



**Grass Valley**  
WE LOVE LIVE

# KALEIDO SOFTWARE

**Version 12.0.1**

## **Release Notes**

M770-2103-219  
2022-02-25

[www.grassvalley.com](http://www.grassvalley.com)

## FCC Compliance

In order to comply with FCC/CFR47: Part 15 regulations, it is necessary to use high-quality, triple-screened Media or Monitor cable assemblies with integrated ferrite suppression at both ends.

## Patent Information

This product may be protected by one or more patents.

For further information, please visit: [www.grassvalley.com/patents/](http://www.grassvalley.com/patents/)

## Copyright and Trademark Notice

Grass Valley®, GV® and the Grass Valley logo and/or any of the Grass Valley products listed in this document are trademarks or registered trademarks of GVBB Holdings SARL, Grass Valley USA, LLC, or one of its affiliates or subsidiaries. All other intellectual property rights are owned by GVBB Holdings SARL, Grass Valley USA, LLC, or one of its affiliates or subsidiaries. All third party intellectual property rights (including logos or icons) remain the property of their respective owners.

Copyright © 2007 - 2022 GVBB Holdings SARL and Grass Valley USA, LLC. All rights reserved.

Specifications are subject to change without notice.

## Terms and Conditions

Please read the following terms and conditions carefully. By using Kaleido multiviewer documentation, you agree to the following terms and conditions.

Grass Valley hereby grants permission and license to owners of Kaleido multiviewer to use their product manuals for their own internal business use. Manuals for Grass Valley products may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose unless specifically authorized in writing by Grass Valley.

A Grass Valley manual may have been revised to reflect changes made to the product during its manufacturing life. Thus, different versions of a manual may exist for any given product. Care should be taken to ensure that one obtains the proper manual version for a specific product serial number.

Information in this document is subject to change without notice and does not represent a commitment on the part of Grass Valley.

Warranty information is available from the Legal Terms and Conditions section of Grass Valley's website ([www.grassvalley.com](http://www.grassvalley.com)).

Title	Kaleido Software Release Notes
Part Number	M770-2103-219
Revision	2022-02-25, 11:44

# toc

## Table of Contents

<b>1</b>	<b>Release Notes .....</b>	<b>5</b>
	Applicability .....	5
	Overview .....	5
	Summary .....	6
	New Features, Enhancements, and Bugs Fixed .....	7
	Kaleido Software Version 12.0.1 .....	7
	Kaleido Software Version 12.0.0 .....	7
	Kaleido Software Version 11.6.3 .....	8
	Kaleido Software Version 11.6.2 .....	8
	Kaleido Software Version 11.6.1 .....	8
	Kaleido Software Version 11.6.0 .....	8
	Kaleido Software Version 11.5.0 .....	9
	Kaleido Software Version 11.4.0 .....	9
	Kaleido Software Version 11.3.1 .....	10
	Kaleido Software Version 11.3.0 .....	11
	Kaleido Software Version 11.2.1 .....	12
	Kaleido Software Version 11.2.0 .....	12
	Kaleido Software Version 11.1.0 .....	13
	Kaleido Software Version 11.0.1 .....	14
	Kaleido Software Version 11.0.0 .....	14
	Prerequisites .....	15
	Known Issues and Limitations .....	16
	Installation, Upgrade, Downgrade, Live Update .....	16
	System .....	18
	Hardware .....	20
	Monitor Wall .....	20
	Mouse and RCP Operation .....	24
	Signal Formats .....	26
	Alarm Management and Actions .....	26
	SNMP .....	27
	Router Control .....	28
	Kaleido Remote Control Protocol (Gateway) .....	29
	XAdmin .....	29
	XEdit .....	29
	Documentation .....	34
	Multiviewer Specifications .....	34
<b>2</b>	<b>System Requirements .....</b>	<b>35</b>
	Kaleido-IP migration to Kaleido Software Version 11.0.0 or Higher .....	35
	System Requirements .....	35
	Component Compatibility .....	35

**Contact Us ..... 38**

# 1 Release Notes

The Release Notes include a list of new features and improvements, as well as known issues and limitations associated with the latest version of the Kaleido Software.

## Applicability

Kaleido Software version 12.0.0 or higher is only available for the Kaleido-IP multiviewer series.

The following multiviewer models are supported by Kaleido Software Version 12.0.1:

- Kaleido-IP X110, Kaleido-IP X310
- Kaleido-IP X120, Kaleido-IP X320
- Kaleido-IP X130, Kaleido-IP X330
- Kaleido-IP VM

---

**Note:**

The following options are not supported on Kaleido-IP X110, Kaleido-IP X310, and Kaleido-IP VM:

- **KIP-OPT-UCIP** and **KIP-OPT-UCIP-OUT** options for uncompressed IP monitoring (SMPTE ST 2110 and ST 2022-6).
  - **KIP-OPT-OP34** option for enabling head 3 and 4.
- 

## Overview

Kaleido Software version 12.0.1 is a minor release containing bug fixes (see [page 7](#)) for the Kaleido-IP series multiviewer models.

---

**Note:**

In line with our commitment to environmental preservation, only the *Kaleido Multiviewers Documentation Resource Guide*, and some related documents (e.g., welcome letters, warranty cards) are distributed in printed form. You can obtain the latest version of the Kaleido Software User's Manual and Installation & Service Manual for this multiviewer model, as well as the Release Notes, from the *Documentation Library* section of the Grass Valley website. Software, drivers, and sample databases are available from the *Downloads* section of the website.

---

---

### **Notes**

- To install and use XEdit, you must be connected to the multiviewer over an Ethernet network. Refer to *Installing XEdit* in the multiviewer's Installation & Service Manual for more information.
- 

## **Summary**

[New Features, Enhancements, and Bugs Fixed](#), on page 7

[Prerequisites](#), on page 15

[Known Issues and Limitations](#), on page 16

[Documentation](#), on page 34

[Multiviewer Specifications](#), on page 34

## New Features, Enhancements, and Bugs Fixed

The following is a complete list of features and enhancements introduced over the course of the latest three major versions of the Kaleido Software.

### Kaleido Software Version 12.0.1

#### Bugs Fixed

- ★ [Ref. #KX-14733] **KIP output glitches on high bit rate H.264 decoding:** Under certain circumstances, high bit rate H.264 streams (> 15 Mbits) caused the KIP video decoding to slow down below real time.
- ★ [Ref. #KX-14754] **Video artifacts on 1080i ST 2110-20 output:** Under certain circumstances, the output video exhibited flickering.

### Kaleido Software Version 12.0.0

#### New Features and Enhancements

- [Ref. #KX-14711] **Forward ST 2110-30 to audio monitoring ST 2110-30 IP output on X130 and X330 Kaleido-IP:** SMPTE ST 2110-30 audio monitoring output is available when ST 2110-30 inputs are used. If a compressed source or ST 2022-6 is selected for audio monitoring, then the ST 2110-30 output will be silent even if the stream is still present.  
The audio profile for the SMPTE ST 2110-30 head audio output is fixed at 16 channels, 125us, L24, 48kHz. If the input stream has a different channel count (for example, 2 or 8), it will be remapped to 16 channels and the unused channels will be silent.
- [Ref. #KX-14573] **Kaleido-IP Mosaic is available on a Browser through VNC:** The Kaleido-IP monitor wall can be remotely accessed with a Web browser through VNC. From your browser, you can perform remote on-screen wall control with your mouse as you would with a Kaleido-RCP2. This feature is available on a per head basis only when the compressed head streaming output is enabled with the KIP-OPT-STREAMING-OUT license activated on the multiviewer. To VNC heads 3 or 4, the KIP-OPT-OP34 license must be active.
- [Ref. #KX-14747] **Reset Database Button:** A reset database button has been added to XAdmin to restore the database to its factory default configuration.
- [Ref. #KX-14639] **Set the number of SMPTE ST 2110-30 audio receivers to expect per Input device on X120, X320, X130 and X330 Kaleido-IP:** The number of NMOS audio receivers per input device can now be set in the NMOS configuration in XAdmin.
- [Ref. #KX-14755] **Input Downscaler Video Quality Enhancement:** The input downscaler's quality performance has been improved. This new filtering will remove flickering and jaggies on small video monitors.
- [Ref. #KX-14758] **Default payload Id for ST 2110-30 output stream is 97 on X130 and X330 Kaleido-IP:** Contact Technical Support if you want to change the payload Id to another value.

## Kaleido Software Version 11.6.3

### Bugs Fixed

- [Ref. #KX-14724/KX-14684] **Audio monitoring of a 2022-6 source can be noisy:** Fixed issue related to the audio monitoring of 2022-6 input sources. In certain circumstances the monitoring would be noisy and also corrupt the graphical representation on the Audio Level Meters.

## Kaleido Software Version 11.6.2

### Bugs Fixed

- [Ref. #KX-14717] **Stuttering input video:** On systems using a rotation configuration, stuttering of input video sources could be observed.
- [Ref. #KX-14718] **Kaleido-IP system snapshot issue:** A system snapshot could hang and fail to complete on some systems.
- [Ref. #KX-14719] **XEdit locks up:** A memory allocation issue could result in XEdit locking up with large databases. Memory is now correctly managed to avoid system lock ups.
- [Ref. #KX-14653] **Kaleido-IP HLS streams discovery of profiles issue:** Issues could arise with HLS source handling when a source dynamically switched in and out of encrypted modes.

## Kaleido Software Version 11.6.1

### Bugs Fixed

- [Ref. #KX-14703] **With non-seamless redundancy, routing a source with no audio impacts other audio meters:** When a source without audio was routed to an input of the Kaleido-IP, all other widgets displaying audio could lose their audio.
- [Ref. #KX-14653] **Kaleido-IP HLS streams discovery of profiles issue:** Under certain circumstances, the discovery of profiles with HLS streams did not work.

## Kaleido Software Version 11.6.0

### New Features and Enhancements

- [Ref. #KX-14599/KX-14561] **XAdmin new look and feel; dark theme:** XAdmin is now using the common Grass Valley color theme.
- [Ref. #KX-14223/KX-14412] **Addition of non-seamless redundancy for Kaleido-IP inputs:** Non-seamless input redundancy is a mode of operation for the Kaleido-IP that provides your system with a degree of network redundancy for the system's inputs. In many ways the operation is analogous to the redundancy as defined in SMPTE ST-2022-7; however the redundancy is implemented through a network-failover mechanism opposed to the hitless/seamless merge that would be achieved via a full 2022-7 implementation.



- [Ref. #KX-14539/KX-14620/KX-14629] **Kaleido-IP X130 & X330 now supports SMPTE ST 2110-20 IP outputs in 1080i:** Each head can be individually configured to stream 1080i over SMPTE ST 2110-20 over its IP output. XAdmin has been updated to allow you to select the 1080i output option on Kaleido-IP X130 & X330 models.

### Bugs Fixed

- [Ref. #KX-14519] **Improved 4K display support:** Kaleido-IP EDID parsing has been updated to better handle *special* characters, such as "\*" in third-party display EDIDs.
- [Ref. #KX-14643] **Kaleido-IP HDMI audio output could fail on stereo devices:** Audio monitoring HDMI output on stereo (2 channels) devices such as flat panel display could fail because of a detection issue.

## Kaleido Software Version 11.5.0

### New Features and Enhancements

- [Ref. #KX-14573] **Kaleido-IP processing latency improvement:** The Kaleido-IP processing latency has been reduced when using the ST 2110 IP outputs.

### Bugs Fixed

- [Ref. #KX-14557] **Kaleido-IP motion artifacts improvement:** The Kaleido-IP exhibited motion artifacts with fast moving detailed content.

## Kaleido Software Version 11.4.0

### New Features and Enhancements

- [Ref. #KX-14497] **Enable upstream router control:** upstream router control with Kaleido-IP to allow control of the router when loading a layout, and for creating channels that are based on router sources is now possible.  
In Kaleido-IP, the inputs are NMOS receivers shown as Virtual Inputs. This requires that the Kaleido-IP database is setup to use Transport Stream friendly names. Contact Technical Support for more information on how to do this. See [Grass Valley Technical Support](#), on page 38.
- [Ref. #KX-14446] **XEdit new look and feel - dark theme:** XEdit is now using the common Grass Valley color theme and supports variable system font size.
- [Ref. #KX-12259/KX-14260/KX-14447] **Support for quad-head on the Kaleido-IP:** the Kaleido-IP can now support four mosaic output displays as a licensed option on the following multiviewer models only: Kaleido-IP X120, X320, X130, and X330. This feature does not apply to the Kaleido-IP VM or other multiviewer models.

**NOTE:** If you upgrade from version 11.3.0 or lower to version 11.4.0 or higher, you will lose the saved Head Streaming Configurations. The same goes for downgrading from 11.4.0 or higher to a version 11.3.0 or lower. Before upgrading, make a note of the head streaming configuration in XAdmin.

## Bugs Fixed

- [Ref. #KX-14512] **Kaleido-IP stops responding to NMOS connection requests:** if the Kaleido-IP receives a 50Hz SDP file from GV Orbit, the Kaleido-IP failed to parse it correctly, thereby breaking all NMOS operation. This can also occur with other video formats or frame rates, when an SDP file contained an unknown attribute.
- [Ref. #KX-14387] **Detection of 60p video frame rate:** sometimes the video format of a 1080p60 signal is incorrectly reported as 1080p59.94.
- [Ref. #KX-14449] **Kaleido-IP 2110-40 with Teletext can be lost on reboot:** sometimes when rebooting the Kaleido-IP, if a Teletext stream was joined using 2110-40 (NMOS or Join-Leave API), Teletext could be loss until the input is cleared and the join occurs again.
- [Ref. #KX-14318] **Display the second Mellanox card serial number in XAdmin rivermax license:** as of Kaleido Software version 11.2.1, when the Kaleido-IP is equipped with 2 Mellanox cards, the XAdmin Rivermax license displays only 1 serial number. Now both serial numbers are shown.
- [Ref. #KX-14504] **Gray rectangle stays on display output after boot up:** a gray rectangular at the bottom right corner where the dashboard is shown may be seen.
- [Ref. #KX-14558] **Kaleido-IP H264 with 422 8 bits content has decoding issues:** in rare cases, MPEG2-TS containing H264 encoding in YUV422 color format in 8 bits could produce a garbled image in half of the picture.

## Kaleido Software Version 11.3.1

### New Features and Enhancements

- [Ref. #KX-12551] **Deleted NMOS receivers or Virtual Inputs maintain their URI when they are re-created in Kaleido-IP:** The receiver URI is maintained when it is deleted and then later is created again. URIs are now created with a predictable pattern that is reproducible every time the receiver is created.  
This requires that the Kaleido-IP database is setup to use Transport Stream friendly names. Contact Technical Support for more information on how to do this. See [Grass Valley Technical Support](#), on page 38.
- [Ref. #KX-12559] **Router connection between a router destination and a Kaleido-IP virtual input:** You can now make *router connections* between a control system's destinations and Kaleido-IP *receivers*. This mapping is made in XEdit's **System Panel > Routing Connections** tab. The mapping is one router port to one virtual input (video, audio, ANC291).  
This requires that the Kaleido-IP database is setup to use Transport Stream friendly names. Contact Technical Support for more information on how to do this. See [Grass Valley Technical Support](#), on page 38.
- [Ref. #KX-14489] **Kaleido-IP supports channel creation from router sources:** You can now create a channel from a router source, through the Channel Table view in XEdit. When the channel is loaded on the wall (having been assigned to a widget), it loads the source on the router and automatically assigns it to a receiver or virtual input.  
This requires that the Kaleido-IP database is setup to use Transport Stream friendly names. Contact Technical Support for more information on how to do this. See [Grass Valley Technical Support](#), on page 38.

## Bugs Fixed

- [Ref. #KX-14493] **Kaleido-IP join with uncompressed IP input issues:** After upgrading the Kaleido-IP from Kaleido Software version 11.2.1 to version 11.3.0, the Kaleido-IP cannot join uncompressed IP outputs from certain edge devices such as the UPC-3901. Kaleido Software version 11.3.1 resolves this issue.
- [Ref. #KX-14468] **PG Name missing from widgets in Kaleido-IP:** Under rare conditions, the PG name is missing from the widgets, and from the source tree.
- [Ref. #KX-14416] **Kaleido-IP X330 could not join more than 111 streams:** Kaleido Software version 11.3.1 resolves this issue.

## Kaleido Software Version 11.3.0

### New Features and Enhancements

- [Ref. #KX-13895] **Invalid stream descriptor in Kaleido-IP SMPTE ST 2110 head streaming SDP:** Some third-party software or hardware uses the stream descriptor line ("s=") contained in the SDP files to identify SMPTE ST 2110 sources. Kaleido-IP now publishes a valid stream descriptor inside its SDP files for all heads.
- [Ref. #KX-14299] **Kaleido-IP now supports displays with 533MHz UHD 4K60 resolution over HDMI:** In XEdit, choose the 3840x2160@60Hz (UHDTV-CVT-RB) head resolution to enable this option.
- [Ref. #KX-14377] **Kaleido-IP is now compliant with more Ancillary data streams for SMPTE ST 2022-6:** Ancillary data extraction from SMPTE ST 2022-6 streams is now on par with that available with SMPTE ST 2110-40 streams:
  - AFD
  - Time code
  - CC608/708
  - OP47 Teletext
- [Ref. #KX-14297] **Kaleido-IP now supports 256 virtual inputs:** Prior to Kaleido Software Version 11.3.0, a Kaleido-IP was limited to a maximum of 128 virtual inputs. Now it supports a maximum of 256 virtual inputs (128 widgets per head). See the *Kaleido Multiviewer Product Comparison Guide* for more information about this product's capacities.
- [Ref. #KX-14390] **Kaleido-IP Subtitle widget can now be used for multiple Teletext languages:** Subtitle widget now exposes all text language selections like the video widget in XEdit.
- [Ref. #KX-14271 & KX-14322] **Kaleido-IP HEVC video decoder performance improvements:** This results in a performance increase when decoding HEVC streams.
  - Any HEVC decode that will be downscaled by more than half its original size will use an optimized mode.
  - All 4K UHD streams use this new optimization.
  - A 15% to 20% performance gain in the number of HEVC streams that can be decoded.

## Bugs Fixed

- [Ref. #KX-14100] **Changing NMOS registry can take a long time for Kaleido-IP to be rediscovered:** When changing an NMOS registry on the Kaleido-IP's XAdmin system page, it could take a long time before the multiviewer is discovered again.
- [Ref. #KX-14189] **For Kaleido Software v11.2.x: variable "caps" is missing in NMOS senders query:** The caps variable information was missing for NMOS receivers.
- [Ref. #KX-14306] **Kaleido-IP lost its "NMOS Registry Configuration" after an upgrade:** After an upgrade, the NMOS Registry configuration in XAdmin was empty and had to be manually reconfigured after the upgrade. When upgrading to Kaleido Software v11.3.0, there is no need to manually re-enter this information anymore.
- [Ref. #KX-14358] **Kaleido-IP HLS streams using a CDN key could not be decoded:** HLS streams that connect to a CDN provider (Akamai or Cisco NG) with an encryption key could not be decoded due to a compatibility issue with the Python version installed on the Kaleido-IPs.
- [Ref. #KX-14372] **Mismatch luminance value between 2110-20 in vs 2110-20 out:** There was a change in luminance values between SMPTE ST 2110-20 inputs and output signals.
- [Ref. #KX-14394] **Kaleido-IP monitor could restart with a source containing an H.264 format change:** Kaleido-IP monitor wall could crash and restart if an MPEG2-TS source contains a program where video is encoded in H.264 and that video changes format while being displayed on the wall.
- [Ref. #KX-14397] **Kaleido-IP can become unreachable through its management port after reboot:** On certain rare occasions, the Kaleido-IP could loose connectivity on its first network adapter port after a reboot.
- [Ref. #KX-14410] **Kaleido-IP can take a long time to recover from an internal error:** In the rare case when there is an internal error, the Kaleido-IP recovery time has been reduced from 1 minute or more to a few seconds.

## Kaleido Software Version 11.2.1

### Bugs Fixed

- [Ref. #KX-14305] **Starting from GV Orbit Version 1.3.0, Kaleido-IP does not appear in the discovered device list:** the Kaleido-IP fails to connect to GV Orbit's NMOS registry.

## Kaleido Software Version 11.2.0

### New Features and Enhancements

- **Kaleido-IP X130 and X330 support:** This release adds support for the Kaleido-IP X130 and X330 multiviewers.
- [Ref. #KX-14030] **Support for more SMPTE ST 2110-20 video formats:** The following SMPTE ST 2110-20 video formats are now supported: 1080p23.98, 1080p29.97, 1080p60, 2160p23.98, 2160p29.97, 2160p59.94, and 2160p50.

## Bugs Fixed

- [Ref. #KX-14119] **Losing Compact Router labels and connections:** As of Kaleido Software version 9.03, though the Compact Router matrix is available, connection to the Compact Router can be lost resulting in the inability to use various router control buttons or to be able to click and make a crosspoint.
- [Ref. #KX-13144] **Transport stream not decoding on Kaleido-IP:** The decoder did not properly detect 4:2:2 10-bit streams.
- [Ref. #KX-14212] **Certain HLS streams cannot be decoded:** In certain cases, Kaleido-IP could not handle long URLs or URLs containing special characters.
- [Ref. #KX-14182 & KX-14210] **Kaleido-IP not responding:** importing a database from a previous version or upgrading to v11.x could cause the Kaleido-IP to be unresponsive if the database contained an output head configured for interlace video output format.
- [Ref. #KX-14057] **Kaleido-IP reverts to default IP addresses on LAN5 and LAN6:** In cases where the Kaleido-IP boots with no network connection detected on LAN5 or LAN6 (for example, the network switch has not completely booted), the configuration would revert back to the default IP addresses.
- [Ref. #KX-14118] **Luminance output level is dimmed if source is interlaced:** when the source is interlaced, the luminance level is decreased.

## Kaleido Software Version 11.1.0

### New Features and Enhancements

- [Ref. #KX-13823] **Kaleido-IP SMPTE 2110-20 now supports Narrow, Narrow Linear and Wide senders:** SMPTE ST 2110-21 Traffic Shaping and Delivery Timing is now supported.
- [Ref. #KX-13933] **Kaleido-IP SMPTE ST 2110-30 inputs now support audio levels A and B:** Support for the following SMPTE ST 2110-30 audio levels (all 48kHz sampling frequency):
  - **A:** reception of 48 kHz streams with 1 to 8 audio channels at packet times of 1 ms. AES67 compliant.
  - **B:** Level A plus 1 to 8 channels at packet times of 125µs
- [Ref. #KX-12496] **Kaleido-IP now supports SMPTE 2110-40:** Ancillary Timecode (ATC), EIA-608, EIA-708, OP-47 Teletext, and Active Format Display (AFD) ancillary data are now supported.
- [Ref. #KX-13932] **Kaleido-IP SMPTE ST 2110-20 Streaming Outputs are now supported by NMOS IS-04/05:** Support NMOS IS-04/05 for discovery/registration and connection management with GV Convergent / GV Orbit.
- [Ref. #KX-13825] **New Kaleido-IP SMPTE ST 2110-20/30/40 inputs are supported by NMOS IS-04/05:** Support NMOS IS-04/05 for discovery/registration and connection management with GV Convergent / GV Orbit.
- [Ref. #KX-13874] **Kaleido-IP NMOS grouphint tags have been updated:** added support for NMOS grouphint tags for NMOS receivers as specified by NMOS BCP-002. For example, this enhances the ease of integration of Kaleido-IPs with GV Convergent / GV Orbit.

### Bugs Fixed

- [Ref. #KX-13582] **The default TSL port 8901 did not work:** In this release, the TSL port number 8901 now works.
- [Ref. #KX-13598] **Kaleido Software version 11.0.0 audio monitoring is not working with a Kaleido-IP X110 / X310:** Audio monitoring is unavailable with a Kaleido-IP X110 / X310 running Kaleido Software version 11.0.0. This release fixes this issue.

## Kaleido Software Version 11.0.1

### Bugs Fixed

- [Ref. #KX-13856] **Kaleido-IP crashing with certain SMPTE ST.2110 sources:** some 2110-20 sources using RTP extension headers with no payload could crash the Kaleido-IP.
- [Ref. #KX-13854] **Invalid EDID checksum prevents setting a valid resolution on display with Kaleido-IP:** an HDMI display with invalid EDID checksum will not be detected as a valid screen even if display resolutions are exposed properly.

## Kaleido Software Version 11.0.0

### New Features and Enhancements

- [Ref. #KX-13238] **Kaleido-IP Uncompressed Output:** Kaleido-IP X120 and X320 now supports uncompressed head streaming outputs (SMPTE ST 2110-20). Head outputs also support redundancy (SMPTE ST 2022-7). The requirements for this option are found in the Kaleido-IP X320 / X120 Installation & Service Manual (M926-8902-xxx).
- **For a Kaleido-IP, PTP network clock is now supported:** this is for setting the multiviewer's date & time and for locking head streaming outputs.
- **For a Kaleido-IP, DHCP is used for the network management port:** now by default, the Kaleido-IP uses DHCP to set its management network IP address. This simplifies installation and configuration of the multiviewer out of the box.

## Prerequisites

All multiviewers have a Kaleido Software minimum version compatibility requirement. This information is available in the multiviewer's Installation & Service Manual under the topic *Kaleido Software Minimum Version Compatibility*. For example, a Kaleido Software upgrade may require upgraded (improved) hardware or a Kaleido Software downgrade may no longer work with the current configuration made with a more recent Kaleido Software version.

---

### IMPORTANT

When upgrading or downgrading a multiviewer with a difference in Kaleido Software version that is greater than one minor version (for example, going from 8.10 to 8.30), certain other upgrade / downgrade requirements and limitations may be in effect; see *Upgrading the Multiviewer* in the multiviewer's Installation & Service Manual for more information.

---

Before upgrading the multiviewer system, make sure you have a backup of the current system database so that you can return to the previous Kaleido Software version if necessary. Refer to *Creating a Backup* in the Kaleido Software User's Manual, for details.

## Known Issues and Limitations

---

**Note:** The star (★) symbol indicates a new known issue or limitation found in Kaleido Software version 12.0.1.

---

## Installation, Upgrade, Downgrade, Live Update

### All Multiviewer Models

- [Ref. #KX-12401] **ES Switch protocol unsupported with Jupiter controllers:** ES Switch protocol over serial link is not supported with a Jupiter controller.
- [Ref. #KX-4520] **Cluster and cascade systems:** all members of a cascade or cluster must use the same Kaleido Software version.

---

**Note:** For cluster or cascade systems, Kaleido Software version 11.0.0 or higher is not compatible with previous Kaleido Software versions. Kaleido Software version 11.0.0 or higher is only available for the Kaleido-IP multiviewer series, and as such a Kaleido-IP series multiviewer will not operate in a cluster or cascade with other Kaleido multiviewer models. Kaleido Software version 11.0.0 or higher does not support cascade.

---

- [Ref. #KX-12431] If the IP address of one cluster member is changed then all cluster members must be restarted.

### Kaleido-IP

- [Ref. #KX-14509] **Kaleido-IP minimum MPEG2 bitrate should be set to 8 Mbps:** When using MPEG2 for head streaming output, the minimum bitrate should be set to 8 Mbps or higher.
- [Ref. #KX-12259/KX-14260/KX-14447] **Quad-head on the Kaleido-IP is not backwards compatible - head streaming configuration must be noted down:** If you upgrade from version 11.3.0 or lower to version 11.4.0 or higher, you will lose the saved Head Streaming Configurations. The same goes for downgrading from 11.4.0 or higher to a version 11.3.0 or lower. Before upgrading, make a note of the head streaming configuration in XAdmin.



- [Ref. #KX-12666] **As of Kaleido Software Version 9.20, Kaleido-IP has a new type of input that is not backwards compatible with previously configured NMOS DEVICES:** Virtual inputs were first introduced in Kaleido Software version 8.40. Prior to Kaleido Software version 9.20, they were configured in XEdit as *NMOS DEVICES*, found in the main window, under the **System** tab, and then the **Description/Calibrations** on the second level tab bar. When upgrading to Kaleido Software version 9.20 or higher, any *NMOS DEVICES* are converted into *INPUTS*. Such an upgrade will bring changes that are not backwards compatible with Kaleido Software versions earlier than 9.20. If a user installs Kaleido Software version 9.20 or higher and then decides to downgrade to a Kaleido Software version earlier than 9.20, the *INPUTS* folder will be empty and you will have to recreate the inputs or see *Workaround* below. The same applies to a user that exports a database from Kaleido Software version 9.20 (or higher) to a Kaleido Software version earlier than 9.20. For Kaleido Software version 9.20 or higher, changes have also been made to the alarms' URLs for virtual inputs that now have changed to their definitive form. Refer the *Kaleido Software User's Manual* for more information.  
*Workaround:* Before upgrading to Kaleido Software version 9.20 (or higher), make a database backup. When downgrading to a Kaleido Software version earlier than 9.20, restore this database backup to the multiviewer.
- [Ref. #KX-12440] **Kaleido-IP streaming audio monitoring loss:** after several hours of mosaic viewing using VLC, audio program monitoring becomes silent.  
*Workaround:* in VLC, click *Stop* and then *Play* to restart audio program monitoring.
- [Ref. #KX-11858] **Kaleido-IP excessive pixelization with H.264 stream:** H.264 streams encoded using picture-adaptive frame-field and with very long sequences between I-frames can show excessive pixelization.
- [Ref. #KX-11815] **Restoring a pre-8.50 database might change the output scan format:** in a backup database made with a Kaleido Software version earlier than V8.50, room displays are likely to have their *scan format* property set to interlaced by default. For a Kaleido-IP multiviewer using software versions prior to V8.50, the *scan format* property was ignored, which is now no longer the case. Restoring such a pre-8.50 database to a Kaleido-IP currently configured to output in 1080p might change the output format to 1080i instead. *Workaround:* in XEdit, set the monitoring output scan format back to progressive. Refer to *Configuring the SDI Monitoring Output Format*, in the Kaleido-X User's Manual, for more information.
- [Ref. #KX-7805] **Kaleido-IP X310, Kaleido-IP X110:** should you downgrade a Kaleido-IP X310, or Kaleido-IP X110 multiviewer, to a version of the Kaleido Software earlier than 7.33, this will result in a non-functional system, with the monitor wall not starting.  
*Workaround:* To recover from an unwanted downgrade, use XAdmin's Upgrade page to upgrade your multiviewer back to a version of Kaleido Software supported by your multiviewer. See *Kaleido Software Minimum Version Compatibility* in the multiviewer's Installation & Service Manual for the minimum version to install.
- **SMPTE ST 2022-7:** has the following limitations:
  - Output resolution is limited to 1080p59.94 and 1080p50 only.
  - A PTP fail over is not seamless.
  - The uncompressed ST 2110-20 outputs are wide senders according to SMPTE ST 2110-21.

- [Ref. #KX-13629] **For a Kaleido-IP, use approved SFP cartridges:** ST-2022-7 is only supported by using the SFP cartridges listed in the Kaleido-IP Installation & Service Manual.
- [Ref. #KX-13641] **For a Kaleido-IP, static IP addresses are preferred:** When the DHCP server's lease time for IP addresses expires, DHCP enabled devices on the network renew their IP configuration data. When the multiviewer is assigned a new IP address from the DHCP server, you must reboot the multiviewer so it can apply the new IP address to its configuration. For this reason, once the DHCP server has assigned an IP address to the multiviewer and you have IP connectivity to the multiviewer, set a static IP address for the multiviewer.
- [Ref. #KX-13957] **Inability to downgrade a Kaleido-IP multiviewer to 11.0.0 & 11.0.1 from 11.1.0 or higher:** Once a Kaleido-IP has been upgraded to:
  - 11.0.1, it cannot be downgraded to 11.0.0.
  - 11.1.0 or higher, it cannot be downgraded to 11.0.0 or 11.0.1.

## System

### Kaleido-IP

- [Ref. #KX-14637] **Kaleido-IP Head Streaming Audio out is Limited to 6 Audio Channels Maximum:** While decoding the first 8 channels of 2110-30 audio streams is supported, the probing and streaming out is limited to 6 audio channels.
- [Ref. #KX-14682] **ST 2110-20 Output format message does not follow the XAdmin configuration:** If the HDMI resolution is set to 720p or UHD, the ST 2110-20 warning message is displayed in 1080p format regardless of the XAdmin configuration (1080i/p). The output format message does not follow the XAdmin configuration.
- [Ref. #KX-12974] **As of Kaleido Software Version 9.21, when Kaleido-IP X120 / X320 are used with a DisplayPort-to-HDMI converter and 1080i resolution, the signal becomes unstable:** If you select **Interlace** for the Kaleido-IP output while using the active DisplayPort-to-HDMI dongle, the signal may become unstable.  
*Workaround:*
  - Use a progressive scan instead of interlaced head output signal.
  - Use an optional DisplayPort-to-HDMI **passive** adapter. Note that a DisplayPort-to-HDMI passive adapter will not support 4K/UHD. Contact Technical Support to purchase DisplayPort-to-HDMI passive adapters that have been tested to work with this multiviewer.
- [Ref. #KX-10136] **The Kaleido-IP X320/X120 supports 4K UHD (3840 × 2160p @ 25 / 29.97 / 50 / 59.94 Hz) mosaic at the HDMI output:** however, the maximum streaming output resolution is still HD (1920 × 1080p).
- [Ref. #KX-5808] **Kaleido-IP requires real-time PSI metadata update for an audio sampling rate change:** audio sampling rate change without a PSI change is not supported.

- [Ref. #KX-6066] **EdgeVision compatibility:** if you set the *high resolution* stream's encoder level to **Medium** in EdgeVision Configurator, the output stream resulting from a 720p input signal to the EdgeVision is currently not compatible with the Kaleido-IP, and may result in noise (for example, vertical lines, or stray dots) on the monitor wall.  
*Workaround:* In Edgevision Configurator, select a different encoder level for the high resolution stream.
- [Ref. #KX-10338] **Renaming transport streams:** renaming a transport stream may result in blank text labels or disabled/non-existent alarm statuses on the monitor wall.  
*Workaround:* Restart the Kaleido-IP unit after changing a transport stream's name.
- [Ref. #KX-14306] **NMOS registry configuration is lost after an upgrade:** After an upgrade, the NMOS Registry Configuration (NMOS Registry IP Address, Registration Port, Query Port) in XAdmin is empty.  
*Workaround:* Re-enter this NMOS registry information in XAdmin.

## Multiple Multiviewer Models

- [Ref. #KX-4927] **NV9000 aliases:** the Kaleido Software does not officially support aliases. If you want to include aliases from an NV9000 router configuration within your multiviewer configuration, contact Technical Support (see [Grass Valley Technical Support](#), on page 38).
- [Ref. #KX-3900] **Swapping port assignments:** swapping the port assignments between two tally devices connected to a multiviewer over a TCP/IP or UDP/IP network, and configured in XEdit, may result in a nonfunctional system.  
*Workaround:* If you need to interchange the network port assignments between two devices in XEdit, first disconnect both devices from the multiviewer as follows:
  - 1 In the **Interconnects** tab, click the link between the device and the multiviewer, and then, in the **Properties** pane, set the **Transport type** attribute to "Disconnected".
  - 2 Save the system.  
If you are using XEdit in offline mode, then export the database to the multiviewer.
  - 3 Set the new port assignment for each device.
  - 4 Set the **Transport type** attribute back to the appropriate value.
  - 5 Save the system again.  
If you are using XEdit in offline mode, then export the database to the multiviewer once more.
- [Ref. #X16-43] **EDID auto detection:** with EDID auto detection enabled, if a glitch occurs in the connection between a multiviewer and one of its monitor-wall displays, the display timings may be reset to incorrect values. The display image is compromised (for example, green dots, misaligned graphics and/or video, or loss of display). This might happen, for example, after a power-up or a system reboot, during which an anomaly in the EDID detection would change the head resolution. It could also be triggered by the swap of a DXF-100 storing the wrong EDID information.  
*Workaround:* Reset the head resolution or reboot the system to have the proper resolution applied.

- [Ref. #KX-2564] **Clusters:** after a multiviewer is removed from a cluster system, and reverted to a standalone system by reloading its individual database, errors or warnings may be recorded in `vroom.log`.  
*Workaround:* Make sure to restart any separated multiviewer once you have loaded it with the appropriate standalone database.
- [Ref. #KX-2213/T80883] Changing an input format may momentarily affect the entire screen.
- [Ref. #KX-2916] **HD-SDI monitoring output resolutions:** the current version of the Kaleido Software supports the following DVI/RGBHV resolutions only: 1920 × 1080 (for an HD-SDI output in the 1080i or 1080p format, configurable in XEdit), and 1280 × 720 (for an HD-SDI output in the 720p format). Any other DVI/RGBHV resolution will result in the HD-SDI output being disabled (you may see a color bar in some circumstances).

---

**Note:** Make sure that the **Use detected monitor resolution** option is disabled. Refer to *Enabling EDID Auto-Detection from the Monitor Wall*, or *Enabling EDID Auto-Detection in XEdit*, in the Kaleido Software User's Manual, for details.

---

## Hardware

- [Ref. #KX-2463] **Kaleido-RCP2 does not support USB hubs:** if an externally powered USB hub is connected to the Kaleido-RCP2, then a mouse connected to the hub will not work. Similarly, multi-function keyboards or numeric keypads that have a built-in USB hub also do not work when connected to the Kaleido-RCP2.  
*Workaround:* Use a standard keyboard or keypad, and connect it to the Kaleido-RCP2 directly.
- **Non-functional buttons on Kaleido-RCP2:** ALARM INHIBIT, SAVE.
- **Non-functional connections on KXI-DVI-Bridge:** ETH 10/100.

## Monitor Wall

- [Ref. #KX-11456] **Kaleido-IP VM:** when upgrading a *virtual* Kaleido-IP system, you may notice video tearing and audio breaking up on the monitor wall.  
*Workaround:* Make sure your Kaleido-IP VM system is off air, before you start uploading the RUN package.
- [Ref. #KX-10528] **Kaleido-IP:** changing the display resolution for *Head 2* of a Kaleido-IP multiviewer may result in frozen video (and audio) on the monitor wall.  
*Workaround:* Restart the multiviewer.
- [Ref. #KX-5811] **Kaleido-IP:** if you replace a monitor wall display with a different model while the multiviewer is running, you may notice unexpected behavior at the audio monitoring output.  
*Workaround:* Restart the multiviewer to obtain the audio support information from the new display.
- [Ref. #KX-7912] **Kaleido-IP:** if your Kaleido-IP multiviewer is connected to a single monitor wall display configured with a 50 Hz refresh rate, you may notice video tearing on the display.  
*Workaround:* Configure a separate room with the second, unused head, and select a default resolution that has a 50 Hz refresh rate.

- [Ref. #KX-7537] **Audio monitors:** in the case of a source with embedded Dolby E audio in either of the two AES pairs that are selected for Dolby E metadata decoding, while the Dolby E option is not enabled for this source, VU and peak meters may appear *empty* (indicating silence) instead of *full* (0 dBFS), which indicate by convention that the option is not enabled. In addition, if an audio monitor explicitly configured to show PCM levels is assigned a source with embedded Dolby E audio, the monitor's VU and peak meters will appear *empty* (indicating silence) regardless of the actual PCM levels or Dolby E option status.  
*Workaround:* Setting the monitor's **Audio format** attribute to *Auto*, instead of PCM, may help with the second issue.
- [Ref. #KX-6744] **Display resolutions:** although it is still possible to select and configure output resolutions as low as 800×600 in XEdit (and on the monitor wall, for some multiviewer models), this resolution is not supported. The lowest display resolution supported is 1024×768.
- [Ref. #KX-6287] **Audio monitors:** although valid calibration values for out of phase sensitivity are between -1 and 1, XEdit lets you set the threshold for an audio monitor's phase meter to a value that is outside of the valid range, after which audio monitors may turn gray or unresponsive on the monitor wall.  
*Workaround:* To recover from such a situation, set the phase meter threshold back to a valid value (between -1 and 1), and then restart your multiviewer.
- [Ref. #KX-4934/KX-6337] **NV9000 source labels:** in the case of a multiviewer with sources from an upstream NV9000 router configuration, on rare occasions, after restarting the multiviewer, UMDs may fail to show the expected source labels on the monitor wall.  
*Workaround:* Refresh the layout on the monitor wall. If router source labels are still missing after refreshing the layout, then restart the multiviewer.
- [Ref. #KX-1054] **Closed captions:** closed captions may fail to appear or they may be only partially visible, when a monitor — be it configured with transparency — overlaps the area where the captions are expected to be displayed.
- [Ref. #KX-4736] **Router crosspoint actions:** a monitor wall action configured to switch router crosspoints upon loading a specific layout may fail to produce the expected crosspoint changes when that layout happens to be loaded during the multiviewer startup process.  
*Workaround:* Refresh the layout.
- [Ref. #KX-4722] **Distorted monitors:** a system configuration that has displays in different rooms sharing conflicting head assignments may result in distorted layout elements on the monitor wall. This may happen, for example, if the same output head is assigned to two displays with different resolutions.  
*Workaround:* Review your room configurations in XEdit, look for red *Head* elements in the filtered System list that appears at the bottom of the **Tools** pane, and then remove the conflicting display or delete the conflicting room altogether (refer to *Managing Rooms* in the Kaleido Software User's Manual).
- [Ref. #KX-6008] **Kaleido-IP:** in the case of a Kaleido-IP system that has sources from an EdgeVision device, changing a stream's resolution at the EdgeVision output may result in UMDs failing to display text information decoded from the stream (for example, the video format), on the monitor wall.  
*Workaround:* Restart the Kaleido-IP multiviewer.

- [Ref. #KX-6066] **EdgeVision compatibility:** if you set the *high resolution* stream's encoder level to **Medium** in EdgeVision Configurator, the output stream resulting from a 720p input signal to the EdgeVision is currently not compatible with the Kaleido-IP, and may result in noise (for example, vertical lines, or stray dots) on the monitor wall.  
*Workaround:* In EdgeVision Configurator, select a different encoder level for the high resolution stream.
- [Ref. #KX-6068] **Kaleido-IP:** when the Kaleido-IP is decoding streams that are subject to sustained corruption, it may happen that the decoding engine restarts causing all video windows on the monitor wall to momentarily freeze or black.
- [Ref. #KX-5744] **Incorrect assignments:** due to a limitation in XEdit's support for drag-and-drop operations (see Ref. #KX-5744 on [page 31](#)), when you first load a new layout on the monitor wall, you may notice that a monitor's source or destination assignment is incorrect.  
*Workaround:* Open the layout in XEdit, click the corresponding monitor, verify the **Source** and **Monitor wall destination** attributes indicated in the **Properties** pane, and correct them as needed.
- [Ref. #KX-2493] **Glitch after changing assignment:** if two monitors of approximately the same size are displaying the same source on the same head, changing one monitor's assignment may cause glitches in the other.
- [Ref. #KX-5748] **Kaleido-IP output resolution:** in the case of a Kaleido-IP multiviewer, the value indicated for **Detected monitor resolution** in the **Display Resolution** window is always "unknown" since the Kaleido-IP does not support automatic resolution detection.
- [Ref. #KX-5865] **Kaleido-IP:** if your Kaleido-IP multiviewer is connected to displays that are configured with different resolutions and refresh rates (for example, 1280 × 720 @ 50 Hz for Head 1 vs. 1920 × 1080 @ 60 Hz for Head 2), you may notice video tearing on one of the displays.
- [Ref. #KX-5103] **Kaleido-IP:** after losing communication with the data network, it may take up to one minute for all video signals to reappear on the monitor wall, once communication is reestablished.
- [Ref. #KX-5234] **Kaleido-IP:** the Kaleido-IP does not support spanned monitors.
- [Ref. KX-13064] **Kaleido-IP VM cropping and zooming support:** The Kaleido-IP VM does not support cropping and zooming (underscan/overscan) modes.
- [Ref. #KX-5110] **Kaleido-IP:** when monitoring a program that belongs to an encrypted stream, the corresponding video window displays a black signal on the monitor wall.
- [Ref. #KX-5188] **Kaleido-IP:** in the case of a Kaleido-IP, the physical input information (**Phy**) on the monitor wall's **Info** menu is not relevant.
- [Ref. #KX-3956] **Cascade:** in the case of a cascade system, changing a display resolution from the monitor wall menu is not supported. To maintain the integrity of the underlying cluster configuration, you must use XEdit to configure the display resolution (see *Changing Room Display Resolutions* in the Kaleido Software User's Manual).  
*Workaround:* In the advent that such a change was made by mistake, you will have to repair the broken cascade, by using XEdit as follows:
  - 1 Connect to the multiviewer associated with the display whose resolution was changed by mistake, and open the corresponding room.

- If you want to *restore the previous resolution*, then set this display to its previous resolution.
- If you want to *apply the new resolution*, then change something in the room to enable the **Save** button (for example, move a display, and then bring it back to its initial position).

2 On the **File** menu, click **Save**.

- [Ref. #KX-1592] **Sony production switchers:** the Kaleido Software's current implementation of the Sony Serial Tally protocol does not provide the name of the selected source for the Program and Preview outputs, on Sony production switchers. This prevents UMD labels associated with these switcher outputs from being dynamically updated on the monitor wall.
- [Ref. #KX-3944] **Full screen layouts:** if you attempt to load a full screen layout while pointing a tally element from a composite monitor on the monitor wall, then the full screen layout may load without the expected logical source assignments.  
*Workaround:* When pointing a composite monitor on the monitor wall, make sure the pointer is positioned over the video window area within the composite before loading the full screen layout.
- [Ref. #DVR-60] **KXI-DVI-Bridge:** on some units an unconnected DVI input may be detected as active, in which case the unit would report an unstable DVI input.  
*Workaround:* Always connect valid signals to both DVI inputs. If only one signal is available, then connect it to DVI-D IN A, and loop DVI-D OUT A back to DVI-D IN B.
- [Ref. #DVR-49] **KXI-DVI-Bridge:** when both DVI inputs are in use, connecting or disconnecting one of the inputs may cause momentary glitches on the other signal path. For example, disconnecting DVI input B would cause glitches on all outputs A (HD-SDI OUT A 1, HD-SDI OUT A 2, and DVI-D OUT A).
- [Ref. #KX-3573] **Display resolution and analog clocks:** it is sometimes not possible to change a display's resolution from the monitor wall. This may occur if the current layout includes an analog clock.  
*Workaround:* If the issue does not resolve itself after a few attempts, then load a layout that does not include analog clocks, before changing the resolution.
- [Ref. #KX-1138] **Send to [router] output menu available while no router outputs are enabled:** in the case of a multiviewer model for which there is no *SDI Router Output* option, or a multiviewer where this option is not enabled, the **Send to [router] output** menu may still be available on the monitor wall. This typically results from having configured an internal router in XEdit.
- [Ref. #KX-3530] **Timers:** once you have stopped a timer that was configured in Overrun mode, you cannot start it again.  
*Workaround:* Reset the timer, and then start it again.
- [Ref. #KX-1770/KX-3561] **Timers:** if you modify a timer in XEdit while a timer monitor associated with this timer is shown on the monitor wall, your changes are not automatically reflected on the monitor wall. This may lead to unpredictable behavior (for example, timer not starting, or starting at an unexpected time).  
*Workaround:* Refresh the layout on the monitor wall.
- [Ref. #KX-2053] **Timers:** on the monitor wall, if you change the logical source (channel) associated with a timer monitor, the timer monitor will appear to have stopped (even though the system has actually implemented the timer change).  
*Workaround:* Refresh the layout on the monitor wall to observe the change.

- [Ref. #KX-2712] **Keying Mode and UMDs:** a UMD with the same background color as the layout background may not be displayed properly when the DVI Input Keying Mode on the video output is set to **Background**.  
*Workaround:* In XEdit, set the UMD transparency to a value between 75% and 80% (in the **Properties** tab, under **Appearance**, click the **UMD transparency** box, and then enter the value).

## Mouse and RCP Operation

- [Ref. #KX-2891] **Audio monitoring:** the Kaleido-RCP2's volume control, and -20dB buttons, their equivalent on the RCP-200, and the corresponding Gateway commands apply to *analog* audio monitoring outputs only. They do not affect the audio signal at digital (for example, AES, HDMI, or SDI) monitoring outputs. The Kaleido-RCP2's Mute button (and its equivalents), is also limited to analog audio outputs.
- [Ref. #KX-4750] **Cascade:** in the case of a cascade system, monitor wall functions performed via the associated buttons on a Kaleido-RCP2 or RCP-200 (ASPECT RATIO, UNDERSCAN, FULL SCREEN, etc.) only work in parts of the layout associated with the multiviewer that is directly connected to the displays.  
*Workaround:* Use the monitor wall menu.
- [Ref. #KX-4710] **Spanned monitors:** mouse and Kaleido-RCP2 operations are not fully supported on monitors spanning two or more displays.  
*Workaround:* In XEdit, configure the spanned monitor you want to control, as a monitor wall destination. You will then be able to use a mouse connected to the Kaleido-RCP2 to interact with the spanned monitor. Configuring your multiviewer as a router also allows you to interact with spanned monitors by using the RCP-200, or other router control devices or software (for example, the Router Control Matrix and Single Bus applications available from the Kaleido Web page).
- [Ref. #KX-3843] **Keyboard configuration:** if you change the external keyboard configuration for a currently active RCP user, the user must log on to the room again for the change to be effective.
- [Ref. #KX-2542] **Kaleido-RCP2:** it may happen that the list of rooms discovered on the network by the Kaleido-RCP2 is incomplete.  
*Workaround:* Try to obtain the room list again. On the Kaleido-RCP2, press the ESC button to return to the Configuration menu, and then press ENTER to select ROOM SELECTION, and obtain the room list from all multiviewer systems that are currently available on the network.
- [Ref. #KX-3594] **Blinking pointer:** in cases where the two heads from the same dual-head output are associated with displays in separate rooms, the RCP user in each room may notice that the mouse pointer is blinking.
- [Ref. #KX-3543/KX-3544] **Large mouse pointer option:** when using XEdit in online mode, after you select or clear the **Use large mouse pointer** option and save your change, the pointer size may not be immediately adjusted on the monitor wall.  
*Workaround:* In the case of a Kaleido-MX, Kaleido-MX 4K, Kaleido-Modular-X, Kaleido-XQUAD or KMV-3901/3911, restart the multiviewer; for other multiviewer models, refresh the current layout or load a different layout.
- For troubleshooting purposes, if you connect a mouse directly to your multiviewer (as opposed to connecting the mouse to a Kaleido-RCP2, for instance), the pointer can only travel between the displays supported by that card.



When more than one display is connected to the card, the required mouse movement to go between displays does not always follow the wall layout set in XEdit. For example, you will have to move the mouse pointer horizontally or vertically (depending on the multiviewer model) in order to go from one display to the next.

- [Ref. #KX-740] It is not possible to enter a value of "10" from the Kaleido-RCP2 keyboard when using an input method. As soon as you type "1", the selection is made.  
*Workaround:* To enter "10", type "0".
- [Ref. #KX-1324] Two RCP users in the same room cannot use the monitor wall menu at the same time.
- [Version 2.00] If two RCP users use the same head, the mouse pointer is shared. However, because the pointer position of each user is preserved, the pointer behavior looks natural.
- [Version 2.00] Connecting the keyboard affects the mouse pointer fluidity.
- [Version 2.00] Mouse pointer movements are not as fluid as on a standard PC.

## Signal Formats

- [Ref. #KX-7480/KX-7481] **Kaleido-IP encrypted signal detection:** with the current version of the Kaleido Software, when a monitored source becomes encrypted, the last non-encrypted video image may remain visible on the monitor wall, and related status texts may keep the last decoded values. In the case of a scrambled audio signal, when the *Audio scrambled* alarm is raised, other audio alarms may keep the last status they had before the audio signal became encrypted, instead of being disabled.
- [Ref. #KX-5900/F33873] **Kaleido-IP:** the current version of the Kaleido Software for the Kaleido-IP does not support decoding of ST 302 PCM audio.
- [Ref. #KX-5808] **Kaleido-IP:** audio sampling rate changes without a PSI change are not supported. Should this occur, the audio will not be decoded, and the audio loss alarm will be raised.

## Alarm Management and Actions

- [Ref. #KX-9384] **Virtual alarms:** if you include the text *GlobalAlarm* in the name of a virtual alarm, the virtual alarm may eventually disappear from your system configuration.  
*Workaround:* Create the virtual alarm again, making sure not to include the reserved text *GlobalAlarm* in its name.
- [Ref. #KX-6568] **Folder status in iControl's GSM alarm browser:** when navigating a multiviewer's GSM, by using the alarm browser in iControl, some alarm folders may be black, until you expand them to reveal the alarms they contain, at which point the folder color will be updated to reflect the status of the alarms.  
*Workaround:* Create a virtual alarm, based on the alarms whose status you want to be able to monitor in real time.

---

**Note:** An alarm status is only visible in iControl's GSM alarm browser when at least one of the following conditions apply.

- The alarm is already monitored on the monitor wall.
  - Someone navigated to this alarm by expanding the System list in iControl or XEdit.
  - The alarm is associated with a background action.
  - The alarm contributes to a virtual alarm.
- 

- [[Ref. #KX-6159] **Virtual alarms:** changing a virtual alarm's name in XEdit may result in its status becoming unavailable on the monitor wall.  
*Workaround:* Refresh the layout on the monitor wall.
- [Ref. #KX-6248] **Global alarm metadata:** editing of global alarm metadata from a multiviewer's GSM, in iControl, is not supported.
- [Ref. #KX-4655] **Alarm scheduling:** if non-recurring schedules were in progress before a multiviewer restarted, the associated actions (alarm inversion or suppression) may fail to be applied once the system has restarted.  
*Workaround:* For every schedule you need to resume, open the **Schedule Entry Details** window, and then click **OK**: (1) On the **Tools** menu, click **Edit schedules**. (2) In **Edit Schedule**, select a schedule you want to resume (to locate them, notice that they have nothing indicated under **Recurrence**, and are reported as *In progress* under **Status**), click **Edit** to open **Schedule Entry Details**, and then click **OK** to close the window.

- [Ref. #KX-4725] **Background actions:** a background action triggered by an alarm is executed, regardless of the alarm's operational mode.
- [Ref. #KX-6067] **Kaleido-IP alarms:** in the case of the Kaleido-IP, video alarms are only supported for signals whose video resolution's horizontal dimension is a multiple of 16.
- [Ref. #KX-2695/KX-4394] **Background actions:** background actions created from the main System list in the **Description/Calibrations** tab, or from the filtered System list associated with the current level in the sources table, cannot be saved from these tabs. *Workaround:* To save background actions created from the **Description/Calibrations** tab, or from the **Channels/Sources** tab, switch to the **Actions** tab, and then click **Save** on the toolbar.
- [Ref. #KX-5752] **Virtual alarms:** when building a virtual alarm based on the current multiviewer, clicking **Use selected folder as path** in the **Build Virtual Alarm** window may have no effect. *Workaround:* Manually enter the desired path in the **Path** box.
- [Ref. #KX-3632] **Virtual alarms:** when a virtual alarm associated with a router source becomes pending (for example after the router source was disconnected), then background action items based on this alarm's status may not be executed.
- [Ref. #KX-3172] **Background actions based on router sources:** with the current version of the Kaleido Software, a background action based on a router source can only be triggered when the same router source is used on the monitor wall. *Workaround:* Add a hidden component (for example, a UMD) to your layouts, and assign the required router source to this component.
- [Ref. #KX-3567] **Dialnorm alarms:** after a multiviewer input has switched from a signal with dialnorm information to a signal format that does not include this information, the *Dialnorm - Expected* and *Dialnorm - Loudness* alarm indicators may report irrelevant status information, whereas they should be disabled.

## SNMP

- [Ref. #KX-4998/KX-6071] **Kaleido-IP and SNMP managers:** in the case of a Kaleido-IP, publishing signal/service probing alarms to SNMP managers is not fully supported. This partial support for KALEIDO-KX-MIB allows the Kaleido-IP to report service/signal status to an SNMP manager via the MIB file's `kxVirtualAlarmTable`. This table includes entries for all virtual alarms and logical sources created in XEdit for your multiviewer. For each logical source, the global alarm and associated text information is available. Refer to the MIB-embedded descriptions for exceptions. *Workaround:* If an iControl Application Server is available to your system, configure it to relay your Kaleido-IP alarm status information to the target devices. Refer to *General Status Manager (GSM)* in the Kaleido Software User's Manual, and to *iControl and SNMP* in the iControl User Guide, for more information.
- [Ref. #KX-2477] **SNMP managers:** some text status data (for example, AFD/WSS format, Dolby E or Dolby VANC encoded dialnorm or program config, etc.) only become available to SNMP managers once they have been displayed on the monitor wall. *Workaround:* (1) In XEdit, add the text status element from the appropriate source signal to a logical source (channel). (2) Assign the logical source to a UMD. (3) Load the layout that includes this monitor on the monitor wall. The text status will then be available to SNMP managers.

- [Ref. #KX-1521] The Kaleido Software does not support the SNMP v2 `GetBulk` command. Performing a `GetBulk` on `kxVideoTable` returns “There is no such instance in this MIB” instead of the data for the table.
- [Ref. #KX-1521] **Kaleido-IP with Kaleido Software Version 11.0.0 or higher does not support SNMP:** The SNMP service is unavailable on these multiviewers.

## Router Control


- [Ref. #KX-11130] **Upstream router control:** the **Assign Router Input** category/index panel does not support duplicate names for the router sources. When using the panel to assign a router source to a monitor, if multiple router sources have the same name, only the source with the highest index number is available.  
*Workaround:* Update the configuration of your router, or router control system, so that every router source has a unique name. Alternatively, override the source labels for the appropriate physical router level in XEdit's **Router Configurations** tab.
- [Ref. #KX-3886/KX-3895] **Ineffective Lock/Unlock features in Matrix and Single Bus:** with the current version of the Kaleido Software, all Lock and Unlock features available from the Matrix and Single Bus user interface are ineffective.
- [Ref. #KX-3946] **KX Router source mapping:** although the multiviewer's physical inputs appear in the list of sources that can be selected when configuring source mapping for the *KX Router* logical router, they should *not* be used. Only logical sources (channels) should be used in this context.
- [Ref. #KX-2482] **“Monitor wall” physical level:** although it appears in the list of physical levels that can be added to any logical router configuration, the “Monitor wall” physical level should only be used when configuring the *KX Router* logical router.
- [Ref. #IC-13430] **Matrix and Single Bus support up to 8 levels:** the Matrix and Single Bus client applications can display and control up to 8 levels in a logical router. When the *All follow* mode is enabled, it applies to the levels that are visible in the application window only.  
*Workaround:* To control a logical router with more than 8 levels, use a router-control device or application that supports the required number of levels.
- [Ref. #IC-13335] **Level offset required for commands to Network Modular devices from third-party router controllers:** if a third-party router controller sends a command (using the Network Modular protocol) to Level 1 of a router connected to a Kaleido multiviewer, the command is sent to Level 0 instead. This is due to the particular way in which the Network Modular protocol is handled by the NDC component of the Kaleido Software.  
*Workaround:* On the third-party router controller, increment the target Level (or Frame ID) by one. For example, to change a crosspoint on Level 1, send the instruction to Level 2.
- [Ref. #IC-13242] When an NV9000 system controller is controlling a multiviewer's *KX Router* logical router, and the multiviewer is controlling the NV9000, the NV9000 may indicate that the multiviewer is offline.  
*Workaround:* Change the timeout period on the NV9000 system controller. The recommended timeout value is 2000 milliseconds.

- [Ref. #KX-2513] After launching the Single Bus or Matrix View Router Control applications from the multiviewer's home page, it is possible to create salvos, change settings, etc. However, when the multiviewer is restarted, such changes will be lost.  
*Workaround:* Use a standalone version of the iControl Router Control software, or the one that is part of the iControl suite, to configure your Kaleido routers. Your salvos and other settings will then be visible, when you next open the Single Bus and Matrix applications from the Kaleido-X home page.
- [Ref. #KX-1697] **Background actions:** if a background action is configured to change an external router crosspoint, then, when the action is triggered, the Kaleido Gateway will return `<ack/>` even if the crosspoint change could not be made. Note that in such a case, the crosspoint failure will cause the action to stop, and the event will be properly recorded in `vroom.log`.

## Kaleido Remote Control Protocol (Gateway)

- [Ref. #KX-2913] If the name of a Kaleido multiviewer contains a space or a special character, opening a remote control Gateway session with user context may not be possible.  
*Workaround:* Remove any space or special character from the system name. Alternatively, if editing the Gateway command is an option, you may try percent-encoding the unsafe characters in the system name.
- [Ref. #KX-2167] If a single `<setKTimer2>` command is used to change both `PresetTime` and either `TimerMode` or `EndMode` for a timer monitor, the `PresetTime` change is ignored.  
*Workaround:* Send separate `<setKTimer2>` Gateway commands for each parameter that is to be changed.

## XAdmin

- [Ref. #KX-6555] **XAdmin compatibility with Internet Explorer 10:** if you use Internet Explorer 10 to access the multiviewer's home page, a blank page may appear instead of the expected application after you clicked the XAdmin button.  
*Workaround:* Click the Compatibility View  button at the end of your browser's address bar. Alternatively, use a different browser.

## XEdit


- [Ref. #KX-7463] **Saving layouts:** when you first save a new layout (or rename an existing layout by using **Save as**), XEdit may fail to prevent you from including invalid characters (for example, `* \ / < > | ? " & : )`) in the layout name. However, any further attempts at saving such a layout result in an error message preventing you from saving your changes.  
*Workaround:* Use **Save as**, to save the layout under a new name that does not include offending characters, and then delete the version of the layout with the invalid name.
- [Ref. #KX-4901] **Saving layout changes:** saving a layout may fail, when the zoom factor XEdit uses to display it is higher than 50%.  
*Workaround:* Zoom out (for example, all the way down to 2%) before saving your changes.

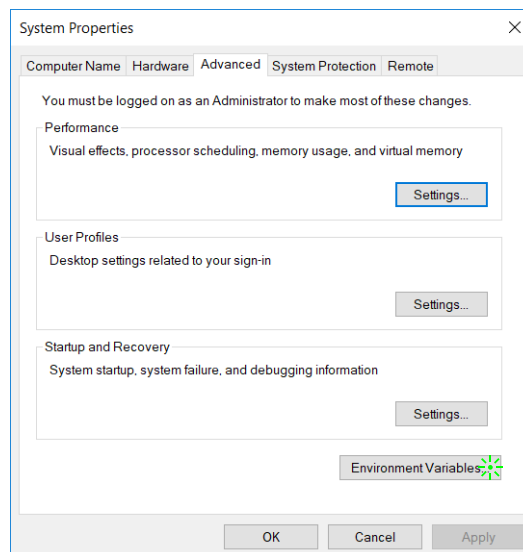
- [Ref. #KX-7447] **Peripheral device alarms:** in XEdit, when you disconnect a device (for example, a router, or a tally interface device) in the **Interconnections** tab, and then switch to the **Channels/Sources** tab, you may notice that alarm status indicators, in the filtered System list associated with the sources table, do not immediately reflect the connection loss.  
*Workaround:* Expand or collapse a node in the System list, or move the scroll bar (if present), to update the alarm status indicators.
- [Ref. #KX-6261] **Global alarms:** in the sources table, the ability to include or exclude a level's contribution to the global alarms is only relevant for alarm levels although the properties are also available for other levels such as text and time code.
- [Ref. #KX-3646] **Incorrect multiviewer model:** on rare occasions, if you use XEdit with different models of multiviewer, you may notice that the model indicated in a system configuration does not match the actual multiviewer anymore, and that the system's logical sources have assignments marked in red.  
*Workaround:* If you have a recent backup of your system configuration, restore this backup to your local workspace, and then export it to the multiviewer. Alternatively, right-click the multiviewer in the System list, click the "replace with..." option that matches your actual multiviewer model, and then make sure to reply **No** when XEdit prompts you to confirm whether you want to restore the database factory defaults.
- [Ref. #KX-4696] **Import NVISION config:** on rare occasions, when configuring physical routers in XEdit's **Router configurations** tab, the **Import NVISION config** button is not available.  
*Workaround:* Disconnect XEdit from the multiviewer, and then connect again.
- [Ref. #KX-6308] **Kaleido-IP:** in the case of a Kaleido-IP system configuration with a very large number of transport streams, connecting to the multiviewer or accessing a local copy of its database with the current version of XEdit may take more than one minute.
- [Ref. #KX-5883] **Kaleido-IP:** after changing the name of a transport stream, related alarm indicators in the System list may turn white (meaning that their status is pending or unknown).  
*Workaround:* Restore the transport stream's original name.
- [Ref. #KX-5936] **Kaleido-IP:** after adding a transport stream to your Kaleido-IP system configuration, it may happen that the transport stream that appears at the bottom of the filtered System list associated with the sources table cannot be expanded.  
*Workaround:* Click a different cell in the sources table, or collapse the filtered System list, and then expand it again.
- [Ref. #KX-5774] **Kaleido-IP source names:** if your sources table includes dynamic assignments from Kaleido-IP transport streams in the **Name** level under **Source info**, using the incremental copy tool to quickly populate the source name column for a range of logical sources results in clearing assignments in this column instead.
- [Ref. #KX-5483] **Kaleido-IP:** in the case of transport streams for which **Activate automatic sources creation** was selected, new logical sources created automatically for these streams may not follow the current template.
- [Ref. #KX-5210] **Kaleido-IP:** in the logical sources table, if you manually remove sources associated with a transport stream for which **Activate automatic sources creation** was selected, these sources are not automatically created again.  
*Workaround:* Right-click the appropriate transport stream element in the filtered System list associated with the sources table, and then click **Create logical sources**.

- [Ref. #KX-5379] **Kaleido-IP:** on rare occasions, when navigating the System list in XEdit, the first time you expand an elementary stream, an audio or video presence alarm may briefly indicate a signal loss before turning green.
- [Ref. #KX-5744] **Source assignments:** when assigning logical sources or monitor wall destinations to monitors in a layout, it may happen that the selection migrates to an adjacent element from the **Channels/Sources** or **Monitor wall destinations** list during the drag-and-drop operation.  
*Workaround:* Once you selected a logical source or monitor wall destination from the corresponding list, dragging the selected element horizontally until the pointer exits the **Tools** pane, or performing a slower drag-and-drop may help.
- [Ref. #KX-4708] **Logical source names:** if your configuration includes logical sources with names based on router source labels that are set locally in XEdit (for example, in the Source/Destination mapping configuration for the corresponding router, you cleared the option **Get labels from physical level**, and either typed the labels manually or imported them from a CSV file), then further changes to these router source labels in the router configuration are not reflected in the sources table (under **Source info**).  
*Workaround:* In the sources table, right-click the name you want to refresh, click **Copy assignment** on the menu, right-click again, and then click **Paste assignment**.
- [Ref. #KX-4505] **Monitor wall destinations:** after switching to the **Layouts** tab in XEdit, the set of destinations listed in the **Monitor wall destinations** pane may momentarily not belong to the current system's KX Router, or fail to reflect the latest changes to this logical router's destinations. This is more noticeable if you work with different systems during the same XEdit session, if you modify your KX Router configuration while managing a specific layout's assignments, or if you want to assign monitor wall destinations to monitors in a *full screen* layout when a room layout has yet to be opened.  
*Workaround:* Open a *room* layout to update the set of destinations listed in the **Monitor wall destinations** pane.
- [Ref. #KX-3797] **TSL (network) devices port number:** xEdit does not prevent adding multiple TSL (network) devices configured to the same multiviewer port number (8901 by default). If you must configure more than one TSL (network) device make sure to specify different port numbers (in the 1023–65,535 range) to avoid conflicts.
- [Ref. #KX-3903] On rare occasions, switching from online to offline mode, or vice versa, while the **System** tab is active may result in most of the panels in XEdit displaying a "Loading..." message indefinitely.  
*Workaround:* Click a tab other than **System**, in the main tab bar (for example, **Rooms**, **Layouts**, etc.), and then:
  - If you just switched to **offline** mode, connect to the multiviewer, and then switch back to offline mode.
  - If you just switched to **online** mode, close the connection to the multiviewer, and then switch back to online mode.Alternatively, close XEdit, and then open it again.
- [Ref. #KX-3336] **Logical Sources:** if you do not click **Save** after deleting a level from the sources table, then adding a new level may cause unwanted data from the deleted level to reappear in the table.  
*Workaround:* After deleting a level from the sources table, click **Save**.

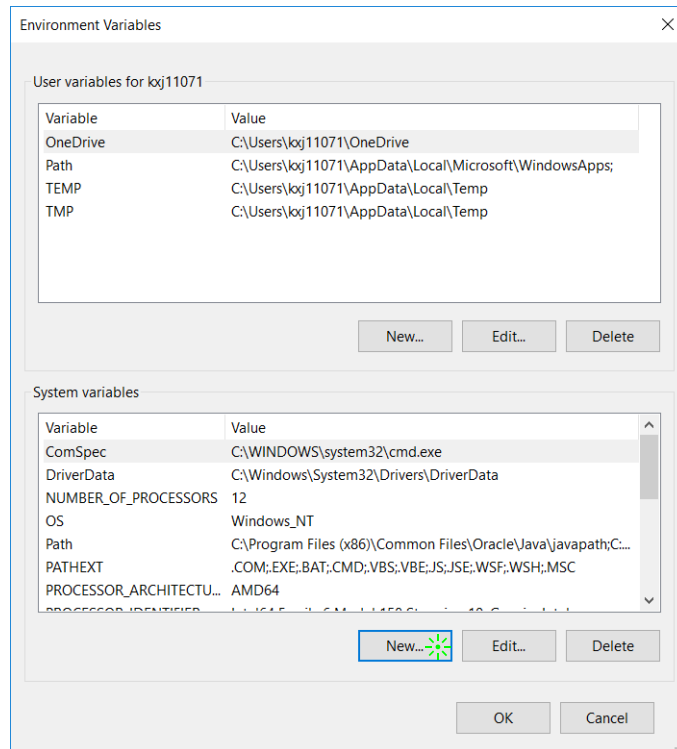
- [Ref. #KX-3124] **Resetting calibrations to factory defaults:** with the current version of the Kaleido Software, the calibration reset feature (see *Restoring Factory Defaults*, in the Kaleido-X User's Manual) is not immediately effective on the multiviewer.  
*Workaround:* Restart the multiviewer, close XEdit, and then open it again, for the calibrations to be applied.
- [Ref. #KX-3000] **Alarm status not updated:** when using XEdit in online mode, having a firewall enabled on your client PC or laptop may prevent alarm status indicators from being dynamically updated in XEdit.  
*Workaround:* Disable the firewall.
- [Ref. #KX-1965] **Concurrent sessions:** if two or more XEdit sessions are open, and connected to the same multiviewer in online mode, changes made under the **System** tab and applied from one XEdit session are not reflected in the others.
- [Ref. #KX-2506] **Cluster composition not automatically updated across concurrent XEdit sessions:** if user A adds a multiviewer to a cluster while user B is connected to a different member of the same cluster, then the addition is not automatically reflected in XEdit for user B.  
*Workaround:* Other concurrent users must close XEdit, and open it again to view the updated cluster composition.
- [Ref. #KX-2903] **Database location:** if the XEdit database is located in a directory whose name contains an IP address, then attempting to export the database will cause a system error, and XEdit will close.  
*Workaround:* Rename the directory without using an IP address.
- [Ref. #KX-2860/T94343] **Offline changes to logical sources (channels) are not reflected on the monitor wall after a database export:** if changes are made (in XEdit) to a logical source currently in use, and if the modified database is then exported to the multiviewer, the changes will not appear on the monitor wall, even if the layout is refreshed.  
*Workaround:* After the database export is completed, create an empty layout (for example, a layout that does not contain any monitors), and load it on the monitor wall. This will cause the logical source cache to be emptied. You can then load the layout with recent logical source changes.
- [Ref. #KX-1348] **Custom resolutions:** custom resolutions created in XEdit must have the same active width and active height as one of the default resolutions, otherwise the new resolution will not be applied. When creating a new resolution, it is recommended to start from an existing resolution (for example, one whose active height and width parameters match your display), and update the timing parameters as needed. You may have to reboot twice after adding an unknown resolution (for example, a resolution whose geometry [width × height] is not already known by the multiviewer).
- [Ref. #KX-1666] In the **Actions** tab, the **Undo** and **Redo** commands are not available.
- [Ref. #KX-1702] The **Set action** menu is not available when you right-click a GPI line element in the System hierarchical list in the **System** tab.  
*Workaround:* (1) Click the **Actions** tab, and expand the GPI/GENLOCK card in the filtered System list that appears in the **Tools** pane. (2) Right-click the GPI In or GPI Out element under the GPI line for which you want to define a background action, point to **Set action**, and then click the appropriate action type on the menu.  
Alternatively, click the **Channels/Sources** tab, and then click anywhere under an alarm heading. You can then expand the GPI/GENLOCK card in the filtered System list, and proceed as described above.



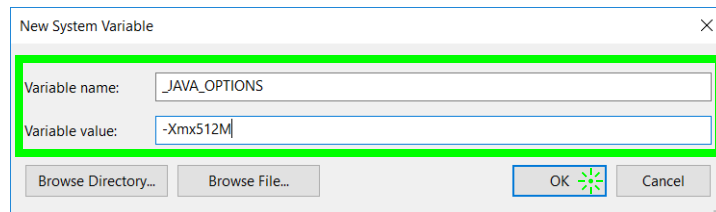
- [Ref. #KX-1376] **Toolbar:** when the XEdit window is resized, the monitor toolbar may disappear.  
*Workaround:* Resize the window again until the toolbar reappears  
().
- [Ref. #KX-1192] In the **Rooms** tab, the **Maximize horizontally** and **Maximize vertically** toolbar buttons are not relevant, and have the unwanted effect of resizing the selected heads.  
*Workaround:* Do not use these buttons when configuring rooms: they are only relevant in the **Layouts** tab.
- [Ref. #KX-1037] **Pointer properties:** online changes made to mouse pointer properties require a refresh of the layout so they can take effect.
- [Ref. #KX-330] **Widget libraries:** monitors from widget libraries may change in appearance (compared to the original) when used in a layout.
- [Ref. #KX-634] **Database export:** exporting a database from XEdit may take up to a minute, during which time there is no user feedback. System Performance may also be slightly degraded.  
*Workaround:* Delete any unused layouts or logical sources prior to exporting a database.
- [Ref. #KX-13959] **Difficulties using XEdit on PCs running Microsoft Windows 10:** Certain Microsoft Windows 10 PCs have issues running XEdit.  
*Workaround:* Add the following entry to each PC's system variables that is running XEdit. Proceed as follows:
  - 1 In the PC's Start menu, open Settings.
  - 2 Search for *variables* and select *Edit the system environment variables*.



- 3 In *System Properties*, click *Environment Variables*.



4 Under *System variables*, click *New*.



5 Set the *Variable name* parameter to `_JAVA_OPTIONS`

6 Set the *Variable value* parameter to `-Xmx512M`

7 Click OK. Click OK. Click OK.

8 Reboot the PC.

## Documentation

You can download the latest product documentation. See the *Kaleido Multiviewers Documentation Resource Guide* for more information.

## Multiviewer Specifications

Refer to the multiviewer's *Installation & Service Manual* for the multiviewer's specifications and its list of supported input and output formats.

# System Requirements



This section details the requirements that must be met prior to installing or upgrading the Kaleido Software. See the multiviewer’s Installation & Service Manual for information about how to upgrade (or downgrade) a multiviewer system.

## Kaleido-IP migration to Kaleido Software Version 11.0.0 or Higher

Kaleido Software version 11.0.0 or higher is available for the Kaleido-IP multiviewer series only.

When a Kaleido-IP multiviewer is currently using Kaleido Software version 10.xx or lower, and you want to upgrade it to a Kaleido Software version 11.0.0 or higher, a special migration procedure must be followed. Refer to the *Migration to Version 11 or Higher Upgrade Guide* for more information about how to do this.

To downgrade the multiviewer to:

- Kaleido Software version 10.xx or lower, refer to the *Migration to Version 11 or Higher Upgrade Guide* for more information about how to do this.
- Kaleido Software version 11.x.x, you have to re-image the multiviewer’s hard disk. For this, contact Technical Support. See [Grass Valley Technical Support](#), on page 38.

## System Requirements

### Component Compatibility

Kaleido Software version 12.0.1 is compatible with the products listed below. For some products, a minimum version and a recommended version may be indicated. For a specific multiviewer model, the minimum version indicated for a product is typically what was the latest version of the product at the time this multiviewer model was introduced. This version of the product was tested and found to be compatible with the first version of the Kaleido Software that supported the multiviewer model. It may not have been tested against every subsequent release of the Kaleido Software or other products. The recommended version of a product has been tested and found to comply with the current version of the Kaleido Software.

#### Grass Valley system component compatibility

Product	Kaleido-IP
XUpdate (Kaleido Upgrade Manager application)	Minimum: 8.00 or higher
RCP-200 remote control panel	Minimum: 2.00 or higher.
Kaleido-RCP2 control panel	Recommended: 165 or higher Minimum: 160

**Grass Valley system component compatibility (continued)**

Product	Kaleido-IP
ABT Audio Bridge Terminal (CPU firmware version)	Minimum: 1.0.9 or higher
ABT Audio Bridge Terminal (FPGA firmware version)	Minimum: 1.0.3 or higher
KXI-DVI-Bridge firmware	Minimum: 8.3.1 or higher
NV9000 router control system	Recommended: 6.4.0 or higher Minimum: 6.0.0
EdgeVision	Recommended: 1.46 or higher Minimum: 1.05
CPU-ETH2	N/A
CPU-ETH3	N/A
CPU-ETH3-REF <sup>a</sup>	N/A
Densité REF-1801	N/A
Densité GPI-1501	Recommended firmware: 1.0.0 (upgrade package 1.0.0-RC-1) or higher
Densité VDA-1002	N/A
IPG-3901	N/A
iControl	Recommended: 6.00 or higher Minimum: 4.14
iControl Web	iControl Web is not compatible with Kaleido-X version 8.20 and later. Refer to the iControl Release Notes for updates.

a. Frame reference module included with CPU-ETH3.

**IMPORTANT**

Keeping your Grass Valley software products up to date ensures optimal interoperability between all system components.





## **Grass Valley Technical Support**

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1-530-478-4148.

To obtain a local phone number for the support center nearest you, consult the Contact Us section of Grass Valley's website ([www.grassvalley.com](http://www.grassvalley.com)).

An online form for e-mail contact is also available from the website.

## **Corporate Head Office**

Grass Valley  
3499 Douglas-B.-Floreani  
St-Laurent, Quebec H4S 2C6  
Canada  
Telephone: +1 514 333 1772  
Fax: +1 514 333 9828  
[www.grassvalley.com](http://www.grassvalley.com)