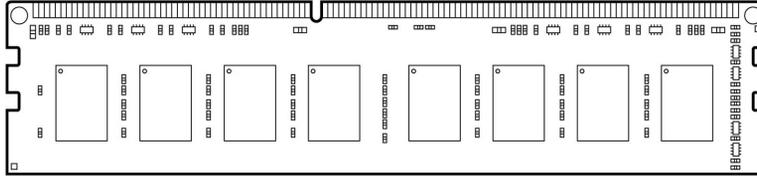


### Overview



### Models

#### PC3-10600 (DDR3-1333 MHz) DIMMs

HP 1-GB PC3-10600 (DDR3-1333 MHz) DIMM

AT023AA

HP 2-GB PC3-10600 (DDR3-1333 MHz) DIMM

AT024AA

HP 4-GB PC3-10600 (DDR3-1333 MHz) DIMM

VH638AA

#### PC3-10600 (DDR3-1333 MHz) SODIMMs

HP 1-GB PC3-10600 (DDR3-1333 MHz) SODIMM

VH639AA

HP 2-GB PC3-10600 (DDR3-1333 MHz) SODIMM

VH640AA

HP 4-GB PC3-10600 (DDR3-1333 MHz) SODIMM

VH641AA

### Introduction

Maximize your Business PC performance with HP Memory. Upgrading your memory is a cost-effective way to boost your system performance without having to upgrade your processor.

A common perception is that upgrading to a faster processor will improve overall system performance. However for systems with insufficient memory, a faster processor will not result in higher overall performance. In fact, adding memory is the easiest way to boost system performance; and it's more cost effective than upgrading your processor. Random Access Memory (RAM) temporarily stores information from your operating system, and applications and data that are in current use. This allows your processor to easily access the critical information that makes your programs run. More RAM allows you to run more programs simultaneously and makes it easier to toggle between programs.

When adding memory it is important to use comparable DIMMs to those already installed. Adding faster DIMMs will increase the amount of memory but system memory will still run at the speed of the slowest DIMM.

New releases of operating systems or software applications often include an increase in the minimum acceptable system memory requirement for acceptable system performance. As a result it is often advised to upgrade the system memory when you upgrade the operating system or software applications on your HP Desktop.

#### Dual Channel configuration

Although memory performance industry standards have improved, they lag behind the rapid increase in processor speeds and therefore have become a system bottleneck. HP Desktops feature motherboards designed with two memory channels instead of a single channel.

Dual channel memory configuration helps minimize the bottleneck by utilizing the theoretical bandwidth of two memory modules instead of one, thus reducing system latencies and significantly improving system performance.

### Overview

**NOTE:** Dual Channel memory configuration requires the population of memory in each of the two memory channels.

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### Key Benefits

- Faster start-up times with fewer delays during routine operations
  - More programs running simultaneously
  - Easy toggling between several open applications
  - Rigorous supplier qualification processes for ensured quality
  - Thoroughly tested by HP for high reliability
  - Competitively priced
- 

### Compatibility

See table in Technical Specifications section for compatibilities.

**NOTE:** Not all models are available in all regions.

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### 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

PC3-10600 Memory DIMMs					
Kit Size	# of DIMMs	Compatibility*	Data Rate**	# of Pins	Motherboard Keynotch
1 GB (AT023AA)	1	<p>HP Compaq dx7510 Microtower, HP Compaq 4000 Pro Small Form Factor, HP Compaq 6000 Pro Microtower, HP Compaq 6000 Pro Small Form Factor, HP Compaq 6005 Pro Microtower, HP Compaq 6005 Pro Small Form Factor, HP Compaq 6200 Pro Microtower, HP Compaq 6200 Pro Small Form Factor, HP Compaq 8000 Elite Small Form Factor, HP Compaq 8000 Elite Convertible Minitower, HP Compaq 8100 Elite Convertible Minitower, HP Compaq 8100 Elite Small Form Factor, HP Compaq 8200 Elite Small Form Factor, HP Compaq 8200 Elite Convertible Minitower, HP Compaq 8200 Elite Microtower Business PCs, Compaq 500B Microtower Business PC, HP 500B Microtower Business PC, Compaq 505B Microtower Business PC, HP Pro 2000 Microtower Business PC, HP Pro 3000 Microtower Business PC, HP Pro 3000 Small Form Factor Business PC, HP Pro 3005 Microtower Business PC, HP Pro 3005 Small Form Factor Business PC, HP Pro 3010 Microtower Business PC, HP Pro 3010 Small Form Factor Business PC, HP Pro 3015 Microtower Business PC, HP Pro 3110 Microtower Business PC, HP Pro 3110 Small Form Factor Business PC, HP Pro 3115 Microtower Business PC, HP Pro 3115 Small Form Factor Business PC, HP Pro 3120 Microtower Business PC, HP Pro 3120 Small Form Factor Business PC, HP Pro 3125 Microtower Business PC, HP Pro 3130 Microtower Business PC, HP Pro 3130 Small Form Factor Business PC, HP Pro 3090 Microtower Business PC, HP Elite 7000 Microtower Business PC, HP Elite 7100 Microtower Business PC, HP Elite 7200 Microtower Business PC</p> <p><b>NOTE:</b> Please check this product's web page on <a href="http://HP.com">HP.com</a> for current compatibility information.</p>	1333 MHz	240	Single
2 GB (AT024AA)	1	<p>HP Compaq 4000 Pro SFF, HP Compaq 6000 Pro MT, HP Compaq 6000 Pro SFF, HP Compaq 6005 Pro MT, HP Compaq 6005 Pro SFF, HP Compaq 6200 Pro MT, HP Compaq 6200 Pro SFF, HP Compaq 8200 Elite SFF, HP Compaq 8200 Elite CMT, HP Compaq 8200 Elite MT, HP rp5800 Retail System</p> <p><b>NOTE:</b> Please check this product's web page on <a href="http://HP.com">HP.com</a> for current compatibility information.</p>	1333 MHz	240	Single
4 GB (VH638AA)	1	<p>HP Compaq 4000 Pro SFF, HP Compaq 6000 Pro MT, HP Compaq 6000 Pro SFF, HP Compaq 6005 Pro MT, HP Compaq 6005 Pro SFF, HP Compaq 6200 Pro MT, HP Compaq 6200 Pro SFF, HP Compaq 8200 Elite SFF, HP Compaq 8200 Elite CMT, HP Compaq 8200 Elite MT, HP rp5800 Retail System</p> <p><b>NOTE:</b> Please check this product's web page on <a href="http://HP.com">HP.com</a> for current compatibility information.</p>	1333 MHz	240	Single

### Technical Specifications

Kit Size	# of SODIMMs	Compatibility*	Data Rate**	# of Pins	Motherboard Keynotch
1 GB (VH639AA)	1	HP Compaq 6000 Pro All-in-One Business PC, HP Compaq 6005 Pro Ultra-slim Desktop PC, HP TouchSmart 9100 Business PC, HP Compaq 8000 Elite Ultra-slim Desktop PC, HP Compaq 8000f Elite Ultra-slim Desktop PC, HP Compaq 8200 Elite Ultra-slim Desktop PC  <b>NOTE:</b> Please check this product's web page on HP.com for current compatibility information.	1333 MHz	204	Single
2 GB (VH640AA)	1	HP Compaq 6005 Pro USDT, HP Compaq 8200 Elite USDT, HP TouchSmart 9100, HP TouchSmart 9300 Elite  <b>NOTE:</b> Please check this product's web page on HP.com for current compatibility information.	1333 MHz	204	Single
4 GB (VH641AA)	1	HP Compaq 6005 Pro USDT, HP Compaq 8200 Elite USDT, HP TouchSmart 9100, HP TouchSmart 9300 Elite  <b>NOTE:</b> Please check this product's web page on HP.com for current compatibility information.	1333 MHz	204	Single

**NOTE:** \*Not all products available in all regions.

<b>DDR3 Memory DIMMs</b>	<b>Dimensions (HxWxD)</b>	1.18 x 5.24 x 0.16 in (3 x 13.3 x 0.4 cm)
<b>DDR3 Memory SODIMMs</b>	<b>Dimensions (HxWxD)</b>	1.18 x 2.66 x .15 in (3 x 6.76 x 0.38 cm)

Operating Systems supported: Windows 8 Pro, Windows 8, Windows 7 Home Basic\*, Windows 7 Home Premium\*, Windows 7 Professional Edition 32\*, Windows 7 Professional Edition 64\*, Windows 7 Ultimate Edition 32\*, Windows 7 Ultimate Edition 64\*, Windows Vista Business 64†, Windows Vista Business 32†, Windows Vista Home Basic 32†, Windows XP Professional 32, Windows XP Professional 64 or Windows XP Home 32. No driver is required for this device. Native support is provided by the operating system.

**NOTE:** Not all models available in all regions.

\*This system may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See <http://www.microsoft.com/windows/windows-7/> for details.

† Certain Windows Vista product features require advanced or additional hardware. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: <http://www.windowsvista.com/upgradeadvisor>. For Windows Vista system requirements, visit: <http://www.windowsvista.com/systemrequirements>.

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