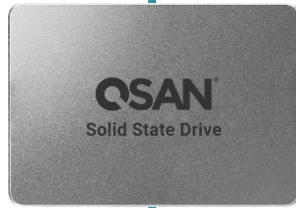


## Data Sheet



## QSAN NVMe SSD

# SQ4 Series

Enterprise PCIe Gen 5 Dual / Single Port

### Features

- Dual / Single NVMe 2.0 compliant controller, PCIe 5.0
- QLC NAND
- 0.3 DWPD (Drive Writes Per Day)
- Performance up to 14,700 MB/s
- MTBF (Mean Time Between Failures) rating of 2.5M hours
- Security options: SE (Secure Erase), ISE (Instant Secure Erase), and SED (Self-Encrypting Drive)
- 5-year limited warranty<sup>1</sup>
- Enterprise features: Namespace, Reservation, Metadata Protection, Power Loss Protection
- Support NVMe-MI (Management Interface)

### Applications

- Data Lake
- Large Scale Infrastructure
- High Speed Backup
- Archive

### High Performance NVMe SSDs Power Up Enterprise Workloads

QSAN SQ4 NVMe SSD is designed to deliver the advantages of next-generation flash storage for data-centric and read-intensive enterprise workloads. Built on PCIe Gen5 NVMe architecture, SQ4 supports U.2 form factor and provides seamless compatibility with modern enterprise storage platforms.

### High Performance NVMe SSDs Fulfill Modern Applications

As modern applications continue to generate exponential data growth, enterprises increasingly require **scalable, cost-efficient NVMe storage** to support long-term data retention and analytics. QSAN SQ4 NVMe SSDs are purpose-built for **read-heavy and sequential access workloads**, commonly found in data analytics, AI model training, content delivery, and large-scale backup environments.

### Flash Management Technology Makes SSDs Last Longer

QSAN SQ4 incorporates advanced flash management technologies to maximize the reliability and lifespan of QLC NAND. Intelligent wear-leveling, optimized garbage collection, and robust error correction mechanisms work together to maintain consistent performance throughout the SSD's lifecycle.

### Nothing Important than Data Security

QSAN SQ4 provides TCG-Opal with security options to support SED (Self-Encrypting Drives) as well as SE (Secure Erase) and ISE (Instant Secure Erase) on-device encryption. It also includes power loss protection for data at rest and in motion and enterprise data path protection for user and metadata.

<sup>1</sup> The warranty for the product is subject to the conditions stated herein for the shorter of :

(a) the expiration of time period associated with the product.

or

(b) the period ending on the date when the SSD has exceeded its TBW (Total Bytes Written) threshold as may be indicated by SSD's firmware

## Specification

Model Name	SQ430T5000	SQ461T5000	SQ430T5010	SQ461T5010
Capacity	30.72 TB	61.44 TB	30.72 TB	61.44 TB
Endurance	0.3 DWPD (Drive Writes Per Day)			
Encryption	Non-SED		SED	
TBW (Total Bytes Written)	16,819 TB	33,638 TB	16,819 TB	33,638 TB
<b>Configuration</b>				
Interface	Dual-port PCIe Gen 5 (2x2), NVMe 2.0			
Form Factor	U.2, 2.5-inch, 15 mm			
NAND Flash Type	3D QLC			
<b>Performance</b>				
128K Sequential Read	14,700 MB/s			
128K Sequential Write	2,500 MB/s			
4K Random Read	2,500K IOPS			
4K Random Write	27K IOPS			
<b>Reliability</b>				
UBER (Uncorrectable Bit Error Rate)	< 1 sector per in 10 <sup>18</sup> bits read			
MTBF (Mean Time Between Failure)	2.5M hours			
Limited Warranty	5 years or TBW limit			
<b>Power</b>				
Requirement (DC)	12 V +/- 10% 3.3 V +/- 15%			
Active Read	21 W			
Active Write	25 W			
Idle	5 W			
<b>Physical Size</b>				
Dimension (W x L x H) (mm)	69.85 x 100 x 15			
<b>Environmental</b>				
Operating Temperature	0 °C ~ 70 °C			
Non-Operating Temperature	-40 °C ~ 85 °C			
Operating Relative Humidity	Up to 90%			
Non-Operating Relative Humidity	Up to 93%			

## Specification

Model Name	SQ430T5100	SQ461T5100	SQ430T5110	SQ461T5110
Capacity	30.72 TB	61.44 TB	30.72 TB	61.44 TB
Endurance	0.3 DWPD (Drive Writes Per Day)			
Encryption	Non-SED		SED	
TBW (Total Bytes Written)	16,819 TB	33,638 TB	16,819 TB	33,638 TB
<b>Configuration</b>				
Interface	Single-port PCIe Gen 5 (1x4), NVMe 2.0			
Form Factor	U.2, 2.5-inch, 15 mm			
NAND Flash Type	3D QLC			
<b>Performance</b>				
128K Sequential Read	14,700 MB/s			
128K Sequential Write	2,500 MB/s			
4K Random Read	2,500K IOPS			
4K Random Write	27K IOPS			
<b>Reliability</b>				
UBER (Uncorrectable Bit Error Rate)	< 1 sector per in 10 <sup>18</sup> bits read			
MTBF (Mean Time Between Failure)	2.5M hours			
Limited Warranty	5 years or TBW limit			
<b>Power</b>				
Requirement (DC)	12 V +/- 10% 3.3 V +/- 15%			
Active Read	21 W			
Active Write	25 W			
Idle	5 W			
<b>Physical Size</b>				
Dimension (W x L x H) (mm)	69.85 x 100 x 15			
<b>Environmental</b>				
Operating Temperature	0 °C ~ 70 °C			
Non-Operating Temperature	-40 °C ~ 85 °C			
Operating Relative Humidity	Up to 90%			
Non-Operating Relative Humidity	Up to 93%			