

FAQ / Application Note

Subject : How to deploy a Windows CE image (NK.bin) into ECM-945GSE

FAQ Document No:	Date: 2012/9/6
Model Name. ECM-945GSE	Rev. B1
Category: <input type="checkbox"/> General <input type="checkbox"/> H/W <input checked="" type="checkbox"/> S/W <input type="checkbox"/> Others, <u>寫小分類</u>	

Purpose:

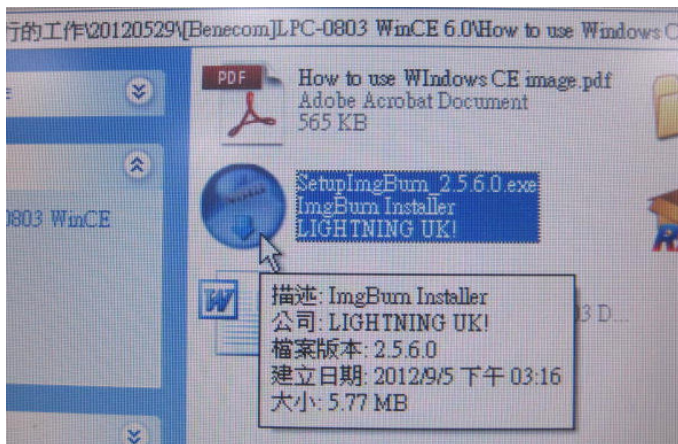
To clarify how to deploy a Windows CE image(NK.bin) into ECM-945GSE.
 The SOP can be used for system which bases on ECM-945GSE such as LPC-0803, etc.
 However, the resolution of Windows CE image will be bound when the image built.
 So, make sure the image resolution is compatible with the system you want.

Environment and condition :

1. FreeDOSBootSetup.iso file or FreeDOS with CEloader boot disc.
(In this case, we used the FreeDOSBootSetup.iso file)
2. Windows CE image - NK.bin
3. ECM-945GSE or system which bases on ECM-945GSE such as LPC-0803, etc.
4. Storage such as CF or HD (In this case, we used a CF)

Procedure and Results:

1. We have to make a FreeDOS with CEloader boot disc for making CF.
 Use burning software(such as ImgBurn) to burn the FreeDOSBootSetup.iso file as a FreeDOS with CEloader boot disc.
 Install the ImgBurn software as below.



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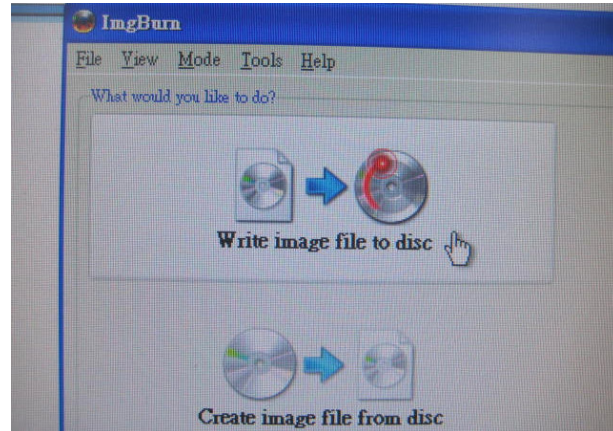
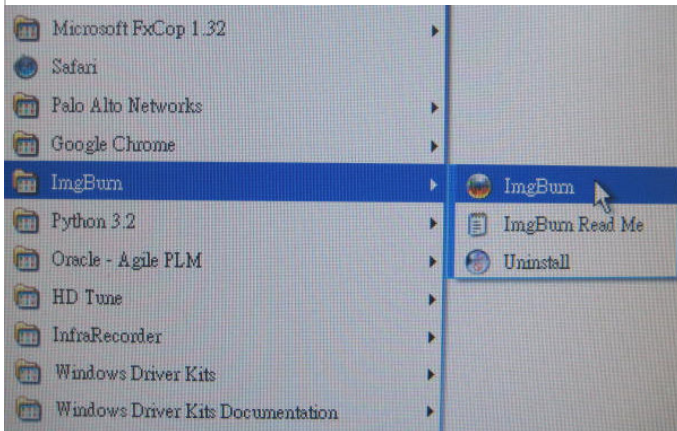
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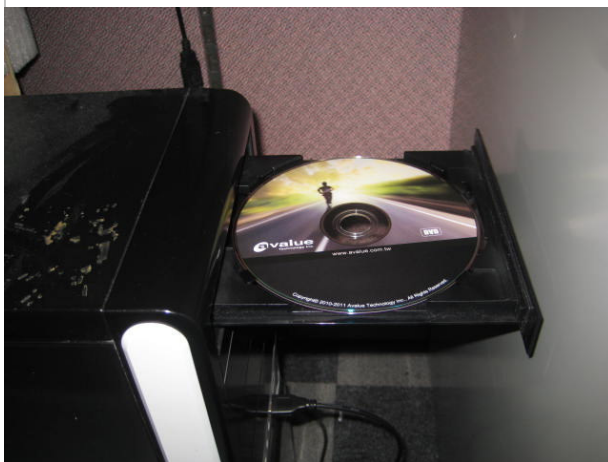
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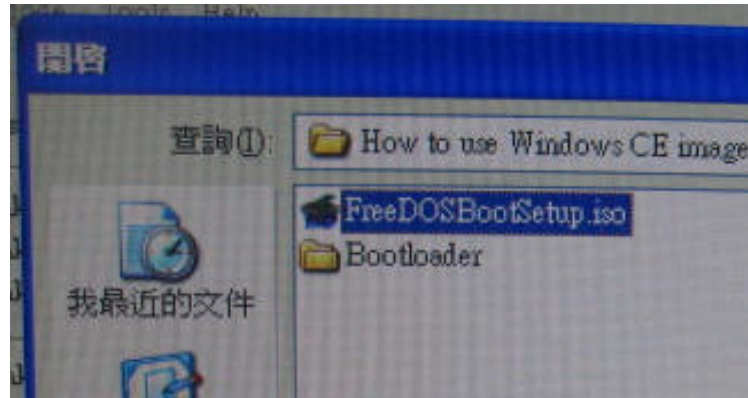
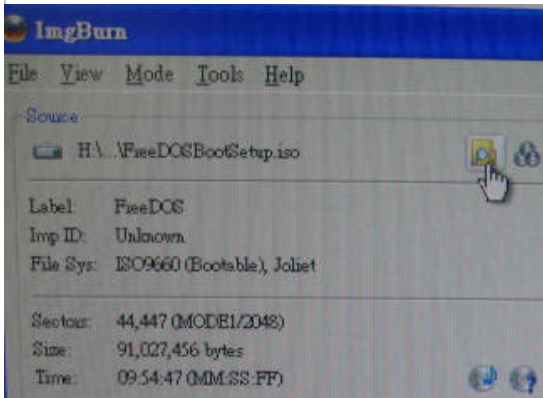
2. Launch the “ImgBurn” and choose “Write image file to disc”



3. Put an empty disc to the R/W DVD ROM to burning.



4. Choose the FreeDOSBootSetup.iso file to burning.



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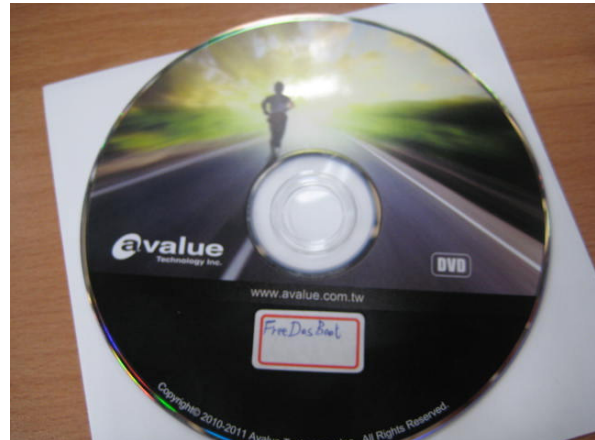
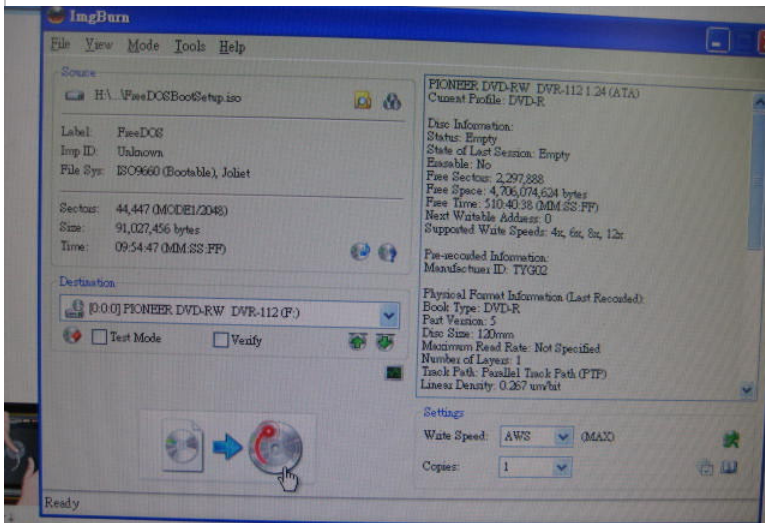
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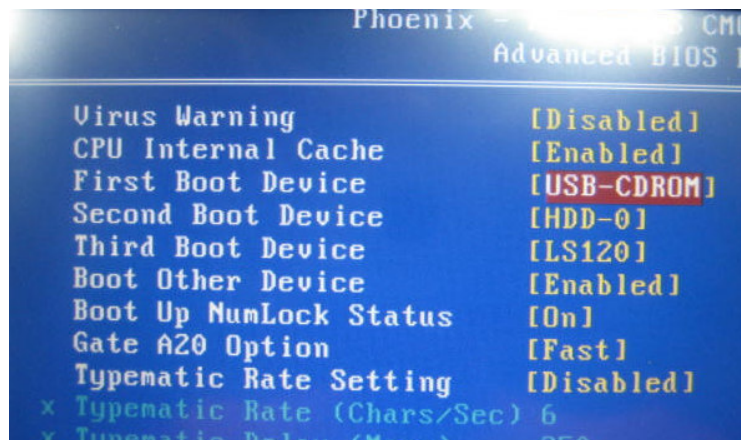
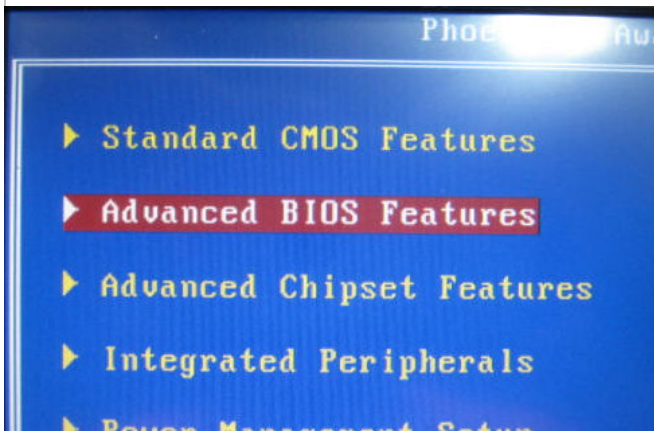
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5. Complete the “FreeDOS with CEloader boot disc” after burning it.



6. Then, use the “FreeDOS with CEloader boot disc” to make a FreeDOS CF card.
 Attach USB DVD/CD ROM and insert your “FreeDOS with CEloader boot disc”, plug in your CF Card on ECM-945GSE. Power on ECM-945GSE and choose boot device from USB-CDROM in BIOS.
(The SOP can be used for system which bases on ECM-945GSE such as LPC-0803, etc. However, the resolution of Windows CE image will be bound when the image built. So, make sure the image resolution is compatible with the system you want.)



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7. When booting menu appears, please select the item1 to continue.

```
1 - Load FreeDOS with maximum RAM free, using EMM386
2 - Load FreeDOS including HIMEM XMS-memory driver
3 - Load FreeDOS without drivers

Select from Menu [123], or press [ENTER] (Selection=1)

Singlestepping (F8) is: OFF
```

That shall enter into FreeDos after select item1 as below.

```
FreeDOS HIMEM64 3.10 [Oct 19 2004] (c) 1995, Till Gerken 2001-2004 ton ehler
HIMEM - Always On A20 method used
EMM386 1.13 [Nov 23 2004] (c) ton ehler 2001-2004 c't/H. Albrecht 1990
Kernel: allocated 39 Diskbuffers = 20748 Bytes in HMA

FreeCon version 0.82 pl 3ak XMS_Swap [Aug 18 2004 23:00:58]

No drives assigned. SHSUCDX can't install.
FreeDOS DISPLAY ver. 0.11
Buffers allocated: 000 in TPA, 001 in XMS
Uncompressing and loading UPKed CPI (CPX) file :-).
MODE select codepage 858 function completed
type HELP to get support on commands and navigation

Welcome to FreeDOS

CuteMouse v1.9 [FreeDOS]
Installed at PS/2 port

C:\>
```

The content of the disc shall be like the following diagram.

```
C:\>dir/w
Volume in drive C has no label
Volume Serial Number is 126B-12D9
Directory of C:\

[98DOS]      [CE_SETUP]   [FDOS]       [OS_GHOST]   [TOOLS]
[XP_SETUP]   COMMAND.COM  FDCONFIG.SYS FREEDOS.BSS  HIMEM.EXE
KERNEL.SYS  METAKERN.SYS SETUP_CE.BAT          7 file(s)
ytes
6 dir(s)    38,492,160 bytes free
```

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8. After booting into FreeDOS, please type **setup_ce D:** in the command line as below.

D: means CF Card.

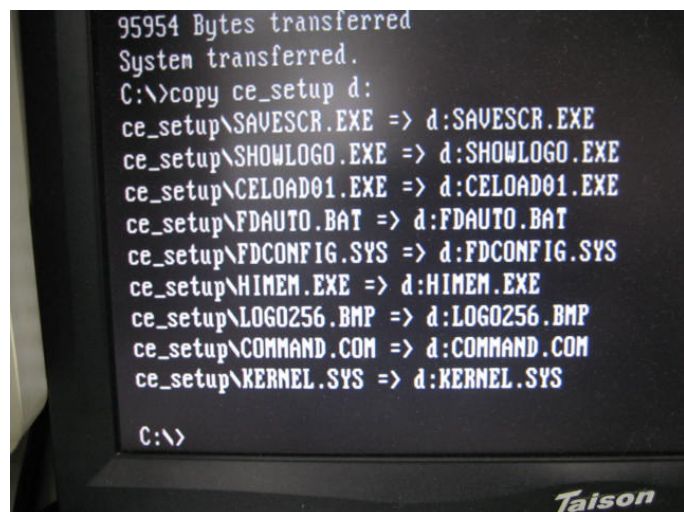
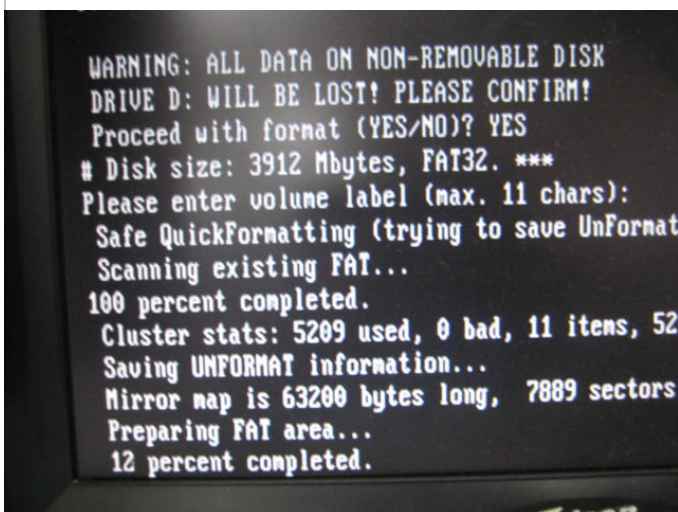
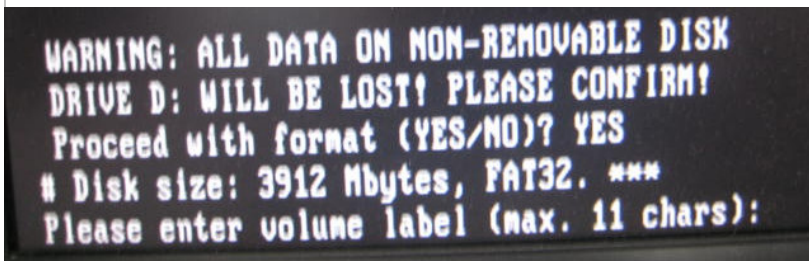
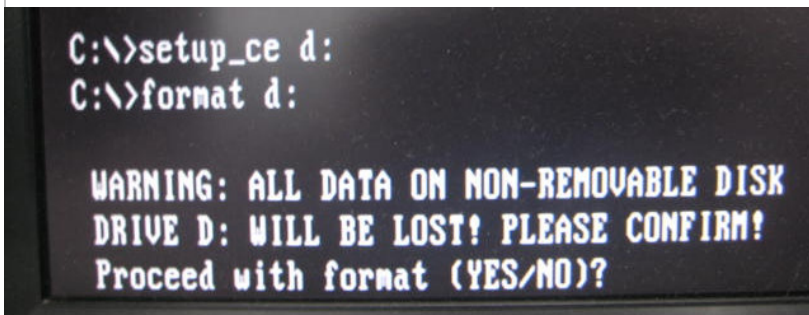


9. After execute **setup_ce D:**, that shall automatically execute a batch of instructions as below.

We shall type "YES" after the inquiry "Proceed with format (YES/NO)?" inquires as below.

We can just enter no character for the other inquiry "Please enter volume label (max, 11 chars):" as below.

The progress processed like below.



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10. Check D: (CF).

After completing setup, the CF card is a FreeDOS bootable device and bootloader of CE is available inside. The CF shall has the following contents.

```
C:\>d:

D:\>dir/u
Volume in drive D has no label
Volume Serial Number is 1B68-1604

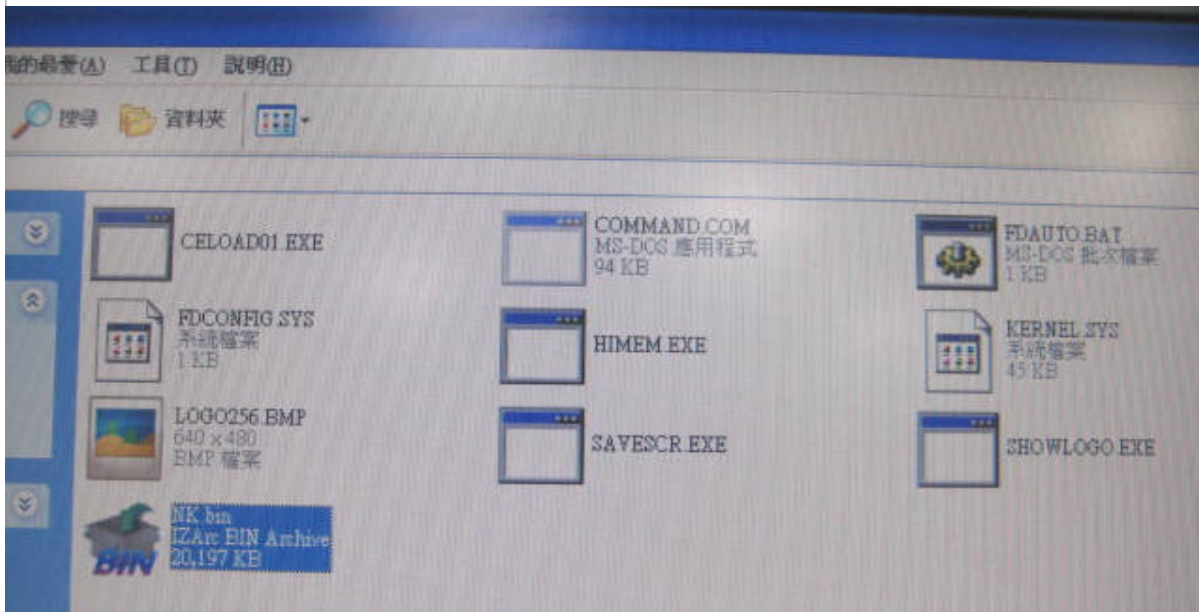
Directory of D:\

CELOAD01.EXE  COMMAND.COM  FDAUTO.BAT  FDCONFIG.SYS  HIMEM.EXE
KERNEL.SYS   LOGO256.BMP  SAVESCR.EXE  SHOWLOGO.EXE
607,492 bytes
0 dir(s)      3,911 Mega bytes free
```

Or, Power off and then remove CF card with ECM-945GSE, plug-in and explore it in your host PC, you will see the files of CF card are list as below:



11. Please copy your NK.bin, and put it in CF card.



12. Re-plug-in FreeDOS CF card and remove USB DVD/CD ROM.

13. Power on ECM-945GSE and boot from CF card. A Windows CE startup map will be appeared on the screen as follows:



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14. After loading complete, Windows CE is launching immediately as follows:



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Date :2012/9/6

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