



MobileView Fleet Manager User Manual

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Version	This document applies to MobileView Fleet Manager PENTA.
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FCC compliance	<p>This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.</p> <p>You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p>
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Chapter 1

Introduction

Summary

This chapter gives you an overview of the Fleet Manager software. It summarizes the functions and lists the system requirements for Fleet Manager.

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About this manual

The *MobileView Fleet Manager User Manual* introduces the system and explains:

- How to install the software
- How to use the software with the MobileView equipment
- How to contact technical support

To use this document effectively, you should have:

- A basic knowledge of CCTV systems and components
- A basic knowledge of computers and networks

Read these instructions and all related documentation before installing or operating this product. The most current versions of this and related documentation are available from technical support. Refer to “**Technical support**” on page 54 for instructions on contacting technical support.

Note: This manual describes how to use the Fleet Manager software. For specific information on MobileView digital video recorders (DVRs), please refer to the appropriate user manual for your model.

Product overview

MobileView is a digital video recording system (DVR) designed for vehicles such as inner-city transit buses or paratransit vans, light passenger rail, and other transit vehicles. The central component of the MobileView system is a high-quality DVR, which records images from up to 16 cameras (monochrome or color) with dual-channel audio along with information such as the time, date, and vehicle identification. Three software applications support and add value to a MobileView solution: Video Manager, AutoArchiver, and Fleet Manager.

Video Manager is primarily used to review surveillance and event-based video stored on the DVR and in local or remote archive files. Video Manager is also used to configure MobileView operating parameters.

AutoArchiver is a server-based application that automates many of the data transfer functions found in Video Manager. The application also collects health and status of online MobileView units. The automated functions and collected information are realized and accessible through the Fleet Manager application.

Fleet Manager is a client-based application used with AutoArchiver. The application provides a GUI interface to configure the AutoArchiver’s automated functions, and review health and status information from compatible MobileView recorders. When deployed alongside Video Manager, operators can easily review, investigate, download, and archive a wide array of live and historic data.

The GUI uses a tabular display format along with a variety of context-sensitive menus to simplify management MobileView equipped vehicles.

Features

Fleet Manager does the following:

- Automatically schedules and downloads CCTV bookings when vehicles are available at the garage.
- Receives CCTV bookings from authorized staff and schedules numerous simultaneous data requests from multiple vehicles.
- Performs multiple concurrent downloads and sends an e-mail notification that new information is ready for review.
- Automatically downloads driver-tagged events (such as panic button activations) and notifies response staff.
- Transfers, consolidates, and manages surveillance data from a fleet of MobileView systems within the same network.
- Provides remote access to centralized fleet CCTV data.
- Uses wireless-and-fixed LAN infrastructure to transfer CCTV and other vehicle operating data across the network.
- Performs daily status checks and reports on the condition of hard drive units, CCTV capture equipment, power supply modules, fans and cooling systems, central processor units, and other equipment.
- Performs automated, periodic snapshot of camera images to help owners verify camera alignment and image quality.

System requirements

The minimum requirements for the Fleet Manager software are:

- Windows XP OS with SP2 and all current updates (or Vista)
- .NET Framework SP1.1 and 2.0
- Intel Core 2 dual 2.4 GHz recommended
- Intel 945 chipset recommended
- 2 GB recommended
- SVGA monitor (1024 x 768 pixel resolution)
- NVIDIA 8XXX series GPU, 9XXX series recommended)

- 160 GB hard disk space (360 GB recommended)
- DVD-RW drive
- Ethernet crossover cable

Other requirements

You will also need:

- A depot server with AutoArchiver software
- A network LAN
- Windows 2003 Server (to install AutoArchiver software)
- Wireless connection to the MobileView DVR

AutoArchiver software installation is described in the following section. For further information regarding the depot server, please contact our Technical Support department. Contact details are listed at the end of the manual.

Chapter 2

Installation

Summary

This chapter gives instructions for installing Fleet Manager and AutoArchiver.

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Installing AutoArchiver

AutoArchiver is the backend server application for the MobileView Garage Archive Management System. The application is provided on the same CD as the Fleet Manager and Video Manager applications.

AutoArchiver is installed on a file server running Windows 2003 Server Standard Edition. The server is commonly called the Depot Server. Running a server class OS provides several data protection options not found in a desktop OS. These include high security credential authentication and built-in RAID for high availability and data backup.

Caution:

- AutoArchiver may not be installed on the same computer as Video Manager.
- AutoArchiver is not supported on Windows Small Business Server.

Fleet Manager is not normally loaded to the Depot server.

To install AutoArchiver:

1. Insert the installation CD into the CD drive.
2. When the launch screen opens, select AutoArchiver from the list of options.
3. On the Welcome page, click Next.
4. Select whether to restore all options to factory default or to uninstall the previous version.

Both “Restore to factory defaults” and “Uninstall previous version” apply to systems with a pre-existing or current installation.

Restore to factory defaults will restore customized system configurations back to defaults before the new installation begins. This eliminates incompatible or archaic configurations settings.

Uninstall previous version will initiate the previous version uninstall routine to facilitate removal of the previous version. Upon completion of the uninstall process, the new install will resume.

5. Supply Customer Configuration details as shown below and click Next.

DVSS AutoArchiver Installation

Customer Configuration
Enter your details

Corporation: General Electric Company

Depot: mvserver

Region: USA

Days between camera check: 1

DVS file share name: CCTVData

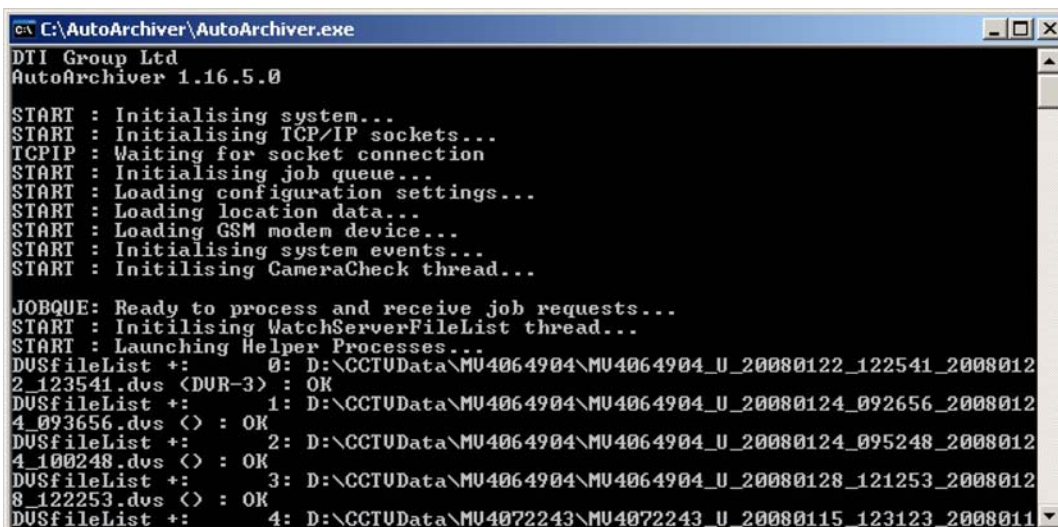
AutoArchiver Account Password: GEMV405

< Back Next > Cancel

6. Supply e-mail addresses to send the specified information to Email Configuration page, and click Next.
7. Select whether to perform camera check testing.
Camera check testing has specific requirements to work properly and is not generally applicable to all customers. See “Viewing test images from fleet DVRs” on page 46 section before selecting this check box.
8. Read the license agreement, click I agree, and then click Next.
9. Unless a special requirement exists, accept the default folder location for AutoArchiver, and click Next.
10. Unless a special requirement exists, accept the default folder location for CCTV_Data and click Next.
11. On the Ready to Install page, click Install.
12. Follow additional prompts to complete and finish the installation.

When AutoArchiver installation is complete, double-click the desktop icon to launch the AutoArchiver application. A console window similar to that shown in Figure 1 below will open.

Figure 1: AutoArchiver console window



```

C:\AutoArchiver\AutoArchiver.exe
DTI Group Ltd
AutoArchiver 1.16.5.0

START : Initialising system...
START : Initialising TCP/IP sockets...
TCPIP : Waiting for socket connection
START : Initialising job queue...
START : Loading configuration settings...
START : Loading location data...
START : Loading GSM modem device...
START : Initialising system events...
START : Initilising CameraCheck thread...

JOBQUE: Ready to process and receive job requests...
START : Initilising WatchServerFileList thread...
START : Launching Helper Processes...
DUSfileList +: 0: D:\CCTUData\MU4064904\MU4064904_U_20080122_122541_2008012
2_123541.dvs <DUR-3> : OK
DUSfileList +: 1: D:\CCTUData\MU4064904\MU4064904_U_20080124_092656_2008012
4_093656.dvs <> : OK
DUSfileList +: 2: D:\CCTUData\MU4064904\MU4064904_U_20080124_095248_2008012
4_100248.dvs <> : OK
DUSfileList +: 3: D:\CCTUData\MU4064904\MU4064904_U_20080128_121253_2008012
8_122253.dvs <> : OK
DUSfileList +: 4: D:\CCTUData\MU4072243\MU4072243_U_20080115_123123_2008011

```

Caution: Do not close this window. Closing the AutoArchiver console window closes the application. This application must remain open to transfer data.

Installing Fleet Manager

The Fleet Manager software is provided on a CD. This software is installed on a workstation.

Note: If you have a firewall installed on your computer, configure it to allow this application.

To install the software:

1. Insert the installation CD into the CD drive.
2. When the launch screen opens, select Fleet Manager from the list of options.
3. On the Welcome page, click Next.
4. Select whether to restore all options to factory default or to uninstall the previous version.

Both “Restore to factory defaults” and “Uninstall previous version” apply to systems with a pre-existing or current installation.

Restore to factory defaults will restore customized system configurations back to defaults before the new installation begins. This eliminates incompatible or archaic configurations settings.

Uninstall previous version will initiate the previous version uninstall routine to facilitate removal of the previous version. Upon completion of the uninstall process, the new install will resume.

5. On the Welcome page, click Next.
6. Read the license agreement, click I agree, and then click Next.
7. On the Ready to Install page, click Install.
8. Follow additional prompts to complete and finish the installation.

Chapter 3

Using Fleet Manager

Summary

This chapter explains how to use Fleet Manager.

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Starting AutoArchiver

AutoArchiver is configured to start automatically on system startup. You can also start the program:

- Via the AutoArchiver icon located on the desktop
 - or —
- Navigate to the directory `c:\AutoArchiver` and execute the application `AutoArchiver.exe`

Starting Fleet Manager

Fleet Manager is not configured to start automatically on system startup. You must start the program:

- Via the Fleet Manager icon located on the desktop
 - or —
- Via the Start > Programs > DVSS Fleet Manager menu

Exiting AutoArchiver

Note: Closing the AutoArchiver console window exits the program.

You can exit the AutoArchiver by:

- Clicking inside the console window and pressing the letter “Q” for quit and exit.
 - or —
- Clicking the Close button (the X button in the top-right corner).

Clicking the X button will cause an error. Ignore the error and the console will close automatically.

Exiting Fleet Manager

Note: Closing the Fleet Management System window exits the program.

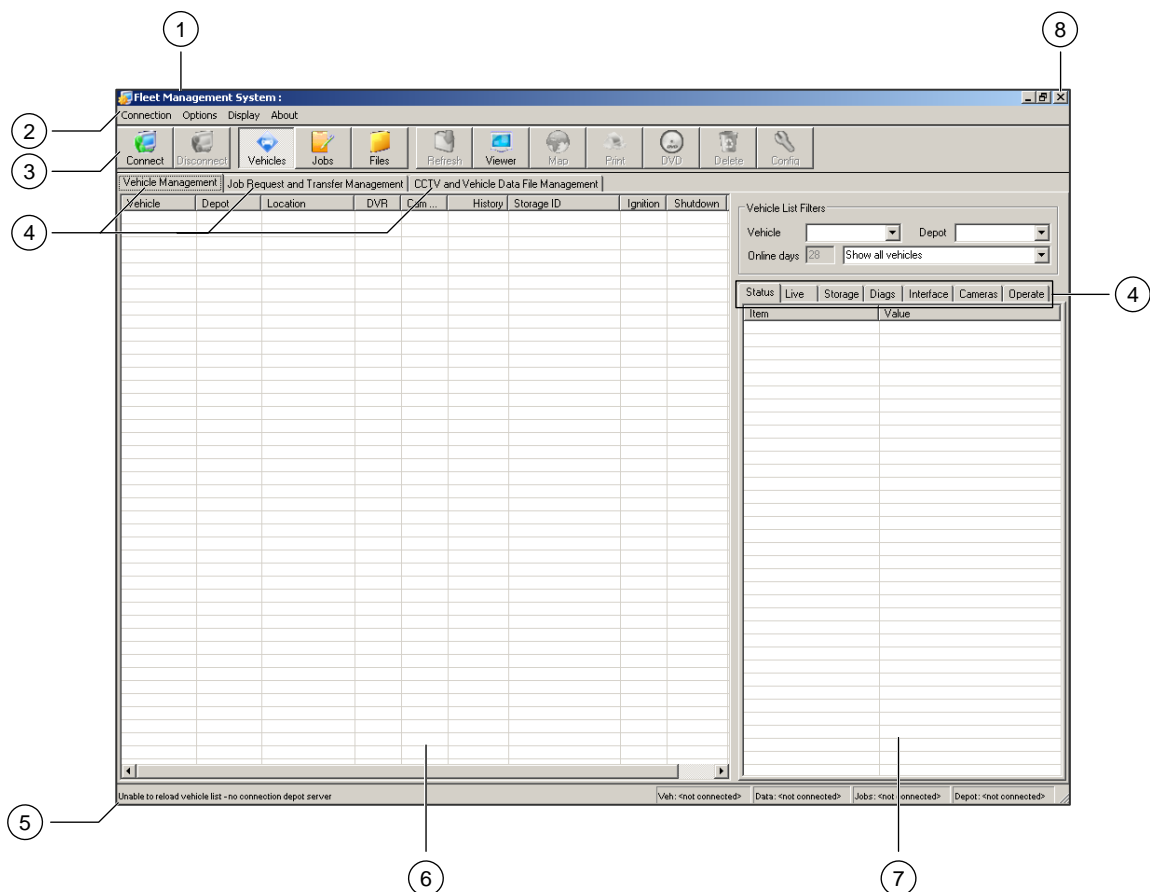
You can exit the Fleet Manager by:

- Clicking Connection > Exit.
— or —
- Clicking the Close button (the X button in the top-right corner).

Fleet Management System window

The workspace for Fleet Manager is the Fleet Management System window. This window contains a title bar, menu bar, toolbar, and a status bar. The window is divided into two panes, a management pane and a maintenance pane. Figure 2 shows the Fleet Management System window and identifies window controls and panes.

Figure 2: The Fleet Management System window



- | | |
|--------------|---------------------|
| 1. Title bar | 5. Status bar |
| 2. Menu bar | 6. Management pane |
| 3. Toolbar | 7. Maintenance pane |
| 4. Tabs | 8. Close button |

See Table 1 below for additional details.

Table 1: Fleet Management system - window controls

Control	Description
Title bar	Identifies the Fleet Manager application.
Menu bar	Gives access to application commands.
Toolbar	Contains buttons for commonly-used application commands. See Table 2 below.
Tabs	Display sets of related options.
Status bar	Displays application status messages and shows the connection status of the vehicle, data, jobs, and depot servers.
Management pane	Contains vehicle status information on three tabbed pages. See: "Managing vehicles" on page 28 "How color is used to indicate status" on page 30 ""Vehicle shortcut menu" on page 31 "Requesting video footage" on page 34
Maintenance pane	Contains the details of vehicles selected in the list, on seven tabbed pages. See: "Viewing information about fleet DVRs" on page 39 "Live vehicle GPS data" on page 40 "Data storage on fleet DVRs" on page 42 "Diagnostics" on page 44 "Viewing the DVR interface settings for fleet vehicles" on page 46 "Viewing test images from fleet DVRs" on page 46 "Viewing the status of a DVR during its latest communication" on page 50
Close button	Closes the window and exits the application.

Table 2: Fleet Management System - toolbar commands

Button	Description
Connect	Launches the Connection Manager for connecting to depot servers. See "Connecting to depot servers" on page 15.
Disconnect	Disconnects Fleet Manager from the depot server.

Button	Description
Vehicles	Opens the Vehicle Management tab, which displays status information for fleet vehicles. See “Managing vehicles” on page 28.
Jobs	Opens the Job Request and Transfer Management tab, which displays the status of requests. See “Vehicle shortcut menu” on page 31.
Files	Opens the CCTV and Vehicle Data Management tab, which displays the status of job requests that are stored in the personal data directory. See “ Managing CCTV and vehicle data files ” on page 36.
Refresh	Refreshes the display with current information from the depot server.
Viewer	Opens the Viewer, which lets you view footage from completed job requests. See “ Viewing requested video footage ” on page 37.
Map	Shows where each vehicle was located the last time it communicated with the depot server.
Print (Future)	Future Print Option – Option is grayed out.
DVD	Burns selected footage onto a DVD.
Delete	Deletes the currently selected video archive. You must have sufficient rights to the file.
Config	Launches the Configuration Manager, which lets you change specific settings in Fleet Manager. See “Configuring the system” below.

Connecting to depot servers

The Connection Manager lets you connect to depot servers.

To connect to a depot server:

1. Click the Connect button.
2. In the Depot Connection dialog box, enter the depot server host name or IP address, and then click Connect.

Previously connected depot servers will be listed in the drop down list.

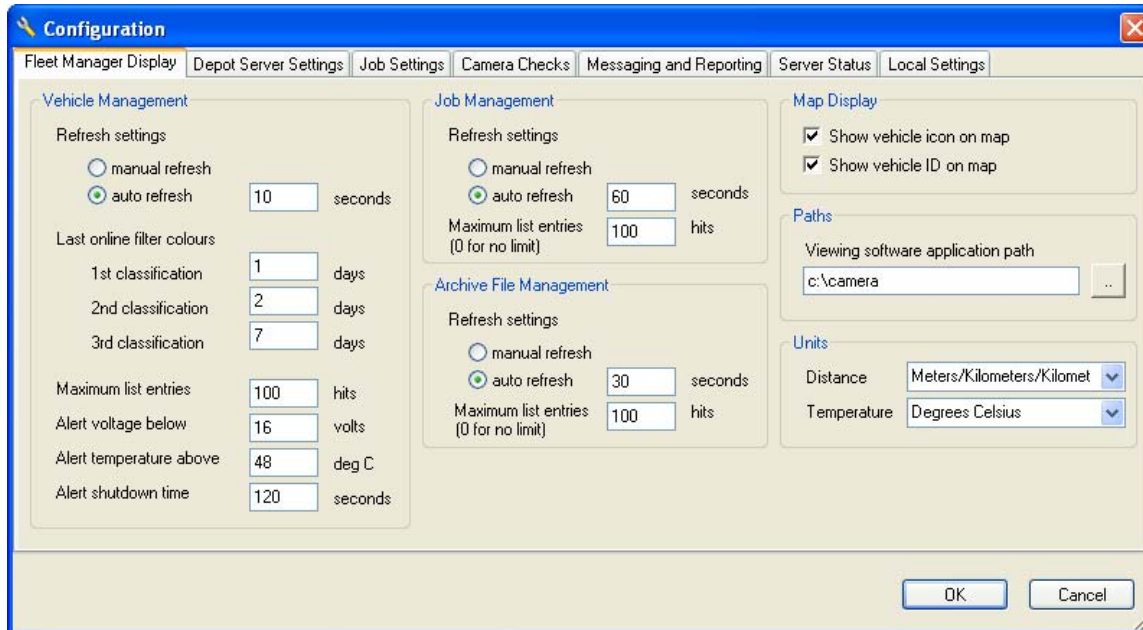
Configuring the system

This section describes how to configure your system.

Accessing the Configuration Manager

To access the Configuration Manager, click the Config button. The Configuration dialog box displays as shown in Figure 3 below.

Figure 3: Configuration — Fleet Manager Display tab



Configuring the display of data

The Fleet Manager Display tab of the Configuration Manager gives you control over the way the system displays data. It lets you configure:

- Vehicle management settings
- Job management settings
- Archive file management settings
- Map display settings
- Paths
- Units

Table 3: Fleet Manager Display tab

Option	Description
Vehicle Management	
Refresh settings	<p>Controls how Fleet Manager display is updated with information from depot servers. Choose one of the following options:</p> <ul style="list-style-type: none"> Manual refresh. The display updates when you click the Refresh button. Auto refresh. The display updates automatically at the interval you specify. The default setting is 60 seconds. <p>Caution: Since highlighted user selections are deselected during a refresh, setting the auto refresh time too low can hinder operator interaction.</p>
Last online filter colors	<p>Establishes the duration of three groups that are used to indicate how recently a specific DVR was online. A specific color is applied to the entries in each group. (See “How color is used to indicate status” on page 30.) The three color groups are:</p> <ul style="list-style-type: none"> Dark Green: No setting provided, used to indicate DVR is online Light green. The default setting is 1 day. Light blue. The default setting is 2 days. Pink. The default setting is 4 days. <p>Note: Color selections are not configurable.</p>
Maximum list entries	Controls the maximum number of entries shown on the Vehicle Management tab. The default setting is 100. The maximum is 2,000.
Alert voltage below	The corresponding “volts” cell on the Vehicle Management tab is highlighted in pink for online vehicles whose voltage is below the threshold specified here. Offline vehicles are not highlighted. Vehicles whose threshold is in tolerance are not highlighted.
Alert temperature above	The corresponding “temp” cell on the Vehicle Management tab is highlighted in pink for online vehicles whose temperature is above the threshold specified here. Vehicles whose threshold is in tolerance are not highlighted.
Alert shutdown time	The Shutdown cell on the Vehicle Management tab turns pink for online vehicles whose shutdown time is above the threshold specified here.
Job Management	
Refresh settings	<p>Controls how the Jobs Request and Transfer Management display is updated with information from the depot server. Choose one of the following options:</p> <ul style="list-style-type: none"> Manual refresh. Information is updated when you click the Refresh button. Auto refresh. The information is updated at the interval you specify here. The default setting is 60 seconds. <p>Caution: Since highlighted user selections are deselected during a refresh, setting the auto refresh time too low can hinder operator interaction.</p>

Option	Description
Maximum list entries	<p>Controls the maximum number of entries shown on the Job Request and Transfer Management tab. The default setting is 100. The maximum is 2,000.</p> <p>Caution: Setting the maximum job count too high can result in excessive refresh times. Users must adjust the refresh and job count for the specific installation.</p>
Archive File Management	
Refresh settings	<p>Controls how the CCTV and Vehicle Data File Management tab is updated with information from the depot server. Choose one of the following options:</p> <ul style="list-style-type: none"> Manual refresh. Information is refreshed when you click the Refresh button. Auto refresh. The information is refreshed at the interval you specify (in seconds). The default setting is 30 seconds. <p>Caution: Since highlighted user selections are deselected during a refresh, setting the auto refresh time too low can hinder operator interaction.</p>
Maximum list entries	<p>Controls the maximum number of entries shown on the CCTV and Vehicle Data File Management tab. The default setting is 100. The maximum is 2,000.</p> <p>Caution: Setting the maximum entries too high can result in excessive refresh times. Users must adjust the refresh and entries count for the specific installation.</p>
Map Display	
Show vehicle icon on map	Configures Fleet Manager to display vehicle icons on the system map. Press the Map button to display a map showing each vehicle's last known location.
Show vehicle ID on map	Configures Fleet Manager to display the vehicle ID on the system map. Press the Map button to display a map showing each vehicle's last known location.
Paths	
Viewing software application path	The directory path of the Video Manager application executable file, "DVSS_Client.exe". The default location is C:\Camera.
Units	
Distance	Displays distance in meters, kilometers, or miles.
Temperature	Displays temperature in degrees Celsius or degrees Fahrenheit.

Configuring the depot server

The Depot Server Settings tab lets you configure:

- General settings

- E-mail settings
- Disk storage and management

These settings are specific to the depot server. They have no configuration affect on the Fleet Manager application running on the local machine.

Figure 4: Depot Server Settings tab

The screenshot shows the 'Configuration' window with the 'Depot Server Settings' tab selected. The window is divided into three main sections:

- General Settings:**
 - Operator name: General Electric Company
 - Depot name: Division 15
 - Hours between server process cycling: 24 hours
- Email Settings:**
 - Depot sender email address: division15@depotmailserver.com
 - SMTP mail server address: smtp.depotmailserver.com
- Disk Storage and Management:**
 - Auto-deletion of archive files
 - Minutes between disk file purging: 10 minutes
 - Delete files when the free disk space falls below: 10 Gb
 - Delete files until the following free space is reached: 100 Gb
 - Local archive drive path: D:\CCTVData\
 - Shared archive drive path: \\INTEL\CCTVData\
 - Minutes between archive file catalogues: 1440 minutes

Buttons for 'OK' and 'Cancel' are located at the bottom right of the window.

Table 4: Depot Server Settings tab

Option	Description
General Settings	
Operator name	This entry identifies the corporation operating the depot server. This is specified during AutoArchiver installation but can be changed here.
Depot name	Identifies the depot the specific installation of AutoArchiver services.
Hours between server process cycling	Controls the frequency of server process cycling. The default setting is 24 hours. This is a watchdog control facility and the server automatically restarts according to the duration of this setting.
E-mail Settings	
Depot sender e-mail address	Contains the address or distribution list where depot email messages are sent. This is specified during AutoArchiver installation but can be changed here.
SMTP mail server address	Contains the SMTP mail server. This is specified during AutoArchiver installation but can be changed here. Set this value to N during installation if you don't have this information at hand.

Option	Description
Disk Storage and Management	
Minutes between disk file purging	Sets the number of minutes to wait after completion of the previous purge process before beginning the subsequent purge process. This affects files with DVS extensions stored in the CAMDATA share specified in this same tab section. The default setting is 10 minutes.
Delete files when the free disk space falls below	Sets the minimum amount of free space on the physical HDD containing the CAMDDATA share before automatic file deletion initiates. The default setting is 0 GB.
Delete files until the following free space is reached	Sets the amount of remaining space at which file deletion stops. The default setting is 200 GB.
Local archive drive path	Defines the path to the AutoArchiver data folder on the AutoArchiver computer. This parameter is set during AutoArchiver application install and cannot be changed. The default location is D:\CCTVData.
Shared archive drive path	Defines the Windows network share name of the AutoArchiver data folder specified above. The default name is \\ServerName\CCTVData. ServerName refers to the machine name of the AutoArchiver server.
Minutes between archive catalogs	<p>Defines the number of minutes that must elapse before re-indexing the video file list from the shared location. The default of 1440 minutes equals 24 hours or 1 day.</p> <p>Note: New user jobs (CCTV Request) will appear in the CCTV and Vehicle Data File Management tab at the next refresh. Auto Download Vehicle Event and Alarm type jobs will not appear until the next archive catalog index.</p>

File Purge Operation

Every X minutes, as set by the “Minutes between disk file purge”, files with the DVS extension are purged from the CCTVData share if the CCTVData free space drops below the “Delete files when the free disk space fall below” parameter. File deletion will continue until such time as the disk free space rises above the “Delete files until the follow free space is reached” parameter. File deletion starts with the oldest DVS files and continues to the newest until free space exceeds the value specified by the "Delete files until the follow free space is reached" parameter.

Configuring job settings

In the Fleet Management System window, a job is a request for video footage or event data. The Job Settings tab lets you set parameters for downloading data files. This includes:

- General settings
- Job failures and retries
- E-mail notifications

Figure 5: Job Settings tab

The screenshot shows the 'Configuration' window with the 'Job Settings' tab selected. The window has a blue title bar and a menu bar with options: Fleet Manager Display, Depot Server Settings, Job Settings, Camera Checks, Messaging and Reporting, Server Status, and Local Settings. The main content area is divided into three sections:

- General Settings:**
 - Job timeout period: 2 minutes
 - Maximum concurrent jobs to be processed: 1 jobs
 - Overlap minutes applied to progressive backups: 5 minutes
- Job Failure / Retries:**
 - Number of failed job retries before cancellation: 25 retries
 - Number of failed job retries before suspension: 3 retries
 - Job suspension period before continuing to retry: 15 minutes
- Notifications:**
 - Send emails for completed jobs
 - Send emails for failed jobs
 - Email notification list (for multiple addresses use ','): supervisor.division15@depotmailserver.com

At the bottom right, there are 'OK' and 'Cancel' buttons.

Table 5: Job Settings tab

Option	Description
General Settings	
Job timeout period	Sets the duration (in minutes) of inactivity in jobs, caused by a broken connection between the DVR and the AutoArchiver, at which the system requeues the job. The “Failed attempts” cell increments each time a job is requeued. The default setting is 2 minutes.
Maximum concurrent jobs to be processed	Sets the number of simultaneous downloads the AutoArchiver will process. The default setting is 1 job. The maximum value is 5 jobs. Note: Setting this variable to high can impact system performance. Generally 3 simultaneous jobs is the maximum practical limit.
Job Failure/Retries	
Number of failed job retries before cancellation	Specifies the number of times you want the system to retry when a job fails before canceling the job. The default setting is 25 retries.
Number of failed job retries before suspension	Specifies the number of times you want the system to retry when a job fails before suspending the job for a period of time. This allows time for the vehicle to move to a new location where service is available. The default setting is 3 retries.
Job suspension period before continuing to retry	Specifies how long (in minutes) the system suspends a job before initiating the next round of retries. The default setting is 15 minutes.
Notifications	
Send e-mails for completed jobs	The default setting is Enabled.
Send e-mails for failed jobs	The default setting is Enabled.
E-mail notification list	List of e-mail address recipients.

E-mail notifications

If enabled, Fleet Manager can send e-mail notifications for completed or failed jobs. Simply enter emails addresses into the supplied box separated by a semicolon “;”. Figure 6 on page 23 shows a sample of an e-mail notification. Table 5 above describes the options available in configuring notifications.

Figure 6: E-mail notification sample

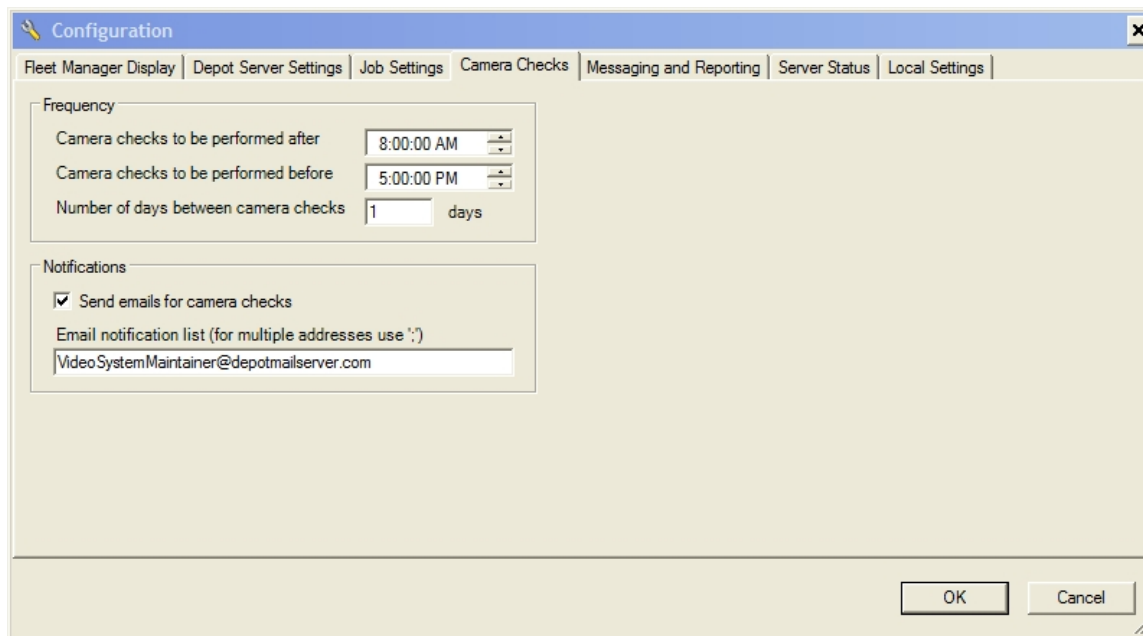
```
CCTV DOWNLOAD NOTIFICATION

Vehicle:          SMU-5223
Status:          CCTV BOOKING REQUEST COMPLETED
Archive type:    USER CCTV BOOKING REQUEST
Description:     DOWNLOAD TEST
From date:      04/09/2009 16:24:25
To date:        04/09/2009 16:29:25
Requested by:   QR-DEMO-VIEWER
Request date:   04/09/2009 16:39:44
Job started:    04/09/2009 16:39:44
Job completed:  04/09/2009 16:41:03
Transfer size:  413.38 Mb
Transfer time:  79 seconds
Transfer rate:  5358.177 Kb/sec (41.861 Mbit/sec)
Storage server: QR-DEMO-VIEWER
File name:      c:\CCTVData\SMU-5223\SMU-5223_U_20090904_162425_20090904_162925.dvs
Failed attempts: 0
```

Configuring camera testing

Fleet Manager can automatically download sample images from cameras attached to MobileView systems. This reduces camera testing and validation time. This feature is configured in the Camera Checks tab.

Figure 7: Camera Checks tab



Caution: For best image results, camera check times should be set for daylight hours. Camera check hours must progress from an earlier time to a later time.

Table 6: Camera Checks tab

Option	Description
Frequency	
Camera checks to be performed after	Specifies the time after which testing can be performed. The default setting is 8:00:00 a.m.
Camera checks to be performed before	Specifies the time after which testing stops. The default setting is 5:00:00 p.m.
Number of days between camera checks	Specifies the number of days between camera tests. The default setting is 1 day.

Option	Description
Notifications	
Send e-mails for camera checks	Notifies the e-mail recipient of the camera check activity.
E-mail notification list	List of e-mail address recipients.

Note:

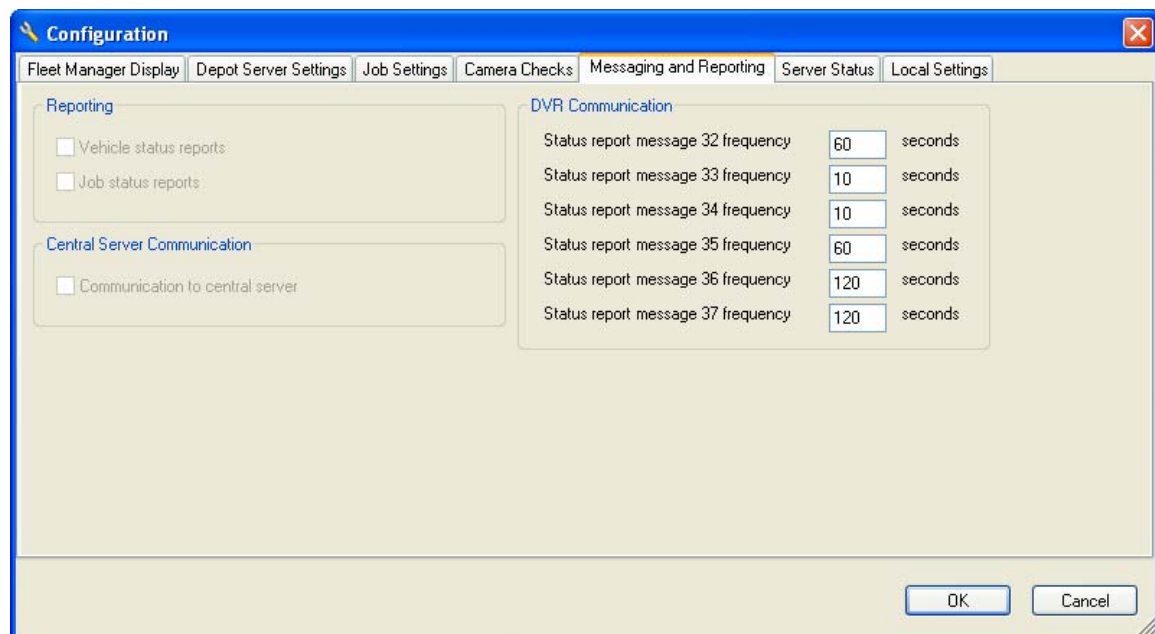
Camera checks occur between the specified times only while the MobileView is online to the AutoArchiver. Camera checks will not occur if the vehicle is offline during the specified times.

The email feature requires the AutoArchiver computer connect to a SMTP mail server. This configuration is explained in Table 4 on page 19.

Configuring messages and reporting

The Reporting and Central Server Communication settings shown on the Messaging and Reporting tab are read-only. If you need to change the settings, contact technical support. (See **“Contacting us”** on page 54.)

Figure 8: Messaging and Reporting tab



The variables under DVR communication control how often AutoArchiver polls the DVR fleet for specific information. Information is broken into different message types. Table 7 on page 26 provides a description for each message type.

Note: Each frequency variable has been set to yield the best performance in a broad range of environments. Changing these values may degrade system performance. Refer to Table 8 below for recommended default values.

Table 7: Status report message description

Number	Description
32	System voltages and temperatures
33	Analog/digital input/output status
34	DVR GPS location
35	Data storage status
36	General status (software version, serial ID, IP addresses, etc.)
37	Cumulative status report including average/minimum/maximum temperatures, shutdown reasons, and image/sound/GPS records recorded

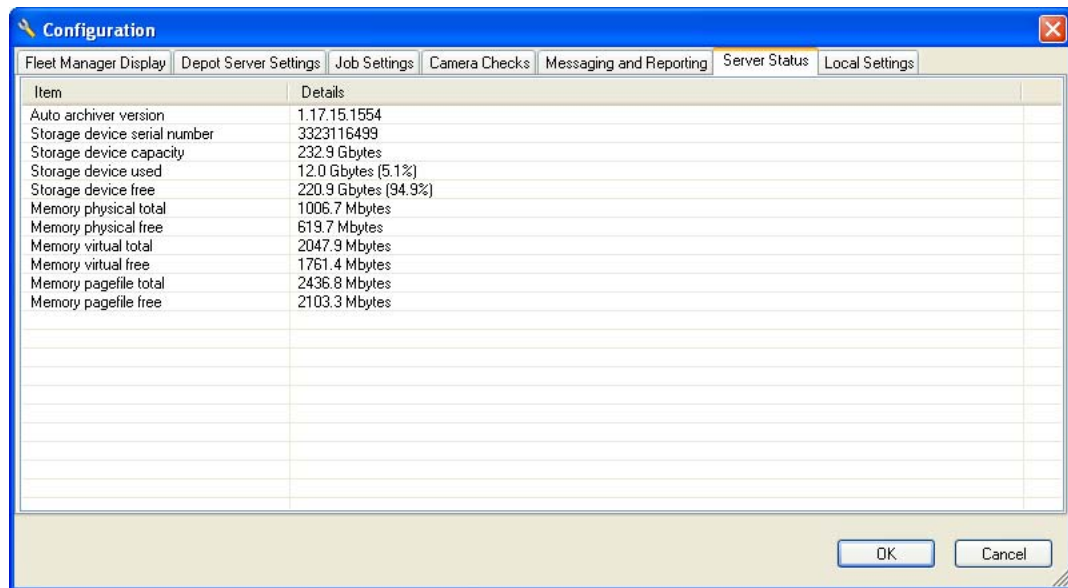
Table 8: Messaging and Reporting tab default values

Option	Description
Status report message 32 frequency	The default setting is 60 seconds
Status report message 33 frequency	The default setting is 10 seconds
Status report message 34 frequency	The default setting is 10 seconds
Status report message 35 frequency	The default setting is 60 seconds
Status report message 36 frequency	The default setting is 120 seconds
Status report message 37 frequency	The default setting is 120 seconds

Viewing server status data

The Server Status tab displays generic depot server settings. These values are read-only.

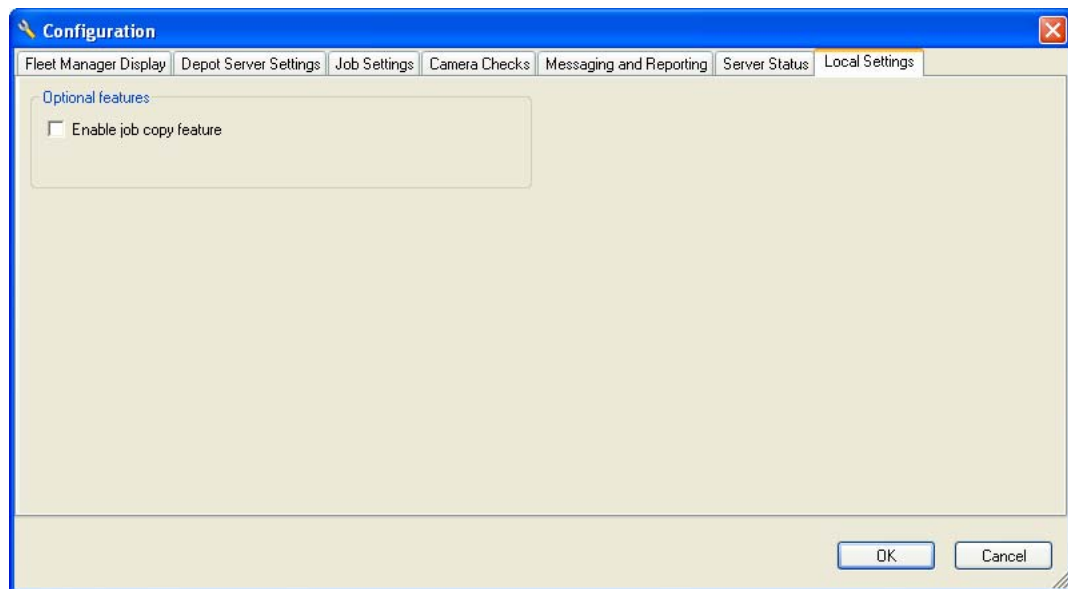
Figure 9: Server Status tab



Configuring local settings

The Local Settings tab gives you the option to copy completed jobs to your local PC or laptop directory.

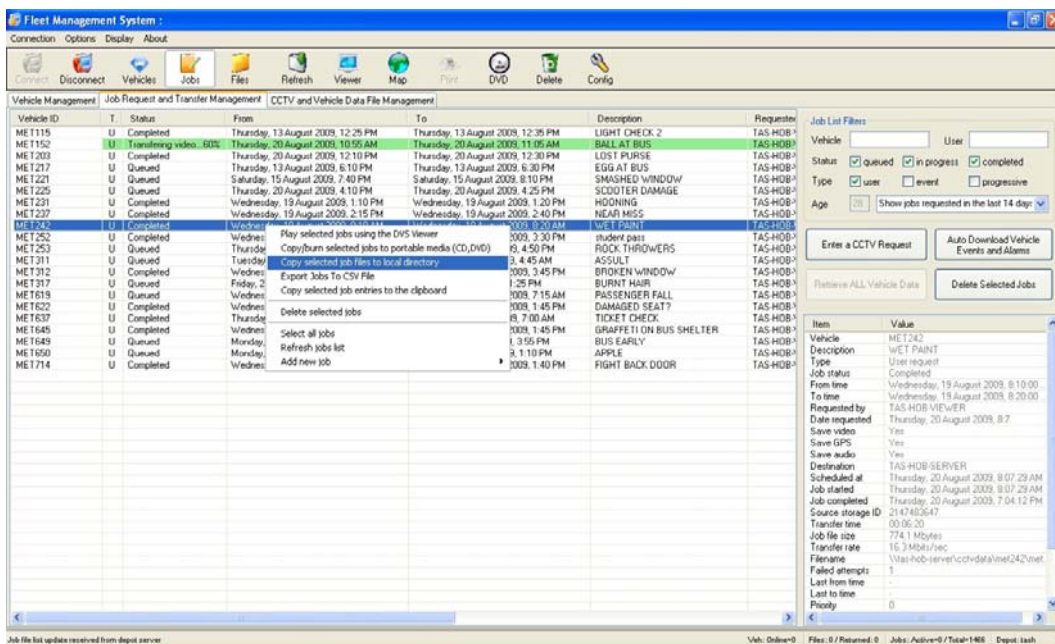
Figure 10: Local Settings tab



To enable job copy feature, check the “Enable job copy feature” check box.

To disable job copy feature, clear the “Enable job copy feature” check box.

Figure 11: Job Copy Feature



To access this feature once enabled, right-click on the selected job, and then click “Copy selected job files to local directory”, as shown in Figure 11 above.

Working with Fleet Manager

This section provides information about the Fleet Manager workspace and gives instructions for performing common tasks.

Managing vehicles

You can view the status of vehicles in your fleet, request event data or video, set up camera testing, and perform other tasks on the Vehicle Management tab (shown in Figure 12 on page 29).

Figure 12: Vehicle Management tab

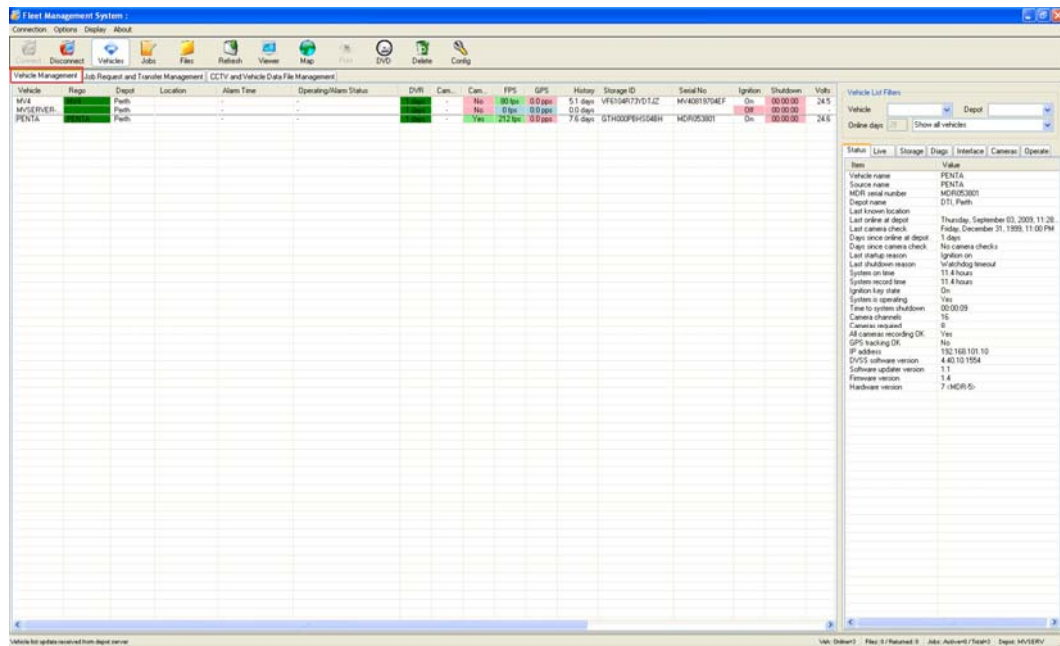


Table 9: Items displayed on the Vehicle Management tab

Item	Description
Vehicle	Displays the vehicle ID number.
Rego	Displays the vehicle registration or license plate number. (Frequently the same as the vehicle number described above.)
Depot	Identifies the depot (or garage) server to which the recorder is assigned.
Location	Indicates the vehicle's location within the depot. Available for DVRs with GPS units in garages where the parking sections are mapped. Maps are stored in the C:\Camera\Maps directory and only show the location of the DVR while in the depot.
Alarm Time	Displays the last time an alarm was triggered.
Operating/Alarm Status	Displays the operating or alarm status of the DVR unit.
DVR	Indicates the number of days since the DVR's last contact with the depot server.
Cam Check	Indicates the number of days since the last camera check.
FPS	Indicates the average, overall frames per second recorded by the DVR during the last reporting period.
GPS	Indicates the average of positions per minute recorded during the last reporting period. Positions per minute refers to the latitude and longitude coordinate updates provided to the GPS module.
History	Indicates number of days of video footage currently stored on the DVR.

Item	Description
Storage ID	Contains the serial number of the DVR's hard drive.
Serial No	Contains the serial number of the DVR.
Ignition	Indicates the on/off state of the vehicle ignition.
Shutdown	Indicates the length of time before the unit shuts down. This countdown timer activates when the vehicle ignition shuts off. If it's set to 00:00:00, the DVR is either already OFF or the ignition is still ON.
Volts	Indicates the minimum voltage recorded by the DVR during the past recording period.
Vavg	Indicates the average voltage recorded by the DVR during the past recording period.
Temp	Indicates the maximum temperature during the past recording period.
Tavg	Indicates the average temperature during the past recording period.
SW Vers	Indicates the software version running on the DVR.
Model	Contains the model number of the DVR.
Map	Indicates whether or not the DVR has position data and is displayed on the map.

How color is used to indicate status

Colored highlights are applied to cells in the Fleet Management System window to show how recently each DVR was online. Table 10 below shows how the highlighting is applied.

Table 10: Colored highlighting in the Fleet Management System window

Color	Most recent communication with DVR [1]
Dark green	Currently online
Light green	1 day ago
Light blue	2 to 4 days ago
Pink	4 or more days ago

[1] Except for dark green, the number of days in each color group can be changed. The color selection is not configurable. See "Last online filter colors" in Table 3 on page 17.

Vehicle shortcut menu

Additional Vehicle Management commands are available on a shortcut menu. To open the shortcut menu, right-click any vehicle.

Figure 13: Vehicle shortcut menu

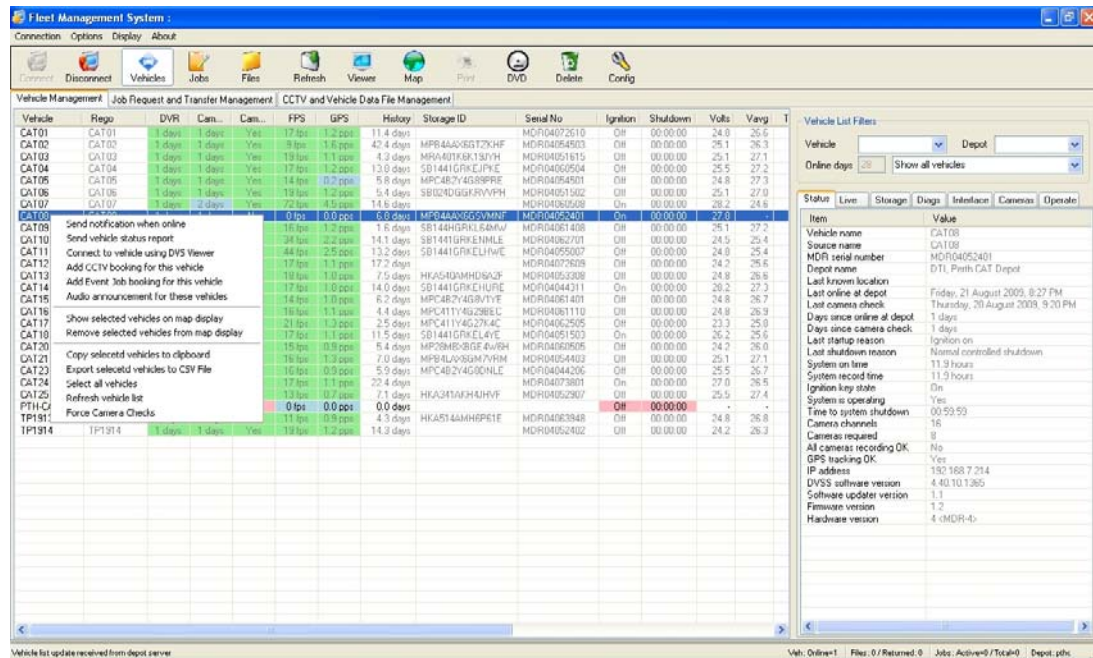


Table 11: Vehicle shortcut menu commands

Command	Description
Send notification when online	When the vehicle returns to the garage and connects to the depot server, an e-mail is automatically sent to the specified e-mail address.
Send vehicle status report	Sends a vehicle status report to the specified e-mail address. The report includes the most recent image of each camera stored on the server for the selected vehicle.
Connect to vehicle using DVS Viewer	Automatically launches Video Manager and connects to the selected vehicle to show live video data if the vehicle is at the garage and online.
Add CCTV booking to this vehicle	Opens the CCTV booking window for the selected vehicle.
Add event job booking to this vehicle	Opens the event job booking window for the selected vehicle.
Show selected vehicle on map display	Opens the map display window and shows the selected vehicle on the map. This requires map data for the respective area. All vehicles that have previously reported in with position data can be shown on the map display.

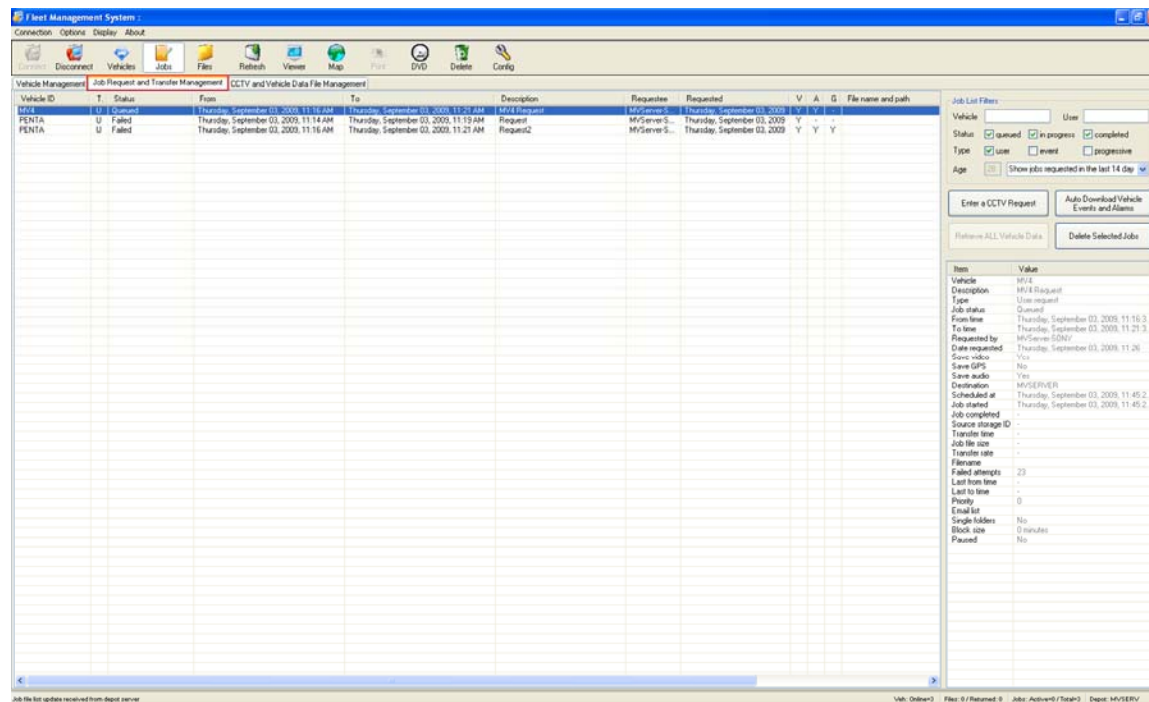
Command	Description
Remove selected vehicle from map display	Removes the selected vehicle from the map display window.
Copy selected vehicles to clipboard	Copies vehicle data for the selected vehicles to the Windows clipboard.
Export selected vehicles to csv file	Exports data for the selected vehicle to a file in csv format. The csv format can then be opened by Microsoft Excel for analysis.
Refresh vehicle list	Updates the vehicle list with the most current information.
Force camera checks	Forces a camera check on the selected vehicle. This function is useful during the commissioning of a bus to obtain an image of each camera for commissioning purposes.

Working with job requests and transfers

The Job Request and Transfer Management tab, shown below, displays the status of existing video and data requests. In addition to checking the status of existing requests, you can use the maintenance pane tab to:

- Request video footage
- Set up automatic download of vehicle event and alarm data
- Retrieve all vehicle data

Figure 14: Job Request and Transfer Management tab



Job request and transfer data is provided in both the management and maintenance panes. Since information in the maintenance pane is more complete, Table 12 below provides a description of each information item.

Table 12: Job Request and Transfer Management tab

Item	Description
Vehicle ID	Contains the vehicle ID number.
Description	Contains the archive description entered by the system operator when the download job was entered.
Type	Indicates the type of job request: <ul style="list-style-type: none"> • (U) user request = CCTV request • (A) auto/ event request = Autodownload vehicle events and alarms • (P) progressive request = Retrieve all Vehicle data
Job status	Indicates the status of the requested jobs. There are three statuses: <ul style="list-style-type: none"> • Queued = waiting for connection • In progress = transferring data • Completed = the job is done • Failed = job request failed
From time	The start date & time of the selected surveillance archive.
To time	The end date & time of the selected surveillance archive.
Requested by	Identifies the server or computer which requested the footage.
Date requested	Date and time the surveillance archive request was entered.
Save video	Indicates whether the surveillance archive contains video data. Shown as V in the management pane.
Save GPS	Indicates whether the surveillance archive contains GPS data. Shown as G in the management pane.
Save audio	Indicates whether the surveillance archive contains audio data. Shown as A in the management pane.
Destination	Identifies the depot server to which data will be downloaded.
Scheduled at	Indicates when the download is scheduled to take place.
Job started	Indicates when the job started.
Job completed	Indicates when the job was completed.
Source Storage ID	Serial number of the media from which the surveillance archive was downloaded.
Transfer time	Indicates the amount of time required to transfer the requested data from the vehicle to the server.
Job file size	Indicates the size (in bytes) of the job output file.
Transfer rate	Indicates the rate (in bytes/sec.) at which the data was transferred.
Filename	Identifies the surveillance archive filename and location as stored on depot server.

Item	Description
Failed attempts	Indicates how many failed attempts occurred during download.
Priority	Indicates the priority assigned to the request.

Requesting video footage

You can request video footage from a local or remote vehicle. The footage will be downloaded as soon as the vehicle returns to the depot and comes within range of the wireless network.

To request video footage:

1. Click “Enter a CCTV Request.” The User Data Request Form opens.
2. Enter the required information. See Table 13 below for information about the values required.
3. Click Add job.

Table 13: User Data Request Form details

Setting	Information required
Vehicle ID	This field is automatically populated with the vehicle ID from the select drop down box..
Select	Allows selection of the vehicle ID from a drop down box or direct entry into the select box. You can type the vehicle ID manually or select it from the list of available vehicles in the drop down box.
Description	Type a description of the footage for future reference.
From Time and To Time	Enter the beginning and ending times of the video segment being requested. To do this, click the arrow to open the calendar, and then select the date.
User name and password	Provide a user name and password for the system identified next to the “Enter details for:” entry. Credentials for the AutoArchiver computer are required if the checkbox “Autoarchiver Authentication” is selected. Otherwise, enter credentials for the DVR.
Save data	Select checkboxes next to “Save Video”, “Save Audio”, or “Save GPS” to save the identified data types. Clear the selection for undesired data types.
Schedule at	Click the up or down arrows to schedule a date and time for the download.
Destination	This the name of the destination server. It is not user configurable.

Setting	Information required
Priority	Select the download priority from the dropdown list. Setting download priority affects how the DVR reacts during the save process. Low has no effect. Medium temporarily reduces the DVR frame rate by half its normal setting. High reduces the DVR frame rate to 1 frame per second. (This setting works with MobileView 4 only.)
Channel filter	Enter channels from which to download data. For example, enter "1, 2" to download surveillance data from channels 1 and 2 only..
Frame filter	Enter the maximum frame rate of the saved surveillance file. This setting reduces the frame rate of each saved camera to the specified quantity in the saved file only. The setting does not change the frame rate on the DVR.
E-mail notification list	Enter the e-mail addresses of persons to be notified when the job is complete. Click the drop down to select a previously entered e-mail address from a list. Use a semicolon (;) to separate multiple e-mail addresses.

Requesting automatic download of event data and video

Fleet Manager allows automatic download and update of several data types. These are listed below.

- Log files
- Camera checks
- Health & Status
- Video footage placed in the vehicle's archive space

Download of all the above items are automatically enabled when the Auto Download Vehicles Event and Alarms form is completed. (See **Table 14** on page 36.)

Note: Recorder status and health information will not be shown unless an auto download event is configured for the recorder.

To configure automatic downloading:

1. Click Auto Download Vehicle Events and Alarms. The Event Archive Auto-Download Request Form opens.
2. Enter the required information. See Table 14 on page 36 for information about the values required.
3. Click Add job.

Table 14: Event Archive Auto-Download Request Form details

Setting	Information required
Vehicle ID	This field is automatically populated with the vehicle ID from the select drop down box.
Available	Allows selection of the vehicle ID from a drop down box or direct entry into the select box. You can type the vehicle ID manually or select it from the list of available vehicles in the drop down box.
Description	Enter a description of the footage for future reference.
Leave archive on vehicle	Select this checkbox to leave the archive on the vehicle after it has been automatically downloaded. This box is normally deselected.
User name and password	Provide a user name and password for the system identified next to the "Enter details for:" entry. Credentials for the AutoArchiver computer are required if the checkbox "Autoarchiver Authentication" is selected. Otherwise, enter credentials for the DVR.
Destination	Enter the destination for the download.
E-mail notification list	Enter the e-mail addresses of anyone you want notified. Separate each address with a semicolon (;).

Note: Recorder status and health information will not be shown unless an auto download event is configured for the recorder.

Managing CCTV and vehicle data files

The CCTV and Vehicle Data Management tab displays the status of CCTV download requests.

Figure 16: Fleet Manager Viewer



Notes:

- If Video Manager is already open, it must be closed before clicking the Viewer button.
- If Fleet Manger is being run on the depot server, Video Manager will not launch.
- CCTV requests transfer a large amount of data. Network bandwidth limitations may affect the playback performance. If this occurs, use the “Copy selected job entries to local directory” feature to make a local copy of the file for playback.

Fleet maintenance

The Maintenance pane occupies the right side of the Fleet Management System window. When you select the Vehicle Management tab, the maintenance pane shows the details about the selected vehicles on a series of seven tabs. These are:

- Status
- Live
- Storage
- Diagnostics

- Interface
- Cameras
- Operate

Details about each tab are given below.

Viewing information about fleet DVRs

The Status tab in the maintenance pane displays operational and maintenance information about fleet DVRs.

Figure 17: Status tab

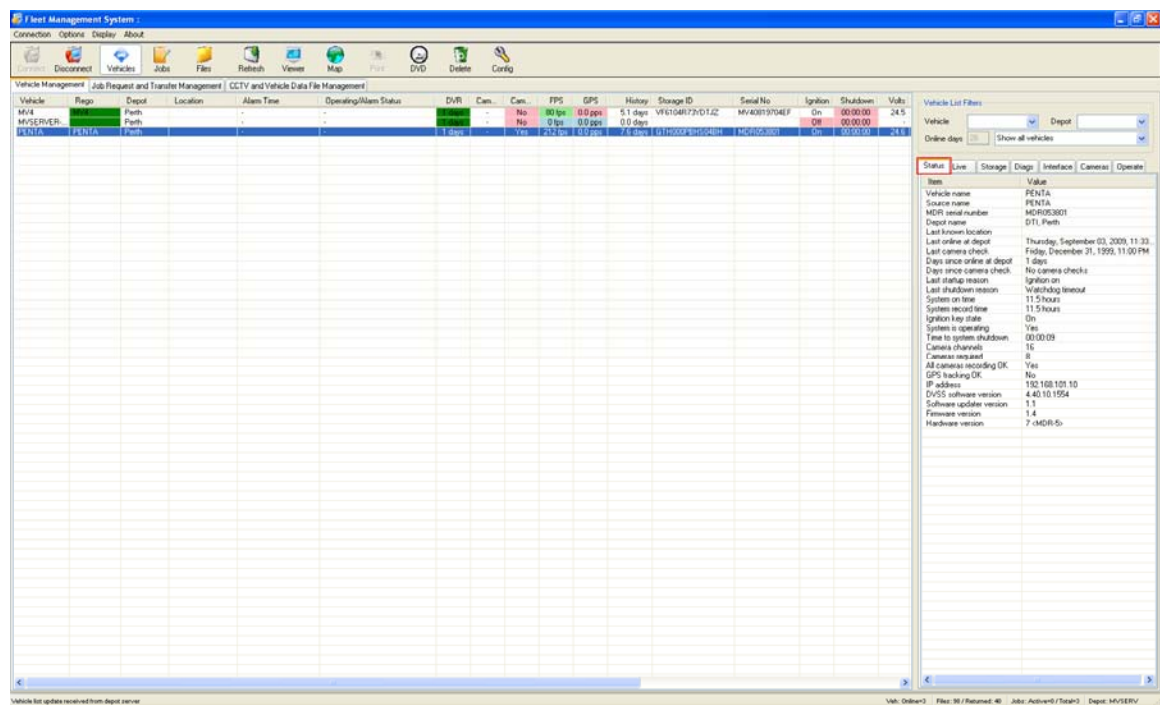


Table 15: Status tab — information on DVRs

Item	Description
Vehicle name	Contains the vehicle ID number.
Source name	Contains the registration or license plate number of the vehicle which may be the same as the vehicle number.
MDR serial number	Contains the serial number of the recorder. MDR is a generic mnemonic meaning Mobile Data Recorder.
Depot name	Identifies the depot (or garage) that has been selected.

Item	Description
Last known location	Indicates the vehicle's location within the garage. (Available for DVRs with GPS units in garages where the parking sections are mapped.)
Last online at depot	Contains the date of the DVR's last contact the depot server.
Last camera check	Contains the date of the DVR's last camera check.
Days since online at depot	Indicates the number of days since the DVR's last contact with the depot server.
Days since camera check	Indicates the number of days since the last camera check.
Last startup reason	Indicates the circumstance of the DVR's most recent startup.
Last shutdown reason	Indicates the circumstance of the DVR's most recent shutdown.
System on time	Indicates number of hours that the DVR was on before connecting to the depot server.
System record time	Indicates number of hours recorded before the DVR was connected to the depot server.
Ignition key state	Indicates the last known on/off state of the vehicle ignition key.
System is operating	Indicates the system operating state during its last communication with the depot server.
Time to system shutdown	Indicates the length of time after ignition shutoff until the DVR turns off.
Camera channels	Contains the number of camera channels on the DVR.
Cameras required	Contains the number of cameras configured for the DVR.
All cameras recording OK	Indicates the current status of the cameras connected to the DVR.
GPS tracking OK	Indicates the current status of the GPS.
IP address	Contains the IP address of the DVR.
DVSS software version	Contains the software version of the DVR application.
Software updater version	Contains the version of the DVR software updater.
Firmware version	Contains the DVR firmware version.
Hardware version	Contains the DVR hardware version.

Live vehicle GPS data

For DVRs with GPS installed and enabled, the Live tab gives information useful for locating a vehicle, such as the vehicle's location, speed, and direction of travel during its most recent communication with the depot server.

Figure 18: Live tab

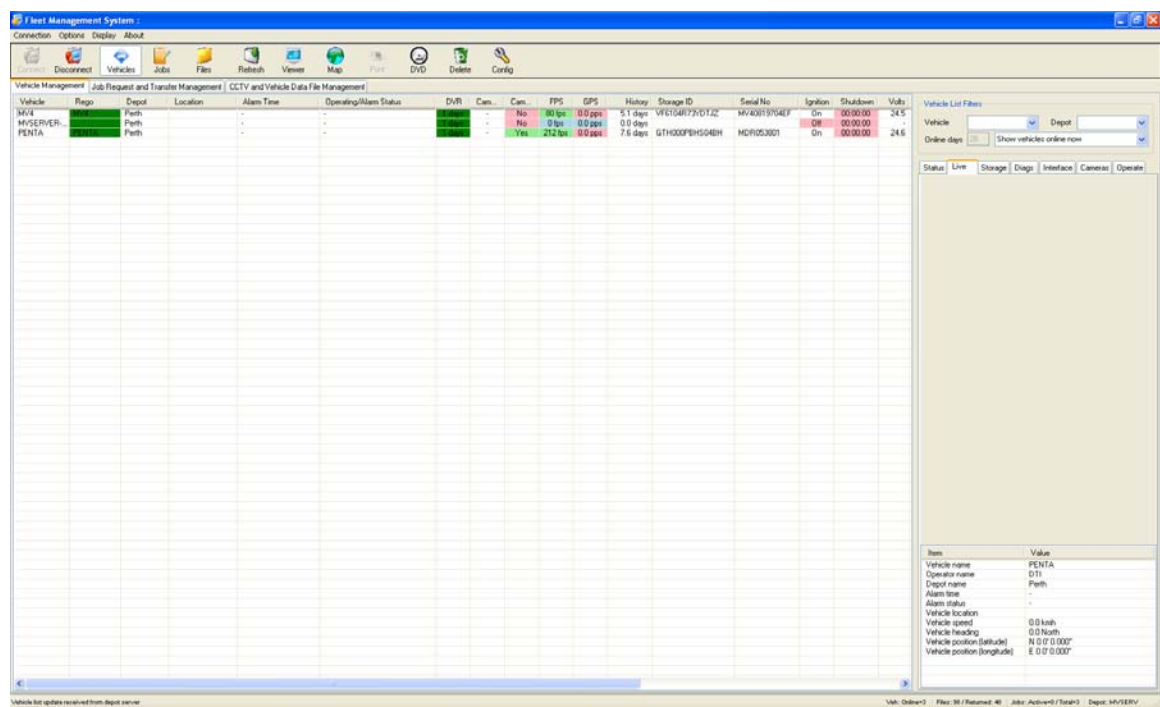


Table 16: Live tab — vehicle GPS data

Item	Description
Vehicle name	Contains the vehicle number.
Operator name	Contains the corporation name registered in the AutoArchiver.
Depot name	Identifies the depot server.
Alarm time	Contains the date of the last alarm activation.
Alarm status	Indicates whether or not the alarm is activated.
Vehicle location	Indicates the vehicle's location within the garage. (Available for DVRs with GPS units in garages where the parking sections are mapped.)
Vehicle speed	Contains the speed at which the vehicle was traveling during its last communication with the depot server.
Vehicle heading	Contains the vehicle's direction of travel during its last communication with the depot server.
Vehicle position (latitude)	Contains the vehicle's latitude during its last communication with the depot server.
Vehicle position (longitude)	Contains the vehicle's longitude during its last communication with the depot server.

Data storage on fleet DVRs

The Storage tab displays information about data storage on the fleet DVRs.

Figure 19: Storage tab

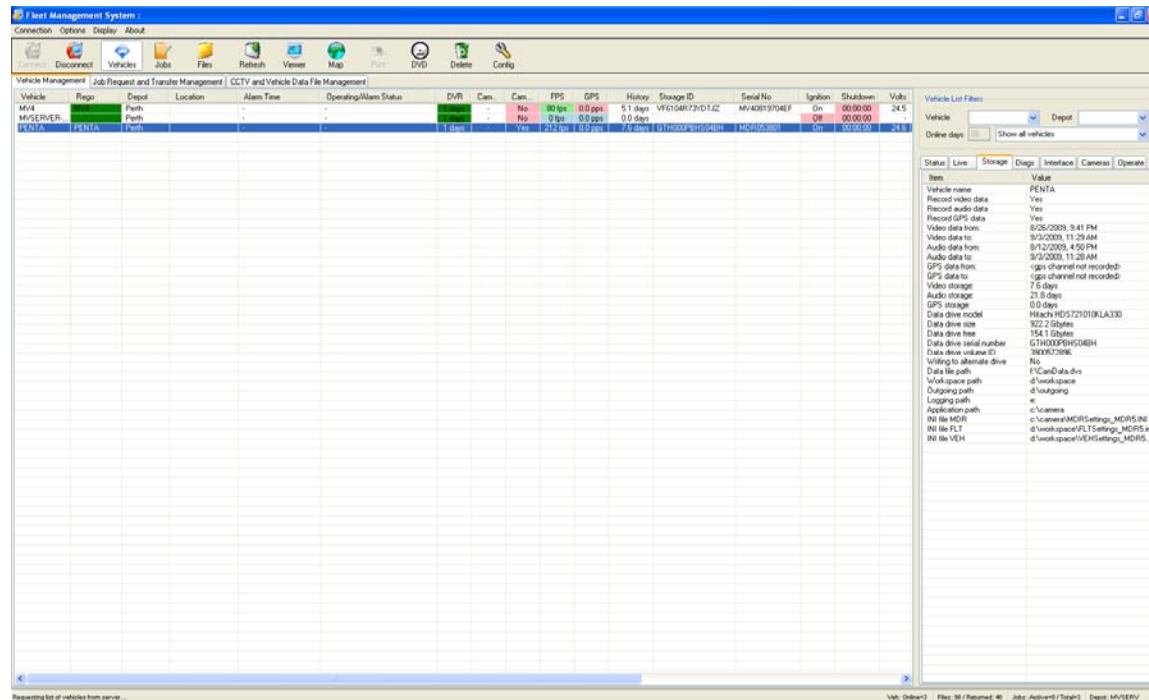


Table 17: Storage tab — data storage on DVRs

Item	Description
Vehicle name	Contains the vehicle number.
Record video data	Indicates whether video is being recorded.
Record audio data	Indicates whether audio is being recorded.
Record GPS data	Indicates whether GPS is being recorded.
Video data from	Contains the earliest date of the video data.
Video data to	Contains the latest date of the video data.
Audio data from	Contains the earliest data of the audio data.
Audio data to	Contains the latest date of the audio data.
GPS data from	Contains the earliest date of the GPS data.
GPS data to	Contains the latest date of the GPS data.
Video storage	Indicates the number of days of video storage currently stored on the DVR.

Item	Description
Audio storage	Indicates the number of days of audio storage currently stored on the DVR.
GPS storage	Indicates the number of days of GPS storage currently stored on the DVR.
Data drive model	Contains the model of the DVR's hard drive.
Data drive size	Contains the size of the DVR's hard drive.
Data drive free	Contains the amount of free space on the DVR's hard drive.
Data drive serial number	Contains the serial number of the DVR's hard drive.
Data drive volume ID	Contains the volume ID of the hard drive.
Writing to alternate drive	Indicates whether the DVR is storing data on an alternate drive.
Data file path	Contains the file path to the DVR's data file.
Workspace path	Contains the workspace path within the DVR.
Outgoing path	Contains the path for outgoing data within the DVR.
Logging path	Contains the path to where log files are stored within the DVR.
Application path	Contains the path to where the application within the DVR is located.
INI file MDR	Contains the path to where the MDR INI file is located within the DVR.
INI file FLT	Contains the path to where the FLT INI file is located within the DVR.
INI file VEH	Contains the path to where the VEH INI file is located within the DVR.

Diagnostics

The Diagnostics (Diags) tab displays alarm status and vehicle speed, direction, and location.

Figure 20: Diagnostics tab

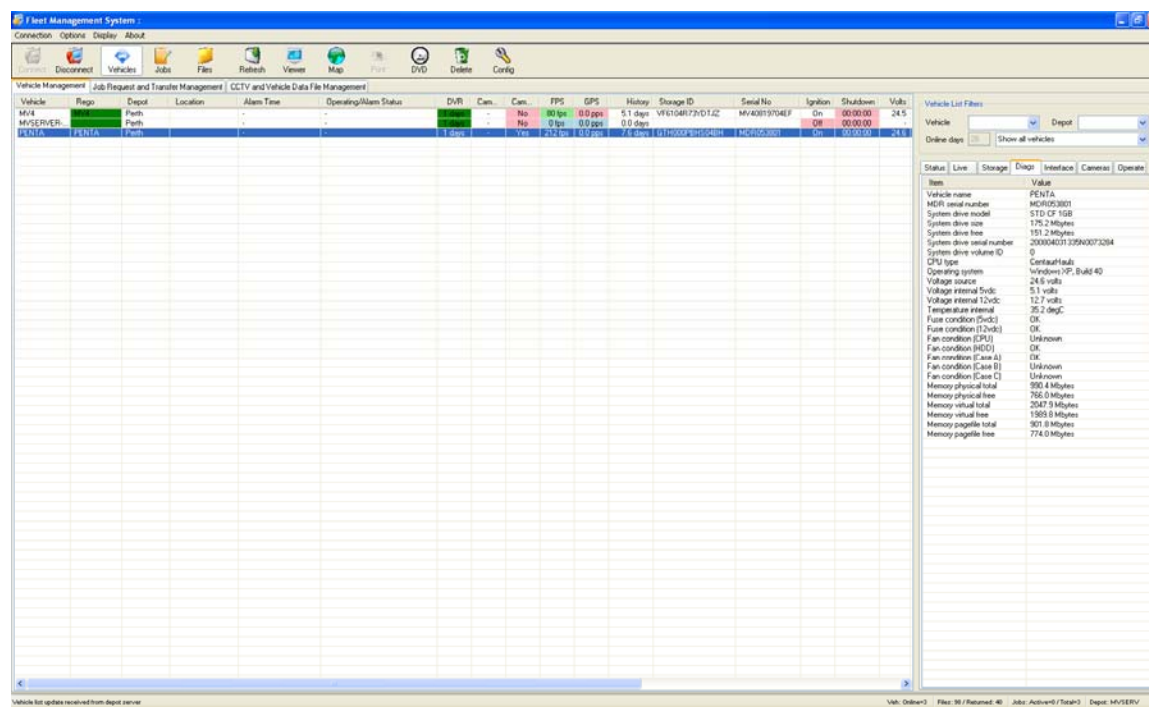


Table 18: Diagnostics tab — alarm status and vehicle speed, direction, and location

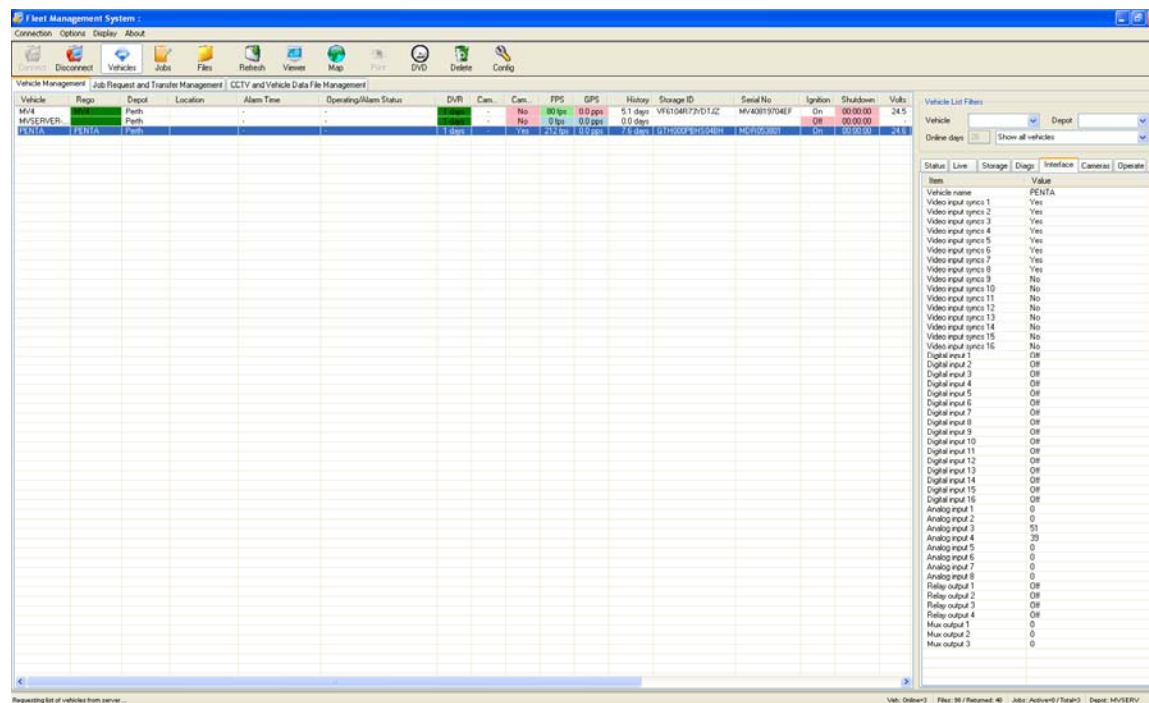
Item	Description
Vehicle name	Contains the vehicle ID number.
MDR serial number	Contains the serial number of the MDR/DVR. MDR is the low-level name for the DVR Mobile Data Recorder.
System drive model	Identifies the model of the drive on the depot server that contains the operating system and applications .
System drive size	Contains the size of the DVR’s drive.
System drive free	Indicates the amount of free space remaining on the drive.
System drive serial number	Contains the drive’s serial number.
System drive volume ID	Contains the drive’s volume ID.
CPU type	Contains the DVR’s CPU type.
Operating system	Contains the DVR’s operating system type and build.
Voltage source	Contains the DVR’s input voltage during the last communication with the depot server.

Item	Description
Voltage internal 5 VDC	Contains the voltage of the internal 5 V power supply during the DVR's last communication with the depot server
Voltage internal 12 VDC	Contains the voltage of the internal 12 V power supply during the DVR's last communication with the depot server.
Temperature internal	Contains the DVR's internal temperature during the last communication with the depot server.
Fuse condition (5vdc)	Contains the condition of the DVR's 5 V power out fuse.
Fuse condition (12vdc)	Contains the condition of the DVR's 12 V power out fuse.
Fan condition (CPU)	Contains the condition of the DVR's CPU fan.
Fan condition (HDD)	Contains the condition of the DVR's HDD fan.
Fan condition (Case A)	Contains the condition of the DVR's case A fan. This applies only to MobileView PENTA.
Fan condition (Case B)	Contains the condition of the DVR's case B fan. This applies only to MobileView 4.
Fan condition (Case C)	Contains the condition of the DVR's case C fan. This applies only to MobileView 4.
Memory physical total	Contains the DVR's total physical memory.
Memory physical free	Contains the DVR's free memory.
Memory virtual total	Contains the DVR's total virtual memory.
Memory virtual free	Contains the DVR's free virtual memory.
Memory pagefile total	Contains the DVR's total memory page file size.
Memory pagefile free	Contains the DVR's free memory page file size.

Viewing the DVR interface settings for fleet vehicles

The Interface tab displays the interface settings applied to the selected DVR during its last communication with the depot server. This tab lets you view the settings of the DVR's video, analog, digital, and multiplexer inputs.

Figure 21: Interface tab

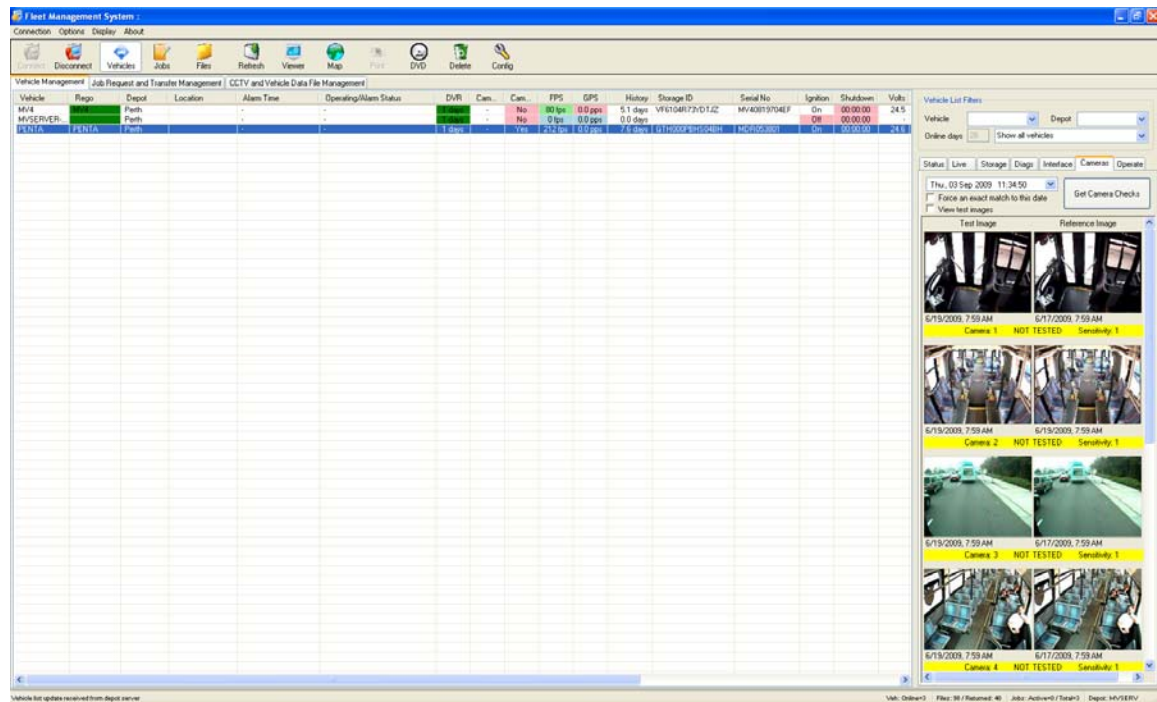


Viewing test images from fleet DVRs

The cameras tab provides a side-by-side comparison of recent camera images from the selected DVR against previously established reference images. This time saving feature provides a centralized means of checking whether a camera image has changed to an unacceptable degree.

Camera image updates, called test images, can be obtained up to a maximum of once per day when the DVR is online to the depot server. If an image has changed, historic query of past test images helps identify when the change occurred. This can aid with investigations if the change was vandal related.

Figure 22: Cameras tab



Fleet Manager provides a means of updating a camera's reference image if the camera has been replaced or its field of view changed.

Update a reference image:

1. Select the DVR to be checked.
2. Select the cameras tab in the maintenance pane
3. Select the date containing the desired reference image.
4. Click "Get camera checks".

The current reference and test image for the selected date will display.

If the selected date does not have a test image, the latest available image before the selected date will be displayed.

If the selected date does not have a test image and "Force an exact match to this date" is checked, an error will display indicating no information is available on the specified date.

5. Double-click any image to expand it.
6. Clicking the "Set as Reference" box will update the current image to be the reference image.

If camera check testing was selected during AutoArchiver installation, the user may check test results of a test from a particular date.

To check a camera for alignment, focus, and graffiti:

1. Select the DVR to be checked.
2. Select the cameras tab in the maintenance pane
3. Select the date containing the desired reference image.
4. Check the “View test images” box
5. Click “Get camera checks”.

The current reference and test image for the selected date will display.

If the selected date does not have a test image, the latest available image before the selected date will be displayed.

If the selected date does not have a test image and “Force an exact match to this date” is checked, an error will display indicating no information is available on the specified date.

6. Double-click any image to expand it.
7. Use the scroll bar to check test results from each camera configured on the vehicle. Results are color coded per Table 20 below.

Notes

- Camera test checks occur with the same frequency as camera checks and the features are interdependent.
- Camera test checks are available only if the vehicle was within range of the wireless network during the hours specified in the configuration.
- For information on configuring camera check frequency and times, see “Configuring camera testing” on page 24.

If the “View test images” box is checked, the image columns may display “ghost” images. This is due to the algorithm averaging the images and is normal.

Table 19: Camera check status color description

Color	Description
Green	Camera check was successful.
Red	Camera check was unsuccessful. This indicates the image comparison made by the algorithm did not match. This does not necessarily mean that the camera is not working. The camera test only determines if there are major differences between the two images.

Ghost images

On a daily basis, the DVR generates multiple test images for each camera on a vehicle. These are sent to the AutoArchiver for camera checks. Before the AutoArchiver executes the camera check test algorithm, it gathers all the images for a vehicle on a given day and averages them into one image. The blended image may have ghost images. This averaged image removes unwanted artifacts that can cause false positives. The AutoArchiver generates the averaged image after all the individual images for the current day have been received.

Modifying a reference image or hotspot

Fleet Manager allows user to define the specific image area the camera check test function compares. This fine tuning helps eliminate section of the image that are known to change. Examples are windows and seats.

To modify an existing reference image or set a hotspot:

1. After conducting a camera check and setting a reference image, double-click the image that will have a comparison area defined. A Camera Check Settings dialog box displays as shown in the figure below.



2. Modify the comparison sensitivity level. Experimentation is required to find an optimum setting. The range is 1 (lowest) to 10 (highest). Starting with a sensitivity level of 1 (default) is recommended.
3. Place the mouse within the image and define a reference region. The region will be the area checked by the comparison algorithm.



4. Click Set as Reference. This will set a new reference image for future camera checks and tests.
5. Click Close to exit the screen.

Viewing the status of a DVR during its latest communication

The Operate tab displays information about the status of a selected DVR during its last communication with the depot server.

Figure 23: Operate tab

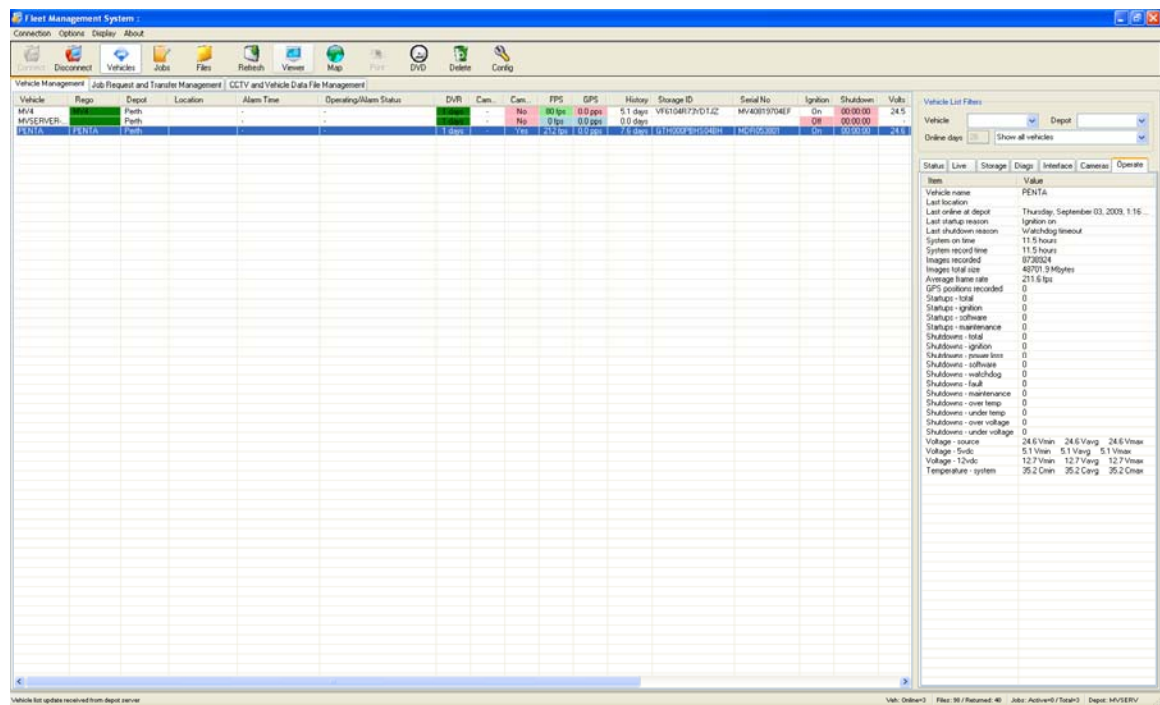


Table 20: Operate tab

Item	Description
Vehicle name	Contains the vehicle number.
Last location	Contains the location of the vehicle when it last communicated with the depot server.
Last online at depot	Contains the last time that the DVR communicated with the depot server.
Last shutdown reason	Contains the reason for the last shutdown of the DVR.
System on time	Contains the amount of time that the DVR system has been on at the time the DVR last communicated with the server.
System record time	Contains the amount of time that the DVR system has recorded at the time the DVR last communicated with the server.
Images recorded	Contains the number of images recorded in the last recording period.
Images total size	Contains the size of the images recorded during the last recording period.
Average frame rate	Contains the average recording period in the last recording period.
GPS positions recorded	Contains the number of GPS positions recorded during the last recording period.

Item	Description
Startups	Contains the total number of startup events, plus individual totals for ignition, software, and maintenance startups.
Shutdown	Contains the number of shutdowns, including the ignition, power loss, software, watchdog, fault, maintenance, over temperature, under temperature, over voltage, under voltage, and total.
Voltage source	Contains the input voltage to the DVR for the last recording period, including the minimum, average, and maximum.
Voltage 5 VDC	Contains the voltage of the 5 V supply for the last recording period, including the minimum, average, and maximum. This setting is not used.
Voltage 12 VDC	Contains the voltage of the 12 V supply for the last recording period, including the minimum, average, and maximum.
Temperature - system	Contains the temperature of the DVR for the last recording period, including the minimum, average, and maximum.

Chapter 4

Troubleshooting and support

Summary

This chapter provides information to help you troubleshoot problems and contact technical support in case you need assistance with your equipment.

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Troubleshooting

Failure	Possible reasons
Job request failure.	Wrong user name and password. Ensure that you have the correct user name and password.
Autodownload job request failure.	<p>When entering autodownload jobs and the AutoArchiver authentication box is checked, the system authenticates with the server. If the user does not exist on the server with administrator rights, the system ignores the autodownload job.</p> <p>Ensure the following:</p> <ul style="list-style-type: none"> • Date and time are set correctly on the server and client initiating the request. • Create autodownload jobs directly from the server. • Check the AutoArchiver authentication box. • Use the AutoArchiver user account to create the job. • Ensure that you do not create more than ten auto download jobs at a time.
No vehicles are displaying in the main window when searching for vehicles.	Make sure the Vehicle box in the Vehicle List Filters area of the Vehicle Management tab is clear of any characters, including blank characters.

Contacting us

For help installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact us during business hours (Monday through Friday, excluding holidays, between 5 a.m. and 5 p.m. Pacific Time).

Technical support

North America

T 1 888 437.3287 (Toll-free in the US, Puerto Rico, and Canada)

Note: Be ready at the equipment before calling.

Online resources

Here are some useful links on our website www.interlogix.com.

Link	Description
Warranty and terms information	From the Customer Support menu, select Return and Warranty Policy Statement or Sales Terms and Conditions.
Customer service and technical support	From the Customer Support menu, select Customer Service or Technical & Application . Select the appropriate product category for the contact information or use the menu to select a location outside the US.

Many UTC Fire & Security documents are provided in English only as PDFs. To read these documents, you will need Adobe Reader, which you can download free from Adobe's website at www.adobe.com.

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