(intel)

Unleash Performance with Intel® Cache Acceleration Software-Workstation (Intel® CAS-W)

Available Exclusively from Dell*

Intel® Cache Acceleration Software-Workstation (Intel® CAS-W) is offered exclusively on the latest Dell Precision* tower and rack workstations

Enterprise-grade, caching acceleration software for workstations

Intel® Cache Acceleration Software-Workstation (Intel® CAS-W) is designed for professionals who work with large data files and want to maximize performance by eliminating storage I/O bottlenecks. Intel CAS-W is offered exclusively on the latest Dell Precision* tower and rack workstations: T3610, T5610, T7610, and R7610.[1]

How does Intel CAS-W work?

The challenge with current caching solutions is that all data is treated the same—Intel CAS-W solves this with a unique data caching policy that allows the user to select which data type should be accelerated, providing better control and performance optimization. This "hot data" is placed on an SSD cache, sized appropriately to fully utilize its capacity, thus reducing the storage system latency and significantly improving performance. The remaining less active data, referred to as "cold data," can be stored on hard disk drives (HDDs) which are more cost-effective when performance is not the highest criteria. By effectively selecting which data types to accelerate, Intel CAS-W provides better control and performance optimization.

Intel CAS-W can also utilize unused system memory, dynamic random access memory [DRAM) or "buffered cache," which maximizes performance. These features optimize workstation resources while the application is running in the background. Intel CAS-W works seamlessly with applications without requiring any migration of data or system imaging.

Why Intel CAS-W and Dell?

Intel CAS-W software helps eliminate storage and I/O bottlenecks for workstations. With Intel CAS-W, workstation users can utilize existing capacity storage (inexpensive HDDs) along with an appropriate sized SSD drive to boost performance cost-effectively rather than purchasing high-capacity multi-SSD storage.

Dell Precision workstations are created for advanced graphics and professional applications. Dell partners with industry-leading technology companies to solve today's most complex problems of application computing. Our highly collaborative approach results in tested, optimized solutions that can help you cut costs and raise efficiency and productivity.

Use Cases

Workstation use cases that benefit from Intel CAS-W include animation rendering, video editing, high performance computing (HPC), engineering and scientific research, product design, digital imaging, and energy exploration.

Will Intel CAS-W help me?

Intel CAS-W works best when the active workload (i.e., the sum of the sizes of all the files you are using in your applications) has:

- Large repository of "hot data" or frequently accessed files
- Heavy read component (vs. writes)
- Falls between the installed system memory and roughly twice the size of the cache SSD

For example, a 20GB workload on a system with 8GB of memory will show excellent performance gains when reading the scene data using Intel CAS-W and a 128GB SSD. This is because the scene is too large to fit in system memory, and reading from the SSD is much faster reading from the spinning disk. The same scene on a workstation with 128GB of memory would show much less benefit, since the entire scene could easily fit in available memory.

How do I buy Intel CAS-W?

You can buy Intel CAS-W for new workstations or for systems you already own.

1. When purchasing new workstations, use the Dell Precision workstation configurator tool at **Dell.com/Precision** and select one of the following models: **T3610**, **T5610**, **T7610**, and **R7610**.

2. If you already own a Dell Precision Workstation, you can **purchase Intel CAS-W here**.

GET UP TO 250% PERFORMANCE IMPROVEMENT[2]		
BENCHMARK	**DATA DESCRIPTION**	**IMPROVEMENT[2]**
SPECwpc* Storage	An industry-standard benchmark that measures performance across various subsystems, grouping by verticals. *Measurement: Storage-Media and Entertainment*	Up to 250%
PCMark* 7 Storage	A storage subsystem benchmark that measures performance under typical end-user scenarios. *Measurement: Storage Score*	Up to 140%
PCMark 8 Storage	An updated version of PCMark Storage that includes new workstation-like usages including light and heavy content creation. *Measurement: Storage Bandwidth*	Up to 92%
IOMeter*	Open source, de facto industry-standard tool for measuring performance using specific IO transaction types. *Measurement: 8K Sequential Reads*	Up to 44%

SYSTEM REQUIREMENTS	
Hardware	• Memory: 4GB minimum; 8GB or greater recommended • CPU Overhead: Intel® CAS only consumes approximately 2% of CPU resource capacity. It is recommended that the CPU is not at maximum for best operation.
OS	• Microsoft Windows* 7 Professional (32 and 64-bit) • Microsoft Windows 7 Ultimate (32 and 64-bit) • Microsoft Windows 8.1 Professional (64-bit)
SSD	• Flash/SSD: Windows* supported Flash device 128GB recommended • Validated and supported with 128GB SSDs

Conclusion

The intelligent combination of Intel CAS-W and Dell Precision workstations brings increased performance and control for workstation users and their demanding workloads and applications.

Learn more about Intel® Cache Acceleration Software: intel.com/CAS

Find the Intel® Solid-State Drive that's right for you: intel.com/go/ssd

ALSO AVAILABLE FOR SERVERS: INTEL® CAS ENTERPRISE EDITION

Linux*: Intel® Cache Acceleration Software for Linux OS for up to 200GB of target cache includes 1 year of support (8x5). **Learn more >**

Windows*: Intel® Cache Acceleration Software for Windows OS for up to 200GB of target cache includes 1 year of support (8x5). **Learn more >**