

Guide for update NK.bin

In this document we explain how to update NK.bin (WINCE OS). There are three sections to describe update software and utility, update tools and update procedures

Update Software

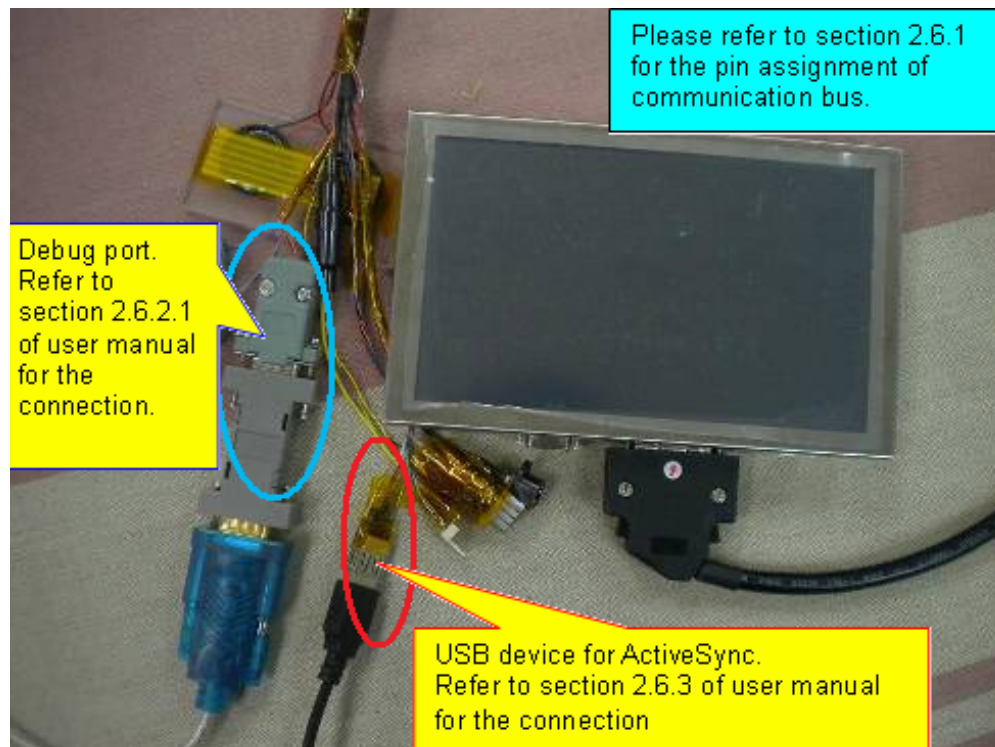
1. DNW RAR file: including software utility "DNW.exe" and USB driver in PC side.
2. NK.bin: update WINCE bin file

Tools:

1. USB Cable: from USB port on PC side to USB Device Port on BEGA220A
2. Serial Port: from COM Port on PC Side to debug Port on BEGA220A

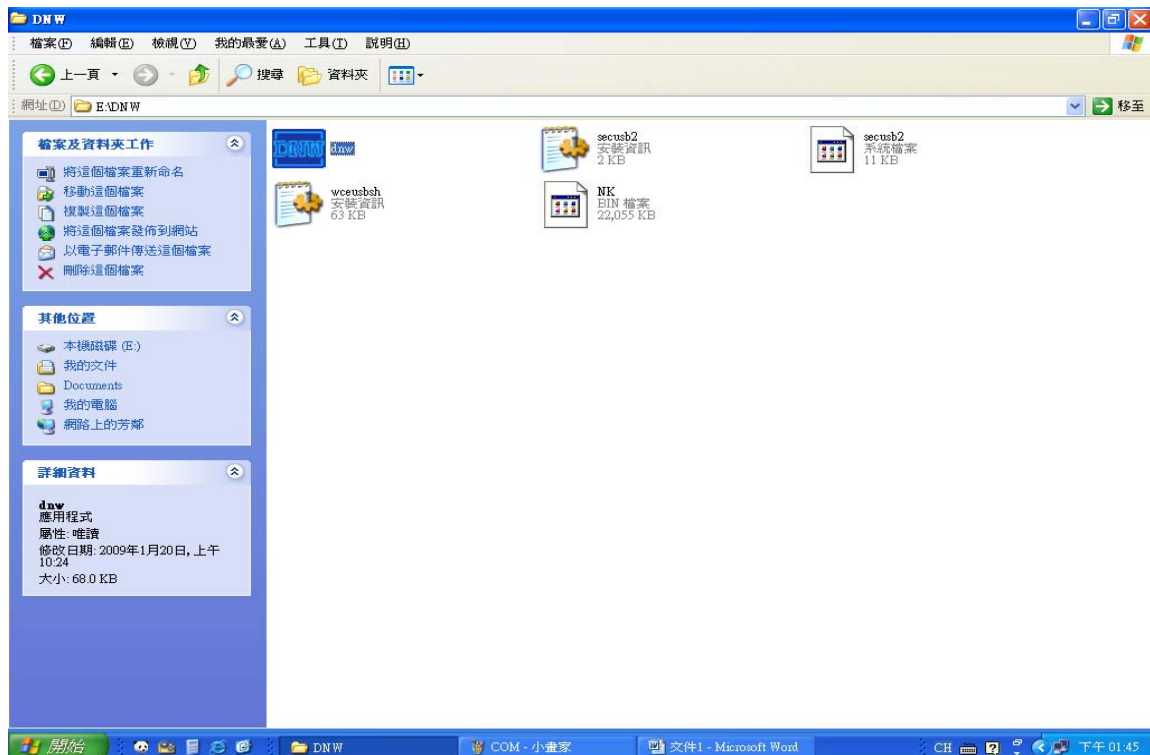
Update procedures

1. Do not switch any configuration switch on BEGA220A.
2. Connect Serial Cable from COM Port on PC Side to debug Port on BEGA220A
3. Prepare a Power Adaptor for BEGA220A board. Turn OFF BEGA220A.

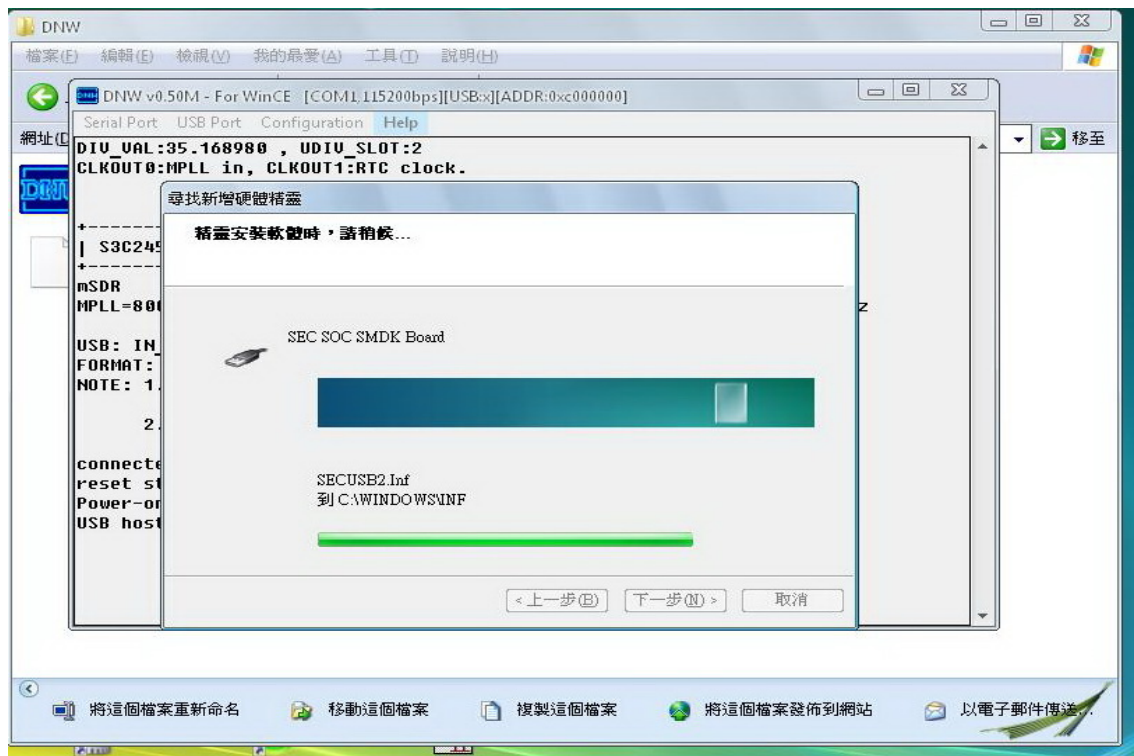


4. Plug power into BEGA220A. Then Power ON BEGA220A.
5. Connect USB Cable from USB port on PC side to USB Device Port on BEGA220A.

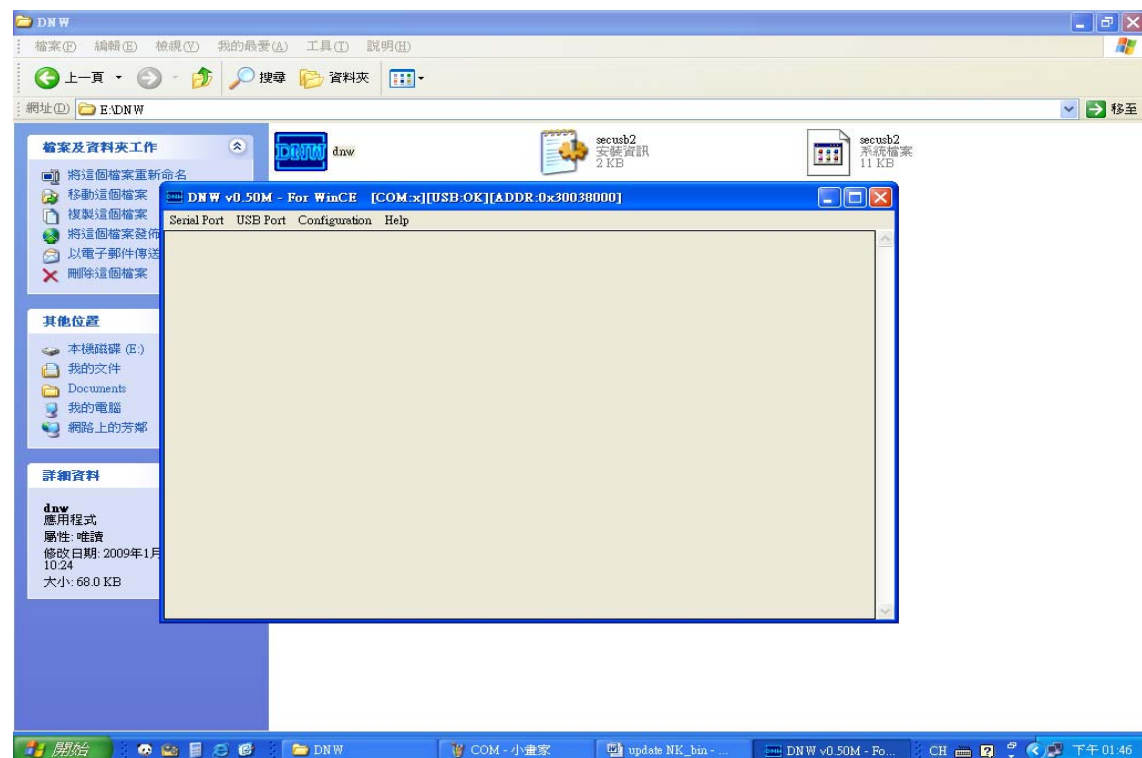
6. Create a directory (For example: DNW) on PC side. Copy DNW.exe /Secub2.* /NK.bin into new directory.



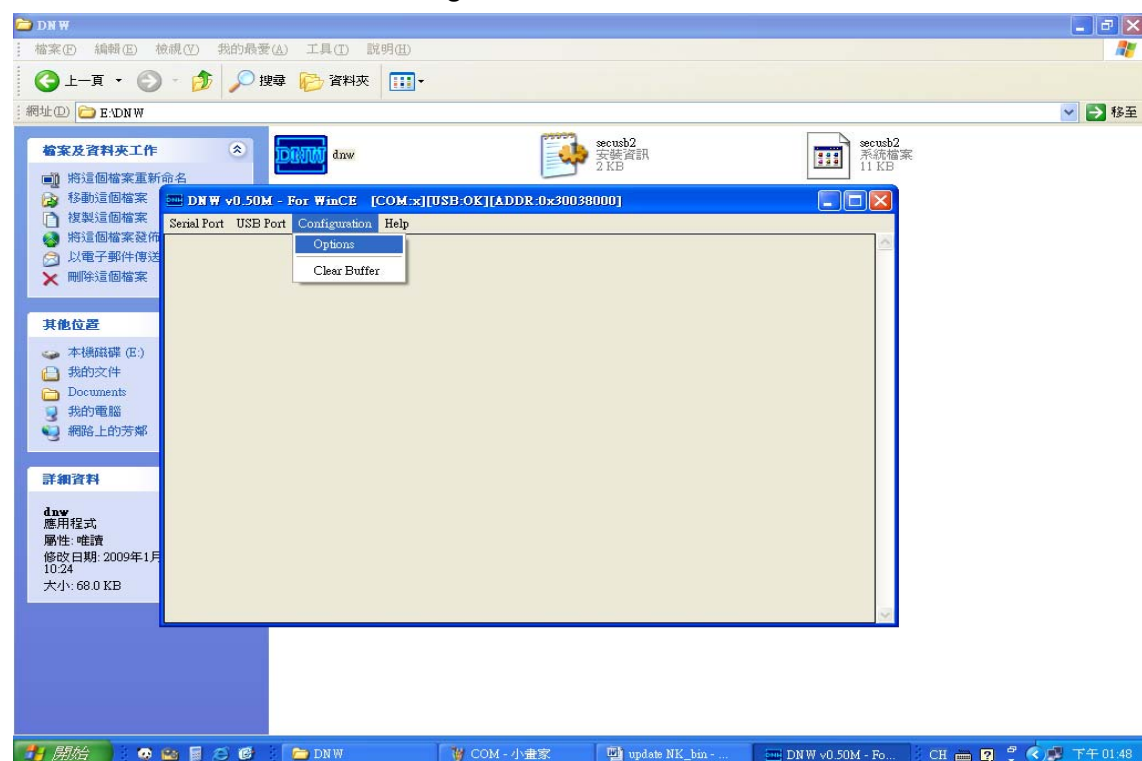
7. You will find a newly device on PC to search new driver as following diagram.



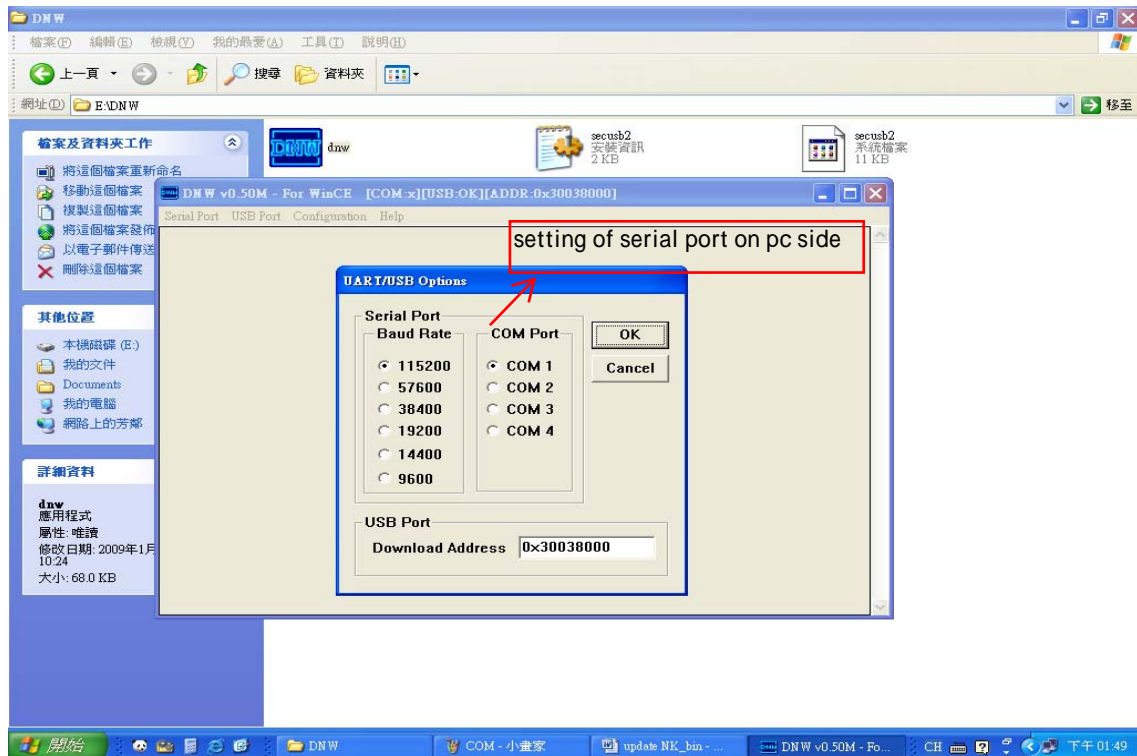
8. Start DNW



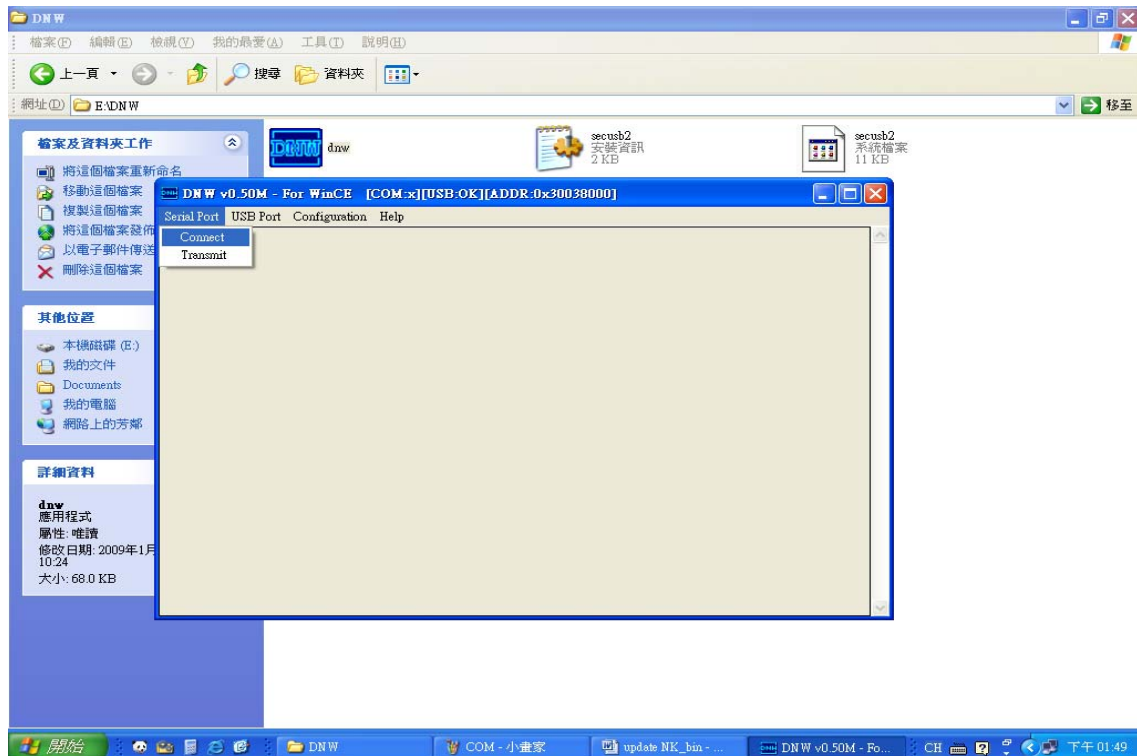
9. Select UART and USB configuration.

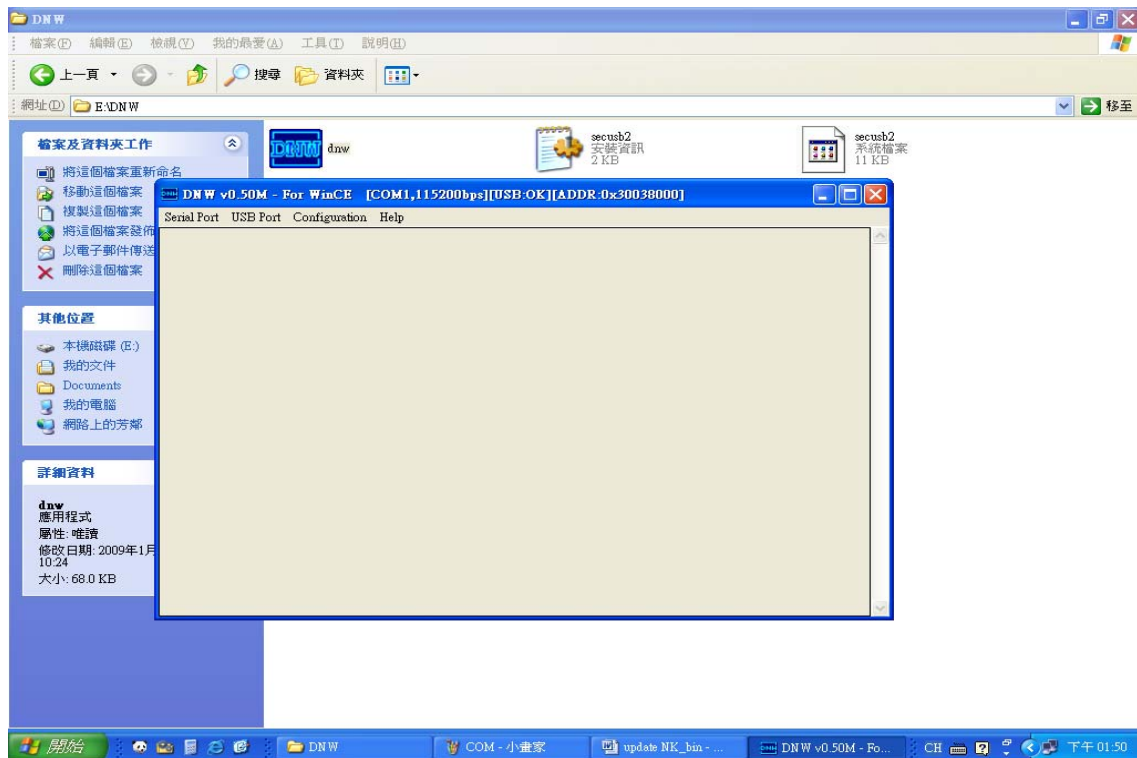


10. Select the COM port on PC side you use and set its baud rate. Select download address of USB port as diagram.



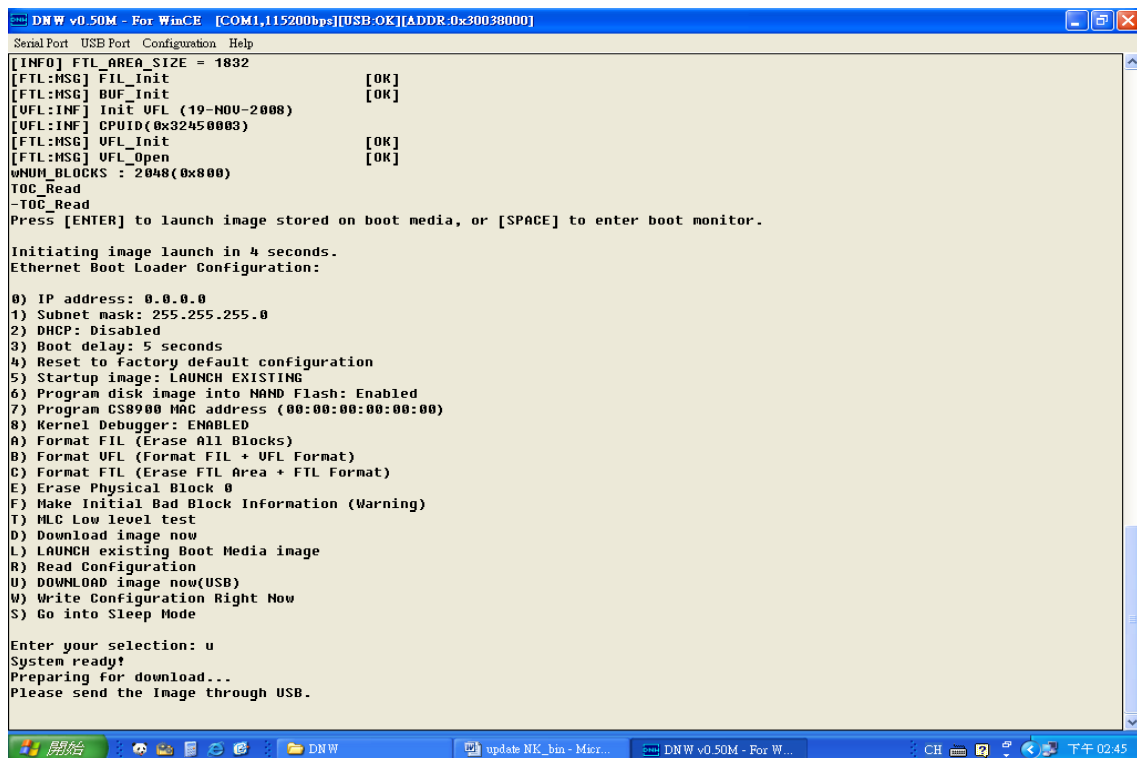
11. Connect serial port on PC side to serial port on BEGA220A. If connecting baud rate will appear on top column.

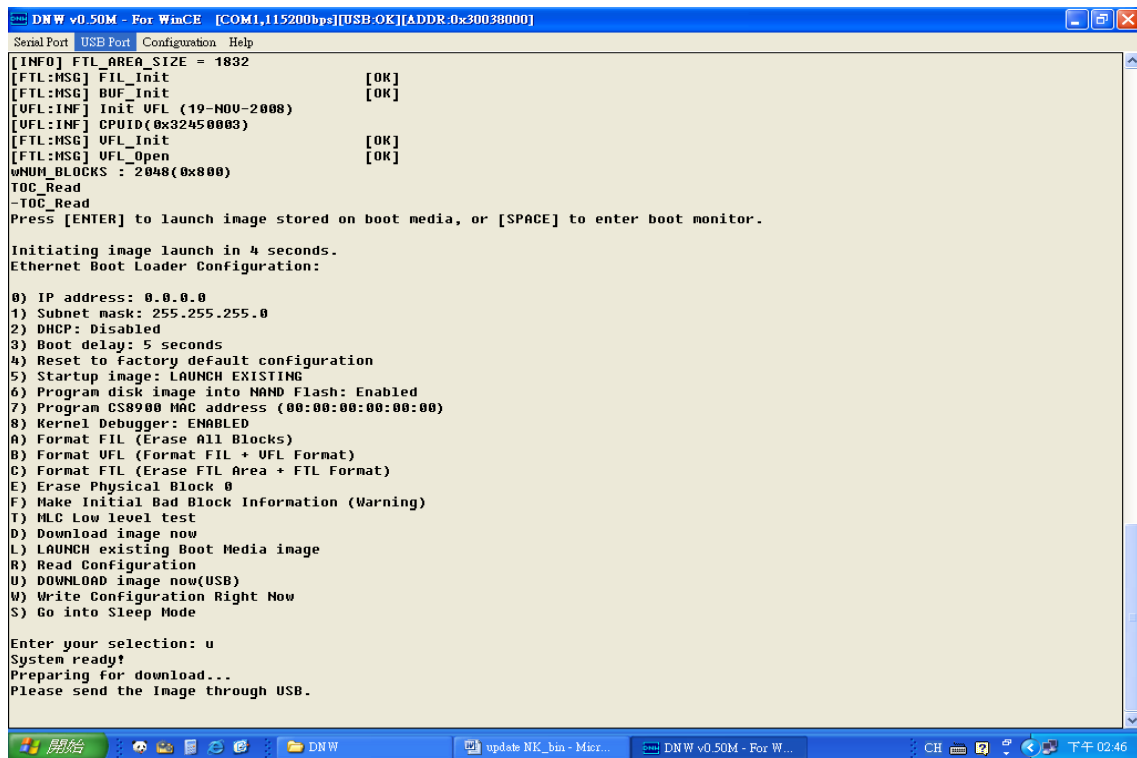




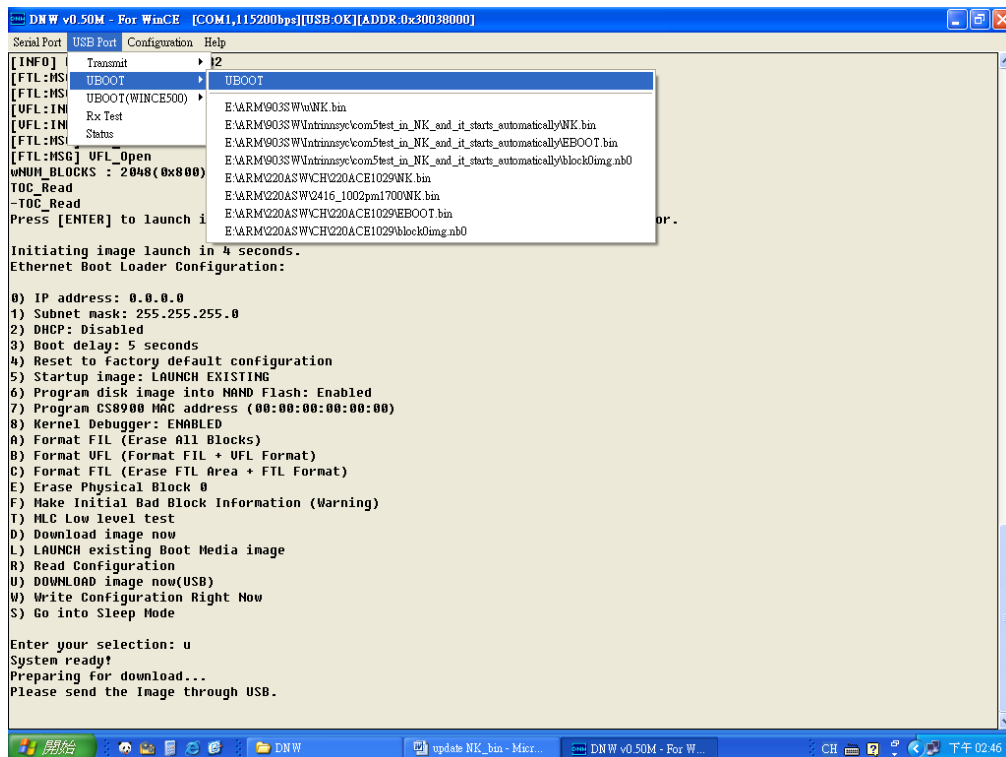
12. Then Window CE Boot Loader will be downloaded into BEGA220A. Please note the message press [SPACE] to enter boot monitor.

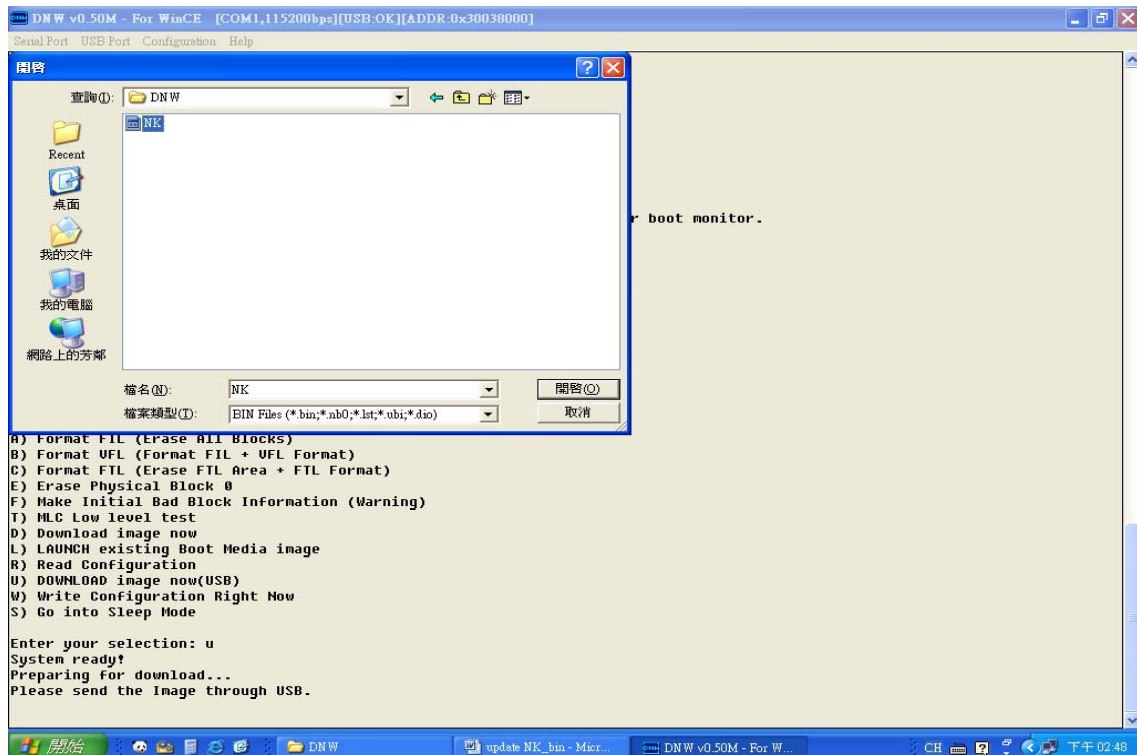
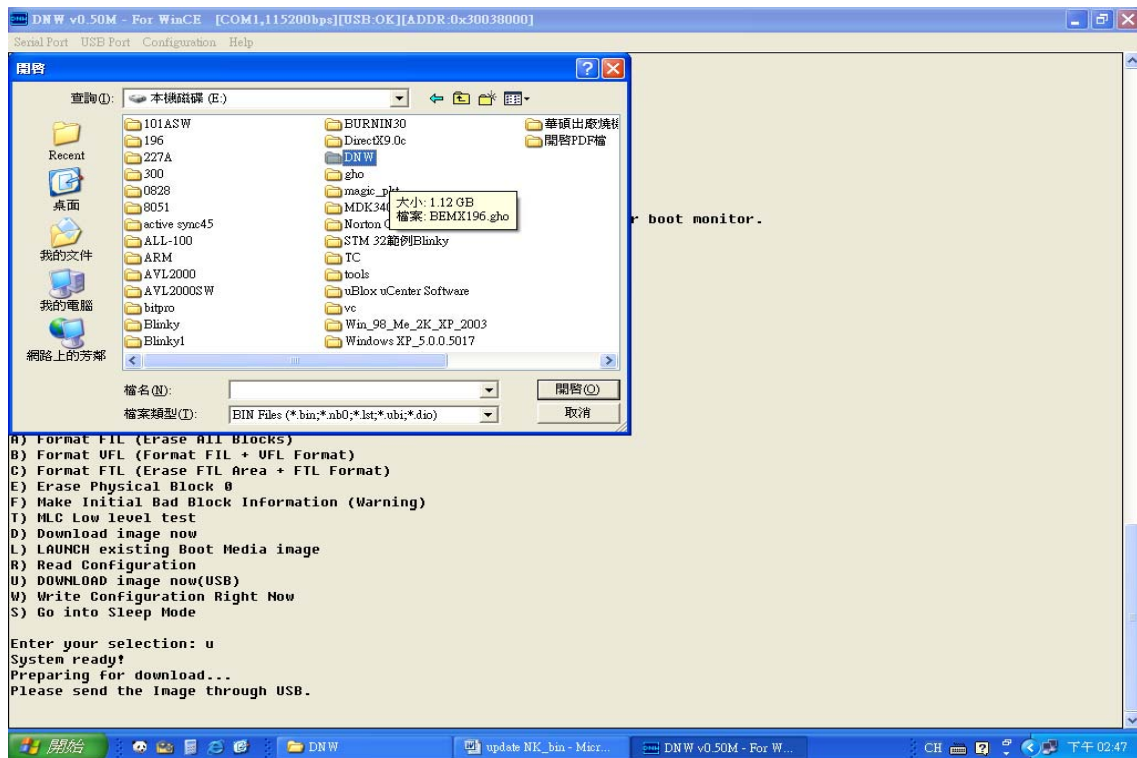
After [SPACE] pressing there is menu of boot loader configuration. Follow the sequence as the following diagram. Press [U].



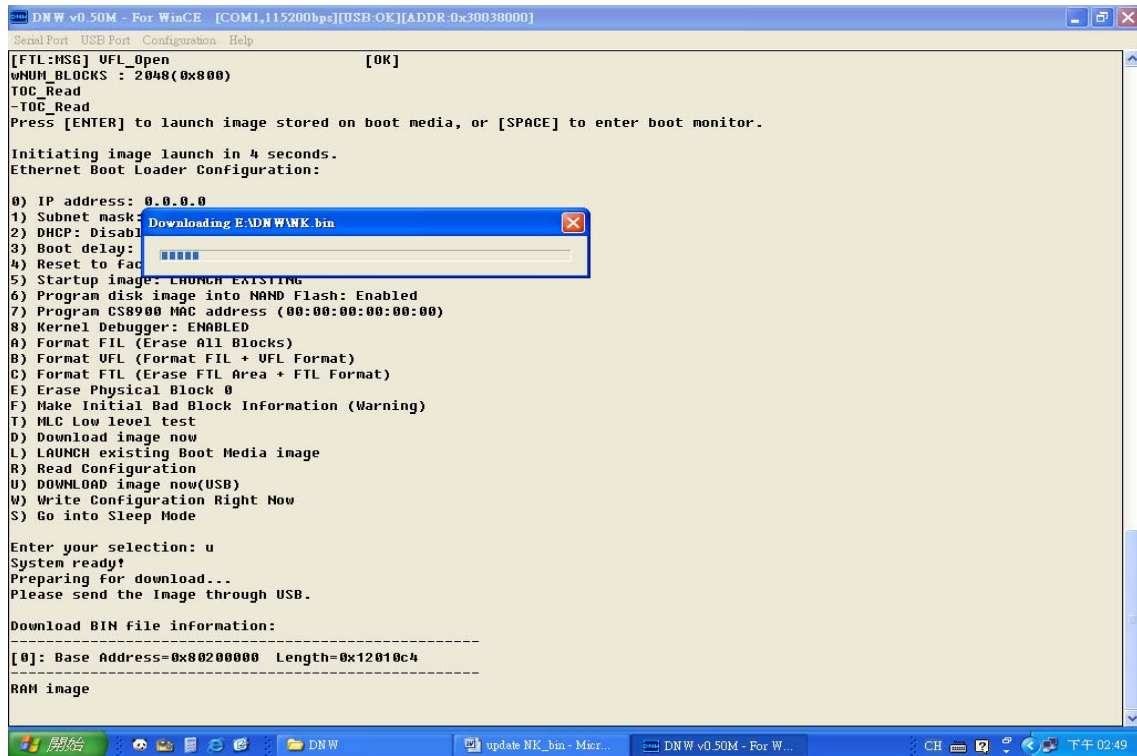


13. Select the source of download from USB port as below. Click USB Port first, then click UBOOT to select "NK.bin" file of update version





14. You will see update under processing. When processing completes all WINCE OS updating will finish. You turn off BEGA220A and then turn on. New update WINCE OS will appear.



The screenshot shows the DNW v0.50M - For WinCE application window. The title bar includes the text "[COM1,115200bps][USB-OK][ADDR:0x30038000]". The menu bar has "Serial Port", "USB Port", "Configuration", and "Help". The main text area displays the following content:

```
[FTL:MSG] UFL_Open [OK]
wNUM_BLOCKS : 2048(0x800)
TOC_Read
-TOC_Read
Press [ENTER] to launch image stored on boot media, or [SPACE] to enter boot monitor.

Initiating image launch in 4 seconds.
Ethernet Boot Loader Configuration:

0) IP address: 0.0.0.0
1) Subnet mask:
2) DHCP: Disabled
3) Boot delay:
4) Reset to Factory Default
5) Startup image: LAUNCH EXISTING
6) Program disk image into NAND Flash: Enabled
7) Program CS8900 MAC address (00:00:00:00:00:00)
8) Kernel Debugger: ENABLED
A) Format FIL (Erase All Blocks)
B) Format UFL (Format FIL + UFL Format)
C) Format FTL (Erase FTL Area + FTL Format)
E) Erase Physical Block 0
F) Make Initial Bad Block Information (Warning)
T) MLC Low level test
D) Download image now
L) LAUNCH existing Boot Media image
R) Read Configuration
U) DOWNLOAD image now(USB)
W) Write Configuration Right Now
S) Go into Sleep Mode

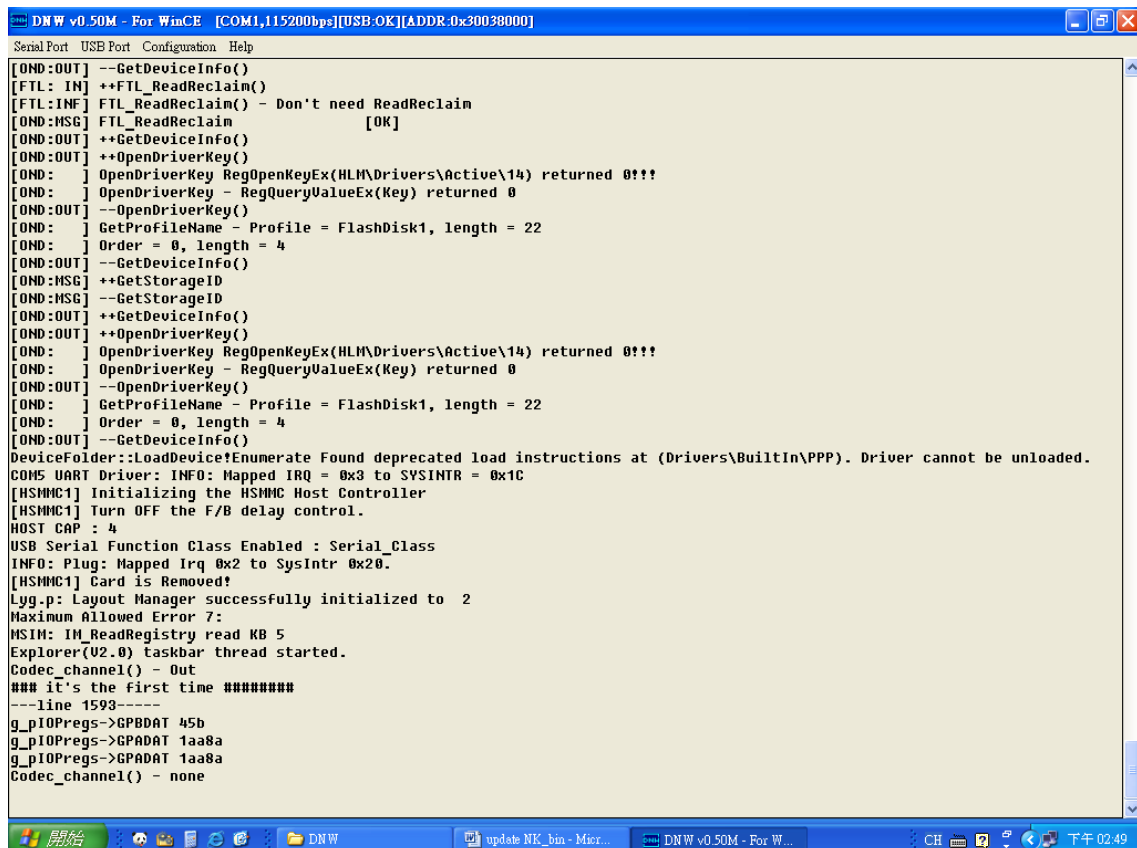
Enter your selection: u
System ready!
Preparing For download...
Please send the Image through USB.

Download BIN file information:
[0]: Base Address=0x80200000 Length=0x12010c4

RAM image
```

A blue dialog box titled "Downloading EADN WNK bin" is overlaid on the main window, showing a progress bar with several blue segments.

The taskbar at the bottom shows the Windows Start button, several icons, and the taskbar text "DNW", "update NK_bin - Micr...", "DNW v0.50M - For W...", "CH", and the system clock "下午 02:49".



The screenshot shows the same DNW v0.50M - For WinCE application window. The title bar and menu bar are identical to the previous screenshot. The main text area displays the following log output:

```
[OND:OUT] --GetDeviceInfo()
[FTL: IN] ++FTL_ReadReclaim()
[FTL:INF] FTL_ReadReclaim() - Don't need ReadReclaim
[OND:MSG] FTL_ReadReclaim [OK]
[OND:OUT] ++GetDeviceInfo()
[OND:OUT] ++OpenDriverKey()
[OND: ] OpenDriverKey RegOpenKeyEx(HLM\Drivers\Active\14) returned 0!!!
[OND: ] OpenDriverKey - RegQueryValueEx(Key) returned 0
[OND:OUT] --OpenDriverKey()
[OND: ] GetProfileName - Profile = FlashDisk1, length = 22
[OND: ] Order = 0, length = 4
[OND:OUT] --GetDeviceInfo()
[OND:MSG] ++GetStorageID
[OND:MSG] --GetStorageID
[OND:OUT] ++GetDeviceInfo()
[OND:OUT] ++OpenDriverKey()
[OND: ] OpenDriverKey RegOpenKeyEx(HLM\Drivers\Active\14) returned 0!!!
[OND: ] OpenDriverKey - RegQueryValueEx(Key) returned 0
[OND:OUT] --OpenDriverKey()
[OND: ] GetProfileName - Profile = FlashDisk1, length = 22
[OND: ] Order = 0, length = 4
[OND:OUT] --GetDeviceInfo()
DeviceFolder::LoadDevice!Enumerate Found deprecated load instructions at (Drivers\BuiltIn\PPP). Driver cannot be unloaded.
COM5 UART Driver: INFO: Mapped IRQ = 0x3 to SYSINTR = 0x1C
[HSMHC1] Initializing the HSMHC Host Controller
[HSMHC1] Turn OFF the F/B delay control.
HOST CAP : 4
USB Serial Function Class Enabled : Serial_Class
INFO: Plug: Mapped Irq 0x2 to SysIntr 0x20.
[HSMHC1] Card is Removed!
Lyg.p: Layout Manager successfully initialized to 2
Maximum Allowed Error 7:
MSIM: IM_ReadRegistry read KB 5
Explorer(V2.0) taskbar thread started.
Codec_channel() - Out
### it's the first time #####
---line 1593----
g_pIOPregs->GPBDAT 45b
g_pIOPregs->GPADAT 1aa8a
g_pIOPregs->GPADAT 1aa8a
Codec_channel() - none
```

The taskbar at the bottom is identical to the previous screenshot, showing the same icons and system clock.