

# VISION BOX

## VB-115/VB-216 Series User's Manual



Manual Version: 2.3  
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# 1 Introduction

The VISION BOX series VB-115 and VB-216 with a fan-less platform design works with MAVIS or Sparrow IEEE 1394 industrial cameras for AOI (Automation Optical Inspection) applications. VB-115 standard platform is with Celeron M 1.5GHz CPU and 2GB DDR2 533 memory. VB-216 high end platform is with 1.66GHz high-speed mobile Core Duo CPU and 2GB DDR2 533 memory for advanced high-speed inspection applications. VISION BOX series associate with Windows XP embedded OS which is better on long term operation. Each VISION BOX has six USB 2.0 interface connectors and offers dual Gigabit Ethernet ports. VISION BOX series have two standard PCI bus for extension and is ideal for plug-in motion control cards such as: PISO-PS200, PISO-PS400, I/O and encoder cards for machine automation inspection applications.

## **Features:**

- Fan-less cooling design
- Celeron M 1.5GHz or Core Duo 1.66GHz Mobile, Low power consumption CPU
- 2 GB DDR2 533 memory
- High speed CF card for Windows XP Embedded OS operation
- Dual ports Gigabit Ethernet
- 2.5" SATA HDD supported
- Two 32-bit, 33MHz PCI Bus supported

## **Target Applications**

- Semiconductor
- Component inspection
- Quality control in Manufacturing
- Food and beverage inspection

## 1.1 Specification

Model No.	VB-115C-N	VB-115H-N
CPU	Intel Mobile Celeron M 1.5GHz	
Chipset	Intel 910GM	
L2 Cache	1 MB	
Memory	2 GB DDR2 533	
OS Storage	4GB 233x Compact Flash Card	2.5" 160GB SATA Hard Disk
PCI Bus	Two 32-bit/33MHz PCI Slot, Not support PCI long card.	
Front I/O Interface	2 x USB 2.0 Ports, ATX power on/off switch, Status LEDs (HDD Access, Power, LAN)	
Rear I/O Interface	PS/2 connector, VGA connector, 4 x USB 2.0 ports, 2 x GbE LAN ports, 4 x Serial Ports via one DB44 connector (3 x RS-232, 1 x RS/232/422/485), 1 x SVGA, 1 x DVI Interface, 1 x MIC-in, 1 x Speaker-out, 2-pin connector output for remote power on/off switch, DC-in power connector for +12V ~ +30V DC power input	
Power	DC to DC power designed for on-board, supporting from 12 to 30VDC One External 120W AC adapter (Input: 100~240VAC, 2A, 50/60Hz; Output:19VDC)	
Dimensions	195 mm (W) x 268 mm (D) x 107 mm (H)	
Construction	Fan-less design with aluminum cooling chassis	
Environment	<p>Operating temperature</p> <p>Ambient air temperature : 0°C to 40°C</p> <p>VISION BOX case ( Surface Temperature of Chassis)</p> <ul style="list-style-type: none"> <li>➤ 5°C to 45°C (W/HDD)</li> <li>➤ -10°C to 50°C (W/CF card only)</li> </ul> <p>Storage temperature: -20°C to 80°C</p> <p>Relative humidity: 10% to 90% (Non-condensing)</p>	
Certification	CE, FCC A	

## 1.2 Accessories

### 1.2.1 VISION BOX Accessories

Accessory Photo	Description	Q'ty
	AC Power Adapter 120W with power cord	1
	2-pin Remote power connector	1
	COM Port harness cable (1 DB44 connector to 4 x DB9 ports)	1
	Chipset Drivers and Image OS recovery DVD	1
	QuickStart	1
	Hard Disk screws	4

# 2 Hardware

## 2.1 Interface and Connection

- **VISION BOX Front View**

VB-115 and VB-216 are same interface design in the front and rear.



- **VISION BOX Rear View**



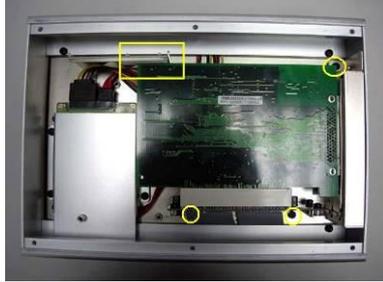
# 2.2 Hardware Installation

	<p>To assure system safety and reliability, please do not use CPU and memory not recommended by ICP DAS in your VISION BOX as they may cause hazards. ICP DAS assume no liability for damages to the misuse of this product and the warranty will be voided immediately.</p>
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## 2.2.1 PCI Card Installation

<p>Step 1: Unscrew the 6 screws on bottom cover.</p> 	<p>Step 2: Open the bottom cover with care.</p> 
<p>Step 3: Unscrew the PCI bus triangle stand.</p> 	<p>Step 4: Let the PCI bus triangle stand straight up and unscrew the bracket.</p> 
<p>Step 5: Insert your PCI card into the PCI Bus until it is completely plugged in.</p> 	<p>Step 6: Make sure the PCI card install correctly and then fasten the bracket by screw.</p> 

Step 7: Make sure the rear part of PCI card is completely plugged into the card holder and screw PCI bus triangle stand properly.



Step 8: Put bottom cover back in place and screw it.



## 2.2.2 HDD Installation

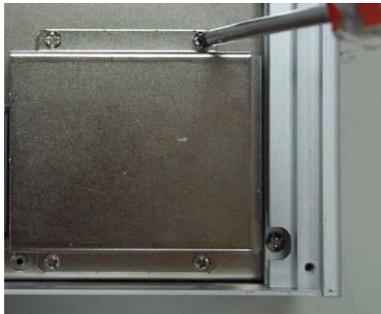
Step 1: Unscrew the 6 screws on bottom cover.



Step 2: Open the bottom cover.



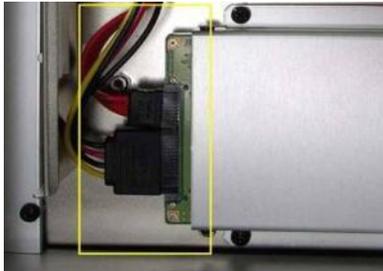
Step 3: Unscrew the HDD stand



Step 4: Screw 2.5" HDD



Step 5: Plug HDD cable. Pay close attention to SATA power cable and SATA cable at the right position.



Step 6: HDD stand screws.

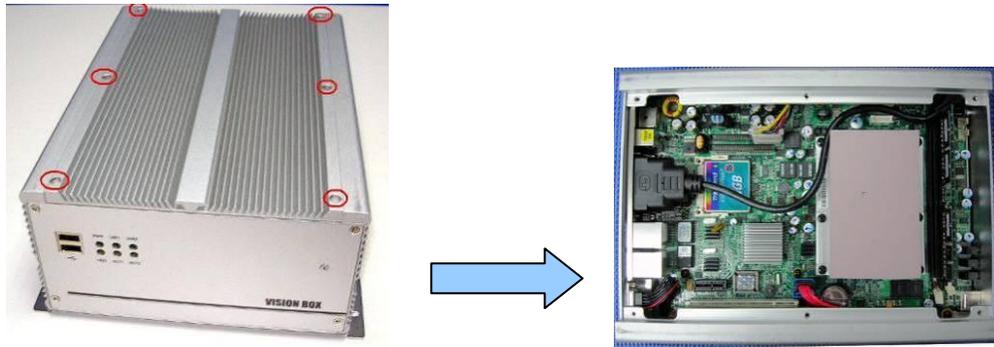


Step 7: Put bottom cover back in place and screws it.



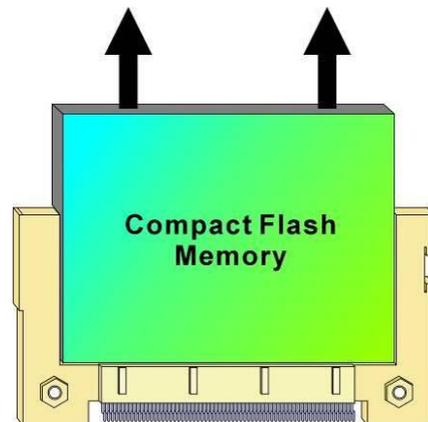
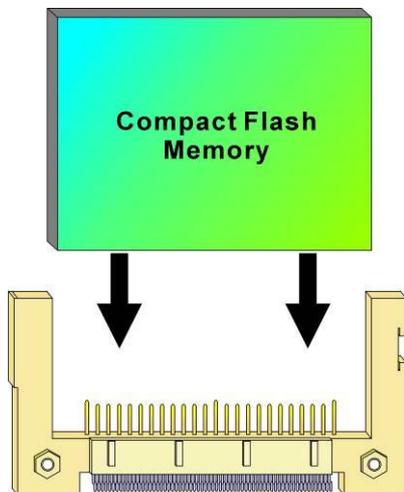
### 2.2.3 CF Card Installation

The Compact Flash Socket is located on the top side of VISION BOX system board. Please unscrew the 6 screws of the top cover to remove the lid. Please follow the procedures below to install or remove a Compact Flash memory card.



**To install a Compact Flash memory card** into system board, align the notches on the card with the Compact Flash socket in the system board. Then firmly insert the card into the socket until it is completely seated.

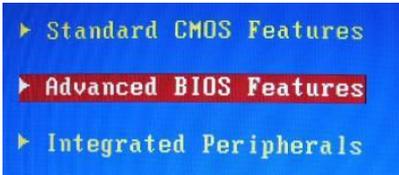
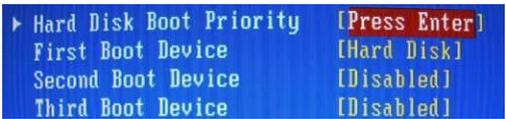
**To remove the Compact Flash memory card** from system board, pull out the memory card from the Compact Flash socket.



## 2.2.4 CF Card and HDD Master/Slave Setting

The VISION BOX allows using Compact Flash card and Hard Disk at the same time. You will need to go to BIOS setup to change the system boot up priority.

### ■ VISION BOX Series BIOS setting

<p>Step 1: Power on the system; hold the DEL key down until the blue BIOS screen appears. Scroll down to 'Advanced BIOS Features'</p>	
<p>Step 2: Select 'Hard Disk Boot Priority'</p>	
<p>Step 3: Use '+' or '-' key to select options. Press 'F10' to save your settings. And reboot the system.</p>	

If you install only either one of CF card or HDD on VISION BOX, the system BIOS will be set as 'Ch0 Master' automatically for system boot up device.

## 2.2.5 VISION BOX COM Ports

The VISION BOX provides four COM ports for I/O data communication from COM1 to COM4. User can connect the COM port device via COM port harness cable. Each DB9 connector assign of COM port harness cable as below.

COM Port Connector	Appearance of COM Port Harness Cable	DB9 Connector Label	COM Port No.	VB-115 Protocol Support	VB-216 Protocol Support
DB44		A	COM1	RS-232	RS-232
		B	COM2	<b>RS-232</b> <b>RS-422</b> <b>RS-485</b>	<b>RS-232</b> <b>RS-422</b> <b>RS-485</b>
		C	COM3	RS-232	RS-232
		D	COM4	RS-232	RS-232

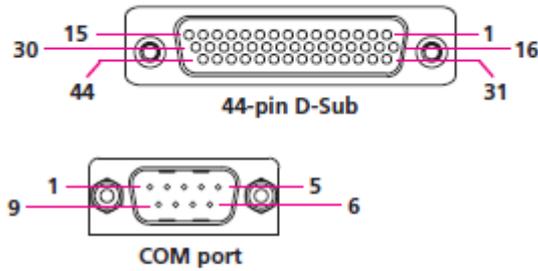
The VISION BOX COM ports all set on RS-232 protocol by default setting. There is only one COM port can be support RS-422 in Full Duplex Mode or RS-485 protocol in Half Duplex Mode via COM port setting (Please refer 2.2.5.1 and 2.2.5.2).

There have two connection solutions recommended, while user required to use RS-485 protocol for I/O data communication.

- a. Added one RS-232 to RS-485 converter in between of VISION BOX and the I/O device, for example: add one ICPDAS I-7520 RS-232 to RS-485 converter.
- b. VISION BOX also can be connected to RS-485 I/O devices directly without converter requirement. However this is support to use in ICPDAS's I7000 and M7000 series I/O products only, and user must to use DCON utility and set the Delay Time (unit: ms) for difference Baud Rate communication speed as below.

Baud Rate(bps)	115200	57600	38400	19200	9600
Delay Time(ms)	2	4	6	12	24

The 44-pin D-Sub connector is used to connect 4 external serial devices. Here is the pin assignment of the serial interface.



COM1 (RS232) labelled "A" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
1	1	DCD1	2	2	RXD1
3	3	TXD1	4	4	DTR1
5	5	GND	6	6	DSR1
7	7	RTS1	8	8	CTS1
9	9	RI1	10		GND

COM2 (RS232) labelled "B" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
11	1	DCD2	12	2	RXD2
13	3	TXD2	14	4	DTR2
15	5	GND	16	6	DSR2
17	7	RTS2	18	8	CTS2
19	9	RI2	20		GND

COM3 (RS232) labelled "C" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
21	1	DCD3	22	2	RXD3
23	3	TXD3	24	4	DTR3
25	5	GND	26	6	DSR3
27	7	RTS3	28	8	CTS3
29	9	RI3	30		GND

COM4 (RS232) labelled "D" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
31	1	DCD4	32	2	RXD4
33	3	TXD4	34	4	DTR4
35	5	GND	36	6	DSR4
37	7	RTS4	38	8	CTS4
39	9	RI4	40		GND
41		NC	42		NC
43		NC	44		NC

Note: Pin 39 is defined as an external power source, which can be selected for 5V or 12V using JP10.

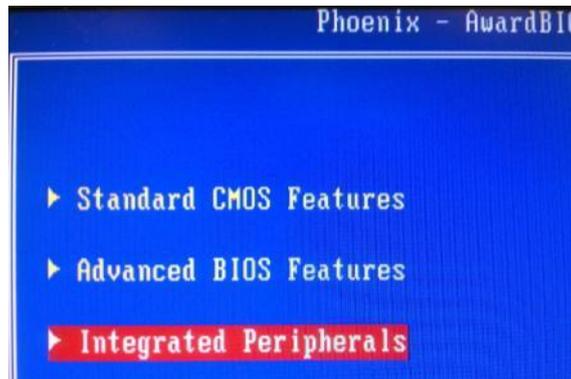
COM2 also supports the RS-485 and RS-422.

COM2 (RS422) labelled "B" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
11	1	TXD-	12	2	TXD+
13	3	RXD+	14	4	RXD-
15	5	GND	16	6	RTS-
17	7	RTS#	18	8	CTS+
19	9	CTS-	20		GND

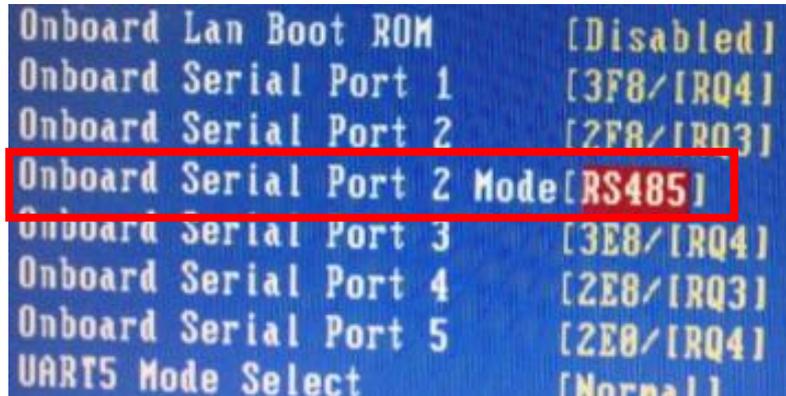
COM2 (RS485) labelled "B" on DB9 Cable Connector					
DB44 Pin #	DB9 Pin #	Def.	DB44 Pin #	DB9 Pin #	Def.
11	1	TXD-	12	2	TXD+
		RXD-			RXD+
13	3	Reserved	14	4	Reserved
15	5	Reserved	16	6	Reserved
17	7	Reserved	18	8	Reserved
19	9	Reserved	20		Reserved

### 2.2.5.1 VB-115 series COM1 (RS-232/422/485) BIOS Setting

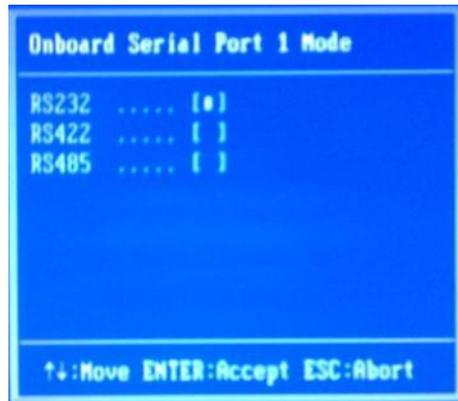
Step 1: Power on the system; hold the DEL key down until the blue BIOS screen appears. Scroll down to 'Integrated Peripherals'



Step 2: Select 'Onboard Serial Port 1 Mode'



Step 3: Use “↑” or “↓” key to select options. Press 'F10' to save your settings. And reboot the system.

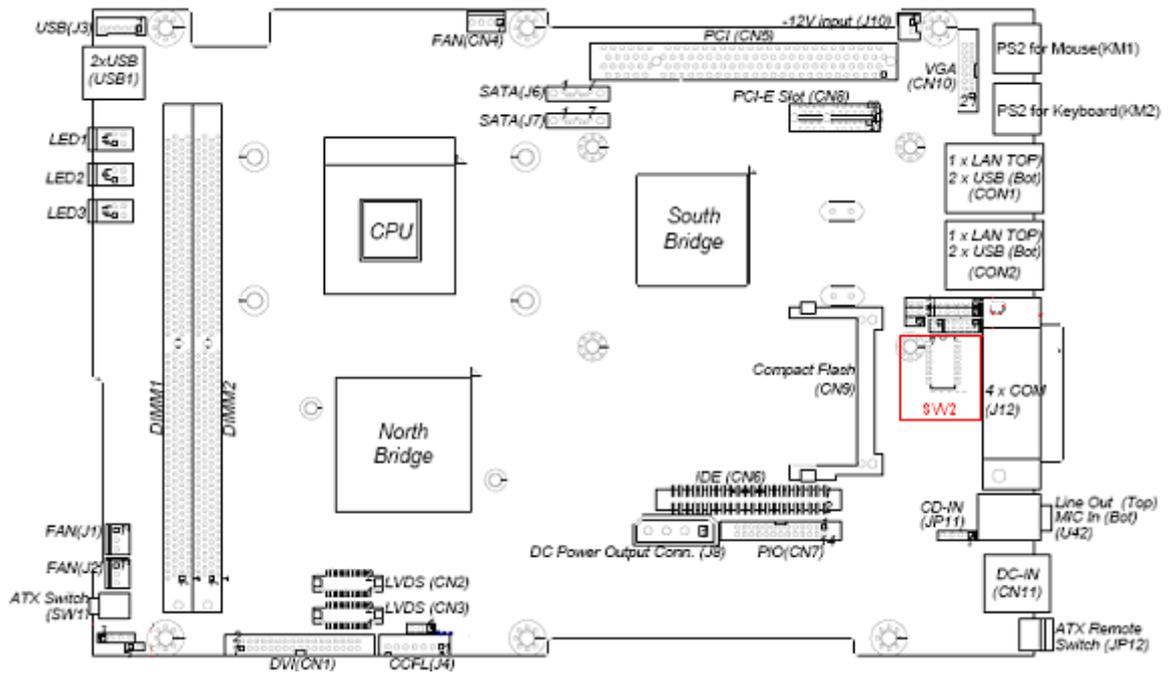


### 2.2.5.2 VB-216 series COM2 (RS-232/422/485) Switch Setting



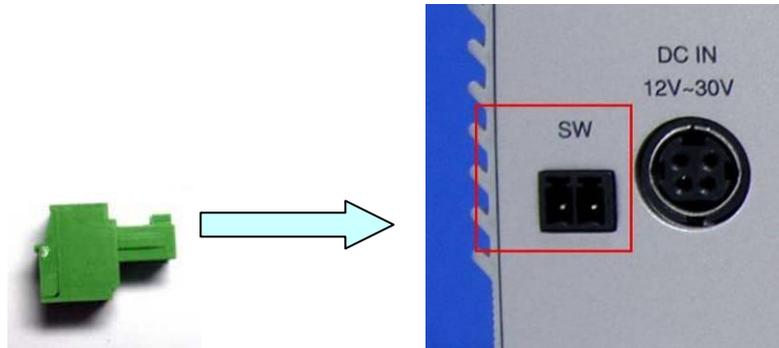
Mode	1	2	3	4	5	6	7	8	9	10
RS232*	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
RS422	OFF	OFF	ON	OFF	ON	OFF	ON	ON	ON	ON
RS485	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	ON

- **COM2 Switch location of VB-216**



## 2.2.6 ATX power remote on/off switch

User can wire out to other remote power switch to control VISION BOX power on or off.



Pin.	Def.
1	GND
2	PWR_ON

# 3 Software

## 3.1 Standard Operation System

### 3.1.1 VB-115H/VB-216H

VB-115H/VB-216H default did not offer any licensing system OS. We recommend that users can install licensing system OS via USB DVD player into the HDD of VB-115H/VB-216H for your application requirement.



User can find the chipset drivers of VISION BOX in our recovery DVD. For the PCI interface cards or driver installation, please just follow the system OS standard operation.

	<p><b>The Image OS files in recovery DVD are authorized legally to use in VB-115C/VB-216C only. If user want to use these Image OS files in VB-115H/VB-216H, then please contact the sales of ICPDAS to order legally Windows XP Embedded License for it. Otherwise, ICPDAS won't allow this illegally authorization, and plus user must to take all the responsibility of Microsoft software illegal authorization.</b></p>
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## 3.2 XP Embedded Operation System

### 3.2.1 VB-115 Series/VB-216C

VISION BOX default standard image OS supports three UI languages: English, Traditional Chinese and Simplified Chinese. The image OS built by Microsoft Windows Embedded SP2 Feature Pack 2007. VB-115 series addition offers Windows Embedded Standard 2009 image OS files.

Users can find the backup image OS on the recovery DVD. Meanwhile user can change to special image OS for difference language UI requirement.

Image OS	Language support	Version
Standard-XPe	English + Traditional Chinese (Unicode only), Simplified Chinese (Unicode only)	1.0.0.19

If the OS version you require is not included above, a customized one can be provided for additional charges.

### 3.2.2 How to recovery Image OS?

Please refer the procedure description as below for recovery the Image OS file into CF card.

3.2.2.1 Please prepare following items for Image OS recovery execution

- One USB DVD player
- One system boot up CD/DVD
- Please copy the recovery software into USB disk
- VISION BOX recovery DVD

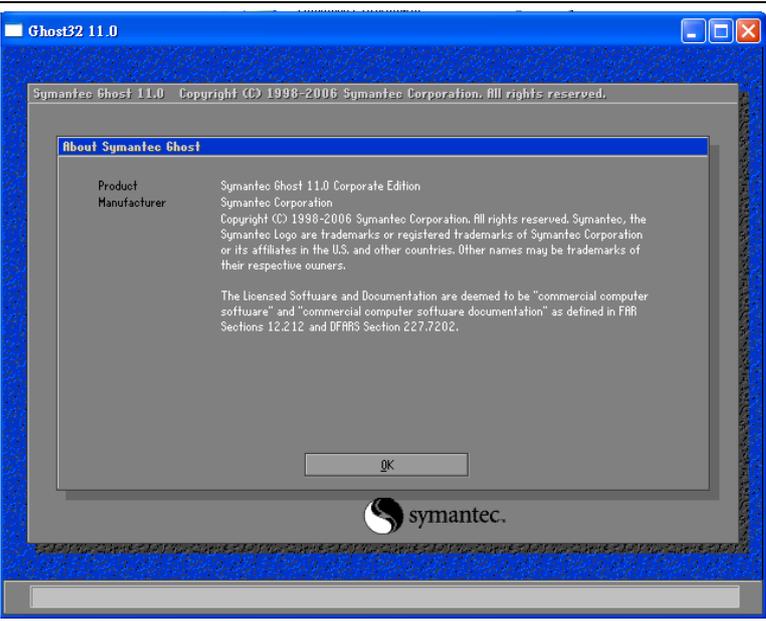
3.2.2.2 There are two options for recovery execution, and user can choose either way for recovery process.

- **Option1** – Plug the USB DVD player into VISION BOX USB port, and then insert the system boot up CD/DVD into DVD player. After system boot up, remove the boot up CD/DVD and insert VISION BOX recovery DVD into DVD player. In the meantime, plug the USB disk into VISION BOX USB port then follow the description of 3.2.2.3 for the recovery execution!
- **Option2** – Please copy the system boot up files into the root path of USB disk,

then copy recovery software and the Image OS file into the USB disk too. When VISION BOX system boot up, please click 'Delete' key for enter the system BIOS then set the system boot up priority from USB. After that, please restart the system then system will be boot up from USB disk. Then follow the description of 3.2.2.3 for the recovery execution!

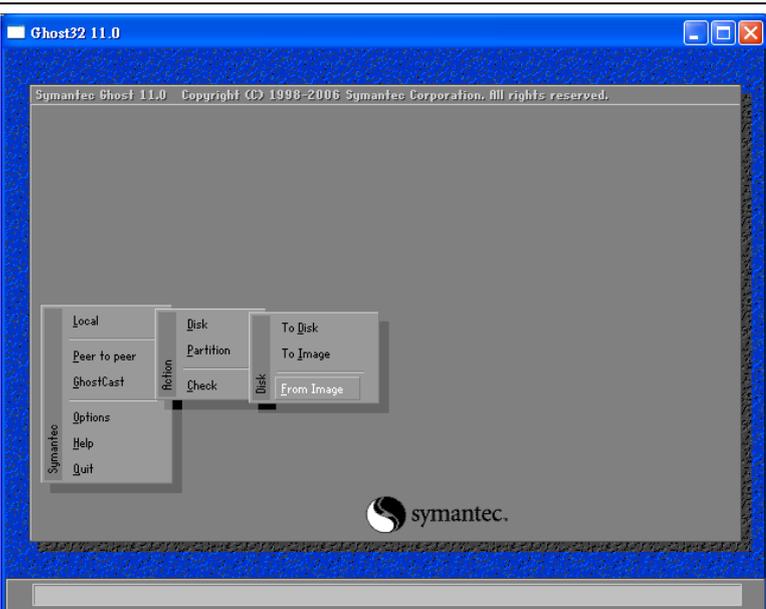
3.2.2.3 Below example is used "Symantec Norton Ghost32 V.11" as a demonstration how to do recovery the Image OS file into CF card. (The VISION BOX recovery DVD didn't attached any recovery software, so user must to get the legally software for it. The "Symantec Norton Ghost V.11" or above version are recommend).

Step 1 – Open "Symantec Norton Ghost32 V.11" software and click 'OK'.



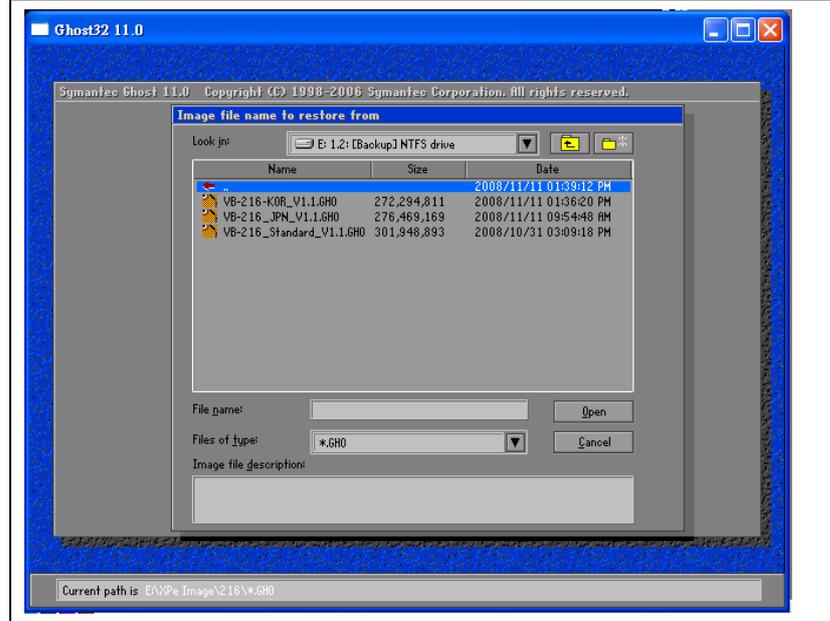
The screenshot shows the 'About Symantec Ghost' dialog box within the Ghost32 11.0 application window. The dialog box contains the following text: 'Product: Symantec Ghost 11.0 Corporate Edition', 'Manufacturer: Symantec Corporation', and a copyright notice for 1998-2006. It also includes a disclaimer about the software being deemed 'commercial computer software' and 'commercial computer software documentation' as defined in FAR Sections 12.212 and DFARS Section 227.7202. An 'OK' button is visible at the bottom of the dialog box.

Step 2 – Select 'Local - Disk - From Image' from function menu.

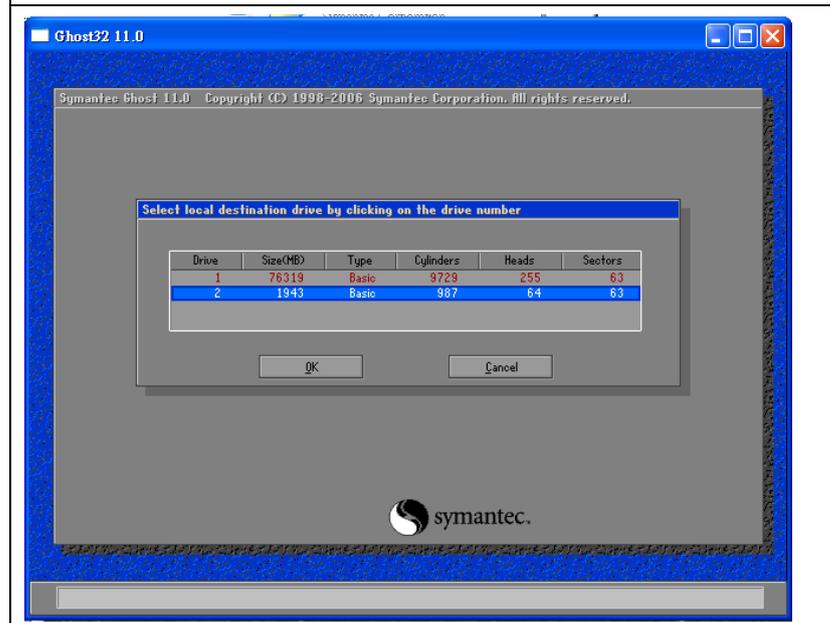


The screenshot shows the main menu of the Ghost32 11.0 application. The 'Local' menu is open, and the 'Disk' sub-menu is also open, with 'From Image' selected. The main menu options include: Local, Peer to peer, GhostCast, Options, Help, and Quit. The 'Disk' sub-menu options are: Partition, Check, and From Image. The 'To Disk' and 'To Image' options are also visible in the background.

Step 3 – Select from path of the Image OS file.

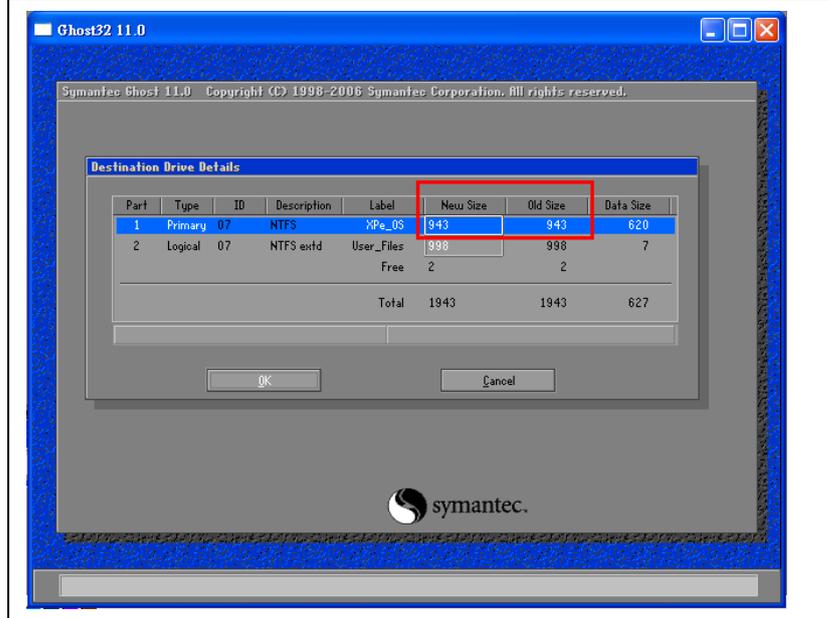


Step 4 – Select the destination of HDD or CF card for recovery the Image OS file into the path.



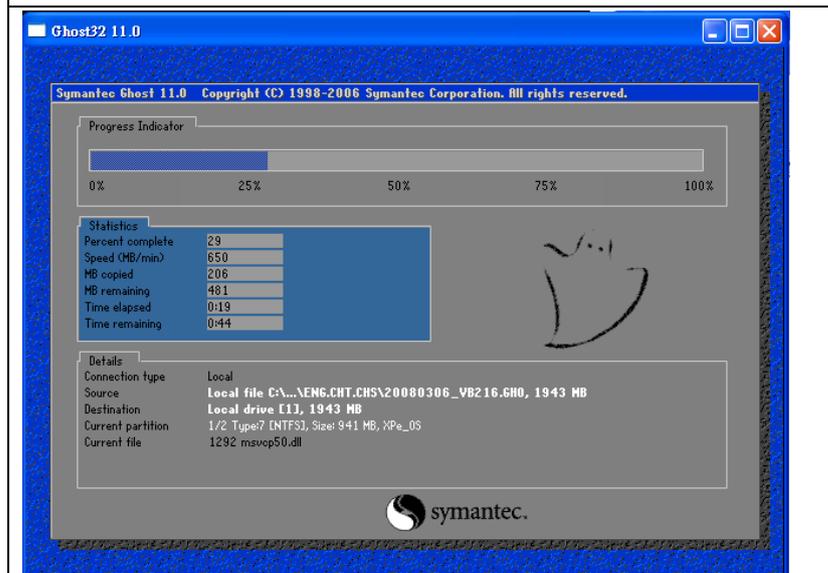
Step 5 – Recovery the Image OS file into CF card.

Ghost software is needed to set the 'New size' greater or equal with 'Old size' on partition C:\ (943MB, please refer the red rectangle position of the picture). Otherwise the Image OS file may fail to recovery into the destination.



Step 6 – Select the destination disk then click 'OK'.

Once the program pop up 'Clone Completed Successfully' then click 'Restart Computer'. After restart the computer then VISION BOX will start to run the recovery Image OS for system operation!



### 3.2.3 Image OS Component List

The VISION BOX image OS support component list as below. If the component list that you require is not included customization is welcomed.

#### ■ Programming Languages Components

Component Item	Description	Note
Visual Basic 6.0 Runtime Library	Microsoft Visual Basic 6.0 runtime library	
Visual C++ Runtime Libraries (Side X Side)	Microsoft Visual C++ 6.0 runtime library	
Microsoft Foundation Class Library (Legacy)	MFC library	
.NET Framework 1.1	.NET Framework 1.1	
Chinese (PRC) .NET Framework 1.1 MUI	.Net 1.1 Simplified Chinese	Standard-XPe only
Chinese (Taiwan) .NET Framework 1.1 MUI	.Net 1.1 Traditional Chinese	Standard-XPe only
.NET Framework 2.0	.NET Framework 2.0	
Msxml 3.1	Microsoft language extension 3.1 library	
Explorer Application	Windows Explorer library	
Standard Template Libraries (STL)	Standard Template library	

#### ■ Installation Components

Component Item	Description	Note
Add Hardware Control Panel	Add new hardware device	
Add/Remove Programs Control Panel	Add or remove program	
Class Installer - Stream	Class Installer	
Safely Remove Hardware Program	Safety remove hardware	

#### ■ Interface Components

Component Item	Description	Note
Communications Port	Com Port	
USB 2.0	USB 2.0 Support	
USB Mass Storage Device	USB Mass Storage Device	
Removable Storage Service	Remove storage device	
CD-ROM Drive	CD-ROM driver	
Keyboard & Mouse Control Panel	Keyboard and mouse	
Smart card Subsystem	IC card or Smart card	

■ **Networking Support Components**

Component Item	Description	Note
Realtek RTL8168/8111 Family PCI-E GBE NIC"	Gigabit Ethernet Driver	VB-115 series only
DHCP Client Service	DNS Client	
Windows Firewall control panel t	Windows Firewall	
Internet Connection Wizard	Internet connection wizard	
Internet Explorer	IE 7.0 explorer	
Map Network Drives/Network Places Wizard	Network driver connection	
Network Setup Wizard	Network setup wizard	
Workstation Service	Create or maintain remote client server connection	
Security Accounts Manager Server Library	Accounts manager	
Security Shell Extension	Security shell	
Simple Network Management Protocol	SNMP	

■ **Database Components**

Component Item	Description	Note
Microsoft SQL Express 2005 Macro	Microsoft SQL Server 2005 Express support*	
Microsoft Data Access Components (MDAC) -- ODBC Driver	ODBC support	
Jet Database DAO Support	Jet Database DAO Support	
Jet Database Data Extensions	Jet Database Data Extensions	
Jet Database Engine	Microsoft Jet database engine	
Jet Database Foreign Data ODBC Extensions	Jet Database Foreign Data ODBC Extensions	
Jet Database ODBC Support	Jet Database ODBC Support	
Jet Database OLEDB Support	Jet Database OLEDB Support	
Jet Database Replication Extensions	Jet Database Replication Extensions	
Microsoft Data Access Components (MDAC)	MDAC component included ADO component	
Visual Fox Pro ODBC Driver Stub	supplies the Visual Fox Pro ODBC driver	vfpodbc.dll

Microsoft SQL Server 2005 Express support\* - The Image OS file built-in the Marco component of SQL Express 2005 only. Microsoft SQL Server 2005 Express Edition Service Pack2 is recommended and can be download in free via Microsoft website.

■ **Printer Support Components**

Component Item	Description	Note
Printer Common #1 (Client Side Shared Components)	Printer Support	
USB Printing Support	USB Printing Support	
Local Printing	Local printing support	
Server Printing	Server printing support	

■ **System Tool Components**

Component Item	Description	Note
Accessories/System Tools	System Properties	
Administration Support Tools	Administrative Tools	
WMI Core	WMI Core	
Tray Icon Add/Remove Support	Tray icon add/remove	
CDFS	CDFS	
UDFS	UDFS	
FAT	FAT	
NTFS	NTFS	
Volume Shadow Copy Service	Volume shadow copy service	
Event Log	Event log	
File Sharing	File sharing	
HID Keyboard Device	Keyboard properties	
Indexing Service	Remote server file index and access	
Task Manager	Task Manager	
Intel Corporation 915GM/915GMS/915GME/910GML Embedded Graphics Chipset Function	VGA Driver	VC-115 series only
Realtek High Definition Audio(SJJ)	Audio Driver	VC-115 series only
Dos Windows on Windows Support	Support 16-bit applications	
Time Service Core	Time Zone and Internet Time	
System cloning tool	To ensure that each device has a run-time image containing a unique computer security ID (SID) and computer name	

■ **Windows Tool Components**

Component Item	Description	Note
CMD – Windows Command Processor	Command Prompt	
Windows Accessories	Windows Accessories program	
Windows API – User	Windows API	
Windows Clean-Up Utilities	Disk clean-up utilities	
Windows Image Acquisition Core	Scanner or digital camera image acquisition service	
Windows Installer Service	Add or remove program	
Windows Logon (Standard)	Windows Standard Logon	
Direct3D	DirectX 9.0C	
Display Control Panel	Display	
Windows Picture and Fax Viewer	Windows picture and fax viewer	
Windows XP Visual Style	Windows XP visual style	
Wireless Zero Configuration	Auto setting for 802.11 interface card	
Computer Browser Service	My Network Places	
Computer Name User Interface	Computer name setting	
Cryptographic Network Services	Authentication	
Date/Time Control Panel	Date and Time Properties	
Desktop Wallpaper	Desktop wallpaper	
Device Manager	Device Manager	
NTFS	NTFS system file	
Power Meter Control Panel	Power setting	
Compression and Expansion Tools	Windows Compression and Expansion Tools	
System Control Panel	System control Panel	
Text Services Framework	Language for non-Unicode program	
Microsoft IME Language Model Manager	Input languages manager	
International Control Panel	Regional and language options	
Microsoft IME Pad	Languages	
Microsoft Simplified Chinese IME Core	Simplified Chinese keyboard input language	Standard-XPe only
Microsoft Taiwan IME Program	Traditional Chinese keyboard input language	Standard-XPe only

### 3.2.4 Image OS Operation UI (User Interface)

This Chapter can help user to quickly preview the Image OS operation UI (User Interface) of VISION BOX. User also can refer the Chapter 3.2.3 for the Image OS Component List.**Start Menu**

Start Menu – English UI (Default setting of each Image OS)



Start Menu – Traditional Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Traditional Chinese)

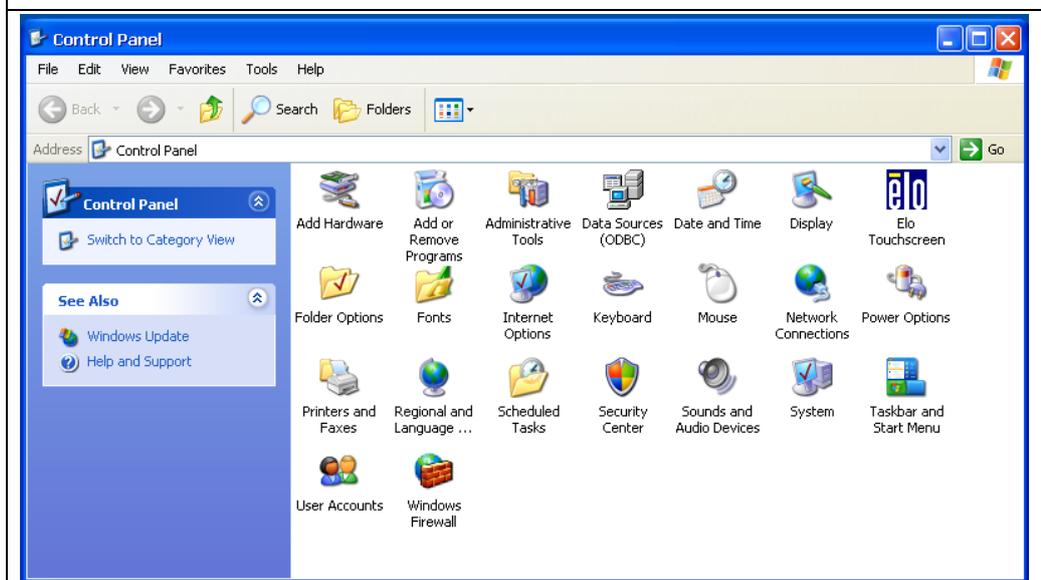


Start Menu –Simplified Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Simplified Chinese)

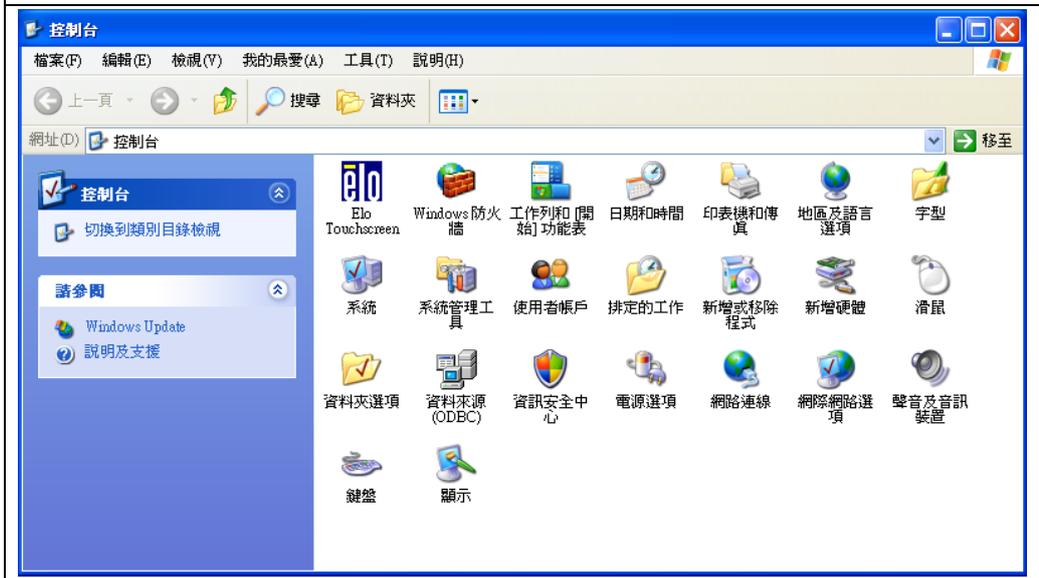


### 3.2.4.2 Control Panel

Control Panel – English UI (Default setting of each Image OS)



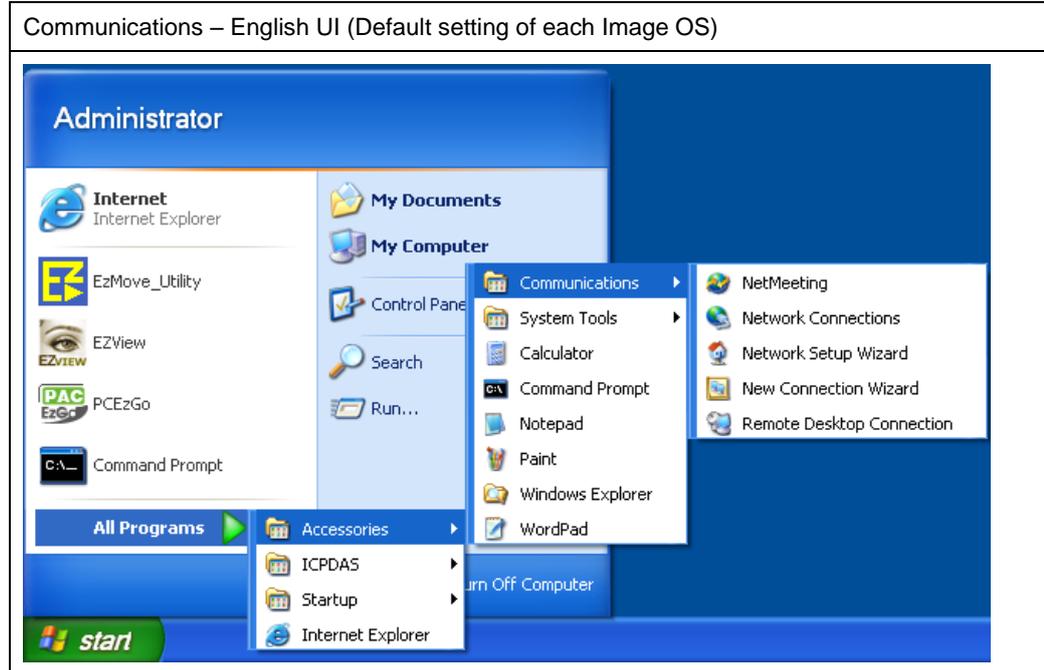
Control Panel –Traditional Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Traditional Chinese)



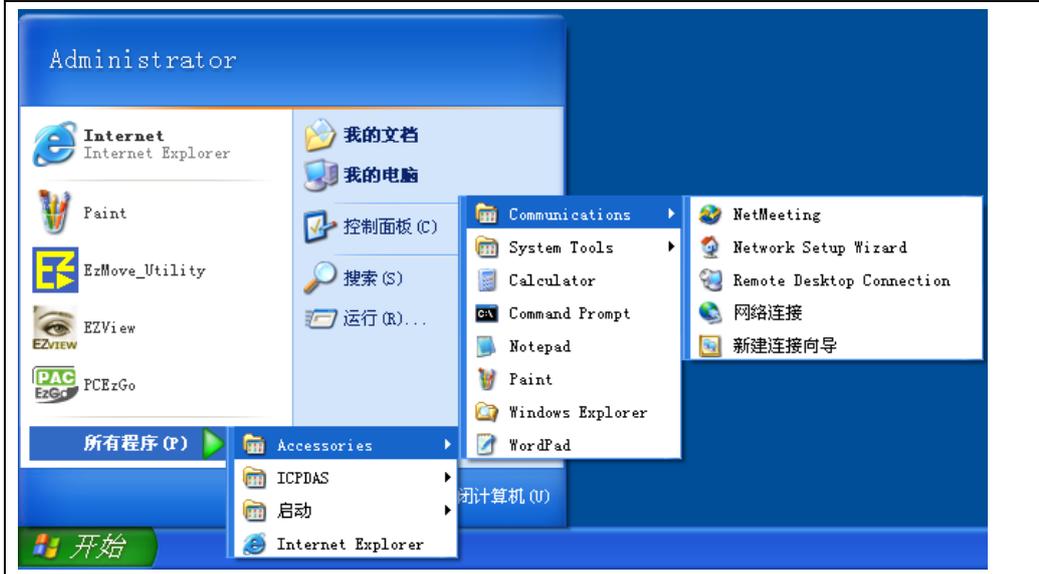
Control Panel –Simplified Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Simplified Chinese)



### 3.2.4.3 Accessories – Communications

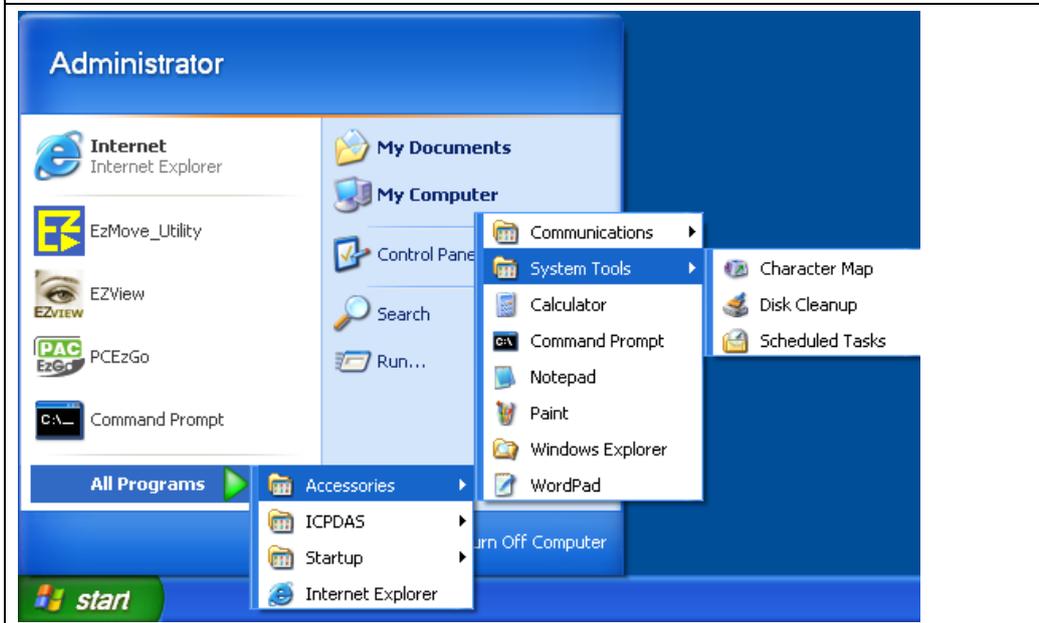


Communications –Simplified Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Simplified Chinese)

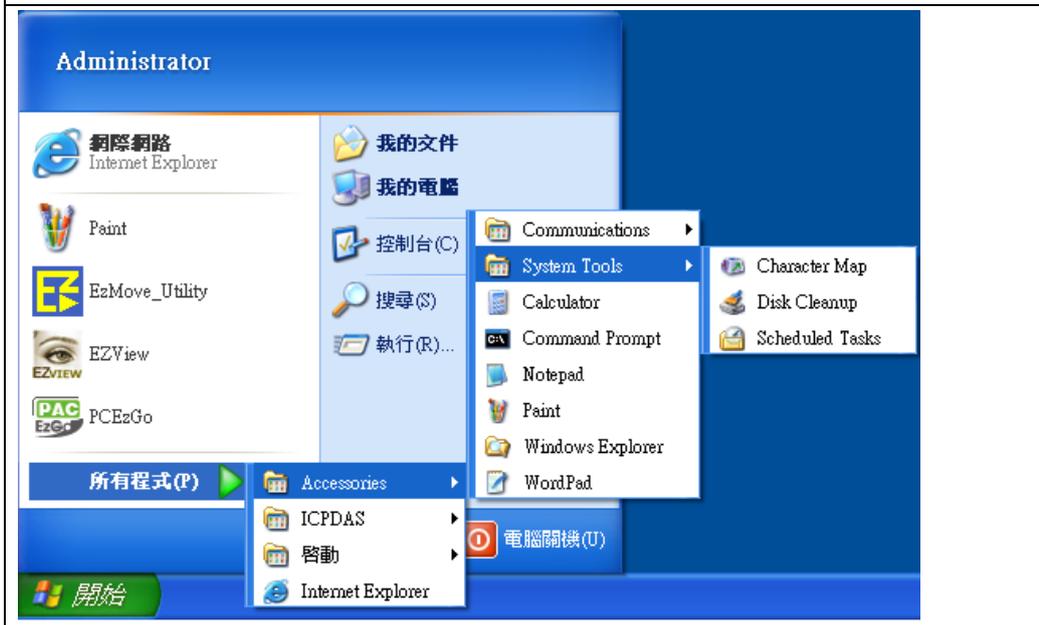


### 3.2.4.4 Accessories – System Tools

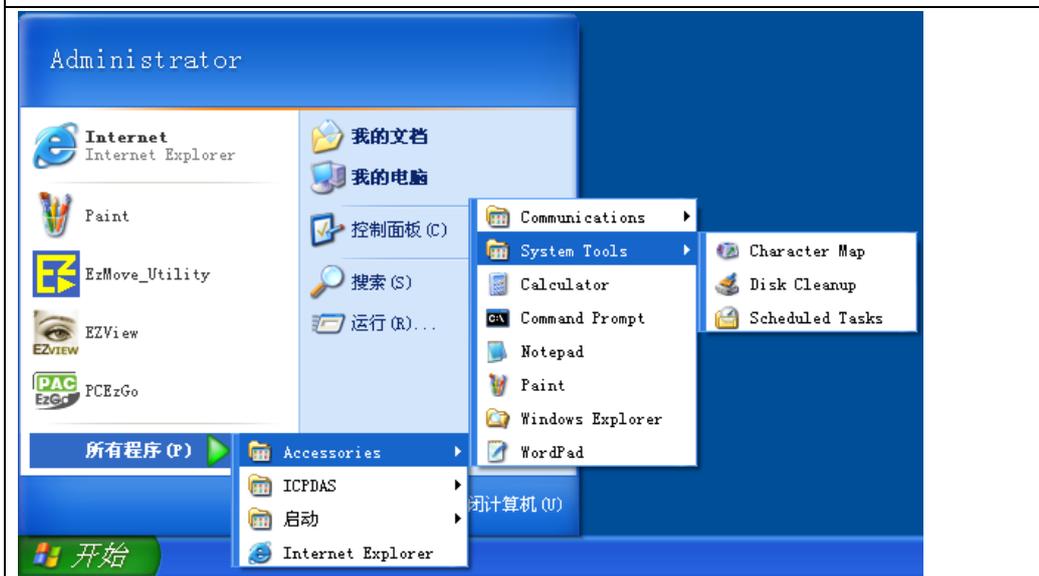
System Tools – English UI (Default setting of each Image OS)



System Tools –Traditional Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Traditional Chinese)



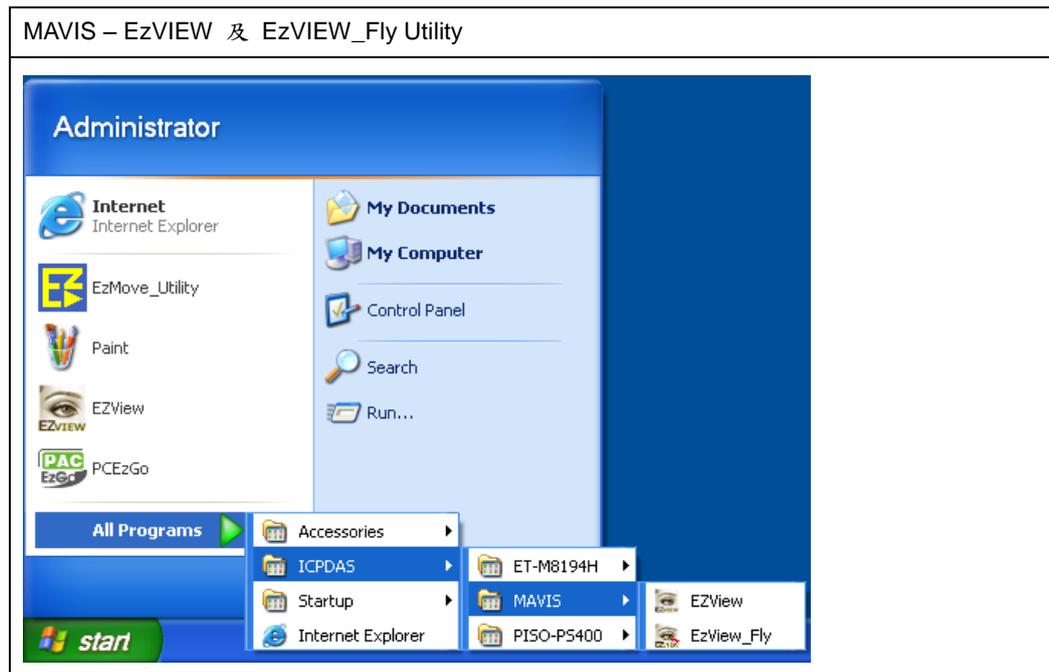
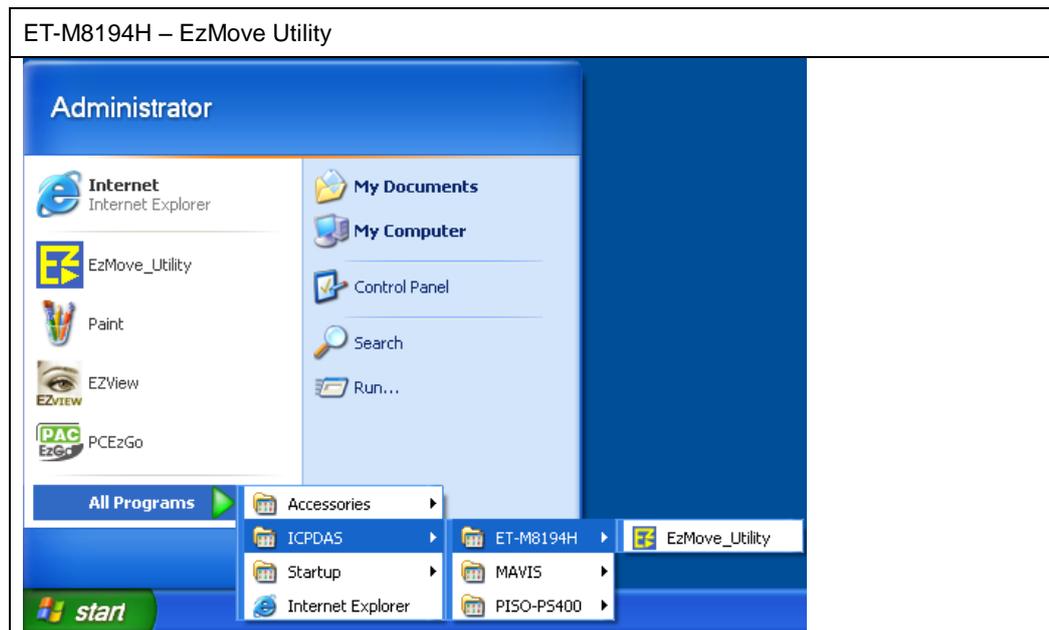
System Tools –Simplified Chinese UI (Standard Image OS supported, and user must to change the OS UI language setting to Simplified Chinese)

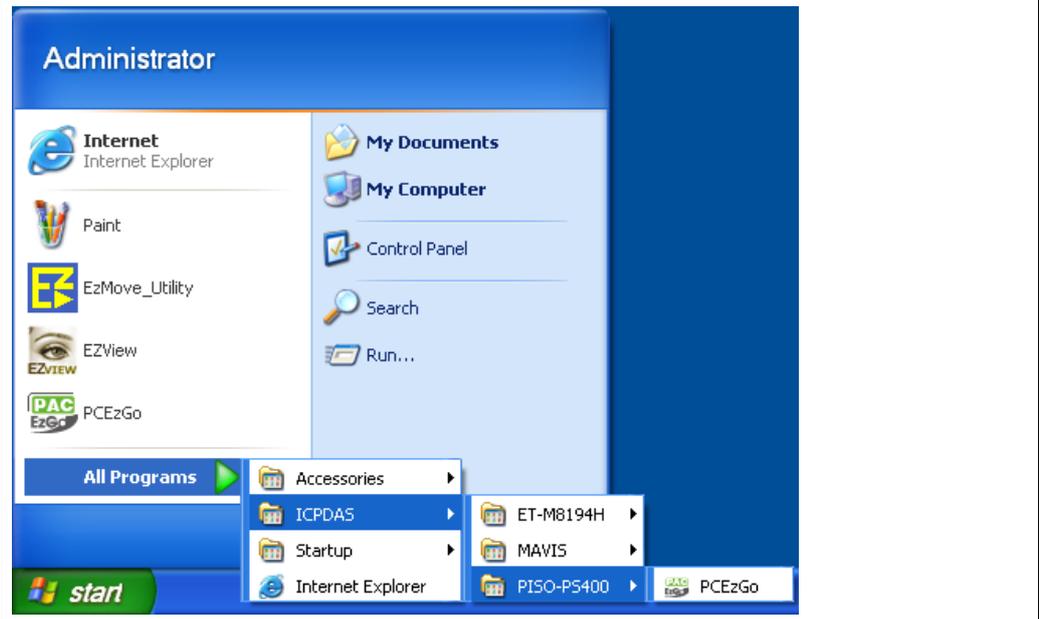


### 3.2.4.5 ICPDAS Product Utilities

The VISION BOX Image OS also works well with ICPDAS motion and vision products utilities - ET-M8194H, MAVIS and PISO-PS400 in English operation UI.

The utilities are same with standard product operation. However, the utility only can work while user install the product into VISION BOX (For detail product information, please visit ICPDAS website or refer the product user's manual).



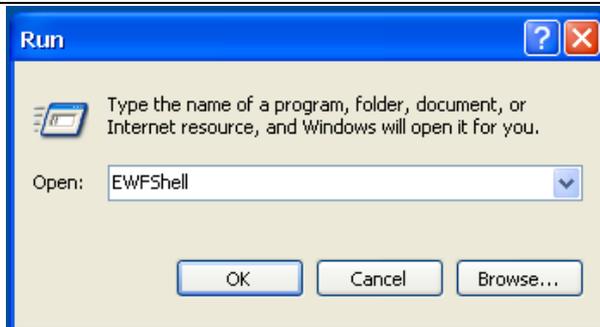


### 3.2.5 EWFSHELL Write-Protect Utility

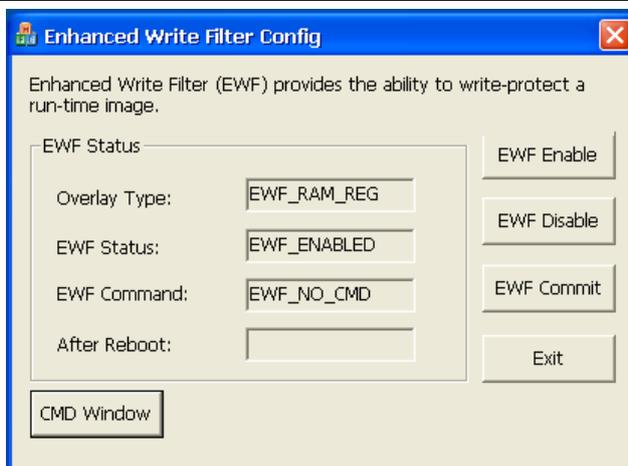
The VISION BOX Windows XP Embedded Image OS has a function - EWF (Enhance Write Filter) and write-protect utility is named - "EWFSHELL". The EWFSHELL allows user to modify the EWF status of C:\ while user required to changes system setting or need to write data into C:\. EWF value will be set in **DISABLE** by Image OS default setting. User can use EWFSHELL utility to check or modify EWF current status.

- **When need to enable the EWF?**
  - a. For protect the current system setting and user's application program as well as data safety consider.
- **When need to disable the EWF?**
  - a. Need to install new device or program into VISION BOX
  - b. Require to change the current system UI or parameters setting
  - c. Need to write data into C:\
- **How to use EWFSHELL?**

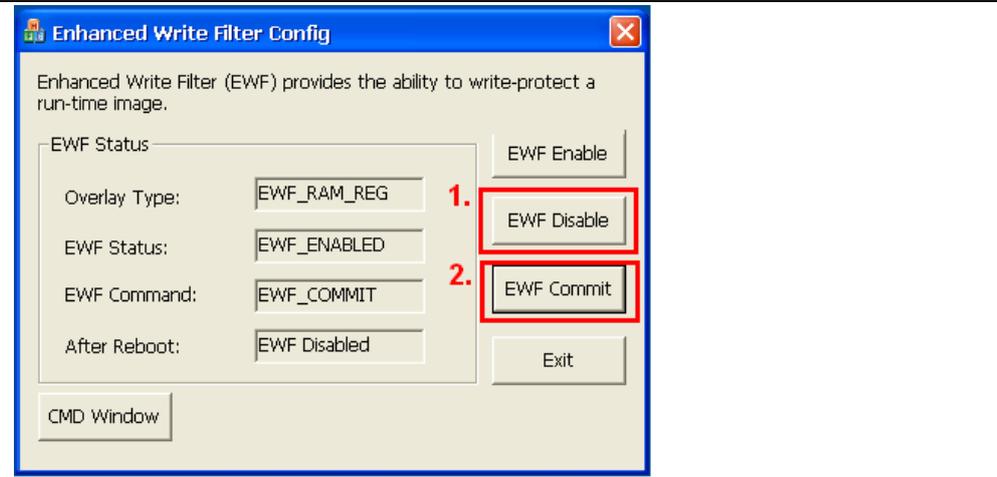
Step1 – Selected 'Run' of 'Start' menu, then typing "EWFSHELL" into 'Open' area and click 'OK'. After that the EWFSHELL utility will show up (The EWFSHELL only present by English operation UI). Or selected in the "ICPDAS" folder in the "PROGRAMS" of the "Start" menu.



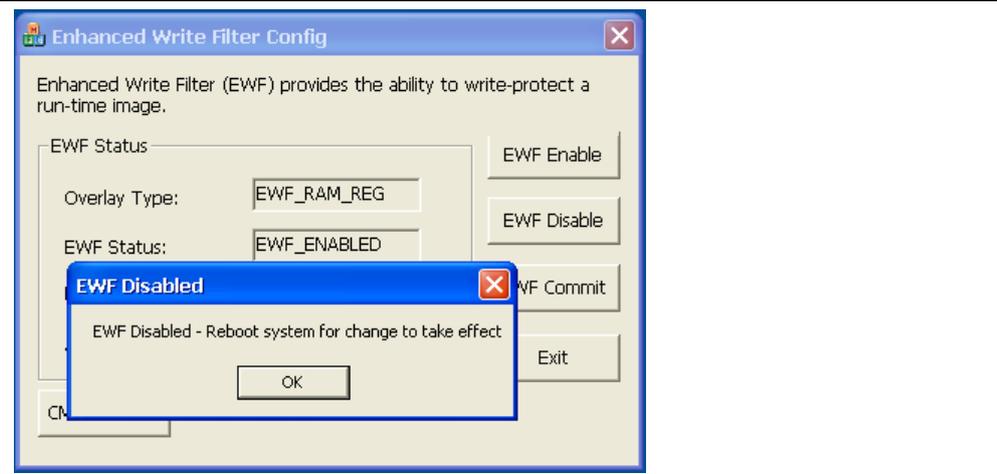
Step2 – User will see the EWF status set in Enable by default setting.



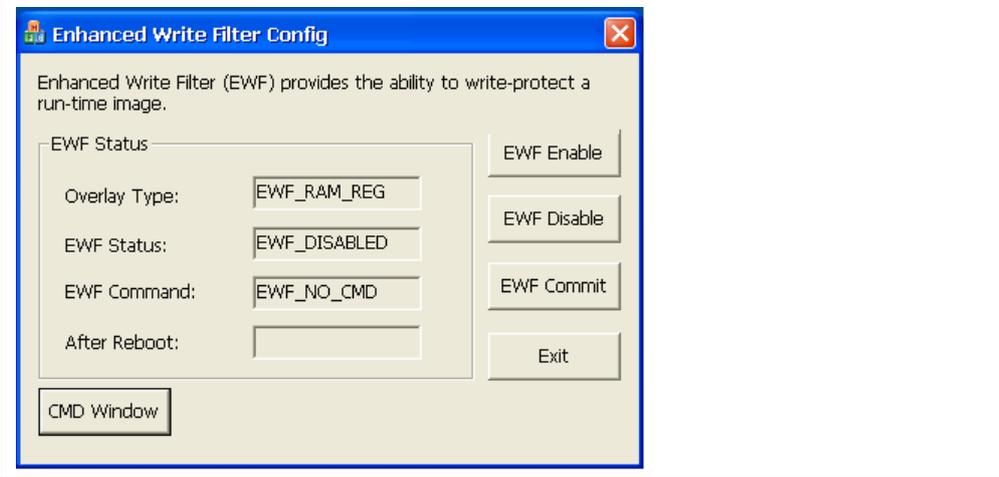
Step3 – If user wants to disable EWF, then please follow the procedure to click 'EWF Disable' and then click 'EWF Commit'.



Step4- After EWFSHELL show up a message box 'EWF Disabled – Reboot system for change to take effect'. Please click 'OK' to close the message box and then click 'Exit' for close EWFSHELL.



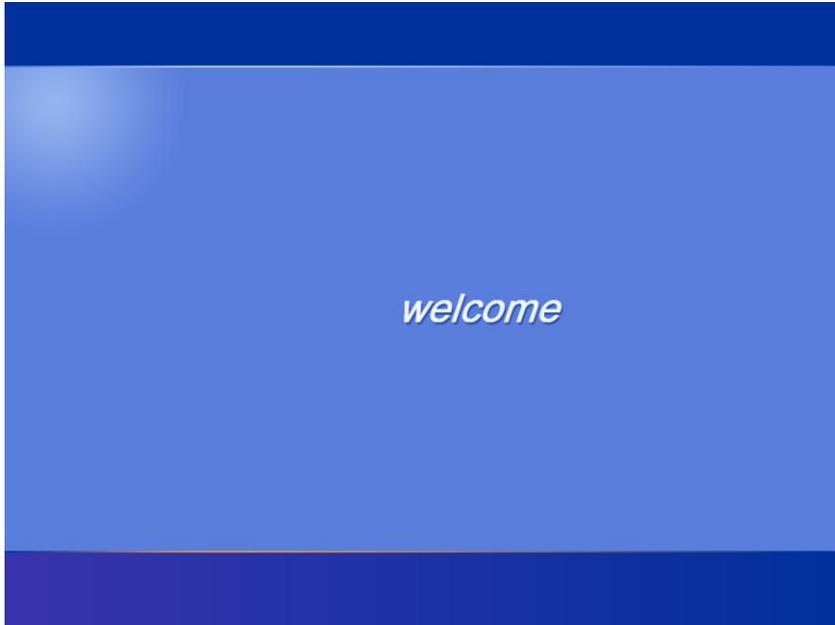
Step5 – Please close and restart the system, and then run EWFSHELL again to confirm the EWF Status has been change to Disable. When EWF Status is Disabled then user would be able to change system setting or write any data into C:\.



If user wants to enable EWF, then please follow above procedures and selected to click 'EWF Enable' in the procedure of Step3

### 3.2.6 OS UI Language Setting

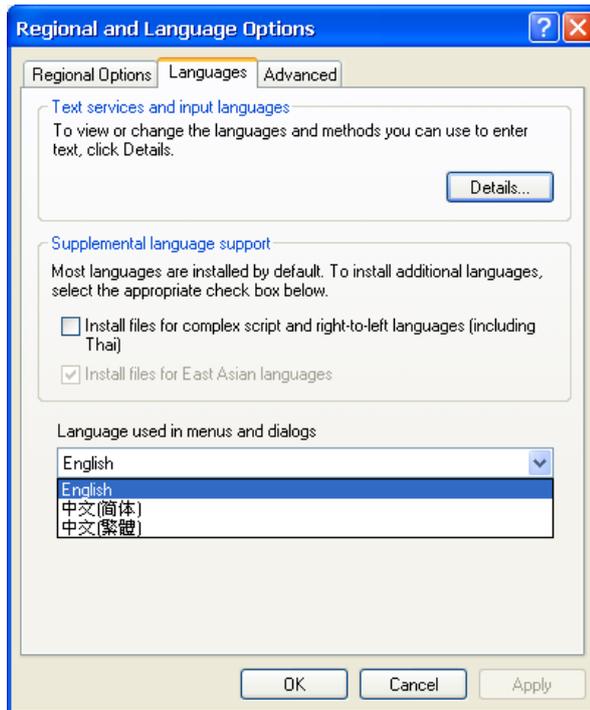
The VISION BOX image OS set the Windows welcome message and default UI language in English.



	<p><b>Non-English languages will support by UNICODE only. Any user's application program must be change the UI language to UNICODE, otherwise the program UI may present abnormal.</b></p>
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### 3.2.6.1 Standard-XPe

Users can go to the 'Regional and Language Options' in the 'Control Panel' to change OS UI language to Traditional Chinese or Simplified Chinese. Meanwhile users must go to disable EWF of C:\ for this change first; otherwise the OS UI language will be rollback to English default setting after restart system.



- When user changes language setting to Simplified Chinese and system logout or re-boot, then system will show the selected language as below.

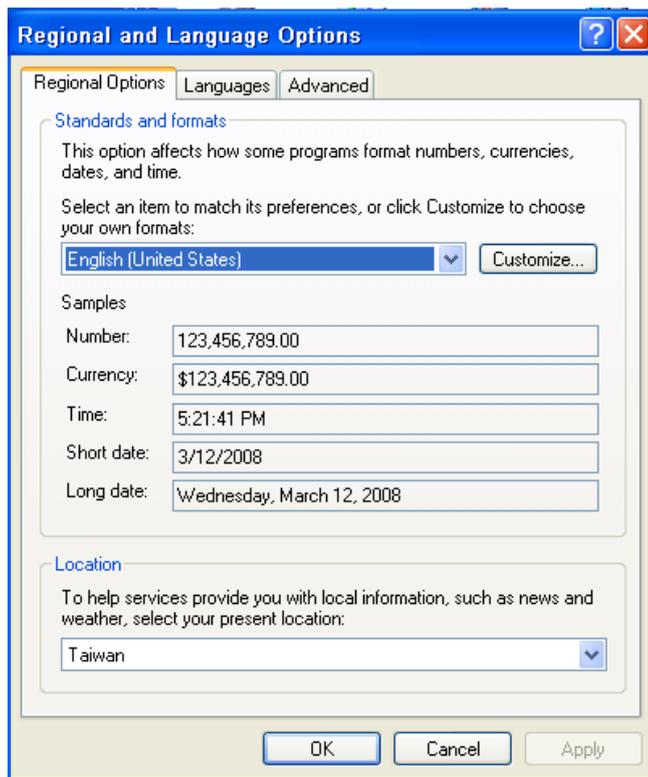


- When user changes language setting to Traditional Chinese and system logout or re-boot, then system will show selected language as below.



### 3.2.7 Time Zone Setting

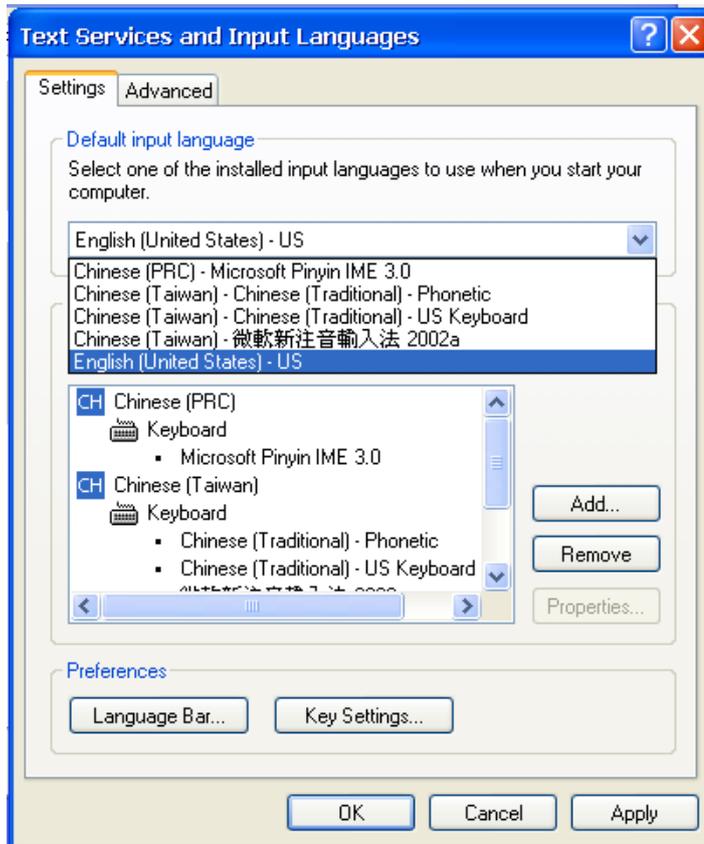
The VISION BOX default Time Zone set the location in Taiwan. User can go to 'Regional and Language Options' to change Time Zone for your location. Meanwhile users must to go to disable EWF of C:\ for this change first; otherwise the Time Zone will be rollback to Taiwan by default setting after restart system.



### 3.2.8 Keyboard Input Language Setting

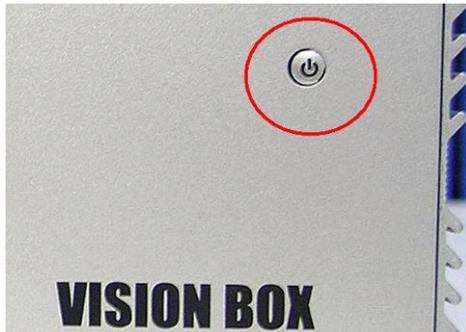
The VISION BOX image OS set the default UI language present by English. The keyboard input language will also set in English (United States) – US.

User can go to 'Text Services and Input Languages' to change input language for your keyboard. Meanwhile users must to go to disable EWF of C:\ for this change first; otherwise the Input Languages of keyboard will be rollback to English by default setting after restart system.

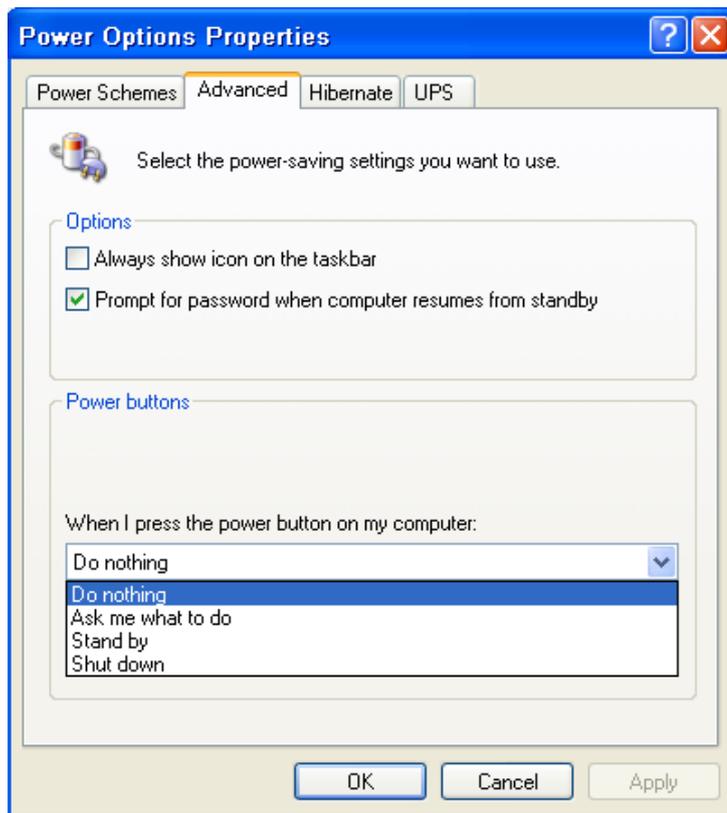


### 3.2.9 Front Panel Power Button Setting

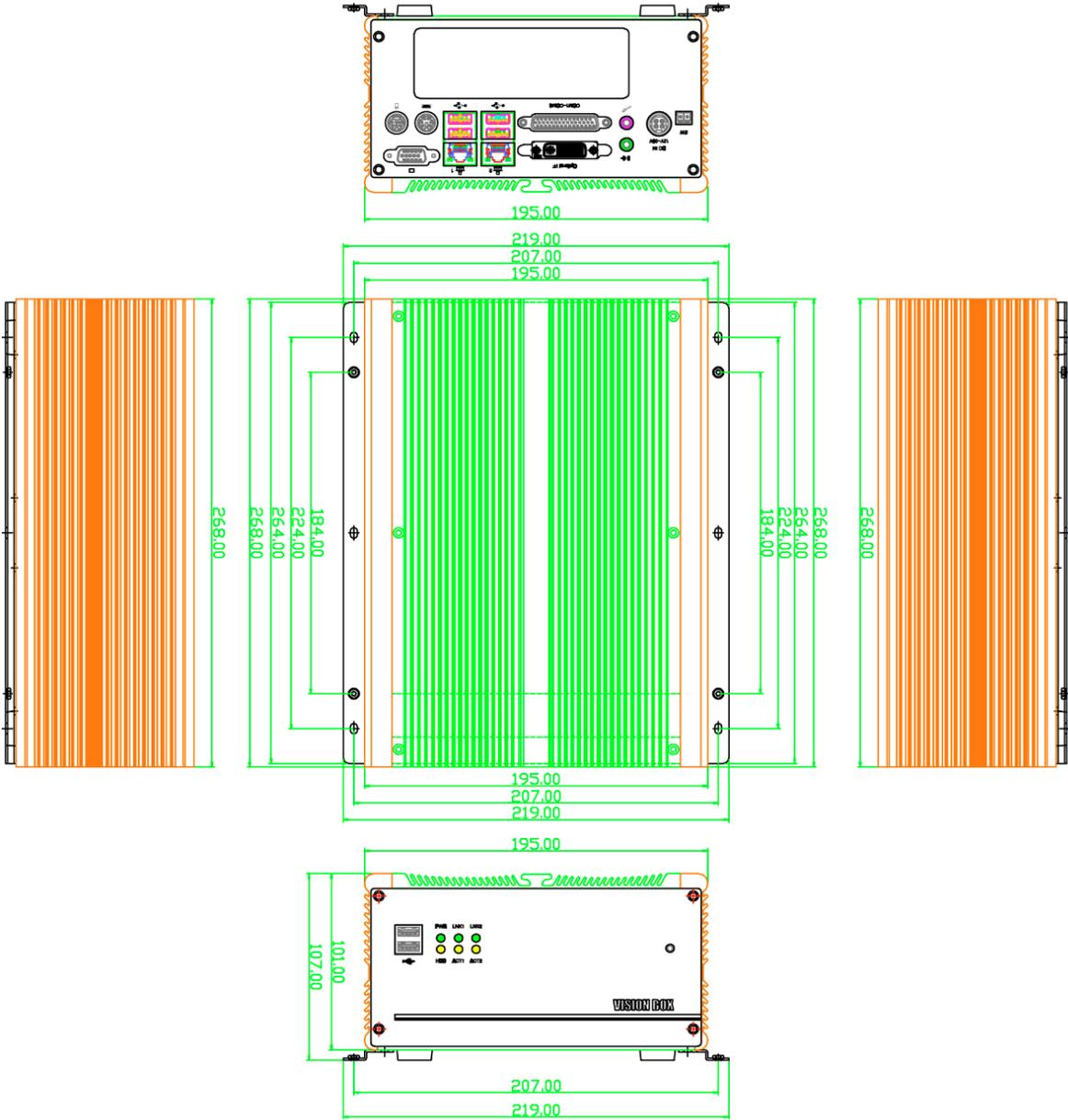
To avoid accidentally interrupted VISION BOX system operation, Power button is in 'Do nothing' mode as default setting — press 6 seconds with power button to shut-down system. The setting can prevent incorrect operation by power button. The OS can be shut down by pressing power button 6 seconds or close Windows XP embedded OS.



Consider the system operation reliability and safety, we strongly recommend user do not change this setting.



# 4 Mechanical Drawing



# Appendix A – Storage Performance

Model No.	Storage Device	Read	Write	OS Boot up Speed
VB-115C	Phison CF Card 4G 233X	40MB/s	10MB/s	34s
VB-115H	2.5" SATA HDD (5400rpm)	37MB/s	34MB/s	48s
VB-216C	Transcend CF Card 2G 266X	47MB/s	17MB/s	45s
VB-216H	2.5" SATA HDD (5400rpm)	37MB/s	34MB/s	45s

# Appendix B – Revision History

Revision Date	Change Description
2009/5/20	<ol style="list-style-type: none"> <li>1. VB-115 hardware specification change               <ul style="list-style-type: none"> <li>● Upgrade to DDR2 533 memory</li> <li>● Upgrade to Gigabit Ethernet</li> <li>● Upgrade to 2.5" SATA HDD</li> <li>● Change to 4GB 233x CF card</li> </ul> </li> <li>2. XP embedded 2009 OS Image supports for VB-115 series in recovery DVD</li> <li>3. User's manual modify for above change</li> </ol>
2008/11/28	<ol style="list-style-type: none"> <li>1. Image OS added components               <ul style="list-style-type: none"> <li>● ODBC</li> <li>● Microsoft SQL Express Marco</li> <li>● Firewall interface</li> <li>● EWFSshell Write-Protect Utility</li> <li>● ET-M8194H Driver and EzMove Utility</li> </ul> </li> <li>2. User's manual modification               <ul style="list-style-type: none"> <li>● Added VISION BOX COM port assign and description</li> <li>● Added the Image OS recovery example</li> <li>● Added system operation user interface description</li> <li>● Added EWFSshell Write-Protect utility operation procedure and description</li> <li>● Modify the component list of Image OS</li> </ul> </li> </ol>

# Warranty Policy

ICP DAS supplies a one year warranty period for the VISION BOX series, however there certain instances of limited of warranty situations, where by ICP DAS will not take any responsibility in the following cases:

1. Damages or losses caused by fire, earthquake, acts by third parties, deliberate or erroneous misuse by users, and use under extreme operating conditions.
2. Damages or losses are caused by malfunction resulting from bad connection with other equipment.
3. Damages or losses caused by incorrect use which is not in line with instructions in user's manual.
4. In case indirect, additional, consequential damages (loss of expected interest, suspension of business activities) are incurred as results of malfunction or non-function of the equipment, we shall be exempted from assuming responsibility for such damages.

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