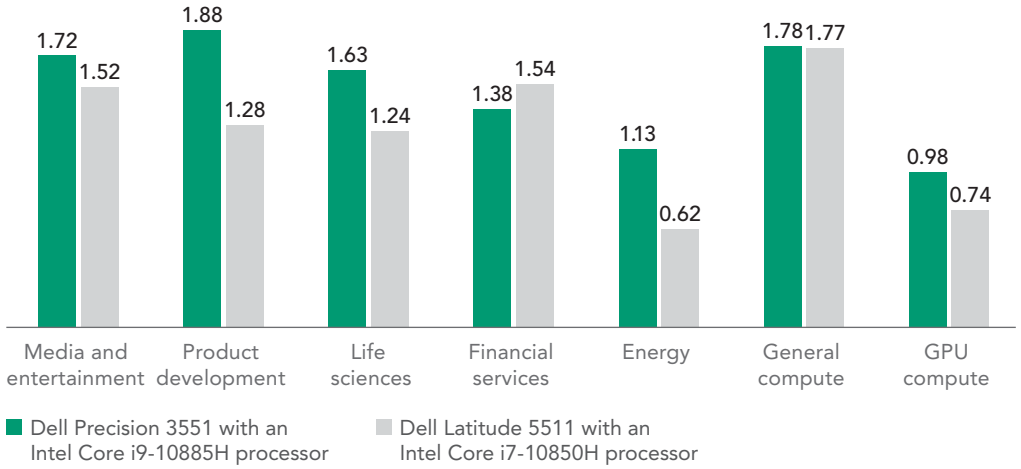



Figure 3: SPECworkstation 3 scores. Higher is better. Source: Principled Technologies.

**SPECworkstation 3** is a benchmark that evaluates workstation performance based on diverse applications sorted into media and entertainment, product development, life sciences, financial services, energy, general operations, and GPU compute workloads.[6]

# Resource-intensive applications

While the test results in the previous sections provided a general performance overview of each system, we also want to focus on a key benefit of owning a mobile workstation: completing design, media, and photography projects faster. So, we hand-timed how long it took each system to complete a series of content creation tasks in two Adobe® Creative Cloud® workflows. In this section, we report those results, along with several other benchmark scores. To see the ROI figures for these results, read the science behind the report.

**17% less time** to complete an Adobe Photoshop® workflow

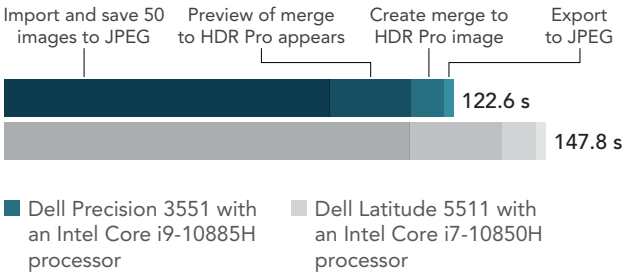



Figure 4: Time (in seconds) to perform tasks in Adobe Photoshop. Lower is better. Source: Principled Technologies.

**19% less time** to complete an Adobe Lightroom® workflow

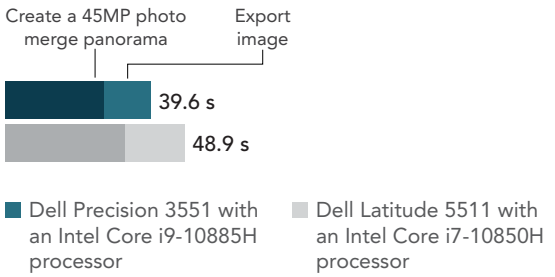



Figure 5: Time (in seconds) to perform tasks in Adobe Lightroom. Lower is better. Source: Principled Technologies.

PugetBench: Up to **66% better creative workflow performance*** across Adobe Creative Cloud workloads

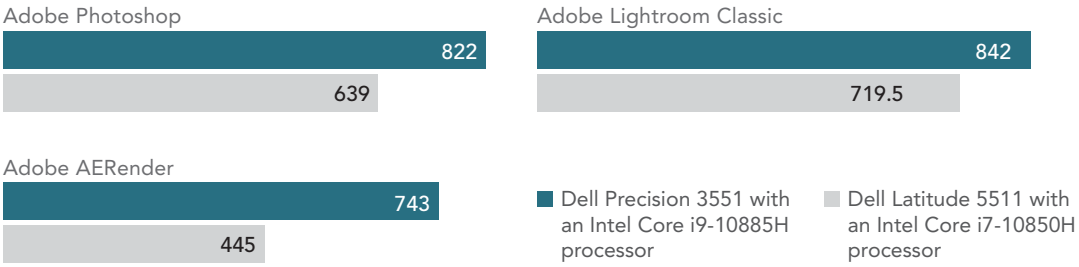



Figure 6: PugetBench for Adobe Creative Cloud benchmark scores. Higher is better. Source: Principled Technologies.

*According to Puget Systems, "To address the need for comprehensive, repeatable, and consistent benchmark testing, Puget Systems is developing benchmarks that are designed to thoroughly test many of Adobe's most popular applications using real-world projects and workflows. In fact, these are the same benchmarks we use to publish regular hardware articles looking at the performance of the latest CPU, GPU, and other hardware components."[7]

SPECviewperf 13®: Up to **15x better 3D graphics performance** across diverse workloads

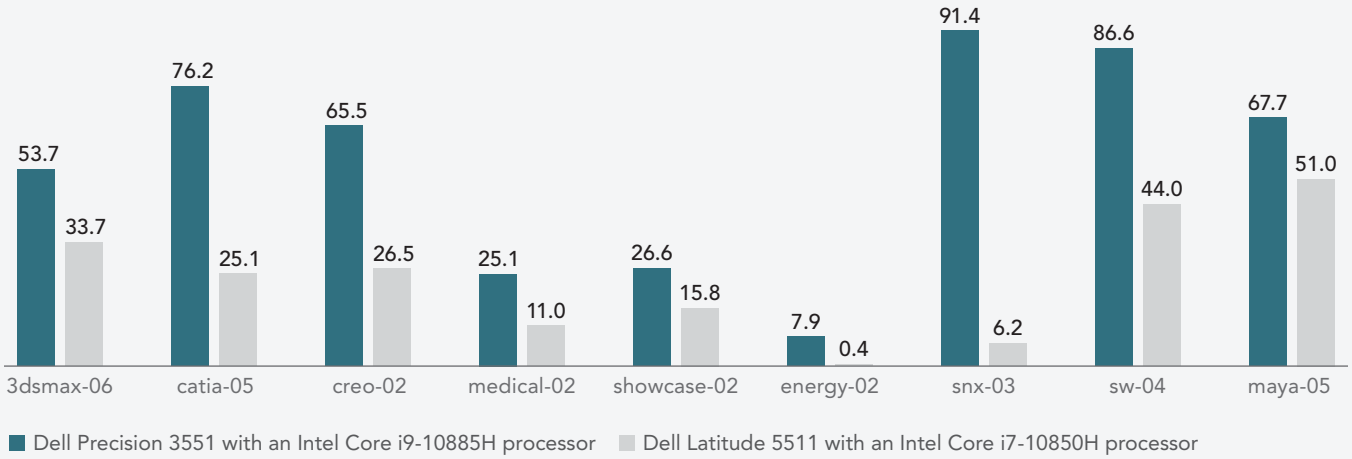



Figure 7: SPECviewperf 13 scores. Higher is better. Source: Principled Technologies.

Cinebench R20 CPU: **13% better basic computing results** on this benchmark

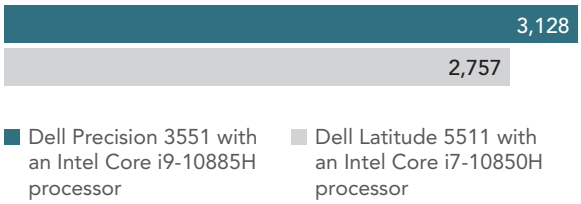
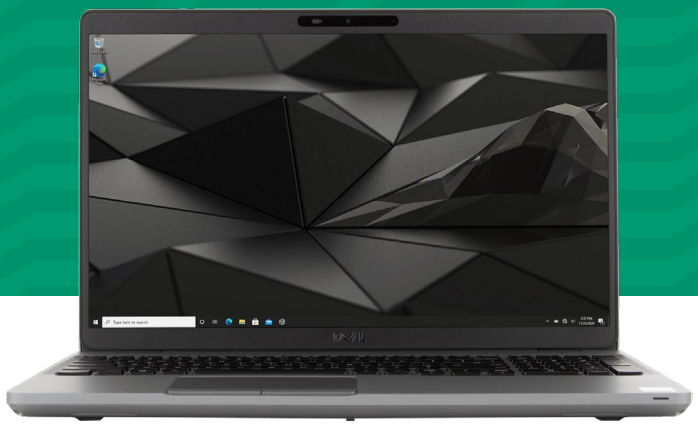



Figure 8: Cinebench R20 CPU score. Higher is better. Source: Principled Technologies.

**PugetBench for Adobe Creative Cloud benchmarks** test a system's performance using real-world projects and workflows that content creators, engineers, scientists, and other professionals use.[8]

**SPECviewperf 13** is a benchmark that measures 3D graphics performance with workloads, called viewsets, that "represent graphics content and behavior from professional applications."[9]

**Cinebench R20** is a benchmark that integrates common user tasks with Cinema 4D to measure a system's performance.[10]



## Conclusion

We found that the Dell Precision 3551 mobile workstation outperformed the Dell Latitude 5511 laptop in almost every category we tested. These performance wins were particularly true with the most demanding content-creation and workstation applications. By choosing the Precision 3551 mobile workstation instead of the Latitude 5511 laptop, you could see a return on your additional investment pretty quickly (depending on your workloads), and potentially have enough extra time to squeeze out another project or two or tackle other items on your to-do list.

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1 Dell, "Latitude 5511 Laptop," accessed December 10, 2020, https://www.dell.com/en-us/work/shop/dell-laptops-and-notebooks/latitude-5511-laptop/spd/latitude-15-5511-laptop/cto3l551115us?view=configurations&configurationid=c3e3d50c-474b-4d13-a9a0-0180da37ebc6.

2 Dell, "New Precision 3551 Mobile Workstation," accessed December 10, 2020, https://www.dell.com/en-us/work/shop/workstations-isv-certified/new-precision-3551-mobile-workstation/spd/precision-15-3551-laptop/xctop355115us_vivp?view=configurations&configurationid=4adce606-e961-4f4f-a2dc-8940e3a2c307.

3 U.S. Bureau of Labor Statistics,"Industries at a Glance: Professional, Scientific, and Technical Services: NAICS 54," accessed December 11, 2020, https://www.bls.gov/iag/tgs/iag54.htm.

4 BAPCo, "SYSmark 2018," accessed November 18, 2020, https://bapco.com/products/sysmark-2018/.

5 Principled Technologies, "HDXPRT 4," accessed November 18, 2020, https://www.principledtechnologies.com/benchmarkxprt/hdxprt/.

6 Standard Performance Evaluation Corporation, "SPECworkstation 3," accessed November 18, 2020, https://www.spec.org/gwpg/wpc.static/workstation3-info.html.

7 Puget Systems, "PugetBench Adobe Creative Cloud," accessed December 6, 2020, https://www.pugetsystems.com/labs/articles/PugetBench-for-Adobe-Creative-Cloud-1642/.

8 Puget Systems, "PugetBench," accessed November 18, 2020, https://www.pugetsystems.com/benchmarks/.

9 Standard Performance Evaluation Corporation, "SPECviewperf 13 benchmark," accessed November 18, 2020, https://www.spec.org/gwpg/gpc.static/vp13info.html.

10 Maxon, "Who Should Use Cinebench?" accessed November 18, 2020, https://www.maxon.net/en/cinebench.


**Read the science behind this report at http://facts.pt/oAJ2y0s ►**

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This project was commissioned by Dell Technologies.