

3.3 WinCE System Installation

Note: This section assumes that you have in front of the method in accordance with the USB driver installed and the development board is set to NOR flash to start the system update and installed NAND flash, please set to start, set the method please refer to previous chapters.

Description: Windows CE install the binary files needed for CD-ROM is located in "\images\wince5.0" directory. Windows CE system installed mainly in the following steps:

- (1) Zoning
- (2) Install bootloader
- (3) Install Eboot
- (4) Install Windows CE Kernel Image

The following are the steps in detail.

3.3.1 Zoning

Tip: NAND flash partition will erase all data inside

(1) Serial port connected, open HyperTerminal, start power development board, enter the BIOS menu.

```

size = 327680

##### FriendlyARM BIOS for 2440 #####
[x] bon part 0 320k 2368k
[lv] Download vivi
[k] Download linux kernel
[yl] Download root_yaffs image
[lc] Download root_cramfs image
[a] Absolute User Application
[ln] Download Nboot
[el] Download Eboot
[i] Download WinCE NK.nb0
[lw] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[gl] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[it] Print the TOC struct of wince
[lul] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[lq] Goto shell of vivi
Enter your selection: _
    
```

(2) Select [x] to start of NAND flash partition, as shown.

Description: Some of NAND flash zoning district when the report will prompt bad, bad because the district will do supervivi detection records, so this will not affect normal use of the board.

```

ttyS0 - HyperTerminal
File Edit View Call Transfer Help
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: x
doing partition
size = 0
size = 327680
size = 2424832
check bad block
part = 0 end = 327680
part = 1 end = 2424832
part = 2 end = 67108864
BF0000: is bad
k = 0 block = 616
part0:
    offset = 0
    size = 327680
    bad_block = 0
part1:
    offset = 327680
    size = 2097152
    bad_block = 0
part2:
    offset = 2424832
    size = 64651264
    bad_block = 1
    
```

Connected 2:37:18 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

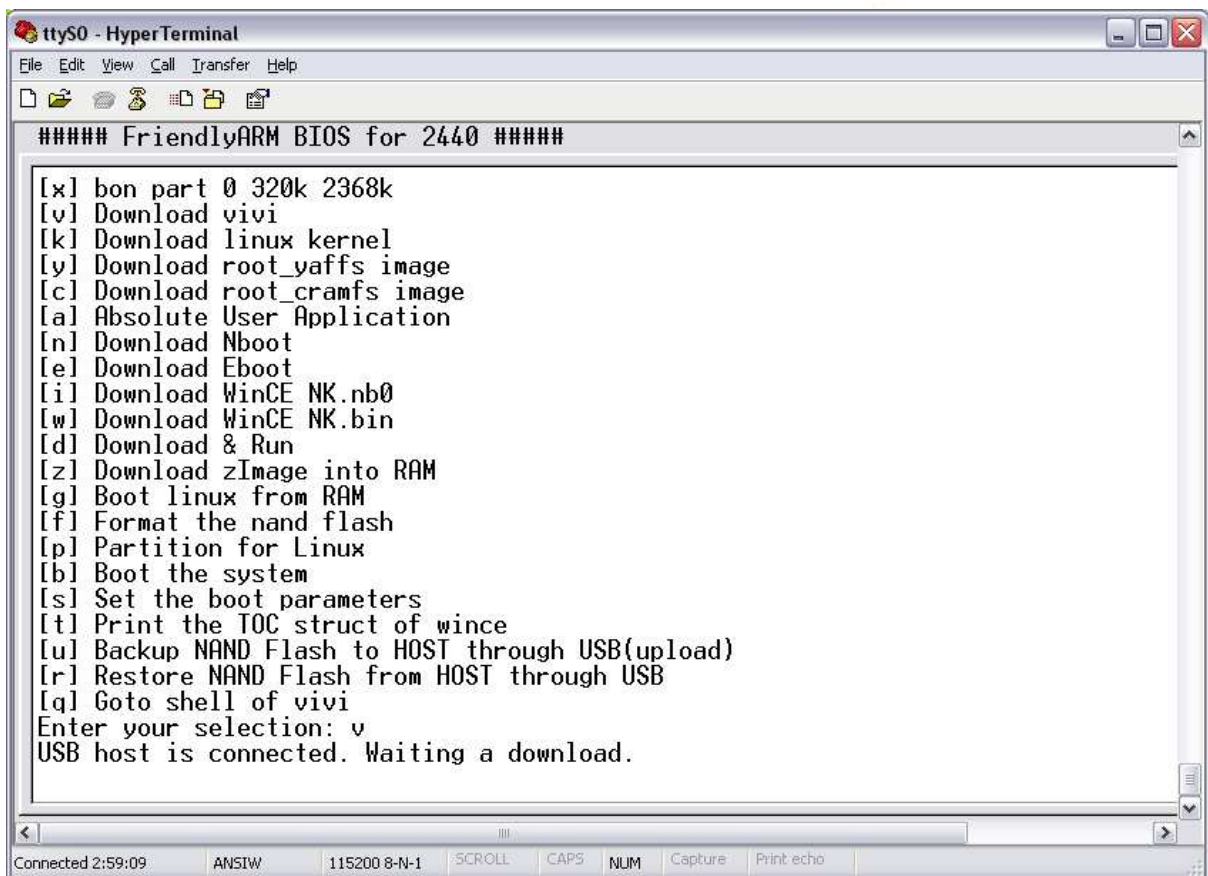
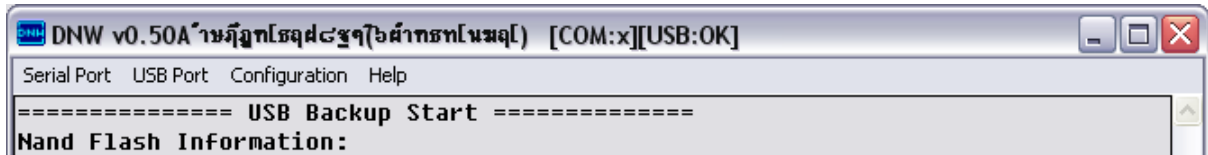
3.3.2 Install bootloader

The development board provides two bootloader can boot WINCE: supervivi and nboot.bin, they say prescribed as follows:

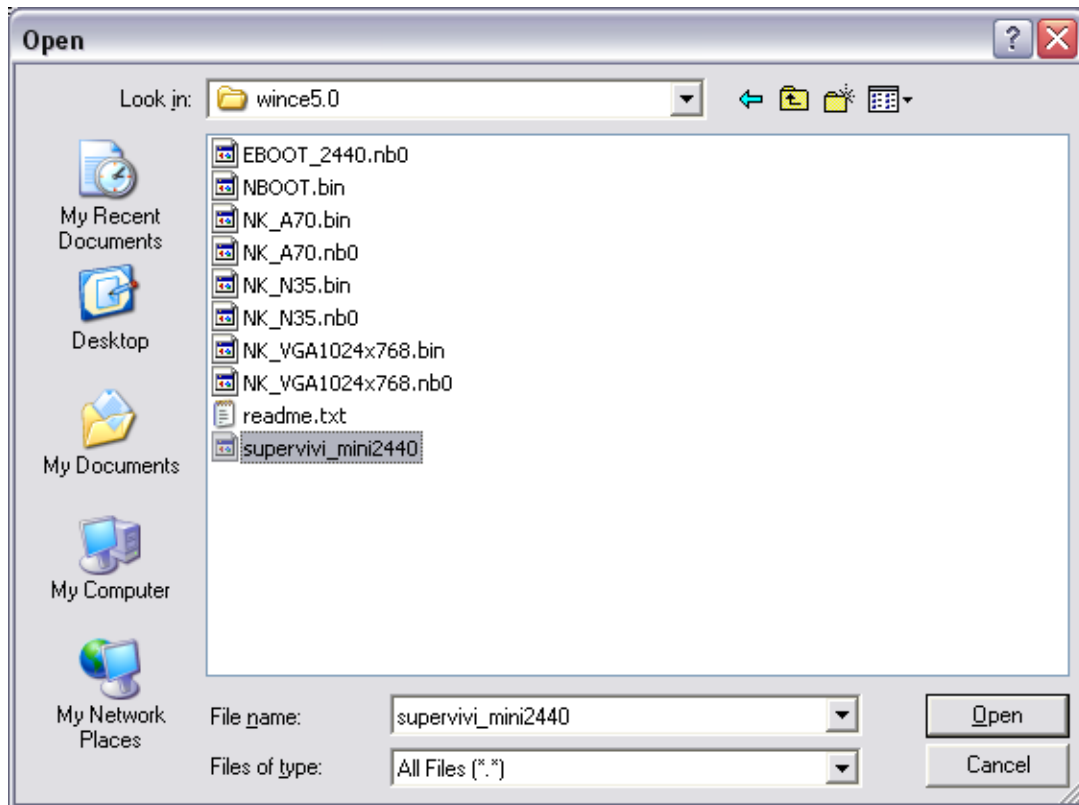
	supervivi	Nboot
Binary image file location	\images\wince5.0	\images\wince5.0
The location of the source code	Without	WindowsCE5.0\NBOOT
Project documents	Without	Nboot.mcp
Compiler	arm-linux-gcc	ADS1.2
<p>Description:</p> <p>supervivi by the arm-friendly maintenance and development, does not provide the source code</p> <p>NBOOT compiler, download programmer see chapter 4.6</p>		

The following is a programmer download supervivi steps:

(1) Open the DNW procedures, connected to USB cable, if the title bar DNW tips [USB: OK], note USB connection, then in accordance with its menu to select the function [v] to start the download supervivi



(2) Click "USB Port-> Transmit" option, and select Open File supervivi (the file is located in CD-ROM\images\wince5.0 directory) to start the download.

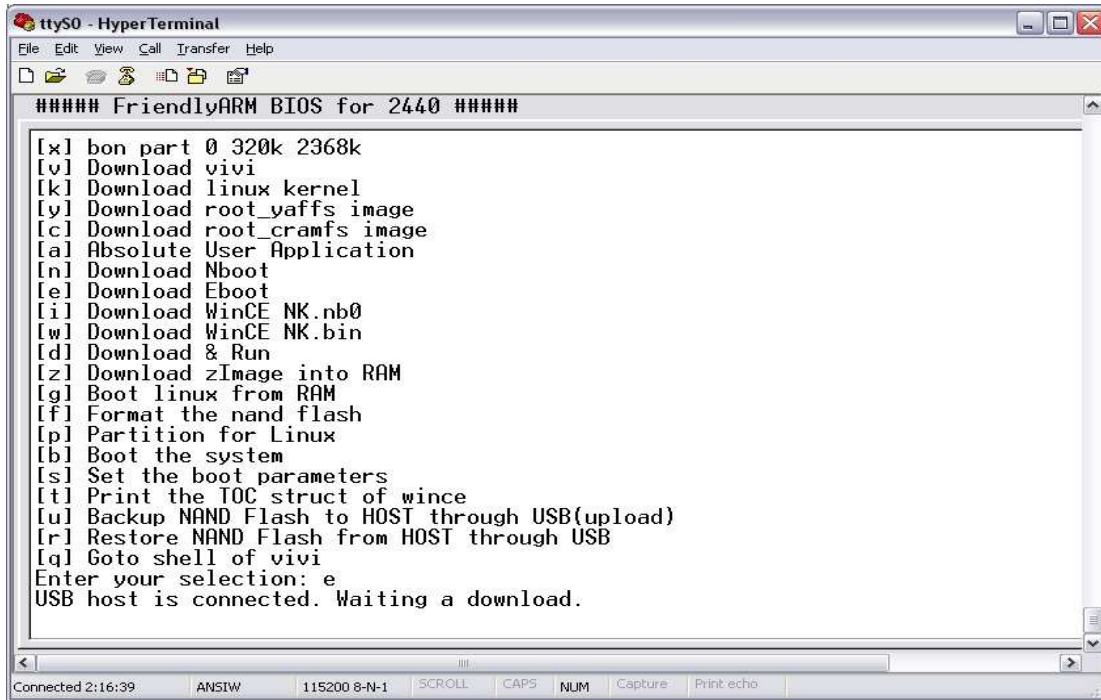


(3) Download, BIOS will automatically NAND flash programmer to the district supervivi, and return to the main menu.

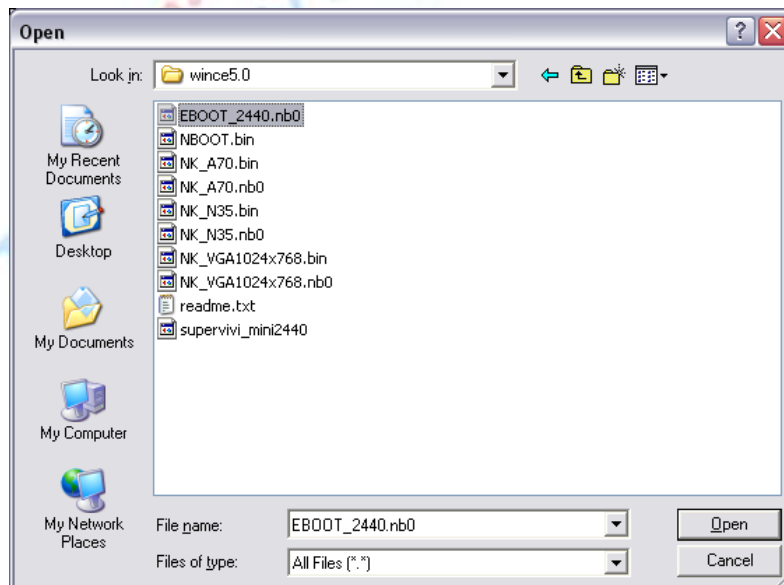
3.3.3 Install Eboot

Description: Eboot only in this role program nk.bin does not have any other purposes.

(1) In the BIOS main menu, select the function [e], to start the download Eboot



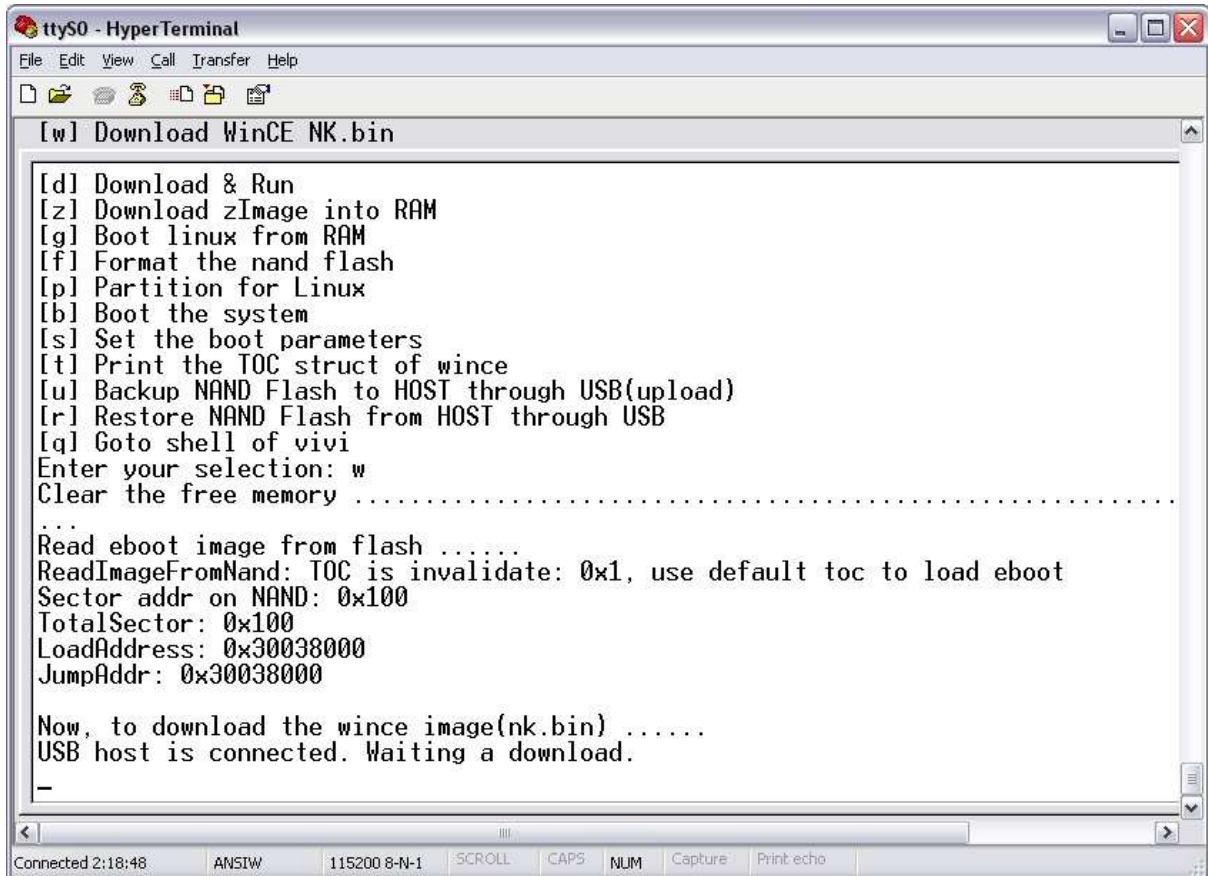
(2) Click "USB Port-> Transmit / Restore" option, and select the file Eboot_2440.nb0



(3) Download, BIOS will automatically Eboot to NAND flash programmer, and to return to the main menu.

3.3.4 Install Windows CE Kernel Image

(1) In the BIOS main menu, select the feature number [w], to start the download WINCE kernel



(2) Click "USB Port-> Transmit / Restore" option, and select file to open the corresponding core NK.bin (the CD-ROM file is located in the \images\wince5.0 directory) to start the download.

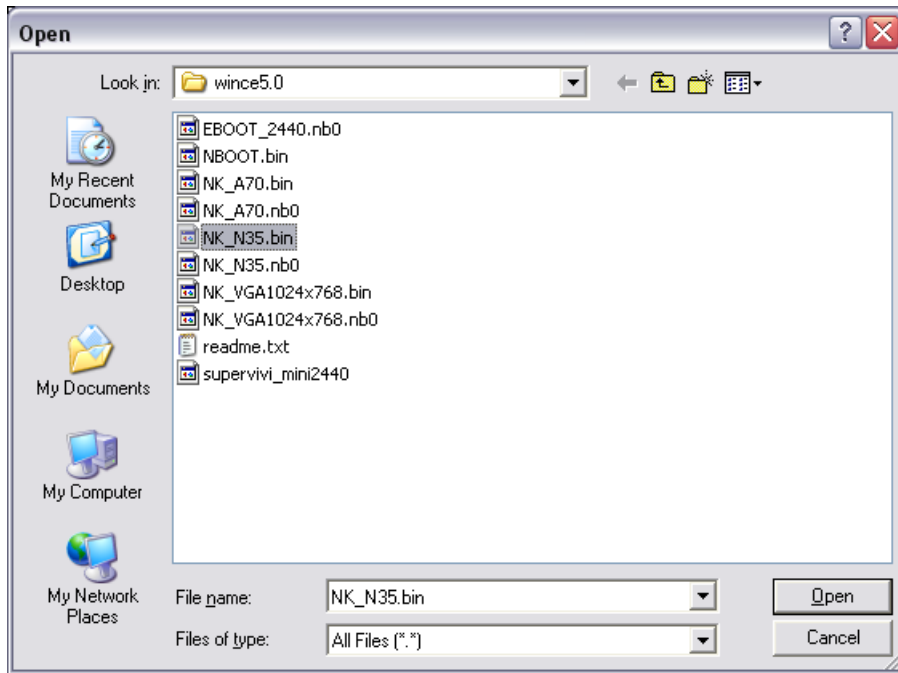
WINCE kernel documentation:

NK_N35.bin - for NEC 3.5 "LCD of the core document

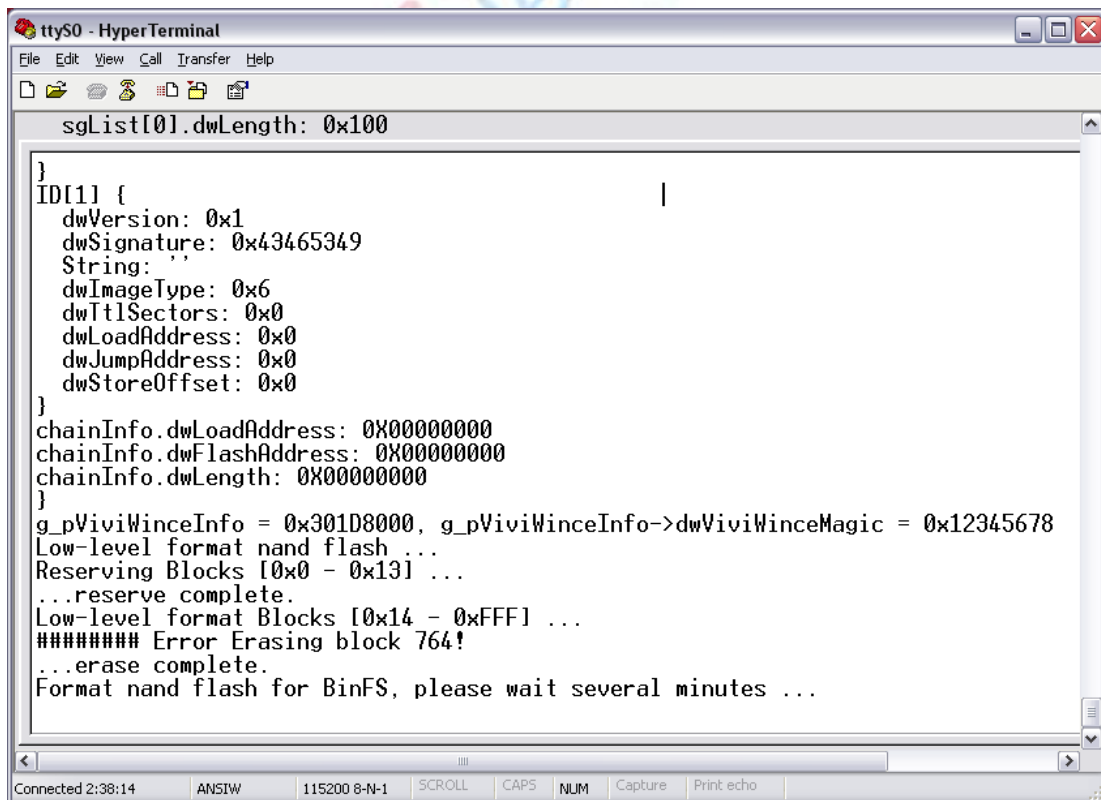
NK_A70.bin - applied to 7-inch true color screen

NK_VGA1024x768.bin - module for VGA output, a resolution of 1024x768

Reality may not be identical with this, please refer to the readme.txt directory images/wince5.0 document describes.



Download is complete, BIOS will automatically call the programmer Eboot format features the beginning of NAND flash, and programmer WINCE kernel image file.



(3) The programmer has finished, WINCE will automatically run, the information appears in Figure:

```

ttyS0 - HyperTerminal
File Edit View Call Transfer Help
HW_Init : GetProcAddress
HW_Init : ERROR_INVALID_PARAMETER
HW_Init : InitializeCriticalSection
HW_Init : VirtualAlloc
HW_Init : pPWR->State
HW_Init : HW_InitRegisters
HW_Init : CreateEvent
HW_Init : InterruptInitialize
HW_Init : CreateThread
HW_Init : CeSetThreadPriority
HW_Init OPCS: 0x00
HW_Init INT1: 0x00
HW_Init INT2: 0x00
HW_Init INT3: 0x00
HW_Init : Donw
<PWR_Init:0x37b70
>PWR_Open(0x37b70, 0x0, 0x3)
<PWR_Open:1
>PWR_IOControl(0x321000, 0x0, 0, 0x60378b8)
<PWR_IOControl:1
>PWR_Open(0x37b70, 0x0, 0x3)
<PWR_Open:2
PWR_Close(0x37b70)
384 clock
SetBaudRate -> 960008250 (0 opens)
Connected 2:43:27  ANSIW  115200 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
    
```