QuickSpecs

Overview

HP Solid State Drives for HP Business Desktop PCs

Models

SATA 6 GB/second Interface Drives

Intel® Pro 1500 180 GB SATA SED Opal1 Solid State Drive (SSD)	G4M04AA
HP 128 GB Solid State Drive (SSD)	QV063AA
HP 128 GB SED Opal 2 Solid State Drive (SSD)	G1K24AA
HP 3D 256GB Sata SSD	N1M49AA/ N1M49AT
HP 256GB SATA TLC Non-SED Solid State Drive	P1N68AA
Intel Pro 2500 180GB SATA SED Opal2 Solid State Drive	P3X90AA
256GB SATA 2.5" Value (Non-SED) Solid State Drive	W0U55AA / W0U55AT

Introduction

Boost the performance and robustness of your HP Business Desktop PC with a Solid State Drive.

These Solid State Drives are drop-in replacements for the 2.5-inch or 3.5-inch (with bracket) hard disk drive of some HP Business Desktop PCs, providing many performance and durability improvements over traditional Hard Disk Drive (HDD) technology.

With no moving parts, these drives do not need to spin up or mechanically seek files in the way that a conventional hard disk drives does. The result is a quiet, cool, highly rugged storage solution that can offer faster system responsiveness. These drive characteristics enable significant improvement in PCMark05 v120 – hard drive performance over a standard 3.5-inch hard disk drive while significantly improving boot-up, shut down and application loading times as well as overall application responsiveness.

The industry-standard 2.5-inch form factor enables interchangeability with existing hard disk drives (HDDs) and native SATA HDD drop-in. If you're configuring a new system or you just want to extend the lifecycle of an existing system, Solid State Drives are one of the best performance upgrades you can make.

Expand the storage capabilities of your desktop with the HP 3D 256 GB SATA SSD[1], which includes 3D VNAND flash for impressive read/write performance and reliability plus the same solid performance you already get from current from SSD drives.

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 30 GB (for Windows 8.1) of system disk is reserved for the system recovery software.

Performance

SATA 6GB/second Interface Drives
The 180 GB Intel® Pro Solid State Drive achieves sequential read rates of up to 540-megabyte (MB)/sec and sequential write rates of up to 490-megabytes (MB)/sec.

The HP 128 GB SSD achieves sequential read rates of up to 450-megabyte (MB)/sec and sequential write rates of up to 260-megabytes (MB)/sec.

Overview

The HP 128Gb SED Opal 2 Solid State Drive achieves sequential read rates of up to 520-megabyte (MB)/sec and sequential write rates of up to 340-megabytes (MB)/sec.

Benefits

The Solid State Drives bring these powerful benefits for storage solution:

- Take the worry out of storing your data with a hard drive with no moving parts
- Get faster transfer speeds and higher cell endurance with Intel NAND flash memory Multi Level Cell (MLC) components
- Significantly improve boot up, shut down and application loading times.
- Improved protocol for enhanced data integrity
- Performance increases: For example, up to 6 GB/s maximum external (burst) data transfer rate for the 128 GB SSD drive
- Native Command Queuing allows the hard drive to have several write or read commands outstanding at the same time
- Supports the ATA Data Set Management Command (Trim Attribute) to help maintain your SSDs performance at "fresh-out-of-the-box" levels, and is specifically designed to run with Microsoft Windows 7*.
- Includes installation kit that contains: 3.5" desktop drive bay adapter to 2.5" SSD adapter bracket, screws, installation guide, and warranty documentation.
- Blazing fast responsiveness and performance
- Solid, reliable, silent operation
- Low power consumption
- Realize high performance in a small footprint with a 3D VNAND architecture that stacks cell layers on top of one another.
- Rest easy with a limited warranty.[2]

Compatibility

The Intel® Pro 1500 180GB SATA SED Opal1 Solid State Drive (SSD) is compatible with the HP ProDesk 400 G1 MT, HP ProDesk 400 G1 SFF, HP ProDesk 405 G1 MT, HP ProDesk 490 G1 MT, HP ProDesk 600 G1 TWR, HP Pro Desk 600 G1 SFF, HP EliteDesk 800 G1 TWR, HP EliteDesk 800 G1 SFF, HP EliteDesk 800 G1 USDT, HP EliteDesk 800 G1 DM (Mini), HP EliteDesk 800 G1 AiO, HP Compaq 6305 Pro MT, HP Compaq 6305 Pro SFF..

The HP 128 GB Solid State Drive is compatible with the HP Compaq 6000 Pro MT, HP Compaq 6000 Pro SFF, HP Compaq 4300 Pro SFF, HP Compaq 4300 Pro AiO, HP Compaq 6005 Pro MT, HP Compaq 6005 Pro SFF, HP Compaq 6005 Pro USDT, HP Compaq 6200 Pro MT, HP Compaq 6200 Pro SFF, HP Compaq 6300 Pro MT, HP Compaq 6300 Pro SFF, HP Compaq 6300 Pro AiO, HP Compaq 8200 Elite SFF, HP Compaq 8200 Elite CMT, HP Compaq 8200 Elite MT, HP Compaq 8200 Elite USDT, HP Compaq 8300 Elite SFF, HP Compaq 8300 Elite CMT, HP Compaq 8300 Elite MT, HP Compaq 8300 Elite USDT, HP Compaq 8300 Pro AiO, HP Compaq 6305 Pro MT, HP Compaq 6305 Pro SFF, HP TouchSmart 9300 Elite, HP rp5800 Retail System, HP ap5000 Retail System, and HP RP7 Retail System.

The HP 128Gb SED Opal 2 Solid State Drive is compatible with the HP ProOne 400 G1 AIO Touch, HP ProOne 400 G1 AIO Non-Touch, HP ProDesk 400 G1 MT, HP ProDesk SFF, HP ProDesk 405 MT, HP ProDesk 490 G1 MT, HP ProDesk 600 G1 TWR, HP ProDesk 600 G1 SFF, HP ProDesk 400 G1 DM (Mini), HP ProOne 600 G1 AIO, HP EliteDesk 800 G1 TWR, HP EliteDesk 800 G1 SFF, HP EliteDesk 800 G1 USDT, HP EliteDesk 800 G1 DM (Mini), HP EliteOne 800 G1 AIO, HP EliteOne 800 AIO 21.5" Non-Touch.

The Intel Pro 2500 180GB SATA SED Opal2 Solid State Drive is compatible with the HP ProDesk 400 G2.5 SFF, HP ProDesk 405 G1 MT, HP ProDesk 400 G3 SFF, HP ProDesk 400 G3 MT, HP ProDesk 490 G3 MT, HP ProDesk 400 G2 DM (Mini), HP ProOne 400 G2 AIO Touch, HP ProOne 400 G2 AIO Non-Touch, HP ProDesk 600 G2 MTW. HP ProDesk 600 G2 SFF, HP ProDesk 600 G2 Desktop Mini, HP ProOne 600 G2 AIO 21.5" Touch, HP ProOne 600 G2 AIO 21.5" Non-Touch, HP EliteDesk 705 G2 MT, HP EliteDesk 705 G2 SFF, HP EliteOne 705 G2 AIO 23" Touch, HP EliteOne 705 G2 AIO 23" Non-Touch, HP EliteDesk 705 G2 Desktop Mini, HP EilteDesk 800 G2 TWR, HP EliteDesk 800 G2 SFF, HP EliteDesk 800 G2 35W Desktop Mini, HP EliteDesk 800 G2 65W Desktop Mini, HP Collaboration PC G2, HP EliteOne 800 G2 AIO 23" Touch, HP EliteOne 800 G2 AIO 23" Non-Touch.

NOTE: Please check this product's web page on HP.com for current compatibility information.

Overview

NOTE: Not all solid state drive models are available in all regions.

NOTE: Use of HP System Software Recovery Disks (SSRD) is not supported on 80GB or 128GB SSD models due to minimum image size requirements (>=140GB) for the SSRD.

Operating Systems supported: Windows 10 Pro 64*, Windows 10 Home 64*, Windows 8.1 Pro 64**, Windows 8.1 64**, Windows 7 Professional 64 (available through downgrade rights from Windows 10 Pro)***, Windows 7 Professional 32 (available through downgrade rights from Windows 10 Pro)***, Windows 7 Professional 64**, Windows 7 Professional 32**.

*Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.microsoft.com.

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***This system is preinstalled with Windows 7 Pro software and also comes with a license and media for Windows 10 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

Service and Support

Your Option Limited Warranty is a one (1) year (HP Option Limited Warranty Period) parts replacement warranty on any HP-branded or Compaq-branded options (HP Options). If your HP Option is installed in an HP Hardware Product, HP may provide warranty service either for the HP Option Limited Warranty Period or the remaining Limited Warranty Period of the HP Hardware Product in which the HP Option is being installed, whichever period is the longer but not to exceed three (3) years from the date you purchased the HP Option.

Technical Specifications

Intel® Pro 1500 180GB SATA SED Opal1 Solid State Drive (SSD)	**Unformatted Capacity***	180GB	
	Architecture	Multi Level Cell (MLC) NAND Flash	
	Interface type	SATA 6GB/sec	
	Dimensions-external (W x H x D)	2.75 x 0.276 x 3.96 in (6.985 x 0.7 x 10.05 cm)	
	Weight	Up to 0.17 lb (78 g) max	
	Bandwidth Performance	**Sustained Sequential Read**	Up to 540 MB/s
		Sustained Sequential Write	Up to 490 MB/s
	Bandwidth Performance	**Random Read (4KB)**	up to 41K IOPs
		Random Write (4KB)	up to 80K IOPs
	Latency	**Read**	80µs (TYP)
		Write	85µs (TYP)
	Power	**DC power requirement**	Min 4.5 V; Max 5.5 V
		Total power consumption	195 mW (Active) ; 125 mW; (Idle)
	Useful drive life	**MTBF**	1.2 million device hours**
	Environmental (all conditions, non-condensing)	**Temperature** (operating)	32° to 158° F (0° to 70° C)
		Relative Humidity (operating)	5% to 95%
		Shock (operating)	1,500 G/0.5 msec
	Regulations	UL, CE, C-Tick, BSMI, KCC, Microsoft, WHCK, VCCI, SATA-IO, RoHS	
	Option kit contents	Intel® Pro 1500 180GB SATA SED Opal1 Solid State Drive, documentation, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable	

* For solid state disk drives, GB means 1 billion bytes. 128GB is the unformatted capacity of this drive before a portion of the drive is reserved for flash management features. Actual capacity will vary by content
** The product achieves a mean time between failure (MTBF) based on population statistics not relevant to individual units.

128 GB Solid State Drive	**Unformatted Capacity***	128 GB
	Architecture	Multi Level Cell (MLC) NAND Flash
	Interface type	SATA 6GB/sec
	Dimensions-external (W x H x D)	2.75 x 0.276 x 3.96 in (6.985 x 0.7 x 10.05 cm)
	Weight	0.16 lb (73 g) max

Technical Specifications

Bandwidth Performance	**Sustained Sequential Read**	Up to 450 MB/s
	Sustained Sequential Write	Up to 260 MB/s
Bandwidth Performance	**Random Read (4KB)**	up to 46K IOPs
	Random Write (4KB)	up to 56K IOPs
Latency	**Read**	55µs (TYP)
	Write	55µs (TYP)
Power	**DC power requirement**	Min 4.5 V; Max 5.5 V
	Total power consumption	160 mW (Active) ; <85 mW; (Idle)
Useful drive life	**MTBF**	1.2 million device hours**
Environmental (all conditions, non-condensing)	**Temperature** (operating)	32° to 158° F (0° to 70° C)
	Relative Humidity (operating)	5% to 95%
	Shock (operating)	1,500 G/1.0 msec
Regulations	UL, CSA, EN 60950-2000, CISPR Pub 22 Class B, CNS 13438, AS/NZS CISPR 22:2002 Class B, Korea KCC, CE Mark	
Option kit contents	HP 128 GB Solid State Drive, documentation, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable	

* For solid state disk drives, GB means 1 billion bytes. 128GB is the unformatted capacity of this drive before a portion of the drive is reserved for flash management features. Actual capacity will vary by content
** The product achieves a mean time between failure (MTBF) based on population statistics not relevant to individual units.

HP 128Gb SED Opal 2 Solid State Drive	**Unformatted Capacity***	128 GB
	Architecture	NAND Flash, Advanced Encryption Standard 256 (AES) engine, TCG Opal compliant
	Interface type	SATA 6GB/sec
	Dimensions-external (W x H x D)	2.75 x 0.267 x 3.94 in (6.985 x 0.68 x 10.02 cm)
	Weight	0.12 lb (55 g) max
	Bandwidth Performance	**Sustained Sequential Read**	Up to 520 MB/s
		Sustained Sequential Write	Up to 340 MB/s
	Power Consumption	**Active***	0.78A / 3.891W
		Idle**	0.005A / 0.026W

* Active power is measured during execution of IOMeter 2006 in Windows7
** Idle power is measured on DOS Idle status with DIPM on

Technical Specifications

Useful drive life	**MTBF**	1.5 million device hours
Environmental (all conditions, non-condensing)	**Temperature** (operating)	32° to 158° F (0° to 70° C)
	Relative Humidity (operating)	5% to 95%
	Shock (operating)	1,500 G / 0.5 ms Half Sine Wave
Regulations	UL, CSA, EN 60950-2000, CISPR Pub 22 Class B, CNS 13438, AS/NZS CISPR 22:2002 Class B, Korea KCC, CE Mark	
Option kit contents	HP 128Gb SED Opal 2 Solid State Drive, documentation, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable	

* For solid state disk drives, GB means 1 billion bytes. 128GB is the unformatted capacity of this drive before a portion of the drive is reserved for flash management features. Actual capacity will vary by content

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HP 3D 256GB Sata SSD

Unformatted Capacity	256 GB	
	500,118,192 (User Addressable Sectors)	
Architecture	Self-Encrypting (SED) Solid State Drive with NAND Flash and SATA interface. Fully complies with ATA/ATAPI-7 Standard (Partially Complies with ATA/ATAPI-8) Power Saving Modes: DIPM (Partial / Slumber mode)	
	Support NCQ : Up to 32 depth	
	Synchronous Signal Recovery	
Interface	Serial ATA (6.0 Gb/s)	
Form Factor	2.5 inch	
Height	6.80 mm ± 0.20	
Width	69.85 mm ± 0.25	
Length	100.20 mm ± 0.25	
Weight	Up to 54 g	
Bandwidth Performance	**Sustained Sequential Read:**	Up to 540 MB/s
	Sustained Sequential Write:	Up to 280 MB/s
Power	Power consumption:	Active: Typical 250mW; Idle: Typical 50mW

Technical Specifications

Mean Time Between Failure (MTBF)	1,500,000 hours	
Environmental (all conditions, non-condensing)	Operating Temperature:	32° to 158° F (0° to 70° C)
	Relative Humidity:	5% to 95%
	Shock:	1,500 G/0.5 ms

HP 256GB SATA TLC Non-SED Solid State Drive	**Unformatted Capacity**	256 GB	
	Architecture	TLC NAND Flash	
	Interface	SATA 3.2 (6.0 Gb/s)	
	Dimensions (W x H x D)	6.98 x 0.7 x 10.05 cm	
	Weight	36.5 g	
	Bandwidth Performance	Sustained Sequential Read:	Up to 498 MB/s
		Sustained Sequential Write:	Up to 455 MB/s
		Random Read:	Up to 84K IOPs
		Random Write:	Up to 49K IOPs
	Power	DC power requirement:	5 VDC 5%-100 mV ripple p-p
		Total power consumption:	95mW (active); 70mW (idle)
	Useful Drive Life	72TB written, up to 40GB/day for 5 years	
	Environmental (all conditions, non-condensing)	Operating Temperature:	32° to 158° F (0° to 70° C)
		Relative Humidity:	5% to 95%
		Shock:	1,500 G/0.5 ms
	Option kit contents	HP 256GB SATA TLC Non-SED Solid State Drive, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable	

* For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software.

Intel Pro 2500 180GB SATA SED Opal2 Solid State Drive	**Formatted Capacity**	180 GB
	Architecture	Solid State Drive with SATA interface; ATA 8 Compliant and SATA 3.0 compliant
	Interface	Serial ATA 3 (6.0 Gb/s)
	Form Factor	2.5 inch
	Height	7 mm ± 0.5
	Width	69.85 mm ± 0.25
	Length	100.45 mm Max

Technical Specifications

Weight (typical)	Up to 78 g		
Data Transfer Rate (128k Sequential)	Sequential Read	Up to 540 MB/s	
	Sequential Write	Up to 490 MB/s	
Power Watts	Power consumption (avg):	Power-Up: 6W (max)	
		Read: <3.7W	
		Write: 3.7W	
		Standby: <55mW	
		DEVSLP: <7mW	
Environmental (all conditions, non-condensing)	Operating Temperature:		32° to 158° F (0° to 70° C)
	Relative Humidity:		5% to 95%
	Shock:		1500 G Max - operating (operating)
Option kit contents	HP 256GB SATA TLC Non-SED Solid State Drive, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable		

NOTE: For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software.

256GB SATA 2.5" Value (Non-SED) Solid State Drive			
	Unformatted Capacity	256 GB	
	Architecture	TLC NAND Flash	
	Interface	SATA 3.2 (6.0 Gb/s)	
	Dimensions (W x H x D)	6.98 x 0.7 x 10.05 cm	
	Weight	31g	
	Bandwidth Performance	Sustained Sequential Read:	Up to 510 MB/s
		Sustained Sequential Write:	Up to 330 MB/s
		Random Read:	Up to 38K IOPs
		Random Write:	Up to 70K IOPs
	Power	DC power requirement:	5 VDC 5%-100 mV ripple p-p
		Total power consumption:	50mW (active); 20mW (idle)

Technical Specifications

Useful Drive Life	72TB written, up to 40GB/day for 5 years	
Environmental (all conditions, non-condensing)	Operating Temperature:	32° to 158° F (0° to 70° C)
	Relative Humidity:	5% to 95%
	Shock:	1,500 G/0.5 ms
Option kit contents	HP 256GB SATA TLC Non-SED Solid State Drive, 3.5-inch bay adapter bracket, 3.5-inch bay adapter bracket screws, SATA cable	

NOTE: "For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software."

[1] For hard drives and SSDs, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB is reserved for system recovery software.

[2] One-year limited warranty, or the remaining warranty of the HP Desktop in which the drive is installed.

Summary of changes

Date of change:	Version History:		Description of change:
June 17, 2015	From v1 to v2	New	launched
June 17, 2015	From v2 to v3	Addition	Added Specs for HP 3D 256GB Sata SSD
August 13, 2015	From v3 to v4	Addition	Added specs for " HP 256GB SATA TLC Non–SED Solid State Drive"
February 29, 2016	From v4 to v5	Addition	Added Intel Pro 2500 180GB SATA SED Opal2 Solid State Drive - P3X90AA
		Changed	Introduction and Widows compatibility.
June 29, 2016	From v5 to v6	Update	Added SSD
June 21, 2017	From v6 to v7	Update	Multiple updates