



# GIVE YOUR SMALL BUSINESS A BOOST WITH POWERFUL MODERN PCS

Small-business-targeted tests show that modern PCs powered by 8th Generation Intel® Core™ processors running Windows® 10 Pro can deliver faster processing and better performance, compared with older devices upgraded to Windows 10 Pro.

## Small Businesses Perform Better with Modern Devices

Small-business needs are more demanding than ever, and the most current devices promise outstanding performance, reliability, and productivity to meet those needs. Employees armed with new devices have the power, speed, and mobility to stay on top of industry trends, maintain accurate inventories, stay current with vendor requirements, and, most important, satisfy customers' expectations of fast and accurate service.

With Windows® 7 end of life rapidly approaching, smaller organizations that are making the move from Windows 7 Professional to Windows 10 Pro face a choice—to upgrade their older, slower devices to Windows 10, or to replace their aging devices with newer ones built with modern processors and components. Businesses might be tempted to keep older devices to reduce capital expenses. However, older devices might not always meet the critical requirements of modern businesses, from speed and agility to compatibility, security, and mobility needs. Most data-intensive demands are better met when business tools are up-to-date, making use of the quick processing speeds of devices running current operating systems.

## Fast Productivity for Real-World Business

From retail sales and inventory control to complex engineering, financial records management, and product design, businesses need the right tools for the job. More and more, employees must multitask, running several apps at the same time, and still deliver fast, accurate information to coworkers and customers.

Organizations upgrading to Windows 10 Pro can work fast and seamlessly. Prowess testing shows that newer equipment with modern 8th Generation Intel® Core™ processors can handle the work better and perform faster, compared with older systems powered by prior-generation processors.<sup>1</sup>



Up to  
**3.4x faster**  
to export a graphics-rich Microsoft® PowerPoint® presentation as a video on a Dell™ XPS™ 13 powered by Windows® 10 Pro



Up to  
**2.1x faster**  
to export a dynamic slideshow from MOVAVI® Slideshow Maker on a Dell™ XPS™ 13 powered by Windows® 10 Pro



Up to  
**3.4x faster**  
to transcode a video on a Dell™ XPS™ 13 powered by Windows® 10 Pro



Up to  
**2x faster**  
to render a 3D graphic in Autodesk® AutoCAD® on a Dell™ XPS™ 13 powered by Windows® 10 Pro

# The Right Tools for the Most Demanding Jobs

Prowess Consulting conducted testing on a variety of systems and hardware to see whether there was conclusive proof that upgrading to modern equipment in tandem with a system update makes a difference in performance. Tests were designed to replicate relevant content creation and computer-aided design (CAD) workloads that are frequently seen in daily business activities. Typical small business workflows like exporting videos, creating dynamic slideshows, and creating 3D CAD designs require fast and reliable performance, so those activities were chosen to ensure that real-world business needs were addressed.

Modern devices with 8th Generation Intel Core processors were shown to deliver the full potential of upgrading to Windows 10 Pro, enabling up to 3.4x faster video exporting, up to 2.1x faster dynamic slideshow generation via MOVAVI® Slideshow Maker, up to 3.4x faster video transcoding, and up to 2x faster 3D rendering, compared with older systems powered by prior-generation processors.<sup>1</sup> The speed and reliability of newer devices can help keep organizations of all sizes competitive.

## System Upgrades Benefit from the Power of Modern Devices

Businesses making the transition from an outdated operating system to Windows 10 Pro and Microsoft® Office 365® gain the most benefit and make the best use of their investments when upgrading their devices in tandem. In addition to the performance gains identified, the newer devices also stand out compared to older devices because they offer biometric features and peripheral integration using USB-C® and Thunderbolt™ 3. Newer devices have long battery life and sleek, light designs that provide increased portability. They also provide a more seamless mobile experience to help remote workers stay connected.

Better device performance and expanded features can translate to a more efficient workforce, lower maintenance costs, less downtime, and more agile production. To keep employees productive, provide outstanding customer satisfaction, and meet vendor requirements, small businesses are smart to upgrade office desktops and staff laptops to newer devices built on 8th Generation Intel Core processors.

The Prowess Consulting test report, “**Empower Employees with Modern Tools,**” details all of the business scenario tests that were conducted, the hardware and systems that were used, and specific result metrics.

## Modern Businesses Need Modern PCs

Modern PCs running on 8th Generation Intel® Core™ processors unlock the full benefits of Windows® 10, enabling small businesses to thrive. An empowered workforce using modern devices can be more productive, and the right hardware and software combination can help protect against today's security threats, save on maintenance costs, streamline business processes, and provide an outstanding customer experience.

<sup>1</sup> Prowess. "Empower Employees with Modern Tools." July 2019. [www.prowesscorp.com/project/empower-employees/](http://www.prowesscorp.com/project/empower-employees/). Study commissioned by Intel and conducted by Prowess Consulting. Configurations: **1. Dell™ OptiPlex™ 3010 desktop**, powered by a 3rd Generation Intel® Core™ i5-3570 processor, with Western Digital® 500 GB hard-disk drive (HDD) 7k2 WD5000AAKX-60U6AA0, 2 x 4 GB Samsung® DDR3 PC-12800 800 MHz, Intel® HD Graphics Family, and Windows® 7 Professional Service Pack 1 Build 7601 (original operating system)/Windows 10 Pro Build 1803 17134.407 (upgraded operating system). **2. Dell™ XPS™ 14 L421X laptop**, powered by a 3rd Generation Intel Core i5-3371U processor, with SanDisk® 240 GB solid-state drive (SSD) SDSSDA-240G, 1 x 8 GB Hyundai® Electronics DDR3L PC3-12800 800 MHz, Intel® HD Graphics 4000, and running Windows 7 Professional Service Pack 1 Build 7601 (original operating system)/Windows 10 Pro Build 1803 17134.441 (upgraded operating system). **3. Dell™ Inspiron™ i5860-5790BLU desktop**, powered by an 8th Generation Intel Core i5-8400 processor, with 1 TB Seagate® HDD ST1000DM010, 1 x 8 GB Hyundai Electronics DDR4-2400 1,200 MHz, Intel® UHD Graphics 630, and Windows 10 Pro Build 1803 17134.345. **4. Dell XPS 13 9370 laptop**, powered by an 8th Generation Intel Core i5-8250U processor, with 256 GB Samsung® SSD PM981, 2 x 4 GB LPDDR3 on board, Intel UHD Graphics 620, and Windows 10 Pro 1803 Build 17134.407. See the paper for full configuration and testing details.



Software and workloads used in performance tests may have been optimized for performance only on Intel® microprocessors. Performance tests, such as SYSmark® and MobileMark®, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more complete information visit [www.intel.com/benchmarks](http://www.intel.com/benchmarks).

Performance results are based on testing by Prowess Consulting between October 1, 2018 and October 16, 2018, and may not reflect all publicly available security updates. See configuration disclosure for details. No product or component can be absolutely secure.

The analysis in this document was done by Prowess Consulting and commissioned by Intel.

Results have been simulated and are provided for informational purposes only. Any difference in system hardware or software design of configuration may affect actual performance.

Cost reduction scenarios described are intended as examples of how a given product, in the specified circumstances and configurations, may affect future costs and provide cost savings. Circumstances will vary. Prowess and Intel do not guarantee any costs or cost reduction.

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