

Disabling temporal dithering on DXM blade workstations

Temporal dithering is a technique used by graphics cards to generate intermediate colours by rapidly alternating a pixel between two adjacent colour values. The effect is not perceptible to the human eye but results in a significant overhead for any compression algorithm, such as that used by PCoIP, when dealing with the increased pixel colour activity. If temporal dithering is enabled on a machine using PCoIP, poor performance and high bandwidth usage can result, even when the display is seemingly static.

To resolve these issues, you must disable temporal dithering on the blade workstation. This application note provides instructions for Windows systems and Linux systems ([page 2](#)).

Windows systems

(Applies to AMD graphics cards only)

Follow these steps:

1. Right-click the desktop and choose AMD Catalyst Control Center.
2. In the AMD Catalyst Control Center, click Preferences.
3. Enable the Advanced View setting.
4. In the left-hand menu, click Information > Software.

The Software page lists the registry key containing the **2D Driver Path**. Write down the full path for this registry key. This is the *target registry key*.

You will need to create one or, for octal video head systems, two new registry values in this target registry key. The registry path is similar to this:

```
HKLM\System\CurrentControlSet\Control\Class\{4D36E968- E325- 11CE- BFC1- 08002BE10318}\0000
```

For more information about control sets, see the following Microsoft support article:

<http://support.microsoft.com/kb/100010>

5. Launch the Registry Editor.
6. Browse to the target registry key as listed in step 4.

In the example above, the target registry key is named '0000'.

In systems with octal video heads, there will be two target registry keys. The name of the second target key is incremented by 1. So if the first target registry key is '0000', the second key is '0001'.

7. In the target registry key:
 - a. Create a new 32-bit DWORD registry value named:
`DP_Di sabl eDi ther`
 - b. Set the data for the new registry value to 1.

On systems with octal video heads, repeat this step for both target registry keys. That is, create 32-bit DWORD registry values, both named `DP_Di sabl eDi ther`, in the two target registry keys.

8. Restart the blade workstation.

Temporal dithering is now disabled.

Linux systems

(Applies to AMD graphics cards only)

AMD Catalyst™ provides the `ati config` tool to configure graphics drivers on Linux systems. To disable temporal dithering

1. Run this command:

```
# sudo ati config --set-pcs-val="MCIL, DP_DisableDither, 1"
```

This command modifies the `/etc/ati/amdpcsd` file.

2. Restart the X Window System on the blade. For example, press Ctrl+Alt+Backspace.

Temporal dithering is now disabled.

For a list of `ati config` options, run:

```
# sudo ati config --help | less
```

For additional information about the `ati config` command, see the following link:

https://wiki.archlinux.org/index.php/AMD_Catalyst

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