

# Getting Started Guide

**MemoCam<sup>®</sup>DVR**

**MemoCam<sup>®</sup>DVR/S**

Version 3.2.002

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Video Domain Technologies Ltd.

Manufacturer: Video Domain Technologies Ltd.  
Model: MemoCam  
Rated voltage(s): 12VDC  
Current(s) (or power): 0.4 A

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This Class A/B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A/B est conforme à la norme NMB-003 du Canada.



Changes or modifications not expressly approved by Video Domain could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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# Introduction

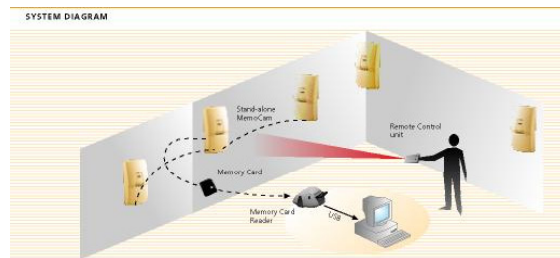
Congratulations! You have chosen the MemoCam modular security solution.

MemoCam is a modular solution that allows for economical system expansion and optimized use of existing equipment. With MemoCam, you can expand from a single unit to multiple sites and cameras.

MemoCam is a configurable system solution for Video detection, CCTV monitoring, snapshot recording, and alarm triggering.

MemoCam stores all images in a Multimedia Card. To analyze the recorded events on a PC, the Multimedia Card is removed from the MemoCam unit and images are downloaded using a Multimedia Card reader and the MemoCam software.

One or more stand-alone units can be placed at different locations. The units are configured using the Multimedia Card. The MemoCam is activated using the remote control unit.



*Figure 1. The MemoCam System*

The MemoCam unit has the following features:

- ❑ Automatic setup using the Multimedia Card.

- ☐ User defined image quality, frame rate, and recording time per event, delay between frames, and more
- ☐ Fixed or cyclic recording modes
- ☐ Pre-alarm recording
- ☐ Image integrity protection
- ☐ Arm/Disarm Scheduler
- ☐ Video motion detection
- ☐ Multi camera support
- ☐ Video out
- ☐ Remote control unit

The MemoCam software allows you to:

- ☐ View images as thumbnails or in a detailed list view.
- ☐ Sort images by date and time.
- ☐ View images for a specific period of time.

- ☐ Play, pause, fast-forward, and rewind images. In addition, you can view images frame-by-frame or as a slide show playback.
- ☐ Verify frame integrity.
- ☐ Export to the built-in image editor.
- ☐ Export to AVI.
- ☐ Configure the MemoCam unit.
- ☐ Print an image.

The events recorded by the unit can be viewed on a PC with Windows 95, 98, 2000, ME, NT, or XP with Internet Explorer™ 5.0 (or higher), or a Pocket PC, with Windows CE 3.0 (or higher). The images are read from the MultiMedia card using a card reader and the MemoCam software.



## Scope of this Guide

This guide describes how to implement and install each of the following MemoCam series models:

- ❑ MemoCam® DVR
- ❑ MemoCam® DVR/S

The MemoCam DVR is designed for easy integration into existing CCTV systems, and includes VMD, a video compression engine, a removable Multimedia Card, and supports up to three external cameras, an external monitor and external alarm devices.

The MemoCam DVR/S provides the additional feature of a built-in serial port for serial communication.

## Package Contents

The MemoCam Kit includes the following items:

- ❑ MemoCam unit
- ❑ Multimedia Card
- ❑ Protective card cover
- ❑ Power adapter
- ❑ IR remote control unit and 2 AAA batteries
- ❑ 2 video input cables
- ❑ 1 video output cable
- ❑ MemoCam Installation Manual
- ❑ MemoCam Getting Started Guide (this guide)
- ❑ MemoCam Software CD

If items are missing, contact your local dealer.

## See What MemoCam® DVR Can Capture



### **Office and Warehouse**

See who opened the locked drawer in your office.  
View pictures of anyone who was around that valuable package that disappeared.  
See who came into the office after hours and what exactly they were doing there.



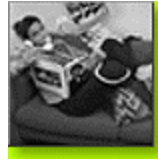
### **Convenience and Retail Stores**

Replace the unreliable time-lapse VCR with the maintenance free MemoCam DVR.  
See who goes behind the counter and who reaches into the cashier drawer.



### **Access Controlled Areas**

Verify that nobody but authorized personnel goes through that door.  
See which unauthorized people are entering.



### **Home**

See if the babysitter is spending more time with her boyfriend than with your baby.  
Find out what the A/C technician was looking for in your bedroom chest of drawers.  
Determine what set off the alarm and why the police couldn't find any entry marks.



### **Managers**

Make sure employees do not punch the clock for each other by matching picture time with time punched on the card.



### **Schools/Hotels/Hospitals**

See who's been pushing drugs in the school halls.  
Get the picture of who walked out of the employees' room with all their purses.  
See who opened the restricted medicine supply cabinet and removed prescription-only drugs from it.

# Setting Up MemoCam<sup>®</sup> DVR

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This section describes how to set up the MemoCam DVR unit before you begin using the unit. For more information, refer to the *MemoCam Installation Manual*.

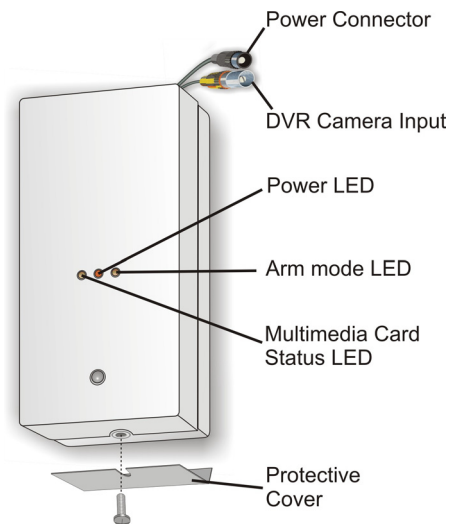


*For information about setting up the MemoCam DVR/S for serial communication with a host, refer to the MemoCam Installation Manual.*

---

## Placing the MemoCam<sup>®</sup> DVR Unit

It is recommended to install the MemoCam DVR in an indoor, dry, cool location.



*Figure 2. MemoCam DVR Unit – Front View*

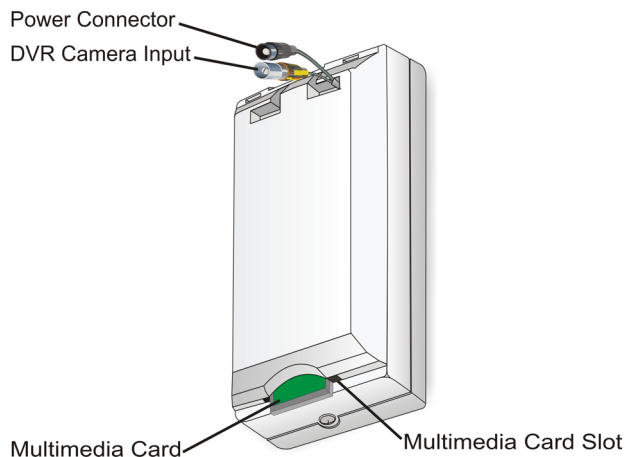


Figure 3. MemoCam DVR Unit – Rear View

## Connecting the External Camera

To connect an external camera to the unit:

1. Insert the connector from the external camera into the MemoCam DVR camera input connector (Figure 3).

For instructions on how to connect up to two additional cameras, refer to the *MemoCam Installation Manual*.



*All cameras connected to the MemoCam DVR must be the same standard, either CCIR or EIA. The unit automatically identifies the camera type when you turn the power on.*

The following are the minimum system requirements for cameras connected to the unit.

Video Input	1Vpp
Type	CCIR (European) or EIA (USA)



*For detailed information about installing the MemoCam DVR/S, refer to the MemoCam Installation Manual.*

## Connecting the Power Supply

Connect the power adapter to the unit's power connector (Figure 3). Plug the power adapter into a wall socket. The Power LED indicator lights red, as described in Table 1 on page 11.



*The MemoCam DVR works only with the original, supplied, power adaptor.*

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## Accessing the Multimedia Card

The simplest way to use the MemoCam DVR is by accessing the removable Multimedia Card. The card can transfer image data from the MemoCam unit to your computer, and configuration data from your computer to the MemoCam unit. The Multimedia Card can be used with any standard card reader.



*To install the Multimedia Card reader on your computer, refer to the documentation supplied with the Multimedia Card reader.*

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To access the Multimedia Card:

1. MemoCam DVR comes with a protective cover over the Multimedia Card slot. Remove this cover before inserting or removing the Multimedia Card.
2. To remove the Multimedia Card, push the card gently inward until you hear a click and then pull the card out of its slot.
3. To reinsert the Multimedia Card, insert the card into the slot and push the card gently until you hear a click (refer to Figure 4 on page 8). Slowly release your finger from the card. Wait 3 or 4 seconds for the unit to read the card.



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*When inserting the Multimedia Card, the side with the label should face toward you, as shown in Figure 4.*

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*Figure 4. Inserting the Multimedia Card*



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*Verify that the unit is disarmed before removing the Multimedia Card. Refer to Disarming MemoCam® DVR on page 11.*

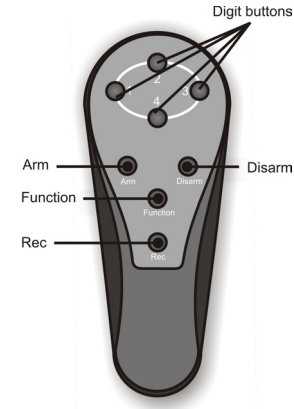
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# Getting Acquainted

The MemoCam DVR can be controlled by remote control or by the internal scheduler (refer to the *MemoCam Software Manual* for more details).

## Remote Control Unit

The remote control unit is used to activate (arm), deactivate (disarm), and manually record image snapshots.



*Figure 5. Remote Control Unit*

As shown in Figure 5, the remote control unit has the following buttons:

- ❑ Arm – Activates the MemoCam unit. When armed, the MemoCam unit will record a

series of images upon detection of movement.

- ❑ Disarm – Deactivates the MemoCam unit. When disarmed, snapshots can be taken manually using the remote control unit.
- ❑ Function – Reserved for future enhancements.
- ❑ Rec – Triggers a snapshot to be stored in the Multimedia Card.
- ❑ Digit buttons numbered 1, 2, 3, and 4 – Allows for Arm and Disarm Code entry.

Remote control signals can be detected only from the front of the MemoCam unit.



*Insert the two included AAA batteries into the remote control unit before use.*

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## Arming MemoCam<sup>®</sup> DVR

To activate (arm) MemoCam DVR:

1. Verify that the MemoCam unit is powered and the Multimedia Card is inserted into the unit.
2. Point the remote control at the unit and press *Arm* (refer to Figure 5 on page 9). MemoCam emits one long beep and the Arm mode LED illuminates orange (refer to Figure 2 on page 5).



*The system is preset so that no code is necessary to arm the MemoCam unit. However, you do have the option of selecting an arm code. For information about defining an arm code, refer to the MemoCam Software Manual.*

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## Disarming MemoCam® DVR

To deactivate (disarm) MemoCam DVR:

1. Point the remote control unit at the MemoCam unit and enter the disarm code using the buttons labeled 1-4 on the remote control unit (refer to Figure 5 on page 9).
2. Press *Disarm* (refer to Figure 5 on page 9). The MemoCam unit beeps three times and the Arm mode LED turns off.



*The default disarm code is: 1234. To define a new disarm code, refer to the MemoCam Software Manual.*

## LED Indicators

As shown in Figure 2 on page 5, MemoCam DVR has the following LED indicators:

Table 1. MemoCam LEDs

LED	Color	Description
Multimedia Card Status (left)	Red	Error or Multimedia Card is faulty or not inserted correctly
	Blinking Green	Data is being written to the Multimedia Card
	Orange	Multimedia Card is full
Power (middle)	Red	Power is connected
Arm mode (right)	Orange	MemoCam unit is in Arm mode
	None	MemoCam unit is in Disarm mode



*All LED indicators except the power LED indicator can be enabled or disabled. Refer to the MemoCam Software Manual.*

## Audible Signals (Beeps)

The MemoCam unit can be configured to emit an audible signal (beep) when:

- ☐ You arm the unit – Long beep.
- ☐ You enter a disarm code – Short beep after each button is pressed.
- ☐ You disarm the unit – Two short beeps and one long beep.
- ☐ In Disarm mode – A recurring short beep.
- ☐ The Multimedia Card is not inserted – A recurring short beep.
- ☐ The configuration is upgraded by inserting a Multimedia Card with an updated configuration – One short beep.
- ☐ The configuration returns to the factory default – Three short beeps.



*Audible signals can be enabled or disabled.  
Refer to the MemoCam Software Manual.*

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# Installing MemoCam<sup>®</sup> Software

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Before you install the MemoCam software, make sure your computer or Pocket PC meets the following system requirements.

## PC Minimum Requirements

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CPU	Pentium II 200MHz or higher
RAM	16MB or higher
Graphic adapter	Super VGA or higher
Display resolution	640x480, 32000 colors or higher
Operating systems	Windows 95, 98SE, ME, 2000, NT, or XP, with Internet Explorer <sup>™</sup> 5.0 or higher
Multimedia Card Reader	

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## Pocket PC Minimum Requirements

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CPU	ARM (or compatible)
RAM	16MB or higher
Display resolution	320x240, 32000 colors/256 gray level or higher
Operating systems	Windows CE 3.0 or higher
Multimedia Card Reader	

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## Installing MemoCam® Software on Your PC

Before beginning the installation, close all Windows programs you have running.



*If you are using Windows NT, verify that the Active Desktop option in the display properties is ON.*

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To install MemoCam software:

1. Insert the MemoCam Software CD into the CD-ROM drive. The *CD Browser* screen appears automatically. If the *CD Browser* screen does not appear automatically, open Windows Explorer, browse to the CD-ROM drive, and double-click `MCBrowse.exe`.
2. Click *Install MemoCam*. The *Welcome* screen appears.

3. Click *Next* to continue with the installation. The *License Agreement* screen appears.
4. Click *Yes* to accept the License Agreement terms. The *Destination Location* screen appears, indicating where the program will be installed.
5. To change the folder location, click *Browse*. To continue, click *Next*. The MemoCam files are installed and the *Setup Complete* screen appears.
6. You must restart your computer in order to use the newly installed program. Select the Restart option and click *Finish*. Your computer is automatically restarted.

For more information, refer to the *MemoCam Software Manual*.

## Installing MemoCam® Software on Your Pocket PC

Before installing the MemoCam software for your Pocket PC, install and configure the MemoCam software on your PC. For information on installing the MemoCam software on your Pocket PC, refer to the *MemoCam® Pocket PC Player User Guide*.



*To install the Multimedia Card reader on your computer, refer to the documentation supplied with the Multimedia Card reader.*

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## Viewing the Images

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This section describes how to view MemoCam DVR images. For detailed information about all of MemoCam's many features, refer to the *MemoCam Software Manual*.

To view the recorded images:




*If you are using a MemoCam DVR/S unit that is connected directly to your computer through the serial port, proceed to Step 4.*

---

1. Disarm the MemoCam unit (refer to *Disarming MemoCam®DVR* on page 11).
2. Remove the Multimedia Card from the MemoCam unit (refer to *Accessing the Multimedia Card* on page 7).

3. Insert the Multimedia Card into the card reader attached to your computer or Pocket PC.



4. Click  on your desktop to open the MemoCam software. The MemoCam window opens, displaying thumbnails of the images stored on the Multimedia Card (refer to Figure 6 on page 17).





*If there is no Multimedia Card in the reader, the MemoCam software opens a file containing sample images.*

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## Viewing the Image List

You can view the Image List displayed in the MemoCam window in either of the following ways:

- ❑ **As thumbnails of the images** (Figure 6). To display the Image List as thumbnails, click  or open the **View** menu and select **Thumbnails**.
- ❑ **As a detailed list** (Figure 8 on page 18). To display the Image List as a detailed list, click  or open the **View** menu and select **Details**.

For more information, refer to the *MemoCam Software Manual*.

If you are using a PC, the thumbnails view appears as shown in Figure 6.

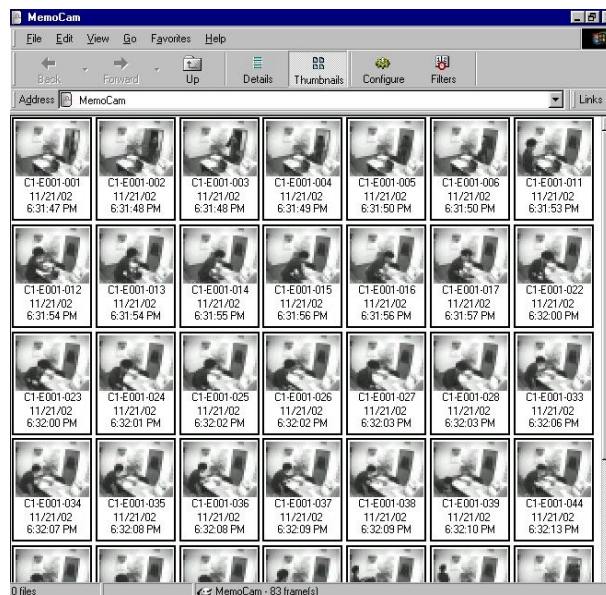


Figure 6. Thumbnails View – PC

If you are using a Pocket PC, the thumbnails view appears as shown in Figure 7.



Figure 7. Thumbnails View – Pocket PC

If you are using a PC, the detailed list view appears as shown in Figure 8.

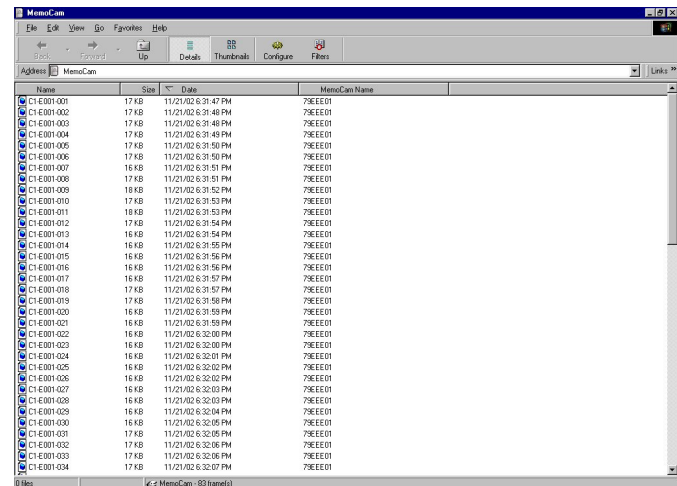


Figure 8. Detailed List View – PC



If you are using a Pocket PC, the detailed list view appears as shown in Figure 9.

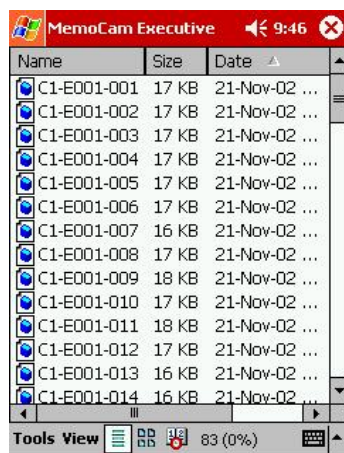


Figure 9. Detailed List View – Pocket PC

## Playing the Images

You can view images consecutively in the MemoCam Image Viewer. The images are played in the order they appear in the Image List. A toolbar to control the viewing of images appears on the top of the window.

To play images:

1. Double-click an image in the list.


OR








1. Select an image in the list.
2. Open the **Edit** menu and select **Play**.



Figure 10. Image in MemoCam Image Viewer

The MemoCam Image Viewer toolbar contains the following buttons:

Button	Description
	Plays the images backward.

Button	Description
	Plays the images forward.
	Pauses the playing of images.
	Displays the current image in your PC's default viewer.
	Displays the previous image.
	Displays the next image.
	Checks the image integrity. Enter the integrity key or load the key from a file. For more information, refer to the <i>MemoCam Software Manual</i> .
	Adjusts the speed at which the images are displayed.

## Checking the System

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To check that the MemoCam unit was installed successfully and is operational:

1. Make sure the Multimedia Card is inserted in the unit (refer to *Accessing the Multimedia Card* on page 7).
2. Disarm MemoCam using the remote control unit (refer to *Disarming MemoCam®DVR* on page 11).
3. Point the remote control unit at MemoCam and press *Rec* to record a snapshot. The Multimedia Card Status LED blinks green.
4. Remove the Multimedia Card from the unit (refer to *Accessing the Multimedia Card* on page 7).
5. Insert the Multimedia Card into the card reader attached to your computer or Pocket PC.

6. View the image as described in *Viewing the Images* on page 16.

If you encounter any problems during this process, refer to *Troubleshooting* in the *MemoCam Installation Manual*, or the *MemoCam Software Manual*.



*The MemoCam unit has an internal clock. To configure the date and time, refer to the MemoCam Software Manual.*

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# Glossary

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Arm	Enables automatic detection and recording function.
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Cyclic Recording	Continuous recording. The MemoCam records over older images from start of the cycle when Multimedia Card is full.
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Disarm	Disables the automatic detection and recording function.
--------	--

Event	The recording of one or more images as a result of a trigger.
-------	---

LED	Light Emitting Diode. An electric component that lights up.
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Multimedia Card	A stamp-sized plastic card containing read/write non-volatile memory.
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PIR	Passive Infrared motion detector.
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Snapshot	Recording of a single picture.
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Trigger	A signal that activates the recording process. Usually generated by an alarm contact.
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VMD	Video Motion Detection. A feature that detects changes in video frames.
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The opening of the packaging of the Software and/or the installation of the Software and/or the use of the Product shall be deemed that you have read and accepted the terms of this License and Limited Warranty Agreement.

If you do not agree to the terms of this agreement, do not use the product. Promptly return the entire package to the place where you obtained it.

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The Product is provided 'As Is' and without Warranty, by VDT and/or the distributor and/or the importer, if the importer is not a distributor (each hereinafter the 'Distributor') of the Product, in the country where the product was purchased, or our suppliers, express or implied, including without limitation implied warranty of merchantability of fitness any particular purpose.

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Except as otherwise restricted by law, this Agreement shall be governed only by, and interpreted, in accordance with the laws of the State of Israel and the exclusive jurisdiction shall be vested to the local courts of Tel Aviv.

## Entire Agreement

This Agreement sets forth the entire understanding and rights and duties between you and VDT. This Agreement may be amended only in writing signed by both parties. No person or entity is authorized to modify this Agreement or to make any warranty, representation or promise which is different than, or in addition to, the representation or promises of this agreement.

## Waiver

No waiver of any right under this Agreement shall be effective unless in writing, signed by a duly authorized representative of the party to be bound. No waiver of any past or present right arising from any breach or failure to perform shall be deemed to be a waiver of any future right arising under this Agreement.

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If any provision in this Agreement is invalid or unenforceable, that provision shall be construed, limited, modified or, if necessary, severed, to the extent necessary, to eliminate its invalidity or unenforceability, and the other provisions of this Agreement shall remain unaffected.