



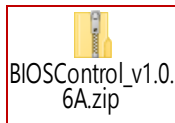
ASRockRACK TECHNICAL DOCUMENT (NOVEMBER/2024)

Q: How to adjust BIOS Setting locally with BIOS_Control Tool in Linux?

Preparation

1. Please download the BIOS Control Tool below, which is executed in Linux

[BIOSControl_v1.0.6A.zip](#)



2. Linux Environment

Notice

1. This tool is only for local, remote mode is unsupported
2. Please refer to ReadMe Note first in the file, the following steps would give you the instruction of this tool

Step

- 1.

To unzip the attachment, we run **#sudo unzip BIOSControl_v1.0.6A.zip**

(The environment is in Ubuntu 24.04)

- 2.

Enter **Driver folder** then run:

#sudo chmod 777 Install.sh

#sudo make

#sudo ./Install.sh

```

tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ cd driver/
tsd@tsd-GENOAD8UD-2T-X550:~/Documents/driver$ sudo chmod 777 Install.sh
tsd@tsd-GENOAD8UD-2T-X550:~/Documents/driver$ sudo make
make -C /lib/modules/6.8.0-48-generic/build M=/home/tsd/Documents/driver modules
make[1]: Entering directory '/usr/src/linux-headers-6.8.0-48-generic'
warning: the compiler differs from the one used to build the kernel
The kernel was built by: x86_64-linux-gnu-gcc-13 (Ubuntu 13.2.0-23ubuntu4) 13.2.0
You are using: gcc-13 (Ubuntu 13.2.0-23ubuntu4) 13.2.0
CC [M] /home/tsd/Documents/driver/asrdev.o
/home/tsd/Documents/driver/asrdev.c:17:6: warning: no previous prototype for 'ShowBlock
17 | void ShowBlockData(void* buffer, int size)
    | ^~~~~~
MODPOST /home/tsd/Documents/driver/Module.symvers
CC [M] /home/tsd/Documents/driver/asrdev.mod.o
LD [M] /home/tsd/Documents/driver/asrdev.ko
BTF [M] /home/tsd/Documents/driver/asrdev.ko
Skipping BTF generation for /home/tsd/Documents/driver/asrdev.ko due to unavailability
make[1]: Leaving directory '/usr/src/linux-headers-6.8.0-48-generic'
tsd@tsd-GENOAD8UD-2T-X550:~/Documents/driver$ sudo ./Install.sh

```

3.

Back to the **previous folder**, then we run

#sudo chmod 777 BIOSControl

to get the permissions of BIOSControl Tool

```

tsd@tsd-GENOAD8UD-2T-X550:~/Documents/driver$ cd ..
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ sudo chmod 777 BIOSControl

```

4.

Dump the BIOS Data and check the parameters you want to modify

The command instruction and example would show below

We run

#sudo ./BIOSControl /g BIOS_INFO

#cat BIOS_INFO

The utilization of the tool:

```

Dump the Data:
  BIOSContorl /g "Output Filename"

Input the Data By parameters:
  BIOSContorl T="Title" V="Value"
Input parameters example:
  BIOSContorl T="Fast Boot" V=2

```

```
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ sudo ./BIOSControl /g BIOS_INFO
Asrock BIOS Control v1.0.6
ASRock Incorporation, all rights reserved
=====
[ Completed ]
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ cat BIOS_INFO
```

Input File name by user

To see the Information you dump by the tool

For example:

If you want to modify the CSM mode, you can grep the keywords by commands

```
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ cat BIOS_INFO | grep CSM -C 20
```

You can check 20 lines before and after of your keyword(CSM) by this parameter

The result shows below:

```
{
  "HII Default Value" : 2,
  "Help" : "Enable to launch the Compatibility Support Module. If you are
not speed.",
  "PkgListGuid" : "{899407D7-99FE-43D8-9A21-79EC328CAC21}",
  "Question Id" : 384,
  "Title" : "CSM",
  "Valid Value" :
  [
    {
      "Title" : "Disabled",
      "Value" : 0
    },
    {
      "Title" : "Enabled",
      "Value" : 1
    },
    {
      "Title" : "Custom",
      "Value" : 2
    }
  ],
  "Value" : 1,
  "Value Type" : "UINT8",
  "VarGuid" : "{EC87D643-EBA4-4BB5-A1E5-3F3E36B20DA9}",
  "VarInfo Offset" : 337
},
```

The Display name in BIOS: CSM

The current setting of the CSM mode (1 means Enabled)

To modify your CSM mode:
There are 3 selections of the Value Set.
If you want to set to Custom,
please add {T="CSM" V=2}
in your command
The following steps would show the example

5.

To set the CSM mode to **Custom**

we run

```
#sudo ./BIOSControl T="CSM" V=2
```

Then run

```
#sudo ./BIOSControl /g BIOS_INFO_UPDATE
```

```
#cat BIOS_INFO_UPDATE | grep CSM -C 20
```

to dump and check the BIOS Data after update

**You can also reboot and check the BIOS Setting*

```
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ sudo ./BIOSControl T="CSM" V=2
Asrock BIOS Control v1.0.6                                     Set the CSM mode to Custom
ASRock Incorporation, all rights reserved
=====
Set variable:OK
[ Completed ]
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ sudo ./BIOSControl /g BIOS_INFO_UPDATE
Asrock BIOS Control v1.0.6                                     Dump the data again to check result
ASRock Incorporation, all rights reserved                     Remember to input a new file name
=====
[ Completed ]
```

```
tsd@tsd-GENOAD8UD-2T-X550:~/Documents$ cat BIOS_INFO_UPDATE | grep CSM -C 20
```

```
{
  "HII Default Value" : 2,
  "Help" : "Enable to launch the Compatibility Support Module
not speed.",
  "PkgListGuid" : "{899407D7-99FE-43D8-9A21-79EC328CAC21}",
  "Question Id" : 384,
  "Title" : "CSM",
  "Valid Value" :
  [
    {
      "Title" : "Disabled",
      "Value" : 0
    },
    {
      "Title" : "Enabled",
      "Value" : 1
    },
    {
      "Title" : "Custom",
      "Value" : 2
    }
  ],
  "Value" : 2, The current Value( Custom mode)
  "Value Type" : "UINT8",
  "VarGuid" : "{EC87D643-EBA4-4BB5-A1E5-3F3E36B20DA9}",
  "VarInfo Offset" : 337
},
```

Done