BIOS Update Guide

Keysight M9537A SL05 BIOS Update

KEYSIGHT TECHNOLOGIES

Description

This Keysight M9537A BIOS upgrade allows you to restore or update the BIOS in your M9537A AXIe Embedded Controller. This Update Guide is for BIOS version SL05.

As an overview, here are the primary steps to updating the BIOS:

Step 1: Create a bootable USB flash drive

Step 2: Obtain the M9537A BIOS files from Keysight.com

Step 3: Obtain AFUDOS.exe from AMI.com

Step 4: Boot to DOS then run batch files to update BIOS

Step 5: Verify the Update

The remainder of this guide provides detailed instructions for performing these steps.

The instructions use the Microsoft Windows Internet Explorer (IE) browser on a Keysight M9537A Embedded Controller running Windows 10. If you use a different browser or PC, the screens may look different from the pictures below.

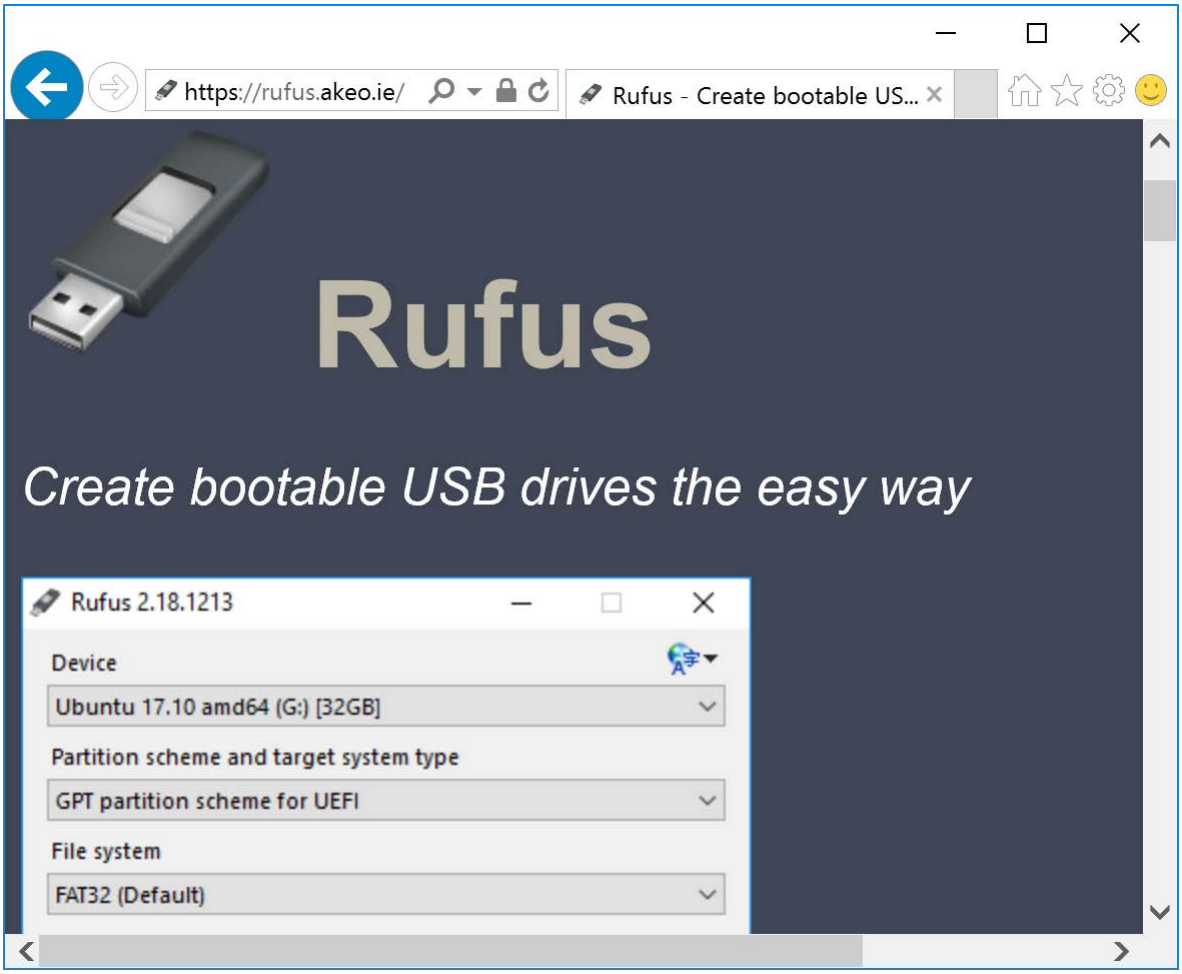
Step 1: Create a bootable USB flash drive

In this step you will create a DOS bootable USB flash drive.

The following instructions are one possible method for creating a bootable USB flash drive. If you already have a bootable USB flash drive, you can skip this step. However, not all bootable USB flash drives provide the correct application environment for the Keysight BIOS update. For example, booting to a Windows 7 System Recovery Disk and going to the command prompt will not work.

The following instructions use a 3rd party tool called Rufus. The open source license allows you to use it freely. The Rufus 2.1 default settings create a USB flash drive that boots into a DOS-compatible operating system called FreeDOS[1]. This works well with our BIOS update.

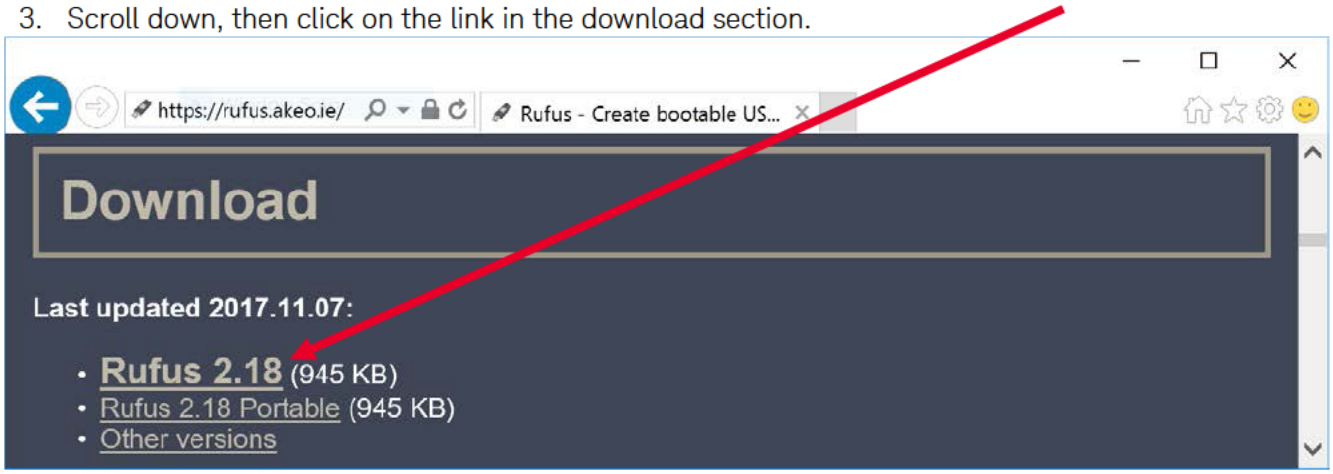
1. Insert an empty USB flash drive into a USB port on the M9537A. A 128MB flash drive or larger should be used.
2. Run IE browser and go to this website: https://rufus.akeo.ie/. This opens the following window:



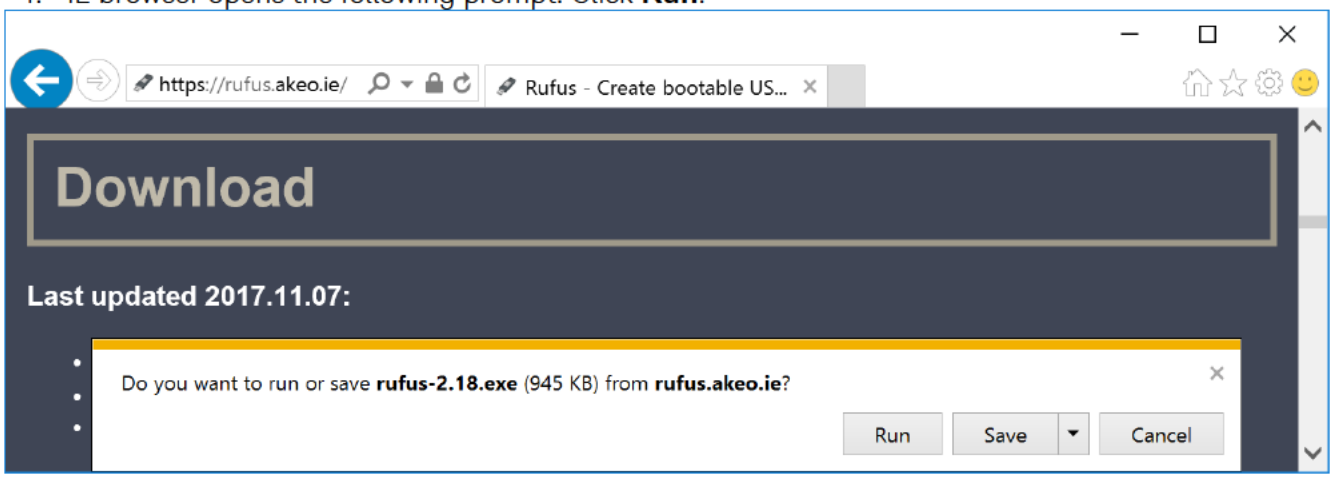
[1] For more information about FreeDOS, see: http://www.freedos.org

Scroll down to the “Download” section and click on the “Rufus” link.

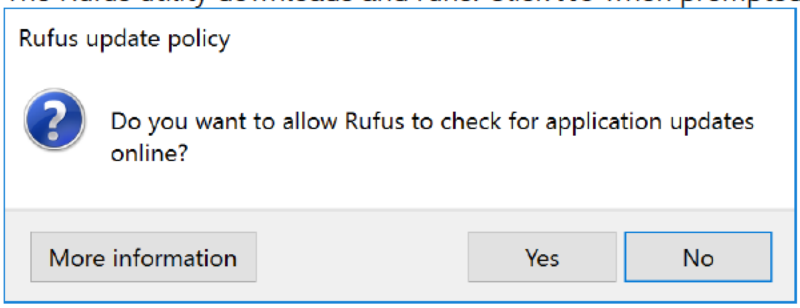
3. Scroll down, then click on the link in the download section.



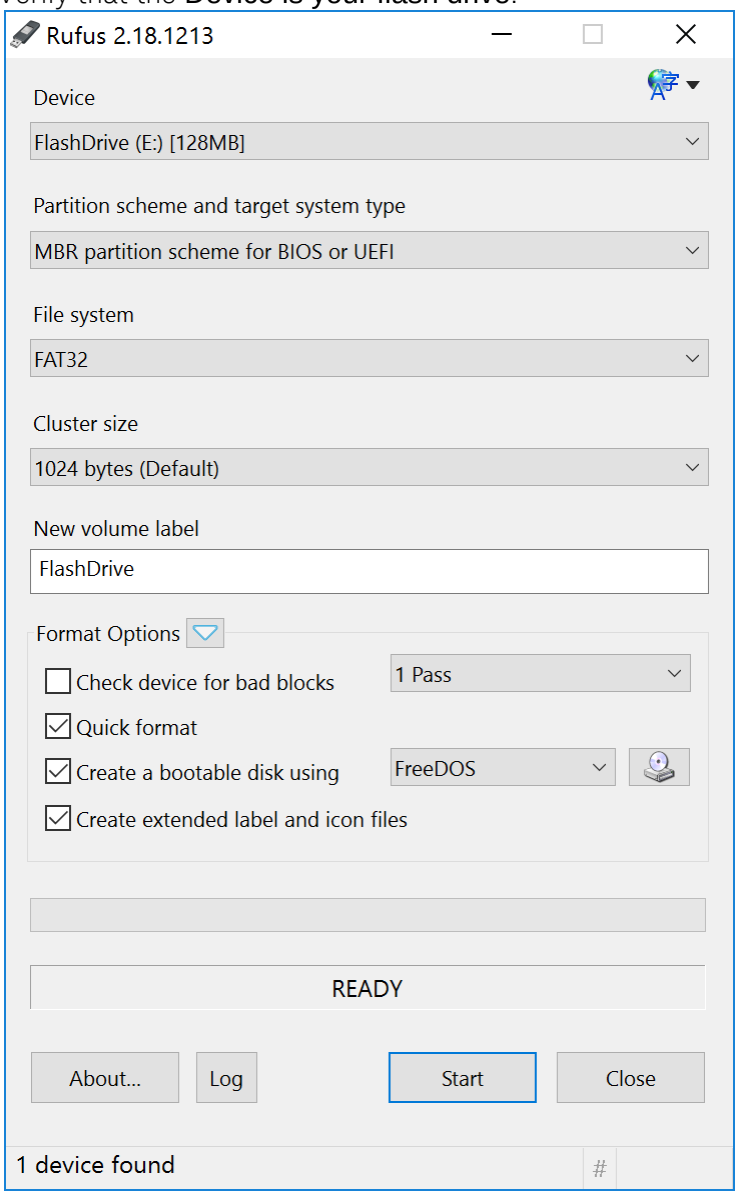
4. IE browser opens the following prompt. Click **Run**.



5. The Rufus utility downloads and runs. Click **No** when prompted about the **Rufus update policy**.



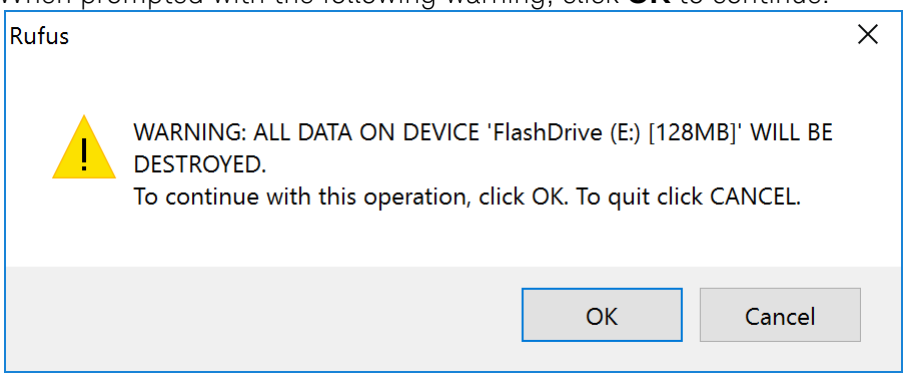
6. Verify that the Device is your flash drive.



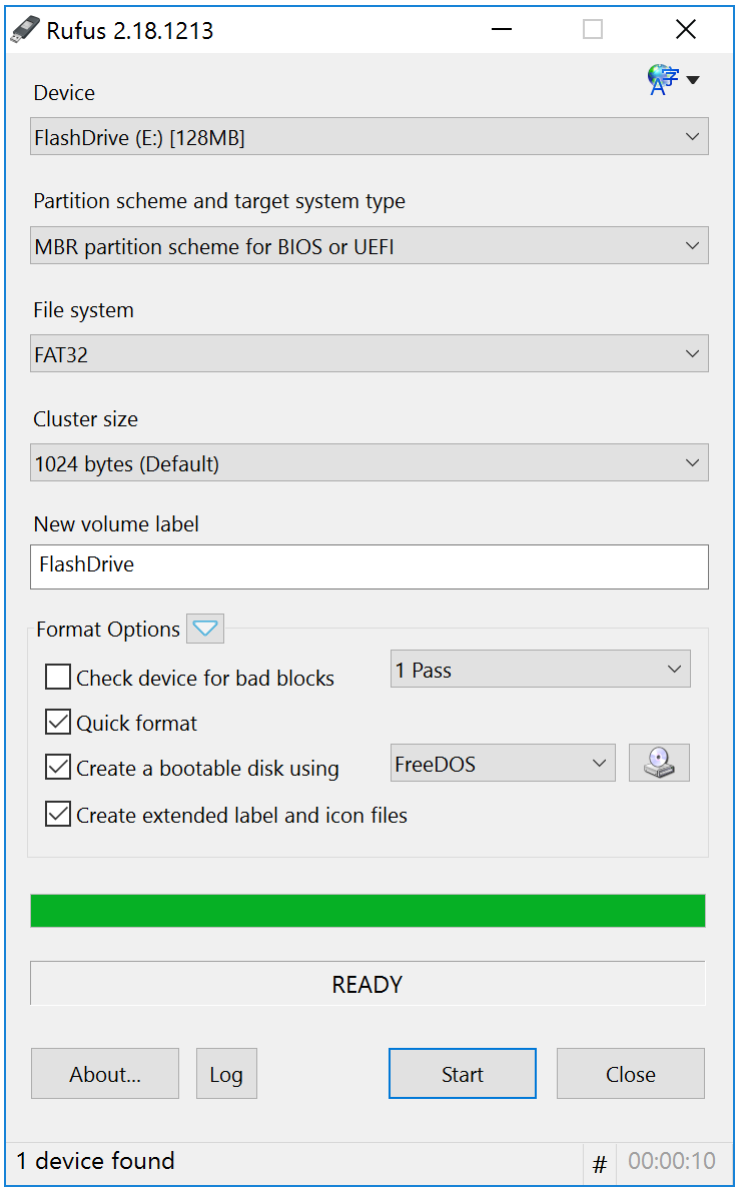
Note: If you have a large flash drive you might need to set the File system to “Large FAT32” in order to make your flash drive bootable.

7. Click on **Start**.

8. When prompted with the following warning, click **OK** to continue.



9. In less than 20 seconds the screen should look like this. Click **Close**.



10. You have created a bootable USB flash drive that boots into a DOS-compatible operating system called FreeDOS. You are ready for Step 2.

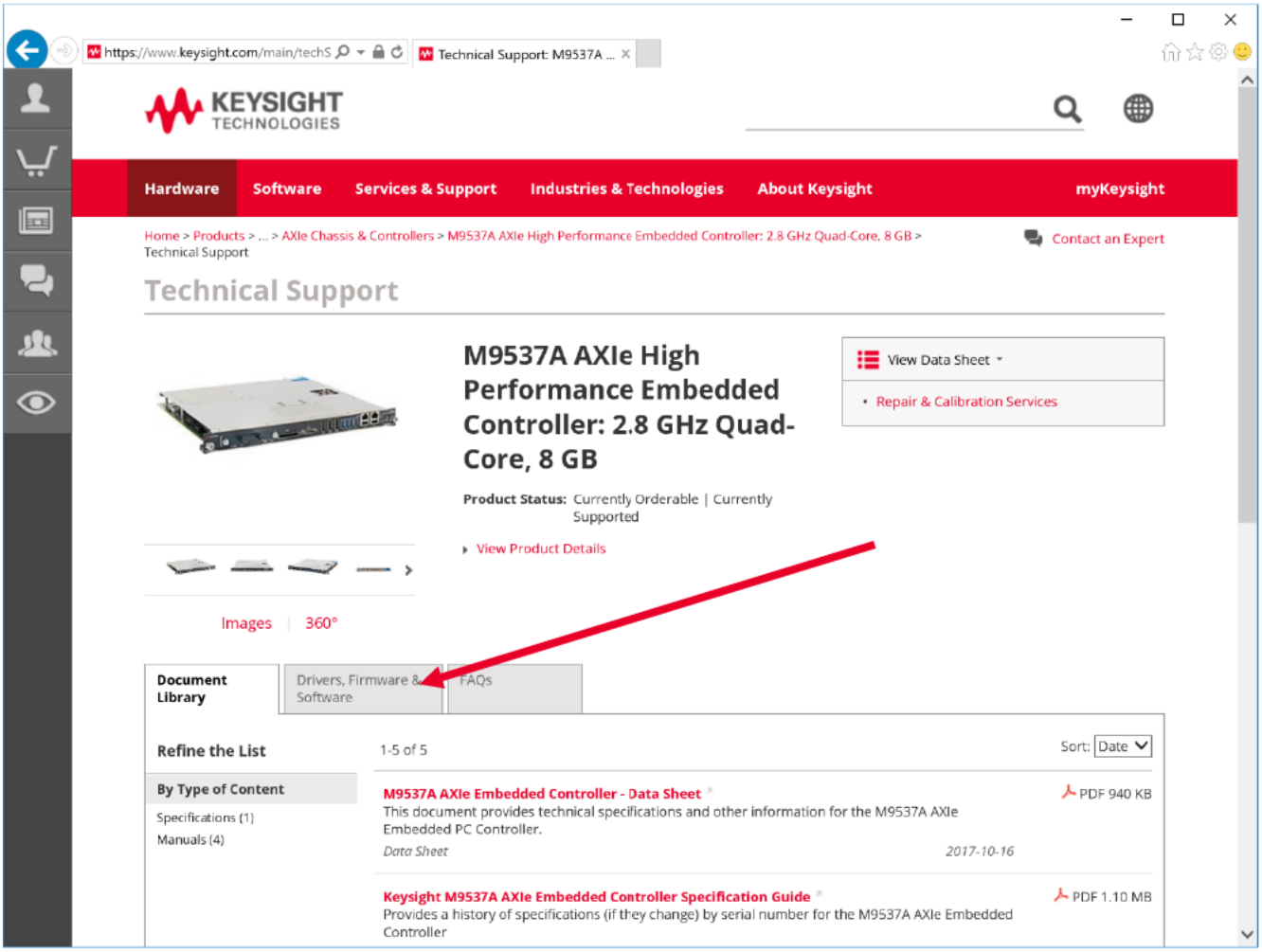
Step 2: Obtain the M9537A BIOS files from Keysight.com

In this step you will collect files from Keysight.com and put them on your DOS bootable flash drive.

1. In the browser go to Keysight.com and search on M9537A,

   or use this link www.keysight.com/find/M9537A

2. Then click on: Visit Technical Support You will see a page like this:



3. Click on the tab labeled “Drivers, Firmware & Software.
4. Click on the BIOS entry:

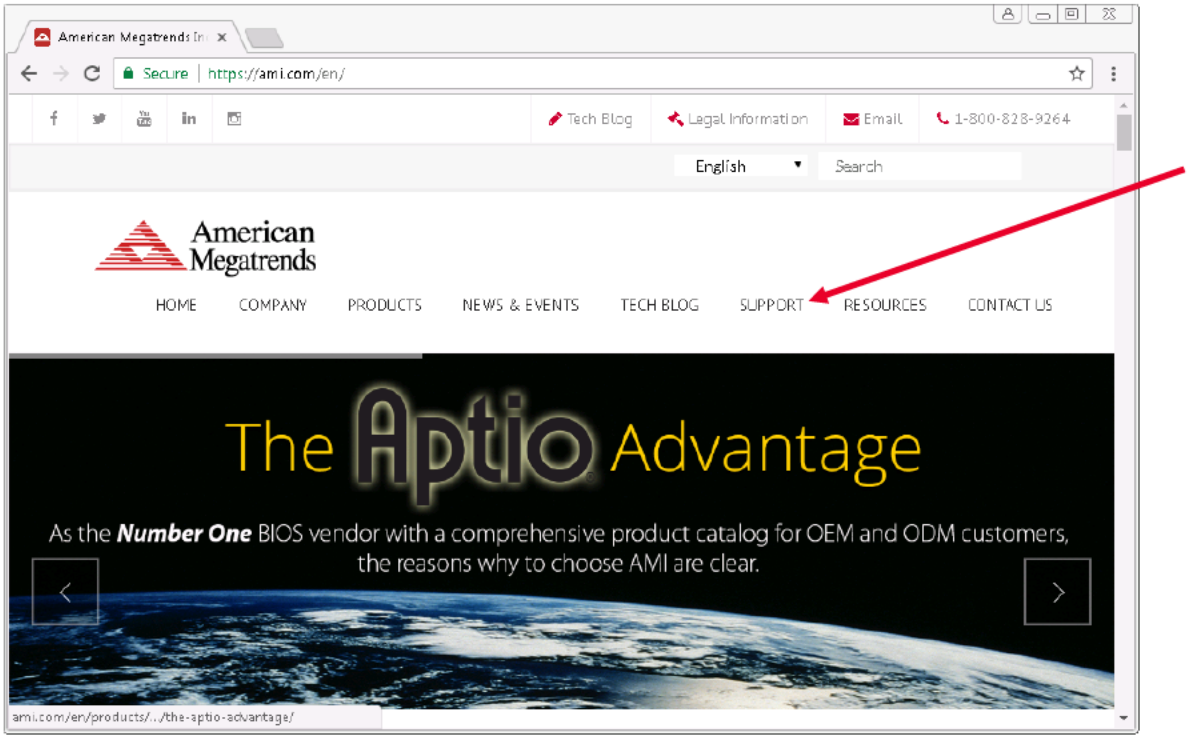
   M9537A BIOS Downloads
   New and old BIOS'es for the M9537A...
   Previous Versions
   Computer Software

5. Select BIOS version SL05 then download the zip file.
6. Unzip the file.
7. Copy the folder “M9537A_SL05” to the DOS bootable flash drive.

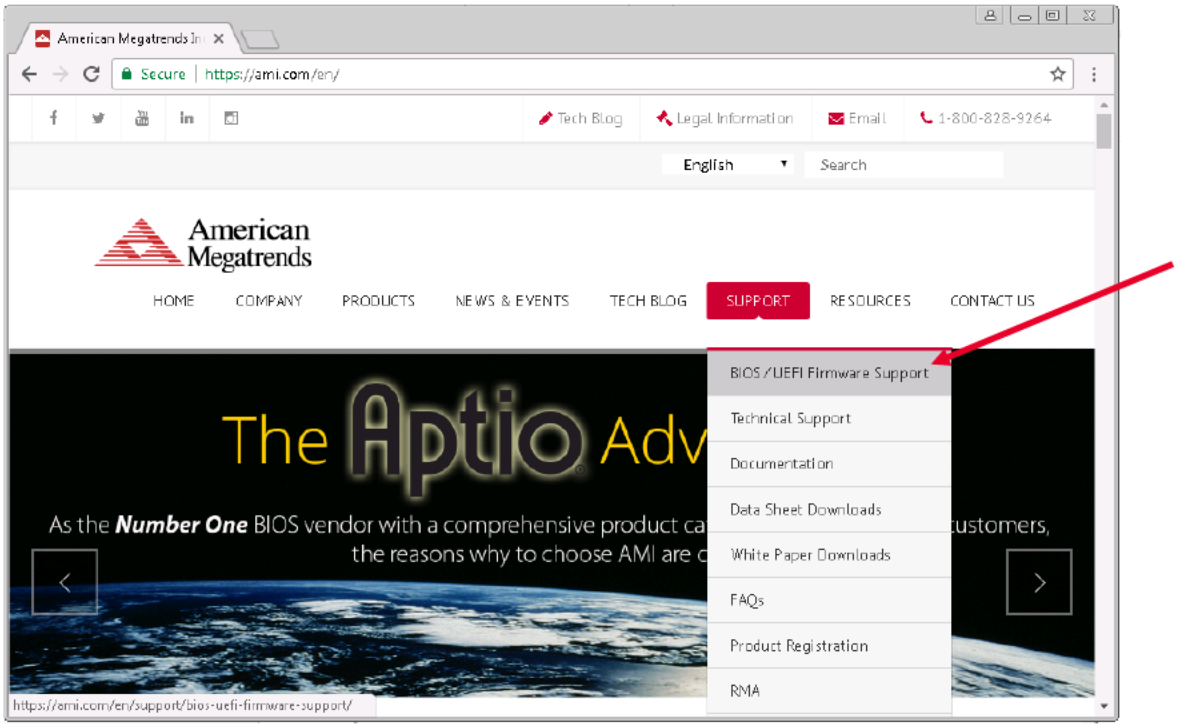
Step 3: Obtain AFUDOS.exe from AMI.com

In this step you will collect the file AFUDOS.exe from AMI.com and then copy it on your DOS bootable USB flash drive.

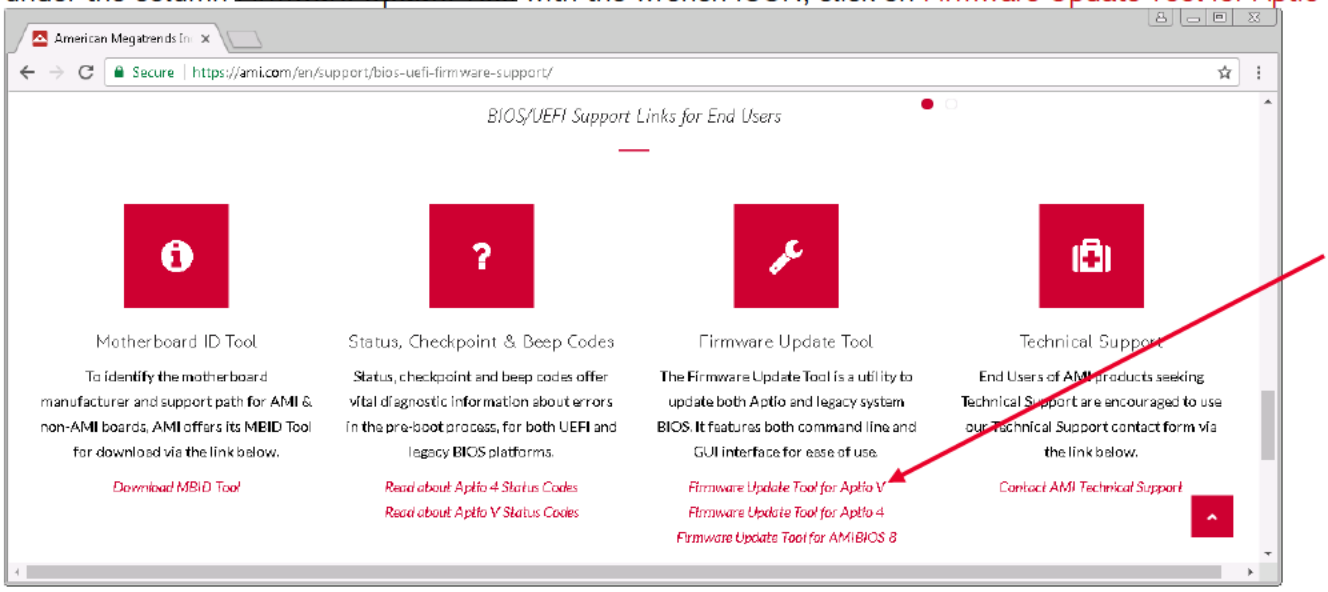
1. **Open browser to:** www.ami.com.
2. Left-click the word "**Support**" in the top row of the web page. Note: the screen may look different that the one shown below.



3. A pull-down menu appears. Select "**BIOS/UEFI Firmware Support**".

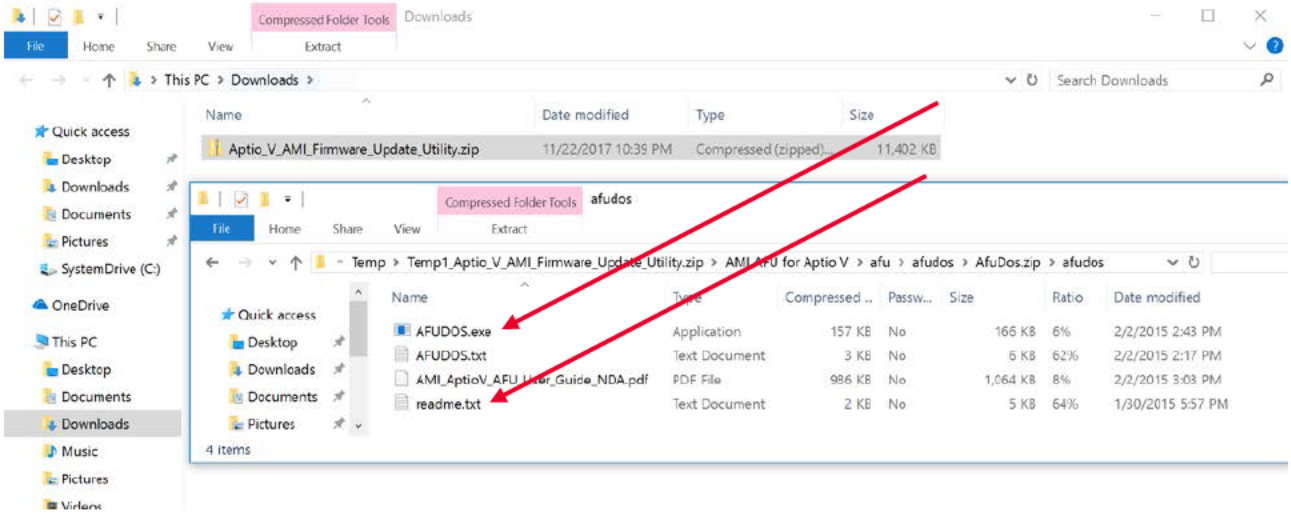


4. Scroll down to near the bottom of the web page to the section *BIOS/UEFI Support Links for End Users*, and under the column Firmware Update Tool with the wrench ICON, click on Firmware Update Tool for Aptio *V*.



5. The License Agreement opens. Scroll down to the bottom and **check** the box and **click** on "submit" to start the download. Save the .zip file

6. Unzip the files and then navigate to the “afu” folder, then to the “afudos” folder. Enter the “afudos” folder and find the zip file “AfuDos.zip”. Open it, and enter the “afudos” folder. There you will finally find “afudos.exe” and the “readme.txt” file.



7. Open the “readme.txt” file and verify that the version number is 5.07.01. The first few lines of the “readme.txt” file look like this:

```
AFU (AMI Firmware Update) is a package of utilities used
to update the system BIOS under various operating systems.

Note: AFU only works for APTIO with SMI FLASH support.
      Compatible with Aptio 5.

The package includes:

- AFUDOS 5.07.01
- AFUDOS Release Notes
- AFU User Guide
```

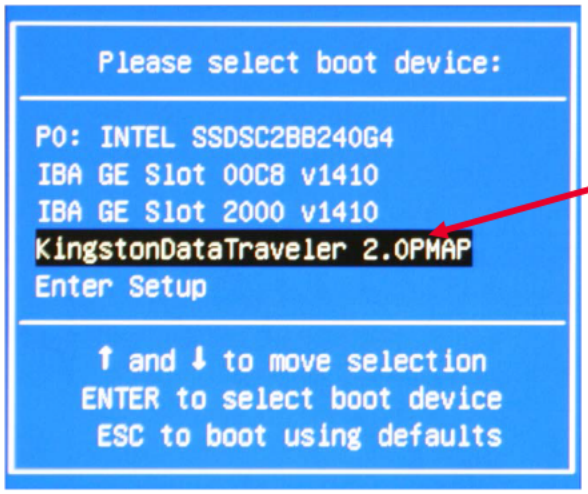
If the version is not 5.07.01, then stop the BIOS install and consult Keysight technical support for advice. Keysight has verified that version 5.07.01 works correctly for installing the BIOS.

8. Copy “AFUDOS.exe” to your flash drive into the folder “M9537A_<version>/BIOS1/. For example, if your flash drive is drive D:, then copy AFUDOS.exe to “D:/M9537A_SL05/BIOS1/”.

Step 4: Boot to DOS then run batch files to update BIOS

In this step you will update your M9537A to the new version of BIOS and Intel ME Firmware version 11.8.50.3399.

1. With the USB flash drive plugged into the M9537A, reboot and press F7 during the boot up splash screen. Scroll down to your flash drive and press Enter.



   If the flash drive does not appear in this list, put it in the other type of USB port (i.e. USB 2.0 or USB 3.0) and reboot. If it still does not appear, then try a different manufacturer flash drive or smaller size flash drive.

2. Within three seconds you will be booted to FreeDOS and have a command prompt.

3. Change to the folder M9537A~1\BIOS1\
   You can do this by typing: cd m<tab>b<tab><enter>

```
FreeDOS kernel 2042 (build 2042 OEM:0xfd) [compiled May 11 2016]
Kernel compatibility 7.10 - WATCOMC - FAT32 support

(C) Copyright 1995-2012 Pasquale J. Villani and The FreeDOS Project.
All Rights Reserved. This is free software and comes with ABSOLUTELY NO
WARRANTY; you can redistribute it and/or modify it under the terms of the
GNU General Public License as published by the Free Software Foundation;
either version 2, or (at your option) any later version.
C: HD1, Pri[ 1], CHS=    0-32-33, start=     1 MB, size=119999 MB

FreeCom version 0.84-pre2 XMS_Swap [Aug 28 2006 00:29:00]
Using US-English keyboard with US-English codepage [437]
C:\>cd M9537A~1\BIOS1\
C:\M9537A~1\BIOS1>1
```

4. Please run the single batch commands one **1PBIOS1.BAT**. Because the DOS command line provides auto-completion on a tab, it's very easy to run the command by typing "1<tab><enter>".
   The command that you will execute is:

   ```
   1PBIOS1.BAT
   ```

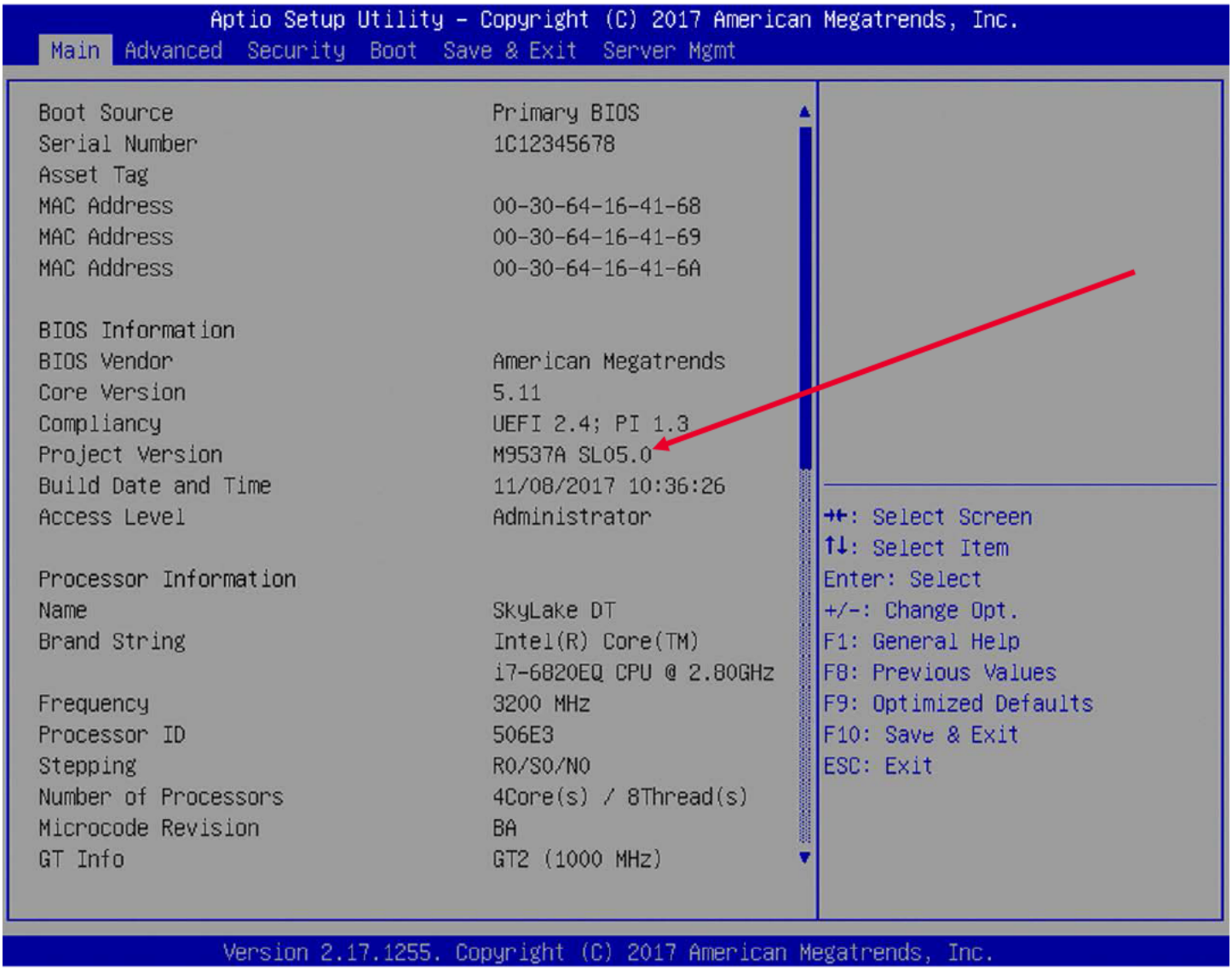
   The **1PBIOS1.BAT** command takes about 2 minutes and will update the BIOS to SL05.

5. Press Ctrl-Alt-Del to reboot

Step 5: Verify the Update

In this step you will verify that the installed version of BIOS is what you intended.

1. On the boot-up Keysight splash screen press the **DEL** key to display the BIOS screen.
2. On the Main BIOS screen the BIOS version is displayed. Verify it's the version you want.
3. You have completed updating the BMC on your M9537A.



You can also verify the BIOS version number by booting to Windows and running the command "msinfo32.exe". The first screen that opens, shows the BIOS version number.

.

This information is subject to change without notice.
© Keysight Technologies 2017
Edition 1, November 2017
Published in U.S.A.

M9537-90025
http://www.keysight.com

KEYSIGHT TECHNOLOGIES