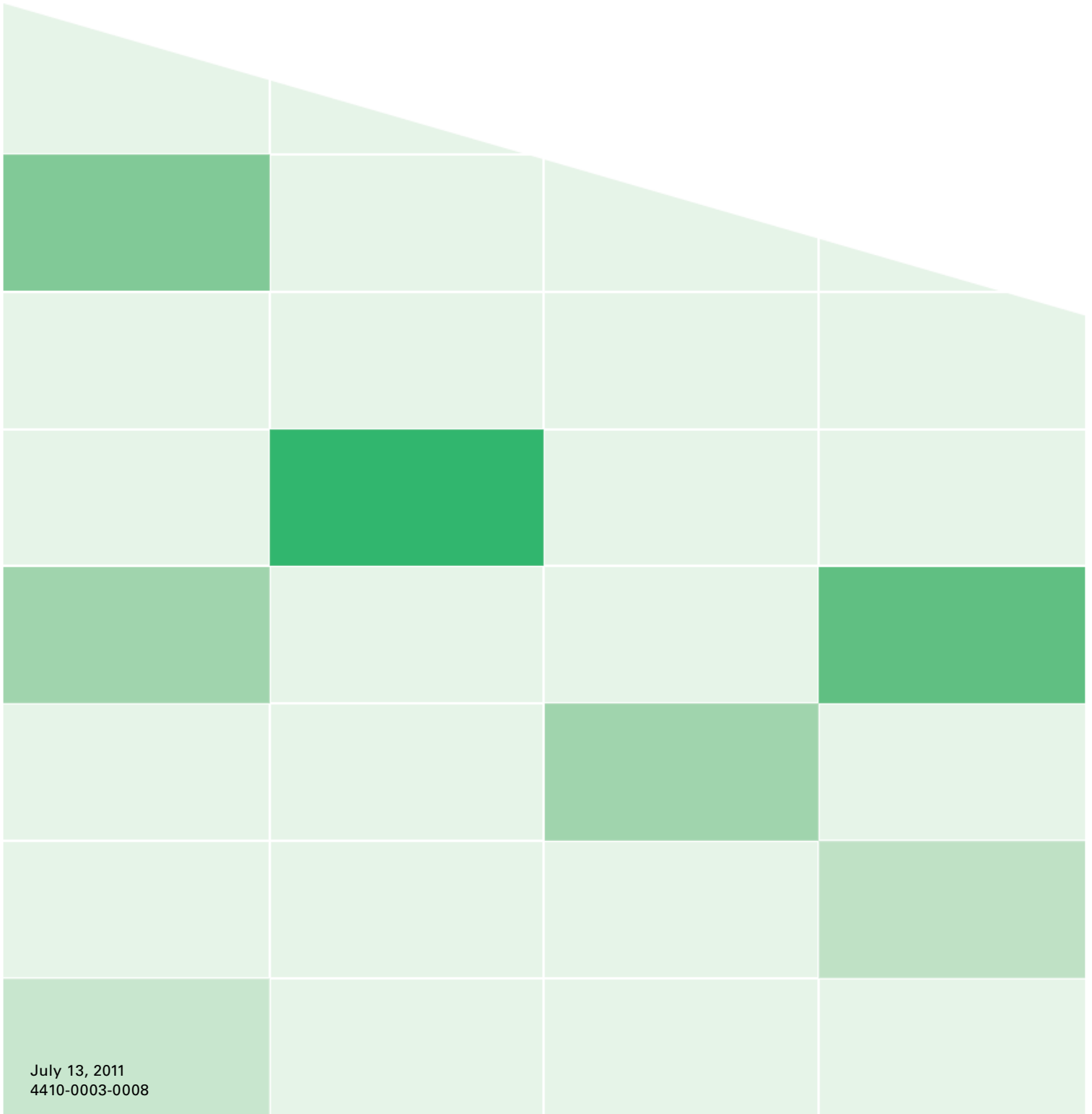




VBrick StreamPlayer

StreamPlayer v5.2 User Guide



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About VBrick Systems

Founded in 1997, VBrick Systems, an ISO 9001 certified vendor, is a privately held company that has enjoyed rapid growth by helping our customers successfully introduce mission critical video applications across their enterprise networks. Since our founding, VBrick has been setting the standard for quality, performance and innovation in the delivery of live and stored video over IP networks—LANs, WANs and the Internet. With thousands of video appliances installed world-wide, VBrick is the recognized leader in reliable, high-performance, easy-to-use networked video solutions.

VBrick is an active participant in the development of industry standards and continues to play an influential role in the Internet Streaming Media Alliance (ISMA), the MPEG Industry Forum, and Internet2. In 1998 VBrick invented and shipped the world's first MPEG Video Network Appliance designed to provide affordable DVD-quality video across the network. Since then, VBrick's video solutions have grown to include Video on Demand, Management, Security and Access Control, Scheduling, and Rich Media Integration. VBrick solutions are successfully supporting a broad variety of applications including distance learning and training, conferencing and remote office communications, security, process monitoring, traffic monitoring, business and news feeds to the desktop, webcasting, corporate communications, collaboration, command and control, and telemedicine. VBrick serves customers in education, government, healthcare, and financial services markets among others.

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StreamPlayer User Guide

This document is written for anyone using or evaluating StreamPlayer. The StreamPlayer product family lets you view high quality MPEG, Windows Media, and H.264 streams (both live and on-demand) right from your desktop. The StreamPlayer software is available in two versions: StreamPlayer, a view-only component, and StreamPlayer Plus which also allows recording and editing of MPEG streams.

It is important to note that the StreamPlayer software you have installed opens different types of media files depending on the version you purchase and the licenses you have installed. A fully configured StreamPlayer installation can play MPEG-1, MPEG-2, MPEG-4, WM (Windows Media), and H.264 video streams. Also note that although the terms StreamPlayer and StreamPlayer Plus are generally used interchangeably, StreamPlayer Plus is actually the fully-featured system that plays and records all VBrick-supported media types.

Organization

1. Getting Started	provides a quick overview of the StreamPlayer user interface.
2. Play	explains how to launch a video stream using StreamPlayer.
3. Record	explains how to record live video streams. StreamPlayer Plus only.
4. Play/Edit Saved Files	explains how to play and edit video streams. StreamPlayer Plus only.
5. Preferences	explains how to set preferences for standard StreamPlayer functions.
6. Windows Media Player	explains how Windows Media Player interacts with StreamPlayer.
7. Capture Driver	explains how to install and use VBrick's "virtual" capture card software.

Font Conventions

Arial bold is used to describe dialog boxes and menu choices, for example: **Start > All Programs > VBrick**

`Courier fixed-width font` is used for scripts, code examples, or keyboard commands.

`Courier bold fixed-width font` is used for user input in scripts, code examples, or keyboard commands.

This bold black font is used to strongly emphasize important words or phrases.

Folder names and user examples in text are displayed in this sans serif font.

User input in text is displayed in this bold sans serif font.

Italics are used in text to emphasize specific words or phrases.

Getting Started

Using StreamPlayer



Unless specifically noted, StreamPlayer refers to StreamPlayer WM, StreamPlayer, StreamPlayer with MPEG-2 Playback, and StreamPlayer Plus. If you have Windows XP with Service Pack 2 installed and are using the Windows Firewall (on by default) you need to follow this procedure. The first time that you launch StreamPlayer or StreamPlayer Plus you will see an error message. Click **Unblock**. The next time you run StreamPlayer Plus you will not see this message again.



▼ To launch StreamPlayer:

1. Go to **Start > Programs > VBrick > StreamPlayer Plus**.



The StreamPlayer interface is easy to navigate. The following functions are available from the interface.

	Play Selecting a video in the Program Info and then pressing the Play button plays the video. Double clicking a video from the list in the Program Info window also plays the video.
	Record StreamPlayer Plus only. Pressing the Record button will launch the video window, which allows recording of the currently selected video. If a valid StreamPlayer Plus license is not installed, you will be prompted to upgrade to StreamPlayer Plus.

 Archive	Pressing the Archived Files button lets you play stored video files. If StreamPlayer Plus is installed, it also allows users to edit MPEG-1 and MPEG-2 video files and FTP video files.
 Help	Launch the online help system. Minimize or close the application.
Preferences	The Preferences button allows the user to modify the StreamPlayer default settings.
IP Address	IP address of selected stream.
Port	Port number of selected stream.

StreamPlayer Differences

Table 1. Supported Versions

Version	Plays	License Required
StreamPlayer WM	WM, MPEG-1 †	No.
StreamPlayer	WM, MPEG-1, MPEG-4, H.264 †	Yes. Installs automatically.
StreamPlayer with MPEG-2 Playback	WM, MPEG-1, MPEG-2, MPEG-4, H.264	Yes. See Product CD or download from website.
StreamPlayer Plus	WM, MPEG-1, MPEG-2, MPEG-4, H.264 plus Record, FTP, Edit ††, Capture Driver †††	Yes. See Product CD or download from website.

† Plays MPEG-2 if you have an MPEG-2 decoder (e.g. a DVD player) on your computer.

†† Edits MPEG-1 and MPEG-2 streams only.

††† Outputs raw streaming media for third-party applications.

Play



Playing a Stream

StreamPlayer buffers a certain amount of data before starting a stream to ensure smooth playback. Streams with a lower data rate will take slightly longer to start than those with a higher data rate. StreamPlayer launches Windows Media Player to play MPEG/Windows Media video streams on the PC. There are several ways to play video through StreamPlayer.



- ▼ To play a stream in StreamPlayer use one of the following methods:
 - Double-click on any Program Title in the StreamPlayer **Program Info** window to launch Windows Media Player. After a short delay (usually less than a second) the selected video will appear.
 - Highlight the entry in the Program Info window and press the **Play** button.
 - To play an MPEG-1 or MPEG-2 unicast stream or a multicast stream that does not appear on the Program Guide, enter the IP Address of the VBrick and Port number in StreamPlayer and press **Play**.
 - To play an RTSP stream, enter an RTSP address in the IP Address field and select **Play**.
 - To play a Windows Media stream, enter an HTTP or RTSPU URL in the IP Address field and select **Play**.

In some cases, you may receive the following error message when attempting to play a video:

```
0xC00D10B3: Windows Media Player cannot play this file. Connect to the Internet or insert the removable media on which the file is located, and then try to play the file again.
```

This problem occurs because Microsoft Windows Media Player automatically tries to detect whether the player is connected to a network. If Windows Media Player cannot detect a

network connection, and if you try to play online content, you receive an error message. This problem may also occur if your player is set to **Work Offline**.

▼ To force the player to always assume that the player is connected to a network:

1. Go to **Tools > Options**.
2. On the Player tab, under Player settings, check the **Connect to the Internet** check box.

See the following Microsoft URL for more information:

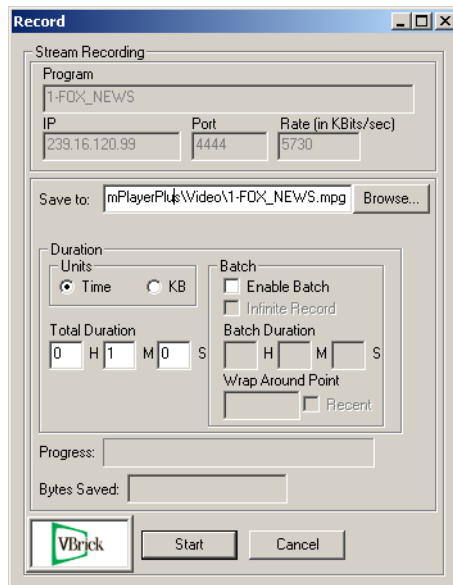
<http://support.microsoft.com/default.aspx?scid=kb;EN-US;838101>

Record



Recording a Stream

StreamPlayer Plus only. Recording from VBricks using StreamPlayer Plus software may be done in a number of different modes with various protection schemes. The recording might consist of a single large file or a series of smaller, or batch, files. Batch files may be set up so that recent files overwrite earlier ones. Live streams might have the ability to record them suppressed or allowed through a password. The recorded stream can be the current stream being viewed or a different one. StreamPlayer can also record password-protected streams if you know the password. When attempting to record a stream that has been password protected, you will be prompted to enter the configured password. There are circumstances where you will not be able to record streams. For example, recording is not permitted when the application is unlicensed and running in demo mode. Recording can also be restricted or entirely disabled by an administrator. Note that Recording and Edit/FTP are currently supported for MPEG-1 and MPEG-2.



- ▼ To record a stream:
 1. Highlight the program to record in the Program Information pane.
 2. Select the StreamPlayer Plus **Record** button.
- ▼ To save a stream:
 1. Enter the name of the file to be saved or browse to the location. The default is C:\Program Files\VBrick\StreamPlayer Plus\Video\"programinfofilename\".mpg.

Note The file name extension for MPEG-1 and MPEG-2, is .mpg. For MPEG-4 and H.264 it is .mp4. For Windows Media it is .wmv.

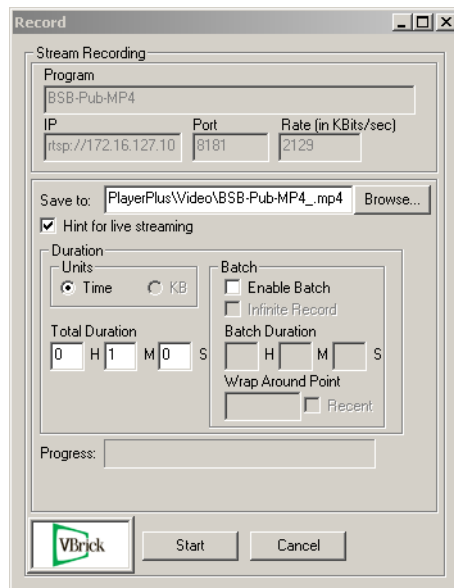
Password Protection

Enter the password if it is a protected stream. Streams can be password protected in a VBrick Appliance in the SAP Transmit or Encoder Configuration section of a VBrick Appliance (refer to the *VB1000-2000-3000* or *VB4000-5000-6000 User Guide* for instructions on how to configure SAPs). StreamPlayer Plus can record password-protected streams if the password is known. When attempting to record a stream that has been password protected, the user will be prompted to enter the configured password. Two specific categories shown below and set in the VBrick appliance affect StreamPlayer Plus recording. (See the *StreamPlayer Plus Administrator Guide* for more information.)

- norecord – The stream cannot be recorded.
- norecord=<password> – StreamPlayer prompts the user for a password.

MPEG-4/H.264 Hinting

If the stream is MPEG-4 or H.264, the **Hint for live streaming box** will be selectable. (For other MPEG and Windows Media types this box will not be visible). Hinted files contain reorganized data that facilitates streaming over the network. If the **Hint for Live Streaming** box is checked, StreamPlayer Plus embeds certain information within the files, making it easier for a server to read and send pre-formatted packets. Hinting eliminates server-side preprocessing, reducing the CPU load, memory requirements, and the amount of disk access on the server.



Hint for live streaming	Hinting a file takes place after the file has been recorded. It is recommended that the hinting be complete before the recorded file is accessed. If the recorded file will be streamed from a Video on Demand server, it is recommended that Hinting be selected.
-------------------------	--

Units	<ul style="list-style-type: none"> • Time – Enter the duration in H (hours), M (minutes) and S (seconds). The file can be recorded in one continuous stream and the length of the recorded file specified by duration in seconds or KB. The minimum number of seconds that can be entered is 1; the default is 1 minute. An error message will be displayed if there is not sufficient disk space for the file being captured. If it is desired to simply Start and Stop a record manually, simply set a long duration, press Start to begin the recording and then press Stop to end the recording. • KB – File size = Rate x Seconds/(8X1024).
Enable Batch	<p>MPEG-1, MPEG-2, MPEG-4, H.264 only. Recording in Batch Mode means that the video is recorded in segments. When Batch mode is selected, the video will be recorded in multiple files, each file equal in size to the specified batch duration in seconds or KB. The name of each file saved will be appended with an increasing number (video1.mpg, video2.mpg. . .video99.mpg). For example, if it is necessary to record in batch mode for a total duration of 60 minutes, and the batch file duration is 20 minutes, three 20-minute files will automatically be created. Batch mode can be used to record video that exceeds the Windows 4 GB file size limitation (32-bit), and is especially useful when forwarding large video files to a remote Video on Demand server or VBStar (VBStar supports Batch Mode, allowing the automatic reassembly and streaming of multiple MPEG-2 video files.). An error results if an attempt is made to edit or FTP multiple saved files that were not created as in the same batch recording. Selecting Batch requires that other parameters be specified in order to prevent filling the storage device.</p>
Batch Duration	Duration in HH:MM:SS.
Infinite Record	Requires a Batch Duration and a Wrap Around Point. This is the equivalent of specifying both the length of the clips (in seconds or KB) and the total number of clips.
Wrap Around Point	This directs the program that after creating the specified number of files, StreamPlayer Plus will begin recording over the previous files in consecutive order. For example, if the Wrap Around Point is set to 5, after recording 5 files, StreamPlayer Plus will continuously overwrite the files, beginning at 1.
Recent	Next to Wrap Around Point field there is a Recent button. If this button is checked then the Wrap Around Point text changes to Save Files. In this mode, rather than overwriting files previously recorded, the oldest files are discarded and a file with the same name but the next consecutive batch number is created. Identification of files by number is easier than identification by date.
Start	The video is saved to disk in real time and a progress bar is displayed. The recording may be stopped at any time by pressing Stop. MPEG files may be viewed, e-mailed, FTPed, and/or edited.

Disk Storage Requirements

Stream recording requires significant disk space. One minute of captured video/audio from a 1.2 Mbps stream (a typical MPEG-1 stream or a high bit rate MPEG-4 stream) requires approximately 9 MB of disk space. By comparison, 1 minute of captured video/audio from a 5.5 MB per second stream (a typical MPEG-2 stream) requires approximately 40 MB of disk space. Be sure to have enough disk space free for any intended capture. The amount of disk storage required depends on the bit rate and the recording time. A rough rule is to allow 1 GB per hour for MPEG-1, 2.5 GB per hour for MPEG-2, and 500 MB per hour for MPEG-4.

System Stream Rate (Bits/sec)	System Stream Rate (Bytes/sec)	Storage Required per Sec. (Kbytes)	Storage Required per Min. (Mbytes)	Storage Required per Hour (Mbytes)
1,200,000	150,000	150	9	540
1,800,000	225,000	225	14	810
2,000,000	250,000	250	15	900
2,500,000	312,500	313	19	1,125
2,800,000	350,000	350	21	1,260

Note The Total Bit Rate in StreamPlayer Plus will be different than what is shown in MPEG-4 settings. The actual rate may be slightly higher than what is shown in StreamPlayer Plus (due to overhead).

Play/Edit Saved Files



Playing Saved Files

StreamPlayer Plus can play most MPEG and Windows Media files, and video can be played directly on a PC after recording a stream to disk. Select the Archive button on StreamPlayer to open the video file location. A file browser makes it possible to select, open and play a file. Recorded MPEG and Windows Media video files placed on a file server are available for on-demand viewing using StreamPlayer software. Files can also be transferred to a VBrick Video on Demand server (for MPEG files) or a Windows Media video on demand server (for Windows Media files) providing additional functionality. The default storage location for archived files is `C:\Program Files\VBrick\StreamPlayer Plus\Video`. Once a video is selected, it can be played, edited (StreamPlayer Plus only), and/or transferred via FTP (StreamPlayer Plus only). While playing video, use **Seek**, the slider bar at the bottom of Windows Media Player, to control the location in the file.

Playing Batch Files

It is possible to play either a single recording or batch files. If there are multiple batch files recorded during the same batch record session or if the batch files recorded during different sessions are the same type and were recorded at the same bit rate, they can be seamlessly viewed by holding down the <shift> key. To select non-contiguous files, select each file with the right mouse button while holding down the <control> key and selecting **Open**.

Note Playing multiple batch files is supported for MPEG-1 and MPEG-2. MPEG-4, H.264, and Windows Media files can be highlighted and played individually but not as a group.

Edit/FTP

StreamPlayer Plus only. After you select the file to be played, the Edit/FTP dialog box appears in StreamPlayer Plus for MPEG-1 and MPEG-2 files. Selecting No brings up the Windows Media Player and the file or files will automatically load and play. Selecting Yes for brings up the Edit Clip dialog box. Edit and FTP are supported for MPEG-1 and MPEG-2 video files. *MPEG-4 and Windows Media files cannot be edited or FTPed.* An error results if an attempt is made to edit or FTP multiple saved files that were not created as in the same batch recording. To edit Windows Media files, use Microsoft Windows Movie Maker or a similar product.



Editing Files

The Archive Editor allows selecting a portion of the MPEG-1 or MPEG-2 video file for immediate playback, and permits saving this clip as a new file. The editor is not frame-accurate; rather, it indicates how many seconds from the start of the file that the edited section begins, and how many seconds from the start of the file until it ends.

▼ To edit an MPEG-1 or MPEG-2 video file:

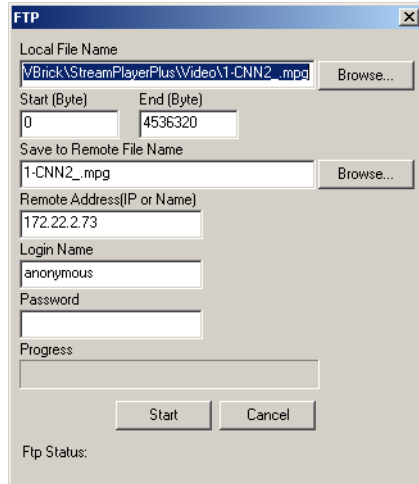
1. After selecting an MPEG-1 or MPEG-2 video file, put the viewer in pause mode by starting and then pausing the clip within the Edit Clip window.
2. Next, select **Start Transmit** and move the slider to the point in the video where the clip will start.
3. Select **End Transmit** and move the slider to where the clip will end.

Note: The Start and End times are displayed, as well as the duration of the clip. (The Clip Editor displays an error if the times are entered incorrectly, such as the start time after the end time or vice versa).

4. To play the new clip, press the **Play** button. Keep creating clips until the one that's played is satisfactory (this button is grayed out while paused).
5. To save the clip, use **Save As** and enter a file name (this button is grayed out while paused).
6. Press **Start** to save the clip to disk as a new MPEG-1 or MPEG-2 file.

Moving Files via FTP

StreamPlayer Plus has a built-in file transfer capability that allows an MPEG-1 or MPEG-2 saved file to be instantly transferred to a FTP server. Selecting FTP from the Archive Viewer brings up the FTP dialog box as shown.



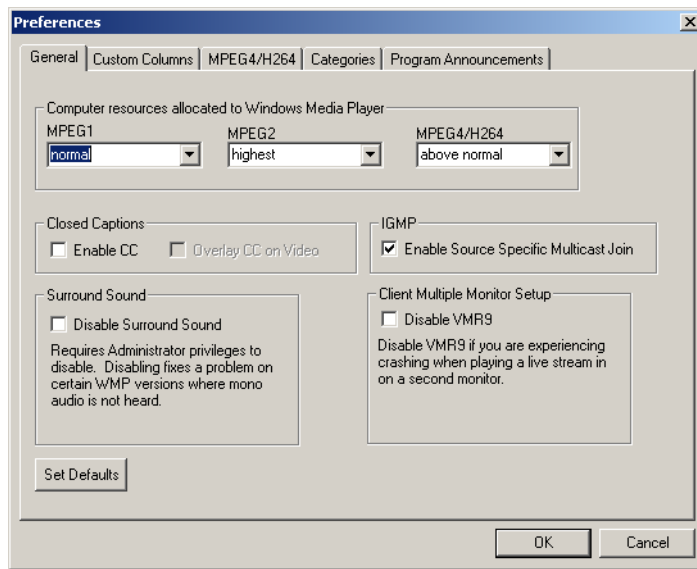
Local File Name	The full path name of the file to transfer. The default is the current file.
Start/Stop Bytes	If a start and stop position have been selected in the Archive Viewer, this is the starting and ending position in bytes that will constitute the file to be transferred. In other words, the edit can be FTPed without saving it locally.
Save to Remote File Name	The full path name where the file will be located on the FTP server.
Remote Address	The name or IP address of the FTP server.
Login Name	The FTP user name.
Password	The FTP password.

After entering the Login name and Password, you can to browse the contents of the FTP server by selecting the **Browse** button. This is convenient for determining what video files may already exist on the server.

Preferences

Setting Preferences

Note that StreamPlayer always uses the latest Windows Media Player installed on your computer. You cannot choose a specific player.



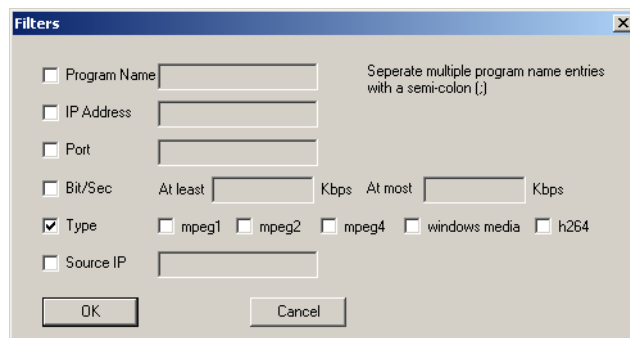
General

Computer resources allocated to Windows Media Player	This setting allocates computer video resource preferences. Depending on the computer environment, StreamPlayer may require higher priority than other non-real time processes that may be running on the desktop. The computer Resource Allocation (priority) may be set for Normal, Above Normal, Highest, or Critical for MPEG1, MPEG2 and MPEG4/H264 decoding. If performance problems are experienced with either video playback or recording, set Resource Allocation to a higher level. The defaults are MPEG1 normal, MPEG2 highest, and MPEG-4/H264 above normal.
Closed Captions	This selection enables or disables closed captions and determines how they will be displayed. Enabling Closed Captions in the StreamPlayer Preferences menu generally enables closed captions in Windows Media Player. Overlay Closed Captioning puts Closed Captions on top of the video. This is particularly beneficial if the video is viewed full screen (or if you want TV-like behavior). If not checked, closed captions will be displayed below or beside the picture.

IGMP	IGMP (Internet Group Management Protocol) is used to receive multicast streams from a network. The latest version of this protocol (version 3) supports Source Specific Multicast (SSM). In an SSM-enabled environment, multiple streams can be sent to the same multicast address. Decoders can distinguish between streams based on their source IP address. This option is available only on Windows XP machines and is supported for 232.x.x.x address space. When this option is on, StreamPlayer can playback 232.x.x.x. streams that are coming in on the same multicast address.
Surround Sound	Check Disable Surround Sound to fix a problem on certain Windows Media Player versions where mono audio is not heard. You must have Administrator privileges to disable Surround Sound.
Client Multiple Monitor Setup	Check Disable VMR9 if StreamPlayer crashes or hangs when you are playing a live stream on a second monitor.

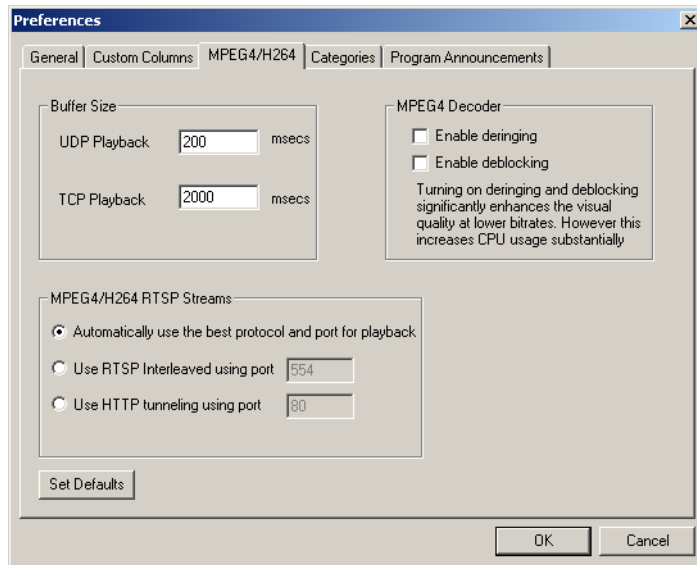
Custom Columns

Columns	The default is for Program Name only to be displayed in the Program Info area. To view other available information, select the Custom Columns Tab. Other possible selections include IP Address, Port, Source IP, etc. Use the Column buttons on the Settings Box to add or remove columns. The display order can be changed using the Sort By buttons.
Filters	Filters can be used to narrow the selections from the available fields. If the word "Unit" is entered, only VBricks with the word "Unit" in the Program Info field will appear. If "239" is entered in IP address, only those VBricks with "239" in the IP address field will appear. The Filters field is not case sensitive. It can also search for a partial name. For example entering "Science" in the program name field displays programs with names "SCIENCE" and "ScienceClass." Also, multiple search entries can be input by separation with a semi-colon. For example, entering "sales;HR" will display programs"company sales" and "company HR".



MPEG-4/H264

Due to the lower bandwidth nature of MPEG-4 and H.264 streams, StreamPlayer offers several parameters to tune the receiving of these streams.



Buffer Size	Sets the buffer size which provides a more smooth viewing experience if there is packet loss. Default (and minimum setting) is 200 milliseconds for UDP Playback (typical on a Local Area Network) and 2000 milliseconds (2 seconds) for TCP Playback (typical on the Internet).
MPEG-4 Decoder	There are several settings that can improve the video quality of MPEG-4 streams by post processing the video signal after it has been decoded. However, this increases CPU utilization substantially. Deringing and Deblocking are resource intensive and are not recommended unless the PC has a 2.0 GHz, or higher, processor. On lower end machines, enabling Deringing and Deblocking may degrade video quality.
Enable Deringing	Corrects for certain motion artifacts.
Deblocking	Smooths the video frame by smoothing artifacts inherent to the digital compression process.
MPEG-4/H264 RTSP Streams	StreamPlayer Plus can receive MPEG-4/H264 streams via several methods in order of efficiency – UDP, RTSP Interleaving, or HTTP tunneling. When Automatic is chosen StreamPlayer Plus will try different protocols to establish the best connection. In some cases, for example, if you know you cannot receive UDP streams because of firewall issues, you may want to define the method StreamPlayer tries to connect because the automatic method can cause up to several seconds of delay. The port can also be modified, but this is not recommended, unless you know that the port on the VBrick or Video on Demand server that is sending the video has also been changed.

Categories

StreamPlayer supports Categories. Categories allow the sender to restrict the ability of network users to see a stream announcement the network. For example, a corporation can broadcast financial, sales and engineering information from separate VBrick appliances onto

a common network. A Category known to the sender and recipient protects the stream announcement from being seen by others. A Category entered in the originating VBrick product can be matched in the StreamPlayer application to permit listing of the stream. The field is set in the **Configuration: Encoder > Encoder > Announce** section of the VBrick Appliance. To receive the stream, the same Category keyword must be entered under the Categories tab of StreamPlayer.

To enter a Category, enter the category name and select Add. Once a category is added, StreamPlayer will receive streams that are transmitted from the VBrick with the same Announcement (SAP) category entry as well as streams not sent with a Category. For more information about categories, see the *StreamPlayer Administrator Guide*.

Note StreamPlayer displays all programs in which a VBrick appliance is not advertising a category. To filter a stream, the VBrick product originating the stream must be configured with a category.

Program Announcements

The addresses on this window apply to all appliances. They are rarely changed and should not be modified unless specifically instructed to by VBrick Systems or by a VBrick Certified Partner.

Server Announce Address	IP Address and Port from which Announcements will be received from VBricks. The Server Announce address is the address on which Multicast announcements will be received.
RTSP Server Announce Address	Address on which the VBrick's transmit RTSP server announcements. In order to view programs in the Program Info screen, the addresses here must be set to the same address and port to which the VBrick appliance is transmitting.
Program Listings	<ul style="list-style-type: none"> • Stream Watch – The source filter periodically sends messages to the StreamPlayer. If the StreamPlayer does not receive these messages for this predefined time period in seconds, the StreamPlayer restarts the player. • Network Interface Card – If your computer has more than one interface card, specify which NIC will receive the stream.

Windows Media Player

StreamPlayer uses the latest version of the Windows Media Player installed on your computer to play a selected stream. (Windows Media Player can be downloaded from the [Microsoft](#) website if it isn't already installed on your PC.) Once a stream is launched with Windows Media Player, you can select various Windows Media Player options. However, it is important to note that different versions of the Media Player have different capabilities and options. *Windows Media Player options are also in different menu locations on different versions of the player.* Some Media Player Options relevant to StreamPlayer Plus are shown on the **File**, **View**, and **Play** menus.



Windows Media Player Options

Once a stream is launched with Windows Media Player, some Windows Media Player options can be utilized. Only some Media Player options are specifically included in the operation of StreamPlayer. The Windows Media Player Options important to StreamPlayer operation are **File**, **View**, and **Play**. If the Media Player Options are not visible, select the small icon at the top left of the viewing window. The location of options settings vary in different Media Player versions. Use Media Player Help to locate location of settings in different versions.



File Options

Launching a Stream from Windows Media Player

This applies to entering MPEG-1 and MPEG-2 streams. Open does not work with RTSP on Windows Media Player 7.1 and 9. The address on those versions can be entered directly into the IP Address window on StreamPlayer. The multicast address and port number may be entered directly in Media Player without launching StreamPlayer by using **File > Open**, and typing in the IP address and port from which the stream originates. For examples of additional functionality, see "Source Filter Tags" in the *StreamPlayer Admin Guide*.

- ▼ To launch a stream (from Windows Media Player) without using StreamPlayer:
 1. Launch Windows Media Player.
 2. Select **File > Open URL**.
 3. Enter `vbricksys://ip=address&port=number` (replace the address and port number with the IP address and port of the stream).
 4. Enter **OK** to play the stream. Note: This method does not provide the display of the Program Title, Author, or Copyright information.
 5. If there are several NICs installed on the PC, the interface that StreamPlayer Plus uses can be specified by including the interface IP address:
`vbricksys://ip=225.1.1.1&port=4444&interface=123.456.789`
 6. To play a MPEG-4 RTSP stream (unicast) type:
`vbrtsp://<ip address of server>/<program-name>`
 7. To play a MPEG-4 multicast stream type:
`vbhttp:// <ip address of server>/<path to the SDP file>`
 8. To play a Windows Media stream type:
`http://<ip address of server>/<path to .nsc file>`
`http://<ip address of server>/<path to ASX file>`
`http://<ip address of server>/<program name>`
`rtspu://<ip address of server>/<program name>`

View Options

Most StreamPlayer Plus options are set under the **Preferences** tab of the StreamPlayer Plus application but others can be set in the menus Windows Media Player. The **View** options

make it possible to resize the display, choose a skin, and set other display options. View options include the following.

Full Mode	Shows player in standard consumer mode.
Skin Mode	Shows player in selected skin (for example Corporate).
Full Mode Options	Controls the appearance of menu and task bars.
Now Playing Options	Show/hide title, playlist, etc.
Statistics	Displays frame rate selected and actual. Statistics does not display the selected and actual frame rate when Closed Captioning Overlay on Video is selected in StreamPlayer Plus Preferences. Statistics are available for all appliances. Statistics are not available if Media Player 7.1 is used.
Full Screen	Alt + Enter.
Video Size	Zoom to 50%, 100%, or 200%.

Play Options

Note that you can control video using the **Play** and **Volume** options. Captions must be turned on in Windows Media Player (indicated by a check mark) and in StreamPlayer under Preferences in order to be displayed. If **Closed Captions** is selected in StreamPlayer, it will be automatically selected in Windows Media Player. Captions are located under **Now Playing Options**.

Note When Closed Captioning Overlay on video is selected in the StreamPlayer Plus Preferences, Statistics does not display the selected and actual frame rate. Statistics are not available if Media Player 7.1 is used.



Capture Driver

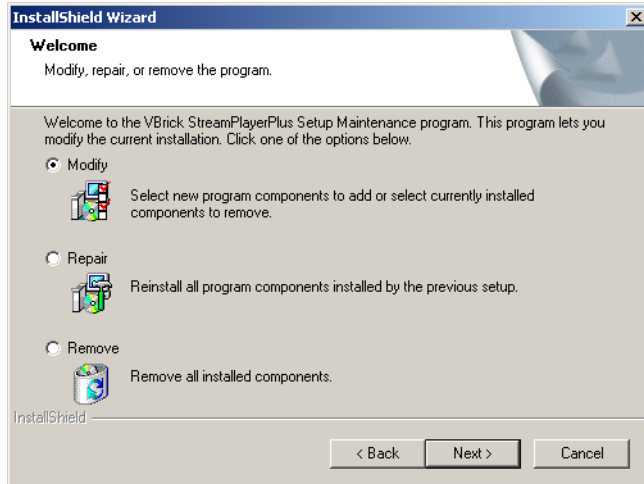
MPEG-1 and MPEG-2 streams only. VBrick's Capture Driver is a virtual video capture card. The Capture Driver software acts similar to the way hardware capture cards work, with the added benefit that it can receive video originating from a VBrick. The Capture Driver receives the MPEG video and outputs AVI or DV video; therefore, all existing software programs that capture or manipulate video and audio may be used with VBrick appliances. Video sources may be anywhere on the network. Unlike hardware capture devices, the connection does not require a physical connection to a computer through an analog coax or Firewire cable. Also, any number of video sources is possible. There is no limit imposed by the number of physical audio/video inputs available on the computer. Since the process is digital, there is no conversion loss. The capture driver enables frame capture, motion detection, automatic e-mail notification, logging, and more, for security and monitoring applications. Video can be captured, using an editing program, in multiple formats, including AVI, DV, etc. and edited directly using a familiar editing tool. Video can also be re-encoded from MPEG format to other formats that might be more suitable for the application.

Overview

Once installed, it appears in the Window's Multimedia Control Panel like a physical capture card. Any video application that allows the selection of an installed audio/video device will provide VBrick as a choice for video input. Selecting **VBrick Video Capture** permits choosing a physical VBrick appliance through a Program Guide. Upon selection, the Capture Driver processes the video stream, identifies it as MPEG-1 or MPEG-2, and decodes it. The decoded audio/video is delivered to Windows via a standard DirectX interface, just like a local physical capture card. The video software does not know or care that the audio/video source may be miles away—delivered to the computer as MPEG over IP—it acts like a local video capture card.

Installing Capture Driver

By default the VBrick Capture Driver is not installed with the installation of the StreamPlayer Plus software. In order to install the Capture Driver software, rerun the [SetupStreamPlayer_5_x_x.exe](#) (the software cannot be installed from **Add or Remove Programs**). A maintenance window will appear asking if you want to Modify, Repair, or Remove, Choose **Modify** and press **Next**. The Add/Remove Components dialog box will display.



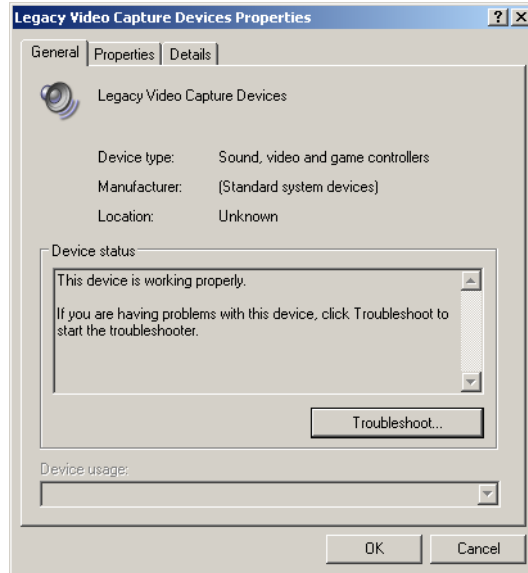
Check **Capture Driver** and press **Next**. If you have previously installed Capture Driver then a popup dialog box will appear asking you if you wish to remove the old version and restart your PC. You must choose **Yes** to install the software. Choosing **No** will cancel the install. If you select **Yes**, an additional popup dialog box will appear asking for a license file. A License file is required for installation of StreamPlayer Plus. The license file, ending with a .lic extension, is distributed on the Product CD or by e-mail. Press **Yes** to install the license file. Browse to the location of the License File and select it, then select **Open**; or double-click on the file name. The Capture Driver will be installed on your system.

Verifying Installation

Capture Driver can be installed on Windows 7, Vista, or Windows XP. The following procedure explains how to verify the installation using Windows XP.

▼ To verify installation using Windows XP:

1. Go to **Start > Control Panel**.
2. Select **System** by double clicking it, or use the right mouse button and **Open**.
3. Select **Hardware**.
4. On the Hardware menu, under Device Manager, select **Device Manager**.
5. Select **Sound, Video and game controllers** by double-clicking on that line entry.
6. Double-click **Legacy Video Capture Devices**.



7. The **Properties** tab shows VBrick Video Capture. The **General** tab reports Device Status.
8. Under **Sound, Video and game controllers**, double-click on **Legacy Audio Drivers**.
9. Select the **Properties** tab. Double-click on **Audio Devices**. The **Audio for VBrick Video Capture** will display. The **General** tab reports Device Status.

Using a Captured Stream

- ▼ To use Capture Driver:
 1. Open the third-party software for which you want to capture video or audio.
 2. When prompted for the input device for the capture, select **VBrick Video Capture** and/or **Audio for VBrick Video Capture**. The Capture Driver will capture the VBrick stream and allow the third-party software to act on it.



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