



FAQ / Application Note

Subject : Base on SkyLake to flash BIOS with ME and clear DayLightSaving in UEFI mode

FAQ Document No: S17009

Date: 2017/6/22

Model Name. EMX-SKLUP

Rev. A1

Category: ☐General ☐H/W ☒S/W ☐Others, 寫小分類

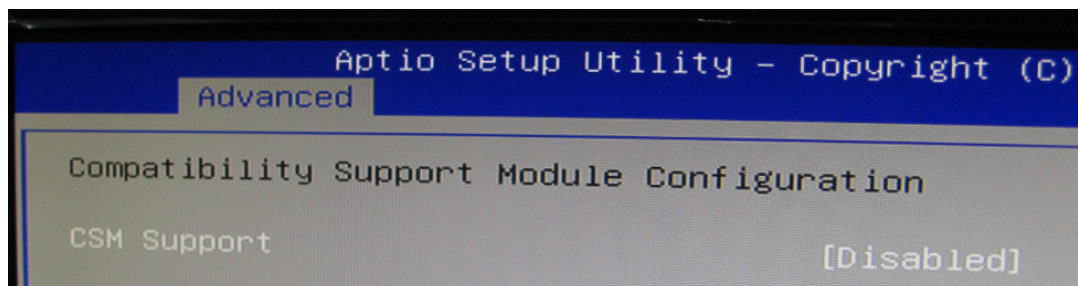
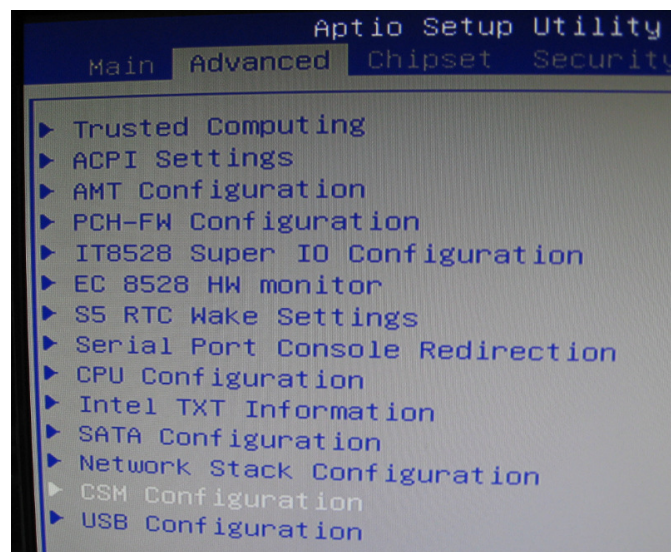
Purpose:

SkyLake and further products will be set UEFI as BIOS default, CSM will be disabled, but the BIOS will not include EFI shell.

As the result, this document will guide the customer how to add the EFI shell for flashing the BIOS, how to flash BIOS with ME and clear DayLightSaving in UEFI mode by using AMI tool(Afuefix64.efi for UEFI).

Before flashing BIOS, we have to check what BIOS mode in your board.

If the BIOS is set UEFI as default, the CSM support will be set as [Disabled] as below.



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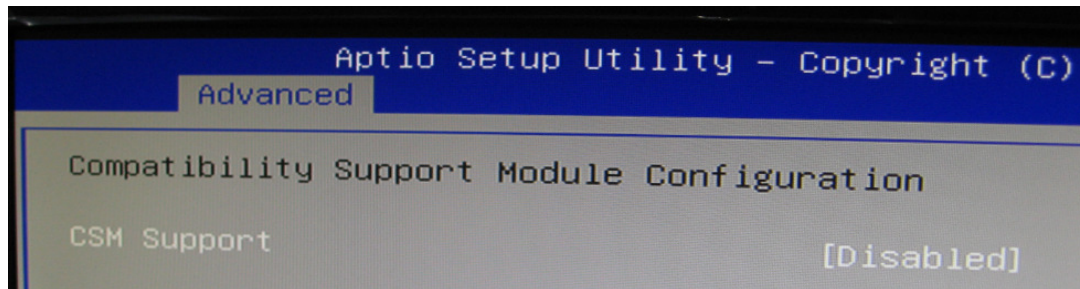
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If so, please flash the BIOS according to the following “UEFI instruction”.
If not, please set the CSM support as [Disabled].

UEFI instruction:

1. After make sure the BIOS is set UEFI as default(CSM support is set as [Disabled]), please prepare a bootable USB stick.



2. The bootable USB stick format must be FAT32(the flash tool can't support USB NTFS, because of Microsoft policy).

3. Because the BIOS has be removed EFI shell, so we need to add the EFI shell into the bootable USB stick.

Copy the following three files into your bootable USB stick, the path is “USB stick:\efi\boot”.

(The “EFI” folder should be involved into BIOS flashing package, if not, please consult your AE)



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4. Copy BIOS file you want to flash into your bootable stick.

Usually, Avalue has packaged a BIOS folder, which involves flash tool, Clearing DayLightSaving Tool, autoexec file(update.nsh) and BIOS file.

抽取式磁碟 (I:) ▶ XSKUT5223				
新增資料夾				
	名稱	修改日期	類型	大小
	AfuEfix64_5.09.02.1384.efi	2017/4/28 下午 0...	EFI 檔案	495 KB
	DayLightCk_v110.efi	2017/4/25 下午 0...	EFI 檔案	19 KB
	Update.nsh	2017/6/22 下午 0...	NSH 檔案	1 KB
	XSKUT5223.bin	2017/6/19 下午 0...	IZArc BIN Archive	16,384 KB

So, we should only copy the BIOS folder into your bootable USB stick.

Therefore, your bootable USB stick should has two folder at least, one is “EFI”, another is BIOS Folder as below.

抽取式磁碟 (I:) ▶			
新增資料夾			
	名稱	修改日期	類型
	EFI	2017/6/22 上午 1...	檔案資料夾
	XSKUT5223	2017/6/22 上午 1...	檔案資料夾

5. Then, Please Plug the bootable USB stick into the board you want to flash.

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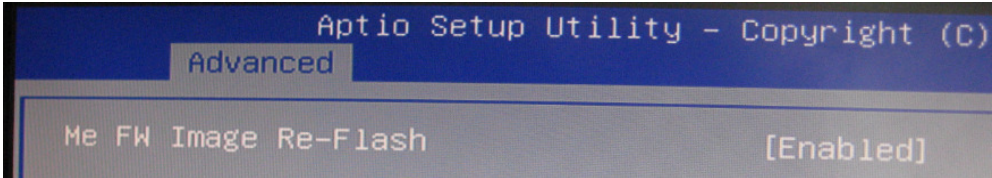
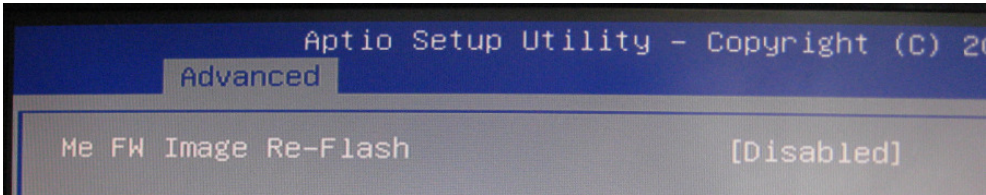
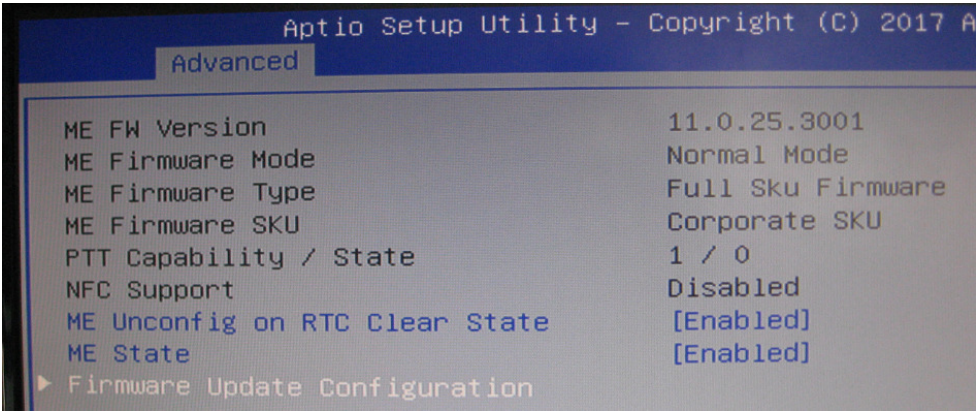
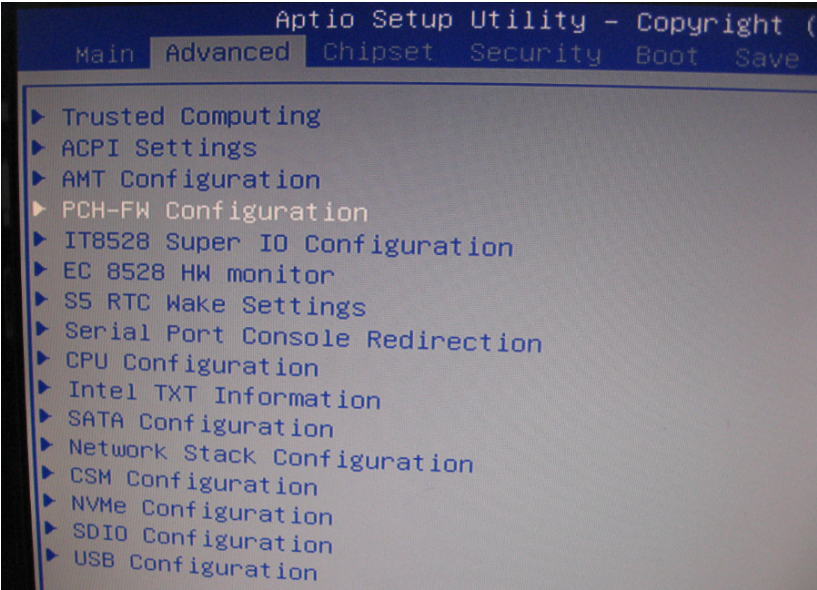
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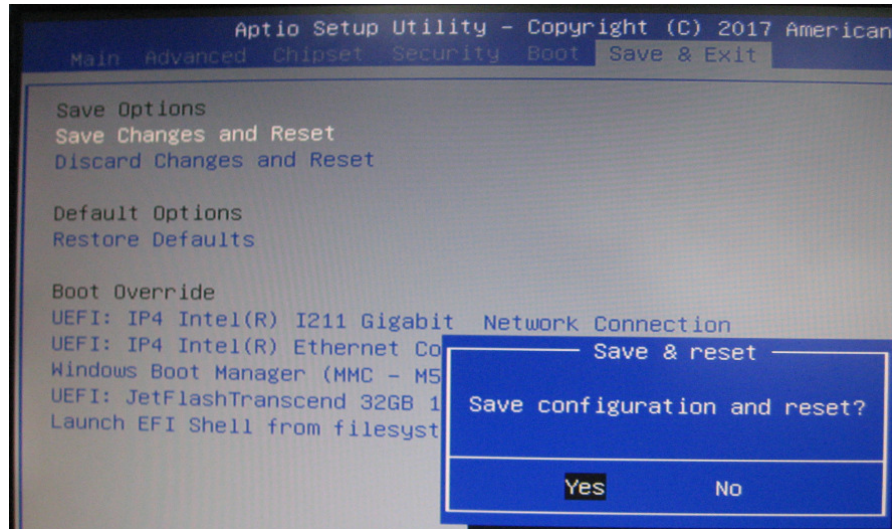
6. Next, enter into the BIOS to **Advanced\PCH-FW Configuration\Firmware Update Configuration** for **setting Me FW Image Re-Flash from [Disabled] to [Enabled]**.



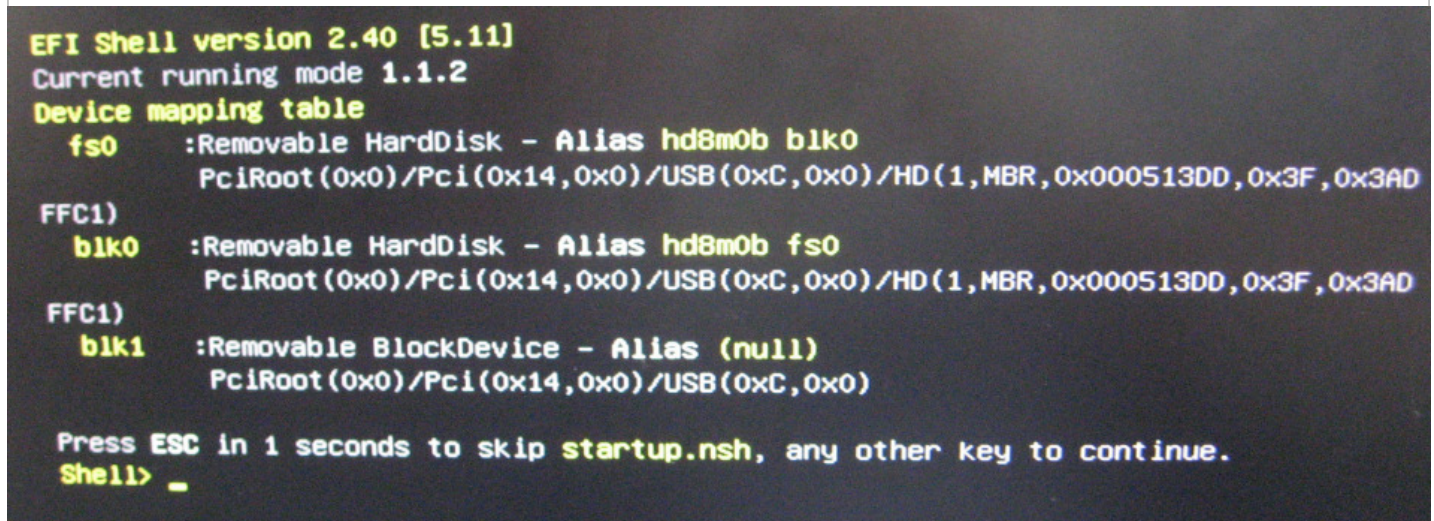


7. Next, please choose “Save Changes and Reset” to reboot system.

Note: **setting Me FW Image Re-Flash from [Disabled] to [Enabled]** is one-shot option, which means it would auto-Disable at next reboot.



8. After the “Save configuration and reset” has been save as “Yes”, the board will boot up with EFI shell as below. Now we can start to flash the BIOS.



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9. If we have not plugged the other bootable device such as HDD or DVD except the USB stick. We should see a device named “fs0”, which should be our bootable USB stick. So, please key in “fs0:” for enter into the bootable USB stick as below.

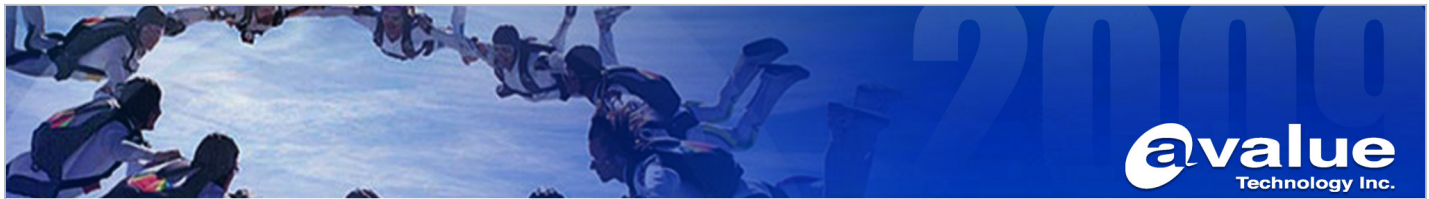
```
EFI Shell version 2.40 [5.11]
Current running mode 1.1.2
Device mapping table
  fs0      :Removable HardDisk - Alias hd8m0b blk0
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/H
FFC1)
  blk0     :Removable HardDisk - Alias hd8m0b fs0
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/H
FFC1)
  blk1     :Removable BlockDevice - Alias (null)
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)

Press ESC in 1 seconds to skip startup.nsh, any other
Shell> fs0:_
```

```
EFI Shell version 2.40 [5.11]
Current running mode 1.1.2
Device mapping table
  fs0      :Removable HardDisk - Alias hd7m0b blk0
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/HD(
FFC1)
  blk0     :Removable HardDisk - Alias hd7m0b fs0
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/HD(
FFC1)
  blk1     :Removable BlockDevice - Alias (null)
            PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)

Press ESC in 1 seconds to skip startup.nsh, any other
Shell> fs0:

fs0:\> _
```

10. Then, enter into the BIOS folder to execute “update”.

```
Press ESC in 1 seconds to skip startup.nsh, any other key
Shell> fs0:

fs0:\> cd XSKUT5223

fs0:\XSKUT5223> Update.nsh_
```

11. The autoexec file “update.nsh” will be executed, and then the “DayLightSaving” will be Cleared as below, and then please press any key for continuing to flash the BIOS.

```
# === DayLightSaving check v.1.1===
# Support:Haswell,Broadwell,SkyLake,KabyLake,ApolloLake
# Chipset:SKYLAKE(PCH.100 series)
# LanPhyMac:00:04:5F:96:D0:12
# 2017-6-22 16:45:01 # ~ by Avalue.SWR2.Chain

[Daylight Saving]:Enable(1)->Fail
Clear [Daylight Saving]
[Daylight Saving]:Disabled(0)->Pass
Enter 'q' to quit, any other key to continue: _
```

```
# === DayLightSaving check v.1.1===
# Support:Haswell,Broadwell,SkyLake,KabyLake,ApolloLake
# Chipset:SKYLAKE(PCH.100 series)
# LanPhyMac:00:04:5F:96:D0:12
# 2017-6-22 16:45:01 # ~ by Avalue.SWR2.Chain

[Daylight Saving]:Enable(1)->Fail
Clear [Daylight Saving]
[Daylight Saving]:Disabled(0)->Pass
Enter 'q' to quit, any other key to continue:
Update.nsh> AfuEfiX64_5.09.02.1384.efi XSKUT5223.bin /P /B /N /X /ME
+-----+
|               AMI Firmware Update Utility v5.09.02.1384               |
|               Copyright (C)2017 American Megatrends Inc. All Rights Reserved.               |
+-----+
Reading flash ..... done
- ME Data Size checking . ok
- FFS checksums ..... ok
- Check RomLayout ..... Ok.
_Erasing Boot Block ..... 0x004D3000 (38%)
```

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12. The BIOS with ME should be completely flashed if the “Update success for ME..” and “WARNING : System must power-off to have the changes take effect!” message have been shown up as below.

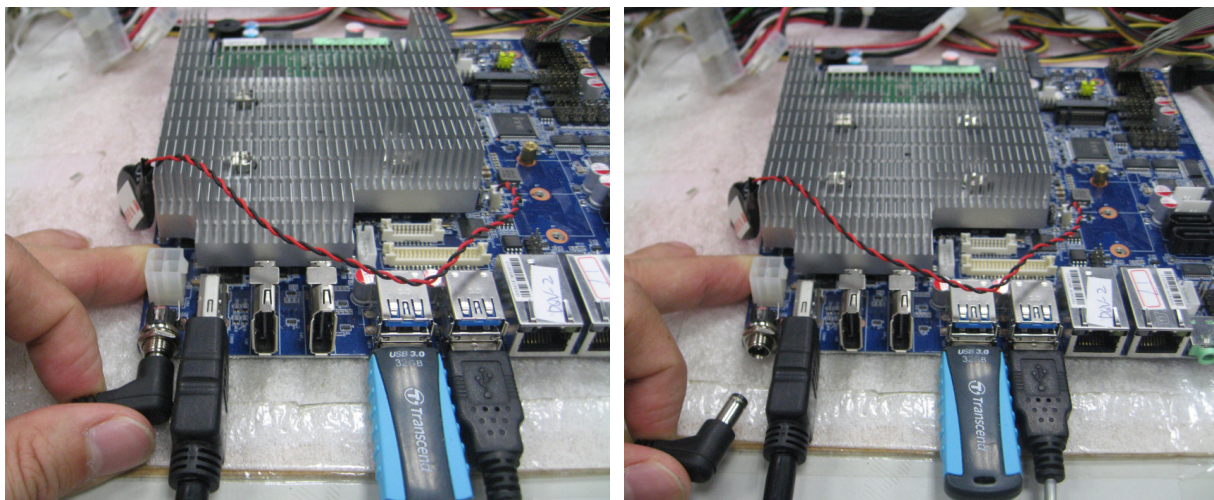
```

Enter 'q' to quit, any other key to continue:
Update.nsh> AfuEfi\64_5.09.02.1384.efi XSKUT5223.bin /P /B /N /X /ME
-----+-----
|               AMI Firmware Update Utility v5.09.02.1384               |
|      Copyright (C)2017 American Megatrends Inc. All Rights Reserved.      |
|-----+-----|
Reading flash ..... done
- ME Data Size checking . ok
- FFS checksums ..... ok
- Check RomLayout ..... Ok.
Erasing Boot Block ..... done
Updating Boot Block ..... done
Verifying Boot Block ..... done
Erasing Main Block ..... done
Updating Main Block ..... done
Verifying Main Block ..... done
Erasing NVRAM Block ..... done
Updating NVRAM Block ..... done
Verifying NVRAM Block ..... done
- Update success for DSC
- Update success for GBE. |
- Update success for ME.. -
WARNING : System must power-off to have the changes take effect!

fs0:\XSKUT5223> _

```

13. After the BIOS has been flashed completely, please **power off** the board, and the power on it.



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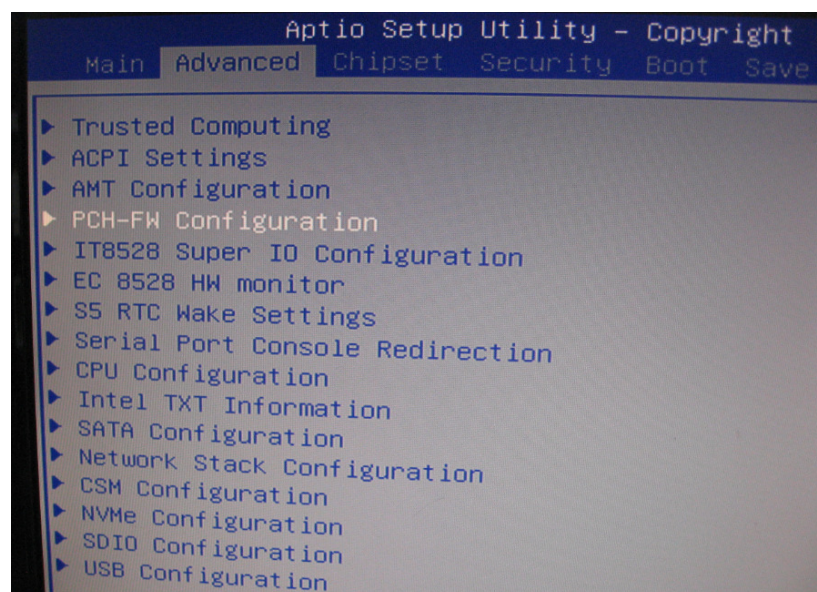
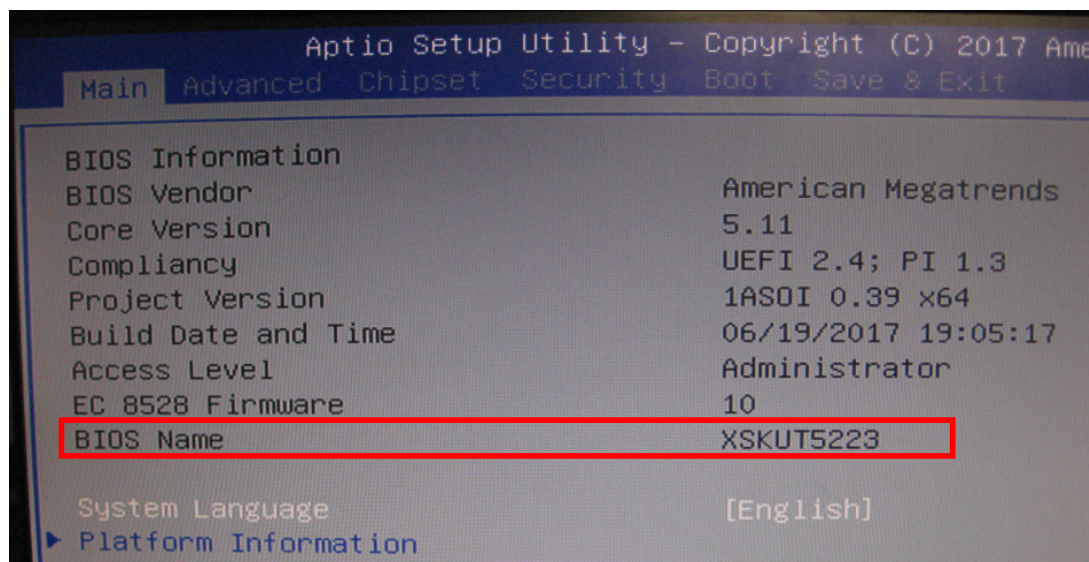
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14. Finally, check whether the BIOS & ME has been updated successfully.



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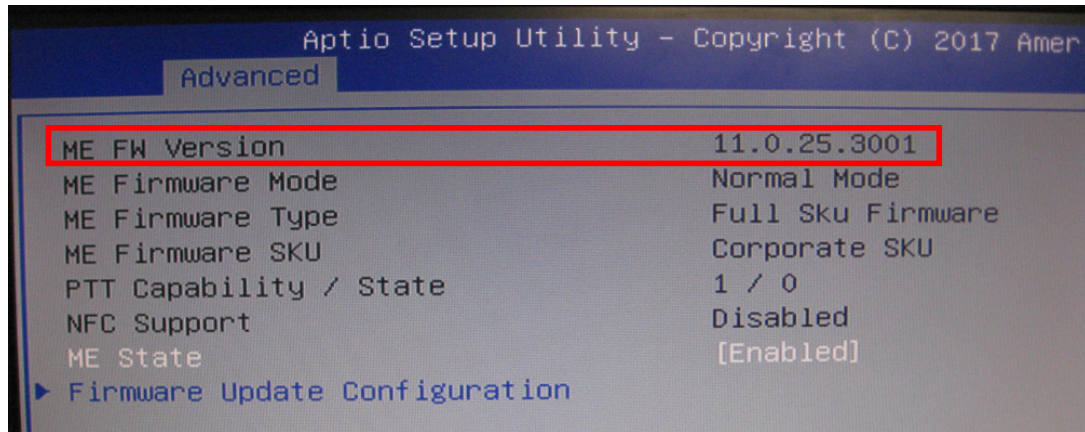
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