INNOVENTIONS Update

Introducing RAMCHECK LX

Our latest memory tester, the RAMCHECK LX, is now shipping to customers worldwide. The RAMCHECK LX features a large, bright display that is much brighter than the previous version of the RAMCHECK. In fact, you can read it clearly from 4 or 5 feet away, at any angle! RAMCHECK LX also uses a fast USB interface and the latest components.

What does RAMCHECK LX mean for you? It means faster test times, improved error detection and a superior user experience. Best of all, if you are already a RAMCHECK customer and you need an additional tester, RAMCHECK LX will work with all of your current RAMCHECK adapters. Just plug in your existing test adapter, turn the LX on and you're ready to go.

The RAMCHECK LX (seen above with the optional DDR2 adapter) is now available. Please reference part number INN-8686. All products are sold with a limited 1-year warranty.

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RAMCHECK LX Display

The RAMCHECK LX tester uses a high-contrast 128 x 64 pixel LCD, black on white, with LED backlighting and 6 o'clock view direction. In fact, you will be able to clearly see the display from 4-6 feet (or a meter) away, at any angle, even in bright indirect light.

Better still, not only is the LX display brighter, it is twice the size of the RAMCHECK LCD display (128 x 32 pixels).

In brightly-lit areas, such as a store kiosks or shop floors in repair depots with florescent white lighting, the RAMCHECK LX display is easy to see. And as with the older RAMCHECK, you can manually adjust the contrast to your preferred setting.

INNOVENTIONS manufactures the world's most popular bench top testers for JEDEC-standard memory, with thousands of users around the world.

Why should you buy a memory tester from us?

A memory tester is an important investment. When you purchase from us, you can feel confident that you are making the right decision.

We've been manufacturing memory testers since the 1980s. Our proven track record not only assures you that we provide great products, but we'll be around when you need us in the future.

We have the largest installed base of memory testers in the market, with almost 20,000 testers sold throughout the world.

We provide live, free customer support. Our trained staffers are experts in the memory testing field. If you ever need support, our staffers will provide prompt, clear answers. Our promise to you: No annoying voicemail system that takes days for a return call!

What the heck is an SPD?

The vast majority of memory modules have a small EEPROM chip called an SPD, which stands for Serial Presence Detect. Contained on this EEPROM is information that tells the computer's BIOS the module's size, speed, voltage and data width. The BIOS will then use this identifying information to configure the memory during operation of the computer.

When testing memory, RAMCHECK will detect the EEPROM and read this SPD data. Tests will then be performed based upon the information stored on the EEPROM. For example, if the SPD information says that the module is 667 MHz, RAMCHECK will perform the test at 667 MHz, which is the actual operating speed the module would encounter in use.

RAMCHECK makes it easy to program the SPD. For example, if you have a batch of memory that fails at 400 MHz but passes tests at 333 MHz, you can save a master SPD file that identifies the modules at being rated for 333 MHz and then flash the SPD to each module using the RAMCHECK. ***CAUTION: While this is a very useful feature, SPD programming should only be done by trained, knowledgeable users. Incorrect SPD data may permanently damage the module!***

A wealth of information is available on our website regarding SPD programming with RAMCHECK. Please refer to http://www.innoventions.com/ramcheck/man_rc_spd.htm for more information.

Interpreting a Test Log

Both the RAMCHECK and RAMCHECK LX provide you with very detailed test logs, allowing you to quickly see not only the particulars of the module under test, but exactly why the module failed. These test logs are invaluable for memory repair, RMA returns and a host of other reasons.

The RAMCHECK's Basic Test will show you the module's size, speed, structure, then runs through a series of tests. Below is an actual RAMCHECK LX test log for a common 667MHz DDR2 DIMM.

The first screen displays the module's size, speed, voltage, the particular test pattern, the module's bank and the CAS Latency. This example shows testing at 667MHz with an automatic setting of CAS Latency to the default value of CL=4 for this frequency.

Once a test is successfully concluded, you will see a 'Pass' message and distinctive sound tones. Important parameters are shown in this particular screen, followed by a screen showing more detailed results.

The Test Log stores all of the intermediary test results while the memory devices are checked during the test phases. The Test Log remains stored until a new test is initiated. It may be uploaded to your PC for printing via the USB interface. You can also save the file.

Test results summary screens provide a wealth of information after each test phase.

This screen shows the results of wiring tests performed by the RAMCHECK LX. All summary screens are added to the Test Log.

If RAMCHECK LX detects an error, the test is halted and information about the location of the defect is displayed.

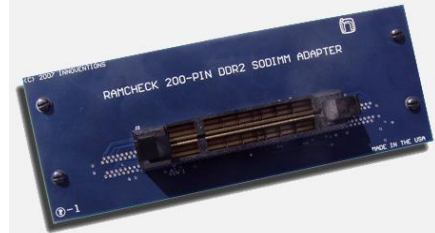In this example bytes 7 and 8 are highlighted showing that byte 8 has a bit error displayed as an "F". The corresponding 8 bits per byte are displayed in the next line showing an "F" in bit 62. The bottom line confirms that the bit error is located on pin 235 of the DDR2 module.

If you are interested in troubleshooting or repairing your own modules and you have a diagram of the module (which you can typically find by searching for the part number), you can use this information to pinpoint the defective chip or chips.

A wealth of information is available on our website regarding the test logs and how to use them. Please go to our Application Note section for more details.
http://www.innoventions.com/ap_note.htm

DDR2 SO-DIMM Testing

Many of our customers use the simple converters we offer for SO-DIMM (laptop PC memory) testing. These converters are a great way to test memory, but what if you have a very high volume of memory that you need to test each week or month? You may want something more than a converter.

To answer this demand, we have created a separate full-featured adapter just for testing DDR2 SO-DIMM modules. Using the rugged Yamaichi test socket manufactured specifically for high-volume testing, the adapter is designed to be used many thousands of times, and the socket is replaceable once it is worn out.

It works with both the RAMCHECK and RAMCHECK LX. It tests 200-pin PC2-3200, PC2-4300, PC2-5300/PC2-5400 and PC2-6400 DDR2 SODIMM memory, including unbuffered and registered modules (ECC and non-ECC) that comply with JEDEC standards. It's also compatible with PC2-6400 DDR2 memory modules, but tests at a lower frequency. To order, please reference part number INN-8668-14.

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"Innovative Products from Inventive Minds"

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Have you updated your firmware?

We strive to protect your investment in memory test equipment. That's why we release firmware updates for the RAMCHECK and RAMCHECK LX every 2-3 months. These firmware upgrades provide additional support for new modules, repair bugs, and add functionality to your tester. These firmware updates are free!

We recommend that our customers bookmark our download page and check it frequently for updates: http://www.innoventions.com/ftp.htm

To get started, register your tester online at the link above. A password will be sent to you within seconds. Once you're logged in you can download the firmware to your PC. To flash the new firmware to your RAMCHECK, just connect it to your PC with the serial cable (RAMCHECK) or USB cable (RAMCHECK LX), then start up the PC Communications Program (also available on our website). Easier yet, just click the Automated Firmware Download button in the PC Communications Program once you have registered.

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