

3.1 Backup and Recovery System

In the development process, we often need to constantly update the programmer and system debugging, and sometimes you will be with the system program all good, so that the feeling you have done, when we all want to save the current procedures to the target system for later reference test, or copy the current system completely into the target board to another; especially when the urgency of the project's requirements, and re-build a very complex system, the same time, when using the system built-in backup and recovery features, will be able to quickly and efficiently solutions summary of your problem.

Note: At present, only the FriendlyARM features to provide this technology.

3.1.1 Backup System

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

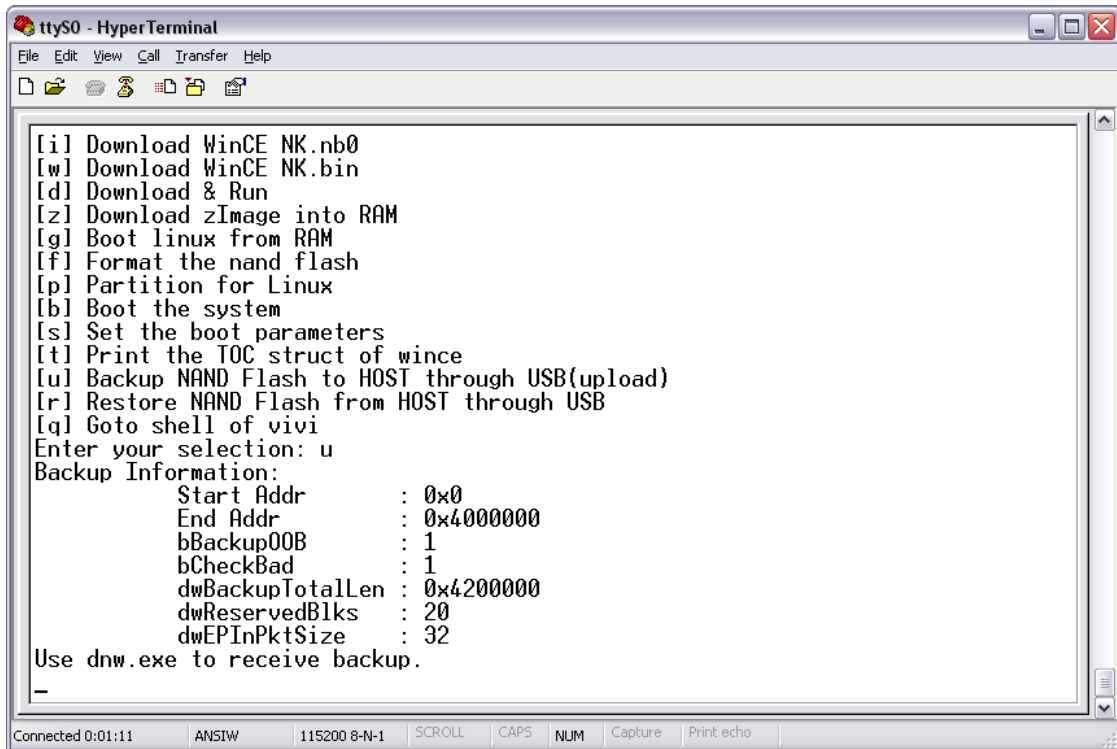
In addition, the backup will not destroy any flash data, backup before you check your system to normal operation line for easy reference.

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

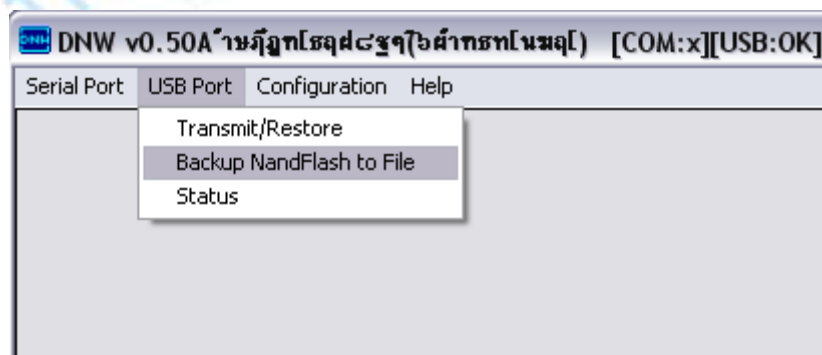
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ttyS0 - HyperTerminal
File Edit View Call Transfer Help
##### FriendlyARM BIOS for 2440 #####
[x] bon part 0 320k 2368k
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection:
Connected 0:00:08 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
    
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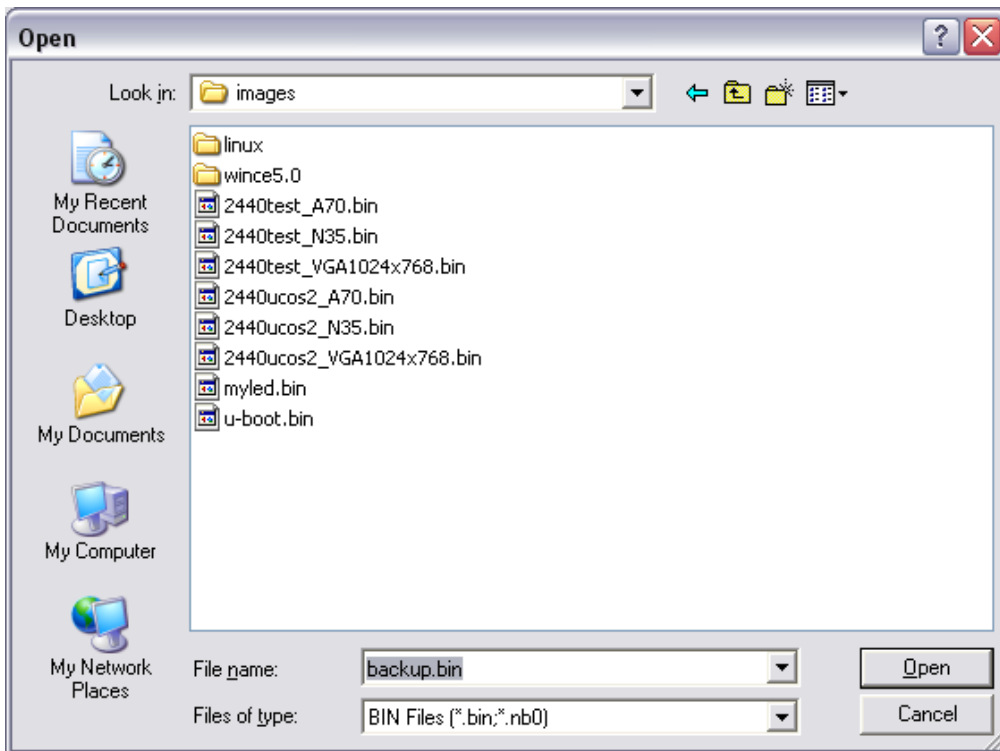
(2) Select [u] to start the backup NAND flash content to a file, as shown:



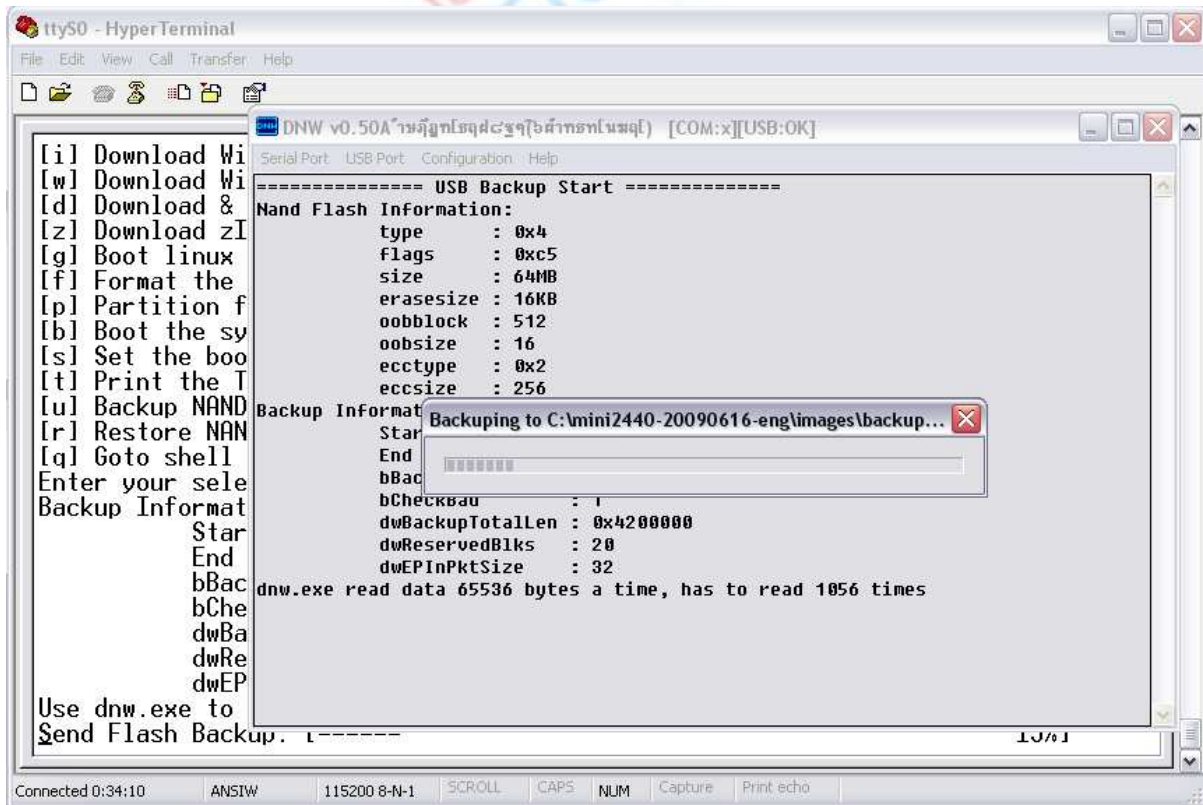
(3) Open the DNW procedures, connected to USB cable, if the title bar DNW tips [USB: OK], note USB connection, then select the DNW menu USB Port > Backup NandFlash to File, as shown:



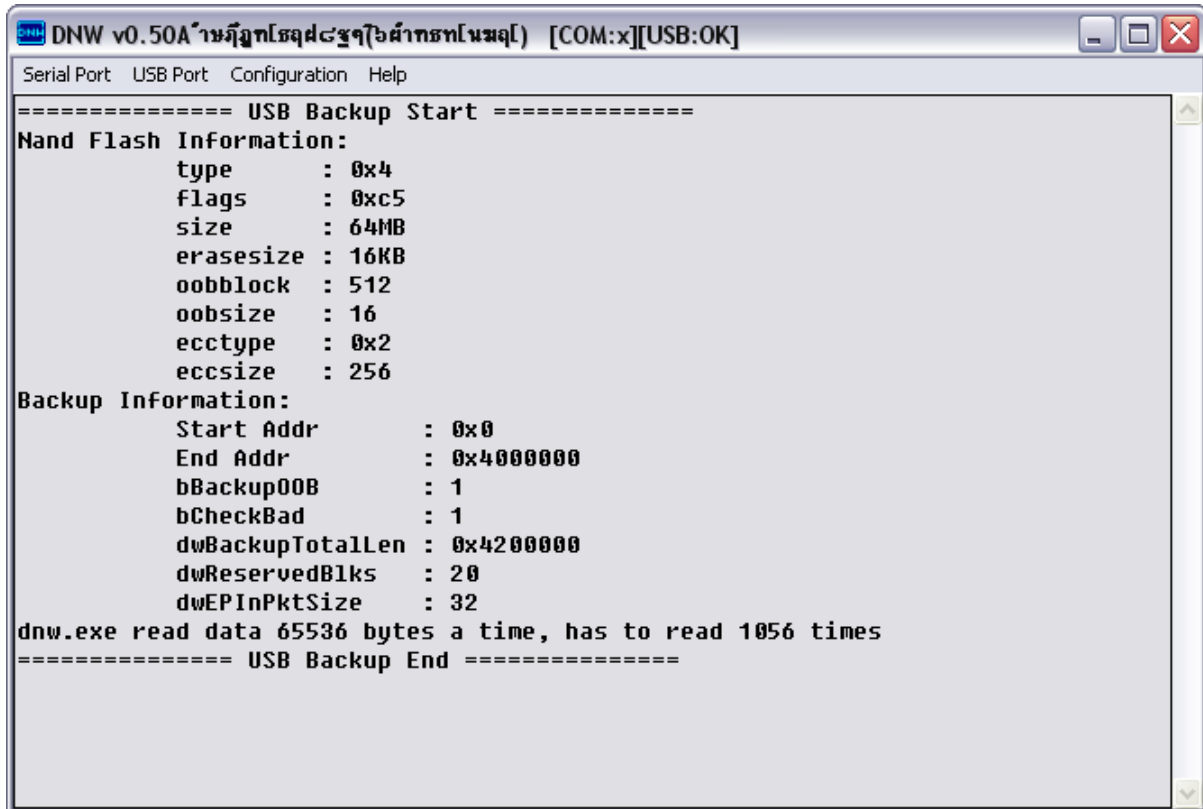
Save the file out of the window, select the location to save the file to be named (in this case to save the file to backup.bin), figure:



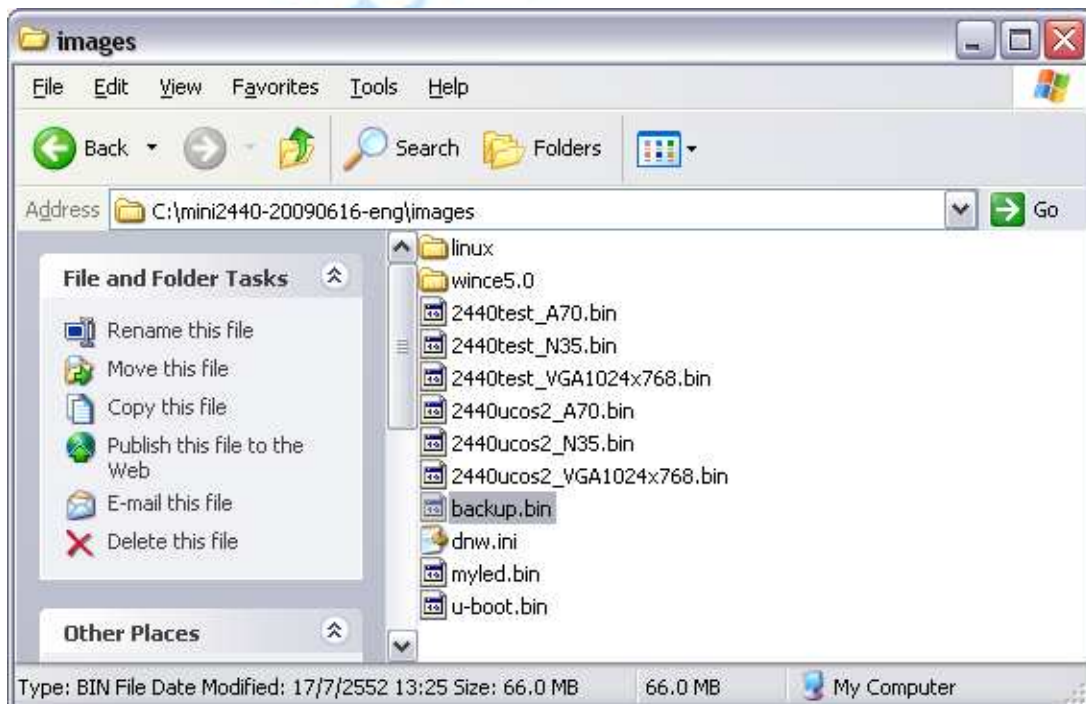
System backup, the backup progress as shown:



Backup finished, DNW window appears in figure information.



Generated by the final backup file size is 66M byte, this is because the NAND flash contains all the bytes of information, NAND flash on the introduction of more data, please see the corresponding manual.



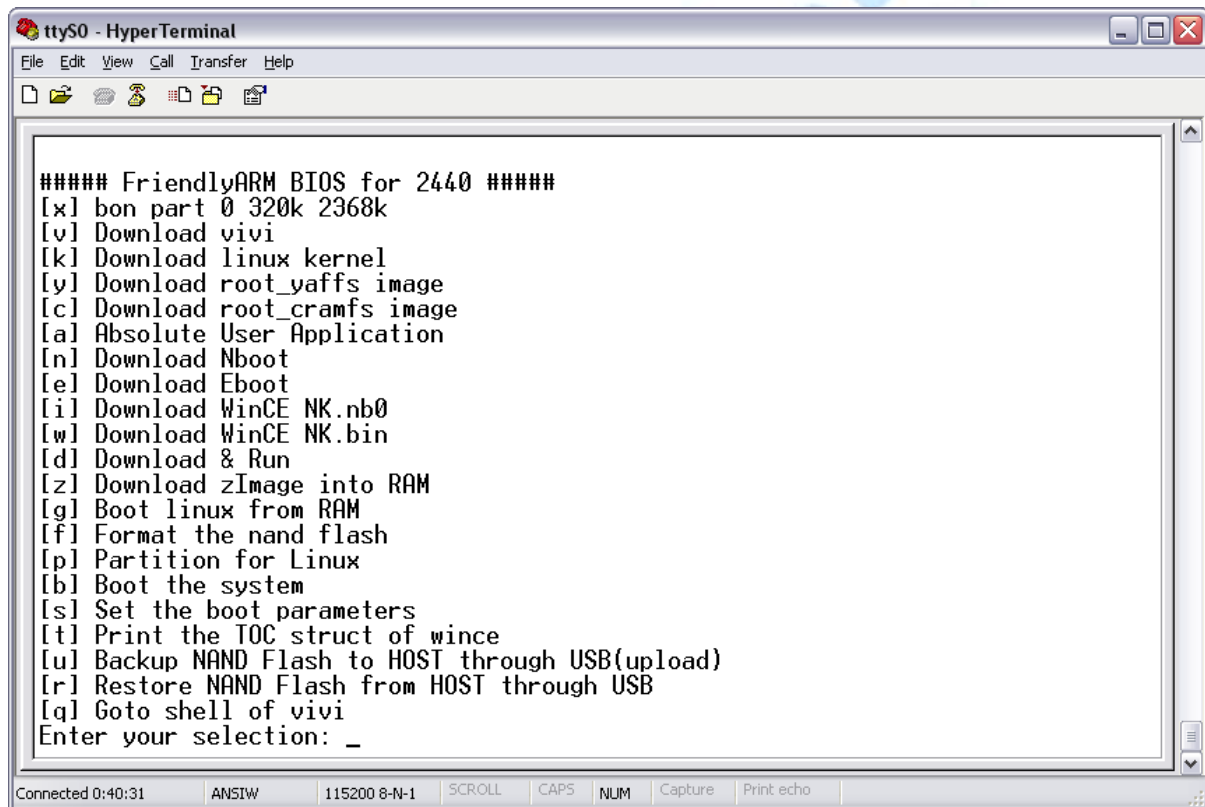
3.1.2 Use Backup File to Restore the System

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 start, set up methods please refer to previous chapters.

In addition, it is necessary to use the backup file to restore the system must be generated in accordance with the previous step to create the backup file. **Recovery system will erase the entire NAND flash!**

The following describes how we begin to restore the backup file system to use.

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

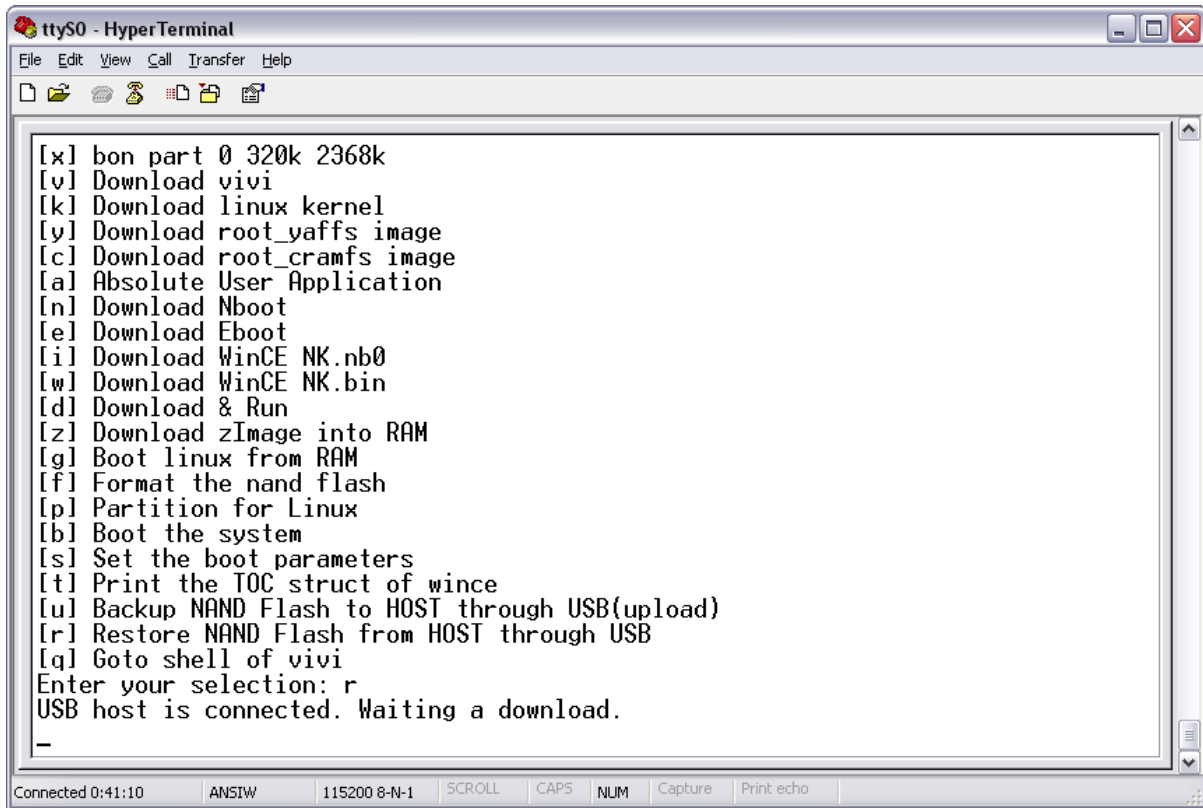


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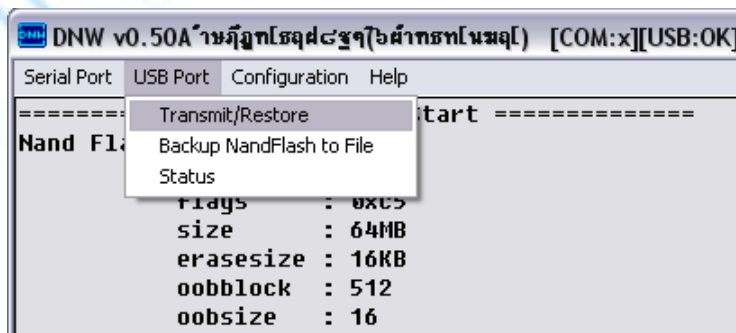
ttyS0 - HyperTerminal
File Edit View Call Transfer Help
##### FriendlyARM BIOS for 2440 #####
[x] bon part 0 320k 2368k
[v] Download vivi
[k] Download linux kernel
[y] Download root_yaffs image
[c] Download root_cramfs image
[a] Absolute User Application
[n] Download Nboot
[e] Download Eboot
[i] Download WinCE NK.nb0
[w] Download WinCE NK.bin
[d] Download & Run
[z] Download zImage into RAM
[g] Boot linux from RAM
[f] Format the nand flash
[p] Partition for Linux
[b] Boot the system
[s] Set the boot parameters
[t] Print the TOC struct of wince
[u] Backup NAND Flash to HOST through USB(upload)
[r] Restore NAND Flash from HOST through USB
[q] Goto shell of vivi
Enter your selection: _
    
```

Connected 0:40:31 ANSIIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

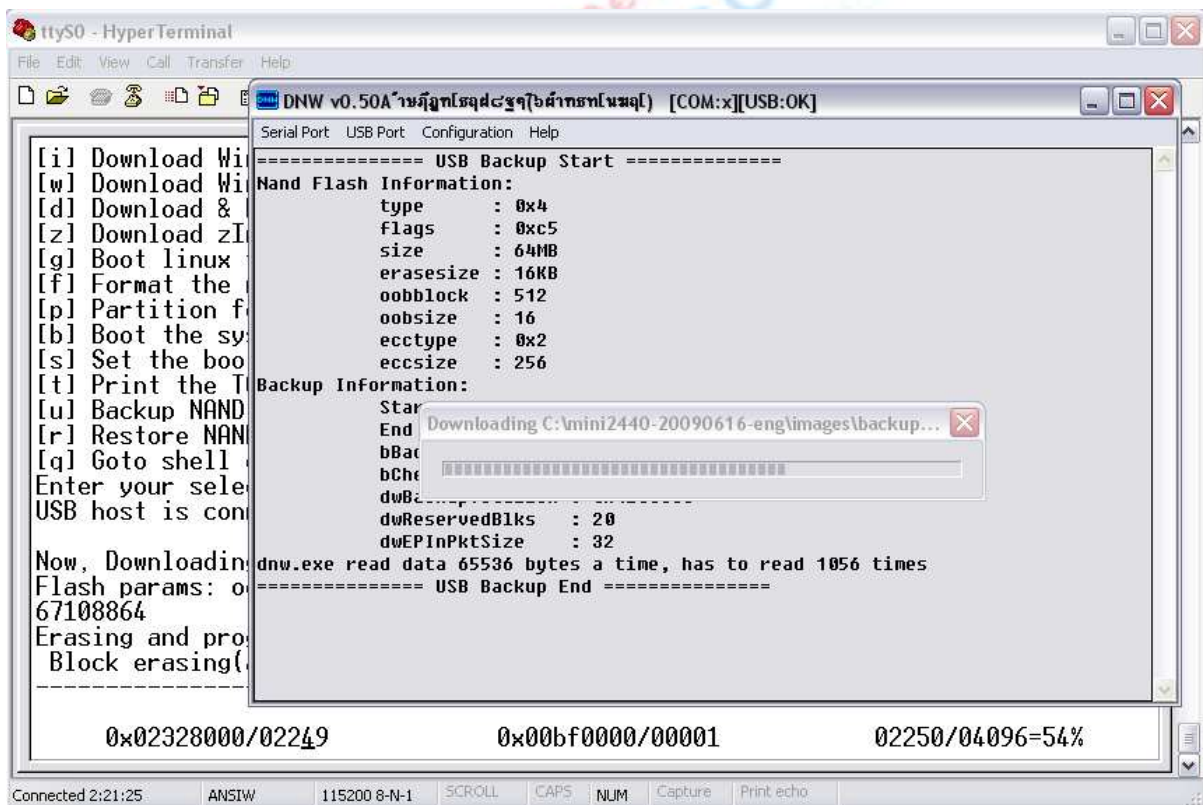
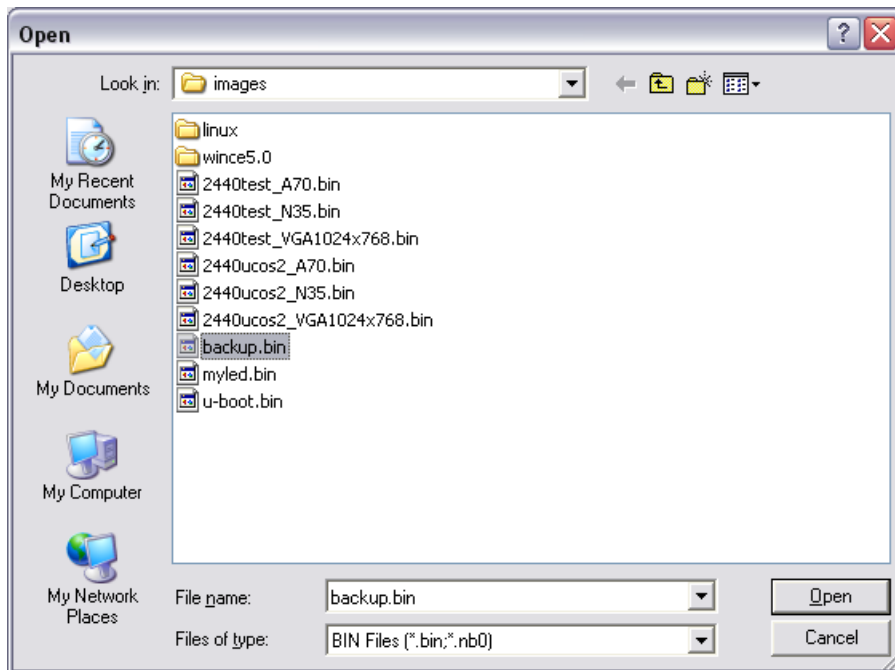
(2) Select [r] to start using the backup file to restore the entire NAND flash, as shown:



(3) Open the DNW procedures, connected to USB cable, if the title bar DNW tips [USB: OK], note USB Connection, then select the DNW menu USB Port > Transmit/Restore, as shown:



Input file selection window, select the backup file to be used (as generated by step backup.bin), click "Open" the beginning of the restoration, as shown:



Restore completed on the development board can be set to start NAND flash, according to a power switch or reset to restart.