AMD

Customer Communications Document

AMD Processor Power Management Driver (AmdPPM.sys)

Version 1.0.0

Date: 8/10/2007

How to use this guide.

The pages below contain details from AMD's internal bug tracking database and provide increased detail for this release.

Before each title are 3 letters corresponding to a socket type **M**obile, **D**esktop, **S**erver.

The use of color indicates the requirement for this fix.

Green indicates the fix is optional and provides no increased functionality.
Orange indicates the fix is optional but does provide increased functionality.
Red indicates the fix is required and should be implemented.

Summary of Changes

This software release affects the following processors: Family 10h, and Family 11h; on platforms running Windows Server 2003-SP2, or Server 2003-SP1 with QFE package KB924441.

MDS

The AMD Processor Power Management Driver (AmdPPM.sys) has been re-packaged with an updated .INF file that adds a key to the registry that changes the default value of the OS 'PerfEnablePackageIdle' flag to '0'. The default value of this flag on aforementioned OSes is '1', which forces the OS to evaluate processor idleness on a per-package basis, rather than on a per-core basis. As a result, this causes improper performance-state (p-state) behavior on multi-core processors. Note: no changes are required to the actual driver binary (AmdPPM.sys), as the OS issue is addressed by the described .INF file change (AmdPPM.inf).

For more information on the 'PerfEnablePackageIdle' flag, please refer to Microsoft's Knowledge-Base article # 896256, as described here:
http://support.microsoft.com/kb/896256

For more information on QFE package KB924441, please refer to Microsoft's Knowledge-Base article # 924441 as described here:
http://support.microsoft.com/kb/924441

This update contains:

Mobile – 1 required updates, 0 optional updates.
Desktop – 1 required updates, 0 optional updates.
Server – 1 required updates, 0 optional updates.

MDS OBS47318

Title: Improper p-state behavior under Windows Server 2003-SP2, or Server 2003-SP1 with QFE package KB924441.

Description: This problem occurs when installing the AMD Processor Power Management Driver (AmdPPM.sys) on aforementioned OSes. By default the OS evaluates processor idleness on per-package basis, thus causing improper p-state behavior on our multi-core processors.

Resolution: Add a key to the registry at driver installation time, via the .INF file, that changes the default value of the OS 'PerfEnablePackageIdle' flag to '0', which instructs the OS to evaluate processor idleness on per-core basis, thus allowing for proper p-state behavior on our multi-core processors.