

TN0069E How to update firmware by RS232C

Latest review: 2007-07-23

Revision: B

Applies to: NVE1000,NVE2000,NVE4000,IPC1100

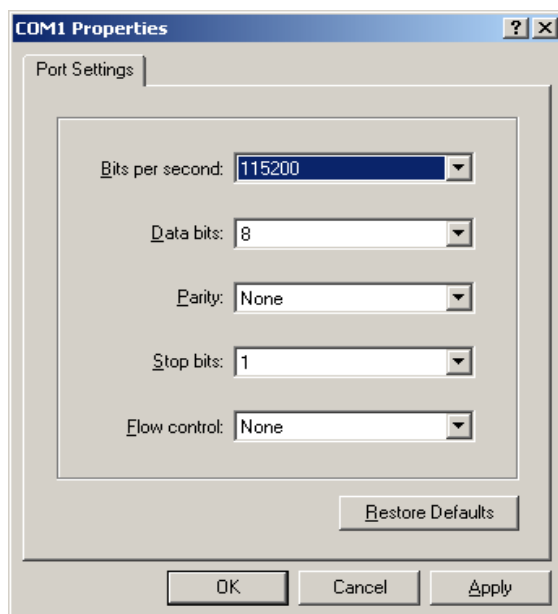
Level: Public

## Summary

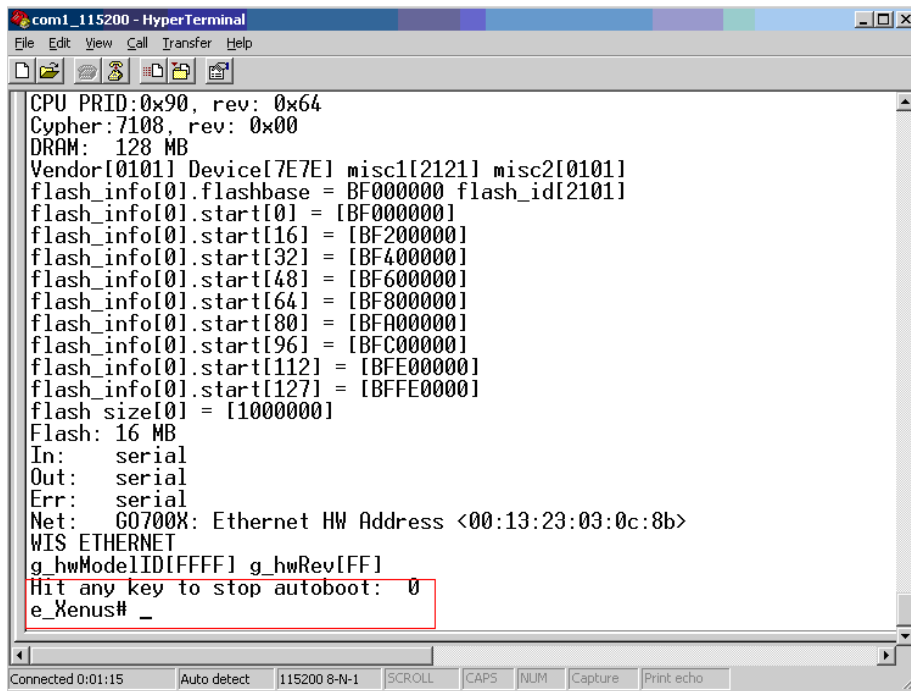
How to update NVE/IPC series' firmware by RS232C interface

## Detailed Information

1. Connect NVE to PC by RS232C cable. For details, refer to NVE400 HW Manual.
2. Set the following items like below after opening Hyper Terminal.
  - Bits per second : 115200
  - Data bits:8
  - Parity:None
  - Stop bit:1
  - Flow control: None



- Supply power to NVE. When the message “Hit any key to stop autoboot:” is displayed, press any key. After that, **e\_Xenus# prompt** will be displayed.



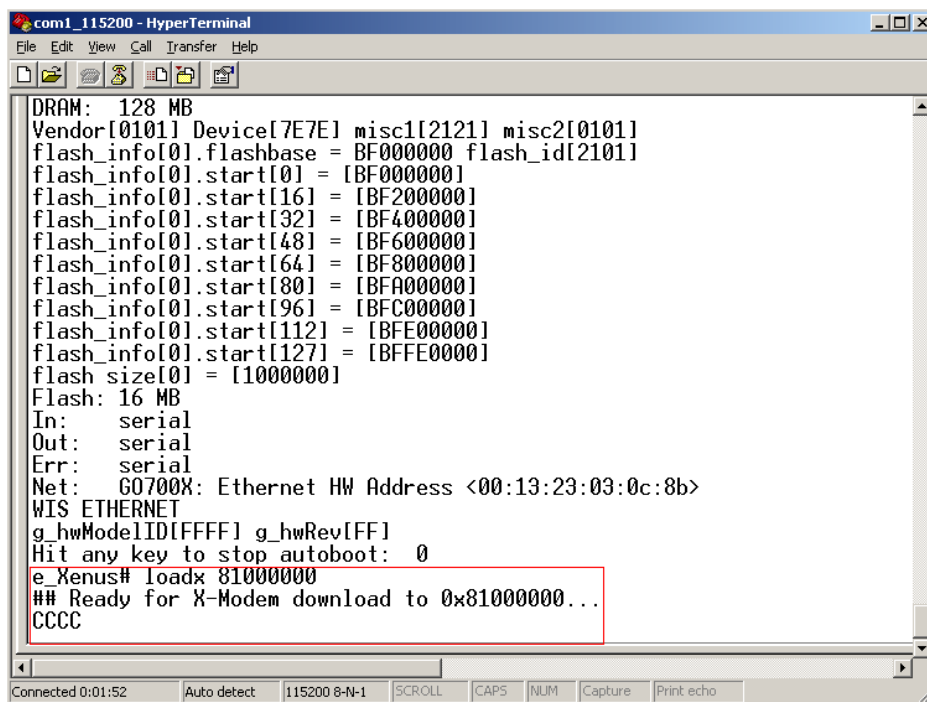
```

com1_115200 - HyperTerminal
File Edit View Call Transfer Help
CPU PRID:0x90, rev: 0x64
Cypher:7108, rev: 0x00
DRAM: 128 MB
Vendor[0101] Device[7E7E] misc1[2121] misc2[0101]
flash_info[0].flashbase = BF000000 flash_id[2101]
flash_info[0].start[0] = [BF000000]
flash_info[0].start[16] = [BF200000]
flash_info[0].start[32] = [BF400000]
flash_info[0].start[48] = [BF600000]
flash_info[0].start[64] = [BF800000]
flash_info[0].start[80] = [BFA00000]
flash_info[0].start[96] = [BFC00000]
flash_info[0].start[112] = [BFE00000]
flash_info[0].start[127] = [BFFE0000]
flash size[0] = [1000000]
Flash: 16 MB
In: serial
Out: serial
Err: serial
Net: 60700X: Ethernet HW Address <00:13:23:03:0c:8b>
WIS ETHERNET
g_hwModelID[FFFF] g_hwRev[FF]
Hit any key to stop autoboot: 0
e_Xenus# _

```

- Type ‘loadx 81000000’ on **e\_Xenus# prompt** and then press ENTER key. After that, NVE is preparing to get the file.

**E\_Xenus# loadx 81000000**

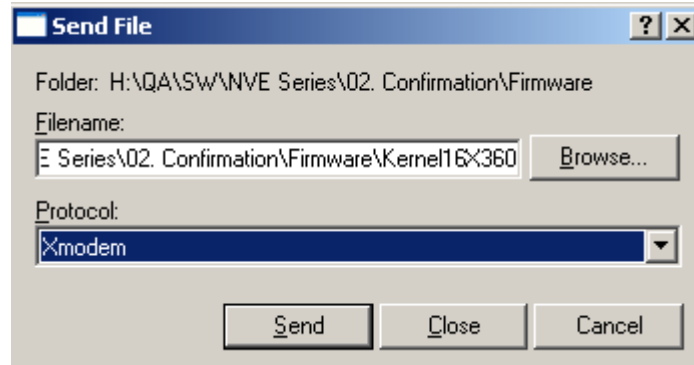


```

com1_115200 - HyperTerminal
File Edit View Call Transfer Help
DRAM: 128 MB
Vendor[0101] Device[7E7E] misc1[2121] misc2[0101]
flash_info[0].flashbase = BF000000 flash_id[2101]
flash_info[0].start[0] = [BF000000]
flash_info[0].start[16] = [BF200000]
flash_info[0].start[32] = [BF400000]
flash_info[0].start[48] = [BF600000]
flash_info[0].start[64] = [BF800000]
flash_info[0].start[80] = [BFA00000]
flash_info[0].start[96] = [BFC00000]
flash_info[0].start[112] = [BFE00000]
flash_info[0].start[127] = [BFFE0000]
flash size[0] = [1000000]
Flash: 16 MB
In: serial
Out: serial
Err: serial
Net: 60700X: Ethernet HW Address <00:13:23:03:0c:8b>
WIS ETHERNET
g_hwModelID[FFFF] g_hwRev[FF]
Hit any key to stop autoboot: 0
e_Xenus# loadx 81000000
## Ready for X-Modem download to 0x81000000...
CCCC

```

5. Select Send File in Transfer of Hyper Terminal and then select the firmware file you want to download. Choose the **Xmodem** for the protocol.



**Caution:** THERE IS A IMPORTANT THING YOU NEED TO BE CAREFUL

In the case of firmware file, if HW version is 1.1, you have to download **KernelXnnn** . If HW version is 1.2 or later, you have to download **Kernal16Xnnn** Please refer to the note “How to distinguish NVE hardware version” at the end of this document to distinguish the hardware version.

6. When pressing SEND button, firmware file will be sent. It takes around 10~20 minutes. The following view is shown after completing file transmission.

```

com1_115200 - HyperTerminal
File Edit View Call Transfer Help
flash_info[0].flashbase = BF000000 flash_id[2101]
flash_info[0].start[0] = [BF000000]
flash_info[0].start[16] = [BF200000]
flash_info[0].start[32] = [BF400000]
flash_info[0].start[48] = [BF600000]
flash_info[0].start[64] = [BF800000]
flash_info[0].start[80] = [BFA00000]
flash_info[0].start[96] = [BFC00000]
flash_info[0].start[112] = [BFE00000]
flash_info[0].start[127] = [BFFE0000]
flash size[0] = [1000000]
Flash: 16 MB
In: serial
Out: serial
Err: serial
Net: G0700X: Ethernet HW Address <00:13:23:03:0c:8b>
WIS ETHERNET
g_hwModelID[FFFF] g_hwRev[FF]
Hit any key to stop autoboot: 0
e_Xenus#
e_Xenus# loadx 81000000
### Ready for X-Modem download to 0x81000000...
CCCCC## Image loaded at Address = 0x81000000
e_Xenus#
Connected 0:40:41 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

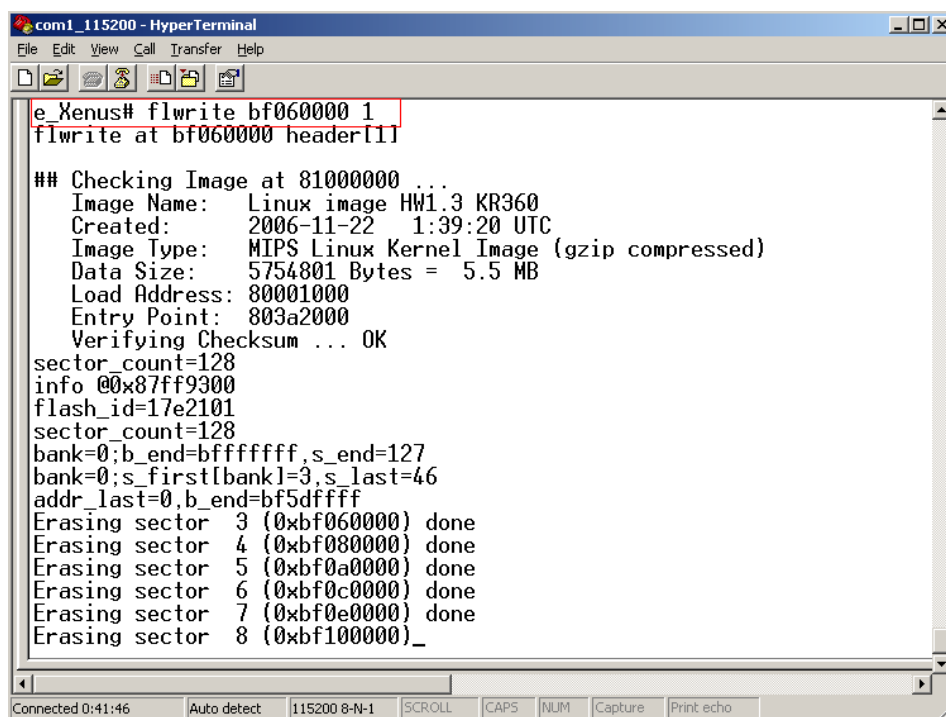
```

7. After completing file transmission, you have to write transmitted file to flash rom . It takes around 3 minute. For more details, refer to the picture and Note below.

E\_Xenus# flwrite bf430000 1

or

E\_Xenus# flwrite bf060000 1



```
com1_115200 - HyperTerminal
File Edit View Call Transfer Help
e_Xenus# flwrite bf060000 1
flwrite at bf060000 header[]

## Checking Image at 81000000 ...
Image Name: Linux image HW1.3 KR360
Created: 2006-11-22 1:39:20 UTC
Image Type: MIPS Linux Kernel Image (gzip compressed)
Data Size: 5754801 Bytes = 5.5 MB
Load Address: 80001000
Entry Point: 803a2000
Verifying Checksum ... OK
sector_count=128
info @0x87ff9300
flash_id=17e2101
sector_count=128
bank=0;b_end=bfffffff,s_end=127
bank=0;s_first[bank]=3,s_last=46
addr_last=0,b_end=bf5dffff
Erasing sector 3 (0xbf060000) done
Erasing sector 4 (0xbf080000) done
Erasing sector 5 (0xbf0a0000) done
Erasing sector 6 (0xbf0c0000) done
Erasing sector 7 (0xbf0e0000) done
Erasing sector 8 (0xbf100000)_

Connected 0:41:46 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

**Note** : If HW version is 1.1, you have to type **'flwrite bf430000 1'**.

If HW version is 1.2 or 1.3, you have to type **'flwrite bf060000 1'**.

Please refer to the note "How to distinguish NVE hardware version" at the end of this document to distinguish the hardware version.

8. You must reboot the system by typing 'reboot' or turn the system off after step 7.

**Note:** How to distinguish NVE hardware version.

1. By the product label on the bottom of case

HW V1.1 have white label.

HW V1.2 and V1.3 has yellow label

2. By the hardware revision number

HW revision is shown after model device when searching with IP admin tool.

Device Name : NVEXXXrevYY (XXXX : 1000/2000/4000) or IPC1100revYY

YY	HW version
0 ~ 29	1.1
30 ~ 49	1.2
50 ~	1.3

## Revision History

Revision	Date	Description
A	2006-11-24	Created.
B	2007-07-23	Added 8 <sup>th</sup> step (reboot) for those who does not know what to do next after step 7.