



Monitor Wall 4.0



BOSCH

en Installation and Operating Manual

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1 Introduction

1.1 About this Manual

This manual is intended for persons who will set up the Monitor Wall program. The manual describes the setup and initial commissioning of Monitor Wall.

Monitor Wall can only be operated together with a video management system. It is installed on a separate PC that is integrated into a video management system. Within this system, Monitor Wall is handled in the same way as a hardware decoder. However, this program enables video data to be reproduced on digital monitors that are connected to this PC. This documentation assumes that the reader is familiar with the video management system.

1.2 Conventions in this Manual

In this manual, the following symbols and notations are used to draw attention to special situations:



CAUTION!

Security instructions where non-compliance can result in loss of data are marked with this symbol.



NOTICE!

This symbol indicates special features and provides tips and information for easier, more convenient use of the software.

Terms that you can find in the program, e.g. menu options or commands, are written in **bold**.

1.3 Minimum Installation and Operating Requirements

Hardware	Personal computer
CPU:	Dual Core, 3.0 GHz or faster
Hard disk interface:	IDE or better
RAM:	min. 2 GB
Operating system:	Windows XP Home / XP Professional SP2/SP3, Windows Vista SP1/SP2, Windows 7 (Business, Home; 32-bit, 64-bit in emulation mode)
Graphics card:	NVIDIA Quadro FX 4800/4600/4500/3500/ 1500 PCIe (driver version 91.85) NVIDIA Quadro NVS 440/285 PCIe (driver version 91.85) ATI FireGL V7200/V3300 PCIe (driver version 8.323) or similar
Ethernet network card:	100 MBit

Sound card:	Recommended
Software:	DirectX 9.0c or above MPEG-ActiveX 5.06.0013 Configuration Manager 4.03.0017 or above Video management system (e.g. BVMS, VIDOS)
Free hard disk space: (on installation)	100 MB (.NET environment, MPEG-ActiveX, Monitor Wall, Configuration Manager)

The above specifications are minimum requirements. The higher the resolution displayed, the bit rate of the video stream and the number of monitor windows, the higher the required computing power of the PC on which Monitor Wall is installed.

The following example configuration is provided as a starting point for calculating your system requirements:

Example configuration:	Intel Core 2 Duo E8400 with 3.2 GHz, 2 GB RAM, NVIDIA Quadro FX 4800 graphics card
Playback:	5 x 4CIF MPEG-4 or 10 x 2CIF MPEG-4 or 20 x CIF MPEG-4

1.4 Additional Documentation

The Monitor Wall program is installed on a PC with a network connection to the computer on which a video management system is installed. The program is configured using the video management system and the Configuration Manager program. The program is operated via the video management system.

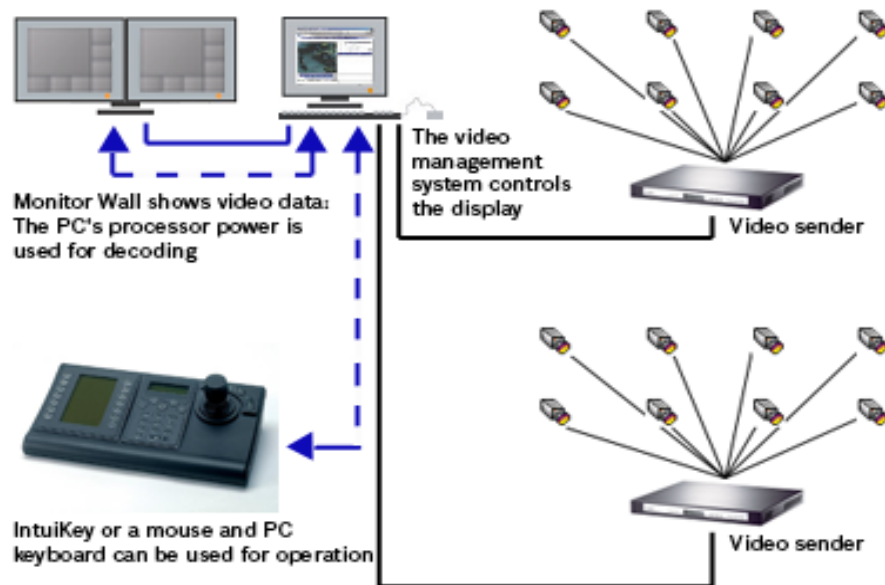
Therefore, please also refer to the following documentation:

Video management system	Describes the basic setup of the system, e.g. integrating cameras, setting up salvos and planning drawings.
Configuration Manager	Describes additional configuration options.
Site maps	Describes the creation of site maps in VIDOS .
VIDOS IntuiKey	Describes the use of the IntuiKey digital control panel when integrated with the video management system VIDOS.
Camera documentation	The manufacturer will provide you with separate documentation for each camera.
VideoJet, VIP, etc.	BOSCH will provide you with documentation for each device. This explains the typical device settings.

1.5 Monitor Wall

Monitor Wall is an easy-to-use additional program for a video management system. Monitor Wall is used to reproduce video data on digital monitors, which the video management system then handles in the same way as hardware monitors. The video management system can be used to change the number and arrangement of the monitor windows displayed with Monitor Wall.

Using a PC on which a video management system is installed, the user can, for example, establish connections, control cameras or start instant playback (with the appropriate system configuration). The user can perform these actions using a mouse and PC keyboard, or an IntuiKey control panel.



2 Installation

This chapter is intended for the administrator of a video management system. It describes the installation and activation of Monitor Wall.

2.1 Monitor Wall Installation and Startup

The Monitor Wall program is usually installed on a PC on which no other programs associated with the video management system are installed.



NOTICE!

If other programs associated with the video management system are installed on the PC on which you want to install Monitor Wall, deactivate the relevant services by selecting **Control Panel > Administrative Tools > Services**.

When you install Monitor Wall, the Configuration Manager program is also installed automatically. The program CD comes complete with installation instructions (Quick Installation Guide).

After installation, you will find the following icon on your desktop:



1. Click this icon to start Monitor Wall .

2.2 License

Before you can use Monitor Wall, you must purchase the relevant license. This license is specific to the PC on which you install Monitor Wall .

When you purchase licenses, you will be provided with one authorization number by e-mail for each program and workplace.

Using this number and the installation code found in the **License Viewer...** dialog box in Configuration Manager, you can generate the activation key on the **Bosch Software License Manager** Internet platform.

You then enter this key via the **License Viewer...** dialog box. Thereafter you can use Monitor Wall.

2.2.1 Generating the Activation Key

Acquiring the Installation Code

1. Open Configuration Manager.
2. Select **Help > About... > Licenses > License Viewer...**

Write down the second installation code (Code 2) or copy it to the clipboard.

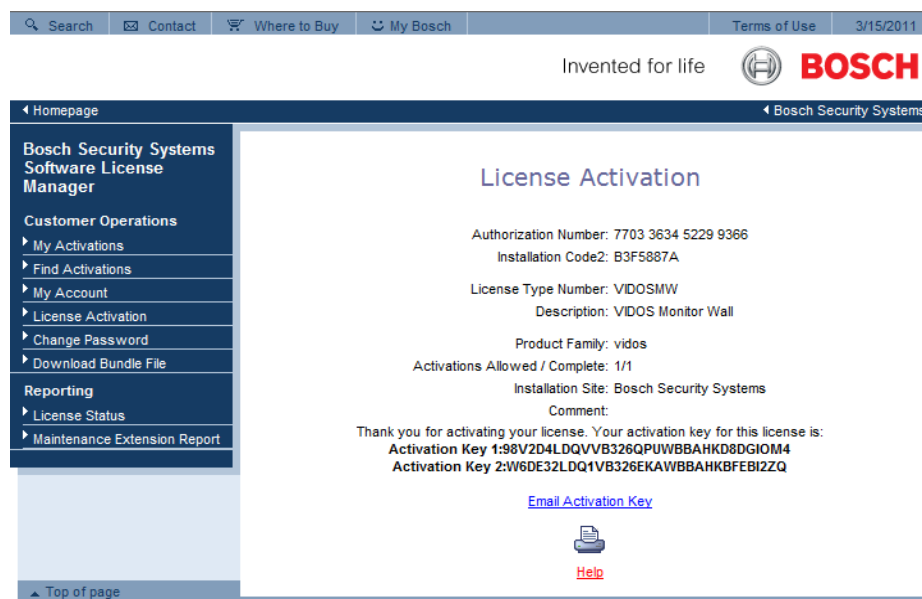
More detailed information about installing and operating Configuration Manager can be found in the documentation for Configuration Manager.

Requesting Activation Keys

3. Open the following Website from any PC:
<https://activation.boschsecurity.com/>

The Bosch Security Systems Software License Manager user interface will appear. The page appears in English only.

4. If you already have an account, log in.
You can create a new account if you wish. The benefit of an account is that you can list all of your previous license activations.
Once you have logged in, the welcome dialog will appear.
You can also continue the process without logging in.
Next, you will see the **License Activation** screen.
5. Enter the authorization number that you received when you purchased Monitor Wall.
6. Then click the check mark next to the input window.
7. The next step is to enter the installation code along with brief information about the installation location. You may also add a comment.
This information will assist you later in assigning the Activation Key to the device.
8. Click **Submit**.
Two activation keys are displayed.



You can copy the keys to the clipboard.

You can also have the keys e-mailed to you. To do this, click the **Email Activation Key** link. You will see a dialog box in which you can enter two e-mail addresses for recipients.

You can print the page.

2.2.2

Entering Activation Keys

9. Open Configuration Manager.
 10. Select **Help > About... > Licenses > License Viewer...**
 11. Click the **Activation key** button and enter the first activation key (**Activation Key 1**) or paste it from the clipboard.
 12. Click the **OK** button to save the activation key.
 13. Repeat steps 11 and 12 for the second activation key (**Activation Key 2**).
- Once activation is complete, the relevant entry will be displayed in the **License Viewer...** dialog box. You can now use Monitor Wall on this PC.

3 Setup

This chapter is intended for the administrator of a video management system. It describes how to setup a Monitor Wall in the VIDOS video management system.

Once the program is started, it is detected by the video management system in the network scan just as any other hardware receiver, and can be integrated into the system.

The monitor layout and the camera connections are controlled using the video management system.

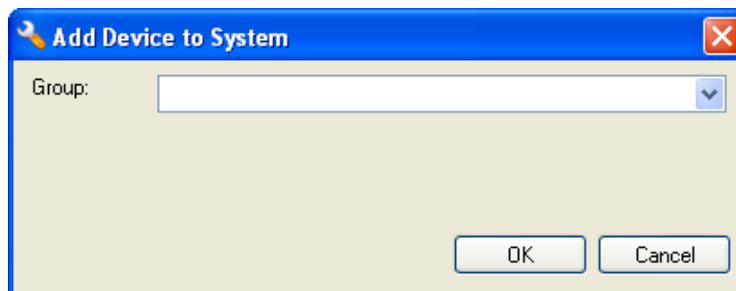
You can allow the user to operate Monitor Wall, e.g. to establish connections to the monitor window, by providing them with access to a workplace with mouse and PC keyboard or IntuiKey . You can use rights management to assign individual users different operating options. For more details, please refer to the separate documentation on the VIDOS video management system and IntuiKey.

3.1 Integrating Monitor Wall into the Video System

3.1.1 Integrating Monitor Wall into Configuration Manager

In order to integrate a Monitor Wall into a video management system, it must first be integrated into Configuration Manager.

1. Start Monitor Wall.
2. Start Configuration Manager.
3. Configuration Manager automatically scans the network for compatible devices. The program detects the running Monitor Wall, just like hardware, and lists it in the main tab **Network**.
4. In the list of identified devices, right-click the entry for the Monitor Wall. The popup menu appears.
5. Select the **Add to System...** command from the popup menu. The **Add Device to System** dialog box appears.



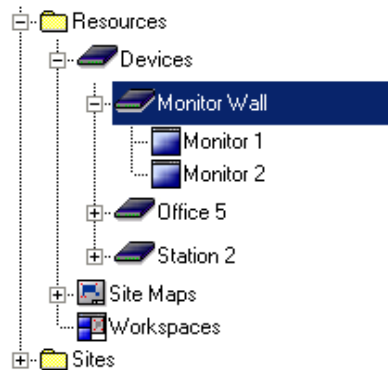
6. You can select an existing group into which you want to integrate the Monitor Wall. To create a new group, enter a name for the group. You can also continue without selecting or creating a group.
7. Click **OK**.
8. Switch to the main tab **Devices**. The Monitor Wall appears in the list of devices assigned to the system.

3.1.2 Integrating Monitor Wall into VIDOS

In order to integrate a Monitor Wall into a VIDOS system, it must be started and integrated in Configuration Manager. VIDOS detects Monitor Wall and displays it in the same way as other devices, e.g. a hardware receiver.

1. Start Monitor Wall.
2. Start VIDOS.

3. In the **Overview** window, on the **System** tab, open the tree structure under the **Resources** folder.
4. The Monitor Wall is displayed under **Devices**. For each Monitor Wall, two hardware monitor icons are displayed under the entry for the device.

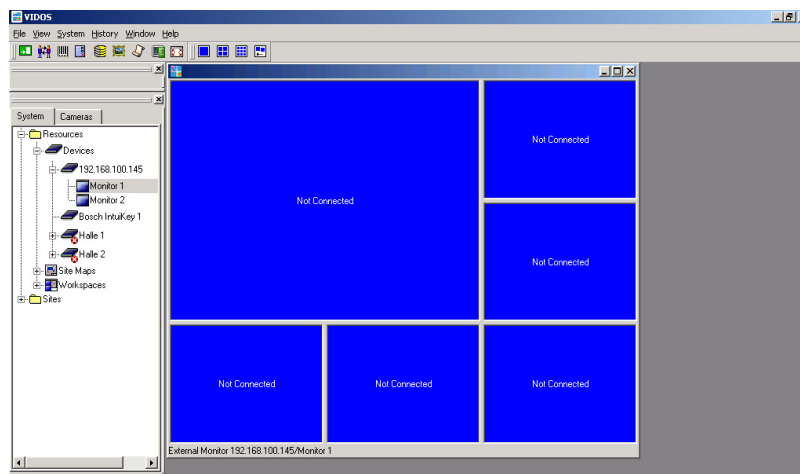
**NOTICE!**

You can use VIDOS to control more than one Monitor Wall.

5. Right-click the icon for the required Monitor Wall and choose **Properties**. The **General** tab is displayed in the **Properties** dialog box.
 6. Enter a meaningful name for the Monitor Wall and close the dialog box.
 7. Repeat steps 5 and 6 for every Monitor Wall installed.
- Each Monitor Wall that is installed on a network PC is now integrated into the VIDOS system.

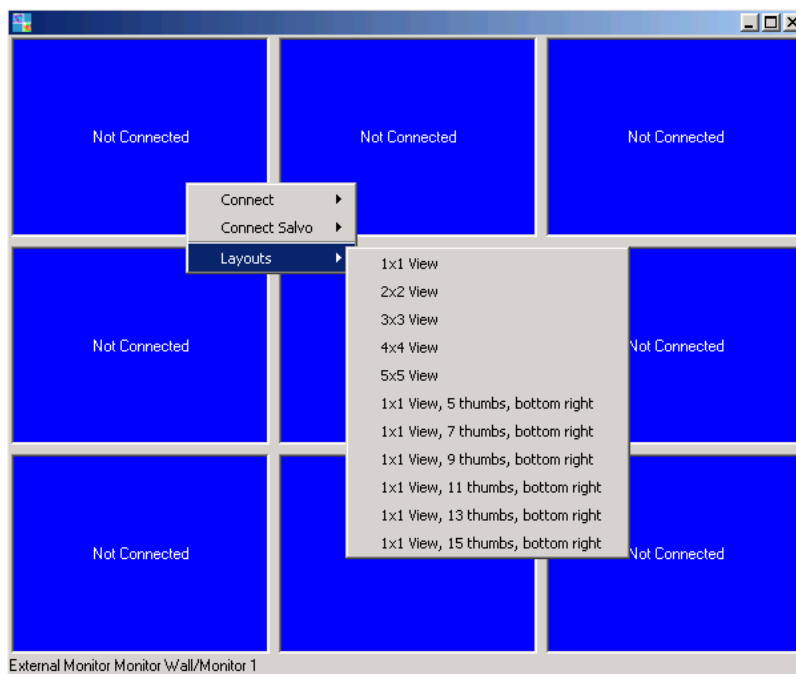
3.2**Configuring the Layout of the Monitor Window**

1. In VIDOS, in the **Overview** window, **System** tab, double-click the symbol of the required Monitor Wall in the tree structure under **Devices**. You will see two subentries with the hardware monitor icon.
2. Double-click Monitor 1 or choose **Open** in the popup menu for Monitor 1. A new window is displayed. Several monitor windows are displayed within this window:



3. Right-click in the window to display the popup menu.

4. Choose **Layouts** from the popup menu. Select the required layout:



If you are using Monitor Wall on a double monitor, the layout is identical on both halves of the monitor.

3.3 Establishing Connections to the Monitor Windows



NOTICE!

If you are using Monitor Wall on a double monitor, also drag monitor 2 onto the desktop.

1. Right-click in one of the monitor windows.
2. Select **Connect**.
A list of devices and cameras that have been assigned to the system in Configuration Manager is displayed.
3. Select the device or camera to which you want to connect this monitor window.
4. Repeat steps 1 to 3 for each monitor window.

Alternative:

1. Holding the mouse button down (drag&drop), drag a camera or encoder directly from the **System** tree structure to one of the monitor windows.

As soon as the connection is established, the video playback starts in the relevant window on the digital monitor of the Monitor Wall. The video data is displayed as configured in VIDOS. In VIDOS, a snapshot from the location of the connected camera is displayed in each monitor window in a similar way to hardware monitor windows.



NOTICE!

Some devices or cameras do not support the snapshot function. In this case, only a gray monitor window is displayed in VIDOS. The video playback on the digital monitor of the Monitor Wall is not affected.

3.4 Monitor Numbering for Use with IntuiKey

In order to connect cameras to individual monitor windows of the Monitor Wall using an IntuiKey control panel, you must assign unique numbers to the monitor windows.

1. In the tree structure of VIDOS, double-click the icon for the required Monitor Wall. The two subentries with hardware monitor icons are displayed.
2. Right-click the hardware monitor icon for Monitor 1 and select **Properties**. The **General** tab is displayed in the **Properties** dialog box.
3. Enter a meaningful name and a unique number for the monitor. The number refers to the first window displayed in the top left of the Monitor Wall. The subsequent windows are numbered automatically from left to right, row by row. This example shows the monitor numbering for different layouts if you assign the monitor the number 7:



View 3x3

View 1x1,
5 thumbsView 1x1,
7 thumbs

4. If you are working with a double monitor, repeat steps 2 and 3 for the second hardware monitor icon.



NOTICE!

Ensure that no duplicate numbers have been assigned. If you assign the monitor numbers, for example, in increments of 100, this will prevent duplicate number assignments even if the layouts are changed at a later time.

3.5 Further Settings in VIDOS

You can allow the user to operate the Monitor Wall, e.g. to move cameras, establish connections, or play back recordings. To do this, provide the user with a VIDOS workstation with mouse and PC keyboard, or a digital IntuiKey control panel. The user is able to use all operations that VIDOS also offers for other software or hardware monitor windows. It is therefore important to allocate user rights carefully in order to prevent unauthorized access to other functions.



WARNING!

All operations and connections are performed via VIDOS. Do not switch VIDOS off if you want to change the connections or operate the Monitor Wall.

For more detailed information on setting up VIDOS workstations, refer to the separate documentation on VIDOS and IntuiKey.

3.6 Exiting Monitor Wall

Press the Esc key to exit Monitor Wall.

This operation disables the camera connections. After restarting Monitor Wall, they must be re-established via VIDOS.

3.7 Monitor Wall and Servers

The program can also be integrated into a VIDOS client-server system. You can integrate Monitor Wall locally into a single VIDOS client.


However, you can also integrate Monitor Wall centrally, so that all VIDOS clients in the system are able to access it. To do this, use the Configuration Manager. Start any Configuration Manager in the system, connect it to the required server, and assign the Monitor Walls to the system as described in the separate documentation for VIDOS Server (Device Allocator section).

4 Settings in Configuration Manager

In Configuration Manager, the currently running Monitor Walls are detected in the same way as other hardware, various information is displayed, and further configuration options are provided. In the following, the configuration pages found in the Configuration Manager for Monitor Wall are listed, and the different settings explained.



NOTICE!

Changes do not become effective until you click  in the toolbar.

Further information can be found in the separate Configuration Manager documentation.

4.1 Unit Access Tab

Identification

In this area, you can assign the Monitor Wall a device name and ID in order to make assignment easier in larger installations.

Password

In this area, you can protect the Monitor Wall against unauthorized access.

Monitor Wall works with two password levels. The **service** level is the highest level of authorization. With this level of access, after entering the required password, users can use all functions of Monitor Wall and change all configuration settings. The **user** level enables users to make and break connections, but does not provide access to configuration.

Device access (main tab Devices only)

This area controls access from VIDOS to the Monitor Wall. Here, you can configure settings to determine which protocol and which HTTP port are used for communication between VIDOS and the der Monitor Wall.

If the Monitor Wall is password-protected, this is where you save the password for access via VIDOS.

Version information

In this area, you can view the hardware and firmware versions of Monitor Wall.

4.2 Advanced Tab

Video windows

In this area, you can edit how the video windows are displayed.



NOTICE!

The settings in this area apply to all video windows. You cannot configure settings here for individual video windows.

Under **Aspect ratio**, you can choose whether the video windows have an aspect ratio of 4:3 or 16:9. Select a setting that is appropriate for most of your video sources.

Under **Metadata**, you can define whether or not metadata can be displayed in the video windows.

Under **Video smoothing**, you have the option to improve the playback quality of the videos. To improve the quality, drag the slide control to the right, or enter a number between **0** and **100** in the input field. If you enter **0**, no video smoothing is performed; if you enter **100**, the maximum possible video smoothing is performed. The higher the level of smoothing, the

greater the time delay between the live image and the display of the video image in Monitor Wall.

Destination

If the devices accessed by the Monitor Wall are protected by a global password, you can save this password here.

Display resolution


In this area, you can specify whether the Monitor Wall automatically selects the optimum resolution for the display device on startup.

4.3

Network Access Tab

Network

In this area, you define the network settings for the Monitor Wall.

1. In the **Device IP address** field, enter an IP address that is valid in the network (for example, 192.168.0.32).
2. If required, enter an appropriate subnet mask and gateway address for the IP address.
3. In the toolbar, click .
4. Confirm the prompt that the device will be restarted.
5. Restart Monitor Wall.

**NOTICE!**

A new IP address, or a new subnet mask or gateway address, does not become valid until Monitor Wall is restarted.

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