



EM2416 Download Wince6.0 Image Manual

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1. The necessary files for download image

IROM_Fusing_Tool.exe: the program is used to fuse the Bootloader into the SD-card (Only for XP).

DNW.exe: the serial debug program is used to show the board details on the computer.

USB_Driver: the USB driver of the PC is used to download the files on the base board from computer (only for XP).

IROM_SD_EBOOT.nb0: the SD-card Bootloader is used to boot the WINCE kernel or load it into NAND flash.

STEPLDR.bin: the first NAND flash Bootloader is used to boot the EBOOT.bin.

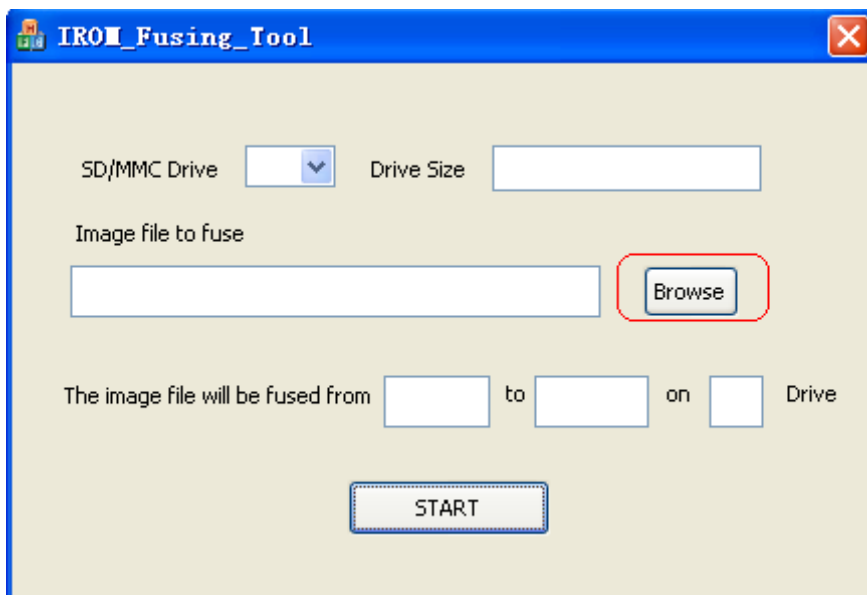
EBOOT.bin: the second NAND flash Bootloader is used to boot the WINCE kernel.

xip.bin: the WINCE kernel image.

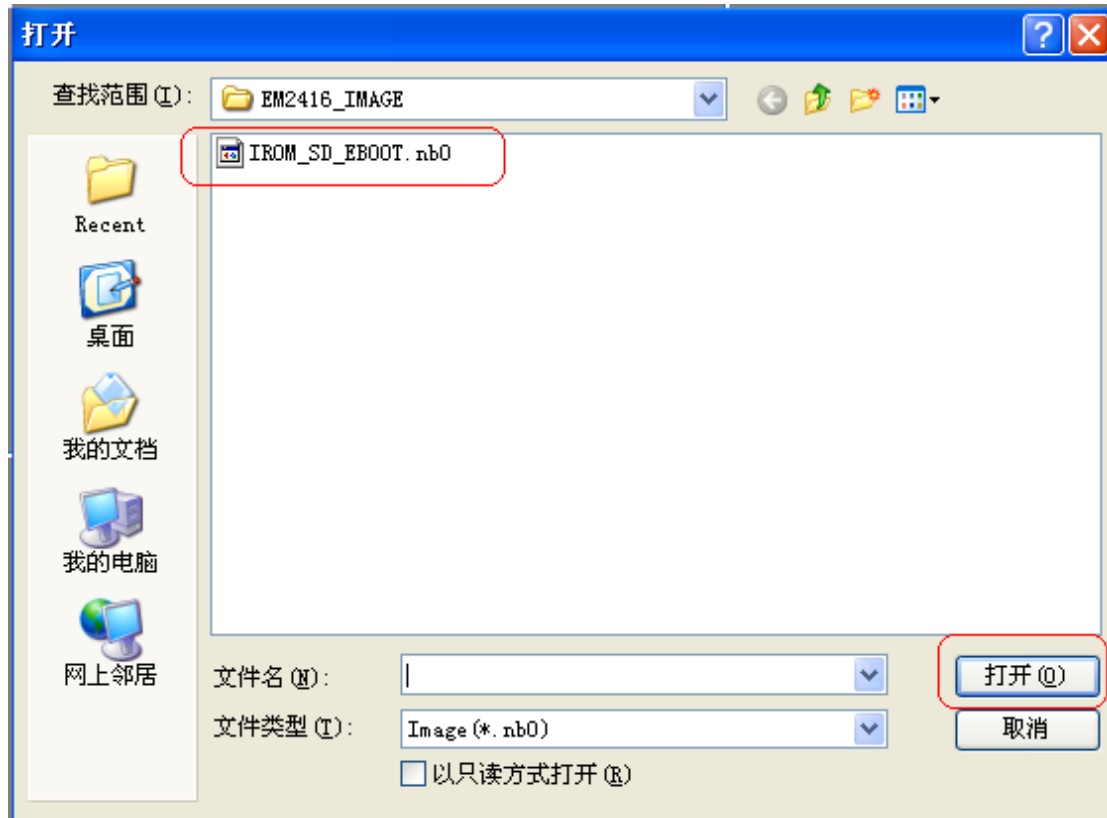
2. Download boot image into SD card

Preparing a 2GB SD-card and plug it with an adapter into your computer. Make sure your SD-card adapter can be normally used in your computer and select the removable disk as your device; you could format it with FAT32 file-system.

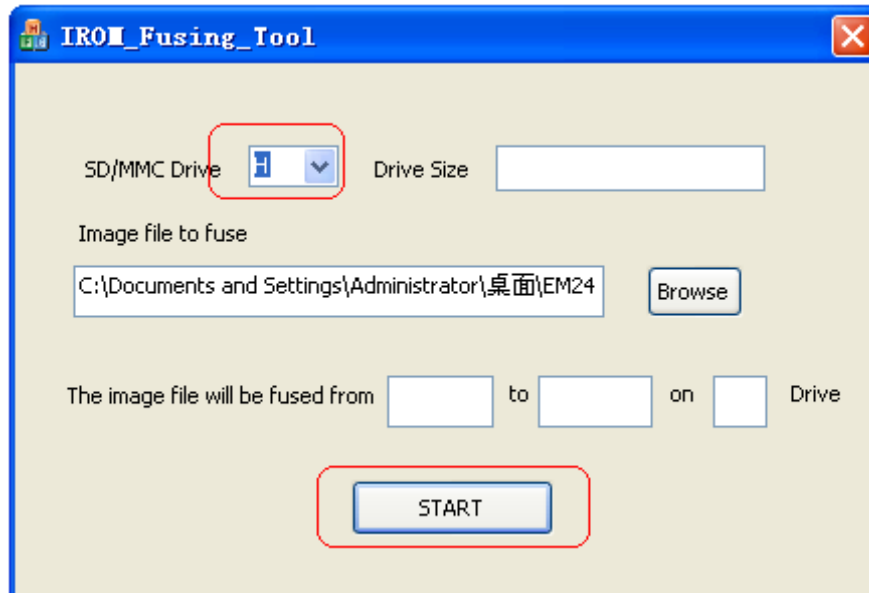
Double-click the **IROM_Fusing_Tool.exe** as follows:



Click “**Browse**” button and select the **IROM_SD_EBOOT.nb0** file in the WINCE images folder as follows:



Click "SD/MMC Drive" and select the Removable Disk letter on user computer, for example: **H**



Click "TART" button to fuse the **IROM_SD_EBOOT.nb0** into the SD card until the windows message box pop-up.



Unplug the SD card from the SD card adapter and insert it into the slot on the baseboard.

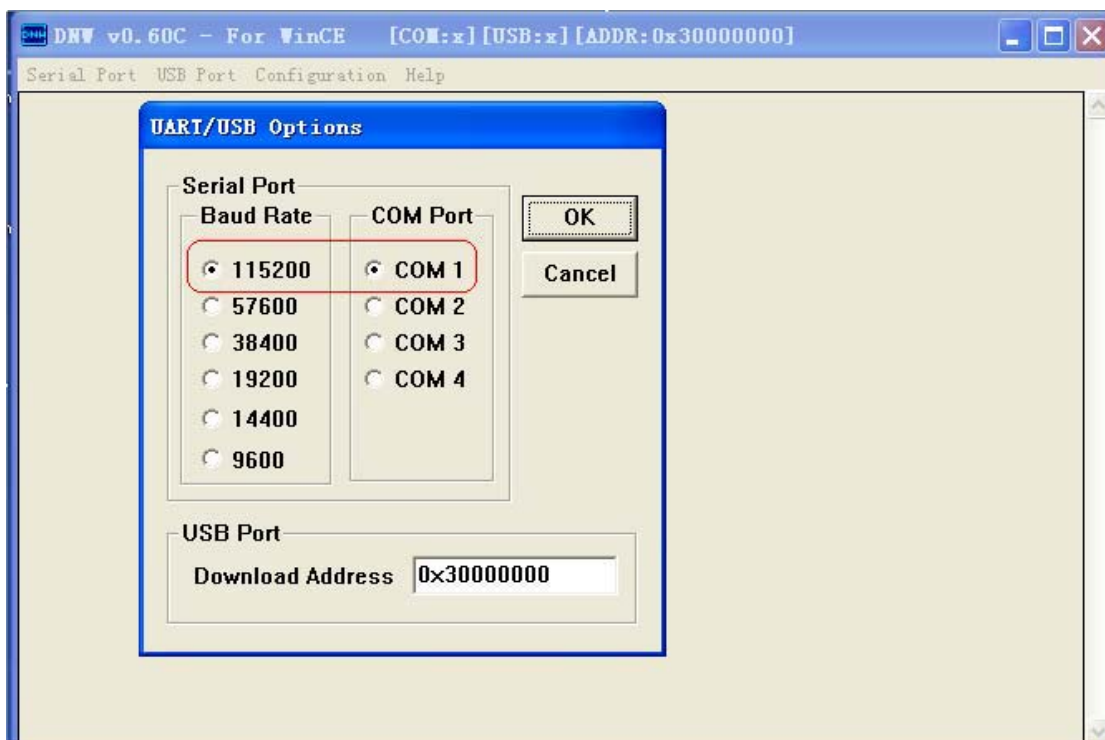
3. Download image into board

Open the **DNW.exe** program and set its configuration as follows:

[DNW->Configuration->Options]

Baud Rate: 115200

COM port: COM1 (user computer COM number, to the actual subject)



Click "OK" to save the configuration and exit. In the menu, click [**Serial Port->Connect**] to open the serial port.

Set the board to start from SD card: baseboard "F_SEL" put dial to the right, then, power on the board, and click the PC **SPACE bar**:



```
DNV v0.60C - For WinCE [COM1,115200bps] [USB:x] [ADDR:0x30000000]
Serial Port USB Port Configuration Help

Ethernet Boot Loader Configuration:

0) IP address: 0.0.0.0
1) Subnet mask: 255.255.255.0
2) DHCP: Disabled
3) Boot delay: 1 seconds
4) Reset to factory default configuration
5) Startup image: LAUNCH EXISTING
6) Program disk image into SmartMedia card: Enabled
7) Program CS8900 MAC address (00:00:00:00:00:00)
8) KITL Configuration: DISABLED
9) Format Boot Media for BinFS
A) Erase All Blocks
B) Mark Bad Block at Reserved Block
C) Clean Boot Option: FALSE
D) Download image now
E) Erase Reserved Block
F) Low-level format the Smart Media card
L) LAUNCH existing Boot Media image
R) Read Configuration
U) DOWNLOAD image now(USB)
W) Write Configuration Right Now
S) DONLOAD image now(SD)Now

Enter your selection:
```

Select "5" and "6", make sure there are:

5) Startup image: LAUNCH EXISTING

6) Program disk image into SmartMedia card: Enabled

Select "b" -> "9" -> "u":

```
Enter your selection: b
Reserving Blocks [0x0 - 0x5] ...
...reserve complete.

Ethernet Boot Loader Configuration:
```

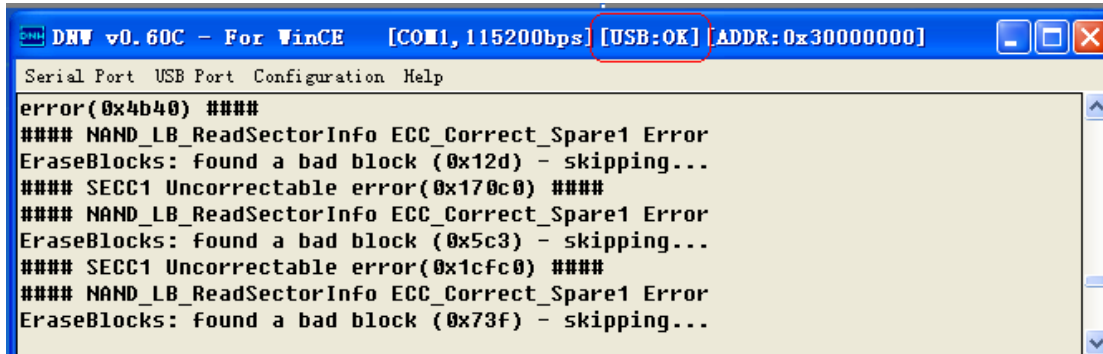
```
Enter your selection: 9
Enter LowLevelFormat [0x6, 0x7ff].
Erasing flash block(s) [0x6, 0x7ff] (please wait): #### SECC1 Uncorrectable
error(0x4b40) ####
#### NAND_LB_ReadSectorInfo ECC_Correct_Spare1 Error
EraseBlocks: found a bad block (0x12d) - skipping...
#### SECC1 Uncorrectable error(0x170c0) ####
#### NAND_LB_ReadSectorInfo ECC_Correct_Spare1 Error
EraseBlocks: found a bad block (0x5c3) - skipping...
#### SECC1 Uncorrectable error(0x1cfc0) ####
#### NAND_LB_ReadSectorInfo ECC_Correct_Spare1 Error
EraseBlocks: found a bad block (0x73f) - skipping...
Done.
WriteMBR: MBR block = 0x6.
Done.

Ethernet Boot Loader Configuration:
```

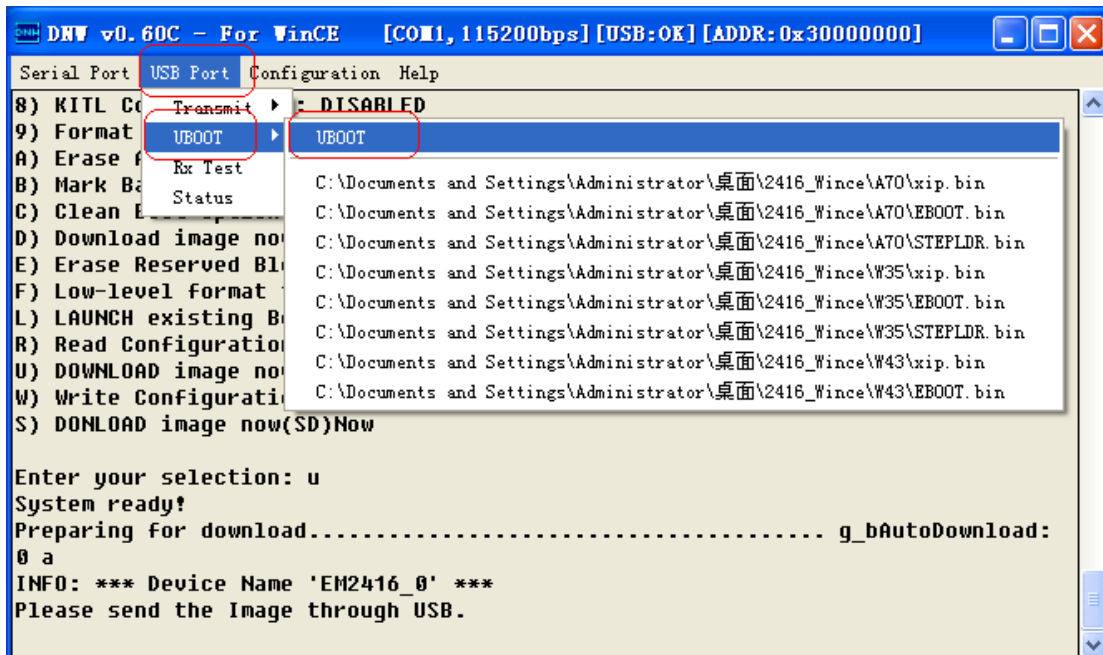
```

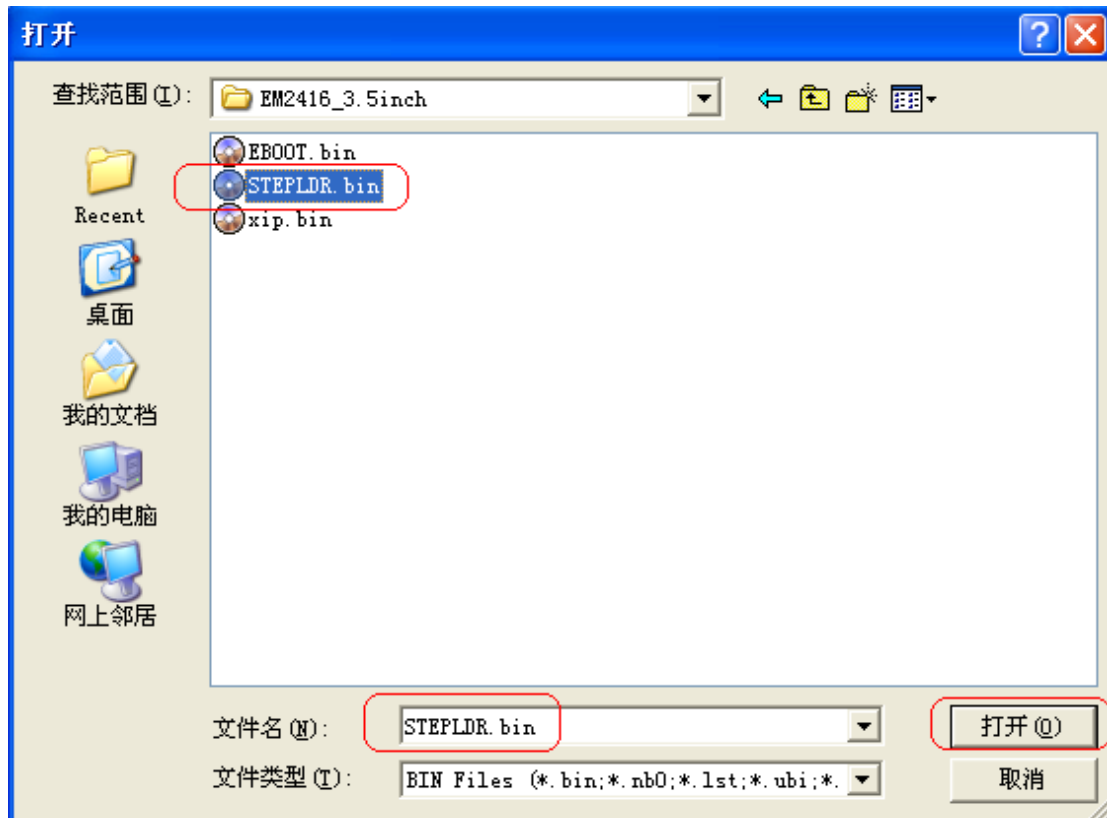
Enter your selection: u
System ready!
Preparing for download..... g_bAutoDownload:
0 a
INFO: *** Device Name 'EM2416_0' ***
Please send the Image through USB.
  
```

If it is first time to burn image, please install the USB download driver before burning, in the install dialog box, assign to the USB_Driver directory: **secusb2.inf and secusb2.sys**. After install the USB download driver, in the DNW status bar: **USB: X -> USB: OK**:

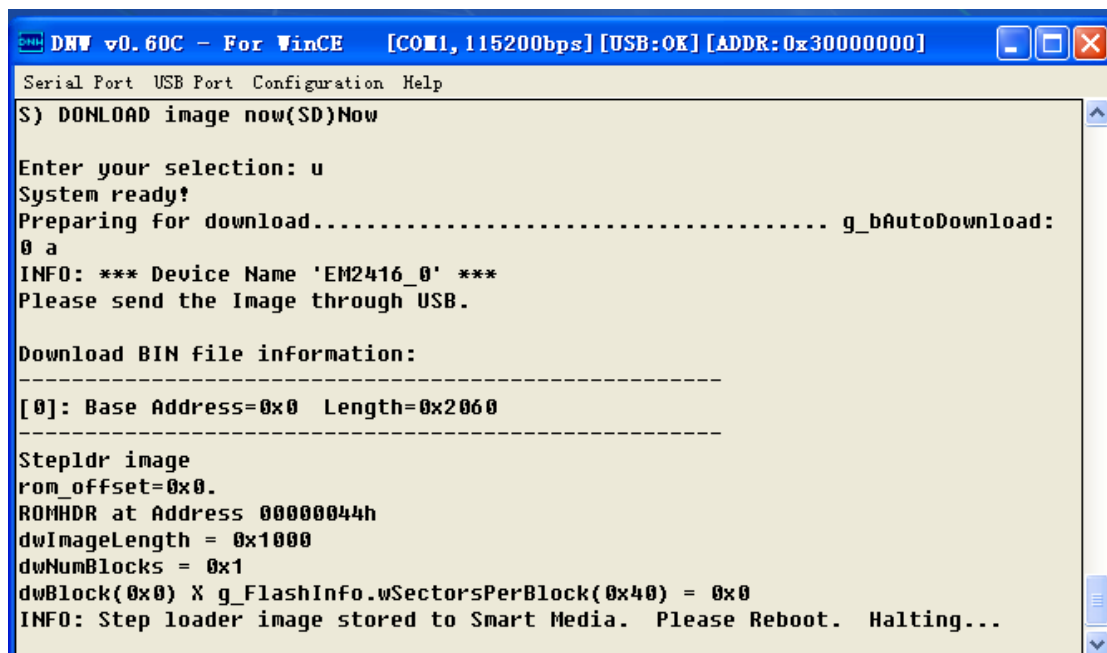


Then start to burn image:

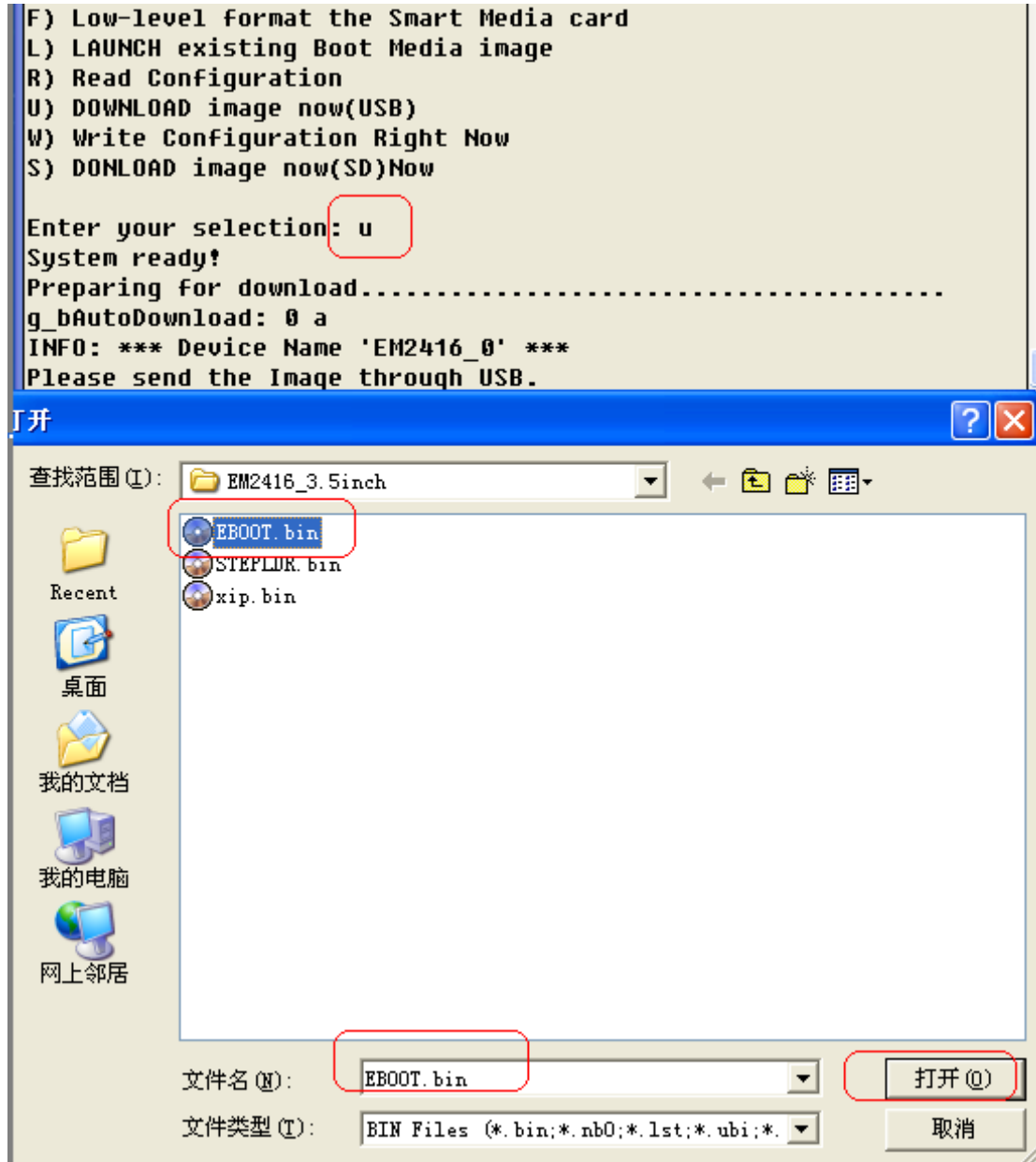




Select "**STEPLDR.bin**" and burn it into the board.



Reset the board and click PC **space bar**, the board into command line, then select "**u**" to burn the "**EBOOT.bin**" as the same burn "**STEPLDR.bin**".



Finally, switch 'F_SEL' to left on carrier board to set EM2416 boot from Nand flash. Then power on EM2416 board, in the console, select 'u' to burn "xip.bin" as the same burn "STEPLDR.bin", after that the WINCE system will start up.