WP–8X4X OS Release Note, Version 1.5.0.0 [April, 6, 2010]

OS Key Features:

Features	Supported	Description
Language of OS	Yes	WP-8x4x-EN: Multi-language ● English ● German ● Russian ● French ● Spanish ● Italian WP-8x4x -SC: Simplified Chinese WP-8x4x -TC: Traditional Chinese
.NET Compact Framework 2.0	Yes	V2.0.7045 for Visual Studio .Net 2005/2008
SQL CE 3.5	Yes	SQL CE 3.5 (3.5.5386.0)
FTP Server	Yes	
Http Server	Yes	
Telnet	Yes	
Printer	Yes(PCL 6)	For HP Laser Jet printer on USB and Ethernet (over the network neighborhood)
Touch Panel	Yes	
Multi-Serial Module	Yes	i-8112iW (RS-232 *2), i-8114W (RS-232 *4), i-8114iW (RS-232 *4), i-8142iW (RS-485 *2), i-8144iW (RS-485 *4)

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Abstract

Update the OS image using the latest version of the exe update file and the previous registry backup by the latest version of the exe update file can be retained on the new OS and the data on the System_Disk backup by the latest exe update file also can be restored to the new OS. The prefix name can be "COM" or "MSA/MSB" for the multi-serial driver.

New Features

- The prefix name can be "COM" or "MSA/MSB" for the multi-serial (I-811xW/I-814xW) driver. (It must work with WinPAC utility V2.0.1.5 or later) (The prefix name only be "MSA/MSB" in the previous version of OS image)
- Add backplane timerout/timer1/timer2 functions (It must work with WinPACSDK.dll 1.0.9.4 or later)
- The Network ID (User name/Password/Domain) can be allowed to access to network resources and the settings will not be lost after Power-On.
- Show the CPU frequency to system properties "Processor" information
- The file system of System_Disk is changed from FAT to TFAT file system

Important notice:

Due to the FAT file system of System_Disk is change as TFAT, the System_Disk will be disappear after updating the OS from V1421 or earlier to V1500. If you update OS image by Eshell, please backup the System_Disk first.

If you update OS image by using Exe file, the exe file will backup the data of the System_Disk automatically, and restore the data back to System_Disk at next reboot after updating the OS.

Please refer to the document for more details regarding how to update OS image from V1421 to V1500,

Document location: Shipped CD:\napdos\wp-8x4x_ce50\
\Document\How_To\Updata Software\

W4-01-03_how_to_update_OS_image_from_V1421_to_V1500_by_Exe_file_english.pdf

Bug Fixed

- The serial touch driver for the touch display connected to COM1 of WP-8x4x can not work after installing the multi-serial driver

- The multi-serial (I-811xW/I-814xW) driver was loaded by OS slowly than the auto-run program set by WinPAC utility. If an AP is used to open the I-811x Com port, and set this AP to an auto execution program, this AP will hang after reboot.

Improvements

- The registry defined on [HKEY_LOCAL_MACHINE\init] "Launchxx" should be run automatically by the system but sometimes the exe file on the registry cannot be run because the disk is loaded slowly than the running "LaunchXX" by system. This improvement is the remedy for running the exe file again.
- Show a "format the disk" dialog box and toggle the running LED, while formatting the System_Disk
- Show a "defrag the disk" icon on the system tray and toggle the running LED, while the System_Disk defragment is running.

Modifications

- Provide Power management to turn on/off the display (Disable Power management in the factory default)
  - Useridle and systemidle timeout set to 0 in the factory default.
- Remove "Microsoft Windows CE v5.00 (.......)" message from the desktop.

Eboot Version 1.2.0.1 [March, 26, 2010]

Modifications

- The Serial number can not be read caused by the Serial number chip failed or damaged, and the serial number will be FF-FF-FF-FF-FF-FF-FF-FF (The serial number can be obtained from the System Information of WinPAC utility)

WinPAC SDK DLL Version 1.0.9.4 [March, 29, 2010]

Enhancements

- Add backplane timer
  pac_SetBPTimerOut/ pac_SetBPTimer/ pac_KillBPTimer
  /pac_GetBPTimerTimeTick_ms/ pac_GetBPTimerTimeTick_us
- Allow the com port driver to use prefix name more than 10 devices (the COMx's name=$device\COMx,x>=10)

WinPAC utility Version 2.0.1.5 [March, 26, 2010]

Improvements

- Battery capacity detection periodly.
- The prefix name for multi-serial driver can be "COM" or "MSA/MSB".
- Show registry saving progress bar while saving system registry.

Support New Demo
pac_i8048W
C#/VB.net/EVC
pac_i8050W
C#/VB.net/EVC
BPTIMER
EVC

MISC Software
DCON_CE: Version 504
The application, DCON_CE_V501.exe is renamed to DCON_CE_WP.exe.

Refer to the \System_Disk\Tools\DCON_CE for more details

Location:
1. \System_Disk\Tools\napopc_ce5 on WinPAC
2. \napdos\wp-8x4x_ce50\System_Disk\Tools\napopc_ce5 on the shipped CD

SendToCOM: Version 1.0.3
- Support to open the COM port more then COM10 (COM10, COM11 …)
- Support to change slot number for I-8K modules while opening COM0.

Location:
1. \System_Disk\Tools\SendToCOM on WinPAC
2. \napdos\wp-8x4x_ce50\System_Disk\Tools\SendToCOM on the shipped CD

RegistryEditor:
Add a new application, RegistryEditor to edit the system registry.

Location:
1. \System_Disk\Tools\RegistryEditor on WinPAC
2. \napdos\wp-8x4x_ce50\System_Disk\Tools\RegistryEditor on the shipped CD

Update_Eboot_Tool:
Location:

Shipped CD: \napdos\wp-8x4x_ce50\PC_Tools\Update_Eboot_Tool

Refer to the document located on the shipped CD:

\napdos\wp-8x4x_ce50_back\PC_Tools\Update_Eboot_Tool\02_how_to_reinstall_the_eBoot_by_a_download_cable_english.pdf for more detail regarding how to update the Eboot.

# The prefix name can be "COM" or "MSA/MSB" for the multi-serial driver

1.1. Power off the WP-8000

1.2. Insert the module into any slot

1.3. Power on the WP-8000

1.4. Start the WinPAC utility on the desktop, and then click the "Multi-serial port wizard" index page.

1.5 Click the "Slot scan (Refresh)" button, the module plugged on the WinPAC will show on the slot text box.

1.6 Check the "USE COMx" box
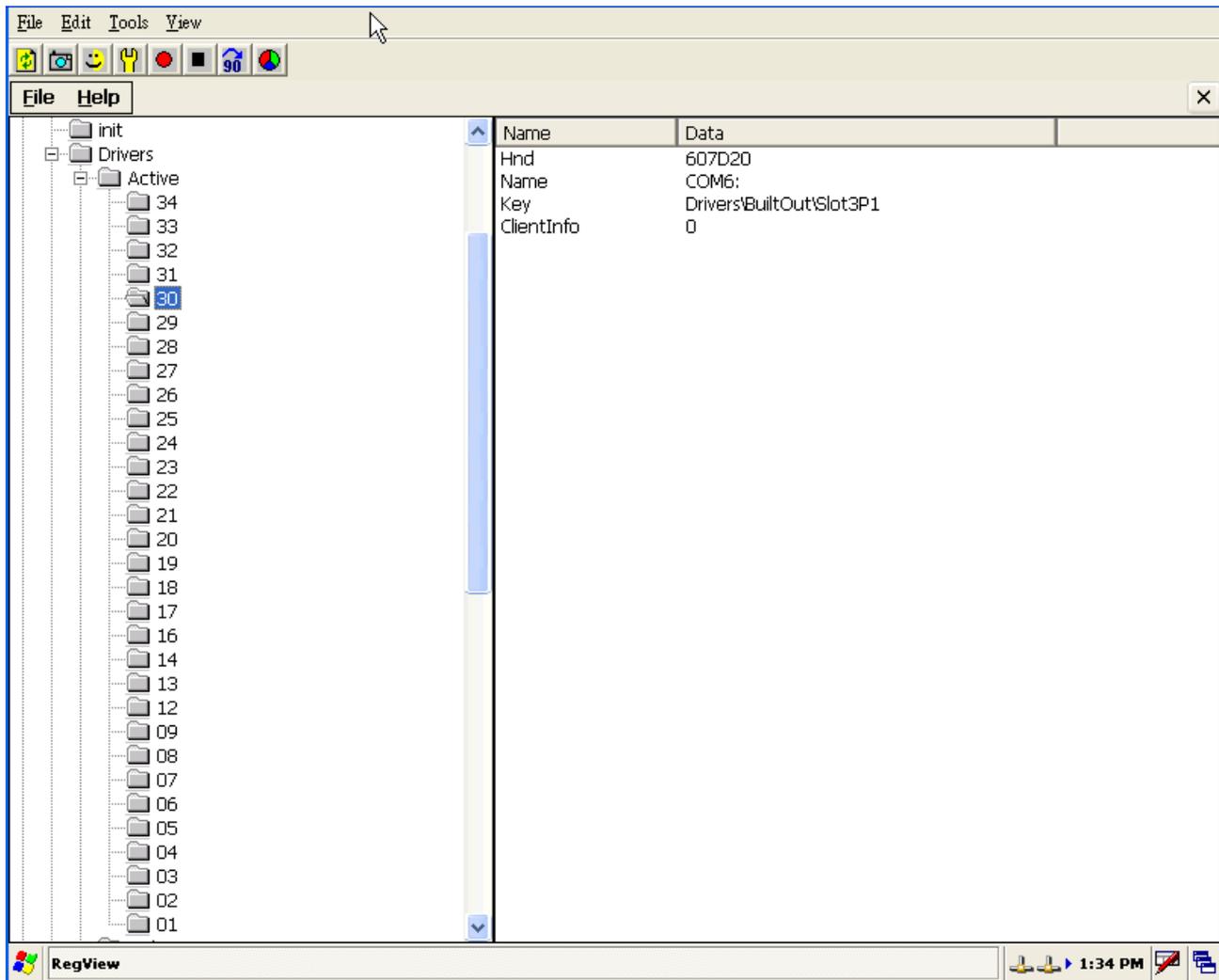
1.7 Click the "Set" button to install the driver.
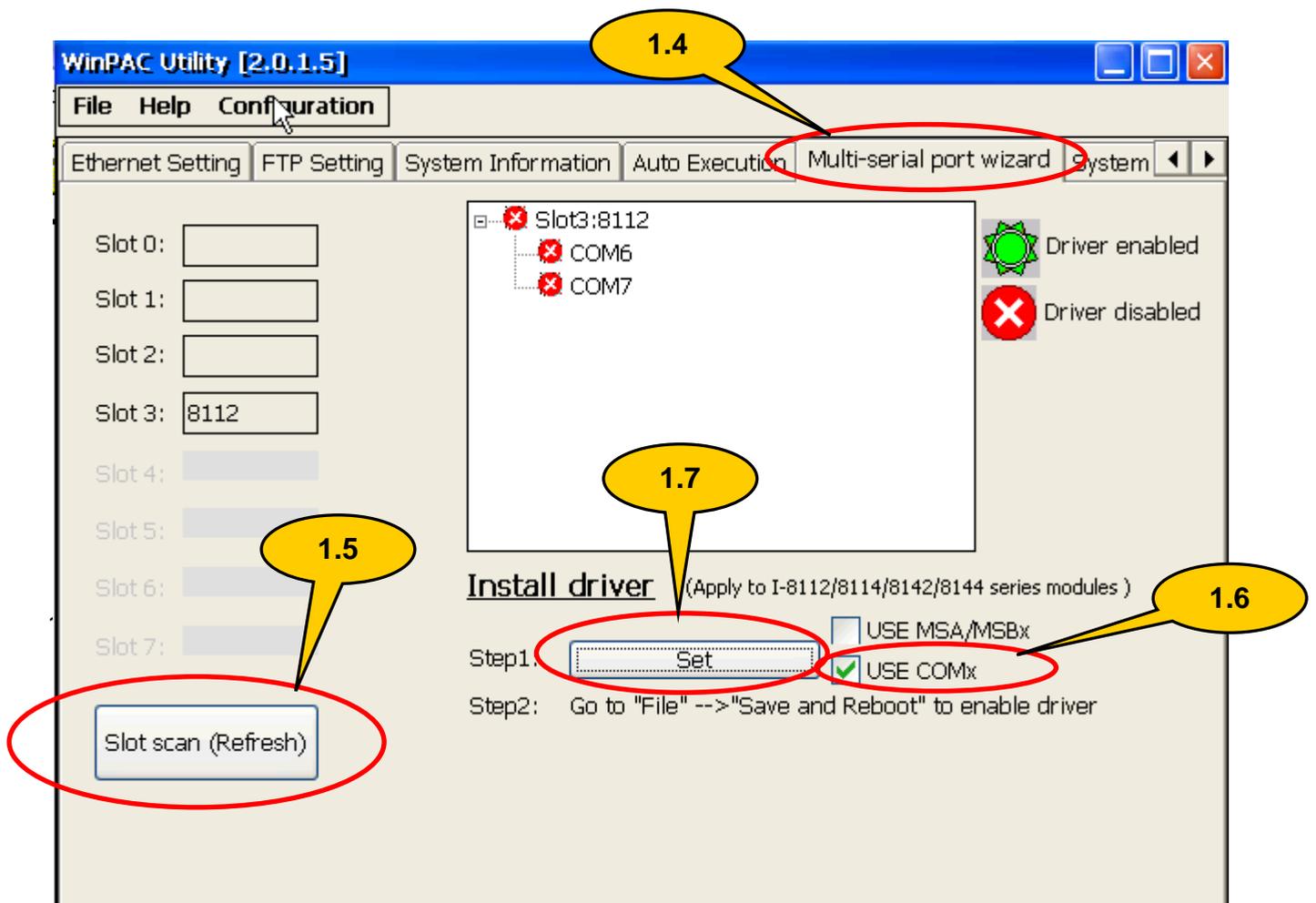
1.8 **Click** the "File->save and Reboot" menu option to reboot the WP-8x4x.
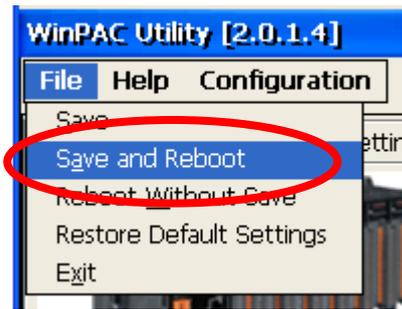
1.9 After rebooting, the driver **will be installed** and enabled.
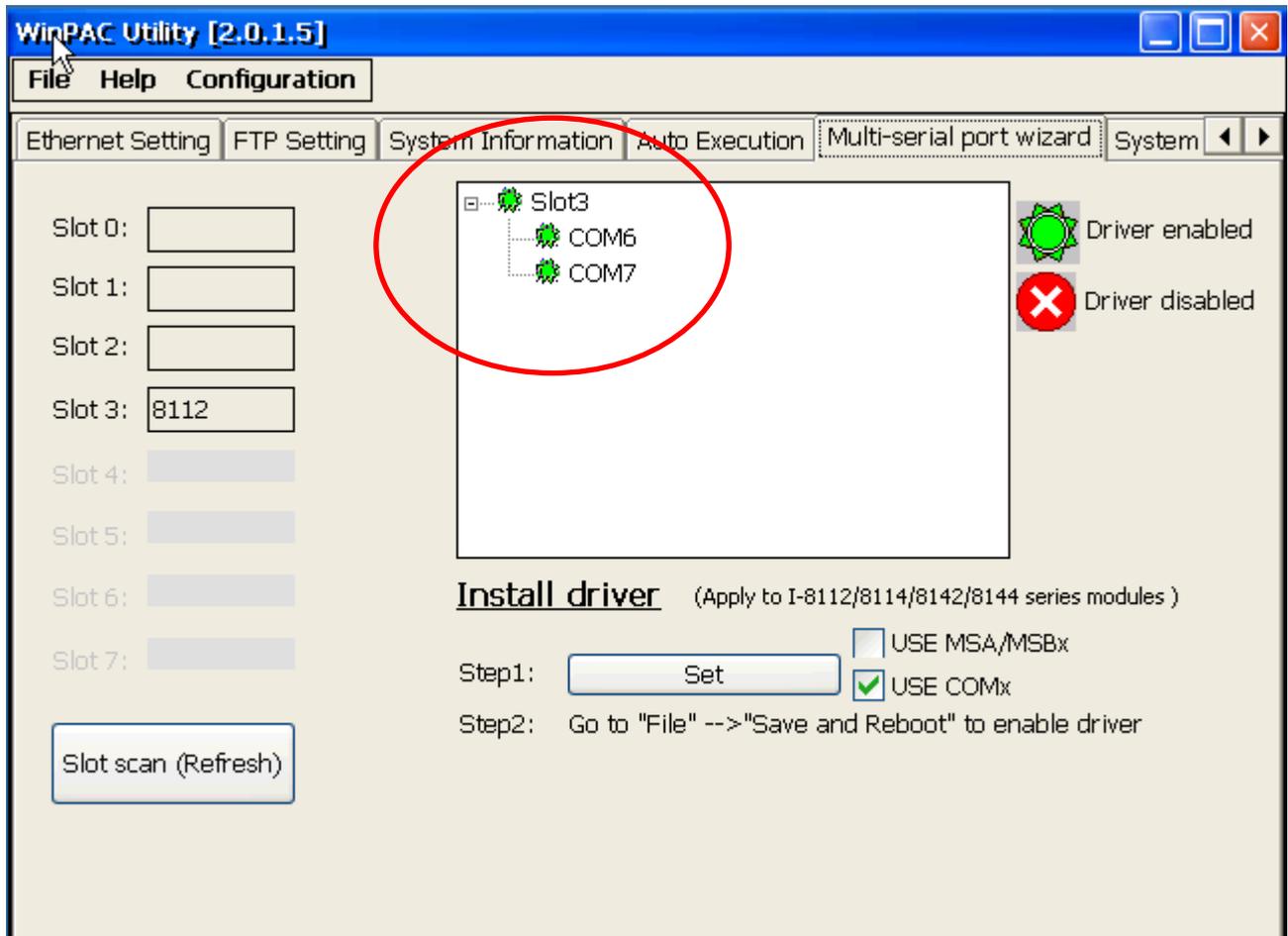
2.0 Run the registryviewer.exe to check whether the COM6/COM7 is active
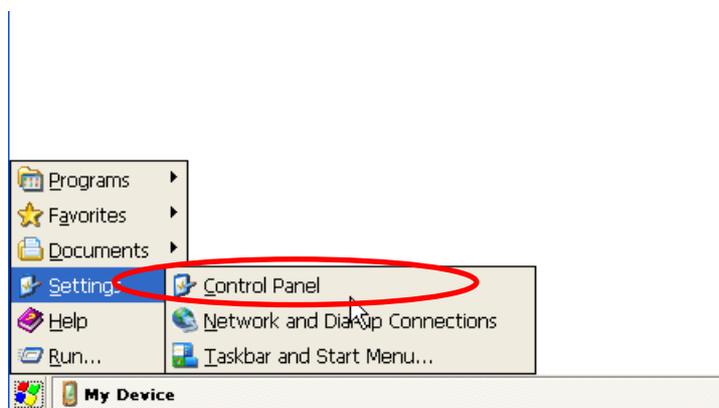
How to use Backplane Timer

Refer to the shipped CD:

\napdos\wp-8x4x_ce50\Demo\WinPAC\eVC\Standard\Backplane\BPTIMER for more details.

How to use the Network ID (User name/Password/Domain) to access to network resources

Step1: Click Start -->Control Panel-->Owner

**Step2:** Select Network ID tab and input the user name, Password and Domain

Step3: Click the "File->save and Reboot" menu option to reboot the WP-8x4x.

Step3: Enter the address of the network resource at the Address bar, such as \\rd1-sean.
If the user name, Password and Domain is correct for this network resource, the network
resource can logon. If not, a login dialog box will ask you to input the user name, Password and
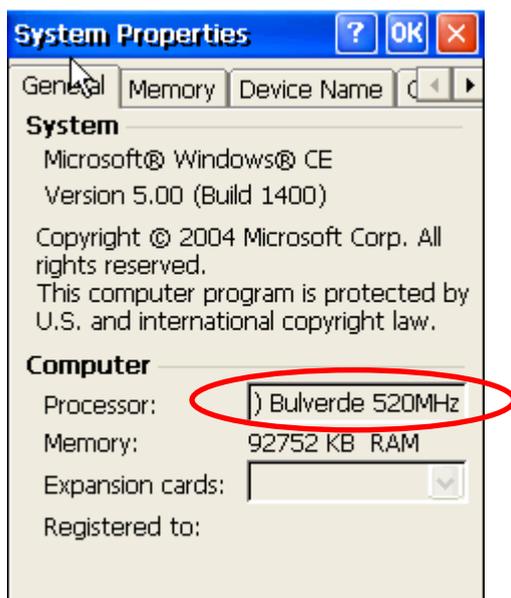Domain shown as following.
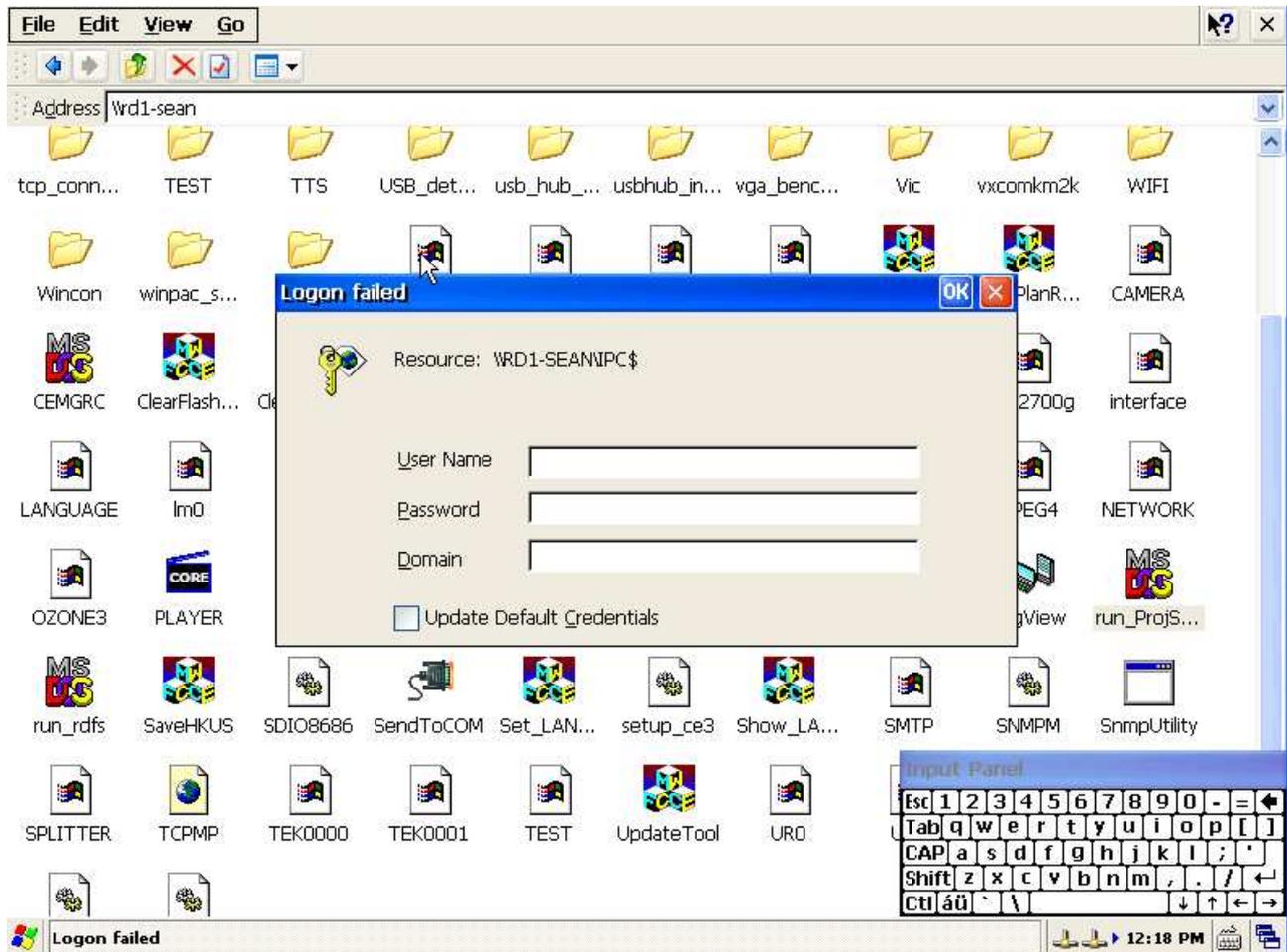
Show the CPU frequency on "Processor" information of the system properties

Step1: Click Start -->Control Panel-->Owner

Step2: Select General tab, and obtain the CPU frequency shown on the "Processor"

FAT changed to TFAT file system

Introduction

The FAT file system is not a transaction-safe file system. FATFS can be corrupted if a write operation is interrupted in the middle of a transaction. Interruptions occur due to power loss or the removal of the media. The FAT volume is corrupted when the content of the FAT table does not match the directory or data sections of the volume.

A TFAT file system ensures that the file allocation table (FAT) and directories remain intact if power loss occurs. In order to accomplish this, the FAT and directory data is either completely written or completely not written, per transaction. Because TFAT prevents the FAT and directory data from being inconsistent with each other, write operations cannot corrupt the main volume on a disk.

A TFAT driver is a superset of the FATFS driver, and supports both FAT and TFAT volumes. You do not need to include both a FATFS and a TFAT driver. Either includes one driver or the other driver. TFAT handles a FAT volume identically to a FATFS driver, and the APIs exposed by TFAT are equivalent to those associated with FATFS

System_Disk defragment

The files on System_Disk are copied and deleted frequently, and OS cannot or will not allocate enough contiguous space to store a complete file as a unit. The disk defragment will occur.
The **defragment** is process that reduces the amount of fragmentation in file systems. It does this by physically organizing the contents of the disk to store the pieces of each file close together and contiguously.

While the System_Disk defragment is doing, the running LED is blinking and the defragment icon will show on the system tray of t the bottom-right hand of the screen.

Note: Don't power off the WinPAC while the defragment is doing.

Show the icons by turns
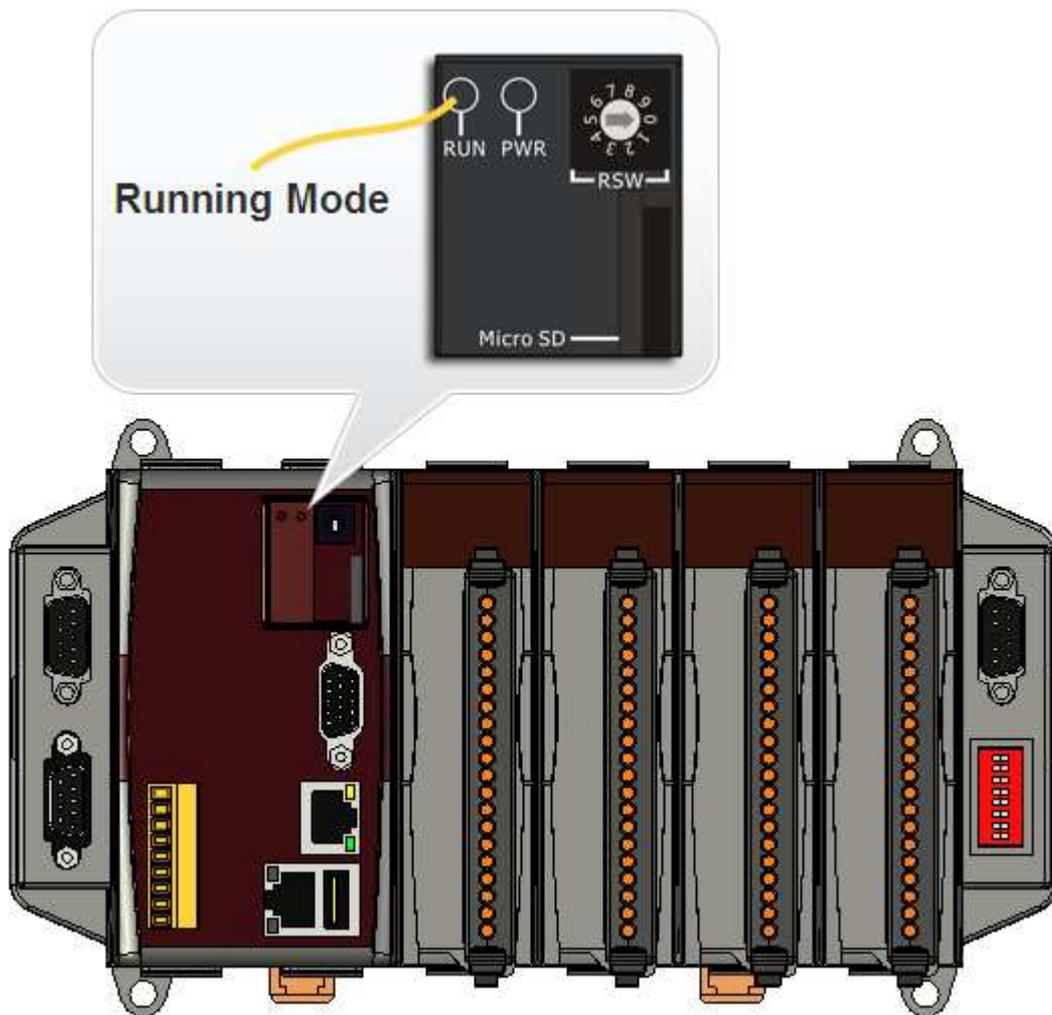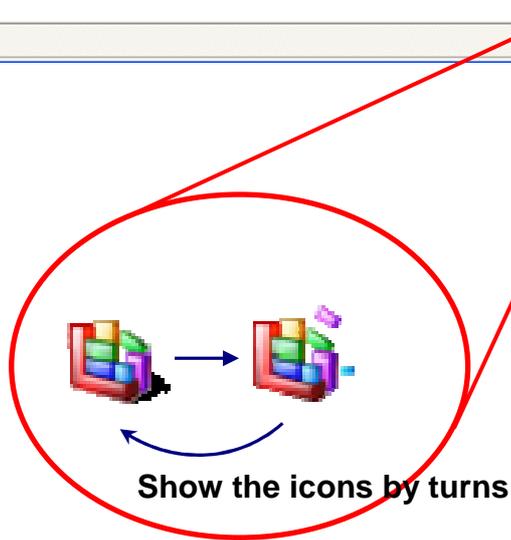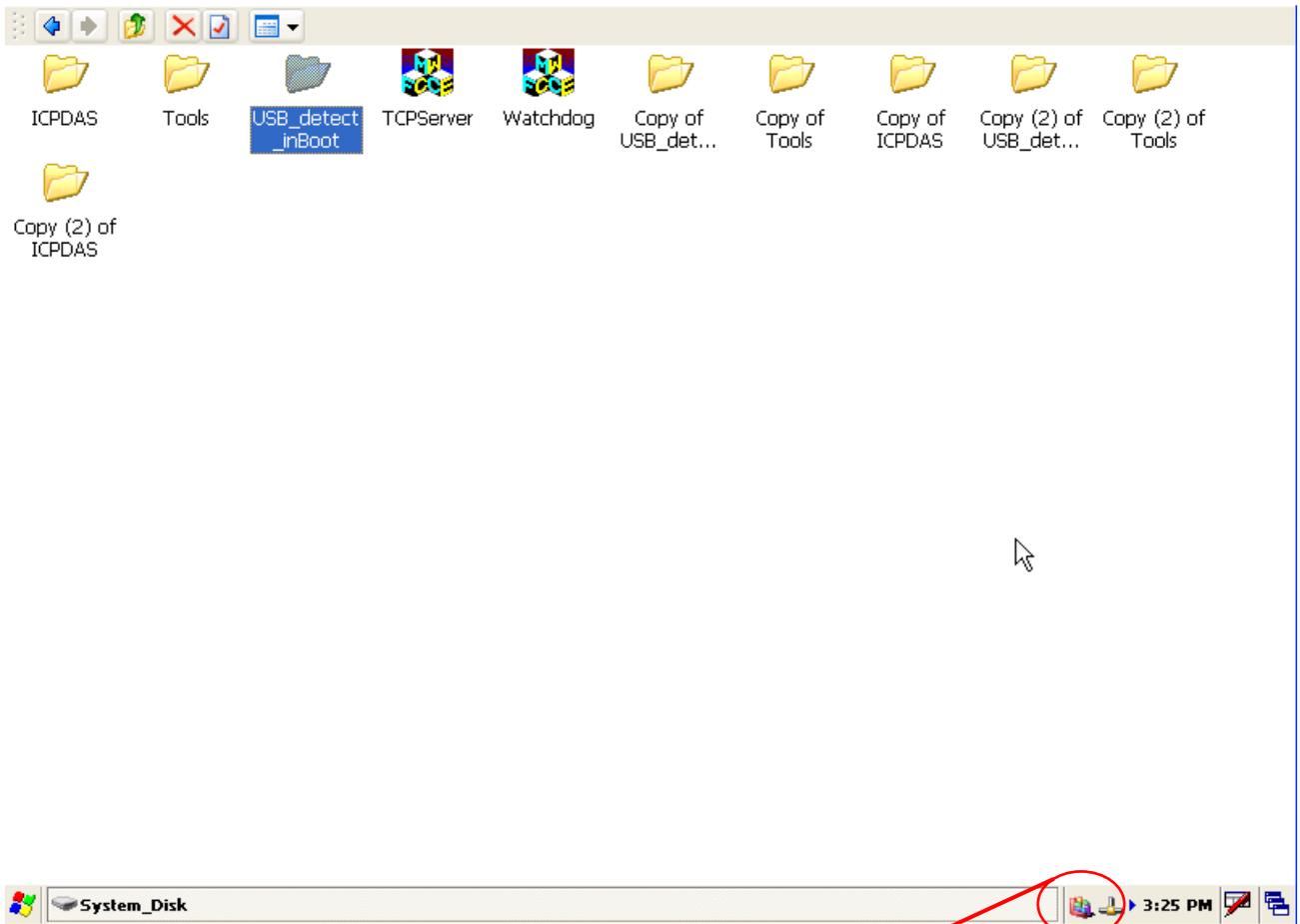
Retain the previous registry

Check the "Retain the currnet registry at next reboot" checkbox while running the installation package file (**WP8x4x_20100406_Ver.1.5.0.0_xx.exe** or **later**). The previous registry will be backup on the pecified disk, and the all settings of the registry will be restored to the new OS at next reboot after updating the OS using the installation package file.

All the previous settings on the registry will be restored to the new OS except the keys below.
1. **HKEY_LOCAL_MACHINE\Drivers\BuiltIn**
2. **HKEY_LOCAL_MACHINE\ICPDAS\OS**
3. **HKEY_LOCAL_MACHINE\HARDWARE\MODULETYPE**

Old Registry on WinPAC

New Registry on WinPAC

Old Registry
HKLM\BuiltIn
HKLM\ICPDAS\OS
HKLM\HARDWARE\MODULETYPE
The others
A

*A registry only exists on old registry

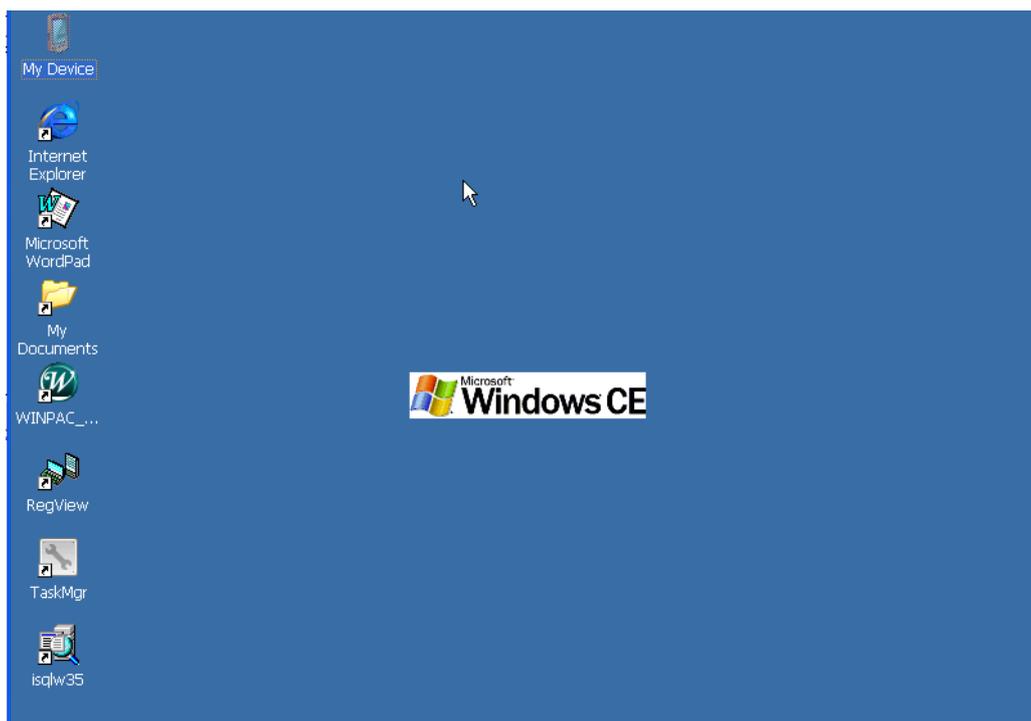| New Registry |
|---|
| HKLM\BuiltIn |
| HKLM\ICPDAS\OS |
| HKLM\HARDWARE\MODULETYPE |
| The others |
| B |
| A |

*B registry only exists on the new registry

Remove "Microsoft Windows CE v5.00"

message from the desktop

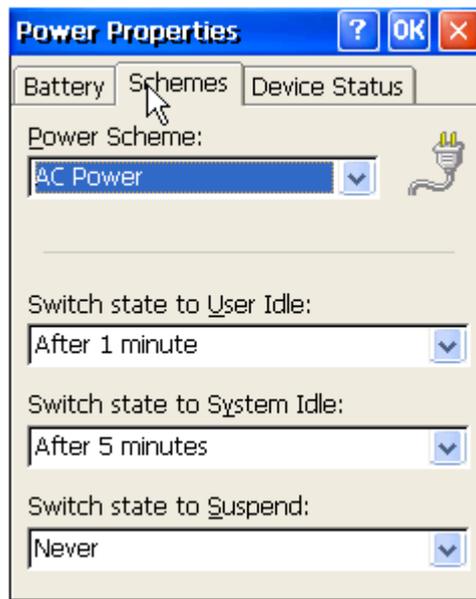The desktop of WP-8x4x in OS V1421 or earlier
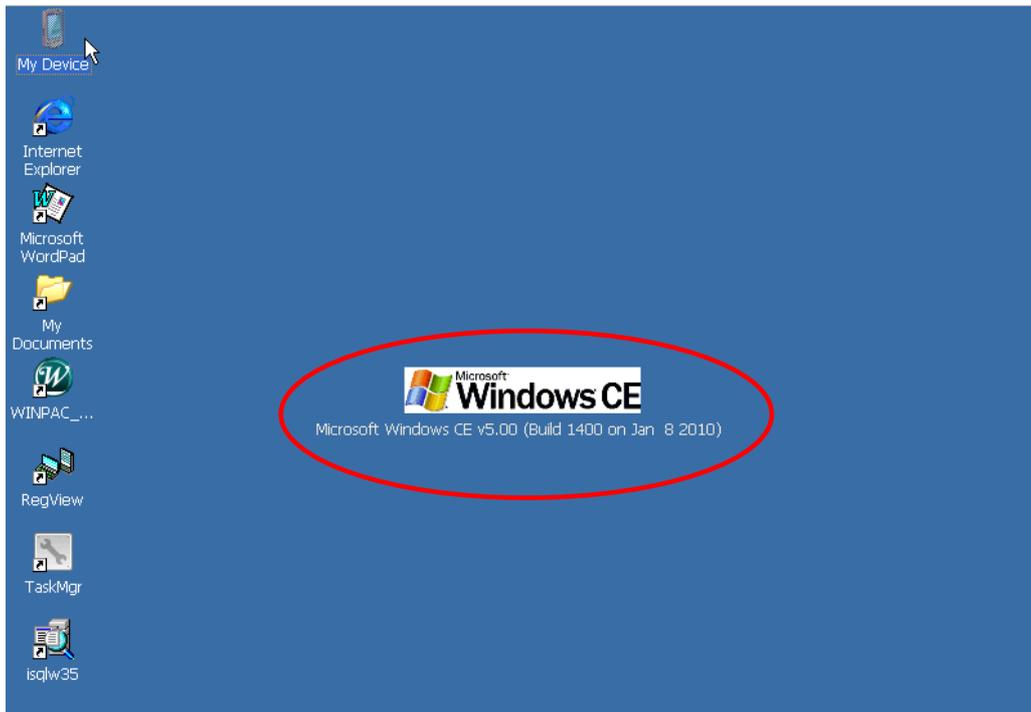
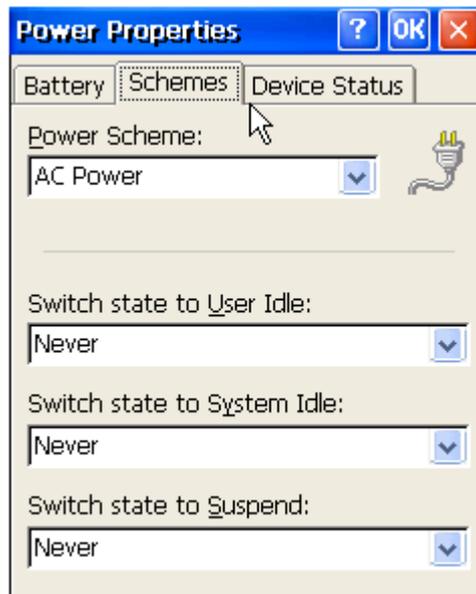The desktop of WP-8x4x in OS V1433 or later

Disable Power management in the factory default

The Power Scheme of AC Power in OS V1421 or earlier

The Power Scheme of AC Power in OS V1433 or later

The OS have 4 different power states (On /User Idle/System Idle/Suspend) that will be the four states of the internal power manager state machine. The transition from On to User Idle and User Idle to Suspend is done after timers expirations

In **V1421** or **later** of WinPAC, the display will be turned off automatically, while the system state is system idle.

In **V1500** or **later** of WinPAC, the User and System Idle time set to 0 (Never) and the display will not be turned off automatically.

Set the time for User and System Idle in this version, and the power management is also allowed to control turn the display On/Off.