

Dreamcore QC Software V2.0

Documentation

Last updated: 3 Mar 2022 00:05

Overview

The QC software acts as an end-to-end replacement for the existing QC script and expands to automate the entire QC process as much as possible.

Modes

The software has 4 modes, each for a different use case. Under normal usage (full QC sequence), the software defaults to starting in the driver mode, and automatically switch to the next mode when it finishes the current stage. This however can be manually set according to the user's need.

This section is just an overview of the different modes. Details on what each mode does are below in the Procedure Description section.

You will see which mode the software is running in the console log during start up.

Mode 0: Driver mode

This mode is the default mode if no other modes are specified in the mode.txt. It records tester information, installs drivers, tests hardware, checks and installs benchmark files. At the end of this mode, the software switches to mode 1 (benchmark mode)

Mode 1: Benchmark mode

This mode runs stress tests and benchmarks while monitoring hardware temperatures. It reports scores of benchmarks at the end as well. At the end of this mode, the software switches to mode 2 (post-OOBE mode)

Mode 2: Post-OOBE mode

This mode is meant to be run after the system hardware has been tested, and some customization on the software side is needed. This includes installing RGB control software, setting OEM information like wallpaper and model names, and activating Windows. At the end of this mode, the software switches to mode 3 (restore point mode)

Mode 3: Restore Point mode

This mode simply creates a restore point of the system. It does not allow or need any user action. It is meant to be used after all software and update are installed and finalized. After running this mode, the system should be ready to ship. The software cleans up and resets to mode 0.

Manual mode switch

Although the software is designed to automatically switch mode, the user can also specify which mode to run. To do this, edit the mode.txt at C:/ProgramData. This folder is hidden by default and is only visible if enabled 'show hidden items' in Windows Explorer. If this mode.txt does not exist, it means that the software will default to mode 0, and you can manually create and edit it to run it in other modes,

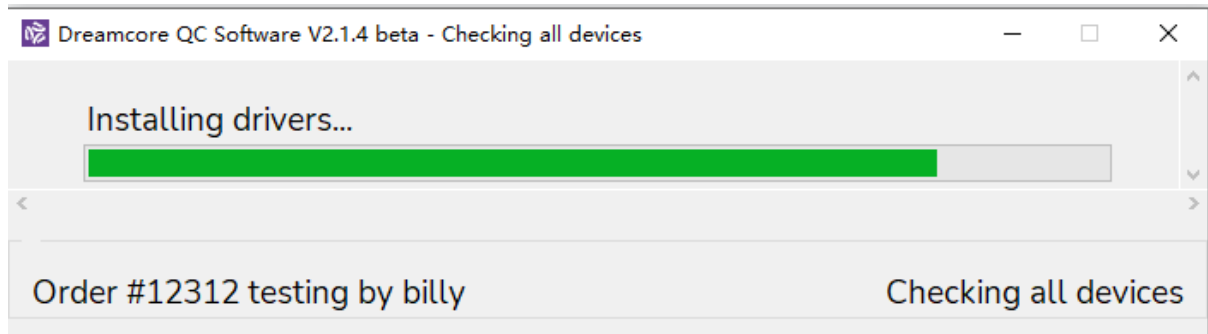
The file contains one digit, 0, 1, 2 or 3, corresponding to each mode listed above. To switch the mode, simply change the digit. Please do not type in anything or newlines before and after the mode digit, else the software will default to mode 0.

Modifying mode.txt may require manually modifying the file's permission to allow the current logged in user to edit. This is needed if the file is created in Audit mode then kept during OOBE and tried to edit after OOBE. Since the file owner is the Admin account in Audit mode, modifying the file requires permission to be granted for the new account after OOBE.

Procedure Description

This section describes what each mode does and details of each function/feature that the software runs.

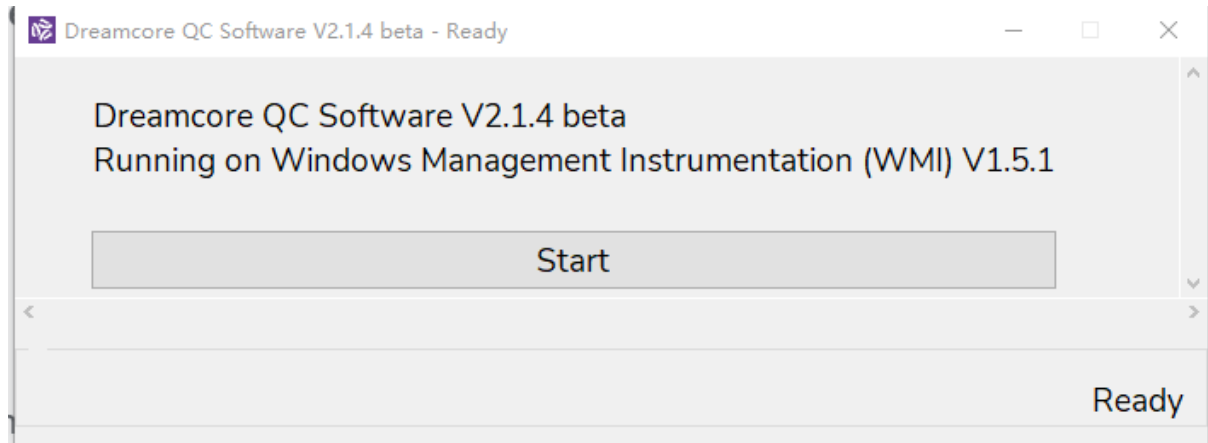
Basic UI layout



- The title bar shows the version of the software and current status.
- The bottom left area shows the order and tester info if available (after them being typed in)
- The bottom right area shows the current status of the software.
- The window of the software is always on top except for full-screen benchmarks like 3DMark. This ensures the order and tester can be identified instantly. The user can minimize the window if they wish (not recommended).
- The window cannot be resized or maximized. It changes size whenever needed. The maximum window size is 70% of screen height and width, and if that will not fit everything that needs to be displayed, a scroll bar will appear and the user can scroll both horizontally and vertically if needed.
- To properly close the software, use the X button on the window, do NOT close by the console window X, as it may result in certain files not being updated or cleaned up.

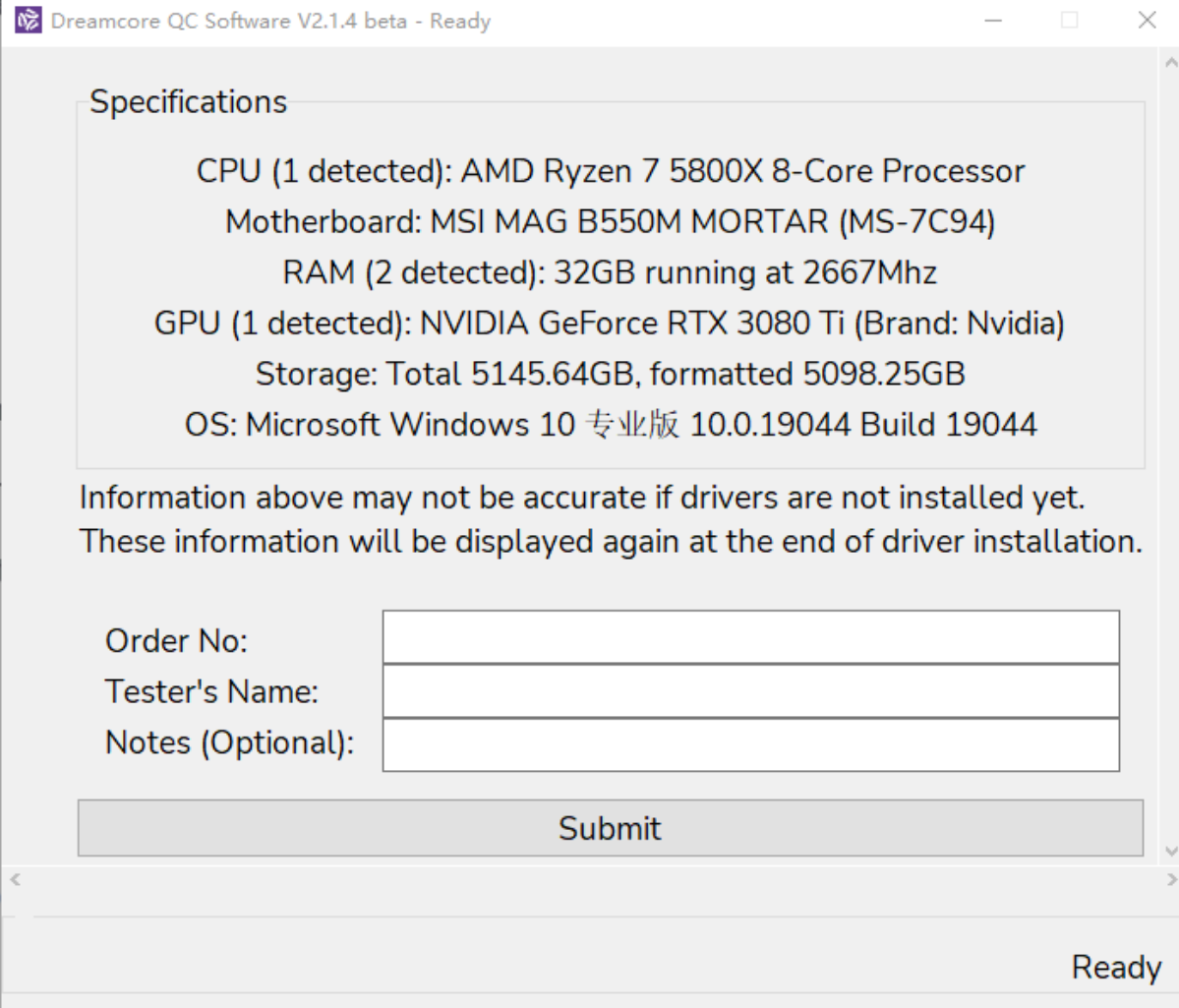
Driver mode

Start page



Press the Start button or enter key to start scanning hardware specs. The scanning process will be tracked by a progress bar, and certain components (mainly storage) take longer than others to scan.

Information input page



The screenshot shows a software window titled "Dreamcore QC Software V2.1.4 beta - Ready". Inside, there is a "Specifications" section with the following text:

CPU (1 detected): AMD Ryzen 7 5800X 8-Core Processor
Motherboard: MSI MAG B550M MORTAR (MS-7C94)
RAM (2 detected): 32GB running at 2667Mhz
GPU (1 detected): NVIDIA GeForce RTX 3080 Ti (Brand: Nvidia)
Storage: Total 5145.64GB, formatted 5098.25GB
OS: Microsoft Windows 10 专业版 10.0.19044 Build 19044

Below the specifications, a message states: "Information above may not be accurate if drivers are not installed yet. These information will be displayed again at the end of driver installation."

There are three input fields with labels to their left:

- Order No: [input field]
- Tester's Name: [input field]
- Notes (Optional): [input field]

A "Submit" button is located below the input fields. At the bottom right of the window, the word "Ready" is displayed.

This screen allows for preliminary confirmation of specs. As noted, some specs may not be accurate as drivers are not installed yet, for example, the GPU model. However, the GPU brand should be accurate.

You can use up and down arrow keys to switch between text boxes, and enter key to submit.

A more detailed report of detected hardware can be seen in the console window:

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Developer: Billy Cao (aliencaocao@gmail.com)

```
2021-11-27 18:48:24:986: INFO - Specifications: (main: 1174 in gatherInfo)
2021-11-27 18:48:24:986: INFO - CPU (1 detected): AMD Ryzen 7 5800X 8-Core Processor (main: 1175 in gatherInfo)
2021-11-27 18:48:24:986: INFO - Motherboard: MSI MAG B550M MORTAR (MS-7C94) (main: 1176 in gatherInfo)
2021-11-27 18:48:24:986: INFO - RAM (2 detected): 32GB (main: 1177 in gatherInfo)
2021-11-27 18:48:24:986: INFO - GPU (1 detected): NVIDIA GeForce RTX 3080 Ti (main: 1178 in gatherInfo)
2021-11-27 18:48:24:986: INFO - Storage: Total 5145.64GB, formatted 5098.25GB (main: 1179 in gatherInfo)
2021-11-27 18:48:24:986: INFO - OS: Microsoft Windows 10 专业版 10.0.19044 Build 19044 (main: 1180 in gatherInfo)

2021-11-27 18:48:24:986: INFO - Detected 2 DRAM sticks. Total capacity: 32GB (main: 573 in __call__)
2021-11-27 18:48:24:986: INFO - 0 Unknown 16.0GB (Running at 2667Mhz) (main: 575 in __call__)
2021-11-27 18:48:24:986: INFO - 1 Unknown 16.0GB (Running at 2667Mhz) (main: 575 in __call__)

2021-11-27 18:48:24:986: INFO - Detected 3 volumes in 3 drives. 3345.62GB out of 5098.25GB free (main: 700 in __call__)
2021-11-27 18:48:24:986: INFO - Drive detected: (main: 701 in __call__)
2021-11-27 18:48:24:986: INFO - 0 XPG GAMMIX S11L (SSD): Total 953.86GB (main: 703 in __call__)
2021-11-27 18:48:24:986: INFO - 1 ST4000VX007-2DT166 (HDD): Total 3726.02GB (main: 703 in __call__)
2021-11-27 18:48:24:986: INFO - 2 Samsung SSD 970 EVO Plus 500GB (SSD): Total 465.76GB (main: 703 in __call__)
2021-11-27 18:48:24:986: INFO - Volume detected: (main: 704 in __call__)
2021-11-27 18:48:24:986: INFO - 0 C: System (NTFS): 71.07GB out of 418.49GB free (83.02% used) (main: 706 in __call__)
2021-11-27 18:48:24:986: INFO - 1 D: Data (NTFS): 205.52GB out of 953.75GB free (78.45% used) (main: 706 in __call__)
2021-11-27 18:48:24:986: INFO - 2 E: Unspecified (NTFS): 3069.03GB out of 3726.01GB free (17.63% used) (main: 706 in __call__)

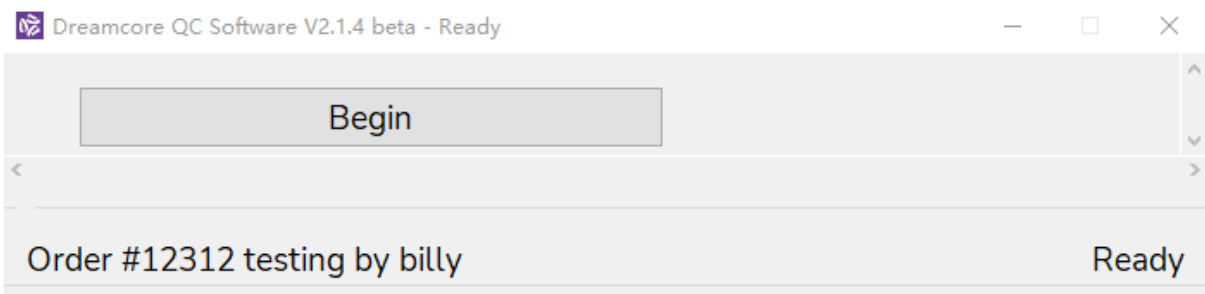
2021-11-27 18:48:24:986: INFO - CPU Brand Code: ['A'] (main: 1186 in gatherInfo)
2021-11-27 18:48:24:987: INFO - GPU Brand Code: ['N'] (main: 1187 in gatherInfo)

2021-11-27 18:48:24:987: INFO - ID GPU (main: 594 in __call__)
2021-11-27 18:48:24:987: INFO - 0 NVIDIA GeForce RTX 3080 Ti (main: 596 in __call__)
2021-11-27 18:48:24:987: INFO - System has integrated GPU: False (main: 597 in __call__)
2021-11-27 18:48:24:987: INFO - System has discrete GPU: True (main: 598 in __call__)
2021-11-27 18:48:24:987: INFO - Is Quadro: False (main: 599 in __call__)

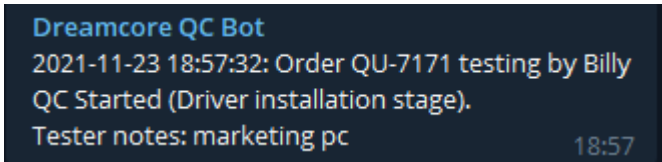
2021-11-27 18:48:24:987: INFO - WiFi Adaptor: {'Intel(R) Wi-Fi 6 AX200 160MHz'}, brand: ['Intel'] (main: 1194 in gatherInfo)
2021-11-27 18:48:24:987: INFO - LAN Adaptor: {'Realtek PCIe 2.5GbE Family Controller'}, brand: ['Realtek'] (main: 1197 in gatherInfo)
2021-11-27 18:48:25:071: STATUS - Awaiting user input (main: 375 in status)
2021-11-27 18:48:25:136: STATUS - Ready
(main: 373 in status)
```

Tester will type in the order no, their name, and any notes. Then, press the submit button or enter key to store the information.

After submitting, these info will be reflected in the bottom left of the window:



Press Begin or press enter key to start the QC process. This will send a Telegram message too. Note that at this point in time, the ethernet and wifi drivers are not installed yet, thus the PC might not have Internet access, causing the Telegram message to not be sent. The software will install drivers and once the Internet is available, it will send the messages out, together with a timestamp that indicates the actual time that this message was meant to be sent (but failed due to lack of Internet):



After pressing Begin, the software installs drivers and 3DMark. List of supported specs is listed at the end of this document. Drivers for all supported systems should be installed fully automatically.

Drivers stage overview

When the software scans for hardware (after pressing Start button), it also checks and validates all driver files/folders to ensure they are in the right name and place. If any error is detected, a pop-up box will appear and the driver installation for that part will be skipped. Some drivers will display a progress bar but they do NOT require any human action to proceed.

During installation, the software window will freeze and appear unresponsive. This is NORMAL and is intended to prevent any disruption. Please do not click/drag around the software window during installation.

After installation, the software will report the success or failure of the installation, with the exception of AMD Chipset Driver, as it is technically difficult to determine the success of AMD chipset driver installation. Nonetheless, the tester should refer to both the failure of installation reported by QC software, as well as the error devices in device manager to ensure that everything is installed properly.

WiFi and Bluetooth drivers

These drivers are only installed if the software detected compatible devices in the system, else, they will be skipped. The software supports both Intel and MediaTek WiFi and Bluetooth drivers.

Chipset drivers

Intel Chipset Drivers

The software currently installs 3 drivers for Intel Chipset: Intel Chipset Driver, Intel Management Engine, Intel Serial IO. Depending on the manufacturer of the motherboard, some boards may need more than these 3 to eliminate all yellow bang in device manager. In those cases, the software will alert the tester at end of driver installation by showing problematic devices in a checklist.

Note: The software treats Intel 10th and 11th gen both as '11th' gen, as they use the same set of chipset drivers.

AMD Chipset Drivers

AMD Chipset Driver is only one installer file, and it should work for all supported AMD chipsets.

LAN (Ethernet) Drivers

The software and this documentation refer to Ethernet as LAN in all places. E.g. LAN adaptor = Ethernet adaptor

If there is no LAN adaptor detected, the software will have a pop-up warning, as it is highly unusual for any motherboard to not have a built-in LAN adaptor. Same behaviour for unsupported LAN adaptor detected.

Intel LAN Driver

The Intel LAN Driver is only installed if it detected an Intel LAN adaptor.

Realtek LAN Driver

The Realtek LAN Driver is only installed if it detected a Realtek LAN adaptor.

Marvell LAN Driver

Marvell LAN is mainly used for high-end boards and is mostly for 10G ports. This driver is only installed if it detected such a device. Note that there is limited compatibility for this driver as motherboard vendors tends to customize it a lot, thus do expect some failures due to this. The marvell LAN driver used for Asus and Gigabyte are different, and the software will install according to detected motherboard brand. For all other brands (including MSI), the Gigabyte driver will be used, as it is compatible with a wider range of models.

GPU Drivers

GPU Drivers usually take the longest to install.

Intel GPU Driver

The Intel GPU Driver is only installed if there is an Intel GPU detected. The software launches the installer with a progress bar. It is NORMAL for you to see the installer displaying a 'Begin' button when launched, and pauses there for a while. This happens as the installer is loading files in the background. Although there is a button displayed, you do NOT need to click or do anything. The installation is fully automatic.

Nvidia GPU Driver

The Nvidia GPU Driver is only installed if there is an Nvidia GPU detected.

There are two types of Nvidia GPUs, the GeForce series and Quadro series. They require different drivers, and the software detects which type it is and installs the corresponding driver accordingly.

The installer will be launched with a progress bar. No user action is needed.

GeForce Experience will be installed together.

Regarding automatic detection of Nvidia Quadro GPUs VS GeForce GPUs: only works if the Quadro driver downloaded into the drivers folder is new enough to support the Quadro GPU detected. The software defaults to recognizing the card as a GeForce card (installs Game Ready driver and runs 3DMark Time Spy) if it cannot confirm that it is a Quadro. Thus, Quadro drivers need to be updated whenever there is a new product released.

AMD GPU Driver

The AMD GPU Driver is only installed if there is an AMD GPU detected. There is no visible installer window during installation.

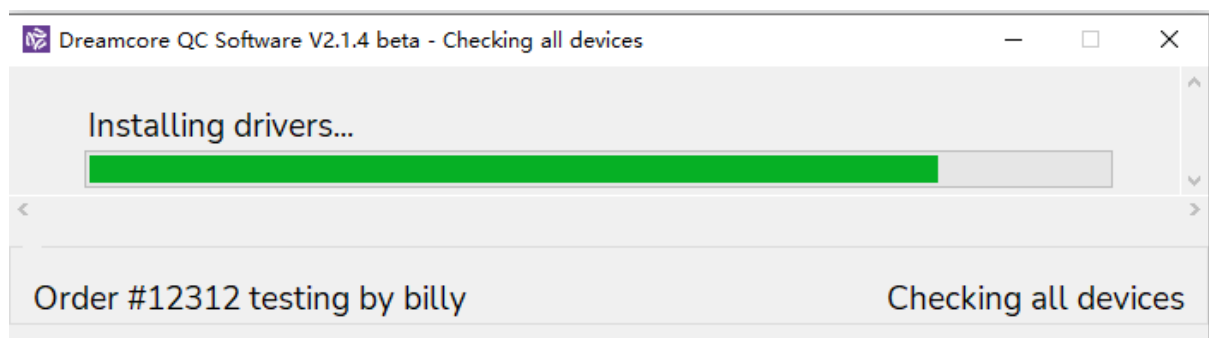
Realtek Audio Driver

The Realtek Audio driver will always be attempted to install, however in some cases, the onboard audio chip may not be compatible with the driver due to some OEM customizations. In these cases, the software will log a warning message in the console stating that it is not compatible. Testers will need to go to the official website of the motherboard manufacturer to download and install their specialized audio driver.

The Realtek Audio driver used for Asus and MSI are different, and the software will install according to detected motherboard brand. For all other brands (including Gigabyte), the MSI driver will be used, as it is compatible with a wider range of models.

Checking of all devices

At the end of driver installation, the software will perform a scan in the device manager to look for any problematic device (shows a yellow bang in device manager). If there is any, it will be recorded and logged, and the device manager window will open, and the software will open a web browser and do a google search of the motherboard model for you.



3DMark installation

After drivers are installed, the software will start to install 3DMark. This process is done in the background simultaneously with some other tasks documented below. No user action is required for this.

The software installs 3DMark and the TimeSpy, FireStrike and NightRaid DLCs.

Time syncing

The software will attempt to sync time at launch, but if there is no Internet, it will retry after driver installation. This includes setting the timezone to Singapore (UTC +8), and syncing time with Microsoft server. This is needed as some motherboard arrive with the wrong time. This process is done in the background simultaneously with some other tasks documented below. The software will open a web browser and do a google search of the motherboard model for you.

Power plan

The software sets Windows power plan to High Performance. This process is done in the background simultaneously with some other tasks documented below.

Disk initialization

The software detects any uninitialized drives (RAW disks shown in disk management utility), and initializes them and format them to the max of their capacity. It assigns the next available drive letter to the new volume formatted. The software also records all drivers that are formatted at this stage for BurnIn disk test later on. More details on this in the BurnIn Test section. This process is done in the background simultaneously with some other tasks documented below.

WiFi Test

The software only performs WiFi test if there is a WiFi adaptor and the WiFi driver was installed successfully.

The software first disables all non-WiFi internet adaptors (E.g. Ethernet adaptors) so that any subsequent Internet tests are forced to use the WiFi card. It then loads the embedded office WiFi profile and connects to the office WiFi. After connecting, it performs an Internet connectivity check. Finally, it enables back all Internet adaptors.

The software will try to connect to three wifi, following this order: Dreamcore 5.0GHz, Dreamcore, Dreamcore 2.4GHz.

If the software failed to connect to the office WiFi (for 5 tries) or failed to access Internet (for 10 tries), the WiFi test is marked as fail.

This process is done in the background simultaneously with some other tasks documented below.

Note: Change of office WiFi password need to notify developer because need to update the embedded WiFi config file for automatic wifi testing.

Bluetooth Test

The software only performs Bluetooth test if there is a WiFi adaptor and the Bluetooth driver is installed successfully.

The software tries to scan for any bluetooth device, and if it finds any, it immediately ends the test and passes it. If no bluetooth device was found in 5 seconds, the test is marked as fail. If there is any error in accessing the bluetooth device, the test is failed.

This process is done in the background simultaneously with some other tasks documented below.

Note: On some WiFi adaptors, signals are very weak without attaching antennas, thus if bluetooth test fails, it is recommended to attach the antennas and try again manually.

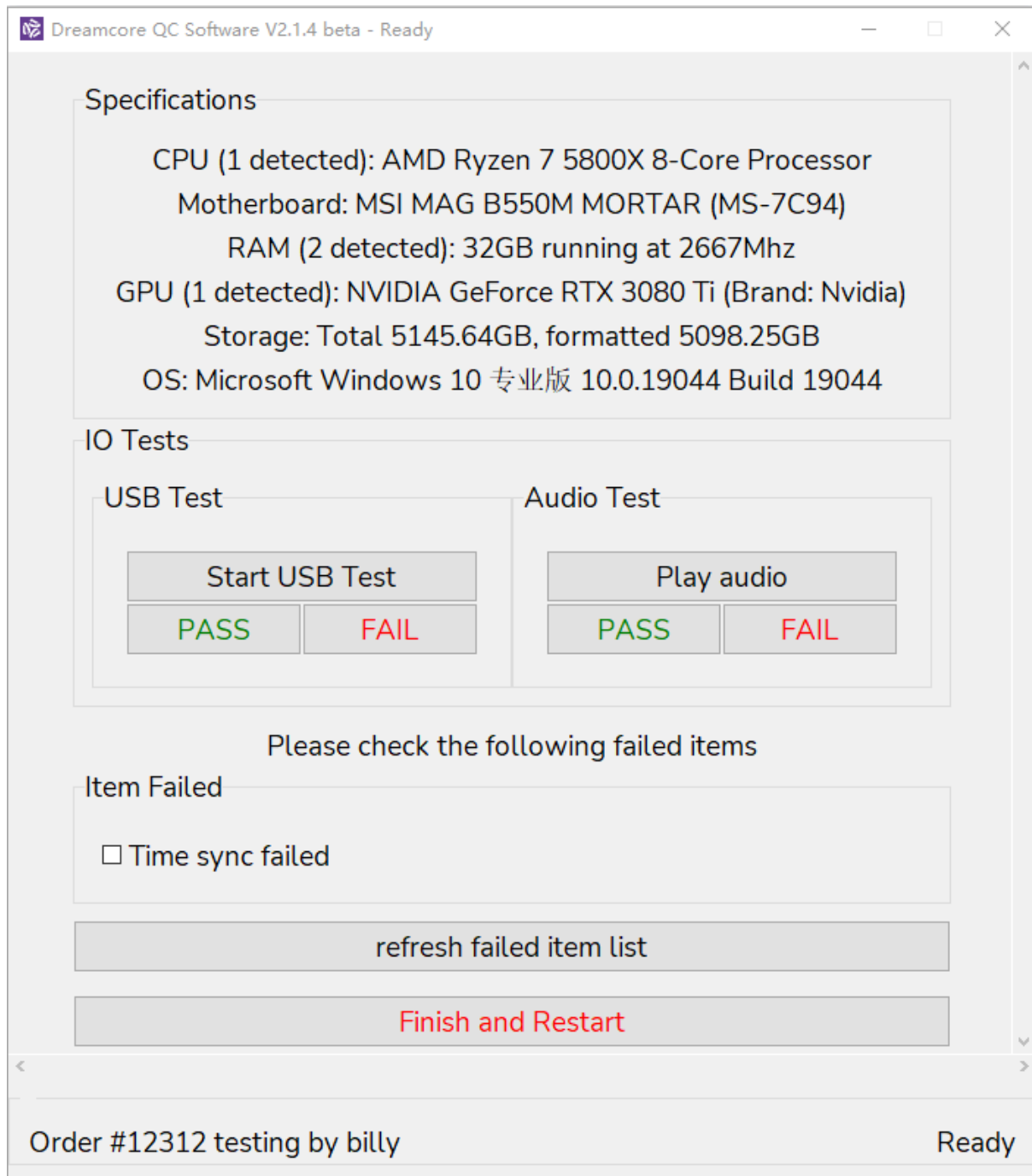
Windows Update

Windows Update will be started, downloading and installing all available updates. This is done in the background and requires no user action.

The software will first check for Internet connection before starting Windows Update. If Internet connection is not available, Windows Update will be skipped, and you will see a retry button on the screen. You can retry after making sure Internet is connected. If everything is normal, there will be no retry button.

NOTE: All 'Windows Update' referred to in this documentation is only limited to the software's built-in windows update function. If the tester uses the Settings check for updates button, it will conflict and NOT work properly (e.g. waiting for Windows Update to finish will NOT work). Thus, do NOT use the system settings app to do Windows Update, unless the software reports error in its own windows update function.

Post-driver page



This screen is shown after driver installation.

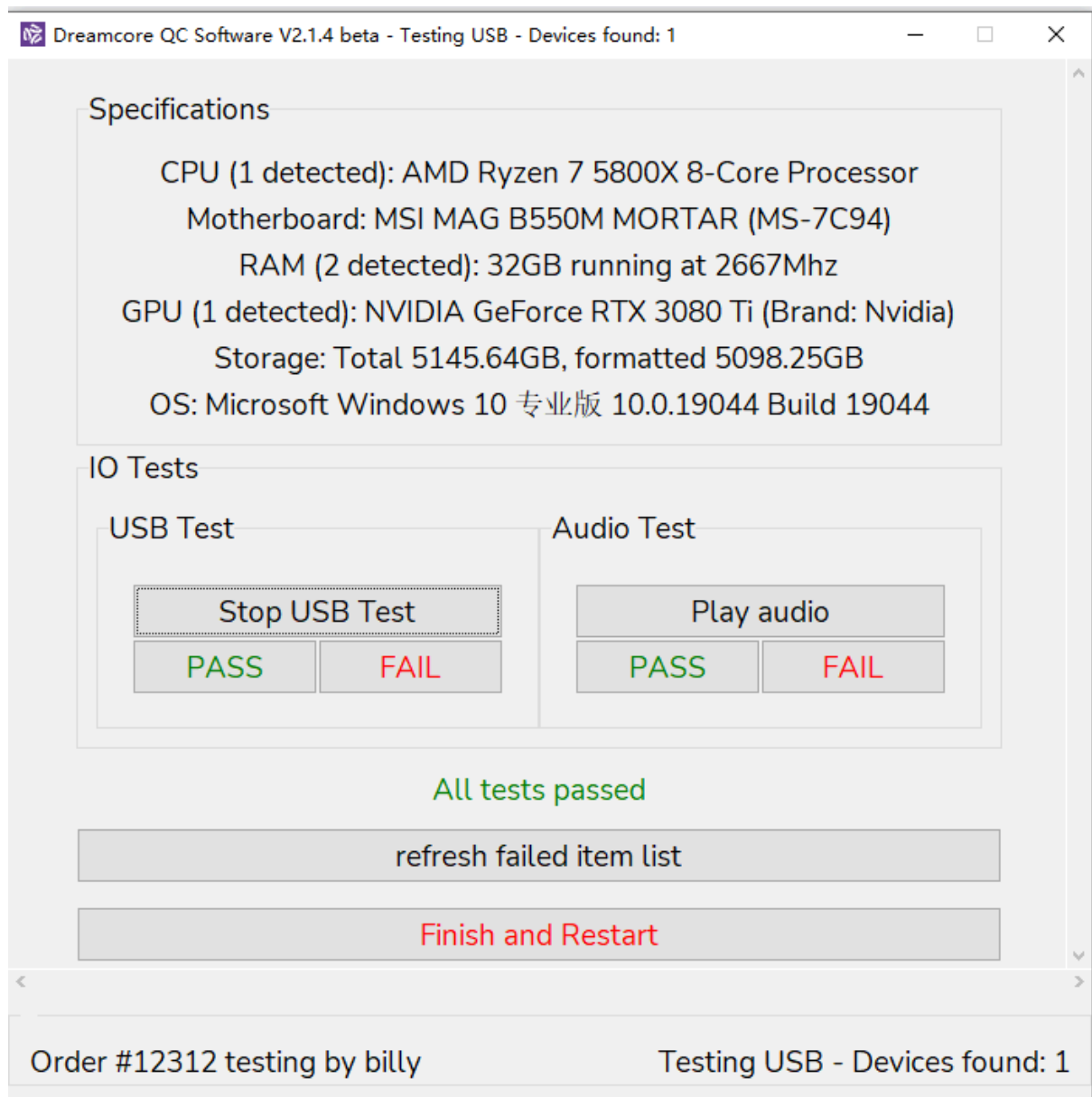
At the top, it displays an updated specs list, re-scanned after driver installation. This spec list should be accurate, and if there is any error, the tester must look into it.

Below the specs section is the IO Tests section. This section consists of the only 2 tests not being done automatically, the USB port test and the Audio Jack test. They will be documented in detail below.

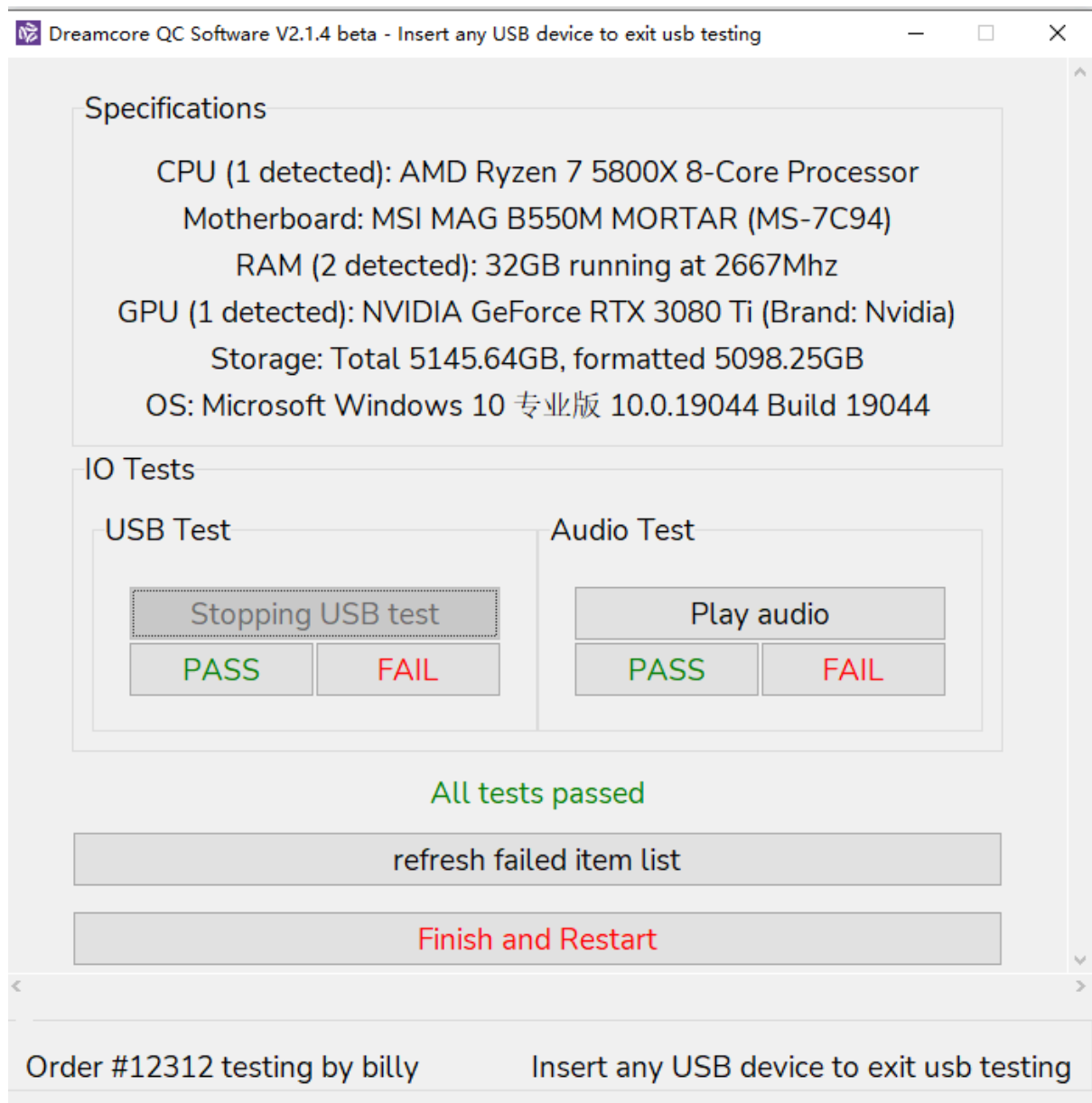
Below the IO Test section is the item failed checklist. All failed driver installs, problematic devices in device manager and other failed tasks will be gathered and reflected here in a todo-list style. Testers are to fix these issues one by one. A Telegram message containing the failed items list will also be sent. This message will be edited each time the user refreshes the list. After they fixed an issue, they can check the checkbox and press the refresh button. This is also useful if Windows Update installed some drivers that may fix some problematic devices in device manager. If there is no more issue left, the todo-list will not be shown and instead, a green 'all tests passed' text will be shown. This means no more tester action is needed and tester can safely proceed.

USB Test

Start by clicking the Start USB Test button. Then, at bottom right, you will see a counter. Each time you plug IN a USB device, the counter goes up. Plug out does not count. You can start the test and plug in and out USB devices into every port to test, then come back to check if the total count matches the number of ports tested. If it passes, click the PASS button, else click the FAIL button and refresh the failed item list. This allows for the Telegram message that contains the failed items to be updated.



To stop the USB test, click the Stop USB Test button, and plug in any USB device again.
USB Test can be repeatedly started and stopped.



Audio Jack Test

Click on the Play audio button to play a short audio clip. Plug in earphones into audio jacks to test and hear if got sound. The volume of the default audio output device will be set to 69% automatically to make it loud enough. This test can be repeated. If it passes, click the PASS button, else click the FAIL button and refresh the failed item list. This allows for the Telegram message that contains the failed items to be updated.

Finish and Restart (end of driver mode)

After the tester settled all issues in the todo-list, they can click the Finish and Restart button in red colour to perform clean up and automatically reboot into benchmark mode. The tester can safely click this button even if Windows Update is not done as the software will automatically wait for Windows Update to finish before rebooting. This button will be greyed out before 3DMark is done installing. After clicking this button, no more tester attention is needed until all benchmarks are finished (which will be notified via Telegram). The software switches to mode 1 (benchmark mode) after clicking the button.

Benchmark mode

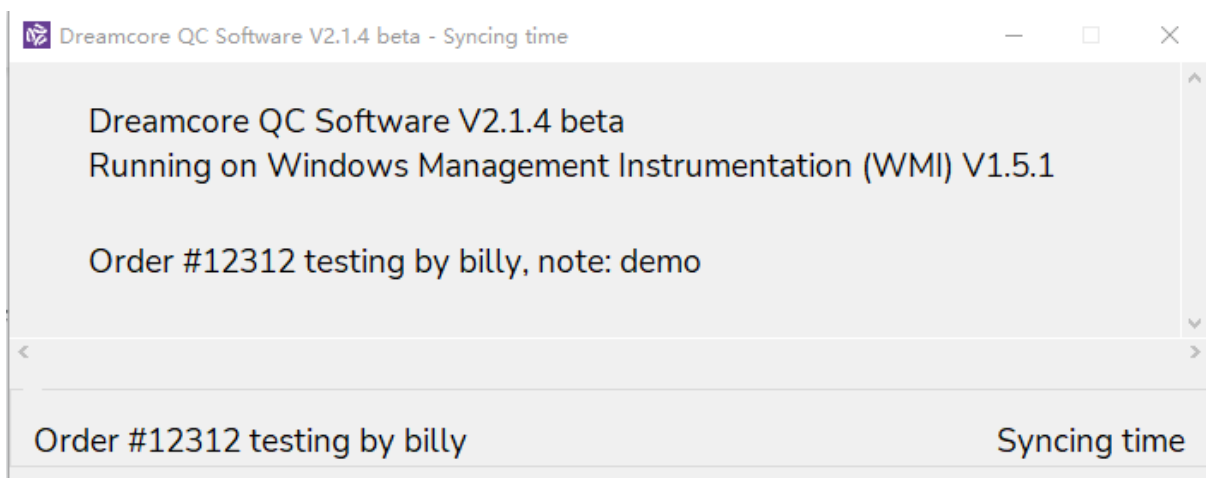
Benchmark mode is meant to be fully automatic and requires no user attention until the end of the stage where scores and temperatures are displayed.

The software uses HWINFO to monitor hardware temperature and power draw. The HWINFO.exe can be upgraded whenever needed by just replacing the exe file in the folder. The stage starts with a shortened hardware scanning to automatically determine benchmark settings. It then waits for 2 minutes for the OS to load. At the end of the 2 minutes, the software records the temperature of CPU and GPUs as idle temperatures.

Per Dreamcore request, all integrated GPU temperatures are not recorded.

The benchmark mode runs BurnIn test, then Cinebench R20, then 3DMark for 2 runs, finally launching RAM Test.

During benchmark and all subsequent modes, the tester info will be displayed in the window for ease of checking.



BurnIn Test Pro V9.2

Test settings

- CPU 99%
- 2D Graphics 100%
- 3D Graphics 100%
- RAM 99%
- GPGPU 100%
- Selected disks 100%
- 15 Min

Disk selection

- Automatically determine which disk to burn-in test. Specifically:
- If in Audit mode, all drives that are just initialized + system drive will be tested. For this to be working, the software must run in driver mode first as during driver mode it saves the drives to burn in. E.g. it does not work if manually running in benchmark mode straight away.

To edit the drives selected to burn in test, you can manually create/edit the *disks_to_burnin_test.txt* on the desktop. Note that this txt file will NOT include the system drive letter as it will only be added just before running the BurnIn test depending on whether the system is in Audit mode or not

Sample of the txt:

c:

d:

e:

Please do not add any other thing besides drive letter into the txt. One drive letter per line. Caps do not matter.

- If not in audit mode, only drives specified in the *disks_to_burnin_test.txt* file will be tested. You can manually edit the txt file. If the file is empty or does not exist, no disk will be tested.

Notes:

- CPU and RAM set to 99% to prevent bug where 3D Graphics test does not start or freezes immediately after starting
- In some cases, disk tests will fail with 66666 errors but the error description will say 'no error. This is a known bug of BurnIn test and in this case, you can assume that the test passed.
- There is a count down of 900 seconds (15min) in the software and if BurnIn test crashes or stops in the middle, it will not stop and will continue to count down. There is currently no way to skip the waiting time.
- The count down displayed in the software window will lag by a bit e.g. 15min count down takes longer than 15min. This is a known issue and currently only can be mitigated to a certain extent, as it is a BurnIn test limitation. It blocks off work submitted to the CPU and causes delay in the timer.

Cinebench R20

The software launches Cinebench R20 and runs the multi-core CPU rendering test, then records the score. You will see the Cinebench window and the rendering progress, however, no user action is needed. The score will be displayed at the end of benchmark stage.

3DMark

3DMark is run for 2 runs, with the demo skipped as demo do not contribute to the score. You will see 3DMark benchmark in full screen. The scores will be displayed at the end of benchmark stage.

Installation

3DMark should be automatically installed during driver mode. However, if running manually in benchmark mode and 3DMark is not installed before, the software will install it at the start before the 2min countdown.

Automatic choosing of test

The software chooses which 3DMark test to run depending on the GPUs detected.
Specifically:

- If any discrete GPU is installed, the software runs Time Spy
- If there is Nvidia Quadro GPU, the software runs Fire Strike
- If there is no discrete GPU (integrated GPU only), the software runs Night Raid

However, all 3 tests will be installed during driver mode, and the tester is free to run any of them manually by using the 3DMark program.

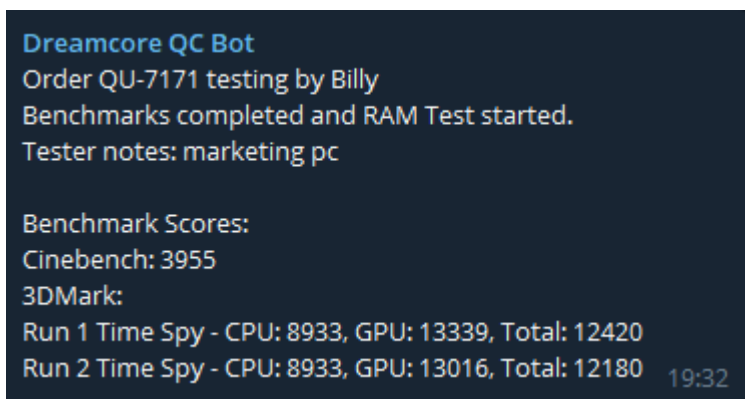
Uninstall

This step is only carried out after the tester press the clean up button at the end of all benchmarks. The software performs clean up and removal of 3DMark result files, logs, uninstalls 3DMark and its DLCs, and Futuremark Systeminfo.

RAM Test

At end of 3DMark, RAM Test will be launched and the software will automatically set the test settings to the number of threads on the system and the capacity of RAM installed. However, because RAM test length varies greatly, the software does not stop it. The tester needs to manually stop it.

A Telegram message will be sent when RAM Test has started, together with benchmark scores for the record.



If scores of 3DMark varies by more than 5% (Highest score is more than 5% higher than lowest score), a warning message is attached to this Telegram message.

Post-benchmark page

Dreamcore QC Software V2.1.4 beta - Running RAM Test

Order #12312 testing by billy, note: demo

Specifications

CPU (1 detected): AMD Ryzen 7 5800X 8-Core Processor
Motherboard: MSI MAG B550M MORTAR (MS-7C94)
RAM (2 detected): 32GB running at 2667Mhz
GPU (1 detected): NVIDIA GeForce RTX 3080 Ti (Brand: Nvidia)
Storage: Total 5145.64GB, formatted 5098.25GB
OS: Microsoft Windows 10 专业版 10.0.19044 Build 19044

Benchmark Scores

Cinebench: 6969

3DMark Run 1 (Time Spy)

CPU: 40
GPU: 69
Total: 4069

3DMark Run 2 (Time Spy)

CPU: 11
GPU: 22
Total: 333

Hardware Temperatures (C)

Idle	Maximum	Average	CPU Power (W)
CPU: 57	CPU: 66	CPU: 59	Min: 36
GPU1: 46	GPU1: 46	GPU1: 46	Avg: 46
			Max: 58

Graphing

Temperatures

Power

Clean up

Order #12312 testing by billy

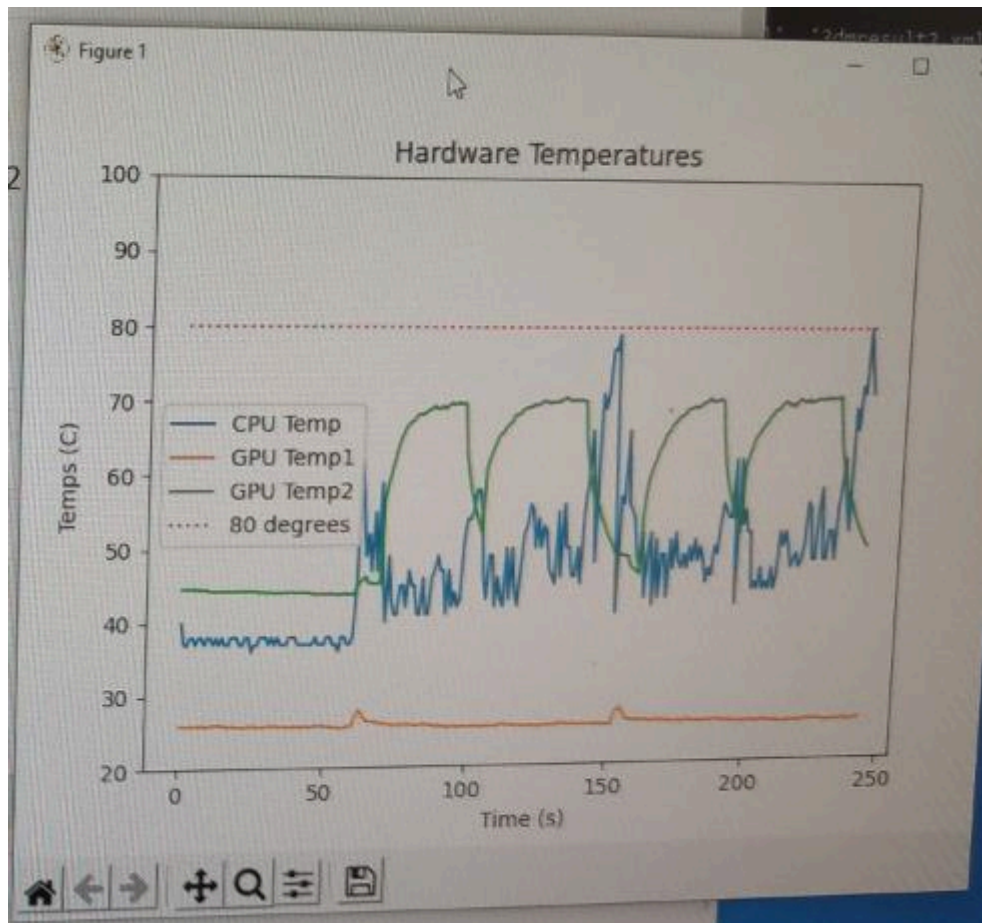
Running RAM Test

This screen is displayed after 3DMark is finished and RAM Test has started.

The benchmark scores are displayed in the Benchmark Scores section. For 3DMark, the total score is the 'overall' score. CPU and GPU score is just for verification of both parts performing up to standard.

The Hardware Temperatures section displays temperatures monitored via HWINFO during the entire benchmark stage. When there are multiple GPUs, the temperature of all GPUs will be displayed (except integrated GPUs). CPU Power is also displayed for verification that no power throttling happened. All temperatures are rounded to whole number.

To visualise changes in hardware temperature and power draw, user can click on the two buttons below in the Graphing section. A pop-up window showing the graph of the monitoring data is shown.




User can use the widgets at bottom left to navigate around the graph, or even save it as an image using the save button. A red dotted line at 80 degrees is shown for quick reference.

After the tester is done recording the temperatures and scores, he can click the clean up button to uninstall 3DMark and clean up log files and HWINFO settings. After clean up is done, a pop-up window will show. Tester then manually use the sysprep utility to perform OOBE. OOBE is not automated yet and tester need to do the settings manually.

Post-OOBE mode

Once OOBE setting process is done, Windows will show a flashing blue screen loads for a while. After it enters the desktop, the software will automatically start itself and enter the post-OOBE mode.

In this mode, the software will not carry out any task automatically. All functions require the user to manually trigger it. This mode provides options to set OEM info and activate Windows, while running Windows Update again in the background.

 Dreamcore QC Software V2.1.4 beta - Ready

Order #12312 testing by billy, note: demo

Specifications

CPU (1 detected): AMD Ryzen 7 5800X 8-Core Processor
Motherboard: MSI MAG B550M MORTAR (MS-7C94)
RAM (2 detected): 32GB running at 2667Mhz
GPU (1 detected): NVIDIA GeForce RTX 3080 Ti (Brand: Nvidia)
Storage: Total 5145.64GB, formatted 5098.25GB
OS: Microsoft Windows 10 专业版 10.0.19044 Build 19044

OEM Info

Build Name:

Alpha
Alpha Pro
Apollo
Dream Machine
Dream Machine Pro
Fuel
Ghost
Ghost Pro
Office
Reverie

Submit

Windows Activation (OS Edition: Professional)

Activation Key:

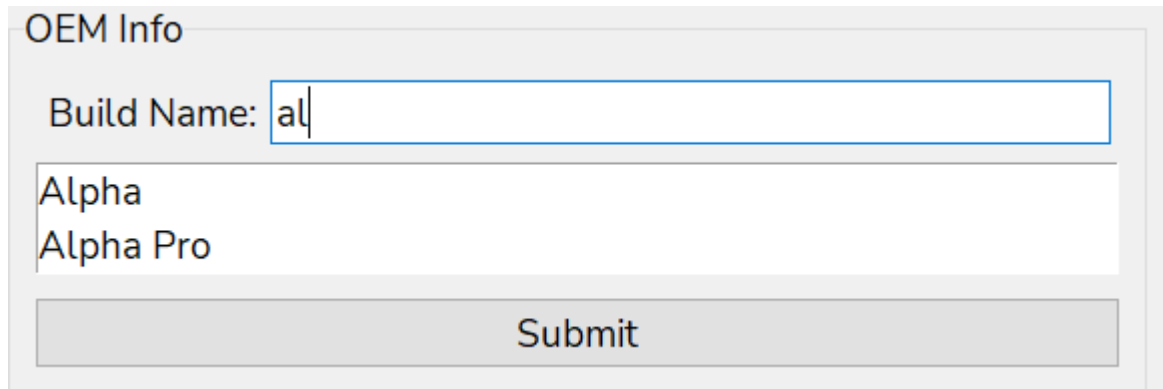
ActivateView Activation Info

Finish and clean up

Order #12312 testing by billy

Ready

In this mode, tester can select from a list of build names, or type in one themselves. Then, click the Submit button or press enter key to set the system OEM information and wallpaper. The text box also has auto-complete function in the built-in list of builds.



OEM Info

Build Name:

Alpha
Alpha Pro

Submit

OEM Information

The software sets the following OEM information in the system:

- Manufacturer: Dreamcore
- Model: Dreamcore [build name]
- Logo: Dreamcore Logo
- Support URL: <https://dreamcore.com.sg>
- Computer Name: Dreamcore [build name] without space and full-stop
- Wallpaper: Dreamcore Cloud 2K

Windows Activation

- The only accepted activation key format is xxxxx-xxxxx-xxxxx-xxxxx-xxxxx. User need to manually type in the dashes. Caps does not matter.
- The software will show a pop-up box showing whether Windows is successfully activated. If windows activation fails, tester need to try again manually via Windows Settings.
- Windows activation requires Internet connection. The software will check for Internet before attempting to activate.
- User can also use the View Activation Info button to see the current status of the Windows license.
- The OS Edition is the current installed OS edition. It is to remind tester that they need a matching edition key to activate.

Finish and clean up

Pressing this button will clean up and reboot the system for restore point creation. It should only be pressed if all RGB and motherboard-specific software are installed and properly configured, and the system is in its 'final state'. As Windows Update is running in background, the software also waits for Windows Update to finish before rebooting into restore point mode, thus it is safe to press this button if Windows Update is still running.

Restore Point mode

Once the system reboots, the software will automatically launch and create restore point with the naming format: DC_date. Before creating the restore point, all temporary files generated by the QC software will be removed, including mode.txt and tester.txt that stores mode and tester info. This ensures that the restore point created does not contain these files. The process is automatic, no user action is needed.

After restore point creation, the software will display the result - success or fail on screen. A Telegram message will also be sent depending on the result. If it is successful, the software removes its log file on the desktop, else, it is kept for debugging purposes. If restore point creations fails, a retry button will appear.

Restore point creation will always **fail** in Audit mode as Windows OS disabled it in Audit mode.

At this stage, the machine can be considered ready to pack and ship, and it also marks the end of the QC process.

Extra notes:

- To enable debugging log details, create a blank txt file and name it debug.txt and place it beside the exe. You should see an 'Enabled debug verbose logging' log at launch once you done this.

Supported Systems:

- CPU: Intel 10th to 12th gen, AMD Ryzen 1000 to 5000 series desktop, AMD Threadripper/PRO 1000 to 3000 series, AMD Ryzen 2000 to 5000 series laptop. Supports multi-CPU systems as long as they are the same brand.

- Only Asus, Gigabyte, MSI, AsRock motherboards are supported (using an unsupported motherboard does not immediately mean failure - 99% of the time everything will work perfectly, just that you get a warning pop-up).
Supports AMD AM4 300 series and above chipset. AMD TRX40, (s)WRX80, X399 chipset, Intel 400 series chipset and newer.
- GPU: Nvidia Maxwell and newer GeForce GPU, Nvidia Kelper and newer Quadro GPU, AMD Radeon 400 series and newer. AMD Zen, Zen+, Zen2, Zen3 laptop and desktop APUs.
Does NOT support Intel discrete GPU. Supports multi-brand gpu mixing: AMD iGPU/dGPU + Nvidia GPU. Does NOT support mixing of Nvidia GeForce and Quadro GPUs. Does NOT support AMD iGPU + AMD GPU + Nvidia GPU.
- Windows 10 V1903 (a.k.a. 19H1, 'Redstone') and newer, Windows 11, English and Simplified Chinese
- Wifi and BT: only Intel and MediaTek WiFi and Bluetooth adaptors are supported, both onboard and via PCIe Card. Requires Intel AC8000 series and newer.
- LAN: Realtek, Intel and Marvell LAN adaptors, both onboard and via PCIe Card
- Audio: Realtek Audio only, both onboard and via PCIe Card
- Storage: Any SATA or NVMe device recognizable by Windows 10, already RAID-ed disk arrays are not supported.
- At least 13GB + 10% of free disk space

Known Limitations

- The software will not do proper clean up if closed by console window
- The window may freeze and appear unresponsive when a process is running. This is NORMAL and intended to ensure stability. Do not spam click/drag around the window if it freezes as doing so may interrupt the script.
- Disk model detection for RAID arrays is not supported. Still detectable before RAID is set up
- Audio driver may not be compatible with some motherboards. When this happens, the software will warn that it is incompatible and prompt the tester to try again using driver from official website.
- 3DMark does not 100% choose the "best" gpu, it uses whatever the OS default to for 3D applications, which is usually the dgpu (solvable but quite troublesome)

- Only supports one WiFi adaptor per system for automatic wifi test but supports multiple wifi adaptors for driver installation
- The software assumes that every wifi adaptor will include bluetooth function
- RGB software installation not planned but possible in future via checkboxes and stuff (requires frequent updates)
- Temperature reporting for multi-CPU systems is limited to the first CPU that Windows reports. HWINFO logging still works for all CPUs but need human to check the log files.
- Multi-motherboard systems are not supported.
- The software only classifies storage devices connected via the USB interface as 'external' storage. The rest types of devices (internet drive etc.) will be classified as 'local disk' and will be included in attempts to initialize and format, if they are not initialized. If they are already initialized properly, nothing will be done to these drives. However this relies on the Windows API, so to prevent uncertainties, please check for any non-USB drive that also does not belong to the system to prevent any accident.
- Detection of AMD iGPU only works on processors with a letter 'G' inside the model, or laptop processors ending with letters HS, HX, H, U, C. This should cover all existing AMD CPUs but future models that introduce new naming conventions requires an update.
- In very rare cases, some anti-virus software may flag the software as virus, as it is a self-extracting program. However, please be assured that it contains zero malicious code.