The MRAM NVM Express Accelerator Card is a revolutionary MRAM based SSD that has the high speed and high endurance of DRAMs combined with the non-volatility of Flash, all without the need for power backup.

Powered by Everspin nvNITRO, this product can be used for metadata caching to dramatically accelerate write performance without the need for battery backup. SMART’s new MRAM NVM Express Accelerator Card is the first in an emerging lineup of MRAM-based persistent memory products. SMART Modular Technologies is a member of NVM Express.

**Features & Benefits**

- Amazingly fast performance - 1.5 Million+ IOPS (4K Random Read/Write)
- Consistent, ultra-low latency with a short tail (as low as 2µs, end to end)
- Two access modes - NVMe SSD and Direct Access (MMIO)
- Persistent, non-volatile, no need for batteries or supercapacitors

**Specifications**

- **Form Factor**: PCIe HHHL (Half Height Half Length)
- **Interface**: PCIe Gen3 x8
- **Capacity**: 1GB, 2GB
- **Protocol/Access Modes**: NVME 1.1+, Direct Memory Access (IOPEM, DAX, PCIe, MMIO)
- **Performance IOPs (R/W)**
  - (4K random R/W): 1.5M/1.5M (x8 PCIe)
- **Latency (R/W) QD = 1**
  - 6.26µs (Read)/<6µs (Write)
- **Customer Defined Features**: Customers may optionally program onboard FPGA with their own RTL to extend features/functions
- **Endurance**: Unlimited uniform endurance

**Applications**

- Storage arrays
- File systems
- Tiering and OLTP log cache
- Remote, shared persistent memory

**MRAM Ordering Information**

<table>
<thead>
<tr>
<th>MRAM NVM Express Accelerator Card</th>
<th>SMART Part Number</th>
<th>Density</th>
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<tbody>
<tr>
<td>SSPE8NLXLAM36BEV</td>
<td></td>
<td>1GB</td>
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</tbody>
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**Contact information**

Corporate Headquarters/North America: T: (+1) 800-956-7627 • T: (+1) 510-623-1231 • F: (+1) 510-623-1434 • E: info@smartm.com
Customer Service: T: (+1) 978-303-8500 • E: customers@smartm.com
Latin America: T: (+55) 11 4417-7200 • E: sales.br@smartm.com
EMEA: T: (+44) 7825-064427 • E: sales.euro@smartm.com
Asia/Pacific: T: (+65) 6678-7670 • E: sales.asia@smartm.com

For more information, please visit: [www.smartm.com](http://www.smartm.com)