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The Open Platform Company

Installer's Guide

Installing the Stretch encoder card with Milestone XProtect®

Milestone Systems

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Introduction

In order to enable the Stretch S7 PCIe DVR add-in card in XProtect®, Milestone has developed a driver to enable compatibility. To download the driver, visit Download section here, select *Device Packs* under Type and click download button on your right hand side. The features of the driver are listed under Milestone Supported Hardware section here.

A combination of the Stretch PCIe card, the Milestone developed driver, XProtect VMS and a preconfigured workstation enables system builders to build a Hybrid NVR solution.

Target audience and white paper purpose

This guide is relevant for people installing a Stretch PCIe card and the Milestone-developed driver for this card. This guide is aimed for systems builders who want to build a hybrid NVR solution with the Stretch PCIe card, the Milestone-developed driver for this card, Milestone XProtect and a preconfigured workstation. However, this guide does not explain how to preconfigure a workstation, as it depends on a workstation; neither does it explain how to install Milestone XProtect, as this information is available on the download section of the Milestone website.

The **guide** assumes the reader has a general understanding of Milestone XProtect **VMS** and IP network management in general.
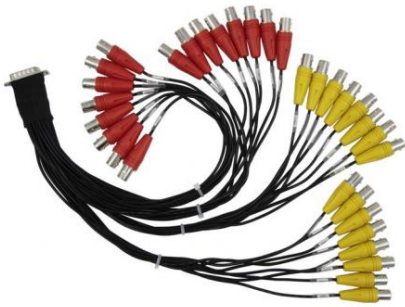
Stretch Board Installation

Before installing a Stretch VRC7000 Add-In card, make sure that the Windows PC host is powered off and that the power cord is disconnected.

IMPORTANT! Some PCs maintain power to motherboards even when the PC is switched off. Be sure to disconnect the power cord and make sure that the power supplies are not connected before continuing installation.

IMPORTANT! The Stretch VRC7000 Add-In cards contain static-sensitive components. Use care while you handle the cards. Make sure you are properly grounded before touching the card, and only touch the edges of the card.

To install the Stretch VRC7000 Add-In card:

1. Carefully remove the card from its anti-static packaging.
2. If you are installing a VRC7016X or a VRC7032, connect a SATA power cable to the card.
3. Insert the card carefully into a PCIe slot of a powered-down PC host.
4. Secure the add-in card to the PC host case with a set screw.
5. Connect a 16-channel audio and video input squid cable to the card.

At this point, you should connect 16 SD analog camera input sources to the audio and video input squid cable so that you can test the installation.

Stretch PCIe Driver Installation

After you have installed the Stretch VRC7000 Add-In card on your Windows system, restart your computer. Windows detects the presence of newly installed hardware and starts the *Found New Hardware Wizard.*

To install the digitally signed PCIe driver for your add-in cards, use the following steps:

> **NOTE**: In the Found New Hardware Wizard, multiple sequences of steps are possible when installing the digitally signed PCIe driver. For example, checking a box to include sub-folders may result in selecting the wrong driver to install in certain situations. To minimize chances of making such mistakes, follow these steps.

Windows XP

1. When the wizard asks you to connect to **Windows Update** to search for software, select **No, not at this time** and click the **Next** button.
2. When the wizard asks you to install software automatically or from a specific location, select **Install from a list or specific location** and click the **Next** button.
   a. When the wizard asks you to choose search and installation options, select **Don't search, I will choose the driver to install** and click the **Next** button

Windows 7

1. When the wizard asks you how to search for driver software, select **Browse my computer for driver software**.
2. When the wizard asks you to browse for driver software on your computer,

select **Let me pick from a list of device drivers on my computer**.

Windows XP and Windows 7	1. When the wizard asks you to select the device driver to install, click the *Have Disk button*, which opens the **Install from Disk** dialog.

2. In the **Install From Disk** dialog, browse to the 32- or 64-bit version of the digitally signed PCIe driver to install. Point the dialog to the folder where you have placed the Windows driver files (download windows driver files here: http://download.milestonesys.com/Stretch/). Be careful to select the 32-bit or the 64-bit drivers according to your system.

   Select the *stretch_s6dvr.inf* file in the directory and click the Open button. Verify that you have not selected the *Check in Subfolders* box.

3. Click the *OK* button. In the Found New Hardware Wizard, click the *Next* button.

   NOTE: If a Hardware Installation warning dialog appears, click the **Continue Anyway** button. You can ignore the Windows Logo testing warning message.

4. In the Found New Hardware Wizard, click the **Finish** button to complete installation of the PCIe driver.

IMPORTANT! Each version of Milestone Device Pack corresponds to a certain version of the Stretch Driver. It is very important that you always install the version of the Stretch Driver that goes with the Milestone software. Failing to do so can result in unreliable behavior.

The following table will allow you to select the right versions:

Milestone Device Pack version	Stretch PCIe Add-in Card Driver Version
6.4 and 6.5	7.5
6.6 to 7.3	7.8.0
7.4 and newer	7.11.1

Adding the card to Milestone XProtect Software

Make sure that the device has been properly installed on Windows and that it shows up correctly without any warnings in the Windows Device Manager.

1. If you have not already done so, install the Milestone XProtect® Device Pack 6.4 or newer from here. As well as Windows driver – refer to the section above.

2. Open the Milestone XProtect Management Client (XProtect® Corporate) or the Milestone XProtect Management Application (XProtect® Enterprise, XProtect® Professional, XProtect® Express, XProtect® Essential and XProtect® Go).
3. Open the **Add Hardware** dialog and choose to add the device manually.
4. Type in an IP address of any *active* network interface card (NIC) on the server on which you have installed the Stretch encoder card (do not use host name, "localhost" or "127.0.0.1"). This is primarily used for licensing purposes, and the NIC is in no other way related to the Stretch encoder card or the operation of this.
5. If you use XProtect Corporate, you do not have to specify any user name and password. If you use any other XProtect product, you must specify something in the password field. You can, for example, type in a space or anything simple and easy as the device driver does not use this in any way.
6. Choose the proper Stretch device driver from the drop-down list and complete the add hardware procedure.
7. If you have not done so already, connect your cameras to the encoder card. You should now be able to see video from these in the preview screens or the XProtect® Smart Client.

Troubleshooting

1. If you cannot add the card or the card later stops working, check that the specified IP address is in use by an *active* (that is, a connected) NIC .
2. Due to limitations of the Stretch SDK and a time-consuming handover procedure, only one application can work with the device at a time. This is not an issue for XProtect Corporate, but for the other XProtect products, this means that whenever the Management Application accesses the device, the Recording Server service loses its connection to the device, and whenever the **Camera Settings** dialog is accessing the device, neither the Management Application nor the Recording Server service have access. After an application stops accessing the card (either by focusing on some other feature or device or by being shut down), the other application should automatically regain access. However, this process might take some time.
3. Do not use another Windows driver than the one specified by Milestone. The Stretch SDK only works with the Windows driver it was built for.
4. Please note, Stretch driver does not support Windows Server 2008, also some motherboards are not compatible with Stretch card. Please contact Stretch if you face card compatibility issues with your motherboard.
5. If video is missing from one or more channels, check to see whether the squid cable(s) are properly seated on the card. Also, check to see whether all channels in the squid cable are passing video by swapping questionable cables with a known good cable.
6. If video is black or distorted from one or more channels, check the SD camera inputs for mixed NTSC and PAL video standards. The Stretch VRC7000 Add-In cards must be supplied either all NTSC or all PAL SD video standard camera inputs.
7. If the Stretch VRC7000 Add-In card does not show up on Windows Device manager, open the PC case and check the board LED's are ON. If the LEDs are off, check to see whether the card uses a

SATA power cable and make sure it is plugged into the card (board models VRC7016X and VRC7032 require a SATA power cable connected to operate correctly). Also check to see whether the card is properly seated into the PCIe slot If the board's LED are OFF and the SATA power cable is connected (when it applies) please contact your milestone support.

8. If the digitally signed Stretch PCIe driver does not install properly, check to see whether the correct driver type and version were used. Make sure that the proper 32- or 64-bit Windows driver was installed. Make sure to uncheck the Check Subfolders option when installing. Sometimes it is necessary to restart Windows to get the driver to start properly after installation.

9. If the digitally signed Stretch PCIe driver does not function properly with the Milestone application: check to see whether the correct driver version was used. Refer to table above.

10. If the Stretch card is disabled in the Windows Device Manager and then again enabled it might cause the card to lock up on some machines. If this happens please reboot the computer and everything will be working again.

11. Using more than one Stretch card in a single server is supported beginning in Device Pack 6.9

12. Beginning in Device Pack 6.9, Windows User Account Control (UAC) must be disabled. If UAC is left enabled, the Stretch card will not function correctly.

Technical Support

If you have followed this installation guide carefully and have gone through the troubleshooting solutions and your board still does not work, please refer to your Milestone Support Team (please login under My Milestone with your credentials and click on Partner Support)

When contacting your Milestone support team, please be sure to include the following data in your request:

- Milestone Software used and version
- Stretch Add-in Card model used
- Stretch Add-In Card Serial Number (you can find the serial number in a sticker on the PCB)
- Version of the Stretch PCIe Driver used

About Milestone Systems

Founded in 1998, Milestone Systems is the global industry leader in open platform IP video management software. The XProtect platform delivers powerful surveillance that is easy to manage, reliable and proven in thousands of customer installations around the world. With support for the widest choice in network hardware and integration with other systems, XProtect provides best-in-class solutions to video enable organizations – managing risks, protecting people and assets, optimizing processes and reducing costs. Milestone software is sold through authorized and certified partners. For more information, visit **www.milestonesys.com**

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