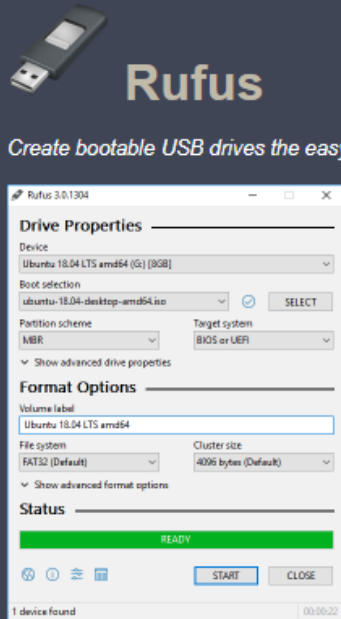


Update BIOS Steps

1. Download Rufus from <https://rufus.ie/>



Rufus

Create bootable USB drives the easy way

Rufus 3.0.1304

Drive Properties

Device: Ubuntu 18.04 LTS amd64 (G) (8GB)

Boot selection: ubuntu-18.04-desktop-amd64.iso [SELECT]

Partition scheme: MBR Target system: BIOS or UEFI

Format Options

Volume label: Ubuntu 18.04 LTS amd64

File system: FAT32 (Default) Cluster size: 4096 bytes (Default)

Status

READY

START CLOSE

1 device found 00:00:02

Rufus is a utility that helps format and create bootable USB flash drives, such as USB keys/pendrives, memory sticks, etc.

It can be especially useful for cases where:

- you need to create USB installation media from bootable ISOs (Windows, Linux, UEFI, etc.)
- you need to work on a system that doesn't have an OS installed
- you need to flash a BIOS or other firmware from DOS
- you want to run a low-level utility

Despite its small size, Rufus provides everything you need!

Oh, and Rufus is **fast**. For instance it's about twice as fast as [UNetbootin](#), [Universal USB Installer](#) or [Windows 7 USB download tool](#), on the creation of a Windows 7 USB installation drive from an ISO. It is also marginally faster on the creation of Linux bootable USB from ISOs. ⁽¹⁾

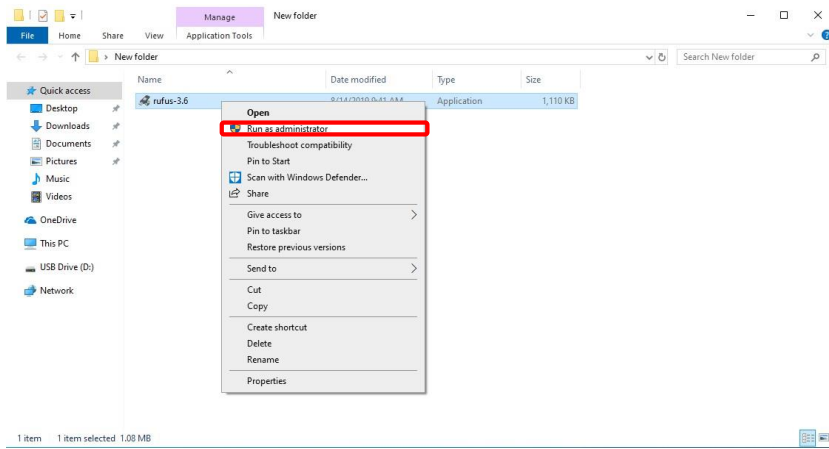
A non exhaustive list of Rufus supported ISOs is also provided at the bottom of this page. ⁽²⁾

Download

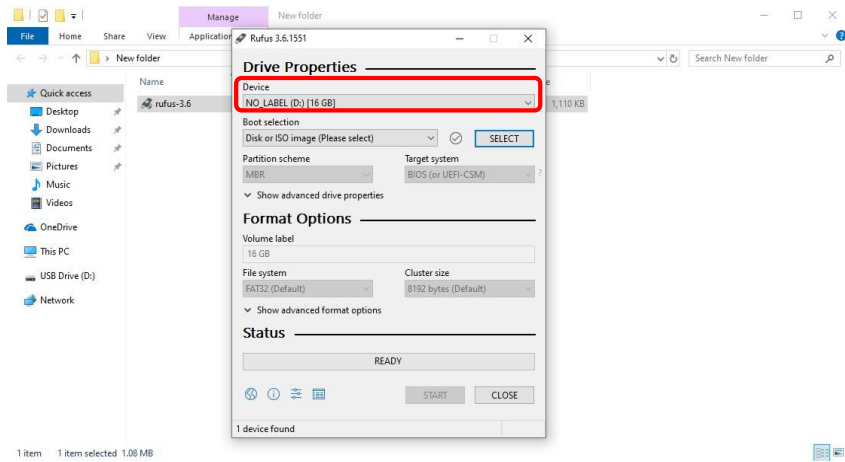
Last updated 2019.07.18:

- [Rufus 3.6](#) (1.1 MB)
- [Rufus 3.6 Portable](#) (1.1 MB)
- [Other versions](#)

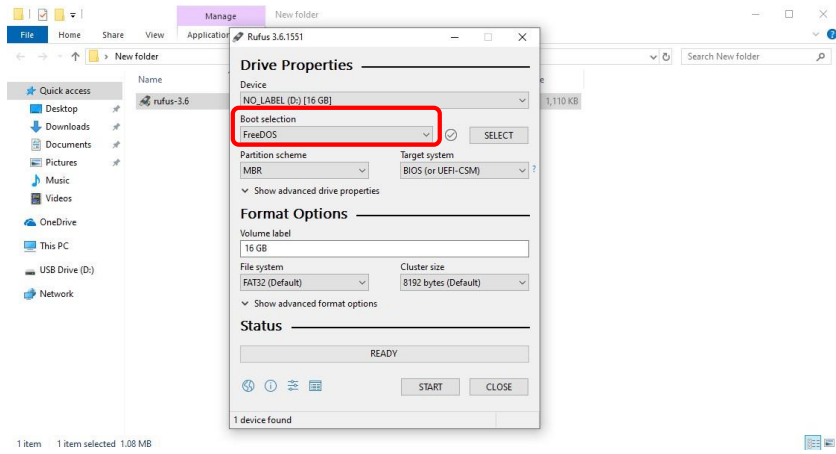
2. Insert a blank USB drive, right click on executable file and select "Run as Administrator"



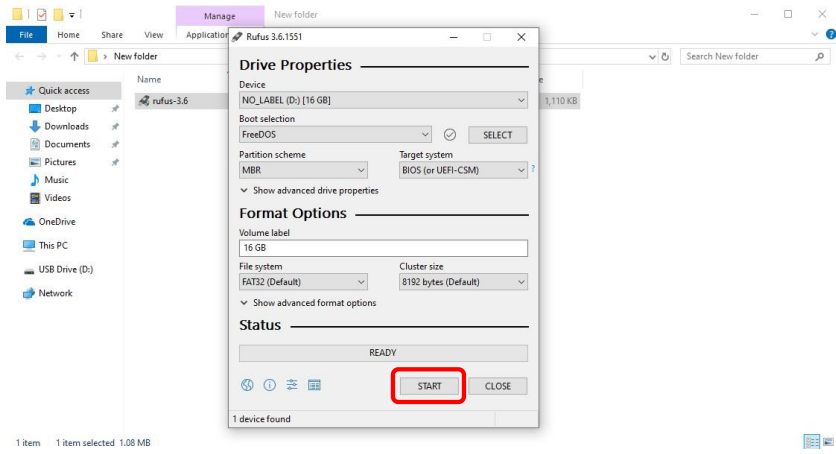
3. Select the USB drive on Device section



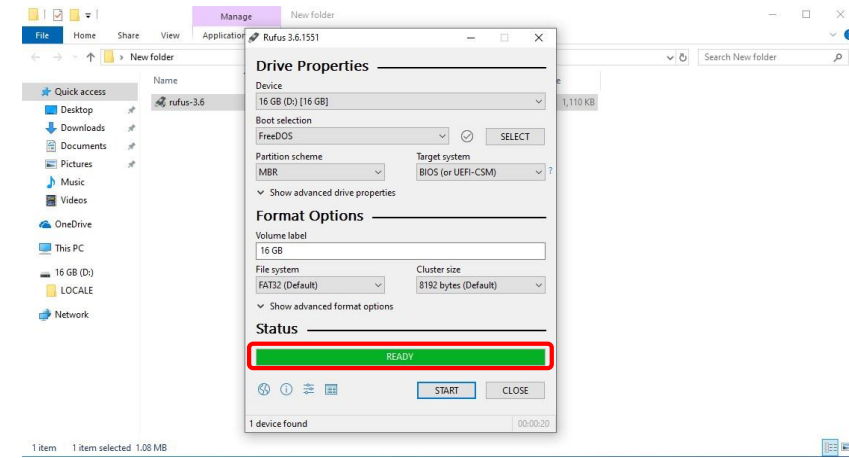
4. Select "FreeDOS" for Boot selection



5. Select "Start"

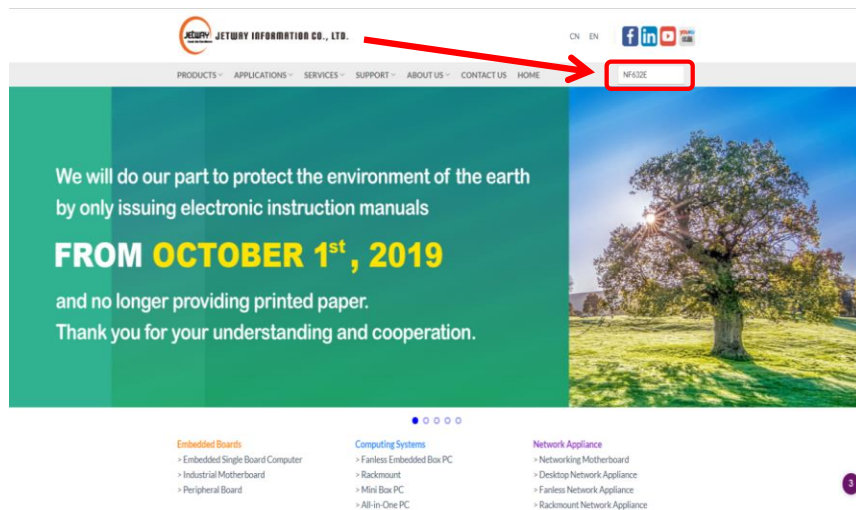


6. Status shown Ready in green after it's done.

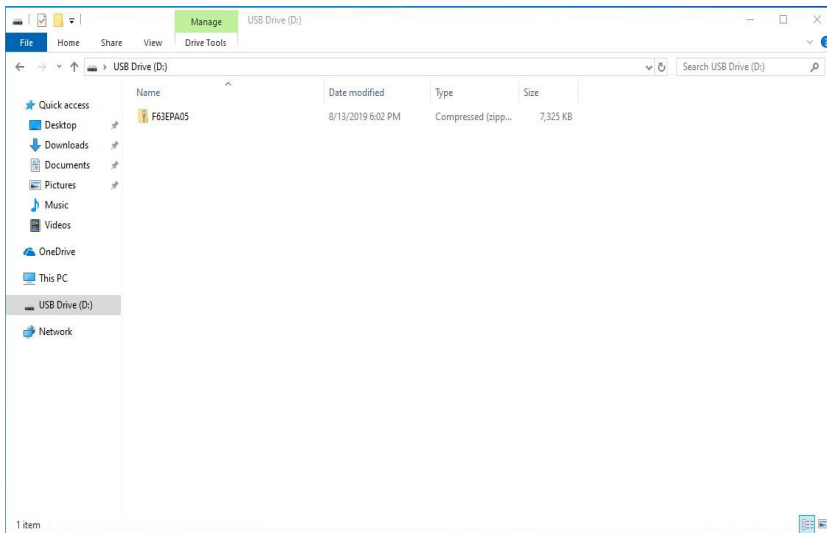


7. Search and download BIOS ZIP file that fits your exact motherboard model.

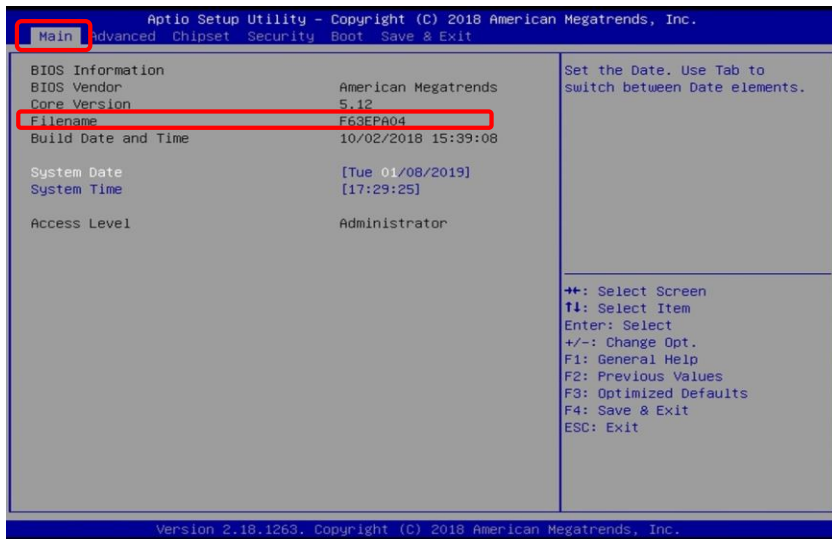
Note: Make sure the downloaded BIOS file is correct. Applying wrong BIOS can cause the system unbootable.



8. Unzip BIOS file and save all extracted files to the USB drive.

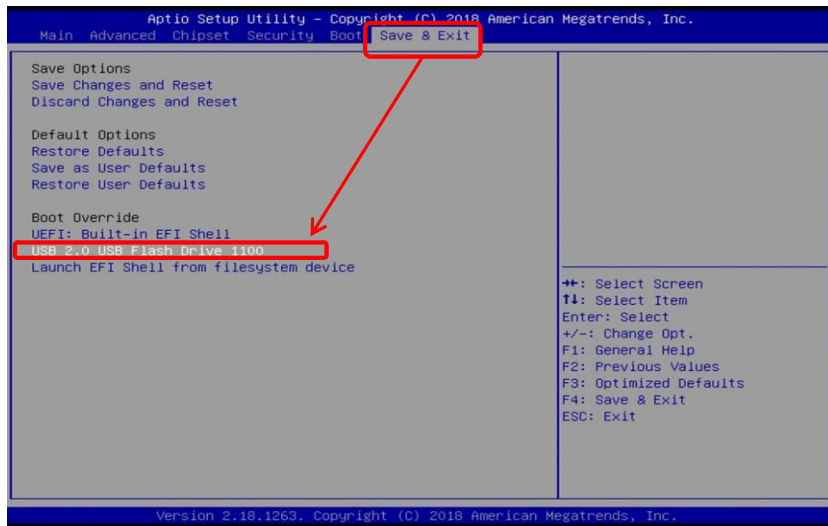


9. Plug in the USB drive and boot from it.

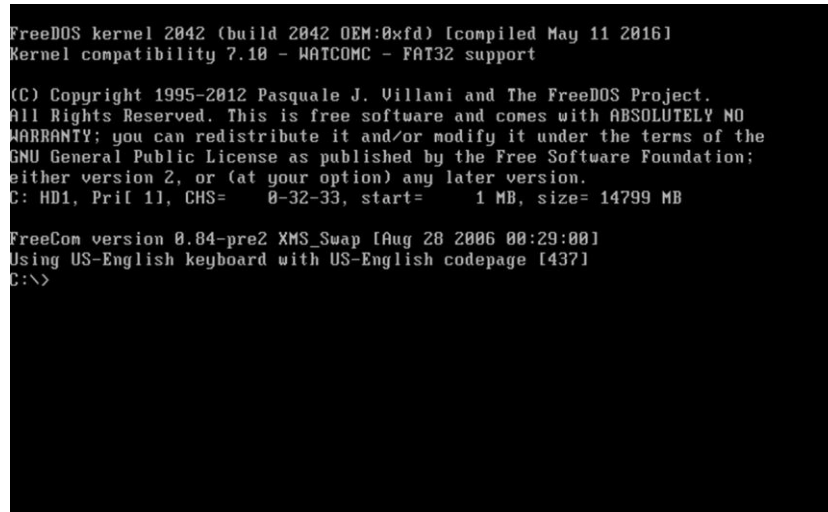


Legacy Mode

10. Hit "DEL" to enter BIOS screen, check BIOS version, and select the USB device for Boot Override on "Save & Exit" tab.

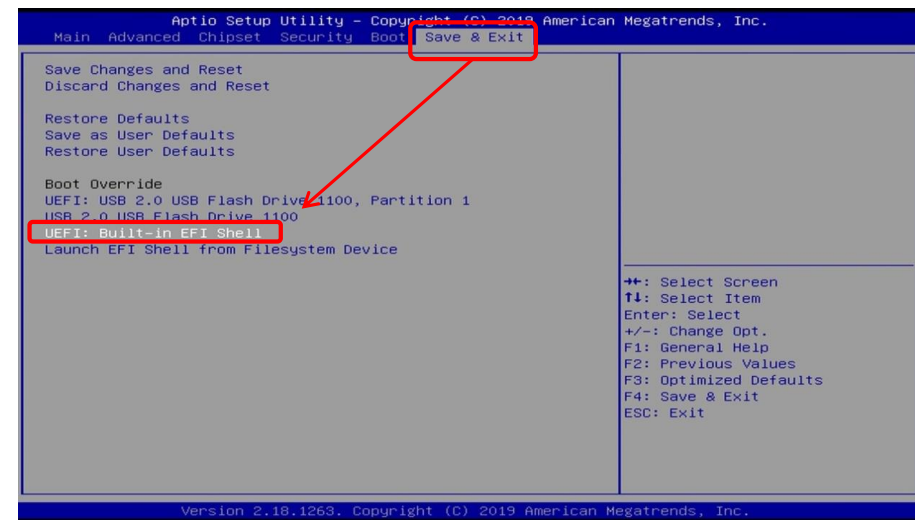


11. System will restart and boot from the USB until command prompt appears.

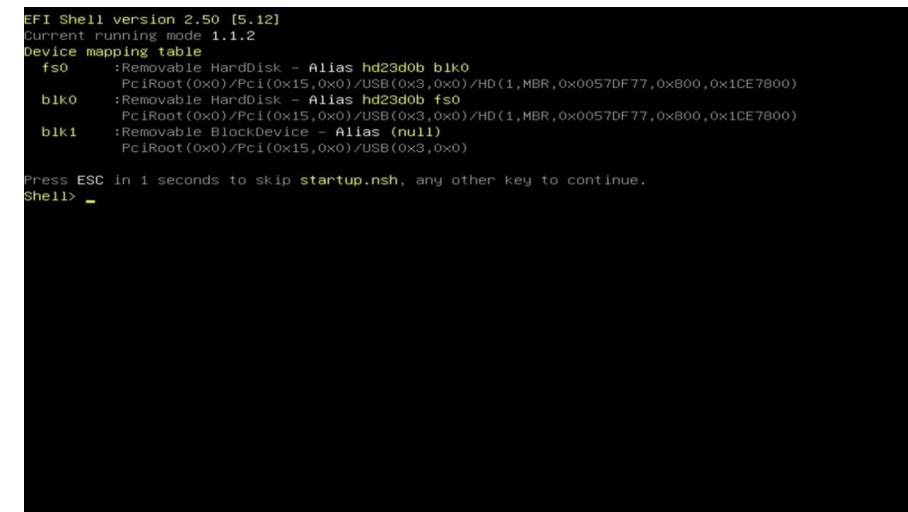


EFI Shell Mode

10. Hit "DEL" to enter BIOS screen, check BIOS version, and select the Built-in EFI Shell for Boot Override on "Save & Exit" tab.



11. System will restart and boot from the EFI Shell until command prompt appears.



Legacy Mode

12. At the C:\ prompt, type **dir** to show all your files.

```
FreeDOS kernel 2042 (build 2042 OEM:0xfd) [compiled May 11 2016]
Kernel compatibility 7.10 - MATCOMC - FAT32 support

(C) Copyright 1995-2012 Pasquale J. Villani and The FreeDOS Project.
All Rights Reserved. This is free software and comes with ABSOLUTELY NO
WARRANTY; you can redistribute it and/or modify it under the terms of the
GNU General Public License as published by the Free Software Foundation;
either version 2, or (at your option) any later version.
C: HD1, Pri# 11, CHS= 0-32-33, start= 1 MB, size= 14799 MB

FreeCom version 0.84-pre2 XMS_Swap [Aug 28 2006 00:29:00]
Using US-English keyboard with US-English codepage [437]
C:\>dir
Volume in drive C is 16 GB
Volume Serial Number is 20CC-84FA
Directory of C:\

LOCALE          <DIR>  08-14-19 10:41a
AUTOEXEC.BAT    96 08-14-19 10:41a
F63EPA05.ZIP    7,500,392 05-24-19 11:36a
F63EPA05        <DIR>  08-14-19 10:58a
                2 file(s)    7,500,488 bytes
                2 dir(s)    14,759 Mega bytes free
C:\>
```

13. Type "**CD folder_name**" to change directory and enter the BIOS folder.

```
FreeDOS kernel 2042 (build 2042 OEM:0xfd) [compiled May 11 2016]
Kernel compatibility 7.10 - MATCOMC - FAT32 support

(C) Copyright 1995-2012 Pasquale J. Villani and The FreeDOS Project.
All Rights Reserved. This is free software and comes with ABSOLUTELY NO
WARRANTY; you can redistribute it and/or modify it under the terms of the
GNU General Public License as published by the Free Software Foundation;
either version 2, or (at your option) any later version.
C: HD1, Pri# 11, CHS= 0-32-33, start= 1 MB, size= 14799 MB

FreeCom version 0.84-pre2 XMS_Swap [Aug 28 2006 00:29:00]
Using US-English keyboard with US-English codepage [437]
C:\>dir
Volume in drive C is 16 GB
Volume Serial Number is 20CC-84FA
Directory of C:\

LOCALE          <DIR>  08-14-19 10:41a
AUTOEXEC.BAT    96 08-14-19 10:41a
F63EPA05.ZIP    7,500,392 05-24-19 11:36a
F63EPA05        <DIR>  08-14-19 10:58a
                2 file(s)    7,500,488 bytes
                2 dir(s)    14,759 Mega bytes free
C:\>cd f63epa05_
```

EFI Shell Mode

12. At the Shell prompt, type **fs0:** to enter the USB drive. At fs0:\ prompt, type **dir** to show all your files.

```
EFI Shell version 2.50 [5.12]
Current running mode 1.1.2
Device mapping table
fs0 :Removable HardDisk - Alias hd23d0b blk0
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)/HD(1,Mbr,0x0057DF77,0x800,0x1CE7800)
blk0 :Removable HardDisk - Alias hd23d0b fs0
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)/HD(1,Mbr,0x0057DF77,0x800,0x1CE7800)
blk1 :Removable BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)

Press ESC in 1 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> dir
Directory of: fs0:\

08/27/19 10:09a <DIR>          8,192 LOCALE
08/27/19 10:09a          96 AUTOEXEC.BAT
06/28/19 04:57p    4,443,928 BATJUA04.zip
08/27/19 10:18a <DIR>          8,192 BATJUA04
                2 File(s)    4,444,024 bytes
                2 Dir(s)
fs0:\> _
```

13. Type "**CD folder_name**" to change directory and enter the BIOS folder.

```
EFI Shell version 2.50 [5.12]
Current running mode 1.1.2
Device mapping table
fs0 :Removable HardDisk - Alias hd23d0b blk0
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)/HD(1,Mbr,0x0057DF77,0x800,0x1CE7800)
blk0 :Removable HardDisk - Alias hd23d0b fs0
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)/HD(1,Mbr,0x0057DF77,0x800,0x1CE7800)
blk1 :Removable BlockDevice - Alias (null)
      PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)

Press ESC in 1 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> dir
Directory of: fs0:\

08/27/19 10:09a <DIR>          8,192 LOCALE
08/27/19 10:09a          96 AUTOEXEC.BAT
06/28/19 04:57p    4,443,928 BATJUA04.zip
08/27/19 10:18a <DIR>          8,192 BATJUA04
                2 File(s)    4,444,024 bytes
                2 Dir(s)
fs0:\> cd BATJUA04_
```

Legacy Mode

14. Type `dir` again to list all files under the BIOS folder.

```
Directory of C:\
LOCALE             <DIR> 08-14-19 10:41a
AUTOEXEC.BAT      96 08-14-19 10:41a
F63EPA05.ZIP      7,500,392 05-24-19 11:36a
F63EPA05          <DIR> 08-14-19 10:58a
                2 file(s) 7,500,488 bytes
                2 dir(s) 14,759 Mega bytes free
C:\>cd f63epa05
C:\F63EPA05>dir
Volume in drive C is 16 GB
Volume Serial Number is 20CC-84FA

Directory of C:\F63EPA05

.<DIR> 08-14-19 10:58a
..<DIR> 08-14-19 10:58a
AFU560.EXE 155,216 03-11-14 3:00p
F63EPA05.BIN 16,777,216 05-24-19 11:31a
F63EPA05.BAT 992 05-24-19 11:34a
README.TXT 862 05-24-19 11:33a
ME164.EXE 664 11-30-17 1:43p
          5 file(s) 16,934,950 bytes
          2 dir(s) 14,759 Mega bytes free
C:\F63EPA05>
```

15. Type `*.bat` and hit `Enter` to start updating BIOS.

```
Directory of C:\
LOCALE             <DIR> 08-14-19 10:41a
AUTOEXEC.BAT      96 08-14-19 10:41a
F63EPA05.ZIP      7,500,392 05-24-19 11:36a
F63EPA05          <DIR> 08-14-19 10:58a
                2 file(s) 7,500,488 bytes
                2 dir(s) 14,759 Mega bytes free
C:\>cd f63epa05
C:\F63EPA05>dir
Volume in drive C is 16 GB
Volume Serial Number is 20CC-84FA

Directory of C:\F63EPA05

.<DIR> 08-14-19 10:58a
..<DIR> 08-14-19 10:58a
AFU560.EXE 155,216 03-11-14 3:00p
F63EPA05.BIN 16,777,216 05-24-19 11:31a
F63EPA05.BAT 992 05-24-19 11:34a
README.TXT 862 05-24-19 11:33a
ME164.EXE 664 11-30-17 1:43p
          5 file(s) 16,934,950 bytes
          2 dir(s) 14,759 Mega bytes free
C:\F63EPA05>f63epa05
```

EFI Shell Mode

14. Type `dir` again to list all files under the BIOS folder.

```
PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)
Press ESC in 1 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> dir
Directory of: fs0:\

08/27/19 10:09a <DIR> 8,192 LOCALE
08/27/19 10:09a 96 AUTOEXEC.BAT
06/28/19 04:57p 4,443,928 BATJUA04.zip
08/27/19 10:18a <DIR> 8,192 BATJUA04
          2 File(s) 4,444,024 bytes
          2 Dir(s)

fs0:\> cd BATJUA04

fs0:\BATJUA04> dir
Directory of: fs0:\BATJUA04

08/27/19 10:18a <DIR> 8,192 .
08/27/19 10:18a <DIR> 0 ..
02/21/19 03:27p 561,776 AfuEfix64.efi
06/28/19 04:57p 33 BATJUA04.NSH
06/28/19 04:41p 16,777,216 BATJUA04.ROM
          3 File(s) 17,339,025 bytes
          2 Dir(s)

fs0:\BATJUA04>
```

15. Type `*.NSH` and hit `Enter` to start updating BIOS.

```
PciRoot(0x0)/Pci(0x15,0x0)/USB(0x3,0x0)
Press ESC in 1 seconds to skip startup.nsh, any other key to continue.
Shell> fs0:

fs0:\> dir
Directory of: fs0:\

08/27/19 10:09a <DIR> 8,192 LOCALE
08/27/19 10:09a 96 AUTOEXEC.BAT
06/28/19 04:57p 4,443,928 BATJUA04.zip
08/27/19 10:18a <DIR> 8,192 BATJUA04
          2 File(s) 4,444,024 bytes
          2 Dir(s)

fs0:\> cd BATJUA04

fs0:\BATJUA04> dir
Directory of: fs0:\BATJUA04

08/27/19 10:18a <DIR> 8,192 .
08/27/19 10:18a <DIR> 0 ..
02/21/19 03:27p 561,776 AfuEfix64.efi
06/28/19 04:57p 33 BATJUA04.NSH
06/28/19 04:41p 16,777,216 BATJUA04.ROM
          3 File(s) 17,339,025 bytes
          2 Dir(s)

fs0:\BATJUA04> BATJUA04.NSH
```


Legacy Mode

16. Update BIOS

Note: DO NOT shut down, touch keyboard/mouse, or unplug any USB device while updating the BIOS, your computer could become "bricked" and unable to boot.

```
-----+
|          AMI Firmware Update Utility v5.06.00          |
|          Copyright (C)2014 American Megatrends Inc. All Rights Reserved.          |
|-----+
| Reading flash ..... 0x001A0000 (27%)                  |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|                                                        |
|-----+
|          AMI Firmware Update Utility v5.06.00          |
|          Copyright (C)2014 American Megatrends Inc. All Rights Reserved.          |
|-----+
```

17. Power off the system when update is finished.

```
-----+
|          AMI Firmware Update Utility v5.06.00          |
|          Copyright (C)2014 American Megatrends Inc. All Rights Reserved.          |
|-----+
| Reading flash ..... done                              |
| - ME Data Size checking . ok                          |
| - FFS checksums ..... ok                             |
| Erasing Boot Block ..... done                        |
| Updating Boot Block ..... done                       |
| Verifying Boot Block ..... done                     |
| Erasing Main Block ..... done                       |
| Updating Main Block ..... done                       |
| Verifying Main Block ..... done                     |
| Erasing NVRAM Block ..... done                       |
| Updating NVRAM Block ..... done                      |
| Verifying NVRAM Block ..... done                    |
| Update Finish, System must power-off to have the changes take effect!          |
| C:\F63EPA05>                                         |
|-----+
```

EFI Shell Mode

16. Flashing BIOS

Note: DO NOT shut down, touch keyboard/mouse, or unplug any USB device while updating the BIOS, your computer could become "bricked" and unable to boot.

```
Directory of: fs0:\
08/27/19 10:09a <DIR>          8,192  LOCAL
08/27/19 10:09a                96  AUTOEXEC.BAT
06/28/19 04:57p             4,443,928  BATJUA04.zip
08/27/19 10:18a <DIR>          8,192  BATJUA04
                2 File(s)  4,444,024 bytes
                2 Dir(s)

fs0:\> cd BATJUA04

fs0:\BATJUA04> dir
Directory of: fs0:\BATJUA04

08/27/19 10:18a <DIR>          8,192  .
08/27/19 10:18a <DIR>           0  ..
02/21/19 03:27p             561,776  AfuEfix64.efi
06/28/19 04:57p              33  BATJUA04.NSH
06/28/19 04:41p             16,777,216  BATJUA04.ROM
                3 File(s)  17,339,025 bytes
                2 Dir(s)

fs0:\BATJUA04> BATJUA04.NSH
BATJUA04.NSH> AFUEFIX64 BATJUA04.ROM /P /B /N

-----+
|          AMI Firmware Update Utility v5.12.00.1904          |
|          Copyright (C)2019 American Megatrends Inc. All Rights Reserved.          |
|-----+
| Reading flash ..... 0x00039000 (1%)                  |
|-----+
```

17. Power off the system when update is finished.

```
02/21/19 03:27p             561,776  AfuEfix64.efi
06/28/19 04:57p              33  BATJUA04.NSH
06/28/19 04:41p             16,777,216  BATJUA04.ROM
                3 File(s)  17,339,025 bytes
                2 Dir(s)

fs0:\BATJUA04> BATJUA04.NSH
BATJUA04.NSH> AFUEFIX64 BATJUA04.ROM /P /B /N

-----+
|          AMI Firmware Update Utility v5.12.00.1904          |
|          Copyright (C)2019 American Megatrends Inc. All Rights Reserved.          |
|-----+
| Reading flash ..... done                              |
| Secure Flash enabled, recalculate ROM size with signature... Enable.          |
| - FFS checksums ..... ok                             |
| - Check RomLayout ..... ok                          |
| Loading capsule to secure memory buffer ... done     |
| Erasing Boot Block ..... done                       |
| Updating Boot Block ..... done                       |
| Verifying Boot Block ..... done                     |
| Erasing Main Block ..... done                       |
| Updating Main Block ..... done                       |
| Verifying Main Block ..... done                     |
| Erasing NVRAM Block ..... done                       |
| Updating NVRAM Block ..... done                      |
| Verifying NVRAM Block ..... done                    |
| Process completed.                                    |
fs0:\BATJUA04> _
```

Legacy Mode

18. Power on the system again, it will auto reboot 2-3 times and should be successfully applied to a new version. You can enter BIOS screen and check BIOS version to confirm the change.

```
Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit

BIOS Information
BIOS Vendor      American Megatrends
Core Version     5.12
Filename         F63EPA05
Build Date and Time 05/24/2019 11:25:10

System Date      [Tue 01/08/2019]
System Time      [19:44:01]

Access Level     Administrator

Set the Date. Use Tab to
switch between Date elements.

++: Select Screen
!: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.
```

EFI Shell Mode

18. Power on the system again, it will auto reboot 2-3 times and should be successfully applied to a new version. You can enter BIOS screen and check BIOS version to confirm the change.

```
Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit

BIOS Information
BIOS Vendor      American Megatrends
Core Version     5.12
Filename         BATJUA04
Build Date and Time 06/28/2019 16:38:08

TXE FW Version   3.0.13.1144

Access Level     Administrator

System Date      [Tue 01/01/2019]
System Time      [00:37:58]

Set the Date. Use Tab to
switch between Date elements.

++: Select Screen
!: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Version 2.18.1263. Copyright (C) 2019 American Megatrends, Inc.
```