

# HighPoint SSD7000 Series & PowerEdge R540 2U Rack Server

## Compatibility Report

Last Update: 10/11/2021

Version: **V1.00**

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## 1. Hardware:

### a. HighPoint Product:

SSD7000 Series, SSD7500 Series, SSD6200 Series, SSD6540 Series

### b. Host Platform or External Device:

Dell PowerEdge R540 2U Rackmount Server

## 2. Compatibility Status:

**Compatible (Boot & Data RAID)**

## 3. Description:

Dell PowerEdge R540 1U Rackmount Server platforms are capable of supporting HighPoint SSD7000 series NVMe RAID controllers. SSD7500 series controllers can also be used with this platform, but will be unable to operate at full speed, as the systems only provides PCIe 3.0 connectivity. The SSD6540 series NVMe RAID enclosures utilize a PCIe Gen3 x16 NVMe HBA for external connectivity, which appear to be compatible with this platform.

The current motherboards used by R540 workstations utilize the Intel C620 chipset (Intel 600 based systems are known to be compatible with HighPoint NVME products). The motherboard's BIOS includes UEFI support, and provides option ROM settings for UEFI and legacy devices.

Cross-Sync does not appear to be possible due to the form factor of most of the PCIe slots – only 1 full size slot is available.

## 4. Compatibility Details:

### a. PCIe Host Interface:

Dell R540 platforms supports PCIe Gen3 (PCIe 3.0), and provides up to 5 slots and a total of 48 lanes, which can be assigned by the administrator. However, only one slot can support a full height/full length PCIe card. At least one slot requires a riser card.

#### Slots

##### PCIe

##### Non-rear storage config

1 x full height/full length

1 x half height/half length (2U Right riser) slots

3 x half height/half length slots

Reference: [https://www.dell.com/en-us/work/shop/productdetailstxn/poweredge-r540#features\\_section](https://www.dell.com/en-us/work/shop/productdetailstxn/poweredge-r540#features_section)

**b. Boot RAID Support (NVMe arrays used to boot a system):**

Dell R730 appears to be capable of supporting bootable NVMe arrays. The BIOS appears to provide UEFI option ROM support, and has a Secure Boot option which can be disabled.

**c. Data RAID Support (NVMe arrays used for data storage):**

There are no apparent restrictions for a data-only storage configuration aside from the lack of Cross-Sync support (only a single full size PCIe slot is available).

**5. Manufacturer Reference Material**

**a. Product Website (Documentation Link):**

<https://www.dell.com/support/home/en-us/product-support/product/poweredge-r540/docs>

**b. User Guide:**

[https://www.dell.com/support/manuals/en-us/poweredge-r540/per540\\_ism\\_pub/dell-emc-poweredge-r540-overview?guid=guid-a75f5ce9-6d03-4b70-861b-1028858ef1fe&lang=en-us](https://www.dell.com/support/manuals/en-us/poweredge-r540/per540_ism_pub/dell-emc-poweredge-r540-overview?guid=guid-a75f5ce9-6d03-4b70-861b-1028858ef1fe&lang=en-us)

**BIOS and UEFI Guide:** [https://www.dell.com/support/manuals/en-us/poweredge-r540/per540\\_bios\\_pub/pre-operating-system-management-applications?guid=guid-53cc073c-7846-4bb4-901b-8043412a4237&lang=en-us](https://www.dell.com/support/manuals/en-us/poweredge-r540/per540_bios_pub/pre-operating-system-management-applications?guid=guid-53cc073c-7846-4bb4-901b-8043412a4237&lang=en-us)