

How to Use TOS 7 Properly on 424 Series TNAS

Applicable Models:

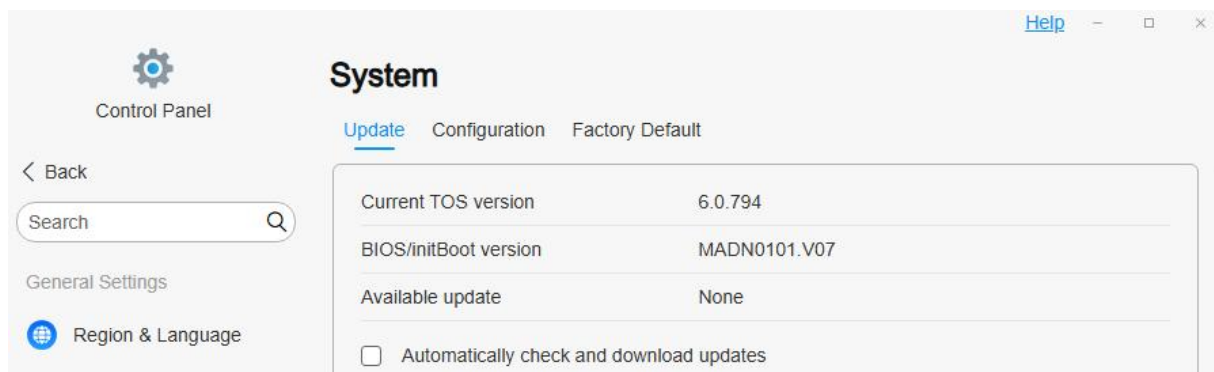
F2-424, F4-424, F4-424 Pro

Description:

Please confirm the BIOS version before proceeding.

- Devices with BIOS version MADN0101.V04 or MADN0101.V03 should follow this guide.
- The following BIOS versions can be updated and operated with TOS7 normally without any extra adjustments: MADN0101.V05, MADN0101.V06, MADN0101.V07, MADN0101.V08, and BJFX-ADLN-109.

How to check the BIOS version: Go to the Update page in the TOS Control Panel to view the BIOS version.



Issue Symptoms:

Prerequisite: The device is an F2-424, F4-424, or F4-424 Pro with BIOS version MADN0101.V04 or MADN0101.V03.

1. If the system disk is an NVMe M.2 SSD, after updating from TOS 6 to TOS 7, the device enters the initialization page after rebooting.
2. After installing TOS 7 on an NVMe M.2 SSD, the device enters the initialization page after rebooting.

Cause:

In BIOS versions MADN0101.V04 and MADN0101.V03, the USB boot priority is higher than the NVMe M.2 SSD.

Note:

If you will only install TOS 7 on a SATA SSD or SATA HDD in the future, you do not need to update the BIOS or adjust the boot order. You can use Method A.

If you want to install TOS 7 on an M.2 NVMe SSD in the future, Method D is recommended to update the BIOS. You can also use the temporary methods: Method B or Method C to adjust the boot order.

Solutions:

You can choose one of the following four methods that best fits your situation:

Method A: Use a SATA drive as the system disk.

1. Update: Before updating to TOS 7, go to Storage Manager > Disk in the TOS Control Panel. In the System Disk function, edit the system disk and migrate it from the M.2 NVMe SSD to a SATA HDD or SATA SSD, then update to TOS 7.
2. Installation: When installing the system, select a SATA HDD or SATA SSD as the system disk.

Method B: Remove the onboard USB boot device after installing or updating the system.

1. Update: After TOS 7 finishes updating and rebooting, shut down the device, remove the USB drive, and power it on again.
2. Installation: After the system installation finishes rebooting, shut down the device, remove the USB drive, and power it on again.

Method C: Adjust the BIOS boot order.

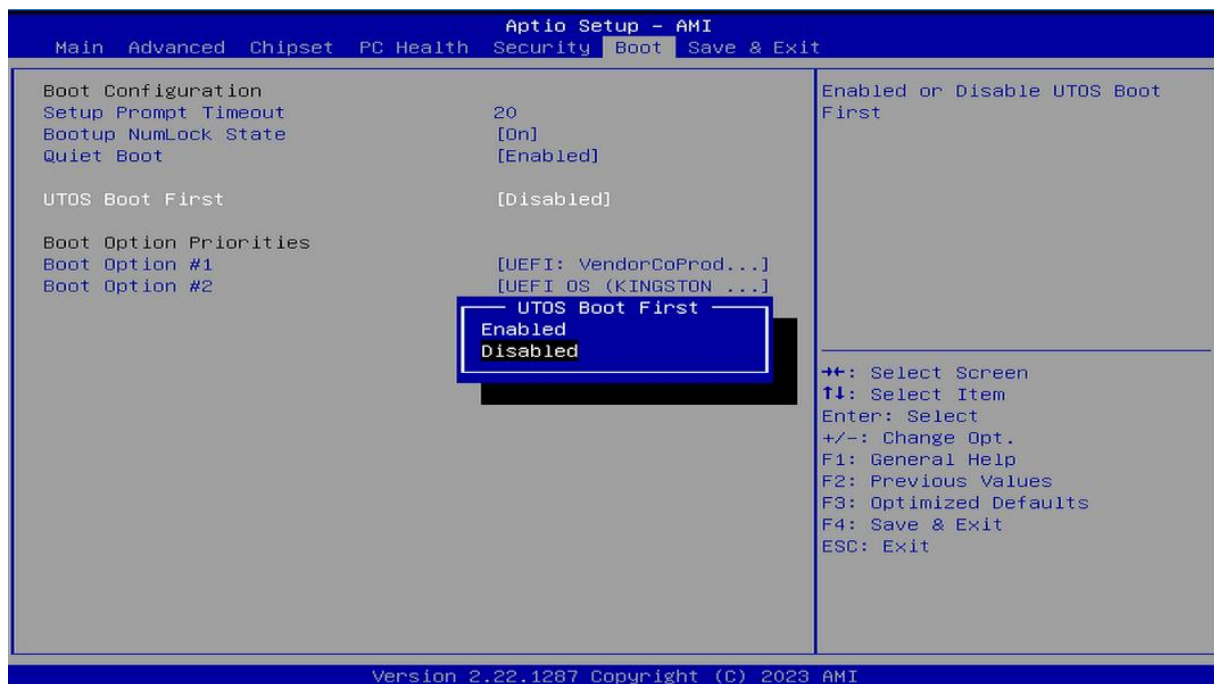
Adjusting the BIOS boot order is only a temporary solution. If you replace disks or reinstall the system, you will need to modify it again.

1. Enter the BIOS page.

Install all disks you use. With the device powered off, connect the TNAS to a monitor using an HDMI cable and connect a keyboard. Press the power button, then immediately press Del or Esc repeatedly in short taps until the BIOS interface appears. Do not hold the key down; tap it 1-2 times per second.

2. Disable UTOS Boot First.

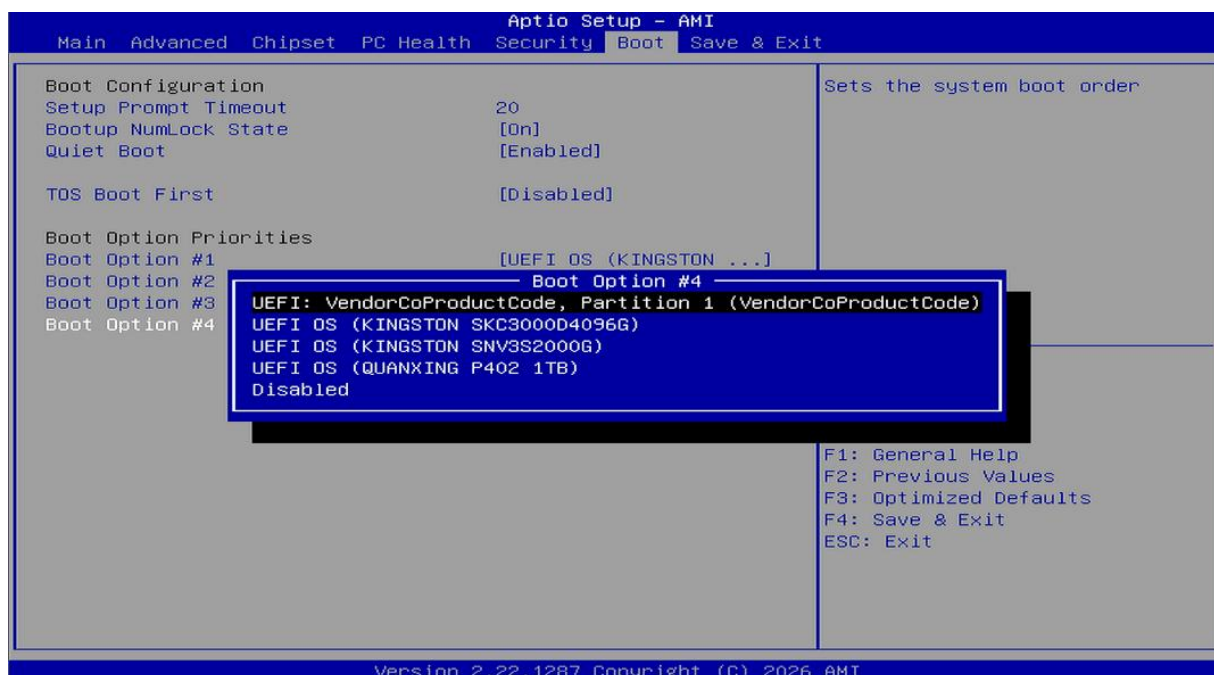
In the BIOS, press the Right Arrow key to go to the Boot page. Press the Down Arrow key to select UTOS Boot First, press Enter, then press the Down Arrow key to select Disabled, and press Enter to confirm.

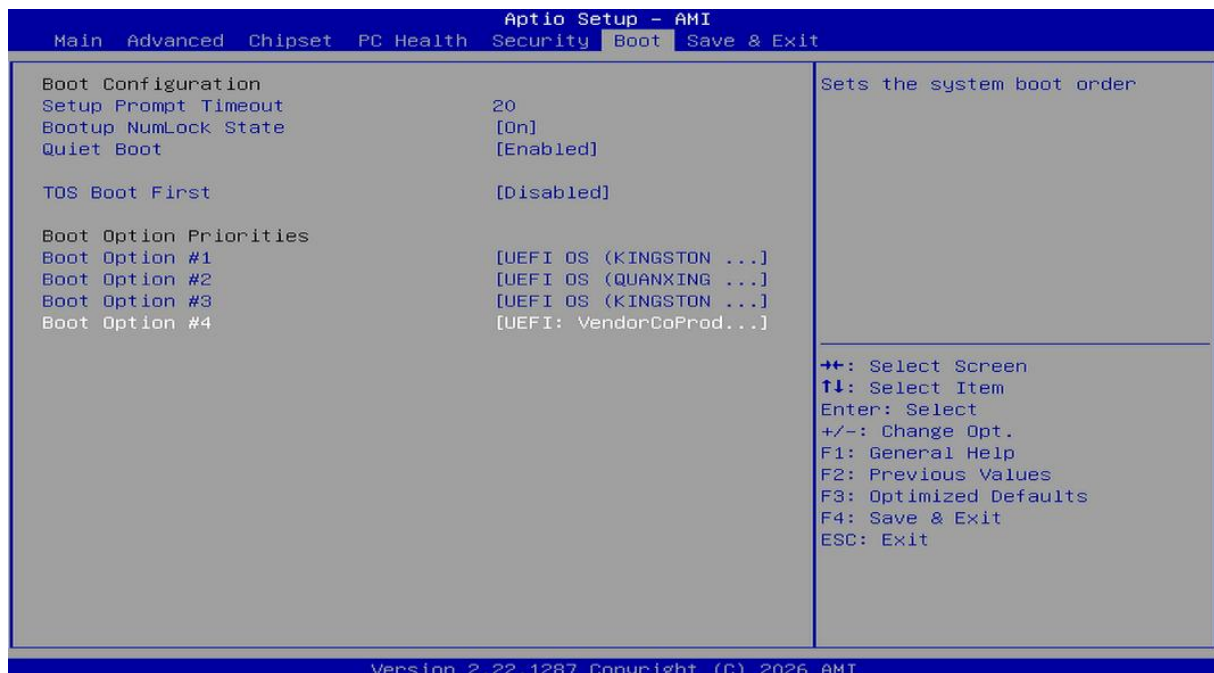


3. Adjust the boot order.

After disabling UTOS Boot First, press the Down Arrow key to select the last Boot Option, then press Enter to adjust it.

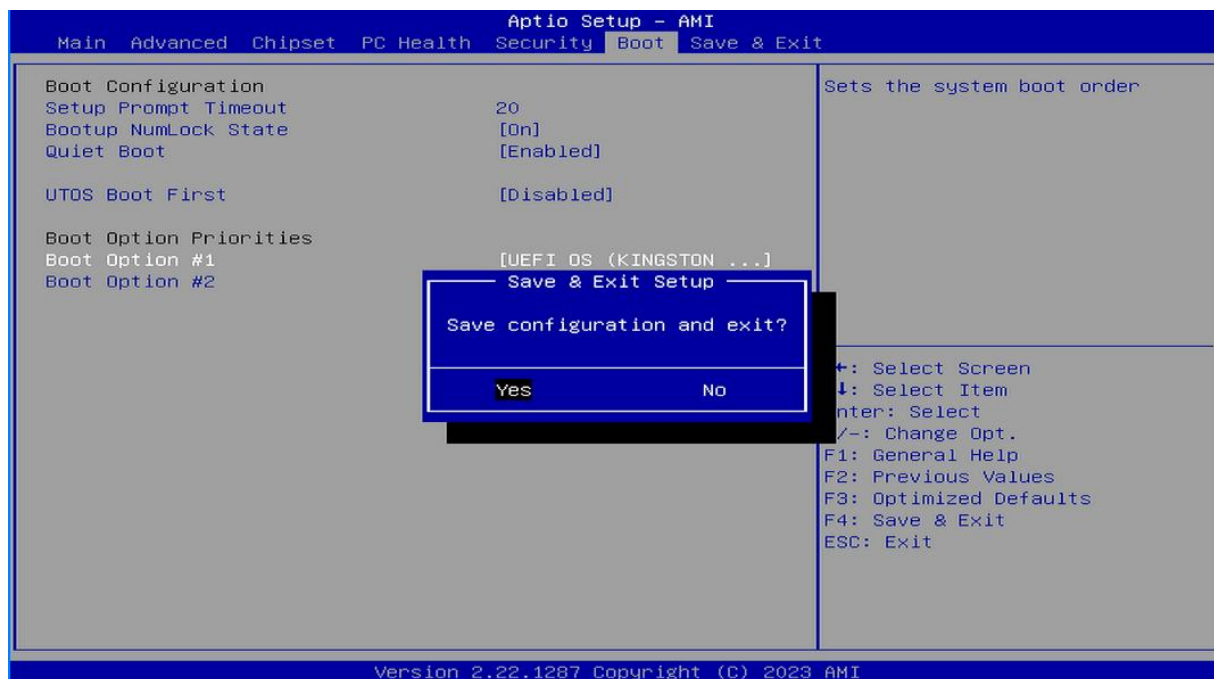
Use the arrow keys to select the onboard USB boot device, then press Enter to confirm the selection.





4. Save and exit.

After setting the USB boot device as the last boot option, press F4. When prompted to save and exit, press Enter again to save and exit. You can then update to TOS 7 normally.



Method D: Update the BIOS version.

After updating the BIOS version, you can install, update, and use TOS 7 normally.

- 1、 Confirm whether the current BIOS version of your F2-424, F4-424, or F4-424 Pro is MADN0101.V04 or MADN0101.V03. If it is one of these two versions, follow the steps below to update the BIOS.

2. Download the latest BIOS file for your model:

F2-424: F2-424__MADN0101.V08

https://download3.terra-master.com/Apps/forum/BIOS/F2-424__MADN0101.V08.zip

F4-424: F4-424__MADN0101.V08

https://download3.terra-master.com/Apps/forum/BIOS/F4-424__MADN0101.V08.zip

F4-424 Pro: F4-424 Pro__MADN0101.V08

https://download3.terra-master.com/Apps/forum/BIOS/F4-424_Pro_MADN0101.V08.zip

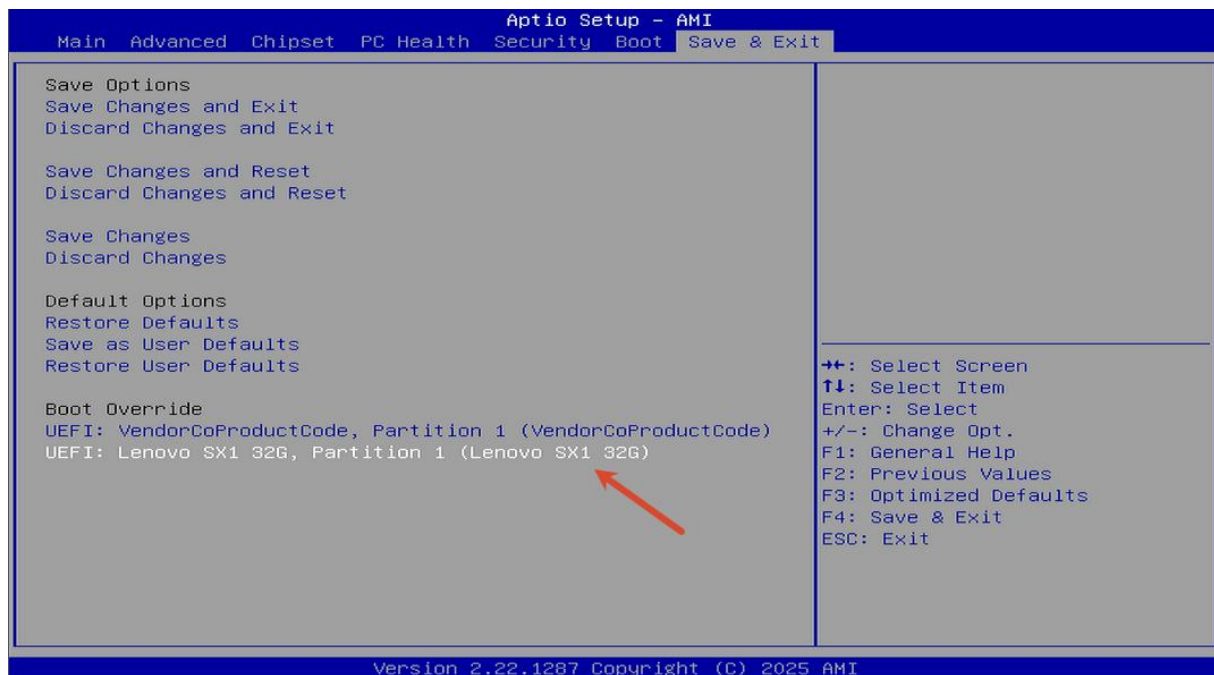
3、 Prepare an empty USB drive smaller than 32 GB and format it as FAT. Extract the ZIP file for your model and copy all extracted files to the root directory of the USB drive.

Name	Type	Size
DmiEditEfi64	File folder	
EFI	File folder	
Fpta.efi	EFI File	1,724 KB
MADN0101.V08T11061226	V08T11061226 File	16,384 KB
startup.nsh	NSH File	1 KB

4、 Remove all disks from the TNAS, insert the prepared BIOS update USB drive into the TNAS, connect the TNAS to a monitor with an HDMI cable, and connect a USB keyboard. Press the power button, then immediately press Del or Esc repeatedly in short taps until the BIOS interface appears. Do not hold the key down; tap it 1-2 times per second. You can also check whether the BIOS Version on the home page is one of the versions mentioned above.

Aptio Setup - AMI						
Main	Advanced	Chipset	PC Health	Security	Boot	Save & Exit
BIOS Information				Set the Date. Use Tab to switch between Date elements.		
BIOS Vendor				Default Ranges:		
Product Name				Year: 1998-9999		
BIOS Version				Months: 1-12		
Build Date and Time				Days: Dependent on month		
Serial Number				Range of Years may vary.		
Access Level						

5、 On the BIOS page, press the Right Arrow key to go to the Save & Exit page. Press the Down Arrow key to select the USB drive for updating the BIOS, then press Enter to confirm. If you select the onboard USB boot device, the system installation page will open; restart the device and select again.



- 6、 When this page appears, wait for the countdown to finish. After the countdown, the BIOS update will start automatically and is expected to take 1-3 minutes. Wait until FPT Operation Successful appears. Do not press any keys before the success message appears.

```

EFI Shell version 2.80 [5.26]
Current running mode 1.1.2
Device mapping table
  fs0 :Removable HardDisk - Alias hd10d0b0b0b0b blk0
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x3,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
1,0x0)/HD(1,GPT,434DB4B5-CD75-4E9B-8179-DDE1BABB CAB1,0x22,0x47847)
  fs1 :Removable HardDisk - Alias hd10m0b0b0d0b blk1
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
3,0x0)/HD(1,GPT,C5706A24-07D1-42CA-BC99-3336B177E0BA,0x800,0x3B5F7DF)
  blk0 :Removable HardDisk - Alias hd10d0b0b0b0b fs0
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x3,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
1,0x0)/HD(1,GPT,434DB4B5-CD75-4E9B-8179-DDE1BABB CAB1,0x22,0x47847)
  blk1 :Removable HardDisk - Alias hd10m0b0b0d0b fs1
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
3,0x0)/HD(1,GPT,C5706A24-07D1-42CA-BC99-3336B177E0BA,0x800,0x3B5F7DF)
  blk2 :Removable BlockDevice - Alias (null)
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0x3,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
1,0x0)
  blk3 :Removable BlockDevice - Alias (null)
        PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/USB(0x1,0x0)/USB(0x1,0x0)/USB(0x
3,0x0)

Press ESC in 2 seconds to skip startup.nsh, any other key to continue. _

```

```

- Erasing Flash Block [0xD9D000] - 100 percent complete.
- Programming Flash [0x0D9D000] 36KB of 36KB - 100 percent complete.
Processing Flash memory block 3975 from 4095.
- Erasing Flash Block [0xF88000] - 100 percent complete.
- Programming Flash [0x0F88000] 8KB of 8KB - 100 percent complete.
Processing Flash memory block 3997 from 4095.
- Erasing Flash Block [0xF9E000] - 100 percent complete.
- Programming Flash [0x0F9E000] 80KB of 80KB - 100 percent complete.
Processing Flash memory block 4039 from 4095.
- Erasing Flash Block [0xFC8000] - 100 percent complete.
- Programming Flash [0x0FC8000] 8KB of 8KB - 100 percent complete.
Processing Flash memory block 4061 from 4095.
- Erasing Flash Block [0xFDE000] - 100 percent complete.
- Programming Flash [0x0FDE000] 80KB of 80KB - 100 percent complete.
- Processed memory blocks 4095 from 4095.
- Verifying Flash [0x1000000] 16384KB of 16384KB - 100 percent complete.
RESULT: The data is identical.

```

Flash device was programmed. It is recommended to perform G3 power cycle to complete the flashing process.

FPT Operation Successful.

```

startup.nsh> pause
Enter 'q' to quit, any other key to continue: _

```

- 7、 After the success message appears, press Enter. The TNAS will reboot automatically. After a few seconds, the TNAS will beep once, indicating that the hardware self-test has passed. When you hear the beep, immediately press Del or Esc repeatedly in short taps until the BIOS interface appears. Then follow Step 5 to select the BIOS update USB device again and press Enter to confirm.
- 8、 After selecting the BIOS update USB drive for the second time, wait for the operation to complete automatically. When finished, the page shown below will appear, indicating that all operations have been completed. You can then remove the BIOS update USB device and update or install TOS 7 normally.

```

blk1 :Removable BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x14,0x0)/USB(0xC,0x0)/USB(0x1,0x0)/USB(0x1,0x0)

Press ESC in 1 seconds to skip startup.nsh, any other key to continue.
startup.nsh> echo -on
startup.nsh> for i in 0 1 2 3 4 5 6 7 8 9 a b c d e f g h
startup.nsh> if exist FS0:\Fpta.efi then
startup.nsh> FS0:
startup.nsh> if exist flag.txt then
startup.nsh> cd DmiEditEfi64
startup.nsh> F4-424.nsh
+F4-424.nsh> AMIDEEFIx64.EFI /sk 0A450A46JF01ADLN /sp 000-F4424-EU000-2000
+-----+
|          AMI Desktop Management Interface Edit Utility v5.27.02.0006          |
|          Copyright (c) 1985-2021, American Megatrends International LLC.      |
|          All rights reserved. Subject to AMI licensing agreement.              |
+-----+

Initializing the SMBIOS interface. Please wait a moment.....
      Name                R/W    Status    Information
-----
(/SK)System SKU number    W      Done    "0A450A46JF01ADLN"
(/SP)System product       W      Done    "000-F4424-EU000-2000"
startup.nsh> pause
Enter 'q' to quit, any other key to continue: _

```

