# Test your memory. Don't toss it. RAMCHECK LX DDR4 Pro.



Fast USB connection.

Large, bright display.

RAMCHECK has been a huge help in our efforts to improve efficiency in tests."

- Chuck Kenny, Strike One, Inc.

## RAMCHECK LX Tests\*

- √ 288-pin DDR4
- √ 240-pin DDR3
- ✓ 240-pin DDR2
- √ 184-pin DDR
- ✓ SO-DIMMs
- ✓ Legacy SDRAM/EDO
- \* Requires optional adapters. Discount packages containing the most popular adapters are available.

This thing has been one of the best investments ever. Not sure how I did without before."

- Hesam Lamei, Quality RAMs Test your PC, laptop and server memory with RAMCHECK LX! It quickly and thoroughly tests and identifies all popular memory formats, including DDR4, DDR3, DDR2, DDR and SDRAM.

With its small footprint, large, bright display and fast USB interface, RAMCHECK LX DDR4 (seen above with the DDR4 Pro adapter) is very easy to use. No lengthy manuals to wade through, no complex set up procedures to follow. Simply turn the unit on, insert the memory module into the rugged test socket, and press the start button. It really is that easy! In less than a minute, RAMCHECK LX will display the module's size, speed and type, and then perform a thorough test of the module.

When you buy RAMCHECK LX, your investment is protected, with regular free firmware upgrades available to keep your tester up to date. A PC communication software package is included to log and print your test results via USB, plus a powerful SPD editor to program/edit/save SPD data.

# RAMCHECK®LX DDR4 Pro/DDR3

For a complete testing solution, the popular RAMCHECK LX DDR4 Pro/DDR3 gives you everything you need for testing and identifying both 288-pin DDR4 and 240-pin DDR3 DIMM memory modules. Support for testing SO-DIMM, DDR2, DDR, SDRAM and chips is also available.

www.memorytesters.com 10425 Bissonnet St., Houston, TX 77099 USA Telephone: 1 (281) 879-6226 Fax: 1 (281) 879-6415 E-mail: sales@innoventions.com





# **RAMCHECK LX DDR4 Features and Specifications**

# RAMCHECK LX DDR4 Specifications (with optional adapters)

#### Basic Tes

- · Identifies module type, size, configuration, voltage and frequency.
- · Checks open/short, addressing and identifies defective bits.

#### Extensive Test

- Voltage Cycling
   Multi-Burst
   Mode Functionality
- Voltage Bounce
   March Up/Down
   Relative Voltage Spikes (EDO/FPM)
- Relative Refresh/Cell Leakage (EDO/FPM)
   Temperature Stress

# Auto-Loop Test

- Module is endlessly tested with different pattern bits Excellent for burn-in testing
- · Detects pattern sensitivity problems

#### Test Frequencies

- Test DDR4 at 1600MHz.\*
- Test DDR3 at 1066MHz. 866MHz.\*
- Test DDR2 at 866MHz, 800MHz, 667MHz, 600MHz, 533MHz, 466MHz, 400MHz, 333MHz.
- Test DDR modules at 466MHz, 433MHz, 400MHz, 333MHz, 266MHz, 200MHz
- Test frequencies automatically selected or can be optionally changed by the user "on the fly."
   \*Higher frequency modules test at lower frequency but the correct frequency is identified.

#### **Test Parameters**

- DDR4 CAS Latency: 9-24. DDR3 CL: 5-12. DDR2 CL: 2-6. DDR1 CL: 2, 2.5, 3.
- DDR4 Trcd: 7-14 For DDR3: 5-10. For DDR2: 2-5. For DDR1: 2-4.
- DDR4/DDR3/DDR2 Burst Length of 4 or 8. For DDR1: 2, 4 or 8.
- DDR4/DDR3/DDR2 Additive Latency (AL), Write Recovery, and On-Die Termination values for full JEDEC range.

#### Addressing Capability

 Maximum 16 Rows and 16 Columns addressing, 4-rank select controls and 3 bank addresses for 64GB or larger modules. Test support typically added as larger modules are introduced to the market.

#### VDD Setup

- Digitally controlled state-of-the-art switching power supply for Vdd.
- Vdd automatically defaults to 1.2V (DDR4), 1.5V (DDR3), 1.8V-1.9V (DDR2), 2.5V-2.6V (DDR).
- User has interactive control of the wider VDD range: DDR4: 1.14V-1.26V, DDR3: 1.35V-1.80V, DDR2: 1.45V-2.20V, DDR1: 2.20V-3.00V.

#### Data Bus Width

• x64 to x72 bits (Parity/ECC).

#### SPD Programming

- Edit/program/save SPD data, unlimited SPD files Convenient SPD Wizard
- Production Mode for automated SPD programming and verifying



# **General Specifications**

#### Upgrades

- Regular free firmware and PC software upgrades via the Internet.
- Optional adapters are available for a wide range of DIMM and SO-DIMM memory formats, including DDR3, DDR2, DDR, 168-pin SDRAM and older legancy DRAM.

# Environmental Temperature/Humidity

• 3° C to 32° C (40° F to 90° F), 20% - 80% non-condensing.

#### Dimension/Weight

• 9.5" x 6.5" x 3.5" (W x L x H)/4 lbs (10 lbs shipping weight), carrying case, manual included.

#### 1-vear limited warrant

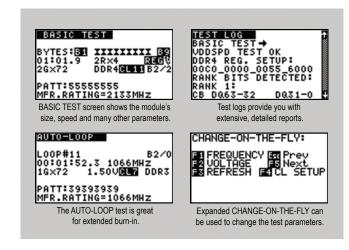
Part number: INN-8686-DDR4-PRO (RAMCHECK LX base and DDR4 Pro adapter)
Product operation and specifications are subject to change without prior notice.

# The leader in memory testing for over 30 years

INNOVENTIONS has been the leader in portable memory test equipment since 1987, when we introduced the original RAMCHECK. Thousands have been sold worldwide to memory distributors and manufacturers, Fortune 500 companies, data centers, major government institutions and IT departments. You too can rely on INNOVENTIONS.

# RAMCHECK LX Key Features

- With DDR4 adapter, tests and identifies PC4-25600/23400/21300/19200/17000/14900/ 12800 DDR4 modules. (Maximum frequency 1600MHz.)
- With DDR3 adapter, tests and identifies PC3-12800/10600/8500/6400 DDR3 modules. (Maximum frequency 1066MHz.)
- Supports Registered, Unbuffered and ECC DDR3 modules up to 64GB+.
- With DDR2 adapter, tests and identifies PC2-6400/5300/4300/3200 DDR2 modules. (Maximum frequency 866MHz.)
- Reliable and affordable, very simple to operate the module's size, speed and structure
  are automatically detected by the tester. No need for user setup.
- Rugged test socket for heavy use (DDR4 Pro, DDR3/2/1).
- Very fast. Test a 16GB DDR4 DIMM in less than two minutes (Basic Test).
- · Includes powerful SPD wizard for programming, editing and saving SPD files.
- Automatic and user controlled test parameters of Trcd, CAS Latency (CL), Additive Latency (AL), Write Recovery (WR), OCD and more.
- Fast USB connectivity. Free firmware upgrades available online.



# Optional RAMCHECK LX Adapters

# **240p DDR3**

The RAMCHECK 240-pin DDR3 adapter tests JEDEC-standard PC3-6400, PC3-8500, PC3-10600, PC3-12800, and PC3-14900. Adapter included in the LX DDR3 and LX DDR4/DDR3 packages. *p/n INN-8668-16*.





# **240p DDR2**

The RAMCHECK 240-pin DDR2 adapter tests JEDEC-standard PC2-6400/5300 4300/3200 DDR2 modules at true clock speed. Adapter included in the LX DDR2 and LX DDR3/DDR2 packages. p/n INN-8668-15.

## **SO-DIMM Testing**

Adapters and converters are available for the RAMCHECK LX, providing a low-cost solution for testing DDR4, DDR3, DDR2 and DDR1 SO-DIMMs. Pictured is the DDR3 SO-DIMM converter (requires 240-pin DDR3 adapter.) p/n INN-8668-16-1

www.innoventions.com 10425 Bissonnet St., Houston, TX 77099 USA Telephone: (281) 879-6226 Fax: (281) 879-6415 E-mail: sales@innoventions.com Copyright © 2018, INNOVENTIONS, Inc. All Rights Reserved.

