



Removal of Default VBE 8-bpp Graphics Mode Support in VBIOS

Application Note

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1 Introduction

Support for non-VGA compatible, 8-bpp (bits per pixel) graphics mode is no longer provided by default in the video BIOS (VBIOS) for graphics products starting from the AMD Radeon™ HD 7000/7000M series of graphics products.

Support for this graphics mode in the VBIOS is required to display 8-bpp, VGA specification-compliant images, such as system boot-up images. Note that your graphics product must also be capable of supporting the graphics mode at the hardware level in order to display these type of images.

This application note describes how to obtain support for the graphics mode, if needed.

2 Problem Statement

During boot-up in DOS, either a black screen or no boot-up image may be shown.

If you recently installed a new VBIOS for your graphics product through an online update, the above symptoms may be a result of upgrading to a VBIOS version that does not support non-VGA compatible, 8-bpp graphics mode. They are sometimes also accompanied by a system crash which results in a system reboot.

3 Root Cause

For compatibility preparation, non-VGA compatible VESA BIOS Extensions (VBE) with 8-bpp graphics mode is no longer supported by default in the VBIOS for future AMD graphics products. Physical support for this mode is also expected to be removed at the hardware level. This is consistent with the Unified Extensible Firmware Interface (UEFI) VBIOS supporting only 32-bpp or higher graphics modes, a decrease in the use of 8-bpp graphics mode in today's applications, and AMD's forecasted removal of 8-bpp graphics mode support.

VGA-compatible, 8-bpp graphics mode support still remains available from AMD but requires your graphics product manufacturer to generate and provide the appropriate VBIOS.

4 Solution

To prevent the above symptoms from occurring, you can:

- Update the boot-up image for your system to an image that does not require 8-bpp graphics mode support. For example, replace the current image with a 32-bpp version.
- Ask your graphics board manufacturer to provide a VBIOS that includes support for all 8-bpp graphics modes (provided that your graphics product is capable of supporting non-VGA compatible, 8-bpp graphics mode).

A Revision History

A.1 Rev 1.00 (August 28, 2014)

- Initial release (based on document #54998).