Under Vehicle Surveillance System

Operating Instruction



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First Chapter: User Instruction

1.1 Purpose

Preparation of this document is intended to improve maintenance personnel vocational skills to enable them to quickly fit vehicle surveillance system maintenance personnel roles, customer maintenance needs quickly respond judgment and troubleshooting. Through this document, you will learn how to install, maintain and use the system.

1.2 Reading Object

Vehicle surveillance system maintenance and customer service personnel's technical maintenance, use of personnel.

1.3 General Introduction

This document includes the following several aspects:

- system requirement.
- Software installation and configuration.
- Software instructions.

Second Chapter: System Installation

2.1 Installation Profile

Vehicle surveillance system required to run the program, including under vehicle scanner drivers and configuration tools, video capture card driver, CCTV DVR, monitor terminal, license plate recognition module drive and control registration, vehicle surveillance systems, System database to Microsoft Access 2003/2007 system. All installation procedures are required to provide the location of the system installation root directory.

2.2 System Hardware Connection Structure

The system consists of a hardware device used industrial personal computer, under vehicle scanner, CCTV DVR, monitor terminal, gigabit switch, vehicle license plate cameras and license plate recognition module such as the seven equipment modules, hardware connection diagram(main part) as shown below:



Note:

1) When the images is saved by capturing is blue, try switching to connect to the channel of host video capture card.

2) Dual NIC IP configuration of the host cannot be on the same network segment, please refer to the contents of the configuration section 3.1.2.

2.3 Software Requirement

No.	Software name/catalogue	Note
1	Driver \ PCI Video Capture Driver	Video acquisition card driver
2	MVGESDK-EN-GENERIC_WIN32_V1.4.1.exe	Under vehicle scanner driver
3	Car Check.exe	Car surveillance system software
4	Microsoft Access 2003/2007	Database software
5	Windows XP/Windows 7 (32bit)	Windows 7 system, does not support 64 - bit
6	Record Player.exe	Local video player software

Table 1 Software sheet

2.4 Hardware Requirements

Table 2 Hardware configuration sheet

NO.	Hardware Name	Note	
1	under vehicle scanner	Offer by the under vehicle surveillance system software provider	
		1) Operation system	
		Windows XP/Windows 7 (32bit)	
		2) Hardware requirement	
2	PC machine	More than a dual-core 3.0 G hz CPU, 2G Memory, 200G or more	
		free hard disk space, Dual NIC(at least one gigabit), USB 2.0	
		interface with more than 2, Display resolution is 1920*1080 and	
		above.	
3	PCI video conture cord	Offer by the under vehicle surveillance system software provider	
5		according to the used solution.	
4	License plate cameras	Offer by the under vehicle surveillance system software provider	
•		according to the used solution.	
5	License plate recognition	Offer by the under vehicle surveillance system software provider	
5	encryption dog	according to the used solution.	
6	CCTV DVR	Offer by the under vehicle surveillance system software provider	
0	COLUDIA	according to the used solution.	
7	Video monitoring terminal	Offer by the under vehicle surveillance system software provider	
/		according to the used solution.	
8	Gigabit Switch	Offer by the under vehicle surveillance system software provider	
	Organit Switch	according to the used solution.	

Third Chapter: Software Installation And Configuration

3.1 Under vehicle scanner driver installation and configuration

3.1.1 Driver Installation

Step 1: Double Click WVGESDK-EN-GENERIC_WIN32_V1. 4. 1. exe to install under vehicle scanner driver, the interface is as follows:



Step 2: Click on [Next] to continue, click on [Cancel] to exit. Click on [Next], the interface is as follows:



Step 3: In the above interface, Click on [Next] to continue, click on [Cancel] to exit. After click on [Next], the interface is as follows. In the following screen, you need to select a local path to install the driver, please keep the default path.

Setup - MVGESDK-EN-GENERIC	_ 🗆 🔀
Select Destination Location Where should MVGESDK-EN-GENERIC be installed?	
Setup will install MVGESDK-EN-GENERIC into the following folder.	
C:\Program Files\MVGESDK-EN Browse	
At least 33.9 MB of free disk space is required.	
< Back Next >	Cancel

Step 4: In the following screen, you can rename the shortcut folder name. Please keep the default shortcut name. Then click on [Next] to continue.

💐 Setup - MVGESDK-EN-GENERIC	
Select Start Menu Folder Where should Setup place the program's shortcuts?	
Setup will create the program's shortcuts in the following Start M	1enu folder.
MVGESDK-EN	Browse
< <u>Back</u> <u>N</u> ext >	Cancel

Step 5: After click on [Next], the interface is as follows, it will prompt to install additional tasks. Please select it.

😽 Setup - MVGESDK-EN-GENERIC	
Select Additional Tasks Which additional tasks should be performed?	
Select the additional tasks you would like Setup to perform while installing MVGESDK-EN-GENERIC, then click Next.	
Add application directory to your system path	
< Back Next >	Cancel

Step 6: Once selected click on [Next], the interface is as follows, it will display the installation and configuration information.

Setup	- MVGESDK-EN-GENERIC
Read	y to Install
Set	up is now ready to begin installing MVGESDK-EN-GENERIC on your computer.
Clic cha	k Install to continue with the installation, or click Back if you want to review or ange any settings.
D	estination location: C:\Program Files\MVGESDK-EN
St	art Menu folder: MVGESDK-EN
A	dditional tasks: Add application directory to your system path
<	2
	< <u>B</u> ack Install Cancel

Step 7: Click on [Install] to start the installation, a interface as follows.

🕷 Setup - MVGESDK-EN-GENERIC	
Installing Please wait while Setup installs MVGESDK-EN-GENERIC on your computer.	
Extracting files C:\Program Files\Common Files\Pleora\DriverStats.exe	
	Cancel

Note: When you install the driver, the interface as follows will be display, please click on [Yes] to install patch and wait.

Microsoft Visual C++ 2005 Rec	listributable (x86) 💶 🗖 🔀
Please read the following license agre to see the rest of the agreement.	ement. Press the PAGE DOWN key
MICROSOFT SOFTWARE LICENSE MICROSOFT VISUAL C++ 2005 RUN These license terms are an agreemer (or based on where you live, one of it read them. They apply to the softwar the media on which you received it, if any Microsoft * updates, * supplements, * Internet-based services, and * support services for this software, unless other terms a those terms apply. By using the software, you accept the	TERMS NTIME LIBRARIES It between Microsoft Corporation s affiliates) and you. Please e named above, which includes any. The terms also apply to ccompany those items. If so, ese terms. If you do not accept
, Do you accept all of the terms of the p choose No, Install will close. To install	preceding License Agreement? If you you must accept this agreement.
	<u>Y</u> es <u>N</u> o
Licrosoft Visual C++ 200	5 Redistributable
Windows 正在配置 Microsof Redistributable, 请稍候。 正在收集必要信息	t Visual C++ 2005

Step 8: After finish to install the patch, the splash interfaces will display. The eBUS Driver Install Tool interface will display.



le <u>H</u> elp			
Network Adapter MAC	Description	Current Driver	Action
b8-97-5a-0c-c3-c5	Intel(R) 82574L Gigabit Network Connection	Manufacturer Driver	Do Nothing 🗸 🗸
J8-97-58-0C-C3-C6	Intel(K) 52574L Gigabit Network Connectio	Manufacturer Driver	Do Nothing Install eBUS Universal Driver Install eBUS Optimal Driver Install High-Performance IP Device Driv

List all the host network card, depending on the scene actually used to select which network card installed the camera driver. If the host's another network card is not used to connect the underbody hardware and use it, so it should not be install the eBUS driver. After assignment, select [Install eBUS Optimal Driver] item in the row Action column drop-down menu bar. If Gigabit Ethernet is not Inter825xx series chipsets, select

[Install eBUS Universal Driver](Universal type), and click the [Install] to begin the installation.

Network Adapter MAC	Description	Current Driver	Action	
b8-97-5a-0c-c3-c5	Intel(R) 82574L Gigabit Network Connection	Manufacturer Driver	Install eBUS Universal Driver	~
b8-97-5a-0c-c3-c6	Intel(R) 82574L Gigabit Network Connectio	Manufacturer Driver	Do Nothing	×
T	octalling eBLIS Universal	43%		

Step 9: If the installation process is as follows interface pops up, click the [Continue Anyway].

Softwar	e Installation
1	The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why</u> this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
	Continue Anyway

After finishing installation, In the [eBUS Driver Installation Tool] window, you can see [Current Driver]. The Manufacturer Dirver will change the Driver contents into the name which is in the Action column selected before.

Step 10: Complete the installation interface as shown below, click on [Finish].



Note: After close the finish dialog, you must restart the system, then you can continue for the subsequent configuration.

3.1.2 Configuration

- 1. The configuration of the host's NIC IP
- Windows XP operating system configuration: Desktop->network neiborhood->Right button to property->Local connectivity->Click property->Select Internet protocol (TCP/IP), Click property, manually change IP address to 192.168.0.100(Note: It cannot be on the same network segment with another network IP of host), subnet mask is 255.255.255.0, as below:

You can get IP settings assigned his capability. Otherwise, you ne he appropriate IP settings.	automatically if your network supports ed to ask your network administrator for
◯ <u>O</u> btain an IP address autom	natically
✓ ● Use the following IP address	s:
IP address:	192.168.0.100
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
<u>D</u> efault gateway:	
 Obtain DNS server address Use the following DNS server Preferred DNS server: Alternate DNS server: 	automatically er addresses:
	Advanced

 Win7 operating system configuration: Start->Control Panel->Network and sharing Center->Click Change adapter settings->Local connection->Right button click property, select Internet deal the forth versions (TCP/IPv4) to change IP, this operation is the same as in XP system, please follow the above method.

- 2. Open the card giant frame
- During the NIC driver installation processing, select the type of [Install eBUS Optimal Driver] without continue operation. If you choose the type is [Install eBUS Universal Driver], you need to open the configuration of jumbo frame. In the "Local Area Connection Properties" under the General tab, click the "Configure" button. Then click [Yes] in the pop-up prompt dialog box, click the advanced options menu, as shown below:

Realtek	PCIe GBE F	amily	Control	ler Proper	ties	?	×
General	Advanced	About	Driver	Resources	Power Manager	nent	
The fol the pro on the Propert 802.11 Auto D Auto D Check EEE Flow C Green Jumbo Large Netwo Shutd Shutd	Advanced lowing property perty you war right. y: 2/1p VLAN T Disable PCIe Disable PCIe Disable PHY sum Offload Control Ethernet Ethernet Send Offload rk Address own Wake-Or & Duplex	About ies are a t to char agging n-Lan	Driver available inge on th	Tesources or this networ e left, and the ⊻alue	Power Managen ik adapter. Click en select its value : MTU	nent]
Wake WOL	-On-Lán Capa & Shutdown L	ibilities ink Spee	bed		ок Са	ancel	

• In the "Advanced" tab properties, find the "Jumbo packets", select a value of 9014 bytes of the line to enable the property.

3.2 Video Capture Card Driver Installation

3.2.1 Driver Installation

- 1. Driver installation: First make sure the host has a PCI slot, if no PCI slot, replace the host. After Installing and securing the capture card, open the hosts corner of the screen prompted to find new hardware, multimedia video controller automatically pop up the "Found New Hardware Wizard" screen, Specific installation steps are as follows:
- In the pop-up [Found New Hardware Wizard] window, select [install from a list or specific location (Advanced) (S)], click "Next" to continue the installation.



• Select the [Include this location in the search(O)] option, click Browse to manually select the directory storing the device driver:[Driver\PCIVideoCaptureDriver] folder, click OK, and then automatically return to the earlier window, single click "Next" to continue(Note: Location of driver).

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
E:\Driver\PClVideoCaptureDriver\XP Srowse
Don't search. I will choose the driver to install. Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

• During the installation process, if there are [required documents] window, click the Browse button in the installation folder [Driver\PCIVideoCaptureDriver], select the desired file MVBY.sys, click OK. Automatically returns to the previous one [the required documents] window, click OK to continue the installation.

• Interface appears as shown below, click the "Finish" button to complete the driver installation.

Found New Hardware Wiz	card .
	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Microview V110(Audio) WDM Driver Build081205
	Click Finish to close the wizard.
	< Back Finish Cancel

2. Check whether the device is successfully installed, follow these steps.

Step 1: Select the desktop [My Computer], right-click and select "Manage"

Step 2: In the pop-up "Computer Management" screen, click "Device Manager", click to expand [Sound, video and game controllers], if properly installed, there will be two devices [Microview V110(Audio) WDM Driver Build081205] and [Microview V110(Video) WDM Driver Build081205] the style shown in the following figure:



If you install the device Microview V110 (Audio) WDM Driver Build081205 occur, such as: a yellow "!" "?", follow the above steps to re-install, also you can choose to restart the system.

3.3 Under Vehicle Surveillance System

3.3.1 System Survey

Under vehicle surveillance system has achieved the video view and save, automatic vehicle license plate recognition and image capture function when the vehicle passing through, the system consists of six main functions: vehicle image display area, Real-time video display area, the license plate number information display area, vehicle information list, image manipulation functional areas, functional operation area, as follows:

- Vehicle image display area: real-time display of vehicles at the detected image, historical images, and bottom of the vehicle underbody after treatment images.
- Real-time video display area: Real-time display the monitoring video, capturing vehicle plate video, and then they were saved by digital video surveillance DVR.
- License plate number information display area: Displays the detected vehicle license plate capture photos with automatic identification of the results, click [Modify] button can modify the number of the recognition errors.
- Vehicle information list: all day checking vehicle information, including license plate number, check the time, vehicle surveillance results.
- Image manipulation functional areas: the image to zoom; brighten, darken; edge enhancement, super-enhanced operation.
- Functional operating areas: Setting attributes of license plate recognition, associated parameters of line CCD camera, DVR video attributes, video playback and registry equipment, as well as the system language, real-time curve, historical data query functions.

3.3.2 Installation of under vehicle surveillance system

Via the end of the under vehicle surveillance system related installation files are copied to the appropriate directory, you can achieve the system installation, system file structure is shown below:



Note:

1) In the system files are copied to the appropriate directory, shall perform [reg.bat] file system registration, otherwise the software may not work correctly.

3.3.3 "CCSystem" Files Configuration

"CCSystem" the configuration file, follow the steps below:

- Below the software installation ini main directory to find "CCSystem.ini" file (For example: [C:\CCD\CarCheck\ini\]), select"CCSystem.ini" file.
- Double click "CCSystem" file, in the "Notepad" program editing interface to add different functions depending on the desired. The figure for the corresponding period redlining line content:

N CCSystem.ini - 记事本	En la	
文件(P) 编辑(R) 格式(D) 春着(2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
		~
;license plate recognitio	on module information	T
;PROVINCE : using the s	simple license plate of local	
;NIGHT : Identify e	nvironmental (0:represents day,the other represents night)	
; [Tu]		
LINJ PROUINCE=座		
EPFORMAT=2,6,4,12,16,8		
LOCATE=5		
OCR=2		
NIGHI=0		
TNUERTAL=28		
CONFIDENCE=80		
CHANNEL=1		
;		
;the information for con	Figure the connection FTP	
;NEEDUPLUHD : WHEL SHRTP · FTP ·	ner opload ine ploture to rip server(0:Not opload, ine diner represents opload) Server IP	
:PORT : Port		
;LOGINNAME : Userl	Name	
;LOGINPWD : Pass	word	
;SCANUPOLOADDIR : Need	to upload the image storage directory	
;		
SURTP=192.168.0.69		. H
PORT=21		
LOGINNAME=		
LOGINPWD=		
SCANUPOLOADDIR=D:\CarChe	ckImageUpload\	
;		
;configure system other :	information	
;SavePath	: a catalog for stroring the under vehicle images and LPR images.	
;ImageSaveDays	: the number of days to retain images	
;LoginImageName	: the path of Logo	
	. The path of foglin interface from	
:ZoomPictureTimes	the times of agy to react ing	
;DiskCrisisValue	: the alarming value for the minimum hard disk space(unit:MB)	
;ShowComparisonDialog	: whether pop-up dialog box comparison, When there is history(0:no pop-up, the other represents pop)	
;ShowTHRecordVideo	: License plate recognition video display area(0:no display,the other represents display)	
; [Imago]		
SavePath=D:\CarCheckImag	e\	
ImageSaveDays=30		
LogoImageName=image\EngLo	ogo.png	
SmallLIN=image\EnglishLo	goSmall.png	
LoginImage=image\Login.p	ng	
SaveLogDays=30		
DiskCrisisUalue=1024		
ShowComparisonDialog=0		
ShowTHRecordVideo=1		~
	in I, toi I	

- 1) [PROVINCE=粤]the"粤"is as shorthand for the user's provinces, this configuration items can pass the "LPR Properties Settings" dialog box to set;
- 2) [EPFORMAT=2,4]the"2,4"indicates a special license plate identifying the type of the configuration items through the "LPR Properties Settings" dialog box set;
- 3) [NEEDUPLOAD=0]indicates whether the star-up image upload feature, if you start this function, you need the FTP server's IP address and other information to be configured, and to ensure that the system is located on the FTP server can be connected to the host, the specific meaning to view configuration files note.
- 4) [SavePath=D: \ CarCheckImage];the[D:\CarCheckImage] is a catalog for stroring the under vehicle images and LPR images.
- 5) [SaveLogDays=30]the "30" is the number of days to retain log;
- 6) [ImageSaveDays=3]the"30"is the number of days to retain images;
- 7) [DiskCrisisValue]is the alarming value for the minimum hard disk space;
- [ShowComparisonDialog=0] When there is history, whether pop-up dialog box comparison(0:no pop-up, the other represents pop);
- [ShowTHRecordVideo=1] Represents the main interface is displayed captured video of license plate (0: Non-display, other is display).

PS: All of the above, please use the party under the specific circumstances of one's own self-set, after setting save the file.

3.3.4 Software Registration

Before using under vehicle surveillance system, you must be registered on the system; registration method of the click system installation directory [CarCheck.exe] file; registration interface as shown below:

Tip: Please send the Software Pro	d the serial number to ovider,then you can get
LicenseNo:	
LicenseNo:	

As shown in the interface, users will be [serial number] send software provider, you can obtain the corresponding [License] to complete the software's registration.

Each one has a corresponding registration key period of use, in the period, the user can freely use the bottom of the vehicle surveillance system; expires software providers are required to purchase a registration key again to get the new permissions.

Note:

Software running on a different computer, the resulting [serial number] varies, users simply send the system displays the serial number of software vendors and pay the appropriate fee, to obtain the corresponding registration code.

Forth Chapter: Software Instruction

4.1 Starting the software

Under the "under vehicle surveillance system installation catalog", click [CarCheck.exe] file to start the software, pop-up interface as shown below(if the remaining useful life of more than 30 days, the pop such as "Figure 1" shows the remaining useful life of less than 30 days, the pop such as "Figure 2" shows the interface):

Under Vehicle	Surveillance System
Username: Password:	Admin 💌
Login	Exit
	Figure 1
Under Vehicle	Surveillance System
Username: Password:	Admin
Tip: After 20 days	the software will be expired.
Login	Exit

Figure 2

In the above screen, enter the correct [User Name] and [Password], Click the [Login] button to enter the system's main interface. If you enter a user name or wrong password more than three times, it will automatically exit the vehicle surveillance system.

As described above [Figure 2] interface, the user can click[Tip] information links, pop-up [software registration] interface, complete the software re-registration period.

4.2 Main Interface

After the system is up and login is successful, the system will enter the main interface, single click the inspected vehicle list, the interface is shown below:



If you haven't enabled the license plate capture function, the software running as shown below:



The main interface is functionally divided into the bottom of the vehicle image display area, Real-time vehicle video display area, the license plate number information display area, vehicle information list, image manipulation functional areas and functional operation areas such as the six functional areas, users can view or in different regions operate different functions.

• Under vehicle image display area: real-time display of vehicles at the detected image, historical images, and bottom of the vehicle underbody after treatment images.

- Real-time video display area: Real-time display the monitoring video, capturing vehicle plate video, and then they were saved by digital video surveillance DVR. (Customized is based on the actual usage scenarios.).
- License plate number information display area: Displaying the detected vehicle license plate capturing photos with automatic identification of the results. click [Modify] button can modify the number of recognition errors.
- Vehicle information list: Checking vehicle information in all day, including license plate number, the checking time, vehicle surveillance results.
- Real-time log information list: real-time display of the region need to run the process produces some log information to facilitate the use of personnel or maintenance personnel system view real-time operation of the system state.
- Image manipulation functional areas: the image to zoom; brighten, darken; edge enhancement, super-enhanced, contrast enhancement, magnifying glass, real size, most suitable, such as open and save image.
- Functional operating areas: Setting attributes of license plate recognition, associated parameters of line CCD camera, DVR video attributes, video playback and registry equipment, as well as the system language, real-time curve, historical data query functions.

4.3 Image Operation

Function keys in the region to achieve the vehicle image display area of the image operations, including a magnifying glass, zoom in, zoom out, the most suitable, true size, brighten, darken, restoration, edge enhancement, super enhanced features such as Open and Save.

4.3.1 Magnifying Glass

Select the magnifying glass in front of the box when the mouse is moved underneath the image display area, the mouse pointer changes shape in the direction you drag the magnifying glass icon and automatically pop rectangle when you drag the image display area underneath the green rectangle to any location can be enlarged images of the rectangular box, right-click on the magnifying glass or click image magnifier operations elsewhere exit.

If you do not check the box, move the mouse to the bottom of the vehicle when the image display area does not pop up the green magnifying frame.



4.3.2 Image Full Screen

Double-click or click the image area underneath the "Full Screen" button, you can switch to full screen mode, full screen mode, you can see the real image and the bottom of the vehicle to operate on the license plate image, but does not affect the license plate recognition; in full screen mode can make image manipulation to the pictures, including a magnifying glass, zoom in, zoom out, the most suitable, true size, brighten, darken, restoration, edge enhancement, super-enhanced, open ,and save functions, with the following description of specific functions image manipulation functions describe the same interface as shown below:



4.3.3 Vice-screen operation

Host dispose a dual monitor configuration, the full-screen button is for the second extension, the display screen is to open and close the Deputy Vice-screen. Open the vice-screen, the main screen displays real-time image processing for vehicle renderings, deputy screen can also use the mouse wheel zoom in and out on the image and drag(mouse needs to move to the vice-screen).

4.3.4 Image Dragging

In the under vehicle image display area, press the left mouse button and drag the mouse, release the mouse in another location, the image will move to the location of the mouse reappear.



4.3.5 Enlarge

In the under vehicle image display area, use the mouse wheel to zoom in and out, with the mouse by sliding it forward to enlarge, the subsequent reduced, can also hold down the left mouse button on the image drag +. (Note: You cannot check the box in front of the magnifying glass, or drag the magnifying glass when it is moving the operation.)



4.3.6 Narrow

The default image is the most appropriate mode and cannot be further reduced; only the image to zoom after the operation, to be able to zoom out operations.

Interface is same with "4.3.4 Enlarge".

4.3.7 Most Suitable

Click [Most suitable] button, the image will be centered for the ratio of the image display area.



4.3.8 Real Size

Click the [Real Size] button, the image will be displayed as the actual length and width.



4.3.9 Brighten

Click the [Brighten] button, the image will become brighter, as shown below:



4.3.10 Darken

Click the [Darken] button, the image will become darker, as shown below:



4.3.11 Restore

Click the [Restore] button, the image will restore the default brightness state. Screen brightness cannot see the brightness of the image before the operation.

4.3.12 Contrast Enhancement

Single click [Contrast enhancement] button, enhancing image brightness contrast of each part, the interface shown in the following figure.



4.3.13 Edge Enhancement

Click [Edge] button underbody parts in the image edge contour is highlighted, more conducive to distinguish between different parts of cars.



4.3.14 Super Enhancement

Single click [Super enhancement] button, enhancing image edge, changing the image brightness and darkness.



4.3.15 Image Delete Function

After saving the image of under vehicle surveillance every time, monitor disk space on the system, while preserving the image of disk space is less than the set threshold, the dialog box will pop up as shown below:



If you select[OK], the following interface will pop up:

RootDirectory	SubDirectory	UsedSpace(unit: MB)
D:\CarCheckImage\	2014-02-12	0.00
D:\CarCheckImage\	2014-01-21	240.97
D:\CarCheckImage\	2014-01-15	0.00
D:\CarCheckImage\	2014-01-13	12.92
D:\CarCheckImage\	2014-01-10	57.31
D:\CarCheckImage\	2014-01-07	79.34
D:\CarCheckImage\	2014-01-04	2.29
D:\CarCheckImage\	2014-01-02	62.65
D:\CarCheckImage\	2013-12-26	57.66
D:\CarCheckImage\	2013-12-23	12.32
Delete		Cancel

In this interface, you can double-click an image catalog that will be no longer needed, then click below or choose [Delete] key.



Click[OK] to finish delete.

4.3.16 Open

Click the [Open] button to open the pop-up dialog box shown below, the user can select the saved image files underneath the vehicle image display area for display, and can by clicking on the image of the other buttons on the operating area images to operate.



4.3.17 Save

The image(brighten, darken, edge enhancement, super-enhanced) processing, click the [Save] button, the processed image will overwrite the previous picture.

4.4 Real-time Video

4.4.1 Real-time monitoring video display

Start the software, the real-time monitoring display area will show 4 paths video area (customized with 4 cameras) surveillance video. Interface as shown below:



Double click any path video area to check; double click again to turn back to 4 paths video area.



4.4.2 Real-time capturing video display

After starting the software, capturing video display area will display the real-time capturing video by camera, as shown below:



4.4.3 Real-time capturing video attributes setting

In the video capture card and camera connection under normal circumstances, For right through the video properties can be set by double-clicking "real-time video display area," according to the pop-up screen(as shown below), the video attributes set. In the setting process, the corresponding property in real time effect of the video display area, the user can watch "Live video display region" to view the settings effect.

The PCI video capture card is the way of two into one out, for two-way video signal input, only choose one way among them to be output. Therefore, for the "Chanel switching" feature, you only need to select "Channel one" button under normal circumstances; If you select "Channel one", the "Video Display Area" is not properly display the video (Display the blue background), then you need to switch channels.

VideoAttribute				
Bright -		_]_		128
Chroma]			80
Contrast]			100
Saturation				128
Change Chann	el			
	 Channel One 		O Channel Two	
	Default		Exit	

Since the license plate recognition rate greatly influenced by the environment, so the use of the system, according to the actual environment, the video attributes set. In daylight or well-lit environments using the system, usually only need to click the "Default" button to set the video properties can; while at night or low light environments using the system, you will need to make the appropriate attributes for video adjusted to achieve the best license plate recognition rate under normal circumstances only need to adjust the "Brightness" and "Contrast" these two parameters, and these two values adjusted to "default" half of they can. Specific parameters adjusted to watch video from the system, the human eye can clearly identify the license plate number shall prevail.

4.5 The results display and modify the license plate recognition

Real-time display of the region LPR license plate image, license plate number and license plate recognition interface style as shown below:



Users can observe the license plate image and license plate number and other information, such as license plate recognition result found a mistake, you can click the [Modify] button on the license plate number recognition result to be modified.

Users can click the "day vehicle surveillance information list" in a column information to modify the license plate number recognition result, if the license plate number has been modified then the corresponding records in the database with the name of the image file directory also will self-image modifying the same name.

D.VE/	Vehicle NO: 粤BX560Q	
FD.Y.00	ID Result: Normal 💌	Modify
Vehicle NO	Check Til Damage	Check Result
粤BX560Q	2014-01-07 1 Reform	Safety
粤BX560Q	2014-01-07 1 ManualID	Safety
粤BX560Q	2014-01-07 1 UnableID	Safety
BX5600	2014-01-07 14:08:33	Safety
粤BX560Q	2014-01-07 14:07:50	Safety
NULL	2014-01-07 14:07:18	Safety

Real-time surveillance of the vehicle, if the vehicle license plate number recognition in the database already exists, the following interface will pop up on the vehicle identification information for comparison; if abnormal situation, the interface at the bottom of the "alignment results" message column corresponding to green light the project will become red, played the role of alarm.



4.6 Information list of inspecting vehicle

After system starting up, listed the information of inspecting vehicles, as shown in below interface:

Vehicle NO	Check Time	Check Result
粤BX560Q	2014-01-07 14:32:50	Safety
粤BX560Q	2014-01-07 14:29:33	Safety
粤BX560Q	2014-01-07 14:23:58	Safety
粤BX560Q	2014-01-07 14:08:33	Safety
粤BX560Q	2014-01-07 14:07:50	Safety
NULL	2014-01-07 14:07:18	Safety
粤BX5600	2014-01-07 14:06:54	Safety

When inspect the vehicle in real-time and found abnormal under the vehicle, you can click the column bottom of the vehicle surveillance results and select the corresponding result type in drop-down box, then make changes on the testing results, the corresponding modification results will be saved in the database. If the car bottom surveillance results are unsafe, the row information will be displayed in red and serve as a warning, as shown below:

Vehicle NO	Check Time	eck Time Check Result		
粤BX560Q	2014-01-07 14:32:50	Safety		
粤BX560Q	2014-01-07 14:29:33	Safety		
粤BX560Q	2014-01-07 14:23:58	Safety 🗸		
粤BX560Q	2014-01-07 14:08:33	Cafaty		
粤BX560Q	2014-01-07 14:07:50	Alarra		
NULL	2014-01-07 14:07:18	Drobibit		
粤BX560Q	2014-01-07 14:06:54	Salety		
₩BX5600	2014-01-07 13:57:41	Safety		

4.7 Real-time log information list

In order to allow the real-time using personnel or maintenance personnel to understand the operational status of the system, specifically add this real-time information displayed list ,during system operation will generate some information(such as: image acquisition information, save the image information, warning or error messages, etc.) the interface as shown below:

2014-01-07 14:54:25	Save the video capture image
2014-01-07 14:54:25	Recognition the License Plate Fail
2014-01-07 14:54:23	Collecting vechile bottom data
2014-01-07 14:54:22	snap success!
2014-01-07 14:54:22	begin snap
2014-01-07 14:54:22	snap success!
2014-01-07 14:54:22	begin snap
2014-01-07 14:54:22	snap success!
2014-01-07 14:54:22	begin snap
2014-01-07 14:54:22	Collecting vechile bottom data
2014-01-07 14:54:19	Finished collected data
2014-01-07 14:54:17	Collecting vechile bottom data
2014-01-07 14:54:16	snap success!
2014-01-07 14:54:16	begin snap
2014-01-07 14:54:16	snap success!
2014-01-07 14:54:16	begin snap
2014-01-07 14:54:16	snap success!
2014-01-07 14:54:16	begin snap
2014-01-07 14:54:16	Collecting vechile bottom data
2014-01-07 14:52:49	Login DVR successful.
2014-01-07 14:52:49	Initial DVR successful.
2014-01-07 14:52:49	Initial License Plate Recognition Module failure
2014-01-07 14:52:49	Open the video capture device is successfully
2014-01-07 14:52:49	Initial the underbody image parameters success, Creat
2014-01-07 14:52:48	connect the ccd success

- Yellow font information indicates a warning message. During the system running, there is such a message to be generated. It's because of you may not start some equipment or functional modules.
- Red font information indicates an error message. During the system running, there is such a message to be generated, it stand for the system has serious problems that will affect the operation of the system.
- Black font information indicates a normal log information, the user can understanding the system status in real-time.

2014-01-07 14:35:33	Login DVR successful.
2014-01-07 14:35:33	Initial DVR successful.
2014-01-07 14:35:33	Initial LPR successful
2014-01-07 14:35:32	Open the video capture device is successfully
2014-01-07 14:35:32	Initial the underbody image parameters success,Create
2014-01-07 14:35:32	connect the ccd success

4.8 Function Operation

The functional areas are mainly related to system parameter setting, history queries and other operations.

4.8.1 Date Query

By clicking [Data Query] button, you can query the vehicle surveillance information in the interface shown below. The query conditions are supported fuzzy queries. If you don't select the "time" condition, it will query the vehicles of all the time period, the query results will show in the "Results" and "Vehicle list", and show the first image data in the right images column, Video area play the video of specified time period from time allocation to check (the time allocation refer to section 4.8.5), If the data which meet the conditions are more than 50, then it will display for paging. The user can view different data by clicking the navigation bar under the "Vehicle List".

Users can click on the any row under the "Vehicle List" to see the license plate numbers of vehicles corresponding details and modify details of the vehicle.

Users can see the full screen images of the under vehicle by double-clicking the vehicle image bottom, and then double-click or press the "Esc" key to exit full screen.

User can through double click the video to check the video of this period time; Double click again to display 4 paths video.



4.8.2 Video Playback

Single click the video playback button, pop-up the window as below, shown in 4.8.2-1.

Download video is same setting with playback; After setting parameter, click the button to download to local, then pop up another dialog box as shown in Figure 4.8.2-2, select the save path and set the name, click [OK] to confirm that. The download progress bar displays download progress in real time, as shown below 4.8.2-3. Click ending download can be ended the download in advance, but it only can save the content has been downloaded. The saved surveillance video can be played by RecordPlayer tools.



Figure 4.8.2-1 Video playback window



Channel:	2	~
StartTime:	2014-01-07 🐱	14:00:32 😂
EndTime:	2014-01-07 💌	14:30:32 😂
	•	36%
	DownLoad Loca	al
	DownLoad Loca	al r

Figure 4.8.2-2 save copy as dialog box

Figure 4.8.2-3 Download progress map

4.8.3 Identifies the attribute set

By clicking "Attribute Set" button, pop-up interface as shown below, set the properties for the license plate recognition, in order to prevent the user to set a time of misuse, gray text box when the software installation has been set up by the system developer, according to the specific needs of the user can set the "Default State", "Picture count", "Interval Time" and "Special Vehicle Type" after modification, by clicking on the "Modify" button to complete the property settings, to make just configurations take effect, you must reboot the software.

Default state: 粤	Night M	lode: 🥝	
Roc Threshold: 2	Picture co	Picture count: 3	
Pos Threshold: 5	Interval 1	Interval Time: 20	
onfidence Level: ⁸⁰			
Special License Plate Type			
ODouble yellow plates	Single Armed plates	O Double army plates	
O tractor plates	C Embassy plates	ODuble Armed plates	

4.8.4 Real-time Curve

By clicking "RT Curve" button pops up the following interface, you can view real-time acquisition curve, when the under vehicle scanner Gigabit Ethernet cameras at work.



4.8.5 Device parameter setting

Click the Device parameter setting button, the screen shown as below; DVR configuration information related addresses and login user name and password, port number appear in the login box. IP addressed required to follow the protocols and network interconnection between the TCP/IP protocol can to ensure that the host is on the same network segment, then configure it will be convenient. After configuration, the software will automatically reconnect, but to ensure that the login information is correct.

Modify the channel name, the channel name is displayed in the lower left corner of the brightest bunch of video text, it can be set to the name of the actual planning of the workplace, it cannot be empty, nor more than eight characters(16 bytes).

Time setting, time advance and play the total time setting is used for data query, to play the video of special period time.

IP Address: 192 . 168 . 0 . 18	Sub Mask : 255 , 255 , 255 , 0
Gateway: 192 . 168 . 0 . 1	Port: 37777
UserName: admin	PassWord: ****
ChannelName	
ChannelOne: 入口	ChannelTwo: 出口
hannelThree: 停车场1区	ChannelFour: 停车场2区
Time Settings	
Time early: 10 (s)	TotalTime: 30 (s)
Settings To Maximize Video	
🙆 Maximized ChanNo: 1	~

4.8.6 Video color setting

Click "the video color setting" button, will appear the interface shown below, click on the corresponding channel number, drag the slider to change the channel display relevant attributes of the video, brightness, color, contrast and saturation (this is soft regulation), Only one requirement is that the video can be clearly displayed on the screen.

Video Color	Set	_	
Color Properties			
Channel One	O Channel Two	O Channel Three	O Channel Four
Bright		0	
Chroma		0	127
Contrast		0	127
Saturation		3	127
	Default	Exit	

4.8.7 Language selection

By clicking on the "Language" button to pop up as shown in the interface, the user through the following box, you can switch the system language, modifications, restart the software to take effect.

ectLanguage	
English	~
Chinese English	
ок	Cancel

4.8.8 Under vehicle parameter set

Click the "Parameter Set" button, pop-up interface as shown below, you can set the vehicle at the end under vehicle scanner Gigabit Ethernet camera parameters.

'ehicle Pa	rameter	Set	-	_	_	×
Interfix parameter						
Exposure time:	333325	(ns)			0	
HSF time:	3000	(Hz)	0			
Max exposure time:	333333	(ns)		ок		

4.8.9 Exit

Click the "Exit" button, pop-up dialog box as shown below, click the "OK" button to exit the system, click the "Cancel" button to close the pop-up dialog box.

