SSD7000 Series UEFI ROM Update Guide (PC)

V1.04– June 1st 2022

Contents

Overview

This guide explains how to update SSD7000 Series NVMe RAID controllers' UEFI ROM using a PC platform.

Prerequisites
This section describes the base hardware and software requirements for SSD7000 Series NVMe RAID Controllers.

Update UEFI ROM
This section describes how to update the UFEI ROM using a PC.

Troubleshooting
Please consult this section if you encounter any difficulties flashing SSD7000 Series NVMe Controller UEFI ROM. It includes descriptions and solutions for commonly reported technical issues.

Appendix
This section describes how to collect trouble shooting information for support cases you have submitted via our Online Support Portal.

Prerequisites

1. **NVMe Drives must be removed**. To avoid data loss, please remove all NVMe drives from the SSD7000 Series NVMe Controller.

2. **A PCIe 3.0/4.0 slot with x8 or x16 lane.** The SSD7202, SSD7502, SSD7105, SSD7505, SSD7540, SSD7580A or SSD7580B must be installed into a PCIe 3.0/4.0 slot with x8 or x16 lanes.

3. **The motherboard needs to be booted into UEFI mode.** Confirm that the motherboard boots in UEFI mode.

4. **USB flash drive: FAT32 format.** Make sure the file system of the USB flash drive is FAT32 format.

Update UEFI ROM

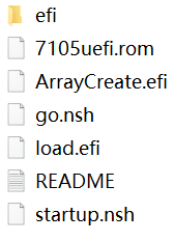
Step 1 Prepare UEFI ROM Package

1. Unzip the SSD7000 Series NVMe Controller UEFI package to the root dir (/) of a USB flash drive (e.g. FAT32), and insert the USB flash drive into the motherboard;

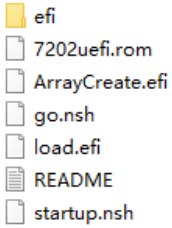
   Please download UEFI software on the official website.

Product	Download Page Link
SSD7105	https://www.highpoint-tech.com/gen3-nvme-m2-bootable
SSD7202	https://www.highpoint-tech.com/gen3-nvme-m2-bootable
SSD7505	https://www.highpoint-tech.com/ssd/ssd7505-overview
SSD7502	https://www.highpoint-tech.com/ssd/ssd7502-overview
SSD7540	https://www.highpoint-tech.com/ssd/ssd7540-overview
SSD7580A	https://www.highpoint-tech.com/ssd7580a-overview
SSD7580B	https://www.highpoint-tech.com/ssd7580b-overview

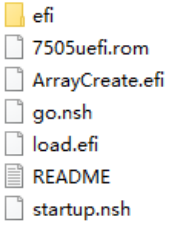
SSD7105:



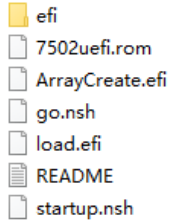
SSD7202:



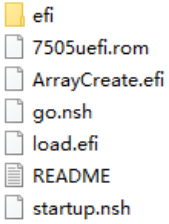
SSD7505:



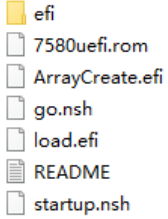
SSD7502:



SSD7540:



SSD7580:

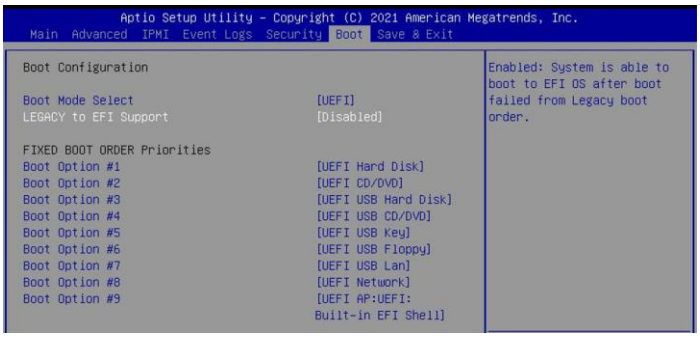


Step 2 Check System EFI Settings

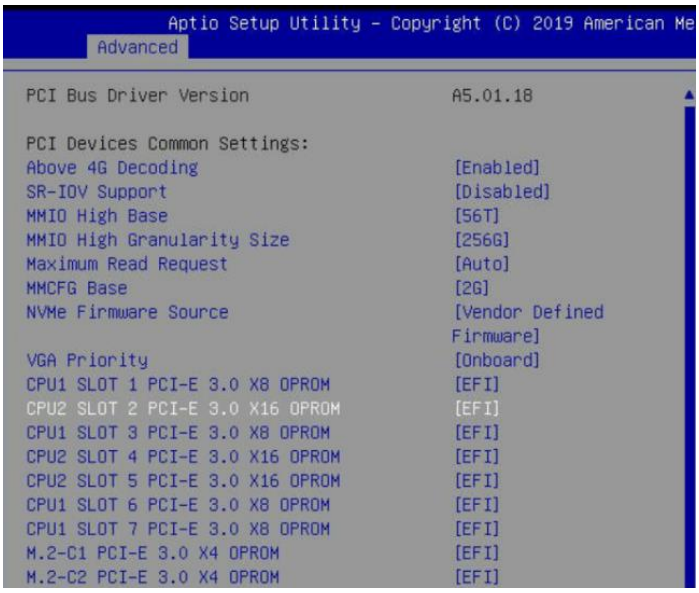
1. Insert the SSD7000 series NVMe controller into the motherboard, power on the system, and enter the BIOS.

2. Change the UEFI settings (Example: SuperMicro X11DPi-NT motherboard):

   a. Set 'Boot mode select' to 'UEFI':



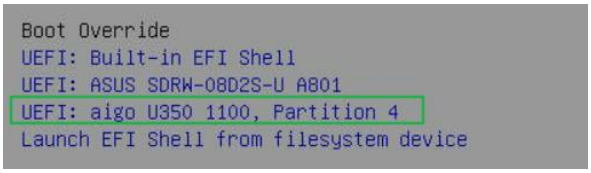
   b. Set the Slot where the SSD7000 Series NVMe Controller is located to 'EFI'.



3. Save changes and reboot.

Step 3 Flash the UEFI ROM

1. Boot from the UEFI USB flash drive and enter the UEFI interface;



2. Enter the following command to flash the UEFI ROM to the SSD7000 NVMe Controller:
   go.nsh

When the message '**Passed**' appears, the flash was successful.

SSD7105：

```
FS0:\> go.nsh
FS0:\> load.efi 7105uefi.rom
Load Utility for Flash EPROM v1.1.0
 (built at Jan  5 2021 13:30:42)

Set flash size to 65K
Found adapter 0x71051103 at PCI 199:0:0
Flash size 0x10400, File size 0x10200
Offset address 0x20000
EPROM Vendor: WINBOND W25X40BV
Erasing ......Suceeded
Flashing ....

Flashing Success (total retry 0)

Verifing ....

Passed !
FS0:\> _
```

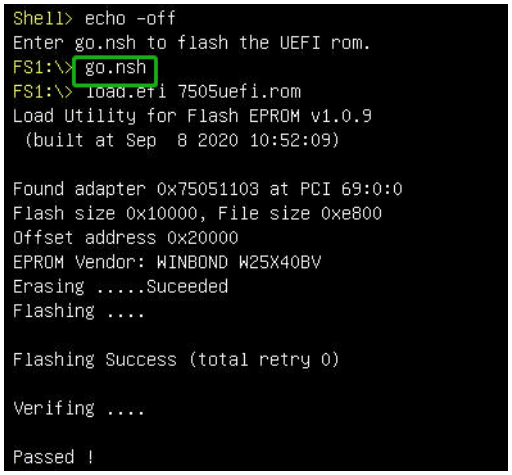
SSD7202:

```
Shell> echo -off
Enter go.nsh to flash the UEFI rom.
FS1:\> go.nsh
FS1:\> load.efi 7202uefi.rom
Load Utility for Flash EPROM v1.0.9
 (built at Sep  8 2020 10:52:09)

Found adapter 0x72021103 at PCI 28:0:0
Flash size 0x10000, File size 0xe800
Offset address 0x20000
EPROM Vendor: WINBOND W25X40BV
Erasing .....Suceeded
Flashing ....

Flashing Success (total retry 0)

Verifing ....

Passed !
```

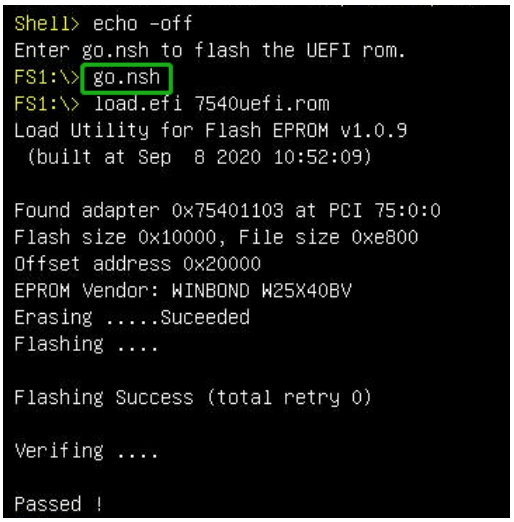
SSD7502:

```
Shell> echo -off
Enter go.nsh to flash the UEFI rom.
FS1:\> go.nsh
FS1:\> load.efi 7502uefi.rom
Load Utility for Flash EPROM v1.0.9
 (built at Sep  8 2020 10:52:09)

Found adapter 0x75051103 at PCI 69:0:0
Flash size 0x10000, File size 0xe800
Offset address 0x20000
EPROM Vendor: WINBOND W25X40BV
Erasing .....Suceeded
Flashing ....

Flashing Success (total retry 0)

Verifing ....

Passed !
```

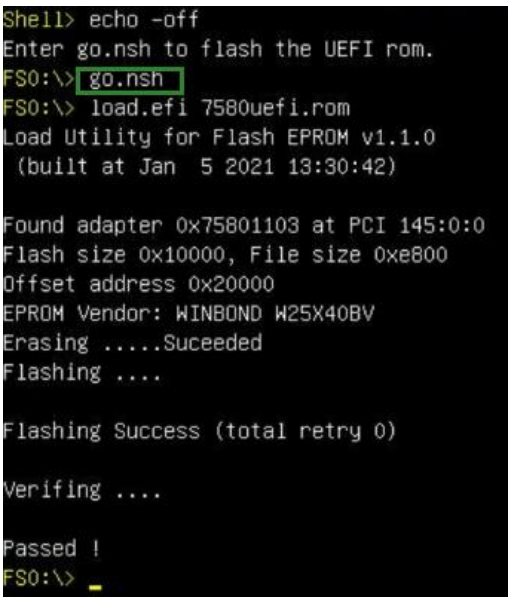
SSD7505:



SSD7540:



SSD7580:

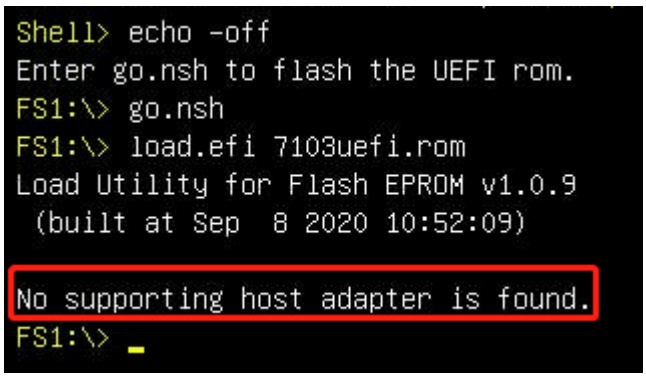


3. Reboot to complete the update process.

Troubleshooting

No supporting host adapter is found

When using the '**go.nsh**' command, the procedure does not start and the message '**No supporting host adapter is found**' is displayed:

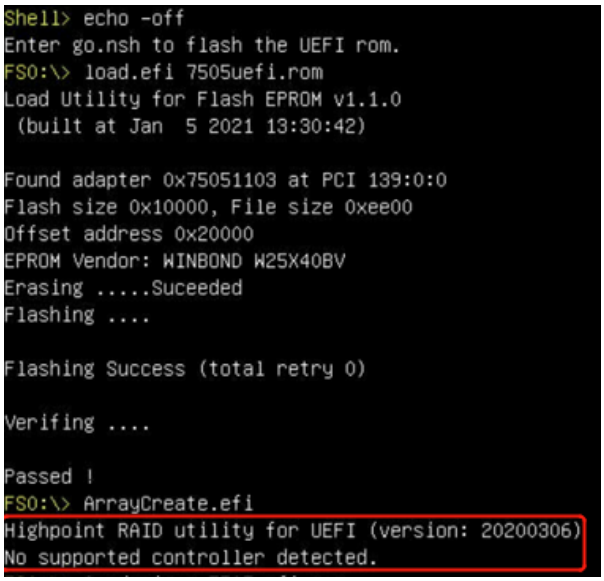


Solution:

Shutdown the system and move the SSD7000 controller to another PCIe slot, and repeat the flash procedure. If the problem still occurs, please refer to the appendix for collection.

The UEFI Utility Reports No Supported Controller Detected

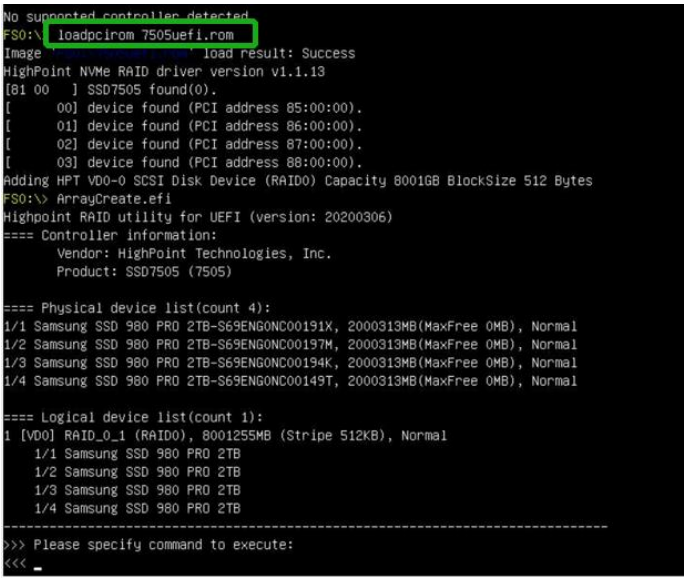
1. Boot from a UEFI device, the drive loads the UEFI BIOS after the old boot. Enter **ArrayCreate.efi** to create RIAD. The UEFI Utility Reports **No Supported Controller Detected**.



Note: If it cannot be loaded successfully, our UEFI rom is not compatible with the current UEFI environment.

2. Then enter **loadpcirom xxx.rom** in the UEFI Shell. Based on the output of this command, we can determine whether our UEFI driver is incompatible with your

motherboard. If it can be loaded manually, it means that the BIOS settings do not allow third-party ROM files to be loaded.



Appendix

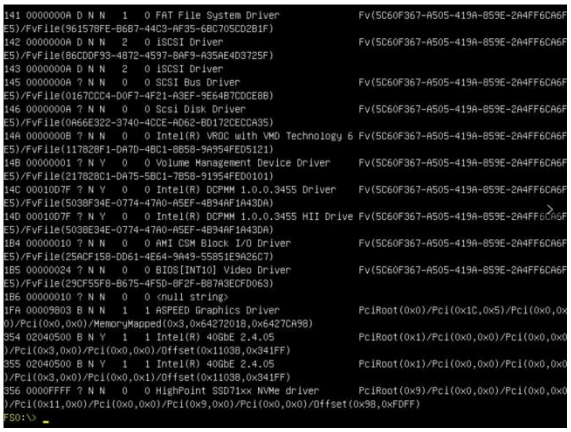
Collecting SSD7000 Series UEFI information

1. Unzip the SSD7000 Series NVMe Controller UEFI package to the root dir (/) of a USB flash drive, and insert the USB flash drive into the PC.
2. Make sure the SSD7000 Series NVMe Controller is installed into a PCIe 3.0/4.0 slot with x8 or x16 lanes;
3. Boot from the UEFI USB flash drive and enter the UEFI interface;
4. At the command prompt, type the following command and press Enter:

   drivers

   The following information will be displayed:

5. Save the driver information that is displayed on screen using the following command:

   drivers > drivers.txt

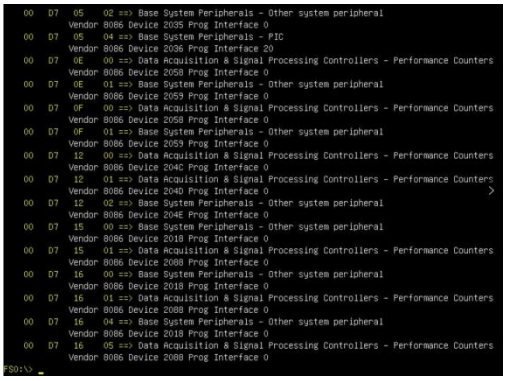
   It will save drivers' log to the USB drive, as the file "**drivers.txt**".

6. At the command prompt, type the following command and press Enter:

   pci

The following information will be displayed:



7. Save the on-screen pci information using the following command:

   pci > pci.txt

   This will save the pci's log to the USB boot drive, as the file "**pci.txt**".

8. You can now check the contents of the drivers.txt and pci.txt that were saved to the USB flash drive. The items highlighted in green below file indicate that the SSD7000 Series NVMe Controller was recognized, and the driver loaded normally:

   SSD7105：

   drivers.txt

```
1A3 0000000A ? - -  -  - MTFTP6 Network Service Driver      Mtftp6Dxe
1A6 0000000A D - -  2  - FAT File System Driver            Fat
1A7 0000000A ? - -  -  - SCSI Bus Driver                   ScsiBus
1A8 0000000A ? - -  -  - Scsi Disk Driver                  ScsiDisk
1A9 0000000A ? - -  -  - TcpsDxe                           TcpsDxe
1AA 00000001 D - -  1  - SMCI Redfish HI USB CDC-RNDIS Drive SmcRedfishHiUsbCdcRndisDriver
1AB 00000001 B - -  1  1 SMCI USB UNDI Driver              SmcUsbUndiDriver
1B7 00000010 ? - -  -  - AMI CSM Block I/O Driver          CsmBlockIo
1B8 00000024 B - -  1  1 BIOS[INT10] Video Driver          CsmVideo
1B9 00000010 ? - -  -  - <null string>
22D 00000011 D - -  4  - HighPoint NVMe RAID driver v1.1.13  Offset(0x98,0x101FF)
```

   pci.txt

```
00  C5  00   00 ==> Mass Storage Controller - Non-volatile memory subsystem
      Vendor 1179 Device 0116 Prog Interface 2
00  C6  00   00 ==> Mass Storage Controller - Non-volatile memory subsystem
      Vendor 1179 Device 0116 Prog Interface 2
00  C7  00   00 ==> Mass Storage Controller - RAID controller
      Vendor 1103 Device 7105 Prog Interface 0
00  C8  00   00 ==> Non-Essential Instrumentation - Non-Essential Instrumentation Function
      Vendor 1022 Device 148A Prog Interface 0
00  C8  00   02 ==> Encryption/Decryption Controllers - Other Encrypt/Decrypt
```

SSD7202:

drivers.txt:

```
112 0000000A ? N N   0   0 IP4 Network Service Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(9FB1A1F3-3B71-4324-B39A-745CBB015FFF)
113 0000000A ? N N   0   0 MTFTP4 Network Service              Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(DC3641B8-2FA8-4ED3-BC1F-F9962A03454B)
114 0000000A ? N N   0   0 UDP Network Service Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(6D6963AB-906D-4A65-A7CA-BD40E5D6AF2B)
115 0000000A ? N N   0   0 IP6 Network Service Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5BEDB5CC-D830-4EB2-8742-2D4CC9B54F2C)
116 0000000A ? N N   0   0 UDP6 Network Service Driver         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(D912C7BC-F098-4367-92BA-E911083C7B0E)
117 0000000A ? N N   0   0 DHCP6 Protocol Driver               Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(95E3669D-34BE-4775-A651-7EA41B69D89E)
118 0000000A ? N N   0   0 MTFTP6 Network Service Driver       Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(99F03B99-98D8-49DD-A8D3-3219D0FFE41E)
11B 0000000A D N N   2   0 FAT File System Driver             Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(961578FE-B6B7-44C3-AF35-6BC705CD2B1F)
11C 0000000A ? N N   0   0 iSCSI Driver                       Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(86CDDF93-4872-4597-8AF9-A35AE4D3725F)
11D 0000000A ? N N   0   0 iSCSI Driver
11F 0000000A ? N N   0   0 SCSI Bus Driver                    Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0167CCC4-D0F7-4F21-A3EF-9E64B7CDCE8B)
120 0000000A ? N N   0   0 Scsi Disk Driver                   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0A66E322-3740-4CCE-AD62-BD172CECCA35)
124 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 Driver   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038F34E-0774-47A0-A5EF-4B94AF1A43DA)
125 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 HII Drive Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038E34E-0774-47A0-A5EF-4B94AF1A43DA)
182 00000010 ? N N   0   0 AMI CSM Block I/O Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(25ACF158-DD61-4E64-9A49-55851E9A26C7)
183 00000024 B N N   1   1 BIOS[INT10] Video Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(29CF55F8-B675-4F5D-8F2F-B87A3ECFD063)
184 00000010 ? N N   0   0 <null string>
2E7 00000011 ? N N   0   0 HighPoint NVMe RAID driver v1.1.11  PciRoot(0x1)/Pci(0x0,0x0)/Pci(0x0,0x0)/Pci(0x10,0x0)/Pci(0x0,0x0)/Offset(0x98,0xE7FF)
```

pci.txt:

```
        Vendor 10B5 Device 8747 Prog Interface 0
00   19   08    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 10B5 Device 8747 Prog Interface 0
00   19   09    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 10B5 Device 8747 Prog Interface 0
00   19   10    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 10B5 Device 8747 Prog Interface 0
00   19   11    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 10B5 Device 8747 Prog Interface 0
00   1C   00    00 ==> Mass Storage Controller - RAID controller
        Vendor 1103 Device 7202 Prog Interface 0
00   1D   00    00 ==> Mass Storage Controller - Non-volatile memory subsystem
        Vendor 1BB1 Device 5016 Prog Interface 2
00   3A   05    00 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2034 Prog Interface 0
00   3A   05    02 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2035 Prog Interface 0
00   3A   05    04 ==> Base System Peripherals - PIC
        Vendor 8086 Device 2036 Prog Interface 20
```

SSD7502:

drivers.txt:

```
110 00000000 ? N N   0   0 DNS Network Service Driver
111 0000000A ? N N   0   0 DHCP Protocol Driver               Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(94734718-0BBC-47F8-96A5-EE7A5AE6A2AD)
112 0000000A ? N N   0   0 IP4 Network Service Driver         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(9FB1A1F3-3B71-4324-B39A-745CBB015FFF)
113 0000000A ? N N   0   0 MTFTP4 Network Service             Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(DC3641B8-2FA8-4ED3-BC1F-F9962A03454B)
114 0000000A ? N N   0   0 UDP Network Service Driver         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(6D6963AB-906D-4A65-A7CA-BD40E5D6AF2B)
115 0000000A ? N N   0   0 IP6 Network Service Driver         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5BEDB5CC-D830-4EB2-8742-2D4CC9B54F2C)
116 0000000A ? N N   0   0 UDP6 Network Service Driver        Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(D912C7BC-F098-4367-92BA-E911083C7B0E)
117 0000000A ? N N   0   0 DHCP6 Protocol Driver              Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(95E3669D-34BE-4775-A651-7EA41B69D89E)
118 0000000A ? N N   0   0 MTFTP6 Network Service Driver      Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(99F03B99-98D8-49DD-A8D3-3219D0FFE41E)
11B 0000000A D N N   2   0 FAT File System Driver            Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(961578FE-B6B7-44C3-AF35-6BC705CD2B1F)
11C 0000000A ? N N   0   0 iSCSI Driver                      Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(86CDDF93-4872-4597-8AF9-A35AE4D3725F)
11D 0000000A ? N N   0   0 iSCSI Driver
11F 0000000A ? N N   0   0 SCSI Bus Driver                   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0167CCC4-D0F7-4F21-A3EF-9E64B7CDCE8B)
120 0000000A ? N N   0   0 Scsi Disk Driver                  Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0A66E322-3740-4CCE-AD62-BD172CECCA35)
124 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 Driver  Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038F34E-0774-47A0-A5EF-4B94AF1A43DA)
125 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 HII Drive Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038E34E-0774-47A0-A5EF-4B94AF1A43DA)
182 00000010 ? N N   0   0 AMI CSM Block I/O Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(25ACF158-DD61-4E64-9A49-55851E9A26C7)
183 00000024 B N N   1   1 BIOS[INT10] Video Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(29CF55F8-B675-4F5D-8F2F-B87A3ECFD063)
184 00000010 ? N N   0   0 <null string>
2EE 00000011 B N N   1   0 HighPoint NVMe RAID driver v1.1.12  PciRoot(0x2)/Pci(0x0,0x0)/Pci(0x0,0x0)/Pci(0xC,0x0)/Pci(0x0,0x0)/Pci(0x14,0x0)/Pci(0x0,0x0)/Offset(0x98,0xE7FF)
```

pci.txt:

```
00   40   00    00 ==> Mass Storage Controller - Non-volatile memory subsystem
        Vendor 1BB1 Device 5016 Prog Interface 2
00   43   00    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   44   14    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   44   15    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   45   00    00 ==> Mass Storage Controller - RAID controller
        Vendor 1103 Device 7505 Prog Interface 0
00   5D   02    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 8086 Device 2032 Prog Interface 0
00   5D   05    00 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2034 Prog Interface 0
00   5D   05    02 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2035 Prog Interface 0
00   5D   05    04 ==> Base System Peripherals - PIC
        Vendor 8086 Device 2036 Prog Interface 20
00   5D   0E    00 ==> Data Acquisition & Signal Processing Controllers - Performance Counters
        Vendor 8086 Device 2058 Prog Interface 0
```

SSD7505:

drivers.txt:

```
110 00000000 ? N N   0   0 DNS Network Service Driver
111 0000000A ? N N   0   0 DHCP Protocol Driver                 Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(94734718-0BBC-47FB-96A5-EE7A5AE6A2AD)
112 0000000A ? N N   0   0 IP4 Network Service Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(9FB1A1F3-3B71-4324-B39A-745CBB015FFF)
113 0000000A ? N N   0   0 MTFTP4 Network Service              Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(DC3641B8-2FA8-4ED3-BC1F-F9962A03454B)
114 0000000A ? N N   0   0 UDP Network Service Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(6D6963AB-906D-4A65-A7CA-BD40E5D6AF2B)
115 0000000A ? N N   0   0 IP6 Network Service Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5BED85CC-D830-4EB2-8742-2D4CC9B54F2C)
116 0000000A ? N N   0   0 UDP6 Network Service Driver         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(D912C7BC-F098-4367-92BA-E911083C7B0E)
117 0000000A ? N N   0   0 DHCP6 Protocol Driver               Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(95E3669D-34BE-4775-A651-7EA41B69D89E)
118 0000000A ? N N   0   0 MTFTP6 Network Service Driver       Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(99F03B99-98D8-49DD-A8D3-3219D0FFE41E)
11B 0000000A D N N   2   0 FAT File System Driver              Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(961578FE-B6B7-44C3-AF35-6BC705CD2B1F)
11C 0000000A ? N N   0   0 iSCSI Driver                       Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(86CDDF93-4872-4597-8AF9-A35AE4D3725F)
11D 0000000A ? N N   0   0 iSCSI Driver
11F 0000000A ? N N   0   0 SCSI Bus Driver                    Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0167CCC4-D0F7-4F21-A3EF-9E64B7CDCE8B)
120 0000000A ? N N   0   0 Scsi Disk Driver                   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0A66E322-3740-4CCE-AD62-BD172CECCA35)
124 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 Driver   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038F34E-0774-47A0-A5EF-4B94AF1A43DA)
125 00010D92 ? N Y   0   0 Intel(R) DCPMM 1.0.0.3474 HII Drive Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5038E34E-0774-47A0-A5EF-4B94AF1A43DA)
182 00000010 ? N N   0   0 AMI CSM Block I/O Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(25ACF158-DD61-4E64-9A49-55851E9A26C7)
183 00000024 B N N   1   1 BIOS[INT10] Video Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(29CF55F8-B675-4F5D-8F2F-B87A3ECFD063)
184 00000010 ? N N   0   0 <null string>
2EF 00000011 B N N   1   2 HighPoint NVMe RAID driver v1.1.11  PciRoot(0x2)/Pci(0x0,0x0)/Pci(0x0,0x0)/Pci(0xC,0x0)/Pci(0x0,0x0)/Pci(0x14,0x0)
/Pci(0x0,0x0)/Offset(0x98,0xE7FF)
```

pci.txt:

```
        Vendor 1000 Device C010 Prog Interface 0
00   44   14    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   44   15    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   45   00    00 ==> Mass Storage Controller - RAID controller
        Vendor 1103 Device 7505 Prog Interface 0
00   47   00    00 ==> Mass Storage Controller - Other mass storage controller
        Vendor 1000 Device C010 Prog Interface 0
00   5D   02    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 8086 Device 2032 Prog Interface 0
00   5D   05    00 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2034 Prog Interface 0
00   5D   05    02 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2035 Prog Interface 0
00   5D   05    04 ==> Base System Peripherals - PIC
        Vendor 8086 Device 2036 Prog Interface 20
```

SSD7540:

drivers:

```
115 0000000A ? - -   -   - IP6 Network Service Driver          Ip6Dxe
116 0000000A ? - -   -   - UDP6 Network Service Driver         Udp6Dxe
117 0000000A ? - -   -   - DHCP6 Protocol Driver               Dhcp6Dxe
118 0000000A ? - -   -   - MTFTP6 Network Service Driver       Mtftp6Dxe
11B 0000000A D - -   2   - FAT File System Driver              Fat
11C 0000000A ? - -   -   - iSCSI Driver                       IScsiDxe
11D 0000000A ? - -   -   - iSCSI Driver                       IScsiDxe
11F 0000000A ? - -   -   - SCSI Bus Driver                    ScsiBus
120 0000000A ? - -   -   - Scsi Disk Driver                   ScsiDisk
124 00010D92 ? - X   -   - Intel(R) DCPMM 1.0.0.3474 Driver   FvFile(5038F34E-0774-47A0-A5EF-4B94AF1A43DA)
125 00010D92 ? - X   -   - Intel(R) DCPMM 1.0.0.3474 HII Drive FvFile(5038E34E-0774-47A0-A5EF-4B94AF1A43DA)
182 00000010 ? - -   -   - AMI CSM Block I/O Driver           CsmBlockIo
183 00000024 B - -   1   1 BIOS[INT10] Video Driver           CsmVideo
184 00000010 ? - -   -   - <null string>
2FB 00000011 D - -   8   - HighPoint NVMe RAID driver v1.1.11  Offset(0x98,0xE7FF)
```

pci.txt:

```
00   44   08    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   44   0C    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   49   00    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   4A   14    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   4A   15    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 1000 Device C010 Prog Interface 0
00   4B   00    00 ==> Mass Storage Controller - RAID controller
        Vendor 1103 Device 7540 Prog Interface 0
00   4D   00    00 ==> Mass Storage Controller - Other mass storage controller
        Vendor 1000 Device C010 Prog Interface 0
00   5D   02    00 ==> Bridge Device - PCI/PCI bridge
        Vendor 8086 Device 2032 Prog Interface 0
00   5D   05    00 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2034 Prog Interface 0
00   5D   05    02 ==> Base System Peripherals - Other system peripheral
        Vendor 8086 Device 2035 Prog Interface 0
00   5D   05    04 ==> Base System Peripherals - PIC
        Vendor 8086 Device 2036 Prog Interface 20
```

SSD7580A:

drivers:

```
197 0000000A D N N   2  0 HttpDxe
198 00000000 D N N   3  0 DNS Network Service Driver        Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(B219E140-DFFC-11E3-B956-0022681E6906)
199 00000000 D N N   2  0 DNS Network Service Driver
19C 0000000A D N N   3  0 DHCP Protocol Driver             Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(94734718-0BBC-47FB-96A5-EE7A5AE6A2AD)
19D 0000000A B N N   7  34 IP4 Network Service Driver      Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(9FB1A1F3-3B71-4324-B39A-745CBB015FFF)
19E 0000000A B N N   4  4 MTFTP4 Network Service           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(DC3641B8-2FA8-4ED3-BC1F-F9962A03454B)
19F 0000000A B N N  20  34 UDP Network Service Driver      Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(6D6963AB-906D-4A65-A7CA-BD40E5D6AF2B)
1A0 0000000A B N N   4  24 IP6 Network Service Driver      Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(5BEDB5CC-D830-4EB2-8742-2D4CC9B54F2C)
1A1 0000000A B N N  14  24 UDP6 Network Service Driver     Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(D912C7BC-F098-4367-92BA-E911083C7B0E)
1A2 0000000A B N N   2  2 DHCP6 Protocol Driver           Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(95E3669D-34BE-4775-A651-7EA41B69D89E)
1A3 0000000A B N N   2  2 MTFTP6 Network Service Driver   Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(99F03B99-98D8-49DD-A8D3-3219D0FFE41E)
1A6 0000000A D N N   2  0 FAT File System Driver          Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(961578FE-B6B7-44C3-AF35-6BC705CD2B1F)
1A7 0000000A D N N   2  0 iSCSI Driver                    Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(86CDDF93-4872-4597-8AF9-A35AE4D3725F)
1A8 0000000A D N N   2  0 iSCSI Driver
1AA 0000000A ? N N   0  0 SCSI Bus Driver                 Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0167CCC4-D0F7-4F21-A3EF-9E64B7CDCE8B)
1AB 0000000A ? N N   0  0 Scsi Disk Driver                Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(0A66E322-3740-4CCE-AD62-BD172CECCA35)
1AC 0000000A D N N   1  0 TcpsDxe                         Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(9FE6C519-86DA-49DC-8725-C2594628AD46)
1AE 00000001 D N N   1  0 SMCI Redfish HI USB CDC-RNDIS Drive Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(E71044B4-0BD7-4448-9133-BB323D5BE85B)
1AF 00000001 B N N   1  1 SMCI USB UNDI Driver            Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(C0C2AB85-93D8-44C5-84CB-28B62A52E197)
1B9 00000010 ? N N   0  0 AMI CSM Block I/O Driver        Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(25ACF158-DD61-4E64-9A49-55851E9A26C7)
1BA 00000024 ? N N   0  0 BIOS[INT10] Video Driver        Fv(5C60F367-A505-419A-859E-2A4FF6CA6FE5)/FvFile(29CF55F8-B675-4F5D-8F2F-B87A3ECFD063)
1BB 00000010 ? N N   0  0 <null string>
1E2 00011001 B N N   1  1 ASPEED Graphics Driver          PciRoot(0x1)/Pci(0x3,0x4)/Pci(0x0,0x0)/Pci(0x0,0x0)/Offset(0x80E0,0x113FF)
235 00140E1B B Y Y   1  1 Broadcom Gigabit Ethernet Driver  PciRoot(0x1)/Pci(0x3,0x6)/Pci(0x0,0x0)/Offset(0xF834,0x2B7FF)
236 00140E1B B Y Y   1  1 Broadcom Gigabit Ethernet Driver  PciRoot(0x1)/Pci(0x3,0x6)/Pci(0x0,0x1)/Offset(0xF834,0x2B7FF)
237 00000011 ? N N   0  0 HighPoint NVMe RAID driver v1.1.11  PciRoot(0x2)/Pci(0x3,0x1)/Pci(0x0,0x0)/Pci(0xC,0x0)/Pci(0x0,0x0)/Pci(0x14,0x0)/Pci(0x0,0x0)/Offset(0x98,0xE7FF)
```

pci.txt:

```
00  8A  0C   00 ==> Bridge Device - PCI/PCI bridge
     Vendor 1000 Device C010 Prog Interface 0
00  8F  00   00 ==> Bridge Device - PCI/PCI bridge
     Vendor 1000 Device C010 Prog Interface 0
00  90  14   00 ==> Bridge Device - PCI/PCI bridge
     Vendor 1000 Device C010 Prog Interface 0
00  90  15   00 ==> Bridge Device - PCI/PCI bridge
     Vendor 1000 Device C010 Prog Interface 0
00  91  00   00 ==> Mass Storage Controller - RAID controller
     Vendor 1103 Device 7580 Prog Interface 0
00  93  00   00 ==> Mass Storage Controller - Other mass storage controller
     Vendor 1000 Device C010 Prog Interface 0
00  94  00   00 ==> Non-Essential Instrumentation - Non-Essential Instrumentation Function
     Vendor 1022 Device 148A Prog Interface 0
00  94  00   02 ==> Encryption/Decryption Controllers - Other Encrypt/Decrypt
     Vendor 1022 Device 1498 Prog Interface 0
00  95  00   00 ==> Non-Essential Instrumentation - Non-Essential Instrumentation Function
     Vendor 1022 Device 1485 Prog Interface 0
00  95  00   02 ==> Encryption/Decryption Controllers - Other Encrypt/Decrypt
     Vendor 1022 Device 1498 Prog Interface 0
```

If you fail to update SSD7000 Series NVMe Controller UEFI ROM, please submit a support ticket using our Online Support Portal, include a description of the problem in as much detail as possible, and upload the **driver.txt** & **pci.txt** information.