

# **Altos Firmware Update Guide**

## ***BrainSphere P330 F6***



**Version 1.2**

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## **Preface**

1. Please visit the official Altos website and download the latest firmware update package for your system model.

Link : <https://www.altoscomputing.com/en-US/download>

2. Please update your system firmware with caution, as incorrect firmware updates can lead to system damage.

## **Chapter 1. Update the BMC firmware**

### **1.1 Update BMC firmware in EFI Shell**

#### **- Step 1. Update the BMC account and password**

1. Download the firmware update package and extract it to your USB flash drive. Then, insert the USB flash drive into the computer. Start the system, and on the boot screen, press F11 to access the boot menu. Choose "Built-in EFI Shell".

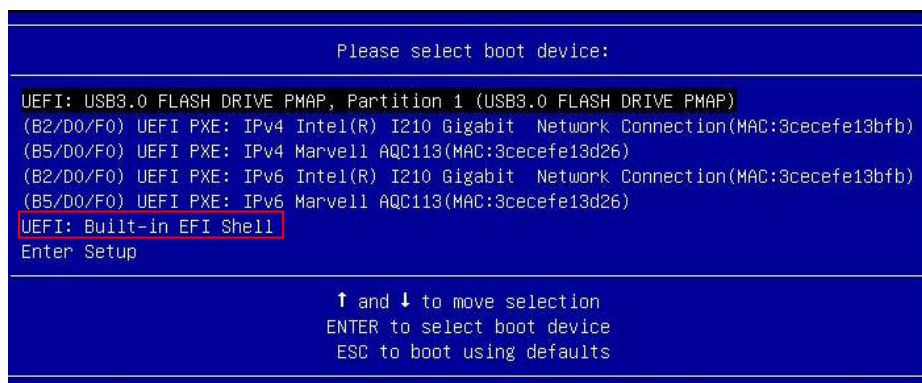


Figure 1.

2. Change path to the root directory of Firmware Package.

```
Shell> map -r
Mapping table
  FS0: Alias(s):HD0w0b:;BLK1:
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x16,0x0)/HD(1,MBR,0xDAF93DBE,0xF0,0x1CE7F10)
  BLK2: Alias(s):
        PciRoot(0x4)/Pci(0x5,0x0)/Pci(0x0,0x0)/NVMe(0x1,79-44-00-00-16-A7-79-64)
  BLK0: Alias(s):
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x16,0x0)
Shell> fs0:
FS0:\> cd P330F6_1.1L_110121_20230823
FS0:\P330F6_1.1L_110121_20230823> _
```

Figure 2.

3. Run "1\_BMC\_Account.nsh"

```
FS0:\P330F6_1.1L_110121_20230823> 1_BMC_Account.nsh_
```

4. The process is as shown in Figure 3.

```
FS0:\FW\N\330F6_1.1L_110121_20230727\FW\FRU\> EnableNamePSW.NSH
off
FS0:\FW\N\330F6_1.1L_110121_20230727\FW\FRU\> ipmicfg.efi -user del 3
Done.
FS0:\FW\N\330F6_1.1L_110121_20230727\FW\FRU\> ipmicfg.efi -user add 3 root Superuser@123 4
Done.
The Next update is BMC programming...
FS0:\FW\N\330F6_1.1L_110121_20230727\FW\FRU\> cd ..
FS0:\FW\N\330F6_1.1L_110121_20230727\FW\> cd ..
FS0:\FW\N\330F6_1.1L_110121_20230727\>
```

Figure 3.

### - Step 2. Update the BMC Firmware

1. Run "2\_BMC.nsh"

```
FS0:\P330F6_1.1L_110121_20230823\> 2_BMC.nsh
```

2. Waiting for the BMC firmware update to complete, as shown in Figure 4.

[illegible]

Figure 4.

- Restart the system and enter the BIOS Setup to check if the system update has been completed.

## 1.2 Update BMC firmware in BMC Web UI

1. After the P330 F6 boots, press the DEL key to enter BIOS Setup, select the BMC page, and enter BMC Network Configuration to set the BMC LAN IP. You can choose Static or DHCP according to your preference to configure the IP address."

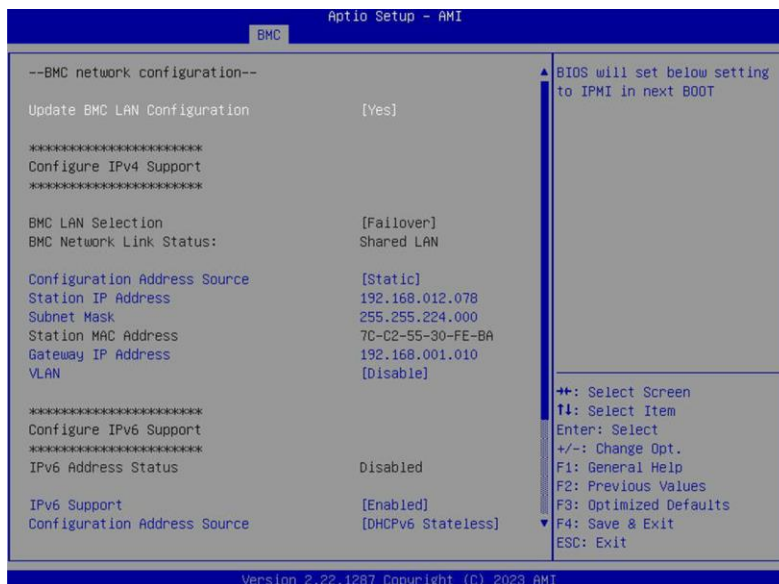


Figure 5.

2. Prepare another computer and connect both your computer and the P330 F6 to the same network. Then, enter the P330 F6's IP address in your browser to access the BMC Web UI.

**Default username: root**

**Default password: Superuser@123**

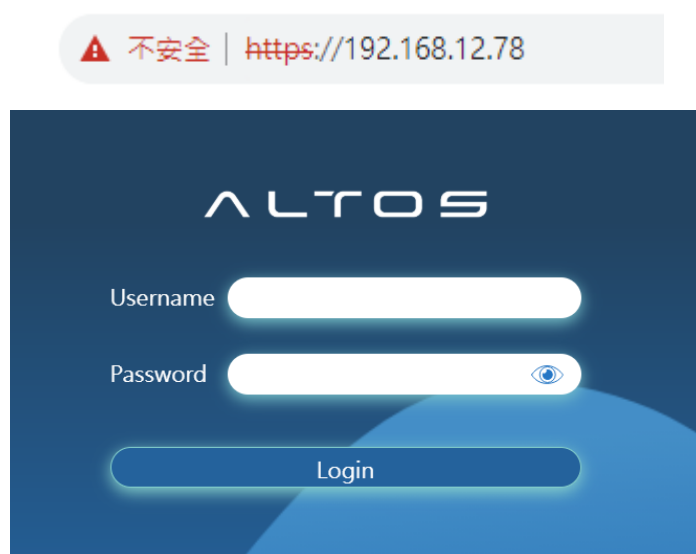


Figure 6.

3. Access the BMC Web UI, go to the Firmware Management page, select the BMC update option, and press Next.

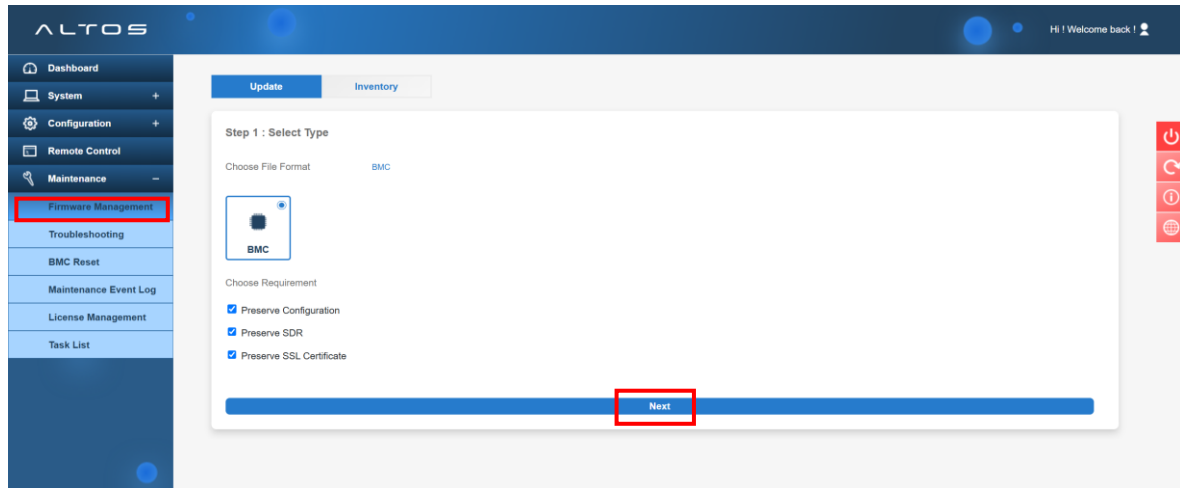
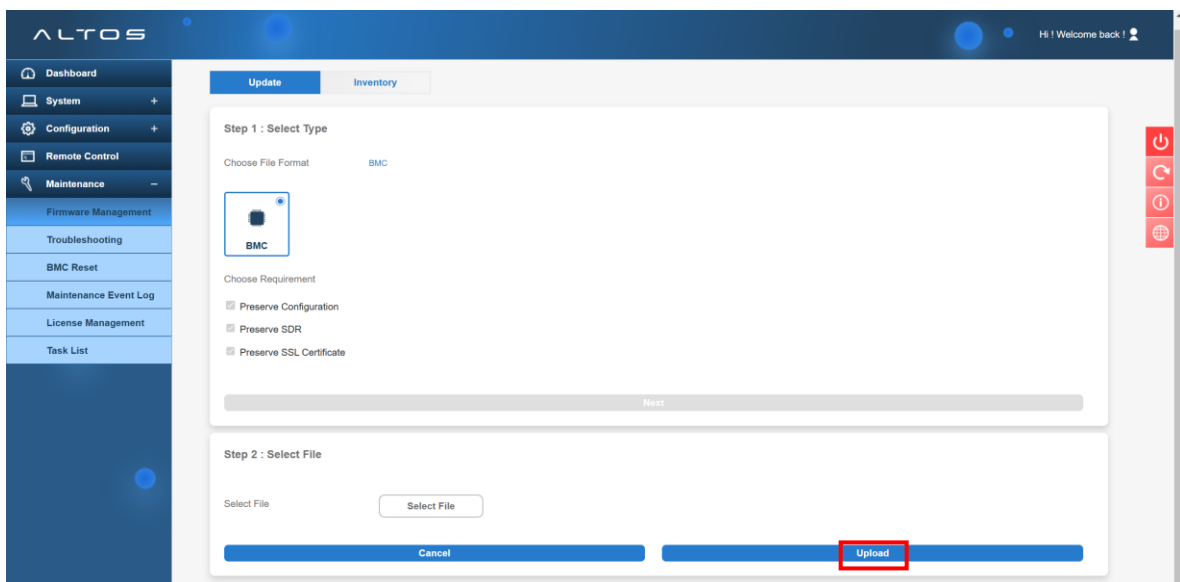


Figure 7.

4. Select the “Bin file” inside the “P330F6BMC\_110xxx” folder in the “FW” directory and upload it.



FW > P330F6BMC_110121					搜尋 P330F6BMC_110121	
名稱	修改日期	類型	大小			
altos.nsh	2023/8/29 下午 04:44	NSH 檔案	1 KB			
BMC_X13AST2600_20230703_110121.bin	2023/7/3 上午 10:33	BIN 檔案	65,536 KB			
README.txt	2022/11/1 上午 11:25	文字文件	8 KB			
SUM.efi	2023/5/23 下午 02:27	EFI 檔案	2,705 KB			

Figure 8.

- Click on the **“Update”** option.

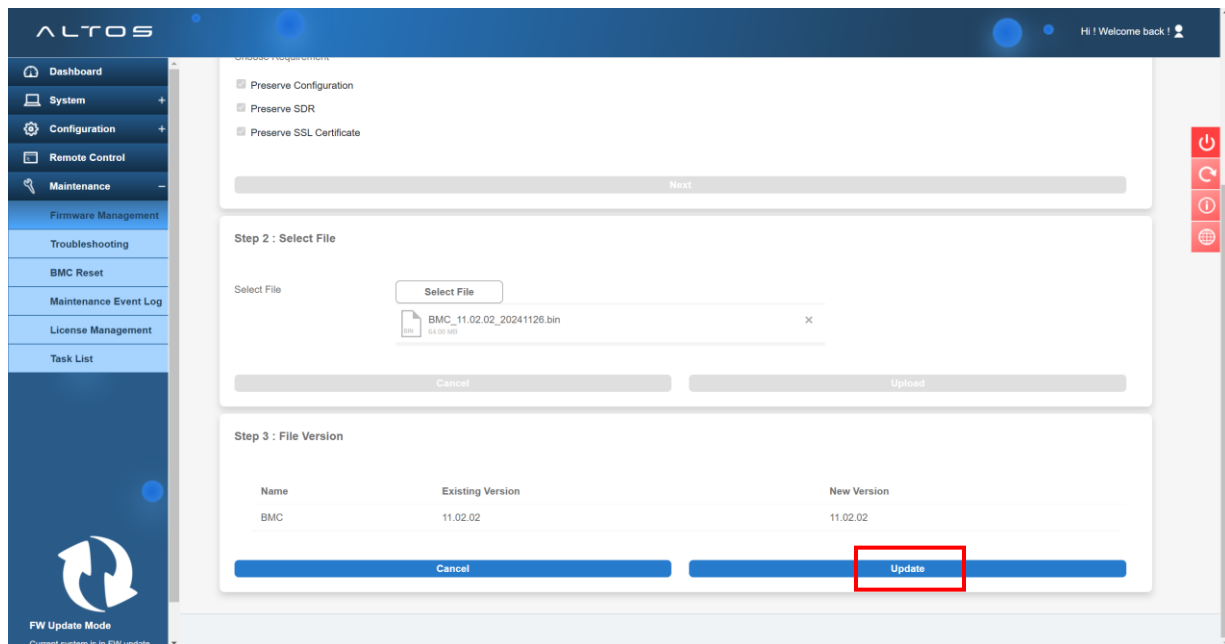


Figure 9.



6. After BMC firmware update finished, the BMC will be reset. After BMC reset, the screen will return to the login page

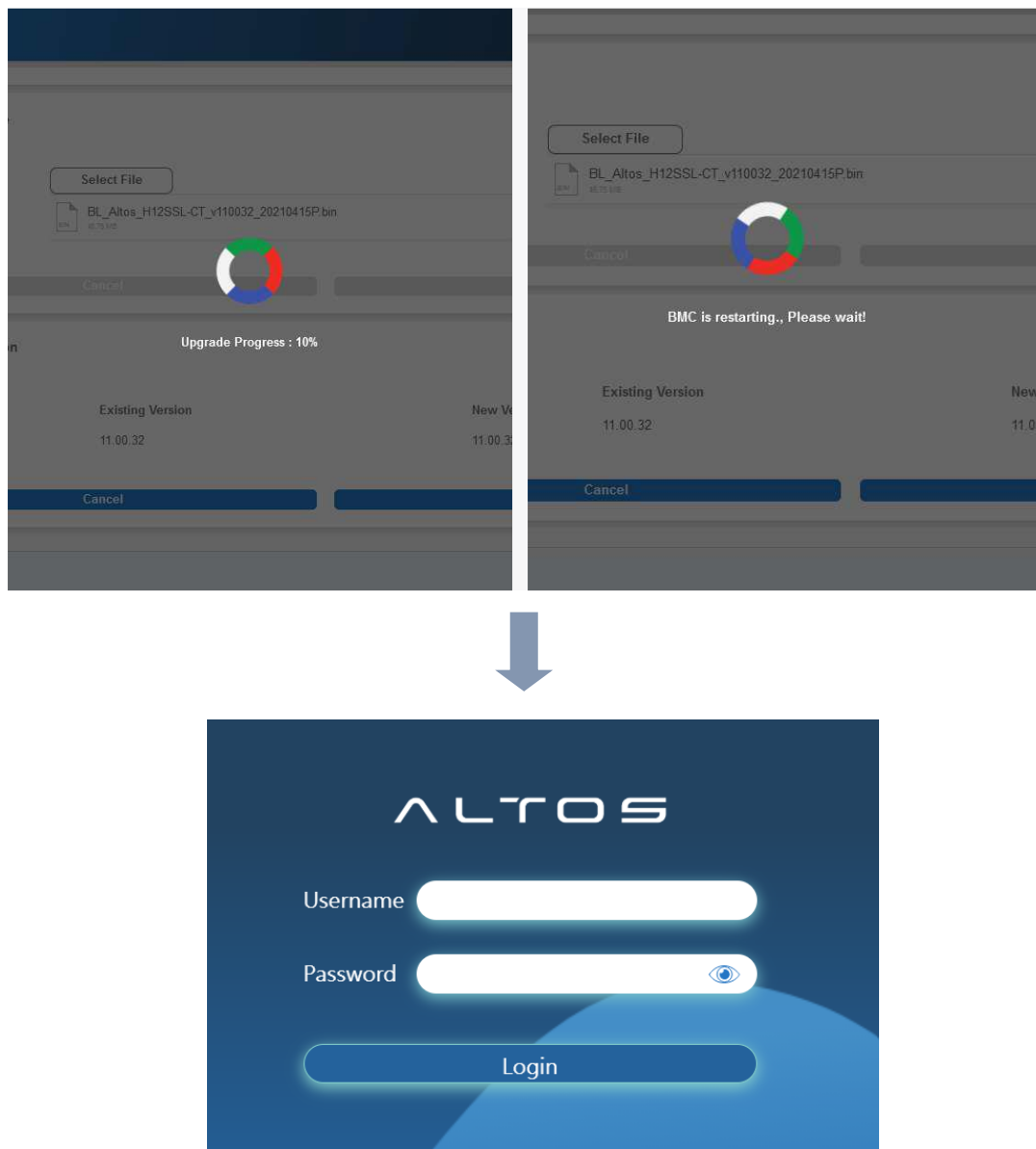


Figure 10.

## **Chapter 2. Update the BIOS firmware**

**Note: During the restart process at each update stage, the system may appear to be in a shutdown state for a period of time. Please do not disconnect the power during this time, as it could potentially lead to system crash**

1. Download the firmware update package and extract it to your USB flash drive. Then, insert the USB flash drive into the computer. Start the system, and on the boot screen, press F11 to access the boot menu. Choose "Built-in EFI Shell".

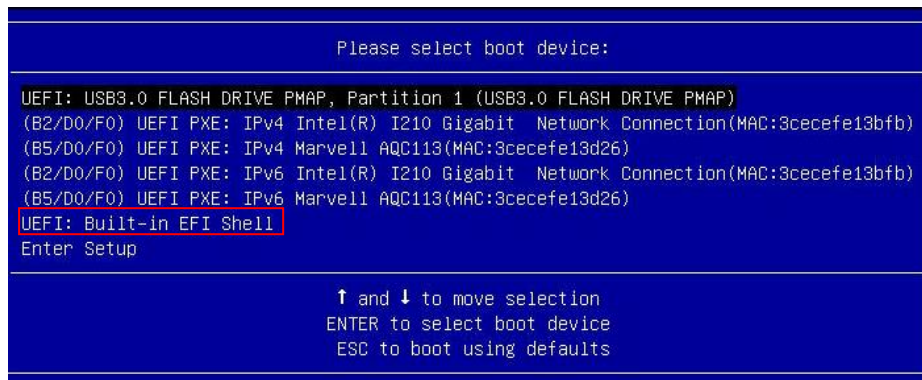


Figure 11.

2. Change path to the root directory of Firmware Package.

```
Shell> map -r
Mapping table
  FS0: Alias(s):HD0w0b::BLK1:
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x16,0x0)/HD(1,MBR,0xDAF93DBE,0xF0,0x1CE7F10)
  BLK2: Alias(s):
        PciRoot(0x4)/Pci(0x5,0x0)/Pci(0x0,0x0)/NVMe(0x1,79-44-00-00-16-A7-79-64)
  BLK0: Alias(s):
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x16,0x0)
Shell> fs0:
FS0:\> cd P330F6_1.1L_110121_20230823
FS0:\P330F6_1.1L_110121_20230823> _
```

Figure 12.

### 3. Run "BIOS.nsh"

```
FS0:\P330F6_1.1L_110121_20230823\> 3_BIOS.nsh_
```

4. After the **first-stage** update (Figure 13) is completed, the system will automatically restart. During the boot process, please press F11 to access the boot menu and select "**Built-in EFI Shell**" (Figure 14).

```
5 File(s)          592 bytes
3 Dir(s)
FS0:\P330F6_21b_W_110202_20241206\> 3_BIOS.nsh
OFF
FS0:\P330F6_21b_W_110202_20241206\> cd FW
FS0:\P330F6_21b_W_110202_20241206\FW\> cd P330F6BIOS_21b_W
FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\> altos.nsh
FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\> flash.nsh "BIOS_21b_W_20241104.bin"
FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\> echo -off
Moving FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\fdt.smc -> FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\fdtx64.efi
- [ok]
Moving FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\afuefi.smc -> FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\afuefix64.efi
- [ok]
*****
*
* Creating new Startup.nsh file...
*
*****
*****
*
* System will reboot to change the operating mode in 10 seconds....
*
* Please also ensure to boot system from 'UEFI: Built-in EFI Shell'
* boot device by pressing F11 hot key later for continuing process
* of programming BIOS.
*
*****
Echo is off.
```

Figure 13.

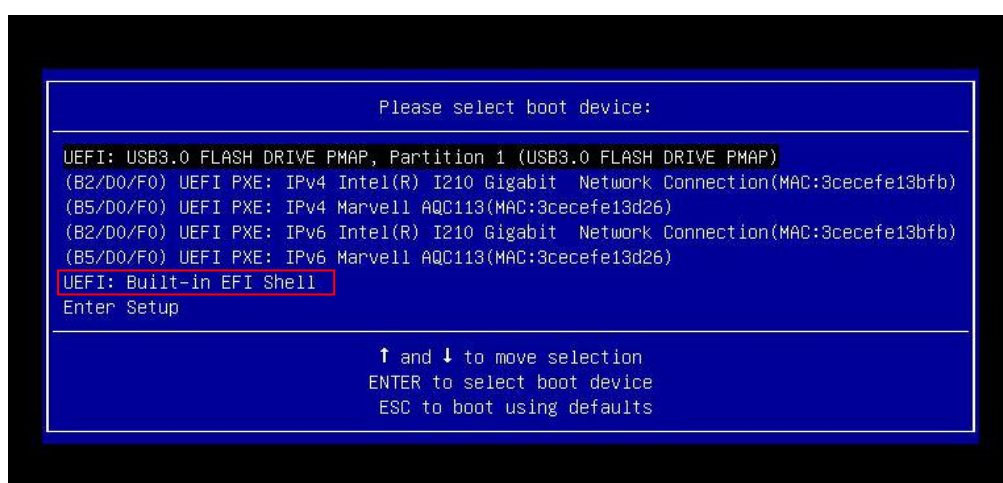


Figure 14.

- After entering the UEFI: Built-in EFI Shell, the system will automatically proceed with the BIOS and ME update process.

```

BLK5: Alias(s):
  PciRoot(0x4)/Pci(0x5,0x0)/Pci(0x0,0x0)/NVMe(0x1,36-FF-7A-48-8B-44-1B-00)/HD(3,GPT,D248D33F
-07A4-4328-AAE7-AFD6ECFA5D99,0x108800,0x1D9EA800)
BLK6: Alias(s):
  PciRoot(0x4)/Pci(0x5,0x0)/Pci(0x0,0x0)/NVMe(0x1,36-FF-7A-48-8B-44-1B-00)/HD(4,GPT,DE8ADBFS
-2037-45F4-BB9C-C84211C6B661,0x1DAF3000,0x2000000)
Press ESC in 1 seconds to skip startup.nsh or any other key to continue.
Shell> fs0:
FS0:\> cd FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W
FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W> flash.nsh BIOS_21b_W_20241104.bin
FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W> echo -off
*****
*
* Program BIOS and ME regions...
*
*****
+-----+
|              AMI Firmware Update Utility v5.16.02.0111              |
| Copyright (c) 1985-2023, American Megatrends International LLC.    |
| All rights reserved. Subject to AMI licensing agreement.            |
+-----+
Reading flash ..... Done
- ME Data Size Checking ..... Pass
- System Secure Flash ..... Enabled
- FFS Checksums ..... Pass
- Check RomLayout ..... Pass
Loading File To Verify Memory ..... Done
Erasing Main Block ..... Done
Updating Main Block ..... Done
Verifying Main Block ..... Done
Erasing Boot Block ..... 0x00D57000 (41%)

```

Figure 15.

- Once completed, restart the system manually enter the BIOS Setup to check if the system update has been completed.

```

Updating NVRAM Block ..... Done
Verifying NVRAM Block ..... Done
Erasing NCB Block ..... Done
Updating NCB Block ..... Done
Verifying NCB Block ..... Done
Erasing RomHole Block ..... Done
Updating RomHole Block ..... Done
Verifying RomHole Block ..... Done
Loading The ME Data To BIOS ..... Done
- Update success for FR
- Update success for DR
- Update success for MR
WARNING !!
System must power-off to have the changes which take effect!

Process completed.
*****
*
* Please press any key and power off the system.
*
*****
Moving FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\fdt\64.efi -> FS0:\P330F6_21b_W_110202_
20241206\FW\P330F6BIOS_21b_W\fdt.smc
- [ok]
Moving FS0:\P330F6_21b_W_110202_20241206\FW\P330F6BIOS_21b_W\afuefix64.efi -> FS0:\P330F6_21b_W_1102
02_20241206\FW\P330F6BIOS_21b_W\afuefix.smc
- [ok]
Deleting 'FS0:\Startup.nsh'
Delete successful.
FS0:\>

```

Figure 16.