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Chapter 1 General Information

1.1 Introduction

UNO configuration utility is a tool to configure the Windows CE.NET platform on *UNO* series products. You can use it to configure the timer for watchdog, set the Web Server root path, etc.

1.2 Application

1.2.1 Configure Watchdog Timer

User can configure the Watchdog timeout duration using UNO Configuration Utility.

1.2.2 Change Web Server Root Path

Each UNO device provides the end users with a Web Server (Not using IIS). With UNO configuration Utility, user can specify the root path for it.

1.2.3 Change FTP Server Root Path

Each UNO device provides the end users with a FTP Server (Not using IIS). With UNO configuration Utility, user can specify the root path for it.

1.2.4 Startup Programs Setting

UNO configuration Utility provides end users with the ability to start their own program when the UNO system starts.

1.2.5 Registry Saving Function

This function is designed to help user save their registry file easily.

1.2.6 Change CF Disk Folder Name

This function is used to change the folder name of the CF card disk.

1.2.7 IP Configuration

This function is used to get the information of the MAC number, IP address and other network information, furthermore, this tool can be used to ping a specified IP address to test the network status.

1.2.8 Windows CE.NET Image Version

This function is used to retrieve the basic information of the system such as OS image version, memory and CF disk usage.

1.3 Definitions, Acronyms, and Abbreviations

UNO: Universal Network cOntroller

UI : User Interface

CF : Compact Flash

DNS : Domain Name Server

Misc : Miscellaneous

Chapter 2 User Interface

2.1 Overall

The user interface contains four tab pages, which are “General”, “Network”, “Watchdog” and “Misc” and three buttons which are “OK”, “Cancel”, and “Apply”. They are all organized on one main page, which is shown as figure 2-1.

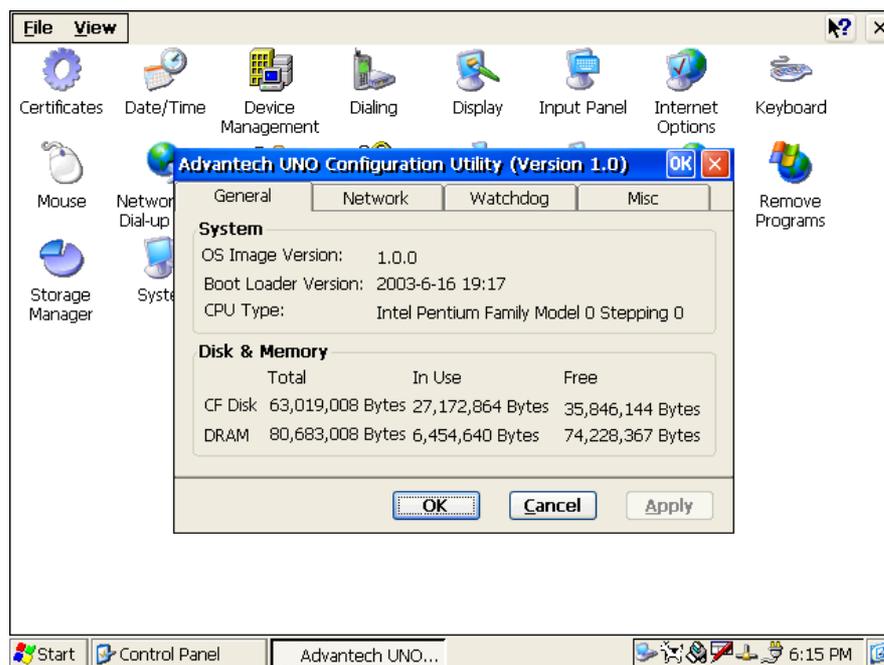


Figure 2-1

2.2 The Three Buttons on the Main Page

“OK” button.

If the user clicks the button, all the changes in all the four tab pages will be saved and the dialog will be closed.

“Cancel” button.

If the user clicks this button, all the changes in the three pages in the Tab control will be discarded (otherwise have been saved in a specified operation) and the dialog box will be closed.

“Apply” button.

If the user clicks this button, the changes in the UNO configuration utility will be saved into the system registry, then this button will be disabled and grayed, but the dialog will not be closed, only when some settings in the “Misc” tab page are changed this button will be enabled.

2.3 Four Pages on the Main Page

2.3.1 “General” tab page

This page shows some basic system information, such as OS image version, boot loader version, CF disk & DRAM usage.

2.3.2 “**Network**” tab page

This page shows some Ethernet Adapter information, such as MAC address, subnet mask and host name. Also in this page the user can get the local area connection information such as gateway and DNS server list. In is page the user can ping a specified IP address and renew the IP of the network adapters allocated by the DHCP server in the LAN.

2.3.3 “**Watchdog**” tab page

This page provides the user with the ability of enabling/disabling the watchdog, and shows the elapsed time since the watchdog was enabled.

2.3.4 “**Misc**” tab page

In this page the user can change the folder name of the *CF* disk, view and edit the registry information, set the root path of the web and ftp server.

Chapter 3 “General” page

3.1 Overall

In this page there are two group boxes: “System” group and “Disk & Memory” Group as figure 3-1 shows. The former shows the basic system information, while the latter shows the usage information of the CF Disk and DRAM.

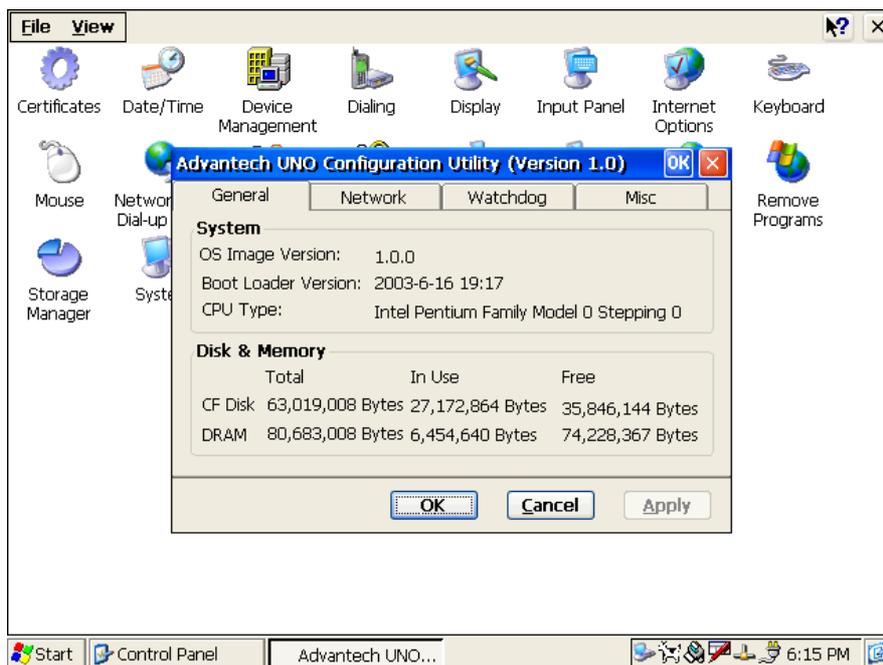


Figure 3-1

3.2 System Information

3.2.1 OS Image Version

Version information of the installed operating system image

3.2.2 Boot Loader Version

The Last modified date and time of the boot loader file.

3.2.3 CPU Type

The detailed information about the CPU

3.3 Disk &Memory Usage Information

3.3.1 CF Disk Usage Information

Usage information of the compact flash card, the item “Total” shows the total capacity of CF card, “In Use” shows the capacity that has been used by programs installed on the CF disk,

and “Free” shows the current available capacity on the CF disk.

3.3.2 *DRAM Usage Information*

Usage information of the compact flash card, the item “Total” shows the total capacity of DRAM, “In Use” shows the capacity that has been used by running programs, and “Free” shows the current available capacity of the DRAM.

3.4 **Input Focus and Tab Order**

If the user activates this tab page, the default input focus is located on the “**OK**” button. The tab order is “**OK**” → “**Cancel**” → “**Apply**”. If the “**Apply**” button is disabled, then it will be excluded from the TAB order, the user can change the current input focus by hitting the TAB key.

Chapter 4 “Network” page

4.1 Overall

In this page there is one group box, one combo box and tree buttons as figure 4-1 shows. The group box “**Ethernet Adapter & IP Address**” display basic information of the Ethernet Adapters, the combo box is used to select a specified Ethernet Adapter, if more than one Ethernet Adapter installed on this machine the user can find all of them in the combo box.

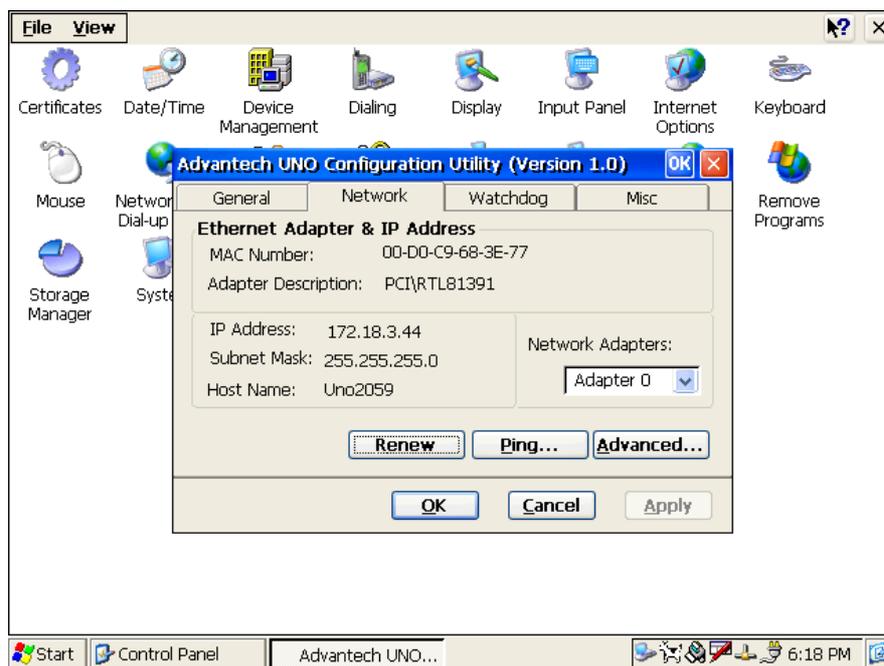


Figure 4-1

4.2 Ethernet Adapter & IP Address

4.2.1 *Selecting the Network Adapters*

The combo box will list out the network adapters that installed in this computer. If the user selects one of the adapters in the combo box, the information displayed in this page is the parameters associated with this adapter.

4.2.2 *MAC Address*

The physical address of the Ethernet Adapter

4.2.3 *Adapter Description*

Description message of the Ethernet Adapter

4.2.4 *IP Address*

IP address bounded to the currently selected Ethernet Adapter.

4.2.5 Subnet Mask code

Sub net mask code of the currently selected Ethernet Adapter

4.2.6 Host Name

Name of the host machine

4.3 Renew IP configuration

“Renew” button

This button is used to release and retrieve the new IP configuration messages displayed in this page. When the button is clicked, the IP address and associated information of all the Ethernet Adapters in the host machine will be updated.

The user can do this through one of the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “R” key.

4.4 Ping A Specified IP Address

“Ping...” button

This button is used to ping a specified IP address. The user can fire this button event through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “P” key.

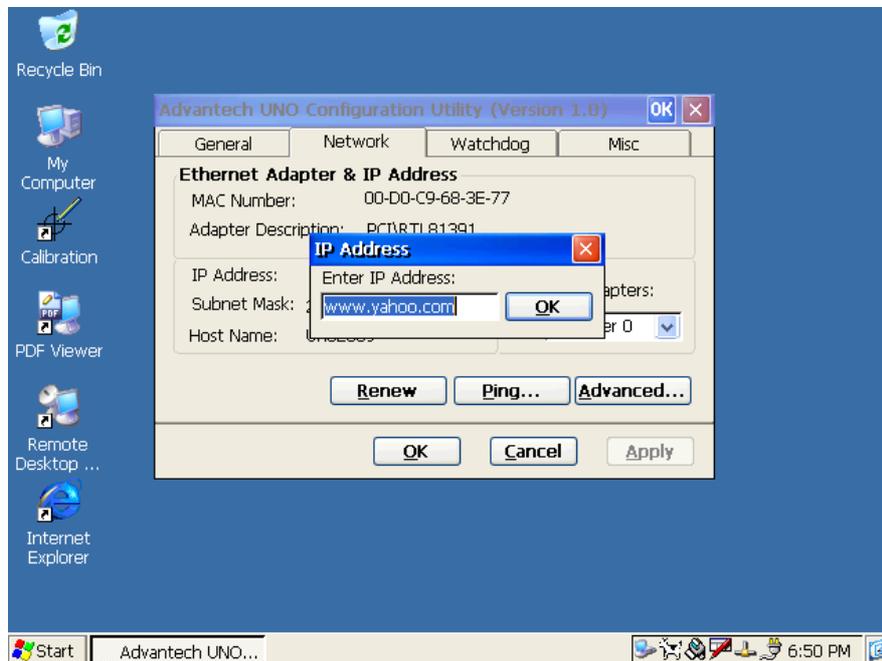


Figure 4-2

If the user clicks this button, there appears a dialog box as figure 4-2 shows. The user can input any IP address he likes in the edit box, such as www.tsinghua.edu.cn. The default address displayed is www.yahoo.com. If the user input an empty string in the edit box and then clicks the

“OK” button, a warning message as figure 4-3 will popup.

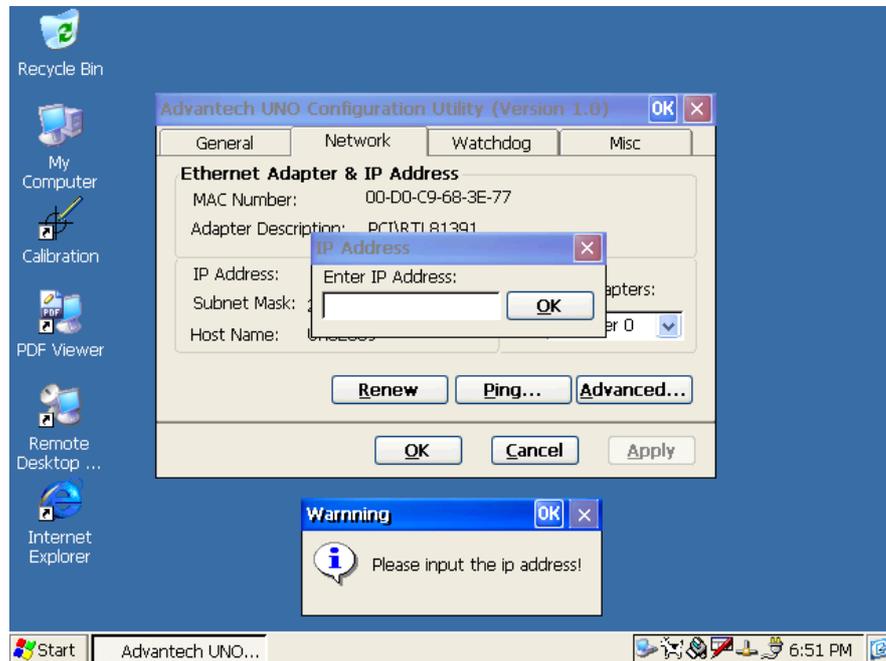


Figure 4-3

The user can fire the “OK” button event in the “IP Address” dialog through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “O” key.

The user can cancel this operation by hitting the ESC key.

4.5 Advanced Network Settings

“Advanced...” button

If the user clicks this button, a dialog like figure 4-4 appears. The user can fire this button event through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “A” key.

4.6 Input Focus and Tab Order

If the user activates this tab page, the default input focus is located on the “Renew” button, the tab order is “Renew”→ “Ping...”→ “Advanced...”→ Network Adapters (Combo box), the user can change the current input focus by hitting the TAB key.

4.7 Advanced Network Settings

In the “Advance Network” dialog box there is a group “Local Area Connection” box and an “OK” button as figure 4-4 shows, “Local Area Connection” group box shows the network servers associated information.

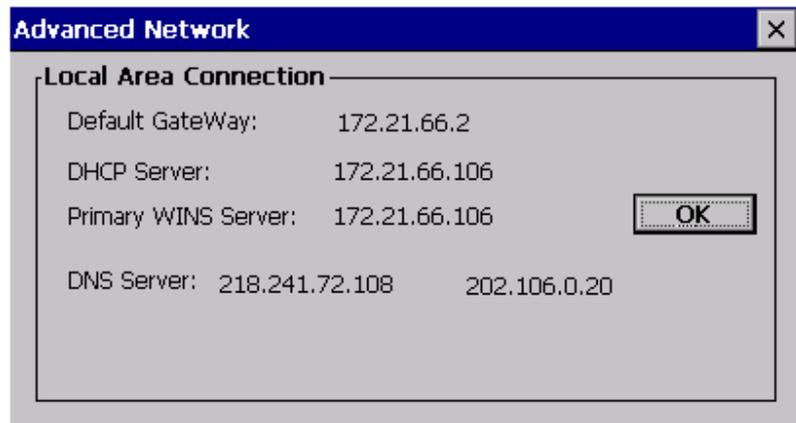


Figure 4-4

4.6.1 *Default Gateway*

IP address of the default gateway

4.6.2 *DHCP Server*

IP address of the DHCP server

4.6.3 *WINS Server*

IP address of the primary WINS server

4.6.4 *DNS Server*

These are IP addresses of the Domain Name Servers. If there is more than one DNS server they will all be displayed.

4.6.5 *"OK" button*

If the user clicks this button then this dialog will be closed and the focus will return to the "Network" page. The user can fire this button event by the following methods:

- (1) Left clicks this button by the mouse.
- (2) Hit the ENTER key
- (3) Activate this page and hit the "O" key.

Chapter 5 “Watchdog” page

5.1 Overall

This tab page shows two sets of function: setting the watchdog and testing the watchdog. The watchdog function runs in a separate process, and will setup when the machine boots successfully. The user can find the watchdog in the toolbar as figure 5-1 and figure 5-2 shows.



Figure 5-1



Figure 5-2

In figure 5-1 the first icon is the watchdog in enabled state, in figure 5-2 in disabled state.

5.2 The Watchdog Process

The watchdog process is independent of the UNO Configuration Utility. It can be separately setup. The user can setup the watchdog process in the Microsoft Windows CE.NET Pocket CMD mode. The watchdog usage: Watchdog [enable/disable].

- (1) **Watchdog enable:** setup the watchdog and enable it. If the watchdog is already running now then change it to enabled state, whether it is enabled or disabled now.
- (2) **Watchdog disable:** setup the watchdog and disable it. If the watchdog is already running now then change it to disabled state, whether it is enabled or disabled now.
- (3) **Watchdog:** setup the watchdog to the last time running state according to the settings in the registry. If the watchdog is already running now then just return.
- (4) **Watchdog /?:** the user will receive the following message:

Usage: watchdog [enable/disable]

Options:

enable Enable the watchdog
disable Disable the watchdog

In the Pocket CMD mode the user can change the watchdog running state by the instructions list above. The watchdog icon will change according to the watchdog running state. If the user mistakenly typed the command options, then the user will read “*Invalid parameter*”.

The user can also change the watchdog running state by left click the watchdog icon in the toolbar. When the watchdog is disabled and the user left clicks the icon then a message as figure 5-3 shows will pop up, if the user clicks the “OK” button, then the watchdog will be enabled, otherwise the watchdog will stay disabled.

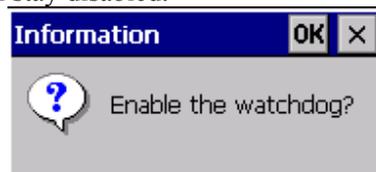


Figure 5-3

When the watchdog is enabled and the user left clicks the icon then a message as figure 5-4 shows will pop up, if the user clicks the “OK” button then the watchdog will be disabled, otherwise the watchdog will stay enabled.

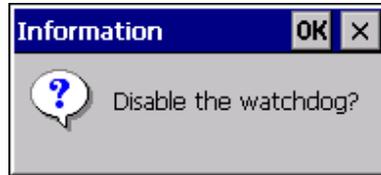


Figure 5-4

The user can change the running state of the watchdog separately, but he can not set response time of the watchdog without the help of the UNO Configuration Utility. If the watchdog is not running and the user setup the UNO Configuration Utility, then the UNO Configuration Utility will setup the watchdog and set the watchdog running state according to the settings in the registry.

If the user changes the watchdog running state in the Pocket CMD mode or in the UNO Configuration Utility, no message as figure 5-3 and 5-4 shows pop up.

5.3 Setting Watchdog Timer Span

Response Time

The response time is the period of resetting the watchdog signal. If the program does not response in the time the watchdog will restart the machine. The user can set it through a combo box as figure 5-5 shows.

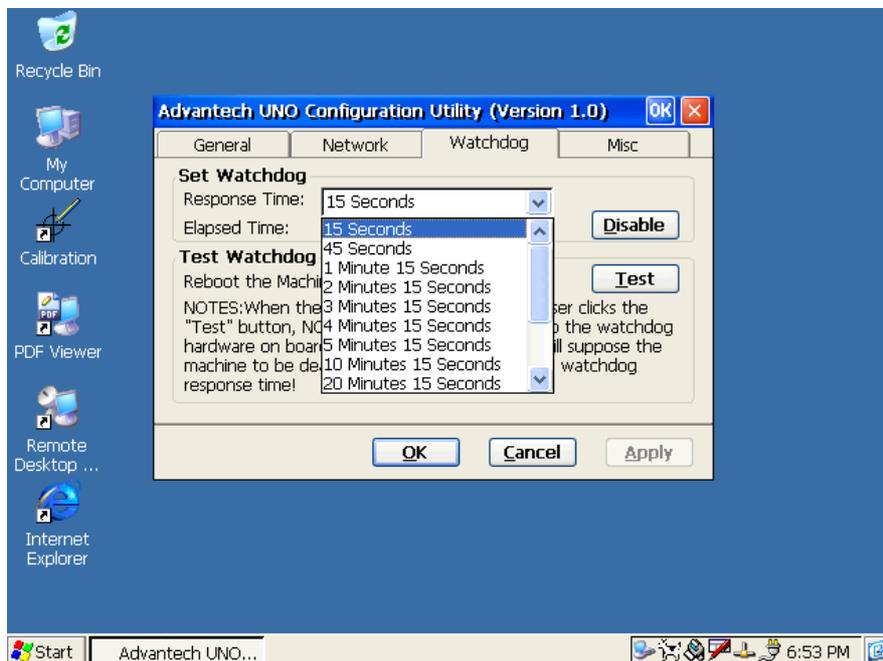


Figure 5-5

The response time that is selectable by the user in the combo box maybe one of the fourteen values:

- (1) 15 Seconds

- (2) 45 Seconds
- (3) 1 Minute 15 Seconds
- (4) 2 Minutes 15 Seconds;
- (5) 3 Minutes 15 Seconds
- (6) 4 Minutes 15 Seconds
- (7) 5 Minutes 15 Seconds
- (8) 10 Minutes 15 Seconds
- (9) 20 Minutes 15 Seconds
- (10) 30 Minutes 15 Seconds
- (11) 40 Minutes 15 Seconds
- (12) 50 Minutes 15 Seconds
- (13) 1 Hour 15 Seconds
- (14) 2 Hours 15 Seconds

Only when the user select a time span and enabled the watchdog the response time will be effective.

5.4 Elapsed Time

When the watchdog was enabled, the time display format is hh:mm:ss. If it is disabled the elapsed time will display 00:00:00

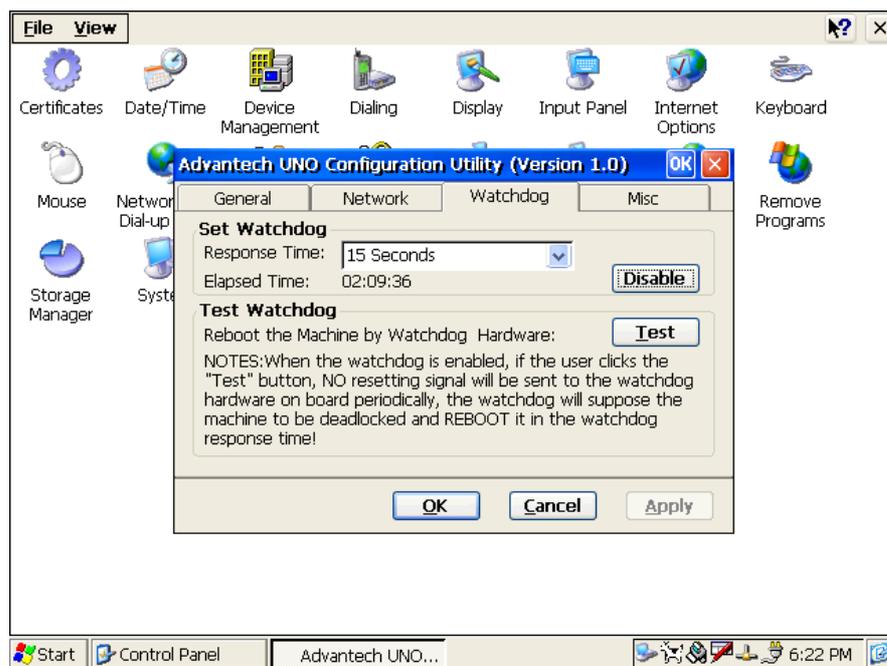


Figure 5-6

If the watchdog is enabled when the UNO Configuration Utility is setup, the elapsed time may not display 00:00:00 at first. The UNO Configuration can find the time that the watchdog is enabled and calculate the elapsed time from then and display it such as 00:00:11 as figure 5-6 shows.

If the watchdog is disabled when the UNO Configuration Utility is setup, the elapsed time will display 00:00:00.

If the user disabled the watchdog and then enabled it, the elapsed time will be 00:00:00 at first.

5.5 Enable / Disable Watchdog

Enable/Disable button:

Enable or Disable the watchdog. If the watchdog is enabled the caption of this button will be **“Disable”**, the **“Test”** button will be enabled as figure 5-6 shows, and the icon of the watchdog in the toolbar will be as figure 5-1 shows.

If the watchdog is disabled the caption of the **“Enable/Disable”** button will be **“Enable”** and the **“Test”** button will be grayed as figure 5-7 shows, the icon will be as figure 5-2 shows

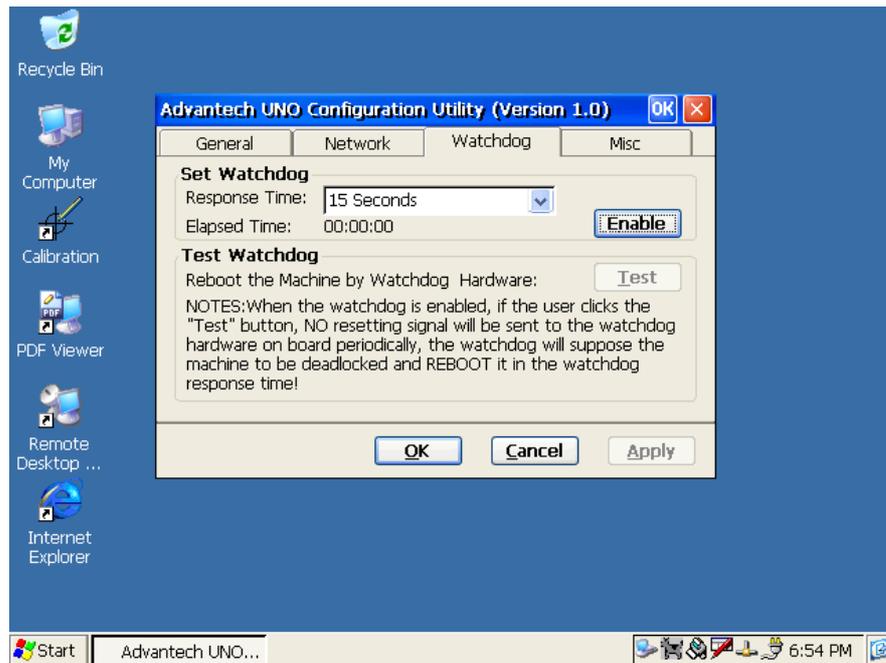


Figure 5-7

The user can disable the watchdog by the following methods:

- (1) Left clicks this **“Enable/Disable”** button by the mouse.
- (2) Change the input focus to this **“Enable/Disable”** button and hit the ENTER key
- (3) Keep the input focus in this page and hit the **“D”** key.
- (4) Left click the watchdog icon.

The user can enable the watchdog by the following methods:

- (1) Clicks the **“Enable/Disable”** button by the mouse.
- (2) Change the input focus to the **“Enable/Disable”** button and hit the ENTER key
- (3) Activate this page and hit the **“E”** key.
- (4) Left click the watchdog icon.

5.6 Test Watchdog Function

When the watchdog is enabled, if the user clicks the **“Test”** button, a message box as figure 5-6 shows will popup and the **“Enable/Disable”** button will be grayed, then NO resetting signal will be sent to the watchdog hardware on board periodically, the watchdog will suppose the machine to be deadlocked and REBOOT it in the watchdog response time. If the machine reboots as expected in the watchdog response time, the watchdog is proved to be working properly.

When the watchdog is disabled the **“Test”** button is grayed and the user can not reboot the machine through the watchdog.

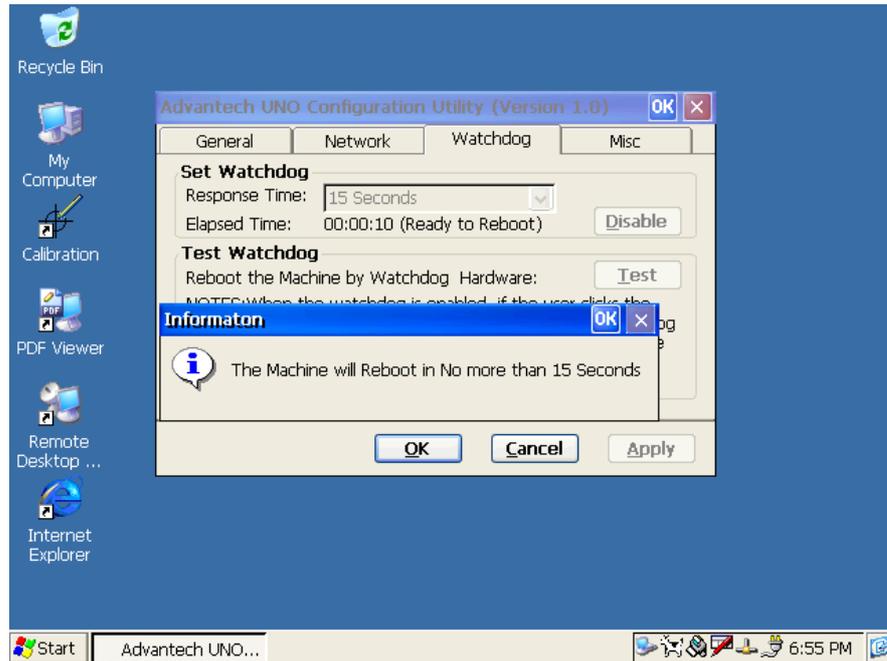


Figure 5-6

5.7 Input Focus and Tab Order

If the user changes to this tab page, the default input focus is located on the “**Enable/Disable**” button, the tab order is “**Enable/Disable**” → “**Test**” → **Response time** (combo box). The user can change the current input focus by hitting the TAB key.

Chapter 6 “Misc” page

6.1 Overall

This page as figure 6-1 shows provide the user with the ability to setting the CF disk folder name, adding or removing startup programs, setting web and ftp server root etc.

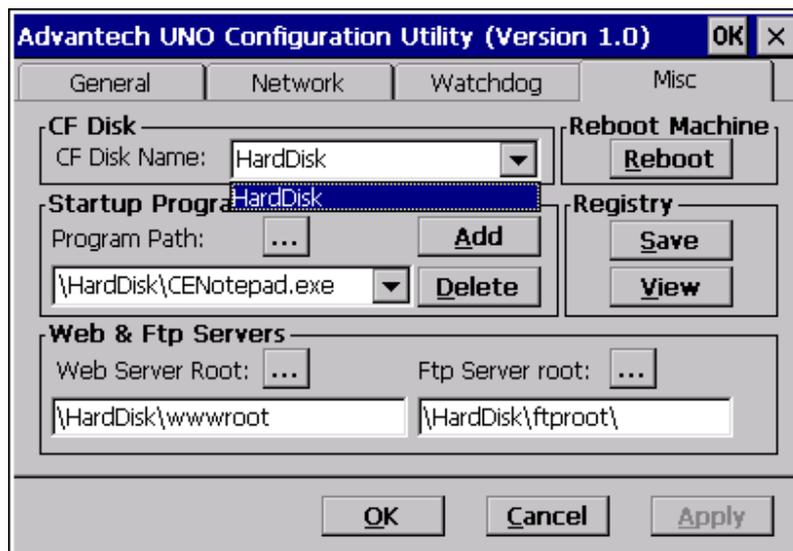


Figure 6-1

6.2 Renaming CF Disk folder

Change the name of the CF disk folder. The user can select the CF disk folder name from the combo box. This setting will be effective only when the user clicks the “Apply” or “OK” button and the machine has been rebooted.

6.3 Setting Startup Programs

The user can set the startup programs. Inside the combo box there are programs that will automatically startup after the system has successfully booted. The user can add new programs or remove existing ones from the startup program set (i.e. the program list in the combo box). The user should never add non-executable files into the program list. Otherwise those located below the non-executable file in the program list may not be executed.

6.3.1 Select a program

“...” button.

If the user clicks this button, there appears an “open” dialog as figure 6-2 shows for the user to select a file from the disk, and this file will be inserted into the combo box after the user clicks the “OK” button in the upper-right corner of this dialog. The user can fire this button event through the following methods:

- (1) Clicks the “OK” button by the mouse.
- (2) Keep focus in this dialog and hit the ENTER key

(3) Double click the file selected.

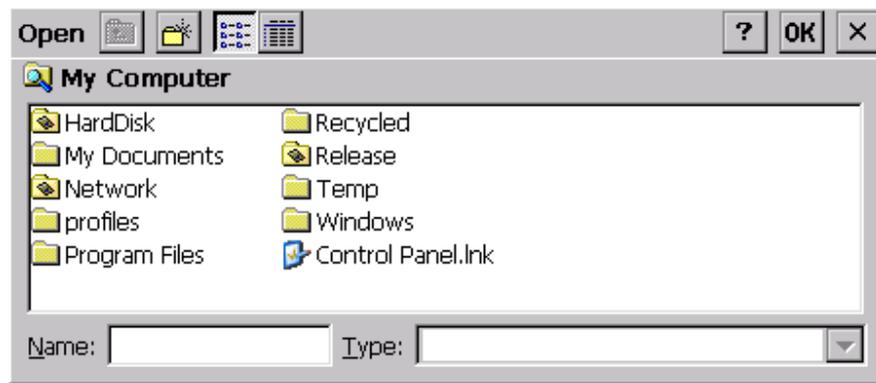


Figure 6-2

If the user selects a new file, then the user must add this file into the startup program set, or delete this file from the combo box. In this condition the user is not allowed to continue selecting files from the disk, otherwise a warning message as figure 6-3 shows will popup.

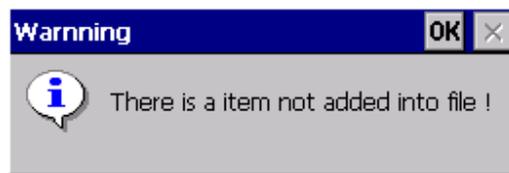


Figure 6-3

(4) Select “Start”→”Programs”→”Windows Explorer”; select “View”→”Option” and choose “Show all files”.

(5) Rename “\HardDisk\STARTUP\startup.ini” to **startup.bat**.

6.3.2 Add a Program into Startup Set

“Add” button.

This button is used to add the newly selected program from the combo box into the startup.ini file. The user can fire this button event through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “A” key.

If a new item was selected from the disk but the current selected item differs from it, then the user is not allowed to continue adding items, otherwise a warning message as figure 6-4 will popup.

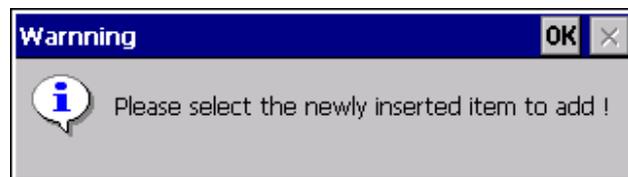


Figure 6-4

The user is not allowed to add item that is already in the list of the combo box without selecting a new file from the disk. Otherwise a warning message as figure 6-5 shows will popup.



Figure 6-5

6.3.3 Delete a Program from Startup Program Set

“Delete” button

This button is used to delete the program that has been added into the startup programs. The user can fire this button event by the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “D” key.

If the currently selected item in the combo box is not the newly selected item from the disk, then the user is not allowed to delete an item when a newly selected item was not added into the startup program set. Otherwise a warning message as figure 6-6 shows will popup.

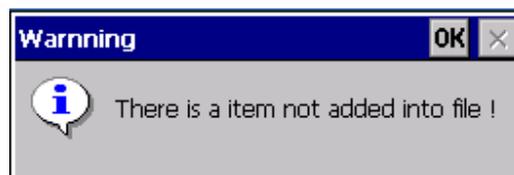


Figure 6-6

6.4 Web & Ftp Server Root Path

6.4.1 Web Server Root Path

The user can specify a web server root path through two methods.

6.4.1.1 Input the Web Server Root Path

The user can input the root path of the web server here. When the UNO Configuration Utility startups, the path displayed in the edit control is the current web server root path, so the user can edit the path in the edit control. If the user modified this path, the “**Apply**” button in the main page will be enabled and the user can save this modification any time later. The root path will be effective only the machine has been rebooted after this operation.

6.4.1.2 Select a Web Server Root Path from the Disk

Select the directory by clicking the “...” button. If the user clicks this button a “**Browse for Folder**” dialog as figure 6-7 shows will popup, the user can select a directory from the dialog as the root path of the web server.

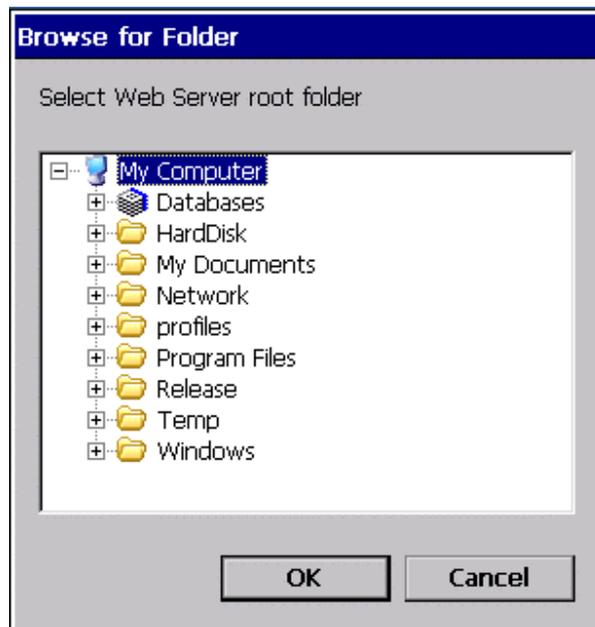


Figure 6-7

6.4.2 Ftp Server Root Path

6.4.2.1 Input a Ftp Server Root Path

The user can input the root path of the ftp server here. When the UNO Configuration Utility startups, the path displayed in the edit control is the current ftp server root path, so the user can edit the path in the edit control. If the user modified this path, the “**Apply**” button in the main page will be enabled and the user can save this modification any time later. The root path will be effective only the machine has been rebooted after this operation.

6.4.2.2 Select a Ftp Server Root Path from the Disk

Select the directory by clicking the “...” button. If the user clicks this button a “**Browse for Folder**” dialog as figure 6-7 shows will popup, the user can select a directory from the dialog as

the root path of the ftp server.

6.5 View, Edit & Save Registry Information

6.5.1 View and Edit Registry Information

“View” button

If this button is clicked, a dialog box as figure 6-8 shows will popup. The user can fire this button event through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “V” key.

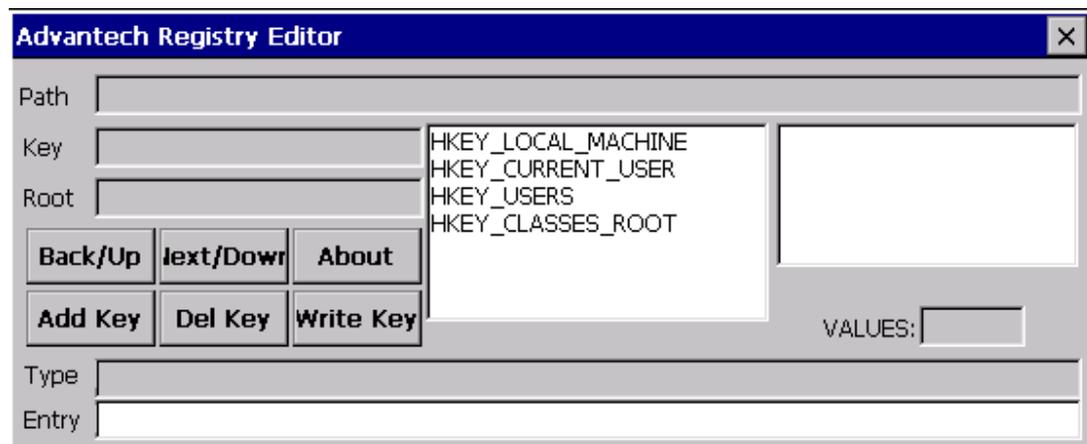


Figure 6-8

6.5.2 Save Registry Settings

“Save” button

If this button is clicked, a message box as figure 6-9 shows will popup. The user can fire this button event by the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “S” key.

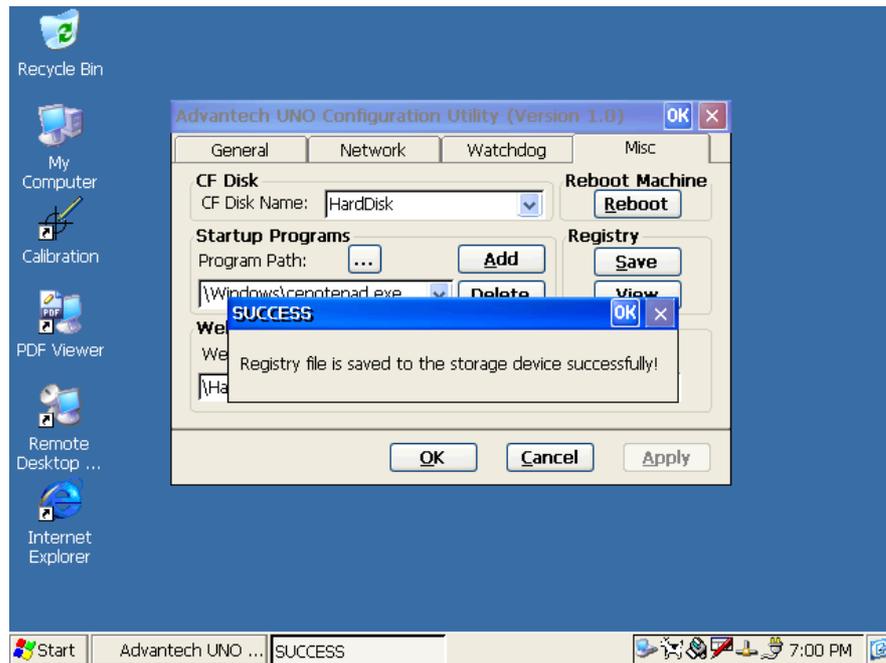


Figure 6-9

6.6 Reboot Machine

“Reboot” button.

If the user clicks this button, a message box as figure 6-10 shows will popup. The user can fire this button event through the following methods:

- (1) Left clicks this button by the mouse.
- (2) Change the input focus to this button and hit the ENTER key
- (3) Activate this page and hit the “R” key.

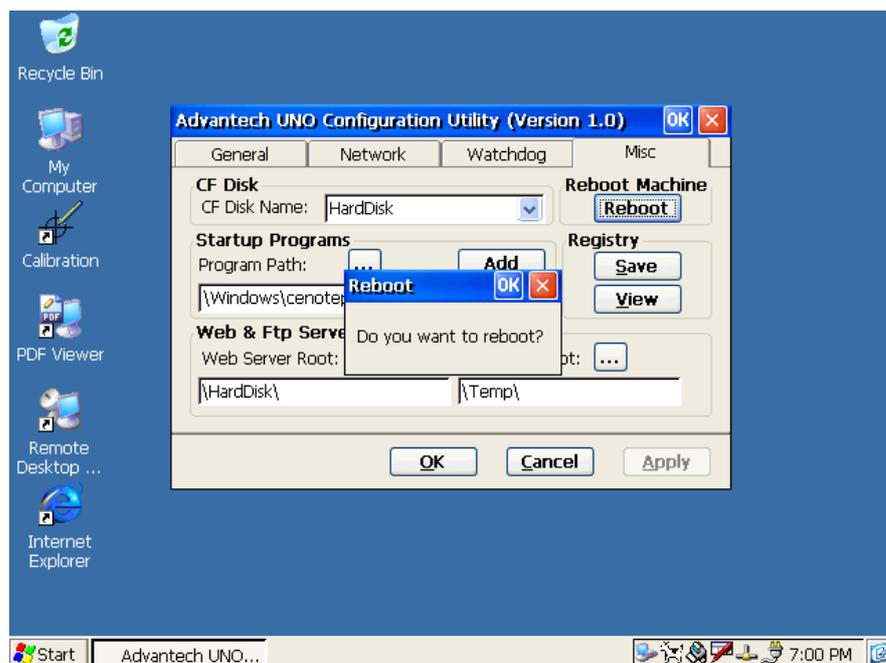


Figure 6-10

The user can decide whether to reboot the machine or not. If the user wants to reboot the machine, he can click the “**OK**” button through two methods:

- (1) Left clicks the “**OK**” button by the mouse.
- (2) Hit the ENTER key

If the user does not want to reboot the machine, he can fire the “×” button event through two methods:

- (1) Left clicks the “×” button by the mouse.
- (2) Hit the ESC key.

6.7 Input Focus and Tab Order

If the user activates this tab page, the default input focus is located on the **CF disk Name** (combo box), the tab order is **CF Disk Name** → “**Reboot**” → “...(Startup Program)” → “**Add**” → **Startup Programs** (combo box) → “Delete”, “Save” → “**View**” → “...(Web Server Root)” → **edit control** (Web Server Root) → “...(Ftp Server Root)” → **edit control** (Ftp Server Root). The user can change the current input focus by hitting the TAB key.