
TN8000.23

Technical Note

*Converting a binary file to a .rom
file for industrial programmers*

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1 INTRODUCTION

This document explains how to convert a binary file generated by the XE8000 tools to a ROM file in order to make it compatible with industrial programmers such as BPMicro BP-XXX or Phyton ChipProg+.

Note: When you use RIDE and the XELoader to program with an XE8000MP, this utility is not needed.

2 AXE2ROM

The utility axe2rom.exe performs the following gnu commands on the binary files:

```
c816-objcopy.exe <file>.axe -target = <file>.srec  
c816-srec2rom.exe <file>.srec -prog -o <file>.rom
```

Note that *.axe is equivalent to *.bin

3 DOUBLE SPEED PRODUCTS

For the products like XE88LC07A and XE88LC02A in 4kInstruction mode the useful memory is 4k instructions but physically the whole flash array is used, the instructions are read in parallel.

The axe2rom.exe utility performs one more action that consists of doubling the code. See the example below with a 3 instruction code:

```
0000 0033FFFFB <- First line of your code  
0001 0033F82C  
0002 0033F82C  
0003 00000000  
...  
...  
0ffe 00000000  
0fff 00000000  
1000 0033FFFFB <- First line of your code (copied)  
1001 0033F82C  
1002 0033F82C
```

The code of the line 0000h is copied to line 1000h (4096d).

Both lines are read at the same time when the microcontroller is used in double speed mode.

4 AXE2ROM USAGE

The utility axe2rom.exe is a command line executable see the usage instruction below:

```
C:\XEMICS>axe2rom
Usage: axe2rom [-t target_name] | [input_file] |
    Converts a binary file (*.axe or *.bin) to *.rom
    -h                : Display this information.
    -t target_name    : Specifies the target chip to be programmed
    List of possible targets (please respect the syntax):
    xe88LC01a, xe88LC02-4kI, xe88LC02-8kI, xe88LC03, xe88LC05a
    xe88LC06a, xe88LC07a, xe1283-4kI, xe1283-8kI,
    input_file       : Input_file to convert in *.rom
                     Input file formats : *.axe, *.bin

***                axe2rom Version V 1.0 Release date Dec 20 2004                ***
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C:\XEMICS>
```

Converting an *.axe file to an *.rom file is as follow:

```
C:\XEMICS>axe2rom -t xe88lc02-4ki file.axe
Generated file : file.rom (2305 instructions)
C:\XEMICS>
```

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