



Dell PowerEdge Boot Optimized Storage Solution – BOSS-N1

New for the latest generation of Dell PowerEdge servers, the Boot Optimized Storage Solution (BOSS-N1) provides key, generational feature improvements to the existing value proposition and highly popular BOSS-S1/S2. BOSS was originally designed to provide a highly reliable, cost-effective solution for separating operating system boot drives from data on server-internal storage. BOSS-N1 further delivers on our compelling value proposition by delivering enhanced accessibility and serviceability with rear-of-the server access to the Enterprise-Class NVMe M.2 SSDs and provides full hot-plug support for most servers. A modular implementation of BOSS-N1 is available for servers requiring an internal non-hot-plug option.

Features

- Supports One (1) or Two (2) 80 mm M.2 Enterprise Class NVMe SSDs
- M.2 devices are read-intensive with 480GB or 960GB capacity
- Fixed function hardware 2-drive RAID 1 (mirroring) or one-drive hardware RAID 0
- Rear facing module for quick and easy accessibility to the M.2 SSDs (hot-plug option)
- Full Hot-Plug support (except for Modular option)
- M.2 drive LED functionality
- Managing BOSS-N1 is accomplished with standard, well-known management tools such as iDRAC, OpenManage Server Administrator, and Command Line Interface (CLI)

Management Tools

The management applications enable you to manage and configure the RAID system, create and manage the disk group, and provide online maintenance. The management applications for BOSS-N1 card include:

- Unified Extensible Firmware Interface (UEFI) RAID Configuration Utility — A storage management application integrated into the System BIOS (F2). It is used to configure and manage RAID disk groups, virtual disks, and physical disks. This utility is independent of the operating system. See UEFI/HII RAID configuration utility
- Command Line Interface (CLI) Utility — A CLI application is used to check controller, physical disk and virtual disk statuses while system is booted to an OS. The application can also be used to check SMART data from the PDs or display controller events. See Manage BOSS-N1 using CLI commands
- Dell OpenManage Server Administrator — Enables user to perform controller and enclosure functions for all the supported RAID controllers and enclosures from a single graphical or command-line interface. For more information, see the Dell OpenManage Server Administrator User's Guide at www.dell.com/openmanagemanuals.
- Integrated Dell Remote Access Controller (iDRAC) and Lifecycle Controller (LC) — Application to effectively monitor the RAID and network controllers installed on the system using iDRAC and LC without an operating system installed on the system. For more information, see the Integrated Dell Remote Access Controller 9 User's Guide at www.dell.com/idracmanuals.

| Function or Feature | BOSS-N1 Card |
|------------------------------------|-------------------------------------|
| Hot-plug of M.2 drives | Yes for rear facing, No for Modular |
| LED activity of M.2 drives | Yes for rear facing, No for Modular |
| Controlled firmware update | Yes |
| RAID levels | RAID 1 and RAID 0 |
| Stripe size | Default stripe size is 128K |
| Battery backup unit | No |
| Non-volatile cache | No |
| Virtual disk cache function | Write through |
| Maximum number of virtual disks | 1 |
| Maximum number of drives supported | 2 |
| Support for non-RAID disks | No |
| Drive types | M.2 NVMe SSDs x 2 |
| PCIe support | Gen 3 |
| Disk cache policy | Drive default |
| TRIM | No |
| Stripe size supported | 128 K |
| Full initialization | No |
| Fast initialization | Yes |
| Background initialization | No |
| RAID 0 | Yes |
| RAID 1 | Yes |
| Single non-RAID | No |
| Dual non-RAID | No |

| Function or Feature | BOSS-N1 Card |
|--|---|
| Degraded RAID 1 and non-RAID | No |
| Foreign import | Yes |
| Consistency check | No |
| Patrol read | No |
| Load balance | Not Applicable |
| Rebuild | Yes (Only Auto-rebuild) |
| Hot spare | No |
| Change rebuild priority/rate | No |
| Virtual disk write back/read ahead cache | No |
| Battery support | Not Applicable |
| Non-RAID disk cache policy | No |
| SMART Info | Yes NOTE: Use the BOSS-N1 CLI to retrieve the SMART information from the drives |
| Physical disk hot-plug | Yes for rear facing, No for Modular |
| BIOS configuration utility (Ctrl-M) | No |
| 4 K native drive support | No |
| TRIM and UNMAP virtual disk | No |
| TRIM and UNMAP non-RAID physical disk | No |
| Self-encrypting drives (SED) support | Yes, to be introduced after BOSS-N1 launch |
| Cryptographic erase (sanitize) | Yes NOTE: If drive supports SANITIZE Crypto Erase. No other encryption support from controller or drive. |

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