Sogeti Smart Workspace recommends new PCs with Intel® Optane™ technology to enhance employee productivity

Executive Summary

Aging desktop computers and laptops struggle to keep up with the demands associated with modern businesses. Today's feature-rich applications, larger document and file sizes, user multitasking, and a flood of background processes slow computer performance. Working in tandem, Intel® Optane™ and Intel® QLC 3D NAND technologies combine the newest memory and Solid State Drive (SSD) characteristics to increase employee productivity and reduce the frustration caused by slower, resource-constrained hardware.

A solution combining the two technologies is now available: Intel® Optane™ Memory H10 with Solid State Storage. The solution increases storage density while reducing system latency. Intel® Optane™ technology also supports the ability to "learn" which files and applications individual employees use most often, enabling even quicker access to employee work product. The right hardware, in combination with the Sogeti SMART WorkSpace platform, offers your team the modern tools they need for better collaboration anytime and anywhere.

Modern workforces need modern technologies

Current employees need the ability to multitask. Unfortunately, legacy laptop and desktop computers often struggle to keep up with the requirements of today's workforce. During a workday, an average employee launches 12[1,2] unique applications, opens each of those applications eight times[3,4], and experiences two system "sleep states" or re-boots[5,6]. Each of these actions creates a small delay on its own, but the cumulative productivity toll adds up when multitasking.

Additionally, mission-critical applications involving databases, high-resolution images, visual presentations, video, and more can require substantial system resources. Due to the volume of information tapped, an older laptop or desktop computer can struggle to accommodate the workload adequately.

Computing today also involves multiple processes which run in the background automatically. Elements like anti-malware programs, system backups, encryption, and firewalls are critical for modern computing. However, these factors place an accruing load on older personal computers (PCs) which exceeds the original design parameters. As a result, the background processes gobble up PC resources and create a performance tax.

Slow computers hamper productivity, increase stress in a fast-moving work environment, and lead to employee frustration. Over time, the accumulation of lost productivity impacts corporate efficiency, customer service speed, revenue opportunity, and employee satisfaction too.

Break through system bottlenecks

As the "brains" behind a computer, processors can make a big difference in system speed. Moore's Law, which suggests that processors double their capacity every two years or so, has remained true since the 1970s. In keeping with the trend, new processors like the Intel® Core™ i9 processor offer enormous performance boosts over their legacy predecessors. On the other hand, CPUs represent only one factor in overall PC speed. The amount of memory in a computer, along with the type of storage medium – a hard disk drive (HDD) or a SSD – factor into performance too.

Since NAND SSDs have no moving parts, they offer performance and reliability benefits over legacy spinning HDDs. Modern memory DIMMs also provide advantages compared with those of years past. New technology innovations allow these newer memory components to load system data more quickly, and with higher energy efficiency, than ever before.

The key is empowering employees with a "balanced," cost-effective PC, one that optimally combines fast SSD storage and system memory to help your team perform their jobs without the unintended barriers which slower performing hardware creates.

Intel® Optane™ technology, now available in new laptops and desktop systems, can help address all these challenges today.

Intel® Optane™ Memory H10 with Solid State Storage

Some desktop or laptop computers available today feature Intel® Optane™ memory to enhance standard SSDs. Adding Intel® QLC 3D NAND technology in new PCs compounds the benefits of each. Intel® Optane™ Memory H10 with Solid State Storage combines these revolutionary memory and storage technologies into a single M.2 form factor for PC use.

Intel® QLC 3D NAND technology builds upon the concepts of 3D XPoint architecture. QLC is an abbreviation for quad level cell, meaning the technology allows storage of four data bits on each memory cell, increasing storage density in a standard form factor.

Intel® Optane™ memory and Intel® QLC 3D NAND technology together offer the exceptional responsiveness needed for today's modern workflows.

Intel® Optane™ Memory H10 with Solid State Storage

intel® OPTANE™ MEMORY + INTEL® QLC 3D NAND TECHNOLOGY

Delivering a new level of performance with high capacity storage

Technology that adapts to you

Intel® Optane™ Memory H10 with Solid State Storage modules also feature another built-in benefit - Intelligent Intel® Rapid Storage Technology (Intel® RST).

Intel® RST "learns" which applications, resources, and files an employee opens most often. Based on that analysis of real-world usage, Intel® RST remembers the most frequently used content and ensures that information is ready for immediate use. Intel® RST continues learning over time. In doing so, the cumulative insight allows it to personalize a more responsive PC experience for the user it serves.

Should an employee's job function change over time – necessitating access to different information – Intel® RST continues its adaptive process. As it recognizes the new information most used by an employee, Intel® RST re-prioritizes stored applications and documents. At the same time, Intel® RST de-prioritizes content not used as often, and frees up system resources for activities that matter most.

The combination of these features makes Intel® Optane™ Memory H10 with Solid State Storage modules an ideal solution for faster boot times, quicker application launches, and smoother multitasking.

Intel® Optane™ technology increases performance and productivity

Intel® Optane™ technology enables a unique approach to data and document storage, blurring the lines between system memory and SSDs.

Intel® Optane™ SSDs offer cost-effective, high volume storage solutions with performance characteristics nearing that of system memory. Paired with Intel® Optane™-enabled memory, the overall solution combines excellent speed with the ability to "remember" which files and applications an employee used recently. When restarted, the system ensures that employee has accelerated access to the files he or she uses most often.

Intel® Optane™ technology uses an innovative architecture called 3D XPoint™ (pronounced "3D cross-point"). Rather than using classic approaches to memory architecture which require one transistor for each memory cell, 3D XPoint employs a different design. As the name suggests, 3D XPoint stores user data in three dimensions, stacking memory cells atop one another. Today, Intel®'s "3D" approach achieves 64 layers for higher storage density per memory module.

These two technical details showcase how Intel® Optane™-based systems and computers offer increased storage capacity and improved access speed.

Multiple capacities to meet your needs

Intel® Optane™ Memory H10 with Solid State Storage is available in various capacities to help PC manufacturers configure systems that best meet employee needs and IT budgets:

Designed for compact devices

Thin & Light, 2 in 1 Notebooks	AIO & Small Form Factor Desktops

— Single slot M.2 2280 form factor —

Several Capacity Options

INTEL® OPTANE™ MEMORY VOLUME™	INTEL® QLC 3D NAND VOLUME™
16GB +	256GB
32GB +	512GB
32GB +	1TB

Benefits for your employees and your organization

PCs with Intel® Optane™ Memory H10 with Solid State Storage offer a rapid return on investment (ROI). The personalized benefits each employee derives from the

"learning" nature of the technology increases productivity, simplifies multitasking in real-world environments, and reduces employee stress and frustration. With Intel® Optane™ technology-enabled systems, documents and workbooks can launch up to two-times faster[7,8]. The technology can also accelerate opening time for Adobe Photoshop Project files, up to 90 percent[9].

Security is another paramount concern for today's corporations. Intel® Optane™ Memory H10 with Solid State Storage modules supports compatibility with industry-standard encryption and secure erase protocols. The modules also simplify system management. IT administrators can use the tools of their choice for systems imaging.

Sogeti SMART WorkSpace

Having the right hardware is vital for employee productivity, job satisfaction, and focus during the workday. However, PCs represent just one piece of a more extensive solution. As companies of all sizes experience workplace modernization, employees also face a transforming workflow. They benefit from modern applications which enable better collaboration among staff anytime, anywhere

Sogeti's SMART WorkSpace, built upon Microsoft Windows 10, offers a simplified solution to enhance teamwork and innovation. In addition to end-user benefits, SMART WorkSpace provides a cost-effective and predictable pay-peruse model, helping companies get the most from their IT budgets. SMART WorkSpace also integrates new tools and future capabilities, delivering those services seamlessly and securely through an on-premise platform or the cloud.

Increase your productivity today

When refreshing your enterprise systems and application platform, choosing computers featuring Intel® Optane™ memory will significantly benefit your business. Empower your team with dramatically improved PCs which are purpose-built for modern multi-tasking, cost-efficiency, and a more personalized user experience

For more information about the ways Sogeti, part of Capgemini, can help your organization identify optimal workplace transformation strategies and implementation paths, including choosing the ideal Intel® components for your PCs, please visit:

www.sogeti.com
www.capgemini.com
www.intel.com/Optane

About Sogeti

Part of the Capgemini Group, Sogeti operates in more than 100 locations globally. Working closely with clients and partners to take full advantage of the opportunities of technology, Sogeti combines agility and speed of implementation to tailor innovative future-focused solutions in Digital Assurance and Testing, Cloud and Cybersecurity, all fueled by AI and automation. With its hands-on 'value in the making' approach and passion for technology, Sogeti helps organizations implement their digital journeys at speed.

A global leader in consulting, technology services and digital transformation, the Capgemini Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion. *People matter, results count.*

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