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INNOVENTIONS Update

Obsolescence versus upgrades

If you've ever owned or used a piece of lab equipment, you know that the manufacturers aren't very helpful when it comes to new technology. For the most part, once you're sold an oscilloscope you are stuck within the limits of that current design.

We're different, because we're engineers and techs like you. For over 20 years we have designed our products with the future in mind. We offer upgrades whenever possible so that you will be able to take full advantage of your investment both now and down the road.

Examples? Our loyal INNOVENTIONS customers who purchased a SIMCHECK II tester in 1995 can still convert their unit to the current RAMCHECK tester and save up to 50% off the cost of a new unit. More recently, customers who purchased the old DDR Series adapter in 2002 can convert to the high-speed DDR Pro adapter. These are great ways we save our customers money, rather than forcing them to buy a whole new system with each step up in technology.

SIMCHECK II conversion

Are you still using an old SIMCHECK II tester but need to test DDR and DDR2? First of all, thanks! We appreciate your business over the past decade. Second: Give us a call at 281-879-6226, e-mail sales@innoventions.com. We can convert your old SIMCHECK II to the RAMCHECK level for a fraction of the cost of a new unit.

Contents

Highlights

RAMCHECK DDR2/DDR1

The RAMCHECK DDR2/DDR1 tester is our most popular system. It is a discounted package containing the RAMCHECK base, plus the 18-pin DDR Pro and 240-pin DDR2 adapters.

This is a great system for testing the vast majority of desktop and server DIMMs. Like all of our testers it will identify and test JEDEC-standard DIMMs, typically in less than a minute.

You do not have to pre-program the RAMCHECK or even know what speed the module is – just insert it and press the Start button.

The RAMCHECK DDR2/DDR1 tester (p/n INN-8668-DDR2+1) will work with all optional DDR adapters and converters, and it can be ordered to support older SDRAM technology with the addition of a 168-pin test socket in the base unit.

RAMCHECK is the world's most popular bench top tester for JEDEC-standard memory, with thousands of users around the world.

Why do I need a memory tester?

If you're currently testing memory on a dedicated motherboard and free software, you know how slow it is. It can take hours for a simple test. You'll have to maintain separate PC's, each set up for different types of memory. The sockets on PC motherboards are not designed for testing, and they will break soon enough, ruining that PC. Worse, the old saying "you get what you pay for" applies here: Can you be absolutely sure that those free software programs will be updated and maintained? Can you trust your business to this?

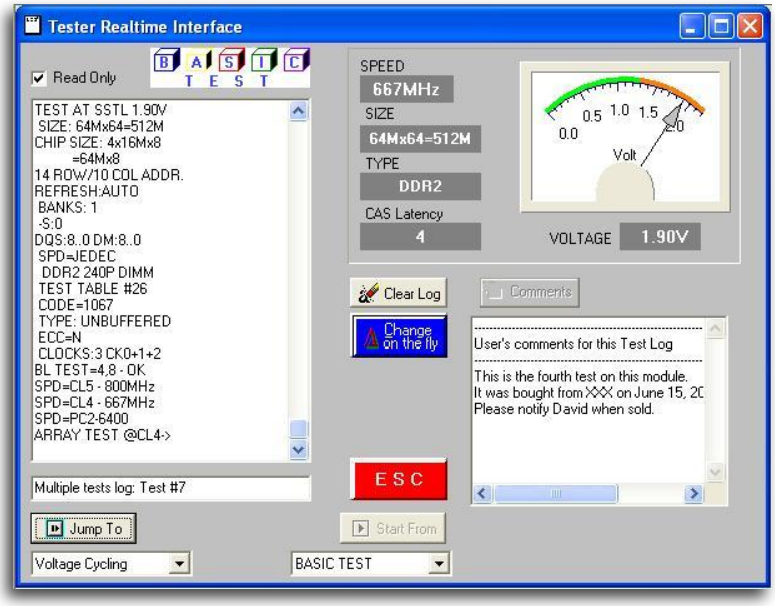
A dedicated memory tester like RAMCHECK provides you with accurate tests in just seconds. With rugged, replaceable test sockets and firmware updates, you can be sure that your investment will pay for itself many times over.

DDR3 and RAMCHECK

DDR3 (dual data rate) memory is a new industry standard that will be in wide use over the next few years. Like DDR2 memory it has 240 pins and may appear the same to the untrained eye. However, DDR3 is completely different and will offer significant advantages when it is released on the market in large volumes during the later part of 2008. According to a writer on Wikipedia,

> Its primary benefit is the ability to run its I/O bus at four times the speed of the memory cells it contains, thus enabling faster bus speeds and higher peak throughputs than earlier technologies. This is achieved at the cost of higher latency. Also, the DDR3 standard allows for chip capacities of 512 megabit to 8 gigabit, effectively enabling memory modules of maximum 16 gigabyte in size.
>
> Theoretically, these modules could transfer data at the effective clock rate of 800–1600 MHz (using both edges of a 400–800 MHz I/O clock), compared to DDR2's current range of effective 400–800 MHz (200–400 MHz clock) or DDR's range of 200–400 MHz (100–200 MHz).

RAMCHECK will support testing DDR3 memory, upon the release of the future DDR3 adapter. If you would like to be added to the request list for DDR3, please send an e-mail to sales@innoventions.com.



What's the Realtime Interface?

Now that you own a RAMCHECK, wouldn't it be great if you could save the test results for each module? Even better, print out the results for your customers so they can see exactly what type of memory, the size and speed? You already can. RAMCHECK comes with a handy PC software program called the Realtime Interface.

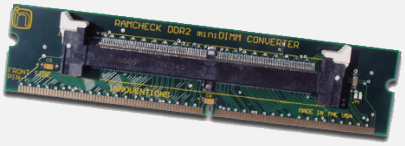
Inside the RAMCHECK package you will find a CD containing the software, plus a serial cable. Simply install the software and hook the RAMCHECK up to your PC. That's all there is to it. Via the RAMCHECK Realtime Interface, you have full operational control over the RAMCHECK, with a nice big display that allows you to see all of the information you need on one screen.

A summary of the module's size, mode type, access time and cycle time, along with the list of the various control signals is displayed after the Basic Test. Also displayed are messages indicating if the module is non-standard, or otherwise different in architecture. You can even override the test parameters by using the CHANGE-ON-THE-FLY feature.

You can download and try the Realtime Interface yourself, even if you don't own RAMCHECK. Just click the Downloads tab at the top of our website.

What else can I do with it?

Plenty! You'll need to have the Realtime Interface to upgrade your RAMCHECK's firmware, but you can also use it to save/edit/store SPD information with the handy SPD Wizard, plus there's an in-depth online help section should you have any technical questions about using RAMCHECK.



What the heck is a miniDIMM?

Also known as a Mini-DIMM, you can guess by the name that this DIMM has a very small form factor.

It's a 244-pin DIMM that was developed to overcome the challenges experienced when using standard DDR and DDR2 SO-DIMMs, particularly in applications where physical space is at a premium.

For example, with DDR2 SODIMMs there are not enough I/O pins to accommodate the ECC function. The 244-pin miniDIMM overcomes this challenge. It enables space saving memory options to support a wide variety of applications such as industrial control equipment, Internet backbone switches, edge routers, embedded computing systems, gateways and industrial control equipment.

You can easily test miniDIMM modules with RAMCHECK. It requires the RAMCHECK DDR2 adapter (p/n INN-8668-12) and the 244-pin miniDIMM converter (p/n INN-8668-12).

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"Innovative Products from Inventive Minds"

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How fast is RAMCHECK?

It depends upon the size and structure of the module being tested and which tests are performed. However, the one-word answer to that question is *Very*. For example, the Basic test performed on a sample 64Mx72 (512MB) DDR module was completed in 21.4 seconds, while a Basic test on a 128Mx64 (1GB) DDR2 was completed in 30.4 seconds.

Problems? Update your firmware!

Most problems that crop up while using RAMCHECK can be corrected by simply downloading and installing the current firmware. We are constantly updating and improving the RAMCHECK firmware, including adding support for newer modules. This is why it is very important that you check our website periodically to download and install the latest version.

To get started, click on the Downloads tab on our website and register.

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