

Standard Operation Process of Qualifying your NUUO DVR server

Purpose

NUUO capture card is PC-based product, therefore, customers have to purchase computer and install NUUO product to be a DVR server on it by themselves. In order to qualify the NUUO server, we suggest customer to do pressure test before shipping the NVR servers to their clients. The whole process will take 1 day. Please follow below steps and checklist (Appendix 1) to finish the test.

A. Build up the PC

1. Prepare motherboard, graphic according to NUUO hardware compatible list (http://support.nuuo.com/mediawiki/index.php/Hardware_compatibility_list)
2. Prepare CPU and RAM according to calculator <http://support.nuuo.com/calculator/>
3. Install CPU, RAM, graphic card and NUUO capture card on the motherboard
4. Boot the PC and enter BIOS to disable "C3 state"¹

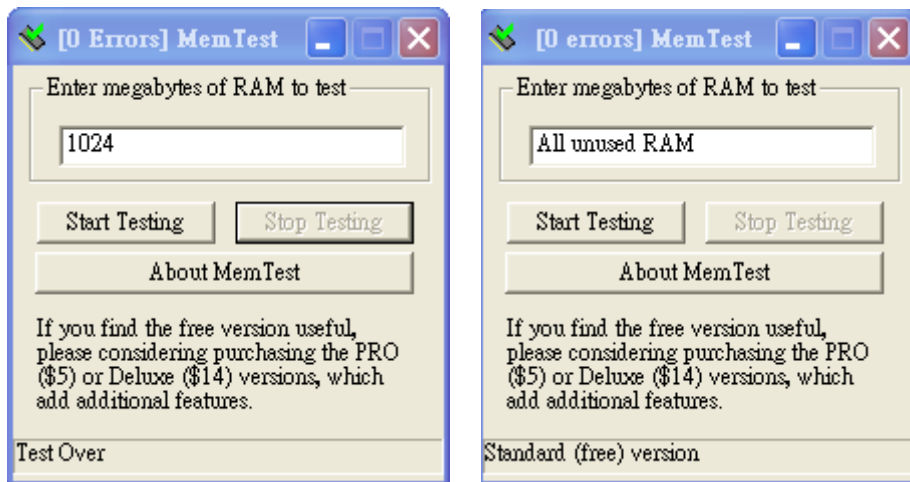
B. OS/Driver installation and setup

1. Install OS (Windows 7 32 bit or Windows XP 32 bit)
2. Update windows to latest status
3. Turn off auto windows update , firewall ,screen saver, and windows sleep
4. Install the drivers of motherboard and VGA card. (Do not use embedded driver of OS)
5. Update the latest driver of graphic card by accessing intel, Nvidia or ATI website.
Intel: <http://www.intel.com/>
Nvidia: <http://www.nvidia.com/content/global/global.php>
Ati: <http://ati.amd.com/>

C. Memory test

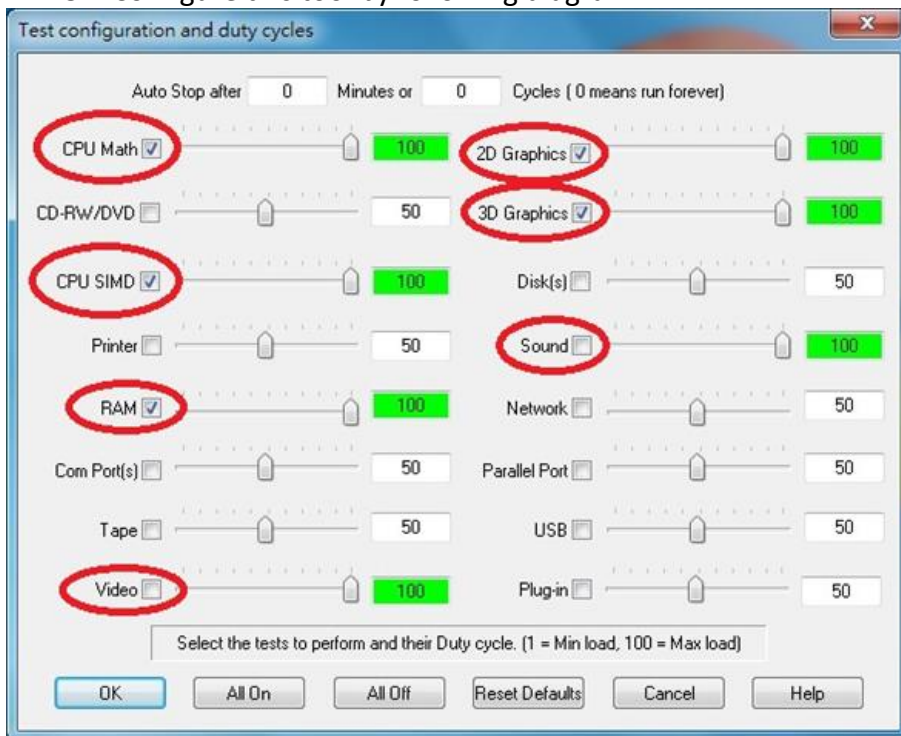
- 1.) Download Memtest tool at <http://www.memtest.org/>
- 2.) Since this tool can only test 1024 MB one time, please execute it several times by following steps.
 - Check the memory of your RAM
 - Divide whole memory by 1024
 - For example, your RAM is 4096 MB, you will need to execute memtest.exe four times
 - Type 1024 MB in the first three dialog and type all unused memory in the last dialog
 - Click start testing on each dialog
 - Wait for the processing
 - If you see test coverage reaches 100% with 0 error, it means the one-fourth of your RAM works well; If you see any error message before reaching 100%, the RMA is a defect one and please install a new RAM.

¹ C3 state: a state where the processor does not need to keep its [cache](#) coherent, but maintains other state. Some processors have variations on the C3 state (Deep Sleep, Deeper Sleep, etc.) that differ in how long it takes to wake the processor. This processor state is optional. Source: http://en.wikipedia.org/wiki/Advanced_Configuration_and_Power_Interface

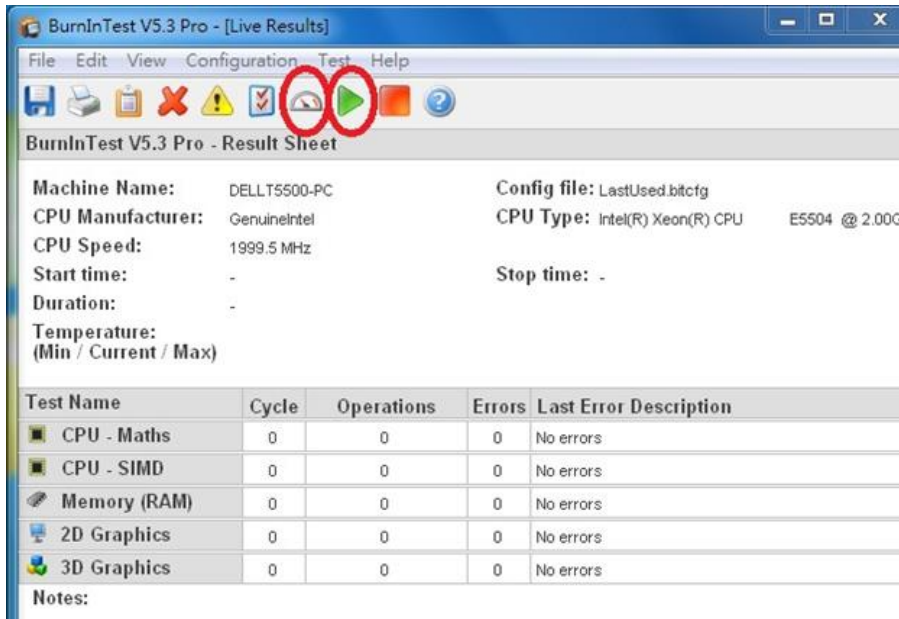


D. BurnInTest

1. Download the BurnInTest tool at <http://www.passmark.com/products/bit.htm>
2. Execute the BurnInTest tool
3. Configure this tool by following diagram



4. Run this tool for 24 hours



5. Check the last error description

If it shows no errors, it means the test item passes. If you see any error log in the error description column, please change the hardware. For example, if there is an error on 3D graphics, please install a new VGA card for troubleshooting and do BurnInTest again until no errors.

Appendix 1 Checklist

Test NO.	Theme	Step	Description	check
001	Start	1	Prepare motherboard and VGA card by compatible list	<input type="checkbox"/>
		2	Prepare CPU and RAM according to calculator	<input type="checkbox"/>
		3	Install CPU, RMA, VGA card and NUUO capture on motherboard	<input type="checkbox"/>
		4	Boot PC and enter BIOS	<input type="checkbox"/>
		5	Disable C3 state	<input type="checkbox"/>
		6	Set CD ROM as prior boot sequence	<input type="checkbox"/>
002	Setting	1	Disable Windows update	<input type="checkbox"/>
		2	Disable firewall	<input type="checkbox"/>
		3	Disable screen saver and save mode of power options	<input type="checkbox"/>
		4	Setup time and date on OS	<input type="checkbox"/>
		5	Disable "synchronize with an internet time server"	<input type="checkbox"/>
003	MB driver	1	Install driver of motherboard	<input type="checkbox"/>
		2	Install latest chipset driver on Intel website http://www.intel.com/	<input type="checkbox"/>
004	VGA driver	1	Install driver of video card	<input type="checkbox"/>
		2	Update driver to latest one from Nvidia or ATI website Nvidia: http://www.nvidia.com/content/global/global.php Ati: http://ati.amd.com/	<input type="checkbox"/>
005	RAM test	1	Check the memory size of RAM	<input type="checkbox"/>
		2	Execute memtest.exe to test RAM	<input type="checkbox"/>
006	BurnIn Test	1	Execute BurnInTest	<input type="checkbox"/>
		2	click "Select tests to perform and their duty cycle"	<input type="checkbox"/>
		3	"Test configuration and duty cycles" -> CPU MATH -> drag to very right -> click "OK"	<input type="checkbox"/>
		4	"Test configuration and duty cycles" -> CPU SIMD ->drag to very right -> click "OK"	<input type="checkbox"/>
		5	"Test configuration and duty cycles" -> RAM -> drag to very right -> click "OK"	<input type="checkbox"/>
		6	"Test configuration and duty cycles" -> Video -> drag to very right -> click "OK"	<input type="checkbox"/>
		7	"Test configuration and duty cycles" -> 2D Graphics -> drag to very right -> click "OK"	<input type="checkbox"/>
		8	"Test configuration and duty cycles" -> 3D Graphics -> drag to very right -> click "OK"	<input type="checkbox"/>
		9	"Test configuration and duty cycles" -> Sound -> drag to very right -> click "OK"	<input type="checkbox"/>
		10	"Test configuration and duty cycles" -> Auto Stop atrer __Mintues or __Cycles -> all set "0" -> click "OK"	<input type="checkbox"/>
		11	click "Start tests" to run for 24 hours	<input type="checkbox"/>
		12	Test result	<input type="checkbox"/> Pass <input type="checkbox"/> Fail