

April 2001

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**Contents**

**Introduction** ..... 3  
**How Memory Is Produced  
and Sold**..... 3  
    Compaq Qualification and  
    Testing Procedures ..... 4  
    Impact of Memory on  
    System Warranty..... 5  
    Price and Value..... 5  
    Single Supplier Convenience .... 5  
    Beware the Term "Compaq  
    Compatible" ..... 5  
**Summary**..... 5

## Why Buy Compaq Memory

***Abstract:** Why buy Compaq memory? The answer is that Compaq is best able to certify the functionality and quality of memory for use in Compaq products. This white paper outlines the importance of buying memory that meets Compaq standards, and gives examples of the risks involved when not using Compaq memory. This paper is intended for customers, vendors, VARs, and Compaq Field Systems Engineers.*

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Why Buy Compaq Memory  
Guidelines and Best Practices prepared by Commercial Desktops and Workstations Group

First Edition (April 2001)  
Document Number 14PR-0401A-WWEN

## Introduction

The need for additional and faster commercial desktop and workstation memory is on the rise due to increasingly sophisticated software and operating systems. Consequently, when selecting and purchasing additional memory, customers need to be aware of the importance of memory quality and that “not all memory is created equal.”

Memory upgrade is an important investment that is intended to enhance a computer’s performance. Unfortunately, there are poor quality memory offerings in the marketplace that can actually hinder performance. To make the right choice when purchasing memory, the following are essential questions to consider:

- Who supplies (manufactures) the memory?
- Has the supplier done performance and reliability qualification testing of its memory and manufacturing process? To meet what standards and perform in what systems? With what hardware and software?
- What impact would installing the memory have on the Compaq product warranty?
- Does the memory supplier’s warranty cover reimbursement for degradation of performance or damage to the product it’s installed into? Or does their warranty only allow for memory module replacement with their same memory (same quality).

Customers can be confident in purchasing Compaq memory for their Compaq unit. Compaq memory is manufactured to the highest quality standards, subjected to the most rigorous testing procedures, and certified for use in Compaq products.

## How Memory Is Produced and Sold

The memory industry is divided into three main groups:

- DRAM “chip” Manufacturers
- Memory Module Manufacturers
- Resellers

These groups are further defined as follows:

1. **DRAM Manufacturers** – There are only a handful of companies in this industry due to the investment of billions of dollars in state-of-the-art fabrication facilities required to manufacture memory chips.
2. **Memory Module (DIMM or RIMM) Manufacturers** – There are many manufacturers that use DRAM chips to manufacture memory modules (DIMMs - **D**ual **I**n-line **M**emory **M**odules, or RIMMs - **R**ambus **I**n-line **M**emory **M**odules). This group includes the DRAM “chip” manufacturer’s own module manufacturing facilities. (As of this writing, there is only one known DRAM Manufacturer that manufactures and sells its modules directly to retail customers. The products of other manufacturers are wholesaled to electronics equipment manufacturers or distributors).

3. **Resellers** – This business consists of two groups:

- Electronics equipment manufacturers like Compaq who buy modules from qualified Memory Module Manufacturers to be tested and installed in their equipment and sold as upgrade options.
- Distributors whose business is to buy and re-sell electronic components such as memory modules.

Both Memory Module Manufacturers and Resellers are considered “suppliers” of memory modules.

## Key Features Customers Should Consider Before Buying Memory

Customers should consider the following before selecting a supplier or buying memory:

- Functionality and quality testing of memory chips and modules
- Quality control of memory module manufacturer
- Impact of memory on system warranty
- Supplier’s warranty in detail
- Price and value
- Convenience of using a single supplier
- The fact that the term “Compaq compatible” does **not** mean the memory is true Compaq memory, or has met Compaq quality standards

The following sections explore the details of these considerations:

### Compaq Qualification and Testing Procedures

- Only specific product from Approved manufacturers that has been tested and proven to meet Compaq engineering specifications is sold by Compaq. Those same Approved manufacturers may have some product that will not pass Compaq qualification testing, and the fallout is therefore sold elsewhere.
- Compaq also qualifies the manufacturing process. Compaq verifies that the Approved manufacturer routinely performs strict quality control tests in the production of Compaq memory modules. This verification ensures continuous quality of the modules provided to Compaq.
- Compaq qualifies every Approved manufacturer’s modules each time Compaq offers a new processor, chipset, or platform. This testing includes hardware and software testing.
- Compaq tests every unit currently shipping with the same Approved modules installed as are sold for Compaq memory upgrades.

This process ensures that every module branded as a Compaq memory module has passed an extensive series of tests to ensure its quality and reliability to work with all Compaq commercial desktops and workstations. No other memory reseller applies such extensive testing on Compaq equipment.

## Impact of Memory on System Warranty

Compaq offers a one-year-parts and carry-in-labor limited warranty on Compaq option memory. Once installed in or on a Compaq CPU, the Compaq memory carries the longer of either a one-year warranty or the remainder of the warranty period for the Compaq unit in which it is installed.

A Compaq warranty does not cover service or parts damage resulting from the use of non-Compaq branded (third-party) memory. The customer is left to determine whether the non-Compaq (third-party) reseller or manufacturer will actually resolve any problems that occur due to the memory, or will just replace the modules with more of the same.

## Price and Value

Due to various factors, Compaq memory may occasionally be priced higher than other brands. Please do not rely on price alone in purchasing memory, but realize that price is relative to the value of the product. The level of quality assurance that Compaq employs for its memory is necessary and well worth a difference in price.

It is value added when you purchase memory that enhances your computer's performance. It is not value if you purchase memory that causes lockups or lost data and costs you time and money. The seeming benefit of initially paying less for less qualified memory is quickly defeated if it results in poor performance or data loss.

## Single Supplier Convenience

Compaq offers everything customers need for Compaq systems, including memory upgrade modules, and verifies that all of these components work together, ensuring the quality of all Compaq products from beginning to end.

## Beware the Term "Compaq Compatible"

Resellers often describe their memory as "compatible" for use in certain brands of equipment (for example, "Compaq compatible"), because their product will physically fit and has the same architecture required by that equipment. The term "compatible," however, does not necessarily mean "tested on" or "qualified" or "from the same source."

## Summary

So why buy Compaq memory?

- So that you know you have the highest quality memory made
- For the reassurance that your memory is qualified and rigorously tested to work in your Compaq products
- For the peace of mind a Compaq warranty can give you
- So you can avoid costly and time-consuming situations involving poor quality memory

Only Compaq has the facilities and the procedures to test, verify, and certify memory to Compaq standards, for every Compaq product.