

# DragonFly NVDRIVE PCIe SSD cache accelerator unveiled

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Marvell today announced the availability of the Marvell DragonFly NVDRIVE, a turnkey enterprise-class PCIe SSD caching solution with built-in SSD modules that extends the company's award-winning DragonFly NVCACHE and NVRAM adapter product offerings first announced last August. Targeted for large-scale Internet and cloud computing data centers, the DragonFly NVDRIVE dramatically scales both bare metal and virtualized server applications, including Web servers, OLTP and analytic databases, as well as NoSQL and big data distributed applications.

"The NVDRIVE is a game-changing extension of the popular DragonFly NVRAM and NVCACHE family. It delivers the same unprecedented application acceleration as the existing NVCACHE solution, but now seamlessly integrates with onboard [SSD](#) modules for plug-and-play ease of use," said Alan Armstrong, vice president of marketing of Marvell Semiconductor's Storage Business Group. "The innovative application of non-volatile DDR memory, highly optimized caching algorithms, and entry enterprise SSD modules creates a converged solution that is ideally suited for mixed-workload cloud data centers. The NVDRIVE raises the bar on affordability and performance, and its unique cache automation and consistent write latency capabilities will be sought after by both OEM and cloud computing customers who require predictable performance at reasonable costs."

The DragonFly NVDRIVE is powered by Marvell's world-class storage SoC technology and seamlessly merges large capacity non-volatile

DRAM with onboard SSD modules to enable up to 100 times higher performance for random read- and write-heavy application workloads as compared to traditional disk-based solutions. Additionally, automated caching removes the guesswork, maintenance and high capital costs required by manual data tiering approaches. Unique to the industry, DragonFly write back caching is fully powered by ARM-based storage processors and enables storage administrators to configure granular cache policies at either a file or block level.

Data protection and reliability are ensured via intelligent RAID software and peer-to-peer synchronous mirroring to prevent data loss against any failure – server, adapter, SSD module or NAND components. An ultra-thin filter driver residing in Linux or Xen is transparent to applications and supports caching across all storage protocols, including SCSI (local DAS), NFS, iSCSI, FCoE and FCP.

Marvell's partners and OEMs are already expressing strong enthusiasm for the DragonFly NVDRIVE. "The SanDisk X100 mSATA SSDs provide small form factor, low-latency, high-performance and cost-effective non-volatile storage for the Marvell DragonFly NVDRIVE," said Kevin Conley, senior vice president and general manager, Client Storage Solutions at SanDisk. "Optimized for entry level enterprise workloads, the Marvell NVDRIVE based on the X100 SSDs provides an ideal solution for customers seeking performance demanding business-critical data center applications."

"As organizations increasingly adopt both virtualization and cloud storage solutions, their demand for powerful and intelligent plug-and-play acceleration of their IO and applications will only increase," said Mark Peters, senior analyst at Enterprise Strategy Group. "And, of course, this enhanced performance should ideally be delivered with a simultaneous TCO reduction to help IT professionals juggle demands where the only certainty is growth. Solutions such as Marvell's

DragonFly NVDRIVE possess the ability to deliver this desired combination, and reflect an entire industry that's focused on delivering a storage model - whether on premise or in the cloud - that is effective, efficient and sustainable."

Feature highlights of the Dragonfly NVDRIVE include:

- Up to 1.5 TB of useable SSD capacity with the industry's largest integrated non-volatile DRAM cache.
- Highly predictable performance across mixed write/read workloads. Cache mode sustained performance exceeds 200,000 4K random IOPS, 3GBps throughput and sub-10us average latency.
- Enterprise-class embedded write-back cache software. Simple, smart and fully automated.
- Robust data protection, including RAID and HA peer-to-peer synchronous mirroring software.
- Rich command line interface (CLI) and cache policies for granular file/block object level configurations.
- Application-transparent OS filter driver supports all major protocols – SCSI, iSCSI, NFS, FCoE and FCP.
- Hypervisor integration enables virtual machine migration, HA, snapshots, clones and more.
- Fully integrated DragonFly Manager for GUI-based administration and performance monitoring.

The Marvell DragonFly NVDRIVE will be sampling later in Q1 with OEM and cloud computing customers. DragonFly NVDRIVE is offered at 750GB and 1.5TB capacity points. Pricing starts at a manufacturer's suggested retail price (MSRP) of \$2,995 USD.

Source: Marvell

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