The WatchGuard DV-1 is the industry standard digital in-car video system that records onto rewritable DVD-Video discs that play on computers and regular DVD players.

**SIMPLE TO USE SIMPLE TO MANAGE**

- Real-time, Direct to DVD-Video
- Plays on PCs and Standard DVD Players
- No Transfer Steps - No Server Computers
- Integrated Automotive Hard Drive
- Records Up to 8 Hours per Disc
- Full Error Correction Ensures Perfect DVDs
- Record-After-the-Fact (Patent Pending)
- New, High Performance WDR Camera
- New, High Fidelity Wireless Microphone
- All-in-One Overhead Mounting

An Optional 2-Piece Modular Version is Also Available
**SIMPLE**

- The Easiest System to Use and Manage
- Zero Transfer Steps
- No Back-Office Computers or Equipment
- Graphical User Interface
- Highly Automated with Minimal Officer Interaction
- No IT Staff Required

**TRUE STAND-ALONE SIMPLICITY**

Because the DV-1 does not need server computers or infrastructure, its total cost of ownership is considerably less than server-based solutions. Never be crippled by problems with servers, software, wireless access points, network issues, or be dependant on IT support.

**SIMPLE OPERATION**

Using the DV-1 is incredibly easy. Most officers will be able to operate the system with little to no training.

- Full graphical user interface
- Backlit direct access keys provide both tactile and audible feedback
- Informative screens and dialog boxes
- Logical layout and operation

**DVD-VIDEO DISCS**

- Plays on Regular DVD Players
- Records up to 8 Hours per Disc
- Automatic Chapter & Menu Creation
- Rewriteable with No Quality Loss
- Embedded Encryption
- Error Correction Ensures Perfect Discs

**CHAPTER MENU**

Recorded events are automatically divided into selectable chapters with thumbnail previews, time/date stamp, officer name and event tags.
DUAL DRIVE DESIGN
DVD + HARD DRIVE

**RECORD-AFTER-THE-FACT™**
Go back in time (up to several days) to recover background recorded video from the hard drive that turned out to be important.

**AUTOMATIC DISC OVERFLOW**
If a DVD fills to capacity, overflow video is stored on the hard drive and is automatically burned onto the next DVD inserted.

**AUTOMATIC DVD BACKUP**
The last 6 DVDs are automatically backed up on the hard drive in case a DVD is lost or destroyed.

**PRE/POST EVENT RECORDING**
Up to 10 minutes of pre-event or post-event video is automatically added.

**SIMULTANEOUS RECORD AND PLAYBACK**
Play back previously recorded video while still recording new video.

**SOPHISTICATED - IT NEVER SKIPS! NEVER HAS. NEVER WILL.**
The spring-loaded, silicone-oil dampened, suspension system isolates the DVD drive from 99.2% of shock and vibration (125:1 peak G-force reduction). In addition, error correction ensures perfect recordings under all conditions.

**TRUE AUTOMOTIVE GRADE DRIVE**
Not your typical hard drive: -40°C - +85°C (-22°F - +185°F) and 200 G Shock Tolerance
(Utilizes the same ruggedized hard drives used in 2012 BMW, Ford & Toyota vehicles)

**NEW CAPABILITIES**

**PRE-EMPTIVE DVD REMAPPING**
Automatically detects scratches and media defects and writes around defective areas
Virtually eliminates media errors and the need to replace discs
Performs well with almost any DVD+RW media

**FULL ERROR CORRECTION**
Automatically reads and corrects all write errors to create perfectly playable DVDs every time
The WatchGuard DV-1 is the only law enforcement product in the world that can reliably create standard video DVDs in a moving vehicle in real-time.

**WatchGuard DV-1**
The only law enforcement product in the world that can reliably create standard video DVDs in a moving vehicle in real-time.
Never Miss Recording Something Important Again!
Remember all the times you wished your old camera was recording, but it wasn’t?
With the WatchGuard DV-1 you never have to worry if the camera is recording, or not, when something important happens - because it’s always recording to the hard drive.
- Video is continuously recorded (buffered) to the hard drive (often called “Background Recording”)
- The background recorded video is automatically overwritten after several days of operation
- Regular recorded (triggered) events are burned to the DVD
- When something important happens, that was not part of a regular recording, simply define a new event by inputting a new start and stop point
- The new Record-After-the-Fact event video will be burned onto the DVD

Record-After-the-Fact™...
It’s the Ultimate Safety Net!
Record-After-the-Fact Ensures You Always Have Video When You Need it Most.
- Vindicates officers
- Provides crucial video for investigations
- Can be the key piece of evidence to make your case
Real RATF™ Stories from Agencies Who Use DV-1™

Michigan – September, 2008

A Deputy was responding to a domestic disturbance call, when a 41 year old man came out of his house wielding a golf club. After the suspect began to attack the Deputy with the golf club, the Deputy was forced to shoot and kill the suspect.

The Deputy’s WatchGuard DV-1 was not actively recording during the incident, however, the attack and shooting were captured on the DV-1’s hard drive. Record-After-the-Fact video was created after the shooting and, once the video was reviewed by the County Prosecutor, the Deputy was cleared of any wrong doing.

Oregon – September, 2010

A State Trooper and a local Police Officer responded to a report that there was a man matching the description of a robbery suspect walking toward the city limits. When the two officers arrived at the location and attempted to make contact with the suspect, the suspect pulled out a handgun. The Trooper responded by firing three shots, wounding the suspect.

Both of the patrol vehicles had in-car camera systems, but neither system was activated to record during the incident.

During the investigation that followed, a Detective in the State Police learned that the local Police car was equipped with a WatchGuard DV-1 that included Record-After-the-Fact technology.

“I was able to input the date and time of the incident, extract the video from the system and burn the video directly to disc right there in the patrol car. The video quality was very good and ultimately the video became the most important piece of evidence in the case. In fact, the County District Attorney’s Office announced that the use of force was justified within 24 hours of viewing the video.

It is worth mentioning that the State Police patrol car that was on scene was also equipped with a (competitor’s) in-car video system but it failed to capture the incident. In fact it became clear that only a video system with a continuous running feed would have captured the event.”

Massachusetts – December, 2009

While investigating a series of 15 arson fires (one of which resulted in a double homicide), local Police determined that one of their WatchGuard DV-1 cameras had inadvertently captured a man (who was later identified as a suspect) getting into his car near one of the fires. They were able to use Record-After-the-Fact video to disprove the suspect’s alibi in which he claimed he had been watching a movie with a friend at the time of the fire. The video evidence was instrumental in getting a confession and the suspect was later indicted on 42 charges, including two counts of murder.

Point of Interest: In 2012, the State Police became a new WatchGuard DV-1 customer and purchased close to 300 WatchGuard DV-1s to replace the competitor’s systems.
NEW, HIGH PERFORMANCE
WDR FRONT CAMERA
(WIDE DYNAMIC RANGE)

DUAL SCAN WDR TECHNOLOGY
The new, dual-scan WDR camera technology dramatically improves
nighttime video quality by using two different exposures for every frame
of video.

CHOOSE YOUR
CAMERA PACKAGE

SEPARATE CAMERAS
• Compact Front WDR Zoom Camera
• Separate IR Backseat Color Camera

AUTOMATIC NIGHT MODE
The front camera detects night conditions and
optimizes the camera settings automatically.

SPLIT SCREEN DISPLAY
The DV-1 can simultaneously record and
display any 2 cameras.
(3 Cameras Can Be Connected)

COMBINATION CAMERA
(2 Cameras in 1 Housing)
• Front WDR Zoom Camera
• Integrated IR Backseat Color Camera
NEUER, HIGHELEISTUNG
WIRELESS MICHERPHONE
HEAR WHAT YOU’VE BEEN MISSING!

NEAR CD AUDIO QUALITY
3x Better Frequency Response

1-2 MILES OF RANGE (LINE OF SIGHT)
Maintain Audio Through Buildings (High Power, 900 MHz)

EXTRAORDINARY BATTERY LIFE
1 Week of Typical Use on a Single Charge

Advanced Technology
Uses a high power industrial radio modem instead of cordless telephone technology

High Fidelity Sound
More lifelike sound, improves the intelligibility of speech

Built-in AGC (Automatic Gain Control) Processor
Helps eliminate distortion

Solid State MEMs Microphone Sensor
Higher sensitivity and frequency response

High Performance Internal Fractal Antenna
Helps achieve 1-2 miles of range

1ST AND ONLY HIGH FIDELITY MIC FOR LAW ENFORCEMENT

iPod Battery
Uses the exact same Lithium Polymer rechargeable battery and connector used in the iPod Classic

Continuous Talk Time
12-30 Hours (it depends upon distance)

Intelligent Standby
2-25 Days (Patent Pending)

Recharge Time
2.5 Hours (charges whether it’s turned off or left on)

Typical Usage
1 Week (from a single charge)
(2 hours of active recording per day)

Backlit LCD Status Display

Includes 2 Clips
Rotatable Alligator Clip
Duty Belt Clip

Rubber-Overmolded corners protect the mic if it’s dropped

Built-in Acoustic Foam Wind Barrier

The spring loaded slider switch can manually activate the mic or temporarily mute the audio
WatchGuard’s Fleet Manager is a Windows based software tool designed to help you easily configure and manage a fleet of DV-1 systems.

**CONFIGURATION CD**
Provides the ability to quickly create a Configuration CD.

- Officer Names
- Department Name
- Vehicle ID
- Setup Event Tags
- Recording Properties
- All System Settings

This CD is then loaded into the DV-1 to populate all names and settings in just seconds.

All of the configurations for all DV-1s in your fleet can be saved on a single CD.

**EVENT TAGS**
An event tag is information that is associated with a video recording that can be used to identify or classify recorded events. After a recording, the DV-1 can prompt the officer to answer any event tag questions that are configured. Your agency has complete control over which (if any) custom or pre-programmed event tags are presented to the officer. There is virtually no limit to the type of event tags that can be configured. Tags can be required, optional and even hidden.

Examples
- Event Classification (List form - DUI, Traffic Ticket, Domestic, etc.)
- Case Number (numeric or alpha-numeric)
- Suspect Race (programmable list)
- Suspect Gender
- License Plate
- Treat as Evidentiary (yes or no)

Event tags can also enable automatic import rules within the optional Evidence Library Critical Event Server software.
**DVD MANAGER UTILITY**

A DVD-Video Media Player and DVD Copy Program

**A Full Featured DVD-Video Media Player**
- Play, Pause, Stop, FF, Rew, Single Frame, 1/4X to 100X speeds
- Isolate Wireless vs. Cabin microphones
- Volume control
- Select specific chapters
- Control the Closed Captioning Layer
- Infinite resizing

**Take Snapshots**
Save full resolution snapshots as JPEG files

**Copy the DVD**
Make an exact duplicate of the entire DVD

**Create a Single Event DVD**
Makes a fully authored DVD-Video disc from a single chapter

**Export Titles as MPEG-2 Files**
Export events as simple MPEG-2 files that can emailed or played on PCs without a DVD-Video codec

**Sophisticated Recovery Tools**
Recover video from damaged discs

**Disc and Drive Diagnostics**
Determine drive type with supported media formats. Display disc content details

**Disc Erase**
Prepares the DVD for reuse in the DV-1 without requiring a destructive reformat step

**DVD Authentication Verification**
Absolutely proves a DVD is unedited by comparing/calculating the video content to the 128-bit encrypted results embedded into the video files and title menus by the DV-1

**IMPORTANT:** Requires Microsoft .net Framework (Run dotnetfx.exe included on this disc)

**DIGITAL IN-CAR VIDEO**

**Need help?** http://support.watchguardvideo.com
DVD-VIDEO TECHNOLOGY FOR ANY VEHICLE

OVERHEAD MOUNTING BRACKETS
Heavy duty, vehicle specific mounting brackets secure the DV-1 overhead in nearly every modern law enforcement vehicle. Over 50 custom bracket packages have been designed, and new brackets are continuously being designed as new vehicles are introduced.

Most attach to the visor posts and do not require any drilled holes. Some bracket kits include vanity plates, trim strips, ticket lights, and are designed to replace factory overhead consoles.

Transferring a DV-1™ to a different type of vehicle is as simple as purchasing a new bracket kit

POPULAR MOUNTING KITS
1999-2013 Chevrolet Tahoe
2013 Chevrolet Caprice
2002-2011 Chevrolet Impala
2006-2013 Dodge Charger
2013 Dodge Durango
2013 Ford Interceptor Sedan and SUV
1999-2011 Ford Crown Victoria
2001-2009 Ford Expedition
2000-2009 Ford Explorer
2001-2013 Ford F-150

OVERHEAD MOUNTING PROVIDES QUICK AND EASY ACCESS TO DVDs, RAIN OR SHINE.
The flexible Modular Version of the DV-1 is available for odd vehicles that may be unable to accommodate the overhead version.

This 2-piece version is identical in functionality, however, the display/control panel is separated from the recorder module (DVR). This allows the DVR to be mounted to a cage wall, under a seat or glove box, or in the trunk (anywhere where the officer or supervisor can easily load or remove the DVDs).

The display/control panel can be ceiling or stalk mounted.

VERSATILE INSTALLATION OPTIONS

HORIZONTAL

VERTICAL

ADJUSTABLE MOUNTING ORIENTATION

The modular version's DVD drive suspension system can be adjusted to operate properly in various mounting orientations; from horizontal, to vertical, or anywhere in between. (Patent Pending)
OPTIONS & ACCESSORIES

Critical Event Server Software
WatchGuard's Critical Event Server (CES) is a powerful evidence management software program that stores, organizes, and plays video recordings from your fleet of DV-1s. CES automatically captures event tags and metadata from all recorded events. The videos from events that were tagged as “critical” (or have event classifications that are defined by your agency as critical) will be copied onto the server computer, providing dynamic access to your most important video.

3rd Camera (Rear Deck)
A compact, lowlight, high resolution, fixed lens camera with a 3-axis, adjustable mounting bracket.

Data Tracker
WatchGuard's Data Tracker is a powerful evidence management software program that databases all identifying metadata from every recorded event and tracks the physical location of DVDs.

Data Tracker allows you to search for any recorded event and locate the specific DVD that contains the recording and the location of that disc.

Integrated GPS Receiver
Captures vehicle location and speed. Automatically sets system date and time.

iUPS Battery Backup
The iUPS (Intelligent Uninterruptible Power Supply) protects the DV-1 from power interruptions and provides 3-5 minutes of operational time in the event of a power failure (i.e. vehicle crash).

Dual Microphone Adapter
Enables two wireless microphones to operate simultaneously. The cabin microphone uses the right audio channel, and the audio from two wireless microphones are combined into the left audio channel.

Wireless Microphone Desktop Charger
Charges the HiFi transmitter in the office. AC Powered.

Radar Interface Cable
Customized cables to connect to modern police radar systems.

Extended Warranties
The original one-year factory warranty can be extended up to 5 years.

Blank DVD+RW Media
• Official EVIDENCE DVDs Serialized with Unique Barcodes
• Official EVIDENCE DVDs (no serial numbers or barcodes)
• Generic Unprinted Bulk DVDs (25 or 100 Packs)
• Custom Printed, Agency Specific DVDs
### ADDITIONAL FEATURES

**FREE Firmware Upgrades by CD for Life**
WatchGuard continues to improve the performance, operation and features by regular firmware updates that are automatically sent to all DV-1 customers who purchased directly from the factory.

**Extensive Supervisor Controls**
3 Access levels (officer, supervisor, administrator)
Nearly every feature is permission controlled.

**Built-In Crash Detection**
Integrated, 3-axis, solid state acceleromter triggers a recording during a crash.

**Programmable System Power Behavior**
Control power up/down around vehicle ON/OFF status. Grant or deny permission to power down the system if vehicle is running. Programmable shutdown time (x-minutes after vehicle is OFF).

**Covert Recording Mode**
Inconspicuously turn off the screen and all indicators while activating both cameras and microphones.

**Screen Saver/Dark Mode**
Turn off the screen and/or indicators after a period of inactivity anytime or at night only.

**Toggle On-Screen Text On/Off During Playback**
Metadata is stored in closed caption layer and can be removed during playback.

**Disc Usage Meter/Activity Icon**
Graphical display of used and available disc space. Icons show the current DVD operation (burning, no disc, ejecting, etc.).

**System Logging**
Keystrokes, system errors, operation sequences, and over/under temperature history are automatically captured and is accessible by Fleet Manager.

**Supports Live Streaming Video**
An optional hardware kit with Windows-based monitoring software is available.

**Car 54 Certified**

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>DVR</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Recorder Type</strong></td>
<td>Dual Drive, DVD-Video Recorder</td>
</tr>
<tr>
<td><strong>Recording Drives</strong></td>
<td>100GB Automotive Grade Hard Drive. Slot Loading, SATA DVD Burner</td>
</tr>
<tr>
<td><strong>Removable Media</strong></td>
<td>4.72&quot; (12cm) 4.7 GB DVD+RW</td>
</tr>
<tr>
<td><strong>Background Recording Capacity</strong></td>
<td>Up to 80 Hours (24 Hours Typical)</td>
</tr>
<tr>
<td><strong>DVD Recording Capacity</strong></td>
<td>2, 4, 6 and 8 Hour Modes</td>
</tr>
<tr>
<td><strong>Resolutions</strong></td>
<td>720x480, 480x480, 352x480</td>
</tr>
<tr>
<td><strong>Bit Rate</strong></td>
<td>4.4, 2.2, 1.45, 1.0 Mbps</td>
</tr>
<tr>
<td><strong>Compression Format</strong></td>
<td>Variable Bit Rate MPEG-2, 30 FPS</td>
</tr>
<tr>
<td><strong>Record Overflow Capacity</strong></td>
<td>Overflow up to 6 DVDs to Hard Drive</td>
</tr>
<tr>
<td><strong>Pre-Event &amp; Post-Event Options</strong></td>
<td>0s, 15s, 30s, 45s, 1m, 2m 3m, 5m, 10m</td>
</tr>
<tr>
<td><strong>Recording Triggers</strong></td>
<td>Lights, Siren, Aux, Crash, Speed, Mic</td>
</tr>
<tr>
<td><strong>Audio Channels</strong></td>
<td>2 (Wireless and Cabin Microphones)</td>
</tr>
<tr>
<td><strong>Supported Cameras</strong></td>
<td>3 Cameras (Record any 2 Simultaneously)</td>
</tr>
<tr>
<td><strong>Operating System</strong></td>
<td>Linux 2.6</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-20°C - +80°C (-4°F - +176°F)</td>
</tr>
<tr>
<td><strong>Screen Size</strong></td>
<td>5.0” TFT LCD (LED Back Lighted)</td>
</tr>
<tr>
<td><strong>Screen Brightness</strong></td>
<td>400 nits Typical</td>
</tr>
<tr>
<td><strong>Screen Viewing Angle</strong></td>
<td>130 Degrees Horizontal</td>
</tr>
<tr>
<td><strong>Playback Speakers</strong></td>
<td>Dual Speakers (Coaxial)</td>
</tr>
<tr>
<td><strong>Output Ports</strong></td>
<td>Analog A/V, USB, Ethernet</td>
</tr>
</tbody>
</table>

**Front Camera**
- **Image Sensor**: Dual Scan, Wide Dynamic Range CCD
- **Analog Resolution**: 550 TV Lines
- **Zoom Lens**: 12X Optical, 10X Digital
- **Sensitivity**: Less than 1 LUX
- **Angle of View**: 3.5 - 53.4 Degrees

**Backseat Camera**
- **Image Sensor**: High Sensitivity CCD
- **Analog Resolution**: 480 TV Lines
- **Sensitivity**: 0.01 LUX (B/W)
- **Angle of View**: 90 Degrees

**Amplified Cabin Microphone**
- **Frequency**: 100-12,000 Hz

**Wireless HiFi Microphone**
- **Frequency**: 200-14,000 Hz

**Standard Factory Warranty**
- One Year Parts and Labor

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**DV-1 Software**
**Version 6.5**
**Version 7.0**
**DV-Video Playback & Copy Tool**
**PREMIUM**
**Includes DVD-Video Codec**

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**IMPORTANT:**
Requires Microsoft .net Framework 2.0 (Run dotnetfx.exe included)
Recording directly to a DVD-Video disc in the vehicle is the **fastest**, most **efficient** and **cost-effective** process for creating, managing and presenting digital video evidence.