

RS700-E9-RS12 Upgrade BMC Firmware to 2.2.4 version

Notice:Before upgrading BMC Firmware 2.2, be sure to confirm that the BMC version currently used on the machine needs to be at least **1.15**. If the BMC Firmware version of the machine is already **1.15**, you can start with **step6**. If the BMC Firmware version of the machine is already **2.0** or above, you can upgrade the BMC Firmware under DOS or by WEBGUI.

Here is the download link of BMC Firmware **1.15**:

https://dlcdnets.asus.com/pub/ASUS/server/RS700-E9-RS12/FW/ASMB9_FW1154_RS700-E9-RS12.zip

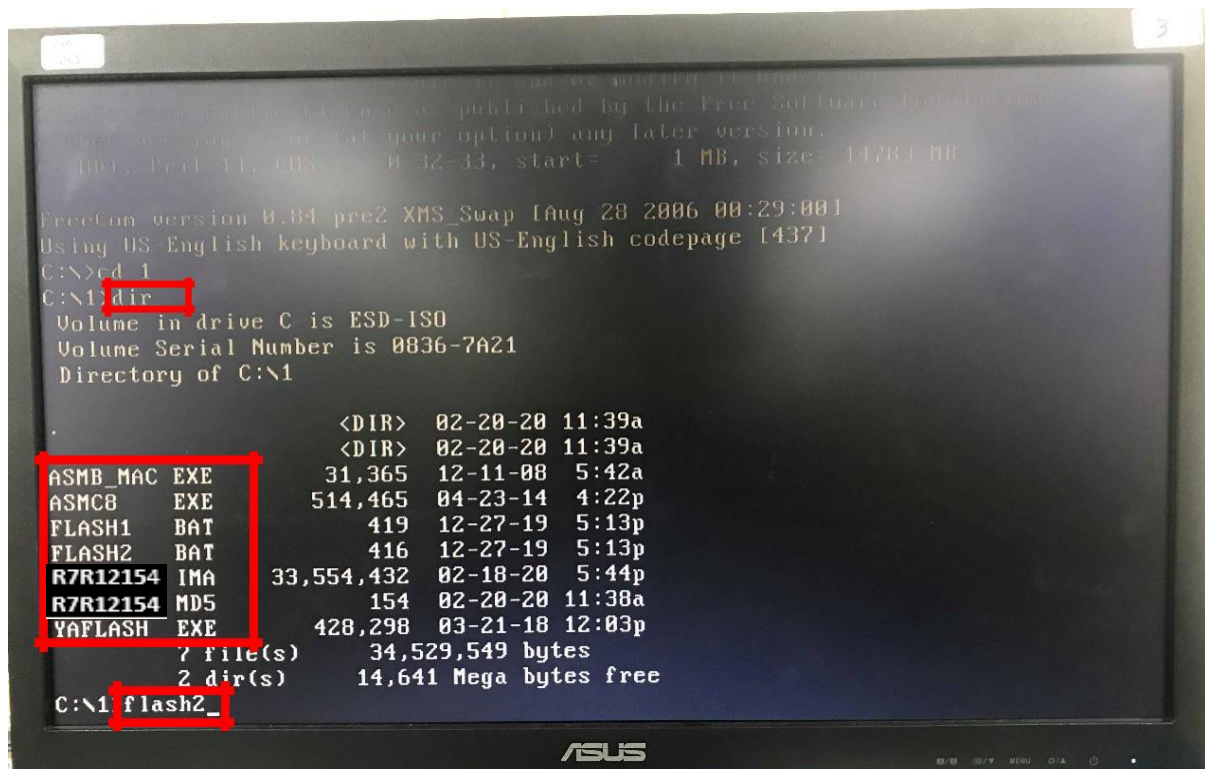
Here is the download link of BMC Firmware **2.2.4**:

https://dlcdnets.asus.com/pub/ASUS/server/RS700-E9-RS12/FW/ASMB9_FW2024_RS700-E9-RS12.zip

Step 1: Upgrade the BMC Firmware under DOS environment, decompress the BMC F / W version 1.15 and 2.2, and place the folder in the USB Flash ROM device. You can rename the file first. (For example: BMC firmware 1.15 and BMC firmware 2.2) You can set this USB flash rom as the first priority to boot or press Hot key "F8" in the POST screen to enter the USB Flash ROM device. (You must make a DOS boot function for this USB Flash ROM first)

Step2: Input **dir** and press enter to show the files in the USB Flash ROM.

Step3: Input **flash2** and press enter to run flash2.



```

=====
Firmware Details
=====
RomImage                               ExistingImage
-----
1.  ModuleName      Description      Version      Version
2.  boot            BootLoader      2.3.000000   2.3.000000
3.  conf            ConfigParams    2.3.000000   2.3.000000
4.  bkupconf        ConfigParams    2.3.000000   2.3.000000
5.  root            Root           2.1.000000   2.1.000000
6.  osimage         Linux OS       2.1.000000   2.1.000000
7.  www             Web Pages      2.1.000000   2.1.000000
8.  ast2500e        1.15.000001   1.15.000001
Existing Image and Current Image are Same
Continuing with Full Firmware Update

*****
WARNING!
FIRMWARE UPGRADE MUST NOT BE INTERRUPTED ONCE IT IS STARTED.
PLEASE DO NOT USE THIS FLASH TOOL FROM THE REDIRECTION CONSOLE.
*****
Preserving Env Variables...           done
Uploading Firmware Image : 5%

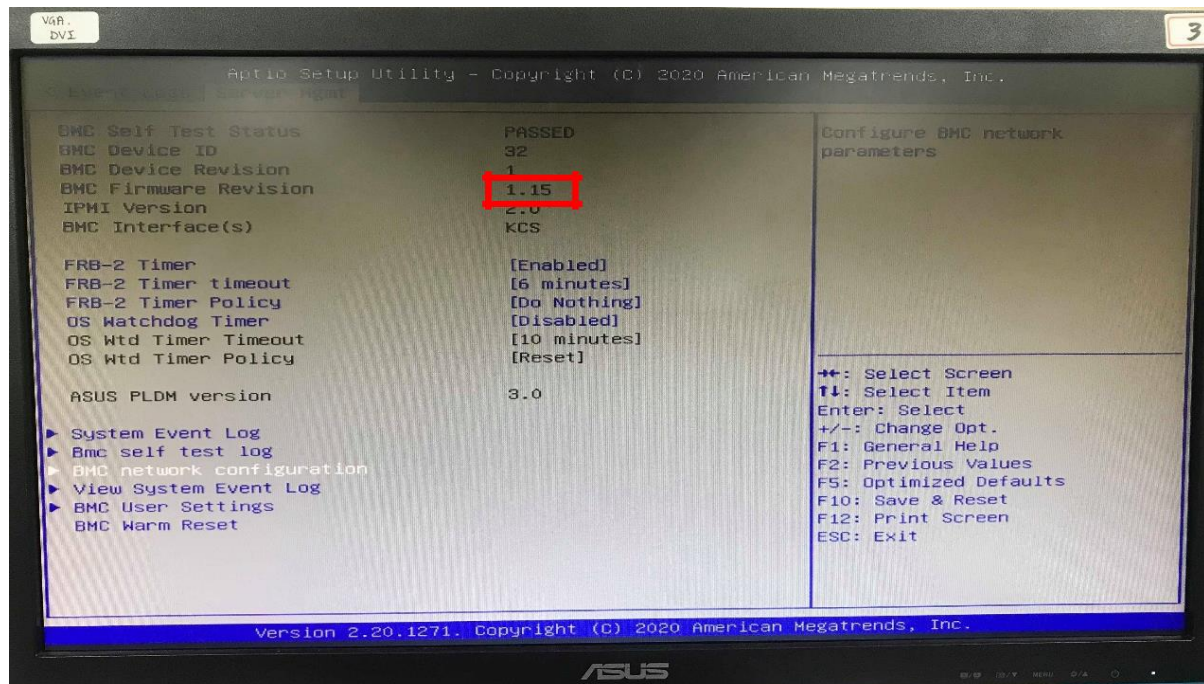
```

```

C:\1>flashrom -p 0x40 --chip 2500 --firmware 2500 --mode 0x40 --mode 0x40
Flashing [firmware] Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [firmware] Module : ...
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [firmware] Module : ...
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [firmware] Module : ...
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [firmware] Module : ...
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [firmware] Module : ...
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Setting Env variables... done
Resetting the firmware.....
C:\1>goto end
C:\1>echo Please wait for 70 seconds to initialize firmware
Please wait for 70 seconds to initialize firmware
C:\1>ASMB_MAC -delay 70
Delay 70 Seconds
Remainder 52 Seconds

```

Step5: Reboot system and you can check the BMC Firmware version in the Server Mgmt of bios manual. The BMC firmware version is **1.15**.



Step6: Reboot system and press Hot Key "F8" into USB Flash ROM again.

Step7: Input **dir** and press enter to show the files in the USB flash rom.

Step8: Input **flash3** and press enter to run flash3.

```
Press any key to continue . . .
C:\20>cd
C:\20>cd
C:\20>
C:\20>dir
Volume in drive C is UFD_1G
Volume Serial Number is 26F6-7DEA

Directory of C:\20

                <DIR>  02-25-20  11:19a
                <DIR>  02-25-20  11:19a
ASMB_MAC  EXE           31,365  12-11-08  5:42a
ASMC8     EXE           514,465  04-23-14  4:22p
BMCFIR~1  TXT              758  12-04-19  1:29p
FLASH1   BAT             419  12-12-19  4:49p
FLASH2   BAT             416  12-12-19  4:49p
FLASH3   BAT             454  12-12-19  4:49p
R7122204  IMA       33,554,432  12-13-19  4:10p
R7122204  MD5             155  12-13-19  4:38p
README   TXT             1,029  12-04-19  3:14p
YAFLASH  EXE           428,298  03-21-18 12:03p
      10 file(s)         34,531,791 bytes
      2 dir(s)          549,748,736 bytes free
C:\20>flash3
```


Step9: Wait for flashing firmware images. After all firmware images are done, please wait for about 70 seconds to initialize firmware.

```
C:\N20>YafFlash -kcs R5A1U206.ima -uyes
INFO: Yafu INI Configuration File not found... Default options will not be applied...

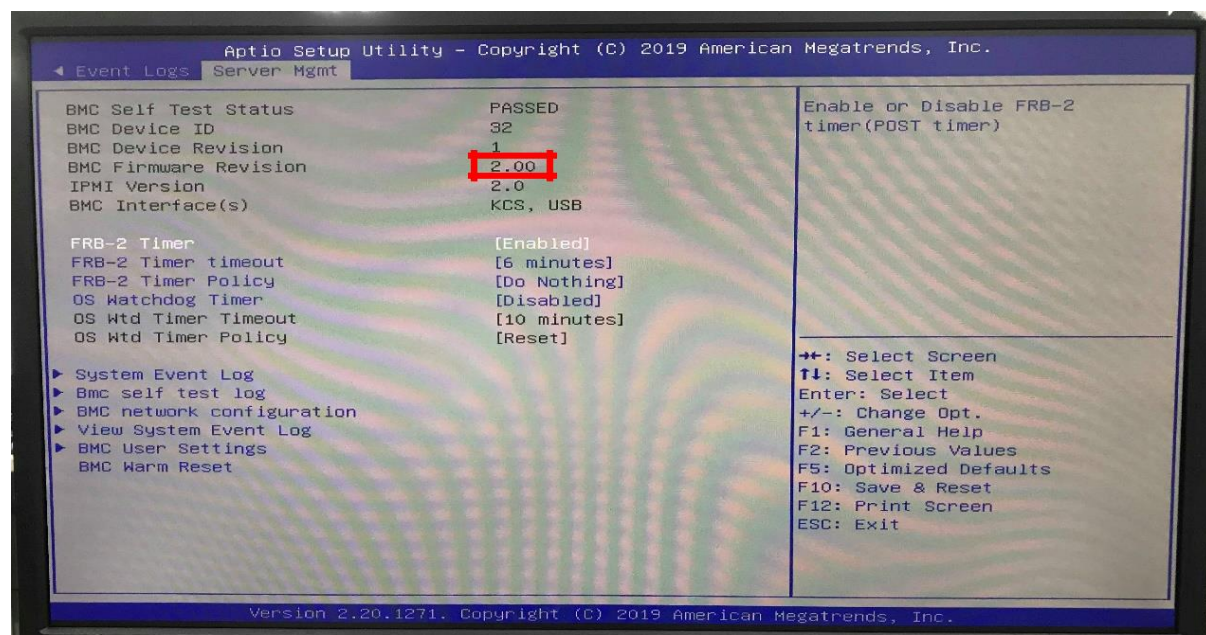
-----
YAFUFlash - Firmware Upgrade Utility (Version 4.55.6)
-----
(C)Copyright 2016, American Megatrends Inc.
The Image Modules count are different for Image
So,The Images are different. Use '-info' Option to know more
Continuing with Full Firmware Update
-
```

```
-----
YAFUFlash - Firmware Upgrade Utility (Version 4.55.6)
-----
(C)Copyright 2016, American Megatrends Inc.
The Image Modules count are different for Image
So,The Images are different. Use '-info' Option to know more
Continuing with Full Firmware Update
Continuing Full Firmware Upgrade with update of UBOOT

*****
WARNING!
FIRMWARE UPGRADE MUST NOT BE INTERRUPTED ONCE IT IS STARTED.
PLEASE DO NOT USE THIS FLASH TOOL FROM THE REDIRECTION CONSOLE.
*****
Preserving Env Variables... done
Uploading Firmware Image : 100%... done
Flashing [boot] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [conf] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [root] Module ....
Flashing Firmware Image : 67%
```

```
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [bkupconf] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [root] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [osimage] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [www] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Flashing [ast2500el] Module ....
Flashing Firmware Image : 100%... done
Verifying Firmware Image : 100%... done
Setting Env variables... done
Resetting the firmware.....
C:\15>goto end
C:\15>echo Please wait for 70 seconds to initialize firmware
Please wait for 70 seconds to initialize firmware
C:\15>ASMB_MAC -delay 70
Delay 70 Seconds
Remainder 20 Seconds
```

Step10: Reboot system and you can check the BWC firmware version in the Server Mgmt of bios manual. The BMC firmware version is 2.2.4.



Q: Why does it take longer to boot after I update the BMC firmware to 2.0? Is this normal?

A: We have started to support Redfish functionality in BMC ver2.0. Asus has realized this version firmware is facing a long period of POST time. Mainly due to BIOS is transferring DATA to BMC, we are working closely with AMI to the issue. We estimate the issue will be significantly improved when the next BMC firmware is released. Ultimately, the Redfish function will not be affected, our customer can rest assured its efficacy has exceeded Asus' expectation.

P.S.

1. After the actual boot time, there is a 5-7 minute waiting time approximately. The length of time will also have a direct relationship with the number of devices installed in the machine.
2. You can also try to turn off the Network stack function in the BIOS manual (default setting is off), temporarily disable this function and ignore this data transfer mechanism when booting, so this waiting time will not occur.