

User's Manual

旗威科技
Chipware

UROMTER II

USB ROM Emulator User's Manual

Preliminary update

Version 1.1 – Mar. 16, 2005

Copyright © 2004 by Chipware, all right reserved

No. 8, 10th Lane, Guanghua S. St., • Hsin-Chu 300 • Taiwan • R.O.C.

☎ 886-3-543-9918 🌐 www.chipware.com.tw



Important Notice

CHIPWARE SYSTEM INC. reserves the right to change this documentation without prior notice. Information provided by CHIPWARE SYSTEM INC. is believed to be accurate and reliable. However, CHIPWARE SYSTEM INC. makes no warranty for any errors which may appear in this document. Contact CHIPWARE SYSTEM INC. to obtain the latest version of device specifications before placing your order. No responsibility is assumed by CHIPWARE SYSTEM INC. for any infringement of patent or other rights of third parties which may result from its use. In addition, CHIPWARE products are not authorized for use as critical components in life support systems or aviation systems, where a malfunction or failure of the product may reasonably be expected to result in significant injury to the user, without the express written approval of Chipware.



Table of Content

	<u>PAGE</u>
TABLE OF CONTENT	3
REVISION HISTORY	4
1 INTRODUCTION	5
1.1 DESCRIPTION	5
1.2 EQUIPMENT CHECKLIST	5
1.3 CONTACT INFORMATION	5
2 GETTING STARTED	6
2.1 UP AND RUNNING IN 10 MINUTES!	6
2.2 INSTALL THE SOFTWARE	6
2.3 INSTALL THE HARDWARE TO YOUR TARGET BOARD	9
2.4 RUN THE APPLICATION:	13
2.4.1 Window mode:	13
2.4.2 DOS prompt mode:	14
2.5 FAQ:	14
3 APPENDIX	16
3.1 THE PIN OUT OF CONNECTOR:	16



Revision History

Revision	Date	By	Remark
V1,0	12/20/2004	Chamber Ling	First edition
V1,1	03/16/2004	Chamber Ling	Modified some application notes

1 Introduction

1.1 Description

Thank you for purchasing a Chipware product. We make every attempt to provide quality tools at reasonable prices. If you have any questions, comments or suggestions, please feel free to contact us by FAX, Voice, email or mail and express your opinions. This chapter details how to obtain support for the product(s) mentioned in this manual.

1.2 Equipment checklist

Carefully unpack the UROMTER. Save the box and packing materials for future use.

Hardware

Check to make sure you have all the following items :

UROMTER II mainframe

USB Cable for download cable

Target Cable

Software

Installation CD-ROM, the following software will be installed:

- The USB Device Driver, Supported Win 98SE/2000/XP
- UROMTER.EXE, is DOS Mode program. It operates under DOS and all versions of Windows.
- ROMTER.EXE, It is works under ALL 32 bit version of Windows (including NT/2000/XP).
- Utility software, including HEX to BIN Converter etc.

Document

User's manual (The document you are seeing)

1.3 CONTACT INFORMATION

You can reach us at any of the following :

Voice : (886) 3-543-9918

Monday-Friday, 9:00-17:00

FAX : (886) 3-543-7632

Email : chipware@www.chipware.com.tw

Web : <http://www.chipware.com.tw>

Mail : No. 8, 10th Lane, Guanghua S. St

Hsinchu City 30052, Taiwan.

2 Getting Started

2.1 Up and Running in 10 Minutes!

As engineers, we understand that you do not have time to troubleshoot your test equipment. You need to be able to trust your test equipment. With that in mind, we thoroughly test each and every UROMTER to ensure that you receive a fully functional unit. The following sections are designed to get you up and running in less than 10 minutes. If your system is not running by the time you complete these instructions, please contact our technical support staff.

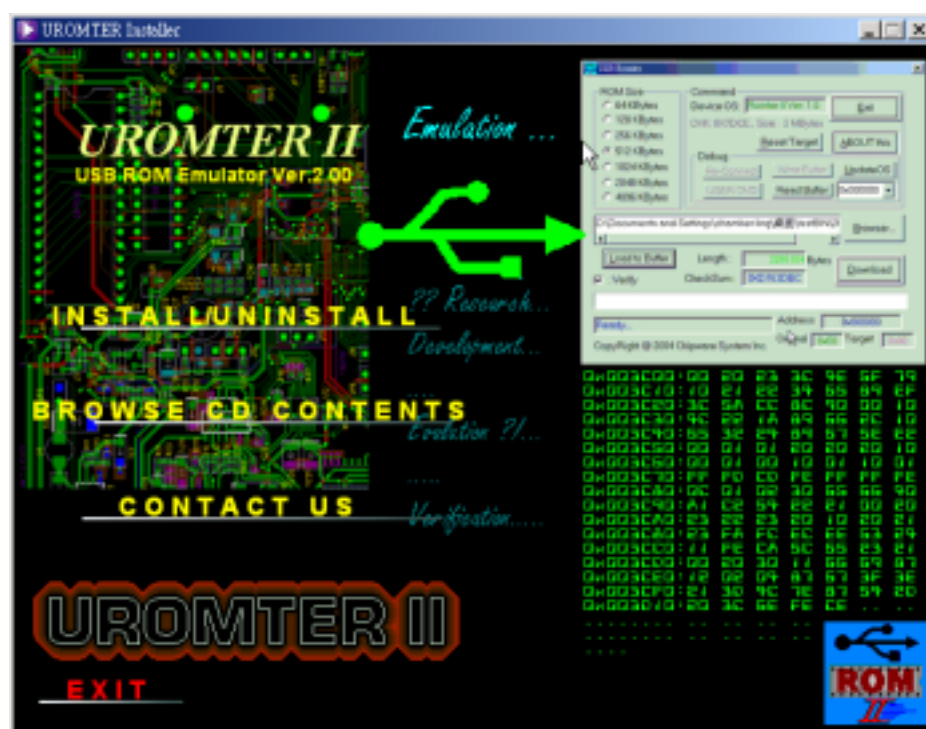
2.2 Install the software

If your system is configured to auto-launch applications from CDROM (auto-notification is enable), our launch pad will appear after you insert the CDROM into your drive. Simply select the INSTALL/UNINSTALL software option from here. If the auto-notification is disable, then double click on Setup.exe in Z:\, where "Z" is your CD-ROM driver allocation.

In any event, it is always advisable to check our web pages for any updates. We always post the most recent versions of our software for free download.

Once launched, the Install shield desktop should appear (Figure 2-1)

FIGURE 2-1 : UROMTER Setup



When you click the “Install/uninstall” will install the software and USB Driver of UROMTER to your PC. The install directory is set to C:\Program Files\USB ROMTER\ as default. And the main files are installed as followed:

ROMTER.EXE : Application Software that is works under windows.

ROMTER.INI : the set initial file of ROMTER.EXE

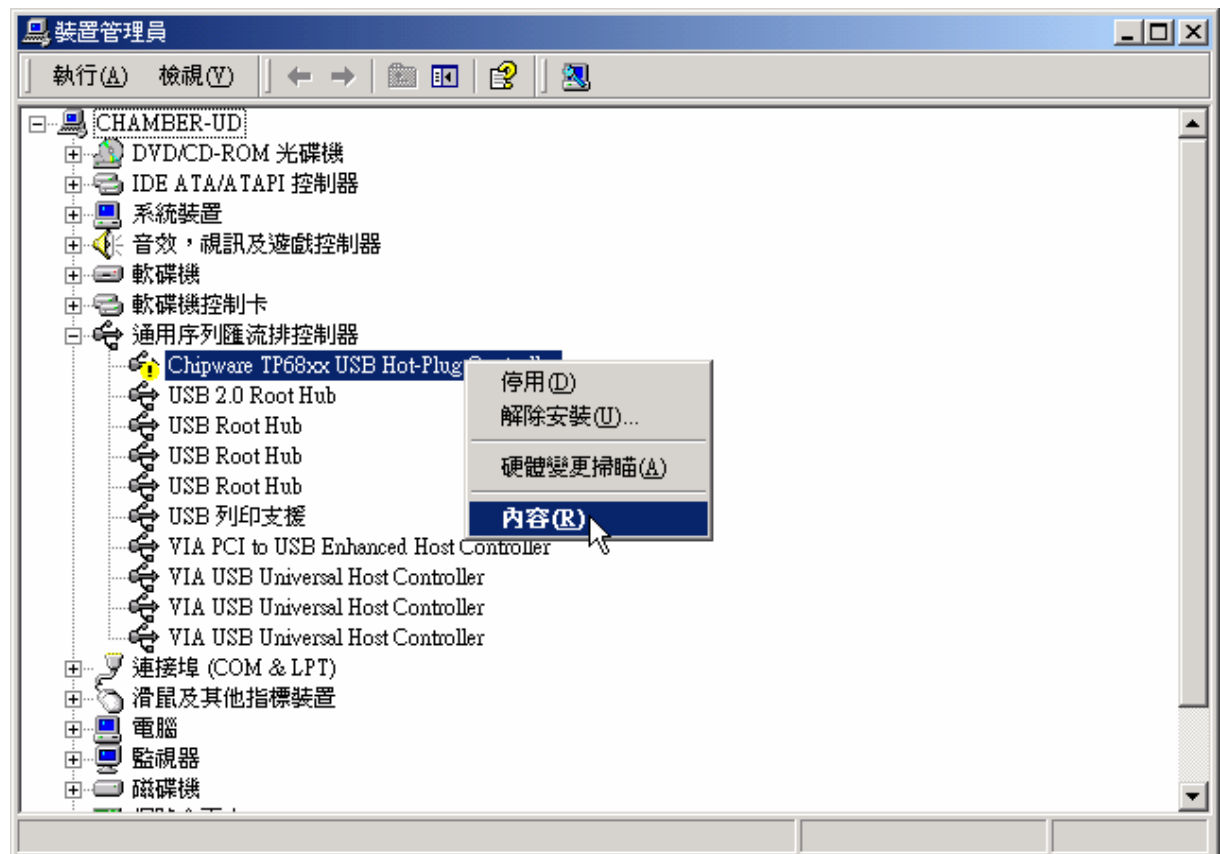
UROMTER.EXE : is DOS Mode program, which can be called using BATCH file.

TPROMOS.USB : the operation system of UROMTER. **Don't delete or rename it !!**

RUN.BAT : A Batch file example for run the DOS prompt mode, this useful command for integrating to the IDE tools, such as KEIL uVision 2.

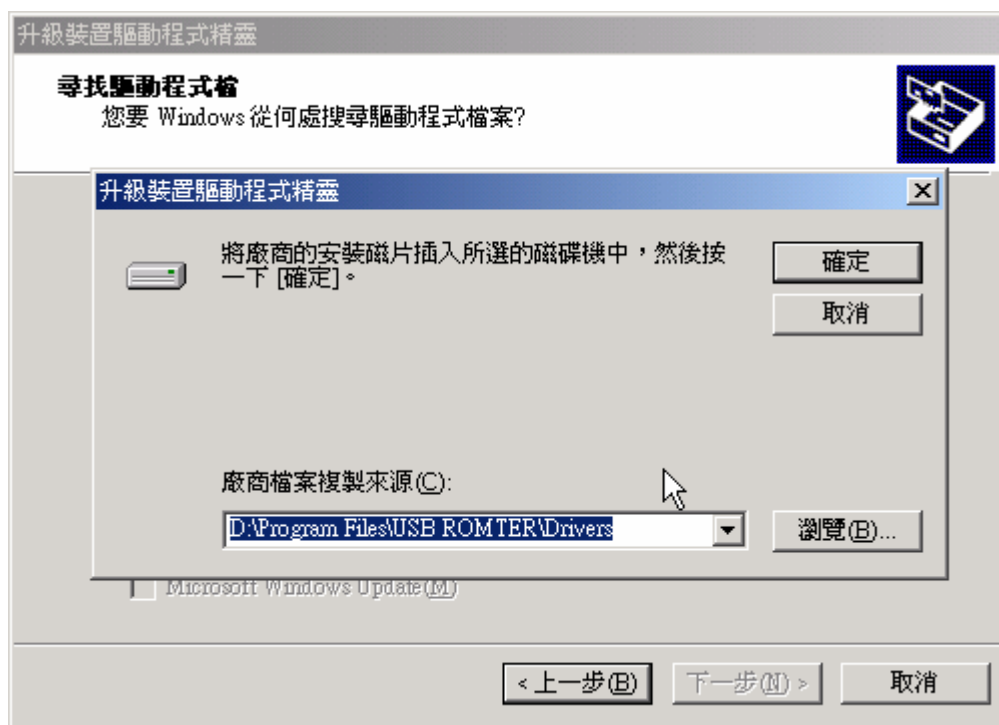
\DRIVERS : the USB Driver, you can re-install the USB driver in manual as followed :

From “My Computer\properties” and select the “Hardware” device on desktop:

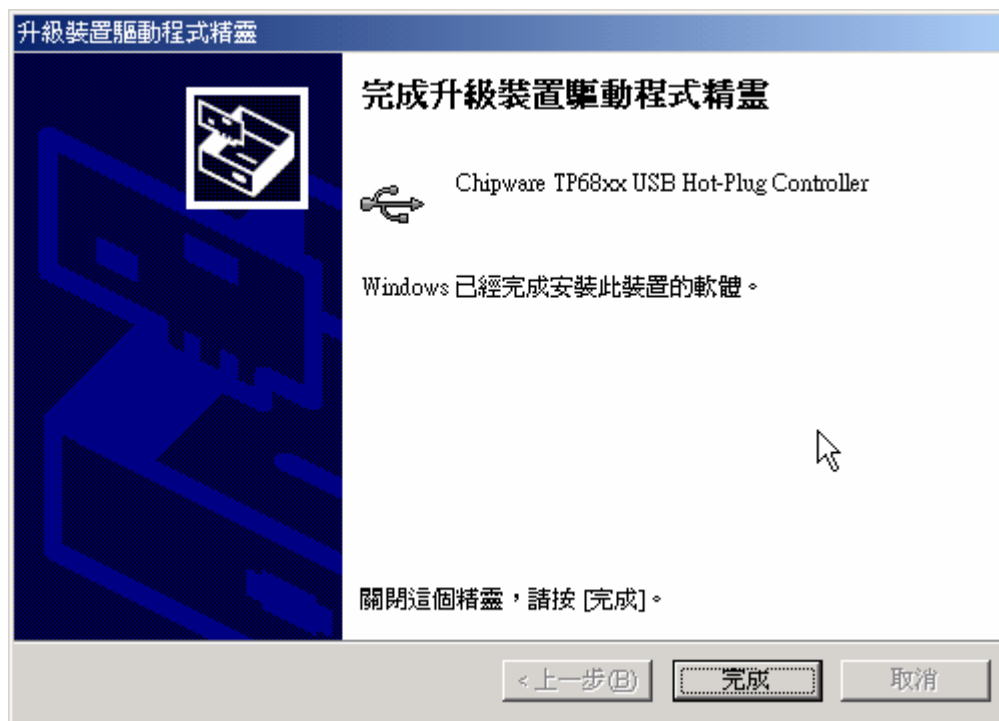


Select the unknown device on “Universal Serial Bus Controller\properties”

Or from the “Control Panel” to Add a Hardware Device .



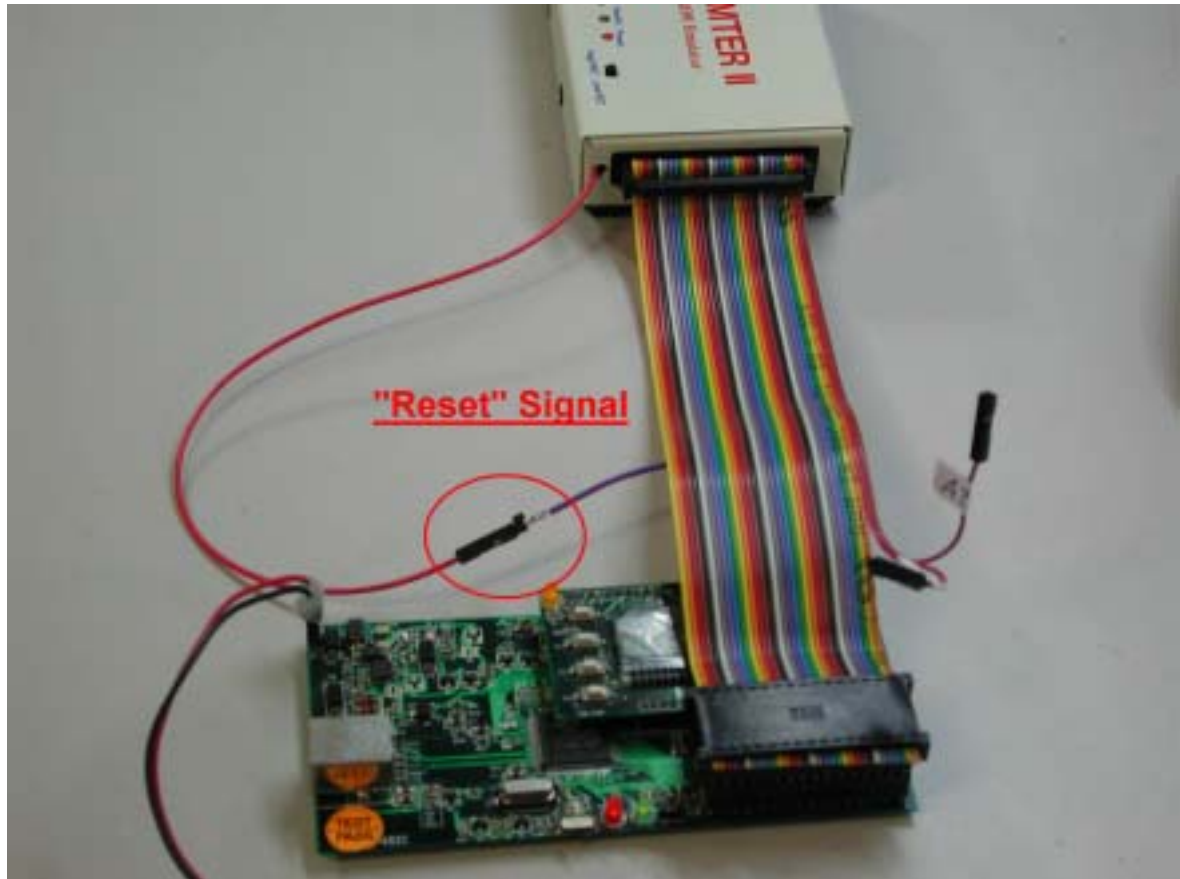
Use the Browser to select the Driver\directory that file "TP68xx.INF" and "TP68XX.SYS" are included.
Then will be finished successfully shown as followed:



2.3 Install the Hardware to your Target Board

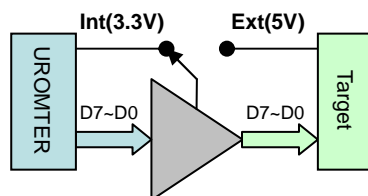
Step 1: Connect the Download cable to your target board.

(Note: The default socket is 32 DIP Pins, if your target board is not 32 pin or PLCC socket, please purchase the Adapter for your application!!)



Step 2: Connect the "Reset" cable to your reset pin of your target board, shown as above .

Step3: Select the correct voltage of your application: If your target board is working with 3.3V, please select 3.3 V. (If your UROMTER II is indicated as "Int.(3.3V)/Ext.(5V)", it indicates that the I/O Buffer of UROMTER II working at internal 3.3V or External voltage from Target Board.)



I/O Buffer(Ex:Target is 5V)



Step 4: Set the Reset Switch based on your application: ("High RST." Will generate a High pulse about 175 mSec after you download the Emulate ROM Code to UROMTER II ; and "Low RST" will generate a low pulse about 175 mSec.



Step 5: Plug the USB Cable into the UROMTER II from PC, and UROMTER II will be powered from USB power!



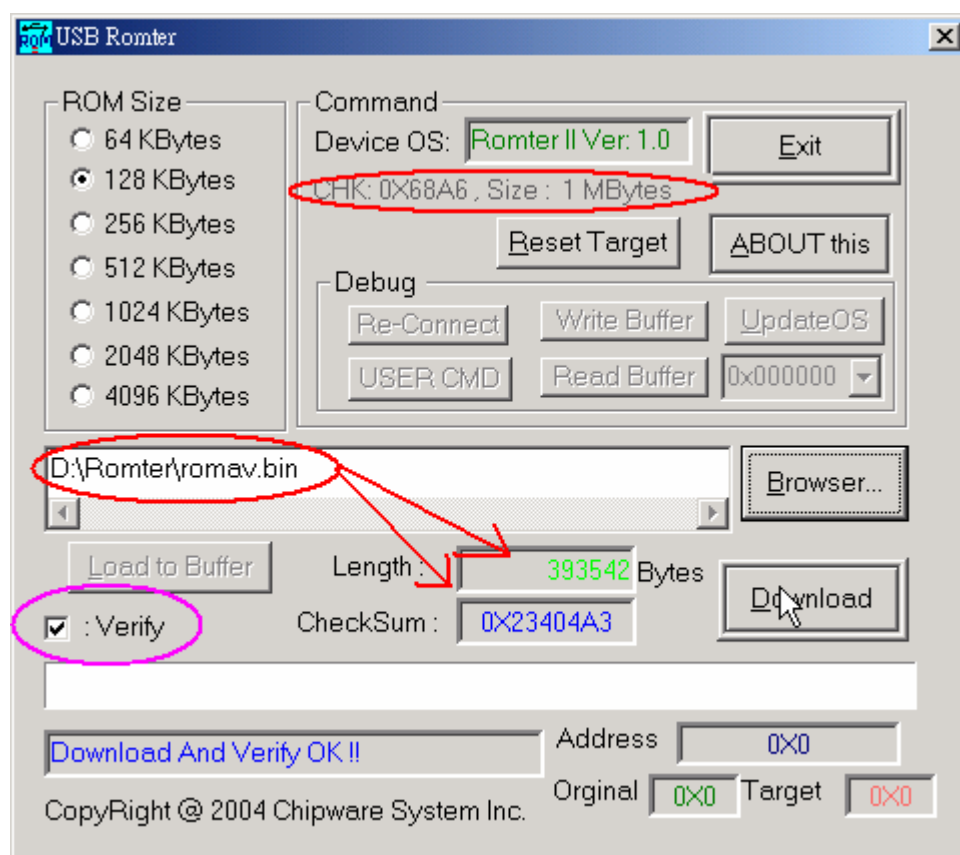
Finally, when you download the Binary file to UROMTER II (If your compiler is supported to HEX format, please using the utility software located at installed directory to convert HEX format to Binary format), then the UROMTER II will generate a Reset signal to your target board. You do not re-download again for generating Reset signal thereafter. You can press the "Reset" button to reset your target board!



2.4 RUN the application:

2.4.1 Window mode:

When you click the "USB ROMTER" on the desktop, then will perform the application software as followed:



There are some tips should be hinted:

1. Select the correct emulated ROM Size from your target board. The Maximum ROM Size is supported from variant UROMTER II that is shown above. But you can choose the emulated ROM Size under the limitation from your target board.
2. From the File Browser to find your application ROM Code. Then it will be saved in the initial file and show its length and checksum. You can download the ROM code repeatedly for clicking the "Download".
3. The "Verify" Option provide the verify function when you download the emulated ROM Code to UROMTER II, If there is any error happened when checked the between the UROMTER II Buffer and Emulated ROM Code, the "Error" Led will blinking and shown the Error Address on the screen ! Of course, the "Verify" Function will spend some time for checking the error happened, you can inhibit this option for more effective in download.

4. The "Reset Target" function is same as the "Reset" of Hardware on the "Reset" Button, and the Reset signal is based on the "Reset Setting switch ("High RST. And Low RST."-- The Step 4 in Hardware installation section as above).

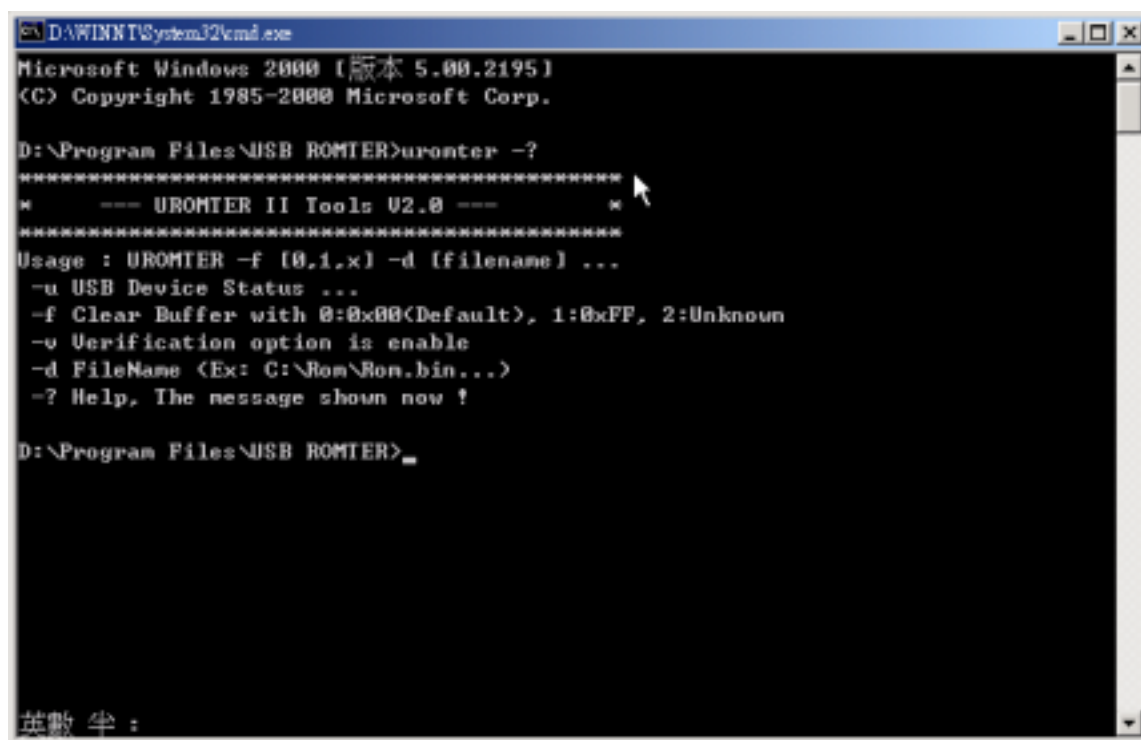
2.4.2 DOS prompt mode:

For more application, the engineers are more like the DOS prompt command line. This method can integrate into the IDE (Integration Development Environment), such as KEIL uVision etc. So, we provide a DOS prompt command line in application. (Note: Although that is a DOS Command line, it should be performed in DOS prompt windows in Windows OS, such as Windows 2000/XP etc.)

After install the Software, there are some files will be created in X:\Program Files\USB Romter\ .The DOS command line is UROMTER.EXE and a example Batch file is appended. (**Note: If you want to duplicate this execution file to your working directory, then you should duplicate the device OS file, too. i.e. "TPROMOS.USB".**)

C:\Program Files\USB ROMTER\UROMTER -?

You can get the more command option in detail or see the "Readme.txt".



```
DAWINNTSystem32cmd.exe
Microsoft Windows 2000 [版本 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

D:\Program Files\USB ROMTER>uronter -?
*****
*      --- UROMTER II Tools V2.0 ---      *
*****
Usage : UROMTER -f {0,1,x} -d {filename} ...
-u USB Device Status ...
-f Clear Buffer with 0:0x00(Default), 1:0xFF, 2:Unknown
-v Verification option is enable
-d FileName <Ex: C:\Rom\Rom.bin...>
-? Help, The message shown now !

D:\Program Files\USB ROMTER>
```

2.5 FAQ:

Your suggestions will drive us to provide more service to you!!

Thank you!

Enjoy it and Good luck.

Q: *May I use the USB Hub to connect UROMTER II? How?*

A: Because the power consumption of UROMTER II is over 100mA. If you want to connect the UROMTER II to USB Hub, please plug the power adapter to USB Hub in order to increase the drive current of USB hub! Basically, every port of USB Hub drives around 100 mA without power adapter.

Q: *Why my UROMTER II always had "Verify Error" happened?*

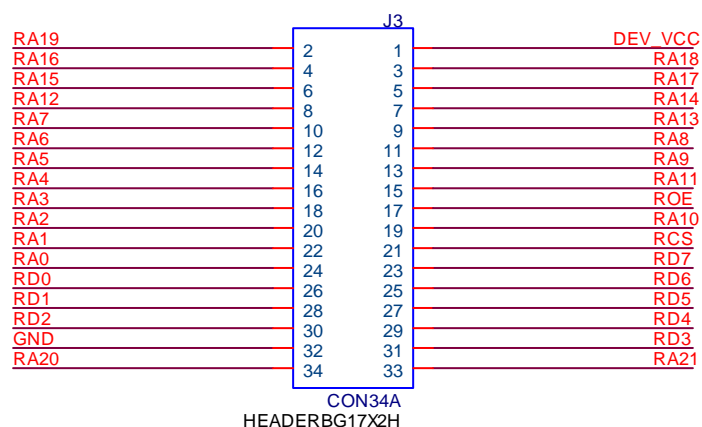
A: Please un-plug the UROMTER II, and check the voltage of USB Power. If USB's Voltage is under 4.7V that maybe makes the UROMTER II unstable. Of Course, the USB cable cannot too long.

Q: *Why my PC cannot find the device of UROMTER II?*

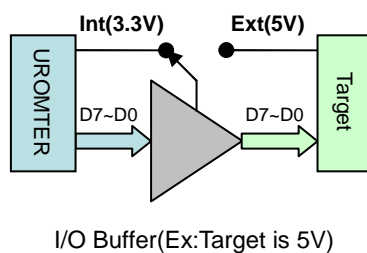
A: Please check the USB port of your PC, firstly. You can try another USB port. If it still not works, you can re-start the PC. Then, plug the UROMTER II into USB port and re-start your PC.

3 Appendix

3.1 The pin out of Connector:

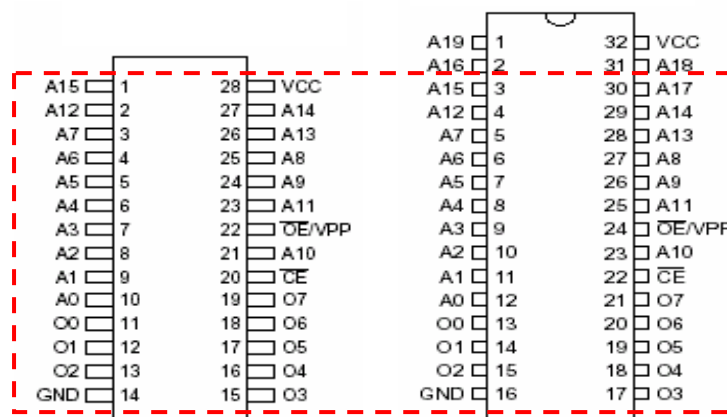


Note: The DEV_VCC is the power of Target board, and is independent of UROMTER II when you choose the 5V switch in side wall of UROMTER II BOX.



Note: The Address 20 (RA20) is no used when you emulated the ROM Size under 1Mx8. Of course, the RA21(Address 21) will be used for 4Mx8.

Attention: If your application uses the 28 pins socket (such as 27C512), then, please align the socket of download cable to position of the figure as below. And, set the Switcher of "Int.(3.3V)/Ext(5V)" to the Int.(3.3V) . Then, I/O Buffer is powered from internal power of Emulator. If you want to apply the power of Target to the I/O Buffer, short the Pin#32 and Pin#30 of Socket.(If the voltage of Target board exceed to 3.8V, we strongly recommend to use Int.(3.3V).)



>64KB Applications
(32Pins)

<=64KB Applications
(28Pins)