



**FUTUREMARK**  
CORPORATION

# 3DMARK<sup>®</sup>

Futuremark Driver Approval Policy & Optimization Guidelines

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## Futuremark Approved Drivers – Website and ORB

The following points are required to be fulfilled by a driver in order for it to be approved by Futuremark to be used with 3DMark03 or 3DMark05. Futuremark lists all approved drivers on its web site (<http://www.futuremark.com/community/drivers/?approved>), and only those drivers will be enabled in the ORB.

1. The driver is an official release (not beta, pre-release or like).
  - a. OEM specific drivers are approved if they are based on an approved reference driver by the IHV, otherwise fulfil the guidelines and the only difference to the reference drivers is reduction of functionality. OEM's are required to inform Futuremark about any such drivers in order to be approved.
2. The driver is WHQL certified (not WHQL candidate) for all graphics chipsets that the driver supports, or for chipsets capable of running 3DMark.
3. The driver must be available for both Windows 2000 and Windows XP
  - a. 3DMark05 doesn't support Windows98 or WindowsME, thus we won't review drivers for those operating systems anymore.
4. The driver-package must be publicly available for download on the official IHV driver download page for at least two weeks.
5. The drivers must not have any hidden "optimizations" available through registry entries, or various tweak utilities, which may affect the 3DMark performance / rendering quality / rendering technique.
  - a. The only exception to this is if the drivers need a work-around to get a certain hardware configuration to work properly, or to fix a specified hardware error. However, this must be documented and agreed with Futuremark prior to the release of the driver.
6. Futuremark publishes the information about the driver within 7 working-days of the official driver release.
  - a. Futuremark will list both the approved drivers, and all tested drivers (even if they do not pass the validation).

## Special Case Futuremark Approved Drivers – Website only

The following points are required to be fulfilled by a driver in order for it to be approved by Futuremark for new hardware reviews or previews or special case events, such as a product launch:

1. The drivers must be delivered to Futuremark at least 1 week ahead of the desired approval date.
2. The drivers must not have any hidden "optimizations" available through registry entries, or various tweak utilities, which may affect the 3DMark performance / rendering quality / rendering technique.
  - a. The only exception to this is if the drivers need a work-around to get a certain hardware configuration to work properly, or to fix a specified hardware error. However, this must be documented and agreed with Futuremark prior to the release of the driver.
3. The drivers may be beta, and are not required to be WHQL.
4. The driver-package must be publicly available for download on the IHV's web site within 7 working-days after the approval.
  - a. The publicly available beta driver version must be the same build as the one Futuremark has approved.

**Note:** These kinds of special approved drivers will be removed from the FM Approved driver list on the website as soon as the next Official WHQL driver has been released and gets the FM Approval.

**Note2:** These kinds on special approval drivers will **not** be listed in the ORB under any circumstances as FM Approved, as they are only approved for a special case/happening/launch.



## Removal of Futuremark Approved Drivers – Website and ORB

Futuremark has the right to remove any approved drivers from the webpage and/or ORB in case of any of the following points:

1. A driver can be removed from the approved list on the website and/or ORB, if found later that it contains any 3DMark specific bugs or problems (visual or technical) which affect the results.
2. A driver can be removed from the approved list on the website and/or ORB, if found later that it contains any 3DMark specific optimizations and is against our optimization guidelines.
3. A driver can be removed from the approved list on the website and/or ORB, if found later that it reduces image quality in order to increase performance (even non-3DMark specific).

## 3DMark Driver Optimization Guidelines

The current Driver Optimization Guidelines for 3DMark are:

1. It is prohibited to change the rendering quality level or rendering technique in the drivers that is requested by 3DMark (\*).
2. It is prohibited to detect 3DMark directly or indirectly in the drivers. In its sole discretion, Futuremark may approve special case 3DMark detection in the drivers, in order to get a certain hardware configuration to work properly, or to fix a specified hardware error. However, this must be documented and agreed with Futuremark prior to the release of the driver.
3. Optimizations in the drivers that utilize the empirical data of 3DMark are prohibited.
4. Generic driver optimizations that do not violate the above rules and benefit applications and games in general, are acceptable only if the rendering is mathematically consistent with that of Microsoft® DirectX® reference Rasterizer.

As a summary, any and all 3DMark specific optimizations in the drivers are prohibited. Additionally, all generic driver optimizations that change the rendering quality or rendering technique requested by 3DMark are prohibited. What 3DMark requests the hardware / driver to render must be executed as requested.

(\* Examples include a) changing the quality level or mode of Bilinear, Trilinear, Anisotropic filtering or Anti-Aliasing from what 3DMark requests b) lowering or increasing shader model in order to increase performance from what 3DMark requests c) lowering rendering precision from what 3DMark requests d) replacing any dynamic or static content / effects in order to increase performance.



## Any Technical Questions Left Unanswered?

If you have any questions about 3DMark, approved drivers or the optimization guideline, or need more information about of anything of the above, please contact us at:

Futuremark Corporation, <http://www.futuremark.com>

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