



EtherneTV-STB Set Top Box

STB v3.7.2d Release Notes



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FCC Notice

This equipment carries the CE mark and is UL listed in the U.S. and Canada. This equipment has been tested and found to comply with the limits for Class A digital device, pursuant to Part 15 of the FCC rules. 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 A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la Classe A respecte toutes les exigences de règlement sur le matériel 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.

STB v3.7.2d Release Notes

The VBrick EtherneTV Set Top Box is configured for DHCP and will automatically obtain an IP address from a DHCP server if present. If a DHCP server is not available, follow the instructions in the [Configuration](#) section of this document to manually assign a static IP address. The set top box comes configured to run in **Local** mode. When used in **Local** mode, the set-top box will boot to a home page after initial power-up and you will be presented with an example list of streams. To use the box in **Local** mode, edit the configuration file on the STB to refer to valid streams on your network. See the *STB Quick Start Guide* for details.

To change the configuration to run in **MCS** mode, you need to change two settings: **MCS Location** and **Start Mode**. The STB can then be used in a network with VBrick's ETV Portal Server (formerly MCS). The Portal Server will provide program guides with live, stored and scheduled streams in addition to many other features. See the *STB Quick Start Guide* for details. To change the configuration to run in **Local-Fullscreen** mode, you need to configure the **Receive Address** and **Start Mode**. The STB will then display the configured stream without a program guide or user interface.

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What's New in v3.7.2d

There are no changes to features or functionality in this release.

- This release addresses an issue that was causing some set top boxes to hang during startup or re-boot.
- This release addresses an issue that was causing excessive flicker in Local Mode with a PAL monitor. (After installing this upgrade, you must also run the "Additional Upgrade Steps for Local Mode" as explained in the *STB Admin Guide*.)

Compatibility

The STB v3.7.2d software release is compatible with:

- VBrick 3000 Series MPEG-1 Encoders (v2.4.0 or above).
- VBrick 4000 and 6000 Series MPEG-2 Encoders (v2.1.0 or above).
- VBrick 4000 and 6000 Series MPEG-4 Encoders (v2.1.0 or above).

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- Ethernet-TV Portal Server (v3.1.0 or above).
 - EthernetTV-NXG Video-on-Demand Server (v2.0.0 or above).
 - EthernetTV-VOD W Video-on-Demand Server (v1.0.0 or above).

Upgrade

To upgrade from earlier versions of Set Top Box software, see "System Upgrade" in the *STB Admin Guide*. To implement the fix described above for excessive flicker in Local Mode with a PAL monitor, you must also run the "Additional Upgrade Steps for Local Mode" as explained in the *STB Admin Guide*.

Configuration

Connection and configuration details for the set top box are explained in the *STB Admin Guide*. See the following topics for specific information:

- Configuring the IP Address – See "Setting the IP Address."
- Upgrading the Set Top Box – See "System Update."
- Using the Serial Port – See "Serial Port Passthrough."

Configuring for PAL

The `setres` command can be executed from the Linux shell. This command gives PAL users a means to change the screen resolution. Although this command can be executed from any shell (for example from the console, telnet, or the serial port) the intent is for it to be used from the serial port since a PAL user without an NTSC or VGA monitor has no other choice if the STB's IP address is not known. The syntax of the `setres` command is:

```
setres pal <username> <password>
setres ntsc <username> <password>
```

Standard Features

- Access the EthernetTV-NXG Video on Demand server through the EthernetTV Portal Server.
- Access the EthernetTV-DOD W Video on Demand server through the EthernetTV Portal Server.
- Receive and decode live MPEG-1, MPEG-2 and MPEG-4 unicast and multicast streams.
- Video on Demand support for MPEG-1, MPEG-2 and MPEG-4.
- Access the World Wide Web.
- Low cost and compact size.
- IR Remote control for easy navigation.
- Boot standalone. No server required.
- Full DHCP and DNS support.
- Hardware decoding provides high quality video.
- Support for hundreds of channels.
- MPEG-1 rates to 3 Mbps, MPEG-2 rates to 12 Mbps, and MPEG-4 rates to 1.5 Mbps.

- Optional wireless keyboard.
- Configuration over locally connected keyboard and monitor, serial craft port, telnet, Integrated Web Server, or Web Services.
- Passthrough Responder.
- Closed Captioning.
- User-friendly upgrade application.

Caveats

- In the 56, 128 and 200K MPEG-4 templates, video disruptions of 1–2 seconds may occur every 4–6 seconds; the audio is not affected. To work around this issue, change the SAP format. In IWS, go to **Configuration: Encoder > Announce (SAP)** and set **Format** to **ISMA Compliant**.
- When playing an MPEG-4 stream in **Local** or **MCS** mode and there is a loss of service at the encoder end, the STB will attempt to restart for 20–30 seconds. During this time the STB will not respond to keyboard or mouse commands. This is expected behavior. When service is restored, control will return to the STB and you can restart the stream.
- The Video > Data Buffering Seconds parameter can be used to "smooth" out the video in networks where there is a high amount of delay variation or congestion in the network backbone. If an MPEG-4 stream won't open at all, set this parameter to a lower value. The STB may reset if configured for more than 6 seconds of MPEG-4 buffering.
- In set top boxes with a Rev. A Sigma decoder chip (P/N 8000-0044-0000), there is a pause in the video every 10 to 20 seconds to fill up internal buffers and avoid lip-sync problems when playing MPEG-1. MPEG-1 is not recommended on Rev. A hardware.
- The right mouse IR Remote button is not functional.
- The logo that appears at boot time is not viewable on a PAL monitor.
- It is not possible to use the linux shell command line interface on a PAL monitor. Other interfaces such as a VGA display, terminal connected to the STB's serial port (available on part number 8000-0044-0002 or later), Telnet, or the STBs integrated web server can be used to manage the box.
- It is not possible to "downgrade" an STB to a prior release.
- When performing a software upgrade from the web management interface, no user feedback is provided when the upgrade fails.
- On rare occasions, the TV may display in black and white rather than in color. If this happens, reset the STB.
- When playing certain MPEG-4 VOD files, the STB UI may reset. Files that exhibit this behavior are not playable on the STB.
- The box should be manually rebooted whenever the system time is changed. Video may freeze if the system time is changed without a reboot. The automatic reboot feature may reboot at the wrong time if the system time is changed without a reboot.
- When receiving an MPEG-4 stream requested via RTSP from a VBrick MPEG-4 encoder running software earlier than version 3.1.0, the Key Frame Interval should be left at its default value of 3 seconds. A value of zero or larger than 3 will prevent reliable MPEG-4 playback on the STB.
- When browsing the web in **MCS** mode, the user is prompted with a message from the browser before returning to the ETV Portal Server user interface.
- Exiting fullscreen after the video has played to the end will cause the video to restart.

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- There are frequent frame drops when streaming at a low data rate (about 300K) from the Quicktime Broadcaster application.
 - File system writes, such as those that result from changing the configuration or modifying the local user interface, may take several seconds. Avoid rebooting the STB immediately after such writes to avoid corruption of the file system and possible loss of data.
 - For MPEG-4 RTSP streams from a VBrick encoder, the encoder should be configured to enable RTCP transmit. See the *STB Admin Guide* for details.
 - When DHCP is enabled and DNS information is retrieved via DHCP, fully qualified domain names need to be used for all configurable URLs such as the **MCS Location** and **WWW Home Page Location**.
 - The ftp client on the STB does not run well over the serial port. Use another interface instead.
 - With the correct terminal emulator, the pman configuration utility can be run from the serial shell. The serial port parameters cannot be changed from such a pman session. If the serial port parameters are accidentally changed from a pman session that is running on the serial port, reboot the STB to recover.
 - MPEG-4 VOD files repeat after playback completes.
 - The STB will always request FF or RW of VOD files at a speed of 12x. The NXG VOD server can be configured to generate FF/RW at different speeds. If a speed other than 12x is configured at the VOD server, FF/RW will occur at the speed closest to 12x.
 - The ftp home directory (accessible from Parameters->Network->FTP home directory from the management interfaces) should not be left blank. Doing so results in an error at boot time.
 - Audio quality playing at a 56Kbps bit rate is poor.
 - Video-only or audio-only streams may not play reliably.



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