

VGA Grid

&

Pearl

Release 3.14.1
January 19, 2015

What's New in Release 3.14.1

Release 3.14.1 brings a variety of new features to Pearl and VGA Grid including hardware accelerated H.264 encoding with Standalone VGA Grid.

Hardware acceleration is already supported on Pearl. The system internals needed to support hardware accelerated encoding are available on most, but not all VGA Grid systems. Some older models may not support the latest software. Use the Firmware Upgrade feature to see if your device is upgradeable.

Before upgrading Networked VGA Grid to this release, we urge you to review the detailed instructions below and provided on our website at <http://www.epiphan.com/support/vga-grid-upgrade>. Please be aware that as of firmware 3.14.1, VGA Grid no longer supports VGA2Ethernet as an external source. VGA Grid HD Encoders are the only supported external source.

Hardware Refresh for Standalone VGA Grid

SDI source support

Our newest line of Standalone VGA Grid systems now capture, encode, stream and record even more HD content! In addition to the DVI-I ports and S-Video ports found on previous models, Standalone VGA Grid now has SDI ports. The new SDI ports support capture of SDI video and audio.

HDMI audio support

Release 3.14.1 adds the ability to capture audio from non-HDCP protected HDMI sources on new systems built with updated hardware. Simply add the HDMI source to your configured channel to include audio. (Older models cannot capture HDMI audio. If your system has SDI ports, it supports HDMI audio.)

Capture more with Pearl!

Capture 4 HD sources simultaneously

Pearl is even better than before now that it supports video capture from 4 HD sources simultaneously at 30 fps. For projects with a higher frame rate requirement, you can capture from up to 2 sources simultaneously at 60 fps.

New Encoding / Streaming Features

48 kHz audio support

For greater flexibility and improved audio quality from digital sources, Standalone VGA Grid and Pearl now support 48 kHz audio sampling.

Hardware acceleration for H.264 encoding

Standalone VGA Grid is capable of capturing and encoding up to 300 frames per second of HD video thanks to the addition of hardware accelerated H.264 encoding. H.264 with hardware encoding is the default for new all channels, but you may still use software encoding if needed for compatibility reasons.

Simplified H.264 video encoding presets

To make channel configuration even easier, H.264 encoding for Standalone VGA Grid and Pearl now have only two presets: hardware accelerated or software encoding. These selections offer the best video capture possible while maintaining excellent performance throughput. H.264 encoding for Networked VGA Grid now has only one preset: High Quality, offering the best combination of performance and video encoding possible. As a result of this change the video encoding preset drop down no longer appears in the encoding configuration page for the VGA Grid HD Encoder.

Configurable EDID

Some situations require you to configure your Standalone VGA Grid or Pearl so that it describes its extended display identification data (EDID) a particular way for maximum compatibility with your source. Starting with release 3.14.1, you can upload custom EDIDs for VGA and DVI/HDMI sources, making Standalone VGA Grid or Pearl report its video capabilities exactly as you need.

New Recording Features

MP4 support

Recording your AV stream is even more flexible with the addition of MP4 recording support. Select from MOV, AVI, MP4 or MPEG-TS recording.

Other Changes

Improved channel configuration menu

Improvements to the channel configuration menu mean it's easier than ever to configure your channel. Sections have been renamed and ordered in a logical sequence for channel setup. Start by selecting Sources, then configure Encoding and Branding. Lastly setup Streaming and Recording.

Automatic time synchronization for Networked VGA Grid

Keep the Networked VGA Grid system in perfect synchronization by automatically configuring your VGA Grid HD Encoders to use the VGA Grid's network time server. It's as simple as selecting a check box in the VGA Grid's web admin interface.

Changed external encoder support for Networked VGA Grid

As of release 3.14.1, Networked VGA Grid only supports VGA Grid HD Encoders as external encoding sources. In the past other sources, including VGA2Ethernet, have been acceptable. However, alternate encoding sources are no longer supported.

Additionally, VGA Grid HD Encoders now only have a single mode of operation. The mode previously known as Encoding mode is deprecated and all VGA Grid HD Encoders should be upgraded to 3.14.1 which will move them to the VGA Grid centralized-control mode.

As a result of these two changes, channel reconfiguration may be necessary after firmware update to 3.14.1.

Before upgrading Networked VGA Grid to this release, we urge you to review the detailed instructions below and provided on our website at <http://www.epiphan.com/support/vga-grid-upgrade>.

Release 3.14.1: Limitations and known issues

This section includes known issues or limitations that affect functionality or usability and ways that you can work around these limitations.

Affecting encoding

- Encoding with MPEG-4 sometimes results in poor quality.
Workaround: From the channel's stream setup, increase the video bitrate to improve picture quality.
- Video bitrate for MJPEG streams are approximately one and a half to two times the configured value.
Workaround: Verify the actual bitrate on the channel's channel status page and adjust until the correct value is achieved.
- In multiple source channel layouts, sources cannot overrun the top or left edges of the screen.
Workaround: Avoid using negative values for x and y axis coordinates.
- Encoding is unavailable if a branding logo is placed outside the frame size. i.e. if the frame is 1024x768 and the logo is placed with an x-axis margin of 1200.
Workaround: Always keep the branding logo within the frame.
- For VGA sources only, some wide-mode resolutions are not correctly identified and result in a slightly squished image (e.g. for a 1360x768 source, the detected resolution may be 1024x768).
Workaround: This issue is related to the video output hardware. Test your source to see if it exhibits the issue. If possible, avoid using wide-mode for VGA displays that exhibit this issue.

Affecting streaming

- You may see video artifacts when creating multiple source layouts where sources are partially overlapped.
Workaround: Avoid overlapping sources in multiple source channels or disable the Keep Aspect Ratio parameter.

Affecting recording

- You may see video artifacts when creating multiple source layouts where sources are partially overlapped.
Workaround: Avoid overlapping sources in multiple source channels or disable the Keep Aspect Ratio parameter.

Affecting the web interface

- It is possible to name two or more channels with the same value. Use of automatic file transfer and UPnP is unpredictable if this occurs.
Workaround: Ensure each channel has a unique name.

-
- Progress is sometimes incorrectly reported when extracting individual tracks from a multi-track recorder.
Workaround: None, wait for the extraction to complete. If desired, reload the page every few seconds until the process is complete.

Affecting other areas

- Tethered USB devices (i.e. for networking) are not recognized if connected prior to system boot up. This issue does not affect USB drives.
Workaround: Disconnect and reconnect the USB device to resolve the issue. No work-around for remote access.