Tools — H2OFFT (Flash Firmware Tool)

Ver. 0.6

SPD, SEG Group
Insyde Software
March, 2016

update

History

Rev.	Data	Author	Approver	Summary
0.1	2013/12/31	Jim Wu	Giant Liang	Initial version
0.2	2014/01/06	Jim Wu	Giant Liang	Adding “DOS Only” and “Windows” section. Adding “Error Message and Trouble Shooting” section.
0.3	2014/03/06	Zawa Chiu	Giant Liang	Add Linux and Android FFT
0.4	2014/10/29	Darton Chen	Giant Liang	Common arguments and platform.ini of DOS/Windows/Linux are updated. New feature command.ini is added.
0.5	2014/12/18	Tengchang Chen	Giant Liang	Add “EFI Flash Signer” and “Insyde FD Packer” section. Add File Information.
0.6	2016/03/02	Kanos Huang		Added –extrfd argument to extract FD file for single package of Windows version. Merged command.ini into platform.ini. Modified few changes in option tab of option dialog. Updated platform.ini.

Agenda

- Features
- UEFI Shell/DOS/Windows/Linux/Android
  - Operation Mode
  - Command Interface
  - Common Arguments
- DOS/Windows/Linux
  - Command Configuration
  - Tool Configuration
- Linux
  - Graphic Mode
- Windows
  - Graphic Mode
  - Customizing Flash Utility
  - Flash Utility Options
- Error Message and Trouble Shooting
- EFI Flash Signer & Insyde FD Packer
- Files Information

Features

Features

- Flexibility
  - Save and make a backup file of the current system BIOS before updating with a new one.
  - Easily update the system BIOS under supported OS environment.
  - Verify the system BIOS to ensure system reliability.
  - Auto detects hardware settings so user will know if H2OFFT is compatible with system or not. This gives enhanced security.

- Supported OS environment
  - UEFI SHELL
  - DOS
  - WINDOWS
  - LINUX
  - Android

Features

- Supported code base H2O 3.7/5.0/5.1

○ - Support
— - Not Support

OS Environment \ Kernel	Kernel (3.72)	Kernel (5.0)	Kernel (5.1)
UEFI SHELL	○	○	○
DOS	○	○	○
WINDOWS	○	○	○
Linux	○	○	○
Android	○	○	○

UEFI Shell/DOS/Windows/Linux/Android — Operation Mode

Operation Mode

- Console/Command Mode
  - 32 Bits — Run H2OFFT-S.efi (Shell) / H2OFFT-D.exe (DOS)
  - 64 Bits — Run H2OFFT-Sx64.efi (Shell);
  - E.g.:
    - UEFI Shell — `fs0:\> H2OFFT-Sx64.efi -?`
    - DOS — `C:\>H2OFFT-D.exe -?`
    - Linux/Androoid — cd to H2OFFT folder and run ./H2OFFT.sh -h

- The user guide uses the UEFI Shell command interface to describe the common arguments between UEFI Shell and DOS.

UEFI Shell/DOS/Windows/Linux/Android — Command Interface

Command Interface

◯ - Support
— - Not Support

Argument	Description	UEFI Shell	DOS/Windows/Linux	Android
-? or -H	This flash utility help.	◯	◯	Only -H
-AB	Check battery life percent.	◯	◯	◯
-AC	Do not check ac plug in.	◯	◯	◯
-ACB	Check AC plug-in & battery percentage.	◯	◯	
-ALL	Flash all.	◯	◯	◯
-B	Flash PEI volume.	◯	◯	◯
-BEEP	On flashing beep.	—	◯	—
-BEEP:Frequency	On flashing beep with the frequency.	—	◯	—
-BIOS	Flash BIOS region.	◯	◯	◯
-CO	Console mode.	—	—	◯
-C	Clear CMOS.	◯	◯	—
-CM	Clear CMOS after flash complete.	◯	◯	—
-CM:Filename	Flash Calpella Ignition ME with OEM rule	—	◯	—
-CMS:Filename	Flash Calpella Ignition ME without check version	—	◯	—
-CR	Read CMOS	—	◯	◯
-CW	Write CMOS	—	◯	◯
-DAM	Disable show the message of do not remove AC	—	◯	—

Command Interface

◯ - Support
— - Not Support

Argument	Description	UEFI Shell	DOS/Windows/Linux	Android
-DC	Disable comparison in force flash process.	◯	◯	◯
-DR	Enable driver in Linux	—	Only Linux support	
-DESC	Flash DESC region.	◯	◯	◯
-DI	Disable ID display.	◯	◯	—
-E	Flash EC.	◯	◯	◯
-E:Offset(Hex), Size(Hex), Address(Hex)	Update fix size from file offset to physical address.	◯	◯	◯
-EC	Flash EC.	◯	◯	—
-ECB	Flash EC with BIOS.	◯	◯	—
-ECP	Flash EC with percentage.	◯	◯	◯
-EC:String	Flash EC and BIOS	—	◯	—
-ECBP	Flash EC with BIOS with percentage.	◯	◯	◯
-ECC	Compare EC before flash.	—	◯	—
-ECV	Verify EC after flash.	—	◯	—
-ECR	Read Non-share EC.	—	◯	—
-EDT#@:"VALUE"	Update customizes data (such as logo with signature) by IHISI.	—	◯	—
-EOB	Only flash BIOS when EC and BIOS are merged in the same file.	—	◯	—

Command Interface

◯ - Support
— - Not Support

Argument	Description	UEFI Shell	DOS/Windows/Linux	Android
-FD	Flash DXE.	◯	◯	◯
-FE	Flash EC.	◯	◯	◯
-FILE:Filename	Before Flash to erase variable from file.	—	◯	—
-FL	Flash Logo.	◯	◯	◯
-FM	Flash CPU Microcode.	◯	◯	◯
-FN	Flash OEM NVS.	◯	◯	◯
-FP	Flash password.	◯	◯	◯
-FT:Type	Flash OEM special type.	◯	◯	◯
-FV	Flash Variable.	◯	◯	◯
-G	Save current BIOS to file.	◯	◯	◯
-GbE	Flash GbE region.	◯	◯	◯
-GU:String	Compare GUID with current BIOS.	—	◯	—
-IV	Show tool and bios support IHISI version.	—	◯	—
-I:Path	Setup the folder includes platform.ini	—	◯	◯
-LF	Load Fd file by another floppy disk.	—	◯	—
-LG:GUID	Input GUID (For variable access or other features which need to input GUID)	—	◯	—
-MC	Skip all platform model check.	◯	◯	◯
-ME	Flash ME region.	◯	◯	◯
-N	Do not reboot after flash.	◯	◯	◯
-NV	Flash OEM NVS.	◯	◯	◯

Command Interface

◯ - Support
— - Not Support

Argument	Description	UEFI Shell	DOS/Windows/Linux	Android
-O	Save current BIOS to file.	◯	◯	◯
-P	Flash DXE.	◯	◯	◯
-PBI:Type(Hex)	Flash BIOS protect region. Type is the protected region type.	—	◯	—
-PDR	Flash Platform Data region.	◯	◯	—
-PI	Dump BVDT protection MAP.	—	◯	—
-PMCA:ModelName	Change platform model name.	—	◯	—
-PMCAF:FileName	Change display platform model name by file (support multiID).	—	◯	—
-PN	Flash non-SPI flash part.	◯	◯	
-PQ	Query ROM protection MAP in current ROM.	◯	◯	◯
-PR	Query region MAP in current ROM.	◯	◯	◯
-PS	Flash SPI flash part.	◯	◯	—
-Q	Quiet Mode.	◯	◯	◯
-R	Reboot after flash.	◯	◯	—
-RA	Preserve all SMBIOS Structure.	◯	◯	◯
-REBOOT	Reboot after flash.	◯	◯	◯
-RH	Read HDCP key	—	◯	—
-RT:Times, Delay	When SMI error, retry how many times and delay how many milliseconds between each retry.	◯	◯	◯

Command Interface

◯ - Support
— - Not Support

Argument	Description	UEFI Shell	DOS/Windows/Linux	Android
-RV	Read variable.	—	◯	—
-RVA	Reserve variable region	—	◯	—
-Rx	Preserve Typex SMBIOS Structure.	◯	◯	◯
-S	Shutdown after flash.	◯	◯	◯
-SB	Get and Display New Bios ID.	◯	◯	◯
-SC	Display Current Bios ID.	◯	◯	◯
-SPN	Flash NV Storage on security platform.	◯	◯	◯
-SPO	Flash OEM Data Area.	◯	◯	◯
-SPV	Flash Variable Area.	◯	◯	◯
-SP:Type(Hex)	Flash TypeXX Area.	◯	◯	
-SSB	Skip Secure Boot Protect NV region.	◯	◯	◯
-SE:String	Compare serial number with current BIOS.	—	◯	—
-silent	Run in Silent mode	—	—	◯
-U	Show confirm message.	◯	◯	◯
-UU:String	Compare UUID with current BIOS	—	◯	—
-V	Verify file integrity.	◯	◯	◯
-VC	Check downgrade version and same version	—	—	◯
-VRT:Times	When verify error, retry how many times.	◯	◯	◯
-WH	Write HDCP key.	—	◯	—
-X	Skip all platform model check.	◯	◯	◯
-Z	Show the AP help list.	—	◯	—

UEFI Shell/DOS/Windows/Linux/Android — Common Arguments

Common Arguments

- Argument "**-?**" or "**-H**": Command Help
  - Type command "H2OFFT-Sx64.efi -?"
  - Type command "H2OFFT-Sx64.efi -H"

```
fs0:\> H2OFFT-Sx64.efi -?
```



```
    Insyde H2OFFT (Flash Firmware Tool) Version (SEG) 100.00.05.00
    Copyright(c) 2012 - 2013, Insyde Software Corp. All Rights Reserved.


      -? , H              This flash utility help.
      -AB                 Check battery life percent.
      -AC                 Do not check ac plug in.
      -ACB                Check AC plug-in & battery percentage.
      -ALL                Flash all.
      -B                  Flash PEI volume.
      -BIOS               Flash BIOS region.
      -C                  Clear CMOS.
      -CM                 Clear CMOS after flash complete.
      -DC                 Disable comparison in force flash process.
      -DESC               Flash DESC region.
      -DI                 Disable ID display.
      -E                  Flash EC
      -E:Offset(Hex),Size(Hex),Address(Hex)
                          Update fix size from file offset to physical address.
      -ECBP               Flash EC with BIOS with percentage
      -ECB                Flash EC with BIOS
      -ECP                Flash EC with percentage
      -EC                 Flash EC
```

Common Arguments

- Argument "**-AB**": Check battery life percent
  - Type command "H2OFFT-Sx64.efi (filename) –AC -AB"
    - This feature uses the option "AC" to skip AC check and the AC not plug in (Only use when AC is not plugged in and with -AC). This feature will check battery percentage.

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -AC -AB
```

- Argument "**-AC**": Do not check ac plug in
  - Type command "H2OFFT-Sx64.efi (filename) -AC"
    - Before flashing the BIOS, the tool will check if the AC power is plugged in. if it is not, the tool will not continue to flash and pop a message to inform the user. If you do not want to check it, please use this feature.

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -AC
```


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Common Arguments

- Argument "**-ACB**": Check AC plug-in & battery percentage
  - Type command "H2OFFT-Sx64.efi (filename) -ACB"
    - Before flashing BIOS, the tool will check AC plug-in and battery percentage.

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ACB
```

Common Arguments

- Argument "**-ALL**": Flash all
  - Type command "H2OFFT-Sx64.efi (filename) -ALL"
    - User can use this command to flash all protected regions.

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ALL
```

- Argument "**-B**": Flash PEI volume
  - Type command "H2OFFT-Sx64.efi (filename) -B"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -B
```

Common Arguments

- Argument "**-BIOS**": Flash BIOS region
  - Type command "H2OFFT-Sx64.efi (filename) -BIOS"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -BIOS
```

- Argument "**-C**": Clear CMOS
  - Type command "H2OFFT-Sx64.efi -C"
    - Need BIOS support.

```
fs0:\> H2OFFT-Sx64.efi -C
```

Common Arguments

- Argument "**-CM**": Clear CMOS after flash complete
  - Type command "H2OFFT-Sx64.efi (filename) -CM"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -CM
```

- Argument "**-DC**": Disable comparison in force flash process
  - Type command "H2OFFT-Sx64.efi (filename) -DC"
    - During flash BIOS, tool will read the current block from BIOS and new block from file, and then compare them. If they are the same, tool will skip and not flash those blocks. This command will skip this compare feature.

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -DC
```

Common Arguments

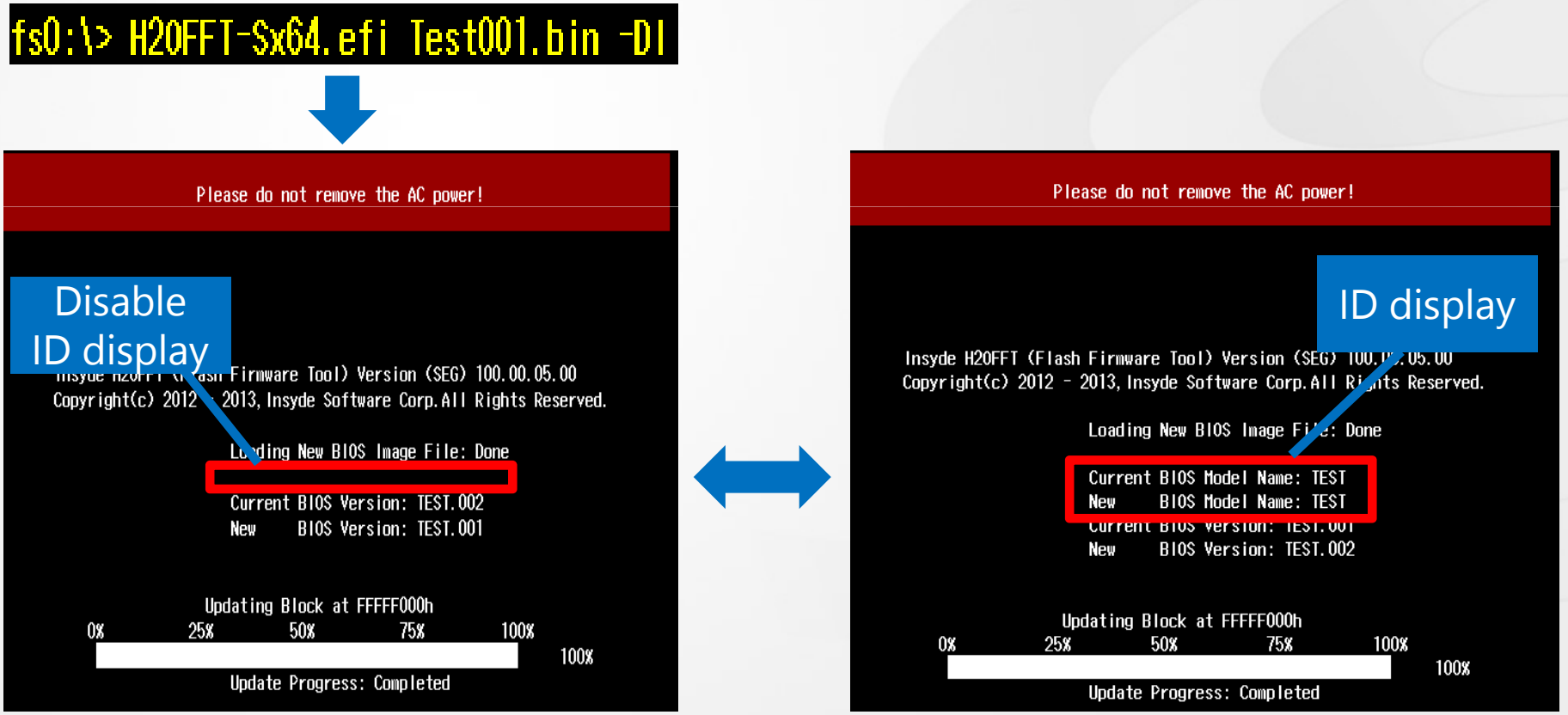
- Argument "**-DESC**": Flash DESC region
  - Type command "H2OFFT-Sx64.efi (filename) -DESC"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -DESC
```


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Common Arguments

- Argument "**-DI**": Disable ID display
  - Type command "H2OFFT-Sx64.efi (filename) -DI"



Common Arguments

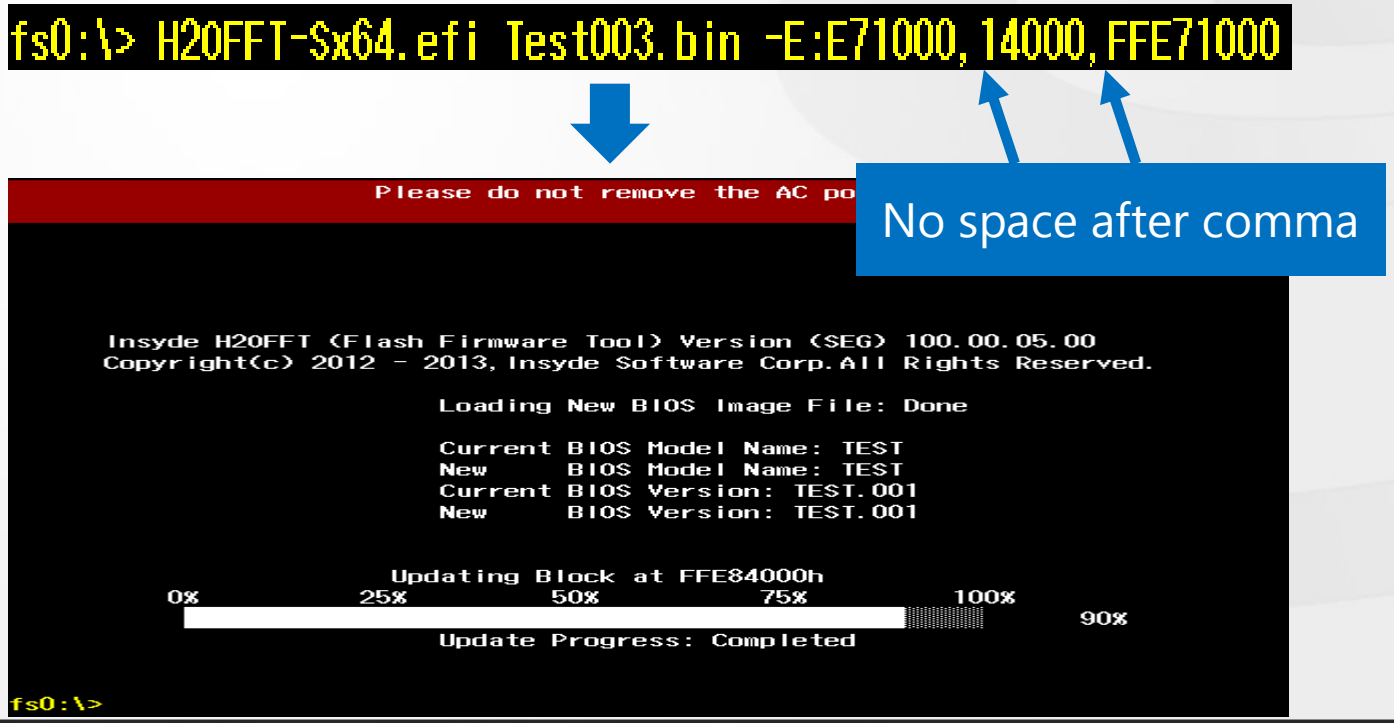
- Argument "**-E**" or "**-EC**": Flash EC
  - Type command "H2OFFT-Sx64.efi (filename) -E"
  - Type command "H2OFFT-Sx64.efi (filename) -EC"

- Argument "**-FE**": Flash EC
  - Type command "H2OFFT-Sx64.efi (filename) -FE"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FE
```

Common Arguments

- Argument "**-E:Offset(Hex),Size(Hex),Address(Hex)**": Update fix size from file offset to physical address
  - Type command
    "H2OFFT-Sx64.efi (filename) –E:Offset(Hex),Size(Hex),Address(Hex)"



Common Arguments

- Argument "**-ECBP**": Flash EC with BIOS with percentage
  - Type command "H2OFFT-Sx64.efi (filename) -ECBP"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ECBP
```

- Argument "**-ECB**": Flash EC with BIOS
  - Type command "H2OFFT-Sx64.efi (filename) -ECB"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ECB
```

Common Arguments

- Argument "**-ECP**": Flash EC with percentage
  - Type command "H2OFFT-Sx64.efi (filename) -ECP"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ECP
```

- Argument "**-FD**" or "**-P**": Flash DXE
  - Type command "H2OFFT-Sx64.efi (filename) -FD"
  - Type command "H2OFFT-Sx64.efi (filename) -P"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FD
```

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -P
```

Common Arguments

- Argument "**-FL**": Flash Logo
  - Type command "H2OFFT-Sx64.efi (filename) -FL"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FL
```

- Argument "**-FM**": Flash CPU Microcode
  - Type command "H2OFFT-Sx64.efi (filename) -FM"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FM
```

Common Arguments

- Argument "**-FN**" or "**-NV**": Flash OEM NVS
  - Type command "H2OFFT-Sx64.efi (filename) -FN"
  - Type command "H2OFFT-Sx64.efi (filename) -NV"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FN
```

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -NV
```

- Argument "**-FP**": Flash password
  - Type command "H2OFFT-Sx64.efi (filename) -FP"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FP
```

Common Arguments

- Argument "**-FT:Type**": Flash OEM special type
  - Type command "H2OFFT-Sx64.efi (filename) –FT:Type"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin FT:1
```

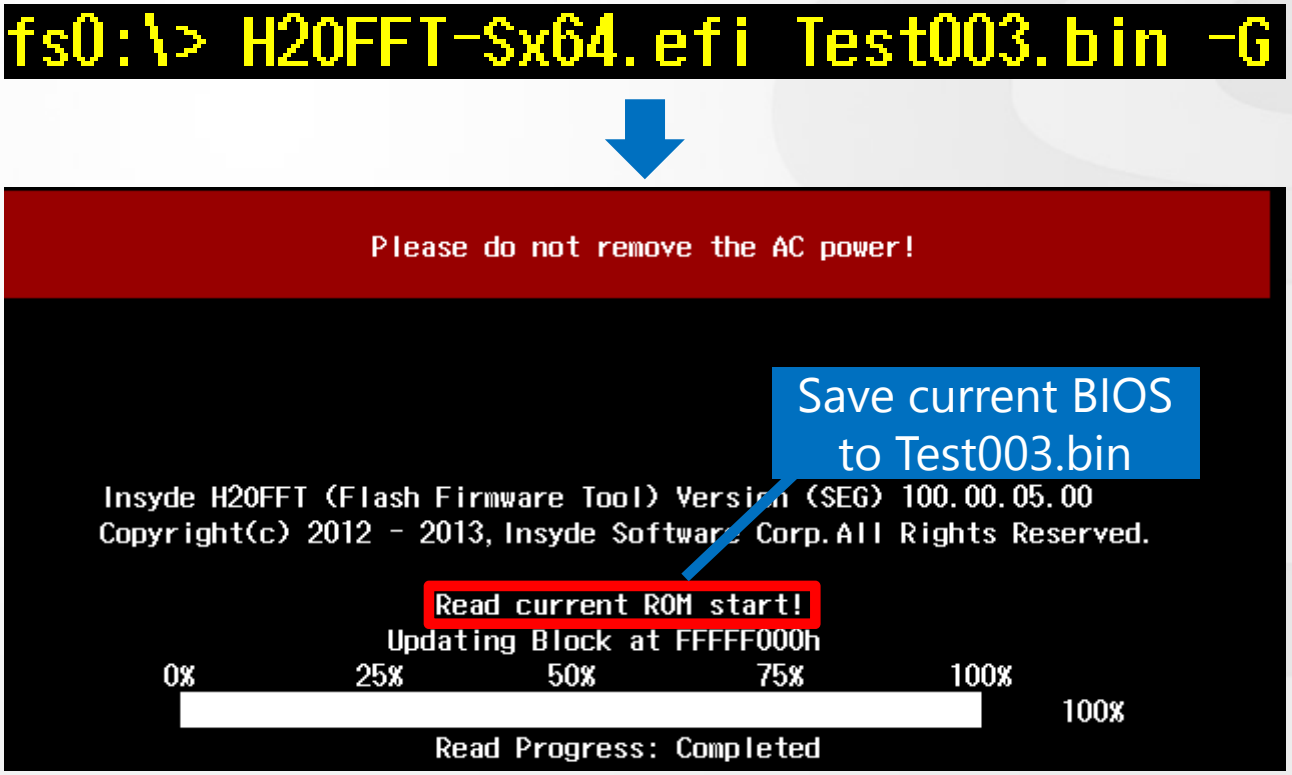
OEM Special Type#

- Argument "**-FV**": Flash Variable
  - Type command "H2OFFT-Sx64.efi (filename) –FV"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -FV
```

Common Arguments

- Argument "**-G**" or "**-O**": Save current BIOS to file
  - Type command "H2OFFT-Sx64.efi (filename) -G"
  - Type command "H2OFFT-Sx64.efi (filename) -O"



Common Arguments

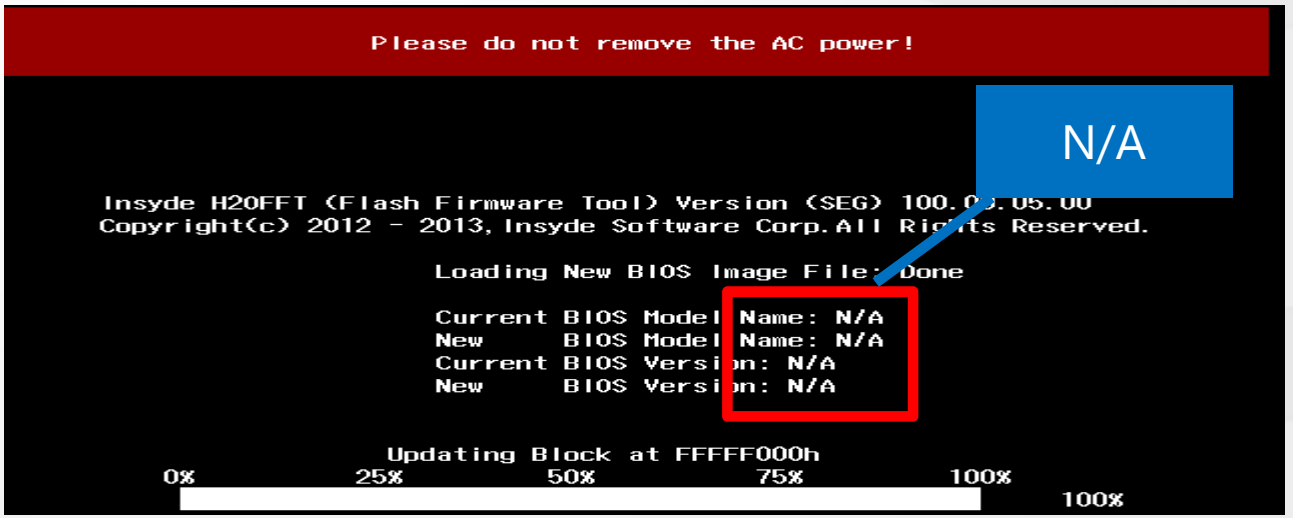
- Argument "**-GbE**": Flash GbE region
  - Type command "H2OFFT-Sx64.efi (filename) –GbE"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -GbE
```

Common Arguments

- Argument "**-MC**" or "**-X**": Skip all platform model check
  - Type command "H2OFFT-Sx64.efi (filename) -MC"
  - Type command "H2OFFT-Sx64.efi (filename) -X"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -X
```



Common Arguments

- Argument "**-ME**": Flash ME region
  - Type command "H2OFFT-Sx64.efi (filename) –ME"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -ME
```


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Common Arguments

- Argument "**-N**": Do not reboot after flash
  - Type command "H2OFFT-Sx64.efi (filename) –N"

```
fs0:\> H2OFFT-Sx64.efi Test002.bin -N
```



```
                    Please do not remove the AC power!


      Insyde H2OFFT (Flash Firmware Tool) Version (SEG) 100.00.05.00
      Copyright(c) 2012 - 2013, Insyde Software Corp. All Rights Reserved.

                          Loading New BIOS Image File: Done

                          Current BIOS Model Name: TEST
                          New     BIOS Model Name: TEST
                          Current BIOS Version: TEST.001
                          New     BIOS Version: TEST.002


                          Updating Block at FFFFF000h
          0%          25%          50%          75%          100%
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  100%
                          Update Progress: Completed

fs0:\>
```

Common Arguments

- Argument "**-PDR**": Flash Platform Data region
  - Type command "H2OFFT-Sx64.efi (filename) –PDR"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -PDR
```

- Argument "**-PN**": Flash non-SPI flash part
  - Type command "H2OFFT-Sx64.efi (filename) –PN"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -PN
```

Common Arguments

- Argument "**-PQ**": Query ROM protection MAP in current ROM
  - Type command "H2OFFT-Sx64.efi -PQ"

```
fs0:\> H2OFFT-Sx64.efi -PQ
```



```
                    Please do not remove the AC power!


     Insyde H2OFFT (Flash Firmware Tool) Version (SEG) 100.00.05.00
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        ROM MAP Protection
TYPE:  3  DESP:           DXE  Addrss: FFC00000  Size:   260000
TYPE:  2  DESP:      Variable  Addrss: FFE90000  Size:    16000
TYPE:  1  DESP: CPU Microcode  Addrss: FFE71000  Size:    14000
TYPE:  8  DESP:               Addrss: FFEA6000  Size:     1000
TYPE:  7  DESP:               Addrss: FFEA7000  Size:    17000
TYPE:  0  DESP:           PEI  Addrss: FFEE0000  Size:   120000
```

Common Arguments

- Argument "**-PR**": Query region MAP in current ROM
  - Type command "H2OFFT-Sx64.efi -PR"

```
fs0:\> H2OFFT-Sx64.efi -PR
```



```
Please do not remove the AC power!

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TYPE:  0  DESP: DESC          Offset:       0 Size:     1000  Access: 1
TYPE:  1  DESP: BIOS          Offset:  C00000 Size:   400000  Access: 1
TYPE:  2  DESP: ME            Offset:    3000 Size:   BFD000  Access: 1
TYPE:  3  DESP: GbE           Offset:    1000 Size:     2000  Access: 1
```

Common Arguments

- Argument "**-PS**": Flash SPI flash part
  - Type command "H2OFFT-Sx64.efi (filename) –PS"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -PS
```

- Argument "**-Q**" or "-silent: Quiet Mode
  - Type command "H2OFFT-Sx64.efi (filename) –Q"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -Q
```

Common Arguments

- Argument "**-R**" or " **-REBOOT**": Reboot after flash
  - Type command "H2OFFT-Sx64.efi (filename) –R"
  - Type command "H2OFFT-Sx64.efi (filename) –REBOOT"

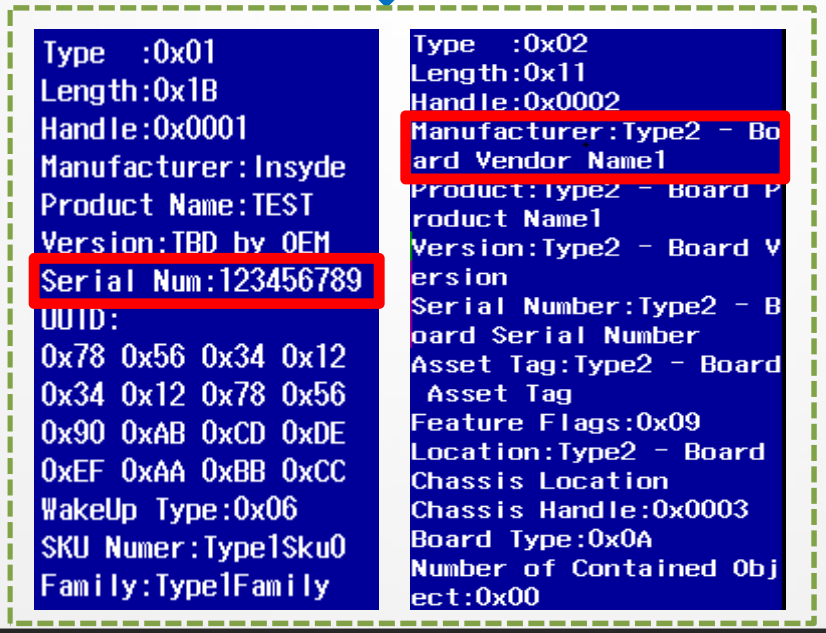
```
fs0:\> H2OFFT-Sx64.efi Test001.bin -R
```

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -REBOOT
```

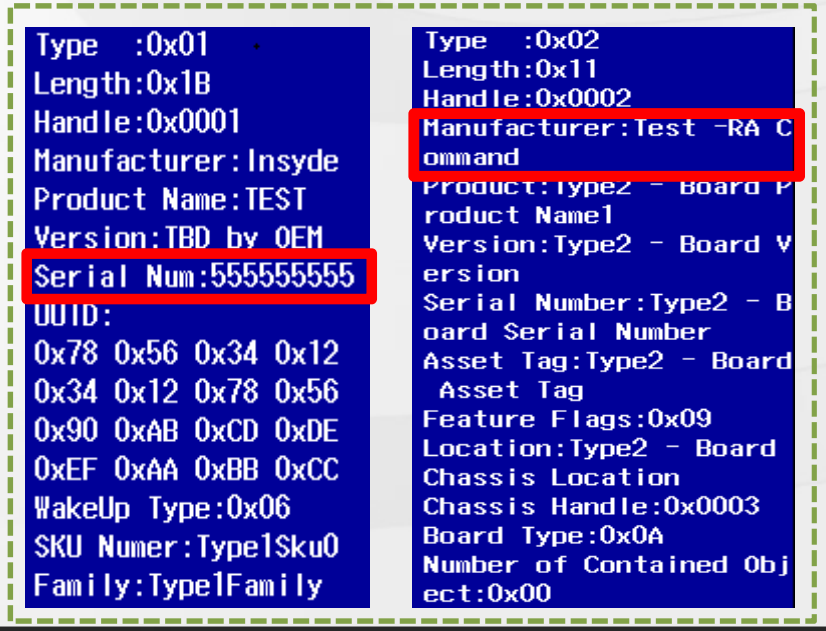
Common Arguments

- Argument "**-RA**": Preserve all SMBIOS Structure (1/2)
  - For example: Modify SMBIOS type 1 by H2OSDE-Sx64

Original Test001.bin
SMBIOS Type 1 and 2

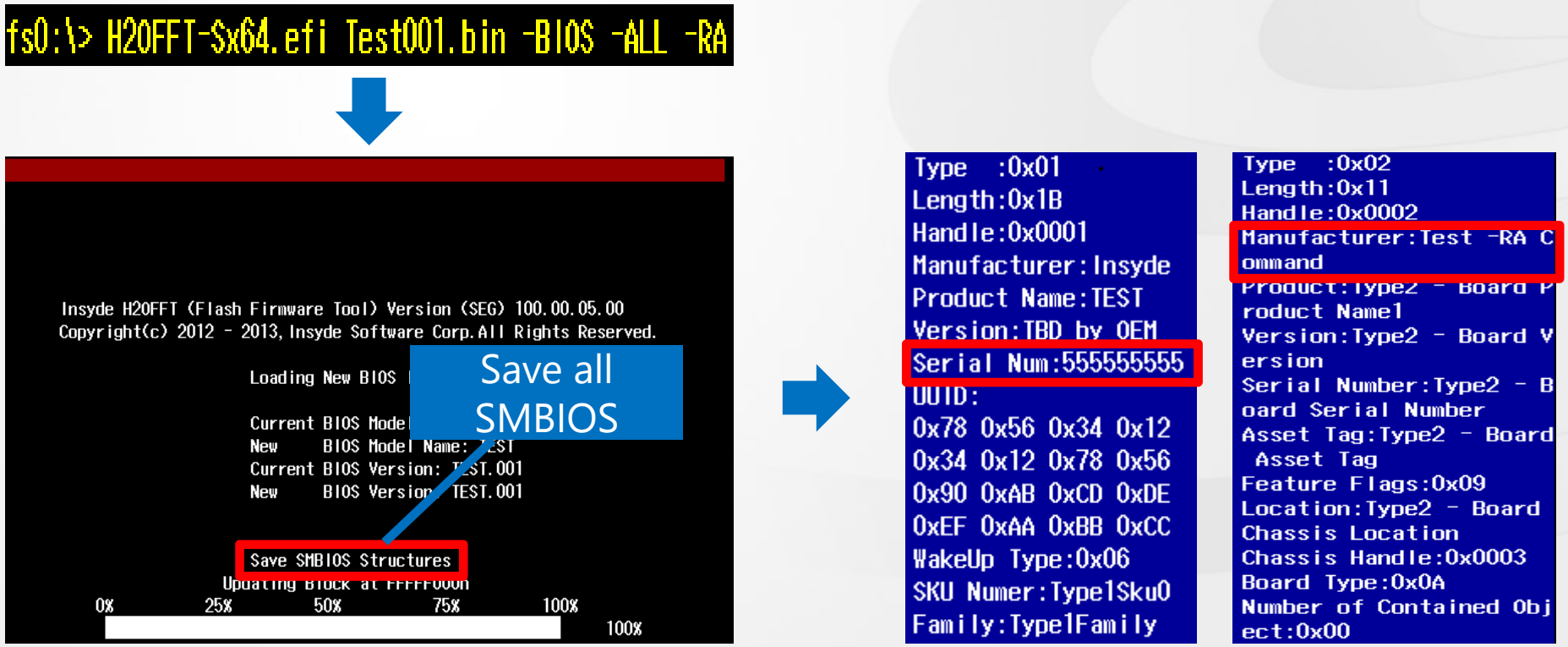


Modify by
H2OSDE-Sx64



Common Arguments

- Argument "**-RA**": Preserve all SMBIOS Structure (2/2)
  - Type command "H2OFFT-Sx64.efi (filename) –BIOS –ALL –RA"



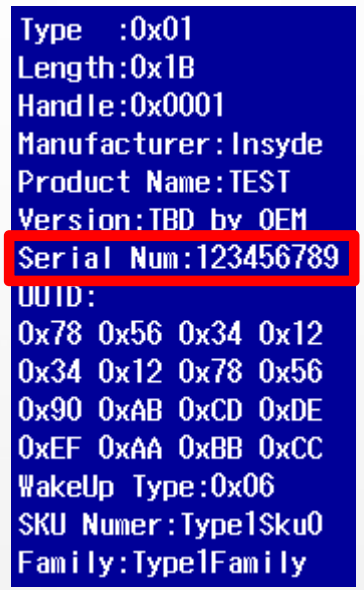
Common Arguments

- Argument "**-RT:Times,Delay**": When SMI error, retry how many times and delay how many milliseconds between each retry
  - Type command "H2OFFT-Sx64.efi–RT:Times,Delay"

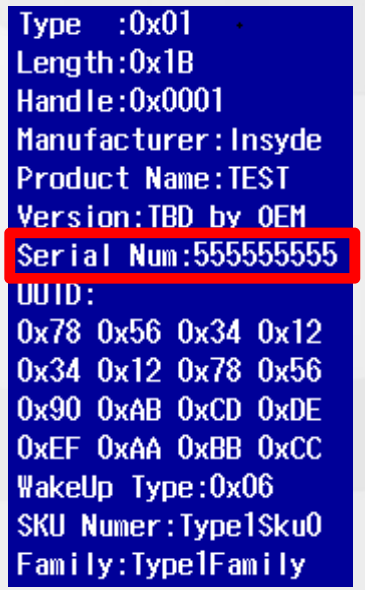
Common Arguments

- Argument "**-Rx**": Preserve Typex SMBIOS Structure (1/2)
  - Example: Modify SMBIOS type 1 by H2OSDE-Sx64

Original Test001.bin SMBIOS Type 1

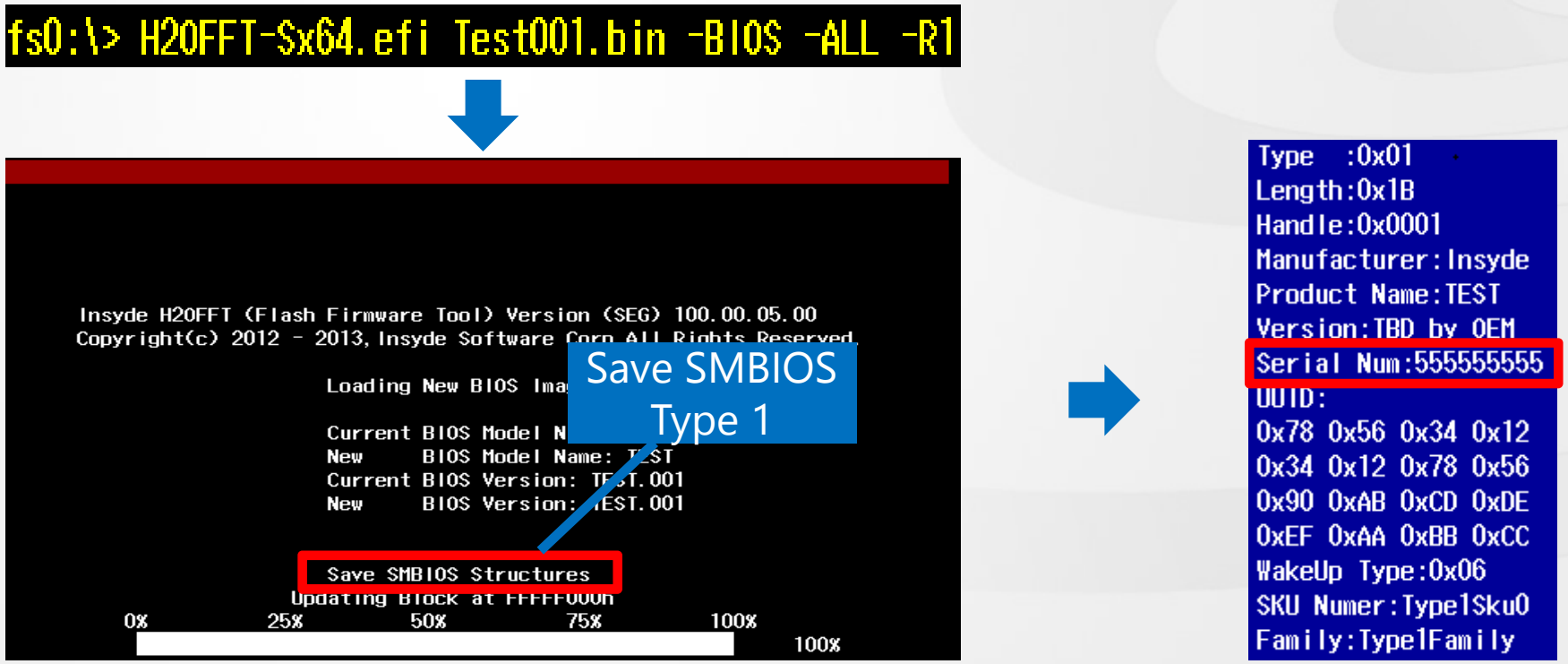


Modify by H2OSDE-Sx64



Common Arguments

- Argument "**-Rx**": Preserve Typex SMBIOS Structure (2/2)
  - Type command "H2OFFT-Sx64.efi (filename) –BIOS –ALL –Rx"



Common Arguments

- Argument "**-S**": Shutdown after flash
  - Type command "H2OFFT-Sx64.efi (filename) –S"

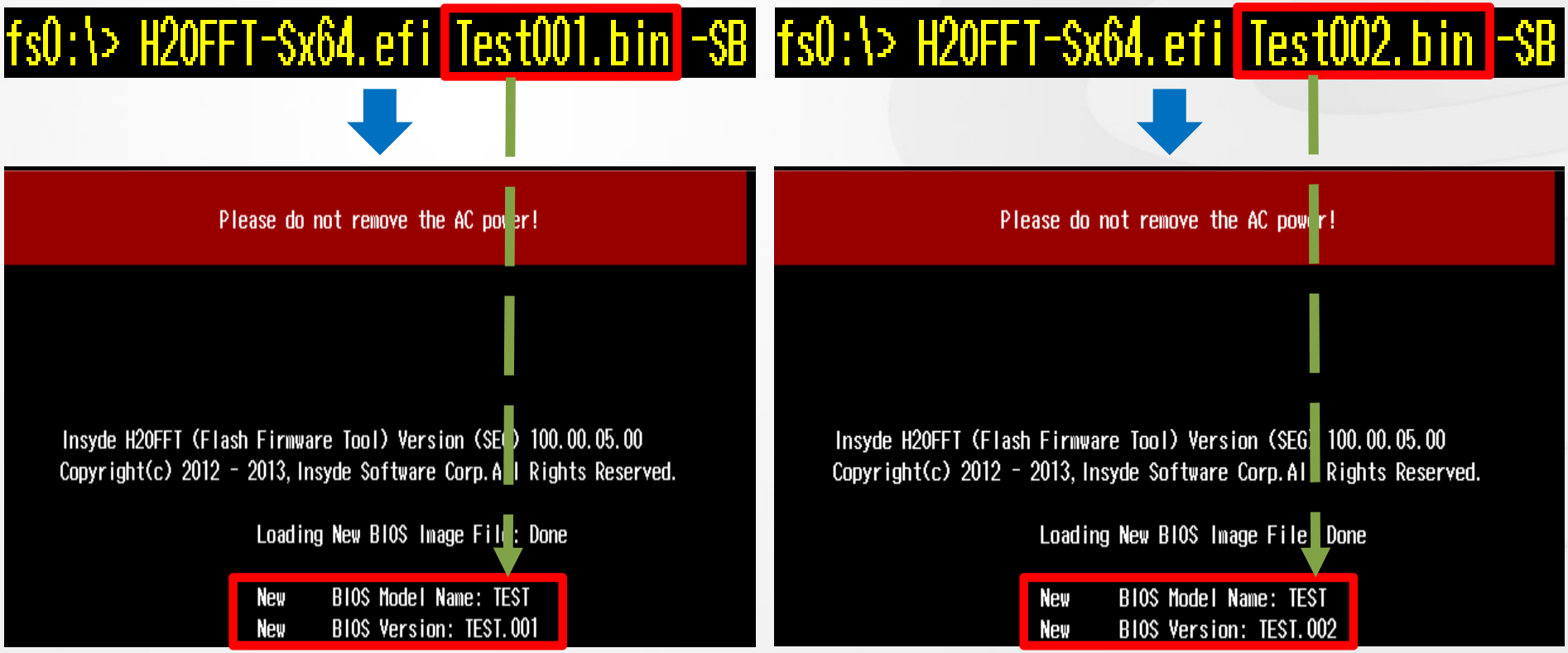
```
fs0:\> H2OFFT-Sx64.efi Test001.bin -S
```

- Argument "**-SPN**": Flash NV Storage on security platform
  - Type command "H2OFFT-Sx64.efi (filename) –SPN"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -SPN
```

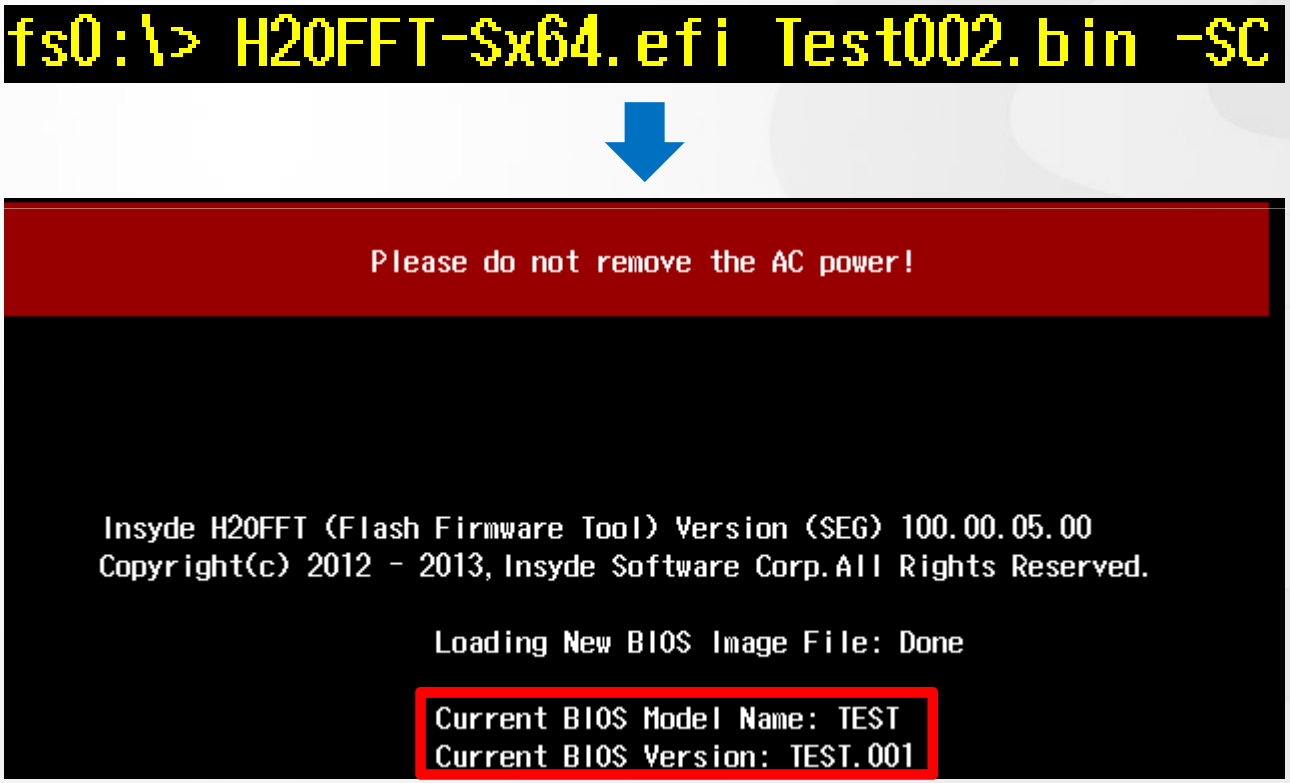
Common Arguments

- Argument "**-SB**": Get and Display New BIOS ID
  - Type command "H2OFFT-Sx64.efi (filename) -SB"



Common Arguments

- Argument "**-SC**": Display current BIOS ID
  - Type command "H2OFFT-Sx64.efi (filename) -SC"



Common Arguments

- Argument "**-SPO**": Flash OEM Data Area
  - Type command "H2OFFT-Sx64.efi (filename) –SPO"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -SPO
```

- Argument "**-SPV**": Flash Variable Area
  - Type command "H2OFFT-Sx64.efi (filename) –SPV"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -SPV
```

Common Arguments

- Argument "**-SP:Type(Hex)**": Flash TypeXX Area
  - Type command "H2OFFT-Sx64.efi (filename) –SP:Type(Hex)"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -SP:1
```

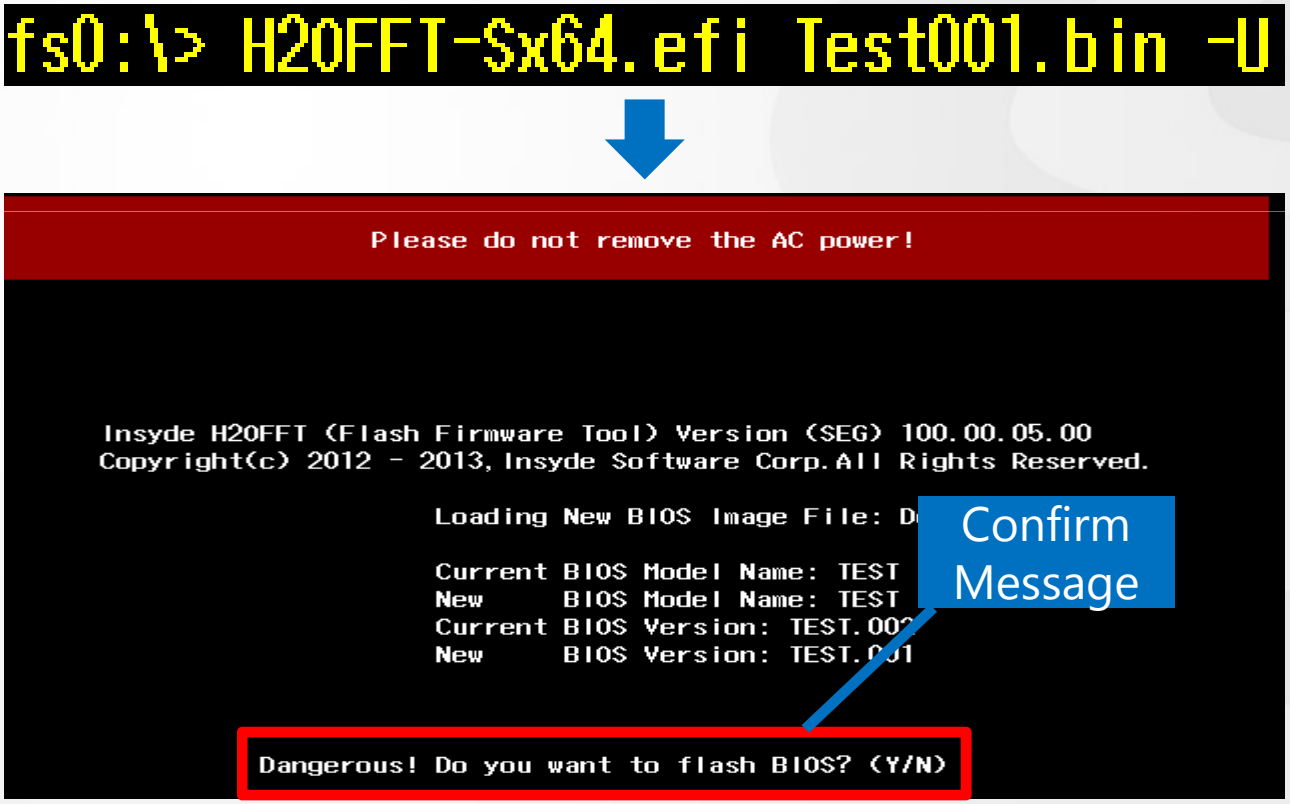
ROM Map Protection Type

- Argument "**-SSB**": Skip Secure Boot Protect NV region
  - Type command "H2OFFT-Sx64.efi (filename) –SSB"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -SSB
```

Common Arguments

- Argument "**-U**": Show confirm message
  - Type command "H2OFFT-Sx64.efi (filename) -U"



Common Arguments

- Argument "**-V**": Verify file integrity
  - Type command "H2OFFT-Sx64.efi (filename) –V"

```
fs0:\> H2OFFT-Sx64.efi Test001.bin -V
```

- Argument "**-VRT:Times**": When verify error, retry how many times
  - Type command "H2OFFT-Sx64.efi –VRT:Times"

Common Arguments

- Argument "**-BEEP**": On flashing beep
  - Type command "H2OFFT-D.exe (filename) –BEEP"

```
C:\>H2OFFT-D.exe Test001.bin -BEEP
```

- Argument "**-BEEP:Frequency**": On flashing beep with the frequency
  - Type command "H2OFFT-D.exe (filename) –BEEP:Frequency"

```
C:\>H2OFFT-D.exe Test001.bin -BEEP:440
```

Common Arguments

- Argument "**-CM:Filename**": Flash Calpella Ignition ME with OEM rule
  - Type command "H2OFFT-D.exe (filename) –CM:Filename"



- Argument "**-CMS:Filename**": Flash Calpella Ignition ME without check version
  - Type command "H2OFFT-D.exe (filename) –CMS:Filename"

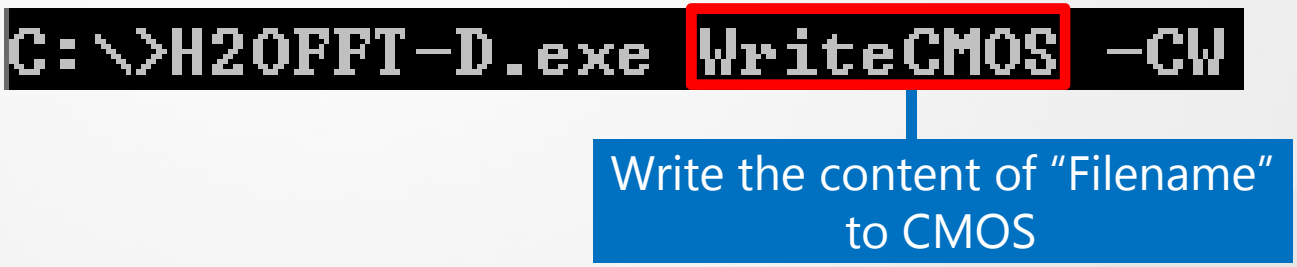


Common Arguments

- Argument "**-CR**": Read CMOS
  - Type command "H2OFFT-D.exe (Filename) -CR"

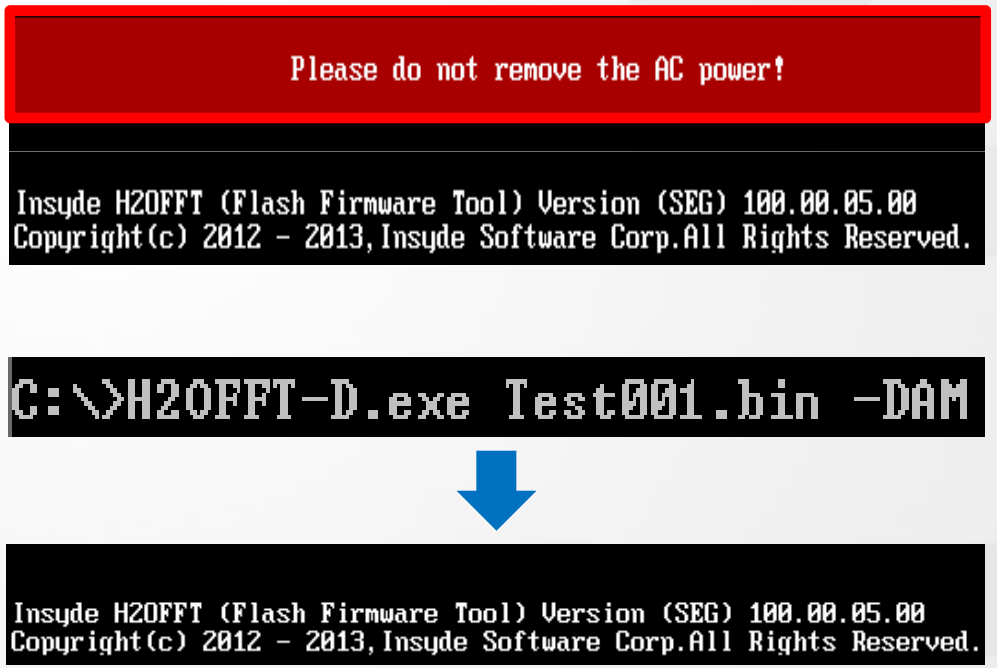


- Argument "**-CW**": Write CMOS
  - Type command "H2OFFT-D.exe (Filename) -CW"



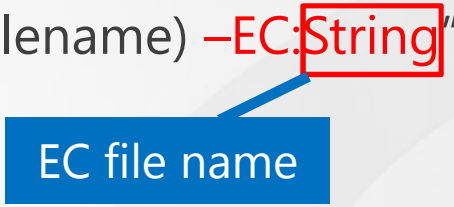
Common Arguments

- Argument "**-DAM**": Disable show the message of do not remove AC
  - Type command "H2OFFT-D.exe (filename) –DAM"



Common Arguments

- Argument "**-EC:String**": Flash EC and BIOS
  - Type command "H2OFFT-D.exe (filename) –EC:String"



- Argument "**-ECC**": Compare EC before flash
  - Type command "H2OFFT-D.exe (filename) –ECC"

```
C:\>H2OFFT-D.exe Test001.bin -ECC
```

Common Arguments

- Argument "**-ECV**": Verify EC after flash
  - Type command "H2OFFT-D.exe (filename) -ECV"

```
C:\>H2OFFT-D.exe Test001.bin -ECV
```

- Argument "**-ECR**": Read Non-share EC
  - Type command "H2OFFT-D.exe (filename) -ECR"

```
C:\>H2OFFT-D.exe ReadEC -ECR
```

Common Arguments

- Argument "**-EOB**": Only flash BIOS when EC and BIOS are merged in the same file
  - Type command "H2OFFT-D.exe (filename) -EOB"

```
C:\>H2OFFT-D.exe Test001.bin -EOB
```

- Argument "**-EDT#@:"VALUE"**": Update customizes data by IHISI.
  - Type command "H2OFFT-D.exe –EDT#@:"VALUE""
  - #: The type ID. Value 0x04 ~ 0x0C.
  - @: The data format. Value F, S, W, DW. (F for file, S for string, W for word value, DW for double word value.)

```
C:\>H2OFFT-D.exe -EDTCDW:'0x12345678'
```

Common Arguments

- Argument "**-FILE:Filename**": Before Flash to erase variable from file
  - Type command "H2OFFT-D.exe (filename) –FILE:Filename"

- Argument "**-GU:String**": Compare GUID with current BIOS
  - Type command "H2OFFT-D.exe –GU:String"



Common Arguments

- Argument "**-IV**": Show tool and bios support IHISI version
  - Type Command "H2OFFT-D.exe -IV"

```
C:\>H2OFFT-D.exe -IV
```



```
Insyde H2OFFT (Flash Firmware Tool) Version (SEG) 100.00.05.00
Copyright(c) 2012 - 2013, Insyde Software Corp. All Rights Reserved.

Tool IHISI version: 2.0.2
BIOS IHISI version: 2.0.1
```

Common Arguments

- Argument "**-LF**": Load Fd file by another floppy disk
  - Type command "H2OFFT-D.exe (filename) –LF"

```
C:\>H2OFFT-D.exe Test001.bin -LF
```

- Argument "**-LG:GUID**": Input GUID (For variable access or other features which need to input GUID)
  - Type command "H2OFFT-D.exe (filename) –LG:GUID"

Common Arguments

- Argument "**-PBI:Type(Hex)**": Flash BIOS protect region. Type is the protected region type
  - Type command "H2OFFT-D.exe (filename) –PBI:Type(Hex)"

```
C:\>H2OFFT-D.exe Test001.bin -PBI:1
```

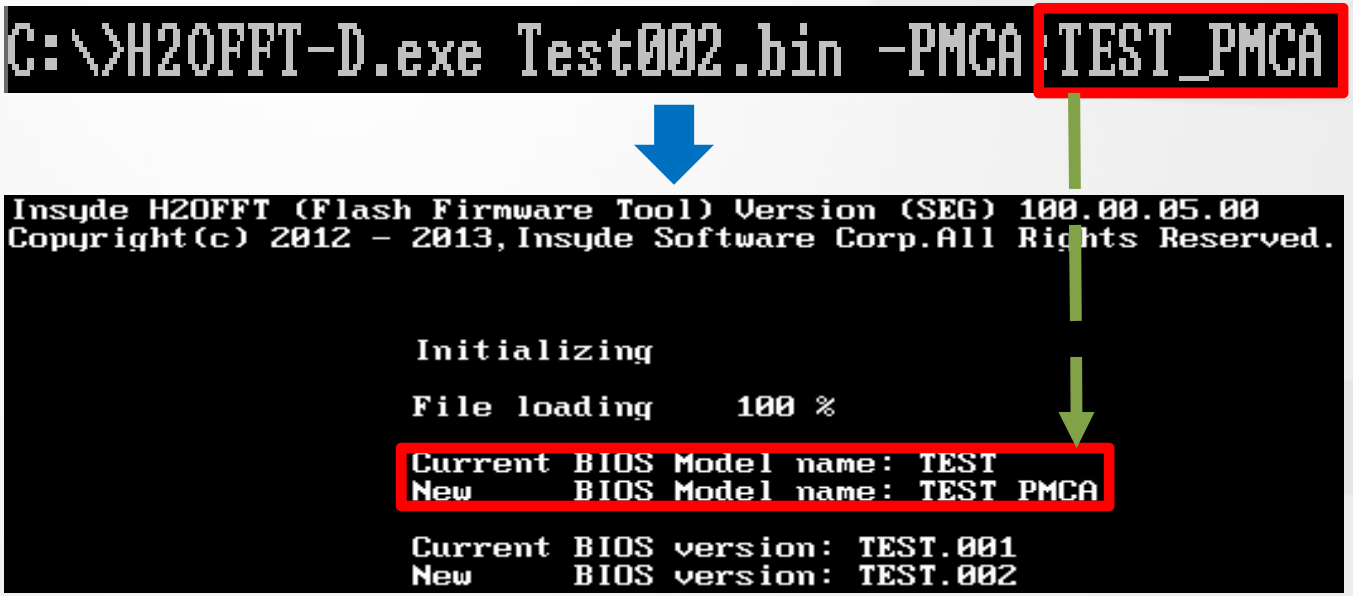
Protection Region Type

- Argument "**-PI**": Dump BVDT protection MAP
  - Type Command "H2OFFT-D.exe (filename) -PI"

```
C:\>H2OFFT-D.exe Test001.bin -PI
```

Common Arguments

- Argument "**-PMCA:ModelName**": Change Platform model name
  - Type Command "H2OFFT-D.exe (filename) –PMCA:ModelName"
  - If BIOS is setting the flag to check the platform name, it can't flash when the platform name does not match in new BIOS and current BIOS.



Common Arguments

- Argument "**-PMCAF:FileName**": Change display platform model name by file (support multiID)
  - Type Command "H2OFFT-D.exe (filename) –PMCAF:FileName"
  - If BIOS is setting the flag to check the platform name, it can't flash when the platform name does not match in new BIOS and current BIOS.
  - It can write many names in file. If there is one name match, it will start to flash.



Common Arguments

- Argument "**-RH**": Read HDCP key
  - Type command "H2OFFT-D.exe (filename) –RH"

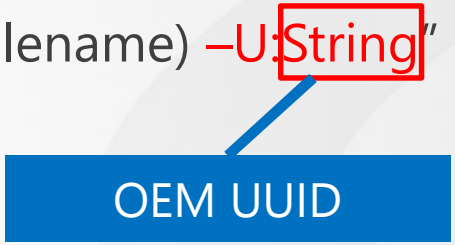
```
C:\>H2OFFT-D.exe ReadHDCP -RH
```

- Argument "**-SE:String**": Compare serial number with current BIOS
  - Type command "H2OFFT-D.exe –SE:String"

OEM serial number

Common Arguments

- Argument "**-UU:String**": Compare UUID with current BIOS
  - Type command "H2OFFT-D.exe (filename) –U:String"



- Argument "**-WH**": Write HDCP key
  - Type command "H2OFFT-D.exe (filename) –WH"

```
C:\>H2OFFT-D.exe WriteHDCP -WH
```

Common Arguments

- Argument "**-Z**": Show the AP help list
  - Type Command "H2OFFT-D.exe -Z"

```
C:\>H2OFFT-D.exe -Z
```



```
    Insyde H2OFFT (Flash Firmware Tool) Version (SEG) 100.00.05.00
    Copyright(c) 2012 - 2013,Insyde Software Corp.All Rights Reserved.

USAGE:Flashit filename [Option]

        -?, H               This flash utility help
        -AB                 Check battery life percent
                            (only use when AC not plugged-in and with -AC)
        -AC                 Do not check AC power plug-in
        -ACB                Check AC plug-in & battery percentage
        -ALL                Flash all
        -B                  Flash PEI volume
        -BEEP               On flashing beep
        -BEEP:Frequency     On flashing beep with the frequency
        -BIOS               Flash BIOS region
        -C                  Clear CMOS
        -CM                 Clear CMOS After flash complete
        -CM:Filename        Flash Calpella Ignition ME with OEM rule
        -CMS:Filename       Flash Calpella Ignition ME without check version
        -CR                 Read CMOS
        -CW                 Write CMOS
        -DAM                Disable show the message of do not remove AC
 Press a key to continue
```

Common Arguments

- Argument "**-CO**": Console mode
  - Type command "H2OFFT.sh (filename) -CO"

```
./H2OFFT.sh Test001.bin -all -bios -co
```

- Argument "**-silent**": Run in silent mode
  - Type command "H2OFFT.sh (filename) -silent"

```
./H2OFFT.sh Test001.bin -all -bios -slient
```

Common Argument

- Argument "**-VC**": Check downgrade version and same version
  - Type command "H2OFFT.sh (filename) -VC"

```
./H2OFFT.sh Test001.bin -all -bios -vc
```

Common Arguments

- Argument "**-DR**": Enable drivers in Linux
  - Type command "H2OFFT.sh (filename) -DR"

Common Arguments

- Argument "**-i:Path**": Setup the folder includes platform.ini
  - Type command "H2OFFT (filename) –i:Path"

```
./H2OFFT.sh Test001.bin -all -bios -i:/tmp/
```

DOS/Windows/Linux — Command Configuration File

Modifying the Configuration File

- Command configurations in platform.ini described in this section.
- Follow the steps below to modify the command settings:
  - 1. Open platform.ini.
  - 2. For each item in the configuration, change the values of related parameters as needed.
  - 3. Save the file.
- Parts of configuration in platform.ini takes effect without arguments
  - Effective : e.g. Run “H2OFFT.exe” and then the tool read [FdFile].Filename in platform.ini for input fd filename.
  - No Effect : e.g. Run “H2OFFT.exe rom.bin –bios”. The tool ignore parts of argument settings in platform.ini.

Configuration File — platform.ini

Item	Parameter	Description
[FDFile]	FileName=	Default : empty. String : Utility always load this file. If the FileName is empty, utility will search current directory and load the first found FD file.
[DirectFlash]	Enable=0	Default : 0 0 : Not using direct flash 1 : Using direct flash
[SkipModelCheck]	Enable=0	Default : 0 0 : Do model check 1 : Skip Check model
[SkipSecureBootProtectNV]	Enable=0	Default : 0 0 : Do NV protect if secure boot 1 : Not protect NV even when secure boot
[FlatForceFlash]	Enable=0	Default: 0 0: Not to activate flat force flash. 1: Activate flat force flash.

Configuration File — platform.ini

Item	Parameter	Description
[ForceFlash]	ALL=0	Default : 0. 0 : Reserve all protected areas. 1 : Flash all ROM parts.
	BB_PEI=0	Default : 0. 0 : Protect these areas if BIOS report them are protected areas. 1 : Force flash these areas if BIOS report them are protected areas.
	CPU_Microcode=0	
	Variable=0	
	DXE=0	
	EC=0	
	Password=0	
	OEM_NVS=0	
	Logo=0	
	Type#09=0	
	Type#08=0	

Configuration File — platform.ini

Item	Parameter	Description
[Region]	BIOS=0	Default : 0. 0 : Don't flash. 1 : Flash BIOS region.
	GbE=0	Default : 0. 0 : Don't flash. 1 : Flash GbE region.
	ME=0	Default : 0. 0 : Don't flash. 1 : Flash ME region.
	DESC=0	Default : 0. 0 : Don't flash. 1 : Flash DESC region.
	Platform_Data=0	Default : 0. 0 : Don't flash. 1 : Flash Platform_Data region.

Configuration File — platform.ini

Item	Parameter	Description
[UpdateEC]	Flag=0	Default : 0. 0 : Don't flash EC by BIOS. 1 : Flash EC by BIOS.
	EC_Dialog=0	Default : 0. 0 : Don't display confirm dialog when begin to update EC. 1 : Show confirm dialog.
	BIOS_Only=0	Default : 0. 0 : Flash EC and BIOS file. 1 : Only flash BIOS part of the merge file.
	EC_Only=0	Default : 0. 0 : Flash EC and BIOS file. 1 : Flash only EC binary file.
	EC_Path=	Default : empty. String : EC file name.

Configuration File — platform.ini

Item	Parameter	Description
[UpdateEC]	EC_Compare=0	Default : 0. 0 : Don't do compare before writing. Just do write action directly. 1 : Read EC and compare difference before writing. If the read data is the same as the data we want to write, it will not do the write action.
	EC_Verify=0	Default : 0. 0 : Don't verify EC. 1 : Verify EC after writing.
	EC_VerifyErrorRetry=3	Default : 3. Integer : Retry times. If the value is not zero means enable verify retry, and will retry setting times. 0 for disable verify retry.

DOS/Windows/Linux — Tool Configuration File

Modifying Tool Configuration File

- Follow the steps below to modify the tool configuration file:
  - 1. Open Platform.ini.
  - 2. For each item in the configuration, change the values of related parameters as needed.
  - 3. Save the file.

Configuration File — Platform.ini

Item	Parameter	Description
[CommonFlash]	SwitchString=	Default : empty. String : A switch flag setting string. Ex: "ACEN DCEN FHRST"
	ErrorMsg00=No error!	ErrorMsg00= Default : empty. String : No error message. ErrorMsg01= Default : empty. String : AC error message. ErrorMsg02= Default : empty. String : DC error message. ErrorMsg03= Default : empty. String : DC gas gauge under xx% message. ErrorMsg04= Default : empty. String : BIOS version error message. ErrorMsg05= Default : empty. String : Model name error message. ErrorMsg10= Default : empty. String : No support this version of Flash Common Interface message. The number of ErrorMsg## is in hex.
	ErrorMsg01=AC detect error!	
	ErrorMsg02=DC detect error!	
	ErrorMsg03=DC gas gauge under xx%!	
	ErrorMsg04=BIOS version compare error!	
	ErrorMsg05=Model name compare error!	
	ErrorMsg10=Not support this version of Flash Common Interface!	
	ErrorMsg11=Show BIOS version string length more then xx bytes.	
	ErrorMsg12=Show model name string length more then xx bytes.	

Configuration File — Platform.ini

Item	Parameter	Description
[Version]	Version=	Default : empty. String : Version number string for display. It will be show on UI, and append on current version number. When current version is 5.02 and this version string set to "12", then it will show “H2OFFT 100,00,05.02.12" on main dialog.
[BackupROM]	Flag=0	Default : 0. 0 : No backup BIOS. 1 : Backup current BIOS and new BIOS binary.
	FilePath=c:	Default : empty. empty : Use current directory. String : Directory for backup BIOS.
	FileName=	Default : empty. empty : Use platform ID as file name. String : File name for backup BIOS.

Configuration File — Platform.ini

Item	Parameter	Description
[UpdateBlock]	PatchFv=0	Default : 0. 0 : Update all binary in file. 1 : Partial update mode.
	FileName=intel.fv	Default : empty. (Only available in partial update mode.) String : BIOS file name.
	FileOffset=0	Default : 0. (Only available in partial update mode.) Integer : The offset of file for reading.
	FlashSize=0	Default : 0. (Only available in partial update mode.) Integer : The size to flash.
	PhysicalAddress=FFF00000	Default : FFF00000. (Only available in partial update mode.) DWORD : Physical address in hex.
	FvID=945PL-A	Default : empty. String : When flag in Platform_Check section is 1, utility will compare this value with current platform ID.
	IDErrorAction=1	Default : 1. (Only available when ID comparison is failed.) 1 : Show error message box. 2 : Close utility and reboot or shutdown.

Configuration File — Platform.ini

Item	Parameter	Description
[Platform_Check]	Flag=3	Default : 3. 0 : Don't check project ID. 1 : Check project ID of new file. If ID is different with current BIOS, the utility will close. 2 : Utility will compare current platform ID with the 20 platform IDs. If any one is match, it will go ahead, otherwise utility will close. 3 : Depends on BIOS report.
	PlatformName1~20=	Default : empty. String : If ROM file do not contain correct ID, user can define ID here.
[PlatformVersion]	Flag=0	Default : 0. 0 : Don't use multi version. 1 : Use the version in the list instead of the version in file.
	Version1~20=	Default : empty. String : If ROM file do not contain correct version, user can define version here.

Configuration File — Platform.ini

Item	Parameter	Description
[AC_Adapter]	Flag=1	Default : 1. 0 : Don't check AC. 1 : Check AC.
	BatteryCheck=0	Default : 0. 0 : Don't check battery. 1 : Check battery.
	BatteryBound=20	Default : 20. Integer (1~100) : Low battery boundary (percentage). When checking battery, life percentage must be bigger then this value, it can do flash.
	BatteryMethod=0	Default: 0. 0: Check by AP 1: Check by BIOS

Configuration File — Platform.ini

Item	Parameter	Description
[Bios_Version_Check]	Flag=2	Default : 2. 0 : Don't check rom file version. 1 : Check BIOS version. When rom file version is older then BIOS, it will display a warning message and close application.
	CheckByBios=0	Default : 0. 0 : Normal process. 1 : It will pass version by IHISI 45h to BIOS and check by BIOS. When BIOS return not allow to flash, it will be terminated the process. When BIOS allow to flash, it will go ahead and do it's normal process. When this flag is enable but BIOS not support, it will skip version check and assume
	CheckByBiosErrorMessage="This BIOS file is not allow to flash. The flash process will be terminated."	Default : "This BIOS file is not allow to flash. The flash process will be terminated." String : User defined error message when BIOS is not allow to flash this version image.

Configuration File — Platform.ini

Item	Parameter	Description
[FlashComplete]	Action=2	Default : 2. 0 : Do nothing. 1 : Shutdown. 2 : Reboot.
	Dialog=0	Default : 0. 0 : Don't display dialog. 1 : Display dialog. 2 : Display dialog and wait several seconds.
	Counter=15	Default : 15. (Unit is second) Integer : The number of seconds for count down to reboot or shutdown.
	ActionOverride=0	Default : 0 0 : This key is disabled. Flash utility bases action key setting to do original behavior. 1 : This key is enabled. Flash utility just does close itself in silent mode.
	Pause=0	Default: 0. 0: Disable to pause after flash complete. 1: Enable to pause after flash complete.

Configuration File — Platform.ini

Item	Parameter	Description
[FlashSecureBIOSOverride]	EnableFlashSecureBIOSOverride=0	Default : 0. 0 : Disable action override. Use the action which returned from BIOS. 1 : Enable the action override when flashing secure BIOS in OS.
	Action=1	Default : 1. 0 : S3. 1 : Reboot. 2 : Shutdown. 3 : Do nothing.
[UI]	Confirm=1	Default : 1. 0 : Don't display confirm dialog. 1 : Display confirm dialog.
	Silent=0	Default : 0. 0 : Normal mode. 1 : Silent mode, hide main dialog.
	SilentWithDialog=2	Default : 2. 0 : Don't display any dialog. 1 : Display main dialog only. 2 : Display all dialogs except main dialog.

Configuration File — Platform.ini

Item	Parameter	Description
[UI]	DisplayID=1	Default : 1. 0 : Don't display BIOS ID. 1 : Display BIOS ID.
	InsydeInfo=1	Default : 1. 0 : Don't display Insyde copyright information and URL. 1 : Display Insyde copyright information and URL.
	VersionInfo=1	Default : 1. 0 : Don't display BIOS version. 1 : Display BIOS version.
	GroupInfo=1	Default : 1. 0 : Don't display group box. 1 : Display group box.
	ConfirmInfo=0	Default : 0. 0 : Don't display BIOS version and build date information in confirm dialog. 1 : Display BIOS version and build date information in confirm dialog.

Configuration File — Platform.ini

Item	Parameter	Description
[UI]	ConfirmInfoRDate=0	Default : 0. 0 : Don't display BIOS version and release date information in confirm dialog. 1 : Display BIOS version and release date information in confirm dialog. When this flag set to 1, the ConfirmInfo flag won't be referenced.
	OnFlashingBeep=0	Default : 0. 0 : Don't beep on flashing. 1 : Beep on flashing.
	OnFlashingBeepDelayTime=800	Default : 800. (Unit is millisecond) Integer : Set beep delay time(Milliseconds).
	DisableMouseAndKeyboardInput=0	Default : 0. 0 : Don't hook mouse and keyboard. 1 : Hook mouse and keyboard without "CTRL+ALT+DEL".
	BeforeRunToolDelayTime=0	Default : 0. (Unit is second) Integer : Delay number of seconds before flash process.

Configuration File — Platform.ini

Item	Parameter	Description
[UI]	ProgramStartToWrongMessageBox=0	Default : 0. 0 : Don't pop-up warning dialog before flash process. 1 : Pop-up a warning dialog before flash process.
	GetFDFileButton=0	Default : 0. 0 : Hide FD file browse button. 1 : Show the button for browsing FD file.
	DelayBeforeFlash=0	Default : 0. (Unit is second) Integer : Delay number of seconds before flashing.
	DisableAccaessRightWarningMessage=0	Default: 0. 0: It will show warning message when any region is locked (such as ME) in input image. 1: Do not show warning message when any region is locked in input image.
	ShowCustomizeMessageOnConfirmDialogOnly=0	Default: 0. 0: Display default confirm message and insert the customize message on confirm dialog. 1: Do not display default confirm message, only show customize message on confirm dialog.

Configuration File — Platform.ini

Item	Parameter	Description
[Others]	ClearCMOS=0	Default : 0. 0 : Don't clear CMOS. 1 : Clear CMOS.
	FlashDevice=0	Default : 0. 0 : Default. 1 : SPI flash part. 2 : Non-SPI flash part.
	DisableCompare=0	Default : 0. 0 : Read BIOS and compare difference before writing. If the read data is the same as the data we want to write, it will not do the write action. 1 : Don't do compare before writing. Just do write action directly.
	DisableVerify=0	Default : 0. 0 : Verify BIOS after writing. 1 : Don't verify BIOS after writing.
	VerifyErrorRetry=3	Default : 3. Integer : Retry times. If the value is not zero means enable verify retry, and will retry setting times. 0 for disable verify retry.

Configuration File — Platform.ini

Item	Parameter	Description
[Others]	SMIErrorRetryDelay=100	Default : 100. (Unit is millisecond) Integer : Delay time during SMI error retry(millisecond).
	SMIErrorRetry=5	Default : 5. Integer : Retry times when SMI fail. (Note: This may let flash time become longer.)
	AllowVersion=000	Default : 000. Version : Utility will do following process. If you want to run into UEFI flash update, the current version (on board BIOS) must be higher than this version(as "AllowVersion" key). Current BIOS version > allow version: Utility will run into UEFI flash update. Current BIOS version <= allow version: Utility will run into Window flash to update BIOS. If AllowVersion=000, utility always into UEFI flash update.

Configuration File — Platform.ini

Item	Parameter	Description
[Others]	ForceIHISIVersion=	Default : empty. Version : This flag will force override the IHISI version which will passing to BIOS. Ex: 1.9.1
	EnablePrivateRegionMovement=0	Default : 0 0 : Disable private region movement. 1 : Enable private region movement. It will backup original private region and relocate to new address which defined in new image BVDT when update whole BIOS.
	DisableSecureCapsuleFlash=0	Default : 0. 0 : Enable flash secure BIOS on normal platform. 1 : Disable flash secure BIOS on normal platform.
	ShowBuildDateTime=0	default : 0. 0 : Not to display the build time and date 1 : To display the build time and date

Configuration File — Platform.ini

Item	Parameter	Description
[Option] ***For Windows and Linux**	Flag=0	Default : 0. 0 : Auto flash mode. 1 : User option mode, including option, start, exit buttons. (Option button will disable on secure flash mode.) 2 : User flash mode, including start, exit buttons.
[ReturnErrorCode]	FileNotFound=3	Default : 3. Integer : If utility can't find the BIOS file, it will return this error code.
	ErrorBeforeFlash=4	Default : 4. Integer : If error occur before flash process, it will return this error code.
	BatteryNotConnect=4	Default : 4. Integer : If battery not connect, it will return this error code.
	BatteryCapacityNotEnough=4	Default : 4. Integer : If battery capacity not enough, it will return this error code.

Configuration File — Platform.ini

Item	Parameter	Description
[ReturnErrorCode]	WriteROMFail=5	Default : 5. Integer : If error occur during write ROM process, it will return this error code.
	WriteECFail=6	Default : 6. Integer : If error occur during write EC process, it will return this error code.
	WriteExtraDataFail=7	Default : 7. Integer : If error occur during write Extra Data process, it will return this error code.

Configuration File — Platform.ini

Item	Parameter	Description
[UpdateExtraData]	Flag=0	Default : 0. 0 : Do not update extra data. 1 : Update extra data by IHISI. If new image is NOT processed by IFIT tool, please do not enable this function.
	DataType=1	Default : 1. Integer : Integer number. The meaning of data type number will define by BIOS OEM. Now will support 1, 4~C. Ex:1,4,6,5 -> Mean you want to update 1,4,6,5 Four type of data. Notice: 2, 3 cannot used.
	Type#errorcode??=messagestringX	# : The type number define in DataType. (Hex) ?? : The error code returned by BIOS. Available value range A0~AF. X : Message string number. For example: When an error occur when updating type 4, BIOS return the error code A2. AP will find the key "type4errorcodeA2" and get the string ID "messagestring4", and find the string in [MessageStringTable].

Configuration File — Platform.ini

Item	Parameter	Description
[UpdateOEMME]	MEFileName=	Default : empty. String : if this file name or Multi-FD ME file name exist tool will run this case to flash ME.
	CheckVersion=0	Default : 0. 0 : Don't check ME file version. 1 : Check ME file version. 2 : When ME flash error is cause of same version and downgrade version do not show error and continue to flash. 3 : When ME flash error, show error but continue to flash.
	Command=	Default : empty. String : When this field is empty and don't want to check ME version, utility will use "-f %filename -generic -allowsv" as default command. The %filename is a keyword which will be replaced with the value in MEFileName within this section or the filename in MULTI_FD section.

Configuration File — Platform.ini

Item	Parameter	Description
[Log_file]	Flag=0	default : 0. 0 : Don't log to file. 1 : Utility will log to specify file.
	FileName=InsydeFlash.Log	default : InsydeFlash.Log. String : Log file name.
	CMOS_Flag=0	default : 0. 0 : Disable CMOS debug. 1 : Enable CMOS debug.
	CMOS_INDEX_PORT=70	default : 70. (hex) 70 : Use 0x70 port as index port. 72 : Use 0x72 port as index port.
	CMOS_DATA_PORT=71	default : 71. (hex) 71 : Use 0x71 port as index port. 73 : Use 0x73 port as index port.
	CMOS_OFFSET=68,69	default : 0,0. (hex) CMOS_OFFSET=xx,yy the xx is high byte offset; yy is low byte offset, and the range is 0~FF (hex)

Configuration File — Platform.ini

Item	Parameter	Description
[ReturnCodeDefinition]	RETURN_SUCCESSFUL=0	Default : RETURN_SUCCESSFUL=0 RETURN_MODEL_CHECK_FAIL=259 RETURN_USER_CONFIRM_CANCEL=1602 RETURN_AC_NOT_CONNECT=1602 RETURN_LOAD_DRIVER_FAIL=259 RETURN_NEED_REBOOT=3010 RETURN_USER_EXIT=1602 RETURN_SAME_VERSION_CHECK=1602 99999 : Use the default value above. Other integer : Use input value as return code. The value behind comma is the return value in silent mode.
	RETURN_MODEL_CHECK_FAIL=259	
	RETURN_USER_CONFIRM_CANCEL=1701	
	RETURN_AC_NOT_CONNECT=1702	
	RETURN_LOAD_DRIVER_FAIL=1703	
	RETURN_NEED_REBOOT=3010	
	RETURN_USER_EXIT=1704	
	RETURN_SAME_VERSION_CHECK=99999	

Configuration File — Platform.ini

Item	Parameter	Description
[VARIABLE]	Flag=0	Default : 0. 0 : Do nothing. The following settings in this section won't be referenced. 1 : Erase variable before flash. 2 : Erase variable only.
	SystemManufacturer=0	Default : 0. 0 : Don't erase variable. 1 : Erase variable before flash base on the "Flag" settings.
	BoardManufacturer=0	
	SystemProductName=0	
	SystemSerialNumber=0	
	Uuid=0	
	POSTInfo=0	
	Version=0	
	SLP=0	
	Setup=0	
	BootPriority=0	
	LastBootRecord=0	
	AcpiGlobalVariable=0	
	SLP2M=0	
	SLP2P=0	

Configuration File — Platform.ini

Item	Parameter	Description
[MULTI_FD]	Flag=0	Default : 0. 0 : Normal mode. 1 : Multi-FD mode. It will reference FD#XX values.
	FD#01=PCI,0,1F,2,80,00007006,00007007,9.fd,ME.fd	FD#XX support up to 99 files FD#01 ~ FD#99 This section supports IO space type, PCI address type and multiple condition type. FD#XX=IO,[Offset],[Mask],[Value],[File Name],[ME File Name],[INI File Name] FD#XX=PCI,[Bus],[Device],[Function],[Offset],[Mask],[Value],[File Name],[ME File Name],[INI File Name] FD#XX=MPCIIO,[Conditon Number],PCI-[Bus]-[Device]-[Function]-[Offset]-[Mask]-[Value],IO-[Offset]-[Mask]-[Value],[File Name],[ME File Name],[INI File Name] FD#XX=ID,[Model Name],[File Name],[ME File Name],[INI File Name]
	FD#02=PCI,2,0,0,4,00100006,00100007,7.fd,ME.fd	
	FD#03=PCI,2,0,0,18,0000000c,0000000e,9.fd,ME.fd	
	FD#04=MPCIIO,2,PCI-0-1F-0-00-FFFFFFFF-3B0B8086,IO-538-0100-0000,9.fd,ME.fd	
	FD#05=IO,C0,5AABFE02,5AABFE02,9.fd,ME.fd	
	FD#06=IO,1F6,E7,E4,7.fd	

Configuration File — Platform.ini

Item	Parameter	Description
[MULTI_FD]	FD#07=IO,C0,fe03,fe03,7.fd	[Offset] : Offset in hex. [Mask] : IO type supports BYTE, WORD and DWORD in hex. For example, BYTE -> 03, WORD -> 0A01, DWORD 100400D3 PCI type supports DWORD in hex only. [Value] : IO type supports BYTE, WORD and DWORD in hex. PCI type supports DWORD in hex only. [Model Name] : The platform ID, model name string. [File Name] : File name of FD. [ME File Name] : ME File name of FD. If it exists, utility will run OEMME flash feature. [INI File Name] : INI File name for overwrite. If it exists, utility will load the new ini file and overwrite all sections (except [MULTI_FD]) exist in new ini file. When [Offset] & [Mask] == [Value], it will flash the following files ([File Name] and [ME File Name]).
	FD#08=IO,C0,03,01,7.fd	
	FD#09=PCI,2,0,0,0,00000813,00000812,9.fd	
	FD#10=ID,ModelName,BIOS.fd	

Configuration File — Platform.ini

Item	Parameter	Description
[BIOSVersionFormat]	BIOSVFEnable=0	Default : 0 0 : function is disabled 1 : function is enabled.
	VersionFormat=TXXXXXXX.N.NN.NN	X : The field is masked. The mask field will be NOT compared. N : The digit field can be ASCII, case-sensitive. T : It's the same definition with N. But T is a case-insensitive. . : Dot is also a mask.
[PermitFlashVersion]	PFVFunctionEnable=0	Default : 0 0 : Disable conditional version check. 1 : Enable conditional version check.
	SingleVersion=	Default : empty. String: XXXX, “Message String” XXXX is the conditional version, regarding version check rule please refer section “BIOSVersionFormat”. “Message String” is the message to show then the on board BIOS version is older than the conditional version.
	MultiVersion1~20=	Default : empty. String: XXXX, “Message String” XXXX is the conditional version, regarding version check rule please refer section “BIOSVersionFormat”. “Message String” is the message to show then the on board BIOS version is older than the conditional version.

Configuration File — Platform.ini

Item	Parameter	Description
[PasswordCheck]	PasswordCheckEnable=0	Default : 0. 0 : Disable the password check function. 1 : Enable the password check function.
	MsgCaption=Password confirmation	Default : "Password confirmation" String : The dialog box caption.
	MsgPreface=Please enter password	Default : "Please enter password" String : The preface of password entering.
	MsgSuccess=Password is correct.	Default : "Password is correct." String : The string displayed when the comparing result returned by BIOS is 0x00.
	MsgFailure=Password is incorrect. Please retry again.	Default : "Password is incorrect. Please retry again." String : The string displayed when the comparing result returned by BIOS is 0x01.
[MessageStringTable]	messagestring1="Warning message 1"	The message string must as following format messagestring#="Your message here." The # is a number in Decimal or Hex.
[FactoryCopy]	Restore=0	Default : 0. 0 : Don't do FACTORY_COPY restore after flash. 1 : Restore FACTORY_COPY after flash BIOS. For Security Flash only.

Configuration File — Platform.ini

Item	Parameter	Description
[SecureUpdate]	viaESP=0	Default : 0. 0 : Disable. 1 : Write the capsule to ESP (EFI system partition).
	PhysicalMemoryAllocateFailRetryTimes=3	Default : 3. Integer : Retry times. If the value is not zero means enable physical memory allocate fail retry, and will retry set times. 0 for disabling entry.
	PhysicalMemoryAllocateFailRetryDelay=500	Default : 500 (Unit is millisecond) Integer: Delay time during secure update physical memory allocate fail retry (millisecond).
[AutoWakeup]	Flag=0	Default: 0. 0: Disable. 1: Enable auto power on via RTC.
	Interval=120	Default: 120. Integer: Unit is second. Interval time after system turn off.
[EngineeringErrorDisable] ***For secure flash**	SkipSecureBootProtectionCheck=0	Default : 0. 0 : Disable. 1: Enable.

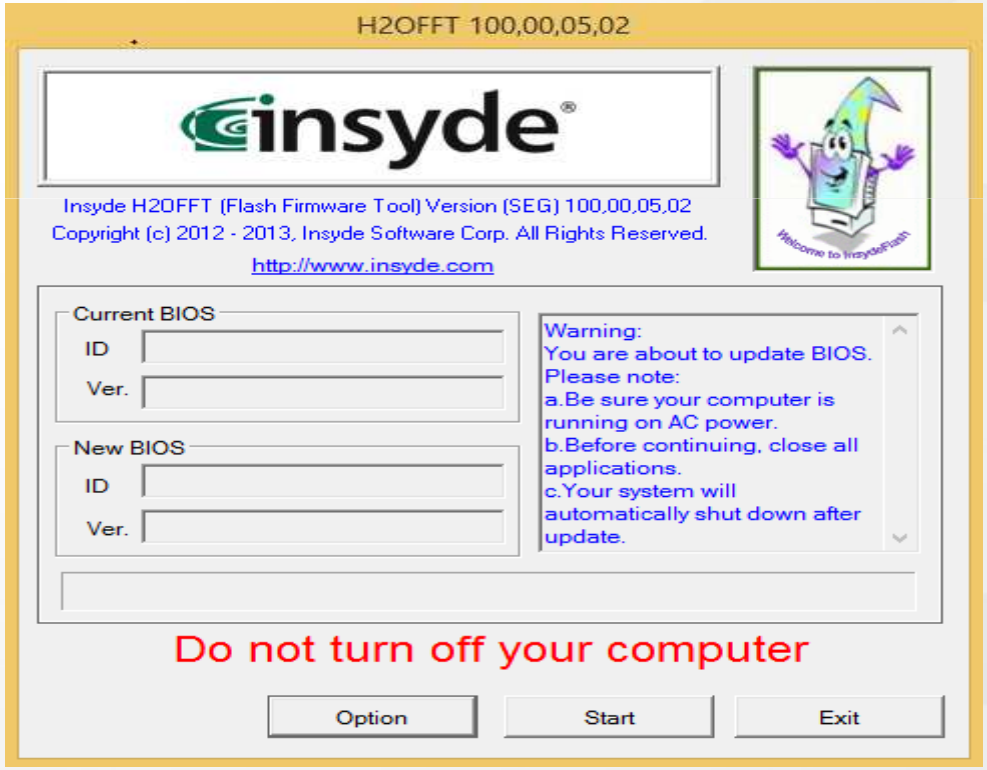
Configuration File — Platform.ini

Item	Parameter	Description
[SecurityFlashFactoryUpdate]	UpdateNvStorage=0	Default: 0. 0: Don't update NV storage area on secure boot support platform. 1: Force updating NV storage area on secure boot support platform.
	UpdateFactoryCopy=0	Default: 0. 0: Don't update FactoryCopy area on secure boot support platform. 1: Force updating FactoryCopy area on secure boot support platform.

Linux — Graphic Mode

Graphic Mode

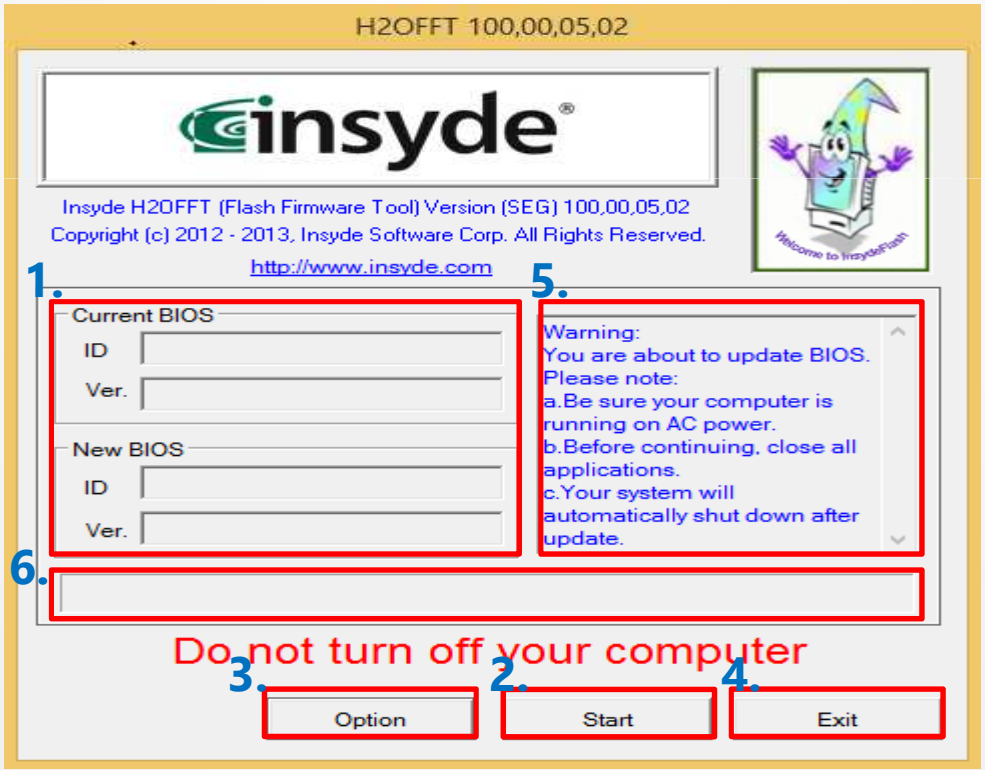
- 32/64Bits – H2OFFT
- The looks of Linux graphic mode is just like Windows version



Windows — Graphic Mode

Operation Mode

- User Interface Mode
  - 32Bits — H2OFFT-W
  - 64 Bits — H2OFFT-Wx64



No.	Function	Description
1.	BIOS Version	Displays the current and new BIOS ID versions.
2.	Start	This button will use the uploaded BIOS ROM file and overwrite the existing BIOS ROM.
3.	Option	This button allows you to modify settings in platform.ini.
4.	Exit	This button closes the H2OFFT-W/H2OFFT-Wx64 program.
5.	Status Box	This box displays the status information.
6.	Progress Bar	This bar displays the progress of Flash ROM.

Windows — Customizing Flash Utility

Customizing Flash Utility

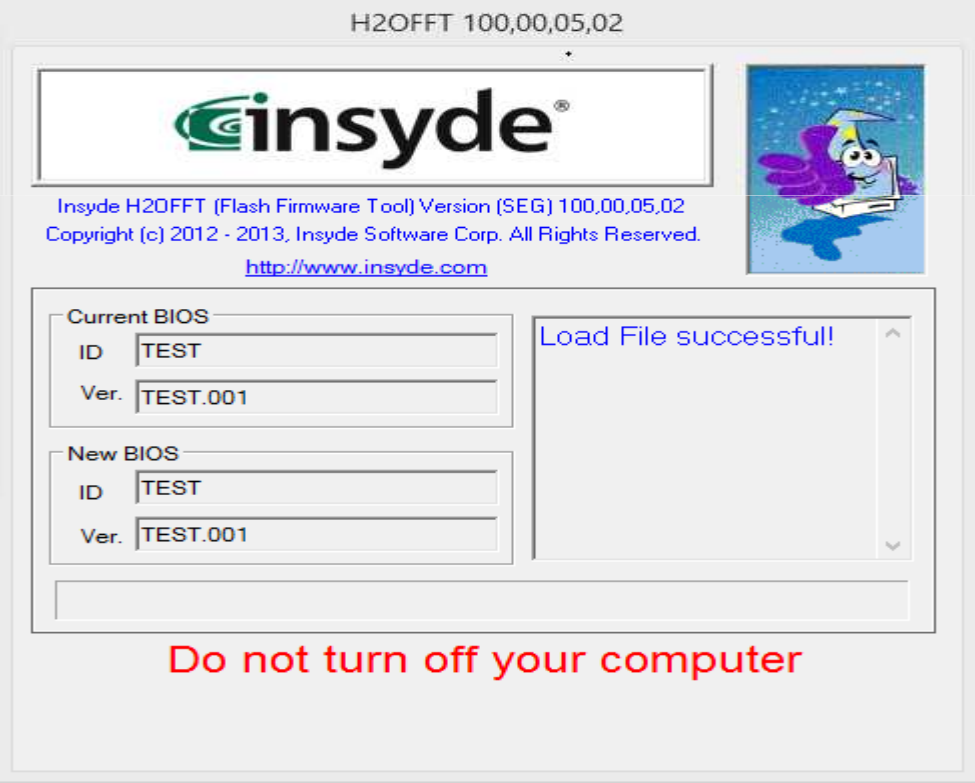
- H2OFFT-W/H2OFFT-Wx64 allows customization of a variety of options.
- To customize your H2OFFT-W/H2OFFT-Wx64, you can choose two of the following methods.
  - Modifying the configuration file "Platform.ini".
  - Specifying the H2OFFT/H2OFFT-Wx64 "Option" button.

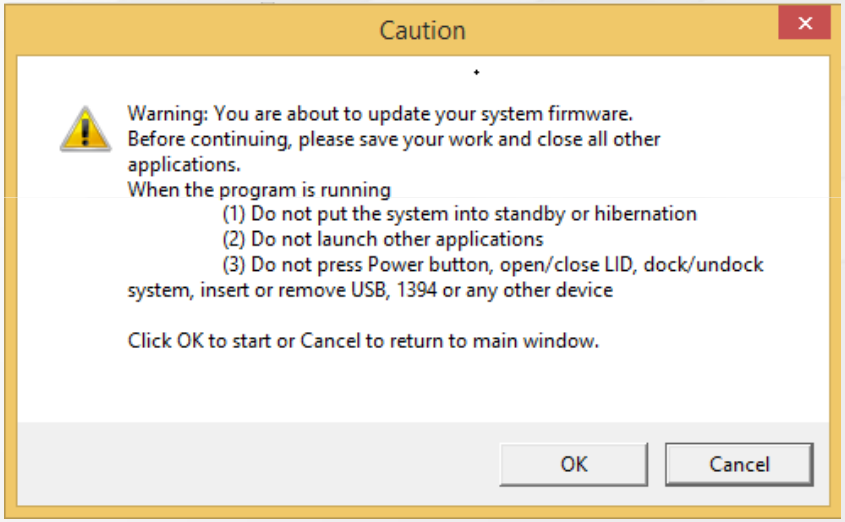
Customizing Flash Utility

- Before beginning to update the BIOS, you must put the ROM file(*.fd) together with H2OFFT/H2OFFT-Wx64.
- There are three options within platform.ini file for user to run H2OFFT-W/H2OFFT-Wx64.
- Platform.ini – [Option]
  - Flag = 0 -> Auto flash mode.
  - Flag = 1 -> User option mode, including option, start, exit buttons.
  - Flag = 2 -> User flash mode, including start, exit buttons.

Customizing Flash Utility

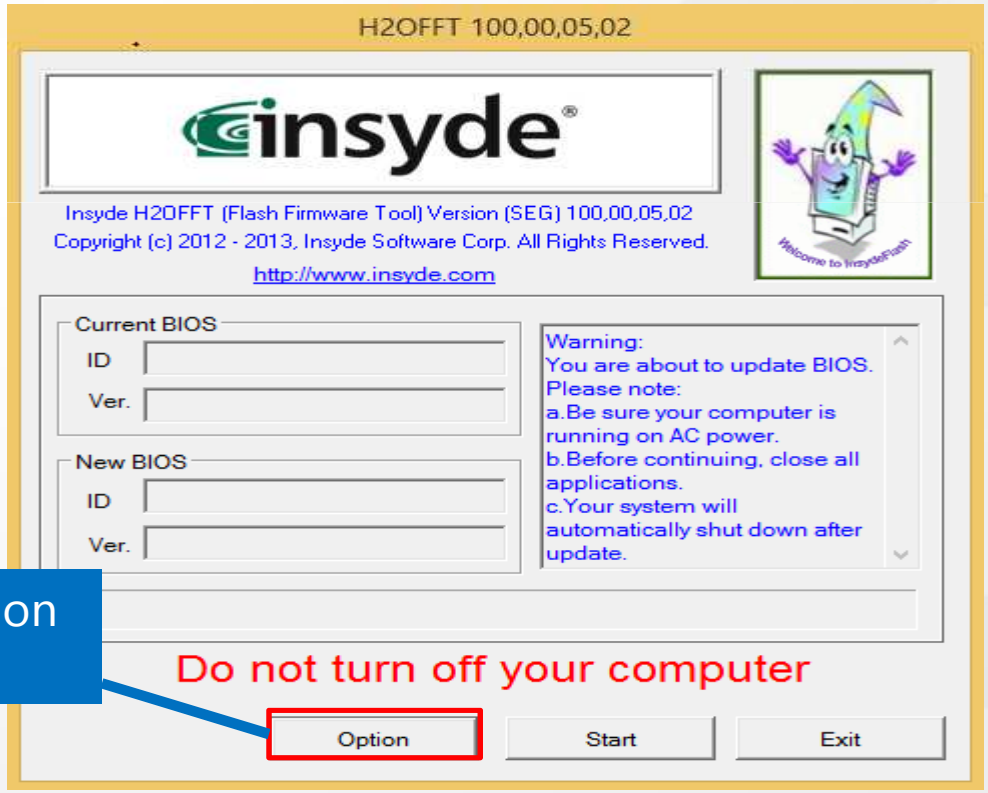
- Flag set to 0:
  - Double click H2OFFT-Wx64, it will show this main dialog and run automatically.





Customizing Flash Utility

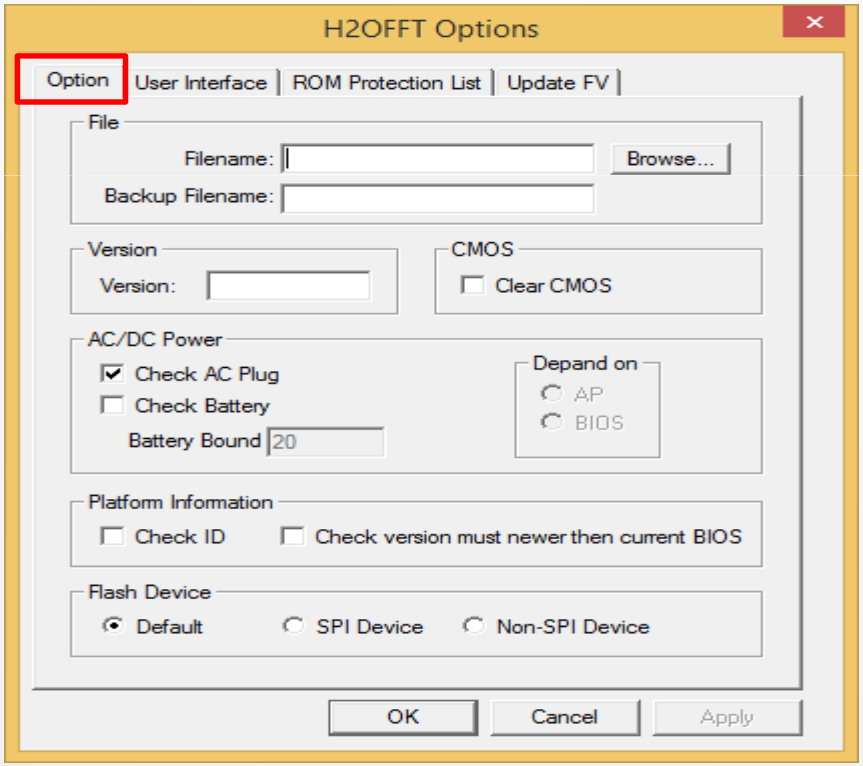
- Flag set to 1:
  - Double click H2OFFT-Wx64, it will show this main dialog. Please click start button to run.

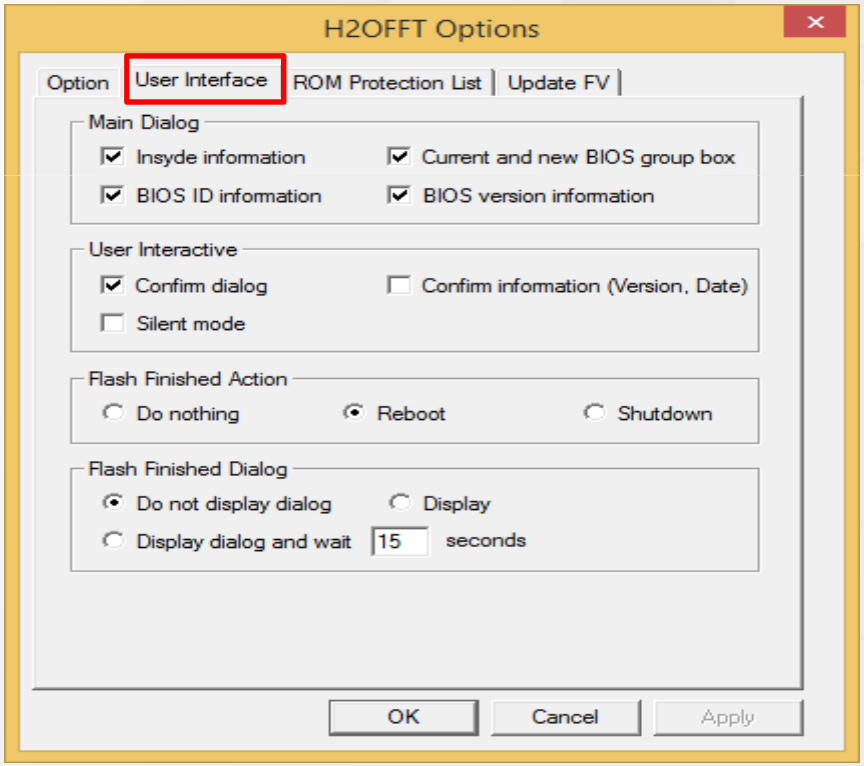


Include option button

Customizing Flash Utility

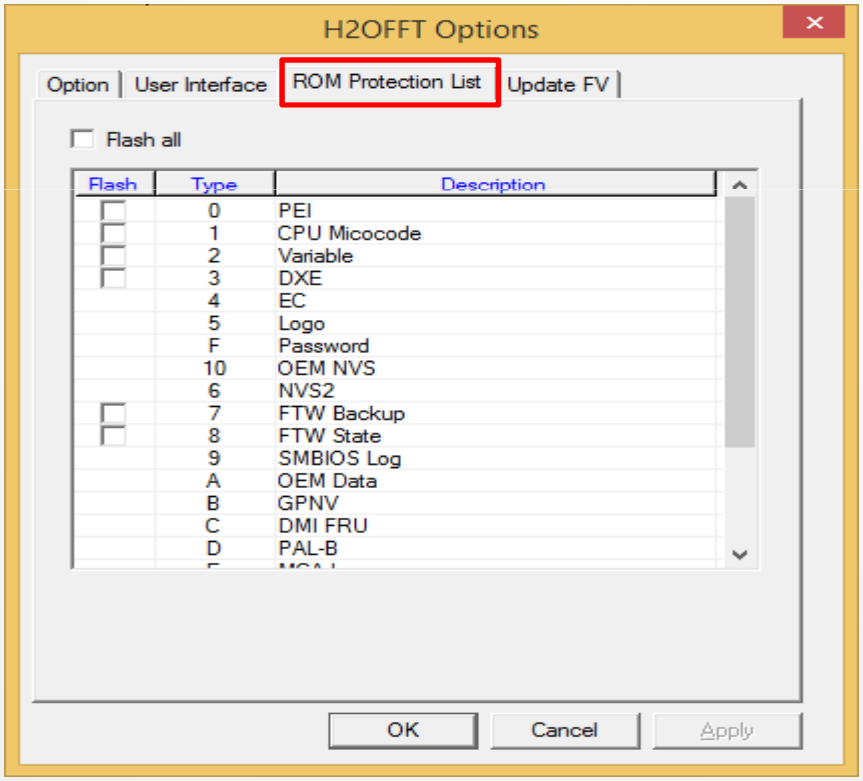
- Flag set to 1: (Option button)
  - Option Tag.
  - User Interface Tag.

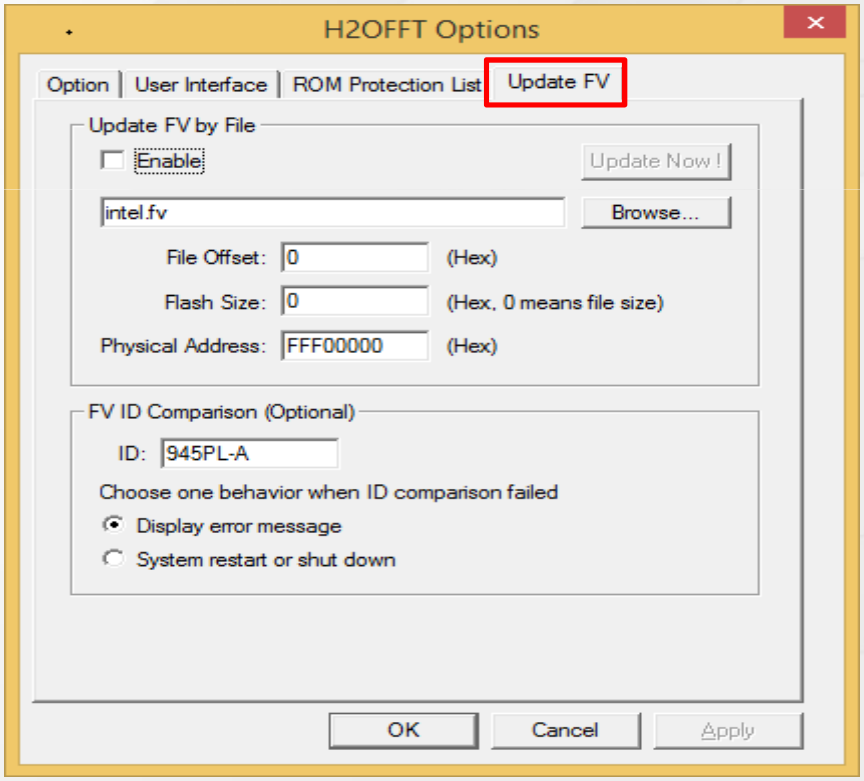




Customizing Flash Utility

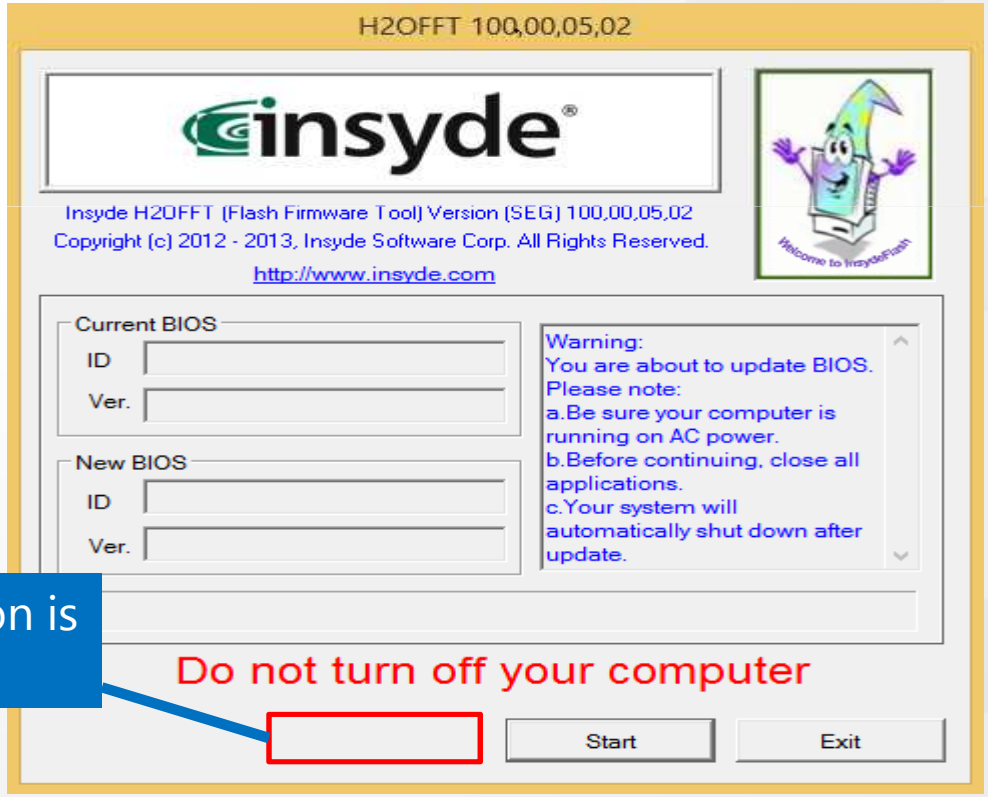
- Flag set to 1: (Option button)
  - ROM Protection List Tag.
  - Update FV Tag.





Customizing Flash Utility

- Flag set to 2:
  - Double click H2OFFT-Wx64, it will show this main dialog. Please click start button to run.

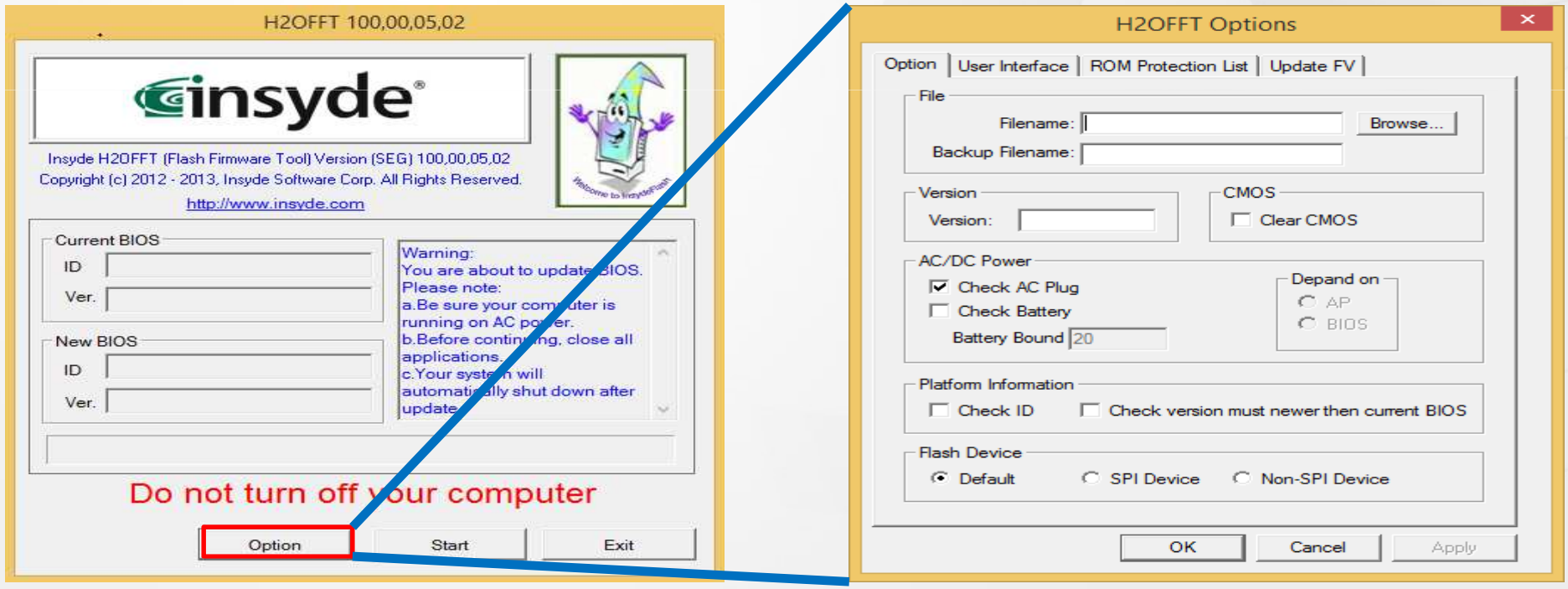


Option button is gone

Windows — Flash Utility Options

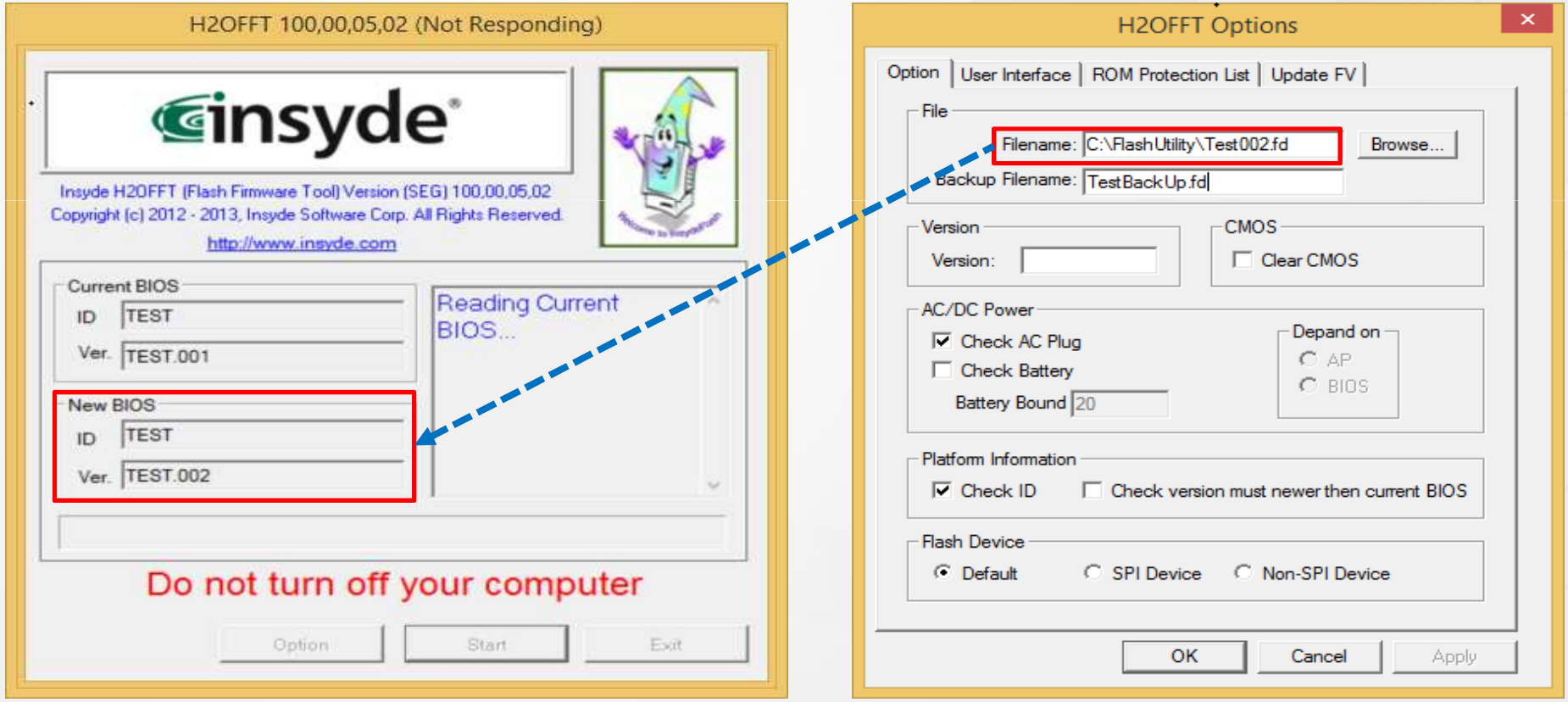
H2OFFT Options

- To customize H2OFFT-W/H2OFFT-Wx64 through the main dialog, perform the following procedure:
  - 1. Double click H2OFFT-W/H2OFFT-Wx64.
  - 2. Click the Option button. A screen will show.



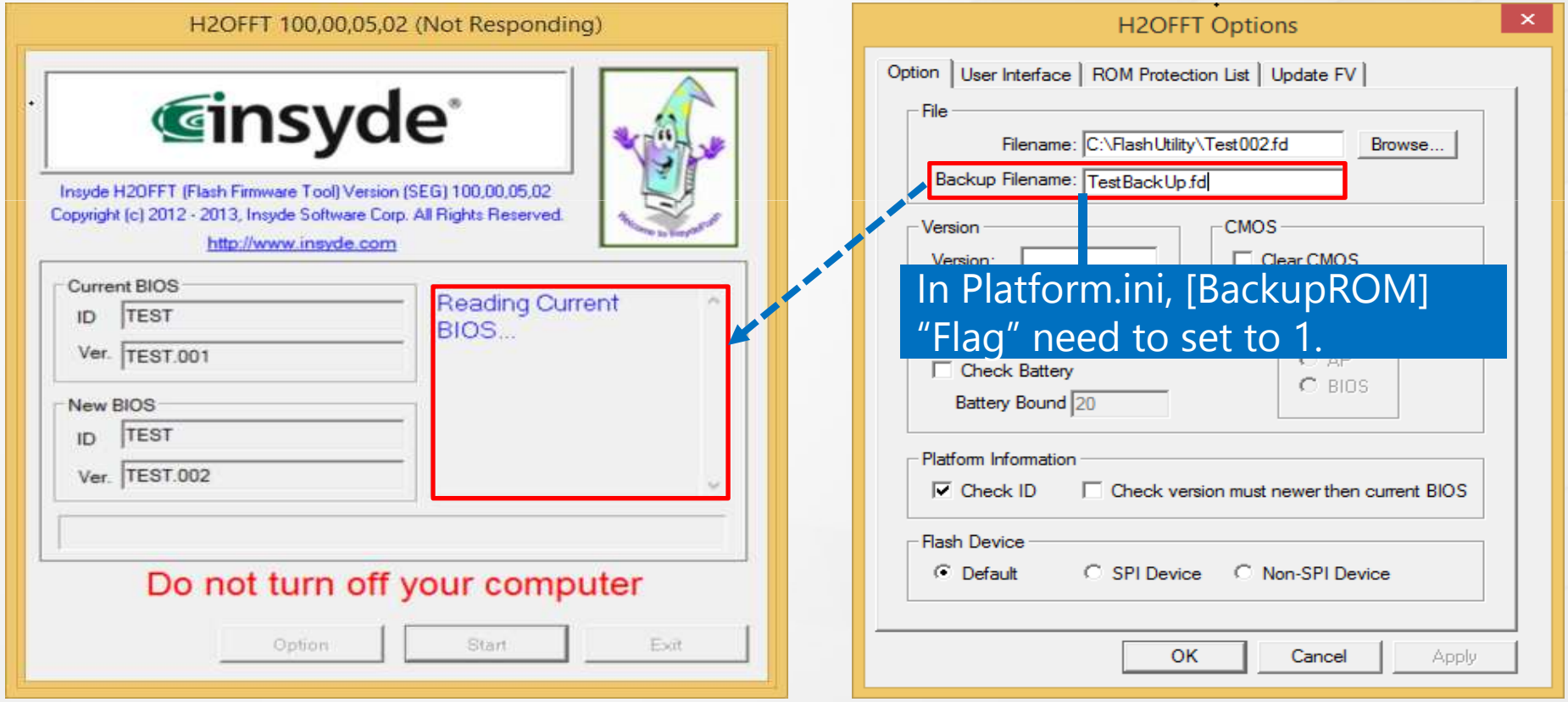
H2OFFT Options

- Option Tag (1/5)
  - File



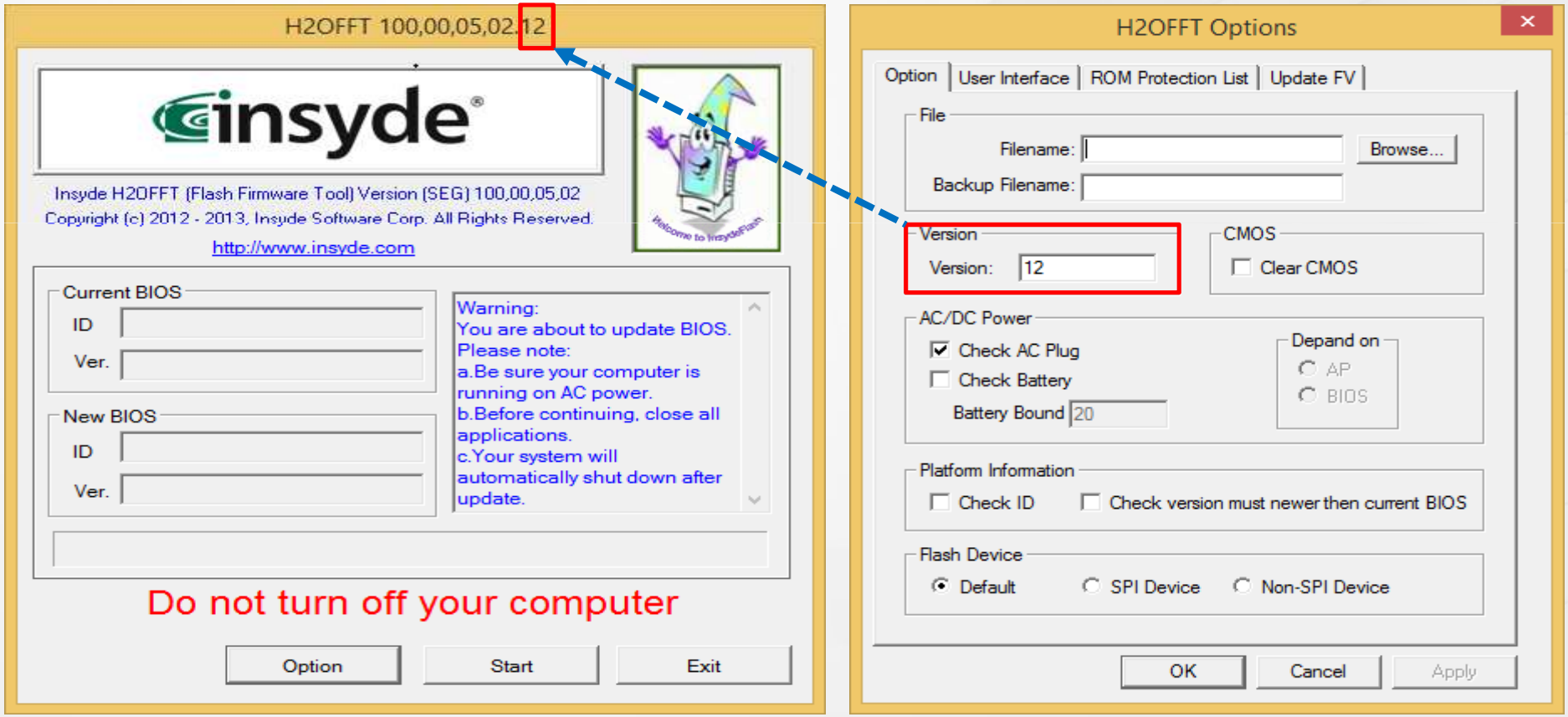
H2OFFT Options

- Option Tag (2/5)
  - File



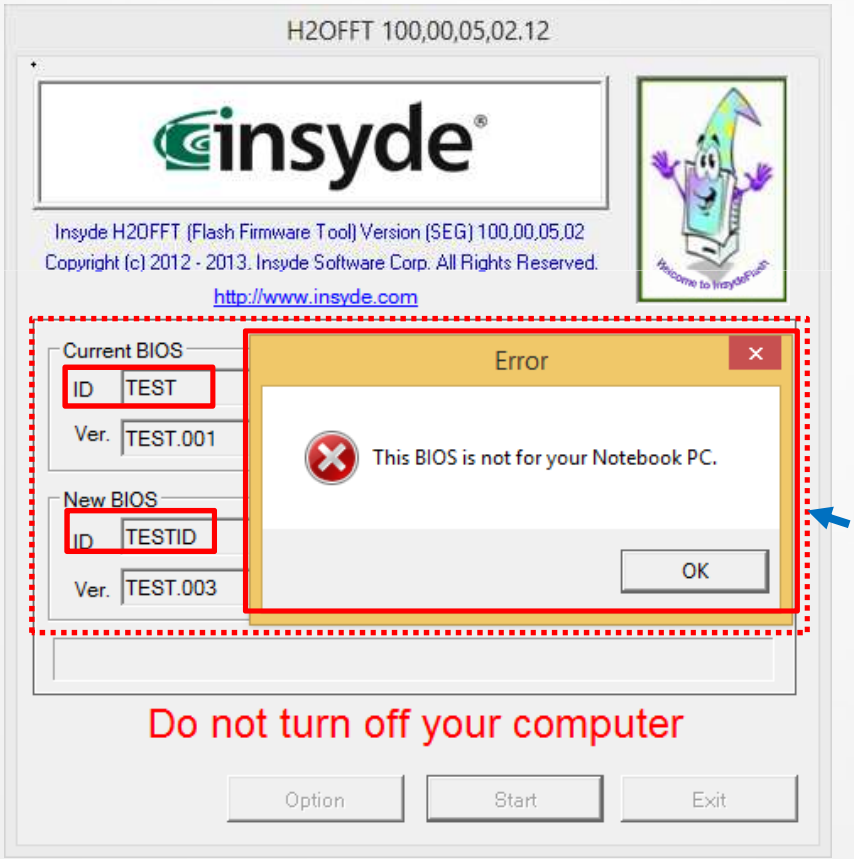
H2OFFT Options

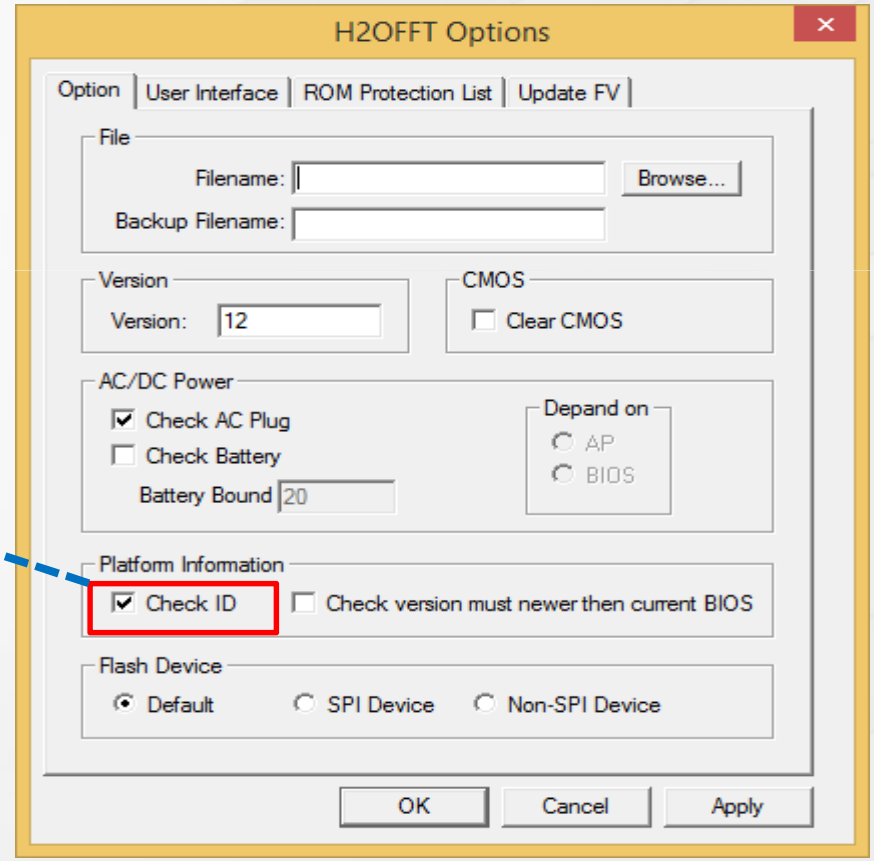
- Option Tag (3/5)
  - Version



H2OFFT Options

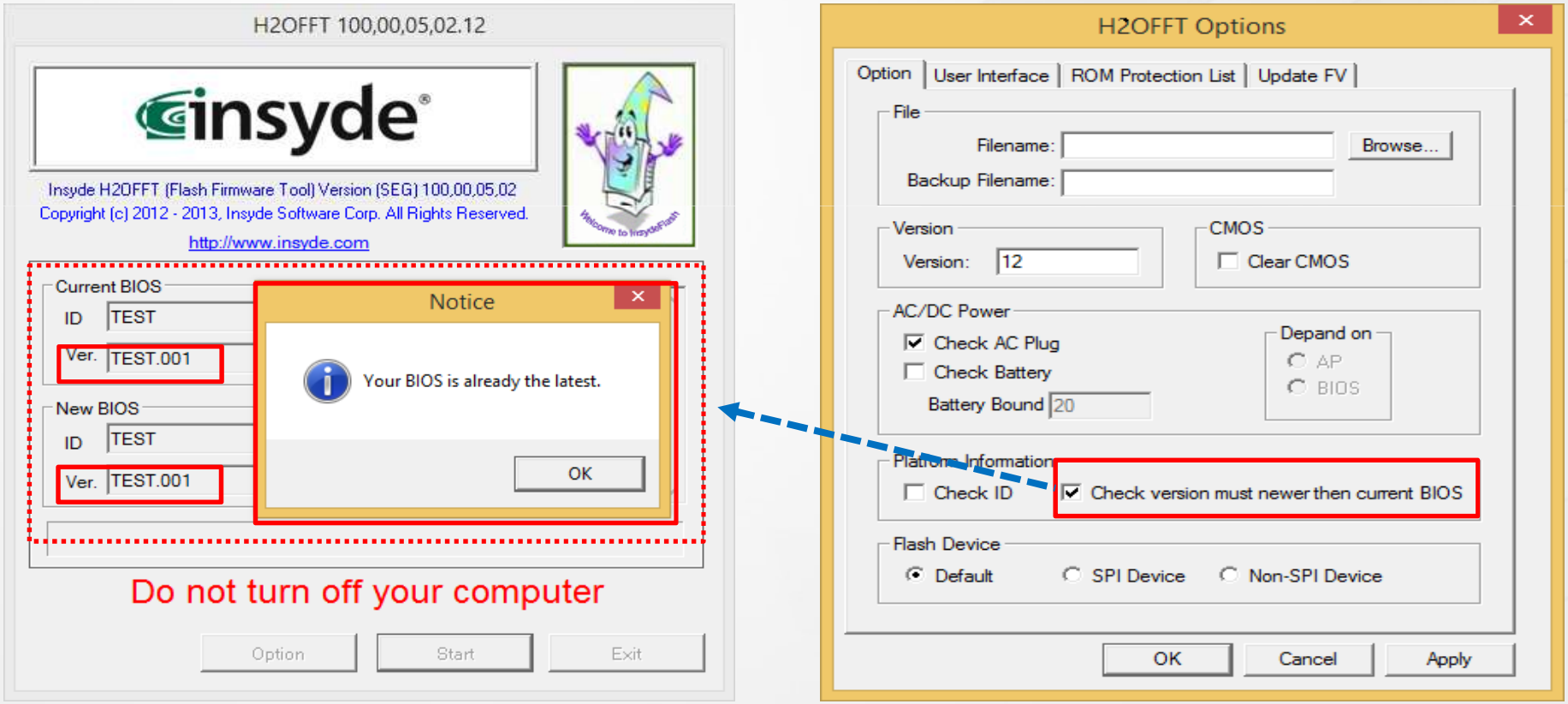
- Option Tag (4/5)
  - Check ID





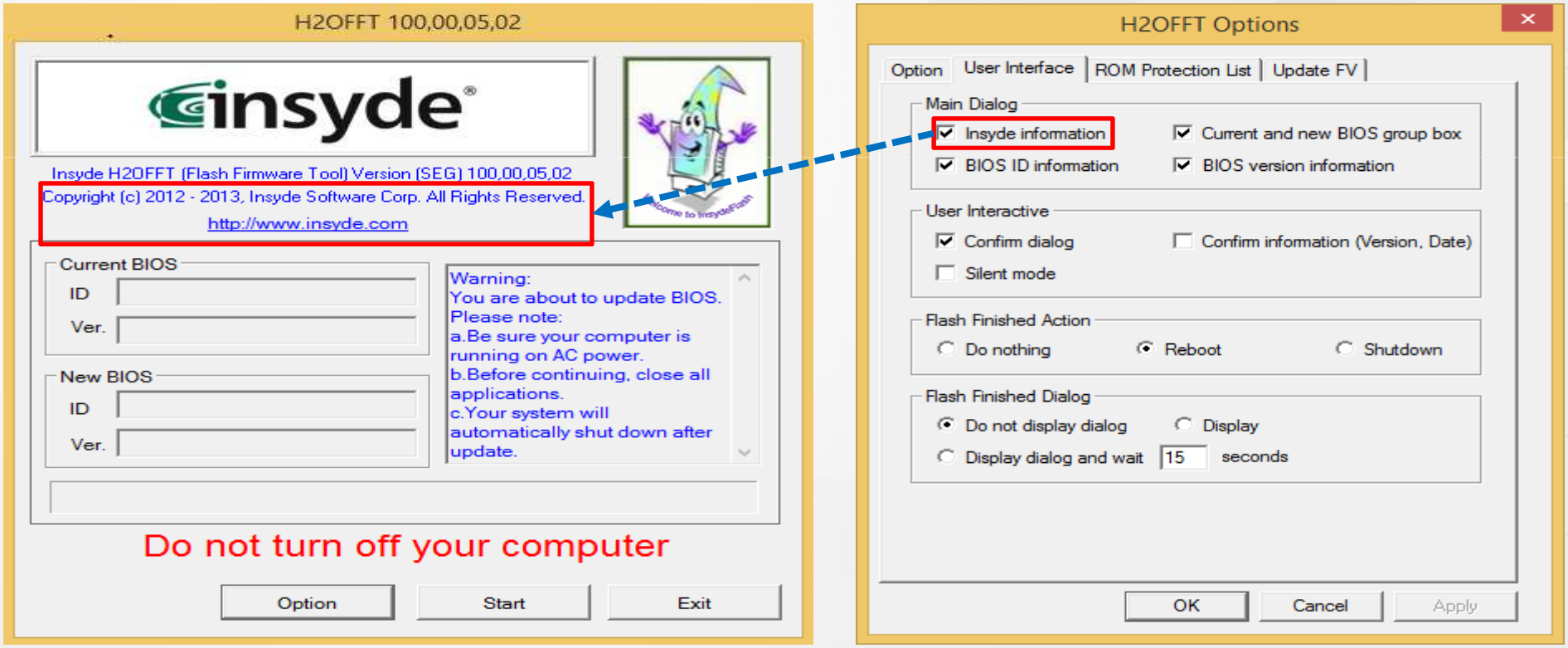
H2OFFT Options

- Option Tag (5/5)
  - Check version must newer then current BIOS



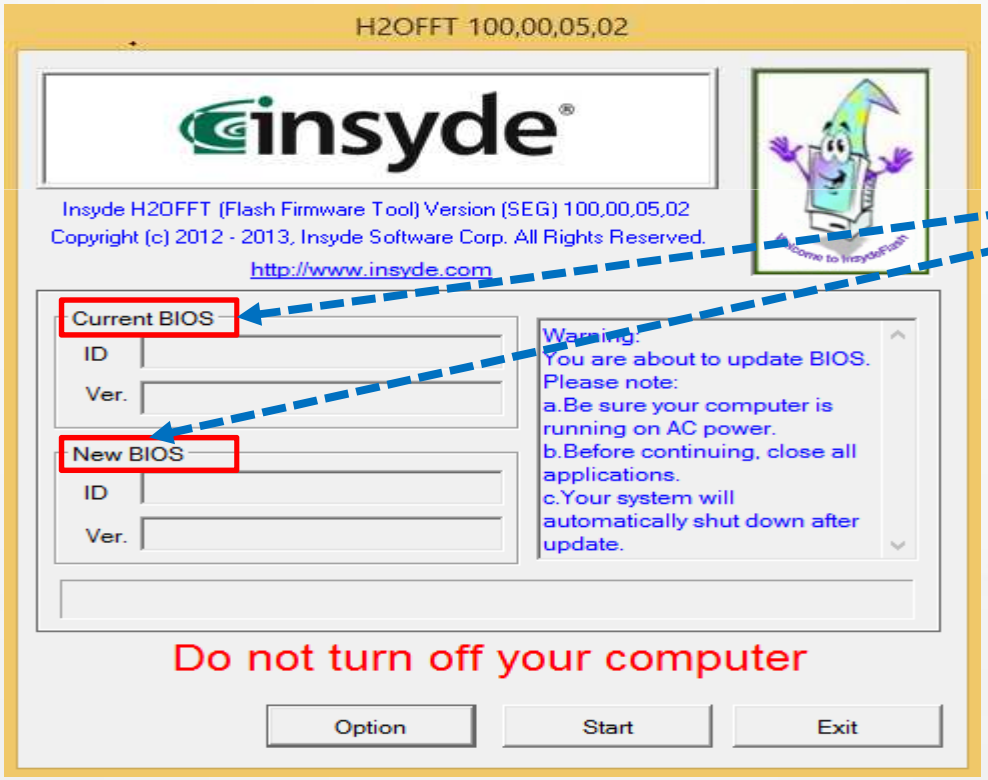
H2OFFT Options

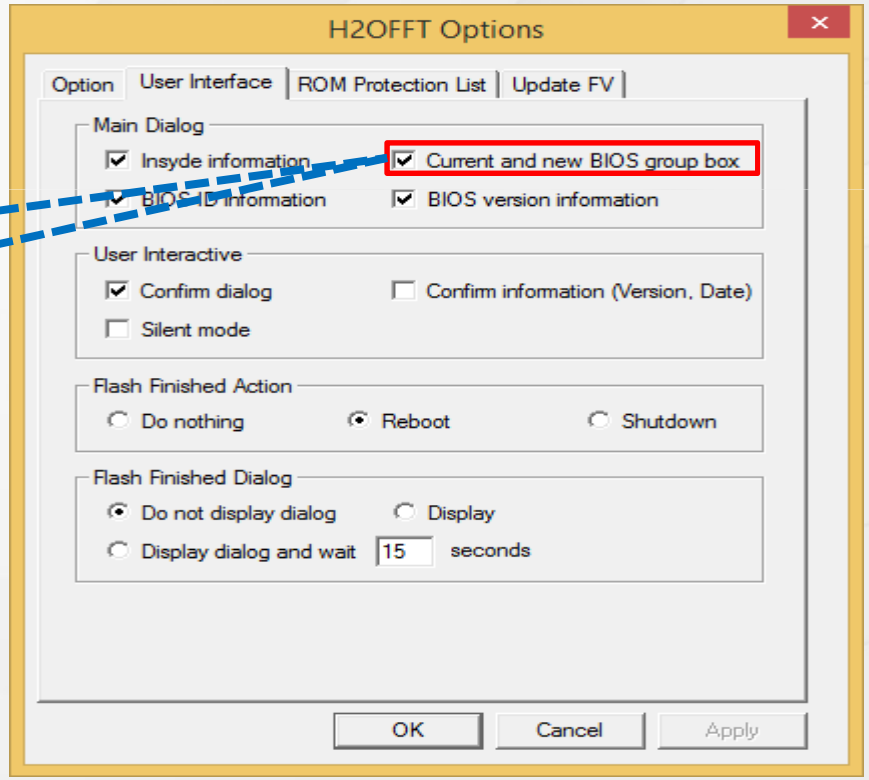
- User Interface Tag (1/9)
  - Insyde information



H2OFFT Options

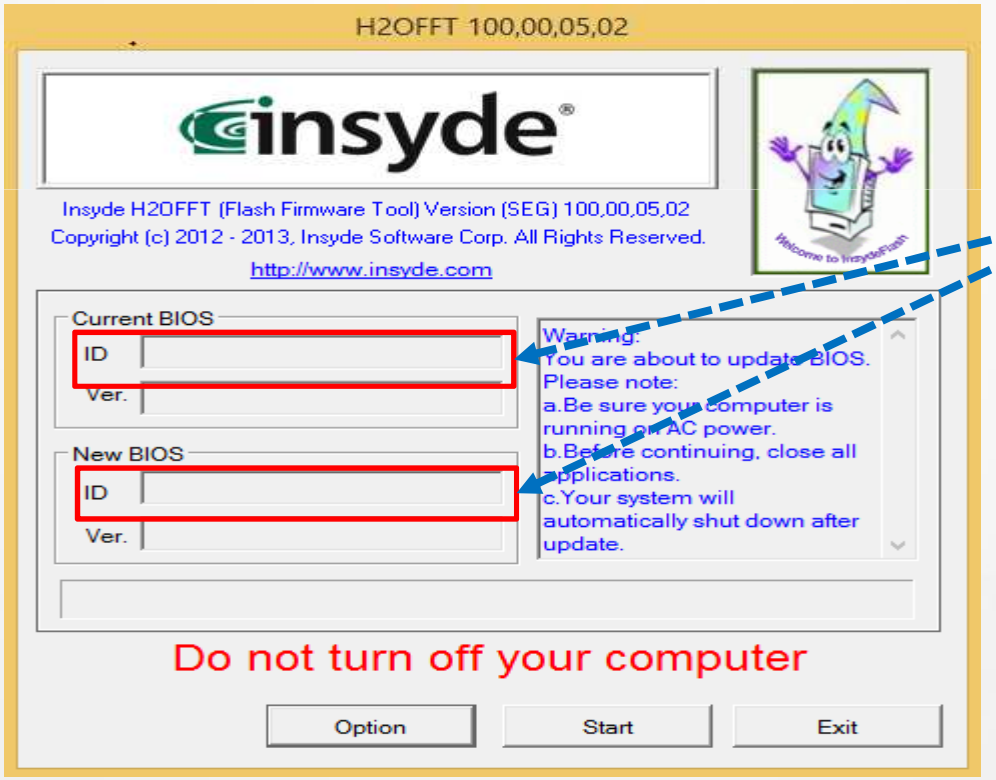
- User Interface Tag (3/9)
  - Current and new BIOS group box
  - Uncheck this checkbox means hidding BIOS Information and BIOS Version Information

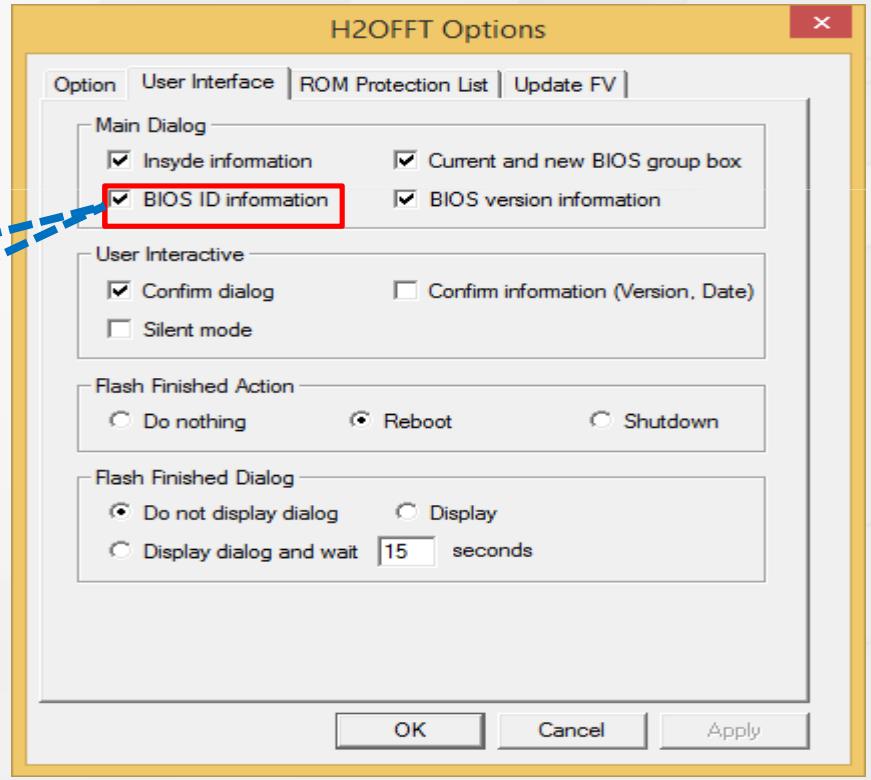




H2OFFT Options

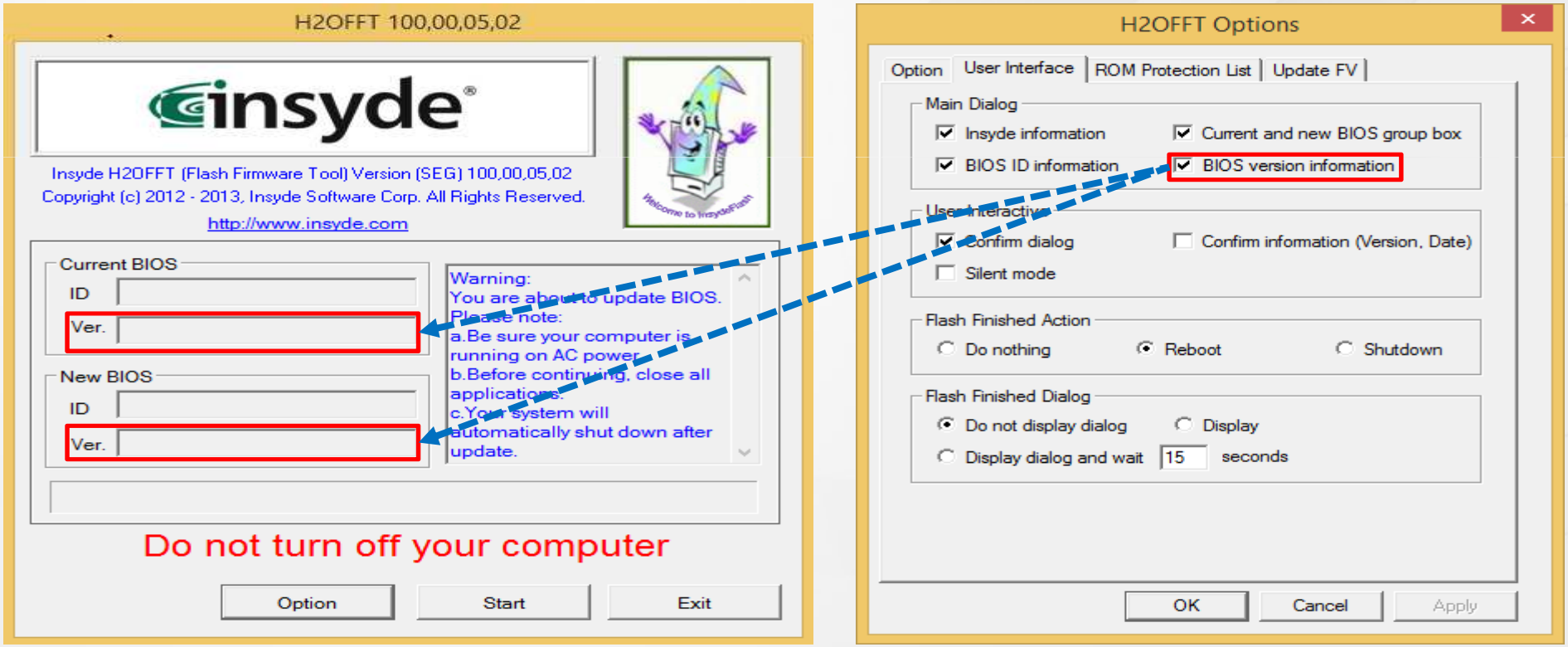
- User Interface Tag (2/9)
  - BIOS ID information





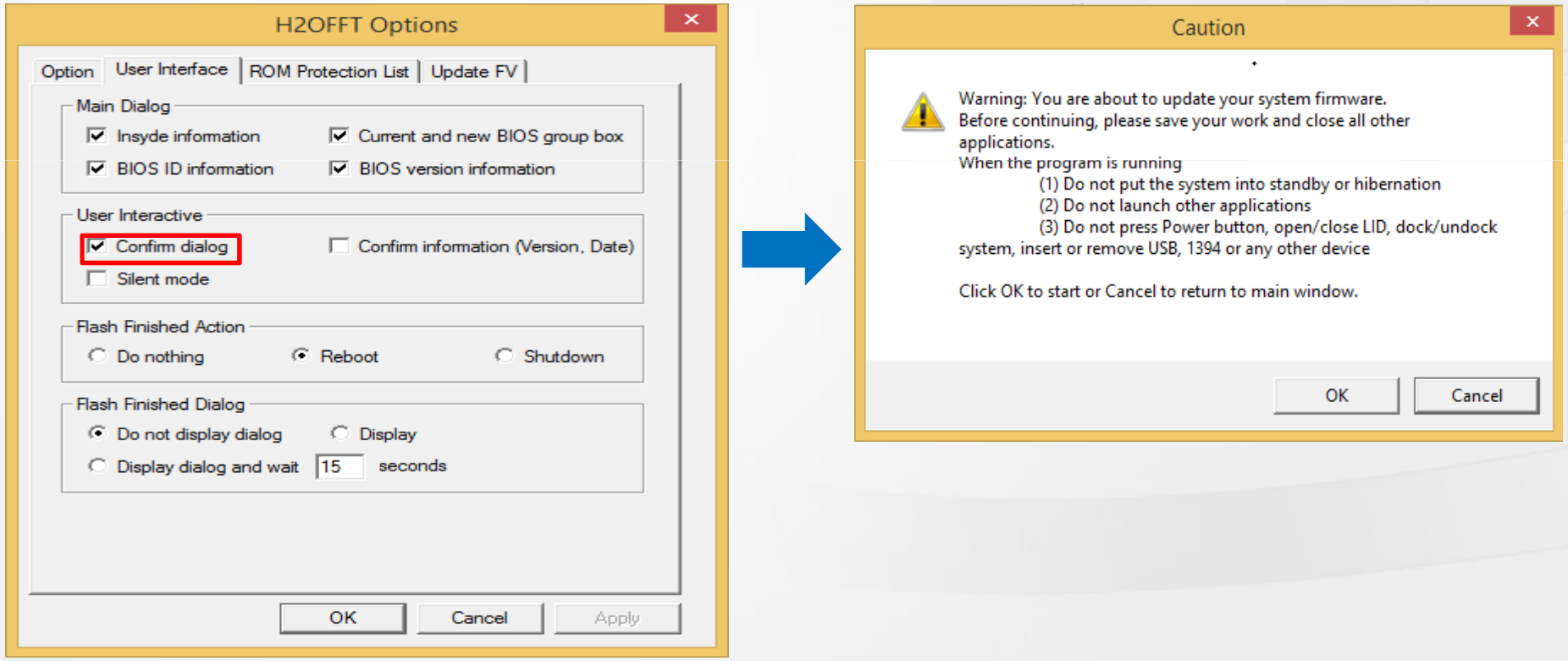
H2OFFT Options

- User Interface Tag (4/9)
  - BIOS version information



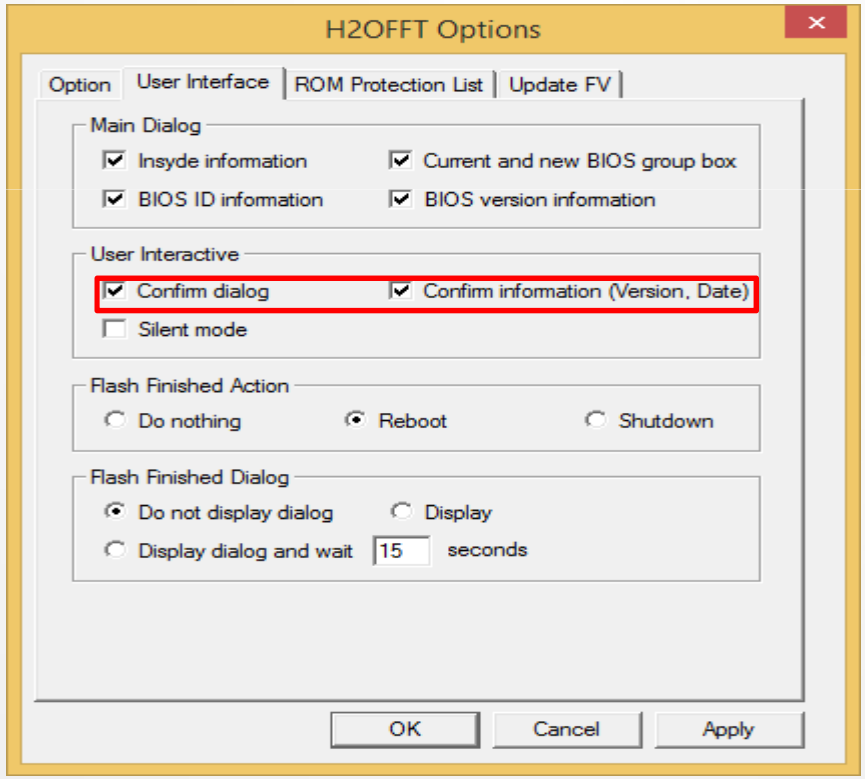
H2OFFT Options

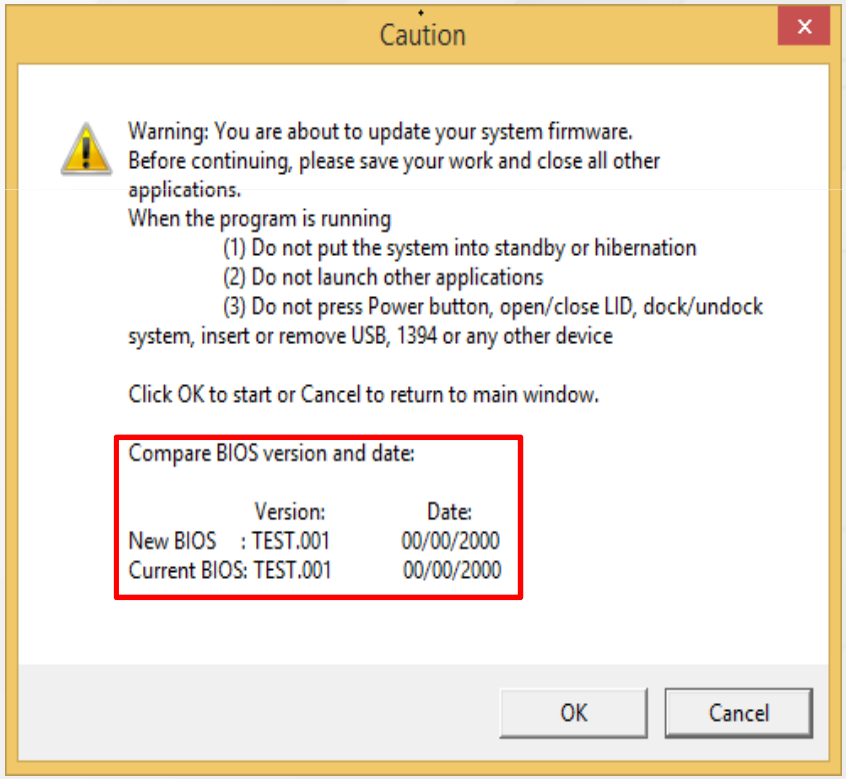
- User Interface Tag (5/9)
  - Confirm dialog



H2OFFT Options

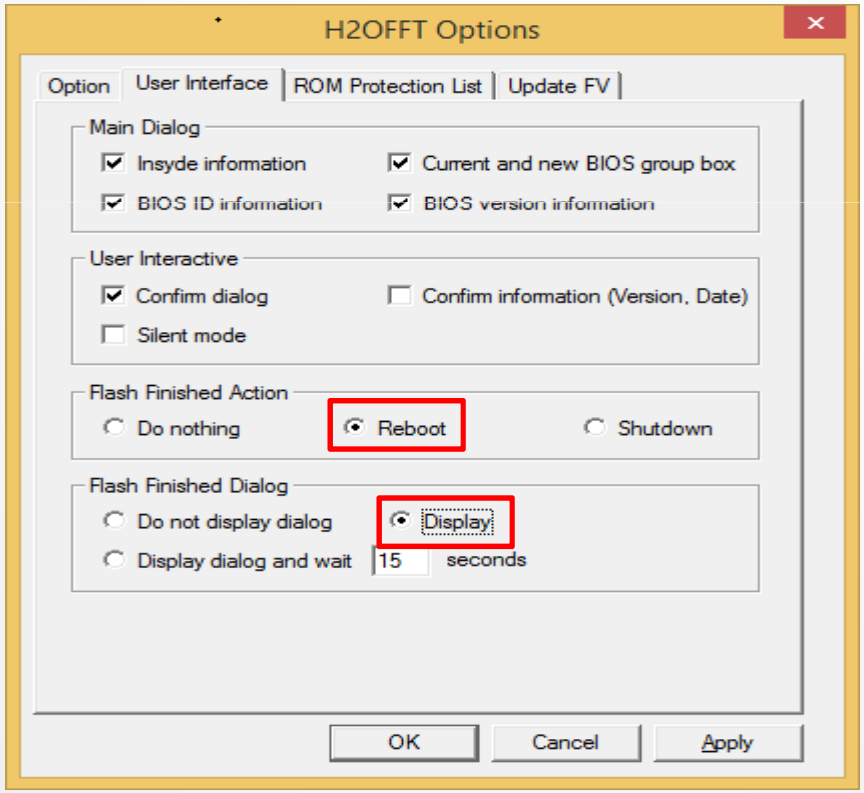
- User Interface Tag (6/9)
  - Confirm information (Version, Date)

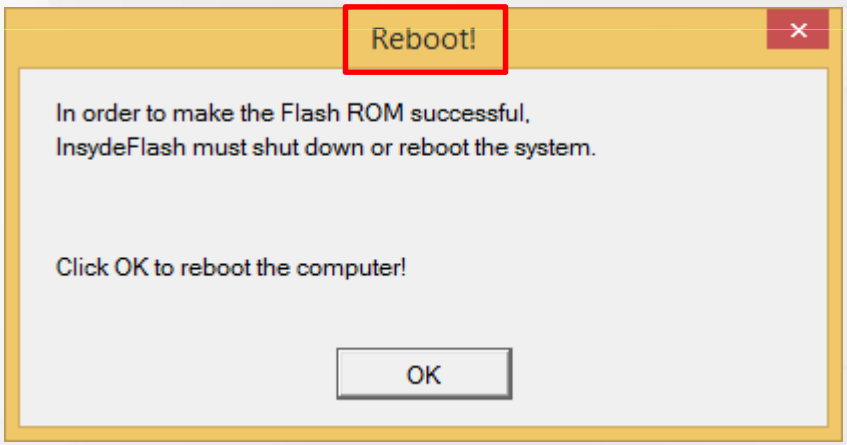




H2OFFT Options

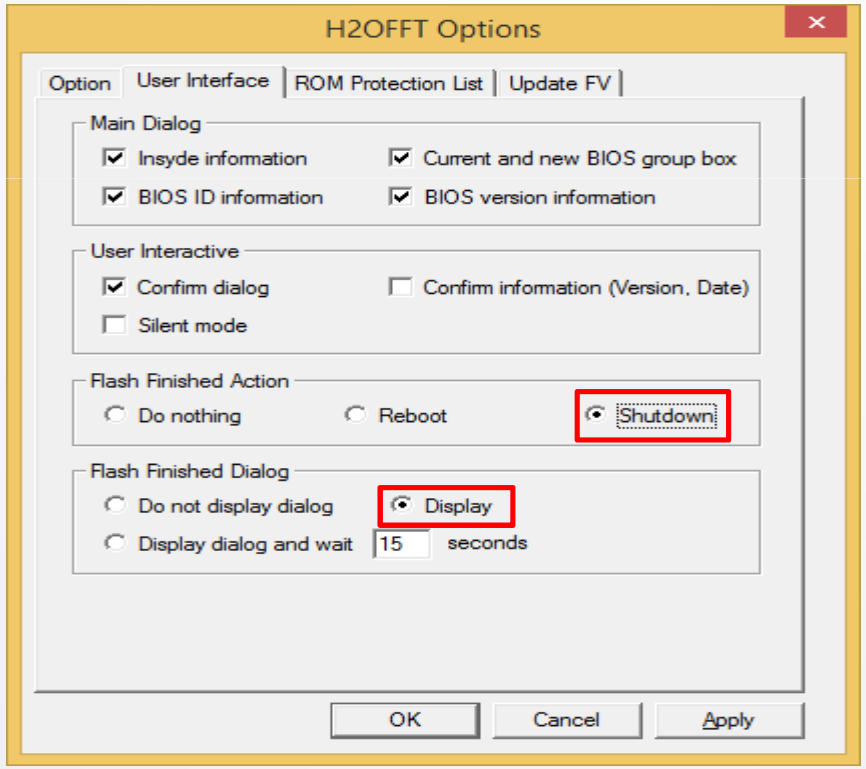
- User Interface Tag (7/9)
  - Reboot — Reboot after flash.
  - Display — Pop-up flash finished dialog

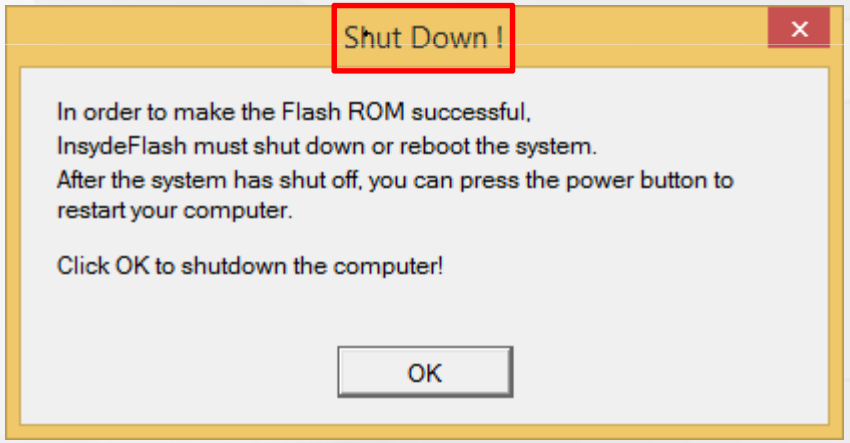




H2OFFT Options

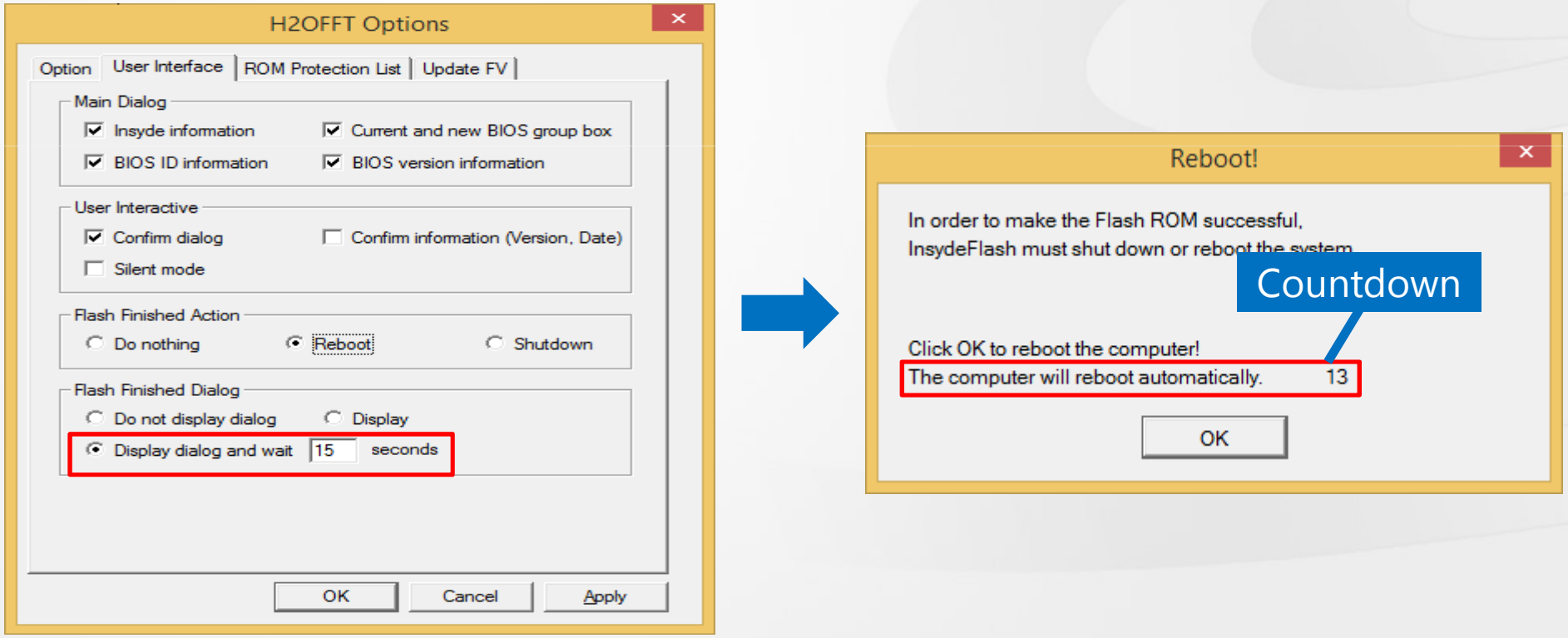
- User Interface Tag (8/9)
  - Shutdown — Shutdown after flash.
  - Display — Pop-up flash finished dialog





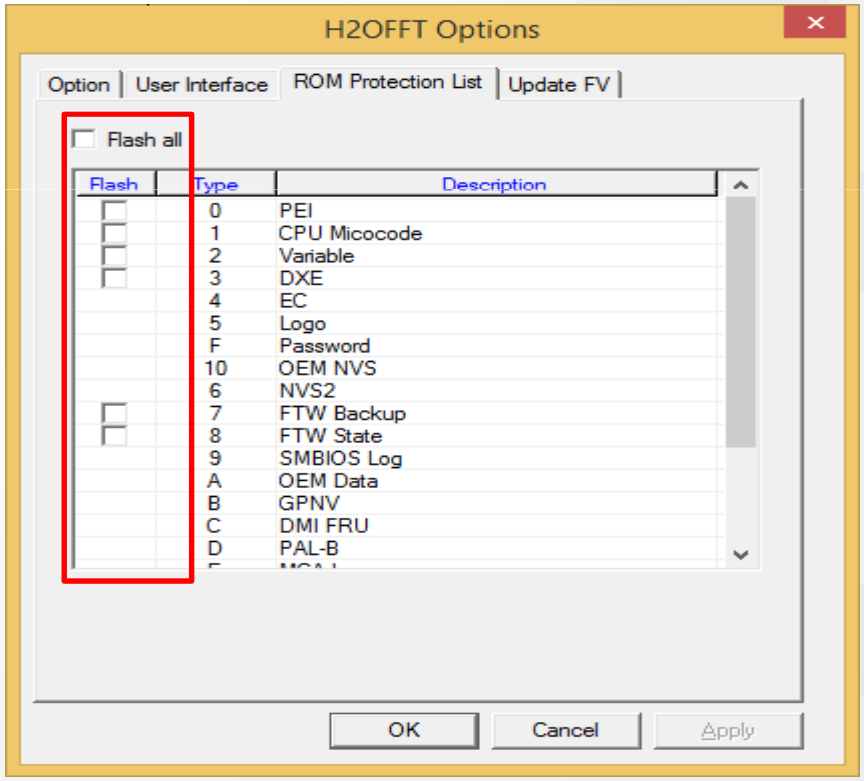
H2OFFT Options

- User Interface Tag (9/9)
  - Display dialog and wait 15 seconds.



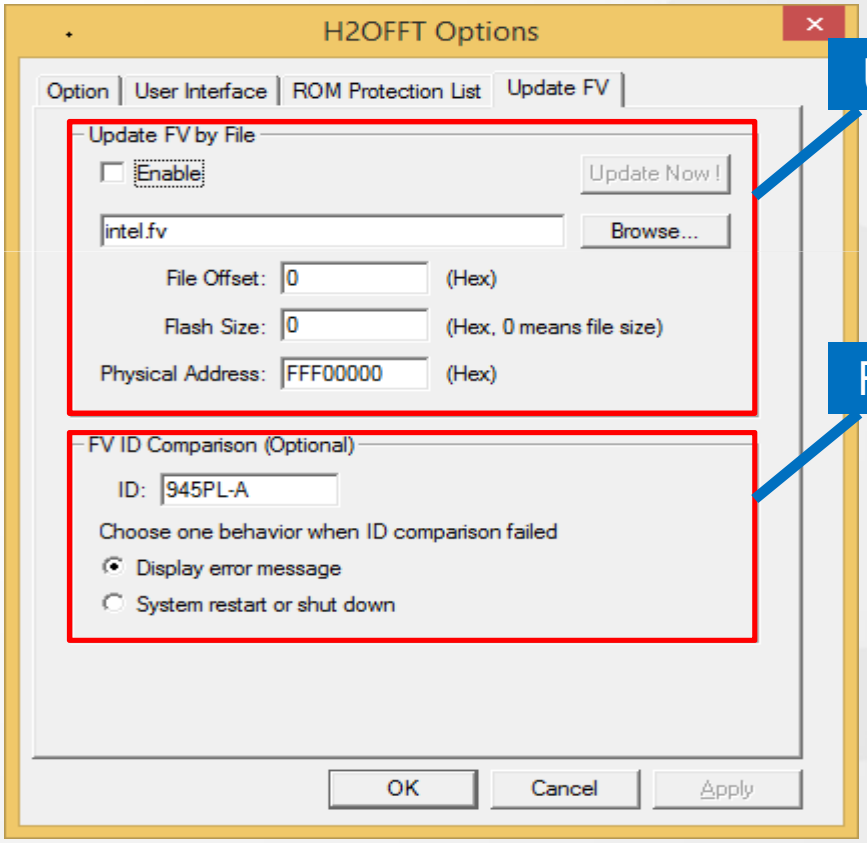
H2OFFT Options

- ROM Protection List Tag
  - Use checkbox to select the ROM protection.



H2OFFT Options

- Update FV Tag



Error Message and Trouble Shooting

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: GUID argument format incorrect X	Parameter -evg: Variable GUID format is incorrect!	Correct GUID.
Error: Ec file size input error!	Input wrong EC size when Update EC.	Correct Input EC size.
Error: This EC file is larger than EC ROM part!	EC size too large.	Check Source Image
Error: This EC ROM file not found.	Open EC file fail.	
Error: Memory allocation failed in 42h! Size:	Allocate Memory Fail in IHISI 42H command.	Memory crash, Reboot system.
Error: Memory allocation failed in 20h! Size:	Allocate Memory Fail in IHISI 20H command.	
Error: Extracting the image in single package failed!	Extract Single Packer Fail.	Check source Packer file.
Error: Cannot open file:	Cannot Open Input File.	Check Source File.

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: File FILENAME not found.	No Input file name.	Correct Input File Name.
Error: Please enter the file name.		
Error: No FD file can open.		
Error: The file FILENAME open failed.	Open File Fail.	Check Source File.
Error: Platform MAP not found!	Platform not supports IHISI 12H (Get Platform ROM map protection) or gets platform map fail.	1. Platform not supports. 2. Or Reboot System.
Error: Error occur when BIOS checking conditional data!	BIOS Check Conditional data Fail.	1. Update Conditional Data in Platform.ini 2. Or Set PFCDFunctionEnable = 0 in Platform.ini to disable this check.
Error: Region MAP not found!	Platform not supports IHISI 17H (Get External ROM map) or gets External ROM map fail.	1. Platform not supports. 2. Or Reboot System.
Error: Cannot get flash part information!	Platform not supports IHISI 13H (flash part information) or gets flash part information fail.	1. Platform not supports. 2. Or Reboot System.

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: The new image file does not support flash utility.	Check this image file fail.	Check Source Image
Error: Bad variable name.	Input Wrong variable name.	Correct variable name.
Error: Bad HDCP file name.	Input Wrong HDCP name.	Correct HDCP name
Error: This ROM file FILENAME not found.	Open File Fail.	Check Source File.
Error: File size is 0!	File size is 0.	Check Source File.
Error: File buffer allocate failed!	Allocate Memory Fail.	Memory crash, Reboot system.
Error: Open FILENAME failed.	Open File Fail.	Check Source File.
Error: File name or variable name must put as first argument!	File name or variable name must put as first argument!	File name or variable name must put as first argument!

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: Bad argument.	Bad argument	Bad argument
Error: New image file did not have model information	New image file did not have model information	1. Check Source File 2. Use –MC to skip model name check.
Error: The file to be updated is removed!	Load image file from buffer fail.	Reboot System
Error: Get region map failed!	Platform not supports IHISI 17H (Get External ROM map) or gets External ROM map fail.	1. Platform not supports. 2. Or Reboot System.
Error: The BIOS image must support ATp!	Cannot find Atp Signature when update EC.	Check Source File
Error: New BIOS version not found.	Cannot find New Bios version.	Check Source File Use –MC to skip model name check.
Error: New image file did not have model information	Cannot find New Bios model information.	
Error: Current ROM BIOS version invalid	Invalid Current Bios version.	

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: File FILENAME not found.	File name not found.	Check input argument.
Error: Data size must be less than XXh bytes. This file is XXh.	Variable Data Size to large.	Check Source file.
Error: RSD PTR not found	Cannot find RSD PTR in F segment (F0000h)	1. Reboot system. 2. Still fail check current bios code. 3. use DediProg to write new bios bin to rom part.
Error: FACP not found!	Cannot find FACP in System ACPI Table	
Error: SMI Cmd not found!	Cannot find SMI Cmd port in FACP	
Error: Read ROM failed.	Read ROM Part Data Fail	
Error: Create FileName fail!	Create File Fail.	Check if read only file system.

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: Input variable data length must smaller than XXh	Variable length too large.	Check Input length data.
Error: Uuid data length must be 32.	Wrong UUID data length.	
Error: GUID data length must be 8.	Wrong GUID data length.	
Error: Serial number data length must be 10.	Wrong Serial number data length.	
Error: OEM data area not found in current BIOS.	OEM data area not found in current BIOS.	Skip –uu: -se: -gu: parameter
Error: Memory allocation failed!	Allocate Memory Fail.	Memory crash, Reboot system.
Error: Read HDCP key fail!	Read HDCP key Fail.	Skip – rh parameter
Error: FILENAME cannot be opened	Cannot Open Input File.	Check Source File.

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: Write HDCP key fail!	Write HDCP key Fail.	Skip – wh parameter
Error: Verify HDCP key fail!	Verify HDCP key Fail.	
Error: Variable length error.	Variable length too large.	Check input argument
Error: Uuid must use with /WV	Uuid string compare fail	Skip –wu: parameter
Error: Update failed! Current system cannot support this version of flash utility.	IHISI 10h (Get FBTS supported version and FBTS permission) Fail	1. Reboot system. 2. Still fail check current bios code. 3. use DediProg to write new bios bin to rom part
Error: UpdateAddress = XXXXh, RomBase Address = XXXXh Error: Physical address must equal or higher than BIOS base address	Physical address must equal or higher than BIOS base address	Check input Argument

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Verify Error: Read fail after write. Address:	Read Rom Part Data fail after write.	Check system environment.
Error: Memory allocation failed in 15h! block write, Size = XXXXh	Allocate Memory Fail.	Memory crash, Reboot system.
Error: Memory allocation failed in 15h! FSA write, Size = XXXXh		
Error: Current BIOS region not found.	Cannot find Bios region in Region Map (IHISI 17H)	1. Reboot system. 2. Still fail check current bios code. 3. use DediProg to write new bios bin to rom part.
Error: New BIOS region not found.		
Error: Current ME region not found.	Cannot find ME region in Region Map (IHISI 17H)	
Error: New ME region not found.		
Error: Current GbE region not found.	Cannot find Gbe region in Region Map (IHISI 17H)	

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: New GbE region not found.	Cannot find Gbe region in Region Map (IHISI 17H)	1. Reboot system. 2. Still fail check current bios code. 3. use DediProg to write new bios bin to rom part.
Error: Current DESC region not found.	Cannot find DESC region in Region Map (IHISI 17H)	
Error: New DESC region not found.		
Error: Current platform data region not found.	Cannot find data region in Region Map (IHISI 17H)	
Error: New platform data region not found.		
Error: Cannot check model name in only EC file!	Cannot check model name when update EC.	Do not use –X –MC parameter when update EC.
Error: Memory allocation failed in XXh! Size: XXh	Allocate Memory Fail.	Memory crash, Reboot system.
Error: IHISI 20h failed. EcOffset:XXh	Write EC Fail and display EC offset.	1. Check EC offset is correct. 2. Or reboot system.

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: IHISI 20h failed.	Write EC fail	1. Check EC offset is correct. 2. Or reboot system.
Error: IHISI 22h failed.	Read EC Fail	
Error: This is not a correct package.	Not a correct package.	Check input package image.
Error: HDR FILENEAME create failed!	Create File Fail.	Check if read only file system
Error: This file cannot open by another disk.	This file cannot open by another disk.	Check Input file.
Error: This file cannot open.	This file cannot open.	
Error: File size must be block size alignment.	File size must be block size alignment.	
Error: The file to be updated is removed!	Read File Fail	

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: File offest XXh is bigger than file size XX	Wrong Update Arguments	Check Update Arguments
Error: File offest + size XXh is bigger than file size XXh		
Error: File size must be sector size alignment.		
Error: This FD file cannot open by another disk.	Read File Fail	Check Input file.
Error: This FD file cannot open.		
Error: This ROM file size is incorrect.		
Error: ROM size: XXh Current BIOS size: XXh		
Error: Size of Profile binary file is larger than Profile region size!		

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: IHISI 00h failed.	IHISI 00h (Read the specific variable into the specified buffer) fail.	Check Input Arguments
Error: IHISI 01h failed.	IHISI 01h (write the specific variable into the specified buffer) fail.	
Error: IHISI 10h failed.	IHISI 10h (Get FBTS supported version and FBTS permission) fail.	1. Reboot system. 2. Still fail check current bios code is supported or not. 3. use DediProg to write new bios bin to rom part.
Error: IHISI 11h failed.	IHISI 11h (Get platform information.) fail.	
Error: IHISI 12h failed.	IHISI 12h (Get Platform ROM map protection.) fail.	
Error: IHISI 13h failed.	IHISI 13h (Flash part information) fail.	
Error: IHISI 14h failed.	IHISI 14h (FBTS Read) fail.	
Error: Read fail before write. Address: XXh		

Error Message and Trouble Shooting

Error Message	Description	Trouble Shooting
Error: IHISI 15h failed	IHISI 15h (FBTS Write) fail.	1. Check if secure flash is enabled in current bios. 2. Reboot system. 3. Still fail check current bios code is supported or not. 4. use DediProg to write new bios bin to rom part.
Verify Error: Read fail after write. Address: XX	Verify Rom part Fail.	Check System Environment
Error: IHISI 14h read compare fail after write. Address: XX		
Error: IHISI 17h failed.	IHISI 17h (Get external ROM file and platform region table) fail.	1. Reboot system. 2. Still fail check current bios code is supported or not. 3. use DediProg to write new bios bin to rom part.
Error: IHISI 1Ch failed.	IHISI 1Ch (Get AT-p information) fail.	

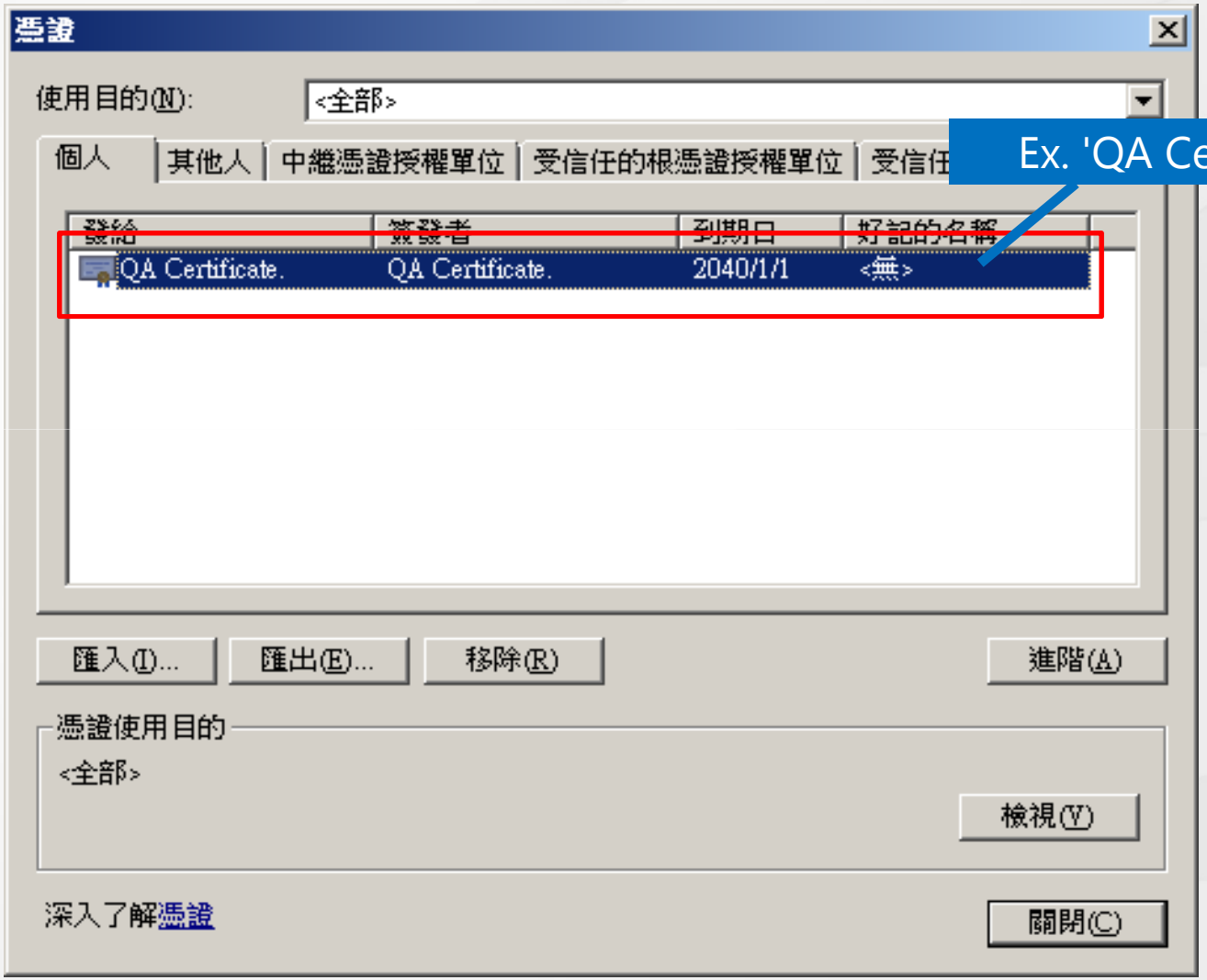
Error Message and Trouble Shooting

<table>
<tr><th>Error Message</th><th>Description</th><th>Trouble Shooting</th></tr>
<tr><td>Error: IHISI 31h failed. Offset:XXh</td><td>IHISI 31h (FMTS Write) fail.</td><td>1. Check if secure flash is enabled in current bios.
2. Reboot system.
3. Still fail check current bios code is supported or not.
4. use DediProg to write new bios bin to rom part.</td></tr>
<tr><td>Error: IHISI 41h failed.</td><td>IHISI 41h (OEM Extra Data Communication) fail.</td><td>1. Reboot system.
2. Still fail check current bios code is supported or not.
3. use DediProg to write new bios bin to rom part.</td></tr>
<tr><td>Error: IHISI 42h failed. Offset:XXh</td><td rowspan="2">IHISI 42h (OEM Extra Data Write) fail.</td><td rowspan="4">1. Check if secure flash is enabled in current bios.
2. Reboot system.
3. Still fail check current bios code is supported or not.
4. use DediProg to write new bios bin to rom part.</td></tr>
<tr><td>Error: IHISI 42h failed.</td></tr>
<tr><td>Error: IHISI 48h failed.</td><td>IHISI 48h (OEM capsule secure flash.) fail.</td></tr>
<tr><td>Error: IHISI 4Ch failed.</td><td>IHISI 48h (OEM secure flash)</td></tr>
</table>

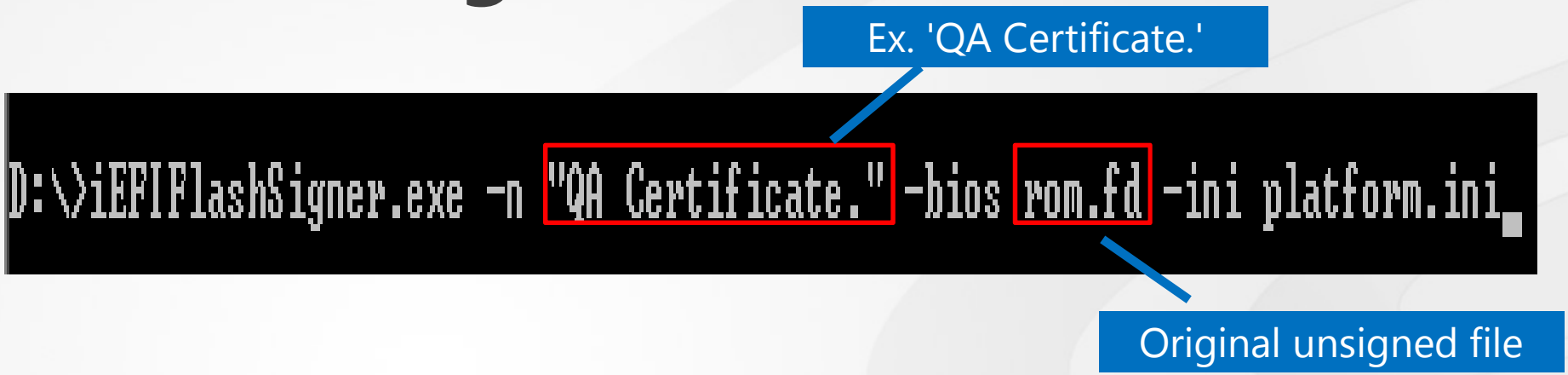
EFI Flash Signer And Insyde FD Packer

EFI Flash Signer

- Make sure which Certificate to be used.

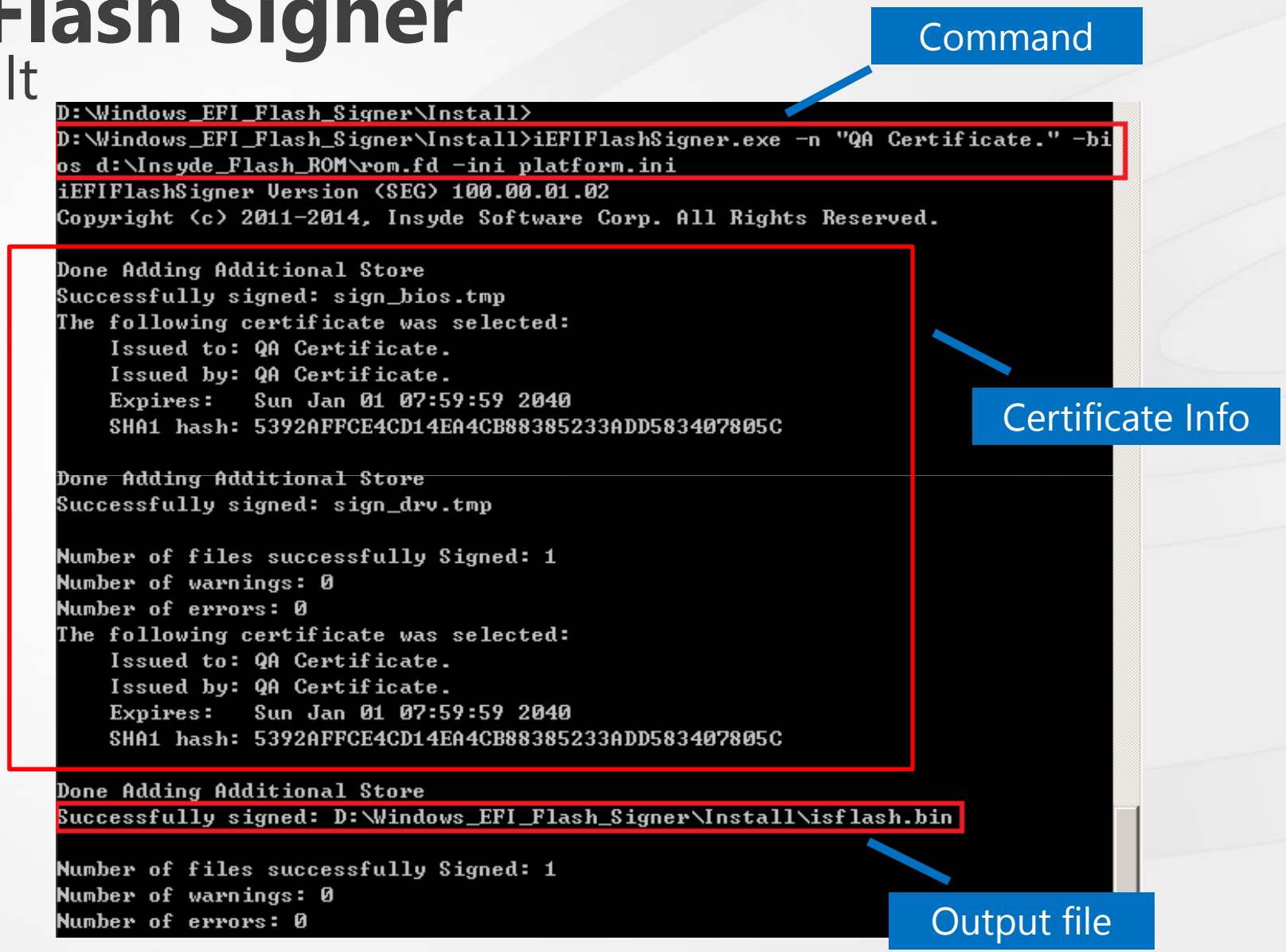


EFI Flash Signer



EFI Flash Signer

- Result




```
D:\Windows_EFI_Flash_Signer\Install>
D:\Windows_EFI_Flash_Signer\Install>iEFIFlashSigner.exe -n "QA Certificate." -bi
os d:\Insyde_Flash_ROM\rom.fd -ini platform.ini
iEFIFlashSigner Version (SEG) 100.00.01.02
Copyright (c) 2011-2014, Insyde Software Corp. All Rights Reserved.

Done Adding Additional Store
Successfully signed: sign_bios.tmp
The following certificate was selected:
    Issued to: QA Certificate.
    Issued by: QA Certificate.
    Expires:   Sun Jan 01 07:59:59 2040
    SHA1 hash: 5392AFFCE4CD14EA4CB88385233ADD583407805C

Done Adding Additional Store
Successfully signed: sign_drv.tmp

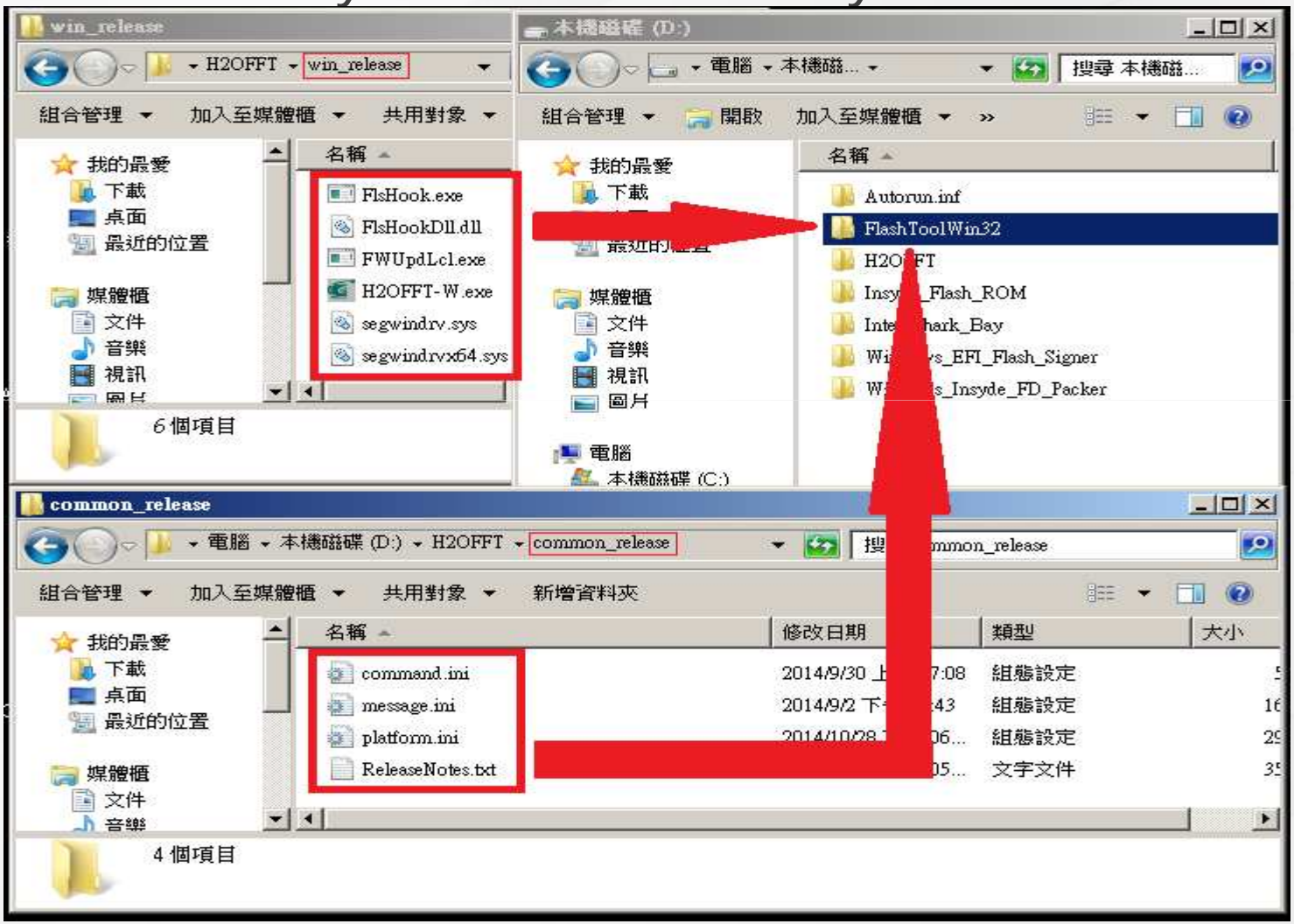
Number of files successfully Signed: 1
Number of warnings: 0
Number of errors: 0
The following certificate was selected:
    Issued to: QA Certificate.
    Issued by: QA Certificate.
    Expires:   Sun Jan 01 07:59:59 2040
    SHA1 hash: 5392AFFCE4CD14EA4CB88385233ADD583407805C

Done Adding Additional Store
Successfully signed: D:\Windows_EFI_Flash_Signer\Install\isflash.bin

Number of files successfully Signed: 1
Number of warnings: 0
Number of errors: 0
```

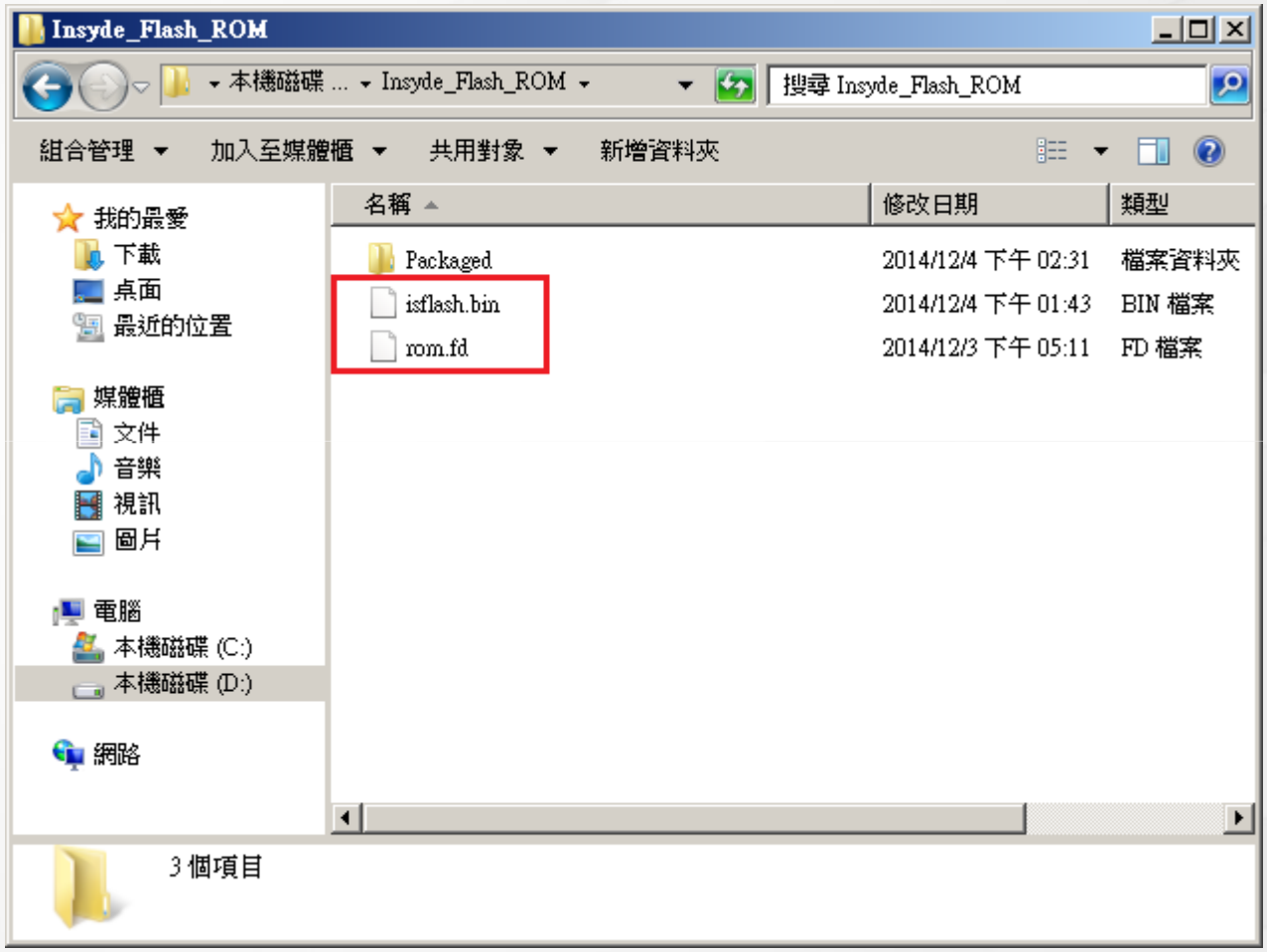
Insyde FD Packer

- Prepare necessary files – flash utility



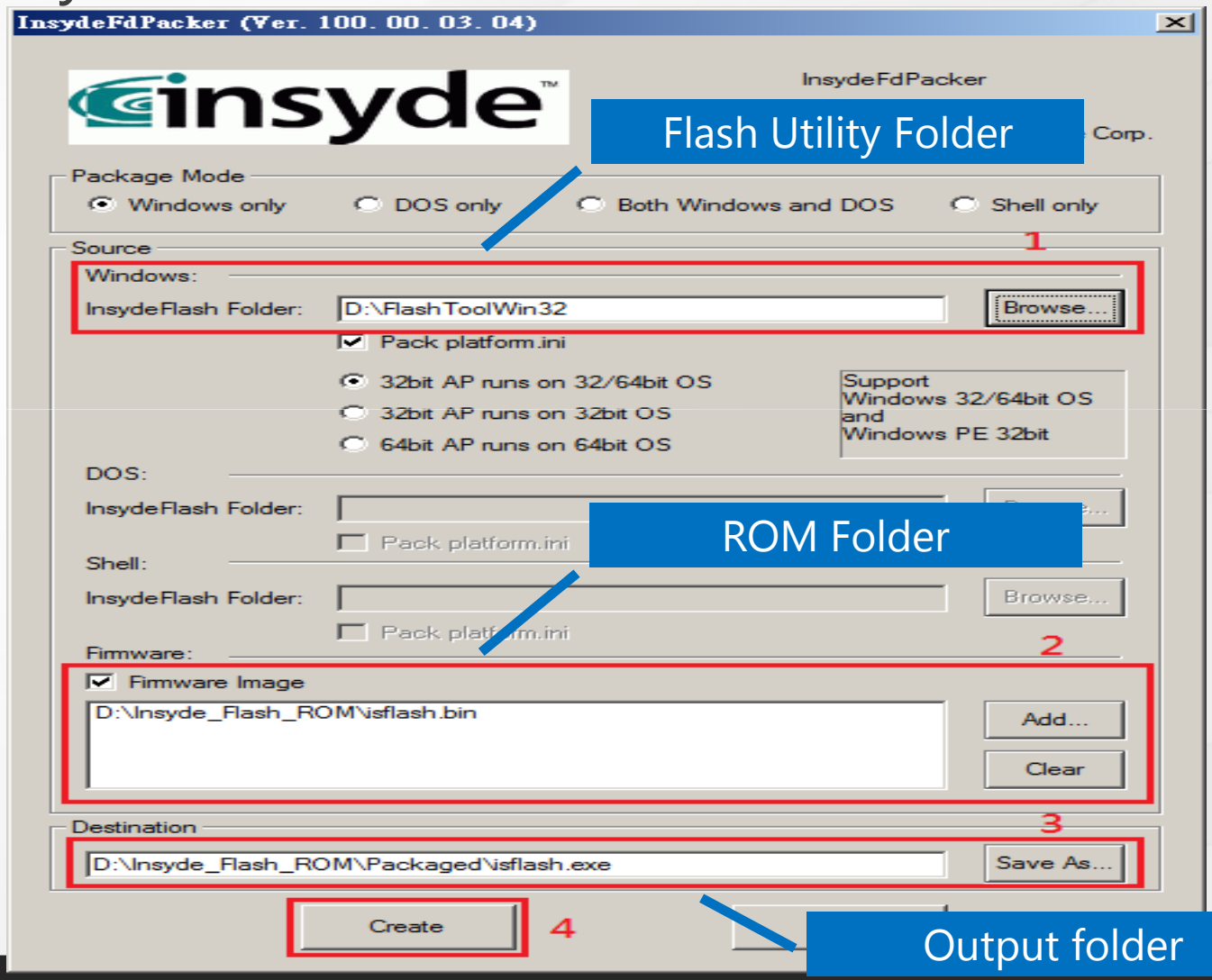
Insyde FD Packer

- Prepare necessary files – Rom file



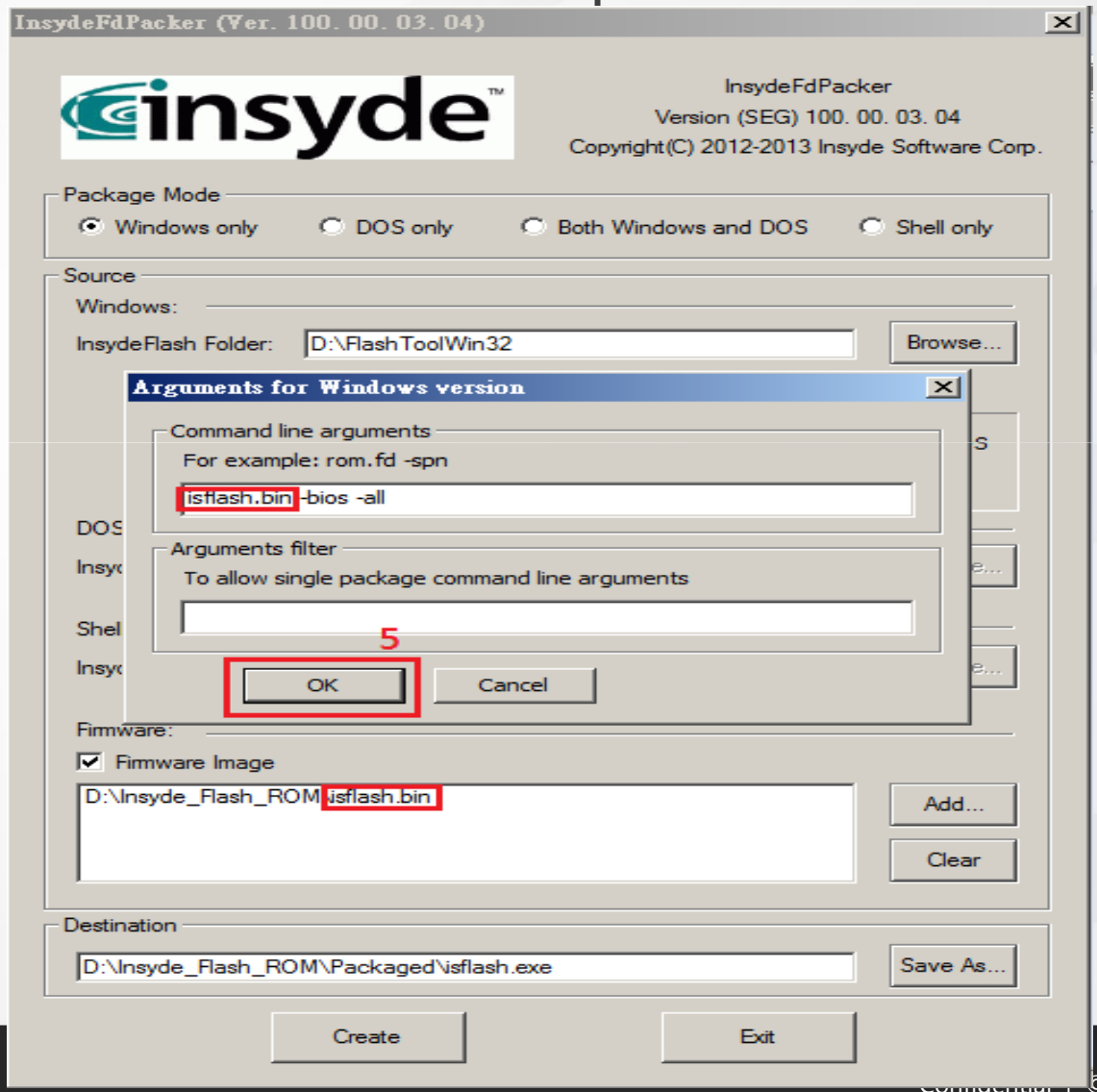
Insyde FD Packer

- Open Insyde FD Packer



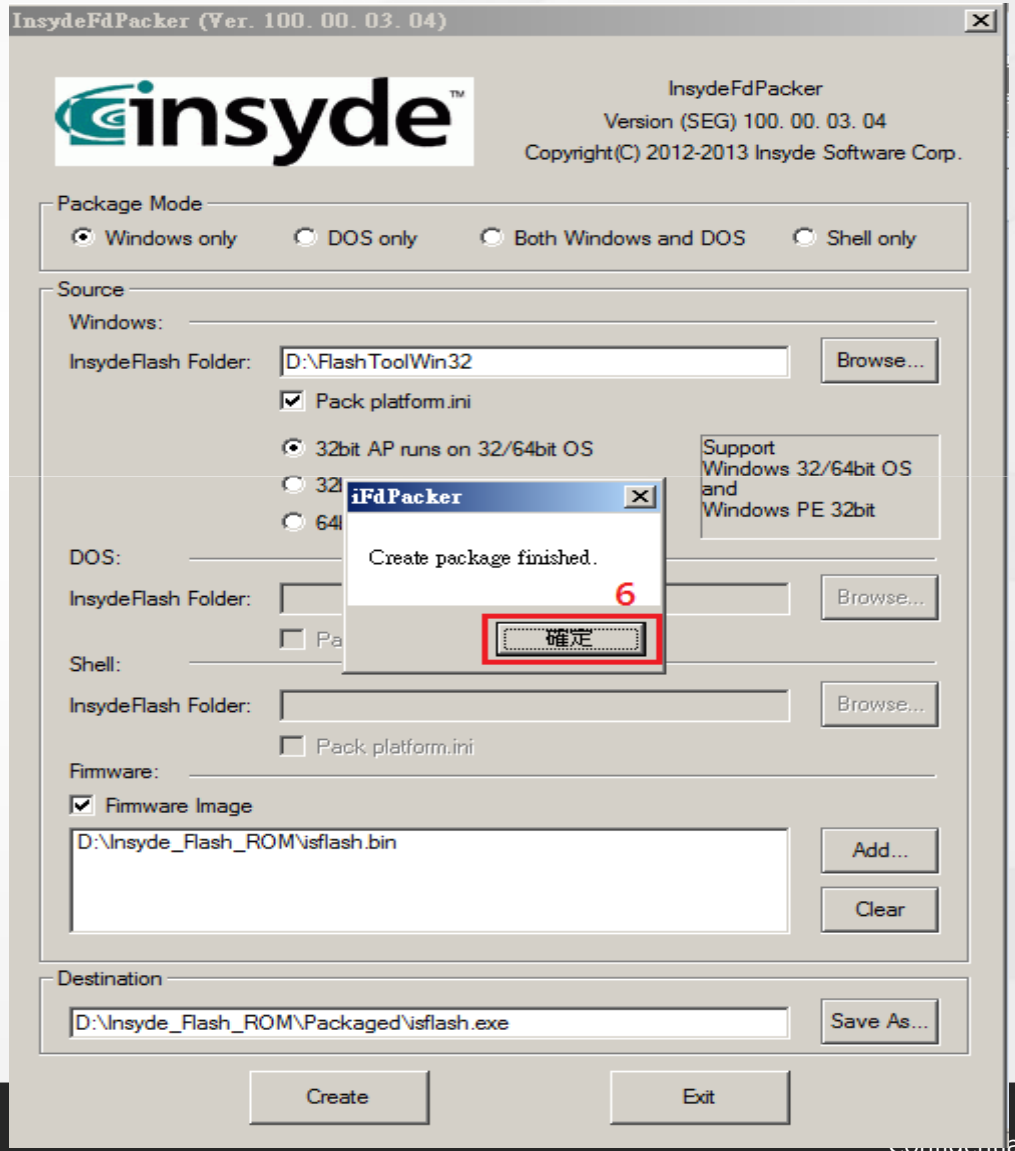
Insyde FD Packer

- Indicate Parameters & Complete



Insyde FD Packer

- Completed



update

Insyde FD Packer

- Extract FD file from single-package

```
C:\Users\qq\Downloads\Test>dir
 Volume in drive C has no label.
 Volume Serial Number is CC91-E060

 Directory of C:\Users\qq\Downloads\Test

03/02/2016  08:57 AM    <DIR>          .
03/02/2016  08:57 AM    <DIR>          ..
01/22/2016  06:51 AM         6,338,398 autorun.exe
               1 File(s)      6,338,398 bytes
               2 Dir(s)  80,833,859,584 bytes free

C:\Users\qq\Downloads\Test>autorun.exe -extrfd

C:\Users\qq\Downloads\Test>dir
 Volume in drive C has no label.
 Volume Serial Number is CC91-E060

 Directory of C:\Users\qq\Downloads\Test

03/02/2016  08:57 AM    <DIR>          .
03/02/2016  08:57 AM    <DIR>          ..
01/22/2016  06:51 AM         6,338,398 autorun.exe
01/07/2016  02:06 AM        16,777,216 delow.fd
               2 File(s)     23,115,614 bytes
               2 Dir(s)  80,817,299,456 bytes free

C:\Users\qq\Downloads\Test>
```

Only one file exists

Executing –extrfd argument to extract FD file in single-package, autorun.exe

Extracted FD file named delow.fd

Files Information

Flash-Tool Files Information (for Windows)

update

Files	Comments
H2OFFT-W.exe	Insyde BIOS flash utility for Windows (command mode or GUI mode)
platform.ini	Configuration File about Insyde BIOS flash utility Configuration File of commands. If the tool is input with any arguments, the command settings do not take effect and the tool will run in command mode. E.g. "H2OFFT-W.exe rom.fd –bios" If the tool is executed without arguments, the command settings will take effect and the tool will run in GUI mode . E.g. "H2OFFT-W.exe" .
FlsHook.exe, FlsHookDll.dll	A tool to hook/avoid mouse and keyboard's functions when flash is in progress.
FWUpdLcl.exe	An intel flash tool. Some specific OEM prefer this tool to flash ME region.
iFdPacker.exe / iFdPackerFileList.ini	The single package tool which is able to pack a single executable with all required files contained, including H2OFFT.exe, rom.fd, and etc.
message_eng.ini message_cht.ini	Containing Most warning / erroneous messages that can be customized. Support multiple language now, the message_eng.ini describes default English messages and the message_cht.ini describes traditional Chinese.
ReleaseNote.txt	The history of release version.
Segwindrv.sys, segwindrvx64.sys	Drivers for H2OFFT of Windows.

EFI Flash Signer Files Information (for Windows)

update

Files	Comments
iEFIFlashSigner.exe	Flash signer utility.
platform.ini	Configuration File about Insyde BIOS flash utility
command.ini	Configuration File of commands. If the tool is executed with any arguments, command.ini does not take effect and the tool will run in command mode. E.g. “H2OFFT-W.exe rom.fd –bios” If the tool is executed without arguments, command.ini will take effect and the tool will run in GUI mode . E.g. “H2OFFT-W.exe” .
Mssign32.dll / wintrust.dll / signtool.exe	Signtool (WDK8) for iEFISigner.

Insyde FD Packer Files Information (for Windows)

update

Files	Comments
iFdPacker.exe	Insyde FD Packer for Windows (command mode or GUI mode)
iFdPackerFileList.ini	File-List of necessary files used by Insyde FD Packer.
ReleaseNote.txt	The history of release version.
Folder	**Comments**
7Zip/	7Zip tool for Insyde FD Packer.

Thanks!