
Keysight M9038A BIOS Update Utility

Description

This Keysight M9038A BIOS upgrade utility allows you to restore or update the BIOS in your M9038A PXIe Embedded Controller. As an example, this Update Guide will use BIOS version KS08.

There are three primary steps to updating the BIOS:

- A) Obtain the M9038A BIOS files from the Keysight M9038A Embedded Controller website.
- B) Create a bootable USB flash drive using Rufus Tool.
- C) Use the bootable USB flash drive to update the BIOS in your M9038A controller.

The remainder of this guide provides instructions on obtaining the necessary files and using them to update the M9038A controller BIOS.

NOTE

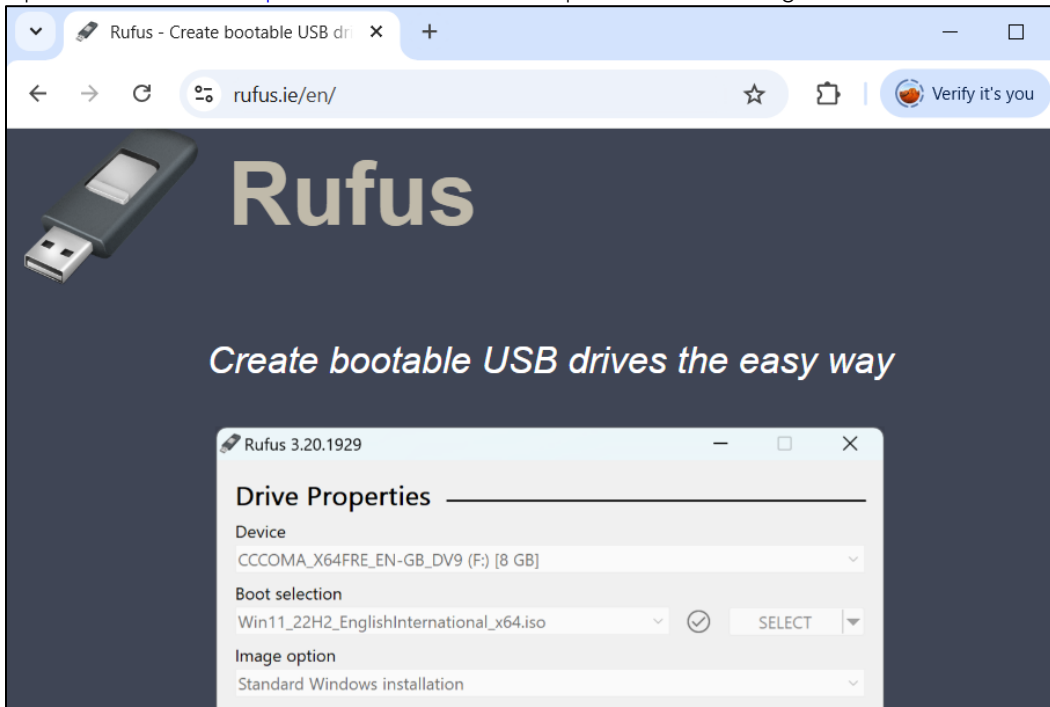
In order to upgrade the BIOS, you must be logged in the Keysight M9038A Embedded Controller as a single user with Administrator privileges. If you are not, you must logout and then login in again as a single user to an account with Administrator privileges. Set the User Account Control to the default position.

Step A. Obtain M9038A BIOS Files

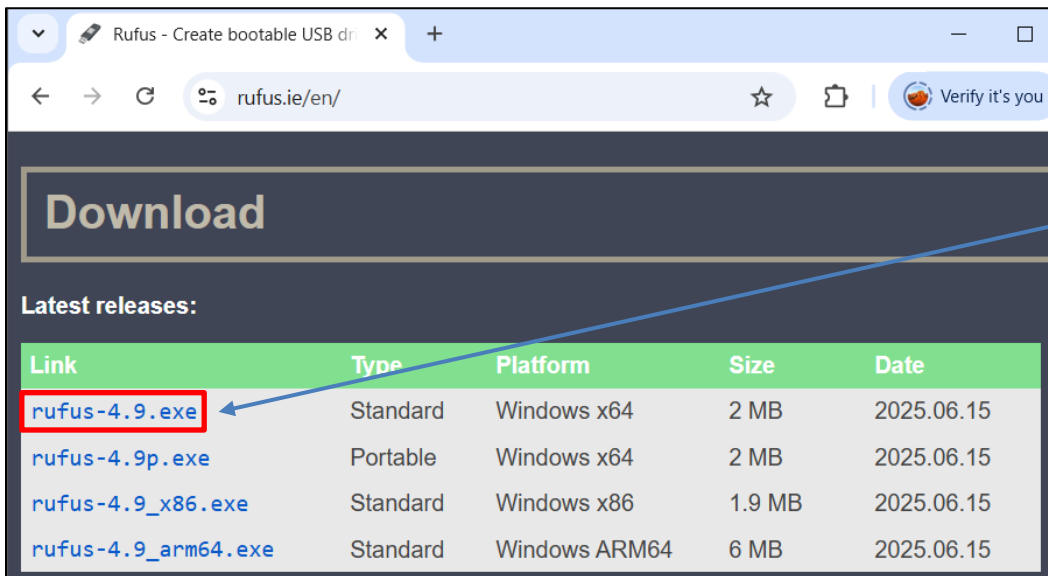
- 1) Open your browser to: www.keysight.com/find/M9038A.
- 2) Left-click on **Visit Technical Support**.
- 3) Left-click the tab named **Drivers, Firmware & Software**.
- 4) Select **M9038A BIOS Downloads**.
- 5) Click the **Download** button and save the downloaded zip file.
- 6) Move the **M9038A_KS09.0_UpdateMEBIOS** zip file to the M9038A desktop.

Step B. Create A Bootable USB Flash Drive


- 1) Insert an empty USB flash drive into a USB port on the M9038A. A 16GB flash drive or larger should be used.
- 2) Open browser to to: <https://rufus.ie/en/>. This opens the following window:



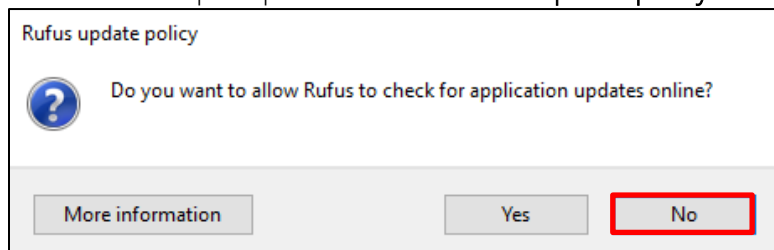
- 3) Scroll down to the **Download** section and click on the Rufus link.



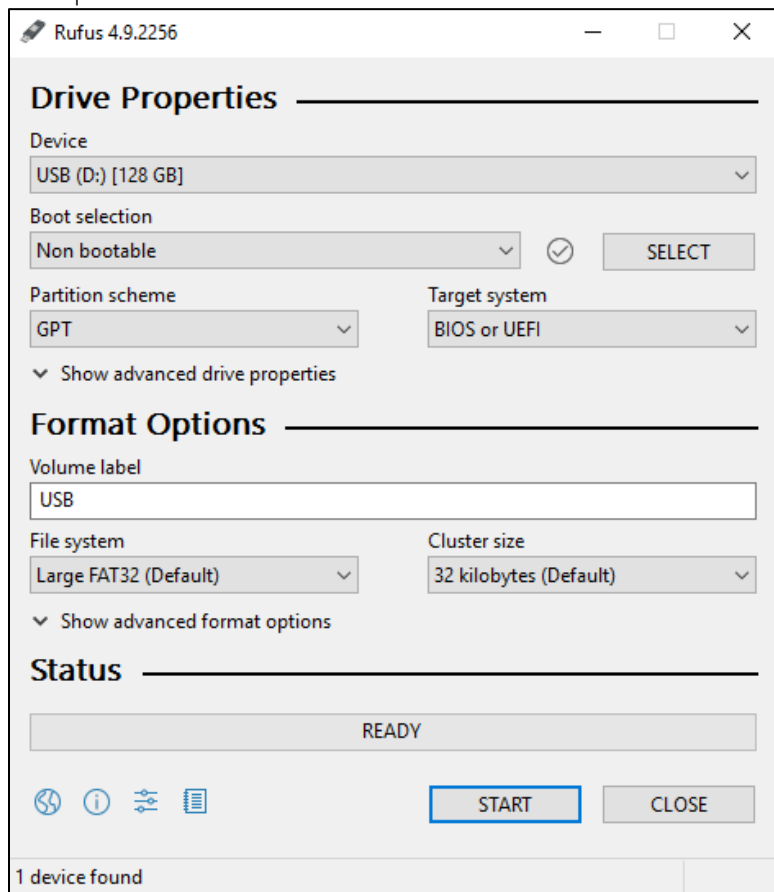
- 4) Run the downloaded Rufus utility.

Name	Date modified	Type
 rufus-4.9	7/21/2025 12:04 AM	Application

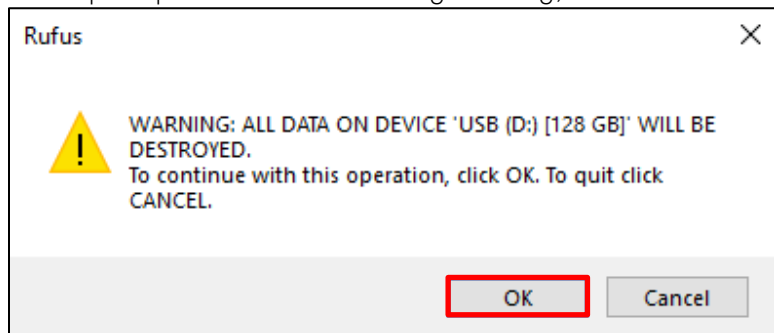
- 5) Click **No** when prompted about the Rufus update policy.



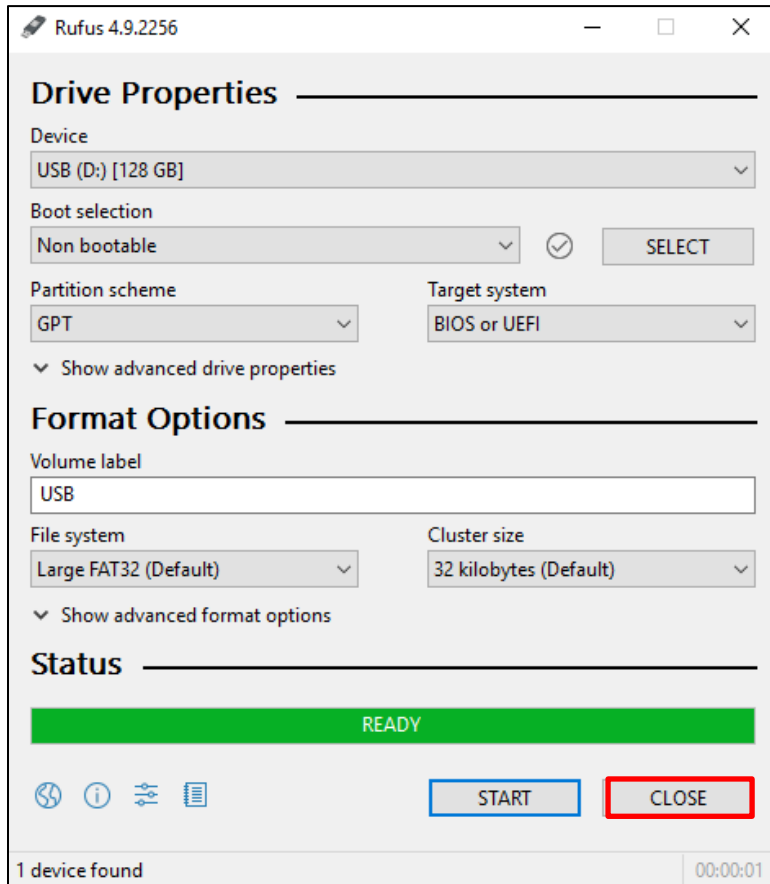
- 6) Verify that the **Device** shown is correct and select all the **Options** following in the image below. In this example there is a 128GB flash drive.



- 7) Click on **Start**.
- 8) When prompted with the following warning, click **OK** to continue.



- 9) In less than 5 seconds the **READY** progress bar will be filled up. The screen should now look like this. Click **Close**.



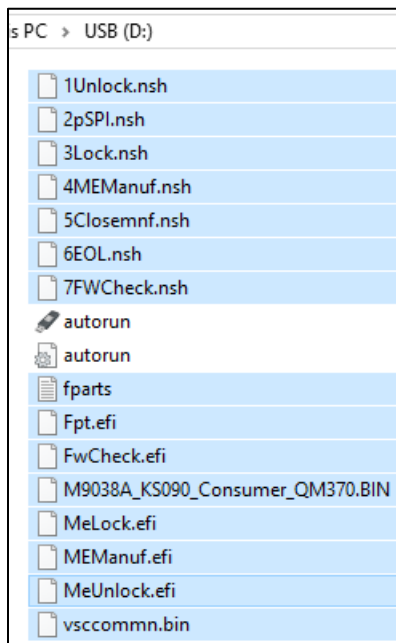
- 10) You have created a bootable USB flash drive. You are ready for Step C.

Step C. Update the M9038A BIOS

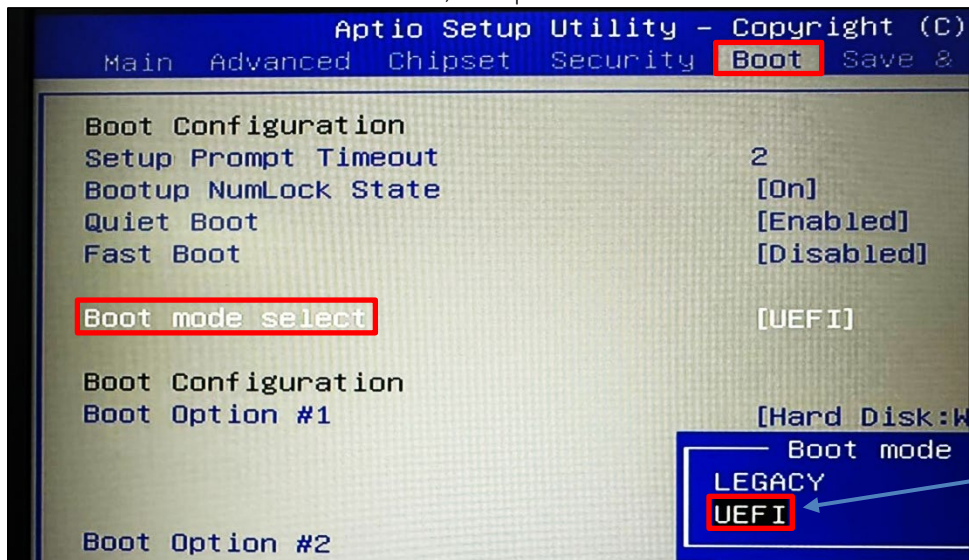
- 1) Using the zip file you have downloaded from **Step A**, unzip it to your desktop.
- 2) You will have the unzip folder **M9038A_KS09.0_UpdateMEBIOS**, which contains several files as listed in the image below.

Name	Date modified	Type
1Unlock.nsh	30-Oct-24 11:28 AM	NSH File
2pSPI.nsh	30-Oct-24 11:28 AM	NSH File
3Lock.nsh	30-Oct-24 11:28 AM	NSH File
4MEManuf.nsh	30-Oct-24 11:28 AM	NSH File
5Closemnf.nsh	30-Oct-24 11:28 AM	NSH File
6EOL.nsh	30-Oct-24 11:28 AM	NSH File
7FWCheck.nsh	30-Oct-24 11:28 AM	NSH File
fparts	30-Oct-24 11:14 AM	Text Document
Fpt.efi	30-Oct-24 11:14 AM	EFI File
FwCheck.efi	30-Oct-24 11:14 AM	EFI File
M9038A_KS090_Consumer_QM370.BIN	30-Oct-24 11:27 AM	BIN File
MeLock.efi	30-Oct-24 11:14 AM	EFI File
MEManuf.efi	30-Oct-24 11:14 AM	EFI File
MeUnlock.efi	30-Oct-24 11:14 AM	EFI File
vsccommn.bin	30-Oct-24 11:14 AM	BIN File

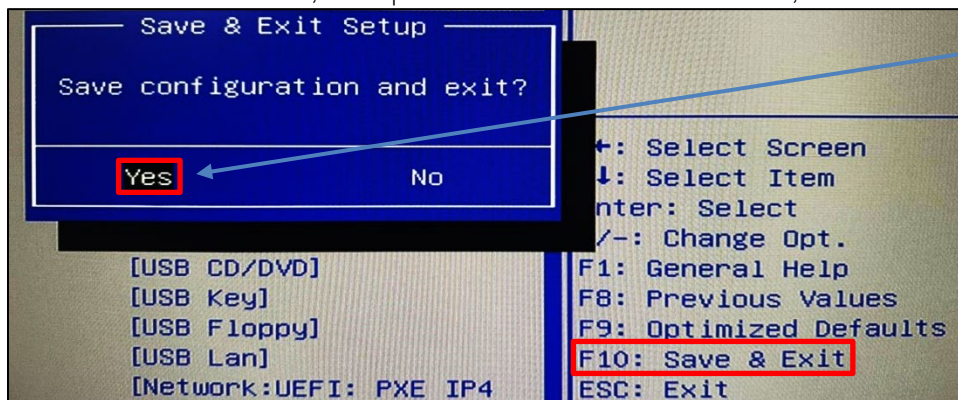
- 3) Drag and drop the files to the bootable USB flash drive that you had created at **Step B**. The screen should now look like this.



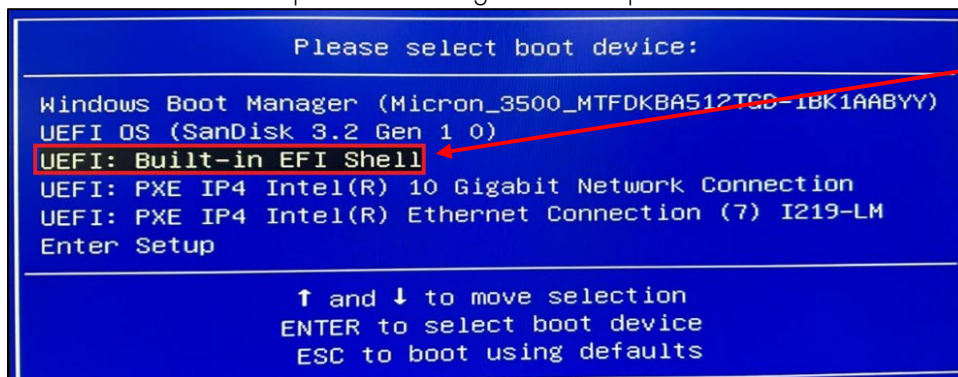
- 4) With the USB flash drive plugged into the M9038A, reboot and press **Del** during the boot up screen. Proceed to **Boot > Boot mode select > UEFI**, and press **Enter**.



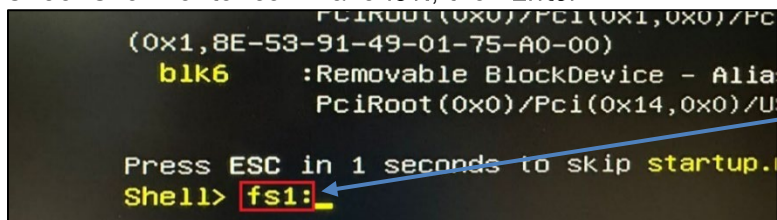
- 5) Press **F10** to Save & Exit, then press **Yes**. It will enter Windows, shutdown the unit.



- 6) Power on the unit and press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.



- 7) Under Shell> enter command **fs1:**, then **Enter**.



- 8) Under fs1:\> enter command **ls**, then **Enter**.

```
(0x1,8E-53-91-49-01-75-A0-00)
    blk6      :Removable BlockDevice -
                PciRoot(0x0)/Pci(0x14,0

Press ESC in 1 seconds to skip sta
Shell> fs1:

fs1:\> ls_
```

- 9) This will check the files inside the bootable USB flash drive. The screen should now look like this.

```
12/04/24 06:39a          218 autorun.inf
12/04/24 06:39a       34,494 autorun.ico
12/04/24 06:34a <DIR>      32,768 EFI
10/30/24 04:28a         15 1Unlock.nsh
10/30/24 04:28a        468 2pSPI.nsh
10/30/24 04:28a         13 3Lock.nsh
10/30/24 04:28a         37 4MEManuf.nsh
10/30/24 04:28a         46 5Closemfn.nsh
10/30/24 04:28a         42 6EOL.nsh
10/30/24 04:28a         51 7FWCheck.nsh
10/30/24 04:14a       15,373 fparts.txt
10/30/24 04:14a     3,457,792 Fpt.efi
10/30/24 04:14a       12,192 FwCheck.efi
10/30/24 04:27a     33,554,432 M9038A_KS090_Consumer
11/04/24 07:27a       16,503 M9038A_Reflash BIOS
10/30/24 04:14a         928 MeLock.efi
10/30/24 04:14a     3,346,528 MEManuf.efi
10/30/24 04:14a         928 MeUnlock.efi
10/30/24 04:14a         4,358 vsccommn.bin
      18 File(s)  40,444,418 bytes
       1 Dir(s)
```

- 10) Under fs1:\> type command **1unlock.nsh**, then **Enter**. Unit will auto reboot.

```
10/30/24 04:14a          3,34
10/30/24 04:14a
10/30/24 04:14a
      18 File(s)  40,444,418 by
       1 Dir(s)

fs1:\> 1unlock.nsh_
```

- 11) Press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.

```
Please select boot device:

Windows Boot Manager (Micron_3500_MTFDKBA512TCD-1BK1AABYY)
UEFI OS (SanDisk 3.2 Gen 1 0)
UEFI: Built-in EFI Shell
UEFI: PXE IP4 Intel(R) 10 Gigabit Network Connection
UEFI: PXE IP4 Intel(R) Ethernet Connection (7) I219-LM
Enter Setup

↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults
```

- 12) Under Shell> type command **fs1:**, then **Enter**.

13) Under fs1:\> type command 2pSPI.nsh, then Enter.

```
(0x1,8E-53-91-49-01-75-A0-00)
blk6      :Removable BlockDevice - Alias
          PciRoot(0x0)/Pci(0x14,0x0)/US
Press ESC in 1 seconds to skip startup.nsh
Shell> fs1:
fs1:\> 2pSPI.nsh_
```

14) Press Enter again to continue.

15) Once successfully updated, the screen should now look like this.

```
FPT Operation Successful.
2pSPI.nsh> echo Done, please cycle power or re
BIOS
Done, please cycle power or reset the system r
2pSPI.nsh> echo setup to configure settings...
setup to configure settings...
fs1:\> _
```

16) Press the power button to shut down the unit and then power on the unit again.

17) Press F7 during the boot up screen. Choose UEFI: Built-in EFI Shell, then Enter.

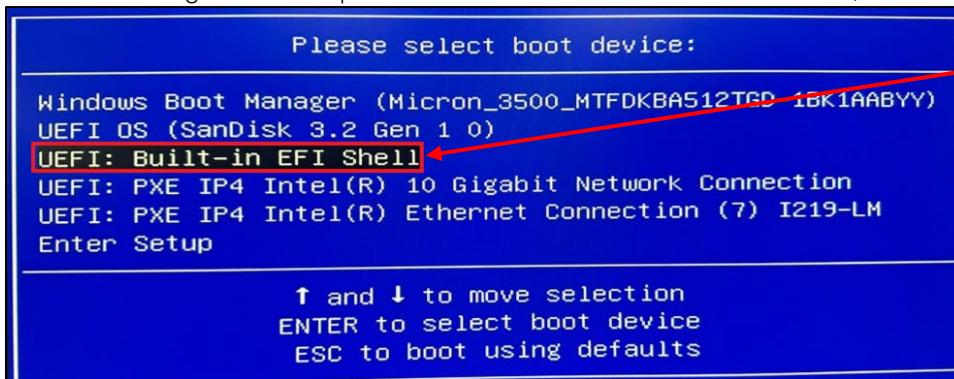
```
Please select boot device:
Windows Boot Manager (Micron_3500_MTFDKBA512TGD_1BK1AABYY)
UEFI OS (SanDisk 3.2 Gen 1 0)
UEFI: Built-in EFI Shell
UEFI: PXE IP4 Intel(R) 10 Gigabit Network Connection
UEFI: PXE IP4 Intel(R) Ethernet Connection (7) I219-LM
Enter Setup
↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults
```

18) Under Shell> type command fs1:, then Enter.

19) Under fs1:\> type command 3Lock.nsh, then Enter. Unit will auto reboot.

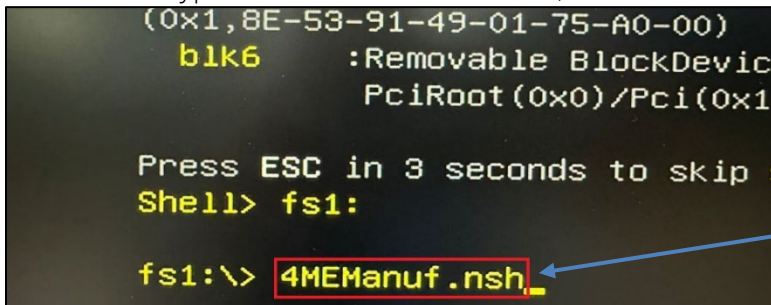
```
(0x1,8E-53-91-49-01-75-A0-00)
blk6      :Removable BlockDev
          PciRoot(0x0)/Pci(
Press ESC in 1 seconds to ski
Shell> fs1:
fs1:\> 3Lock.nsh_
```

20) Press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.

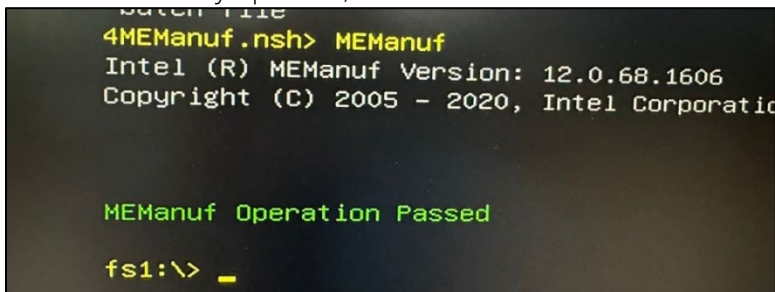


21) Under Shell> type command **fs1:**, then **Enter**.

22) Under fs1:\> type command **4MEManuf.nsh**, then **Enter**.

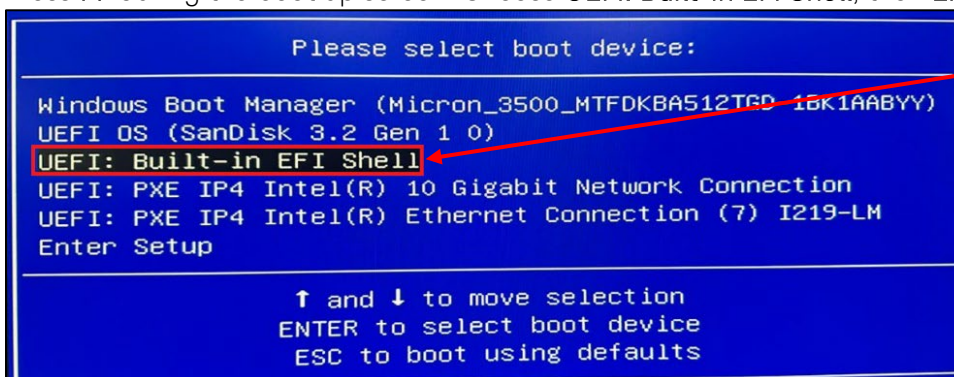


23) Once successfully updated, the screen should now look like this.



24) Press the power button to **shut down** the unit and then **power on** the unit again.

25) Press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.



26) Under Shell> type command **fs1:**, then **Enter**.

27) Under fs1:\> type command **5Closemnf.nsh**, then **Enter**. Unit will auto reboot.

```
(0x1,8E-53-91-49-01-75-A0-00)
blk6      :Removable BlockDevice - A
          PciRoot(0x0)/Pci(0x14,0x0)

Press ESC in 1 seconds to skip startu
Shell> fs1:

fs1:\> 5Closemnf.nsh_
```

28) Press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.

```
Please select boot device:

Windows Boot Manager (Micron_3500_MTFDKBA512TED_1BK1AABYY)
UEFI OS (SanDisk 3.2 Gen 1 0)
UEFI: Built-in EFI Shell
UEFI: PXE IP4 Intel(R) 10 Gigabit Network Connection
UEFI: PXE IP4 Intel(R) Ethernet Connection (7) I219-LM
Enter Setup

↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults
```

29) Under Shell> type command **fs1:**, then **Enter**.

30) Under fs1:\> type command **6EOL.nsh**, then **Enter**.

```
(0x1,8E-53-91-49-01-75-A0-00)
blk6      :Removable BlockDevice -
          PciRoot(0x0)/Pci(0x14,0)

Press ESC in 1 seconds to skip startu
Shell> fs1:

fs1:\> 6EOL.nsh_
```

31) Press **Enter** again to continue.

32) Once successfully updated, the screen should now look like this.

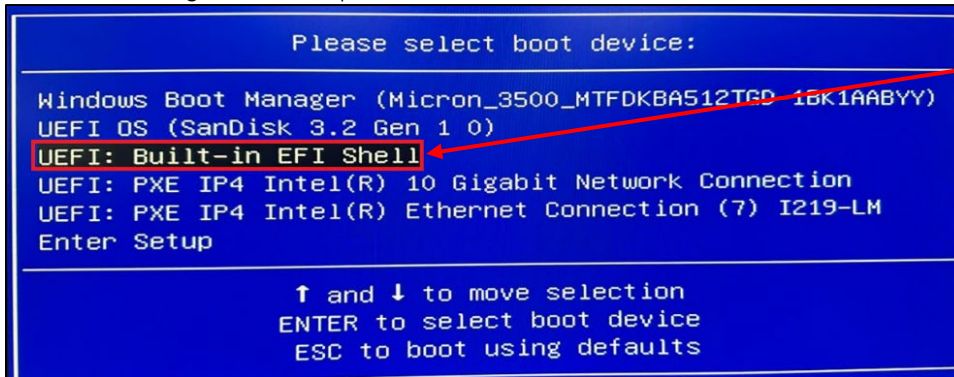
```
fs1:\> 6EOL.nsh
6EOL.nsh> rem For M9038A Project Us
'rem' is not recognized as an inter
batch file
6EOL.nsh> MEManuf -EOL
Intel (R) MEManuf Version: 12.0.68.
Copyright (C) 2005 - 2020, Intel Co

MEManuf Operation Passed

fs1:\> _
```

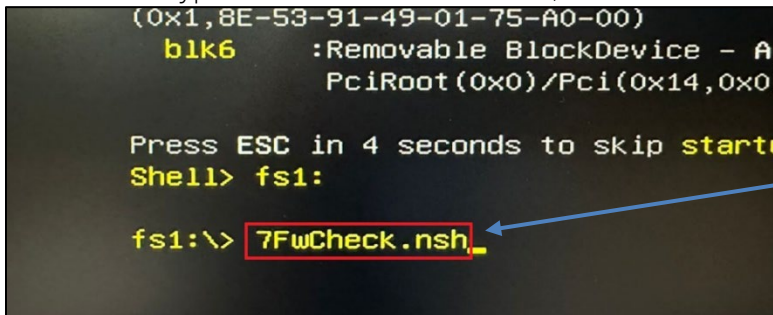
33) Press the power button to **shut down** the unit and then **power on** the unit again.

34) Press **F7** during the boot up screen. Choose **UEFI: Built-in EFI Shell**, then **Enter**.

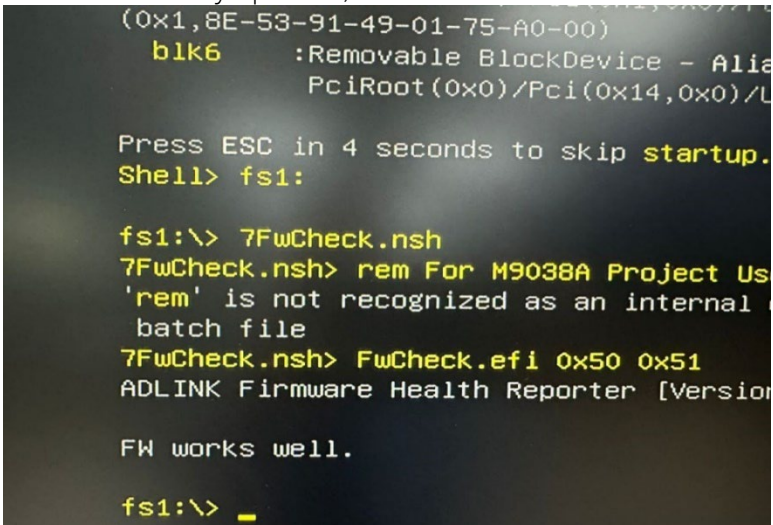


35) Under Shell> type command **fs1:**, then **Enter**.

36) Under fs1:\> type command **7FwCheck.nsh**, then **Enter**.



37) Once successfully updated, the screen should now look like this.



38) Press the power button to **shut down** the unit.

Verify BIOS Version

- 1) Restart M9038A.
- 2) When the M9038A beeps, press the DEL key several times to enter the Setup Menu.
- 3) Ensure that the BIOS version is the correct BIOS version. Example below shows KS08.

