VBrickETHERNETV

VBrick
WM IP Receiver

VBrick v4.1 WM IP Receiver
Admin Guide

VBrick

FCC Notice

This equipment carries the CE mark and is UL listed in the U.S. and Canada. This equipment also complies with the limits for Class B digital devices pursuant to FCC Part 15 testing standards for most electronic equipment. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numerique de la Classe B respecte toutes les exigences do reglement dur le materiel brouilleur du Canada.

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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WM IP Receiver v4.1 Admin Guide

VBrick's WM IP Receiver is similar to a conventional set top box but is significantly more stable, rugged, and reliable. It is designed for 24x7 operation, and built for enterprise networks that require a high degree of stability, security, and scalability. The WM IP Receiver meets the demanding requirements of VBrick's EtherneTV Media Distribution System. The WM IPR plays Windows Media streams from VBrick WM appliances and Windows Media servers. The WM IPR is also a fully-featured VBrick EtherneTV client. This means that in addition to the ability to deliver video, the WM IPR will eventually provide scheduling, access logging, and device control from the Portal Server.

Organization

Getting Started	provides an overview of the IP Receiver and explains how to connect, configure, and login to the device.
Configuration	explains all IPR configuration options including Start mode, network configuration, and security options.
Status, Maintenance & Help	explains how to check system information, reboot or shutdown the IPR, and launch a software upgrade.
Local Mode Configuration	explains how to configure the IPR for Local mode and how to create and upload customized pages.
Software Upgrade	explains how to use the ETV-IPRDownload application to upgrade the IPR software.
Using the IPR	explains how to use the IPR to view Local, Fullscreen, or Portal Server streams.

Getting Help

If you need help, or more information about any topic, use the online help system. The online help is cross-referenced and searchable and can usually find the information in a few seconds. Use the tree controls in the left pane to open documents and the up and down arrows to page through them. Use the **Search** box to find specific information. Simply enter one or more words in the box and press Enter. The search results will return pages that have all of the words you entered—highlighted in yellow (Internet Explorer only). The **Search** box is not case-sensitive and does not recognize articles (a, an, the), operators (+ and –), or quotation marks. You can narrow the search by *adding* words.

If you can't find the information you need from the online help, or from your certified VBrick reseller, you can contact VBrick Support Services on the web. Support Services can usually answer your technical questions in 24 business hours or less. Also note that our publications team is committed to accurate and reliable documentation and we appreciate your feedback. If you find errors or omissions in any of our documents, please send e-mail to documentation@vbrick.com and let us know. For more information about any VBrick

products, all of our product documentation is available on the web. Go to www.vbrick.com/documentation to search or download VBrick product documentation.

Font Conventions

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

`Blue Courier fixed-width font is used for code elements (C++, HTML) as well as filenames, directories, etc.`

`Black Courier fixed-width font is used to indicate user input in keyboard commands, scripts, etc.`

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

Folder names and user input are displayed in this bold sans serif font.

Italics are used to emphasize specific words or phrases.

Related Documents

For more information about using and configuring the WM IPR with the Portal Server, see the *EtherneTV Portal Admin Guide*. This document is available on the VBrick EtherneTV page at www.VBrick.com/documentation

Printer-Friendly

WM IP Receiver Admin Guide

WM IP Receiver Release Notes

▼ To save or print a PDF document:

1. Click once to open the PDF document in Acrobat Reader.
2. To save or print a PDF document, right-click and select **Save Target As** or **Print Target**.

Getting Started

Topics in this chapter

Overview

VBrick's EtherneTV Media Distribution System provides the ability to view live and stored WM (Windows Media) streams directly on a television or monitor by using the ETV IP Receiver. The IP Receiver is integrated with the EtherneTV Portal Server and the ETV video-on-demand (VOD) servers to enable viewing of stored and live WM streams. The IP Receiver can also be deployed as a standalone decoder without the need for a Portal Server.

As explained on the following pages, the IPR can be configured to operate in one of three modes: **Portal Server**, **Local** (standalone), **Local-Fullscreen** (standalone). When the installation includes a Portal Server, the IPR is directed to the Portal Server for user control—the graphics and user interface reside on the ETV Portal Server. When the IPR is deployed independently of the Portal Server, it comes equipped (in **Local** mode) with a user interface and internal graphics. The IP Receiver can be configured using a standard web browser.
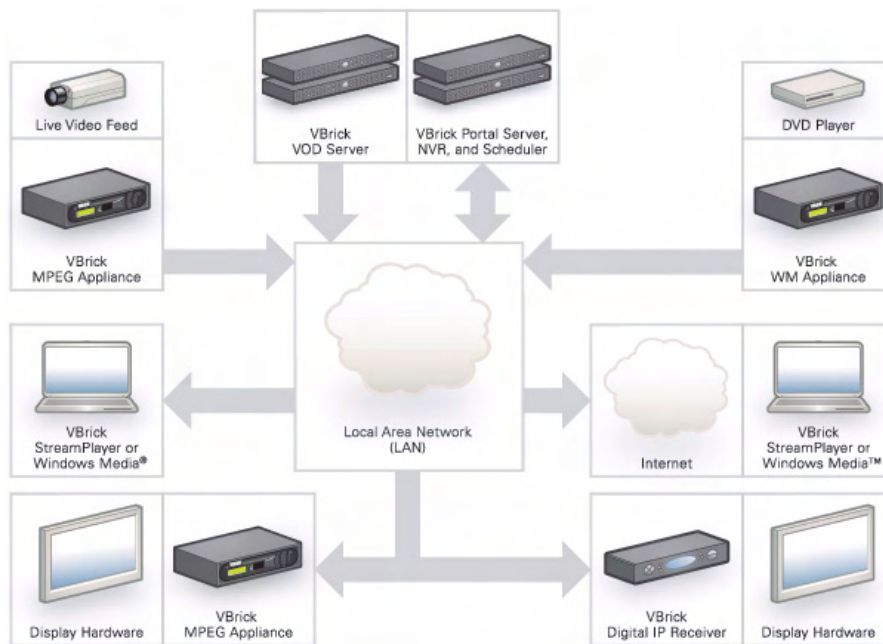

Figure 1. Ethernet-TV Media Distribution System

The WM IP Receiver is a state of the art decoder for WM streams originating from a VBrick WM appliance or a Windows Media streaming server, or for streams hosted by a VBrick EthernetTV Portal Server.

Figure 2. WM IPR – Top View

Hardware Specifications

Model	WM IPR
Processor	Intel® Pentium-M ® Processor 1.4 GHz
Chipset	Intel 854 chipset with 3D graphics
Memory	Standard: On Board DDR333 128 MB
Mass Storage	64 MB DOM
Input Device	IR Remote Control
Front Panel	Button: Power On/Off Indicators: Stand-By, Connected, Recording
Rear Panel	• 10/100 Ethernet port • One RCA jack for composite video output • Two RCA jacks for stereo audio output (right/left) • S-Video output connector • Coaxial and Optical S/PDIF out (not used) • Two USB 2.0 connectors • VGA
Weight	Less than 4.3 kg (9.4 lbs)
Dimension	308 (L) x 223 (D) x 60 (H) mm
Power	AC 100~240V/47-63 Hz, 80W
Operating System	Windows CE 5.0

Functional Specifications

Resolutions	Composite/S-Video: NTSC (720x480), PAL (720x576) VGA: 800x600, 1024x768, 1280x720, 1920x1080.
Protocols	Multicast, HTTP, MMS
Video Sources	VBrick WM Appliance, Windows Media Server.

Decode Rate	56Kbps–4 Mbps.
Video System Type	NTSC or PAL.
EthernetTV Support	Compatible with VBrick's ETV Portal Server (v4.1 or higher).
IR Remote	All standard functions.
Configurable Modes	• Local (Static Program Guide). • Local-Fullscreen (play configured program). • Portal Server.
Outputs	Composite, VGA, RCA audio.
Network	Ethernet, DHCP, Manual IP configuration, IGMP v3.
Management	• Remote Management via web browser. • Web Service. • Telnet (future release).
Security	Login required for user interface change or system changes.

IPR Power States

Once plugged into an AC power source, the IPR is always in one of three states: **On**, **Off**, or **Standby**. Standby is a power saving mode in which the device is neither on or off. There are two triangular silver buttons on the front panel. You can turn power on or off using the (upper) triangular silver button or by using the **Power** button on the remote control. The lower button has no function.

On	Turn the IPR on (from the off state) by briefly pressing the Power button on the front panel or using the Power button on the remote control.
Off	Turn the IPR completely off by pressing the Power button on the front panel for five seconds or more. The IPR is off when unplugged or immediately after being plugged in.
Standby	Put the IPR in Standby (from the on state) by pressing the Power button on the remote control or by using the Shutdown command on the IWS Maintenance menu. To exit Standby, press Power on the remote control. In Standby, there is no network connectivity and the TV will be black.

1. Connect the IPR

The WM IP Receiver is shipped with all the cables and connectors you need to install the device. No software installation is required. The WM IPR is also shipped with the latest IPR software already installed. In the unlikely event you need to reinstall (or upgrade) the software, see) Connect the audio, video, and Ethernet cables as shown in the following drawing. The WM IPR includes the following components:

• WM IP Receiver
• Remote Control with 2 AA Batteries

- Power cable
- RCA connector

▼   To connect the IPR:

1. Using the provided RCA cable, connect the IPR video out to a TV monitor using the yellow video connector.
2. Using the provided RCA cable, connect the IPR audio out to a TV monitor using the corresponding red and white audio connectors.
3. Using *customer-provided* cables, connect the IP Receiver to your Ethernet network, using the **LAN** port.
4. Connect a USB keyboard and mouse to the USB ports and install two AA batteries in the remote control.
5. Connect the IPR power cord to a powerstrip and power on the IPR using the triangular **Power** button on the front panel.

Figure 3. WM IPR – Rear Panel

Composite	Composite video out.
S-Video	Connect to standard TV.
Audio Out	Audio out left and right.
LAN	Connect to local area network.
USB Ports (2)	Connect USB mouse and/or keyboard.
VGA	Connect to a standard TV or a projector with a VGA port.
Power Plug	Connects to power cord.

Figure 4. WM IPR – Front Panel

Connected	Yellow. Blinks when you press any button on remote control.
Standby	Orange. Press Power button to toggle Standby on or off.
Recording	Red. Steady red when a recording is in progress.
Power	Green. Steady green when power is applied.

2. Configure Network Parameters

The IP Receiver is configured with DHCP (Dynamic Host Configuration Protocol) enabled and will automatically retrieve an IP address from a DHCP server if present. If a DHCP server is not available, you can configure the IP Receiver with a static IP address. The following steps explain how to login to the IPR the first time only. **After this initial configuration, you can login to the IPR using IWS.**

Note By default, DHCP is used to retrieve a dynamic IP address for the IPR. If you are not using a DHCP server, you must configure the IPR to use a static IP address as explained below.

▼ To configure network parameters:

1. Connect the TV, cables, keyboard, and mouse as explained above and power on the IPR. Wait for the box to completely power up before continuing.
2. When the Login page is displayed, log in to the Integrated Web Server (IWS) using the default username (`admin`) and password (`admin`).
3. Navigate to the Network Configuration page which shows the **IP Address**, **Hostname**, and other network configuration parameters. Use this page to record the DHCP IP address for future use or to set a different IP address (see Assigning an IP Address below). If leaving the IPR in DHCP mode, be sure to record the IP address provided by the DHCP server for future access to IWS from a PC.
4. When done, click **Apply** and then **Logout**.
5. Remove the USB keyboard and mouse. The next time you will login using the IPR's Integrated Web Server (IWS).

Note VBrick recommends using the initial management pages only to record (or set) the IP address using a keyboard and a mouse. Do not change other IPR parameters until you logout, remove the keyboard and mouse, and login to the IWS management pages over a network connection.

Assigning an IP Address

▼ To assign a static IP address (optional):

1. Go to the **Network** configuration page.
2. Change **DHCP Enable** to **Static** and enter a valid **IP Address**.
3. Set other network parameters (**Subnet Mask**, **Gateway**, **Domain Name Server** etc.) as necessary. Contact a system administrator for the parameters to use on your network.
4. When done, click **Apply** and then **Logout**. If you do not logout, you will be unable to configure the IPR from a PC. Either logout from the console or wait (15 minutes) for the session to expire in order to manage the IPR over the network.

3. Login to IWS

You access the IP Receiver by typing its IP address in the **Address** field of a web browser such as Internet Explorer or Firefox. You login to the IPR's Integrated Web Server (IWS) using the default username and password (you can change these on the Security Configuration page). IWS is a web management application used to set or change configuration settings (see Using IWS on page 9 for more about IWS).

▼ To login to the IP Receiver:

1. Type the IP address of the IPR in a browser, for example **http://<IPR_IPAddress>**

2. Enter the **Username** and **Password** and click **Login**. This displays the **Administrator Page**. Use this page to access all system configuration parameters.

VBrick WM IPR Administrator Page

The IWS allows the user to configure and manage VBrick Systems IP receivers. To log into the IWS, please enter your username and password, then click on the Log In button.

Login
Username: admin
Password: •••••

Login

Figure 5. Login Page

User name	Case-sensitive username. Default = admin (all privileges) or public (read-only).
Password	Case-sensitive password. Default = admin (all privileges) or public (read-only).

Note If you have problems logging in because of a misconfigured IPR or lost IP address, you can still launch IWS by pressing **Ctrl-Alt-F1** from a USB keyboard directly attached to the IPR. See Logging In on page 10 for more information.

4. Select a Start Mode

The next step is to choose a **Start** mode from among the options explained below. The **Start** mode determines how the IPR will behave in your network environment when it's powered on. A network administrator will generally determine the **Start** mode based on the functional requirements at your site. Note that if you are using a TV monitor to configure IWS, as soon as you select a **Start** mode and press **Apply**, IWS closes and the TV switches to the selected mode.

▼ To set the Start mode:

1. After logging in as explained above, the **General Configuration** page (Figure 6) opens.

2. Select a **Start** Mode from among the three choices listed below. See General Configuration on page 11 for more information about these options.

Local-Fullscreen	The WM IPR can operate in a fullscreen mode. One channel is displayed and this stream uses the entire screen of the attached monitor. Table 1 below shows the URL syntax for Local-Fullscreen.
Portal Server	When installed with an ETV Portal Server, the features and options of the VBrick WM IPR are controlled through the VBrick Portal Server. See the *Portal Server Admin Guide* for more information.
Local	In **Local** mode, the IPR will retrieve and render the user interface web page from the configured local path. This is typically located on the IPR's file system. The program guide on the viewer web page will include the streams defined for **Local** mode on the IWS configuration page. See Local Mode Configuration on page 23 for more information.

3. Press **Apply** to exit IWS and open the IPR interface in the selected mode

Table 1. Local-Fullscreen URL Syntax

Stream Type	URL Syntax
Multicast WM	Multicast IP address of VBrick WM Appliance. On the WM Appliance, go to Configuration: Encoder > Multicast and use the **Multicast URL**, for example: http://<ip_address>/vbs1multi.nsc
Unicast WM HTTP (Live)	HTTP URL of VBrick WM Appliance. On the WM Appliance, go to Configuration: Encoder > Server and use the **HTTP URL**, for example: http://<ip_address>:8080/vbrickvideo1/group1 If your WM Appliance is configured to serve multiple bit rates (MBR) you must configure the WM IPR with a group-specific URL, for example: http://<ip_address>:8080/vbrickvideo1/group1
Unicast or HTTP (VOD)	Depends on VOD server. The complete path including HTTP URL and publishing point, for example: http://<ip_address>/VBP/MYWMVideos/myVideo.wmv

Configuration

Topics in this chapter

Using IWS

The following page is displayed when you power on the IPR and login to IWS. Use this page to configure all IPR parameters. Use the navigation panel in the upper left part of the page, and if necessary, select from the configuration options on the left. *Note that only one admin user can be logged in at any time.* A second admin user attempting to login will receive an error message.
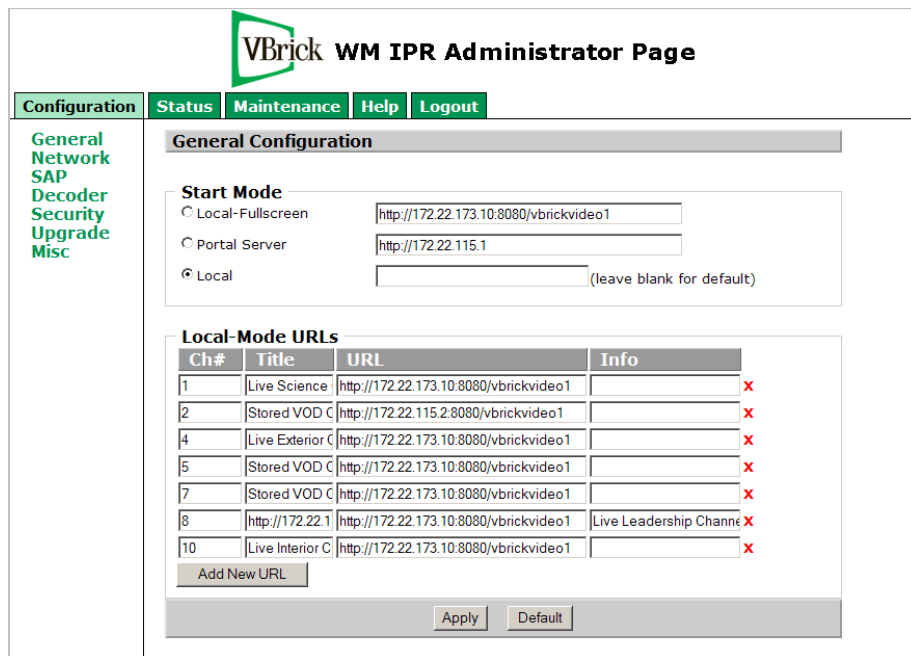

Figure 6. General Configuration Page

Configuration	displays all IPR configuration options including general options, network configuration, and security options.
Status	displays system data including MAC address, serial number, etc.
Maintenance	displays options to reboot or shutdown the IPR, or launch a software upgrade.
Help	displays the IPR online help pages.
Logout	automatically logs out the current user and displays the IWS login page.

Logging In

You login to the IWS management application for the IPR by typing its IP address in a web browser and entering the default username and password (admin and admin) or by typing the current username and password if they have been changed on the Security Configuration page. *If you have problems logging in because of a misconfigured IPR or a lost IP address*, you can still launch IWS by connecting a USB keyboard directly to the IPR:

▼   To manage the IPR via a USB keyboard:

1. Attach a USB keyboard (and optionally a mouse) to the IPR and press **Ctrl-Alt-F1** to launch IWS on the attached TV monitor.
2. After logging in, check the IP address and/or configure the IPR as necessary. If you don't have a mouse, use **Tab** and **Shift-Tab** to navigate.
3. When done, logout, press **Crtl-Alt-F2**, and remove the keyboard. This restores the user interface in the configured **Start** mode.

Note   You can use the IP address or the hostname to log into the IPR. Depending on your network, you may need to enter a fully qualified domain name. For example, you may need to enter http://<hostname>.<domain_name>.loc as the url rather than simply http://<hostname>.

Saving Changes

You must be logged in as an admin user to save changes; if logged in as a public user, no configuration changes or maintenance operations will take effect. Once logged in you can navigate and change configuration parameters as necessary. Each page has it's own **Apply** button that saves the changes you made *on that page*. Click **Apply** to save all of the changes you've made on a page—do not click **Apply** after each individual change. Note that file system writes, such as those resulting from a change to the configuration or modifying the local user interface, may take several seconds. Do not reboot the IPR immediately after such writes to avoid corrupting the file system and possibly losing data.

Note   When making configuration changes, always press **Apply** to save your changes. When selecting the **Default**, an **Apply** is not necessary. A **Default** automatically applies your changes and *may* reboot the IPR depending on the parameters you changed.

General Configuration

Start Mode

Controls the type of user interface and location of content that the IPR will display at startup.

Local-Fullscreen	Use this option to set the unit to decode one channel and operate in full screen mode at start up. You also need to enter a fully-qualified URL for the channel as in the following example. If you use a public URL, be sure it is accurate and has not changed. See Table 1 on page 7 for detailed Local-Fullscreen URL syntax. `http://<ip_address>:<port_number>/<channel_name>`
Portal Server	Use this option if the installation includes an EtherneTV Portal Server and enter the Portal Server URL.
Local	Use this option if the installation does not include an EtherneTV Portal Server. Check **Default** to use the default pages. Uncheck **Default** and enter a Custom Local Path to use your own pages. See Local Mode Configuration on page 23 for more about Local Mode. Note that the Custom Local Path is relative to FTP root rather than absolute. For example, the following relative path is valid: Valid path: `sample\local.asp` Invalid path: `c:\sample\local.asp`

Local-Mode URLs

These fields are used to populate the program list on the IPR when **Start** mode is set to **Local**. See Local Mode Configuration on page 23 for a discussion of how to add channels.

Ch#	Channel number that will display on the IPR.

Title	Channel title that will display on the IPR. Any number of alphanumeric characters. Use any combination alphanumeric, special characters, and spaces not exceeding 22 characters.
URL	Channel URL with port number in the following format: http://172.22.115.2:8080/vbrickvideo1/group1
Info	Enter descriptive information. This information is displayed beneath the preview window. Note: the **Info** button on the IPR remote control is used to view Portal Server data—not IPR data.

Network Configuration

General

DHCP Enable	Set to DHCP if a DHCP server is present. Otherwise set to Static and configure an IP address in next field. Default = DHCP enabled.
IP Address	Enter a static IP address from a network administrator if a DHCP server is not present.
Subnet Mask	Set when using a static IP address.
Gateway	Set when using a static IP address.
Hostname	You can use the IP address or hostname to log into the IPR. The following rules apply to hostname: • must less than 19 characters. • first character must be a letter. • last character must be a letter or digit. • interior characters must be letters, digits, or hyphen. • no embedded spaces or special characters allowed.

Domain Name Servers

Domain Name Server 1	Enter IP address of the first DNS server if present.
Domain Name Server 2	Enter IP address of the second DNS server if present.

SAP Configuration

Management SAP Settings

These options are used to enable or change the management SAP settings on the IPR. The IPR transmits management SAPs for use by other VBrick devices and/or applications on the network such as VBDirectory or the ETV Portal Server. SAPs (Session Announcement Protocol) announce the presence of a device on the network. If configured, each VBrick device periodically multicasts a SAP announcement to the network which can be detected by listeners like VBDirectory.

Transmit Enable	Enables transmission of the management SAP. Check to enable. Leave blank to disable.
Group Name	IPR can be assigned to groups for more organized management. This is the group name that the IPR is associated with (for example Finance).
Unit Number	This value represents the specific IPR ID when it is part of a group (for example Finance, unit 33).
Retransmit Time	Specifies the interval (in seconds) between each transmission of the management SAP.
Time to Live (TTL)	Specifies the number of hops a SAP will travel before being discarded.
Type of Service (TOS)	Sets the value of the TOS bits in the IP header of the management SAP packets. This parameter can be used to implement quality of service within a network.

IP Address	Specifies the unicast or multicast IP address that the SAP will be sent to.
Port	Specifies the IP port that the SAP will be sent to.

Decoder Configuration

Note Be aware that any changes to the <u>Video Output Settings</u> (see below) on the decoder configuration page will reboot the IPR resulting in a brief loss of connectivity.

Player Settings

Minimum Buffer Size	Default = 262144 bytes. This setting will allow more data to be saved before it is displayed. This can be used in networks where there is a high delay or congestion in the backbone. This parameter should generally be left at the default value. However, if a stream will not open, try setting at a higher value.
Buffer Duration	Default = 1000 ms.
Output Volume	Use to set default output volume. This can be overridden, adjusted, or muted using the IR Remote Control.

Video Output Settings

Resolution	• NTSC Standard • PAL Standard • NTSC Widescreen • PAL Widescreen • 800x600 (VGA) • 1024x768 (VGA) • 1280x720 (VGA) • 1920x1080 (VGA)
ChromaFilter	Chroma represents the color information in an image. Chroma is typically paired with luma.
LumaFilter	Luma represents the brightness in an image. Luma is typically paired with chroma. Luma represents the image without any color.
Flicker	Condition caused by the mismatch of vertical and horizontal refresh rates.
Saturation	The spectral purity or intensity of a color.
Contrast	The control used to set the peak white level of the picture. A high contrast picture will appear to have more detail.
Brightness	Adjusts the light intensity of an image.

Security Configuration

This page lets you select the interfaces that can be used to access the IPR. It also manages usernames and passwords. As a standard best practice, VBrick recommends that you change (and carefully record) the admin and public passwords during initial configuration of the IPR.

Admin Interfaces

The **Admin Interfaces** are enabled by default. Be aware that if you disable the **Admin Pages** you will not be able to configure the IPR; if you disable the **Web Service** you will not be able to upgrade the IPR. If you disable both these interfaces, it will be difficult to regain control. Contact VBrick Support Services for more information.

FTP Server	Enables access to the FTP server for Local mode. Default = enabled.
Admin Pages	Enables access to the Admin pages. Default = enabled.
Web Service	Enables access to the IPR web service. Use to control the IPR via an application other than IWS. Default = enabled.
Session Timeouts	Defines the time period in minutes before an admin session times out. Default = 15.

Passwords

The WM IPR has two privilege levels: admin and public. Admin users can set or change any parameter. Only one admin user can be logged in at a time; additional admin users will not be allow to log in. Public users have read-only access.

Admin Username	Default = admin.
Admin Password	Default = admin.
Public Username	Default = public.
Public Password	Default = public.

Upgrade Configuration

These settings are used to identify the FTP server that will be used for a *manual* IPR upgrade. In most cases you will use the **ETV-IPRDownload** application (see Software Upgrade on page 27) to upgrade IPR software. This application lets you automatically upgrade one or more IPRs and provides detailed information and feedback. However you can also use the **Pull-Upgrade Settings** explained below to run a manual upgrade on a single device. After setting these parameters, go to the **Maintenance** page and click **Upgrade**.

Pull-Upgrade Settings

FTP Server IP Address/Hostname	Hostname or IP address of the external FTP server from which the IPR can access upgrade files.
FTP Server Username	Username used to login to external FTP server.
FTP Server Password	Password used to login to external FTP server.
FTP Server Source File	Upgrade file name on external FTP server or path to the file relative to FTP root.

Miscellaneous Configuration

Splash Screen Image

This page lets you change the splash VBrick logo image (see below) that is briefly displayed during startup or reboot. You can use any .jpg or .gif image. Simply upload the file to the user FTP directory as explained in Customizing the Interface on page 24. After uploading the image, be sure to test and/or resize as necessary. To view the image, reboot the IPR from the Maintenance page.

Splash Screen	• Default Image – use the default VBrick image file at startup. • Custom Image Path – use a custom .jpg or .gif image at startup or reboot. Enter the image path relative to the user FTP directory, for example: **myImages\mySplash.gif**

Status, Maintenance & Help

Topics in this chapter

Status

The fields on this screen as described below are read-only.

System Status

MAC Address	Unique physical address of the IPR's network interface.
Serial Number	VBrick serial number.
Model Number	VBrick model number.
Date of Manufacture	VBrick manufacture date.
Software Version	Current software version of code.

Maintenance

Power Management

Reboot	Use to reboot the device. Must be logged in as an administrator.
Shutdown	Use to place device in standby mode. Must be logged in as an administrator.

Upgrade

Pull Upgrade Settings

Upgrade	Upgrade the device using the Pull-Upgrade Settings on page 17. You must be logged in as an administrator.

Default Device Configuration

Default All	Set all configuration parameters to default, *except* IP Address, Subnet Mask, Gateway IP, Network DHCP, user names, and passwords. You must be logged in as an administrator.
Factory Defaults	Restore all configuration parameters to factory defaults. You must be logged in as an administrator.

Help

Use this option to display the searchable online help system that launches in a separate browser window.

Local Mode Configuration

Topics in this chapter

Overview

When the **Start** mode is configured for **Local** on the **General Configuration** page, the IPR will display a list of all streams that are currently configured on this page. In **Local** mode, the IPR user interface is either a pre-configured "default" page or a customized page that you have designed and FTPed to the IPR web server. The user interface consists of multiple files that reside at the root level of the web server. Figure 7 below shows the default Local page after it has been configured to include stream information.
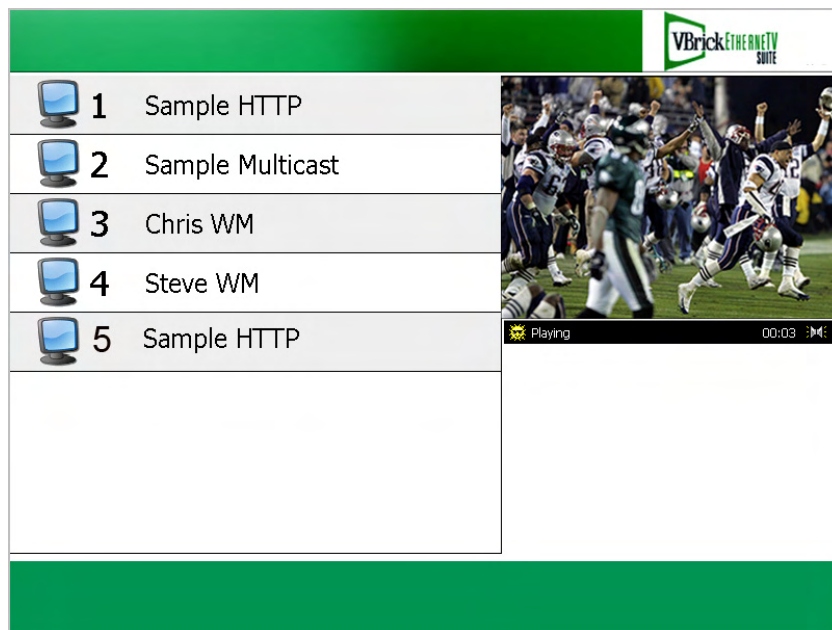
Figure 7. Default Interface in Local Mode

Configuring Streams

Use the following steps to add streams to the Local interface page. Note that changes to the **Local-Mode URLs** are not saved until you press **Apply**. If you accidentally delete stream, and did not press **Apply**, you can simply log out and log back in to recover.

▼   To add streams to the Local interface:

1.   Go to the **General Configuration** page in IWS.

2. Click **Add New URL** to populate the page with empty fields for the new stream.

3. Complete all fields as explained below.

4. Repeat Steps 2 and 3 until all streams have been added.

5. Click **Apply** when done. No reboot is necessary.

6. Click the red **X** to remove a previously configured stream. Use carefully—there is no warning message.

Figure 8. General Configuration Page

Ch#	Channel number that will display on the IPR.
Title	Channel title that will display on the IPR. This title corresponds to the content provided by the URL field above. Use any combination alphanumeric, special characters, and spaces not exceeding 22 characters.
URL	This is typically the channel URL with port number in the following format: http://172.22.115.2:8080/vbrickvideo1 For a complete list of valid URL syntax, see Table 1 on page 7.
Info	Enter description information. This information is displayed beneath the preview window. Note: the **Info** button on the IPR remote control is used to view Portal Server data—not Local mode information.

Customizing the Interface

The Local UI files consist of an .asp page and several JavaScript files and .gif images that reside at the root level of the IPR web server in the sample folder. You can modify or change these files as necessary to move page elements and/or create a different look-and-feel. You can copy and modify the samples files on your local computer or you can create your own user interface using local.asp as an example. To FTP upload/download files to or from the IPR, you can use Internet Explorer, another GUI-based FTP client, or the command prompt

FTP client. Note that the FTP root folder has 8 MB of writable storage available for local UI files and images.

The sample folder at the root level of the FTP server has all the files that are used to create the default local page. (These files are always available and are rewritten when you reboot the IPR. For this reason, be sure to copy these files to a different folder if you customize the interface.) Use these sample files to create your own local files and FTP them to the web server. When you are done, go to the **General Configuration** page, uncheck the **Default** Local page, and enter the **Custom Local Path** to the new files, for example **myLocalUI/myUI.asp**

It is important to note that the WM IPR does not support anonymous login. When logging in to the IPR FTP server from the Windows Explorer be sure to include the username and password in the following format: **ftp://admin:admin@<ipr-IPaddress>**

Note Windows Explorer FTP uses Internet Explorer components and works differently with Internet Explorer 7 than with earlier versions. To view FTP files in the Windows Explorer, open Internet Explorer 7, then go to **Tools > Internet Options > Advanced > Browsing** and check **Enable FTP Folder view (outside of Internet Explorer)**. Then, after logging in, go to the **Page** menu and select **Open FTP Site in Windows Explorer**.

▼ To access the IPR FTP server from Windows Explorer:

1. If using Internet Explorer 7, be sure you have the browser configured to **Enable FTP Folder view (outside of Internet Explorer)** as explained in note above.

2. Open Windows Explorer (*not Internet Explorer*) and enter an FTP command using the FTP username and password as shown in the following example:

   ftp://admin:admin@<IPR-IPaddress>
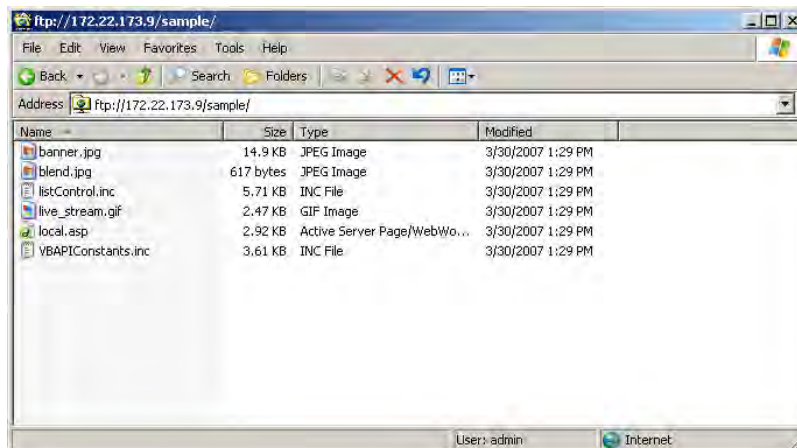
Software Upgrade

Topics in this chapter

Upgrading an IPR

IPR upgrades are performed using the standalone VBrick upgrade application **ETV-IPRDownload**. *This utility can be used to upgrade MPEG IP Receivers or WM IP Receivers.* With **ETV-IPRDownload**, you can (1) upgrade a single unit, (2) you can upgrade multiple units in your network using management SAPs, or (3) you can upgrade multiple units in your network using a manually-created configuration file (MPEG only). In a typical scenario, you use the setup program provided by VBrick to (1) install the IPR software on an upgrade server and (2) to install the download application on the same PC or a different PC.

The IP Receiver software is installed locally (usually on a machine with ETV Portal Server) and then uploaded to target IPRs using the download application. It is important to note that the download application needs an FTP server to upload files. An FTP server must be running on the computer where the release files are located. It can be a third-party FTP server, the FTP server installed with ETV Portal Server, or the FTP server installed with IIS. For this reason you may wish to install the application on a machine that is hosting ETV Portal Server (or on any machine that has IIS installed). If necessary, you can install the download application first and then configure a remote FTP server later.

Uninstalling the IPRDownload Application

If you have an existing version of **ETV-IPRDownload** already installed, you must remove it using the Control Panel *before* you can upgrade the IPR with new software.

▼   To uninstall the Download Application:

1.   Go to **Start > Control Panel > Add or Remove Programs**.
2.   Select **VBrick EtherneTV IP Receiver Software** and click **Change/Remove**.

Installing the Download Application

You can have multiple IP Receiver software release packages installed on the same server. Each release is installed in the default location in a separate folder. You can install the download application and the software release files on the same machine, or on different machines. During installation, you are prompted to install the IPR software, the upgrade application, or both. The IPR software release and the download application can be installed on any computer running Windows 2000 or higher.

Note   Be aware that if you do not already have an FTP server installed, you will need the installation disks for your operating system.

▼ To install IPR software and/or the download application:

1. Double-click on `Setup_IPR_x_x_x.exe` in the installer folder to launch the installer. Then click **Next** to continue.
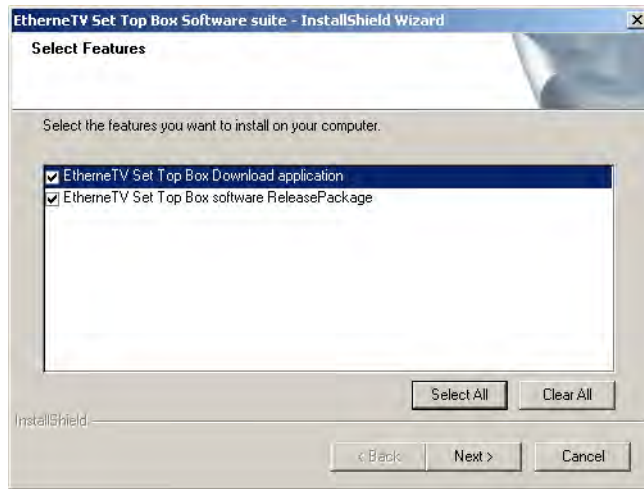
2. Select the features you want to install: the **Download Application**, the **Release Package**, or both. Then click **Next**. (If you select only the **Download Application**, you will not be prompted to create an FTP user account as explained below.)

3. Select an installation folder for the **Download Application** and click **Next**. The default is `C:\Program Files\VBrick\`
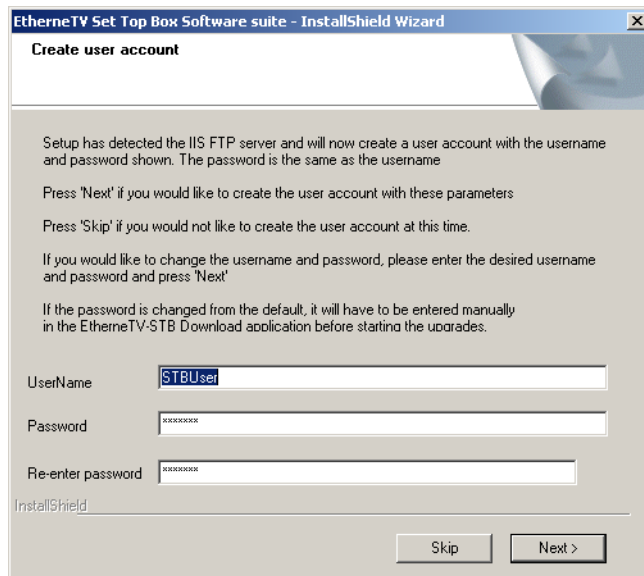
4. In this scenario, the installer has detected an FTP server and will create a user account. **STBUser** is the default name and password for the FTP account. (If you change the default user or password, you will have to enter them manually each time you run a download.) Press **Next**, confirm, and press **Next** again (or **Skip** this step entirely if you do not want to create an FTP account at this time). Note that if an FTP server is not currently installed on the server machine, you may be prompted for the installation disk.

5. Select a destination folder for the **Release Package** and click **Next**. The default is `c:\inetpub\ftproot\STBUser\Releasexxxx`. (All Release Packages have incremental numbers in separate folders.)

6. Click **Finish** when done.

7. Navigate to **Start > All Programs > VBrick > ETV-IPRDownload** to launch the download application.

Before You Begin

Before you begin an upgrade, be aware of the following:

- If the **Release Package** files (typically in `c:\inetpub\ftproot\STBUser\Releasexxx`) are installed on a computer running Windows XP, you must turn off the **Windows Firewall** while running the upgrade. Otherwise the upgrade will fail.

- The download application needs an FTP server running on the computer where the release files are located. It can be a third-party FTP server, the FTP server installed with ETV Portal Server, or the FTP server installed with IIS. If you are using the FTP server installed with IIS and the IP address changes for any reason, make sure you reconfigure the *new* IP address in IIS.

Using ETV-IPRDownload

IPR upgrades for MPEG (v3.7.1 and higher) and WM IP Receivers (v4.1.0 and higher) are performed using the standalone VBrick download application **ETV-IPRDownload**. With **ETV-IPRDownload**, you can (1) upgrade a single unit, or (2) you can upgrade multiple units in your network using the management SAPs (Session Announcement Protocol). These SAPs identify the presence (and revision level) of all IPRs/STBs on the network (see Table 2, SAP Information). If you are upgrading multiple IPRs/STBs, it will generally take several minutes to upgrade each one so plan accordingly. Important: *When selecting devices by IP address, be sure to click in the left column—not on the IP address.* Use **Ctrl + Click** and **Shft + Click** to select multiple units.
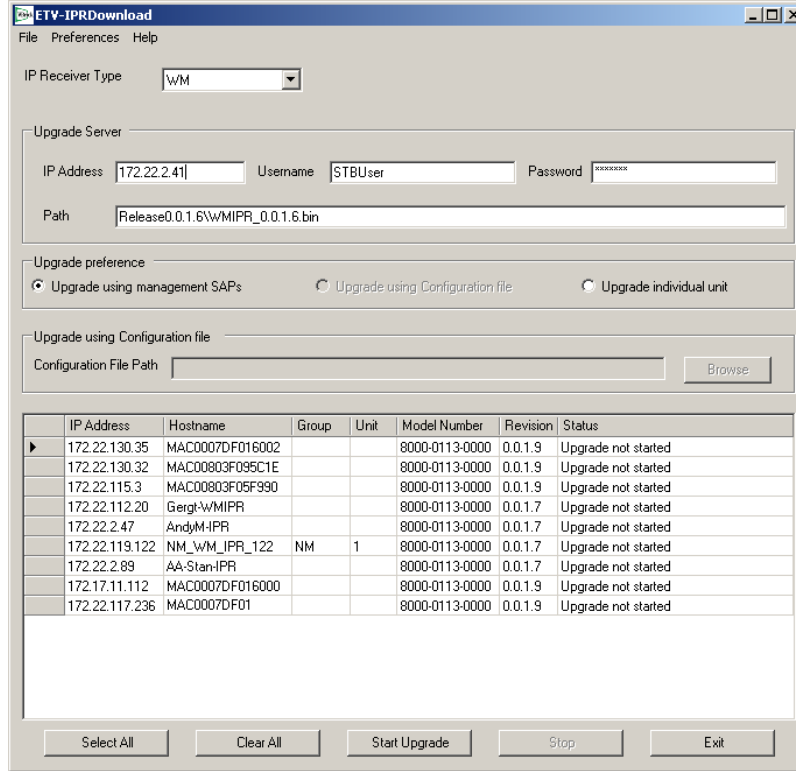
Note If the **Release Package** files (typically in `c:\inetpub\ftproot\STBUser\Releasexxx`) are installed on a computer running Windows XP, you must turn off the **Windows Firewall** while running the upgrade. Otherwise any upgrade you attempt will fail.

▼ To upgrade an IPR using ETV-IPRDownload:

1. Be sure all IPRs are powered on.

2. Select an **Upgrade preference**. There are two ways to upgrade your IP Receivers.

   a. If you select **Upgrade using management SAPs**, the device list is auto-populated. Simply select the units to upgrade and click **Start Upgrade**.

   b. If you select **Upgrade individual unit**, click **Start Upgrade** and enter the IP address and password of the unit to upgrade. Click **OK** to start.

IP Receiver Type	Select MPEG or Windows Media.
IP Address	IP address of upgrade server where the Release Package files are located.
Username	Name of FTP account on the upgrade server.
Password	Password used to login to the FTP server.
Path	The relative path to the folder in which Release Package files are located. Enter a relative path for the configured username. *Do not enter an absolute path.* (Note that the Release Packages are numbered incrementally in separate folders.)
Upgrade using management SAPs	Upgrade using the SAP (Session Announcement Protocol) emitted by the IPR. This automatically populates the list box with all available IPRs. Select individual units and click **Start Upgrade**. A popup will prompt for Username and Password. Note that all WM IPRs must have the same user name and password. If some are different, the upgrade will fail with a message shown in the **Status** column (see Table 2, SAP Information).
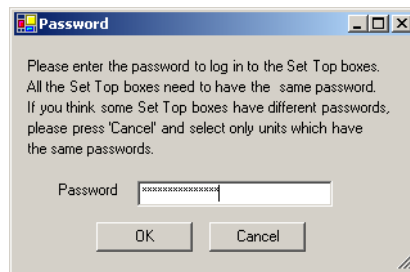
Upgrade using Configuration file	(MPEG IPRs only. This option is not available for WM IPRs.) Upgrade using a text file that identifies the IP address and the password used to login to the IP Receiver. This radio button activates the **Configuration File Path** field and you can **Browse** to a configuration file if available. A sample pipe-delimited configuration file is shown here:

	`172.22.133.1|admin`
	`172.22.133.2|admin`
	`172.22.133.3|admin`

Upgrade individual unit	Upgrade a single unit. Select the radio button and click **Start Upgrade**. A popup will prompt for IP Address, Username, and Password, and automatically run the upgrade.
Configuration File Path	MPEG IPRs only. Path to a pipe-delimited configuration file.
Select All	Selects all IPRs in the list box.
Clear All	Deselects all IPRs in the list box.
Start Upgrade	Starts an upgrade after you selects units to upgrade.

The following table shows the SAP information displayed in the list box for each IP Receiver when you select **Upgrade using Management SAPs**.

Table 2. SAP Information

IP Address	IP Receiver IP address.
Hostname	The VBrick hostname set in the Configuration: Ethernet > Management page.
Group	The group name the IPR is associated with on the Configuration: Network > Management page.
Unit	The Unit Number of the IPR on the Configuration: Network > Management page.
Model Number	IP Receiver hardware model number.
Revision	IP Receiver software revision level.
Status	Upgrade status, for example, not started, in progress, failed, unable to connect, etc.

Once an upgrade starts, do not close the application until the status of all initiated upgrades changes to `Upgrade not needed`, `Upgrade successful` or `Upgrade failed`. If you close the application too soon, the status of some units may not display correctly when the application restarts. These units may include those which had errors during the upgrade process. The

application can be safely closed after the status of all units has been resolved and you have corrected any errors.

Logging Upgrade Activities

The **ETV-IPRDownload** application logs all commands and responses between the application and the upgrade server, and between the application and the IP Receivers. To enable/disable application logging, go to **Preferences > Logging**. For debugging purposes, the log file records all error codes, success codes, checksums, etc. Since each new upgrade overwrites the log, be sure to check the log file (and save if necessary) after a failed upgrade. The `log.txt` file is saved by default in: `C:\Program Files\VBrick\ETV-IPRDownload`.

Using the IPR

Topics in this chapter

Overview

The user interface of the WM IPR screen depends on the **Start** mode. Once configured with an IP address and powered on, the IPR opens in one of three **Start** modes. In **Local-Fullscreen** mode you can view only one channel and it uses the entire screen on the attached monitor; there are no user controls whatsoever. In **Portal Server** mode, all features and options of the IPR are controlled through the VBrick Portal Server. In **Local** mode, the IPR displays a user interface page that is stored on the IPR web server; the available streams on this page are configured on the IWS **General Configuration** page. You can use the IR Remote Control that comes with the IPR to navigate in Portal Server mode and in Local mode. (You can also plug a USB keyboard and mouse into the back of the IPR to perform navigation tasks.)

Local-Fullscreen Mode

If the IPR **Start Mode** is set to **Local-Fullscreen** mode (Figure 9), there will be a (live or stored) video image on the TV monitor at system startup. This image is controlled by the system administrator. *It covers the entire screen and there are no user controls shown or available.* The IR Remote Control is non-functional in this mode except for **Volume** and **Mute**. The video image is programmed to decode a specific stream. This stream is preset on the **General Configuration** page; the audio output volume is preset on the **Decoder Configuration** page.

Figure 9. Local-Fullscreen Mode

Portal Server Mode

In **Portal Server** start mode (Figure 10), the start page is downloaded from a VBrick EtherneTV Portal Server. The live streams and videos available on the IPR are configured in the Portal Server. In **Portal Server** mode, the IPR has optional login authentication to protect against unauthorized use. If authentication is enabled on the Portal Server, the IPR will display a login window when powered on. You must use the numeric keypad on the IR remote control or a USB keyboard to enter a PIN. (PIN numbers are configured in the Portal Server.) Once logged in, the IP Receiver displays the Portal Server home page. This page is dynamically updated with a list of live streams and/or stored videos. *See the ETV Portal Server Admin* for more about the Portal Server.

Note The ETV Portal Server is outside the scope of this document. For more about how to configure and use the Portal Server with an IPR, see the *Portal Server Admin Guide* and the *Portal Server User Guide*.
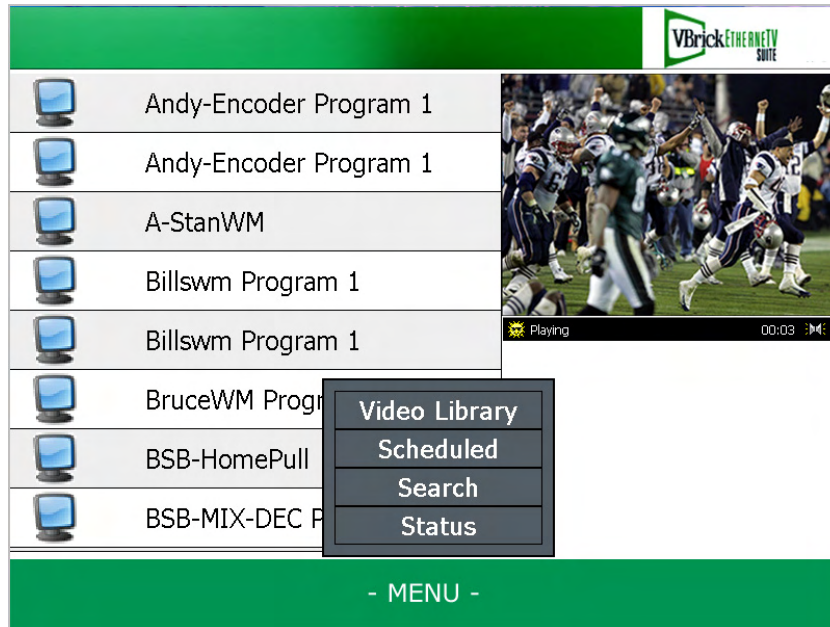
Figure 10. Portal Server Mode

Portal Server Menu

The menu shown in Figure 10 is only available in Portal Server mode. Use the **Menu** button on the Remote Control to toggle the menu on or off. *Note that the menu does not show the currently selected viewing option.* For example, if you are on the **Video Library** page, this is not a menu option.

Video Library	Show all stored streams available for viewing. Select any folder to view contents; select folder **UP** to exit a folder. Scroll down to see all.
Live Broadcasts	Show all live streams currently in progress. Scroll down to see all.
Scheduled	Show all scheduled streams (live or stored) currently in progress.
Search	Search the current page by Keyword, Description, Title, or All. Use the number keypad for text entry as you would on a cell phone by pressing one key per letter.
Status	Shows Record, FTP, and Ingest status. Use **Refresh** (click left arrow) to update the page or **Purge** (click right arrow) to remove selected entries or all entries. Highlight and select any item in progress to abort. After performing any action, click **Refresh** to update the page.

Local Mode

If the IPR is configured for **Local** mode (Figure 11), the start page (`local.asp`) is stored locally on the IPR. The content available on the page (links to either live streams or stored videos) is added by an administrator using the **General Configuration** page in IWS. Local Mode Configuration on page 23 explains how to add streams or modify the interface. To change the available content, you simply add or delete streams.
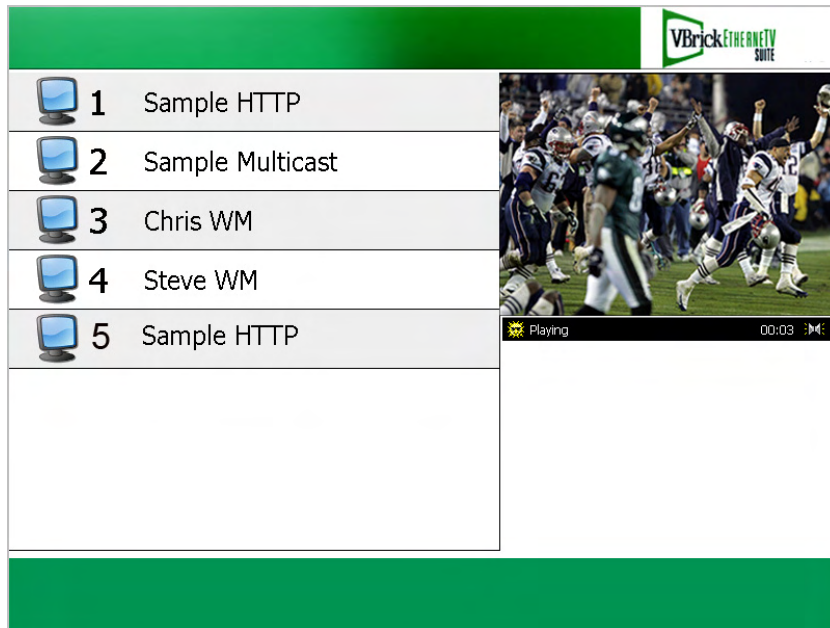
Figure 11. Local Mode

Using the Remote Control

You can use the IR (infrared) Remote Control in **Portal Server** mode and in **Local** mode; and for **Volume** and **Mute** in **Local-Fullscreen** mode. (You can also plug a USB keyboard and mouse into the back of the IPR to perform navigation tasks.) The infrared Remote Control works basically the same regardless of how the start mode is configured. It is important to note that many of the controls, for example Ch/Page up or down, have slightly different functionality depending on where the focus is. Also, several of the buttons are not mapped to any item and are non functional. Be sure to point the remote at the IPR—not at the TV.

Button	Description
Mute	Mute the audio.
Power	Puts the IPR in or out of Standby mode.
Record	Portal Server mode only: record the current stream. When a recording is in progress, a red indicator is shown in lower right area of window.
Stop	Close the current stream.
Play	Play the selected stream.
Rew	VOD content only: Rewind the current stream.
Pause	VOD content only: Pause the current playing stream.
FF	VOD content only: Fast forward the current stream.
Back	Return to the previous web page.
Info	Portal Server mode only. Displays information about the currently selected stream.

Button	Description
Arrows	Change focus to next item; select the previous stream.
OK	Initiate an action or select an option depending on where the focus is.
Volume	Adjust the audio up or down.
Menu	Toggle the Menu on or off in Portal Server mode.
Ch/Page	Move toward top or bottom of current page.
Guide	Got to fullscreen; exit fullscreen.
Live	Portal Server mode. Go to Live Broadcasts page.
VOD	Portal Server mode. Go to Video Library page.
Sched	Display scheduled streams available for viewing.
Mark	Portal Server mode. Exit fullscreen.
0–9	Portal Server mode. Enter a PIN, or enter a search string using the number keypad for text entry.
Search	Portal Server mode. Display the search window. Press Search again to exit window.
Space	Enter a space when using the number keypad for text entry
Clear	When entering search parameters or a PIN number, delete the previously entered digit or character.

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