Overview

HP Z Turbo Drive

Introduction

Storage technology with NAND media is outgrowing the bandwidth limitations of the SATA bus. New high performance storage solutions will connect directly to the PCIe bus for revolutionary performance improvements. These components will be available in a variety of form factors and performance levels, designed specifically for certain market segments, and ultimately the costs will continue to decline as the technology evolves.

Performance

HP Z Turbo Drive

The HP Z Turbo Drive features a PCIe connected SSD, which enables performance levels greater than 1GB/s. This performance is available at a price that is at parity with today's comparable SATA SSDs. This will enable the highest price/performance ratio for client grade SSDs.

The HP Z Turbo Drive will be supported on desktop platforms of HP Z Workstations. It will support storage configurations as a Boot device and as a Data device. The performance gains are significant when connecting to the PCIe bus. The sequential read and write performance is roughly twice as fast as today's SATA SSD products.

Overview

HP Z Turbo Drive 256GB PCIe SSD

Capacity:	256GB SSD
NAND Type:	MLC
Read Bandwidth (128KB):	1.08GB/s
Write Bandwidth (1MB):	800 MB/s
Random Read IOPS (4KB):	120K
Random Write IOPS (4KB):	60K
Endurance (Total Bytes Written):	146 TB
Weight:	1.8oz (51g)
Form Factor:	Half-height, half-length*

*roughly, actual length is 4 inches (100cm)

HP Z Turbo Drive 512GB PCIe SSD

Capacity:	512GB SSD
NAND Type:	MLC
Read Bandwidth (128KB):	1.17GB/s
Write Bandwidth (1MB):	930 MB/s
Random Read IOPS (4KB):	122K
Random Write IOPS (4KB):	72K
Endurance (Total Bytes Written):	292 TB
Weight:	1.8oz (51g)
Form Factor: * roughly, actual length is 4 inches (100cm)	Half-height, half-length*

The HP Z Turbo Drive is supported on all current desktop workstation platforms including Z230, Z420, Z620, Z820, Z440, Z640 and Z840. It is also supported by our current offering of Operating Systems, and does not require a separate driver. It does require a BIOS update for any system shipped prior to the Z Turbo Drive launch. A maximum of 2 Z Turbo Drives can be shipped with platforms from the factory, and it can be configured with additional hard drives, both SATA and SAS.

Overview

Supported Operating Systems:
Microsoft Windows 7, Microsoft Windows 8
Other OS may be supported by the card for use in other systems.

Supported Platforms:
HP Z420, HP Z620, HP Z820, Z440, Z640, Z840, Z230,

Recommended slot order for:

Recommended slot order for Z820

1. Slot 1
2. Slot 6
3. Slot 3 (Requires 2nd CPU)
4. Slot 4 (Requires 2nd CPU)

Z620 - Slot 4, Slot 5
Z420 – Slot 4, Slot 5
Z230 – Slot 4

Recommended slot order for Z840

1. Slot 1
2. Slot 6
3. Slot 3 (Requires 2nd CPU)
4. Slot 4 (Requires 2nd CPU)

Z640 - Slot 4, Slot 5, Slot 3 (in order of preference)

1. Z440 – Slot 4, Slot 5, Slot 3 (in order of preference)

Models

HP Z Turbo Drive 256GB SSD	G3G88AA
HP Z Turbo Drive 512GB SSD	G3G89AA

Technical Specifications

Storage / Hard Drives	**HP Z Turbo Drive 256GB PCIe SSD**	**Capacity**	256GB
		Interface	PCI Express 2.0 x4 electrical x4 physical
		Operating Temperature	32° to 158° F (0° to 70° C)
	HP Z Turbo Drive 512GB PCIe SSD	**Capacity**	512GB
		Interface	PCI Express 2.0 x4 electrical x4 physical
		Operating Temperature	32° to 158° F (0° to 70° C)

Summary of Changes

Date of change:	Version History:		Description of change:
June 10, 2014	From v3 to v4	Changed	Card configurations
January 20, 2015	From v4 to v5	Added	Support for Z440, Z460 and Z840 Workstations
		Changed	Slot order recommendation