

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 (or later) with traffic shaping

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

- Traffic shaping that's configured using the API will continue to work after you upgrade the firmware. 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 the firmware, 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 the firmware 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.

- 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.
- Some audio distortion is heard on the video output port when the channel encoding is set to 1 fps.
Workaround: For best results, encode the channel at 5 fps or higher.
- 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.
- The GoPro camera model HERO7 and some Evertz video distribution systems can suddenly stop working with Pearl-2.
Workaround: Reset the EDID for the Pearl-2 input. You can also use a device such as an HDMI splitter to isolate and filter the video signal before the signal is sent to Pearl-2.
- An audible clicking noise is sometimes heard in recordings and live streams of RTSP video sources.
Workaround: Remove the RTSP source using the Admin panel and recreate it to resolve the issue.

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 Epiphan Live to switch between layouts.

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- 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.
 - In the current FTP session, the **FTP Delete** command continues to work even after the **Disable FTP Delete** setting is applied using the Admin panel.
 - Occasionally, tracks won't extract from a 64 GB .AVI multi-track recording using the Admin UI.
Workaround: Perform the extraction again.

Affecting the Admin panel

- 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.
- 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.
- 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.
- NDI connections aren't currently listed on the channel's status page under **Connections**.

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.

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- 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.
- When setting up the video output ports on Pearl-2, the video input source's frame rate as set for the channel is used by default for the video at the output. The **Frame rate** field in the video output port settings does not change the frame rate of the video at the output port or change the frame rate of the connected display device. **Workaround:** Ignore the Frame rate field in the video output port settings.

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 CMS integrations

- When configuring the primary channel and audio sources for a Pearl-2 remote recorder in Panopto, choosing a Pearl-2 channel that has no audio as the primary video source without choosing a primary audio source from another channel can cause the remote recorder's preview to not display properly in Panopto.
Workaround: Choose a primary audio source from one of the other channels.
- If no Pearl-2 channels are selected when setting up the Pearl-2 remote recorder in Panopto, you can still create an ad hoc event using Pearl's Admin panel or touch screen; however, the ad hoc event isn't actually created on Pearl-2 or recorded.
Workaround: Enable the channels for the Pearl-2 remote recorder in Panopto.

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- The hyper linked Panopto name and logo that appears at the top of the login screen when creating an ad hoc event from the touch screen opens a page that cannot be navigated.
Workaround: Select **Back** in the upper left corner to return to the login screen.
 - 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".
 - If you modify a particular recurring lecture capture plus live webcasting event (e.g. a VOD + Live Stream event in a recurring series), Kaltura excludes that event from the recurring series and the webcast doesn't stream. That's because the RTMP URLs for the modified event loses its mandatory tokens. However, the recurring Kaltura event does record as scheduled and other events in the series are not affected.
Workarounds: To regenerate the RTMP tokens for a live event, go to MediaSpace, find the modified live event entry and uncheck the Live event checkbox - and save. Then re-check it and save the event again. Alternatively, you can go to the Kaltura Management Console (KMC), find the modified live event entry and then, in the Live stream tab, click **Re-generate Stream Token**.
 - On the create new ad hoc event screen, the keyboard shortcut **shift+Tab** does not move to the previous input field or control, but moves to the next input field or control.
Workaround: Press Tab repeatedly until the field you want is highlighted.
 - If a Panopto VOD event is left on pause until the scheduled end time of the event or the event is manually stopped while on pause, a recording of the full duration of the event is uploaded to Panopto instead of only the recording up to the point when the event was paused or stopped.
Workaround: Unpause the event and then manually Stop the event.