

# **GV-DSP LPR**

## User's Manual V1.0



Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.



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## **Chapter 1 Introduction**

The GV-DSP LPR is a Linux-based system built in a small box without a fan and hard drive. Integrating with a web server, the GV-DSP LPR can deliver live images and host its own web site, as well as sending recognition results and captured images to the GV-LPR System and GV-LPR Center. The GV-DSP LPR is beneficial for license plate recognition over long distance and in an outdoor environment.

## **1.1 Key Features**

- Non-PC based solution for 1 port traffic or mobile license plate recognition
- Wide operating temperature range
- · Web-based configuration for image, security settings and firmware upgrade
- Recognition triggered by video motion detection or sensor inputs
- Compatible with GV-LPR System and GV-LPR Center
- Digital watermark
- Hardware watchdog
- IP address filtering
- UMTS
- Recognition results, images and live videos compatible with other system through OCX SDK

## **GeoVision**

## **1.2 Packing List**

- 1. AC Power Cord x 1
- 2. Power Adaptor x 1
- 3. Wall Hook x 1
- 4. Conical Anchor x 4
- 5. Screw x 4
- 6. GV-LPR Software CD x 1
- 7. GV-DSP LPR User's Manual on Software CD
- 8. GV-LPR User's Manual on Software CD
- 9. USB dongle for GV-LPR protection

## **1.3 System Requirements**

These are the requirements for the computer that displays the image or controls the GV-DSP LPR.

- OS: Microsoft Windows 2000/XP/2003/Vista
- Web Browser: Internet Explorer V6.0 or later



## **1.4 Physical Description**

This section identifies the various components of the GV-DSP LPR.

### 1.4.1 Front View



Figure 1-1

No.	Name	Function		
1	Video In	Connects a camera.		
2	TV-Out	Connects an external monitor to output live videos and recognition results immediately. The TV-Out port can be used for adjusting the camera view when the unit is installed at the place where the Internet is not accessible.		
3	Microphone In	Connects a microphone for audio input. (NOT functional now)		
4	Audio Out	Connects a speaker or stereo device for audio output. (NOT functional now)		
5 SD Card Slot for storing recognition images, a		Inserts a removable Secure Digital (SD) card. The SD card is used for storing recognition images, and backing up offline data when connecting to the LPR Center or GV-LPR System.		
6	Reset Button	Resets the unit and keeps all current configurations. When you press the Reset button, all three LED lights will be on. Wait until the Disk Full LED is off and Ready LED is on. Then you successfully reset the unit.		
7	<ul> <li>7 Default Button</li> <li>7 Default Button</li> <li>8 Sets all configurations to their factory settings. To use this function, follow these steps:         <ol> <li>Press and hold the Default button while press release the Reset button.</li> <li>Release the Default button only after Power Like Ready and Disk Full LEDs are off.</li> <li>Wait until Ready LED is on. Then you success the default settings.</li> </ol> </li> </ul>			
8	Power LED	Indicates the power is supplied.		
9	Ready LED	Indicates the unit is ready for connection.		
10	Disk Full LED	Indicates the SD card or hard drive is full.		



## 1.4.2 Rear View

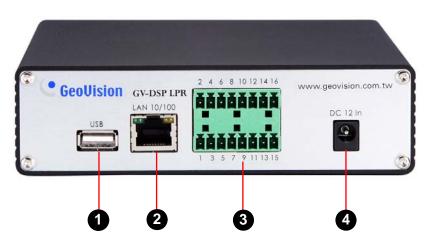


Figure 1-2

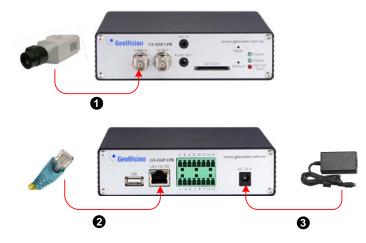
No.	Name	Function	
1	USB Port	Connects to a UMTS modem.	
I	030 Poll	For details on UMTS, see [UMTS Setting] in 4.3.1 Lan.	
2	Ethernet Port Connects to a 10/100 Ethernet network.		
З		Connects digital inputs, relay outputs, RS-232 device and Wiegand device.	
	I/O Terminal Block	For details, see Chapter 6 The I/O Terminal Block.	
		Note: Wiegand and RS-232 interface are NOT functional now.	
4	DC In 12V	Connects the supplied power adaptor.	

## Chapter 2 Getting Started

This section provides basic information to get the GV-DSP LPR working on the network.

## 2.1 Installing on a Network

These instructions describe the basic connections to install the GV-DSP LPR on the network.





- 1. Connect the video output of your camera to the BNC video input.
- 2. Connect the hub or switch on the LAN to the unit's 10/100 Mbps Ethernet port.
- 3. Connect the power supply to the power input.
- Wait until both Power and Ready LEDs are on and then you can set the IP address for the unit.

### 2.2 Assigning an IP Address

Designed for use on an Ethernet network, the GV-DSP LPR must be assigned an IP address to make it accessible.

**Note:** The GV-DSP LPR has a default address of **192.168.0.230**. The computer used to set the IP address must be under the same IP and subnet sequence assigned to the unit.

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- 1. Open your web browser, and type the default IP address <u>http://192.168.0.230/</u>
- 2. In both Login and Password fields, type the default value **admin**. Click **Apply**.
- 3. In the left menu, select Network and then LAN to begin the network settings.

GeoUision	GeoUision LAN Configuration		
	In this section you can configure LPR to work inside of LAN.		
Network	LAN Configuration		
Status			
	O Dynamic IP address Select this option to obtain IP address from a DHCP server		
Advanced	<ul> <li>Static IP address</li> <li>Select this option to enter a Static IP address manually</li> </ul>		
<u>тсрир</u>	O PPPoE Select this option to establish a DSL connection		
IP Filtering	Username:		
Management	Password:		
▶ <u>Logout</u>			
D.	UMTS Setting		
<u></u>			
	UMTS Enable		
	Username :		
	Password :		
	PIN Number:		
	APN : internet		
	Configure connection parameters		
	IP Address: 192.168.1.230		
	Subnet Mask: 255.255.254.0		
	Router/Gateway: 192.168.0.1		
	Primary DNS: 192.168.0.1		
	Secondary DNS: 192.168.0.2 (Optional)		
	Apply Test DHCP		

Figure 2-2

- 4. Select **Static IP address**. Type IP Address, Subnet Mask, Router/Gateway, Primary DNS and Secondary DNS in the **Configure connection parameters** section.
- 5. Click **Apply**. The GV-DSP LPR is accessible by entering the assigned IP address on the web browser.

#### Important:

• **Dynamic IP Address**, **PPPoE** and **UMTS** should only be enabled if you know which IP address the GV-DSP LPR will get from the DHCP server or ISP. Otherwise you must use the Dynamic DNS service to obtain a domain name linked to the GV-DSP LPR's changing IP address first.

For details on Dynamic IP Address and PPPoE settings, see *4.3.2 Advanced TCP/IP*.

• If **Dynamic IP Address**, **PPPoE** or **UMTS** is enabled and you cannot access the unit, you may have to reset it to the factory default and then perform the network settings again.

To restore the factory settings, see the **Default** button in 1.4.1 Front View.



## 2.3 Configuration Basics

Once the camera is properly installed, these important features can be configured using the browser-based configuration page and are discussed in the following sections in this manual:

- Date and time adjustment: see 4.4.1 Date & Time Setting.
- Login and privileged passwords: see 4.4.3 User Account.
- Network gateway: see 4.3 Network.
- Video attribute (Brightness, Contrast, Saturation and Hue): see 3.2.2 Adjustment of Video Attributes.
- Video format, resolution and frame rate: see 4.1.1 Video Settings.

## **Chapter 3 Accessing the GV-DSP LPR**

Two types of users are allowed to log in the GV-DSP LPR: Administrator and Guest. The Administrator has unrestricted access to all system configurations, while the Guest has the access to live view and network status only.

### 3.1 Accessing Your Surveillance Images and Recognition Results

Once installed, your GV-DSP LPR is accessible on the network. Follow these steps to access your surveillance images and recognition results:

- 1. Start the Internet Explorer browser.
- 2. Enter the IP address or domain name of the GV-DSP LPR in the **Location/Address** field of your browser.

GeoVision Inc LPR - Microsoft Internet Explorer	
Elle Edit Yiew Favorites Iools Help	AT
🚱 Back 👻 🕑 👻 📓 🏠 🔎 Search 🤺 Favorites 🤣 😥 🎍 🔜 🦓	
Address http://192.168.0.230/ssi.cgi/Login.htm	💌 🔁 Go 🛛 Links 🎽
GV-DSP LPR	SETUP
Login: admin Password: ••••• Apply	4
C 2007 SEDVISION INC. ALL RIGHTS RESERVED	
🗿 http://www.geovision.com.tw/	Internet

Figure 3-1

- 3. Enter a login name and password.
  - The default login name and password for Administrator are **admin**.
  - The default login name and password for Guest are **guest**.
- 4. A video image, similar to the example on Figure 3-2, is now displayed in your browser.

**Note:** To enable the updating of images in Internet Explorer, you must set your browser to allow ActiveX Controls and perform a once-only installation of GeoVision's ActiveX component onto your computer.

## 3.2 Functions Featured on the Main Page

This section introduces the features of the Live View window and Network Status on the main page. The two features are accessible by both Administrator and Guest.

#### Main Page of Guest Mode

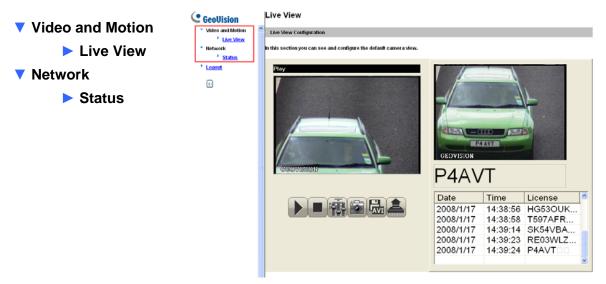


Figure 3-2

## **GeoVision**

## 3.2.1 The Live View Window

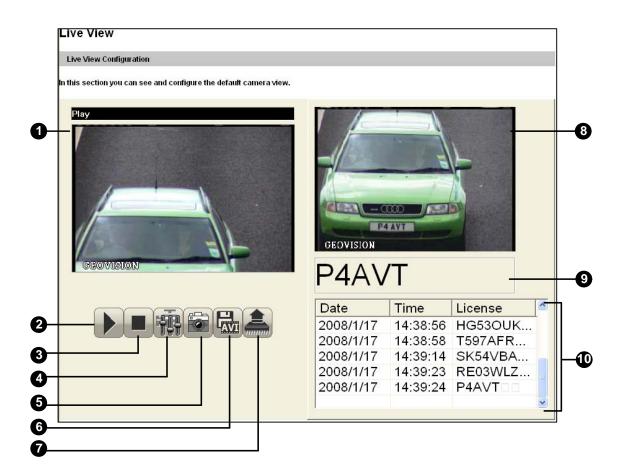


Figure 3-3

No.	Name	Function
1	Live View	Displays live video.
2	Play	Starts the connection and plays live video.
3	Stop	Terminates the connection.
4	Remote Config	Adjusts video attributes of the live video.
5	Snapshot	Takes a snapshot of live video.
6	File Save	Records the live video and saves in .avi format.
7	Firmware Upgrade	Upgrades the firmware of GV-DSP LPR.
8	Recognition Display	Displays the recognition image.
9	Number Display	Displays the plate number.
10	Record List	Lists the dates and times of detection results.

## 3.2.2 Adjustment of Video Attributes

To adjust video attributes of the live video, follow these steps:

- 1. Click the **Remote Config** button (No. 4, Figure 3-3).
- 2. Move the slide bars (Brightness, Contrast, Saturation and Hue) to adjust video attributes. Only the Administrator is allowed to adjust the configurations.

Remote Config		
Camera		
Brightness Contrast Saturation Hue	Image: 128         Image: 128         Image: 128         Image: 128         Image: 128         Image: 128	Default
GEOVIS	TON	
	Apply	Close

Figure 3-4

### 3.2.3 Snapshot of a Live Video

To take a snapshot of a live video, follow these steps:

- 1. Click the **Snapshot** button (No. 5, Figure 3-3). The Snapshot window appears.
- 2. Click the **Print** button to print out the displayed image. Or click the **Save** button to save the image to the local computer.



Figure 3-5



## 3.2.4 Video Recording

You can record live video for a certain period of time to your local computer.

1. Click the File Save button (No.6, Figure 3-3). The Save As dialog box appears.

Save As			? 🛛
Savejn: 🞯 Desktop 💌	+ 1	i di	•
My Documents My Computer My Network Places DataExchange 20080117162406 20080117162658			
File <u>n</u> ame: 20080117162716			<u>S</u> ave
Save as type: Video Files(*.avi)	•		Cancel
Figure 3-6			

- 2. Specify Save in, type the File name, and click the Save button to start recording.
- 3. To stop recording, click the **Stop** button (No.3, Figure 3-3).

### 3.2.5 Firmware Upgrade

This window allows you to upgrade the firmware over LAN. For details, see Chapter 5.

 Cancel



### 3.2.6 Network Status

To view the network status, in the left menu, click Network and select Status.

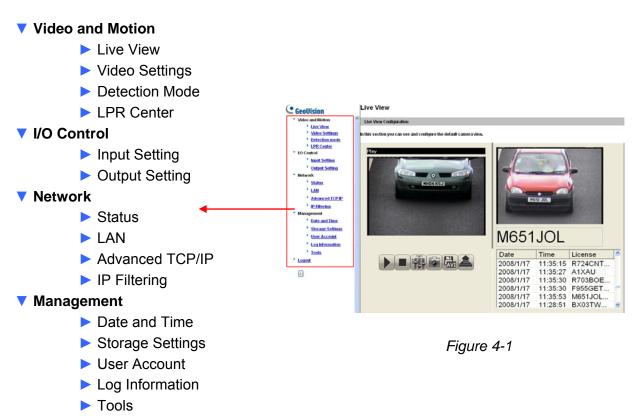
Network Status Informati	on
Current Status Information	
In this section you can see an overview o	of LPR status.
interface:	Wired
IP Acquirement:	Fixed
MAC Address:	0013E20100F1
IP Address:	192.168.1.21
Subnet Mask:	255.255.254.0
Gateway:	192.168.0.1
Domain Name Server 1:	192.168.0.1
Domain Name Server 2:	192.168.0.2

Figure 3-8

## **GeoVision**

## **Chapter 4 Administrator Mode**

The Administrator can access the system configuration via the Internet. Four categories of configurations are involved in the system configuration: **Video and Motion**, **I/O Control**, **Network**, and **Management**.





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## 4.1 Video and Motion

This section includes video settings and detection methods to activate license plate recognition.

## 4.1.1 Video Settings

Video Settings					
In this section you can define your country for engine and video signal type.					
Engine Setting					
Cour	ntry UK	*			
Vid	leo Signal Type				
	Signal Format	Resolution	Live Resolution	Frames per second	
۲	NTSC	720*480	360*240 🗸	10 (360*240 only) 💌	
$\bigcirc$	PAL	720*576	360*288 🗸	10 (360*288 only) 🗸	
$\bigcirc$	AUTO	ATUO	CIF 🗸	10 (360*288 only) 🔽	
Overlay Text GEOVISION  Watermark  Overlay Time  Text Alignment Down Left  Save Image Size CIF					
TV OUTPUT Port Setting Frames per second 10  Overlay Plate and Time : Plate ID and Time					
Apply					

Figure 4-2

**[Engine Setting]** Select the country where you installed the system. The recognition engine performs license plate recognition by country.

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[Video Signal Type] The GV-DSP LPR supports both NTSC and PAL video signals. The Administration can use automatic sensing by selecting AUTO, or manually select NTSC or PAL.

There are several resolution and frame rates available. Note that **10** fps is only available when the resolution is set to  $360 \times 240$  ( $360 \times 288$ ).

NTSC	PAL
720 x 480	720 x 576
360 x 240	360 x 288

Frame Rate	1, 3, 5, 7, 10
------------	----------------

- Overlay Text: Enter a text message that is overlaid on live and captured images, e.g. company name.
- Watermark: Enable the watermark overlay that appears on captured images.
- **Overlay Time:** Enable the time stamp that appears on live and captured images.
- Text Alignment: Select a position for the text and time stamp overlay that appear on live and captured images, e.g. down left, down right, top left or top right.
- Save Image Size: Select the size of the captured image that is saved to the SD card.

**[TV Output Port Setting]** The unit allows the direct connection of an external monitor to output live images and recognition results immediately. When the unit is installed at the place where the Internet is not accessible, the TV-Out port can be used for camera adjustment to make sure the image of license plate is captured properly. Select the frame rate and text overlay. The default settings are 10 fps, and overlaid Plate ID and Time on the image.



### 4.1.2 Detection Mode

You can activate license plate recognition by motion detection or sensor triggers. For motion detection, up to 8 detection areas can be defined; whenever vehicles cross the defined detection areas, the license plate recognition will be activated.

Detection mode	
Motion 💌	
Motion Mode Setting	
J961 TVS	
	Reset
2008/03/26 03:37:52	Save
GEOVISION	
/O Mode Setting	
Trigger Input 🗌 Input 1 📄 Input 2 💭 Input 3 💭 Input 4	
Apply	

Figure 4-3

- 1. From the drop-down list on top left, select the method to activate license plate recognition.
  - **Disable:** Deactivate recognition.
  - Motion: Activate recognition by motion detection.
  - I/O: Activate recognition by input triggers. If this option is selected, choose which inputs (Input 1 to Input 4) will trigger recognition in the I/O Mode Setting section.
- To configure the area of motion detection, first click **Reset** to clear the default setting. Then drag the mouse button to select an area of the image. You can define up to 8 areas to outline your detection areas. Every time when an area is selected, you will be prompted for confirmation.
- 3. Click **Save** to save the defined areas.
- 4. Click **Apply** to take effect.

For the related settings of input devices, see 4.2.1 Input Setting.



## 4.1.3 LPR Center

When the alarm events of motion detection and sensor trigger occur, the LPR Center can get alerts by recognition results and captured images.

LPR Center				
EFK Center				
LPR Name Setting				
Name GVDSP-LPR		Apply		
Period of Connection Ch	ecking (Seco	ond)		
Set time interval: 60		Apply		
<b>Connection Port Settings</b>	:			
POS Port number: 4000				
POS ACK Port 3999 number:				
LPR Live Center Port : 7551				
Apply				
Center Remote Control				
Control Pin 📃 Output 1 📃	Output 2 🗌	Output 3 📃 Output	4 Apply	
Center IP setting				
No. IP Address	Port number	Offline Backup	Customize	Connect Status
1 192.168.0.151	7550	Disable Change	Clear	Disconnect
Add New Center IP Address				
Port number	7550			
Offline Backup	Disable 🗸			
Apply Refresh				

Figure 4-4

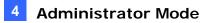
[LPR Name Setting] Type a descriptive name for the GV-DSP LPR.

[Period of Connection Checking] Set the time interval in seconds of each reconnection attempt.

[Connection Port Settings] Both of POS Port and POS ACK Port are used for transmitting the recognition result to GV-DVR System. The default port numbers are 4000 and 3999 respectively. The LPR Live Center Port is used for displaying the recognition result on the live view. When you want to access more than one GV-DSP LPR on the browser screen, set different LPR Live Center Ports for each GV-DSP LPR; otherwise you cannot see the recognition result on the live view.

[Center Remote Control] Select outputs allowed to be triggered by the LPR Center remotely.

**[Center IP Setting]** Connect the GV-DSP LPR to the LPR Center for central monitoring. The maximum of 8 LPR Centers can be connected at one time.



- Add New Center IP Address: Type the IP address of the LPR Center you want to enable connection. Then click Apply for connection.
- Offline Backup: When disconnected from the LPR Center, the GV-DSP LPR can store recognition data to the SD card. When the connection recovers, the GV-DSP LPR can immediately send the stored data to the LPR Center. For the Offline Backup to work, you must select Enable saving results on SD Card in Storage Settings (Figure 4-11) ahead.

## 4.2 I/O Control

The I/O terminal block on the rear panel of the GV-DSP LPR provides the interface for digital inputs and relay outputs. For details on the I/O terminal block, see Chapter 6.

### 4.2.1 Input Setting

The GV-DSP LPR can connect up to 4 input devices, e.g. sensors.

Input Setting	
In this section you can co	nfigure LPR digital input port (4 sets).
Digital Input 1	
🗹 Enable	
Name	Input1
Normal State	📀 Open Circuit (N/O) 🔘 Grounded Circuit (N/C)
Latch Mode	🗹 Enable
Trigger digital output relay	🗹 Output 1 🔲 Output 2 🗹 Output 3 🗹 Output 4
Digital Input 2	

Figure 4-5

- Normal State: Set up the input state to trigger actions by selecting Open Circuit (N/O) or Grounded Circuit (N/C).
- Latch Mode: Enable this option to have a momentary output alarm.
- Trigger digital output relay: Select the output(s) to be triggered after the input is activated.



### 4.2.2 Output Setting

The GV-DSP LPR can connect up to 4 output devices, e.g. alarms. There are six output signals are available: N/O (Open Circuit), N/C (Grounded Circuit), N/O Toggle, N/C Toggle, N/O Pulse and N/C Pulse. Choose the one that mostly suits the device you are using. Set the pulse duration for the pulse mode.

Output Settin	g
In this section you ca	n configure LPR digital output port(4 sets).
Digital Output 1 - No	rmal State
Name	Output1 <ul> <li>Open Circuit (N/O)</li> <li>Grounded Circuit (N/C)</li> </ul>
Toggle Mode	Open Circuit (N/O) O Grounded Circuit (N/C)
Pulse Mode	🔿 Open Circuit (N/O) 🔘 Grounded Circuit (N/C)
Trigger Pulse Mode fo	r 1 seconds
Digital Output 2 - No	ormal State

Figure 4-6

### 4.3 Network

The Network section includes some basic but important network configurations that enable the GV-DSP LPR to be connected to a TCP/IP network.

### 4.3.1 LAN

According to your network environment, select among Static IP, DHCP, PPPoE and UMTS.



LAN Configuration		
In this section you can c	onfigure LPR to work inside of LAN.	
LAN Configuration		
<ul> <li>Dynamic IP address</li> <li>Static IP address</li> <li>PPPoE</li> </ul>	Select this option to obtain IP address from a DHCP server Select this option to enter a Static IP address manually Select this option to establish a DSL connection Username: Password:	
UMTS Setting		
UMTS Enable Username : Password : PIN Number:		
APN : internet		
Configure connection	parameters	
IP Address: 192.168	8.1.230	
Subnet Mask: 255.255	5.254.0	
Router/Gateway: 192.168	8.0.1	
Primary DNS: 192.168	8.0.1	
Secondary DNS: 192.168	8.0.2 (Optional)	
Apply Test DHCP		



#### [LAN Configuration]

- Dynamic IP address: The network environment has a DHCP server. This option should only be enabled if you know which IP address the GV-DSP LPR will get from the DHCP server, or you have obtained a domain name from the DDNS service provider.
- Static IP address: Assign a static IP or fixed IP to the GV-DSP LPR. Type TCP/IP and DNS parameters of the unit in the Configure connection parameters section.
- **PPPoE:** The Network environment is xDSL connection. Type the Username and Password provided by ISP to establish the connection. If you use the xDSL connection with dynamic IP addresses, you must use the DDNS function to obtain a domain name linked to the changing IP address of the GV-DSP LPR first.

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**[UMTS Setting]** UMTS stands for Universal Mobile Telephone System. UMTS is a thirdgeneration (3G) broadband, packet-based transmission of text, digitized voice, video, and multimedia at data rates up to 2 megabits per second. UMTS offers a consistent set of services to mobile computer and phone users, no matter where they are located in the world.

After an UMTS-compatible wireless device is attached to the USB port and the UMTS function is enabled, the GV-DSP LPR can have Internet access. Currently the GV-DSP LPR only supports the wireless module for UMTS applications: **Option GlobeSurfer Icon (Vodafone)**.

To enable the UMTS service, type Username, Password, PIN number and APN (Access Point Name) that are provided by your network operator. If you use the UMTS connection with dynamic IP addresses, you must enable the DDNS function to obtain a domain name linked to the changing IP address of the GV-DSP LPR first.

**[Configure connection parameters]** Type the IP address, Subnet Mask, Router/Gateway, Primary DNS server and Secondary DNS server of the GV-DSP LPR.

Parameters	Default
IP address	192.168.0.230
Subnet Mask	255.255.255.0
Router/Gateway	192.168.0.1
Primary DNS server	192.168.0.1
Secondary DNS server	192.168.0.2

For details on the DDNS function (Dynamic DNS Server), see 4.3.2 Advanced TCP/IP.



### 4.3.2 Advanced TCP/IP

This section introduces the advanced TCP/IP settings, including DDNS Server, HTTP port, and streaming port.

Advanced To	P/IP
Dynamic DNS Serv	er Settings
In this section you ca	n configure your LPR to obtain a domain name by using a dynamic IP.
Enable Service Provider:	Geovision DDNS Server ex: Register Geovision DDNS Server
Host Name:	usemame.dipmap.com
User Name:	
Password:	
Update Time :	Refresh
Apply	
HTTP Port Setting	1
	n change the default HTTP port number (80) to any port within the range 1- method to increase system security using port mapping. You can configure In alternative port.
HTTP Port:	80
Apply	
LPR Streaming Po	rt Settings
In this section you ca setting is 10000.	n configure Streaming connection from a determine port. The default
VSS Port:	10000
Apply	



**[Dynamic DNS Server Settings]** DDNS (Dynamic Domain Name System) provides a convenient way of accessing the GV-DSP LPR when using a dynamic IP. DDNS assigns a domain name to the GV-DSP LPR, so that the Administrator does not need to go through the trouble of checking if the IP address assigned by DHCP Server or ISP (in xDSL connection) has changed.

Before enabling the DDNS function, the Administrator should apply for a host name from the DDNS service provider's website. There are 2 providers listed in the GV-DSP LPR: GeoVision DDNS Server and DynDNS.org.

## **GeoUision**

#### To enable the DDNS function:

- 1. Enable: Enable the DDNS function.
- 2. Service Provider: Select the DDNS service provider you have registered with.
- 3. **Host Name:** Type the host name used to link to the GV-DSP LPR. For the users of GeoVision DDNS Server, it is unnecessary to enter the host name. The system will detect the host name automatically.
- 4. User Name: Type the user name used to enable the service from the DDNS.
- 5. **Password:** Type the password used to enable the service from the DDNS.
- 6. Click **Apply**. The Update Time from the DDNS will be displayed.

#### [HTTP Port Settings]

The HTTP port enables connecting the GV-DSP LPR to the web. For security integration, the Administrator can hide the server from the general HTTP port by changing the default HTTP port of 80 to a different port number within the range of 1024 through 65535.

#### [LPR Streaming Port Settings]

The VSS port enables connecting the GV-DSP LPR to the LPR System or the LPR Center. The default setting is 10000.



### 4.3.3 IP Filter

The Administrator can set IP filtering to restrict access to the GV-DSP LPR.

IP Filte	P Filter Setting					
IP Filtering						
In this sect	ion you ca	n allow or deny network connection listed	in the table.			
🗹 Enable	✓ Enable IP Filtering					
No.		IP Address Range in CIDR format	Action	Customize		
1		192.168.0.33	Deny	Delete		
Filtered IP: (ex: 192.168.0.0/24) Action to take: Allow V						
Apply						

Figure 4-9

To enable the IP Filter function:

- 1. Enable IP Filtering: Enable the IP Filtering function.
- 2. Filtered IP: Type the IP address you want to restrict the access.
- 3. Action to take: Select the action of Allow or Deny to be taken for the IP address you have specifed.
- 4. Click Apply.

## **GeoVision**

## 4.4 Management

The Management section includes the settings of data and time, SD card and user account. Also you can view the firmware version and execute certain system operations.

## 4.4.1 Date & Time Setting

You can set up the date and time appearing in the image's caption.

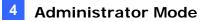
Date and Tir	Date and Time Settings			
In this section you c	an configure time	and date or just synchronize with a NTP server.		
Date and Time on	LPR			
Tue Jul 31 01	:55:36 2007			
Synchronized wit	h a Network Time	Server		
Host name or II	rith Network Time S P Address: 24 hours; Update 1			
Synchronized wit	h your computer a	r modify manually		
<ul> <li>Modify manually Date Time</li> <li>Synchronized with the synchronized withe synchronized with the synchronized withe synchronized withe s</li></ul>	2000/01/15 04:26:54	(yyy/mm/dd) (hh:mm:ss)		

Figure 4-10

[Date & Time on LPR] Display the current date and time on the GV-DSP LPR.

**[Synchronized with a Network Time Server]** Use the NTP server to automatically update the date and time of the GV-DSP LPR every 24 hours. Type the host name or the IP address of the NTP server for connection.

**[Synchronized with your computer or modify manually]** Manually change the date and time of the GV-DSP LPR. Or, synchronize the date and time of the GV-DSP LPR with those of the local computer.



## 4.4.2 Storage Settings

The GV-DSP LPR has one SD card slot. You can store the recognition results or images to the SD card. The image is stored in the JPEG compressed format.

torage Sett	ings				
this section you ca	an configure the dis	ik storage to archive	videos and events	-	
Storage Settings					
Enable recycling		k when free space of (	disk is smaller than	32M 💌	
	1	1			
Total Size	Used Size	Free space	Utilization	Remove	Format

Figure 4-11

#### To add a SD card:

- 1. Insert a SD card to the SD card slot.
- 2. Click the **Refresh** button to detect the SD card. The total size, used size, free space and utilization of the SD card will be displayed. Note that it may take several seconds for your web browser to update the information of the SD card.
- 3. If you like to format the SD card or erase all data stored on it, click the **Format** button.

#### To remove a SD card:

- 1. Click the **Remove** button.
- 2. When you are prompted to ensure the action, click **Yes**. The page will be refreshed and the displayed information of the will be cleaned.
- 3. Remove the SD card from the SD card slot.

Note: The captured images may be lost if you do not remove the SD card properly.

## **GeoVision**

#### [Storage Settings]

- Enable saving results on SD Card: Enable this option to save the recognition results or images onto the SD card.
- Enable recycling: If this option is checked, the system will overwrite the oldest stored files when the space of the SD card is lower than the specified space. If this option is not checked, the system will stop recording when the specified space is reached.

#### Note:

- The GV-DSP LPR doesn't support SD High Capacity (SDHC) cards.
- The SD card of 1G capacity can save approximately 30,000 captured images of D1 resolution, and 120,000 captured images of CIF resolution. The SD card of 4G capacities can save approximately 120,000 captured images of D1 resolution, and 480,000 captured images of CIF resolution.



### 4.4.3 User Account

The GV-DSP LPR has two types of password protection: Guest password for restricting unwanted users from accessing the GV-DSP LPR, and Administrator password for restricting who can enter privileged commands.

Default Guest login name and password are **guest**. Default Administrator login name and password are **admin**.

User Accou	int	
In this section you	can change the administrator ac	count and password
Administrator Ad	count	
Username:	admin	]
Old Password:		]
New Password:		]
Confirm Password	:	]
Apply		
Guest User Acco	ount	

Figure 4-12

### 4.4.4 Log Information

The log contains dump data that is used by service personnel for analyzing problems.

Log Information	
Startup time log	
In this section you can see latest booting time of system.	
Sun Jul 29 07:31:44 2007 Sun Jul 29 07:32:42 2007 Sun Jul 29 07:34:05 2007 Sun Jul 29 07:35:40 2007 Sun Jul 29 07:35:40 2007	<
System Log	
In this section you can see all system activities.	
<pre>Jul 20 07:35:40 (none) syslog.info syslogd started: BusyBox v1.00- rc3 (2005.07.23-08:39+0000) Jul 20 07:35:42 (none) user.info ipcamd: main: /var/run/ipcamd.pid=968 Jul 29 07:35:42 (none) user.info ipcamd: FIvFile_CheckVideoFormat: boot loader video formatentsc is same as flash. Jul 29 07:35:42 (none) user.info ipcamd: SIIUTIL_SysInit: enter Jul 29 07:35:42 (none) user.info ipcamd: SIIUTIL_SysInit: enter Jul 29 07:35:42 (none) user.info ipcamd: SIIUTIL_ThttpRestart:command-visr/bin/killall thttpd, dwResult(256) Jul 29 07:35:42 (none) daemon.crit thttpd[979]: socket :: - Address family not supported by protocol Jul 29 07:35:43 (none) daemon.notice thttpd[979]: thttpd/2.25b 29dec2003 starting on port 80 Jul 29 07:35:43 (none) daemon.warn thttpd[979]: started as root without requesting chroot(), warning only Jul 29 07:35:43 (none) user.info ipcamd:</pre>	
Clear	

Figure 4-13



### 4.4.5 **Tools**

This section allows you to execute certain system operations and view the firmware version.

Additional Tools	
Firmware Version	
In this section you can see LPR firmware version.	
v1.10 2008-03-25	
System Settings	
Restore to factory default settings Load Default	
Reboot	
Do you wish to reboot now? Reboot	

Figure 4-14

[Firmware Version] This section displays the firmware version of the GV-DSP LPR.

**[System Settings]** Clicking the **Load Default** button will make the GV-DSP LPR restore factory default settings. The Ready LED on the front panel will turn off. Wait until the Ready LED turns on and then you can re-log in the GV-DSP LPR.

**Note:** After applying default settings, you will need to configure the GV-DSP LPR's network settings again.

**[Reboot]** Clicking the **Reboot** button will make the GV-DSP LPR perform software reset. The Ready LED on the front panel will turn off. Wait until the Ready LED turns on and then you can re-log in the GV-DSP LPR.

## **Chapter 5 Advanced Applications**

This chapter introduces more advanced applications.

## 5.1 Upgrading System Firmware

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into the GV-DSP LPR over LAN or by using the Video Server Utility included in the Software CD.

## 5.1.1 Upgrading Firmware over LAN

1. In the Live View window, click the **Firmware Upgrade** button (No. 7, Figure 3-3). This dialog box appears.

Browse	
Version	 Upgrade
File	 Cancel

Figure 5-1

- 2. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
- 3. Click the Upgrade button to process the upgrade.

## **GeoVision**:

### 5.1.2 Upgrading Firmware by Using the Utility

The Video Server Utility provides a direct way to upgrade the firmware to multiple GV-DSP LPRs.

- 1. Run Install Utility.exe from the Software CD.
- 2. Double-click the **Video Server Utility** icon which is created on your desktop. This dialog box appears.

le Tool -			
Search Nev	v Delete		
Name	Mac Address	IP Address	Firmware Version
🛓 Tony2	0013E20102EB	192.168.1.15	v1.03 2006-12-08
VS-02	0013E201035E	192.168.0.242	v1.03 2006-11-01
VS-02	0013E20102DB	192.168.0.243	v1.03 2006-12-05
🛓 VS-02	0013E20102DF	192.168.0.239	v1.03 2006-12-05
👗 VideoS_P	0013E20105F9	192.168.0.11	v1.03 2006-12-05
VS-02	0013E2010355	192.168.0.240	v1.03 2006-12-05
🛓 VS-02	0013E20102FA	192.168.0.237	v1.03 2006-12-05
🛓 VS 139	0013E2010395	192.168.0.139	v1.03 2006-12-11
🛓 VS-02	0013E201033B	192.168.0.247	v1.03 2006-11-21
VS-02	0013E2010353	192.168.0.187	v1.03 2006-11-03
🖌 VS-02	0013E20104A5	192.168.0.166	v1.03 2006-11-01
👗 Tony_1	0013E201038C	192.168.1.14	v1.03 2006-12-08
VS-02	0013E20102E1	192.168.0.16	v1.03 2006-11-24
VS-02	0013E2010351	192.168.1.22	v1.03 2006-12-12
VS-02-William	0013E201033F	192.168.0.232	v1.03 2006-11-24
Tony2           VS-02           VS-02	0013E201038D	192.168.0.17	v1.03 2006-11-24
VS-02	0013E2010701	192.168.1.5	v1.03 2006-12-12

Figure 5-2

- Click the Search button to locate the available GV-DSP LPRs on the same LAN. Or click the New button and assign the IP address to locate a GV-DSP LPR over the Internet. Or highlight one GV-DSP LPR in the list and click the Delete button to remove it.
- 4. Double-click one GV-DSP LRP in the list. This dialog box appears.

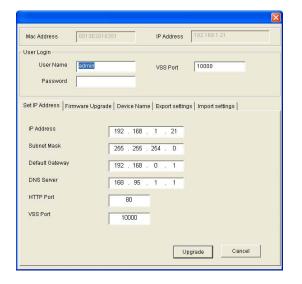


Figure 5-3



5. Click the Firmware Upgrade tab. This dialog box appears.

Mac Address	0013E2010351	IP Address	192.168.1.21
User Login			
User Name	admin	VSS Port	10000
Password			
Set IP Address Firm	nware Upgrade Device N	ame   Export settin	igs   Import settings
Version	v1.03 2006-12-	14	Browse
Upgrade to all	video servers		
			Jpgrade Cancel

Figure 5-4

- 6. Click the Browse button to locate the firmware file (.img) saved at your local computer.
- 7. If you like to upgrade all the GV-DSP LPR in the list, check Upgrade all video servers.
- 8. Type **Password**, and click **Upgrade** to process the upgrade.

## 5.2 Backing Up and Restoring Settings

With the Utility included in the Software CD, you can back up the configurations in the GV-DSP LPR, and restore the backup data to the current unit or import it to another unit.

#### To back up the settings:

- 1. Run **Video Server Utility** and locate the desired GV-DSP LPR. See Steps 1-3 in *5.1.2 Upgrading Firmware by Using the Utility*.
- 2. Double-click the GV-DSP LPR in the list. Figure 5-3 appears.



3. Click the **Export Settings** button. This dialog box appears.

			×
Mac Address	0013E2010351	IP Address 192.168.1.21	
User Login			
User Name	admin	VSS Port 10000	
Password			
Set IP Address   Fin	nware Upgrade   Device Name	Export settings   Import settings	
Save File Path			
C:\Documents a	nd Settings\Admin\Desktop\V	S_2006_12_15.( Browse	
		Export settings Cancel	
		Export settings Cancel	

Figure 5-5

- 4. Click the **Browse** button to assign a file path.
- 5. Type **Password**, and click **Export Settings** to save the backup file.

#### To restore the settings:

1. In Figure 5-3, click the **Import Settings** tab. This dialog box appears.

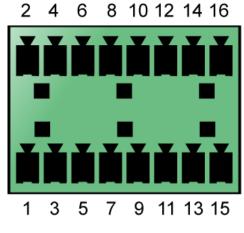
			<b>X</b>
Mac Address	0013E2010351	IP Address	192.168.1.21
- User Login			
User Name	admin	VSS Port	10000
Password			-
Set IP Address   Firr	nware Upgrade   Device M	Name   Export setting	gs Import settings
Version	v1.03 2006-12	2-12	Browse
	,		
		Update se	Cancel

Figure 5-6

- 2. Click the **Browse** button to locate the backup file (.dat).
- 3. Click Update Settings to start restoring.

## **Chapter 6 The I/O Terminal Block**

The 16-pin terminal block, located on the rear panel, provides the interface to: four digital inputs, four relay outputs, an RS-232 interface, a Wiegand interface and auxiliary power. The I/O terminal block can be used to develop applications for motion detection, event alerts, access control and a variety of other functions.



Note: RS-232 and Wiegand Interface are NOT functional now.

Figure 6-1

#### **Pin Assignment**

The pin assignment for the terminal block is described in the table below.

Pin	Function	Pin	Function
1	Relay Output 1	9	DC 5V Out for GV-Relay Module
2	Digital Input 1	10	Ground
3	Relay Output 2	11	RS-232 (TX)
4	Digital Input 2	12	Wiegand D0
5	Relay Output 3	13	RS-232 (RX)
6	Digital Input 3	14	Wiegand D1
7	Relay Output 4	15	Ground
8	Digital Input 4	16	DC 12V Out for Wiegand Card Reader



#### **Relay Output**

The relay outputs on the terminal block can only drive a maximum load of 5V. Working in conjunction with the GV-Relay V2 module, it can drive heavier loads. Refer to the figure and table below to connect the GV-Relay V2 module to the GV-DSP LPR.

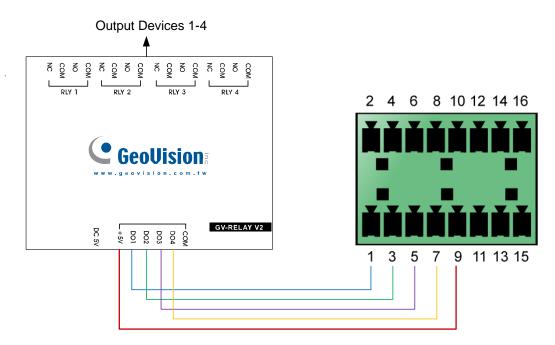


Figure 6-2

GV-Relay V2	I/O Terminal Block
DO 1	Pin 1
DO 2	Pin 3
DO 3	Pin 5
DO 4	Pin 7
+ 5V	Pin 9

Note that you don't need to use the DC 5V connector on the GV-Relay V2 module for power supply, since the power is supplied from the GV-DSP LPR.

**Note:** The GV-Relay V2 module is an optional product.

## **Specifications**

Video Input/Output	1 Video In, 1 TV Out
Audio Input/Output	1 Audio In, 1 Audio Out
Video Compression	GJPEG
Audio Compression	G.723
Live Resolutions	D1, CIF
Live Frame Rate	Up to 10 fps
Image Setting	Brightness, Contrast, Saturation, Hue
Alarm and Event Management Connectors	<ul> <li>Events triggered by motion detection or sensor inputs</li> <li>Central monitoring by LPR Center</li> <li>Relay outputs triggered by sensor inputs or remotely by LPR Center</li> <li>Video Input/TV Ouput: BNC ports</li> <li>Audio Input/Output: Mini stereo jacks</li> <li>Ethernet: 10/100Base-T</li> <li>USB: 2.0</li> </ul>
Security	<ul> <li>SD Card Slot: standard SD cards (Not support SDHC cards)</li> <li>Terminal Block: 4 Digital Inputs, 4 Relay Outputs, RS-232, Weigand</li> <li>IP address filtering</li> </ul>
Installation	
	Web-based configuration
Management Maintenance	Firmware upgrade through Web Browser
Protocol	HTTP, TCP, UDP, DHCP, NTP, DynDNS
Storage	SD Card
Operation Temperature	-20~70°C
Dimensions (W x D x H)	174 x 145 x 40 (mm)
Weight	0.75Kg



	Australia, Austria, Belgium, Canada, Columbia,
	Croatia, Cyprus, Czech Republic, France, Germany,
Country Support	Hungary, Ireland, Israel, Italy, Norway, Poland,
	Portugal, Saudi Arabic, Slovenia, South Africa, Spain,
	Taiwan, Thailand, Turkey, UAE, UK, USA