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## **DapuStor Extends Collaboration with Marvell to Unveil Cutting-Edge Flexible Data Placement (FDP) Technology for QLC SSDs**

San Jose, CA, July 30, 2024 –DapuStor Corporation, a pioneer in high-performance data storage solutions, announced today that it is expanding its collaboration with Marvell to deliver breakthrough Flexible Data Placement (FDP) technology optimized for Quad-Level Cell (QLC) and Triple-Level Cell (TLC) Solid-State Drives (SSDs). This collaboration aims to revolutionize the storage industry by addressing the inherent challenges of QLC SSDs, enhancing their performance, endurance, and capacity, thereby providing a robust and cost-effective solution for data centers, cloud computing, and high-performance computing environments.

### **Unlocking the Potential of QLC SSDs with FDP Technology**

QLC SSDs are renowned for their ability to store four bits of data per memory cell, offering significant capacity advantages and a lower Total Cost of Ownership (TCO) compared to other SSD types. Despite these benefits, QLC SSDs face challenges such as lower endurance and slower write speeds. The innovative FDP technology supported in the Marvell® Bravera™ SC5 SSD controller with firmware level solution developed by DapuStor directly addresses these issues.

FDP technology intelligently distributes data across the QLC Flash memory, optimizing the use of available memory cells and minimizing the impact of write amplification. The FDP algorithms dynamically adjust data placement based on workload and usage patterns, ensuring that the most frequently accessed data is stored in the fastest and most durable regions of the SSD. This results in improved performance, extended endurance, and enhanced reliability.

### **Impressive Performance Metrics with Marvell and DapuStor FDP Solutions**

Extensive testing has demonstrated that FDP algorithms integrated with the Marvell Bravera SC5 SSD controller and DapuStor firmware can achieve a write amplification (WA) close to 1.0. A WA of 1.0 indicates that the SSD is utilizing the NAND Flash to its full endurance potential without wastage. This optimization ensures that the DapuStor QLC SSD H5000 series can perform at its highest possible efficiency.

In addition to intelligent data placement, DapuStor's FDP solutions incorporate advanced error correction and wear leveling techniques, further enhancing the endurance and reliability of QLC SSDs. These advancements enable QLC SSDs to achieve higher write speeds, lower latency, and a longer lifespan, making them ideal for a wide range of demanding applications.

### **Advancing Storage Innovation and Excellence**

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Today's announcement builds on the groundbreaking work that Marvell and DapuStor have achieved in bringing PCIe Gen 5 SSDs to market. The companies' latest cooperation on FDP technology signifies an important milestone in opening new possibilities for QLC applications. By combining Marvell's expertise in data center semiconductor solutions with DapuStor's innovative storage technologies, the collaboration is set to deliver unparalleled advancements in SSD performance and efficiency.

"Marvell is excited to extend our longstanding relationship with DapuStor in bringing innovative storage technologies to market," said Matt Kim, VP of Storage Business at Marvell. "Our collaboration on FDP technology will unlock the full potential of QLC SSDs, providing our customers with higher capacity and performance storage solutions at a lower total cost of ownership."

"We are thrilled to collaborate with Marvell in developing FDP solutions," said John Li, VP of DapuStor. "This collaboration underscores our commitment to innovation and excellence in the storage industry. Together, we will set new standards for the DapuStor QLC SSD H5000 series' performance and reliability."

### **Join Us at the 2024 FMS Conference**

Marvell and DapuStor will showcase the DapuStor QLC SSD H5000 series with FDP solutions at the 2024 FMS: Future of Memory and Storage conference. Attendees are invited to experience firsthand the groundbreaking technology that promises to reshape the future of data storage.

### **About DapuStor Corporation**

DapuStor Corporation (DapuStor), founded in April 2016, is a leading expert in high-end enterprise solid-state drives (SSD), SOC, and edge computing-related products. With world-class R&D strength and over 400 team members, it has comprehensive capabilities from chip design and product development to mass production. Its products have been widely used in servers, telecom operators, and data centers.

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