

Micron® QLC SSDs for the Financial Services Industry



Modernize FSI Record Storage and Accelerate Regulatory Compliance

Financial service industry (FSI) regulatory bodies are charged with protecting individuals, businesses and investors from fraud, theft and misconduct. Many regulations deal with unencrypted data, or preventing alteration or destruction of records, especially write once/read many (WORM) electronic records and financial data. Yet, even with good intentions, FSI enterprises can still encounter issues due to incorrect configurations, aging systems and degradation of storage media.

Legacy Infrastructure Creates Compliance Challenges

FINRA, NCUA and others have fined firms for deficiencies in their storage of e-records. Post-2008 financial crisis regulatory reforms have led to an upsurge in reporting requirements, often many at once that require fast responses and the aggregation of disparate, monolithic records. FSI legacy storage systems with hard disk drives (HDDs) and tape struggle with the speed, security, stability and availability that financial institutions increasingly require.

New QLC SSDs Enable Cost-Effective Modernization at Scale

Modernizing data storage is foundational for fast, scalable, efficient infrastructure and for reducing regulatory risks. Real-time monitoring, transaction-level random IO data storage, immediate availability for auditing and other requirements are more easily achieved with the enhanced speed and data integrity that solid state drives (SSDs) provide. Yet FSIs must weigh the costs of modernizing IT infrastructure against the costs of a slow infrastructure and possible compliance penalties. New quad-level cell (QLC) SSDs change the economics of this equation.

Why Micron for FSI

Modernize Legacy Storage

Scale up or out or down efficiently, and aggregate data with ease. Move from HDDs to SSDs at a better TCO. Turn archives into data lakes you can utilize.

Speed Up Compliance Transaction Times

Relieve risks associated with slow storage. Instantly access and analyze read-centric data stores with Micron 9300 SSDs (random read IOPS up to 850K) in the cache tier and Micron 5210 SSDs (90K IOPS random reads) in the capacity tier.

Secure Your Data

Enjoy self-encrypting drives (SEDs) — native TCG-Enterprise full-drive encryption that works in concert with your own data security portfolio.

Achieve Compelling TCO

Replace slow, power-hungry HDDs with fast and energy-efficient SSDs. High-density flash drives reduce rack space, software licensing and power costs.

Create Positive ROI

Transform scale-out active archives into a strategic asset and deliver massive large-block data streams with ease. For RegTech, choose your platform and let Micron flash storage accelerate the benefits.

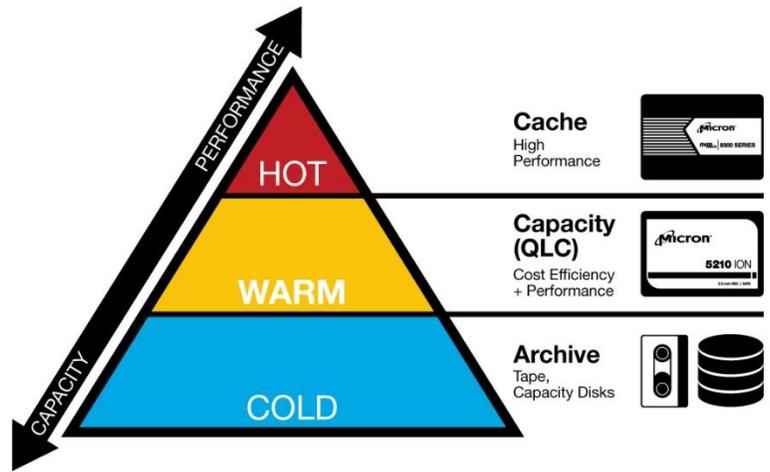
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How Affordable QLC Flash Solves FSI Workload Problems

Micron's launch of the world's first QLC SSDs significantly narrowed the affordability gap between HDDs and flash storage. The Micron 5210 ION SSD is designed for heavily read-intensive workloads and delivers 450X faster random reads, 20X faster random writes, 2X faster sequential throughput, and 3X more energy efficiency than the 7200 RPM HDDs that have typically been used to store regulatory and compliance data.¹ The Micron 5210 ION SSD also offers 100X better data reliability to guard against uncorrectable bit errors² and includes TCG-Enterprise encryption, plus data path and power-loss protection. Available in the same SATA interface as HDDs for platform continuity and simplicity, the Micron 5210 is architected to accelerate responsiveness for reporting and record retention.

Tiering: Right-Sized, Cost-Effective Performance

Micron QLC SSDs are optimized for read-intensive, performance-sensitive workloads that have traditionally lived on HDDs, such as big data analytics, object stores, AI/ML/DL data lakes, SQL/NoSQL databases and more. QLC SSDs are now being used in combination with triple-level cell (TLC) SSDs to form new warm storage tiers to increase system-level performance that's been held back on HDDs and to reduce costs associated with TLC SSDs. Shown is an FSI combination that leverages Micron's performance series of 9300 NVMe™ SSDs for "hot" tiered storage, along with "warm" tiered QLC capacity storage and HDDs housing cold/bulk storage.



Talk with your Micron business development professional today to request a custom, usable-capacity analysis to modernize your infrastructure, and visit micron.com/5210 for more information on Micron's industry-leading QLC technology.

10 Workloads Moving from HDDs to Micron QLC SSDs



AI/ML/DL
Data Lakes



Edge Analytics
(5G, etc.)



Analytics
& Big Data
(Hadoop)



Object Stores
(Ceph)



SQL Databases
(BI/DSS)



NoSQL
Databases
(Cassandra)



CDN



Cloud
Services



vSAN
Capacity Tier



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Regulatory &
Compliance
Storage

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1. Comparison of unrecoverable bit error rates, as measured for the Micron 5210 ION and public data sheets for industry-leading 7200 RPM HDDs.
2. Based on public data sheet values for the 7.68TB Micron 5210 SSD (90,000 IOPS random reads, 4,500 IOPS random writes) compared to 8TB Seagate® Exos 7E8 7200 RPM SATA HDD and SNIA PTSe IOPS industry-standard IOPS test results (rounded up to 200 IOPS for both random reads and writes).