# Advantech Product FAQ

PCIE-1220PS NVM upgrade from V4.53 to V7.1

| Applicable model list | PCIE-1220PS series |
|---|---|
| Model name version | N/A |
| NVM Version | V 4.53 (4.53 0x8000231d) |

**Attention please:**

**The nvmupdate utility only supports NMC's NVM upgraded, it doesn't support NVM downgraded.**

**Description:**

1. Following step is upgrading PCIE-1220PS NVM fromV4.53 (0x8000231D) to V7.10 (0x80007b60) by Intel nvmupdate utility (UEFI Version).

**Flashing step:**

1. Please decompress PCIE-1220PS.zip in USB, insert this USB in system and power on system.

2. We recommend customer to execute PCIE-1220PS NVM upgrading in BIOS UEFI shell, please login BIOS and choose "UEFI: Built-in EFI Shell" in Save & Exit

```
          Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
     Main  Platform  Hardware  Server Mgmt  Post & Boot  Security  Save & Exit
/----------------------------------------------+--------------------------------\
|  Save Changes and Exit                        |                               |
|  Discard Changes and Exit                     |                               |
|  Save Changes and Reset                       |                               |
|  Discard Changes and Reset                    |                               |
|                                               |                               |
|  Save Options                                 |                               |
|  Save Changes                                 |                               |
|  Discard Changes                              |                               |
|  Restore Defaults                             |                               |
|  Save as User Defaults                        |-------------------------------|
|  Restore User Defaults                        |><: Select Screen              |
|                                               |^v: Select Item                |
|  Boot Override                                |Enter: Select                  |
|  UEFI: Built-in EFI Shell                     |+/-: Change Opt.               |
|  UEFI: UFD 3.0 Silicon-Power16G1.00, Partition 1 |F1: General Help            |
|  UFD 3.0 Silicon-Power16G1.00                 |F2: Previous Values            |
|                                               |F3: Optimized Defaults         |
|                                               |F4: Save & Exit                |
|                                               |ESC: Exit                      |
\----------------------------------------------+--------------------------------/
          Version 2.20.1275. Copyright (C) 2019 American Megatrends, Inc.
```

Following picture is BIOS UEFI shell.

```
UEFI Interactive Shell v2.2
EDK II
UEFI v2.70 (American Megatrends, 0x0005000E)
Mapping table
      FS0: Alias(s):HD0g0b:;BLK1:
          PciRoot(0x0)/Pci(0x14,0x0)/USB(0x6,0x0)/HD(1,MBR,0x028B5E23,0x3F,0x1CE
7FC1)
      BLK0: Alias(s):
          PciRoot(0x0)/Pci(0x14,0x0)/USB(0x6,0x0)
Press ESC in 5 seconds to skip startup.nsh or any other key to continue.
Shell> █
```

3. Please key-in following command to check PCIE-1220PS NVM version in Linux before flash NVM.

   Attention: "PCIE-1220PS.tgz" only supports V4.53 (0x8000231D) to V7.10 (0x80007b60), **if showing NVM version is not V4.53 (0x8000231D) , please don't execute this utility.**

```
# ethtool -i <PCIE-1220PS network device name>

Ex:

# ethtool -i b3bp0

driver: i40e

version: 2.8.43

firmware-version: 4.53 0x8000231d 0.0.0

expansion-rom-version:

bus-info: 0000:3b:00.0

supports-statistics: yes

supports-test: yes

supports-eeprom-access: yes

supports-register-dump: yes

supports-priv-flags: yes
```

4. Please refer following commands to check PCIE-1220PS NVM files in BIOS UEFI shell, and we suggest system only insert a USB flash and PCIE-1220PS network card,

```
Shell> fs0:
FS0:\> cd PCIE-1220PS
FS0:\PCIE-1220PS\> ls
Directory of: FS0:\PCIE-1220PS\
02/15/2020  16:59 <DIR>          8,192  .
02/15/2020  16:59 <DIR>              0  ..
01/15/2020  00:58                  327  nvmupdate.cfg
01/23/2020  07:37            5,431,648  nvmupdate64e.efi
02/15/2020  16:55            4,194,304  PCIE-1220PS_XL710_X710_7p10_SFI_NCSI_CFGID7p2_Dual.bin
01/15/2020  00:54                  357  PCIE-1220PS.log
          4 File(s)    9,626,636 bytes
          2 Dir(s)
```

5.   Please refer following command instruction to execute nvmupdate utility in BIOS UEFI shell.

```
FS0:\PCIE-1220PS\> nvmupdate64e.efi -l PCIE-1220PS.log


Intel(R) Ethernet NVM Update Tool
NVMUpdate version 1.34.22.6
Copyright (C) 2013 - 2019 Intel Corporation.



WARNING: To avoid damage to your device, do not stop the update or reboot or power off the system
during this update.
Inventory in progress. Please wait [***|......]



Num Description                     Ver.(hex)  DevId S:B    Status
=== =============================== ========== ===== ====== ==============
01) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:001 Update not
    Connection                                                available
02) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:002 Update not
    Connection                                                available
03) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:005 Update not
    Connection                                                available
04) Intel(R) Ethernet Connection X722  3.51(3.33)  37D3 00:028 Update not
    for 10GbE SFP+                                            available
05) Intel(R) Ethernet Controller X710  4.83(4.53)  1572 00:059 Update
    for 10GbE SFP+                                            available

Options: Adapter Index List (comma-separated), [A]ll, e[X]it
Enter selection: 05  ←X710 device is item 5, please choose 5 to flash X710 NVM
Would you like to back up the NVM images? [Y]es/[N]o: Y  ←please choose Y to backup older NVM
Update in progress. This operation may take several minutes.
[....+*****]



Num Description                     Ver.(hex)  DevId S:B    Status
=== =============================== ========== ===== ====== ==============
01) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:001 Update not
    Connection                                                available
02) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:002 Update not
    Connection                                                available
03) Intel(R) I210 Gigabit Network   3.37(3.25)  1533 00:005 Update not
    Connection                                                available
```

```
04) Intel(R) Ethernet Connection X722    3.51(3.33)    37D3 00:028 Update not
    for 10GbE SFP+                                                 available
05) Intel(R) Ethernet Controller X710    7.16(7.10)    1572 00:059 Update
    for 10GbE SFP+                                                 successful


Power Cycle is required to complete the update process.


Tool execution completed with the following status: All operations completed successfully.
Press any key to exit.
```

6. When utility reports "**All operations completed successfully**", it means successful to upgrade NVM, please press any key to exit, and power off system (AC off).

7. If it reports error message during NVM flashing, please send "PCIE-1220PS.log" to Advantech NCG TSE team (support@advantech-ncg.zendesk.com ) .

8. Please power on system and login Linux, key-in following command to check PCIE-1220PS NVM version again, the NVM version will show V7.10 (0x80007b60) after upgrade NVM

```
# ethtool -i <PCIE-1220PS network device name>
Ex:
# ethtool -i b3bp0
driver: i40e
version: 2.8.43
firmware-version: 7.10 0x80007b60 0.0.0
expansion-rom-version:
bus-info: 0000:3b:00.0
supports-statistics: yes
supports-test: yes
supports-eeprom-access: yes
supports-register-dump: yes
supports-priv-flags: yes
```