razberi™ MP Series

User Manual

Safety Warning

Retain and follow all safety and operating instructions. Observe all warnings on products. Unplug the product from the electrical outlet and discontinue use under the following conditions: The power cord or plug is damaged; the product is exposed to liquid; the product is dropped or an object falls on the product; the product is noticeably overheated. Read this manual carefully before installing the unit. Please read this manual first for correct installation and operation.

Never install the device on a ceiling that cannot hold its weight. The product may fall down and cause damages. Never install the product near electric or magnetic fields. Install the device away from TVs, radio transmitters, magnets, electric motors, transformers, and audio speakers since the magnetic fields distort the video image. Never install or use the product in areas exposed to water, oil, or gas. The water, oil, or gas may result in operation failure, electric shock, or fire. Do not use this unit near water (e.g., near a bath tub, wash bowl, kitchen sink, laundry tub, wet basement, swimming pool, unprotected outdoor installation, or any area which is classified as a wet location). Never face the unit toward the sun. Direct sunlight may cause fatal damage to sensors and internal circuits. Touching a wet power cord with hands or touching the power cord with wet hands may result in electric shock.

Do not service any product yourself. Opening or removing covers that are marked with warning symbols or labels may expose you to electric shock. Service needed on components inside these compartments should be done by an authorized service provider. Replace any batteries with the equivalent battery type. Failure to do so may cause damage or bodily injury. There is a danger of explosion if batteries are incorrectly replaced. Dispose of all used batteries according to the manufacturer's instructions.

Install the system in an environment where the ambient temperature does not exceed the maximum rated ambient temperature of the rack mount system. Ensure there are no obstructions to the case ventilation. Blocking any of the built-in airflow may cause overheating. The product must be connected to a circuit with an adequate rating to prevent an over-current condition on the circuit. Slots in the product are provided for ventilation and should never be blocked or covered since these protect it from overheating. The openings should never be blocked by placing the product on a flexible surface. The product should not be placed in a built-in apparatus unless the apparatus has been designed to accommodate the product, proper ventilation is provided for the product, and the product instructions have been followed.

Operate the product only from the type of power source indicated on the product's electrical ratings label. If you have questions about the type of power source to use, contact your authorized service provider. The power outlet for the power cord should be easily accessible and located as close to the equipment operator as possible. When you need to disconnect power to the equipment, unplug the power cord from the electrical outlet. When disconnecting a power cord/cable from an outlet, pull on the connector. Never pull on the cable itself to disconnect from the power source. Handle all equipment with care when disconnecting from the product or the power source. Equipment may be hot. The power cord must be properly rated for the product and for the voltage/current marked on the product's electrical ratings label. The voltage/current rating of the cord should be greater than the voltage/current rating marked on the product. Do not overload an electrical outlet, power strip, or convenience receptacle. Use care when moving products to other countries with different voltage standards. Substitution for the power supply may result in destruction of the product or personal injury.

Unplug the product from the wall outlet prior to cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. Never insert a foreign object into the product's openings or ventilation slots. The product should be placed away from radiators, heat registers, stoves, or other pieces of equipment (including amplifiers) that produce heat. Allow sufficient air circulation around the product and power supply during use to ensure adequate cooling of the device. Prevent direct exposure to radiant heat sources. Contact the provider if replacement parts are required. Use only the parts, upgrades, and options sent from the provider.

Table of Contents

1. Introduction

Welcome to razberi™. Use this guide as a reference to assist with common razberi™ hardware and software functions. For additional help, contact razberi™ Customer Support.

1.1 Features

- Embedded PoE Switch (4 and 16 port)
- Gigabit Uplink port – RJ45
- Gigabit Uplink port – SFP Combo
- e-SATA port for external storage
- High PoE (802.3at)
- Easy and automated installation
- H.264 Recording at Megapixel resolutions
- Auto camera discovery
- Auto camera configuration
- Embedded Operating System
- 3-yr Warranty on hardware & software

1.2 Package Contents

Ensure that the package contains the following items listed below, for the 4 channel unit.

Ensure that the package contains the following items listed below, for the 16 channel unit.

1.3 Overview

The razberi™ MP Series dramatically simplifies and reduces the costs of megapixel video deployment. The razberi™ plug-and-play operation enables installers with minimal network expertise to deploy an IP video system in the same or less time required for a traditional DVR and analog camera deployment.

The razberi™ MP Series combines the functions of a network video recorder, high powered Ethernet switch, and video management software with "auto setup" features into a single device. The razberi™ automatically provides power (high PoE) and IP addresses, configures cameras for motion detection, and automatically begins recording. For smaller systems, there is no need for installers to source switches, routers, software, and servers.
Installers can use multiple razberi™ units within a network to build large systems over long distances with fiber optics using the built-in SFP Combo Uplink Ports.

The easy-to-use razberi™ software offers digital zoom, camera tours, PTZ control, and intelligent video searches to quickly retrieve recorded events through thumbnail and event searches. There is no software licensing. Automatic software updates offer new software features over the web.

2.   Preparations and Initial Setup

This chapter provides information about system requirements forinstallation, operation, and power connections.

2.1   Initial Installation

The product box includes the following hardware:
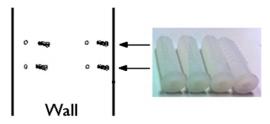
Connect the razberi™ to the external power supply using the available adapter connection. Connect the external power supply to the power cord. Connect the power cord to an available outlet.

Use the wall mounts and mount kit to mount the razberi™. Use the following steps to mount the razberi™ to the desired location. Along with basic installation tools, a #1 Phillips Head screwdriver is required for mounting the razberi™.

1.   Attach the razberi™ unit to the wall mounts by using a Phillips Head screwdriver to fasten one mount to each side of the unit with the provided screws. Fasten the screws into the available holes in the unit as shown in the following example.

2.   To mount the razberi™ unit, place the razberi™ in the desired location and use the available holes in the two attached mounts as templates to mark the locations for the drywall anchors.

3.   Make four holes in the locations previously marked on the wall and insert the four drywall anchors into the holes as shown in the illustration below.

4.   Align the available holes in the two mounts with the anchors in the wall. Fasten four screws (provided in the product package) to the four anchor holes to fix the mounts to the wall as shown in the following illustration.
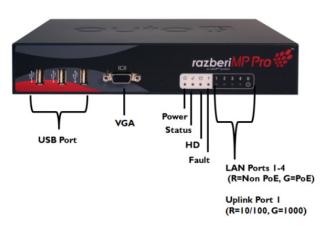
2.2 Connecting a PC and Cameras to the razberi™
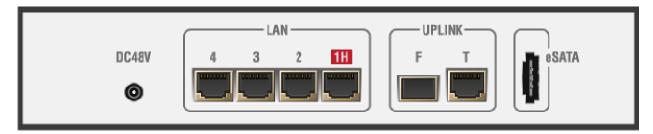
NOTE: Provide the razberi™ 3-5 minutes of start-up time prior to connecting a PC or cameras.

Front Panel

Figure 1

Connect the client PC or the network connection to the Uplink port. Connect cameras to the LAN ports 1H through 4 on a razberi™ 4-port unit, or LAN ports 1H through 16 on the razberi™ 16-port unit.

16 Ports – Back Panel

2.3   Installing the razberi™

There are two typical types of installations.
    1.)   Installing the razberi™ into an existing network where are DHCP server exists. (See figure 2)
          a.   An existing network allows the razberi™ and connected cameras to acquire addresses from an existing router/DHCP Server automatically.
    2.)   Installing the razberi™ into a network where a DHCP server does not exist. (See figure 3)
          a.   The razberi™ can either serve as the DHCP Server in a dedicated network, or it can just be assigned a static address.

Figure 2
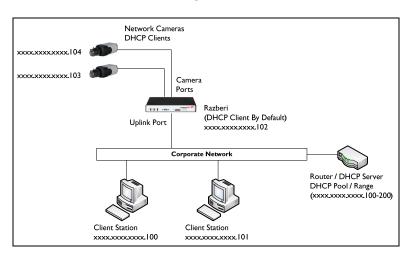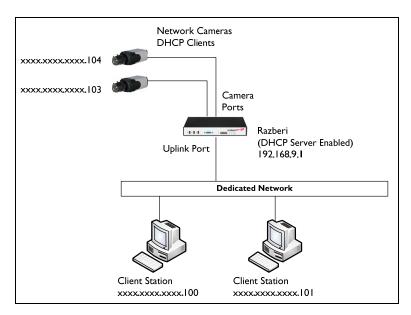
Figure 3
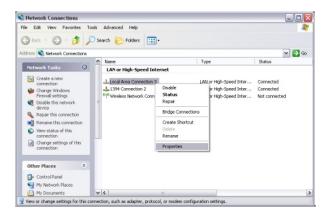
razberi™ Technologies

An existing network allows the razberi™ and connected cameras to acquire addresses from an existing router/DHCP Server automatically. Follow the steps below to install the razberi™ on an existing network.

1. Connect the uplink port on the razberi™ to the existing network.
2. Power up the unit.
3. Connect the cameras to the LAN ports on the razberi™. (Either 1-4 or 1-16) By default the razberi™ and connected cameras acquire addresses from the existing DHCP server/router automatically.
4. Use the razberi™ Utilities CD (included in the razberi™ package) to install the client software. To install the client software without the Utilities CD, access (http://ipaddress/razbericlient) from within a browser web page and follow the installation process. (See figure 6)

The razberi™ can also be installed into a network where a DHCP server does not exist.
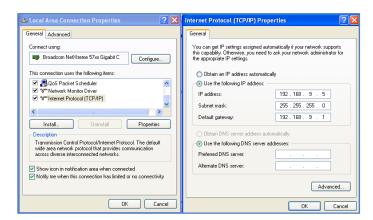
1. If there is no network connection or there are no DHCP servers on the dedicated network, the razberi will default to a specific IP address after a few minutes.
    a. The default IP address that the razberi™ will use is **192.168.9.1**
    b. This address may be used to make an initial connection.
        i. In order to connect to the razberi™, the client machine must be on the same subnet.
        ii. Example, **192.168.9.XXX**
2. Change the network settings on the client PC by accessing the computer's Network Settings, Network Connections, or Network Management.
3. Right-click the Local Area Connection and select Properties. (See figure 4)

Figure 4

4. In the *Local Area Connection Properties* dialog box, select **Internet Protocol (TCP/IP)** and click **Properties**. (See figure 5)

Figure 5

5. Select the **Use the following IP address** option and enter a valid IP address (e.g., 192.168.9.5).
6. Tab through the **Subnet mask** field and set the **Default Gateway** field to the address of the razberi™ (e.g.,192.168.9.1).

7. Tab through the remaining fields. Click **Ok**.
8. Click **Close**.
9. Connect the Uplink port on the razberi™ to the client PC, or to a switch.
10. Insert the razberi™ power cable into an available power outlet following the safety guidelines. Allow 3-5 minutes.
11. Use the razberi™ Utilities CD (included in the razberi™ package) to install the client software. To install the client software without the Utilities CD, access http://**192.168.9.1/razbericlient** (http://ipaddress/razbericlient) from within a browser web page and follow the installation process. (See figure 6)

<p align="center">**Figure 6**</p>

3.   *razberi*™ Software Introduction

Welcome to razberi™. The topics within this guide provide basic information and instruction on razberi™ software. The razberi™ application offers digital zoom, camera tours, PTZ control, and intelligent video searches to retrieve recorded events through event searches. Automatic software updates offer new software features over the web.

razberi™ Technologies

razberi™ Technologies provides network video solutions for professional video surveillance and security applications. The company offers products designed for simplicity and ease-of-use such as the razberi™ MP Series. The razberi™ is an integrated network video recorder combined with a high-powered Ethernets witch and video management software with "auto setup" features. The razberi™ automatically provides power (high PoE), IP addresses, and configures cameras for motion detection to begin recording. Installers can use multiple razberi™ units within a network to build large systems over long distances with fiber optics using the built-in SFP Combo Uplink ports. For more information on the razberi™ MP Series, access the razberi™ Technologies website at www.razberi.net.

Client System Requirements

Operating System:
- Windows 7 (32 bitand64 bit)
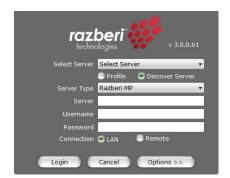
Minimum Hardware Required:
- 3.x GHz Intel® i3 Processor (Intel® i5/i7 preferred for multiple MP camera displays)
- Memory:4GB RAM
- Graphics card with full DirectX9.0c hardware acceleration
  - 1 GB Internal Onboard Memory (minimum recommended)
- 100 MB Disk Space for Software Installation
- Minimum Monitor Resolution: 1280 x 1024
- CD/DVD drive required for installation
- Ethernet 10/100/1000 NIC

3.1   Client Login

1. Connect the cameras to the LAN ports on the razberi™ (see section 2.2 for information on connecting a PC and cameras to the razberi™). **NOTE:** Provide the razberi™ 3-5 minutes of start-up time prior to connecting a PC or cameras.
2. Login by selecting **Profile** or **Discover Server**. Select the connection as either **LAN** or **Remote**. If the razberi™ server resides on a local area network, then login with the **LAN** connection option selected. If the server is outside the local area network, then login with the **Remote** option selected.
3. Use the **Discover Server** option, to auto discover the server. Use the drop down in the **Select Server** field to see a list of available servers with the corresponding IP address. **NOTE:** The list displays servers discovered within a LAN
4. The default user name and password are **admin/admin**

<div align="center">Figure 7</div>

3.2   Creating a Profile

Select **Profile** in the *Login* dialog box to add a profile. Use the *Profile* screen to create a new profile, edit an existing profile, or delete a profile. The fields located on the *Profile* screen are described below.

- **New/Edit:** Select the profile to create, edit, and/or delete.
- **Profile Name:** This field is for the desired name for the profile.
- **Server Type:** Select the type of server from the dropdown.
- **Server:** Select the appropriate IP address from the dropdown or enter it in the field.
- **Username:** This field is for the name of the user. The **Username** must match the user defined name within the **Admin\User Management** section in the server.
- **Password:** Enter a secure password in this field. The **Password** must match the user defined password in the **Admin\User Management** section in the server.
- **Connection:** The connection should be either LAN or Remote.
- **Server HTTP port:** If the razberi™ server is using a different HTTP port (other than the standard 80), then the user must change the Client to reflect the same port value.
- **Server RTSP port:** If the razberi™ server is using a different RTSP port (other than the standard 554), then the user must change the Client to reflect the same port value.
- **Details:** Enter any necessary details for the profile created/edited (e.g., geographical locations, building or angle descriptions).
- **Sites:** Click **Sites** to add any additional sites (secondary servers) to the profile.
- When logging into the application using the created profile, both primary and secondary sites (servers) are accessed.
- **Apply:** Click **Apply** to save the profile.
- **Delete:** Click **Delete** to delete a selected profile.
- **Close:** Click **Close** to close the dialog box. In order to save the information, click **Apply** prior to closing the dialog box.

The razberi™ system saves the profile information for future logins.

3.3   Selecting Ports

Use these fields to change the ports that the client uses to connect to the server. **Note**: Changing the ports in this section does not change the server ports.

1. To configure or reconfigure ports, access the *Login* dialog box.
2. Click **Options** to change the server RTSP (Real Time Streaming Protocol) ports and HTTP ports from their default port values of 554 (Real Time Streaming Protocol) and 80 (HTTP). If the default values of 554 and 80 are changed in the server, then the port values within the razberi™ client must change to match the server ports in order to successfully login.
3. Click **Apply** to save the information when finished.

3.4   Live View Screen

The *Live View* screen displays after logging in to the system and is the main screen in the client application. The *Live View* screen appears by default with:
- The **Tool Bar** on the top
- **Camera Tree** pinned on the left
- **Live Video Display** on the right
- **Zoom Controls** in the lower left
- **Alarm** window across the bottom of the screen. (See figure 8)
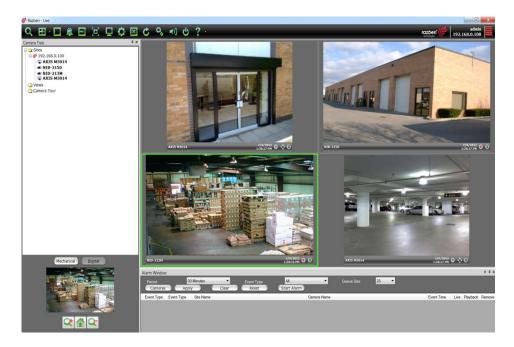
Use this screen to view live video by:
- Dragging and dropping the camera name from the **Camera Tree** on the left
- double-clicking on the desired camera name in the **Camera Tree**
- right-clicking the camera name then choosing **View Camera**

To hide the **Camera Tree**, unpin the tree by using the pushpin icon in the upper right corner of the camera tree.

Figure 8

3.5   Tool Bar

The **Tool Bar** displays on the top of the screen. Each icon on the **Tool Bar** represents available functionality within the application. The descriptions below provide more information about the icons in the **Tool Bar**.

Figure 9

1.   **Search** -Opens the *Recorded Video/Search* window
2.   **Layout** - Opens the **Layout** options
3.   **Camera Bar**- Shows/Hides the **Camera Tree** on the left side of the screen
       NOTE: Press **Escape** to return to the original screen.
4.   **Alarm Window**- Shows/Hides the **Alarm Window** on the bottom of the screen
5.   **Fit Screen** – Fits the video to the available monitor screen
6.   **Full Screen** - Displays the video in a full screen without the menu bar
       NOTE: Press **Escape** to return to the previous view
7.   **Monitor** - Displays the video full screen without the menu bar or camera tree
       NOTE: Press **Escape** to return to the previous view
8.   **Site Administrator** - Displays the *Site Administration* window if the user is an administrator
9.   **Close All** - Closes all the camera windows but the **Menu** and **Camera Tree** remain in view
10.   **Refresh** - Refreshes the video displays on the *Live View* window
11.   **Log Off** - Logs off the application
12.   **Mute** - Mutes all available sound
13.   **Exit** – Closes the application
14.   **Help System** - Offers a dropdown of help options that provide more information about the application

3.6   Camera Tree

The **Camera Tree** displays on the left side of the *Live View* window. The **Camera Tree** contains the following items available in the network: (See figure 10)
- Sites and Cameras
- Views
- Groups
- Camera Tours

- This icon signifies a connected Camera
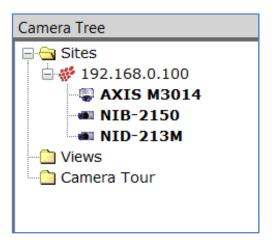
- This icon signifies a PTZ Camera

- This icon signifies an offline Camera

Figure 10

3.6.1   Sites

The site is the server used to log into the application. The IP address of the server is referred to as the primary server and displays under the **Sites** folder in the **Camera Tree.**
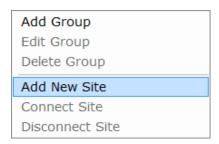
After logging into the system with the primary server, users can add secondary servers. The multi-site feature allows access to more than one server within the application. The added, secondary sites appear under the **Sites** folder in the **Camera Tree**. **NOTE:** Click the "+" next to the appropriate site IP address to view the cameras associated with each site.

1. To refresh the videos displaying from a particular site, access the **Camera Tree**.
2. Right-click the name of the site and select **Refresh Site** from the list of available options.
3. The system may take a few seconds to refresh the video displays.

3.6.1.1   Adding Sites

1.   To add multiple sites to a profile, access the **Camera Tree** and right-click on the **Sites** folder. A list of available options displays. (See figure 11)

<div align="center">**Figure 11**</div>
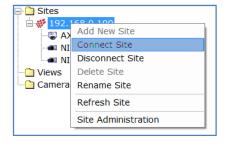
2.   Click **Add New Site**. A new *Login Form* dialog box displays. Use the **Discover Server** or type in the server information to login to the new server as a secondary server. The same server cannot be connected more than one time.
3.   The secondary site appears below the primary site in the **Camera Tree**. Click on the **Site** folder to view the available cameras connected to the site.

3.6.1.2   Connecting Sites

If a site is disconnected, the site address displays in red in the **Camera Tree.**
1.   To connect a site, access the **Camera Tree** and right-click on the disconnected site. A list of options displays.
2.   Click **Connect Site**. (See figure 12)

<div align="center">**Figure 12**</div>
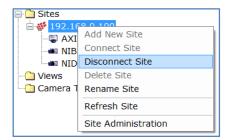
NOTE: Sites may be offline due to a network connectivity problem.

3.6.1.3   Disconnecting Sites

1.   To disconnect a site, select the site from the **Camera Tree** and right-click the site name. (See figure 13)
2.   Select **Disconnect Site** from the list of available options. When a user disconnects a site, all of the cameras disappear and the icon displays in red.

<div align="center">**Figure 13**</div>

3.6.1.4   Renaming Sites

The server's IP address is the default name of the site when a user connects to it.

1. To change a site's name, access the **Camera Tree** and right-click on theIP address.
2. Choose **Rename Site** from the list of available options. (See figure 12)
3. Enter the desired name in the appropriate field and click **OK**.

The new site name appears in the **Camera Tree**. Hover over the site name to view the site's IP address as a tool tip.

3.6.1.5   Deleting Sites

1. To delete a site from the application, access the **Camera Tree**.
2. Right-click on the corresponding site to disconnect and delete it. (See figure 12)
3. Choose **Delete Site** from the list of available options.

NOTE: Users *cannot* delete the primary site.

3.6.2   Views

Users can create and save specific camera views within the application. Adding a defined view provides video from selected cameras from any site that is visible in the application. The predefined views are stored within the Views folder located in the camera tree.

1. To add a new view, right-click on the **View** folder in the **Camera Tree**.
2. Select **Add View** from the list of available options. (See figure 14)

<div align="center">**Figure 14**</div>

3. Multiple monitors are supported. A view must be created first. Then right click on the view and select *Secondary Screen_X.* This will place the selected view on that monitor.

3.6.3   Groups

To save specific layouts and camera views, the application provides **Groups**. A **Group** is a collection of saved camera view sand **Live View Layouts** for selected cameras.

1. To create a **Group**, right-click the **Views** folder inthe **Camera Tree**. (See figure 15)
2. Select **Add Group** from the list of options.
3. In the *Add View Group* dialog box, enter the **Group Name** and a **Description** of the views and layouts included in the **Group**.

After creating the **Group**, a new folder with the **Group** name appears in the **Camera Tree**.
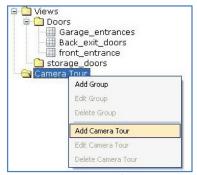
<div align="center">**Figure 15**</div>

3.6.4   Camera Tours

In the **Camera Tree**, use the **Camera Tour** folder to add a sequence of live videos from multiple cameras. Select cameras to add to a tour and view a cycle of live video from the added cameras in the *Live View* window. Set a dwell time so that the live video from each camera appears for a customized length of time. If a camera is offline, then the tour skips that camera and the next online camera in the sequence displays live video.

1.   To create a **Camera Tour**, right-click on the **Camera Tour** folder in the **Camera Tree** and select **Add Camera Tour** from the list of options. (See figure 16)

<p align="center">Figure 16</p>

2.   In the *Add Camera Tour* dialog box, enter the name of the tour in the **Name** field. (See figure 17)

<p align="center">Figure 17</p>

3.   In the **Camera List**, select the cameras to add to the **Camera Tour List** and use the arrows in the middle to navigate the order of the camera views.
4.   In the **Dwell Time** field, select the number of seconds for each camera view to last.
5.   When finished designing the tour, click **OK**. The tour displays in the *Live View* window. If a camera is offline, then the tour skips that video and goes to the next available online camera in the sequence.

To edit **Camera Tours**, right-click on the **Tour** folder in the **Camera Tree** and select **Edit Camera Tour.**

3.7   Live Video Display

The connected cameras display in the **Camera Tree** as online cameras. Up to 16 videos can be viewed on one screen. The video display area appears below the **Tool Bar** and to the right of the **Camera Tree**. The system offers a few options for viewing live video in the display areas.

1.   Click and drag the camera name from the **Camera Tree** to an available open area.
2.   Double-click on a camera name from the **Camera Tree** and the video will display in an open area.
3.   Right-click on the camera name from the **Camera Tree**, select **View Camera** from the list of available options, and the live video from that camera plays in an open area.

Each video display has options in the bottom right corner.

 - Indicates recording video from the camera

 - Closes the video display from that camera

 - Shows PTZ functionality if the camera is a PTZ

NOTE: The PTZ option does not display if the camera is not a PTZ.

Double-click on a video display to make the video fill the display area. Double-click the video display again to return to the previous layout. Right-click, on a video display, to view a list of available options. (See figure 18)

<div align="center">

Figure 18

</div>
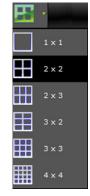
- • **Replay** - Replays the past minute of recording time
- • **Snapshot** - Takes a picture of the current video display frame
- • **Refresh** - Refreshes the video display
- • **Information** - Provides the camera and site information
- • **Display Server Name** - The site name for the camera appears in the video display
- • **Display Timestamp** - The date and time of the video appears in the video display

3.8   Live Video Layout

Use the Layout icon to change the viewing layout of the live video display. The **Layout** icon is located in the Tool Bar. Click the icon to see a list of available layouts.
Possible layouts include:

- • 1 x 1 - Shows a single video in the display area
- • 2 x 2 - Shows four videos in the display area
- • 2 x 3 - Shows a horizontal six video display
- • 3 x 2 - Shows a vertical six video display
- • 3 x 3 - Shows a nine video display of three rows and three columns
- • 4 x 4 - Shows a sixteen video display of four rows and four columns

3.9   Zoom Control
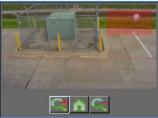
The application enables digital zoom in the *Live View* window as well as in the *Recorded Video* window.

3.9.1   Live View Zoom Control

In the *Live View* screen, the **Zoom Control** section is in the lower left corner. The default zoom type is **Digital**. Use the **Digital** option to zoom in and out of the selected live video displaying in the *Live View* window.

1.   To digitally zoom in or out of live video, select the **Digital** option.
2.   Use the controls to control the zoom viewing the camera's live view. (See figure 19 & 20)

Figure 19

3.   Use the mouse to click and drag the zoom boundary box and move to the desired zoom area.
    a.   Example zoomed image. (See figure 20)

Figure 20

The **Zoom Controls** are as follows:

• **Zoom In**:

• **Return to Original View**:

• **Zoom Out**:

Use the **Mechanical** option to control a PTZ camera

1.   To mechanically zoom in or out of live video, select a live video stream for a PTZ- enabled camera.
2.   Select the **Mechanical** option.
3.   The PTZ controls display in the bottom left corner of the corresponding live video tile. Click on the live video tile for the PTZ-enabled camera.
4.   Use the arrows to control the PTZ camera.

The features of PTZ-enabled cameras may vary. Possible features include pan, tilt, iris, and focus. The application offers preset positions using the PTZ controls. Select any preset position and the PTZ-enabled camera moves to the corresponding preset position.

3.10   Alarm Window

The **Alarm** window displays at the bottom of the *Live View* screen. This window can be used to monitor all the alarm events being received by the razberi unit.

Figure 21

Use the **Alarm** window to monitor video. Use the ⁂ ⏻ ✕ icons on the right side of the **Alarm** window to hide or close it.

1. To add cameras for monitoring, click the **Cameras** button and select the necessary cameras.
    a. All cameras that are checked will show events in the alarm window
2. Click the **Start Alarm** button to begin monitoring with the selected cameras. Click the button again to stop monitoring. (See figure 22)

Figure 22

3.11   Searching Recorded Video

The application stores recorded videos. To access the *Recorded Video* screen, click the **Search** icon in the **Tool Bar**. Use the Search feature to retrieve recorded videos from the application for corresponding cameras by date and time.
The *Recorded Video* screen appears by default with the **Tool Bar** on the top, **Search window** pinned on the left, **Recorded Video Display** on the right, and the **Slider window** across the bottom of the screen. Use the **Zoom Controls** in the lower left corner of the playback window to zoom in and out of recorded video.

3.11.1   Search Main Screen
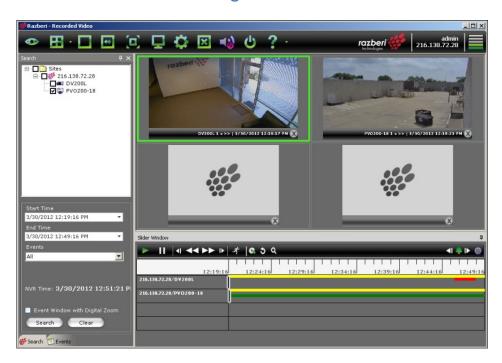
The **Search** window offers the following features. (See figure 23)
*   Search four videos simultaneously in the recorded video display
*   Alternate from 1 x 1 layout to 2 x 2 layout
*   While in 2 x 2 layout, double-click to change the video control in a single mode

To search for recorded video:
1. Click on the camera to search.
2. Select the **Start Time** and **End Time**.
3. Select additional search options.
4. Click **Search**.

Figure 23

The following fields are available to assist in searching for recorded video and are located at the bottom of the **Search** window. (See figure 23)

- a. **Camera List**
  This list displays the sites with the available cameras. Select a camera from the list to automatically list the camera name and site address.

- b. **Start Time**
  This field contains the date and time at which the search starts. The matched video(s) record in the search time specified.

- c. **End Time**
  The field is for the date and time that the searched videos stopped. **Note:** The end time should not exceed the NVR time.

- d. **Events**
  Select an event as audio, motion, contact, schedule, or all. The search is based on the selected events.

- e. **NVR Time**
  This field displays the NVR time

- f. **Event Window with Digital Zoom**
  Select this option to display the **Event** window with digital zoom.

3.11.2   Playback Zoom Control

In the *Video Playback* window, the **Zoom Control** section is in the lower left corner. Use the controls to navigate the zoom area while viewing playback video. Use the **Digital** option to zoom in and out of the selected live video displaying in the *Playback* window.
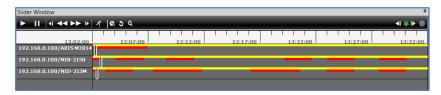
1. To digitally zoom in or out of playback video, select the **Digital** option.
2. Use the controls to navigate the zoom area while viewing the camera's playback video.
3. Use the mouse to click and drag the zoom boundary box and move to the desired zoom area.

3.12   Slider Window

The **Slider** window contains a playback tracking bar, list of corresponding cameras, and playback controls. The tracking bar moves to the designated time while the playback videos play in the *Recorded Video Display*. The tracking bar offers various colors to distinguish the playback options. (See figure 24)

- Red indicates motion recording
- Green indicates constant recording
- Orange indicates contact or sensor based recording.

Figure 24

3.12.1   Playback Controls

Control the recorded video while it plays in the *Recorded Video Display* using the playback controls. (See figure 25)

Figure 25

1. Play Video
2. Pause Video
3. Step Backward
4. Rewind
5. Fast Forward
6. Step Forward
7. Jog Speed Playback
8. Export Video
9. Refresh Display
10. Search

3.12.2   Synchronous and Asynchronous Playback

Click the icon to the far right of the playback controls to synchronize or desynchronize the video playback.
NOTE: This option is best effort. Due to variable frame rate of recording and differing resolutions, this might not synchronize exactly. (See Figure 26)
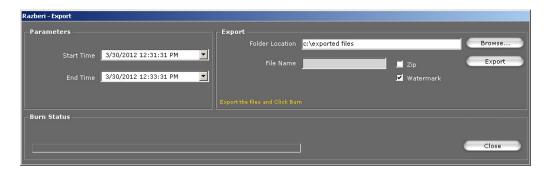
Figure 26

3.12.3   The Export Feature

Click the **Export** icon in the playback controls to export recorded videos to either the HDD on the client machine or a usb flash device.

<p align="center">Figure 27</p>

To export recorded video:
1.   Select the **Start Time** and **End Time**.
2.   Chose a folder location where the files should be placed.
3.   ZIP can be selected to export to a zip file. A name is required for zip files only.
4.   Click **Export.**
5.   The Files will be exported to the selected folder. The files will be in .asf format and can be played back using any media player.

3.13   Event Window

Click on the **Event** window to view the events corresponding to the available cameras.
 Select a camera to view its events, and use the playback controls in the **Slider** window to manage the video.

<p align="center">Figure 28</p>

3.14   Administration Window

The *Administration* window provides many options to manage and customize the application. Six tabs are available for managing both the hardware and software as well as user privileges.

Click the **Administration** icon in the **Tool Bar** to launch the *Administration* window. The six tabs within the window are as follows: (See figure 29)

Figure 29

- **Camera Management**
- **NVR Management**
- **User Management**
- **System Preferences**
- **System Info**
- **NVR Logs**

Click the name of the tab to open the corresponding options. Click **Save Changes in NVR** to save any changes made to settings within the Administration window. Click **Exit Administration** to exit the window without saving any changes.

3.14.1   Camera Management

Use the **Camera Management** tab to view and edit camera lists, details, and settings. The **Camera List** section contains a list of cameras. The table also includes the details and status of each camera. (See figure 30)
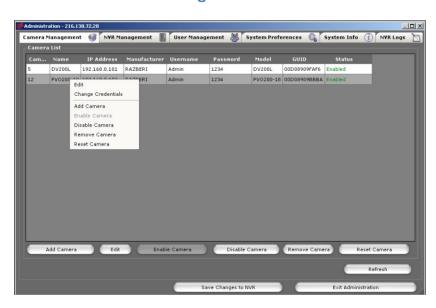
Figure 30

Right-click on a camera row or click on the corresponding button on the bottom of the window to use the following options.

- **Edit** – Allows the user to change settings of the camera (See figure 30)
- **Change Credentials** – Allows the user to change the credentials used to access the camera
- **Add Camera** – Allows the user to manually add a camera to the system
- **Enable Camera** – Allows the user to enable a previously disabled camera. All cameras are enabled by default
- **Disable Camera** – Allows the user to disable a camera, the camera will no longer be recorded
- **Remove Camera** – Allows the user to remove a camera from the system
- **Reset Camera** – Allows the user to reset the camera to the default settings necessary to be able to connected to the system

Click Refresh to reload and update the **Camera List**. Click **Save Changes in NVR** to save any changes made to the **Camera List** within the *Administration* window. Click **Exit Administration** to exit the window without saving any changes.

3.14.1.1   Editing Camera Information

Figure 31

To edit camera information:
1. Access the *Administration* window.
2. Select the **Camera Management** tab.
3. Right-click on a camera row in the
Camera List table.
4. Select **Edit** from the list of options.

The *Edit Camera and Schedule* dialog box
has three available tabs:

    A.   **General Information**
    B.   **Recording Schedule**
    C.   **Camera Settings**

A.   **General Information** tab (See figure 31)
    This tab consists of a **Camera Details** section which contains the following options:

- **Name:** This field is the name of the camera.
- **Description:** The description of the camera is in this field.
- **IP Address:** This field is for the IP address where the camera is configured.
- **Brand:** This field is for the brand name of the camera.
- **Video Format:** Select the video format from the dropdown.
- **Model:** This field is for the camera model.
- **Username:** Enter the user's name to view the camera's administration details.
- **Password:** Enter the user's password. Only the administrator can reset the password.
- ***Change Credentials:** Click this option to change password information.
- **CamGUID(mac ID):** This field is for the unique camera ID.
- **PTZ:** Select the controls for PTZ-enabled cameras only.
- **Audio:** Select this option to enable audio.
- **Apply:** Click this option to apply and save the changes.
- **Cancel:** Click this option to disregard the changes and close the window.

    Note: CamGUID (MAC Id) is mandatory when adding a camera.

B.   **Recording Schedule** tab
    Users can set the recording schedule of a camera two ways:

1. **Event based:** The recording starts when an event triggers. Select all three boxes for motion, contact, and audio events to record.
2. **Time Based:** Users can set time-based recording two ways:
    - **Always:** Select this option for continuous recording.
    - **Custom Schedule:** Select this option to choose a custom schedule from the list or to create a custom schedule. Click **New** to create a new schedule. For more information on customizing a schedule, see the Custom Schedule topic.

C. **Camera Settings** tab

The **Camera Settings** tab displays the details of the corresponding selected camera.

Note: Options on this tab may vary depending on the selected camera.
- **Video Format:** This field displays which format the video is playing, either in
- MPEG, MJPEG, JPEG, or H264. The format depends on the camera.
- **Resolution:** The **Resolution** field displays the resolution of the camera's video.
- Use the available dropdown to select the desired resolution.
- **Quality:** Use this field to adjust the camera's video quality.
- **Frame Rate:** Use this field to adjust the frame rate of the camera's video display.
- **Motion Settings:** Select this option to see the camera's corresponding motion settings. **Note**: The **Motion Settings** option is only available if using a LAN connection.

3.14.1.2   Adding Cameras

Use the **Add Camera** feature to manually add a new camera to the list. To add a camera:

1. Access the *Administration* window.
2. Select the **Camera Management** tab.
3. Right-click on a camera row in the **Camera List** table.
4. Select **Add Camera** from the list of options or click the **Add Camera** button on the bottom of the window.

The *Add New Camera* dialog box contains a **General Information** tab. The tab consists of a **Camera Details** section which contains the following fields: (See figure 31)

- **Name:** This field is the name of the camera.
- **Description:** The description of the camera is in this field.
- **IP Address:** This field is for the IP address where the camera is configured.
- **Brand:** This field is for the brand name of the camera.
- **Video Format:** Select the video format from the dropdown.
- **Model:** This field is for the camera model.
- **Username:** Enter the user's name to view the camera's administration details.
- **Password:** Enter the user's password. Only the administrator can reset the password.
- **Change Credentials:** Click this option to change password information.
- **CamGUID(mac ID):** This field is for the unique camera ID.
- **PTZ:** Select the controls for PTZ-enabled cameras only.
- **Audio:** Select this option to enable audio.
- **Apply:** Click this option to apply and save the changes.
- **Cancel:** Click this option to disregard the changes and close the window.

Note: CamGUID (MAC Id) is mandatory when adding a camera.

3.14.1.3   Enabling Cameras

Connected cameras enable automatically by default.

To manually enable a camera:
1. Access the *Administration* window.
2. Select the **Camera Management** tab.
3. Right-click on the camera row in the **Camera List** table or click the **Enable Camera** button on the bottom of the window.
4. Select **Enable Camera** from the list of options.
5. Click **Yes** on the confirmation prompt to enable the camera. This feature is available for multiple cameras.

3.14.1.4   Disabling Cameras

Use this feature to disable a camera from the camera list. This feature is available to use for multiple cameras. **Note:** Disabling a camera stops all recording from that camera.

To disable a camera:
1.   Access the *Administration* window.
2.   Select the **Camera Management** tab.
3.   Right-click on a camera row in the **Camera List** table.
4.   Select **Disable Camera** from the list of options or click the **Disable Camera** button on the bottom of the window.
5.   In the confirmation window, click **Yes** to disable or **No** to cancel.

3.14.1.5   Removing Cameras
Use the **Remove Camera** feature to remove a camera from the list of available cameras.

To remove a camera:
1.   Access the *Administration* window.
2.   Select the **Camera Management** tab.
3.   Right-click on a camera row in the **Camera List** table.
4.   Select **Remove Camera** from the list of options or click the **Remove Camera** button on the bottom of the window.
5.   Select **Yes** to remove the corresponding camera from the list.

Note: When removing a camera, a prompt appears with the following message:

"Are you sure you want to remove the camera? Selecting 'Yes' results in the loss of video recordings for this camera." Select **Yes** to remove the video from the camera. After clicking **Yes**, the video from that camera is no longer accessible.

3.14.1.6   Resetting Cameras

Use this option to return the camera to default settings.

To reset a camera:
1.   Access the *Administration* window.
2.   Select the **Camera Management** tab.
3.   Right-click on a camera row in the **Camera List** table.
4.   Select **Reset Camera** from the list of options or click the **Reset Camera** button on the bottom of the window.
5.   Select **Yes** to reset the corresponding camera.

3.14.2   NVR Management

The second tab in the *Administration* window is **NVR Management**. Use this tab to manage the configuration and features of the application.

The **NVR Management** tab contains four sub-tabs.
- **Network Configuration**
- **Date Time**
- **Service Status**
- **Maintenance**

Access the **NVR Management** tab and click on a sub-tab name to view the available options.

3.14.2.1   Network Configuration

The **Network Configuration** tab offers management capabilities of the IP, Port, and DDNS Configurations. To access the **Network Configuration** tab, open the *Administration* window. Select the **NVR Management** tab and click on the **Network Configuration** tab.

Note: Changes to the network configuration can only be performed in LAN mode.

The **Server IP Configuration** section displays the settings of the server. (See figure 32)

Figure 32

1. To change the settings, select the status option to enable access to change the static IP address in the **IP Configuration** section.
2. In the **IP Configuration** section, enter the necessary information in the available fields.
3. Click **Apply**.
4. After clicking **Apply**, a prompt window asks to reboot the server. Click **OK** and the client window closes.
5. Re-log in to the system.

The **DHCP Server** section contains two available radio button options. (See figure 32)

1. Click **the On** radio button to turn on the DHCP server. With the DHCP server on, the razberi™ gives out IP addresses.
2. Click the **Off** radio button to turn off the DHCP server. With the DHCP server off, the razberi™ does not give out IP addresses.
3. Click **Apply**
4. After clicking **Apply**, a prompt window asks to reboot the server. Click **OK** and the client window closes.
5. Re-log in to the system.

The section below the **Server IP Configuration** section provides fields to change the server ports. Click **Apply** to apply the server port changes. In the prompt window, click **OK**.

Figure 33
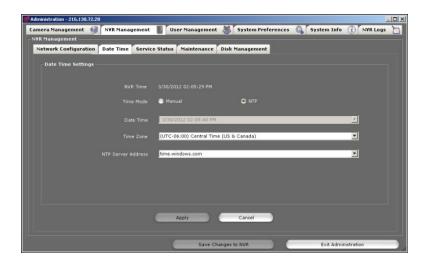
3.14.2.2   Date and Time Settings

After connecting to the razberi™, login to the client and access the **DateTime** tab. (See figure 34)

1. To view the tab, click ⚙ (Administration icon), click the **NVR Management** tab, and select the **DateTime** tab.
2. In the **Time Mode** field, select the *Manual* option.
3. In the **TimeZone** field, use the available dropdown menu to select the appropriate time zone.
4. Click **Apply**.
5. A prompt appears stating, "*It will take few minutes to reboot the server. Please reconnect it later.*" Click **OK** and the system automatically reboots.

Figure 34

3.14.2.3 Service Status

Use the **Service Status** tab to view the statuses of the razberi's services. A green status icon means the service is functioning properly. A red status icon means the service is not functioning properly.

To access the **Service Status** tab, open the *Administration* window, select the **NVR Management** tab and click the **Service Status** tab.

3.14.2.4 Maintenance

Use this tab to refresh or restart the system and update software in the NVR. To update the software, click **Browse**, select the update, and click **Upload**.

To restart the system, click [icon]. To turn off the system, click [icon].

Note: Use only recommended updates.

3.14.3 User Management

Use the **User Management** tab to manage client's users and permissions. To access the tab, open the *Administration* window and select the **User Management** tab.

The **User Management** tab consists of several sections for managing users and user permissions.

- **User List** - View a list of the application's users.
- **User Details** - Select a user in the User List section and view the corresponding user information in the User Details section. User details include the user's Full Name, Username, Password, Email, and SMS Gateway. Select the preferred method of contact by checking either Email or SMS.
- **User Permissions** - Use this section to manage the application's user permissions. Select either Administrator or Limited to determine the type of user. Administrators can also manage the individual camera permissions using the table.

The **User Management** tab allows administrators to manage user access to the application. Administrators can **Add Users**, **Edit Users**, and **Delete Users**. See below for more information.

3.14.3.1   Adding Users

1. Administrative users can add and assign permissions to new users with the **Add User** button located below the **User List** on the **User Management** tab.
2. Complete the fields with the new user information at the top of the dialog box.
3. Select the desired checkbox next to each camera to assign Live View, Playback, SMS text message, or email capabilities.
4. Save changes after each user entry by clicking the **Save** button.

3.14.3.2   Editing Users

1. Administrative users can edit the permissions to current users with the **Edit** button located below the **User Details** section on the **User Management** tab.
2. Edit existing user permissions with this feature.
3. Save changes before exiting the window by clicking the **Save** button.

3.14.3.3   Deleting Users
1. Administrative users can delete current users with the **Delete** button located below the **User Details** section on the **User Management** tab.
2. The **Delete User** feature prompts the administrator for approval.
3. Click **Yes** to delete the user and his or her permissions.

3.14.4   System Preferences

Use the **System Preferences** tab to customize the application to meet specific requirements. To access the tab, open the *Administration* window and select the **System Preferences** tab.

Within this tab, users can access the **Global Recording Settings**, **Camera Default Login**, and **Custom Scheduler** to customize the corresponding features. (See figure 35)

<div align="center">

Figure 35

</div>

3.14.4.1   Global Recording Settings

Use the **Global Recording Settings** tab to customize the **Event Pre Buffer Time** and **Event Record Duration** for recording modules.

To access the tab, open the *Administration* window, select the **System Preferences** tab, and view the **Global Recording Settings** tab.

1. The **Event Pre Buffer Time** field provides the ability to customize the pre buffer time. When the application detects an event in a specified area of a viewed image, it begins archiving the video from a designated time prior to the event. Recording imagery based on movement has advantages of conserving hard drive space and spending unnecessary amounts of time reviewing hours of video searching for the event.
2. The **Event Record Duration** field provides the ability to customize the amount of time the application records an event.

Use the available fields to adjust the times in seconds. Use the field descriptions on the left of each field as guides for the available ranges. Click **Save Changes to NVR** to save the updated recording times.

3.14.4.2   Camera Default Login

Use the **Camera Default Login** tab to customize the default login credentials of any camera connected to the application. All camera authentication services refer to this table to login to the video view page.

To access the tab, open the *Administration* window, select the System Preferences tab, and click the **Camera Default Login** tab. To customize the information, double-click on the **Username** and **Password** fields in the available table.

Click **Save Changes to NVR** to save any changes.

3.14.4.3   Custom Scheduler

To access the tab, open the *Administration* window, select the **System Preferences** tab, and click the **Custom Scheduler** tab. The features in this tab allow administrators to create customized recording schedules for each camera connected to the application. If a custom schedule exists, administrators can apply that schedule to a specified camera using the available dropdown. (See figure 36)

<div align="center">

Figure 36

</div>

Creating New Schedules

1. To create a new schedule, click the **New** button on the **Custom Scheduler** tab.
    The *Add Schedule* screen displays.
2. Provide a specific name for the schedule in the **Name** field (e.g., After Hours or Morning Shift).
3. Click and drag the appropriate date/time values to create a custom schedule.
4. Click **Apply** to apply the newly created schedule to a selected camera.
5. Click **Ok** to save the changes, apply them to the current camera, and close the window.
    Note: In the **Custom Scheduler** tab, newly created schedules display an "**X**" next to the name signifying there are no cameras currently using the schedule. The checkmark next to a custom schedule indicates the schedule applies to a camera or cameras.
6. Click on the schedule name on the left column to see a list of cameras currently using the selected schedule in the assigned cameras table.
7. Click **Save Changes to NVR** to save changes to this window.

Editing Schedules

Use this feature to edit recording times for existing schedules as well as assign cameras to custom schedules.
1. Select an existing schedule and click **Edit** to view and change recording times.
2. Make any necessary changes and click **OK** to view the camera list.
3. To assign the current custom schedule to a camera, click the box to the left of the camera or site.
    Note: Cameras marked in blue are already assigned to another schedule. Select a camera marked in blue to change it to the currently selected schedule.
4. Click **Apply** to make the changes.
5. Click **Save Changes to NVR** before exiting the *Administration* window.

Removing Schedules

1. To remove a customized schedule, select the specified schedule and click **Remove** on the **Custom Scheduler** tab.
2. Click **Yes** in the prompt to confirm the schedule removal.
3. Click **Save Changes to NVR** before exiting the *Administration* window.
    Note: Deleting a custom schedule also deletes the schedule from all associated cameras.

3.14.5　　　NVR Logs

The **NVR Logs** tab displays the login results of the application. Details include the camera, associated action, username, log time, and the result of the log attempt. The tab also has the option to remove logs that are no longer needed.

To view this information, open the *Administration* window and click the **NVR Logs** tab.

There are two available filter options:
1. **User:** Use the dropdown to select the necessary user.
2. **Result:** Use the dropdown to select the necessary result.

3.15　　　Help

Click the dropdown arrow next to the **Help** icon in the **Tool Bar** to view a list of options that offer more information regarding the application.

Options include:
- **About**
- **Server Info**
- **Help**
- **Technical Support**

3.15.1　　　About

The **About** selection opens the *About* dialog box. This dialog box provides details about the product version and copyrights. The **View Log** hyperlink opens a text document with all log information listed. Use this feature for troubleshooting as directed by **Technical Support**.

3.15.2　　　Server Information

The *Server Info* dialog box provides details about the application's recording time zone and the number of cameras that the license supports. To access the Server Info dialog box, click on the **Help** icon in the **Tool Bar** and select **Server Info**.

3.15.3　　　Online Help

To open the application's **Online Help System**, click on the **Help** icon in the **Tool Bar** and select the **Help** option. Use the **Online Help System** to learn how to use the application's features and to access more information on system tools and management.

3.15.4　　　Technical Support

If the **Online Help System** does not fully address a question or issue within the application, click on the **Help** icon in the **Tool Bar** and select **Technical Support**. The *Technical Support* dialog box provides information on contacting a technical support specialist.

4.   FAQ

1. Live Video

a. How do I create Views?
To create a view, right-click on the view folder within the **Camera Tree** and select **Add View**. A view can be named and configured as a pre-defined layout of cameras that can be setup by individual users. Use views for quick visualization of areas of importance and for tours which are camera sequences that users can include within a view or add later by editing a predefined view. See the **Views** section for more information.

b. How do I save Views?
After creating a view, save it by clicking **Finish** within the **View Menu** setup. See the **Views** section for more information.

c. How do I create Tours?
Create a tour by right-clicking on the tour folder found within the **Camera Tree** and selecting **Add Camera Tour**. Tours are pre-defined views of cameras that are sequentially displayed one after another with a specified dwell time between alternating camera views. See the **Camera Tours** section for more information.

d. How do I save Tours?
After creating a tour, save it by clicking **Finish** within the **Tour Menu** setup. See the **Camera Tours** section for more information.

e. What is Digital Zoom and how do I operate it?
Digital zoom is the ability to more closely view a selected camera shot by digitally zooming into a picture. Select the camera and choose **Digital** on the bottom left side of the client. Digital zoom is available for both live and playback mode and is most effective with higher MP cameras that have higher resolution settings. See the **Zoom Control** section for more information.

f. How do I operate Live Video and Recorded Video?
Live video mode is the default display when the client is first launched. To select cameras for viewing, double-click on the cameras within the **Camera Tree** or select a predefined view/tour. Access recorded video by selecting the **Search** icon on the upper left hand corner of the **Tool Bar**. Within a search, the user can define up to four different cameras by time, date, and alarm, and play them back simultaneously for maximum effect. The user can determine whether or not to digitally zoom, print pictures, or archive the video off the server to a specified location for later use. See the **Live View Screen** and **Recorded Video** sections for more information.

2. Logging On

a. What is a profile?
Profiles are predefined logins associated with the user list defined by the administrator of any particular server. By defining profiles that match particular users, the system administrator can monitor the system and protect it from unauthorized personnel. Profiles can incorporate many servers, both local and remote. See **Creating a Profile** for more information.

b. What information do I need to create a profile?
To create a profile, a user needs a user name, password, server type (i.e., DVR / NVR), server IP address/domain name, connection type (i.e., local/remote), and communication port settings. See **Creating a Profile** for more information.

c. How do I edit profiles?
Edit profiles by selecting **New/Edit Profile** from the dropdown option within the **Login** screen. See **Creating a Profile** for more information.

d. How do I create a profile for multiple sites?
Once a profile exists, a user can edit that profile to include multiple sites. Additional sites are for other servers associated with the profile being edited. See **Sites** for more information.

e. How do I manage profiles for multiple sites?
The system administrator manages access to individual servers through user definitions as defined within the **User Management** section found within the *Administration* window of any particular server.

3. Video, Search, and Playback

a. How do I retrieve video?
Video is retrieved by selecting the **Search** icon found at the upper left corner of the **Tool Bar** within the **Live View Screen**.

b. How do I download, archive, and export video?
Once a user locates a video clip, the user can archive the clip by selecting the **Export** icon found within the *Slider* window.

c. How do I perform an Event Search?
Within the *Search* window, the user has many specifications to use in order to narrow the search for a particular event. Users must complete the necessary search criteria using a dropdown under **Events**. See **Event Window** for more information.

For more information on the razberi™ MP Series, access the razberi™ Technologies
web site at www.razberi.net.