Dear Milestone Customer,

With the purchase of Milestone Xprotect Matrix you have chosen a very advanced and flexible surveillance solution. Milestone Xprotect Matrix will enable you to control remote viewers of images from your TCP/IP based video cameras and video servers via Milestone Xprotect Business or through a web page.

This Guide will explain how to install and use the features offered by the software.

Milestone Systems regularly releases service updates for our products, offering improved functionality, support for new devices, and solutions for issues reported by our customers.

To make sure you install the most recent version of our software, please check our website **www.milstonesys.com** for updates.

Milestone Systems A/S

Your Milestone Partner can help you with first line support of your Milestone Xprotect Matrix software. You can use the form below to have your Partner contacts readily available.

Partner:	
Website:	http://

Contact 1:	
Telephone:	
Email:	

Contact 2:	
Telephone:	
Email:	

Please quote the Software License Code when contacting support.

Uninstalling a Previous Matrix Monitor Version

If a **previous** version of Milestone Xprotect Matrix is installed this must be uninstalled before the current version can be installed.

◆ Run the *MilestoneXprotectMatrixMonitor.exe* file from the CD **OR** run the .exe file from the location where you have saved it, if installing a version downloaded from the Internet.

◆ Click OK to confirm uninstalling the previous version.
◆ Click Finish to end the uninstalling procedure.
◆ Continue the software installation as described in the chapter: *Installing the Matrix Monitor software.*

Installing the Matrix Monitor Software

Please read the License Terms in the Product License Sheet before you continue the installation of your Milestone software.

◆ Run the *MilestoneXprotectMatrixMonitor.exe* file from the CD **OR** run the .exe file from the location where you have saved it, if installing a version downloaded from the Internet.
◆ Click *Next* to continue the installation.
◆ Please read and accept the License Agreement.
◆ Please type in your Serial Number (Software License Code) as listed on your Product License Sheet. Then click *Next*.

◆ Choose Installation Path, then click *Next*.
◆ Select Program Folder for the Milestone shortcuts, click *Next*.
◆ By default a link to Milestone Matrix is placed on the desktop and added to the startup folder. Uncheck the options not desired.
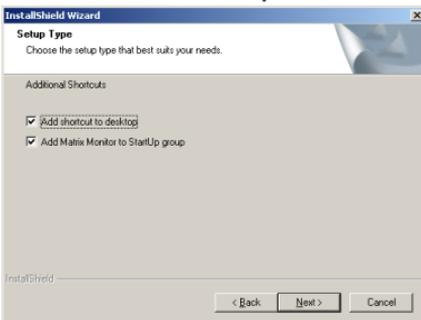
◆ Click *Next* to proceed with the installation.
◆ Click *Finish* to complete the installation.

Retrieving Xprotect Matrix Monitor License Keys

When starting the Matrix Monitor application for the first time you will be asked to supply a Matrix Monitor License Key.

◆ Go to the Milestone website at www.milestonesys.com.
◆ Click on *Software Registration* in the top menu, then choose *Enter the Online Software Registration System*.
◆ If you are a new user, select *New at Milestone* and follow the instructions. Since the License Keys are emailed to the specified address, please make sure that all persons needing to retrieve License Keys have access to the account used.
◆ Log in to the registration system using the registered email address and password.
◆ If you have not yet registered your software, you must select *Add a New Software License Code* and complete the steps to claim your SLC before proceeding.
◆ Choose *Generate New Device license Keys* to generate Matrix Monitor License Keys for your installation. Please follow the instructions given on the screen.
◆ The MAC address asked for is the 12 digit *Matrix Monitor ID* listed in the License key dialog when starting the Matrix Monitor for the first time.
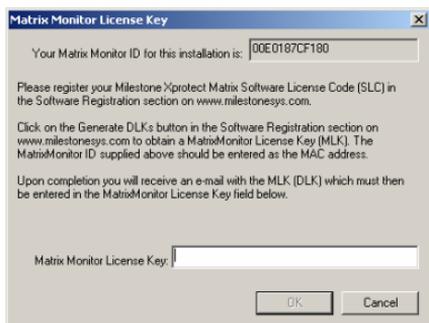
◆ Upon finishing registration, an email will be sent to the specified email address containing the License Keys.
◆ Type in (or Copy-Paste) the Matrix Monitor License Key given in the Matrix Monitor Licence Key dialog, then click *OK*.
◆ Proceed to configure the Matrix Monitor software.

Configuring the Matrix Monitor Software

◆ The Matrix Monitor configuration dialog is used to set up how the Matrix Monitor should react to remote requests.
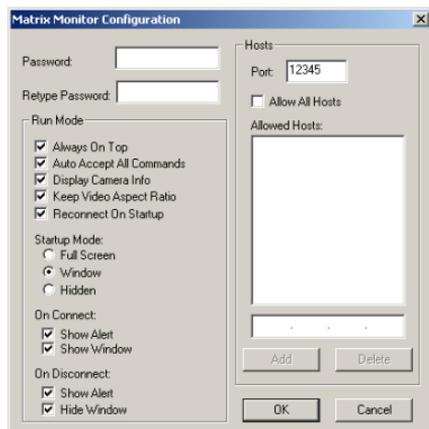
◆ First, a **password** must be assigned in the *password* field, and confirmed in the *retype password* field.

All commands sent to Matrix Monitor must contain this password in order to be accepted. The password is also required when entering the Matrix Monitor configuration dialog.

◆ Second, the **IP port** used must be set up.

The *Port* field specifies the port where Matrix Monitor 'listens' for commands. The default port is 12345.

◆ Third, the **Hosts** that are allowed to send commands (requests to open a Matrix Monitor window) must be configured.

  ○ If commands from any host should be accepted, simply check the *Allow All Hosts* checkbox.

  ○ If only commands from specified hosts should be accepted, leave the *Allow All Hosts* checkbox unchecked.

    The IP addresses of the hosts (computers) from which commands are accepted must be specified in the *Allowed Hosts* dialog.

    ○ To **add a Host**: Type in the IP address of the host (computer), then click the *Add* button.

    ○ To **remove a Host**: Select the IP of the host to be removed from the list, then click the *Delete* button.

- ◆ Lastly, the specific behavior of the Matrix Monitor can be customized in the *Run Mode* section of the *Matrix Monitor Configuration* dialog:
  - o **Always On Top**: Force the Matrix Monitor camera window on top of other windows.
    This setting can be changed by accessing the right-click context menu in the camera window.
  - o **Auto Accept All Commands**: Automatically accept all commands sent from the allowed hosts containing the correct password. If unchecked, an accept dialog is displayed for each received command.
  - o **Display Camera Info**: Show the camera information in the camera window. This allows the camera alias or the camera IP to be displayed even if Matrix Monitor is running in full screen mode.
  - o **Keep Video Aspect Ratio**: Maintain the aspect ratio of the image when the Matrix Monitor window is resized.
    If this function is not selected, the video will be stretched to fill up the entire window.
  - o **Reconnect On Startup**: Matrix Monitor will try to re-connect to the last connected camera when starting.
    If this function is not selected, no camera connection will be attempted on startup.
  - o **Startup Mode**: Selects the Matrix Monitor startup mode.
    Full Screen: Starts Matrix Monitor in full screen mode with no title bar, etc.
    Window: Starts Matrix Monitor in window mode.
    Hidden: Starts Matrix Monitor in hidden mode.
  - o **On Connect**:
    Show Alert: Show an alert window with connection information when a connect command is received.
    Show Window: Auto-restore Matrix Monitor from hidden mode when a connect command is received.
  - o **On Disconnect**:
    Show Alert: Show an alert window with disconnection information when a disconnect command is received.
    Hide Window: Send Matrix Monitor hidden mode after a disconnect command is processed. Matrix Monitor can still be accessed from the icon tray.

Using the Matrix Monitor

The Matrix Monitor camera window shows the video feed from the connected camera.
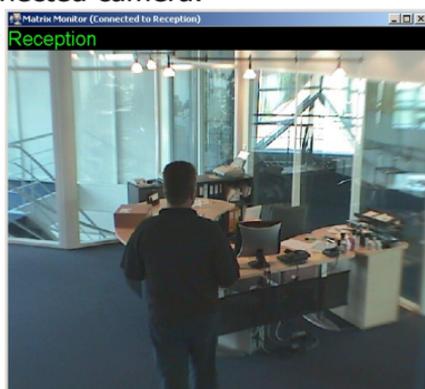
◆ If the *Auto Accept All Commands* option in the configuration dialog is not checked, all received commands will need to be accepted by the user before they are executed by Matrix Monitor. When receiving a command, a small accept command dialog is shown in the lower right corner of the screen containing information about the command and who sent it.
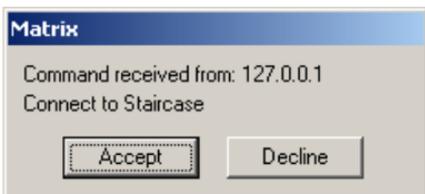
◆ Click *Accept* to accept viewing the feed, or choose *Decline* to ignore the request.
◆ If the *show alert* options in the configuration dialog are checked, a small alert window is shown near the icon tray when the Matrix Monitor has executed a received command.

◆ The alert dialog will close itself after 10 seconds. It can also be closed manually by clicking the **X** in the top right corner.

◆ The view or configuration of the Matrix Monitor window can be changed by right clicking in the window:

```
  Full Screen
✔ Always On Top
  Config
  Hide Window
```

The *Context menu* will then appear with the following options:

- o Full Screen: Sends Matrix Monitor into full screen mode with no title bar, etc.
- o Always On Top: If checked, the Matrix Monitor camera window is forced to be on top of other windows.
- o Config: Brings up the configuration menu. The configuration menu is described in detail in the chapter: *Configuring the Matrix Monitor Software*.
- o Hide Window: Sends Matrix Monitor into hidden mode where it can be accessed in the Icon Tray.

◆ When Matrix Monitor is in hidden mode it can be controlled via the *Icon Tray*. Right clicking on the Matrix Monitor icon in the Icon Tray will bring up the Icon Tray Menu:

```
  Show Window
  Config
  Exit
```

The Icon Tray Menu offers the following options:

- o Show Window: Restores the Matrix Monitor window from hidden mode to either window or full screen mode.
- o Config: Brings up the configuration menu. The configuration menu is described in detail in the chapter: *Configuring the Matrix Monitor Software*.
- o Exit: Shuts down the Matrix Monitor application.

◆ Double clicking anywhere in the *Camera Window* will toggle between full screen and window mode.

◆ Clicking on the **X** in the top right corner of the *Camera Window* will send Matrix Monitor into hidden mode.

◆ Double clicking on the *Icon Tray* will restore Matrix Monitor from hidden mode to either window or full screen mode.

◆ The *Icon Tray* is shown even if Matrix Monitor is not in hidden mode.

Installing the Milestone Xprotect Business Plug-In

To be able to launch the Milestone Xprotect Matrix window from within the Milestone Xprotect Business application, you must first install the Milestone Xprotect Business Matrix Plug-In.

◆ Make sure Milestone Xprotect Business is NOT running on the PC where you are about to install the Plug-In.
◆ If the Milestone Xprotect Business on your system is not version 3.1b or newer you **must** upgrade before you install the Plug-In.

If a **previous** version of Milestone Xprotect Matrix Plug-In is installed this must be uninstalled before the current version can be installed.

◆ Run the *MilestoneXprotectMatrixPlugin.exe* file from the CD **OR** run the .exe file from the location where you have saved it, if installing a version downloaded from the Internet.
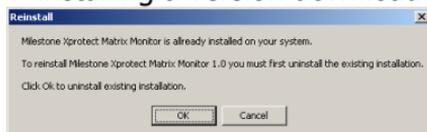
◆ Follow the instructions given on screen. The uninstall procedure is similar to that of the Matrix Monitor. Please see the chapter *Uninstalling a Previous Matrix Monitor Version* for details.

Please read the License Terms in the Product License Sheet before you continue the installation of your Milestone software.

◆ Run the *MilestoneXprotectMatrixPlugin.exe* file from the CD **OR** run the .exe file from the location where you have saved it, if installing a version downloaded from the Internet.
◆ Click *Next* to continue the installation.
◆ Please read and accept the License Agreement.
◆ Please type in your Serial Number (Software License Code) as listed on your Product License Sheet. Then click *Next*.
◆ Choose Installation Path, then click *Next*.
◆ Click *Next* to proceed with the installation.
◆ Click *Finish* to complete the installation.

Configuring the Matrix Monitor Plug-In

◆ Start the Milestone Xprotect Business Administrator:
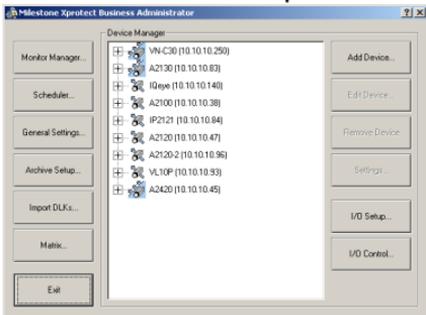
◆ The *Matrix* button is now available in the left side of the main menu. Click to open the *Matrix Configuration* dialog.
◆ Check the *Enable Matrix* box to enable the Matrix functionality:
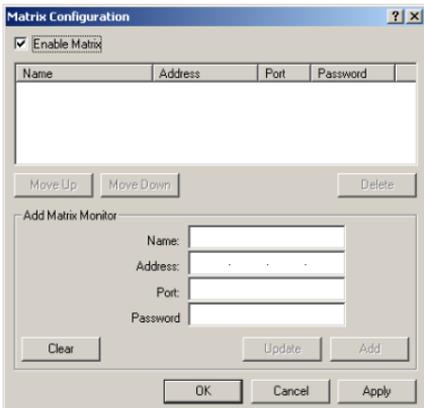
◆ Each Xprotect Matrix Monitor that should be controlled must be set up in this dialog.
   Type in a descriptive name, and the IP address, port and password of the Matrix Monitor in the respective fields, then click *Add*. Repeat this for all the Matrix Monitors you want to control.
◆ The order in which the Matrix Monitors show up in the dialog in the Xprotect Business Monitor can be manipulated by selecting a Matrix Monitor and using the *Move Up* and *Move Down* buttons.
◆ To change the settings for a Matrix Monitor, select it in the list, change the desired setting(s) and click *Update*. Clicking *Add* will add a new Matrix Monitor to the list while keeping the old.
◆ To remove a Matrix Monitor entirely, select it in the list and click *Delete*.

Controlling Matrix from within Xprotect Business

The Matrix Monitors that have been set up in the Xprotect Business Administrator can be controlled from the Xprotect Business Monitor.

◆ Right clicking on one of the camera windows brings up the matrix context menu (here shown in the top left window):

◆ From the list, select which Matrix Monitor to send a command to bring up the selected camera.
◆ Right clicking in the same window again will bring up the menu. The menu shows which Matrix Monitors are viewing this feed.

◆ Selecting a Matrix Monitor that is marked with a **V** will send a command to that Monitor to stop viewing this feed.

◆ **More Matrix Monitors** can view the same feed at once.
Please be aware that having more Matrix Monitors viewing the same camera might slow down the performance of the camera.

◆ The **V**-marking in the Matrix Monitor list reflects only the actions made within the Milestone Business Monitor, and thus may not always show the actual status of the Matrix Monitors – for example, if the Matrix Monitors are controlled from a web page as well.
On startup, the Xprotect Business Monitor assumes that all Matrix Monitors are disconnected.

Controlling Matrix Monitors from a Web Page

Controlling one or more Matrix Monitors from a Web page can be done in a number of ways. Listed below is the simplest possible setup, while a more advance method is shown in the *MatrixWebControlGuide.html* file found on the Milestone Matrix CD, or downloadable from **www.milestonesys.com**.

◆ The Javascript file *MatrixMonitor.js* provided on the Matrix CD must be copied to the directory where the html page used to control the Matrix Monitors is located.

◆ Add the following line to the header section of the html code:
```
<SCRIPT LANGUAGE="javascript"
SRC="NetMatrixMonitor.js"></SCRIPT>
```

◆ In the body section of the html code a link can be added to control a Matrix Monitor. The link shall be in the format:
```
NMMConnect(NMMAddress, NMMPort, NMMPassword;
DevType, DevAddress, DevPassword, DevCamNo,
DevMaxFrameRate, DevResolution, DevTextName)
```

◆ To send a disconnect to Matrix Monitor, the format is:
```
NMMDisconnect(NMMAddress, NMMPort, NMMPassword)
```

◆ The specific use of each parameter is discussed in the *MatrixWebControlGuide.html* file. Special attention should be made to specify the correct camera type (DevType parameter).

◆ A link to send a command to the Matrix Monitor on IP 10.10.10.222, port 12345, password "password", to connect to a camera type 6 with IP 10.10.10.96 and password "pass" in high quality resolution, and assigned the name "Reception" would be:
```
<a href="" onClick='NMMConnect("10.10.10.222",
"12345", "password", "6", "10.10.10.96", "pass",
"1", "0", "1", "Reception"); return
false'>Reception 10.10.10.96</a>
```

◆ In addition being found on the Matrix CD, MatrixMonitor.js can be downloaded from **www.milestonesys.com**.
The MatrixMonitor.js currently supports only Internet Explorer.

◆ Using the code example given in *MatrixWebControlGuide.html* will enable you to read back the status of the individual Matrix Monitors to the web page. This will enable you to build in control mechanisms to verify that a command is received and processed correctly.