

Pearl-2

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 firmware downgrades to 4.5.0 or earlier

Pearl-2 systems that have serial numbers within the following ranges are not backwards compatible with firmware 4.5.0 and earlier.

- Pearl-2 Desktop: TSIC01526 and higher
- Pearl-2 Rackmount: TSJ103024 and higher
- Pearl-2 Rackmount Twin: TSJ103000 and higher

Affecting firmware upgrades to 4.8.1 with traffic shaping

If traffic shaping is already configured using the Pearl-2 API, observe the following before upgrading to 4.8.1:

- Traffic shaping that's configured using the API will continue to work after you upgrade to firmware 4.8.1. You can clear traffic shaping for one or more channels using the API at any time.
- If you reconfigure traffic shaping for a channel using the Admin panel after upgrading to firmware 4.8.1, the API can no longer be used to configure traffic shaping for that channel. You must use the Admin panel going forward. The other channels are not affected.
- If you plan to use the Admin panel to configure traffic shaping for easy access and ease of use, you can clear traffic shaping for all channels using the API before you upgrade to 4.8.1 or after the upgrade. Keep in mind that you can no longer use the API to clear or configure traffic shaping for any channels that were configured using the Admin panel.

Recommendation: After enabling traffic shaping using the Admin panel, test a multicast stream using the auto traffic shaping settings. If your low bandwidth network device is displaying poor video quality, then manually set the limit bandwidth bitrate according to the bandwidth of your particular network device. See [Set up traffic shaping](#).

Affecting encoding

- **Limitation:** When Pearl-2 is overloaded, video frames or audio samples can be dropped causing variable frame rate and audio cracks.
Workaround: Pearl-2 is a powerful system capable of many simultaneous tasks, but like any other computing device, it has finite resources. If this problem is observed, check the CPU load from your

system's Info page.

To reduce system load, do any of the following: disconnect unused video displays from Pearl-2's video output ports, delete unused channels and unused layouts, or reduce the complexity of layouts by scaling at the source instead of having the system scale, or reduce the number of sources in layouts, or reduce the frame size or frame rate for channels displayed on the video output ports. Note that actions performed in the Admin panel and Epiphan Live can increase overhead (such as adding channels/sources to Epiphan Live's Dashboard preview panels), as can switching layouts via Pearl-2's touch screen.

- Encoding video at 60 fps with either 16 kHz or 22 kHz AAC audio can result in some dropped video frames.

Workaround: Select another video frame rate, a different audio sampling rate, or choose MP3 audio.

- Configuring very low frame rates such as 1 fps encoding with a high bitrate setting (e.g. 7000 kbps) results in poor video quality.

Workaround: Allow Pearl-2 to automatically select the best bitrate setting. For 1 fps, this results in a bitrate of about 1180 kbps.

- Occasionally, a solid black image appears when connecting an AV.io HD capture card to a USB port on Pearl-2.

Workaround: Reconnecting the capture card resolves the issue and captures the video normally.

- Some audio distortion is heard on video output port using PCM 22 kHz encoding or very low frame rate (1-5 fps).

Workaround: For best results, use AAC 48 kHz or PCM 48 kHz audio encoding and encode the channel at higher than 5 frames per second.

- The newer model of the GoPro HERO7 Black web camera can suddenly stop working with Pearl-2.

Workaround: Reset the GoPro camera.

- If you're using OBS on a Windows 10 computer to send an NDI video source to Pearl-2, the video and audio doesn't capture.

Workaround: Use a different streaming software like VMix to send an NDI source over the network to Pearl-2.

Affecting streaming and recording

- Interlaced SDI capture is sometimes shifted downwards, resulting in a small green line at the top of the video.

Workaround: This issue varies with different sources. If it is affecting your capture, the best solution is to crop out the green line in your layout.

- During recording if the touchscreen is used to switch layouts, headphones attached to the audio jack on the front of Pearl-2 sometimes pick up audio crackling and pops during the switching process.

Workaround: Note that these artifacts do not affect the final recording, only the audio monitoring

feature. To avoid the disruption to audio confidence monitoring, use the Pearl-2 Admin Panel or Epiphany Live to switch between layouts.

- The ability to perform an **FTP Delete** cannot be disabled, even after using the **Disable FTP Delete** command in the FTP session.

Workaround: Ensure that access to control of the FTP session is restricted to those aware of decisions about deleting the stream.

- Extracting tracks from an .MP4 recording when there isn't enough storage space for the extracted files causes the extracted files to become corrupted.

Workaround: Check how much internal storage space is available on Pearl-2 and delete any unnecessary recordings to free up more space.

- Occasionally, tracks won't extract from a 64 GB .AVI multi-track recording using the Admin UI.

Workaround: Perform the extraction again.

- Some audible clicks are present during playback of AAC formatted recordings at 48, 44, and 22 kHz when using Microsoft Edge versions 41-42.

Workaround: Use a different web browser to playback the recordings.

Affecting the Admin panel

- Passwords and IP restrictions set for viewers don't restrict access when using certain common platforms or when set on a per-channel basis if your stream uses HTTP Live Streaming (HLS) because HLS is processed directly by the apache server.
Workaround: This only applies if you're using a password for the stream. The only common platforms where this is a known issue are VLC and iPhone6, iOS 10.0.1, and using another platform prevents the issue. If you're streaming over HLS, do not set viewer passwords and IP restrictions per-channel. Use global viewer passwords and IP allow/deny lists instead.
- 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.
- The automatic file upload (AFU) file queue shows a maximum of 15 files, Newer 15 and Top of the list buttons do not work. All files are transferred, even though they are not listed.
Workaround: Wait for the queue to have fewer files in the list. Use global viewer passwords and IP allow/deny lists instead.
- Cropping a video source to 16:9 using the layout editor may not scale correctly and can appear as a thin line in the layout editor. This happens when the device or web browser you're using with the admin interface has a different approach to composing layout. Recording and streaming are not affected.
Workaround: Due to color space limitations (YUV with 2x2 subsampling), the cropped region's dimensions must be set to even values.
- Using Microsoft Edge to connect to Pearl-2 using the mDNS name of Pearl-2 does not work.
Workaround: Use a different web browser such as Chrome, Firefox, or Internet Explorer since Microsoft Edge doesn't support mDNS.
- The special preview mode that lets you preview all channels at once using a web browser isn't functioning.
Workaround: Preview individual channels using different tabs in your web browser.
- If you've created more than five channels on Pearl-2, it's possible to select more than the maximum number of five channels supported by Kaltura for scheduled VOD and manual (ad hoc) events. Only the first five channels will list for an event in MediaSpace.
Workaround: From the **Content management system configuration** page in the Admin panel, choose only up to a maximum of 5 channels and ensure that no other channels are selected.
- When adding text overlays using the layout editor, special characters like á, ä, and ê don't preview properly in the editing area; however, the special characters appear properly in the video output.
Workaround: You can preview the layout with special characters on the Status page for the channel in the Admin panel.

Affecting Epiphan Live

- Very fast, repeated switching between layouts using the Switcher interface can sometimes cause the monitoring panels and the preview in the Admin Panel to display a blank screen until the video image finishes loading.
Workaround: Avoid repeated fast switching between layouts.
- The green and red borders around the "Preview" and "Live" areas in the Channel section are offset from the video by a few pixels.
Workaround: The offset is cosmetic and does not affect your Live stream, so no workaround is required.
- When a HDMI output assigned to a Dashboard preview panel has its source changed, the preview panel does not automatically update to reflect the change.
Workaround: Refresh the Epiphan Live Dashboard in your web browser to update any changes in your preview panels.

Affecting video output ports

- Connecting an external monitor to the HDMI 1 port while Pearl-2 is powered on may cause the monitor to not be detected.
Workaround: Connect an external monitor to the HDMI 1 port before turning on Pearl-2.

Affecting USB devices

- For the IPEVO Ziggi-HD Plus web camera, you must enable the power line frequency setting in the web camera before connecting the camera to Pearl-2.
- Audio from an HDMI video source that's coming in on one of the USB ports will occasionally drop some bytes of the audio signal.
Workaround: Use audio from another source in your layouts.

Affecting other areas

- AFU to Amazon Web Services S3 Simple Cloud Storage transfer sometimes does not recover after the network connection is cut. The expected behavior is that the file transfer would restart, but there is sometimes a time desync that results in a failed transfer.
Workaround: If the network connection is severed during a AFU transfer, the process must be restarted from the beginning, and the transfer must proceed without interruptions to the network.
- Prolonged operation of Pearl-2 in high temperature environments may cause the system to become unresponsive and stop recording and/or streaming.
Workaround: If Pearl-2 becomes unresponsive, use the power button to perform a system restart.

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- Pearl-2 doesn't synchronize time from a local Windows NTP server.
Workaround: Avoid using a local Windows NTP server with Pearl-2.
 - In multi-view recordings, different Kaltura players (such as the KMC and MediaSpace) can playback audio differently, where the KMC plays audio from the channel selected as the "main entry".