

## Swissbit N3000 Series

## Product Use Case

Low Power PCIe  
SSDs for Edge  
Servers

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## Challenges

- High sustained performance without throttling
- Reliable operation under wide temperature conditions

## Solution

- ✓ Swissbit N3000 (PCIe Gen 4 NVMe 1.4, M.2)
- ✓ Robust module with low maintenance costs and low risk of failure
- ✓ Exceptional write performance without need for active or passive cooling

## Benefits

- ✓ Low power consumption (~5W)
- ✓ Extended temperature support, ranging from -40 to +85°C
- ✓ Ummatched reliability



Edge servers, intended to minimize latency and speed up content delivery or preprocess data, often have high thermal challenges. Unlike data centers with dedicated cooling systems, edge servers are often deployed in environments without such luxuries. Their compact, capsulated design, intended to minimize footprint, inadvertently restricts airflow and traps heat generated by the CPU close to sensitive data modules. This concentrated heat creates a significant thermal challenge for reliable operation and causes performance degradation.

With the increase of applications at the network's edge, the demand for energy-efficient solutions like the **Swissbit N3000** is growing to prevent exacerbating thermal challenges in edge computing environments

For edge servers emphasizing low power consumption and high reliability, the **Swissbit N3000** series emerges as the perfect solution. It combines the extended temperature support, ranging from -40 to +85°C, with high reliability and affordability. The N3000 four-channel PCIe NVMe architecture not only ensures low power consumption but also enables these encapsulated servers to maintain high performance consistently, without the risks of overheating or performance degradation.

Furthermore, its exceptional write performance operates smoothly without the need for any cooling solutions, even at elevated temperatures, making it an outstanding option

for fanless and sealed embedded systems.

The Swissbit N3000 is versatile, available in M.2 2242 and M.2 2280 sizes and offers a wide range of storage capacities from 240 GB to 1.92 TB, catering to various needs.

For environments where reliability is paramount, such as in mission-critical applications, an enhanced version, the N-3000 Series with "powersafe" PLP (Power Loss Protection), is also available. This advanced feature safeguards data against sudden power outages by protecting both data in transit from the host to the controller and cached data from the DRAM to the NAND, ensuring maximum data integrity.

## Edge Server Applications

- Content Delivery Networks (CDNs)
- Radio Access Networks (5G)
- Smart City & IoT
- Health Care & Medical Devices
- Warehouse / Industry 4.0
- Surveillance and Intrusion Detection



**Do you have any questions?  
Get in touch!**

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## About Swissbit

Swissbit AG is the leading European manufacturer of storage, security and embedded IoT solutions for demanding applications. As trusted partner, Swissbit empowers the digital and connected world by reliably storing and protecting data in industrial, security and IoT applications.

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