



Fresenius Medical Care North America Service Bulletin

Equipment: 2008T Hemodialysis Machines
Bulletin: 14-FRT-002 Rev A
Subject: CDX and Windows 7 (Update)

1.0 PURPOSE

To inform all Field Service and Technical Support personnel of a method to decrease the size and improve the performance of a Windows 7 installation on all 2008T hemodialysis machines equipped with a CDX PC. This Service Bulletin replaces FSB# 13-FRT-001.

2.0 SCOPE

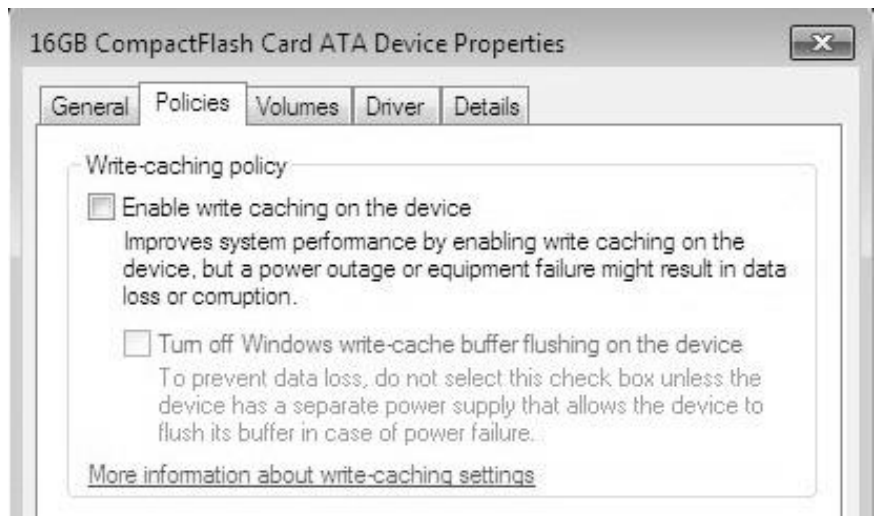
The goal of this guide is to decrease the size and improve the performance of a Windows 7 installation on the 2008T CDX PC. This process may be implemented to reduce the space consumed by the operating system to approximately 5GB for 32bit Windows 7 and 7GB for 64bit Windows 7 (before updates). Another goal is to help make a system that requires as little maintenance as possible.

3.0 PROCEDURE

1. Install Windows 7 32 bit or 64 bit from the installation DVD (*all drivers, except some of the audio, ethernet, video, and touch screen drivers are included with Windows 7*). 64 bit is only supported on the CDX PC with the Atom D525 processor. For additional information about the two PC processors and drivers, see the 2008T Operator's Manual.
 - a. If the video controller driver was not installed and the PC contains the Atom D525 processor, download and install the video controller, Intel D525 chipset, from the Intel (www.intel.com) or from the Aaeon (www.aaeon.com) website under the ETX-LN product.
 - b. If the audio driver was not installed on the PC containing the Atom N270 processor, download and install the driver, AC'97 Audio Codecs, from the Realtek website (www.realtek.com) website.
 - c. Download and install touch screen drivers from ELO touch (www.elotouch.com) if touch screen will be used. Note that the touch screen connects via COM2.
 - d. If the Ethernet driver was not installed and the PC contains the Atom D525, download the realtek chipset 8103 or 8105 driver available at the Realtek website (www.realtek.com) website.

3.0 PROCEDURE (cont.)

2. To increase available disk space, Hibernation may be manually disabled through the command prompt. The Hibernation feature may not be available on all versions of CDX.
 - a. Click Start – All Programs – Accessories, right click on Command Prompt and select 'Run As Administrator'. A User Account Control dialog box will display, select 'Yes'.
 - b. At the Command Prompt you will see: **C:\Windows\system32>**
 - c. Type the following: **powercfg –h off** and press **Enter**
3. Disable sleep mode by going to Control Panel\Hardware and Sound\Power Options. If the system enters sleep mode, the only way to resume is to power cycle the 2008T.
4. To increase available disk space, the paging file may be disabled (or reduced in size).
 - a. Click Start – right click Computer and select Properties.
 - b. Click 'Advanced system settings' located on the left hand side.
 - c. Select the tab labeled 'Advanced'.
 - d. Click on the button labeled 'Settings' under performance.
 - e. Once in Performance Options, select the tab labeled 'Advanced'.
 - f. Locate the section labeled 'Virtual memory' and click the button labeled 'Change'.
 - g. Uncheck the box labeled 'Automatically manage paging file size for all drives'.
 - h. Select the radio button labeled 'No paging file' and click Set.
 - i. Select 'Yes' when asked if you want to continue.
 - j. Click 'Ok' to exit all boxes and restart computer, when prompted, for changes to take effect.
5. Because the 2008T can be power cycled at any time, we recommend turning off the disk drive write cache.
 - a. Click Start – right click Computer and select Properties.
 - b. Click 'Device Manager' located on the left hand side.
 - c. Double click on 'Disk Drive'.
 - d. Double click on the '...ATA Device'.
 - e. Click on the 'Policies' tab.
 - f. Uncheck "enable write caching on the device" if this option is supported by the flash disk.
 - g. Uncheck "Turn off Windows write-cache buffer flushing on the device". Note that this should be unchecked by default.



6. To prevent the Windows error recovery screen from being displayed after an abnormal shut down, the following command may be run from the command prompt as an administrator (right click the command prompt shortcut and select Run as administrator).

bcdedit /set bootstatuspolicy ignoreallfailures

7. Windows 7 should always be shut down before turning off the power to the 2008T if possible.
8. Stop Windows from doing automatic updates at any time, especially if user may turn the power of the 2008T off before doing a Windows shut down. See Control Panel\System and Security\Windows Update.
9. Windows 7 automatically downloads updates from time to time and keeps Windows up to date (if enabled). These update files are stored on the computer even after they are installed. Hard disk space may be reclaimed by deleting these update files.
 - a. Run **services.msc**.
 - b. In the services windows, find a service named Windows Update, select it, and stop the service. The status should change to stopped.
 - c. Run **%windir%**. This will open the Windows folder. Scroll down to find a sub-folder named SoftwareDistribution. Delete the SoftwareDistribution sub-folder. This is where the leftovers of Windows Update are kept.
 - d. Back in the Services window, select the Windows Update service and click on the green triangular icon in the toolbar to start the service.
10. If a screen saver is enabled, do not allow it to turn off the monitor. If it attempts to turn off the monitor, the screen may appear with a random pattern or a faded dialysis screen image until the keyboard or touchpad is touched to stop the screen saver.

If there are any questions regarding this bulletin, contact Fresenius Medical Care Technical Support at 800-227-2572