



Cbrom.exe

Version 1.11

***BIOS ROM
Combination
Utility***

User's Guide

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BIOS ROM Combination Utility

This manual briefly discusses Cbrom, the Award BIOS ROM Combination utility, with instructions to guide you through combining third-party firmware with the Award BIOS in a file format for flash memory chips. Cbrom supports 1-MB and 2-MB flash memory file formats.

Using Cbrom

This manual describes Cbrom ver. 1.11. Later versions may contain additional enhancements.

Cbrom runs at a DOS prompt. To view the complete Cbrom usage, type **CBROM /?** at the DOS prompt and press Enter. A screen similar to this appears:

```
CBROM v1.11
Copyright © Award Software, Inc. 1995-1997 All Rights Reserved.
Syntax: A:\CBROM.EXE InputFile [/other] [8000:0] [RomFile|Release]
A: \CBROM.EXE InputFile [/D|logo|vga ... ] [RomFile|Release]
  InputFile : System BIOS to be added with Option ROMs
    D       : For display all combined ROMs information in BIOS
  /ncr     : Add NCR(SYMBIOS) SCSI ROM to System BIOS
  /aha     : Add AHA78xx SCSI ROM to System BIOS
  /blg     : Add BusLogic SCSI ROM to System BIOS
  /vga     : Add VGA BIOS ROM to System BIOS
  /logo    : Add OEM LOGO BitMap to System BIOS
  /other   : Add special OEM ROM to System BIOS
  /cpucode, /epa, /acpitbl

  RomFile  : File name of option ROM to add-in
  Release  : Release option ROM in current System BIOS
  <<Examples>>
  A:\CBROM.EXE 2a4ib000.bin /D
  A:\CBROM.EXE 2a4ib000.bin /vga VGA.BIN /ncr release
  A:\CBROM.EXE 2a4ib000.bin /other 8000:0 YYY.ROM
```

Cbrom Parameters

- NOTES:**
1. Examples in this manual use **2a59cxxx.bin** as the system BIOS FILE name, **ncr307.rom** as the file name of an NCR SCSI ROM BIOS version 3.07 for the NCR810/825, and **aha7850.rom** as the file name of an Adaptec SCSI ROM BIOS for the Adaptec 7850.

Keep in mind that these file names are **examples only**, to help you understand the process.

2. *Cbrom* commands are not case-sensitive. Upper- or lowercasing of command letters in this manual is for clarity only.

SCSI ROMs

/ncr For standard PCI motherboards, users can combine an NCR SCSI ROM, Adaptec SCSI ROM, or BusLogic SCSI ROM and
/aha
/blg the system BIOS using these commands:

cbrom 2a59cxxx.bin /ncr ncr307.rom

cbrom 2a59cxxx.bin /aha aha7850.rom

cbrom 2a59cxxx.bin /blg ba81c15.rom

After the program executes one of these commands, a confirmation message similar to these appears:

Combine ncr307.rom file to 2a59cxxx.bin...

Combine aha7850.rom file to 2a59cxxx.bin...

Combine ba81c15.rom file to 2a59cxxx.bin...

You may also combine more than one ROM, like this:

cbrom 2a59cxxx.bin /ncr ncr307.rom /aha aha7850.rom /blg ba81c15.rom

After the program executes this command, all three confirmation messages shown above should appear.

Video ROMs

For an all-in-one PCI motherboard, you must combine the VGA BIOS with the system BIOS to also combine option ROMs such as an NCR SCSI BIOS with the system BIOS. Here is an example of combining the VGA BIOS and the NCR SCSI BIOS:

cbrom 2a59cxxx.bin /vga vga.bin /ncr ncr307.rom

After the program executes this command, confirmation messages similar to these appear:

Adding vga.bin 2a59cxxx.bin...46.1%

Combine ncr307.rom file to 2a59cxxx.bin

NOTE: *When adding uncompressed firmware, Cbrom shows the code compression ratio in the confirmation message. In the examples in this*

manual of adding uncompressed firmware (/vga vga.bin, /logo test.bmp) the “adding” messages differ from the “combining” messages in the examples of adding compressed code, such as ncr ncr307.rom, /aha aha7850.rom, and /blg ba81c15.rom. To determine if a ROM is compressed or not, use the debug command (e.g., search for the string marker -lh5).

Other ROMs

You can combine other ROMs not listed above with the system BIOS. The command has this format:

cbrom 2a59cxxx.bin /other [Expand to RAM Address] [Rom File]

For example, this command adds a LAN card boot ROM:

cbrom 2a59cxxx.bin /other 8000:0 BOOTROM.bin

NOTE:

This function requires specially modified source code. Contact Award for information about obtaining source code customized for this feature.

Adding a Full-Screen Logo

This command lets you add a full screen logo to the system BIOS.

cbrom 2a59cxxx.bin /logo test.bmp

After the program executes this command, a confirmation message similar to this appears:

Adding test.bmp...4.5%

Note the compression ratio in the message.

NOTES:

- You must obtain a BIOS from Award modified for a full-screen logo to use this command.*
- Use these specs for the logo:*

<i>Display mode</i>	<i>640 x 480 x 16 colors</i>
<i>Maximum screen</i>	<i>640 x 464</i>
<i>File format</i>	<i>Bitmap file, 16 colors</i>
- Due to size limitations, we recommend a file with a limited number of colors, to improve the compression ratio.*

Miscellaneous Additions

/cpucode Combine up to four micro codes for the Pentium Pro CPU.

/epa This command lets you insert a small logo in the system BIOS to replace the Energy Star Logo. Note that at time of the writing, this function is not available.

/acpitbl Use this command to add ACPI hardware descriptor tables to support ACPI, when it becomes available in operating systems.

Removing a ROM

This command lets you remove any existing ROMs from the system BIOS. For example, you may remove the NCR SCSI BIOS and the Adaptec SCSI BIOS from the system BIOS with these commands:

```
cbrom 2a59cxxx.bin /ncr release
```

A confirmation message similar to this appears:

```
[NCR] driver is released
```

Then type:

```
cbrom 2a59cxxx.bin /aha release
```

A confirmation message similar to this appears:

```
[AHA] driver is released
```

Displaying Details

This command lists all the combined ROMs, with file details. For example, to display a list of the binary files combined in 2a95cxxx.bin, type this command:

```
cbrom 2a59cxxx.bin /d
```

A display similar to this appears:

```
CBROM v1.11
Copyright © Award Software, Inc. 1995-1997 All Rights Reserved.
*****                2a59cxxx.bin BIOS Component                *****

No.  Item-Name  Original-Size  Compressed-Size  Original-File-Name
---  -
0.   System BIOS  20000h (128.00K)  1401Bh (80.03K)  2a59cxxx.bin
1.   NCR ROM     04000h (16.00K)  02594h (9.39K)   ncr307.16k
2.   AHA ROM     02B99h (10.90K)  02BC0h (10.94K)  aha7850.rom

Total compress code space      = 1B000h (108.00K)
Total compress code size       = 1916Fh (100.36K)
Remain compress code space     = 01e91h (7.54K)
```

Exceeding ROM Space

Sometimes when you attempt to add a third-party ROM to the current firmware in the chip, a message similar to this appears:

```
2a59cxxx.bin not enough ROM size for adding driver
```

This error message indicates that the attempted third-party ROM addition exceeds the size allotted for such ROMs in the BIOS binary file. Contact your Award sales representative about obtaining an updated BIOS code base to solve this problem.