

WHITE PAPER

Phoenix
ImageCast™ 6

Secure from the START

ImageCast 6 White Paper



Deploying Phoenix Recover Pro 6 and Phoenix Always using Phoenix ImageCast 6

In this white paper, you will learn how to use the Phoenix Builder Tools to deploy systems using Phoenix ImageCast 6 that include Phoenix RecoverPro 6 or Phoenix Always application software.

Phoenix includes a set of Builder Tools with RecoverPro 6 for manufacturing and Phoenix Always for manufacturing. One component of the Builder Tools set is the Phoenix Protected Area (PPA) Conversion Tools (FWtoFAT.exe). This tool is a Windows command line application designed for converting the PPA (Protected Partition Area); either Hidden Partition (HP) or Host Protected Area (HPA), into a FAT32 partition to ease the process of system deployment/disk imaging with Phoenix ImageCast 6. The FAT32 partition will be converted back to the PPA automatically when the system boots to Windows the next time—after system deployment/imaging is completed with ImageCast 6.

See your Phoenix sales or support representative to get access to these tools.

The PPA Conversion Tools are designed to be used with (and require) one of the following Phoenix products:

- Phoenix RecoverPro 6 for manufacturing
- Phoenix Always for manufacturing

NOTE: This tool is not licensed for use with the End-User version of Phoenix Recover Pro or Phoenix Always.

SUPPORTED OPERATING SYSTEMS

Windows XP SP1 or greater

Windows 2000 SP3 or greater

NOTE: To enable Windows 2000 support for hard drives larger than 137GB, please contact Microsoft. Details can be found in the Microsoft Knowledge Base Article KB305098.

PREREQUISITES:

This white paper assumes that you are familiar with installing Phoenix Recover Pro 6, using Phoenix ImageCast 6, and using command-line operations and/or scripting for Microsoft Windows-based systems.

The following files and folder need to be present in the following folder\path structure in order to run FWTOFAT.

- <path>\Fwtofat.exe
- <path>\instbldr.exe
- <path>\phnxbldr.sys
- <path>\Disk*. * (All files in Disk folder)
- <path>\fdscript.txt must be copied to the <path>\Disk\ folder

Where <path> represents any source path location from which FWTOFAT is run

SUPPORTED LANGUAGES

English

NOTE: For all other languages, the software will install and function in English.

USAGE

- | | |
|-------------------|--|
| FWTOFAT | - Converts Phoenix Protected Area to Empty FAT32 partition |
| FWTOFAT /? | - Displays usage information |
| FWTOFAT /Ver | - Displays version and usage information |
| FWTOFAT /FATTOFW | - Converts Empty FAT32 partition to Phoenix Protected Area |
| FWTOFAT /Silent | - Runs in Silent Mode (No user input required) |
| FWTOFAT /Manual | - Does NOT automatically run after the imaging process |
| FWTOFAT /NoReboot | - Does NOT automatically reboot after converting FAT to PPA. |

KNOWN ISSUES/LIMITATIONS

Administrator privileges are required to install and run the tools.

These tools will fail if the PPA is secured in HP mode by the Phoenix Partition Protection Driver or in HPA mode by commit/lock. To ensure that the PPA is not secured, run the following tools after creating the PPA (See Step I below):

- In HP mode, run “fwtopart /d” to delete the Hidden partition entry from the partition table.
- In HPA mode, run fwunlock and fwuncommit to reset the SETMAX to the native max of the disk.

Before running the FWtoFAT tool, ensure that the fdscript.txt file in the Disk directory is updated with required settings, such as language ID and video mode. By default, language ID is set to English and video mode is set to 800X600. For more information, please refer to:

FWtoFAT\Disk\readme.txt and to the Phoenix Platform Technical Reference, available on the Recover Pro 6 manufacturing CD.

Do not install Phoenix Recover Pro 6 before starting this process. If Recover Pro 6 is installed, uninstall the software before proceeding.

THE PROCEDURE

Following is the process for enabling PPA usage with ImageCast 6. Please read this entire document before you begin the process as there are a few steps that can be altered in order to make the procedure work for specific configurations.

Step I: Preparing the Gold Master drive

- Install Windows OS on Gold Master after leaving enough space for the PPA (normal procedure for installing Recover Pro 6).
- Boot to Windows and install Windows Recover Pro 6/Always components using procedures outlined in the Phoenix Recover Pro 6 User Guide or the associated Phoenix Always documents.
- Install the PPA using GIPA/installation script and Builder Tools.
- Next, remove the security from the HP/HPA to prepare for system deployment/imaging using the Builder Tools provided :

- In HP mode, run “fwtopart/d” to delete the Hidden partition entry from the partition table.
- In HPA mode, run fwunlock and fwuncommit to reset the SETMAX to the native max of the disk.
NOTE: This is required to ensure that the PPA is not secured.

- Boot to Windows and close the *Create the Recover Pro Partition* window.

NOTE: This is required to ensure that the Recover Pro 6 Partition is not created.

- Copy the PPA Conversion Tool package (see **PREREQUISITES** above for a list of necessary files) into the Windows partition.

- Install other required Windows applications (for example, FirstWare Assistant, TrustConnector and so forth)

Step II. Converting the PPA to an empty FAT32 partition

- Under Windows, run the FWtoFAT.exe (along with any necessary command-line arguments) tool.

NOTE: Ensure that this is the last step in the process of creating the Gold Master drive.

- The tool will perform the following functions automatically (no action required):

- Export all the Phoenix Service Areas (PSAs) from the PPA to the Windows partition in the directory from where the FWtoFAT.exe tool was executed.
- Convert the PPA into an empty FAT32 partition.
- Uninstall Phoenix Disk to ensure that the OS can be properly deployed/imaged.
- Disable Phoenix Guardian and Recover Pro 6 dialogs when converting FAT32 partition to PPA.
- Write a registry entry that will run the FWtoFAT.exe tool on the next Windows boot to convert the FAT32 partition to PPA.

NOTE: To prevent the FWtoFAT.exe tool from automatically running on the next Windows boot, use the "/Manual" switch (from the USAGE section above) when running FWtoFAT.exe. To complete the conversion process after deployment/imaging, manually run the command: FWtoFAT.exe /FATTOFW.

- Shut down windows.

- The Gold Master drive is ready for deployment/imaging.

Step III: Deployment/Imaging of Gold Master drive

Gather the disk image of the Gold Master drive using Phoenix ImageCast 6, and then deploy to systems with ImageCast 6 as needed.

Step IV: Converting empty FAT32 partition to PPA on first Windows boot

- On the first Windows boot after imaging the disk of the production system, Windows will automatically run the FWtoFAT.exe tool (unless the "/Manual" switch was used, in which case FWtoFAT.exe /FATTOFW will need to be executed manually).

NOTE: This should be completed prior to first end-user boot, for example: in the manufacturing environment.

- The tool will perform the following functions automatically:

- Import/create all the PSAs to the FAT32 partition.
- Convert the FAT32 partition to PPA.
- Create/update the PPA entries, including the BEER signature.
- Enable Phoenix Guardian and Recover Pro 6 dialogs when converting FAT32 partition to PPA.
- Install the Phoenix Disk to ensure PPA is secured.

- Force shut down of Windows. (This step can be disabled by using the "/NoReboot" command-line argument from the USAGE section above.)

- Phoenix Recover Pro/Always will be ready on the subsequent boot.



Secure from the START

Phoenix Technologies is a global market leader in device-defining software that enables endpoint security from the start. The company first established dominant industry leadership over 25 years ago with BIOS software. From this unique foundation of core level expertise and firmware offering the highest levels of reliability, Phoenix has created a portfolio of innovative software products that simply and easily identify and restore devices, thereby assuring users unparalleled endpoint security and availability.

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