System Board Configuration Tool

Partner Training / User Guide

HP has re-engineered the entire

System Board Configuration Process

with the new, UEFI-based DMIFIT Tool.

Understanding the different tools available…

Original Tool

Mix of utilities across
3 USB keys

- NBDMIFIT
- WNDMIFIT
- MPM LOCK
- ME Configuration
- TPM Configuration
- Intel ME Firmware Update
- Dedicated Tools

Phase I (Released August 2017)

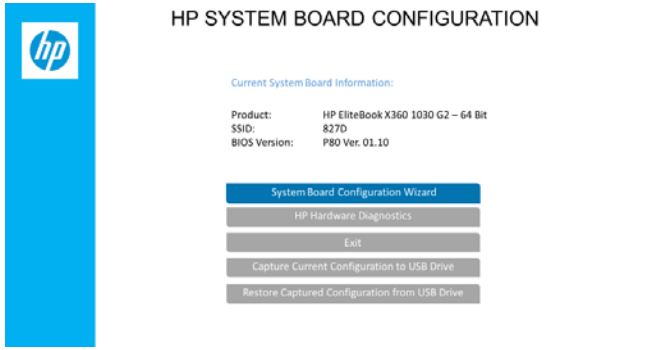
Mix of utilities across
1 USB keys (with menus)

- NBDMIFIT
- WNDMIFIT
- MPM LOCK
- ME Configuration
- TPM Configuration
- Intel ME Firmware Update
- Dedicated Tools

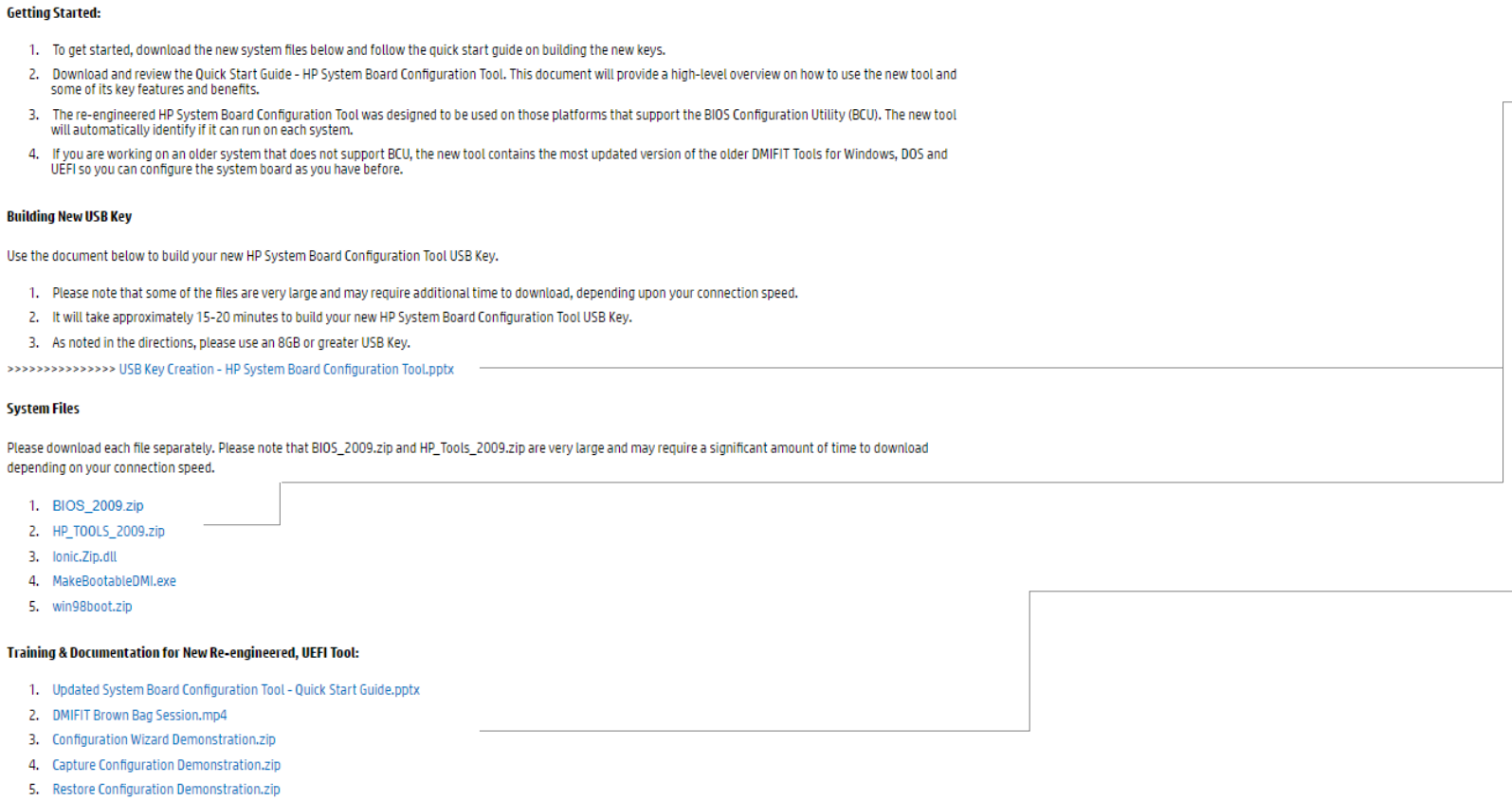
Phase II Combined

Complete menu driven, UEFI
based utility on 1 USB key

- New UEFI Tool for BCU Supported Platforms
- \+
- Phase I Tools for Older Systems.



Files Available on GCSN



Getting Started:

1. To get started, download the new system files below and follow the quick start guide on building the new keys.
2. Download and review the Quick Start Guide - HP System Board Configuration Tool. This document will provide a high-level overview on how to use the new tool and some of its key features and benefits.
3. The re-engineered HP System Board Configuration Tool was designed to be used on those platforms that support the BIOS Configuration Utility (BCU). The new tool will automatically identify if it can run on each system.
4. If you are working on an older system that does not support BCU, the new tool contains the most updated version of the older DMIFIT Tools for Windows, DOS and UEFI so you can configure the system board as you have before.

Building New USB Key

Use the document below to build your new HP System Board Configuration Tool USB Key.

1. Please note that some of the files are very large and may require additional time to download, depending upon your connection speed.
2. It will take approximately 15-20 minutes to build your new HP System Board Configuration Tool USB Key.
3. As noted in the directions, please use an 8GB or greater USB Key.

>>>>>>>>>>>>>>> USB Key Creation - HP System Board Configuration Tool.pptx

System Files

Please download each file separately. Please note that BIOS_2009.zip and HP_Tools_2009.zip are very large and may require a significant amount of time to download depending on your connection speed.

1. BIOS_2009.zip
2. HP_TOOLS_2009.zip
3. Ionic.Zip.dll
4. MakeBootableDMI.exe
5. win98boot.zip

Training & Documentation for New Re-engineered, UEFI Tool:

1. Updated System Board Configuration Tool - Quick Start Guide.pptx
2. DMIFIT Brown Bag Session.mp4
3. Configuration Wizard Demonstration.zip
4. Capture Configuration Demonstration.zip
5. Restore Configuration Demonstration.zip

2 Building Your New USB Key

Directions and files needed to build your new USB Key.

2 Documentation and Training

Quick start guides, videos and other documentation will be placed here.

https://h20345.www2.hp.com/CSNMCMSDOCS/Speedcodes/TDIA/TDIA%20Pages/NotebookUtil.htm

Getting Started

Building the new Phase II Combined Tool is just like building the Phase I Key.

1 Building the USB Key

1. Download the following files from GCSN.
   - BIOS_2009.ZIP
   - HP_Tools_2009.ZIP
   - IONIC.ZIP.DLL
   - MAKEBOOTABLEDMI.EXE
   - WIN98BOOT.ZIP
2. Place files on your desktop.
3. Run MAKEBOOTABLEDMI.EXE as administrator and follow prompts.

2 Set Boot Priority

1. Turn on the System.
2. Press **F10** to enter system set-up.
3. Use arrow to select **Advanced** Tab.
4. Use Arrow to Select **Boot Options**.
5. Ensure UEFI and Legacy boot options are set to USB.
6. Exit and save changes.

3 Insert Key and Start

1. Insert the USB Key and start the system.
2. System should boot to the main menu of the tool.

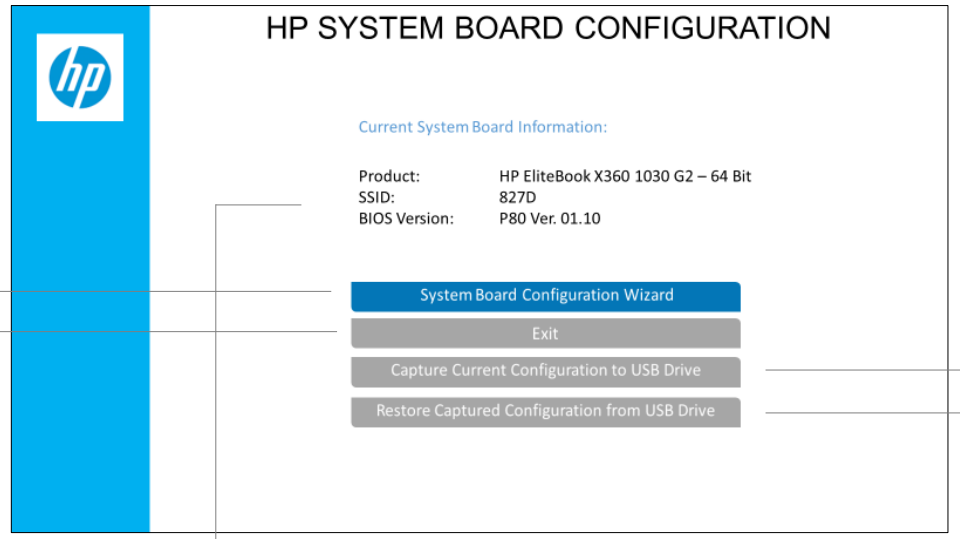
The Main Menu

1 Start the System Board Configuration Wizard

This button will start the system board configuration wizard and will walk you through the process.

2 Exit the Tool

This button will exit and reset the tool.



3 System Information

System Information is displayed here.

4 Capture Current Configuration (link)

This button will start the process to capture the configuration of the current system board.

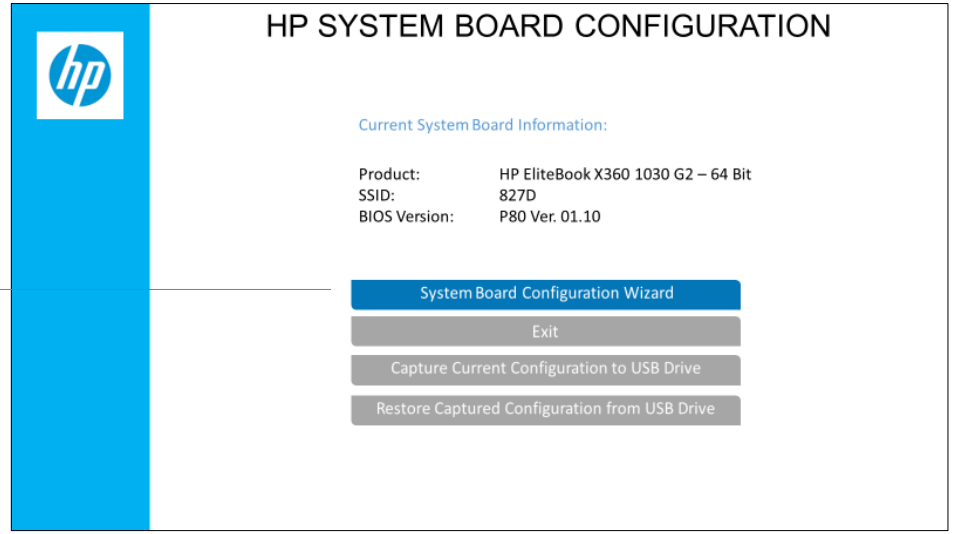
5 Restore Captured Configuration (link)

This button will start the process to configure a system board with the captured system board configuration.

System Board Configuration Wizard

1 Start the System Board Configuration Wizard

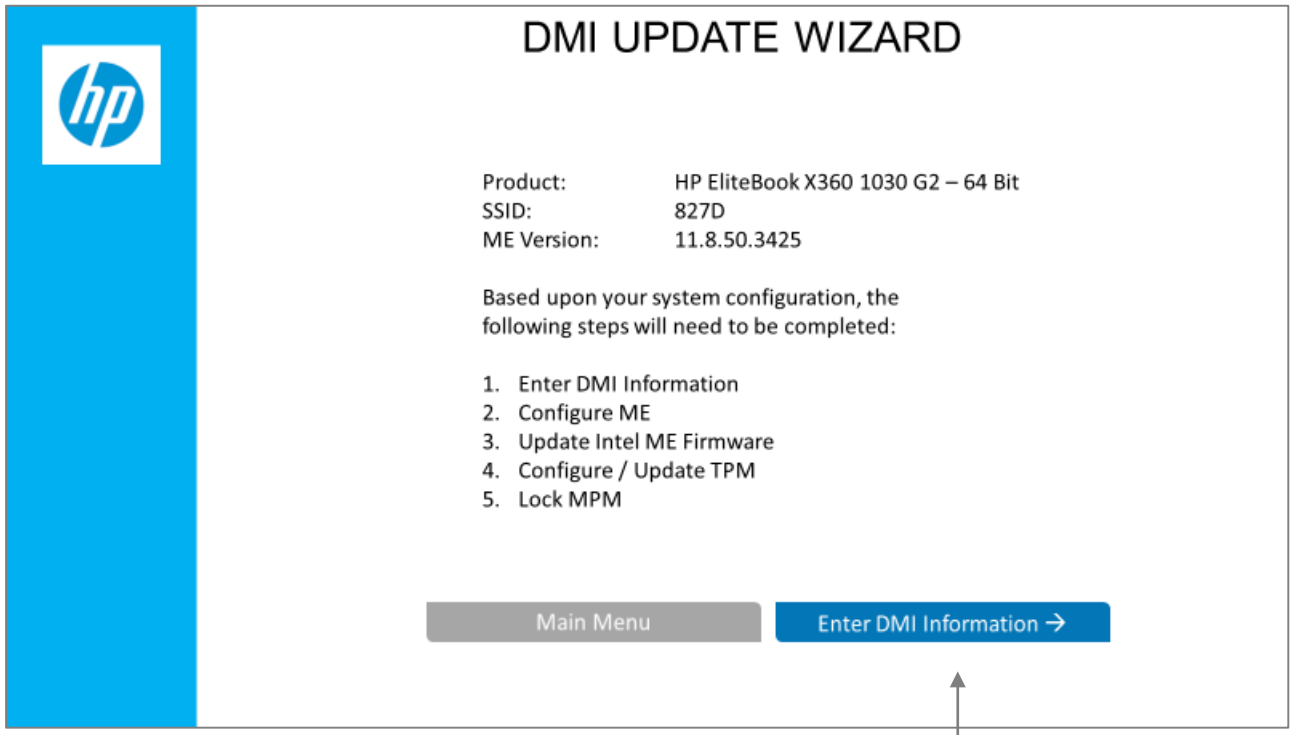
This button will start the system board configuration wizard and will walk you through the process.



Preview Screen

1 System Board Configuration Preview Screen

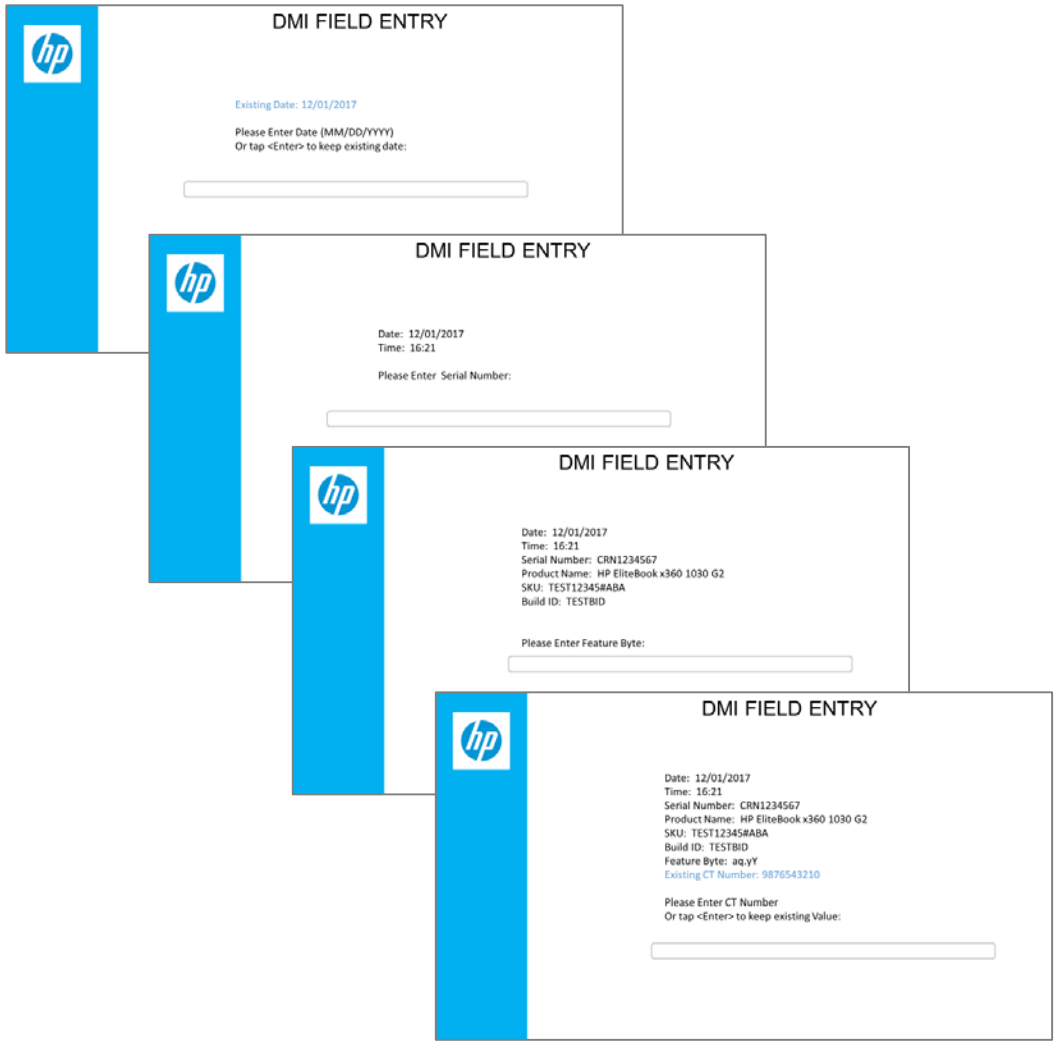
1. Once you start the System Board Configuration Wizard, the tool will identify what steps need to be completed to configure the system board.
2. These steps will vary based upon the type of system you are working on.
3. We start the process with entering DMI information.



Entering DMI Information

1 Entering DMI Information

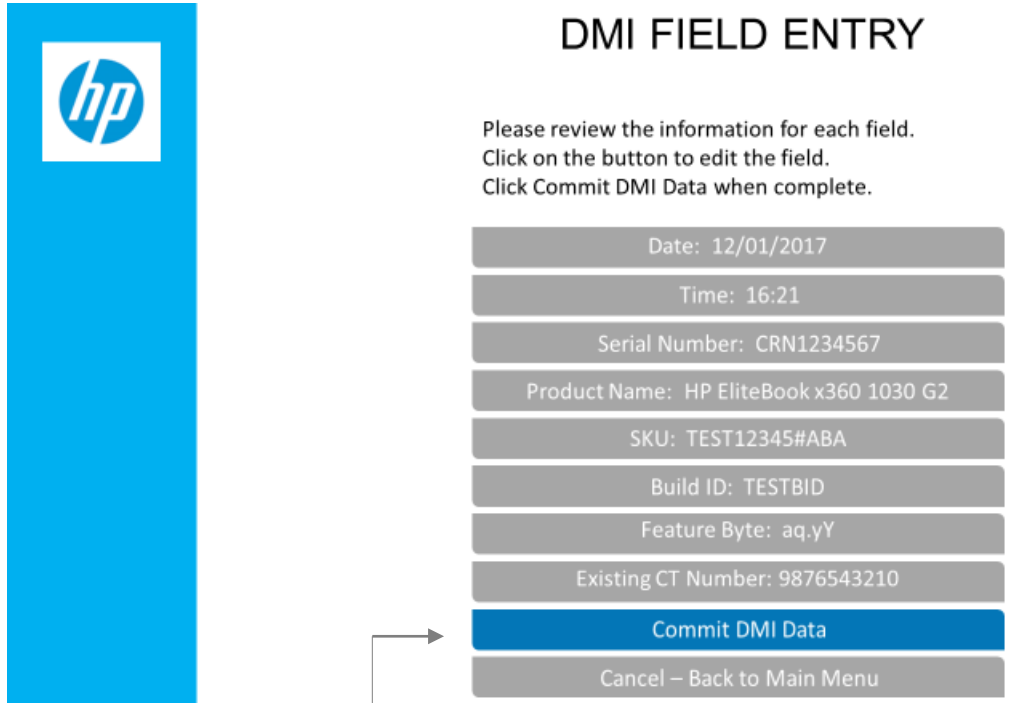
1. A series of screens will prompt you to enter DMI information.
2. Enter the DMI information as found on the system label.



Committing DMI Information

1 Committing DMI Information

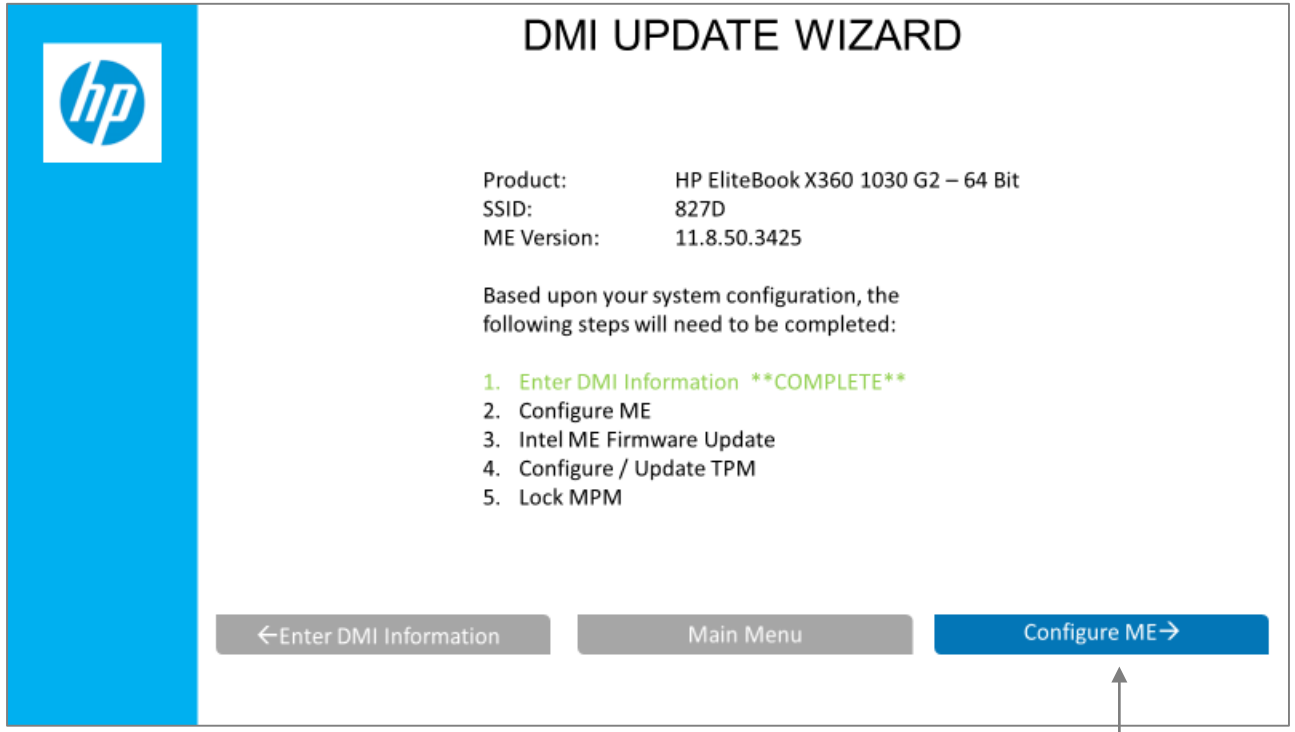
1. Once all of the DMI information has been entered, you will be asked to review and commit the information.
2. To change any of the values, simply select the box.
3. When you are ready to commit the information, select **Commit DMI Data.**
4. The system will reboot and commit the data. It will then return to the Preview Screen.



DMI Confirmation / Next Step

1 Preview Screen / Confirmation

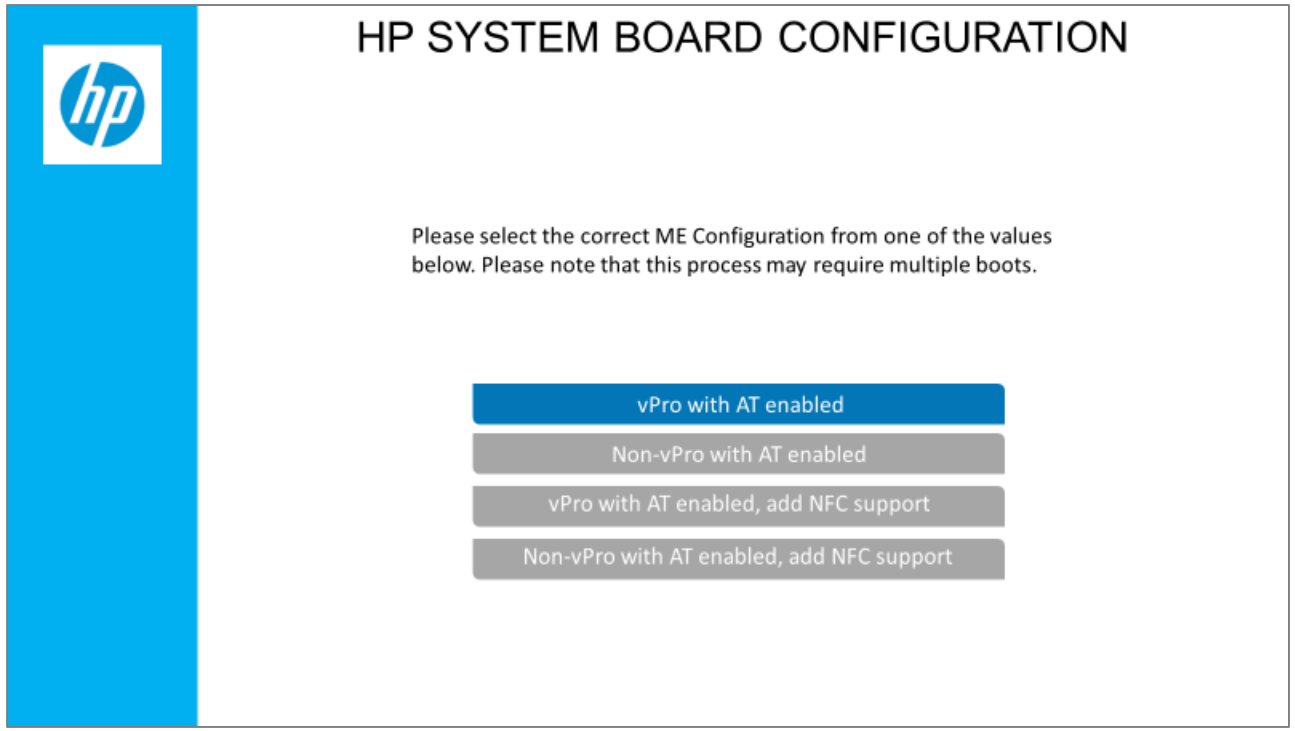
1. Upon rebooting, the tool will return to the preview screen and identify that DMI has been completed.
2. It will then identify the next step that needs to be completed. In this example, it would be to Configure ME.



Configure ME

1 Configure ME

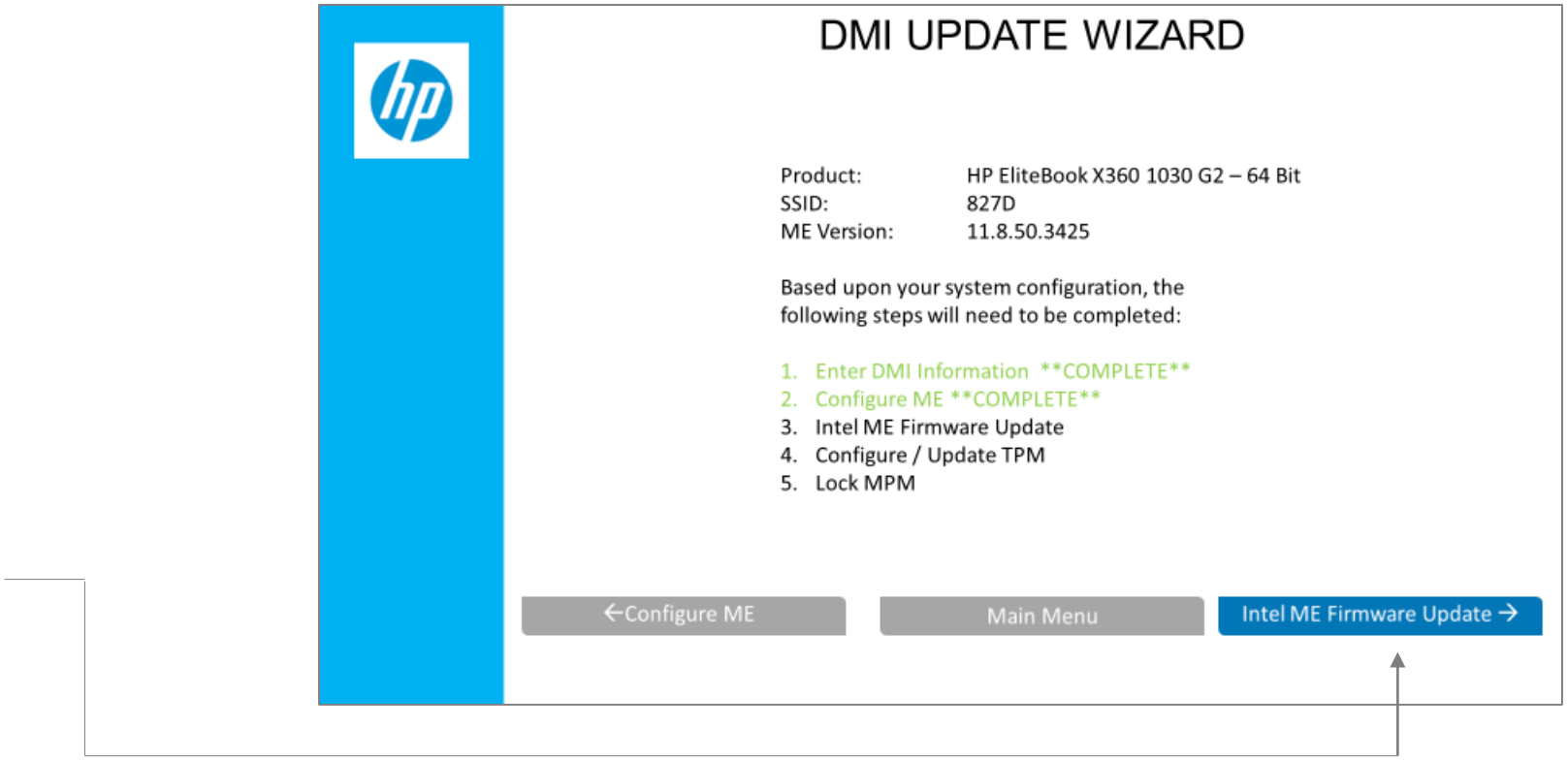
1. After selecting to configure ME, the tool will inspect ME and return a menu of available options.
2. Similar to before, select the option that is required for the customer.
3. The tool will then reboot (may reboot multiple times) and then return to the Preview Screen.



Configure ME Confirmation / Next Step

1 Preview Screen / Confirmation

1. Upon rebooting, the tool will return to the preview screen and identify that ME has been configured.
2. It will then identify the next step that needs to be completed. In this example, it would be to update Intel ME Firmware.
3. Selecting to update the Intel ME Firmware will launch the utility and update ME Firmware.



Update Intel ME Firmware

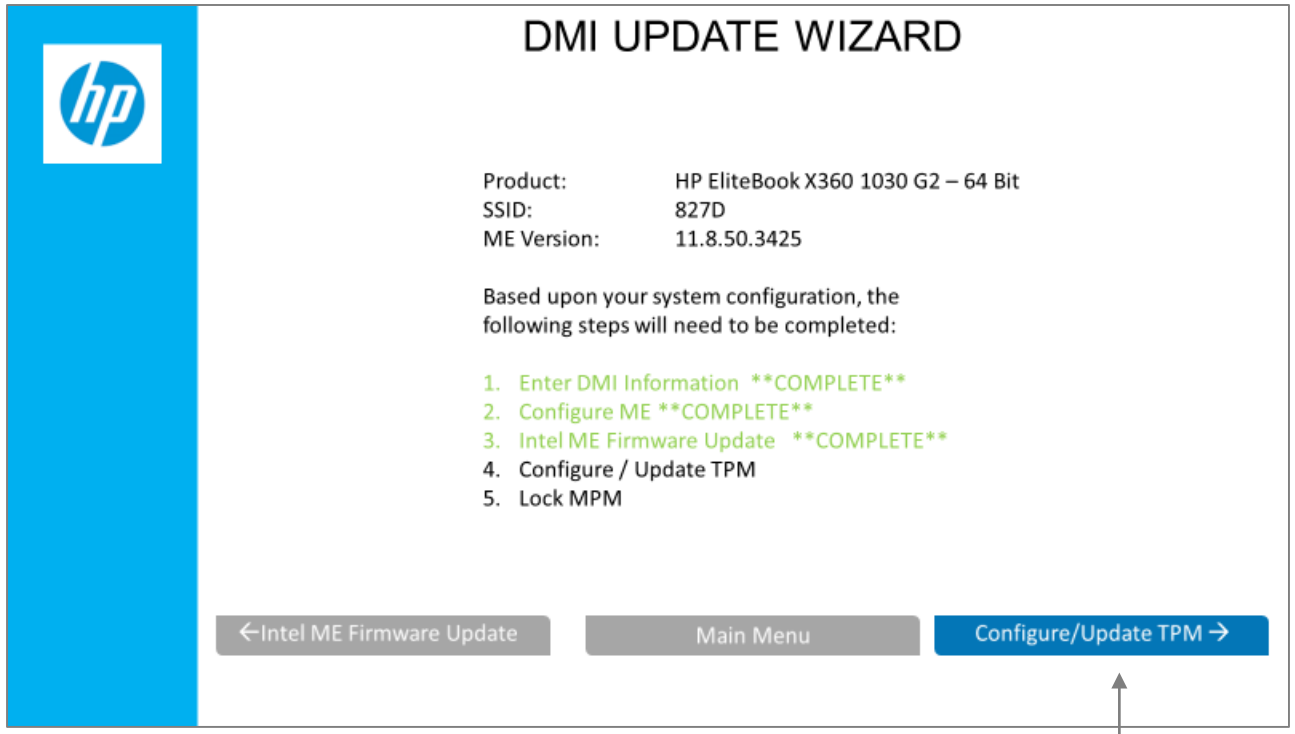
1 Intel ME Update Utility

1. After selecting to update the Intel ME Firmware, the utility will run and complete the update.
2. The tool will then reboot (may reboot multiple times) and then return to the Preview Screen.

Intel ME Firmware Update Confirmation / Next Step

1 Preview Screen / Confirmation

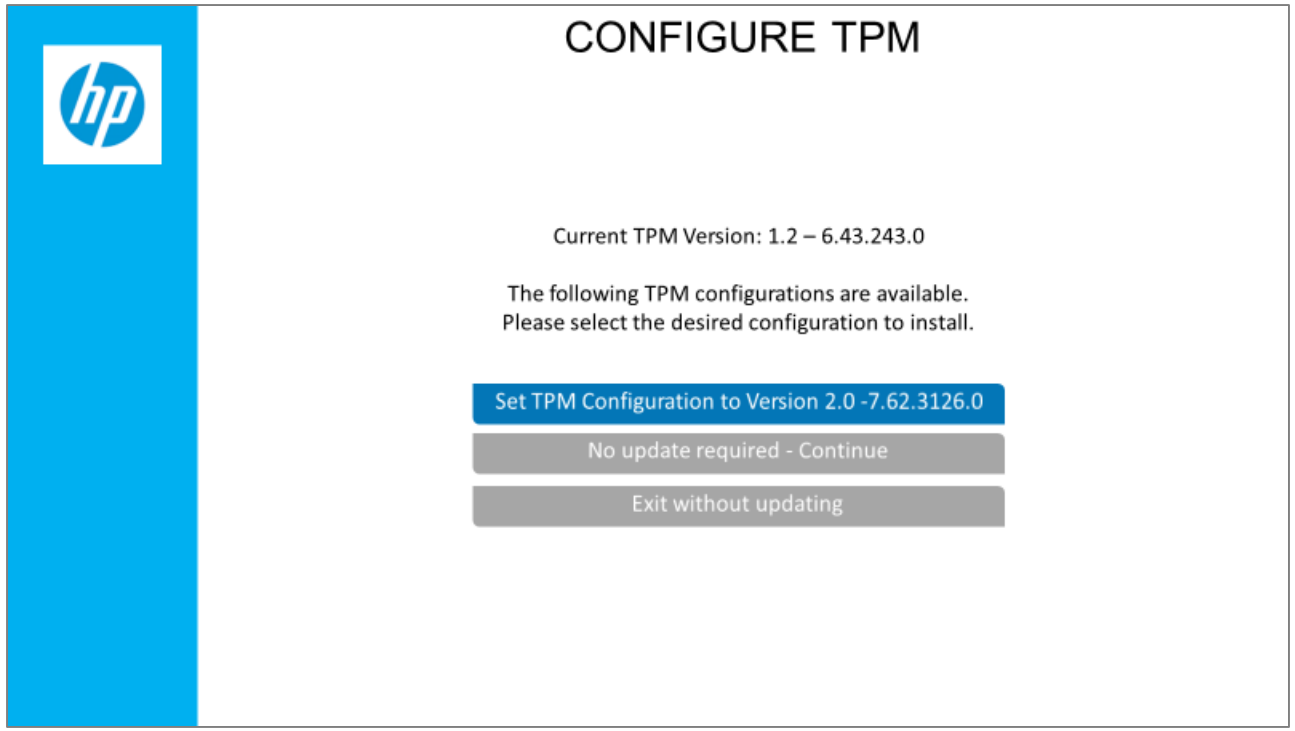
1. Upon rebooting, the tool will return to the preview screen and identify that Intel ME Firmware has been updated.
2. It will then identify the next step that needs to be completed. In this example, it would be to Configure / Update TPM.
3. Selecting to Configure / Update TPM will launch the utility.



Update / Configure TPM

1 Configure ME

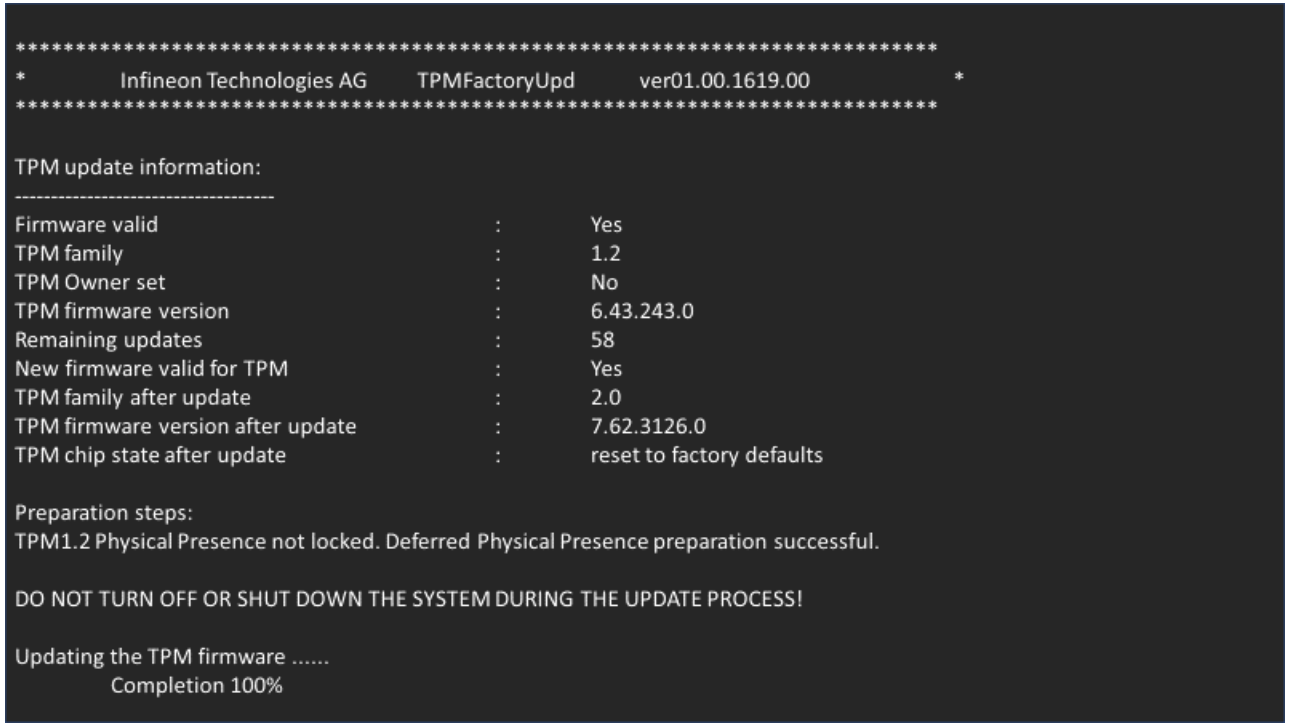
1. After selecting to Configure / Update TPM, the tool will inspect the TPM Firmware and return a menu of available options.
2. You can either change TPM or you can update the Firmware (you must update the firmware if required to eliminate a security vulnerability).
3. Selecting an option will launch the utility.



Update / Configure TPM

1 TPM Utility

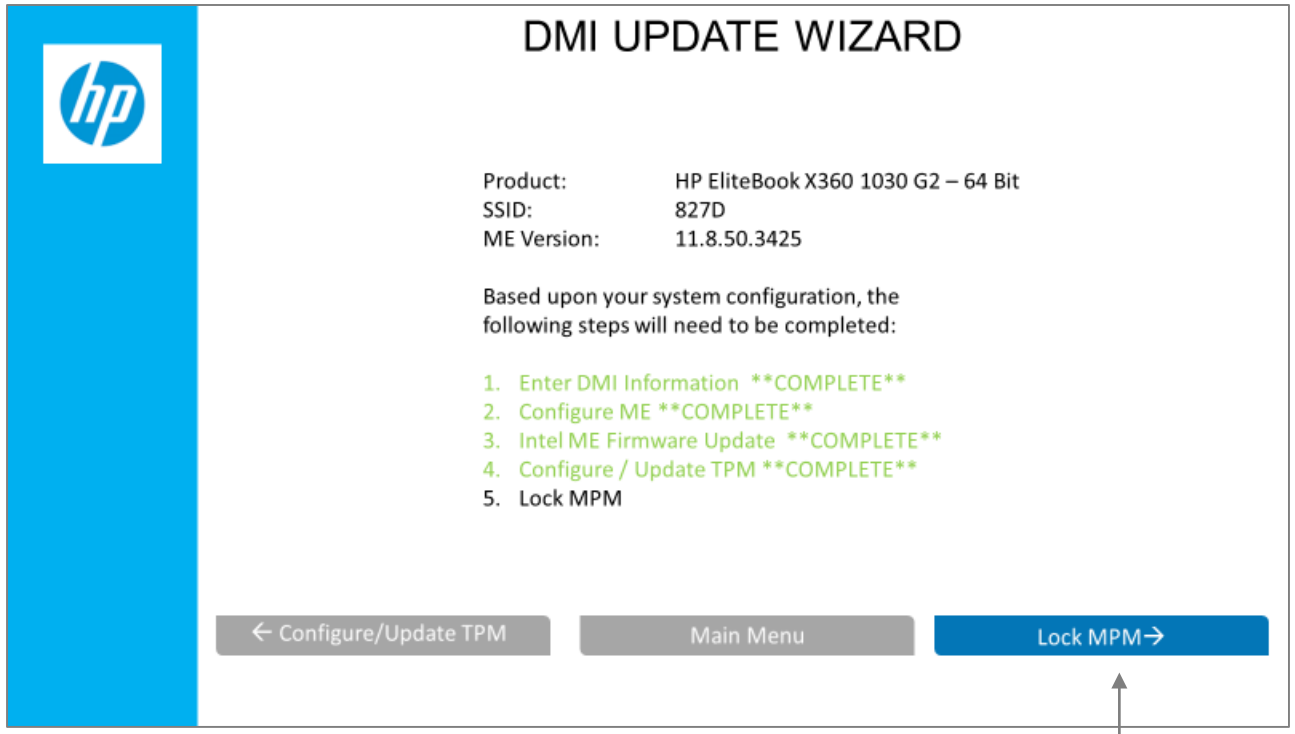
1. Based upon your selection, the utility will run and complete the task.
2. The tool will then reboot (may reboot multiple times) and then return to the Preview Screen.



Update / Configure TPM Confirmation / Next Steps

1 Preview Screen / Confirmation

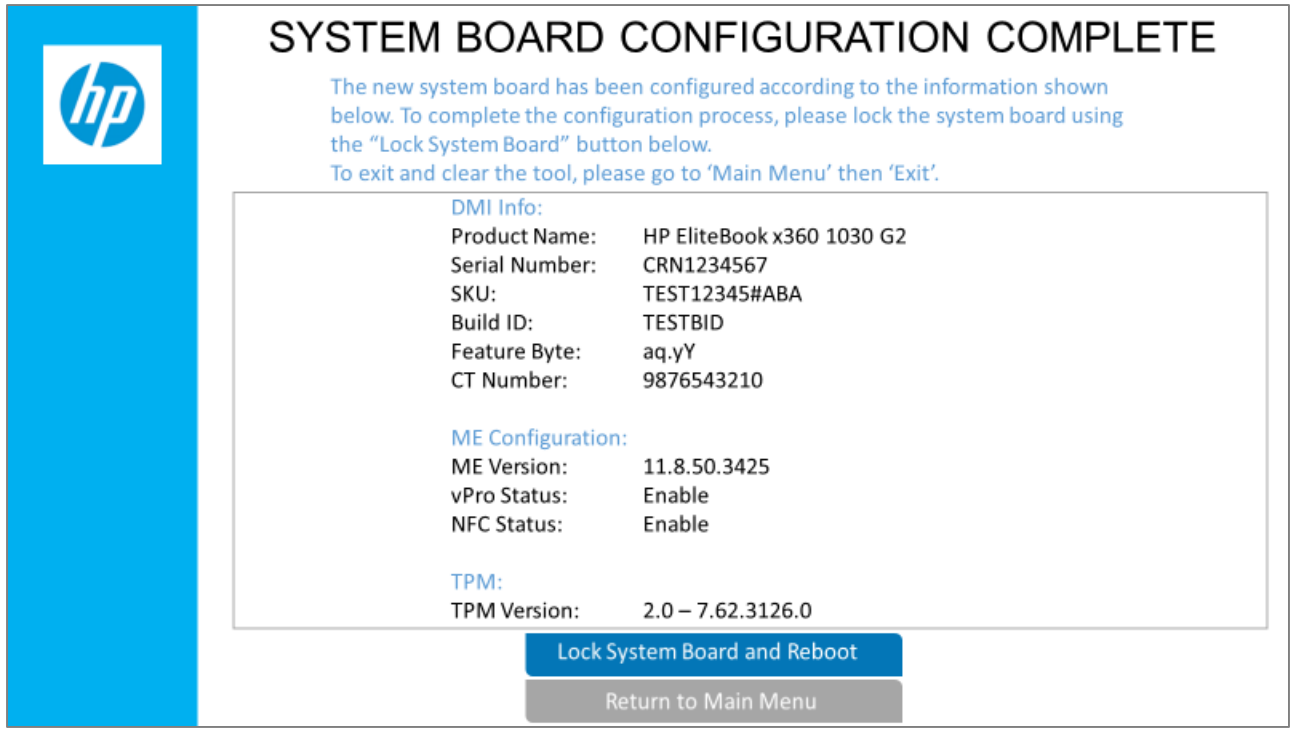
1. Upon rebooting, the tool will return to the preview screen and identify that TPM is complete.
2. It will then identify the next step that needs to be completed. In this example, it would be to Lock MPM.
3. Selecting Lock MPM will generate a final review screen and the lock button.



Lock MPM

1 Lock MPM

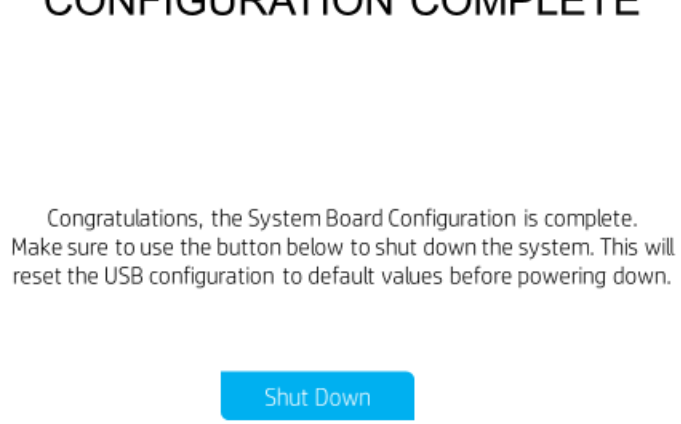
1. After selecting to Lock MPM, the tool will generate a review page.
2. Please review the settings and change if required (please notE you cannot reconfigure ME).
3. Selecting Lock System Board and Reboot will lock MPM and reboot the system a final time.



Lock MPM

1 Final Confirmation / Shut Down

1. You are now done with the process and can shut down the system.



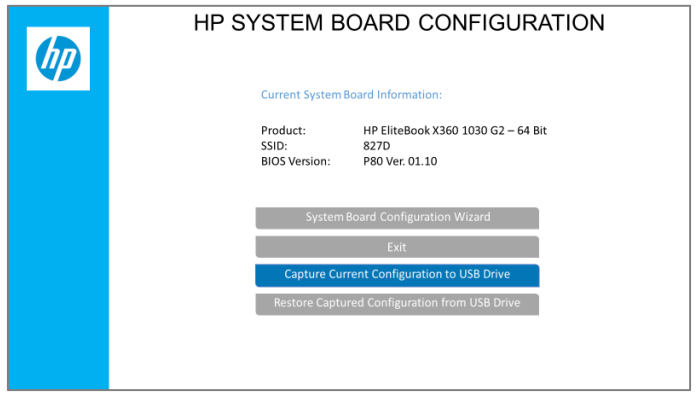
System Board Capture / Restore

1 When to Use

1. The capture / restore functionality can be used in the following scenarios:
    1. When the system board that is to be replaced is still functioning.
    2. When there is a similarly configured system in the customer's environment.

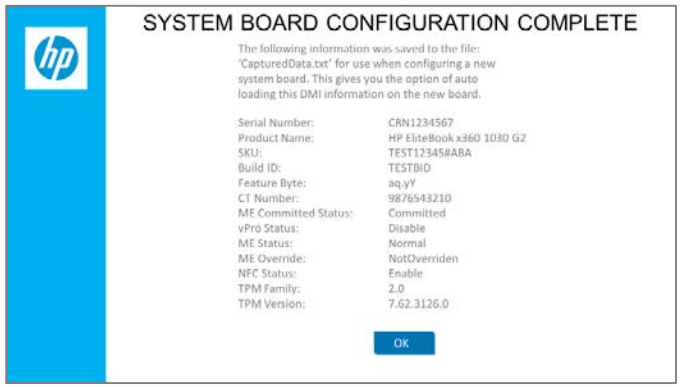
2 Capture Data

1. From the main menu, select Capture Current Configuration to USB.



3 Review Captured Data

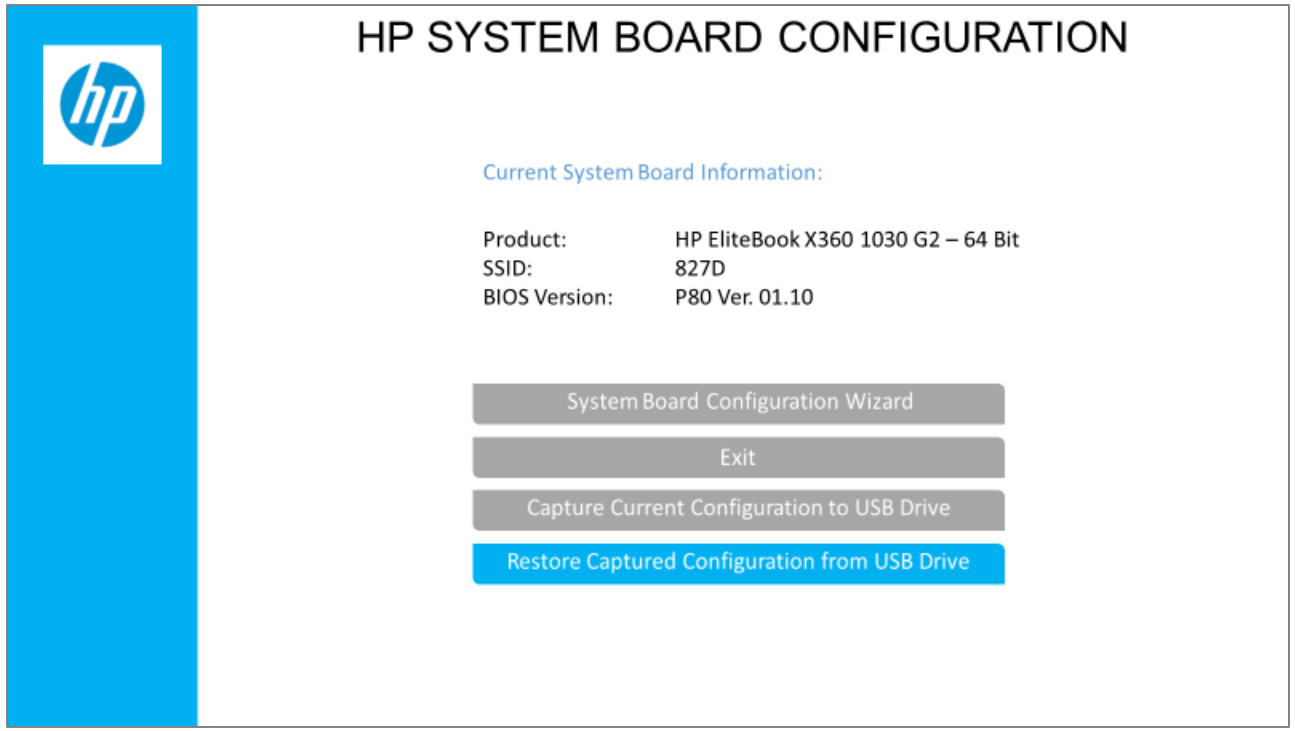
1. The tool will highlight all of the information that it is capturing. Select OK to record the configuration.



System Board Capture / Restore

1 Using Captured Data

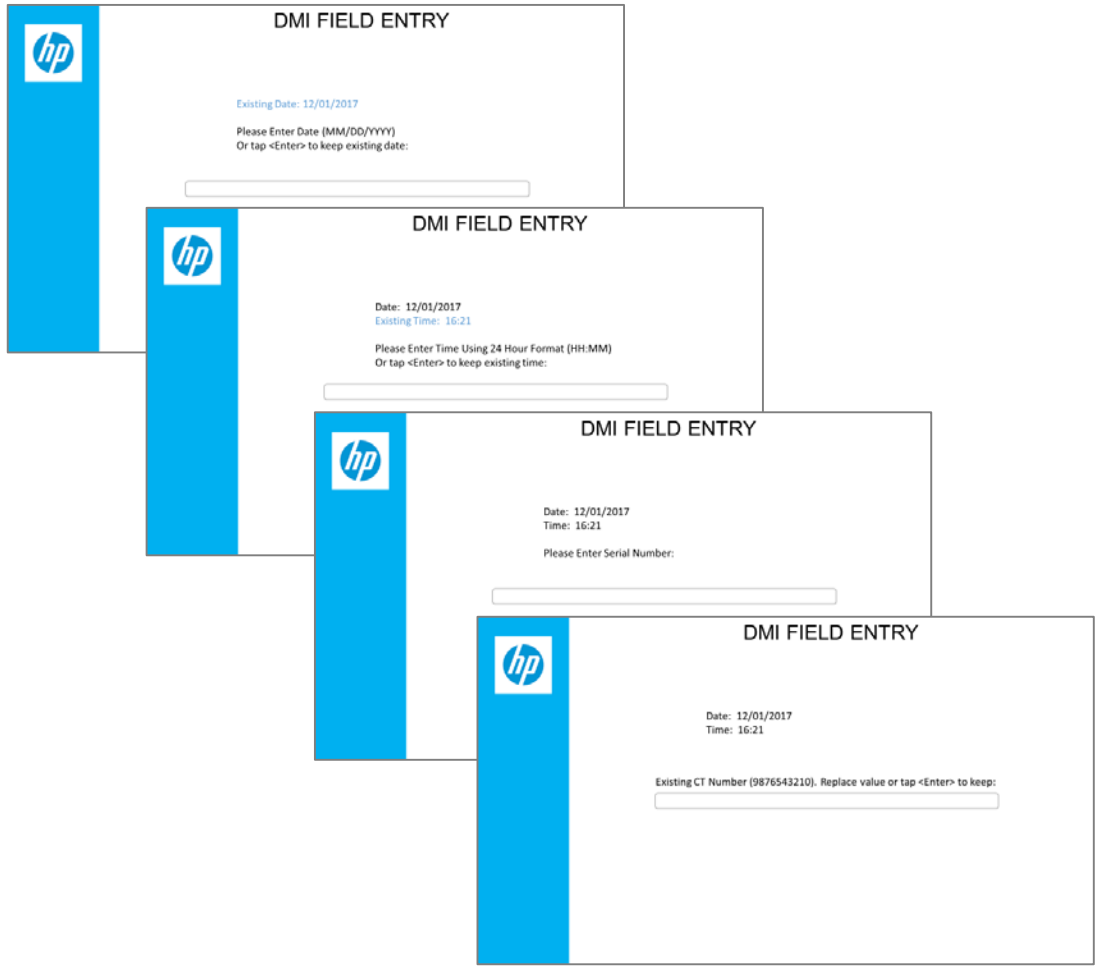
1. After you have captured data from the old system board and installed the new one, you are set to configure the new system board.
2. From the Main Menu, Select **Restore Captured Configuration from USB Drive.**



System Board Capture / Restore

1 Entering System Board Specific Data

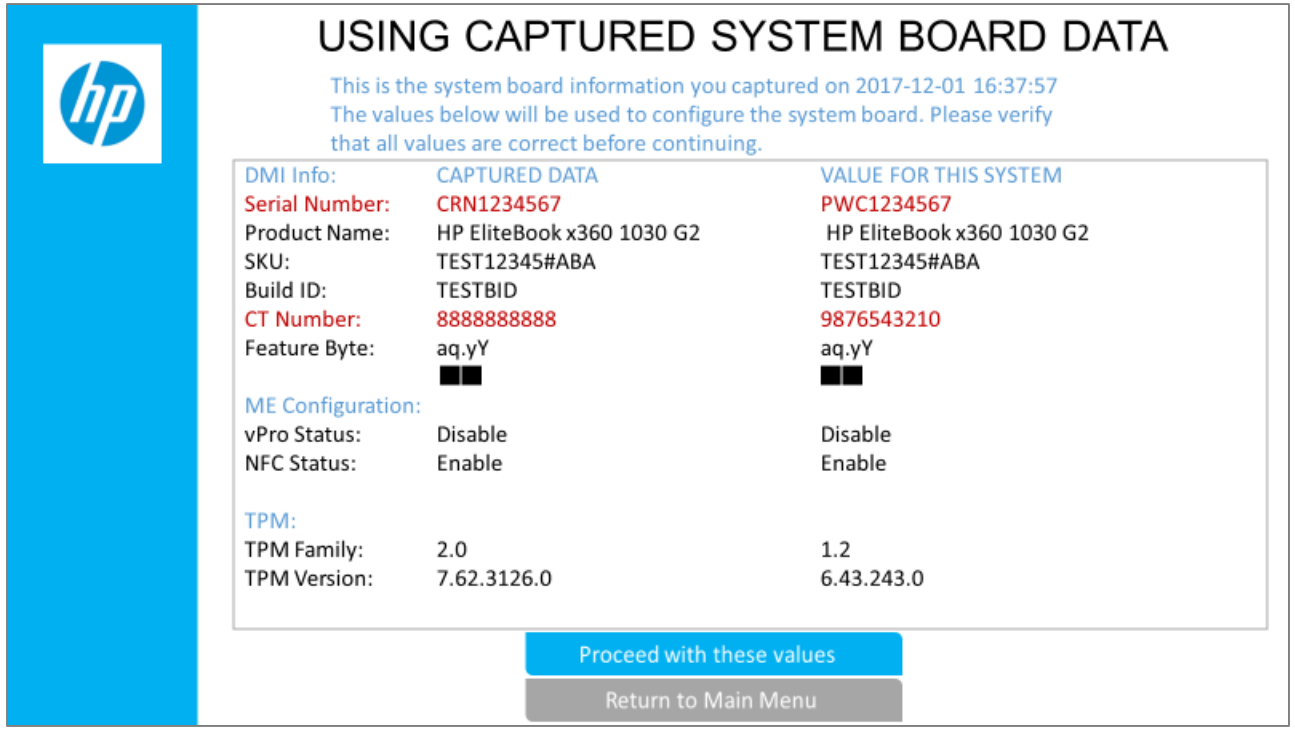
1. The tool will ask you to enter DMI Fields that are specific to each system/ system board.
2. This includes:
    a. Date
    b. Time
    c. Serial Number
    d. CT Number
    e. Asset Tag



System Board Capture / Restore

1 Reviewing Information

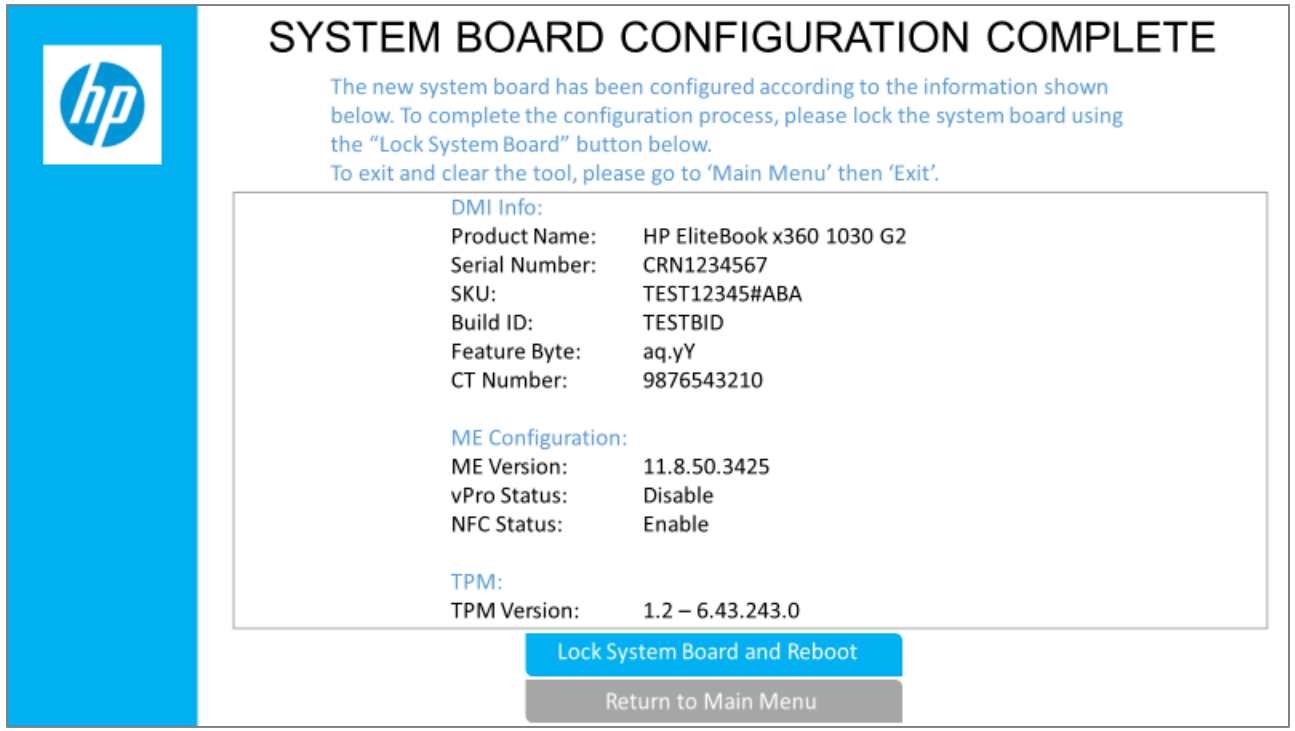
1. Once you have entered the system / system board specific data, the tool will generate a final review screen.
2. There is no customizing these options, you can either proceed with these setting or exit and do it manually with the Wizard.
3. Select **Proceed with These Values.**
4. The system will reboot multiple times.



System Board Capture / Restore

1 Locking MPM

1. Once the system has completed all of the tasks, it will generate a final screen listing all of the settings and their configuration.
2. Selecting Lock System Board and Reboot will lock MPM and reboot the system a final time.
3. You are now done with the process.



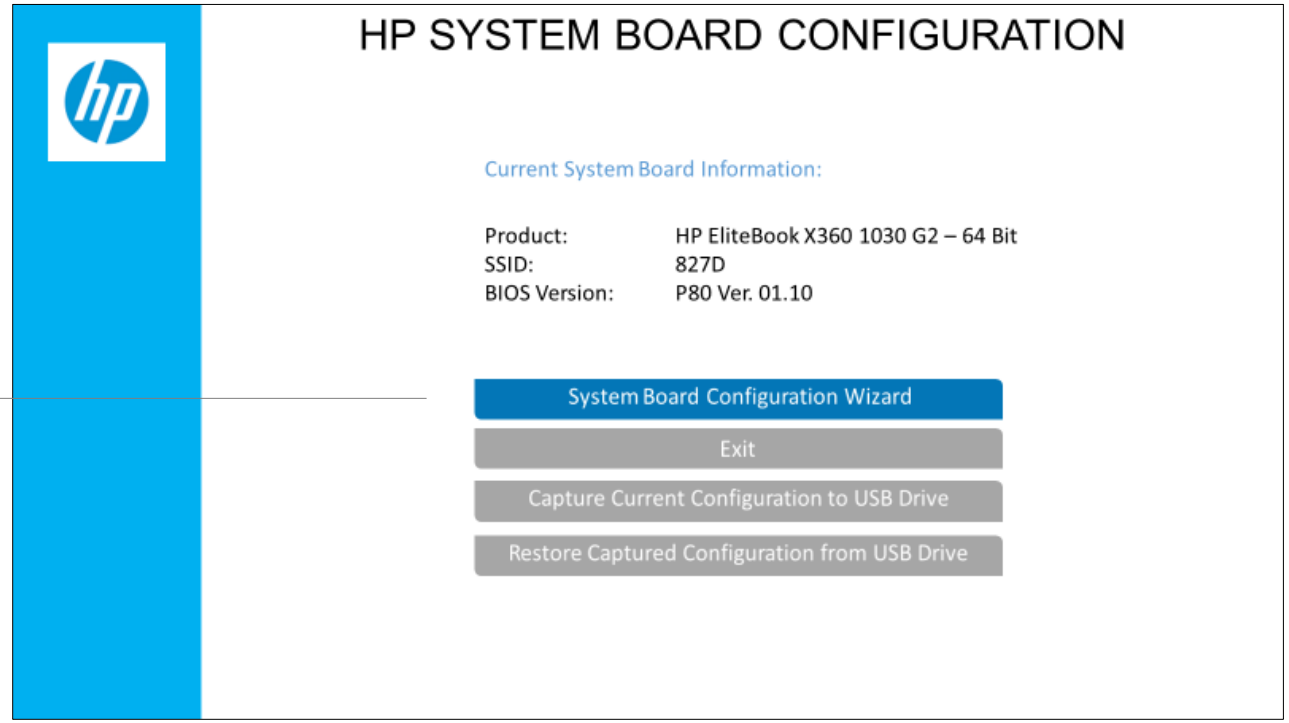
MPM Locked System Board

1 When MPM is Locked

If the MPM is locked on a system board, the tool will still boot to the main menu.

2 Detecting a Locked System Board

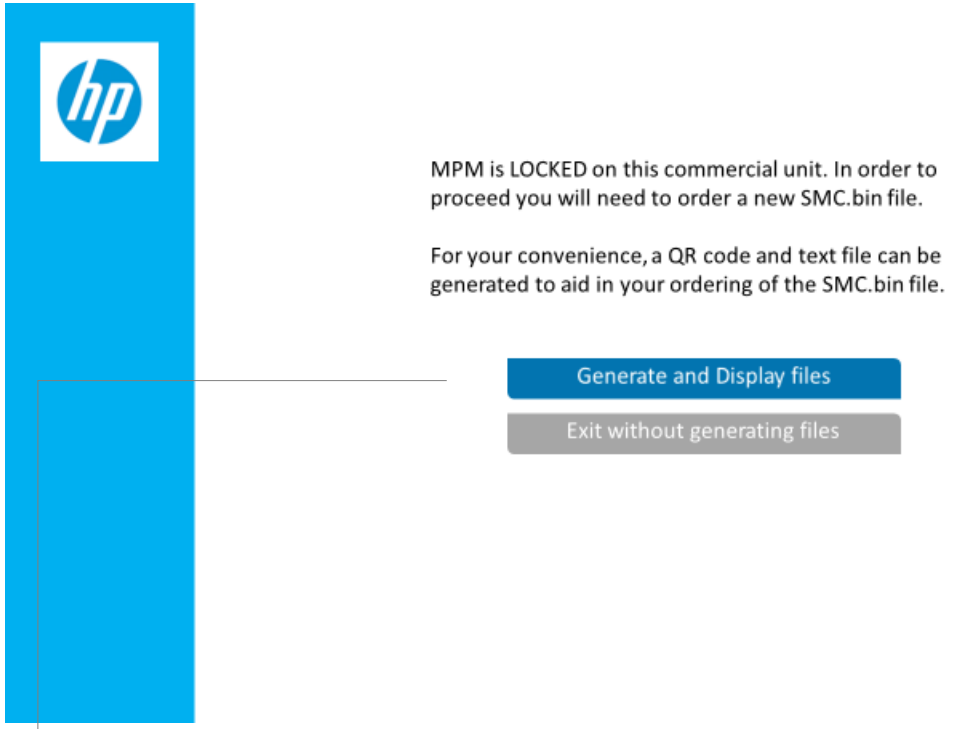
It is not until you attempt to program the locked system board that the tool will detect the system board is locked.



MPM Locked Error Message

1 Error Message

1. The tool will generate an error message indicating that the system board is locked.
2. It will then provide the user with the option to exit or display the information required to request an SMC.BIN File.
3. Selecting Generate and Display Files will advance to the next screen.



QR Code

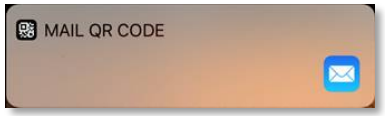
1 QR Code

1. The tool will generate a QR Code that can be scanned by a smart phone application.
2. When scanned, the QR Code will generate an email template with the required information prepopulated.
3. It also presents the information that is required to request an SMC.BIN File.

QR Code / Phones & Applications

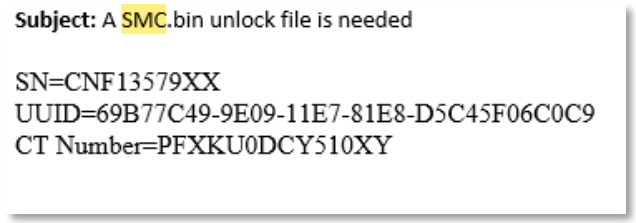
1 iOS

1. When using an iPhone, simply use the camera application to scan the QR Code.
2. An email notification will appear on your screen.
3. Open the email notification and you will find the template complete with Serial Number, UUIS and CT Number.



2 Android

1. When using an Android based phone, simply download the Lightning QR App from the store.
2. Scan the QR Code.
3. An email template will open you will find the template complete with Serial Number, UUIS and CT Number.



Older / Non-Supported Systems

1 Supported Platforms

1. The new HP System Board Configuration Tool is designed to work on those systems that have the BIOS Configuration Utility.
2. In general, this includes:
    a) G3 and Later Commercial Notebooks
    b) G2 and Later Commercial Desktops
    c) 2016 and Later Consumer Notebooks

2 What Happens if Not Supported

1. The tool will detect the platform is not supported by the Phase II Tool and will proceed to treat the USB key as a Phase I key.
2. When booting to UEFI, the tool will launch the older version of the UEFI tools.

3 Configure the System Board

1. Use the older utilities to complete the configuration process as you currently do.

Systems that Require Original 3-Key Solution

1 Legacy / WINPE

1. The new consolidated tool cannot be used on systems that do not boot to Legacy Mode or require direct boot into WINPE.
2. For these platforms, you will need to use one of the WINPE keys the original 3-key solution.

1. ElitePad 900
2. HP Pro Tablet 10 EE G1
3. ElitePad 1000
4. Pro Tablet 608 G1
5. HP ProBook x360 11 G1

Building / Updating the 3 Key Solution

1 The 3-Key Solution

1. You can download version 2.13 of the single key solution to build your USB Keys
2. You will then need to update your USB keys with the latest files by downloading and updating the keys with version 2.14-1.

Creating the Original Three-key Solution Keys

Overview / Getting Started:

To build the new USB keys, please download and follow these directions.

>>> USB Key Tool Creation Quick Start - 2.13.pdf

System Files

Please download each file separately. Please note that files are very large and may require a significant amount of time to download depending on your connection speed.

1. NbDmiFit-2.13.zip
2. WinPE32-2.13.zip
3. WinPE64-2.13.zip

Attention: A update to the original three-key solution is now available:

Overview:

The legacy DMIFIT tool is still available for those who prefer the three-key solution and is required on some dedicated system This is the most current version of DMIFIT available

Getting Started:

To get started, download the NBDMIFIT update file below and follow the quick start guide on updating your keys.For version 2.14-1, all you will need to do is update your existing USB Keys.

Updating your Three USB Keys:

Use the document and files below to update your USB Keys.

>>>>>> Updating USB Keys Quick Start Guide (2.14-1).pdf
>>>>>> NbDmiFit-2.14-1.zip

Documentation:

1. HP Commercial Notebook Step-by-Step Guide - 2.14.pdf
2. HP Commercial Desktop Step-by-Step Guide - 2.14.pdf
3. HP Consumer Notebook Step-by-Step Guide (2C16 Platforms) - 2.14.pdf
4. HP Consumer Notebook Step-by-Step Guide (3C16 Platforms) - 2.14.pdf
5. TPM Step-by-Step Guide - 2.14.pdf

Audio Configuration

1 New Platforms

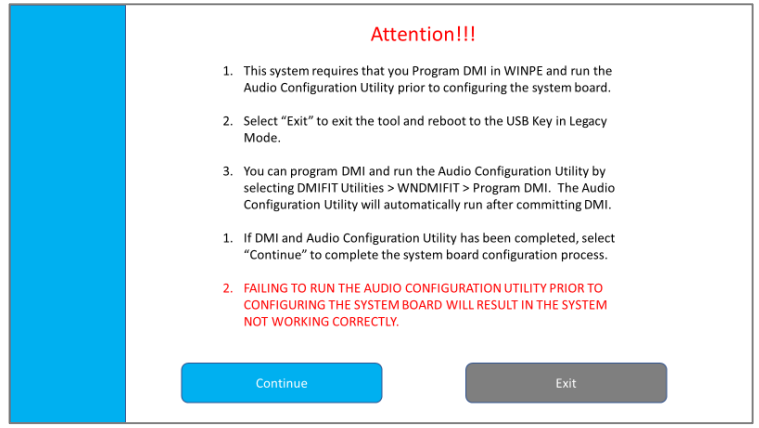
1. Some of the new platforms being released require the speaker / amp firmware be calibrated after a system board has been replaced.
2. These include:
   - EliteBook 1040 G4
   - EliteBook x360 1020 G2

2 WINPE Based Tool

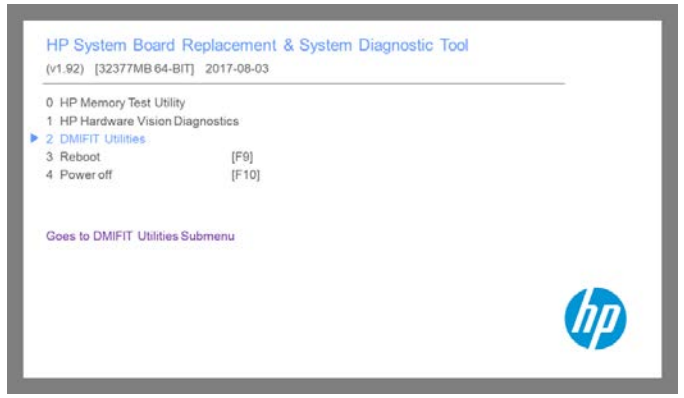
1. The tools to complete the speaker / amp configuration are WINPE based and cannot be completed inside the Phase II Beta Tool.

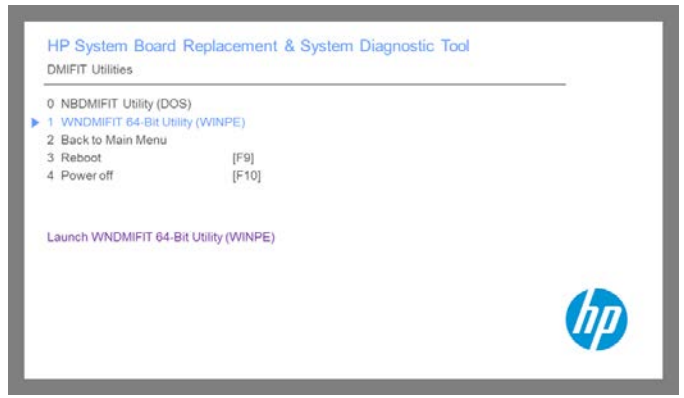
3 Warning Screen

1. The Phase II Beta Tool will display a screen indicating that you must boot to WINPE to run the audio configuration tool before starting the tool.



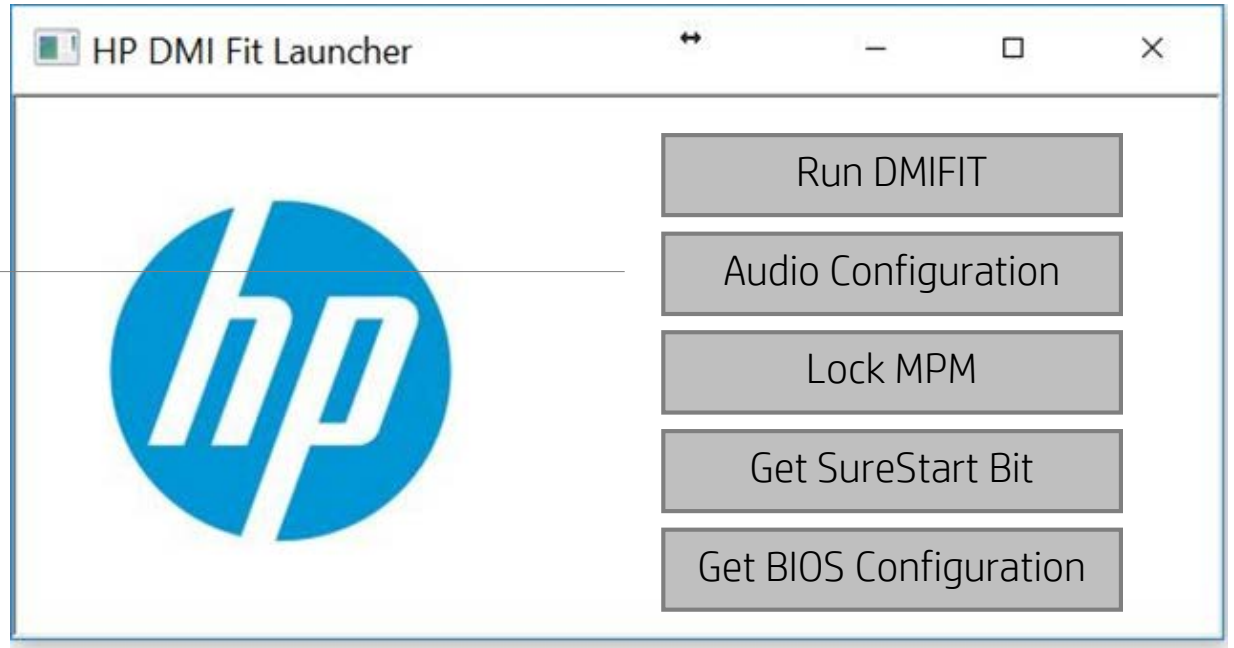
Audio Configuration Tool





1 Running the Tool

1. Boot to the USB Key in Legacy Mode.
2. From the Menu, choose DMIFIT Utilities > WINDMIFIT UTILITIES.
3. This will bring you to the WINPE sub-menu.
4. Select the Audio Configuration Utility.
5. After the utility is complete, reboot to the Phase II Tool and select yes at the warning screen.



Auto Rotate Tool

1 New Platforms

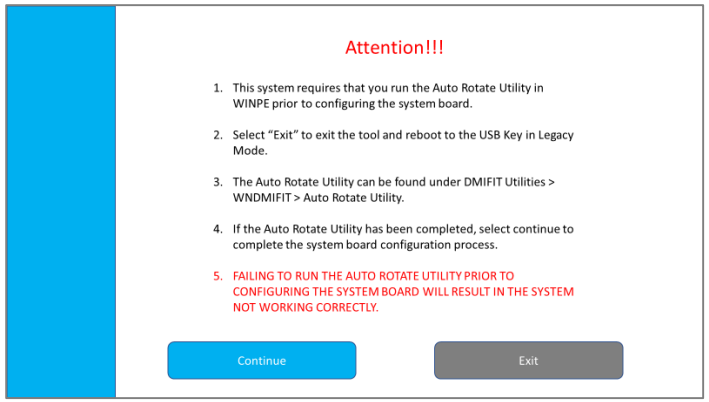
1. Some of the new platforms being released require the screen rotation be calibrated after a system board has been replaced.
2. These include:
   - HP Elite x360 1030 G2
   - EliteBook x360 1020 G2

2 WINPE Based Tool

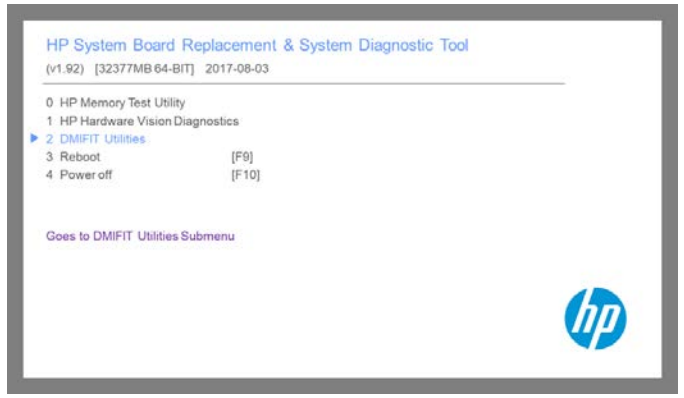
1. The tools to complete the screen rotate configuration are WINPE based and cannot be completed inside the Phase II Beta Tool.

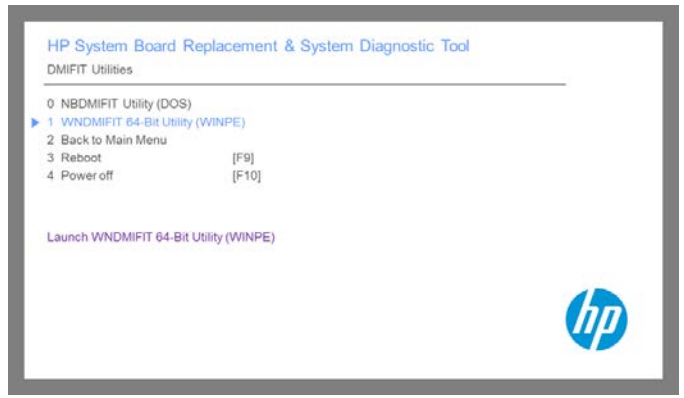
3 Warning Screen

1. The Phase II Beta Tool will display a screen indicating that you must boot to WINPE to run the Auto Rotate configuration tool.



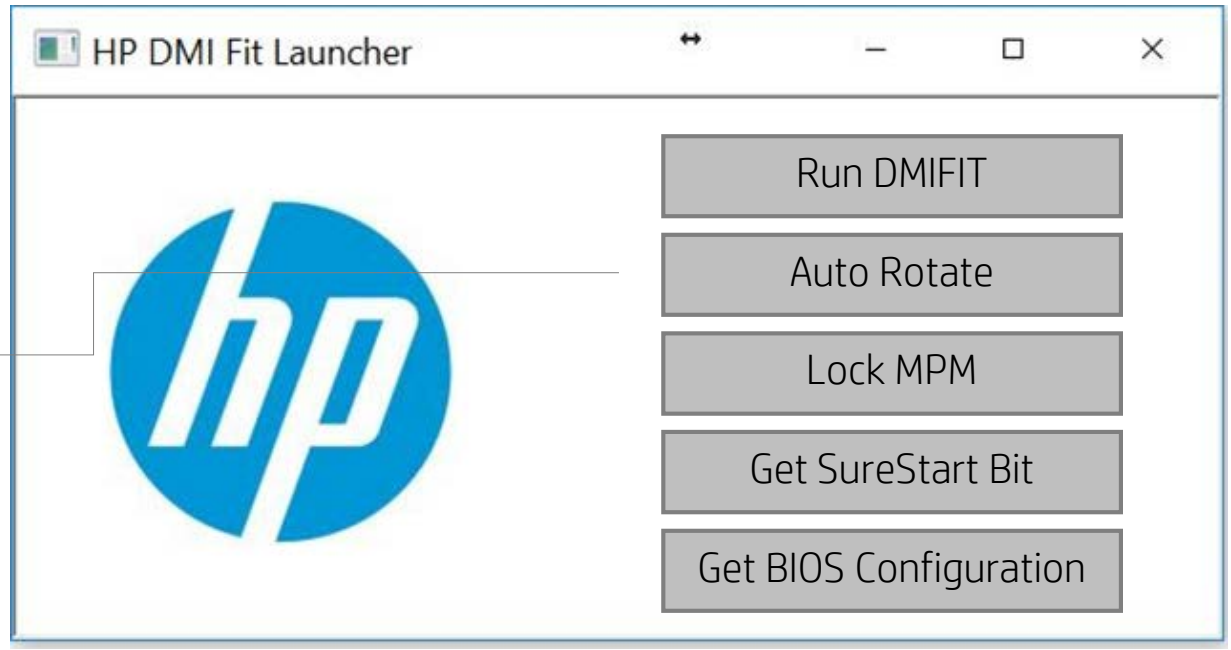
Auto Rotate Tool



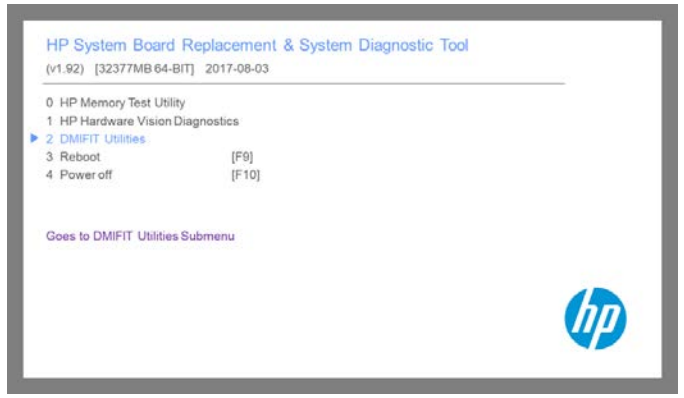


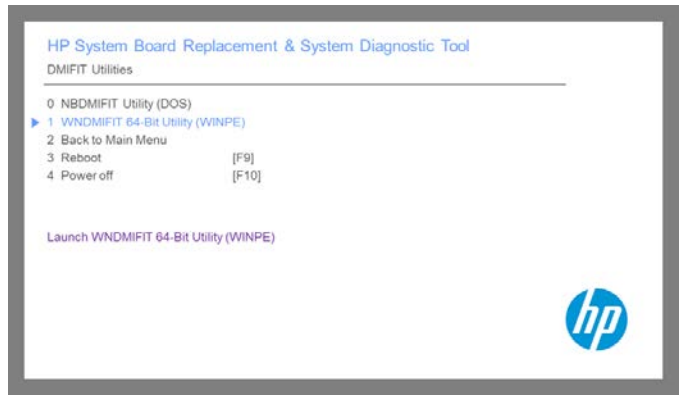
1 Running the Tool

1. Boot to the USB Key in Legacy Mode.
2. From the Menu, choose DMIFIT Utilities > WINDMIFIT UTILITIES.
3. This will bring you to the WINPE sub-menu.
4. Select the Auto Rotate utility from the menu. Follow the prompts.
5. After the utility is complete, reboot to the Phase II Tool and select yes at the warning screen.



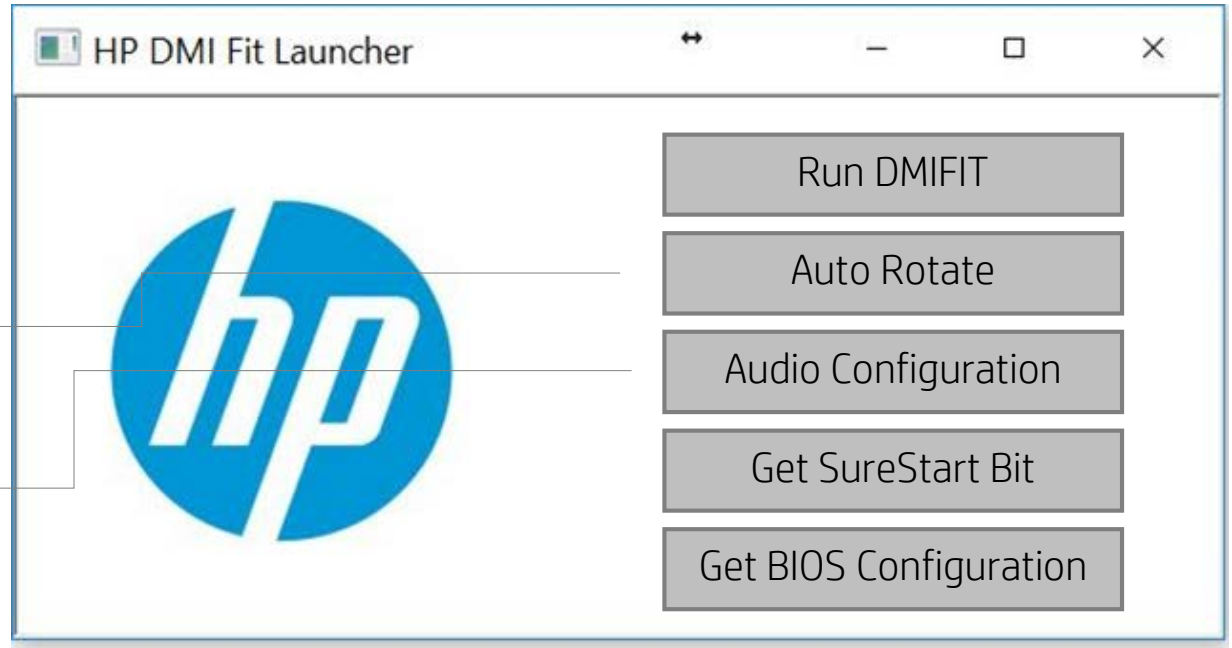
EliteBook x360 1020 G2 Needs Both Utilities!!!!!!!!





1 Running the Tool

1. Boot to the USB Key in Legacy Mode.
2. From the Menu, choose DMIFIT Utilities > WINDMIFIT UTILITIES.
3. This will bring you to the WINPE sub-menu.
4. Select the Auto Rotate Tool from the menu.
5. Then run the Audio Configuration Tool



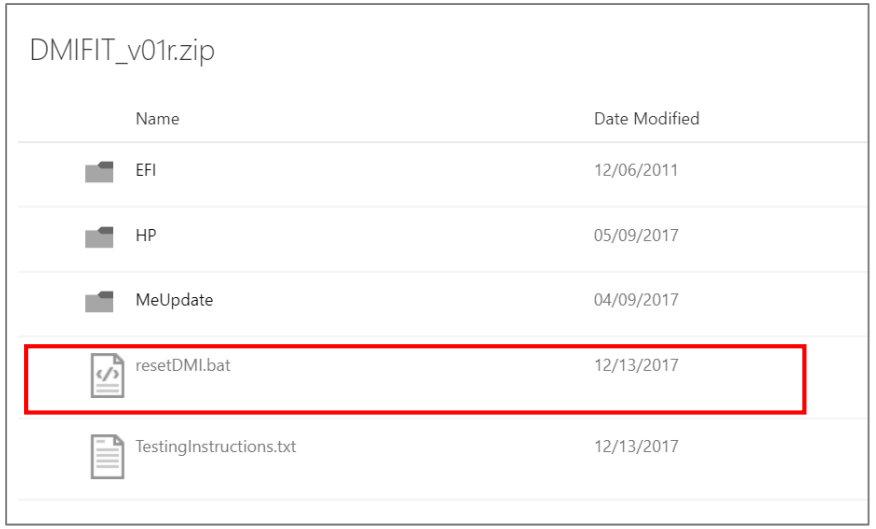
Resetting the Tool

1 Exiting the Tool

1. The tool is designed to remember what stage of the process it is in and return to that point.
2. If you decide you want to start over, simply return to the main menu and exit the tool.
3. Exiting the tool this way will reset the tool and it will start at the beginning of the process.

2 Force Reset

1. Should the tool fail and you want to force a reset of the tool, simply insert the key into a working system and run the RESETDMI.BAT file from Windows File Explorer.



Encountering an Error

While tested across multiple systems, there is still a chance that you may encounter an error when running the new tool. To help us root cause the issue, please follow the steps below:

1 Copy Debug File

1. Insert the USB key into a Windows PC and open a File Explorer Window.
2. Copy EFI > DMIFIT > DEBUG.LOG to your desktop.

2 Additional Documentation

1. Create a zip file containing the DEBUG.LOG and any images or documentation showing the issue you had encountered.

3 Send File

1. Send the file to gbudmifittoolteam@hp.com with a detailed explanation of the issue.