Pearl Mini

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 upgrades to 4.8.1 (or later) with traffic shaping

If traffic shaping is already configured using the Pearl Mini 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 Mini is overloaded, video frames or audio samples can be dropped causing variable frame rate and audio cracks.
  Workaround: Pearl Mini 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 Mini'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 Mini'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 Mini 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 to1 fps.
  Workaround: For best results, encode the channel at 5 fps or higher.

- The GoPro camera model HERO7 and some Evertz video distribution systems can suddenly stop working with Pearl Mini.
  Workaround: Reset the EDID for the Pearl Mini 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 Mini.

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.

- 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.

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 an 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

- When setting up the video output ports on Pearl Mini, 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 CMS integrations

- When configuring the primary channel and audio sources for a Pearl Mini remote recorder in Panopto, choosing a Pearl Mini 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.

- 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.

- If the SD card is removed while a recorded event is uploading to Panopto, uploading is interrupted and the file does not upload; however, the event in Panopto appears as upload complete. If the SD card is immediately re-inserted, Pearl Mini must be rebooted before Pearl Mini will detect it.

Workaround: Wait a minimum of 5 minutes before re-inserting the SD card and rebooting Pearl Mini if the SD card is ejected while files are uploading to Panopto.

- 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 RMTP URLs for the modified event looses it's 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**.

- If you enter your user name and login to Kaltura using the virtual keyboard on Pearl Mini's touch screen, you cannot tap **Next** to go to the next screen while the Event owner text field is still highlighted.
  Workaround: After typing your user name in the Event owner field, remove the focus off the Event owner text field and ensure it isn't highlighted before tapping **Next**.

Affecting other areas

- Pearl Mini doesn't synchronize time from a local Windows NTP server.