## Contents

### Chapter 1  Center V2

1.1 Minimum System Requirements ............................................. 2
1.2 Installation ............................................................................. 3
   - Standard Version .................................................................. 3
   - Professional Version .......................................................... 3
1.3 The Center V2 Window ......................................................... 4
1.4 Subscriber Account ............................................................... 8
   - Creating a Subscriber ....................................................... 9
   - Subscriber Settings ........................................................ 11
   - Attachment Mode Settings .............................................. 12
   - Channel Heading ............................................................ 13
1.5 Connection to Center V2 ...................................................... 15
   - Setting Normal Mode ...................................................... 16
   - Setting Panic Button ...................................................... 26
   - Detecting Input Status ................................................... 27
1.6 Live View .............................................................................. 28
1.7 Recording .............................................................................. 30
1.8 Playback ................................................................................. 31
   - Attachment Playback ...................................................... 31
   - Remote Playback ......................................................... 35
1.9 Two-Way Audio ................................................................. 37
1.10 Advanced Monitoring and Management ............................ 39
   - Showing I/O Status ........................................................ 39
   - Controlling I/O Devices .................................................. 40
   - Camera/Audio Control Window ....................................... 41
   - Camera Monitor ............................................................. 43
   - Viewing Subscriber Information .................................... 45
   - Disabling Subscription ................................................... 45
1.11 Subscriber Schedule .......................................................... 46
   - Setting a Schedule ......................................................... 46
   - Scheduling Alert Notification ......................................... 48
1.12 Alarm Report ................................................................. 49
   - Creating an Alarm Report ............................................... 49
   - Editing Alarm Report Categories .................................. 51
   - Printing Alarm Reports .................................................. 52
1.13 Event List ........................................................................................................53
   Marking the Events with Colorful Flags............................................................53
   Using the Event Tabs ..................................................................................54
   Setting Alert Levels of Event Messages ....................................................57
1.14 Event Log Browser .....................................................................................59
   Opening the Event Log ............................................................................60
   Filtering the Event Log ............................................................................61
   Backing up the Event Log ........................................................................62
   Setting the Event Log ..............................................................................64
   Printing the Event Log .............................................................................65
1.15 System Configuration ...............................................................................66
   General Settings .....................................................................................66
   Layout Settings .......................................................................................68
   Network Settings ....................................................................................69
   Recording Settings ..................................................................................70
   Dispatch Server Settings ..........................................................................73
1.16 Notification Settings ................................................................................74
1.17 Output Alerts .............................................................................................76
   Configuring a Local GV-I/O Box ..............................................................76
   Configuring a Virtual GV-I/O Box ............................................................77
   Triggering Outputs by Event ....................................................................78
   Triggering Outputs Manually ....................................................................79
1.18 SMS Alerts ..................................................................................................80
   Setting SMS Server ..................................................................................80
   Connecting to SMS Server .......................................................................82
   Sending SMS ..............................................................................................82
   Inserting Device Information ....................................................................83
1.19 E-Mail Alerts ...............................................................................................85
   Setting Mailbox ........................................................................................85
   Sending E-Mail .........................................................................................87
   Inserting Device Information ....................................................................87
1.20 E-Map Alerts ...............................................................................................88
   The Remote E-Map Window ......................................................................88
   Configuring the Remote E-Map.................................................................90
1.21 Event Chart ..................................................................................................92
   Accessing the Event Chart .......................................................................92
   Event Chart ...............................................................................................95
Chapter 2 Dispatch Server ..................................................100
  2.1 Minimum System Requirements ....................................101
  2.2 Installation ....................................................................102
  2.3 The Dispatch Sever Window ..........................................103
  2.4 Subscriber Account ......................................................105
  2.5 Service Startup ............................................................108
  2.6 Connecting Center V2 to Dispatch Server .......................110
  2.7 Connecting GV-System to Dispatch Server .....................111
  2.8 Connecting GV-IP Device to Dispatch Server .................112
  2.9 Setting a Primary Center V2 Server ................................115
  2.10 Event Query ...............................................................116
  2.11 Event List .....................................................................117
  2.12 Subscription Schedule ................................................119
  2.13 Live View .....................................................................120
  2.14 Log Browser ...............................................................121
    Dispatch Log Browser ......................................................121
    Event Log Browser ........................................................122
  2.15 System Configuration ..................................................123
  2.16 SMS Alerts .................................................................126
  2.17 E-Mail Alerts ..............................................................127
  2.18 Event Chart .................................................................128
  2.19 Failover Server ...........................................................130

Chapter 3 Vital Sign Monitor .................................................132
  3.1 Minimum System Requirements ....................................133
  3.2 Installation ....................................................................135
  3.3 The VSM Window .........................................................136
  3.4 Subscriber Account ......................................................140
  3.5 Service Startup ............................................................141
  3.6 Connection to VSM .......................................................142
Advanced Settings for Subscription ................................................. 144
Detecting Input Status ..................................................................... 151

3.7 Subscriber Monitoring ........................................................ 152
   Viewing Subscriber Status ......................................................... 152
   Viewing Storage Information .................................................... 154
   Disabling Subscription ............................................................ 155

3.8 Subscriber Schedule ........................................................ 156

3.9 Alarm Report ....................................................................... 157

3.10 Remote Playback .............................................................. 158

3.11 Event List ........................................................................... 159
   Adding Event Tabs ..................................................................... 159
   Setting up the Customized Event Tab ........................................ 160
   Setting Alert Level of Event Messages ....................................... 161

3.12 Event Log Browser .............................................................. 162

3.13 System Configuration ......................................................... 163
   System Settings ......................................................................... 163
   Password Settings ....................................................................... 165
   Event Log Settings ...................................................................... 165
   Notification Settings .................................................................... 166
   Alerts Interval Settings ............................................................. 166

3.14 Output Alerts ....................................................................... 167
   Configuring a Local GV-I/O Box ............................................... 167
   Configuring a Virtual GV-I/O Box .............................................. 167
   Triggering Outputs by Event ..................................................... 167
   Triggering Outputs Manually .................................................... 168

3.15 SMS Alerts .......................................................................... 169
   Setting SMS Server ................................................................... 169
   Sending SMS ............................................................................. 169
   Inserting Device Information ..................................................... 170

3.16 E-Mail Alerts ....................................................................... 171
   Setting Mailbox ......................................................................... 171
   Sending E-Mail ........................................................................... 171
   Inserting Device Information ..................................................... 172

3.17 Temperature Alarm ............................................................. 173

3.18 Event Chart ......................................................................... 175

3.19 Failover Server .................................................................... 176
Chapter 4  Control Center ......................................................... 177

4.1 Minimum System Requirements ........................................... 178
4.2 Installation ........................................................................... 180
4.3 The Control Center Toolbar .................................................. 181
   The Edit Toolbar .................................................................. 181
   The Service Toolbar ............................................................ 183
4.4 Hosts and Groups ................................................................. 185
   Creating a Host .................................................................... 186
   Creating a Group .................................................................. 188
4.5 Connection to the Control Center ........................................ 189
   The Control Center Server Window ...................................... 189
   Advanced Settings ............................................................... 191
4.6 Live View ............................................................................ 193
   Enhancing Live Video ........................................................... 195
   Adjusting Distorted Views ..................................................... 196
4.7 Audio Broadcast ................................................................. 197
   Starting the Audio Broadcast ............................................... 197
   The Audio Broadcast Window .............................................. 198
4.8 Remote DVR ....................................................................... 199
4.9 Remote Desktop ................................................................. 201
   Running Remote Desktop ..................................................... 201
   File Transfer ......................................................................... 202
4.10 Remote ViewLog ................................................................. 203
    Running Remote ViewLog ..................................................... 203
4.11 Data Event Query on GV-System ......................................... 204
4.12 Matrix View ....................................................................... 206
   Running Matrix View ........................................................... 206
   Live View Enhancement ....................................................... 209
   Advanced Settings ............................................................... 210
   Two-Way Audio .................................................................. 212
   Instant Playback ................................................................... 213
   Channel Display on Another Monitor .................................... 214
   Quick Zoom .......................................................................... 215
   Monitor Settings ................................................................. 216
   POS Live View ..................................................................... 217
4.13 IP Matrix ........................................................................... 218
    Running IP Matrix ............................................................... 219
The Controls on the Window ............................................................... 222

4.14 Multi-Screens ........................................................................ 224
Configuring Multiple Screens from a Local Computer .................. 224
Configuring Multiple Screens from Remote Computers ............ 231

4.15 VMD Monitoring ..................................................................... 233
Running VMD .............................................................................. 233
The Controls on the Window ........................................................ 234
Temperature Alarm......................................................................... 236
Dual-Monitor Display .................................................................... 237
Pop-up Viewer .............................................................................. 240

4.16 Instant Playback ...................................................................... 241

4.17 PIP and PAP View .................................................................. 244
Starting PIP View .......................................................................... 245
Starting PAP View ........................................................................ 246

4.18 Panorama View ....................................................................... 247
Creating a Panorama View ............................................................ 249
Accessing a Panorama View .......................................................... 251
Panorama View Controls ............................................................... 251

4.19 I/O Central Panel .................................................................... 252
Running the I/O Central Panel ....................................................... 252
The I/O Central Panel ................................................................... 253
Creating a Group for Cascade Triggers ........................................ 254
Configuring the I/O Central Panel .................................................. 259
Viewing Connection Log ............................................................... 260
Setting Up Mode Schedule ........................................................... 261
Quick Link ....................................................................................... 263
Forcing Output ............................................................................... 264
Editing Background Image ............................................................. 265
Managing a Group of I/O Devices ............................................... 266
Controlling I/O Devices ............................................................... 267
Popping Up Live Video upon Input Trigger ................................. 268

4.20 Remote E-Map ....................................................................... 270
The E-Map Editor Window ............................................................ 271
Creating an E-Map ....................................................................... 272

4.21 Interface Style ........................................................................ 274
The Standard Style ....................................................................... 274

4.22 System Configuration ............................................................. 275
Chapter 1

Center V2

With Center V2, central monitoring station (CMS) can be deployed immediately because it brings multiple GV-Systems together into an integrated interface, allowing the operator to manage several systems from one point of control. The basic feature of Center V2 is to view live video, and receive video evidence (in an attachment format) when any alerts are sent to Center V2. This helps the remote-end operator easily determine the nature of the alarm.

Center V2 also supports GV IP devices (GV-Video Server, GV-Compact DVR, GV-IPCam) for central monitoring.
1.1 Minimum System Requirements

There are two versions of Center V2. The **standard version** can serve up to 5 subscribers and 160 channels at a time. The **professional version** can serve up to 500 subscribers and 800 channels.

Before installation, make sure your computer meets the following minimum requirements.

**Standard Version**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>OS</strong></td>
<td>32-bit</td>
</tr>
<tr>
<td></td>
<td>Windows XP / Vista / 7 / Server 2008</td>
</tr>
<tr>
<td></td>
<td>64-bit</td>
</tr>
<tr>
<td></td>
<td>Windows 7 / Server 2008</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Pentium 4, 3.0 GHz with Hyper-Threading</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>2 x 1 GB Dual Channels</td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>The hard disk space required to install Center V2 (Standard Version) must be at least 1 GB.</td>
</tr>
<tr>
<td><strong>VGA</strong></td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
</tr>
<tr>
<td><strong>DirectX</strong></td>
<td>9.0c</td>
</tr>
</tbody>
</table>

**Professional Version**

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>OS</strong></td>
<td>32-bit</td>
</tr>
<tr>
<td></td>
<td>Windows XP / Vista / 7 / Server 2008</td>
</tr>
<tr>
<td></td>
<td>64-bit</td>
</tr>
<tr>
<td></td>
<td>Windows 7 / Server 2008</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Core 2 Duo, 2.4 GHz</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>2 x 1 GB Dual Channels</td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>The hard disk space required to install Center V2 (Professional Version) must be at least 1 GB.</td>
</tr>
<tr>
<td><strong>VGA</strong></td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
</tr>
<tr>
<td><strong>DirectX</strong></td>
<td>9.0c</td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td>Internal or External GV-USB Dongle</td>
</tr>
</tbody>
</table>

**Dongle Options**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combination</strong></td>
<td>Center V2 Pro</td>
</tr>
<tr>
<td></td>
<td>Center V2 + VSM</td>
</tr>
</tbody>
</table>
1.2 Installation

Standard Version

1. Insert the CMS Software DVD to your computer. It runs automatically and a window appears.
2. Select Install V8.5 Central Monitoring System.
3. Click Center V2 System, and follow the on-screen instructions.

Professional Version

1. Connect the GV-USB Dongle to the computer.
2. Insert the CMS Software DVD to your computer. It runs automatically and a window appears.
3. To install the USB device driver, select Install or Remove GeoVision GV-Series Driver and select Install GeoVision USB Device Driver.
4. To install the CMS system, Install V8.5 Central Monitoring System.
5. Click Center V2 System, and follow the on-screen instructions.
### 1.3 The Center V2 Window

The controls on the Center V2 window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitoring Window</td>
<td>Displays live video.</td>
</tr>
<tr>
<td>2</td>
<td>Status Panel</td>
<td>Indicates the date, time, remaining disk space, and the total number of online channels versus available channels.</td>
</tr>
<tr>
<td>3</td>
<td>Find A Subscriber</td>
<td>Type the desired ID in the Current Subscriber field and click this button to search.</td>
</tr>
</tbody>
</table>
### 4 Subscriber List
Displays subscribers’ ID names and online status. **Blue Icon:** Indicates the subscriber is online. **Gray Icon:** Indicates the subscriber is off-line. **Alarm Icon:** Indicates either motion has been detected or the I/O has been triggered at the subscriber’s site.

### 5 Tools
Accesses Event Log, Event List, Event Chart, QView, audio and microphone control, SMS Server configuration, and short message notification.

### 6 Host Information
Displays the connection status of subscribers.

### 7 Accounts
Adds, deletes or modifies subscriber accounts.

### 8 Preference Settings
Brings up these options: System Configure, Event Log Settings, Notification, Password Setup, E-mail Setup, Customize Alarm Report, SMS Setup, I/O Device, Automatic Failover Support and Version Information.

### 9 Previous Page
Displays the previous page of camera views.

### 10 Next Page
Displays the next page of camera views.

### 11 Refresh Channel
Refreshes the connection status.

### 12 Split Mode
In the 1024 x 768 resolution, select 6, 15, or 24 screen divisions for a single monitor; 9, 25, or 36 screen divisions for dual monitors.

In the 1280 x 1024 resolution, select 6, 12, or 24 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors.

In the 1600 x 1200 resolution, select 6, 12, or 24 screen divisions for a single monitor; 9, 16, or 36 screen divisions for dual monitors.

In the 1680 x 1050, 1920 x 1200 and 1440 x 900 resolutions, select 6, 15, or 28 screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors.

In the 1920 x 1200 resolution, select 6, 15, or 28
screen divisions for a single monitor; 9, 20, or 42 screen divisions for dual monitors.
In the 1920 x 1080 resolution, select 6, 15, or 28 screen divisions for a single monitor; 6, 20, or 35 screen divisions for dual monitors.
In the 1280 x 800 resolution, select 6, 12, 24 screen divisions for a single monitor; 9, 16, 30 screen divisions for dual monitors.

For resolution, see *Layout Settings* later in this chapter.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Exit</td>
</tr>
<tr>
<td>14</td>
<td>Flag</td>
</tr>
<tr>
<td>15</td>
<td>Clipboard</td>
</tr>
<tr>
<td>16</td>
<td>Clip</td>
</tr>
<tr>
<td>17</td>
<td>ID</td>
</tr>
<tr>
<td>18</td>
<td>Event Type</td>
</tr>
<tr>
<td>19</td>
<td>Message</td>
</tr>
<tr>
<td>20</td>
<td>Message Time</td>
</tr>
<tr>
<td>21</td>
<td>Start Time</td>
</tr>
<tr>
<td>22</td>
<td>Event Categories</td>
</tr>
</tbody>
</table>
The types and messages displayed on Center V2:

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion</td>
<td>Camera xx detected motion.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Module xx triggered.</td>
</tr>
<tr>
<td>Connection</td>
<td>Camera xx video lost; Module xx I/O lost; Network abnormal; Fail to login to dispatch server; Dispatch server is shutdown; Video signal of xx has resumed; Module xx has returned to normal; Failed to login SMS server; Failed to send short message; SMS server is shutdown.</td>
</tr>
<tr>
<td>Alarm</td>
<td>Disk Full; Restarted Failed; Multicam Closed; There isn’t enough space for recording; Multicam Surveillance System has been closed; An unexpected error occurred in Multicam Surveillance System. (Error Code: 1 or 2); There is an intruder; Object Missing; Unattended Object; Alert Message of POS; Scene Change.</td>
</tr>
<tr>
<td>System</td>
<td>Start/end service; IP change; Record failed; Status change of monitoring camera. On: xx Off: xx / (By Schedule); Stop/start all cameras monitoring; Start/stop I/O Monitoring. / (By Schedule); Schedule start; Schedule stop. All monitoring devise are stop too. Start monitoring all type events; Stop monitoring all type events; Subscriber session is not established. Wait-time expired; Unexpected logout before subscriber session is completed; Can’t find USB Protection Key.</td>
</tr>
<tr>
<td>Attachment</td>
<td>Record file of Camera xx.</td>
</tr>
<tr>
<td>Wiegand Data</td>
<td>Card No. xxxxxx (Camera xx)</td>
</tr>
</tbody>
</table>

**Note:** Error Code 1 indicates a codec error; Error Code 2 indicates that users can’t write or record any data due to HD failure or user privilege.
1.4 Subscriber Account

Create at least one subscriber before starting Center V2 services. On the Center V2 window, click the **Accounts** button (No. 7, Figure 1-1). The Address Book window appears.

![Figure 1-2](image)

**Figure 1-2**

The buttons on the Address Book:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Add A Group</td>
<td>Adds a group.</td>
</tr>
<tr>
<td>2</td>
<td>Add A Subscriber</td>
<td>Adds a subscriber.</td>
</tr>
<tr>
<td>3</td>
<td>View / Edit Subscriber Address Book</td>
<td>Highlight one subscriber and click this button to open Subscriber Address Book for viewing and editing.</td>
</tr>
<tr>
<td>4</td>
<td>Delete A Group / Subscriber</td>
<td>Highlight a group or a subscriber and click this button to delete it.</td>
</tr>
<tr>
<td>5</td>
<td>Find A Subscriber</td>
<td>Searches a subscriber account.</td>
</tr>
<tr>
<td>6</td>
<td>Import / Export Address Book</td>
<td>Imports or exports the address book data.</td>
</tr>
<tr>
<td>7</td>
<td>Subscriber Settings</td>
<td>Highlight one subscriber and click this button to configure the settings of video and alert formats.</td>
</tr>
<tr>
<td>8</td>
<td>Subscriber Schedule</td>
<td>Sets up subscription schedules.</td>
</tr>
</tbody>
</table>
Creating a Subscriber

1. Click the **Add A Group** button (No. 1, Figure 1-2) to create a group.

2. Click the **Add A Subscriber** button (No. 2, Figure 1-2). This dialog box appears.

3. Type a Login ID and Password. Those will be the ID and Password for the subscriber to log into the Center V2.

![Figure 1-3](image-url)

*Figure 1-3*
4. Type the subscriber’s contact information in the rest of fields (optional).
   - If you wish to send e-mail alerts to this subscriber, type its e-mail accounts. Up to two e-mail accounts can be created for the subscriber. For e-mail settings, see *E-Mail Alerts* later in this chapter.
   - If you wish to send SMS alerts to this subscriber, type its country code and mobile numbers. Up to two sets of mobile number can be created for this subscriber. For SMS Server settings, see *SMS Alerts* later in this chapter.

5. Click **OK** to save the above settings. This dialog box appears.

6. Assign a Storage Group using the drop-down list. For details, see *Recording Settings, 1.15 System Configuration*.

7. The options in the dialog box are discussed later. You may accept the default settings here, and edit them later by clicking the **Subscriber Settings** button (No. 7, Figure 1-2) on the toolbar. After you click **OK**, the subscriber account will be created.
Subscriber Settings

[Monitor Option]

- **Image Size**: Sets the size of video size from the subscriber. Each size set from the subscriber corresponds to a certain size displayed at the Center V2 Server. For example, if the video stream from a subscriber is 704 x 576 and Center V2 operator selects Middle, the size of displayed image on Center V2 will be 720 x 288. For details on the image size, see Appendix E.

Center V2 supports megapixel resolution. If the subscriber sets the resolution to megapixel and the Center V2 operator wishes to view the videos of the same size, the Center V2 operator can select Actual Size. Note this setting will require a lot of bandwidth. It is recommended to select the option in LAN environment.

- **Auto Record Video**: Center V2 automatically records events based on the following Record Mode.

[Record Mode]

- **Live Mode**: Streams live video to Center V2. This is the default recording mode on the Center V2. Make sure you have enough bandwidth to receive video in live. To set the maximum duration of a video file recorded on Center V2, click the Settings button.

- **Attachment Mode**: A defined time of event will be recorded before sending to Center V2. The attachment will be sent out immediately once your subscriber is connected to Center V2. The Attachment Mode also provides several options associated with the attachment. Click the Settings button to bring up the Record Settings – Attachment Mode dialog box. See Attachment Mode Settings later for further setup.

- **Both (Live & Attachment)**: Sends both live video and attachment files.
[Color of Channel Caption]
Changes the color of channel headings. For further setup, see Channel Heading later in this chapter.

Attachment Mode Settings

In the Subscriber Settings dialog box (Figure 1-4), select Attachment Mode, and click the Settings button beside. This dialog box appears.

![Record Settings - Attachment Mode](image)

*Figure 1-5*
[Record Options (per camera)]

- **Pre-Rec Total Frames**: Determines the total pre-recorded frames in a video attachment.
- **Pre-Rec Frames/sec Limitation**: Determines the frame rate in the pre-recorded period.

**Note**: Dividing the Pre-Rec Total Frames by Pre-Rec Frames/Sec Limitation, you will get the total time of the video attachment.

- **Motion Frames/sec Limitation**: Determines the frame rate of the video to be sent as an attachment.
- **Recording Quality**: Use the slider bar to adjust the video quality in 3 levels.

[Attachment option (Record by Motion)] Defines the duration of the video attachment delivered upon motion.

- **Max video Clip**: Determines the duration of the video attachment.
- **Pos-Rec Motion**: Determines how many more seconds of video to be sent when motion stops.
- **Alerts interval**: Determines the interval between sent motion events.

[Attachment option (Record by I/O trigger)] Defines the duration of the video attachment delivered upon I/O trigger.

**Channel Heading**

For easy identification, you can define the background color of channel headings for each subscriber.

1. On Center V2 window, click the **Accounts** button (No.7, Figure 1-1), highlight a subscriber, and click the **Subscriber Setting** button on the toolbar. The Subscriber Settings dialog box (Figure 1-4) appears.
2. Click the **Color of Channel Caption** button. The color dialog box appears.
3. Select a color you wish to use, and click OK. The **Color of Channel Caption** button now displays the color you selected.

4. On the Center V2 window, click the **Preference Setting** button (No. 8, Figure 1-1) and select **System Configure**. The Preference dialog box (Figure 1-51) appears.

5. Click the **General** tab, and select **Use the subscriber setting color as background**. The background color of the channel heading will be in the color you selected.

![Figure 1-6](image.png)
1.5 Connection to Center V2

A single GV-System can connect up to two Center V2 centers simultaneously for central monitoring. To configure GV-System in order to access Center V2 remotely through a network connection, follow these steps:

1. In the Main System, click the **Network** button , and select **Connect to Center V2**. This dialog box appears.

   ![Figure 1-7](image)

   **Figure 1-7**

2. Type the IP address, ID and password of a Center V2. Modify the default port if necessary. Click **OK**. This dialog box appears.

   ![Figure 1-8](image)

   **Figure 1-8**
3. If you want to establish the connection to the second Center V2, click the button.

4. If you want to modify the login information of the established account, select the account in the dialog box, and click the button.

5. If you want to delete the established account, select the account in the dialog box, and click the button.

6. When you finish the settings, click the Connect button to start. When the connection is established, Center V2 will start receiving events, live images or attachments from the subscriber.

**Setting Normal Mode**

To further define the communication conditions between the subscriber and Center V2, select **Normal Mode** in the Connect to Center V2 dialog box (Figure 1-8), and then click the Configure button for setup. A drop-down menu includes two options, **General Settings** and **Advance Settings**. The Advance Settings dialog box includes these tabs: (1) Camera, (2) Other and (3) I/O Device.
General Settings

The settings define the retry modes and communication ports between GV-System and Center V2.

![General Settings](image)

**Figure 1-9**

[Connection Broken]

- **Maximum Retries**: Sets the number of retries if connection is not immediately available.
- **Retry Interval**: Sets the interval between retries.
- **Retry until connected**: Keeps GV-System on trying until connected to Center V2.
- **Retry in the background**: Hides the retries in the background.

[Codec] Selects Geo Mpeg 4 (default) or Geo H264 as the compression method for video sent to Center V2.
[**Connective Port**] Displays ports used for communication. It is recommended to keep the default settings, unless otherwise necessary.

To automatically configure these ports on your router by UPnP technology, click the **Arrow** button. For details on UPnP settings, see *UPnP Settings*, Appendix.

[**Temp Folder**] Attachments are temporarily stored in this folder while waiting to be sent to Center V2. In case the connection is broken, attachments meant to be sent to Center V2 could be found here. Once the connection is back to normal, events saved in the Temp Folder will be sent out immediately.
Advanced Settings

[Camera]

The settings define which camera condition to notify Center V2. To configure the event type, first disable the Monitoring all type events option in Figure 1-8.

- **The Camera list:** Click the drop-down list to select the camera to be configured. Or you can click the Finger button to apply the settings to all cameras.

- **Send to Center V2 when Motion is Detected:** Sends video to Center V2 when motion is detected.

  **Event Type:** If the subscriber wants Center V2 always to get notified of motion detection, select Emergency. If the subscriber wants Center V2 to get notified of motion detection only when an assigned input is triggered, select Normal.
- **Allow Center V2 to View Live Camera**: Gives Center V2 the privilege to view your cameras at any time.

- **Allow Center V2 to Control PTZ Camera**: Gives Center V2 the privilege to control your PTZ cameras. Remember to properly set up camera mapping first. See *Mapping PTZ Cameras*, Chapter 1, *DVR User’s Manual* on the Surveillance System Software DVD.

- **Notify Center V2 when the following events come up**: Notifies Center V2 when any of these alert events occur: Intruder, Missing Object, Unattended Object and Scene Change.

**Event Type**: If the subscriber wants Center V2 always to get notified of these alert events, select **Emergency**. If the subscriber wants Center V2 to get notified of these alert events only when an assigned input is triggered, select **Normal**.

---

**Note**: To set an input trigger for the notification of **Normal** events, see *Security Service, [I/O Device]* later in this chapter.
Define other communication conditions between GV-System and Center V2.

**[Audio]** Applies any of these options here may generate privacy issues. Think before you make any selection.

- **Allow Audio-Out to CenterV2**: Allows Center V2 to listen to the audio from GV-System.
- **Accept Audio-In from CenterV2**: Allows Center V2 to use the talkback feature when emergency occurs.
[Other]

- **Allow Center V2 to Get System Information:** Allows Center V2 to get system information on your GV-System.

- **Send Alert Message of POS’s Loss Prevention to Center V2:** Notifies Center V2 about the events of POS Loss Prevention.

- **Time synchronization with Center V2:** Enables the time increment/decrement of minutes and seconds at the subscriber site to match the time at the Center V2.

- **Notify Center V2 when the storage space was full:** Notifies the Center V2 when the subscriber’s storage space is insufficient.

- **Notify Center V2 when Wiegand Event occurs:** This option is designed for the access control application with GV-Wiegand Capture. When the GV-System receives the card number from GV-Wiegand Capture, the number can also be sent to the Center V2.

---

**Note:** When **Time synchronization with Center V2** is selected, the function of time synchronization will be activated as soon as the Center V2 is started up, and it will be re-activated every 12 hours.
**[I/O Device]**

The settings define which I/O condition to notify Center V2. To configure these settings, first disable the **Monitoring all type events** option in Figure 1-8.

![Figure 1-12](image)

**Figure 1-12**

**[I/O Device]** Notifies the Center V2 of when I/O devices are triggered. Use the **Arrow** buttons to configure each I/O device, or click the **Finger** button to apply to all I/O devices.

- **Allow Center V2 to Enable / Disable I/O**: Allows Center V2 manually arm/disarm any I/O devices at the subscriber’s site without interrupting the monitoring.

For example, when an alarm is triggered at the subscriber site, the Center V2 operator can turn it off remotely before the security staff arrives at the site. Meanwhile, GV-System still remains on monitoring.
- **Send to Center V2 when I/O is Triggered:** Notifies Center V2 when any selected input is triggered.

  **With Camera(s):** Sends the camera video to Center V2 when the selected input is triggered. Click the **Set Camera(s)** button to assign cameras for the application.

  **Event Type:** If the subscriber wants Center V2 always to get notified of the input trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the input trigger only when an assigned input is triggered, select **Normal**.

  **Right Arrow button:** Sets the delay time to notify Center V2 of input trigger. This feature is only available when the **Normal** type is chosen.

  - **Exit Delay:** While the system is activated, this feature provides an interval of time for the subscriber to exit the premises. During this time, the specified input (e.g. an exit/entry door) is inactive. Once the exit delay expires, the input will be fully armed.

  - **Entry Delay:** While the system is activated, this feature provides an interval of time for the subscriber to enter the premises. During this time, the specified input (e.g. an exit/entry door) is inactive so that the subscriber can disarm the system. If the subscriber fails to do, once the entry delay expires, Center V2 will get notified of the input trigger.

- **Output Module:** Enables the assigned output module when the selected input module is triggered.

  For the example of Figure 1-12, when the I/O Device (Module 1, Input 4) is triggered, the Output (Module 1, Pin 3) will be activated simultaneously.

  **Right Arrow button:** Sets the delay time to trigger the assigned output module.

  **Event Type:** If the subscriber wants Center V2 always to get notified of the output trigger, select **Emergency**. If the subscriber wants Center V2 to get notified of the output trigger only when an assigned input is triggered, select **Normal**.
Note:

1. To set an input trigger for the notification of Normal events, see [Security Service] below.
2. The delay settings in Send to Center V2 when I/O is triggered and Output Module allow you to enter your premises and disable input/output module before it is activated. To disable prior I/O settings, the subscriber may exit the connection to Center V2 or use the Stop monitoring normal events when selected pin is triggered feature in Figure 1-12.

- Allow Center V2 to Force Output: Allows Center V2 to manually force output devices of the subscriber to be triggered.

[Security Service] Supports two types of access control systems: Momentary and Maintained Mode.

- Momentary Mode: Pushbutton switches that are normally open and stay closed only as long as the button is pressed. Momentary switches allow turn-on or turn-off from multiple locations. For example, certain premises have a designated entry/exit door. When the staff enters the entry door, the system starts monitoring. When the staff leaves from the exit door, the system stops monitoring.

- Maintained Mode: Push-on/push off button switches that stay open until thrown, and then stay closed until thrown again. Maintained switches are convenient for only one switch location. For example, in the business hour when the door is opened, the system stops monitoring; in the non-business hour when the door is closed, the system starts monitoring.
Setting Panic Button

You may set up a panic alarm button at your GV-System. In case of emergency, press the button immediately to send the associated video to Center V2.

To set up a panic alarm, select Panic Button from the Mode drop-down list in the Connect to Center V2 dialog box (Figure 1-8), click the Configure button and select Advanced Settings. This dialog box appears.

![Settings for Panic Button]

[Figure 1-13]

[Panic Button] Assigns an input device to be the panic alarm button.
- **Trigger by I/O**: Assigns an input module and a pin number.
- **Output Module**: Enables an assigned output module when the panic button is pressed.
  
  For the example of Figure 1-13, when the panic button (Module 1, Pin 1) is pressed, the output module (Module 3, Pin 4) will be triggered simultaneously.

[Send which Camera(s) to Center V2] Select which camera video should be sent to Center V2 when the panic alarm button is pressed.
**Detecting Input Status**

The feature is designed to monitor all inputs for a change of state whenever the subscriber starts the live monitoring through Center V2. A change from the previously defined state (N/O to N/C or N/C to N/O) will activate an alarm condition.

Click [ ] in the Connect to Center V2 dialog box (Figure 1-8). For details, see *Input State Detection*, Chapter 6, *DVR User’s Manual* on the Surveillance System Software DVD.
1.6 Live View

By default, live views are popped up on the Center V2 when events and motions are detected at the subscriber. You can also enable live views to be shown constantly on the Center V2.

To enable live view of any camera:

1. The GV-System needs to grant the Center V2 the privilege to allow live viewing. On the GV-System, click the Network button, select Connect to Center V2, click Configure, and select Advanced Settings and click the Camera tab. The Advanced Settings dialog box appears (Figure 1-10).

2. Select Allow Center V2 to View Live Camera.

3. To apply the settings to all the cameras, click the Finger button.

4. Connect the GV-System to the Center V2.

5. On the Center V2 window, right-click one camera under the subscriber and select Live View.

![Image of live view interface](image.png)

*Figure 1-14*
When a subscriber is in focus, you can enable live view to all its cameras.

1. Click a subscriber in the list and select **Focus on this subscriber only**.

2. Click the subscriber again and select **View All Cameras (Live)**.

![Figure 1-15](image)

**Figure 1-15**

**Note:** You can enhance coloring on live images. See the **Enable Directdraw** option in the General Setting dialog box (Figure 1-51).
1.7 Recording

By default, the Center V2 records any events and motion detected at the subscriber. When the video is recorded, a message labeled with [Live] appears on the Event List.

<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Message</th>
<th>Message Time</th>
<th>Start Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Motion</td>
<td>Camera 1 detected motion</td>
<td>8/5/2010 10:36:19 AM</td>
<td>8/5/2010 10:36:19 AM</td>
</tr>
</tbody>
</table>

**Figure 1-16**

**Note:** The default path of recorded files is :\Center V2\Data\subscriber\Live

You can also start recording manually and instantly when you see any suspicious live images. To start recording manually:

1. To start recording manually, the live view must be enabled already. See 1.6 Live View.

2. To start recording, move your cursor to the live view and click the icon on the channel heading.

3. To stop recording, move your cursor to the live view and click the icon on the channel heading.


<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Message</th>
<th>Message Time</th>
<th>Start Time</th>
</tr>
</thead>
</table>

**Figure 1-17**

**Note:** The default path for recordings started manually is :\Center V2\Data\subscriber\Manual
1.8 Playback

You can play back the video events saved on the Center V2 by clicking the attachments on the Event List, or play back the video events recorded on the remote subscriber.

Attachment Playback

When you click the attachment of an event, the EZ player will appear for playback operations.

![EZ player interface with labeled controls](image)

**Figure 1-18**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tools</td>
<td>Adds effects to the image, including the options of Brightness, Contrast, Smooth, Sharpen, Grayscale and Undo. The other options include Copy, Save As (an image or an .avi file), Print and Setup.</td>
</tr>
<tr>
<td>2</td>
<td>Zoom In</td>
<td>Zooms in the video.</td>
</tr>
<tr>
<td>3</td>
<td>Zoom Out</td>
<td>Zooms out the video.</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Move</td>
<td>Moves the EZ Player window by clicking and holding on this button.</td>
</tr>
<tr>
<td>5</td>
<td>Play</td>
<td>Plays the video file.</td>
</tr>
<tr>
<td>6</td>
<td>Pause</td>
<td>Pauses the video file.</td>
</tr>
<tr>
<td>7</td>
<td>Stop</td>
<td>Stops the video file.</td>
</tr>
<tr>
<td>8</td>
<td>Previous Frame</td>
<td>Goes to the previous frame of the video file.</td>
</tr>
<tr>
<td>9</td>
<td>Next Frame</td>
<td>Goes to the next frame of the video file.</td>
</tr>
<tr>
<td>10</td>
<td>Top Frame</td>
<td>Goes to the beginning of the video file.</td>
</tr>
<tr>
<td>11</td>
<td>End Frame</td>
<td>Goes to the end of the video file.</td>
</tr>
<tr>
<td>12</td>
<td>Speed Control</td>
<td>Controls the play speed.</td>
</tr>
</tbody>
</table>

- **PIP View**: Refers to Picture in Picture. You can zoom in on the video. See 4.17 PIP and PAP View.
- **PAP View**: Refers to Picture and Picture. You can create a split video effect with multiple close-up views on the video. See 4.17 PIP and PAP View.
- **Wide Angle Lens Dewarping**: Corrects image distortion. See Adjusting Distorted Views in this section.
- **Fit Window Size**: Adjusts image size to fit the screen.
Changing Playback Mode

You can choose to play back video one by one in the same player or separate players simultaneously.

1. Click the **Tools** button on the EZ player (No.1, Figure 1-18), and click **Setup** from the pop-up menu. This dialog box appears.

![Setup Dialog Box](image)

**Figure 1-19**

2. To play back one video at one time in the same player, select **Open each video in the same windows**.

3. To play back multiple videos in separate players simultaneously, select each video in its own windows.
Adjusting Distorted Views

When viewing videos through EZ player, images may be curved near the corners. Use the Wide Angle Lens Dewarping feature to correct image distortion.

1. On EZ player, right-click the video image and select **Wide Angle Lens Dewarping** to enable this function.

2. Right-click the video image again and select **Wide Angle Lens Dewarping Settings**. The dialog box appears.

3. Move the slider at the bottom to correct the degree of distortion. The adjusted view is shown on the right.

4. Click **OK** to complete.

*Figure 1-20*
Remote Playback

You can play back the video events recorded on the remote subscriber through network connection. The function is critical when you do not want to enable recording on the Center V2 but want to retrieve the videos for reference.

For the remote playback to work, the following server must already be enabled on the subscriber:

- GV-System: Remote ViewLog Service
- GV-Video Server: ViewLog Server
- GV-Compact DVR: ViewLog Server

**Note:** The Remote ViewLog option is not available for the events already having recorded files on the Center V2 (the events with attachments).

1. Double-click an event without having the attachment in the Event List. This dialog box appears.

![Figure 1-21](image-url)
2. Click the **Remote Playback** button. This dialog box appears.

![Figure 1-22](image)

**Figure 1-22**

3. Select a camera. Type the ID, password and IP address of the connected subscriber. Keep the port as default value 5552 or modify it to match the related port on the subscriber. If you want to play the video events recorded during the Daylight Saving Time period, select **DST Rollback**. Click **OK**. This player appears.

![Figure 1-23](image)

**Figure 1-23**

4. For the controls on the Remote Playback window, see **4.16 Instant Playback**.
1.9 Two-Way Audio

The Center V2 operator can perform two-way audio with subscribers.

Note: To have two-way audio with the Center V2, the subscriber must use GV-System version 8.0 or later.

1. The GV-System needs to grant Center V2 the privilege to allow two-way communications. On the GV-System, click the Network button, select Connect to Center V2, click Configure, select Advanced Settings, and click the Other tab. The Advanced Settings dialog box appears (Figure 1-11).

2. Under the Audio section, select Allow Audio-Out to Center V2 and Allow Audio-In from the Center V2. Click OK.

3. Connect the GV-System to the Center V2.


![Figure 1-24](image)
5. To speak to the subscriber, click the **Microphone** icon to turn it on. The control panel appears.

![Microphone Icon](image)

**Figure 1-25**

6. To listen to audio from the subscriber, click the **Audio** icon to turn it on. The control panel appears.

![Audio Icon](image)

**Figure 1-26**

7. To switch to another subscriber, click the subscriber icon on the **Microphone** or **Audio** control panel, type the subscriber’s ID in the **Search Account** dialog box and click **GO**.

![Search Account](image)

**Figure 1-27**
1.10  Advanced Monitoring and Management

This section describes how to monitor and manage subscribers in these parts: (1) Showing and Controlling I/O Status, (2) Camera/Audio Control, (3) Simple Microphone and Audio Panels (4) Camera Monitor (5) Viewing Subscriber Information (6) Subscription Control.

Showing I/O Status

You can view the status of input devices at the subscriber’s site, as well as forcing the outputs to be triggered.

To allow the Center V2 to control the I/O devices, the subscriber must enable Allow Center V2 to Enable/Disable I/O and Allow Center V2 to Force Output first. For the two options, see Figure 1-12.

On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber, and select Show I/O Status to display this window.

![Figure 1-28](image_url)
**[Module]** Shows the module’s I/O status.

**[Input]** Shows the input device status. The blue icon indicates the input is deactivated; the red lightening icon indicates the input is activated.

**[Output]** Shows the output device status or to manually force an output or reset an output installed at the subscriber site.

To manually force an output to be triggered, click a desired output and click the **Force Output** button. Or select a desired output pin and click the **Force Output** button. To reset an output, click a desired output pin and select **Reset**. Or click the **Reset Output** button and select the desired module and output pin.

**Controlling I/O Devices**

The Center V2 operator can manually arm or disarm the physical I/O devices from subscribers without interrupting the monitoring. For this, the subscriber must give the privilege first. See the **Allow Center V2 to Enable/Disable I/O** option in Figure 1-12.

---

**Note:** This function also supports the client GV IP devices of these firmware versions:
- GV-Compact DVR: Firmware V1.43 or above
- GV-IP Camera: Firmware V1.05 or above
- GV-Video Server: Firmware V1.45 or above
Camera/Audio Control Window

The Camera/Audio Control window allows two-way audio between CenterV2 and the subscriber, as well as PTZ control.

On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber and then select Camera/Audio Control to display this window.

![Figure 1-29](image)

The controls on the Camera/Audio Control:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Change Camera</td>
<td>Switches to another camera of the same subscriber.</td>
</tr>
<tr>
<td>2</td>
<td>Change Size</td>
<td>■ <strong>Size</strong>: Changes the size of the live video. The size choices are only available when the video resolution is higher than 320 x 240. (see <strong>Image Size</strong> in <strong>Subscriber Settings</strong>)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ <strong>Defog</strong>: Enhances image visibility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ <strong>Stabilizer</strong>: Stabilizes live images.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ <strong>Stream1/Stream2</strong>: Switches video streams.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ <strong>PIP View</strong>: Refers to Picture in Picture. You</td>
</tr>
</tbody>
</table>
can zoom in on the video. See 4.17 PIP and PAP View.

- **PAP View**: Refers to Picture and Picture. You can create a split video effect with multiple close-up views on the video. See 4.17 PIP and PAP View.

- **Fisheye**: Enables a 360 degree view. This function only works with a Fisheye Camera.

- **Wide Angle Lens Dewarping**: Corrects image distortion. See *Adjusting Distorted Views in 1.8 Playback*.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Audio</td>
</tr>
<tr>
<td>4</td>
<td>Microphone</td>
</tr>
<tr>
<td>5</td>
<td>Setting</td>
</tr>
<tr>
<td>6</td>
<td>PTZ</td>
</tr>
<tr>
<td>7</td>
<td>Snapshot</td>
</tr>
<tr>
<td>8</td>
<td>Zoom</td>
</tr>
</tbody>
</table>

**Note**: If the subscriber uses GV-System version 8.2 or earlier, an older style of Camera /Audio Control Window will appear. If the GV-System version V8.3 or later is in use, a new window will appear.

*Figure 1-30*
Camera Monitor

Use the Camera Monitor window to define the following:

- Enable and disable live display
  (The subscriber must give the privilege first. See the Allow Center V2 to View Live Camera option in Figure 1-10)
- Define the interval between incoming events triggered by motion detection and video lost

1. On the Subscriber List (No. 4, Figure 1-1), right-click one online subscriber and select Camera Monitor.
2. The Camera Monitor window appears.

![Camera Monitor Window]

*Figure 1-31*
- **Live drop-down list**: Highlight one camera, and select **Play** (enable live display) or **Stop** (disable live video).
- **Suspended Motion Monitoring**: Highlight one camera, and set the interval between incoming events triggered by motion detection. Alternatively, you can right-click one live camera channel on the monitoring window and select **Suspend** for the same setting.
- **Suspend Video Lost Monitoring**: Highlight one camera, and set the interval between incoming events triggered by video lost.
- **Status column**: Displays the status of video lost from cameras or disconnection.

3. Click **OK** to apply the settings.

If the camera is enabled for live display, you will see 📹 in the upper right corner of its monitoring window; otherwise, you will see 📷.
Viewing Subscriber Information

To view the general information about your subscribers, click the **Host Information** button (No. 6, Figure 1-1) on the Center V2 window to display the Host Information window. Choose a subscriber from the list, and click the **View Information** button to view its related information.

![Host Information](image)

*Figure 1-32*

For the feature, the subscriber must grant the privilege to Center V2. See the **Allow Center V2 to Get System Information** option in Figure 1-11.

Disabling Subscription

The Center V2 operator can disable its services to an individual subscriber when subscription expires. In the Address Book (Figure 1-2), right-click one subscriber and select **Disable**. To restore the subscription, right-click that subscriber again and select **Enable**.
1.11 Subscriber Schedule

The Center V2 operator can create schedules to monitor subscription status. When subscribers don't log in Center V2 on the programmed time, the operator and subscribers will get notified.

- When a subscriber doesn't log in Center V2 on time, this message will appear on the Event List: Service hour engaged; still waiting for subscriber to log in.
  When a subscriber logs out suddenly during a service time, this message will appear: Unexpected subscriber logout during service times.

- To activate the computer and output alarm to notify the operator while a SMS and E-mail message being sent out to a subscriber, use the Notification feature. For details, see Notification Settings later in this chapter.

Setting a Schedule

1. On the Center V2 window, click the Accounts button (No. 7, Figure 1-1). The Address Book window appears.
2. Highlight one subscriber, and click the Subscriber Schedule (No. 7, Figure 1-2). The Schedule window appears.

![Figure 1-33](image-url)
3. On the Schedule window menu, click **Schedule**, select **Setup Wizard** and follow the Wizard instructions.

4. When the following dialog box appears during the instructions, drag the mouse over the Login timeline to define the Start and End time.

5. Click **Next** when you finish the schedule. The Setup Wizard dialog boxes pops up again, and then click **Finish** to exit.
**Scheduling Alert Notification**

E-mails and SMS messages can be sent out within the scheduled period of time. The Schedule will work with your E-Mail and SMS settings to all alert conditions. To set up alert conditions, see *Notification Settings* later in this chapter.

---

**Note:** Once you enable the schedule function, you will not be notified when events occur outside the scheduled period of time.

1. On the Schedule window, double-click an established plan. A plan dialog box similar to Figure 1-33 appears.

2. Click the **Advanced Setting** button (No. 5, Figure 1-33). The Advanced Setting dialog box appears.

3. Expand the **Notification** folder, and select **SMS** or **E-Mail** to be scheduled.

4. On the plan dialog box, click the **Notification** button (No. 8, Figure 1-33), drag the mouse over SMS and / or E-mail timelines to define the Start time and End time to send out alerts.
1.12 Alarm Report

For every event, the Center V2 operator can generate a report to evaluate certain conditions.

Creating an Alarm Report

1. In the Event List window, select an event and click on the report column (No. 15, Figure 1-1). This dialog box appears.

![Figure 1-35](image)

2. In the Reporter field, type the name, and click Start to begin the report.

3. There are 6 report categories. Click the desired category tabs for report.

- **Event Type**: Select a type to classify the event.
- **Description**: Select a description for the event.
- **Notification**: Select the authority being notified, and type the notified time.
Arrival: The button becomes available after you select a notified authority. Type the arrival time of the authority.

Measures: Select the measure taken to deal with the event.

Other: The button is available only when the e-mail and/or SMS alert are configured.

4. When you finish the report and will not change the contents, click the End Report. Or click Save to edit later.
Editing Alarm Report Categories

The items in each category of the Alarm Report can be customized and edited to meet your needs. The changes made here will be available for each report.

1. On the Center V2 window, click the Preference Settings button (No.8, Figure 1-1), and select Customize Alarm Report. This dialog box appears.

![Customize Alarm Report dialog box]

2. Click the desired category tab (Event Type, Description, Measurement Taken, and Patrol) to make the necessary changes.

3. Click OK to save the changes.

Figure 1-36
Printing Alarm Reports

You can print out the alarm reports along with filtered logs.

1. To filter the logs with alarm reports, click the **Tools** button (No.5, Figure 1-1), select **View Event Log**, and click the **Filter** button. The Filter window appears.

2. Click the **Clipboard** icon and select the type of alarm report from the drop-down list. For details, see Filtering the Event Log in 1.11 Event Log Browser.

3. Click **OK**. The search results will be displayed in the Event Log Browser window.

4. To print out the alarm reports along with the search results, click the **Page Setup** button (No.8, Figure 1-44), select **Print Managing Alarm Report** and click **OK**.

5. Click the **Print** button (No. 9, Figure 1-44). Find the alarm reports in the last part of the printouts.

Also see Printout Settings in 1.11 Event Log Browser.
1.13 Event List

Marking the Events with Colorful Flags

The flags of various colors are provided to distinguish different events. You will find them useful not only when browsing in the Event List but also when using the Filter function to sort out the desired events.

You can name the colorful flags with the provided texts or change the texts to meet your needs.

1. On the Event List window, select one event, and right-click in the flag column. The flag list appears (Figure 1-37).

2. Select Setup. This dialog box appears.
3. Select the desired flag, and then click the **Modify text** button. A list of text options appears.

4. Select one desired text (Pending, Assigned, In Process, Progressed, Resolve and Reject) or select **User Define** to customize your own flag text.

**Using the Event Tabs**

On the bottom of the Center V2 window, events are sorted under different tabs according to the type. You can utilize these tables to quickly monitor events by type and configure the **Customized Event** tab which contains self-chosen event types.

**Note:** This feature is only supported by the Professional version using a GV-USB dongle.

*Figure 1-39*
Configuring the Event Tabs

All the event tabs are enabled by default. You can also disable the unwanted tabs.

1. On the Center V2 window, click the **Preference Settings** button and select **My Favorite Events**. A sub-menu appears.

2. Unselect the event tab as required.
Setting up the Customized Event Tab

You can also configure the Customized Event tab which groups the selected event types under a single tab. With only a click of the Customized Event tab, you can monitor the desired events instantly.

1. On the Center V2 window, click the Preference Settings button and select Customize Message Settings. The Customize Message Settings dialog box appears.

2. Select an event from the left and select Add to Customized Event Tab.

3. To view the customized events, select the Customized Event tab on the event category of the Center V2 window.

![Customize Message Settings dialog box](image-url)
Setting Alert Levels of Event Messages

You can assign an alert level to each event type for monitoring and management purposes. Each alert level can be distinguished by color. You can customize the color for each alert level or assign a color exclusively for a particular event type.

**Note:** This feature is only supported by the Professional version using a GV-USB dongle.

---

1. On the Center V2 window, click the **Preference Settings** button and select **Customize Message Settings**. The Customize Message Settings dialog box appears.
2. On the left, select an event type you wish to configure.

![Customize Message Settings](image)

3. To assign an alert level, select **Using Priority Color** and choose from the drop-down list. To change the color for this alert level, click the color box and select a desired color.

4. To customize the color of this event type, select **Using Custom Color** and click the color box to assign a desired color.

5. Click **OK** to complete.
1.14 Event Log Browser

The Event Log Browser allows you to locate a desired event coming from subscribers. On the Center V2 window, click the Tools button (No. 5, Figure 1-1) and select View Event Log to display the following window.

Tip: You can quickly access the Event Log of a specific subscriber, instead of filtering all events. Right-click one subscriber on the Subscriber list (No. 4, Figure 1-1), select Event Log and then click a desired log type.

Figure 1-44

The buttons on the Event Log Browser:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open</td>
<td>Opens an event log.</td>
</tr>
<tr>
<td>2</td>
<td>Reload</td>
<td>Refreshes the event log manually</td>
</tr>
<tr>
<td>3</td>
<td>Start / Stop Synchronous EventLog</td>
<td>Refreshes the event log automatically.</td>
</tr>
<tr>
<td>4</td>
<td>Filter</td>
<td>Defines the search criteria.</td>
</tr>
<tr>
<td>5</td>
<td>Refresh the Filter Result</td>
<td>refreshes the filter result.</td>
</tr>
<tr>
<td>6</td>
<td>Event Chart</td>
<td>Provides the daily, weekly and monthly statistical charts based on different criteria.</td>
</tr>
<tr>
<td></td>
<td>7 Backup</td>
<td>Exports the current event list and video files.</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>8 Page Setup</td>
<td>Creates a header and footer for the printout of the event list.</td>
</tr>
<tr>
<td></td>
<td>9 Print</td>
<td>Prints the current event list.</td>
</tr>
<tr>
<td></td>
<td>10 Exit</td>
<td>Exits the browser.</td>
</tr>
</tbody>
</table>

### Opening the Event Log

Click the **Open** button (No. 1, Figure 1-44) to launch the following Open Database dialog box. Define a time period and select the type of database. If you want to open the logs created by the system, select **System Log**; if you want to open the logs you have backed up in a local drive or CD/DVD, select **Backup Log**. Then assign the log path. After clicking **OK**, the events matching the search criteria will be loaded to the Event Log Browser.

![Open Database Dialog Box](image.png)

**Figure 1-45**

**Note:** By default, the displaying period of time is one day, the type of database is System Log and the log path is at:\Center V2\EventLog. The default displaying period of time and log path can be modified by using the Event Log Settings (Figure 1-49).

For details on backing up logs, see **Backup Settings** later in this chapter.
Filtering the Event Log

You can filter log events on the defined criteria. Click the Filter button (No. 4, Figure 1-44) to bring up the Filter window.

![Filter Window]

**Figure 1-46**

**Filters**

- **Read**: Searches for the events you have opened on the Event List that is at the bottom of the Center V2 window.
- **Clipboard**: Searches for the events with alarm reports. The icon indicates the report has been completed. The icon indicates the report has not been completed or ended. The icon indicates the above two types of reports.
- **Flag**: Searches for the flagged events.
- **Clip**: Searches for the events containing video attachments.
- **ID**: Searches for the events from a specific subscriber.
- **Type**: Searches for the events based on the nature of events.
- **Message**: Searches for the events by keywords.
- **Message Time**: Searches for the events by the arriving time or date to Center V2.
- **Start Time**: Searches by the starting time of the events occurred at the subscriber site.
Applying Multiple Filters
This option allows you to define several filter commands for search. Click the Add New Command button to add a new filter command. When you click OK, all events matching the defined commands will be listed on the Event Log Browser.

Removing Filters
Select the filter command you wish to remove from the filter list, and then click the Remove Selected Command button to remove it.

Backing up the Event Log
You can back up logs to a local drive, or export them to CD and DVD.

1. On the Event Log Browser, click the Backup button (No.7, Figure 1-44). This dialog box appears.

![Backup dialog box]

**Figure 1-47**

2. To back up logs to a local drive, select Backup Path, click the [...] button and assign a location where you want to save the files.

3. To export logs to CD and DVD, select Temp folder, click the [...] button and assign a location for temporary storage of backup data.
4. Select whether you want to back up alarm reports and AVI files along with logs.

5. Click OK.

6. If you select **Temp folder**, this dialog box appears for further setup.

![Backup to CD / DVD](image)

**Figure 1-48**

- **Using CD/DVD**: Click to back up files to the CD or DVD using the third-party software. Click the [...] button to assign the desired burning software (.exe file).

- **CD Using OS-Burning**: This option is only available when you use Windows XP, Server 2003, Vista or Windows 7. It burns files to the CD or DVD using the inbuilt software of the operating system. Note that your hard disk needs at least 1 G buffer space.
Setting the Event Log

On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and select **Event Log Setting** to display the following dialog box:

![Event Log Settings dialog box](image)

**Figure 1-49**

**[Event List]**
- **Auto Import**: Specify the number of days for which the logs will be loaded to the Event List at the bottom of the Center V2 window (Figure 1-1) and the Event Log Browser (Figure 1-44).

**[Event Log]**
- **Keep Days**: Select this option and type the number of days to keep log files. Otherwise clear the option to keep log files until the Recycle starts or the storage space is full.
- **Recycle**: Delete the files of the oldest day when storage space is lower than 500 MB.
- **Log Path**: Click the [...] button to assign a storage path.
Printing the Event Log

You can print out the filtered log events, define footers and headers for each printout, and choose whether to attach the Alarm Report with the data logs.

1. On the Event Log Browser, click the **Page Setup** button (No. 8, Figure 1-44) to display this dialog box.
2. Select the options and type the information that you want to print out.
3. Click **OK** to apply the settings.
4. Click the **Print** button (No.9, Figure 1-44) to start.

![Figure 1-50](image-url)

*Figure 1-50*
1.15 System Configuration

On the Center V2 window, click the Preference Settings button (No. 8, Figure 1-1), and select System Configure to display the following Preference window. This window contains these tabs: (1) General, (2) Layout, (3) Network, (4) Record and (5) Dispatch Server.

General Settings

![Preference window](figure1-51)

**Figure 1-51**

[Monitor Option]
- **Manual close channel**: Closes the triggered camera view manually.
- **Close the camera view when motion stopped**: Closes the triggered camera view automatically when motion stops.
- **Post Motion**: Specifies the duration of the camera view remaining on the monitoring window after motion stops.
- **Camera send by I/O trigger will monitor**: Specifies the duration of the camera view remaining on the monitoring window when an I/O device is triggered.
  
  To keep the camera view remaining on the monitoring window even after the alarm is finished, click the right-arrow button, and uncheck **Latch Trigger**. Then the camera view will remain on the monitoring window for the specified time. For example, the alarm is triggered for 5 minutes and you set 10 minutes, which means the total display time will be 15 minutes.

- **Monitor the camera sent by GV-Wiegand Capture**: Specifies the duration of the camera view remaining on the monitoring window when the access control system, connected to GV-Video Server, is triggered. For details, see **Chapter 8 CMS Configurations** in the **GV-Video Server User’s Manual**.

- **Image Quality**: Adjusts the video quality. Moving the slide bar to the right side for the better quality and the bigger image size.

- **Enable Directdraw**: Enables an enhanced image performance for live video. To enhance coloring, click the right-arrow button, select **Use Colorful Mode** and restart the Center V2 program to take it effect.

[Start-up]

- **Auto Run when Windows Starts**: Automatically runs Center V2 when Windows starts.

- **Login SMS Server when Start Service**: Automatically logs in SMS Server when Center V2 starts. You will be prompted to type the IP address, Port, ID and Password of the SMS server.

[Channel Caption]

- **Font and Color**: Click the **Settings….** button to change the font and color of the captions.

- **Use the subscriber setting color as background**: Checks the option to apply the caption settings.
  
  For details, see **Channel Heading** earlier in this chapter.
Layout Settings

This feature transfers the Event List window to a separate monitor while the monitoring windows are displayed in the current monitor. For the application, your VGA card needs to support Twin View, and your Windows desktop must be properly set up for the display across two computer monitors.

Figure 1-52

- **Screen Resolution:** Detects the current screen resolution on your PC.
- **Main Panel Resolution:** Sets the Center V2 panel resolution to 1024 x 768, 1280 x 1024, 1600 x 1200, 1680 x 1050, 1920 x 1200, 1920 x 1080, 1280 x 800 or 1440 x 900. The new resolution is effective after next login.
- **Floating Event List:** Moves the Event List window to a separate monitor at the bottom or right side.
Network Settings

![Figure 1-53](image)

- **Location Name**: Indicates the name of the PC where Center V2 is installed.
- **Assign IP**: When your router or system has more than one IP address, you can assign an IP address for the communication between GV-System and Center V2.
- **Enhance Network Security**: Applies enhanced security for Internet. When the feature is enabled, all subscribers using earlier version than version 7.0 cannot access the Center V2 anymore.
- **Center Port**: Indicates the communication port used by the Center V2. The port should match the one in Figure 1-7. To automatically configure the port on your router by UPnP technology, click the Arrow button. For details on UPnP settings, see UPnP Settings, Appendix.
- **Accept the Connection of GV-Compact DVR, Video Server & IP Cam**: Enables the connection to GV IP devices. For connecting with GV IP devices, the default port is 5551; or you can modify it to match the Center V2 port on GV IP devices. For details, see their separate User’s Manuals.
Recording Settings

In Recording Settings, you can configure storage locations, storage durations and recycling conditions of video recordings.

**Figure 1-54**

- **Recycle**: When 1 to 49 channels are connected to the Center V2 Server and the storage space falls short of the recycle threshold 800 MB (default recycle threshold), 400MB of old files will be deleted. This recycle size increases by 100 MB with every addition of 50 channels. That is, with 50 to 99 channels connected, 500 MB of the old files will be deleted as the storage space falls short of the recycle threshold. See the following table for the corresponding recycle size:
No. of Channels Connected to Center V2 Server | Recycle Size (MB)
---|---
1 ~ 49 | 400
50 ~ 99 | 500
800 | 1500

- **Storage Group**: You can store the recordings of different subscriber at separate locations using the storage group feature. For details, see the following section *Storing Video Files in Separate Locations*.

- **Enlarge Path Threshold**: When the space in a storage path falls short of the path threshold (500 MB by default), recordings are saved to the next path of the same storage group. To enlarge the path threshold, select this option and specify the path threshold. To add paths, see the following section *Storing Video Files in Separate Locations*.

- **Keep Days**: The recordings are stored for the specified number of days before they are recycled.

- **Enlarge Recycle Threshold**: When the current storage path falls short of the recycle threshold (800 MB by default), recycle starts. To enlarge the recycle threshold, select this option and specify the recycle threshold.
Storing Video Files in Separate Locations
You can keep video files from each subscriber in separate locations using the storage group feature. Follow the steps below to set up storage groups and then assign each subscriber with a storage group.

To add storage paths and set up storage groups:
1. Add storage locations using the **Add New Path** button.
2. Assign a storage group to each path using the drop-down list.

**Figure 1-55**

**Important:** The system will first save video files to the path that appears on the top of the list, and switch to the next path (of the same group) as soon as the current location reaches the specified path threshold.
To assign a storage group to a subscriber:

1. On the Center V2 window, click the **Accounts** button (No. 7, Figure 1-1). The Address Book window appears.

2. Select the subscriber and click the **Subscriber Settings** button. The Subscriber Settings dialog box appears.

3. Select a storage group from the drop-down list.

4. Repeat steps 1 to 3 to assign a storage group to another subscriber.

**Dispatch Server Settings**

See 2.6 *Connecting Center V2 to Dispatch Server*. 
1.16 Notification Settings

Center V2 can automatically activate the assigned computer and output alarm to notify the operator while a SMS and an e-mail message are being sent out to subscribers, when alert conditions occur. For this application, click the Preference Settings button (No. 8, Figure 1-1) on the Center V2 window and select Notification to display this window.

![Alarm Settings Window]

**Figure 1-57**

[List box] Select an alert condition in the left list box to be configured.

[Alert Approach]

- **Invoke Alarm**: Select a computer alarm from the drop-down list. Or, select User Define from the list to import one desired .wav sound. Click the Arrow button beside to test the assigned alarm.

- **Output Module**: Select an installed output model and pin number to alert the Center V2 operator. To set up an I/O module on the Center V2, see 1.17 Output Alerts.

- **Send E-Mail Alerts**: Enables e-mail alerts to send e-mails to subscribers. Click the Edit button to edit a message. For Mailbox settings, see 1.19 E-Mail Alerts.
Send SMS Alerts: Enables SMS alerts to send SMS messages to subscribers. Click the Edit button to edit a message. For SMS Server settings, see 1.18 SMS Alerts.

[Text Format of SMS] ASCII for English text, limited to 160 characters. Unicode for other languages, limited to 70 characters.

Note: To automatically send E-mail and SMS alerts when alert conditions occur, ensure to set up e-mail addresses and mobile numbers for each subscriber in the Subscriber Address Book (Figure 1-3).
1.17 Output Alerts

You can activate output devices locally (installed directly to the Center V2 server) and/or virtually (through the network) to warn the Center V2 operator when events occur. Up to nine (9) GV-I/O Boxes (including local and virtual) can be connected to one Center V2 Server.

Note:
1. Only 8-port and 16-port GV-I/O Boxes can be connected to Center V2 through Ethernet.
2. The GV-I/O Box must be installed in the same LAN with the Center V2 server.

Configuring a Local GV-I/O Box

1. On the Center V2 window, click the Preference Setting button (No. 8, Figure 1-1) and select Local I/O Device. This dialog box appears.

   ![Local I/O Device](image)

   Figure 1-58

2. Select the Device, Port and Address using the drop-down lists and then click the Add button.
3. Click OK to finish adding the GV-I/O Box.
4. To trigger outputs automatically by event, see Triggering Outputs by Event later in this section.
5. To trigger outputs manually, see Triggering Output Manually later in this section.
Configuring a Virtual GV-I/O Box

1. On the Center V2 window, click the Preference Setting button (No. 8, Figure 1-1) and select Virtual I/O. The Virtual I/O Device dialog box appears.
2. Click the Add button. This dialog box appears.

![Virtual I/O Device dialog box]

3. Select the device using the drop-down list, and type the IP address, ID and Password of the GV-I/O Box. You can look up the IP address of the GV-I/O Box using the GV IP Device Utility.
4. Click OK to finish adding the GV-I/O Box.
5. To trigger outputs automatically by event, see Triggering Outputs by Events later in this section.
6. To trigger outputs manually, see Triggering Outputs Manually later in this section.
Triggering Outputs by Event

1. On the Center V2 window, click the **Preference Setting** button (No. 8, Figure 1-1) and select **Notification**. The Alarm Settings dialog box appears.

2. Select an event type for alarm output to be triggered.

3. Select **Output Module** and define the module number and pin number using the drop-down lists.

4. To set up more event types for alarm output, repeat steps 2 and 3.

*Figure 1-60*
**Triggering Outputs Manually**

1. On the Center V2 window, click the **Tools** button (No. 5, Figure 1-1) and select **Force Output**. This dialog box appears.

![Force Output of I/O Device](image)

*Figure 1-61*

2. Select a desired module and then click the **Finger** button to trigger the output.

You can also trigger the outputs connected at the subscriber site through the I/O Status interface. For details, see *Showing I/O Status*, 1.10 Advanced Monitoring and Management.
1.18 SMS Alerts

You can send SMS messages to subscribers when alert conditions occur.

Setting SMS Server

Before sending SMS messages to an individual subscriber, you need to define SMS Server correctly.

1. On the Center V2 window, click the Tools button (No. 5, Figure 1-1), and then select **Connect to SMS Server** to display this dialog box.

![Figure 1-62](image)

2. Type the IP address, communication port, Login ID and Password of the SMS Server.

3. If the SMS Server is installed at the same computer with the Center V2, select **Local**. If not, select **Remote**.

4. To set up three mobile numbers of Center V2 operators to get notified when Center V2 loses connection to SMS Server, click the **Mobile Setup** tab to display this window.
5. Select one mobile icon, check **Add to SMS List**, and type country code and mobile number.

6. To set time intervals between each SMS message when alert occurs, click the **SMS Option** tab to display this window.

7. In the SMS Alert Setup field, set the interval between 0 and 1440 minutes.

For details on SMS Server, see Chapter 10, *DVR User’s Manual* on the Surveillance System Software DVD.
Connecting to SMS Server

In the Center V2 window, click the **Tools** button (No.5, Figure 1-1), and then select **Connect to SMS Server** for connection.

Sending SMS

Once the connection of SMS Server and Center V2 is established, there are several ways to send SMS messages to subscribers. See the Center V2 window for the following selections.

1. Click the **Tools** button (No.5, Figure 1-1) and select **Send Short Message**. This sends SMS to an individual subscriber manually.

2. On the Subscriber List (No. 4, Figure 1-1), right-click one subscriber and select **Send Short Message**. This sends SMS to an individual subscriber manually.

3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send Short Message** icon on the window. This sends SMS to an individual subscriber manually.

4. Right-click one display channel and select **Send Short Message**. This sends SMS to an individual subscriber manually.

5. Click the **Preference Settings** button (No. 8, Figure 1-1), and select **Notification** to display the Alarm Settings window. Check the **Send SMS Alerts** item. This sends SMS to subscribers automatically when set alert conditions occur. For details, see **Notification Settings** earlier in this chapter.
Inserting Device Information

The subscriber name and ID can be inserted automatically into your SMS message when it is sent out.

1. On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1) and select **Notification**. This dialog box appears.

![Figure 1-65](image)

2. Select the event into which you wish to insert the subscriber name and ID, and select **Send SMS Alerts**. This dialog box appears.

![Figure 1-66](image)
3. Type the message text and click the **Macros** button. This dialog box appears.

![Figure 1-67](image)

4. Place the pointer to where you wish to insert the subscriber name and ID in the text, select the corresponding symbol and click **Insert**. The symbols will be replaced with real information when the message is displayed to the user.
1.19 E-Mail Alerts

You can send e-mails to subscribers when alert conditions occur.

Setting Mailbox

Before you can send e-mails to a separate e-mail account, you need to define your mailbox correctly.

Setting up the mailbox

1. On the Center V2 window, click the **Preference Settings** button (No. 8, Figure 1-1), and then select **E-Mail Setup**. This dialog box appears.

![Figure 1-68](image)

2. In the Charset field, select the set of characters and symbols that the e-mail uses.

3. In the E-Mail From field, enter your e-mail address.

4. In the SMTP Server field, type the outgoing server address.

5. If your e-mail server requires an SSL (Secure Sockets Layer) authentication for connection, select **This server requires an encrypted connection (SSL)**.

6. If your e-mail service provider requires authentication for sending
e-mails, select **SMTP Server requires authentication**, and type the account ID and password of your SMTP.

7. If you want to set time intervals between each e-mail message when alert occurs, in the Alert Setup field, set the interval between 0 and 1440 minutes.

8. Click **OK**.

**Sending a test e-mail**

After setting up your mailbox, you can use the Test section and send a message to your own e-mail account for testing.

1. Enter your own e-mail address in the E-Mail To field.
2. Enter a subject for the e-mail.
3. Type the desired message in the Mail Content field.
4. Click the **Test Mail** button.
**Sending E-Mail**

There are several ways to send e-mail alerts. See the Center V2 window for the following selections.

1. On the Subscriber List (No. 4, Figure 1-1), right-click one subscriber, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.

2. Right-click one display channel, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.

3. On the Event List, double-click one Event Type, except Attachment, to call up a message window. Click the **Send E-Mail** icon on the window. This sends the e-mail to an individual subscriber manually.

4. Click the **Preference Settings** button (No. 8, Figure 1-1), and select **Notification** to display the Alarm Settings window. Check the **Send E-Mail** item. This sends e-mails to subscribers automatically when set alert conditions occur. See 1.13 Notification Settings in this chapter.

**Inserting Device Information**

The subscriber name and ID can be inserted automatically into your email message when it is sent out. For setup details, see *Inserting Device Information* in 1.19 E-Mail Alerts.
1.20  E-Map Alerts

You can configure an instant E-Map alert to lay out the locations of triggered cameras, sensors and alarms within a floor plan.

For this application, subscribers must already create their own E-Maps using the E-Map Editor and activate **WebCam Server**.

To access the E-Map at the Center V2, right-click one online subscriber on the Subscriber List (No. 4, Figure 1-1) and select **E-Map**. The Remote E-Map window will appear. When motion or input trigger is detected on the subscriber, the camera or input icon on the E-Map will blink for alert. You can also double-click the camera icon to see its live view.

**The Remote E-Map Window**

![Figure 1-69](image)
The controls on the Remote E-Map window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Login</td>
<td>Click to log in up to 500 hosts.</td>
</tr>
<tr>
<td>2</td>
<td>Host Information</td>
<td>Click to view the information of incoming events upon motion detected and I/O devices triggered.</td>
</tr>
<tr>
<td>3</td>
<td>Previous</td>
<td>Click to go to the previous E-Map file.</td>
</tr>
<tr>
<td>4</td>
<td>Home</td>
<td>Click to back to the top of the tree view.</td>
</tr>
<tr>
<td>5</td>
<td>Next</td>
<td>Click to go to the next E-Map file.</td>
</tr>
<tr>
<td>6</td>
<td>ViewLog</td>
<td>Click to access the Remote ViewLog function.</td>
</tr>
<tr>
<td>7</td>
<td>Configure</td>
<td>Click to configure the Remote E-Map.</td>
</tr>
<tr>
<td>8</td>
<td>Tree List</td>
<td>The list displays all created E-Map files and folders.</td>
</tr>
<tr>
<td>9</td>
<td>IP Address</td>
<td>Displays the IP Address of the connected host.</td>
</tr>
<tr>
<td>10</td>
<td>Blinking Icon</td>
<td>The blinking icon represents a triggered camera or I/O device.</td>
</tr>
<tr>
<td>11</td>
<td>Output Icon</td>
<td>Click to manually force the output device.</td>
</tr>
<tr>
<td>12</td>
<td>Camera/Dome Icon</td>
<td>Click to view the live video associated with that camera/dome. Up to 16 live videos can be accessed simultaneously.</td>
</tr>
</tbody>
</table>
Configuring the Remote E-Map

Click the **Configure** button (No. 7, Figure 1-74) to display the following dialog box:

*Figure 1-70*

**[Download EMap files]** Click to download E-Map files from the subscriber server to the local computer. This option can reduce network load when you want to view E-Maps of multiple subscribers.

- **Use local EMap files:** Once downloading E-Map files to the local computer, you can use these E-Map files for connection.

**[Motion] / [I/O Input]**

- **Alert Sound:** Select this option and assign a .wav file to alert the operator when motion is detected or input devices are triggered.
- **Camera Blink, I/O Blink:** When cameras or input devices are triggered, their icons on the E-map flash.
- **EMap Auto Popup**: When cameras or input devices are triggered, the related map will be displayed on the Remote E-Map window instantly.

- **Show Event**: Select this option to display motion or input triggered events on the Host Information window.

- **I/O Trigger Camera**: When input devices are triggered, the related camera views will be displayed on the Remote E-Map window instantly. For this function to work, input devices must be mapped to cameras on the Main System.

- **Hide Tree List**: Select this option to hide the tree list.

- **Enable DirectDraw**: The DirectDraw is enabled by default. Some VGA cards might not support DirectDraw and can produce distorted frames. In this case, disable the feature.

- **Use small icon**: The Remote E-Map uses the large icons of cameras and I/O devices by default. Select this option if you want to use small icons.
1.21 Event Chart

The Event Chart can provide you the daily, weekly and monthly statistical chart based on different criteria. These statistical charts allow the administrator to analyze the occurrence of different event types and message types, and the events that occur on different subscribers.

To display the Event Chart, you need to install the following software on the computer. Use the links in the software DVD or click Here below to download the software.

- Microsoft .NET Framework 3.5 SP1 or later versions (Click Here)
- Microsoft Chart Controls (Click Here)

Accessing the Event Chart

1. Click the Tools button (No. 5, Figure 1-1) and select Event Chart. This window appears.

![Figure 1-71](image-url)
2. Specify a day or select a week or month to query the event data. Click the **Next** button. This dialog box appears.

![Figure 1-72](image)

**Figure 1-72**

3. Select **ID** to query the events based on subscriber’s ID and **message** or **Type** to query the events based on message types. **Import Data** allows you to query the events based on your previously-exported query settings (see Step 5).

Here we select **Type** as an example. Click the **Next** button. This dialog box appears.

![Figure 1-73](image)

**Figure 1-73**
4. Select **List all exist data** to query all the event types, or disable it to select the desired event types.

5. You can optionally click **Export** at the left bottom of the window to export the settings for next-time use.

![Export Data](image)

*Figure 1-74*

6. Click the **Query** button to display the statistical chart.

---

**Note:** If you select **ID** or **Message** to query the events, you need to type the subscriber ID or message type you want to query.
Event Chart

You can click each item on the chart to view more detailed information.

Figure 1-75

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Save Image</td>
<td>Saves the chart image.</td>
</tr>
<tr>
<td>2</td>
<td>Copy Image</td>
<td>Copies the chart image.</td>
</tr>
<tr>
<td>3</td>
<td>Preview</td>
<td>Previews the chart image for print.</td>
</tr>
<tr>
<td>4</td>
<td>Print</td>
<td>Prints the chart image.</td>
</tr>
<tr>
<td>5</td>
<td>Up one level</td>
<td>Goes to the previous chart image.</td>
</tr>
<tr>
<td>6</td>
<td>3D/2D</td>
<td>Presents the chart in 3D or 2D mode.</td>
</tr>
<tr>
<td>7</td>
<td>Pie/Line/Column</td>
<td>Presents the event data in pie, line or column chart.</td>
</tr>
<tr>
<td>8</td>
<td>View</td>
<td>Presents the title, label, legend, name, count or percentage in the chart.</td>
</tr>
</tbody>
</table>
1.22 Failover Server

You can configure up to two failover servers in case of the primary Center V2 server failure. Whenever the primary fails, the failover server takes over the connection from subscribers, providing uninterrupted monitoring services.

1. To import subscribers’ accounts from the primary server to the failover server, click the Import / Export Address Book button (No. 6, Figure 1-2) on the Address Book toolbar, and select Import to transfer the address book data.

2. On the Center V2 window, click the Preference Settings button (No. 8, Figure 1-1), and select Automatic Failover Support. This dialog box appears.

![Automatic Failover Support](image)

*Figure 1-76*
3. Click the **Add** button to add one server. This dialog box appears.

![Automatic Failover Support]

**Figure 1-77**

4. Type the IP Address of the failover server. Keep the default port settings or modify them if necessary.

5. Click **OK**. When the primary Center V2 server fails, all connections from subscribers will be diverted to the failover server automatically.

---

**Note:** Once the primary server is ready to resume the services, it is required to close the failover server so the connection from subscribers can move back to the primary.
1.23 Assigning a Subscriber to Another Center V2

You can assign one subscriber to another Center V2 without ending the current connection. For this function to work, subscribers must also use GV-System version 8.3 or later.

**Note:** The function is not available for the subscribers of GV-Video Server, GV-Compact DVR and GV-IP Camera.

1. In the Subscriber List, right-click the desired subscriber, and select **Dispatch to other Center V2**. This dialog box appears.

![Server Information](image)

**Figure 1-78**

2. Type the IP address of another Center V2. The default port value is 5547. Modify it if necessary.

3. Click **OK**. The subscriber will be therefore assigned to the designated Center V2. In the Subscriber List of the local Center V2, that subscriber’s icon shows offline.
1.24 Channel Display on Another Monitor

If the Center V2 is equipped with multiple monitors, you can use the QView feature to display a selected channel on another monitor screen.

1. On the Center V2 window, click the Tools button (No. 5, Figure 1-1) and select QView. This dialog box appears.

![QView dialog box]

**Figure 1-79**

2. Use the drop-down list to select a desired monitor.

3. Click one channel to be displayed on that monitor.

![Select and display channels]

**Figure 1-80**

4. To switch to another channel, simply click another channel.
Chapter 2
Dispatch Server

The availability of Center V2 Servers may be threatened by network overload. Thru Dispatch Server, the concern can be settled by arranging and distributing subscribers’ requests to the least busy Center V2 Servers. With Dispatch Server, a central monitor station can run several Center V2 Servers and serve a large number of subscribers with the fastest responding time. If any of Center V2 Servers needs maintenance, Dispatch Server can automatically redistribute subscribers’ requests to other Center V2 within a server farm or to servers in another location.
2.1 Minimum System Requirements

Before installation, make sure that your computer meets the following minimum requirements:

**Standard Version**

<table>
<thead>
<tr>
<th>Component</th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS</strong></td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Pentium 4, 3.0 GHz with Hyper-Threading</td>
<td></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>2 x 512 MB Dual Channels</td>
<td></td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>The hard disk space required to install Dispatch Server (Standard Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td><strong>VGA</strong></td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
<td></td>
</tr>
<tr>
<td><strong>DirectX</strong></td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td>GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>

**Advanced Version (Connections to more than 100 DVR subscribers)**

<table>
<thead>
<tr>
<th>Component</th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS</strong></td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Core 2 Duo, 2.4 GHz</td>
<td></td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>2 x 1 GB Dual Channels</td>
<td></td>
</tr>
<tr>
<td><strong>Hard Disk</strong></td>
<td>The hard disk space required to install Dispatch Server (Advanced Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td><strong>VGA</strong></td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
<td></td>
</tr>
<tr>
<td><strong>DirectX</strong></td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td>Internal or External GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>

**Dongle Options**

<table>
<thead>
<tr>
<th>Combination</th>
<th>Dispatch Server</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dispatch Server + VSM</td>
</tr>
</tbody>
</table>
2.2 Installation

1. Connect the GV-USB Dongle to the computer.
2. Insert the CMS Software CD to your computer. It will run automatically and a window appears.
3. To install the USB device driver, select **Install or Remove GeoVision GV-Series Drive** and select **Install GeoVision USB Device Driver**.
4. To install the CMS system, select **Install V8.5 Central Monitoring System**.
5. Click **Dispatch Server System**, and follow the on-screen instructions.
2.3 The Dispatch Server Window

The controls on the Dispatch Server window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Start Server</td>
<td>Starts Dispatch Server.</td>
</tr>
<tr>
<td>2</td>
<td>Stop Server</td>
<td>Stops Dispatch Server.</td>
</tr>
<tr>
<td>3</td>
<td>Server Setting</td>
<td>Configures Dispatch Server.</td>
</tr>
<tr>
<td>4</td>
<td>Account</td>
<td>Adds, edits and deletes the accounts of Center V2 Servers and subscribers.</td>
</tr>
<tr>
<td>5</td>
<td>Subscriber Notification Setting</td>
<td>Sets the alert conditions and methods</td>
</tr>
<tr>
<td>6</td>
<td>Manual Dispatch</td>
<td>Enables manual distribution of subscribers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click this button and drag a subscriber to the desired Center V2 Server.</td>
</tr>
<tr>
<td></td>
<td>Stop/Start Query Center V2 Event</td>
<td>Specifies an event query.</td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Real-time CenterV2 Event</td>
<td>Views real-time events occurring on Center V2 Servers.</td>
</tr>
<tr>
<td>9</td>
<td>Exit</td>
<td>Closes the Dispatch Server window.</td>
</tr>
<tr>
<td>10</td>
<td>Center V2 Status</td>
<td>This part lists the connected Center V2 Servers and their status. Subscribers can be distributed to the ticked Center V2 Servers. Unchecking will disable the distribution service.</td>
</tr>
<tr>
<td>11</td>
<td>Tree View</td>
<td>The list displays all created group folders, servers and subscribers. You can right-click any online subscriber to call up <strong>Subscriber Address Book</strong> and <strong>Camera/Audio Control Panel</strong>. For details, see 2.11 Live View. <strong>Blue Icon</strong>: The server / subscriber is online. <strong>Red Icon</strong>: The server / subscriber is offline.</td>
</tr>
<tr>
<td>12</td>
<td>Subscriber Status</td>
<td>Displays subscriber information such as subscriber ID, type, last login time, last dispatch and current dispatch. Click the desired subscriber form the tree view to display this information.</td>
</tr>
</tbody>
</table>
2.4 Subscriber Account

Dispatch Server can serve up to 50 Center V2 Servers and 25,000 Center V2’s subscribers simultaneously. Before starting the services, create at least one server and one subscriber account on the Dispatch Server. To create an account, click the Account button (No. 4, Figure 2-1) to display this Address Book window.

![Figure 2-2](image)

The toolbar on the Address Book window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Add A Group</td>
<td>Adds a group folder.</td>
</tr>
<tr>
<td>2</td>
<td>Add A Server</td>
<td>Adds a Center V2 Server.</td>
</tr>
<tr>
<td>3</td>
<td>Add A Subscriber</td>
<td>Adds a subscriber.</td>
</tr>
<tr>
<td>4</td>
<td>View/Edit Subscriber Address Book</td>
<td>Opens Subscriber Address Book for viewing and editing.</td>
</tr>
<tr>
<td>5</td>
<td>Subscriber Setting</td>
<td>Highlight one subscriber and click this button to configure the settings of video and alert formats.</td>
</tr>
<tr>
<td>6</td>
<td>Subscriber Schedule Setting</td>
<td>Sets up subscription schedules.</td>
</tr>
<tr>
<td>7</td>
<td>Delete A Group/Server/Subscriber</td>
<td>Highlight a group, a server or a subscriber and click this button to delete it.</td>
</tr>
<tr>
<td>8</td>
<td>Import / Export Address Book</td>
<td>Imports or exports the address book data.</td>
</tr>
<tr>
<td>9</td>
<td>Find A Subscriber</td>
<td>Searches a subscriber account.</td>
</tr>
<tr>
<td>10</td>
<td>Find A Server</td>
<td>Searches a server account.</td>
</tr>
</tbody>
</table>
Creating a Subscriber Account

1. On the Dispatch Server Window, click the **Account** button. The Address Book window appears.
2. Click the **Add a Group** button to create a group.
3. Click the **Add a Server** button to create a Center V2 server account. A server icon pops out. Rename the server to match the location name created for the Center V2 server.

![Dispatch Server](image1.png)

![Center V2 Server](image2.png)

**Figure 2-3**

4. Click the **Add a Subscriber** button to create a subscriber account. The Subscriber Address Book dialog box appears.
5. Create an ID and password for the subscriber. The ID and password will be used when the Center V2’s subscriber wants to log into the Dispatch Server.

![Subscriber Address Book](image)

**Figure 2-4**

6. Click **OK** to finish.

---

**Note:**

1. You can create sub-groups beneath a group; every sub-group can only include one Center V2 server; every Center V2 server can include up to 500 subscribers.

2. When one Center V2 server stops running, its own subscribers will be distributed to available Center V2 servers at the same or higher level of the hierarchical file system.

3. If you do not arrange Center V2 servers and subscribers into groups, they will be distributed to the Center V2 server with fewer subscribers.
2.5 Service Startup

After subscriber accounts are created, you are ready to establish connections to the Dispatch Server. Follow the steps below.

1. On the main screen, click **Configure** and select **Setting**. The Dispatch Server Setting dialog box appears.

2. Type an **Identification Code**. This code will be used for connecting Center V2 Server to Dispatch Server.

![Dispatch Server Setting](image)

*Figure 2-5*
3. Connect Center V2 Server to Dispatch Server. See 2.6 Connecting Center V2 to Dispatch Server.

4. To add a GV-System as a subscriber, connect GV-System to Dispatch Server. See 2.7 Connecting GV-System to Dispatch Server.

5. To add a GV-IP Device as a subscriber, connect GV-IP Devices to Dispatch Server. See 2.8 Connecting GV-IP Device to Dispatch Server.

6. Click the **Start Server** button (No. 1, Figure 2-1) on the main screen to start the service.
2.6 Connecting Center V2 to Dispatch Server

Follow these steps to connect Center V2 to Dispatch Server:

1. Start the Dispatch Server service.

2. At Center V2, click the **Preference Settings** button (No. 8, Figure 1-1), select **System Configure** to display the Preference window, and then click the **Dispatch Server** tab. The Preference dialog box appears.

3. Click the **Dispatch Server** tab. Type the identification code, IP address, and the port of the Dispatch Server.

4. Click **OK**.

5. Restart the Center V2. Without this step, the Center V2 will not connect to the Dispatch Server.

![Figure 2-6](image-url)
2.7 Connecting GV-System to Dispatch Server

Configure the GV-System so that it can connect to Dispatch Server. Follow these steps to connect GV-System to Dispatch server:

1. On the main screen of GV-System, click the **Network** button, and then select **Connect to Center V2**. The Login Information dialog box appears. See Figure 1-7.
2. In the Center IP field, type the IP address of the Dispatch Server.
3. Type a user ID and password created in the Dispatch Server.
4. Change the port number from 5547 (Center V2 port) to **21112** (Dispatch Server port).
5. Click the **OK** button. The Connect to Center V2 dialog box appears.
6. Click the **Connect** button to enable connecting to the Dispatch Server.

**Note:** If you want to modify the login information of the Center V2, on the Connect to Center V2 dialog box, click the listed Center V2 IP and then select **Modify**.
2.8 Connecting GV-IP Device to Dispatch Server

The Dispatch Server can distribute GV-IP Devices to Center V2 Servers based on predefined groups or balance loading of Center V2 Servers. Follow these steps to connect a GV-IP Device to the Dispatch Server:

1. On the main screen, click **Configure** and select **Setting**. The Dispatch Server Setting dialog box appears.

2. Select **Allow GV IP devices to login as subscriber from port** to allow GV-IP Devices to log in as subscribers. Change the port when necessary.

![Dispatch Server Setting Dialog Box](Figure 2-7)
3. On the Web interface of the GV-IP Device, click **Events and Alerts** and select **Center V2**.

![Connection Configuration](image)

**Figure 2-8**

4. Enable connection to Dispatch Server.

   A. **Active Link**: Click to configure and enable the connection.

   B. **Host Name or IP Address**: Type the host name or IP address of the Dispatch Server.

   C. **Port Number**: Match this port to the port value in step 2 (Figure 2-7) to connect to the Dispatch Server.

   D. **User Name**: Type a user name already established in the Dispatch Server to log in.
E. **Password:** Type a valid password to log into the Dispatch Server.

F. Click **Apply.** The Connection Status should display “Connected” and the connection time.

5. This subscriber will be automatically distributed to an online Center V2 Server that has the least number of subscribers.
2.9 Setting a Primary Center V2 Server

You can set up a primary Center V2 Server to which the subscriber is distributed whenever this Center V2 Server is connected. This function is especially useful when you wish to ensure that a certain Center V2 Server gets the priority of monitoring a particular subscriber.

1. Click **Configure** on the main screen and select **Customize Dispatch Setting**. The Customize Dispatch Setting dialog box appears.

2. Select a primary Center V2 Server using the drop-down list.

![Customize Dispatch Setting](image)

3. Select **Auto re-dispatch subscriber after Center V2 Server is online**.

4. Click **OK**. This subscriber will be distributed to the selected Center V2 Server whenever it is connected to the Dispatch Server.
2.10 Event Query

This feature lets you locate a desired event by posing a query on Center V2 Servers. Click the **Stop/Start Query Center V2 Event** button (No. 7, Figure 2-1) on the toolbar to display the following dialog box. Check the desired query items (Type, ID, Date and/or Time), define your query condition under each item, and then click **OK** to display the query results.

![Query Center V2 Event](image)

**Figure 2-10**

The Query feature supports the remote playback when folder sharing on the recording folder of Center V2 is enabled. Double-clicking any found event with video attachment can play it back on Dispatch Server.

**Note:** To enable folder sharing on the recording folder of Center V2, right-click the folder and select **Sharing and Security**. Click the **Sharing** tab, in the **Network sharing and security** section, select **Share this folder on the network**. Click **OK**. The default path for recordings is :\Center V2\Data.
2.11 Event List

The feature lets you view the real-time events occurred on Center V2 Servers. For the application, make sure the Enable Real-Time CenterV2 Event option is enabled; see Figure 2-13. Then click the Real-Time Event button (No. 8, Figure 2-1) on the toolbar to display the following window.

![Real-Time Center V2 Event List](image)

**Figure 2-11**

The controls on the Real-Time Center V2 Event window:

1. The window supports the remote playback when folder sharing on the recording folder of Center V2 is enabled. Double-clicking any event with video attachment can play it back on Dispatch Server.
2. You can flag an incoming event for later reference. Click in the flag column to flag an event. Click the flag icon to remove it.

---

**Note:** The flags of various colors are provided to distinguish different events. You will find them useful not only when browsing in the Real-Time CenterV2 Event List window but also when using the Filter function in the Log Brower to sort out the desired events.
A list of Types and Messages from Center V2 will be displayed:

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion</td>
<td>Camera detected motion</td>
</tr>
<tr>
<td>Trigger</td>
<td>I/O Trigger; Module xx Trigger Resume; Video of Camera xx (By: Module xx)</td>
</tr>
<tr>
<td>Connection</td>
<td>Video Lost; Module Lost; The network connection is lost; The connection of (client xx) is abnormal; Camera cannot be controlled; Ping Timeout; Failed to establish the connection; Video signal of Camera xx has resume; Module xx has returned to normal; Failed to Login SMS Server; Failed to send short message; SMS Server is shutdown.</td>
</tr>
<tr>
<td>Alarm</td>
<td>There isn't enough space for recording; There isn't enough space for recording; The storage for Event Log is low, Event Log will not take any new entries; An unexpected error occurred in Multicam Surveillance System (Error Code: 1 or 2); There is an intruder; Object Missing; Unattended Object; Alert Message of POS.</td>
</tr>
<tr>
<td>Attachment</td>
<td>Record file of Camera xx [Live, Attachment or offline].</td>
</tr>
<tr>
<td>System</td>
<td>Start Recycle; Recycle Event Log; Status change of monitoring cameras. On: (camera no.) Off: (camera no.) / (By Schedule); Stop all cameras monitoring; Start all cameras monitoring; Start I/O Monitoring. / (By Schedule); Stop I/O Monitoring. / (By Schedule); Schedule Start; Schedule Stop. All monitoring devices are stop too; Start monitoring all type events; Stop monitoring all type events; Subscriber session is not established. Wait-time expired; Unexpected logout before subscriber session is completed.</td>
</tr>
</tbody>
</table>

**Note:** Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege.
2.12 Subscription Schedule

The Dispatch Server operator can create schedules to monitor subscription status. When subscribers don't log in Dispatch Server on the programmed time, the operator and subscribers will get notified.

- To set up a schedule, see 1.11 Subscriber Schedule.

- When a subscriber doesn’t log in Dispatch Server on time, this message will appear on the Event List: Service hour engaged; still waiting for subscriber to log in.
  
  When a subscriber logs out suddenly during a service time, this message will appear: Unexpected subscriber logout during service times.

- To notify subscribers by SMS and E-Mail, see 2.14 SMS Alerts and 2.15 E-Mail Alerts.
2.13 Live View

You can view live videos from subscribers. To access a live view, right-click any online subscriber on the tree view of the Dispatch Server window (No. 11, Figure 2-1) and select Camera/Audio Control. For details on the controls of the Live View window, see 4.6 Live View.

You can enhance the coloring to have more vivid and saturated images. Click Configure on the menu bar, select DirectDraw Configuration, select Use Colorful Model, click OK and restart the Dispatch Server program for the mode to take effect. Right-click any online subscriber and select Camera/Audio Control to see the enhanced live video.
2.14 Log Browser

The following two log browsers let you locate the events of Dispatch Server and Center V2 Servers easily.

Dispatch Log Browser

The browser lets you view and locate the system status of Dispatch Server, the login/out status of Center V2 Servers. Click View on the window menu and then select Dispatch Log to display the following log browser. For details on Log Browser, see 1.14 Event Log Browser.

A list of Status and Messages will be displayed:

<table>
<thead>
<tr>
<th>Status</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Start Dispatch Server; Failed to start Dispatch Server; Stop Dispatch Server; Can't find KeyPro; Start to recycle the Dispatch Server; Start to recycle the CenterV2 Event Log.</td>
</tr>
<tr>
<td>Login/logout</td>
<td>CenterV2 Server (IP: CS_IP) connects to Dispatch Server; CenterV2 Server (IP: CS_IP) disconnects from Dispatch Server; CenterV2 Server (IP: CS_IP) disconnects from Dispatch Server abnormally; CenterV2 Client login; CenterV2 Client logout</td>
</tr>
<tr>
<td>Connection</td>
<td>CenterV2 Server (IP: CS_IP) is disconnected by Dispatch Server; CenterV2 Server changes IP from (CS_old_IP) to (CS_new_IP); CenterV2 Server (IP: CS_IP) is transferred to another Dispatch Server (DS_IP:DS_Port).</td>
</tr>
<tr>
<td>Control</td>
<td>CenterV2 Server [CS_Name] is enabled; CenterV2 Server [CS_Name] is disabled.</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dispatch</td>
<td>ID: login_ID is dispatched to [CS_Name] (IP: CS_IP); Invalid login ID; Invalid login Password; This account has already logged in; There is no server online for CenterV2 Client; All online CenterV2 Servers have utmost service.</td>
</tr>
</tbody>
</table>

**Event Log Browser**

The browser lets you view and locate the real-time events from Center V2 Servers. Click **View** on the window menu, and then select **Event log** to display Event Log Browser. For details on Log Browser, see *1.14 Event Log Browser*. 
2.15 System Configuration

To configure Dispatch Server, click the **Server Setting** button (No. 3, Figure 2-1) on the toolbar to display the following dialog box.

![Dispatch Server Setting dialog box](image)

*Figure 2-13*
[Network Setting]

- **Server Port:** The port should match with the Dispatch Server Port of Center V2 (Figure 2-7). Or, keep the port setting as default. To automatically configure these ports on your router by UPnP technology, click the Arrow button. For details on UPnP settings, see *UPnP Settings, Appendix*.

- **Allow GV IP devices to login as subscriber from port:** Enables the connection to the GV-Video Server, GV-IP Camera, and GV-Compact DVR. The default port is 5551, or modify it to match the Center V2 port on the GV IP devices. For details, see *GV-Video Server User’s Manual, GV-IP Camera User’s Manual or GV-Compact DVR User’s Manual*.

- **Autorun server service upon startup:** Automatically starts the Dispatch service when its program starts.

- **Automatic Failover Support:** Distributes Center V2 Servers to another Dispatch Server when the serving Dispatch Server breaks down. Enabling this item, you will be prompted to enter the IP address and port of another Dispatch Server. For details, see *2.17 Failover Server*.

- **Allow unidentified CenterV2 Server login:** Allows Center V2 to access Dispatch Server without entering the Identification Code.

- **Identification Code:** The code protects Dispatch Server against unauthorized Internet access. Center V2 will need the code to log in Dispatch Server.

[Dispatch Setting]

- **Group First:** Keeps subscribers in the assigned groups and Center V2 Servers.

- **Balance Only:** Distributes subscribers to Center V2 Servers with fewer subscribers.

---

*Note:* An unassigned subscriber will be automatically dispatched to a Center V2 Server by balance loading.
[Dispatch Log]
- **Keep Days:** Select the option and specify the number of days to keep Dispatch Logs. Otherwise clear the option to keep log until the Recycle starts or storage space is full.
- **Log Path:** Click the button next to the item to assign a storage path.

[CenterV2 Event Log]
- **Enable Real-Time CenterV2 Event:** Allows real-time event messages coming from Center V2 Servers.
- **Keep Days:** Select the option and specify the number of days to keep Center V2 event logs. Otherwise clear the option to keep log until the Recycle starts or storage space is full.
- **Log Path:** Click the button next to the item to assign a storage path.

[Recycle Log] Deletes the files of the oldest days when storage space is lower than 500 MB.
2.16 SMS Alerts

This feature automatically sends SMS messages to subscribers when they don’t log in on the programmed time. For this, ensure to type a mobile number for each subscriber in the Subscriber Address Book (Figure 2-2).

To set up SMS Server, click Configure on the window menu and select SMS Setup. For details, see 1.18 SMS Alerts.

To define alert conditions to send SMS messages, click the Subscriber Notification Setting button (No. 5, Figure 2-1) on the toolbar to display the Notification Setting dialog box. For setup details, see 1.16 Notification Settings.
2.17 E-Mail Alerts

This feature automatically sends e-mails to subscribers when they don’t log in on the programmed time. For this, ensure to type an e-mail address for each subscriber in the Subscriber Address Book (Figure 2-2).

To set up mailbox, click **Configure** on the window menu and select **E-Mail Setup**. For details, see 1.19 E-Mail Alerts.

To define alert conditions to send e-mails, click the **Subscriber Notification Setting** button (No. 5, Figure 2-1) on the toolbar to display the Notification Setting dialog box. For setup details, see 1.16 Notification Settings.
2.18 Event Chart

Dispatch Server can display log data in line chart, bar chart or pie chart.

To display the Event Chart, you need to install the following software on the computer. Use the links in the software DVD or click Here below to download the software.

- Microsoft .NET Framework 3.5 SP1 or later versions (Click Here)
- Microsoft Chart Controls (Click Here)

To access the Event Chart:
1. Click View from the menu bar and select Dispatchlog.
2. Click the Event Chart button on the Dispatch Log Browser. This dialog box appears.

![Chart Settings](image)

**Figure 2-14**

3. From the drop-down list, select Application Type to display events by the type of server, ID to display events by ID or Status to display events by the type of status. Application Type includes Dispatch Server, Center V2 Server, and Center V2 Subscribers. When Status is selected, events are categorized into Account, System, Login/logout, Connection, Control and Dispatch.
4. Click **OK** to see the data displayed in a chart.

![Chart](image)

**Figure 2-15**

This feature is similar as that in Center V2. See 1.21 Event Chart for more information on the controls of the chart window.
2.19 Failover Server

You can configure up to two failover servers in case of the primary server failure. Whenever the primary server fails, the failover server takes over the connection from subscribers, providing uninterrupted services.

1. To import subscribers’ accounts from the primary server to the failover server, click the Import / Export Address Book button (No. 8, Figure 2-2) on the Address Book toolbar, and select Import Address Book to transfer the address book data.

2. On the Dispatch Server window, click the Server Setting button (No. 3, Figure 2-1). The Dispatch Server Setting dialog box (Figure 2-9) appears.

3. Select the Automatic Failover Support option. This dialog box appears.

4. Click the Add button. The Setting dialog box (Figure 2-13) appears.

5. Type the IP address of the failover server, and change the default port settings if necessary.

Figure 2-16
6. Type **Identification Code** matching to that in CenterV2 Identification Setting. If the information is inconsistent, the connection to the failover server cannot be established.

![Figure 2-17](image)

**Note:** Once the primary server is ready to resume the services, it is required to close the failover server so the connection from subscribers can move back to the primary.
Chapter 3  
Vital Sign Monitor

Vital Sign Monitor (VSM) applies to the center monitoring station where multiple GV-Systems are being monitored. When alert events occur in a GV-System, VSM will receive alert text messages, computer alarms and/or output alarms, while a SMS message and an E-Mail are sent out to subscribers.

VSM also supports GV IP devices (GV–Video Server, GV-Compact DVR, GV-IPCam) for central monitoring.
### 3.1 Minimum System Requirements

Before installation, make sure your PC meets the following minimum requirements:

#### Standard Version

<table>
<thead>
<tr>
<th></th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td>CPU</td>
<td>Pentium 4, 3.0 GHz with Hyper-Threading</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>2 x 1 GB Dual Channels</td>
<td></td>
</tr>
<tr>
<td>Hard Disk</td>
<td>The hard disk space required to install Center V2 (Standard Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td>VGA</td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
<td></td>
</tr>
<tr>
<td>DirectX</td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>

#### Advanced Version (Connections to more than 100 DVR subscribers)

<table>
<thead>
<tr>
<th></th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td>CPU</td>
<td>Core 2 Duo, 2.4 GHz</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>2 x 1 GB Dual Channels</td>
<td></td>
</tr>
<tr>
<td>Hard Disk</td>
<td>The hard disk space required to install Center V2 (Professional Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td>VGA</td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
<td></td>
</tr>
<tr>
<td>DirectX</td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>Internal or External GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>

#### Dongle Options

<table>
<thead>
<tr>
<th>Combination</th>
<th>VSM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VSM + Control Center</td>
</tr>
<tr>
<td></td>
<td>VSM + Center V2</td>
</tr>
<tr>
<td></td>
<td>VSM + Dispatch Server</td>
</tr>
</tbody>
</table>
To ensure the quality of downloading when multiple GV-Systems connect to the VSM, see the list below for the recommended bandwidth:

<table>
<thead>
<tr>
<th>Number of Subscribers</th>
<th>Recommended Bandwidth</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>512 Kbps</td>
</tr>
<tr>
<td>500</td>
<td>2 Mbps</td>
</tr>
<tr>
<td>1000</td>
<td>4 Mbps</td>
</tr>
</tbody>
</table>
3.2 Installation

1. Connect the GV-USB Dongle to the computer.
2. Insert the CMS Software CD to your computer. It runs automatically and a window appears.
3. To install the USB device driver, select **Install or Remove GeoVision GV-Series Driver** and select **Install GeoVision USB Device Driver**.
4. To install the CMS system, select **Install V8.5 Central Monitoring System**.
5. Click **Vital Sign Monitor System**, and follow the on-screen instructions.
### 3.3 The VSM Window

**Figure 3-1**

The controls on the VSM window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Start / Stop Service</td>
<td>Starts or stops the VSM service.</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Adds, deletes or modifies subscribers.</td>
</tr>
<tr>
<td>3</td>
<td>Show / Hide Subscriber List</td>
<td>Shows and hides the Subscriber List.</td>
</tr>
<tr>
<td>4</td>
<td>View Event Log</td>
<td>Launches Event Log Browser.</td>
</tr>
<tr>
<td>5</td>
<td>Force Output</td>
<td>Activates output devices manually to alert the VSM operator.</td>
</tr>
<tr>
<td>6</td>
<td>View Subscriber Information</td>
<td>Accesses the subscriber’s storage and monitoring information.</td>
</tr>
<tr>
<td>7</td>
<td>ID</td>
<td>Enter an ID for further search.</td>
</tr>
<tr>
<td>No.</td>
<td>Function</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>8</td>
<td>View Subscriber Address Book</td>
<td>Enter an ID, and then click this button to view the subscriber’s address book.</td>
</tr>
<tr>
<td>9</td>
<td>View Subscriber Status</td>
<td>Enter an ID, and then click this button to see the subscriber’s status.</td>
</tr>
<tr>
<td>10</td>
<td>Send E-Mail</td>
<td>Sends e-mails to subscribers.</td>
</tr>
<tr>
<td>11</td>
<td>Send Short Message</td>
<td>Sends SMS to subscribers.</td>
</tr>
<tr>
<td>12</td>
<td>Flag</td>
<td>Flags an event for later reference.</td>
</tr>
<tr>
<td>13</td>
<td>Clipboard</td>
<td>Displays the Alarm Report dialog box.</td>
</tr>
<tr>
<td>14</td>
<td>ID</td>
<td>Indicates the subscriber’s ID.</td>
</tr>
<tr>
<td>15</td>
<td>Type</td>
<td>Indicates the event types, including System, Connection, Login/Logout, Motion, Trigger, and Alarm.</td>
</tr>
<tr>
<td>16</td>
<td>Message</td>
<td>Indicates associated information for each event type.</td>
</tr>
<tr>
<td>17</td>
<td>Message Time</td>
<td>Indicates the VSM’s time when receiving the event message.</td>
</tr>
<tr>
<td>18</td>
<td>Start Time</td>
<td>Indicates the subscriber’s time when sending out the event message.</td>
</tr>
<tr>
<td>19</td>
<td>Subscriber List</td>
<td>Indicates the number of online subscribers and displays the ID and status. Right-click any subscriber to call up a menu containing buttons No. 4, 8, 9, 10 and 11. The numbers of online subscribers and total subscribers are shown in brackets next to the Subscriber List. <strong>Blue Icon:</strong> Indicates the subscriber is online. <strong>Gray Icon:</strong> Indicates the subscriber is offline. <strong>Alarm Icon:</strong> Indicates either motion has been detected or the I/O has been triggered at the subscriber’s site.</td>
</tr>
<tr>
<td>20</td>
<td>Event Categories</td>
<td>Events can be sorted in these categories: System, Motion, Trigger, Connection, Alarm, Login/Logout, Wiegand Data, Device Lost and Offline Event. To sort the events, click <strong>View</strong> from the menu bar and select <strong>My Favorite Events</strong>.</td>
</tr>
<tr>
<td>21</td>
<td>Event List</td>
<td>Displays a list of events occurred.</td>
</tr>
</tbody>
</table>
A list of Types and Messages will be displayed on VSM:

<table>
<thead>
<tr>
<th>Type</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motion</td>
<td>Camera xx detected Motion.</td>
</tr>
<tr>
<td>Trigger</td>
<td>Module xx-Input xx Triggered</td>
</tr>
<tr>
<td></td>
<td>Module xx-Input xx Trigger Resume</td>
</tr>
<tr>
<td>Connection</td>
<td>Camera xx Video Lost</td>
</tr>
<tr>
<td></td>
<td>Video Signal of Camera xx has resumed</td>
</tr>
<tr>
<td></td>
<td>Module xx Lost</td>
</tr>
<tr>
<td></td>
<td>Module xx has resumed to normal</td>
</tr>
<tr>
<td></td>
<td>There isn’t enough space for recording</td>
</tr>
<tr>
<td></td>
<td>Connection Lost</td>
</tr>
<tr>
<td></td>
<td>Multicam Surveillance System has been closed</td>
</tr>
<tr>
<td></td>
<td>Status change of monitoring cameras: on: camera xx, off: camera xx</td>
</tr>
<tr>
<td></td>
<td>Keep Days (xx) Alarm of Video Log is lower than xx days; Schedule Start/Stop</td>
</tr>
<tr>
<td>Alarm</td>
<td>An unexpected error occurred in Multicam Surveillance System (Error Code: 1 or 2)</td>
</tr>
<tr>
<td></td>
<td>There is an intruder</td>
</tr>
<tr>
<td></td>
<td>Missing Object; Unattended Object</td>
</tr>
<tr>
<td></td>
<td>Alert Message of POS; Scene Change</td>
</tr>
<tr>
<td></td>
<td>Crowd Detection</td>
</tr>
<tr>
<td></td>
<td>Advanced Missing Object</td>
</tr>
<tr>
<td></td>
<td>Advanced Unattended Object</td>
</tr>
<tr>
<td></td>
<td>Advanced Scene Change</td>
</tr>
<tr>
<td></td>
<td>Critical Temperature Alarm [xx°C] or Critical Temperature Alarm [xx°F]</td>
</tr>
<tr>
<td>Login/Logout</td>
<td>Login</td>
</tr>
<tr>
<td></td>
<td>X succeeded to log in Surveillance System</td>
</tr>
<tr>
<td></td>
<td>Logout</td>
</tr>
<tr>
<td>System</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>Start/End Service</td>
<td></td>
</tr>
<tr>
<td>Fail to Start Service</td>
<td></td>
</tr>
<tr>
<td>Stop all camera monitoring</td>
<td></td>
</tr>
<tr>
<td>Start all camera monitoring</td>
<td></td>
</tr>
<tr>
<td>Start monitoring all type events</td>
<td></td>
</tr>
<tr>
<td>Stop monitoring all type events</td>
<td></td>
</tr>
<tr>
<td>Service hour engaged</td>
<td></td>
</tr>
<tr>
<td>Still waiting for subscriber to log in</td>
<td></td>
</tr>
<tr>
<td>Unexpected subscriber logout during service times</td>
<td></td>
</tr>
<tr>
<td>Can’t find USB Protection Key</td>
<td></td>
</tr>
<tr>
<td>Disk Error</td>
<td></td>
</tr>
<tr>
<td>The Multicam Surveillance System starts recycling. [Storage 1]</td>
<td></td>
</tr>
<tr>
<td>The POS is offline [POS 1, Mapping Camera:x, IP address]</td>
<td></td>
</tr>
<tr>
<td>Wiegand Data</td>
<td>Card No. xxxxxx (Camera xx)</td>
</tr>
</tbody>
</table>

**Note:** Error Code 1 indicates a codec error; Error Code 2 indicates that users can't write or record any data due to HD failure or user privilege.
3.4 Subscriber Account

The VSM can serve up to 1,000 subscribers at a time. Create at least one subscriber before starting VSM services. To create a subscriber, follow these steps:

1. On the VSM widow, click the Account button (No. 2, Figure 3-1) to display the Address Book window.

   ![Address Book Window]

2. Click the Add A Group button to create a group folder.

3. Click the Add A Subscriber button to display the Subscriber Address Book dialog box.

4. Enter a login ID and password (required). Those will be the ID and Password for the subscriber to log in to the VSM. See Figure 3-3.

5. Enter the subscriber’s contact information in the rest of fields (optional).
   - If you wish to send e-mail alerts to this subscriber, type its e-mail address. Up to two e-mail accounts can be created for the subscriber. For e-mail settings, see E-Mail Alerts later in this chapter.
   - If you wish to send SMS alerts to this subscriber, type its country code and mobile number. Up to two sets of mobile number can be created for this subscriber. For SMS server settings, see SMS Alerts later in this chapter.

6. Click OK. This adds the subscriber to the group folder created before. Returning to the VSM window, you will see a message: Add a subscriber – xxx. (Subscriber xxx has been added.)
3.5 Service Startup

After subscriber accounts are created, the VSM is ready to provide services. Clicking the **Start/Stop Service** button (No. 1, Figure 3-1) on the VSM window to receive signals from subscribers.
3.6 Connection to VSM

A single GV-System can connect to up to 5 VSM centers simultaneously for center monitoring. To configure GV-System in order to access the VSM remotely through a network connection, follow these steps:

1. Click the **Network** button, and select **Connect to VSM**. This dialog box appears.

![Figure 3-3](image)

2. Type the IP address, the User ID and Password of one VSM. Click **OK**. This dialog box appears.

![Figure 3-4](image)
3. If you want to establish connection to the second VSM, click the button.

4. If you want to modify the login information of the established account, select the account in the dialog box, and click the button.

5. If you want to delete the established account, select the account in the dialog box, and click the button.

6. Click the **Connect** button to connect all established VSM centers. Make sure those VSM centers are also started for the connection.
Advanced Settings for Subscription
To further define the communication conditions between the subscriber and VSM, click the Configure button on the Connect to Vital Sign Monitor dialog box (Figure 3-4) to display the Advanced Settings dialog box. There are tabs: (1) General, (2) Camera, (3) I/O Device and (4) System Information.

[General]
The settings define the retry mode between GV-System and VSM.

![Advanced Settings dialog box](image)

**Figure 3-5**

- **Run Remote ViewLog Service**: Allows the VSM to retrieve the recordings for playback. For details, see 3.10 Remote Playback.
- **Retry Interval**: Specify the retry interval when the connection is not immediately available.
- **Retry in the background**: Hides the retries in the background.
[Camera]
The settings define the camera conditions to notify the VSM.

![Advance Settings](image)

**Figure 3-6**

- **Notify Vital Sign Monitor of the monitoring status**: Select this option to enable the live monitoring through VSM. Select one camera and select the alert events that you like to notify the VSM when they occur. Click the Finger button to apply the same settings to all cameras.

  **Event Type**: Select *Emergency* for VSM to be notified of the alert event from this subscriber. Select *Normal* for the VSM to be notified of the alert event only when an assigned input is triggered at this subscriber.

**Note**: To set an input trigger for the notification of *Normal* events, see *Security Service in [I/O Device]* below.
[I/O Device]

The settings define which I/O condition to notify the VSM. To configure these settings, first disable the **Monitoring all type events** option in Figure 3-4.

![Advance Settings](image)

**Figure 3-7**

[I/O Device] Notifies the VSM when I/O devices are triggered. Use the **Arrow** buttons to configure each I/O device, or click the **Finger** button to apply to all I/O devices.

- **Allow Vital Sign Monitor to Enable / Disable I/O**: Allows the VSM manually arm/disarm any I/O devices at the subscriber’s site without interrupting the monitoring.
  
  For example, when an alarm is triggered at the subscriber site, the VSM operator can turn it off remotely before arriving at the site. Meanwhile, GV-System still remains on monitoring.
- **Notify Vital Sign Monitor when I/O is Triggered:** Notifies the VSM when any selected input is triggered.

  **Event Type:** If the subscriber wants the VSM always to get notified of the input trigger, select **Emergency**. If the subscriber wants the VSM to get notified of the input trigger only when an assigned input is triggered, select **Normal**.

  **Right Arrow button:** Sets the delay time to notify the VSM of the input trigger. This feature is only available when the **Normal** type is chosen.

  - **Exit Delay:** While the system is activated, this feature provides an interval of time for the subscriber to exit the premises. During this time, the specified input (e.g. an exit/entry door) is inactive. Once the exit delay expires, the input will be fully armed.

  - **Entry Delay:** While the system is activated, this feature provides an interval of time for the subscriber to entry the premises. During this time, the specified input (e.g. a exit/entry door) is inactive so that the subscriber can disarm the system. If the subscriber fails to do, once the entry delay expires, the VSM will get notified of the input trigger.

- **Output Module:** Enables the assigned output module when the selected input module is triggered.

  For this example of Figure 3-7, when the I/O Device (Module 1, Input 4) is triggered, the Output (Module 1, Pin 3) will be activated simultaneously.

  **Event Type:** If the subscriber wants the VSM always to get notified of the output trigger, select **Emergency**. If the subscriber wants the VSM to get notified of the output trigger only when an assigned input is triggered, select **Normal**.
Right Arrow button: Sets the delay time to trigger the assigned output module. This feature is only available when the Normal type is chosen. The Exit Delay and Entry Delay options are similar to those described in the input trigger.

Note: To set an input trigger for the notification of Normal events, see [Security Service] below.

- Allow Vital Sign Monitor to Force Output: Allows the VSM operator to manually force output devices installed at the subscriber’s site.

[Security Service] Supports two types of access control systems: Momentary and Maintained mode. For details, see [I/O Device], Advanced Settings in 1.5 Connection to Center V2.
[System Information]

**Video/Audio Log** Notifies the VSM when the duration of the video/audio logs is less than the specified days.

**Storage Information**
- **Allow Vital Sign Monitor to inquire the storage information**: Allows the VSM to inquire the subscriber's storage information.
- **Report the total amount of free storage space to Vital Sign Monitor**: Reports the subscriber’s size of free storage space.
- **Notify Vital Sign Monitor when the total amount of free space is lower than xx GB**: Notifies the VSM when the subscriber’s storage space is insufficient. The space limit is 1 GB at least.
- **Notify Vital Sign Monitor when the storage space is full**: Notifies the VSM when the subscriber’s storage space was full.
- **Notify Vital Sign Monitor when any storage is lost**: Notifies the VSM when the storage device is lost.
[Other]

- **Time synchronization with Vital Sign Monitor**: Enables the time increment/decrement of minutes and seconds at the subscriber site to match the time at the VSM.

- **Send Alert Message of POS' Loss Prevention to Vital Sign Monitor**: Notifies the VSM when abnormal POS transactions occur.

- **Notify Vital Sign Monitor when the user logs in or is changed**: Notifies the VSM when the GV-System logs in or a different user logs in.

- **Notify Vital Sign Monitor when the user fails to log in Multicam**: Notifies the VSM when the GV-System users fail to log in by typing wrong IDs or passwords.

- **Notify Vital Sign Monitor when the USB Protection Key is removed**: Notifies the VSM when the USB Protection Key is already removed from the GV-System.

- **Notify Vital Sign Monitor when the Multicam starts recycling**: Notifies the VSM as soon as the recycle starts.

- **Send temperature status to Vital Sign Monitor**: Notifies the VSM when the temperature reaches or exceeds the critical temperature.

- **Send POS device connection status to Vital Sign Monitor**: Notifies the POS connection status to the VSM.

**Note**: When **Time synchronization with Vital Sign Monitor** is selected, the function of time synchronization will be activated as soon as the VSM is started up, and it will be re-activated every 12 hours.
Detecting Input Status

The feature is designed to monitor all inputs for a change of state whenever the subscriber starts the live monitoring through VSM. A change from the previously defined state (N/O to N/C or N/C to N/O) will activate an alarm condition.

Click the Connect to Vital Sign Monitor dialog box (Figure 3-4). For details, see Input State Detection, Chapter 6, DVR User’s Manual on the Surveillance System Software DVD.
3.7 Subscriber Monitoring

Viewing Subscriber Status
To view the subscriber status, highlight one online subscriber on the VSM window, and then click the View Subscriber Status icon (No. 9, Figure 3-1) on the toolbar. The following window appears.

![Subscriber Status Window](image)

**Figure 3-9**

[Subscriber] Indicates the subscriber’s ID. You can change the subscriber by clicking the [...] button.

[Video Log Storage] Indicates the information of video log and hard disk space. To view the detailed information of multiple storage groups on the subscriber, click the [...] button.

To use this function, subscribers must grant the privilege first. See the **Allow Vital Sign Monitor to inquire the storage information** option in Figure 3-8.
[Status] Indicates the meanings of icons.

[Temperature] Indicates the temperature of subscriber. This feature is only supported in certain models of GV-IP Camera, and GV-System with GV-3008 Card.

**Note:**

1. For the GV-IP Cameras that support temperature display, refer to the *GV-IPCAM H.264 User’s Manual* for detail.
2. The option **Send temperature status to Vital Sign Monitor** must be enabled on GV-System with GV-3008 Card. For details, see [System Information], Advanced Settings for Subscription, 3.6 Connection to VSM.

**I/O Device**

- **Force Output:** To enable this tab, highlight one output from the tree list, and click this tab to force the output at the subscriber site to be triggered. For this function to work, the subscriber must grant the privilege first. See the Allow Vital Sign Monitor to Force Output option in Figure 3-7.

- **Enable/Disable I/O:** Allows the VSM to arm or disarm any I/O devices at the subscriber site without interrupting the monitoring. For this function to work, the subscriber must grant the privilege first. See the Allow Vital Sign Monitor to Enable / Disable I/O option in Figure 3-7.

**Note:** This function also supports the client GV IP devices of these firmware versions:

- GV-Compact DVR: Firmware V1.43 or later
- GV-IP Camera: Firmware V1.05 or later
- GV-Video Server: Firmware V1.45 or later
Viewing Storage Information

With the above Subscriber Status window, you can see one subscriber’s storage information. When the VSM is monitoring many subscribers, the following windows give you an overview of subscribers’ storage information and monitoring status.

On the VSM window, click the View Subscriber Information button (No 6, Figure 3-1) to display the following window.

[Monitoring]
Indicates whether camera and I/O monitoring are enabled at the subscriber’s sites.

![Figure 3-10](image)

[Storage]
Indicates the total storage size and free space at the subscriber’s sites. For this subscribers must grant this privilege first. See [System Information] in Figure 3-8.

![Figure 3-11](image)
Disabling Subscription

The VSM operator can disable its services to an individual subscriber when subscription expires.

On the Address Book (Figure 3-2), right-click one subscriber and select Disable. To restore the subscription, right-click again to select Enable.
3.8 Subscriber Schedule

The VSM operator can create schedules to monitor subscription status. When subscribers don’t log in the VSM on the programmed time, the operator and subscribers can get notified.

- To set up a schedule, see 1.11 Subscriber Schedule.

- When a subscriber doesn’t log in the VSM on time, this message will appear on the Event List: *Service hour engaged; still waiting for subscriber to log in.*

When a subscriber logs out suddenly during a service time, this message will appear: *Unexpected subscriber logout during service times.*

- To activate the computer and output alarm to notify the operator while a SMS and an E-mail message being sent out to a subscriber, use the Notification feature. For details, see Notification Settings later in this chapter.
3.9 Alarm Report

For every event, the VSM operator can generate a report to evaluate certain conditions.

This function is the same as that of the Center V2. For details, see 1.12 Alarm Report.
3.10 Remote Playback

You can retrieve the recordings from GV-System, GV-Video Server or GV-Compact DVR for playback.

The following function must be enabled ahead to allow remote access:

- **GV-System**: Enable the **Run Remote ViewLog Service** option in Figure 3-5, and start recording.
- **GV-Video Server/GV-Compact DVR**: Enable the **Remote ViewLog** function, and start recording.

1. On the Event List (No. 21, Figure 3-1), double-click one motion event. This window appears.

![Vital Sign Monitor](image)

*Figure 3-12*

2. Click the **Remote Playback** icon. A setting dialog box appears.

3. Select the desired camera to be viewed, enter the ID and password to log in the DVR, and click **OK**. The Remote Playback window appears.

4. For the controls on the Remote Playback window, see 4.14 Instant Playback.
3.11 Event List

On the bottom of the VSM window, events can be sorted under different tabs according to the type. You can utilize these tabs to quickly monitor events by type. You can also configure the Customized Event tab which contains self-chosen event types.

Adding Event Tabs

You can add event tabs to sort events by type.

1. On the main screen, click View and select My Favorite Events. A sub-menu appears.

<table>
<thead>
<tr>
<th>View</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Favorite Events</td>
<td>System</td>
</tr>
<tr>
<td>✓ Subscriber List</td>
<td>Motion</td>
</tr>
<tr>
<td>✓ Subscriber Bar</td>
<td>Trigger</td>
</tr>
<tr>
<td>✓ Subscriber Business Card</td>
<td>Connection</td>
</tr>
<tr>
<td>✓ Subscriber Information</td>
<td>Alarm</td>
</tr>
<tr>
<td>✓ Toolbar</td>
<td>Login/Logout</td>
</tr>
<tr>
<td>✓ Status Bar</td>
<td>Wiegand Data</td>
</tr>
<tr>
<td></td>
<td>✓ Device Lost</td>
</tr>
<tr>
<td></td>
<td>✓ Offline Event</td>
</tr>
<tr>
<td></td>
<td>✓ Customized Event</td>
</tr>
</tbody>
</table>

*Figure 3-13*

2. Select the desired event. The selected event type should appear as a tab at the bottom of the main screen.

3. To remove the event tab from the main screen, repeat steps 1 and 2 to unselect.
Setting up the Customized Event Tab

You can configure the Customized Event tab which groups the selected event types under a single tab. With only a click of the Customized Event tab, you can monitor the desired events instantly.

1. On the main screen, click Configure and select Customize Message Settings. The Customize Message Settings dialog box appears.
2. Select a desired event from the left and select Add to Customized Event Tab.

![Customize Message Settings](image)

Figure 3-14

3. To add other event types into the Customize Event tab, repeat step 2.
4. On the main screen, click View, select My Favorite Events, and select Customized Event to add this tab to the main screen.
Setting Alert Level of Event Messages
You can assign an alert level to each event type for monitoring and management purposes. Each alert level can be distinguished by color. You can customize the color for each alert level or assign a color exclusively for a particular event type.

On the main screen, click **Configure** and select **Customize Message Settings**. The Customize Message Settings dialog box appears. For setup details, see 1.15 Setting Alert Levels of Event Messages
3.12 Event Log Browser

To launch Event Log Browser, click **Tools** on the window menu and select **Event Log Browser**. This feature is the same as that in Center V2. For details, see 1.14 *Event Log Browser*. 
3.13 System Configuration

On the window menu, click **Configure** to see these options: (1) System Configure, (2) Password Setup, (3) Event Log Settings, (4) Local I/O Device (5) Virtual I/O (6) Notification and (7) Alerts Interval. These options are discussed in this section.

**System Settings**

Click **Configure** on the window menu, and then select **System Configure** to open this dialog box:

![System Configure window](image)

*Figure 3-15*
[Startup]

- **Auto Run when Windows starts**: Automatically runs VSM at Windows startup.
- **Start Service when Vital Sign Monitor starts**: Automatically starts the service when VSM starts.
- **Login SMS Server when Service starts**: Automatically logs in the SMS Server when the VSM service starts. You will be prompted to enter the related information of the SMS server.

[Connective Port]

- **Server Port**: Sets the communication port to match that of the subscriber, or keep it as default.
- **Port 2**: To set the appropriate port for the connection to the GV-Video Server, GV-IP Camera and GV-Compact DVR, keep the default port 5609, or modify it to match the VSM port on the GV IP devices. For details, see *GV-Video Server User’s Manual*, *GV-IP Camera User’s Manual*, or *GV-Compact DVR User’s Manual*.

[Enhance network security] Enable to enhance Internet Security. Please notice when this feature is enabled, the subscribers using earlier version than version 7.0 cannot access the VSM any more.

[Arrow Button] The arrow button, in the Connective Port section, provide the UPnP function to configure the ports on your router automatically. For details on UPnP settings, see *UPnP Settings, Appendix*. 

164
Password Settings
You can create administrator and user accounts with different privileges. Click **Configure** and then select **Password Setup** to open this dialog box.

![Account Management Dialog Box](image)

**Figure 3-16**

To change the login account, on the VSM window, click **Service**, select **Login/Change User**, and type the desired account ID and password for login.

Event Log Settings
Click **Configure** on the window menu, and select **Event Log Settings** to display the Event Log Settings dialog box. The settings are the same as those in Center V2. For details, see *Setting the Event Log* in 1.14 Event Log Browser.

Also see 3.13 Event Log Browser.
Notification Settings
When alert conditions occur, the VSM can automatically activate the assigned computer and output alarm to notify the operator while a SMS and an e-mail message are being sent out to subscribers.

To configure this function, click Configure on the window menu and select Notification to display the Alarm Settings window. The settings are the same as those in Center V2. For details, see 1.16 Notification Settings.

Also see 3.15 Output Alerts, 3.16 SMS Alerts, and 3.17 E-Mail Alerts.

Alerts Interval Settings
You can define the frequencies of the motion-detected and video-lost alert messages. Click Configure on the window menu and select Alerts Interval to open this dialog box.

![Alerts Interval](image)

**Figure 3-17**

- **Post-Motion**: Specify how long the incoming alert messages of motion detection stay red-highlighted on the Event List (No. 21, Figure 3-1).
- **Event and Alerts Interval**: Specify the interval between the incoming messages upon motion detection or video lost. Select the event type and click on the interval column to change the period of time.

**Note**: The alert messages for the two types of events will still be shown on the Event List even if you don’t select them. The settings here only affect the frequency of displaying the alert messages.
3.14 Output Alerts

You can activate output devices installed at the VSM site (local) and/or through the network (virtual) to warn the VSM operator when events occur. Up to nine (9) GV-I/O Boxes (including local and virtual) can be connected to a single VSM.

**Note:** Only 8-port and 16-port GV-I/O Boxes can be installed through the network.

**Configuring a Local GV-I/O Box**

On the window menu, click **Configure** and then select **Local I/O Device**. This I/O Device dialog box appears. For setup details, see *Configuring a Local GV-I/O Box* in 1.17 Output Alerts.

**Configuring a Virtual GV-I/O Box**

On window menu, click **Configure** and then select **Virtual I/O**. The Virtual I/O Device dialog box appears. For setup details, see *Configuring a Virtual GV-I/O Box* in 1.17 Output Alerts.

**Triggering Outputs by Event**

Click **Configure** on the window menu and select **Notification**. The Alarm Settings dialog box appears. For detail, see *Triggering Outputs by Event* in 1.17 Output Alerts.
Triggering Outputs Manually

1. Click the I/O Device button on the VSM window. This dialog box appears.

![Force Output of I/O Device](image)

**Figure 3-18**

2. Select a desired module and then click the **Finger** button to trigger the output.

You can also trigger the output devices installed at the subscriber site by using the **Force Output** button on the Subscriber Status. For details, see [I/O Device], **Viewing Subscriber Status**, 3.7 **Subscriber Monitoring**.
3.15 SMS Alerts

This feature lets you send out SMS messages to subscribers when alert conditions occur.

Setting SMS Server

Before sending SMS messages to an individual subscriber, you need to define SMS Server correctly.

Click Configure on the window menu and select SMS Setup. For setup details, see 1.18 SMS Alerts.

Sending SMS

Once the connection between the SMS Server and VSM is established, there are several ways to send out SMS messages to subscribers. See the VSM window for the following selections.

1. Click the Send Short Message button (No. 11, Figure 3-1). This sends out SMS to an individual subscriber manually.
2. On the Event List, double-click any event type to call up a message window, and then click the Send Short Message icon. This sends SMS to an individual subscriber manually.
3. On the Subscriber List (No. 18, Figure 3-1), right-click one subscriber and select Send Short Message. This sends SMS to an individual subscriber manually.
4. Click Configure on the window menu, and select Notification to display the Alarm Settings window. Select Send SMS Alerts. This sends SMS to subscribers automatically when alert conditions occur. See Notification Settings earlier in this chapter.
Inserting Device Information

The subscriber’s ID and camera name can be automatically inserted to your SMS message when it is sent out.

Click **Configure** on the window menu and select **Notification**. The Alarm Settings dialog box appears. For details, see *Inserting Device Information*, 1.18 SMS Alerts.
3.16 E-Mail Alerts

You can send e-mails to subscribers when alert conditions occur.

Setting Mailbox
Before you can send e-mails to an e-mail account, you need to define your mailbox correctly.

Click **Configure** on the window menu and select **E-Mail Setup**. For setup details, see **1.19 E-Mail Alerts**.

Sending E-Mail
There are several ways to send e-mail alerts. See the VSM window for the following selections.

1. Click the **E-Mail** button (No. 10, Figure 3-1). This sends the e-mail to an individual subscriber manually.
2. On the Subscriber List (No. 19, Figure 3-1), right-click one subscriber, and then select **Send E-Mail**. This sends the e-mail to an individual subscriber manually.
3. On the Event List, double-click one event to call up a message window, and then click the **e-mail** icon. This sends the e-mail to an individual subscriber manually.
4. Click **Configure** on the window menu and select **Notification** to display the Alarm Settings window. Select **Send E-Mail Alerts**. This sends e-mails to subscribers automatically when alert conditions occur. See **Notification Settings** earlier in the chapter.
Inserting Device Information
The subscriber’s ID and camera name can be automatically inserted to your e-mail message when it is sent out.

Click **Configure** on the window menu and select **Notification**. The Alarm Settings dialog box appears. For details, see *Inserting Device Information*, 1.18 SMS Alerts.
3.17 Temperature Alarm

You can set up a critical temperature upon and beyond which the VSM operator and the subscriber can be notified.

---

**Note:**

1. This feature is only supported by certain models of GV-IP Cameras and GV-System with GV-3008 Card.
2. For the GV-IP Cameras that support temperature display, refer to the *GV-IPCAM H.264 User’s Manual* for detail.

---

To configure the temperature alarm:

1. If you have a GV-System subscriber, make sure the **Send temperature status to Vital Sign Monitor** option is enabled. For details, see [System Information], Advanced Settings for Subscriber in 3.6 Connection to VSM.
2. On the VSM window, click **Configure** and select **Temperature Monitor**. The Temperature Monitor dialog box appears.
3. In the Units section, select **Celsius** or **Fahrenheit**. The selected unit will be used in the alarm message.

![Temperature Monitor](#)

**Figure 3-19**

4. To show both units in the Subscriber Status (see Figure 3-9), select the **Show both units** option.
Tip: With the **Show both units** option is selected, select either **Celsius** or **Fahrenheit** for the unit to come before the other in the Subscriber Status.

5. In the Alarm section, specify the critical temperature.

6. Click **OK**. Once the temperature reaches or exceeds the critical temperature, an alarm event such as “Critical Temperature Alarm [77.5°C]”, will be shown on the VSM window.

You can also invoke computer alarm and local output device, and send SMS and e-mail alerts using the Alarm Settings. For details, see 1.16 *Notification Settings*, 2.14 *SMS Alerts* and 2.15 *E-Mail Alerts* respectively.
3.18 Event Chart

The Event Chart can provide you the daily, weekly and monthly statistical chart based on different criteria. This feature is similar as that in Center V2. For details, see 1.21 Event Chart. To launch the Event Chart, click Tools on the window menu and select Event Chart.
3.19 Failover Server

You can configure up to two failover servers in case of the primary VSM server failure. Whenever the primary fails, the failover takes over the connection from subscribers, providing uninterrupted monitoring services.

To access this feature, on the VSM window menu (see Figure 3-1), click Service, and select Automatic Failover Support. This feature is the same as Center V2’s. For details on setup, see 1.22 Failover Server.
Chapter 4
Control Center

Control Center is a central monitoring station solution (CMS) that provides the CMS operator with these major features:

- Access to client DVRs (See Remote DVR)
- Access to remote desktops (See Remote Desktop)
- Display of up to 96 cameras from different hosts on the same screen (See Matrix View)
- Remote playback (See Remote ViewLog)
- Central management for I/O devices from different hosts (See I/O Central Panel)
- Monitor up to 104 monitors, including 8 monitors from the local Control Center itself, with 9984 cameras over the network (See IP Matrix)
- Video motion detection (See VMD Monitoring)
- Instant Playback (See Instant Playback)
- Picture-in-Picture and Picture-and-Picture views (See PIP and PAP View)
- Panorama View (See Panorama View)

Control Center also supports GV IP devices (GV–Video Server, GV-Compact DVR, GV-IPCam) and GV-Video Gateway for central monitoring.
### 4.1 Minimum System Requirements

Before installation, make sure your computer meets the following minimum requirements:

#### Standard Version

<table>
<thead>
<tr>
<th></th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td>CPU</td>
<td>Pentium 4, 3.0 GHz with Hyper-Threading</td>
<td></td>
</tr>
<tr>
<td>RAM</td>
<td>2 x 512 MB Dual Channels</td>
<td></td>
</tr>
<tr>
<td>Hard Disk</td>
<td>The hard disk space required to install Control Center (Standard Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td>VGA</td>
<td>NVIDIA GeForce 8600 GT / ATI Radeon X1650</td>
<td></td>
</tr>
<tr>
<td>DirectX</td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>Internal or External GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>

#### Advanced Version

Control Center runs with 4 Matrix views OR connects more than 150 channels.

<table>
<thead>
<tr>
<th></th>
<th>32-bit</th>
<th>64-bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Windows XP / Vista / Server 2008 / 7</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td>CPU</td>
<td>Core2 Duo, 2.4 GHz</td>
<td></td>
</tr>
<tr>
<td>RAM</td>
<td>2 x 1 GB Dual Channels</td>
<td></td>
</tr>
<tr>
<td>Hard Disk</td>
<td>The hard disk space required to install Control Center (Advanced Version) must be at least 1 GB.</td>
<td></td>
</tr>
<tr>
<td>VGA</td>
<td>NVIDIA GeForce 8600 GT x 2 / ATI Radeon X1650 x 2</td>
<td></td>
</tr>
<tr>
<td>DirectX</td>
<td>9.0c</td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>GV-USB Dongle</td>
<td></td>
</tr>
</tbody>
</table>
**Professional Version**

Control Center runs with 6 Matrix views AND connects more than 250 channels.

<table>
<thead>
<tr>
<th>OS</th>
<th>32-bit</th>
<th>Windows XP / Vista / Server 2008 / 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64-bit</td>
<td>Windows Server 2008 / 7</td>
</tr>
<tr>
<td>CPU</td>
<td></td>
<td>Core i7, 2.8 GHz</td>
</tr>
<tr>
<td>RAM</td>
<td></td>
<td>2 x 2 GB Dual Channels</td>
</tr>
<tr>
<td>Hard Disk</td>
<td></td>
<td>The hard disk space required to install Control Center (Professional Version) must be at least 1 GB.</td>
</tr>
<tr>
<td>VGA</td>
<td></td>
<td>NVIDIA GeForce 8600 GT x 3 / ATI Radeon X1650 x 3</td>
</tr>
<tr>
<td>DirectX</td>
<td></td>
<td>9.0c</td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
<td>Internal or External GV-USB Dongle</td>
</tr>
</tbody>
</table>

**Dongle Options**

<table>
<thead>
<tr>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Center or IP Matrix</td>
</tr>
<tr>
<td>Control Center + Advanced Video Analysis</td>
</tr>
<tr>
<td>Control Center + VSM</td>
</tr>
<tr>
<td>Control Center + VSM + Advanced Video Analysis</td>
</tr>
</tbody>
</table>
4.2 Installation

1. Connect the GV-USB Dongle to the computer.

2. Insert the CMS Software DVD to your computer. It will run automatically and a window appears.

3. To install the USB device driver, select **Install or Remove GeoVision GV-Series Driver** and select **Install GeoVision USB Device Driver**.

4. To install the CMS system, select **Install V8.5 Central Monitoring System**.

5. Click **Control Center System**, and follow the on-screen instructions.

---

**Note:** To run the Control Center of version **8.4 or later**, you must upgrade the NVIDIA driver to version **6.14.11.6371** or above if the NVIDIA Graphic Card is in use.
### 4.3 The Control Center Toolbar

![Figure 4-1](image)

The buttons on the Control Center Toolbar:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Host List</td>
<td>Opens the Host List to create and edit hosts.</td>
</tr>
<tr>
<td>2</td>
<td>Group List</td>
<td>Opens the Group List to group cameras from different hosts.</td>
</tr>
<tr>
<td>3</td>
<td>IP Matrix List</td>
<td>See 4.12 IP Matrix.</td>
</tr>
<tr>
<td>4</td>
<td>Edit</td>
<td>Opens the Edit toolbar to display other buttons: Search Host, Configure, Save and Delete. The Add Host button only appears after the Host List is opened.</td>
</tr>
<tr>
<td>5</td>
<td>Service</td>
<td>See the section of Service Toolbar.</td>
</tr>
</tbody>
</table>

#### The Edit Toolbar

The Edit toolbar varies when you open the **Host List** and **Group List**.

- When the Host List is open:

![Figure 4-2](image)
When the Group List is open:

Figure 4-3

The buttons on the Edit toolbar:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Search Host</td>
<td>Opens the Search Host window, by which you can detect any devices on the same LAN and add them to the Host List.</td>
</tr>
<tr>
<td>2</td>
<td>Configure</td>
<td>Displays these options: System Configure, E-Map Editor, DirectDraw Configuration, IP Matrix Service, Import Data, Export Data, Change Password and Version Information.</td>
</tr>
<tr>
<td>3</td>
<td>Save</td>
<td>Saves the changes made on the Host List and Group List.</td>
</tr>
<tr>
<td>4</td>
<td>Delete</td>
<td>Deletes the highlighted Host or Group.</td>
</tr>
<tr>
<td>5</td>
<td>Add Host</td>
<td>Adds a Host.</td>
</tr>
<tr>
<td>6</td>
<td>Rename</td>
<td>Renames the highlighted Group.</td>
</tr>
<tr>
<td>7</td>
<td>Add Group</td>
<td>Adds a Group.</td>
</tr>
</tbody>
</table>

Note: The small toolbars appearing on both the Host List and Group List correspond to the Edit Toolbar options.
The Service Toolbar

The Service Toolbar varies when you open the **Host List** and **Group List**.

- **When the Host List is open:**

  ![Figure 4-4](image)

  *Figure 4-4*

- **When the Group List is open:**

  ![Figure 4-5](image)

  *Figure 4-5*
The buttons on the service toolbar:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote Control</td>
<td>See 4.8 Remote DVR and 4.9 Remote Desktop.</td>
</tr>
<tr>
<td>2</td>
<td>Remote ViewLog</td>
<td>See 4.10 Remote ViewLog.</td>
</tr>
<tr>
<td>3</td>
<td>Audio Broadcast Service</td>
<td>See 4.7 Audio Broadcast.</td>
</tr>
<tr>
<td>4</td>
<td>Multi-screen</td>
<td>See 4.13 Multi-Screens</td>
</tr>
<tr>
<td>5</td>
<td>VMD System</td>
<td>See 4.13 VMD Monitoring.</td>
</tr>
<tr>
<td>7</td>
<td>Quick Zoom</td>
<td>See Quick Zoom, 4.11 Matrix View.</td>
</tr>
<tr>
<td>8</td>
<td>I/O Central Panel</td>
<td>See 4.17 I/O Central Panel.</td>
</tr>
<tr>
<td>9</td>
<td>Audio Out</td>
<td>Allows the user to speak to a selected host.</td>
</tr>
<tr>
<td>10</td>
<td>Matrix</td>
<td>See 4.11 Matrix View.</td>
</tr>
</tbody>
</table>

**Note:** The small toolbars appearing on both the Host List and Group List correspond to the Service Toolbar options.
4.4 Hosts and Groups

You need to create hosts and groups before starting the services. To create hosts, you can use the **Search Host** function (No. 1, Figure 4-2) to detect any GV devices on the same LAN and add them to the Host List. Or you can follow the steps below.

**Note:**

1. To use the Search Host function to locate GV devices, it is required to open TCP port 5201 on the client DVR, TCP port 5202 on the Video Server and Compact DVR, and UDP port 5200 on the Control Center.

2. To use the Search Host function to locate third-party IP cameras, go to Windows Firewall, click the **Exceptions** tab, and then select **UPnP Framework**. See **UPnP Settings, Appendix**.

![Figure 4-6](image-url)
Creating a Host

You can create a host of the DVR, Compact DVR, Video Server, IP Camera, I/O Box and Video Gateway. The Host Settings dialog box may look a bit different among these devices.

1. Click the Host List button (No. 1, Figure 4-1), right-click the Host List window and select **Add IP Camera** as example. This dialog box appears.

![Host Settings Dialog Box](image)

**Figure 4-7**

2. Type the host name, IP address, login ID and password of the host. Keep the communication port as default, unless otherwise necessary.
3. Click the **Update Information** button to request the number of cameras and I/O modules installed from the host. When the update is complete, this message will appear: *Update system information successfully.*

4. Click **OK** to add the host.

---

**Note:**

1. If you add a DVR host, it is required to enabled **Control Center Server** at the DVR; otherwise the message *Unable to Connect* will appear.

2. The Control Center supports IP video devices using RTSP, ONVIF and PSIA standards. To connect the IP device compatible with any of these standards, select **Protocol** from the Brand drop-down list. See **RTSP Streaming, Appendix F**.

---

**Tip:** To access the configuration interface of the IP device, click **Configure**.
Creating a Group

You can group cameras from different hosts by function or geography.

1. Click the **Group List** button (No. 2, Figure 4-1), and right-click the Group List window to select **Add Group**.
2. Name the created group.
3. Drag the desired cameras from the Host List to the created group.
4. Click **Save** to store your settings.

**Tip:**

1. To access the live view from a desired camera, right-click the camera on the Host List or Group List, and select **Live View**.
2. To see the information of a single camera on the Group List, right-click the camera, and select **Device Information**.
4.5 Connection to the Control Center

To configure the client DVR in order to access the Control Center services remotely through a network connection, click the **Network** button on the main screen, point to **Control Center Server**, and then select **Start Default Service** or **Start All Service** for connection.

The Control Center Server Window

When the client DVR starts the Control Center Service (CCS) as described above, the server will be minimized to the system tray. Click the server's icon to restore its window.

![Figure 4-8](image-url)
The controls on the CMS Server:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stop All Service</td>
<td>Stops all Control Center Server services.</td>
</tr>
<tr>
<td>2</td>
<td>Start / Stop Control Center Service</td>
<td>Starts or stops these services: Matrix, I/O Central Panel and Remote DVR. It indicates that the host allows or not allows the Control Center to access the I/O modules and GV-System.</td>
</tr>
<tr>
<td>3</td>
<td>Start/Stop Remote ViewLog Service</td>
<td>Allows or not allows the Control Center to access the ViewLog files.</td>
</tr>
<tr>
<td>4</td>
<td>Start/Stop Desktop Service</td>
<td>Allows or not allows the Control Center to control the desktop.</td>
</tr>
<tr>
<td>5</td>
<td>Start / Stop Bandwidth Control Service</td>
<td>Allows or not allows the Bandwidth Control Server to control the bandwidth. For details see Bandwidth Control Applications, Chapter 8, DVR User’s Manual on the Surveillance System Software DVD.</td>
</tr>
<tr>
<td>6</td>
<td>Event List</td>
<td>Indicates login ID and IP address, service activation and connection time.</td>
</tr>
</tbody>
</table>
Advanced Settings

To configure the CCS Server, click **Configure** on the window menu.

**[Network Settings]** Keep the four communication ports as default, unless otherwise necessary.

![Network Settings](image)

**Figure 4-9**

- **Enable IP White List:** Limits access to the Control Center Server by assigning IP ranges.
- **Codec:** Sets video compression to Geo Mpeg4 or Geo H264. Note Remote Desktop does not support Geo H264 codec.
- **UPnP:** To automatically configure three communication ports on your router, click the **Arrow** button beside Http Port for UPnP settings. For details on UPnP settings, see *UPnP Settings, Appendix.*
- **Remote ViewLog:** Sets the maximum number of users to access the video files for playback from 1 to 16. It also sets the idle time after which to end the Remote ViewLog application.
**[Event Log Settings]** The settings are the same as those in Center V2. See 1.14 Event Log Browser.

**[Set Default Service]** Select the desired services to set as default.

**Figure 4-10**

**[Prompt to accept]** The client can be prompted to accept or reject the connection when the Control Center attempts to access his GV-System (through Remote DVR service) or Desktop (through Remote Desktop service).

**Figure 4-11**

**[Auto start default service when Windows starts]** Automatically runs the default services at startup.

**[Hide when minimized]** Hides the minimized Control Center Server window to the notification area.

---

**Note:** If the user account of the DVR is changed by the time the Auto start default service when Windows starts option is enabled, you have to unselect and then select the option again before the new account setting will take effect.
4.6 Live View

The Live View window is designed to manage the live video.

Right-click any camera on the Host List or Group List, and select **Live View**. Or click the **Camera Information** button on the Host/Group List toolbar and then select **Live View**. The Live View window appears.

**Figure 4-12**

The controls on the Live View window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Change Camera</td>
<td>Switches to another camera of the same host.</td>
</tr>
<tr>
<td>2</td>
<td>Change Size</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Size</strong>: Changes the size of the live video. The size corresponds to the video resolution set at the host. The size choices are only available when the video resolution is higher than 320 x 240.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Defog</strong>: Enhances image visibility.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Stabilizer</strong>: Stabilizes live images.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Stream1/Stream2</strong>: Chooses codec.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PIP View</strong>: Refers to Picture in Picture.</td>
<td></td>
</tr>
</tbody>
</table>
can zoom in on the video. See *PIP and PAP View* later in this chapter.

- **PAP View**: Refers to Picture and Picture. You can create a split video effect with multiple close-up views on the video. See *PIP and PAP View* later in this chapter.

- **Fisheye**: Enables a 360 degree view of a single location using just one camera. Note this option is only available for GV-FE110 and when the camera resolution is set as 1280 x 1024 or higher.

- **IMV1 Panomorph**: Enables a 360 degree view of a single location using a third party fisheye camera. Note this option is only available for a third party fisheye camera and when the camera resolution is set as 1280 x 1024 or higher.

- **Wide Angle Lens Dewarping**: Corrects live view distortions. For details, see *Adjusting Distorted Views* in this section.

<table>
<thead>
<tr>
<th>3</th>
<th>Audio</th>
<th>Accesses audio from the host.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Microphone</td>
<td>Enables speaking to the host. A microphone must be installed properly in the computer.</td>
</tr>
<tr>
<td>5</td>
<td>Setting</td>
<td>Changes the audio and video settings. Defog settings are for adjusting the image color (Normalization) and for decreasing the fogginess of the image (Sampling Range).</td>
</tr>
<tr>
<td>6</td>
<td>PTZ</td>
<td>Activates the PTZ control by selecting PTZ Panel or PTZ Automation.</td>
</tr>
<tr>
<td>7</td>
<td>Visual Automation</td>
<td>Allows you to change the current state of an electronic device, e.g. light ON, by clicking on its image directly. The function is only available when the same function is set at the host.</td>
</tr>
<tr>
<td>8</td>
<td>Snapshot</td>
<td>Takes the snapshot of the displayed live video.</td>
</tr>
<tr>
<td>9</td>
<td>Zoom</td>
<td>Enlarges the video by selecting 1.0x, 2.0x and 3.0x.</td>
</tr>
</tbody>
</table>
Enhancing Live Video

You can enhance the coloring to have more vivid and saturated images. Click the **Configure** button (No. 2, Figure 4-2), select **DirectDraw Configuration**, select **Use Colorful Model**, click **OK** and restart the Control Center program for the mode to take effect.
Adjusting Distorted Views

When viewing images through Live View or Matrix View, these images may be curved near the corners. Use the Wide Angle Lens Dewarping feature to correct image distortion.

1. On the live view, select the **Change Size** button (No. 2, Figure 4-12) and select **Wide Angle Settings**. The Wide Angle Dewarping Setting dialog box appears.

![Figure 4-14](image)

2. Move the slider at the bottom to correct the degree of warping. The adjusted view is shown on the right.

![Figure 4-15](image)

3. To apply the configuration, select the **Change Size** button (No. 2, Figure 4-12) and select **Wide Angle Lens Dewarping**.
4.7 Audio Broadcast

The Control Center operator can use the Audio Broadcast function to speak to multiple hosts at one time over LAN or the Internet.

**Note:** The Audio Broadcast function supports both GV and third-party IP devices with speaker functions.

Starting the Audio Broadcast

1. To open the Audio Broadcast window, click the **Broadcast Service** button on the Host List. This dialog box appears.

![Host List](image)

*Figure 4-16*

2. Drag the desired hosts from the Host List to the Audio Broadcast window. Or right-click the host and select **Add to Broadcast Service**.

3. You can mark or unmark the hosts on the Audio Broadcast window to enable or disable audio broadcasting to them.

4. To start audio broadcasting to the hosts, click the **Start/Stop Broadcasting** button on the Audio Broadcast window, and talk to the microphone connected to the computer of Control Center.
The Audio Broadcast Window

The controls on the Audio Broadcast window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Host Name</td>
<td>Displays the host name.</td>
</tr>
<tr>
<td>2</td>
<td>IP</td>
<td>Displays the host IP address.</td>
</tr>
<tr>
<td>3</td>
<td>Status</td>
<td>Displays the connection status of the host.</td>
</tr>
<tr>
<td>4</td>
<td>Change Style</td>
<td>Minimizes or enlarges the Audio Broadcast window.</td>
</tr>
<tr>
<td>5</td>
<td>Close</td>
<td>Closes the Audio Broadcast window.</td>
</tr>
</tbody>
</table>
| 6   | Setup         | - **Always on top:** Always displays the Audio Broadcast window on top of the screen.  
|     |               | - **Opacity:** Select the opacity level for the Audio Broadcast window. The value can range from 20% (fully transparent) to 100% (fully opaque). |
| 7   | Start/Stop    | Starts or stops audio broadcasting.                                         |
| 8   | Dragging Area | Click the button and drag the Audio Broadcast window to the desired position. |
4.8 Remote DVR

The Remote DVR service allows the Control Center to access client GV-Systems and configure their settings remotely. This feature reduces the trips to each client DVR individually.

Running the Remote DVR

1. The client DVR must activate Control Center Service (No. 2, Figure 4-8) first.
2. At the Control Center, highlight a host in the DVR List.
   Then click the Remote Control button and select Remote DVR.

If the connection is established, the main screen of the client DVR will display on the Control Center desktop. At the same time, the client DVR will display the following message, advising the GV-System is in use and has been locked.

![Remote DVR Connection...](image)

Figure 4-18

If the client wants to interrupt the connection, he or she can click the button at the bottom right corner. A valid ID and Password are required to stop the connection.
**Tip:** If you do not wish to overload the bandwidth by viewing all cameras of the client DVR, you can choose to view certain cameras. There are two ways to activate and deactivate cameras:

1. Before connecting to the client DVR, in the Control Center, click the **Configure** button, select **System Configure**, and then click the **Remote DVR** tab. In the Active Camera field, check or uncheck desired cameras. Click **OK** to save to your settings.

2. When connecting to the client DVR, on the main screen of the client DVR, click the **Exit** button, and then select **Activate Camera**. Check or uncheck cameras.

**Note:**

1. Remote DVR currently doesn’t support audio output, PTZ and I/O control.

2. Remote DVR of version 8.2 and earlier cannot connect to GV-System of version 8.3 and later.

Also see *Remote DVR Settings* in **4.22 System Configuration**.
4.9 Remote Desktop

Not only does Remote Desktop provide the Remote DVR feature of working on client GV-Systems, but allow you to exit to Windows. Viewing the client desktop as a website view, the center operator has a full control to client GV-System and its operation system.

Running Remote Desktop

1. The client DVR must activate **Remote Desktop Service** (No. 4, Figure 4-8) first.
2. At the Control Center, highlight a host in the DVR List. Then click the **Remote Control** button, and select **Remote Desktop**.

When the connection is established, the client desktop will appear on the Control Center desktop.
File Transfer

The File Transfer function is designed to transfer files easily between the Control Center and client DVR.

1. Run the Remote Desktop.
2. Click the File Transfer button on the upper left corner of the Remote Desktop. The File Transfer Service dialog box appears.
3. Select the desired file to transfer to Local (the Control Center) or Remote (the client DVR).

![File Transfer Service dialog box](image)

**Figure 4-19**

**Note:** The size of one single file for transfer cannot exceed 4 GB, but multiple selections of files do not have size limit.

Also see Remote Desktop Settings in 4.22 System Configuration.
4.10 Remote ViewLog

The Remote ViewLog service allows the Control Center to access the event files of different hosts and play them back with ViewLog player.

Running Remote ViewLog

1. For DVR hosts, the client DVRs must activate Remote ViewLog Service (No. 3, Figure 4-8) first.
2. At the Control Center, highlight a host in the Host List or a group in the Group List. Then click the Remote ViewLog button.

When the connection is established, the ViewLog player will appear on the Control Center desktop. For details on ViewLog, see Chapter 4, DVR User’s Manual on the Surveillance System Software DVD.

If highlighting a group for the Remote ViewLog service, you can access the event files of up to 96 cameras. However, the Multi View of ViewLog can only display up to 16 cameras. So you need to select the desired cameras for Multi View mode. On the ViewLog function panel, click the Setting button to display the System Configuration dialog box, and select the Multi View tab.

Also see Remote ViewLog Settings in 4.22 System Configuration.

Note: When Control Center of version 8.3 connects to GV-System of version 8.2 and earlier, the remote playback can work. However, if Control Center of version 8.2 and earlier connects to GV-System of version 8.3, the playback will fail.
4.11 Data Event Query on GV-System

You can query events that occur at DVR hosts by defining search criteria. The search results can be displayed in text or in chart. You can also export your research results in the form of text, html or excel.

1. On the GV-System, click the **Network** button, select **WebCam Server** and click **OK** to enable the WebCam service.

2. On the Control Center, right-click the desired DVR host on the host list and select **Event Data Query**. The Event Data window appears.

3. On the left panel, select a query category and then click **Submit Query** at the bottom to display its search criteria.
   - **Monitor**: events that are monitored

**Figure 4-20**

1. On the GV-System, click the **Network** button, select **WebCam Server** and click **OK** to enable the WebCam service.

2. On the Control Center, right-click the desired DVR host on the host list and select **Event Data Query**. The Event Data window appears.

3. On the left panel, select a query category and then click **Submit Query** at the bottom to display its search criteria.
   - **Monitor**: events that are monitored
■ **System**: system activities
■ **Login**: user login/logout status
■ **Counter**: counter events
■ **POS**: POS transaction events

4. Define each search criteria such as Event Type, Device, Information, Date etc. The search criteria vary depending on the search category selected.

5. If you want to search the events recorded during the Daylight Saving Time period, select **DST Rollback** and specify the time period in the Date column.

6. Click **Submit Query**. The search results will be displayed in text form.

7. To graph the search results, click the **Chart** button.

8. To playback any attached video, click the Video icon.

9. To export the search results, select the file type using the drop-down list and click **Export**.
4.12 Matrix View

Matrix View allows the center operator to monitor up to 96 cameras from different hosts on the same screen. Further, the operator can remotely change camera’s monitoring status and properties. The Matrix view provides these features:

- Support for screen resolution of 1024 x 768, 1280 x 1024, 1600 x 1200, 1680 x 1050, 1920 x 1200, 1280 x 800, 1920 x 1080 and 1440 x 900
- Number of displayed cameras at a time can be up to 96
- Display of up to 8 Matrix windows in 1 monitor or separate 8 monitors at a time
- Support for remote configuration of camera status and properties
- Support for Camera Scan, PTZ Control and POS Live View functions
- Access to client ViewLog for playback

Running Matrix View

1. For DVR hosts, the client DVRs must activate **Control Center Service** (No.2, Figure 4-8) first.
2. At the Control Center, highlight a Group and click the **Matrix** button. The Matrix window appears.

**Tip**: To add or replace one camera view in a Matrix view, simply drag the desired camera from the Group List to the desired channel position.
The controls on the Matrix window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exit</td>
<td>Closes or minimizes the Matrix window.</td>
</tr>
<tr>
<td>2</td>
<td>Screen Division</td>
<td>Select screen divisions with the choices of 1, 4, 6, 8, 9, 12, 16, 20, 24, 32, 36, 48, 64, 80 or 96 channels.</td>
</tr>
<tr>
<td>3</td>
<td>Date/Time</td>
<td>Indicates the current date and time.</td>
</tr>
<tr>
<td>4</td>
<td>Monitor</td>
<td>Starts or stops monitoring.</td>
</tr>
<tr>
<td>5</td>
<td>Configure</td>
<td>Access the Matrix settings and camera properties.</td>
</tr>
<tr>
<td>6</td>
<td>ViewLog</td>
<td>Opens ViewLog.</td>
</tr>
<tr>
<td>7</td>
<td>Camera Scan</td>
<td>Rotates through screen divisions.</td>
</tr>
<tr>
<td>8</td>
<td>PTZ</td>
<td>Displays the PTZ control panel. To display the PTZ control panel, you can also right-click the connected channel and select <strong>PTZ Control</strong>.</td>
</tr>
</tbody>
</table>
**Note:**

1. To display Matrix views in separate 8 monitors, make sure your computer is equipped with 4 VGA cards. To set up multiple monitor positions and resolutions, see *Matrix Settings* in 4.22 System Configuration.

2. The Matrix supports the megapixel resolution only on a single screen. Click the button at left-top corner of the single screen to display megapixel images.

3. According to your screen divisions, the Matrix will reduce the received resolution as close as to the division size. For GV IP devices, the JPEG stream of 704 x 480 or smaller will be changed to the MPEG stream of the similar size; the JPEG stream higher than 704 x 480 will remain as JPEG stream. The mechanism is designed to reduce CPU usage and save bandwidth.
Live View Enhancement

Enhancing Live Images
You can enhance the coloring to have more vivid and saturated images. Click the Configure button (No. 2, Figure 4-2), select DirectDraw Configuration, select Use Colorful Model, click OK and restart the Control Center program for the mode to take effect.

Adjusting Distorted Views
Images may be curved especially near the corners. To correct image distortions, right-click the channel you want to adjust for distortion and select Wide Angle Lens Settings. The Wide Angle Dewarping Setting dialog appears. For details, see Adjusting Distorted Views in 4.6 Live View.
Advanced Settings

On the Matrix window, click the **Configure** button (No. 5, Figure 4-21).

[System Configure]

![System Configure](image)

**Figure 4-22**

- **Caption**: Displays the ID, Location or Camera Name stamp on screen.
- **Camera Scan**: Sets the rotation interval between cameras. Click the **Arrow** button to set rotation mode of 1, 4, 6, 9, 16 or 24 channels. You can also enable the automatic scan function at the Matrix startup.
- **DirectX**: Sets the DirectDraw function.
- **PTZ Control**: Select one type of PTZ control panel. For details on PTZ Automation, see *PTZ Automation*, Chapter 6, *DVR User’s Manual* on the Surveillance System Software DVD.
- **View**: If video sources or connections tend to be interrupted, or you want to prevent the operator from knowing the broken connection, select this option and set the duration that the last frame remains on the screen to avoid the instant and frequent display of “Video Lost” or “Disconnect” messages.
[Camera Configure] Adjusts the properties and recording settings of cameras.

[Video Attributes] Adjusts video attributes of cameras.

[Image Quality] Adjusts the video quality with the choices of Best, Normal and Low. The better quality will result in bigger image size and need bigger bandwidth.

[QView] Allows you to display channels on another monitor. For details, see QView for Channel Display on Another Monitor later in this chapter.

[Auto Retry when Connection Broken] Automatically reconnects when the connection between the Matrix View and cameras is lost.
Two-Way Audio

When the operator monitors the secured sites through Matrix View, he can enable the two-way audio to any host immediately when suspicious events occur. To access this feature, right-click on a camera view that you wish to communicate with its host, and select **Wave out Toggle** to access audio from the host and **Talk Back Toggle** to speak to the host.

*Figure 4-23*
Instant Playback

When monitoring through Matrix View, you can instantly play back any suspicious videos of a certain time length. Time length choices include 10 seconds, 30 seconds, 1 minute and 5 minutes. For details see 4.16 Instant Playback.

- To instantly play back the event(s) of one single channel, click on the Camera Name, select Instant Play and select the time length.
- To instantly play back the events of all channels, click the ViewLog button (No.6, Figure 4-21), select Instant Play, and select the time length.

Also see Matrix Settings in 4.22 System Configuration.
Channel Display on Another Monitor

If the Control Center is equipped with multiple monitors, you can use the QView feature to display a selected channel on another monitor screen.

1. Open the Matrix window, click the **Configure** button (No. 5, Figure 4-21), and select **QView**. This dialog box appears.

![QView dialog box](image)

**Figure 4-24**

2. Use the drop-down list to select a desired monitor.

3. Click one channel to be displayed on that monitor.

![Select channel](image)

**Figure 4-25**

4. To switch to another channel, simply click another channel in the Matrix.
Quick Zoom

When you are monitoring Matrix Views on multiple monitors, the Quick Zoom feature allows you to call back a desired camera view to display on the primary monitor for instant inspection.

**Note:** To set up multiple monitors for Matrix Views, see *Matrix Settings* in 4.22 System Configuration.

1. Click the **Quick Zoom** button (No. 7, Figure 4-4). This dialog box appears.

![Matrix Quick Zoom](image)

**Figure 4-26**

2. To identify the position numbers of monitors, click the **Identify** button. The position numbers will be displayed on the monitors. Following is an example of running four Matrix Views in four separate monitors.

![Figure 4-27](image)

3. To display a desired camera view on the primary monitor, type its monitor number of the Matrix View and the camera channel. Click **Zoom**.

4. To return to the previous Matrix View settings, click **Restore**.

5. To disable the position numbers displayed on Matrix Views, click **Identify** again.
Monitor Settings

When you have set up more than one monitor and want to display matrices separately on each of the monitors, you can specify the monitor at which each matrix is displayed.

1. Configure the monitor positions according to Windows Display Properties. For details, see *Matrix Setting, 4.22 System Configuration*.

2. Right-click the group on the Group List, select **Set Start Position as** and select a matrix number. The matrix numbers here correspond to the ones in Windows Display Properties. The group folder turns red when its starting position is assigned.

![Figure 4-28](image-url)
POS Live View

The POS Live View allows you to view POS transaction data or cardholder information of access control in a separate window.

➢ To open the POS Live View window, click the **ViewLog** button (No.6, Figure 4-21) and select **POS Live View**.

➢ To have the instant playback, double-click the desired transaction item or cardholder data on the POS Live View window.

![Figure 4-29](image)

For details on POS Live View, see *POS Live View*, Chapter 7, *DVR User’s Manual* on the Surveillance System Software DVD.
4.13 IP Matrix

The IP Matrix is designed to reduce trips to set up remote monitors. The operator can remotely assign cameras to be displayed, set screen divisions, start camera scan and etc. This feature is useful for TV wall control.

With the IP Matrix, the operator can manage up to 36 remote monitors, each displaying one Matrix View. Including 8 monitors (Matrix Views) from the local Control Center itself, the operator can monitor up to 104 monitors (Matrix Views), with 9984 cameras ($(96 \times 8) + (96 \times 96)$) in total over the network. The IP Matrix application is illustrated as below.

For details on the Matrix view, see 4.11 Matrix View.

\[\text{Figure 4-30} \text{ IP Matrix controls up to 36 Matrix Views}\]
Running IP Matrix

To run the IP Matrix, you have to set up both client servers and Control Center.

**Note:** An appropriate USB dongle is required for each client server.

On client servers:

1. Insert the CMS Software DVD to the computer. It will run automatically. A window appears.
2. Select **Install V8.5 Central Monitoring System**.
3. Click **IP Matrix**, and follow the on-screen instructions.
4. After the computer is restarted, go to the Windows **Start** menu, point to **Programs**, select **IP Matrix** and click **IP Matrix**. This dialog box appears.

![IP Matrix Client](image)

**Figure 4-31**

5. Type the IP address of the Control Center, and modify the communication port if necessary.
6. Click **Advance**. This dialog box appears.

![Setup Dialog Box](image)

**Figure 4-32**

- **[Location Name]** Names the client server.
- **[Startup]** Automatically connects to the Control Center when the program is started.
- **[Monitor]** This field displays the number, position coordinates and resolution of monitors that are connected to the client server. Enable the desired monitors for remote control.

7. Click **OK** and then **Connect** to build connection with the Control Center.

**On Control Center:**

1. Click the **IP Matrix List** button (No. 3, Figure 4-1) on the Control Center toolbar. The IP Matrix window appears.

2. Click the **Start/Stop Service** button on top left corner to start the service. The icons of connected monitors will be displayed at the bottom of the window.

3. To display monitor views, drag and drop the monitor icons from the bottom to the desired squares on the IP Matrix.
4. To assign cameras to be displayed on a specific monitor, drag a group from the Group List and drop on the monitor square. Or, right-click the monitor square and select **Set Channel** to choose a group.

5. To enlarge and manage one monitor view, double-click the monitor square and use the toolbar for control. For details on the toolbar, see *The Controls on the Window* below.
# The Controls on the Window

![Figure 4-35](image)

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Start / Stop Service</td>
<td>Starts or stops the connection to client servers.</td>
</tr>
<tr>
<td>2</td>
<td>Show / Hide List</td>
<td>Opens or closes the monitor list at the bottom of the window.</td>
</tr>
<tr>
<td>3</td>
<td>Layout Setup</td>
<td>Includes these settings:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>Screen Division</strong>: Specify the screen division of IP Matrix. The maximum number of divisions is 36, e.g. 9 x 4 or 4 x 9.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>Screen update rate</strong>: Specify the update</td>
</tr>
</tbody>
</table>
Control Center

- **Control Center** frequency for all camera views on the monitor square.
  - **Clear all set monitors' position:** Clears the IP Matrix view every time when you modify the screen division.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>Set Channel</strong></td>
<td>Focus on one monitor view, click this icon, and select one group for display.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Matrix Configure</strong></td>
<td>Focus on one monitor view, click this icon, and set caption display, camera scan interval, DirectX and PTZ control method.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Start / Stop Scan</strong></td>
<td>Focus on one monitor view, click this icon, and select to start or stop the camera scan function.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Set Quad</strong></td>
<td>Focus on one monitor view, click this icon, and set the screen division.</td>
</tr>
<tr>
<td>8</td>
<td><strong>Page Up &amp; Page Down</strong></td>
<td>Focus on one monitor view, and click one of these icons to scroll the page up and down.</td>
</tr>
</tbody>
</table>
| 9 | **Monitor Square** | Displays the monitor views. Right-click one monitor view to have these settings:  
  - **Set Channel:** Select a group for display.  
  - **Advanced Control:** Enlarges the monitor view for further management.  
  - **Remove Monitor:** Removes the monitor view from the monitor square. |
| 10 | **Monitor Icon** | The icons of connected monitors. Right-click one icon to have the setting:  
  - **Identify Monitor:** Displays a large number on the monitor square, showing which monitor square corresponds with which monitor icon. |

Also see *IP Matrix Settings* in 4.22 *System Configuration*. 
4.14 Multi-Screens

You can set up a video wall over multiple screens, which allows you to display a maximum of 144 channels on a maximum of 16 monitors. Multiple screens can be built using monitors from a local computer or remote computers through the network.

Note: Multiple screens can only be built from either a local computer or remote computers. Mixed sources are not supported.

Configuring Multiple Screens from a Local Computer

1. Before setting up for multi-screen display, make sure you have established a group consisting of the channels you want to display. For how to set up a group, see 4.4 Hosts and Groups.

2. On the Control Center service toolbar, click the Multi-Screen button. This window appears.

![Multi-Screen Window](image-url)
3. To add a layout template, select the Control Layout List on the left and click the **Add A New Layout** button on the toolbar. The Add Control Layout dialog box appears.

4. Configure the layout in the Add Control Layout dialog box.

![Add Control Layout](image)

**Figure 4-37**

A. Name the layout in the **Name** field.

B. Configure the Settings section. Select **Manual** or **Selecting**.

**[Manual]** Setups up a new layout template.

- **Monitor Layout**: Defines the number of monitors in columns and rows. For example, the following monitor layout is 3 x 2 instead of 2 x 3.
**Figure 4-38**

- **Channel Layout:** Specify the number of screen divisions on the Multi-Screen in columns and rows. A 3 x 3 channel layout on 2 x 2 monitor layout will render 9 channels over 4 monitors.

[Selecting] Apply a template already created using the drop-down list.

C. Configure the Zoom In Settings. Select **All Monitor** or a channel layout (e.g. **2 x 2 Channels**) to display an enlarged channel.

[All Monitor] Zooms a channel over all the channels by double-clicking the image.

[2 x 2 Channels] Zooms a channel over 4 channels by double-clicking the image. The options for the number of channel vary according to the Channel Layout setting in step B.
[Left Top / Right Top / Left Bottom / Right Bottom] Defines the location of the zoomed-in channel on the Multi-Screen. If you have a 3 x 3 channel layout, and you select the zoom-in channels to be 2 x 2, left top, your zoomed-in image will be displayed in the shaded area:

![Diagram showing location of zoomed-in channel]

**Figure 4-39**

5. The layout name and its channel division should appear in the Multi-Screen dialog box.

![Multi-Screen dialog box with layout and channel division]

**Figure 4-40**
6. Define monitor layout.
   A. Double-click the established layout and select **Monitor Layout**.
   B. Look up the coordinates from the Windows Display Properties and assign coordinates by dragging them from the bottom of the dialog box to each monitor.

![Multi-screen layout image](image)

**Figure 4-41**

7. To import channels, drag the already established group from the group list to the top left channel of the Multi-Screen window. A menu pops out.
8. Select either **Put cam by order** or **Use scan function**.
   - **Put cam by order**: Displays source channels from left to right, top to bottom, starting from the selected channel.
   - **Use scan function**: Displays source channels in slide show on a single selected channel of the Multi-Screen.

**Figure 4-42**

---

**Note**: A source channel can only be displayed by a single channel on the Multi-Screen at the same time. A new configuration will take priority and any repeated channel will be removed from the previous configuration.
9. A preview of channel layout appears.

![Multi-Screen layout](image)

**Figure 4-43**

10. To enable this layout, click the **Apply the Selected Layout** button on the Multi-Screen toolbar. To close the display, click the **Close** button on the Multi-Screen toolbar.
Configuring Multiple Screens from Remote Computers

1. Before you start, make sure:
   A. The Control Center V8.5 is installed in both PCs.
   B. The GV-USB dongle is connected to both PCs.

2. On the additional PC, locate and execute the **IPMC.exe** file in the Control Center folder. The IP Matrix Client dialog box appears.

3. Click the **Service** button to allow connection from the Control Center.

4. On the computer that runs the Control Center, click the **Connect to Server** button on the Multi-Screen window. The Connect to dialog box appears.

5. Type the IP address of the additional PC and click **Connect**.

![IP Matrix Client dialog box](image)

*Figure 4-44*

![Connect to dialog box](image)

*Figure 4-45*
6. A “Connected” message should appear and the additional monitor should appear at the bottom.

Figure 4-46

7. Follow steps 4 to 6 in Configuring Multiple Screens from a Local Computer section earlier to configure channel layout, monitor layout and zoom-in settings.

8. Follow steps 7 to 9 in Configuring Multiple Screens from a Local Computer section earlier to import channels and define how they will be displayed.

4.15 VMD Monitoring

With the VMD (Video Motion Detection) function, the operator can be alerted with a pop-up display of live videos when any of these events occur: Motion, Temperature Alarm, Input Trigger, Crowd Detection, Advanced Unattended Object Objection, Advanced Scene Change Detection and Advanced Missing Object Detection.

Note: The VMD feature does not support the third-party IP cameras.

Running VMD

1. Drag the desired cameras from the Host List and drop to **VMD Group** in the Group List.

![Group List](image)

*Figure 4-47*

2. To select the event for a popup alert, right-click the camera, select **Video Analysis**, and select the types of events that have been configured for this camera at the client GV-System. Note Motion Detection is selected by default.

3. To open the VMD window, click the **VMD System** icon. When motion or event is detected within the camera view, the live video will pop up on the VMD window.
The Controls on the Window

![Image](22x474 to 93x493)

**Figure 4-48**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Page Up &amp; Down</td>
<td>Scrolls the page up and down.</td>
</tr>
<tr>
<td>2</td>
<td>Refresh</td>
<td>Refreshes the camera view. The feature is unavailable when the <strong>Camera pops up in the user-defined position</strong> option is enabled (Figure 4-94).</td>
</tr>
<tr>
<td>3</td>
<td>Select Quad</td>
<td>Sets the screen division.</td>
</tr>
<tr>
<td>4</td>
<td>Show System Menu</td>
<td>Includes these settings:&lt;br&gt; - <strong>Host List:</strong> Displays the host tree list.&lt;br&gt; - <strong>Pop-up Viewer:</strong> Displays a Pop-up event on another monitor. For details, see <strong>Pop-UP Viewer</strong> later in this section.</td>
</tr>
</tbody>
</table>
• **System Configure**: Enables DirectX, specifies the Post-Motion duration for the camera view remaining on the window after motion stops and defines the critical temperature upon and beyond which the live view will pop up on the VMD window.

• **Event Popup**: Changes the duration that a popup remains on the screen. By default each popup remains for 60 seconds.

• **Sound Scheme**: Changes the alarm sound to go along with different events.

<table>
<thead>
<tr>
<th></th>
<th>Minimize</th>
<th>Minimizes the window in Windows taskbar.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Minimize</td>
<td>Minimizes the window in Windows taskbar.</td>
</tr>
<tr>
<td>6</td>
<td>Exit</td>
<td>Closes the window.</td>
</tr>
<tr>
<td>7</td>
<td>Pop-up camera</td>
<td>Right-click the pop-up camera to have these settings:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>Advanced Live View</strong>: Opens the live view window for further control. See 4.16 <em>Instant Playback</em>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>Instant Playback</strong>: See 4.16 <em>Instant Playback</em> below.</td>
</tr>
</tbody>
</table>

Also see **VMD System Settings** in 4.22 **System Configuration**.
Temperature Alarm

You can set up a temperature alarm by specifying a critical temperature, upon or beyond which the live view will pop up on the VMD window.

---

**Note:**

1. This function is only supported by certain GV-IP Cameras and GV-System with GV-3008 Card.
2. For the GV-IP Cameras that support temperature detection, refer to the GV-IPCAM H.264 User’s Manual for detail.

---

1. On the VMD window, click the **Show System Menu** icon on the top right corner and select **System Configure**. The System Configure dialog box appears.
2. Type the **critical temperature**.

![System Configure Dialog Box](image)

**Figure 4-49**

3. Right-click the camera under the VMD Group, select **Video Analysis** and select **Temperature Alarm**.
4. The live view should pop up on the VMD window when the camera’s temperature reaches or exceeds the specified critical temperature.
**Dual-Monitor Display**

You can set up two monitors to display the VMD windows for pop-up displays.

**Note:** For monitor resolution of 1280 x 1024 and above, up to 42 pop-up views can be displayed on a VMD window. For monitor resolution lower than 1280 x 1024, up to 36 pop-up views can be displayed on a VMD window.

To set two monitors to display the VMD windows:

1. Click the **Edit** button, click the **Configure** button, select **System Configure** and click the **VMD System** tab.

![System Configure](image)

*Figure 4-50*
2. In the **Position** section, select the monitor to be the first VMD window (Monitor 1) and the second VSM window (Monitor 2). Click **OK**.

3. To open the VMD window, click the **VMD System** button on the Group List.

4. To set the screen division for both Monitor 1 and Monitor 2, click the **Select Quad** button on the VMD window and select a screen division.

![Select Quad button](image)

*Figure 4-51*

5. When the first monitor is full of the pop-up camera view, the next pop-up camera view will go to the second monitor.

Applications of two VMD windows:

The position of pop-up cameras on the VMD windows varies when you enable or disable the **Camera pops up in the user-defined position** option in Figure 4-94.

- **When the option is disabled**: When multiple popup alerts are triggered simultaneously, the positions of popup views on the VMD windows are based on the sequence order of motion or event detection. When the first monitor is full of popup views, the next popup view will go to the second monitor.
Example:

Both Monitor 1 and Monitor 2 are set at 4 screen divisions. When 5 popup alerts are triggered simultaneously, the first 4 popup views will appear on Monitor 1 and the last popup view will appear on Monitor 2.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

Monitor 1 | Monitor 2

- **When the option is enabled:** The positions of popup views on the VMD windows are based on the camera sequence in the VMD Group.

Example:

In the VMD Group, Camera A is listed as the third camera and Camera B is the fifth. Both monitor 1 and monitor 2 are set at 4 screen divisions. When the popup alerts from the two cameras are triggered simultaneously, Camera A images will appear on the third square of Monitor 1 and Camera B images will appear on the first square of Monitor 2. Note the order of popup views is from left to right on the VMD window.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Monitor 1 | Monitor 2
Pop-up Viewer

The pop-up view on the VMD window will be closed as soon as motion stops or an event is undetected. With the Pop-up Viewer feature, you can define the amount of time that a pop-up view stays on another monitor.

When motion or an event is detected, the camera view will pop up on the primary monitor and the assigned monitor together. When motion or an event is undetectable, the pop-up view on the primary monitor will close, but the pop-up view on the other monitor will last for the specified time. The last image of the pop-up view will remain on the screen if no new event pops up. To clear the image, right-click on the screen and select Clear.

**Note:** For this function to work, the Control Center must be set up with at least two monitors.

1. Click the **Show System Menu** button on the toolbar of VMD window, and select **Pop-up Viewer**. This dialog box appears.

![Pop-up Viewer](image)

**Figure 4-52**

2. Use the drop-down list to select a desired monitor.
3. Type **Play Time** to specify the length of time that a pop-up view remains on another monitor. Type the time length between 1 and 10 seconds.

---

240
4.16 Instant Playback

You can retrieve the recordings from the DVR or GV IP device and play video back.

The following function must be enabled ahead to allow remote access from the Control Center:

- **DVR**: Enable recording and **Remote ViewLog Service** on Control Center Server.
- **Video Server/Compact DVR**: Enable recording and **ViewLog Server**.

The places to play video back:

- In the Group List, right-click one camera and select **Instant Play**.
- In the VMD window, right-click the pop-up camera and select **Instant Play**.
- In the Matrix view, click on the **Camera Name** and select **Instant Play**.
Figure 4-53
Right-click the Playback window to have the following features:

<table>
<thead>
<tr>
<th>Name</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Play Mode</strong></td>
<td>Includes these options:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Frame by Frame</strong>: Plays back video frame by frame.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Real Time</strong>: Plays back video on real time. This mode saves waiting</td>
</tr>
<tr>
<td></td>
<td>time for rendering, but drop frames to give the appearance of real-time</td>
</tr>
<tr>
<td></td>
<td>playback.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Audio</strong>: Turns on or off the video sound.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Auto play next 5 minutes</strong>: Plays back video up to 5 minutes.</td>
</tr>
<tr>
<td><strong>Render</strong></td>
<td>Includes these options:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Deinterlace</strong>: Converts the interlaced video into non-interlaced</td>
</tr>
<tr>
<td></td>
<td>video.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Scaling</strong>: Smoothens mosaic squares when enlarging a playback video,</td>
</tr>
<tr>
<td></td>
<td>and applies the colorful mode to enhance the coloring.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Deblocking</strong>: Removes the block-like artifacts from low-quality and</td>
</tr>
<tr>
<td></td>
<td>highly compressed video.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Defog</strong>: Enhances image visibility.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Stabilizer</strong>: Reduces camera shake.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Text overlay's camera name and time</strong>: Overlays camera name and time</td>
</tr>
<tr>
<td></td>
<td>onto the video.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Text overlay's POS/GV-Wiegand</strong>: Overlays POS or GV-Wiegand Capture</td>
</tr>
<tr>
<td></td>
<td>data onto the video.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Full Screen</strong>: Switches to the full screen view.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Wide Angle Lens Dewarping</strong>: Corrects image distortion. For setup</td>
</tr>
<tr>
<td></td>
<td>detail, see <em>Adjusting Distorted Views, 1.7 Recording</em>.</td>
</tr>
<tr>
<td><strong>Tools</strong></td>
<td>• <strong>Snapshot</strong>: Saves a video image.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Save as AVI</strong>: Saves a video as avi format.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Download</strong>: Downloads the video clip from the DVR or IP video device</td>
</tr>
<tr>
<td></td>
<td>to the local computer.</td>
</tr>
</tbody>
</table>

**Note**: The Defog and Stabilizer only work when the functions have been applied on the recording from the DVR.
4.17 PIP and PAP View

With PIP (Picture in Picture), you can crop your video to get a close-up view or zoom in on your video. With PAP (Picture and Picture), you can create a split video effect with multiple close-up views on the video.

You can enable PIP or PAP functions in Live View, Remote ViewLog and Matrix View.

- **Live View**: In the Group List, right-click one camera and select *Live View*. In the Live View window, click the *Change Size* icon and select *PIP View* or *PAP View*.

![Figure 4-54](image)

- **Playback**: Right-click one camera in the Host List or the Group List, and select *Remote ViewLog*. In the Remote ViewLog window, click the *View Mode* button, select *Single View*, and select *Mega Pixel (PIP)* or *Mega Pixel (PAP)*.

- **Matrix**: Right-click one camera view, and select *PIP View* or *PAP View*.
Starting PIP View

To start the PIP View, follow the instructions below:

1. After you select **PIP View**, an inset window of the camera view with a navigation box appears in the image.

![Inset window and Navigation box](Figure 4-55)

2. Point the cursor to the inset window. A hand icon appears. You can drag the inset window to the desired area on the image.

3. Point the cursor to the navigation box. A star icon appears. You can move the navigation box around in the inset window to have a close-up view of the selected area.

4. To adjust the navigation box size, move the cursor to any of the box corners, enlarge or diminish the box.

5. To change the frame color of the navigation box, right-click the image, select **Mega Pixel Setting**, and select **Set Color of Focus Area**.

6. To exit the PIP view, click **PIP View** again.
Starting PAP View

To start the PAP View, follow the instructions below:

1. After you select PAP View, a row of three inset windows appears on the bottom of the screen.

2. Draw a navigation box on the image, and this selected area is immediately reflected in one inset window. Up to seven navigation boxes can be drawn on the image.

3. To adjust a navigation box size, move the cursor to any of the box corners, enlarge or diminish the box.

4. To move a navigation box to another area on the image, drag it to that area.

5. To change the frame color of the navigation box, right-click the image, select Mega Pixel Setting and click Set Color of Focus Area.

6. To hide the navigation box on the image, right-click the image, select Mega Pixel Setting and click Display Focus Area of PAP Mode.

7. To delete a navigation box, right-click the desired box, select Focus Area of PAP Mode and select Delete.

8. To add another navigation box when less than seven navigation boxes are drawn, right-click the image, select Mega Pixel Setting, and then select Enable Add-Focus-Area-Mode.

9. To exit the PAP view, click PAP View again.
4.18 Panorama View

Spliced from multiple camera images, a panorama view provides a continuous scene for live monitoring.

Each camera selected for the panorama view will keep the recording in original format. Up to 4 sets of panorama views can be created.

**Note:** This function is only available when the Control Center dongle with AVP function is used.

To access this feature, on the Group List, right-click the desired group, and select **Panorama Setting**. The CMS Panorama program is enabled and minimized to the system tray. The following Panorama Setup dialog box also appears.

*Figure 4-57*
The controls on the Panorama View Setup dialog box:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Add</td>
<td>Adds an image for automatic splicing.</td>
</tr>
<tr>
<td>2</td>
<td>Undo</td>
<td>Cancels the settings.</td>
</tr>
<tr>
<td>3</td>
<td>Manual Setting</td>
<td>Manually splices the images together.</td>
</tr>
<tr>
<td>4</td>
<td>Blending</td>
<td>Makes the spliced images seamless.</td>
</tr>
<tr>
<td>5</td>
<td>Demo</td>
<td>Displays the setup procedure.</td>
</tr>
<tr>
<td>6</td>
<td>Save Before Exit</td>
<td>Saves the created panorama view and closes the dialog box.</td>
</tr>
<tr>
<td>7</td>
<td>Exit</td>
<td>Closes the dialog box.</td>
</tr>
<tr>
<td>8</td>
<td>Preview Window</td>
<td>Displays the selected source image or the spliced images.</td>
</tr>
<tr>
<td>9</td>
<td>Panorama Selection</td>
<td>Selects the panorama set for the images to be spliced together. Clicks again to rename the panorama set.</td>
</tr>
<tr>
<td>10</td>
<td>Source</td>
<td>Selects the source image to be spliced.</td>
</tr>
<tr>
<td>11</td>
<td>Selected Source</td>
<td>Displays the selected image.</td>
</tr>
</tbody>
</table>
Creating a Panorama View

To stitch images from different cameras together, follow these steps:

1. Select one panorama set (No. 9, Figure 4-57) from the drop-down list. If you want to rename the selected panorama set, type the name in the field.

2. Select one camera from the Source drop-down list (No. 10, Figure 4-57) and then click Manual Setting (No.3, Figure 4-57). This dialog box appears.

3. From the Reference drop-down list, select one camera as the Reference image. At this step, the camera you selected at Step 2 will be the only Reference image.

4. From the Source drop-down list, select one camera as the Source image to be stitched with the selected Reference image.

Figure 4-58
5. To stitch the two images together, click on a significant point in the Reference image and then look for the same point in the Source image. A dialog box of point selection will prompt you to confirm. You need to set up 3 points for stitching.

![Point Selection Dialog](image)

*Figure 4-59*

**Note:** For the best result, position the points in the overlapping areas on both images. Avoid placing the points in a cluster or lining them up straight.

6. The resulting image is displayed in the Preview window. If satisfied with the result, click **OK** to exit the setup dialog box. If not, re-enter the 3 points for stitching.

7. If you want to stitch a third image or more, click **Manual Setting** and repeat Steps 3 to 5 multiple times.

8. When you finish stitching images, click the **Save Before Exit** button (No.6, Figure 4-57) to save the created panorama view before exiting the Panorama View Setup dialog box.

**Note:** The resolution of the images to be stitched will be reduced to 320 x 240. A panorama view has a resolution limit of 1920 x 1080. Once the limit is reached, you cannot stitch more images to the created panorama view.
Accessing a Panorama View

There are two ways to access a panorama view:

- Right-click the Group that has set a Panorama view, select **Panorama View** and select the desired panorama set from the list.
- Right-click the CMS Panorama icon on the system tray, select **Panorama View**, and select the desired panorama set from the list.

Panorama View Controls

**Figure 4-60**

Right-click the panorama view to have these options:
- **Snapshot**: Save the current panorama view as an image file.
- **Blending**: Make the two images smoothly blended together. If this is not set, there can be harsh edges in the panorama.
- **Refresh Rate**: When the panorama view is enabled, the system load will increase. Change the refresh rate for the panorama images to optimize system performance. The refresh rate is from **Speed 1 (Slow)** to **Speed 5 (Fast)**.
4.19 I/O Central Panel

The I/O Central Panel provides a centrally managing solution for I/O devices from different hosts. Its major features are:

- Group I/O devices from different hosts
- Trigger I/O devices in cascade mode
- Monitor different I/O cascade configurations at different times of the day
- Provide quick access to triggered I/O devices by a Quick Link window

Note:
1. The Advanced I/O Panel at the client DVR and the I/O Central Panel at the Control Center can conflict each other. It’s recommended that the client DVR cleans up the settings in the Advanced I/O Panel and renders the I/O control to the Control Center.
2. The I/O Central Panel only supports GV IP devices.

Running the I/O Central Panel

1. For DVR hosts, the client DVRs must activate Control Center Service (No. 2, Figure 4-8) first.
2. On the Control Center Toolbar, drag the desired hosts from the Host List to the I/O Panel Group in the Group List.

Figure 4-61
3. Click the **I/O Central Panel** button on the Control Center toolbar.

When the connection is established, the I/O Central Panel will appear on the Control Center desktop.

### The I/O Central Panel

![Image of I/O Central Panel]

**Figure 4-62**

The controls on the I/O Central Panel:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Configure</td>
<td>Accesses Panel and Schedule settings.</td>
</tr>
<tr>
<td>2</td>
<td>Mode Schedule</td>
<td>Starts/stops Mode Schedule.</td>
</tr>
<tr>
<td>3</td>
<td>Toggle Quick Link</td>
<td>Displays the Quick Link window for quick access to triggered I/O devices.</td>
</tr>
<tr>
<td>4</td>
<td>Advanced I/O List Style</td>
<td>Displays the Advanced I/O List in various styles: View/Edit, Icon and Detail.</td>
</tr>
<tr>
<td>5</td>
<td>Expand Tree Row</td>
<td>Expands tree branches.</td>
</tr>
<tr>
<td>6</td>
<td>Collapse Tree Row</td>
<td>Collapses tree branches.</td>
</tr>
<tr>
<td>7</td>
<td>Mode</td>
<td>Configures various cascade modes.</td>
</tr>
<tr>
<td>8</td>
<td>Standard I/O List</td>
<td>Displays connected I/O modules.</td>
</tr>
<tr>
<td>9</td>
<td>Advanced I/O List</td>
<td>Groups I/O devices in cascade mode.</td>
</tr>
</tbody>
</table>
Creating a Group for Cascade Triggers

You can group I/O devices by function or geography. Further, the group allows cascade triggers, meaning that the trigger actions of one trigger can activate another trigger.

For this example, you might have a group called “Entrance” that contains all I/O devices installed at entrances. The “Entrance” group might contain other sub groups, each of which contains just the related I/O devices in various geographic locations:

When Input 2 is triggered, it will trigger Output 1 and Output 3 sub groups, and Output 1 will trigger Output 2 in a cascade series.

**Figure 4-63**
Creating a Group:

1. Right-click on **Advanced I/O List** (No.9, Figure 4-62), and then select **Add A Group**. This dialog box appears.

   ![Group Information Dialog Box]

   **Figure 4-64**

   - **[Group Name]** Names the group.
   - **[Group Notify Setting]**
     - **Invoke Alarm**: Invokes the computer alarm on I/O trigger. Select a sound from the drop-down list.

2. Click **Save** to apply the settings, and return to the panel.

3. To create a cascading hierarchy, drag the desired inputs/outputs from the left **Standard I/O List** to the group.

**Note:** In the cascading hierarchy, each input can only be used once while the same output can be used repeatedly.
Editing a Group:

To modify group settings, right-click a group, and select View/Edit. This dialog box appears.

[Group Name] As described in Figure 4-64.
[Group Notify Setting] As described in Figure 4-64.
[Current Pin Setting] To enable this option, highlight an I/O device from the group list at the bottom.

- Trigger Associated Outputs: Triggers outputs in cascade mode. Click the Finger tab to apply the change to all I/O devices at the same group.

- Change Icon: To enable this option, select one of two displayed icons: Normal or Trigger. Click the Change Icon tab to change an icon. Click the Finger tab to apply the change to all I/O devices at the same group.

Editing an I/O Device:

In addition to editing groups, you can also edit the settings of individual I/O device. Right-click an I/O device, and select Setting. This dialog box appears.

![Figure 4-66](image_url)
[Display Setting] You can define the nature of I/O devices by colors. Note that the setting only affects the Detail style of the Advanced I/O List (No. 4, Figure 4-62).

- **Alarm Level drop-down list**: Click the drop-down list, and select one of the six default colors: Fire, Smog, Vibration, Intruder, Motion and Emergency. For the Level Undefined option, select Text Color or Background Color, and then click the Input/Output drop-down list to change its color.

[Trigger Setting]

- **Trigger Associated Outputs**: Triggers outputs in cascade mode.
- **Latch Trigger**: Instead of a lasting output alarm, the Latch Trigger option provides a momentary alarm when an input is triggered in cascade mode. For details, see Latch Trigger, Chapter 6, DVR User’s Manual on the Surveillance System Software DVD.
- **Associated Camera**: Assign a camera for its live view to be popped up when this input is triggered. After this option is enabled, you can click the input icon and select View Associate Camera to view live video anytime.
- **Digital Input Invoke Associated Camera**: The live video pops up when its associated input is triggered. See Popping Up Live Video After Input Trigger later in this chapter.
Configuring the I/O Central Panel

On the panel toolbar, click the **Configure** button (No.1, Figure 4-62) and select **Panel Setting**. This dialog box appears.

![Panel Configuration Dialog Box](image)

**Figure 4-67**

### [Startup]

- **Show Quick Link**: Opens the Quick Link window at panel startup.
- **Start Schedule Monitoring**: Starts Mode Schedule at panel startup. For details, see *Setting up Mode Schedule* below.

### [Layout]

- **Show Host Name**: Displays the host name of each I/O device on the Advanced I/O List.
- **Use User-defined Text**: Allows you to modify the text of Alarm Level (Figure 4-66).
**Viewing Connection Log**

You can view the connection status of the hosts. On the panel toolbar, click the **Configure** button (No.1, Figure 4-62) and select **View Notification**. This dialog box will appear. The maximum of 1000 messages will be logged for reference.

![I/O Central Panel - Notify (Max. 1000)](image)

**Figure 4-68**

- **Time:** Displays the time of the connection/disconnection.
- **Message:** Displays the connection/disconnection status of the hosts.
Setting Up Mode Schedule

The Mode Schedule allows you to monitor different I/O cascade configurations at different times. For example, you may want I/O cascade triggers one way during business hours and another way for non-business hours. Modes can be switched automatically at a scheduled time.

Creating a Mode:

1. Click the **Mode** drop-down list (No. 7, Figure 4-62), and select **More Edit**. This dialog box appears.

2. Click **Add**, and name the created mode. You can create up to 100 modes.

3. Click **Save** to return to the panel.

4. Select the created mode from the **Mode** drop-down list, and create the groups in the Advanced I/O List. For details, see *Creating a Group for Cascade Triggers* earlier in this chapter.
Creating a Mode Schedule:

Define the times and days you like the panel to switch modes.

1. On the panel toolbar, click the **Configure** button (No.1, Figure 4-62), and select **Schedule Setting**. This dialog box appears.

![Figure 4-70](image1)

2. Click **Add** to create a schedule. This dialog box appears.

![Figure 4-71](image2)

- **Name**: Type a name for the schedule.
- **Mode**: Select a mode from the drop-down list.
- **Time**: Define a time period you want the mode to run.
- **Days**: Check the day box(es) you want the mode to run.

3. Click **OK** to apply the settings, and click **Save** to return to the panel.

4. To start the mode schedule, click the **Mode Schedule** button (No. 2, Figure 4-62), and then select **Mode Schedule Start**.
Quick Link

The Quick Link provides a quick access to triggered I/O devices. It is a separate window to display all group icons. The group icon flashes when any included I/O device is triggered. Clicking the flashing icon will bring you to the I/O location in the Advanced I/O List.

- To open the Quick Link window, click the **Toggle Quick Link** button. (No. 3, Figure 4-62).
- To open the Quick Link window at panel startup, check the **Show Quick Link** option in Figure 4-67.

![Quick Link Window](image)

*Figure 4-72*
Forcing Output

To manually force an output, click one output, and select **Force Output**.

- In the Standard I/O List, you can force the output individually.
- In the Advanced I/O List, considering cascade triggers, you can only manually force the output at the top level, e.g. Figure 4-73. Other outputs at sub levels cannot be forced manually, e.g. Figure 4-74. However, if the output is not in a cascading hierarchy, you can definitely force it manually, e.g. Figure 4-75.

![Figure 4-73](image1)

![Figure 4-74](image2)

![Figure 4-75](image3)
Editing Background Image

With the Background Image feature, you can import a floor plan to lay out the locations of triggered I/O devices. This feature works in the Icon style of the Advanced I/O List.

1. To switch to the Icon style, click the Advanced I/O List Style button (No. 4, Figure 4-62) and then select Icon.
2. Select a group in the Advanced I/O List. The I/O icons of this group will be displayed.
3. Right-click on the right screen, and select Background Image to import a graphic file.
4. Right-click on the right screen, and uncheck Auto Arrange. Now you can freely drag the I/O icons to the desired locations on the imported map.
5. To add images to another group, repeat the steps 2 to 4.

**Note:** Highlighting Advanced I/O List in the Advanced I/O List, you can import another image.
Managing a Group of I/O Devices

With groups of I/O devices set up on the Advanced I/O List, you can enable or disable these I/O devices by groups.

Enabling a Group
On the Advanced I/O List, right-click a desired group and select Start Monitoring. All input devices of this group are now enabled. When inputs are triggered, outputs will be activated in cascade mode.

Disabling a Group
On the Advanced I/O List, right-click a desired group and select Stop Monitoring. All input devices of this group are now disabled. No cascade triggers will occur.

Pausing the Triggered Inputs
This feature is designed for a group of outputs set to be Toggle mode. When inputs activate outputs in cascade triggers, right-click this group and select Pause Monitoring. The inputs of the group will be reset, but the outputs keep on alarming.
Controlling I/O Devices

The Control Center operator can manually arm or disarm any I/O devices of different hosts without interrupting the monitoring.

**Note:** This function also supports the client GV IP devices of these firmware versions:
- GV-Compact DVR: Firmware V1.43 or later
- GV-IP Camera: Firmware V1.05 or later
- GV-Video Server: Firmware V1.45 or later

Arming or disarming I/O devices

1. On the Standard I/O List, right-click one host and select **I/O Enable Setting**. This dialog box appears.

![I/O Activation dialog box](image)

2. Check the Input/Output to arm or uncheck the Input/Output to disarm the device(s). Then click **Apply** to verify the changes.
Popping Up Live Video upon Input Trigger

You can be alerted by a pop-up live video after an input device is triggered. Up to 16 live videos can be accessed simultaneously.

1. On the toolbar, click the **Configure** button (No.1, Figure 4-62), select **Panel Setting** and click the **Notify** tab. This dialog box appears.

![Panel Configuration](image)

*Figure 4-78*

2. Specify the **Maximum Number of Invoked Camera Views** that can pop up at the same time when inputs are triggered. Note that the maximum number of popup videos is 16.

3. Select **Enable digital input to invoke the associated camera** to activate the function.
4. To display pop-up live view in separate window, select Multiple Window Mode.

5. To display pop-live live view on the VMD window, select **VMD Integration Mode**. For this option, you must also enable the VMD window by clicking **VMD System** icon (No. 5, Figure 4-4).

6. To map a camera to an input device, right-click an input device in the Advanced I/O List, and select **Setting**. This dialog box appears.

![Pin Setting - Input](Image)

**Figure 4-79**

7. Select **Associated Camera**, assign a camera from the drop-down list, and select **Digital Input Invokes the Associated Camera**.

8. Click **OK**. When the input is triggered, the live video of its associated camera will pop up.
4.20  Remote E-Map

The Control Center can create E-Maps for client DVRs to monitor the surveillance sites on an electronic map.

1. Drag the desired hosts from the Host List to the E-Map Group in the Group List.

![Group List](image)

Figure 4-80

2. Click **Save** to store the settings.

3. To create E-Maps for client DVRs:
   - Click the **Configure** button (No. 2, Figure 4-2) on the Edit toolbar and then select **E-Map Editor**. Or,
   - Select **E-Map Editor** within the Control Center folder from the Windows Start menu.

   For details on creating an E-Map, see *Creating an E-Map* later in this chapter.

4. Click the **Remote E-Map** button and the Remote E-Map will appear on the Control Center desktop.

   For details on Remote E-Map, see The Remote E-Map Window, 1.20 E-Map Alerts.
The E-Map Editor Window

Figure 4-81

The controls on the E-Map Editor window:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Up</td>
<td>Returns to the previous E-Map file.</td>
</tr>
<tr>
<td>2</td>
<td>Add Map</td>
<td>Adds an E-Map file.</td>
</tr>
<tr>
<td>3</td>
<td>Add Host</td>
<td>Adds a host folder in the Host View.</td>
</tr>
<tr>
<td>4</td>
<td>Load Map</td>
<td>Imports a floor plan.</td>
</tr>
<tr>
<td>5</td>
<td>Rename</td>
<td>Renames an E-Map file and/or folder.</td>
</tr>
<tr>
<td>6</td>
<td>Delete</td>
<td>Deletes an E-Map file and/or folder.</td>
</tr>
<tr>
<td>7</td>
<td>Map View</td>
<td>Tree view of E-Map files and/or folders.</td>
</tr>
<tr>
<td>8</td>
<td>Host View</td>
<td>Tree view of host folders.</td>
</tr>
<tr>
<td>9</td>
<td>Floor Plan</td>
<td>The window displays the imported graphic file.</td>
</tr>
<tr>
<td>10</td>
<td>Change Icon</td>
<td>Changes the icon for I/O devices.</td>
</tr>
</tbody>
</table>
Creating an E-Map

To create and edit an E-Map file, follow the steps below.

1. Click the **Add Map** button on the toolbar. A New Map file will be created in Map View and the Floor Plan window separately.

   ![Figure 4-82](image)

2. Click the **New Map** file in Map View, and then click the **Load Map** button to import a graphic file. The file opens in the Floor Plan window.

3. Drag and drop the icons from Host View onto the map in the Floor Plan window.

4. The E-Map Editor lets you set the orientation of camera icons and change the icons. Right-click any camera icon to call up a menu, and select the direction where you want the camera to point to. Or change the camera icon into the dome icon.

5. To change the icons for I/O devices, right-click any I/O device icon on the map and select **Change Icon**. The following window appears.

   ![Figure 4-83](image)

6. Click **No Event** and select an icon to display when the I/O device is not
triggered. Click **Event** to select an icon to display when the I/O device is triggered. You can use your own icon by clicking **Add Icon**.

7. Click **File** in the window menu, and select **Save to DVR** or **Save to File** to save the created E-Map file.
4.21 Interface Style

There are two interface styles for the Control Center. The default style is in a toolbar format, and the other style is in window format allowing you to open all the managing windows on one screen.

To change interface style:

1. Click the **Configure** button and select **System Configure**. The System Configure dialog box (Figure 4-85) appears.
2. To change user interface, click the **Control Center Style** drop-down list and select one of these options:
   - **Advanced Style**: the toolbar format
   - **Standard Style**: the window format
3. Click **OK** and restart the Control Center for the new style to take effect.

The Standard Style

You can move freely any managing windows and resize them.

![Drag and drop any camera from Host List to this Live View window.](image)

*Figure 4-84*
4.22 System Configuration

You can configure the startup mode and screen position for the Control Center services. Click the **Configure** button (No. 2, Figure 4-2), and select **System Configure** to display the following dialog box.

**General Settings**

![System Configure](image)

**Figure 4-85**

[Startup]
- **Autorun When Windows Starts**: Automatically runs the Control Center at Windows startup.
- **Minimize when startup**: Automatically minimizes the Control Center toolbar to the taskbar when the Control Center is started.
- **I/O Central Panel**: Automatically runs the I/O Central Panel at Windows startup.
- **Matrix**: Automatically runs the Matrix View and displays up to 6 selected groups of cameras at startup. Click the **Setting** button to select the groups to be displayed.


- **VMD System**: Automatically runs the VMD function at Windows startup.

[Layout]

- **Display host name in the Group List**: Displays the individual camera’s host name on the Group List.

- **Auto sort group name in the Group List**: Automatically sorts the Group List alphabetically by group names. Note that the arrow buttons used to move the groups will not be available for use when this function is enabled.

- **Save Window Position and Size**: Saves the position of the Control Center toolbar and the size of Host List and Group List. The position and size will be restored when the Control Center starts.

- **Always On Top**: The Control Center toolbar always stays on the top of other windows.

- **Control Center Style**: See 4.19 Interface Style.
Network Settings

This dialog box displays the related ports for DVR and Video Server (The Video Server port is also used for IP Camera and Compact DVR communications). To allow the Search Host function (No. 1, Figure 4-2) to work, it is required to open TCP port 5201 on the client DVR, TCP port 5202 on the Video Server and Compact DVR, and UDP port 5200 on the Control Center.

Figure 4-86
Remote DVR Settings

**Figure 4-87**

**[Panel Resolution]** Sets the resolution of the Remote DVR panel.

**[Position]** When the screen resolution is set to higher resolution of wide screen, align the position of the Remote DVR window on screen. The position settings support negative coordinates, and correspond to the XY coordinates in Windows Display Properties. Refer to Figure 4-91.

**[Active Camera]** Enable the desired cameras when the Remote DVR starts.
Remote ViewLog Settings

**Figure 4-88**

**[Panel Resolution]** Sets the resolution of the Remote ViewLog panel. **[Position]** When the screen resolution is set to higher resolution of wide screen, align the position of the Remote ViewLog window on screen. The position settings support negative coordinates, and correspond to the XY coordinates in Windows Display Properties. Refer to Figure 4-91.
I/O Central Panel Settings

[Exit Option] Automatically closes the I/O Central Panel when the Control Center is shut down.

[Position] When the screen resolution is set to higher resolution of wide screen, align the position of the I/O Central Panel on screen. The position settings support negative coordinates, and correspond to the XY coordinates in Windows Display Properties. Refer to Figure 4-91.
Matrix Settings

Figure 4-90

[Position / Resolution] You can open up to 8 Matrix windows in one monitor or separate 8 monitors at a time.

- **X / Y:** Aligns the positions of up to 8 Matrix windows on screen. Type the position values in the X and Y columns. The position settings support negative coordinates, and correspond to the XY coordinates in Windows Display Properties.

- **Resolution:** Changes the Matrix resolution.

- ![Max Channels]: Indicates the maximum number of channels the Matrix window can display.

- ![Full Screen]: Check this column to set the full screen mode.
**Tip:** To set the X and Y values, you may refer to Windows Display Properties and check the position values of the set monitor icons. See Figure 4-91.

![Display Properties dialog box](image)

*Figure 4-91*
Remote Desktop Settings

![System Configure]

**Figure 4-92**

**[Connection Speed]**
Select the Internet connection speed to suit your needs: **Modem (56 Kbps)**, **Broadband (128 Kbps – 1.5 Mbps)** or **LAN (10 Mbps or higher)**.
[Startup] Runs the IP Matrix service when Control Center is started. The Listen Port setting corresponds to the Port setting in the IP Matrix Client dialog box. See Figure 4-31.

[Layout] Saves the position and size of the IP Matrix window and restores it when the window is open. You can also specify Screen Update Rate for update frequency on all camera views.
VMD System Settings

*Figure 4-94*

**[Position]** Sets up to two monitors to display the VMD windows.

**[Option]** When the *Camera pops up in the user-defined position* option is enabled, the position of pop-up camera on the VMD window is based on the camera sequence in the VMD Group, e.g. if camera1 is listed as the third camera in the VMD Group, camera1 will pop up on the third square on the VMD window (the order of pop-up cameras is from left to right). When this option is disabled, the position of pop-up camera is based on the sequence order of motion detection.
Remote E-Map Settings

[Position] When the screen resolution is set to higher resolution of wide screen, align the position of the Remote DVR window on screen. The position settings support negative coordinates, and correspond to the XY coordinates in Windows Display Properties. Refer to Figure 4-91.

Figure 4-95
Appendix

A. Dongle Description
B. Upgrading the Black Dongle
C. Fast Backup and Restore
D. PTZ Control Using GV-Joystick
E. Corresponding Image Sizes of Subscriber and Center V2
F. RTSP Streaming
G. UPnP Settings
H. Supported IP Device Brands
I. Specifications
A. Dongle Description

The GeoVision Central Monitoring Station (CMS) includes four independently developed modules: Center V2 (Pro), Dispatch Server, Vital Sign Monitor (VSM) and Control Center.

- An appropriate USB dongle of “Black” color is required for each CMS module to work.
- Using more than one Black Dongle on the same computer is possible. But remember the rule that Control Center and Center V2 cannot be run together, and Center V2 and Dispatch Server cannot be run together.
- The Black Dongle can be upgraded to include more functions.
- It is required to install drivers from the software CD for the Black Dongle to work.

Dongle options for Center V2
- Center V2 Pro
- Center V2 + VSM

Connection of GeoVision IP devices to Center V2: The Center V2 accepts any video stream from GeoVision IP video devices. There is no need to use an extra dongle. Currently Center V2 does not support the video streaming from third-party IP video devices.

Dongle options for Dispatch Server
- Dispatch Server
- Dispatch Server + VSM
Dongle options for VSM
- VSM
- VSM + Control Center
- VSM + Center V2
- VSM + Dispatch Server

Dongle options for Control Center
- Control Center or IP Matrix
- Control Center + Advanced Video Analysis
- Control Center + VSM
- Control Center + VSM + Advanced Video Analysis

Connection of IP devices to Control Center: The Control Center accepts the video stream from both GeoVision and third-party IP video devices. There is no limitation on the number of channels, and no need to use an extra USB dongle in this case.
B. Upgrading the Black Dongle

The Black Dongle can be upgraded to include more functions or enhance the system. You need to collect the data from your dongle and send it back to GeoVision for an upgrade. The upgrade is a charged service. To upgrade your dongle, follow these steps:

1. Each dongle has its own serial number. Find it on the side of the dongle. Later this serial number will be used in naming the files for upgrading.

   ![Figure B-1](image)

2. Insert the dongle to the computer.

3. In the GV folder, double-click **GVUsbKeyUpClient.exe**. This dialog box appears.

   ![Figure B-2](image)
4. To retrieve the data from the dongle, click **Select All**. The information of the dongle is displayed in the information field. Note the displayed number of “HW Serial” should be the same as that on the dongle.

5. To save the data to your local computer, click **Save Key ID Data**. If you have more than one dongle to upgrade, click **Batch Save**. Different dongle data will be saved as separate files. The file will be named after the serial number on the dongle and saved as *.out*. For example, if a dongle serial number is 7116442, the file is named “NVR-7116442.out”.

6. Send this data file to GeoVision at sales@geovision.com.tw. The GeoVision will examine the data file and send an *.in* file back to you. The file name also includes the serial number of that dongle. In this example, the data file you will receive is named “NVR-7116442.in”.

7. After you receive the updated file, insert the correct dongle matching the .in file you receive, and then run **GVUsbKeyUpClient.exe**.

8. Click **Select All** to read the dongle, click **Upgrade** and then open the updated file to upgrade the dongle. You can also select more than one dongle in the list and click **Batch Upgrade** to upgrade them at the same time. Make sure these dongles match the updated files you receive.
C. Fast Backup and Restoration

With the Fast Backup and Restore (FBR) solution, you can change interface skin for Center V2 and Control Center, as well as back up and restore your configurations in CMS applications.

Installing the FBR Program

1. Insert the CMS Software DVD, click **Install V8.5 Central Monitoring System**, select **Fast Backup & Restore System**, and follow the on-screen instructions.
2. After the installation is complete, run **Fast Backup and Restore Main System** from the Windows Start menu. This window appears.

![Figure C-1](image)
Backing Up and Restoring Settings

You can back up the configurations you made in the CMS application, and restore the backup data to the current system or import it to another site.

Backing Up the Settings

1. In the FBR window (Figure C-1), click the **Backup Remote AP Settings** icon, and select the desired application from the menu. For example, we select VSM Server. This dialog box appears.

![Figure C-2](image)

2. Click the **Next Step** button. The Save As dialog box appears.

3. Select the destination drive to store the backup file. When the backup is complete, this message will appear: *Successfully Backup VSM Server Settings.*
Restoring the System

You can restore the current application settings with the backup of configuration file. Also, you can copy this backup file to configure another application at different site with the same settings as the current application.

1. Open the backup file (*.exe) you previously stored. A valid ID and password are required to display this window.

2. Click the **Restore Remote AP** icon, and then select the application that you want to restore its backup settings. For example, we select VSM Server for restoration.

3. Click the **Next Step** button to start restoring.

4. When the restoration is complete, this message will appear: *Successfully Restore VSM Server Settings.*
D. PTZ Control Using GV-Joystick

You need to run the following program in the background when using the GV-Joystick to control PTZ. For details on the GV-Joystick operations, see *GV-Joystick User’s Manual*.

- **Center V2**
  You can control the PTZ cameras using GV-Joystick in **Camera/Audio Control** (see Figure 1-28). Up to 4 GV-Joysticks can be connected to control the PTZ cameras.

- **Control Center**
  You can control the PTZ cameras using up to 8 GV-Joysticks in **Live View** and **Matrix**.

1. Run `mcamctrl.exe` from the program folder. This dialog box appears.

   ![Figure D-1](image)

   **Figure D-1**

2. In the Device field, select the COM port connected to the GV-Joystick.
3. Click the **Start Service** button ►(Figure D-1) and then you can use the GV-Joystick to control the PTZ camera.
4. If more than one GV-Joystick is connected, repeat Step 2 to set up and use another GV-Joystick.
### E. Image Size

See the table below for the corresponding image size between Center V2 and its subscriber.

![Image Size Table](image.png)

*Figure E-1*
F. RTSP Streaming

The Control Center supports IP video devices using RTSP standard. To connect the IP device compatible with RTSP standard:

1. Select Protocol from the Brand drop-down list.

![Host Settings](image)

2. Select one of the following options from the Model drop-down list.

- **GV_HTTP_SDK_RTSP**: This option is for GeoVision SDK users. The RTSP protocol uses a HTTP port for video streaming from the IP camera.
- **RTSP over HTTP**: The RTSP protocol uses a HTTP port for video streaming from the IP camera.
- **RTSP over TCP**: The RTSP protocol uses a TCP port for video streaming from the IP camera.
- **RTSP over UDP**: The RTSP protocol uses an UDP port for video streaming from the IP camera.

3. On the Command box, type the RTSP link address. For the RTSP command, please consult the documentation of your IP camera. For example:
   - For an AXIS IP camera, type
     RTSP://<IP of the IP camera>/<codec>/media.amp
   - For a HIKVISION IP camera, type
     RTSP://username:password@<IP of the IP Camera>
Appendix

G. UPnP Settings

The Center V2, Dispatch Server, VSM and Control Center support UPnP technology (Universal Plug and Play) to allow automatic port configuration to your router.

In order for UPnP to be enabled, the following requirements must be met:

- Windows XP Service Pack 2 or above
- Windows XP must be configured to use UPnP (see below)
- UPnP must be enabled on your router (consult your router’s documentation)

To enable UPnP in Windows XP:

1. Go to Windows Start, click the Start button, select Settings, and select Network Connections. This window appears.

   ![Figure G-1](image)

2. Right-click one Local Area Connection, select Properties, and click the Advanced tab. This dialog box appears. Click Settings.

   ![Figure G-2](image)
3. Click the **Exceptions** tab. This dialog box appears.

![Figure G-3](image)

4. Select **UPnP Framework**, and click **OK**.
H. Supported IP Device Brands


<table>
<thead>
<tr>
<th>Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geovision</td>
</tr>
<tr>
<td>ACTi</td>
</tr>
<tr>
<td>Arecont Vision</td>
</tr>
<tr>
<td>Axis</td>
</tr>
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<td>Bosch</td>
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<td>Canon</td>
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<td>CNB</td>
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<td>D-Link</td>
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<td>EtroVision</td>
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<td>Hikvision</td>
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<td>HUNT</td>
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<tr>
<td>Samsung</td>
</tr>
<tr>
<td>Sanyo</td>
</tr>
<tr>
<td>SONY</td>
</tr>
<tr>
<td>UDP</td>
</tr>
<tr>
<td>Verint</td>
</tr>
<tr>
<td>Vivotek</td>
</tr>
</tbody>
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# I. Specifications

Product specifications are subject to change without notice.

## Center V2

<table>
<thead>
<tr>
<th>Feature</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum of Subscribers (standard)</td>
<td>5</td>
</tr>
<tr>
<td>Maximum of Subscribers (professional)</td>
<td>500</td>
</tr>
<tr>
<td>Maximum of Channels (standard)</td>
<td>160</td>
</tr>
<tr>
<td>Maximum of Channels (professional)</td>
<td>800</td>
</tr>
<tr>
<td>Control of GV-Joystick</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup to CD/DVD</td>
<td>Yes</td>
</tr>
<tr>
<td>Alarm Reports of Events</td>
<td>Yes</td>
</tr>
<tr>
<td>Notification of SMS Alerts</td>
<td>Yes</td>
</tr>
<tr>
<td>Notification of E-mail Alerts</td>
<td>Yes</td>
</tr>
<tr>
<td>Notification of E-Map Alerts</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic Connection Recovery</td>
<td>Yes</td>
</tr>
<tr>
<td>Support for Mega Pixel Resolution</td>
<td>Yes</td>
</tr>
<tr>
<td>Real-Time Monitoring</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote PTZ Control</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote I/O Control</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Dispatch Server

<table>
<thead>
<tr>
<th>Feature</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum No. of Channels</td>
<td>40,000</td>
</tr>
<tr>
<td>Maximum No. of Subscribers</td>
<td>25,000</td>
</tr>
<tr>
<td>Maximum No. of Center V2</td>
<td>50</td>
</tr>
<tr>
<td>Maximum No. of Sensors / Alarms</td>
<td>3,600,000</td>
</tr>
<tr>
<td>Real-Time Audio Monitoring</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote PTZ Control</td>
<td>Yes</td>
</tr>
<tr>
<td>Remote I/O Control</td>
<td>No</td>
</tr>
<tr>
<td>Auto Recording</td>
<td>No</td>
</tr>
<tr>
<td>Event List Viewer</td>
<td>Yes</td>
</tr>
<tr>
<td>Event List Filter</td>
<td>Yes</td>
</tr>
<tr>
<td>Dual Monitor Support</td>
<td>No</td>
</tr>
<tr>
<td>Network Load Support</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic Connection Recovery</td>
<td>Yes</td>
</tr>
</tbody>
</table>
# Comparison of VSM and Center V2 Pro

<table>
<thead>
<tr>
<th>Feature</th>
<th>VSM</th>
<th>Center V2 Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscriber</td>
<td>1,000</td>
<td>500</td>
</tr>
<tr>
<td>Group</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>4Mbps</td>
<td>25Mbps</td>
</tr>
<tr>
<td>Record Mode</td>
<td>No</td>
<td>Live / Attachment / Both</td>
</tr>
<tr>
<td>Live Subscriber Status</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Auto Login</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I/O Control</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SMS Message</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time Synchronization</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Keep Day Notify</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Event Message</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Notification Setting</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Event Log</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Connection Lost Detection</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I/O Device Support</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Subscriber Storage Info.</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
## Control Center

<table>
<thead>
<tr>
<th>Feature</th>
<th>Amount</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVR Host</td>
<td>1000 Hosts</td>
<td></td>
</tr>
<tr>
<td>Video Server Host</td>
<td></td>
<td>The total number of Video Server, IP Camera, Compact DVR hosts is 500.</td>
</tr>
<tr>
<td>IP Camera Host</td>
<td>500 Hosts</td>
<td></td>
</tr>
<tr>
<td>Compact DVR Host</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote DVR</td>
<td>Unlimited</td>
<td></td>
</tr>
<tr>
<td>Remote Desktop</td>
<td>Unlimited</td>
<td></td>
</tr>
<tr>
<td>Remote ViewLog</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>I/O Host</td>
<td>• DVR: 1000 Hosts</td>
<td>• One host supports up to 9 sets of 16-in and 16-out I/O modules.</td>
</tr>
<tr>
<td></td>
<td>• GV-Video Server +</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• GV-IP Camera +</td>
<td>Only for GV IP products.</td>
</tr>
<tr>
<td></td>
<td>• GV-Compact DVR: 500 CH</td>
<td></td>
</tr>
<tr>
<td>Remote E-Map Host</td>
<td>500 Hosts</td>
<td></td>
</tr>
<tr>
<td>Remote E-Map Map</td>
<td>Unlimited</td>
<td></td>
</tr>
<tr>
<td>Live View (Advanced Type UI)</td>
<td>1</td>
<td>One at a time from one application.</td>
</tr>
<tr>
<td>Live View Channel (Standard Type UI)</td>
<td>20 CH</td>
<td></td>
</tr>
<tr>
<td>Matrix</td>
<td>8 Matrix Views</td>
<td></td>
</tr>
<tr>
<td>Matrix Group</td>
<td>Unlimited</td>
<td></td>
</tr>
<tr>
<td>Matrix Channel</td>
<td>576 CH</td>
<td>For 1920 x 1200, 1920 x 1080 resolution.</td>
</tr>
<tr>
<td>IP Matrix</td>
<td>36 Monitors</td>
<td></td>
</tr>
<tr>
<td>IP Matrix Channel</td>
<td>9984 CH (including 768 Matrix Channels of Control Center itself)</td>
<td></td>
</tr>
<tr>
<td>VMD Group</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

**VMD Group Channel**
- DVR: 1000 CH
- GV-Video Server + GV-Compact DVR + GV-IP Camera: 200 CH

*Only for GV IP products*

**Panorama View**
- 4 Views

**Panorama Channel**
- 32 CH

<table>
<thead>
<tr>
<th>Matrix</th>
<th>Resolutions</th>
<th>Total Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024 x 768: 64 CH</td>
<td>512 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1280 x 1024: 64 CH</td>
<td>512 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1680 x 1050: 80 CH</td>
<td>640 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1600 x 1200: 64 CH</td>
<td>512 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1920 x 1200: 96 CH</td>
<td>768 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1920 x 1080: 96 CH</td>
<td>768 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1280 x 800: 48 CH</td>
<td>384 CH on 8 Matrixes</td>
<td></td>
</tr>
<tr>
<td>1440 x 900: 48 CH</td>
<td>384 CH on 8 Matrixes</td>
<td></td>
</tr>
</tbody>
</table>