

Kaleido-IP X310 Kaleido-IP X110

High quality IP video multiviewers

Quick Start Guide

M926-9405-104

17 December 2014



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Title Kaleido-IP X310/X110 Quick Start Guide

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Important Safeguards and Notices

This section provides important safety guidelines for operators and service personnel. Specific warnings and cautions appear throughout the manual where they apply. Please read and follow this important information, especially those instructions related to the risk of electric shock or injury to persons.

Symbols and Their Meanings



Indicates that dangerous high voltage is present within the equipment enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



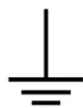
Indicates that the user, operator or service technician should refer to the product manuals for important operating, maintenance, or service instructions.



This is a prompt to note the fuse rating when replacing fuses. The fuse referenced in the text must be replaced with one having the ratings indicated.



Identifies a protective grounding terminal which must be connected to earth ground prior to making any other equipment connections.



Identifies an external protective grounding terminal which may be connected to earth ground as a supplement to an internal grounding terminal.



Indicates that static sensitive components are present, which may be damaged by electrostatic discharge. Use anti-static procedures, equipment and surfaces during servicing.



Indicates that the equipment has more than one power supply cord, and that all power supply cords must be disconnected before servicing to avoid electric shock.



The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Canadian Standard Association (CSA) regulations and recommendations for USA/Canada.



The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Underwriters Laboratory (UL) regulations and recommendations for USA/Canada.



The presence of this symbol in or on Grass Valley equipment means that it has been tested and certified as complying with applicable Intertek Testing Services regulations and recommendations for USA/Canada.



The presence of this symbol in or on Grass Valley product means that it complies with all applicable European Union (CE) directives.



The presence of this symbol in or on Grass Valley product means that it complies with safety of laser product applicable standards.

Warnings



A warning indicates a possible hazard to personnel, which may cause injury or death. Observe the following general warnings when using or working on this equipment:

- Appropriately listed/certified mains supply power cords must be used for the connection of the equipment to the mains voltage at either 120 V AC or 240 V AC.
- This product relies on the building's installation for short-circuit (over-current) protection. Ensure that a fuse or circuit breaker for 120 V AC or 240 V AC is used on the phase conductors.
- Any instructions in this manual that require opening the equipment cover or enclosure are for use by qualified service personnel only.
- Do not operate the equipment in wet or damp conditions.
- This equipment is grounded through the grounding conductor of the power cords. To avoid electrical shock, plug the power cords into a properly wired receptacle before connecting the equipment inputs or outputs.
- Route power cords and other cables so they are not likely to be damaged. Properly support heavy cable bundles to avoid connector damage.
- Disconnect power before cleaning the equipment. Do not use liquid or aerosol cleaners; use only a damp cloth.
- Dangerous voltages may exist at several points in this equipment. To avoid injury, do not touch exposed connections and components while power is on.
- High leakage current may be present. Earth connection of product is essential before connecting power.
- Prior to servicing, remove jewelry such as rings, watches, and other metallic objects.
- To avoid fire hazard, use only the fuse type and rating specified in the service instructions for this product, or on the equipment.
- To avoid explosion, do not operate this equipment in an explosive atmosphere.
- Use proper lift points. Do not use door latches to lift or move equipment.
- Avoid mechanical hazards. Allow all rotating devices to come to a stop before servicing.
- Have qualified service personnel perform safety checks after any service.

Cautions



A caution indicates a possible hazard to equipment that could result in equipment damage. Observe the following cautions when operating or working on this equipment:

- This equipment is meant to be installed in a restricted access location.

- When installing this equipment, do not attach the power cord to building surfaces.
- Products that have no on/off switch, and use an external power supply must be installed in proximity to a main power outlet that is easily accessible.
- Use the correct voltage setting. If this product lacks auto-ranging power supplies, before applying power ensure that each power supply is set to match the power source.
- Provide proper ventilation. To prevent product overheating, provide equipment ventilation in accordance with the installation instructions.
- Do not operate with suspected equipment failure. If you suspect product damage or equipment failure, have the equipment inspected by qualified service personnel.
- To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel. Servicing should be done in a static-free environment.
- This unit may have more than one power supply cord. Disconnect all power supply cords before servicing to avoid electric shock.
- Follow static precautions at all times when handling this equipment.

Electrostatic Discharge (ESD) Protection



Electrostatic discharge occurs when electronic components are improperly handled and can result in intermittent failure or complete damage adversely affecting an electrical circuit. When you remove and replace any card from a frame always follow ESD-prevention procedures:

- Ensure that the frame is electrically connected to earth ground through the power cord or any other means if available.
- Wear an ESD wrist strap ensuring that it makes good skin contact. Connect the grounding clip to an *unpainted surface* of the chassis frame to safely ground unwanted ESD voltages. If no wrist strap is available, ground yourself by touching the *unpainted* metal part of the chassis.
- For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohms.
- When temporarily storing a card make sure it is placed in an ESD bag.
- Cards in an earth grounded metal frame or casing do not require any special ESD protection.

Battery Handling



This product includes a backup battery. There is a danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Before disposing of your Grass Valley equipment, please review the *Disposal and Recycling Information* appendix.

Mesures de sécurité et avis importants

La présente section fournit des consignes de sécurité importantes pour les opérateurs et le personnel de service. Des avertissements ou mises en garde spécifiques figurent dans le manuel, dans les sections où ils s'appliquent. Prenez le temps de bien lire les consignes et assurez-vous de les respecter, en particulier celles qui sont destinées à prévenir les décharges électriques ou les blessures.

Signification des symboles utilisés



Signale la présence d'une tension élevée et dangereuse dans le boîtier de l'équipement ; cette tension peut être suffisante pour constituer un risque de décharge électrique.



Avertit l'utilisateur, l'opérateur ou le technicien de maintenance que des instructions importantes relatives à l'utilisation et à l'entretien se trouvent dans la documentation accompagnant l'équipement.



Invite l'utilisateur, l'opérateur ou le technicien de maintenance à prendre note du calibre du fusible lors du remplacement de ce dernier. Le fusible auquel il est fait référence dans le texte doit être remplacé par un fusible du même calibre.



Identifie une borne de mise à la terre de protection. Il faut relier cette borne à la terre avant d'effectuer toute autre connexion à l'équipement.



Identifie une borne de mise à la terre externe qui peut être connectée en tant que borne de mise à la terre supplémentaire.



Signale la présence de composants sensibles à l'électricité statique et qui sont susceptibles d'être endommagés par une décharge électrostatique. Utilisez des procédures, des équipements et des surfaces antistatiques durant les interventions d'entretien.



Le symbole ci-contre signifie que l'appareil comporte plus d'un cordon d'alimentation et qu'il faut débrancher tous les cordons d'alimentation avant toute opération d'entretien, afin de prévenir les chocs électriques.



La marque C-CSA-US certifie que l'appareil visé a été testé par l'Association canadienne de normalisation (CSA) et reconnu conforme aux exigences applicables en matière de sécurité électrique en vigueur au Canada et aux États-Unis.



La marque C-UL-US certifie que l'appareil visé a été testé par Underwriters Laboratory (UL) et reconnu conforme aux exigences applicables en matière de sécurité électrique en vigueur au Canada et aux États-Unis.



La marque ETL Listed d'Intertek pour le marché Nord-Américain certifie que l'appareil visé a été testé par Intertek et reconnu conforme aux exigences applicables en matière de sécurité électrique en vigueur au Canada et aux États-Unis.



Le marquage CE indique que l'appareil visé est conforme aux exigences essentielles des directives applicables de l'Union européenne en matière de sécurité électrique, de compatibilité électromagnétique et de conformité environnementale.



Le symbole ci-contre sur un appareil Grass Valley ou à l'intérieur de l'appareil indique qu'il est conforme aux normes applicables en matière de sécurité laser.

Avertissements



Les avertissements signalent des conditions ou des pratiques susceptibles d'occasionner des blessures graves, voire fatales. Veuillez vous familiariser avec les avertissements d'ordre général ci-dessous :

- Un cordon d'alimentation dûment homologué doit être utilisé pour connecter l'appareil à une tension de secteur de 120 V CA ou 240 V CA.
- La protection de ce produit contre les courts-circuits (surintensités) dépend de l'installation électrique du bâtiment. Assurez-vous qu'un fusible ou un disjoncteur pour 120 V CA ou 240 V CA est utilisé sur les conducteurs de phase.
- Dans le présent manuel, toutes les instructions qui nécessitent d'ouvrir le couvercle de l'équipement sont destinées exclusivement au personnel technique qualifié.
- N'utilisez pas cet appareil dans un environnement humide.
- Cet équipement est mis à la terre par le conducteur de mise à la terre des cordons d'alimentation. Pour éviter les chocs électriques, branchez les cordons d'alimentation sur une prise correctement câblée avant de brancher les entrées et sorties de l'équipement.
- Acheminez les cordons d'alimentation et autres câbles de façon à ce qu'ils ne risquent pas d'être endommagés. Supportez correctement les enroulements de câbles afin de ne pas endommager les connecteurs.
- Coupez l'alimentation avant de nettoyer l'équipement. Ne pas utiliser de nettoyeurs liquides ou en aérosol. Utilisez uniquement un chiffon humide.
- Des tensions dangereuses peuvent exister en plusieurs points dans cet équipement. Pour éviter toute blessure, ne touchez pas aux connexions ou aux composants exposés lorsque l'appareil est sous tension.
- Avant de procéder à toute opération d'entretien ou de dépannage, enlevez tous vos bijoux (notamment vos bagues, votre montre et autres objets métalliques).
- Pour éviter tout risque d'incendie, utilisez uniquement les fusibles du type et du calibre indiqués sur l'équipement ou dans la documentation qui l'accompagne.
- Ne pas utiliser cet appareil dans une atmosphère explosive.
- Présence possible de courants de fuite. Un raccordement à la masse est indispensable avant la mise sous tension.

- Après tout travail d'entretien ou de réparation, faites effectuer des contrôles de sécurité par le personnel technique qualifié.

Mises en garde



Les mises en garde signalent des conditions ou des pratiques susceptibles d'endommager l'équipement. Veuillez vous familiariser avec les mises en garde ci-dessous :

- L'appareil est conçu pour être installé dans un endroit à accès restreint.
- Au moment d'installer l'équipement, ne fixez pas les cordons d'alimentation aux surfaces intérieures de l'édifice.
- Les produits qui n'ont pas d'interrupteur marche-arrêt et qui disposent d'une source d'alimentation externe doivent être installés à proximité d'une prise de courant facile d'accès.
- Si l'équipement n'est pas pourvu d'un module d'alimentation auto-adaptable, vérifiez la configuration de chacun des modules d'alimentation avant de les mettre sous tension.
- Assurez une ventilation adéquate. Pour éviter toute surchauffe du produit, assurez une ventilation de l'équipement conformément aux instructions d'installation.
- N'utilisez pas l'équipement si vous suspectez un dysfonctionnement du produit. Faites-le inspecter par un technicien qualifié.
- Pour réduire le risque de choc électrique, n'effectuez pas de réparations autres que celles qui sont décrites dans le présent manuel, sauf si vous êtes qualifié pour le faire. Confiez les réparations à un technicien qualifié. La maintenance doit se réaliser dans un milieu libre d'électricité statique.
- L'appareil peut comporter plus d'un cordon d'alimentation. Afin de prévenir les chocs électriques, débranchez tous les cordons d'alimentation avant toute opération d'entretien.
- Veillez à toujours prendre les mesures de protection antistatique appropriées quand vous manipulez l'équipement.

Protection contre les décharges électrostatiques (DES)



Une décharge électrostatique peut se produire lorsque des composants électroniques ne sont pas manipulés de manière adéquate, ce qui peut entraîner des défaillances intermittentes ou endommager irrémédiablement un circuit électrique. Au moment de remplacer une carte dans un châssis, prenez toujours les mesures de protection antistatique appropriées :

- Assurez-vous que le châssis est relié électriquement à la terre par le cordon d'alimentation ou tout autre moyen disponible.
- Portez un bracelet antistatique et assurez-vous qu'il est bien en contact avec la peau. Connectez la pince de masse à une *surface non peinte* du châssis pour détourner à la terre toute tension électrostatique indésirable. En l'absence de bracelet antistatique, déchargez l'électricité statique de votre corps en touchant une surface métallique *non peinte* du châssis.

- Pour plus de sécurité, vérifiez périodiquement la valeur de résistance du bracelet antistatique. Elle doit se situer entre 1 et 10 mégohms.
- Si vous devez mettre une carte de côté, assurez-vous de la ranger dans un sac protecteur antistatique.
- Les cartes qui sont reliées à un châssis ou boîtier métallique mis à la terre ne nécessitent pas de protection antistatique spéciale.

Remplacement et élimination des piles



L'appareil renferme une pile. Pour réduire le risque d'explosion, vérifiez la polarité et ne remplacez la pile que par une pile du même type, recommandée par le fabricant. Mettez les piles usagées au rebut conformément aux directives du fabricant. Avant de vous défaire de l'équipement, assurez-vous d'avoir lu l'appendice *Disposal and Recycling Information*.

Recycling

Visit www.grassvalley.com for recycling information.

Certification and Compliance

Safety Compliance



c

This equipment complies with the requirements of CSA/UL/IEC/EN 60950-1, 2nd Ed. + AM1, Safety of information technology equipment.

us The power cords supplied with this equipment meet the appropriate national standards for the country of destination.

Electromagnetic Compatibility



This equipment has been tested for verification of compliance with FCC Part 15, Subpart B requirements for class A digital devices.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



This equipment has been tested and found to comply with the requirements of the EMC directive 2004/108/EC — Electromagnetic Compatibility:

- EN 55022 Class A Radiated and conducted emissions

- EN 55024 Class A Immunity
- EN 61000-3-2 Limits for harmonic current emissions
- EN 61000-3-3 Limitation of voltage fluctuations and flicker

This equipment has also been tested and found to comply with the requirements of the EMC directive 2006/95/EC — Low Voltage:

- EN 60950-1, 2nd edition
- IEC 60950-1, 2nd edition
- UL/CSA 60950-1, 2nd edition
- GOST R 50377-92 Certification (Russia)
- GS Certification (Germany)

toc

Table of Contents

1 Introduction	1
Overview.....	1
Required Materials	2
System Requirements for a Client PC.....	3
2 Setting Up the Kaleido-IP	5
Step 1: Physical Setup	5
Setting up the Kaleido-IP Hardware	5
Cabling Diagram	7
Changing the Output Resolution.....	7
Step 2: Networking Setup.....	8
Finding the Management IP Address and Application Version	13
Configuring a Client PC.....	14
Step 3: XEdit Installation	16
Step 4: System Setup	19
Opening XEdit in Online Mode.....	20
Configuring Transport Streams	20
Defining Logical Sources	25
Step 5: Testing the Monitor Wall Operation.....	26
Using the Kaleido-RCP2 with Default Settings	26
Loading a Layout.....	28
3 Specifications	29
Appendix: Disposal and Recycling Information.....	33
Contact Us	35

1 Introduction

Welcome to the Kaleido family of multiviewers! This chapter provides information about system requirements, and items shipped with your Kaleido-IP unit.

Overview

This Quick Start Guide is designed to help you get your Kaleido-IP X310, or Kaleido-IP X110 multiviewer up and running for the first time.

Grass Valley's Kaleido family of multiviewers ranges from quad-splits to large-scale, multi-room monitoring systems, with outstanding image quality and signal flexibility. The Kaleido multiviewers are available in different models: the Kaleido-MX, the Kaleido-IP, the Kaleido-X (7RU), the Kaleido-X (4RU), the Kaleido-X16, and the Kaleido-XQUAD frames, as well as the Kaleido-Modular-X cards, and the Kaleido-Modular KMV-3901/3911 cards.

The Kaleido-IP can monitor and display HD and SD television programs distributed over IP, across two HDTV displays. It supports MPEG-2 and H.264/AVC compressed video, and the AAC, AC-3, DD+, MPEG-1, MPEG-2, MPEG-4 AAC LC, and MPEG-4 HE-AAC compressed audio formats, within unencrypted DCII, DVB, or ATSC streams. The **Kaleido-IP X310** supports concurrent decoding of up to 64 MPEG-2 or up to 32 H.264 HD video programs. In the case of SD signals, they support concurrent decoding of up to 128 MPEG-2 or up to 64 H.264 programs. The **Kaleido-IP X110** supports concurrent decoding of up to 16 MPEG-2 or up to 12 H.264 HD programs, and up to 48 MPEG-2 or up to 24 H.264 SD programs. The **Kaleido-IP X300** supports concurrent decoding of up to 24 MPEG-2 or up to 16 H.264 HD programs, and up to 64 MPEG-2 or up to 32 H.264 SD programs. The **Kaleido-IP X100** supports concurrent decoding of up to 8 MPEG-2 or up to 6 H.264 HD programs, and up to 24 MPEG-2 or up to 12 H.264 SD programs.

At the heart of every multiviewer system is the **Kaleido-X software**, which includes the following client applications:

- **XAdmin** is a Web client that your system administrator will use to manage the multiviewer system.
- **XEdit** is a client application used to create layouts for the monitor wall, and to configure the multiviewer, from your PC or laptop.
- The **Router Control** Software Single Bus and Matrix View applications (also part of the iRouter Router Control Software packaged with iControl Application Servers) can be used to control your multiviewer's logical sources and monitor wall destinations, via the *KX Router* logical router, or to control other logical routers configured within your multiviewer system.

A Kaleido-IP multiviewer system in its default configuration includes a predefined room and some layouts. Once you have connected your Kaleido-IP to your local management and data networks, hooked up one or two 1920 × 1080 @ 60 Hz (HDTV) displays, and specified transport stream information, you can start using these layouts to monitor

television signals distributed over IP. Consult the *Kaleido-X User's Manual* (on the DVD that shipped with your system) for instructions on how to define more rooms and layouts to suit your specific requirements.

Required Materials

Your Kaleido-IP system package includes the following

- Kaleido-IP unit
- Installation hardware and rails, including manufacturer's documentation for the rails
- Two 25.4 cm (10 in.) DisplayPort-to-HDMI adapter cables
- Two power cords
- DVD including the Kaleido-X User's Manual, database samples, Quick Start guides and hardware reference manuals for all multiviewer models
- The Kaleido-IP X310/X110 Quick Start Guide (this document)

Note: In line with our commitment to environmental preservation, only the Quick Start Guide for your multiviewer model, and some ancillary documents (e.g. welcome letters, warranty cards) are distributed in printed form. All manuals and the Release Notes are available on the DVD that shipped with your multiviewer. Refer to the *Documentation* section of the Release Notes for a complete list. You can obtain the latest version of the manuals, the Release Notes, as well as software and useful data, from the *Software and documentation* section of Grass Valley's support portal.

In addition to the above, you will need the following (not supplied)

- One or two displays for every Kaleido-IP unit
- Keyboard, mouse for basic Kaleido-IP configuration
- One dedicated 1000Base-T (or 100Base-T) Ethernet switch with enough ports for your Kaleido-IP units, client PCs, and Kaleido-RCP2 devices
- Up to three more dedicated 1000Base-T (or 100Base-T) Ethernet switch for your Kaleido-IP units to connect to high-bitrate data streams (up to five more for a Kaleido-IP X310 with six network adapters)
- Client PC (see below for system requirements)
- Cables (to connect your multiviewers to displays, and to the networks):

Cable type	Purpose
CAT-5	For Ethernet connectivity (management network, data/video networks)
Display cables	Extension modules—for example Grass Valley's DXF-200 (part number DXF-200-C)—or standard DVI, HDMI, or DisplayPort cables. DisplayPort-to-DVI adapters, if needed.

System Requirements for a Client PC

A client PC or laptop meeting the following requirements is required to access the XAdmin Web client, and the other Kaleido-X client applications.

Operating system	Windows XP Professional, Windows 7, Windows 8, or Windows 8.1
Processor	Core 2 Duo at 2 GHz, or better
Memory	At least 2 GB of RAM
Disk space	At least 2 GB free

Note: The Kaleido-IP X310 and X110 multiviewers cannot be downgraded to a Kaleido-X software version earlier than 7.30. To recover from an unwanted downgrade, use XAdmin's Upgrade page to upgrade your multiviewer back to Kaleido-X version 7.30 or later.

Setting Up the Kaleido-IP



This chapter will guide you through the installation of a Kaleido-IP X310, or Kaleido-IP X110 multiviewer in its default configuration.

Summary

<i>Step 1: Physical Setup</i>	5
<i>Step 2: Networking Setup</i>	8
<i>Step 3: XEdit Installation</i>	16
<i>Step 4: System Setup</i>	19
<i>Step 5: Testing the Monitor Wall Operation</i>	26

Step 1: Physical Setup

Setting up the Kaleido-IP Hardware

To set up the Kaleido-IP hardware

- 1 Referring to the manufacturer's documentation shipped with your Kaleido-IP unit, mount the unit in a standard 19-inch rack. Make sure that the unit has adequate ventilation.
- 2 Connect your Kaleido-IP's gigabit Ethernet port LAN1 to the dedicated 1000Base-T (or 100Base-T) Ethernet switch associated with your *management* network, and connect LAN2 to the switch associated a *data* network (see [Cabling Diagram](#), on page 7).
You will use the first port (gigabit LAN1) to manage your system (e.g. by using XEdit, and XAdmin), and direct all high-bitrate data (e.g. MPEG2 streams) to the other ports (gigabit LAN2–LAN4, or, in the case of a Kaleido-IP X310 with two optional network adapters, LAN2–LAN6).
- 3 Connect the other Ethernet ports you require (if any) to the appropriate data networks.

Note: To disconnect a network cable at the optional LAN5 or LAN6 data ports, you may need to use an object (e.g., the blade of a flat screwdriver) to reach the cable's locking mechanism.

- 4 Connect a client PC, and the Kaleido-RCP2 (if available) to the switch on LAN1. You can also connect a mouse and a keyboard to your Kaleido-RCP2.

Notes

- The Kaleido-RCP2 is an optional device, and may not have been shipped with your Kaleido-IP system. For information on this and other options for your multiviewer system, please contact your Grass Valley sales representative.
 - You may need to upgrade your Kaleido-RCP2 devices (if available) to the latest firmware. The update file can be found on the DVD that shipped with your multiviewer, and on Grass Valley's support portal. Please refer to the *Kaleido-RCP2 Guide to Installation and Operation* (available on the DVD, and from the portal), for instructions on how to determine the firmware level, and how to perform the upgrade.
-

- 5 Connect one of the DisplayPort output of the multiviewer to a display that supports a resolution of 1920 × 1080 @ 60 Hz (HDTV) (see [Cabling Diagram](#), on page 7).

Notes

- Depending on your display type, you may use the DisplayPort-to-HDMI that shipped with your system, or DisplayPort-to-DVI adapters (not included).
 - Although the Kaleido-IP unit has one DVI and two DisplayPort outputs, only the two DisplayPort outputs are used.
 - To disconnect a display cable at the DisplayPort outputs, you may need to use an object (e.g., the blade of a flat screwdriver) to reach the cable's locking mechanism.
 - If your displays are not collocated with your Kaleido-IP unit, you may choose to employ DXF-200 transmitter/receiver devices that allow you to install a display up to 1,000 meters (3,300 feet) from the signal source. In this case, use a proper DisplayPort-to-HDMI cable between the Kaleido-IP and the DXF-200-TX module. Stringing DisplayPort-to-DVI and DVI-to-HDMI adapters together between the multiviewer and the DXF-200 is not a supported configuration.
For more information on the DXF-200, refer to the *DXF-200 DVI/HDMI Optical Extension System User's Manual* (part no. M916-9900-104).
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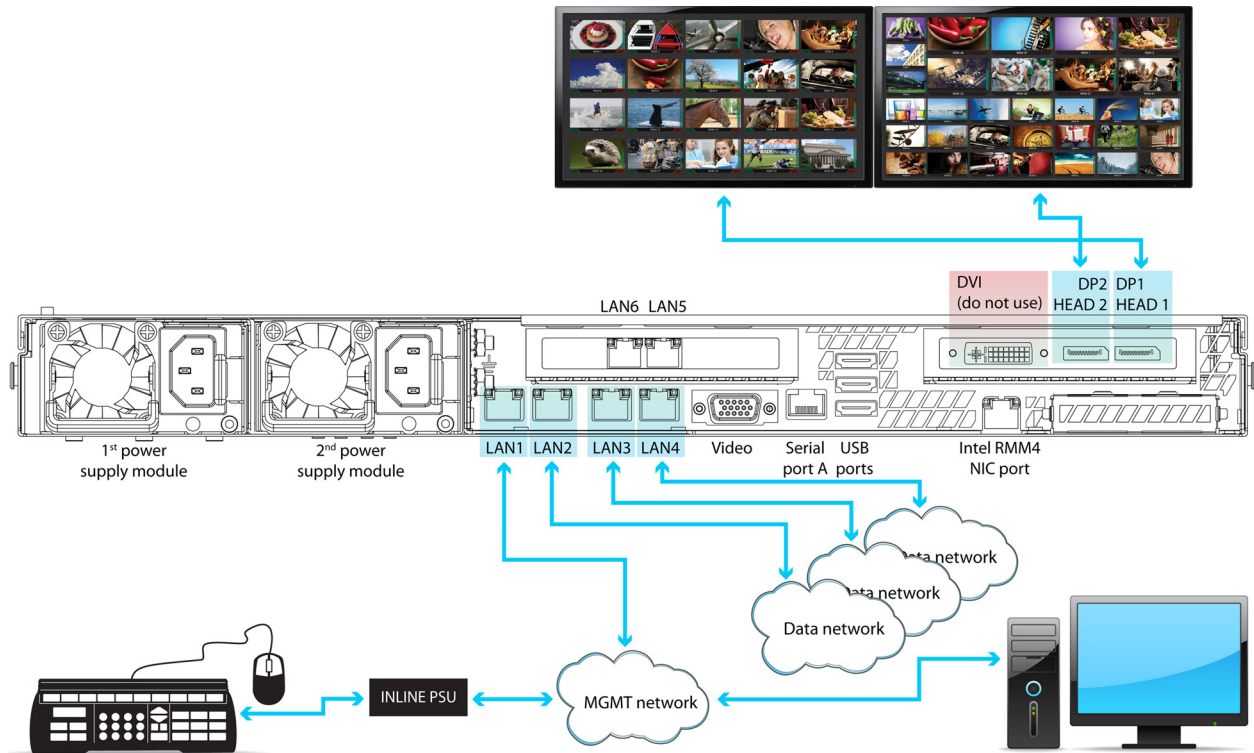
- 6 Connect the power cords, and then turn the power on. The power switch is located on the front panel.¹

IMPORTANT

Should you wish to add or replace a display or AV receiver at a later time, make sure the multiviewer is powered off, before making these changes. In the advent that you have connected such a device while the multiviewer was running, you must restart the multiviewer for audio monitoring to be functional. Refer to *Restarting and Shutting Down a Kaleido-IP Multiviewer*, in the Kaleido-X User's Manual.

- If you wish to use a different display resolution, see [Changing the Output Resolution](#), on page 7, for detailed instructions.

Cabling Diagram

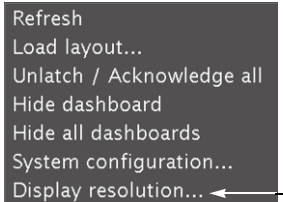


Cabling diagram for a Kaleido-IP X310 with two additional DATA ports (LAN5-LAN6, not connected). The Kaleido-IP X110 rear panel is identical, except for LAN5 and LAN6, which are not available for this model.

Changing the Output Resolution

To change a display's resolution from the monitor wall

- Connect a mouse to one of the USB connectors of the Kaleido-IP.
- Right-click anywhere on the monitor wall, point to **Monitor Wall** (if you clicked a monitor), and then click **Display resolution**.



The **Display Resolution** window appears.

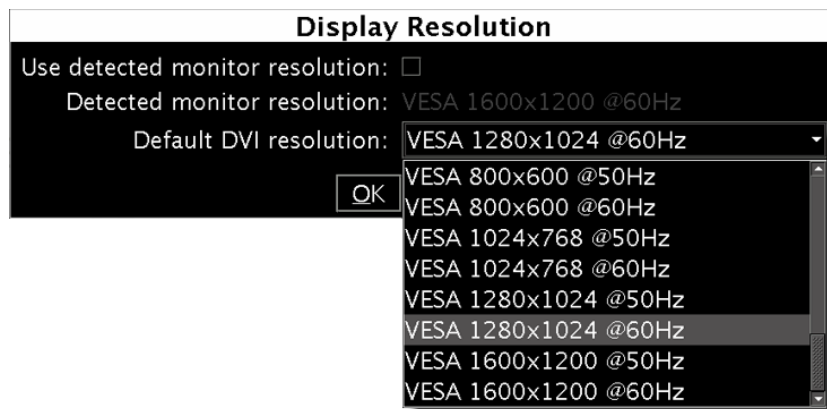
1. The Kaleido-X software does not support activating a soft shutdown from the Kaleido-IP frame's power button.



- 3 Clear the **Use detected monitor resolution** check box.

Note: 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 yet support automatic resolution detection.

- 4 Select the desired resolution from the **Default DVI resolution** list.



- 5 Click **OK**.
The output resolution is adjusted accordingly.

Step 2: Networking Setup

The Kaleido-IP multiviewer must be configured with at least two IP addresses—one for the management network (MGMT), and one for a data network (DATA)—, corresponding network mask and gateway settings, and a system name. The Kaleido-IP X310 model may require up to six IP addresses. In XAdmin and XEdit, a Kaleido-IP X100 or Kaleido-IP X300 with *two* network adapters is identified as **Kaleido-IP-2**. A Kaleido-IP X110, Kaleido-IP X310, or Kaleido-IP X300 with *four* network adapters is identified as **Kaleido-IP-4**, and a Kaleido-IP X310, or Kaleido-IP X300 with *six* network adapters is identified as **Kaleido-IP-6**.

A client PC must be configured, within the *management* network, to communicate with the multiviewer (see [Configuring a Client PC](#), on page 14). You must also configure any Kaleido-RCP2 units you may have ordered.

The Kaleido-IP is shipped with the following default settings.

Kaleido-IP default IP settings

	Kaleido-IP-6	Kaleido-IP-4	Kaleido-IP-2
Management IP address (LAN1)	10.0.3.70	10.0.3.70	10.0.3.70
Network mask	255.255.0.0	255.255.0.0	255.255.0.0
Default gateway	10.0.0.1	10.0.0.1	10.0.0.1
Link mode	Auto-negotiate	Auto-negotiate	Auto-negotiate
Data port 1 IP address (LAN2)	172.30.3.70	172.30.3.70	172.30.3.70
Network mask	255.255.0.0	255.255.0.0	255.255.0.0
Link mode	Auto-negotiate	Auto-negotiate	Auto-negotiate
Data port 2 IP address (LAN3)	172.30.3.71	172.30.3.71	—
Network mask	255.255.0.0	255.255.0.0	
Link mode	Auto-negotiate	Auto-negotiate	
Data port 3 IP address (LAN4)	172.30.3.72	172.30.3.72	—
Network mask	255.255.0.0	255.255.0.0	
Link mode	Auto-negotiate	Auto-negotiate	
Data port 4 IP address (LAN5)	172.30.3.73	—	—
Network mask	255.255.0.0		
Link mode	Auto-negotiate		
Data port 5 IP address (LAN6)	172.30.3.74	—	—
Network mask	255.255.0.0		
Link mode	Auto-negotiate		

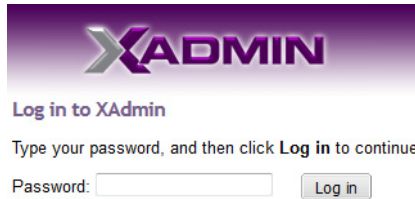
Note: If the management IP address of your Kaleido-IP has been changed (i.e. it no longer corresponds to the as-shipped configuration), it is still possible to determine the current *management* IP address setting. See [Finding the Management IP Address and Application Version](#) on page 13.

To change the Kaleido-IP's management and data IP addresses

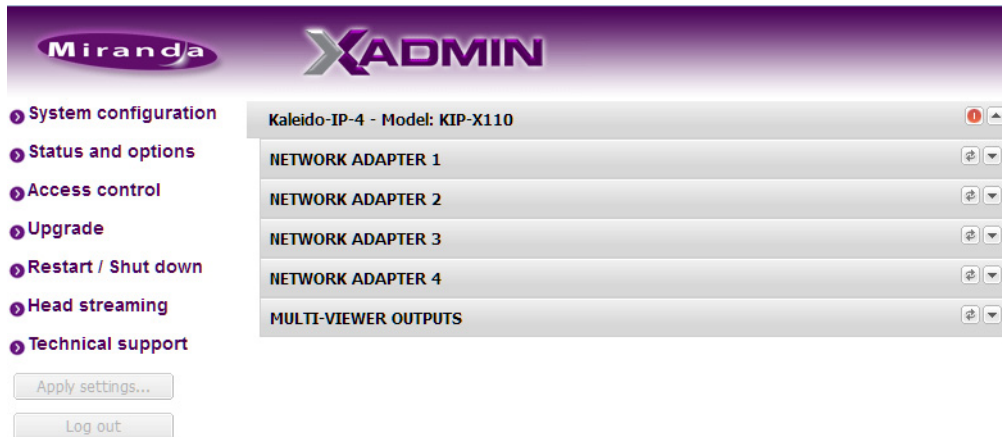
- 1 Configure your client PC or laptop with an IP address in the same range as the current *management* IP address of the multiviewer (see [Configuring a Client PC](#), on page 14).
- 2 Open a Web browser window and type your multiviewer's management IP address in the address bar.
- 3 The multiviewer's home page appears.



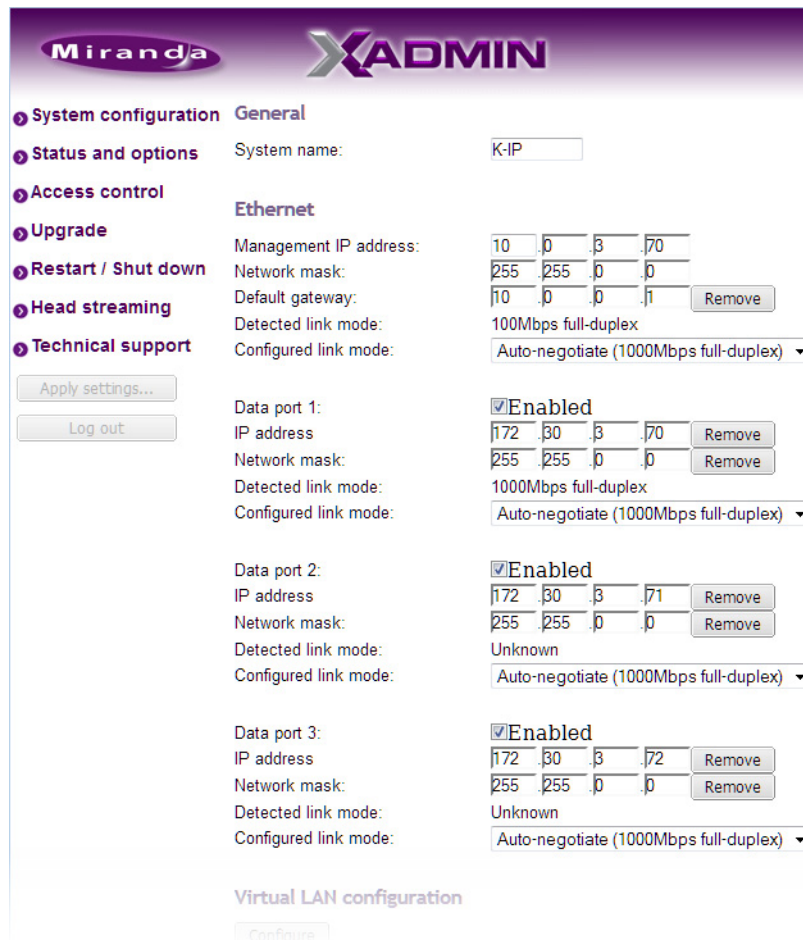
- 4 Click the XAdmin button.
- 5 If you see a security warning, or a certificate error message, then refer to *Registering your Multiviewer's Security Credentials with your Browser*, in the Kaleido-X User's Manual.
- 6 If the "Log in to XAdmin" page appears, type the password, and then click **Log in**.



- 7 **Internet Explorer users:** If a blank page appears, then refer to *Enabling the Compatibility View in Internet Explorer 10*, in the Kaleido-X User's Manual. The XAdmin Status and Options page appears.



- 8 Click **System configuration**, in the navigation area on the left of the page. The System Configuration page appears, showing the current system name, management and data IP addresses, network masks, default gateway, connection-speed and duplex-mode settings, as well as the date and time settings.



- 9 Under **General**, type a different name for your system if you wish.

If there are more than one multiviewer in the same network environment, it is important to assign each a unique system name, so that you can tell them apart (for example, when using a remote control panel such as the Kaleido-RCP2 or RCP-200).

Note: In the case of a Kaleido-IP multiviewer, the system name must comply with RFC 1123, because it is also used as the device's host name. Up to 8 characters are allowed, limited to A-Z, a-z, 0-9, and the hyphen. The system name cannot start or end with an hyphen.

- 10 Under **Ethernet**, type the appropriate IP addresses, network masks, and gateway settings, and review the detected connection speeds and duplex modes for your Kaleido-IP's network adapters.

Management IP address	Must be within the network to which the Kaleido-RCP2 units, and the operators' PCs or laptops are normally connected.
Data port	The IP address for a data port must be within the same range as the associated streaming devices (e.g. encoders, multiplexers). To omit network configuration for an unused data port, clear the corresponding Enabled check box.

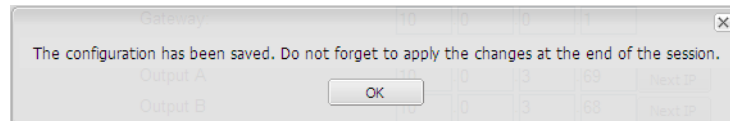
Network mask	Must be set to the appropriate values, for the management and data networks.
Default gateway	If your management network is not configured with a gateway, clear the default gateway IP address.
Detected link mode	By default, all network adapters are set to auto-negotiate. The connection speed and duplex mode will be set automatically based on the corresponding port settings on the associated switch.
Configured link mode	1000 Mbps full-duplex communication can only be achieved via auto-negotiation, as required by the IEEE-802.3 standard, section 28D.5. Should your network configuration require specific speed and duplex mode settings, select the appropriate value from the Configured link mode list.

- 11 Under **Date and Time**, select the appropriate time zone and format for your location.
- 12 If this Kaleido-IP is meant to monitor HLS sources, enable NTP synchronization: next to **NTP synchronization**, click **Enabled**, and then type the NTP server's IP address.

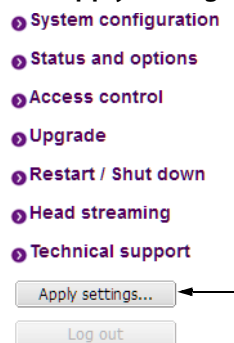
Date and Time

Current date and time: Wednesday November 26, 2014 03:56:37 PM UTC-5
 Date and time format: English (Canada)
 Time zone: America/Montreal
 NTP synchronization: Enabled Disabled
 NTP server IP address: 10 . 0 . 2 . 8

- 13 Click **Save**.
The new settings are saved locally.



- 14 Click **OK**.
- 15 The **Apply settings** button becomes available.



- 16 Click **Apply settings**.
The multiviewer must be restarted for changes to the network configuration to take effect. A message appears prompting you to reboot the system immediately.

17 Click **OK**.

Note: Settings cannot be applied to a multiviewer system while an upgrade is in progress. If the multiviewer does not reboot after 10 seconds or so, try clicking **Apply settings** again after a minute or two, until the multiviewer reboots.

18 If this Kaleido-IP is meant to monitor HLS sources, then you must also configure access to your facilities' DNS, and proxy servers:

- a Click **Configure**, under **DNS and proxy configuration**.
The DNS and Proxy Configuration page appears.

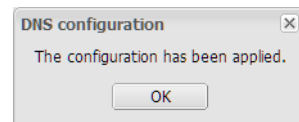
DNS configuration

domain:	<input type="text" value="miranda.com"/>
search:	<input type="text" value="miranda.com"/>
primary:	<input type="text" value="10"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value=".8"/>
secondary:	<input type="text" value="10"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value=".20"/>

Proxy configuration

Enable proxy
proxy (URL to PAC file):

- b Type the appropriate suffixes for your primary domain, and search domain, and the IP addresses for the primary, and secondary DNS server.
- c Select **Enable proxy**, and then type the URL of the appropriate proxy auto-config (PAC) file, if required.
- d Click **Apply configuration**.
A message appears confirming that the changes have been applied.



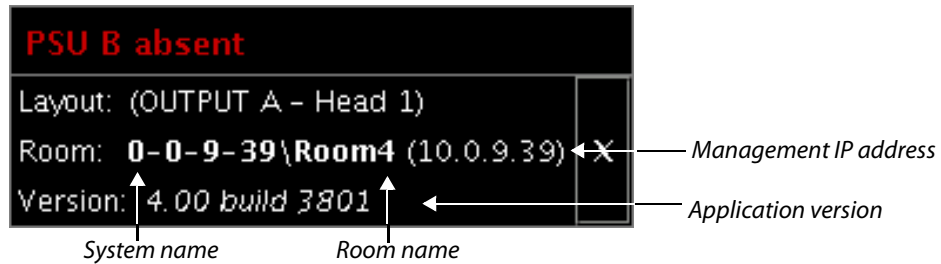
- e Click **OK** to dismiss the message.

19 If this system must monitor sources from a VLAN environment, then refer to *Configuring Virtual Network Adapters on a Kaleido-IP*, in the Kaleido-X User's Manual, to add the required virtual network adapters.

Finding the Management IP Address and Application Version

To find the management IP address and application version

- 1 Connect a mouse to a USB connector: either at the front of the frame, or on the rear panel.
- 2 Right-click anywhere on the monitor wall. On the shortcut menu, point to **Monitor Wall** (if you clicked a monitor), and then click **Show dashboard** to display the dashboard associated with the current head. A small window appears in the bottom-right area, revealing the management IP address and the system version. Take note of these values.



Configuring a Client PC

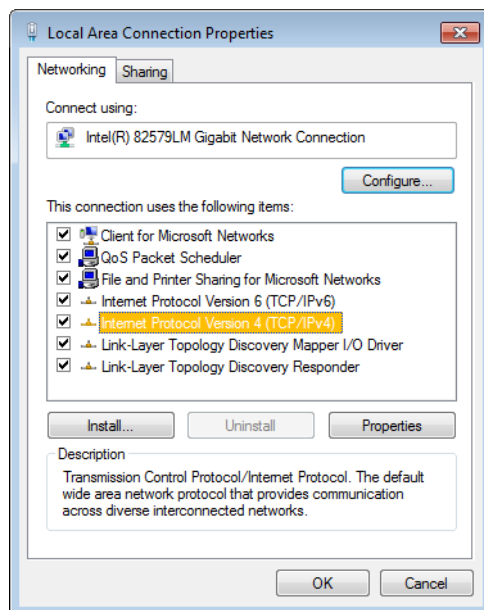
The client PC that you will use to communicate with the Kaleido-IP multiviewer (via XAdmin and XEdit) and the multiviewer's gigabit Ethernet port associated with the *management* network must have IP addresses within the same subnet. The following procedure applies to a typical Windows 7 or Windows 8 system. For Windows XP, see [Changing an IP Address on Windows XP](#), on page 15.

Changing an IP Address on Windows 7 or Windows 8

To change the IP address of a client PC that has Windows 7 or Windows 8

- 1 Press the Windows key on your keyboard, type "control panel" and then press Enter.
- 2 In the search box, type "adapter", and then, under **Network and Sharing Center**, click **View network connections**.
- 3 In **Network Connections**, right-click the network adapter you wish to configure (e.g., *Local Area Connection*, or *Ethernet*), and then click **Properties**. If the system prompts you for an administrator password or confirmation, type the password or provide confirmation.

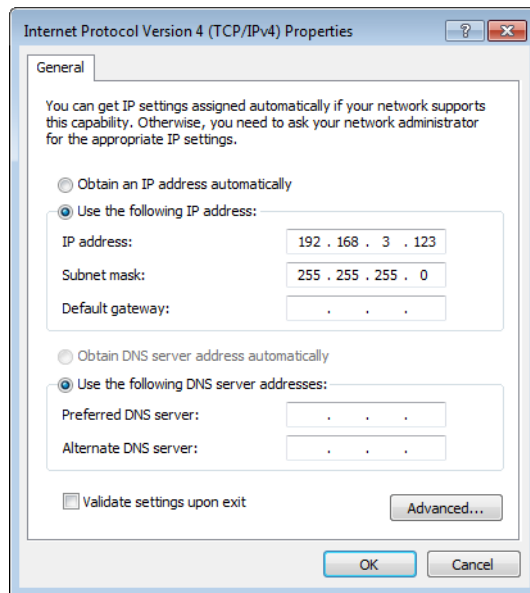
The Properties window for the selected network adapter opens.



- 4 On the **Networking** tab, under **This connection uses the following items**, click **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.

The **Internet Protocol Version 4 (TCP/IPv4) Properties** window opens.

- 5 On the **General** tab, click **Use the following IP address**.



- 6 Type an IP address in the same range as the multiviewer's current IP address.
For example, if the multiviewer's IP address is 192.168.3.31, then the IP address of your client PC could be 192.168.3.123. If you are unsure, contact your network administrator.
- 7 Type a subnet mask in the same range as that of the multiviewer.
- 8 Click **OK**.
- 9 In **Local Area Connection Properties**, click **Close**.

Changing an IP Address on Windows XP

To change the IP address of a client PC that has Windows XP

- 1 On the **Start** menu, point to **Control Panel**, right-click **Network Connections**, and then click **Open** on the menu.
- 2 In **Network Connections**, right-click **Local Area Connection**, and then click **Properties** on the shortcut menu.
- 3 In **Local Area connection Properties**, select **Internet Protocol (TCP/IP)** from the list on the **General** tab, and then click **Properties**.
The **Internet Protocol (TCP/IP) Properties** window opens.
- 4 On the **General** tab, click **Use the following IP address**.
- 5 Type an IP address in the same range as the multiviewer's current IP address.
For example, if the multiviewer's IP address is 10.0.3.70, then the IP address of your client PC could be 10.0.3.123. If you are unsure, contact your network administrator.
- 6 Type a subnet mask in the same range as that of the multiviewer.
- 7 Click **OK**.
- 8 In **Local Area Connection Properties**, click **Close**.

Step 3: XEdit Installation

XEdit is a client application used to create layouts for the monitor wall, and to configure your multiviewer system, from your PC or laptop. When the computer with XEdit is connected to the multiviewer through a TCP/IP network, you can use XEdit to modify layouts and settings directly on the multiviewer, or you can work locally on the computer and then export your changes to the multiviewer.

To install XEdit from your multiviewer's home page

- 1 From a workstation on the same subnet as the multiviewer, open a Web browser window and type the multiviewer's IP address in the address bar.

The multiviewer's home page appears.



- 2 Click the **XEdit** button.

The browser prompts you to save an executable file to your hard drive (Kaleido-windows32-online.exe²). This file is an online installer, which will download XEdit and other companion elements from your multiviewer, and install them. Some browsers may allow you to run the file directly. Depending on your browser's security features, warnings may appear, which you may safely dismiss.

- 3 Unless your browser let you run the file (and you chose to do so), navigate to the location where you saved the installer file and open it.


More security warnings or prompts may appear, which you may safely dismiss or accept.

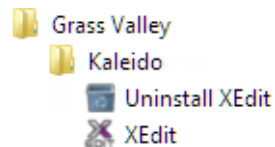
A window appears, showing the download and installation progress.

² Installers for Linux or Mac OS X are not yet available.

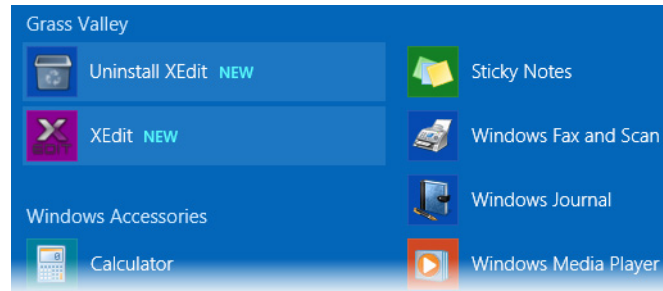


At the end of the installation process:

- If you have Windows 7, or Windows XP, shortcuts () are added to your desktop and to the Start menu (under **All Programs**).



- If you have Windows 8.1, or Windows 8, XEdit will appear on your desktop, in the Apps view with all the other applications on your PC (Windows 8.1), or in your Start screen (Windows 8).



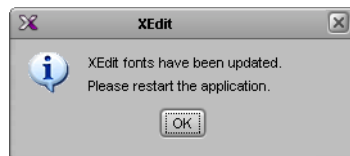
Once the installation has completed, the XEdit startup screen appears.



Depending on your Windows Firewall settings, a security alert may appear.

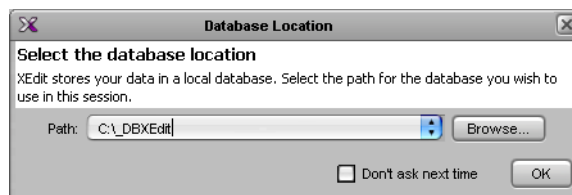
- Click **Allow** access to unblock the application.

If XEdit cannot find all of the fonts it needs already on your PC or laptop, it downloads them from the multiviewer automatically, in which case a message will appear to confirm the font update, and instruct you to restart the application.

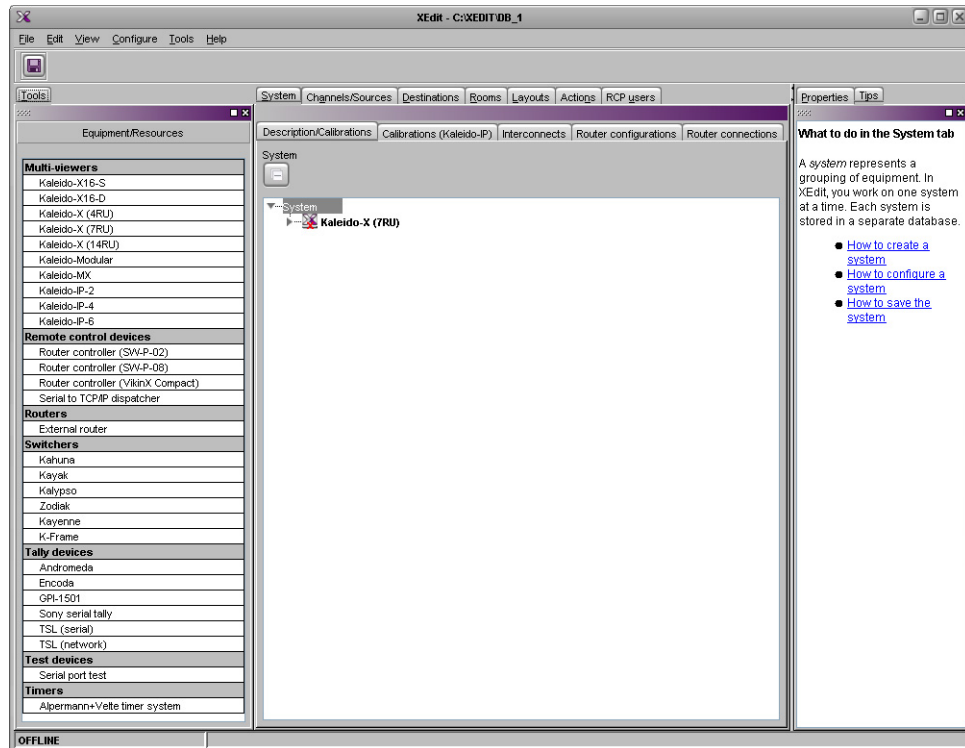



- Click **OK** to continue, and then open XEdit again, by using the shortcut on your desktop, in your Apps view (Windows 8.1) or Start screen (Windows 8), or from the Start menu (Windows 7, Windows XP).

- 4 When prompted to specify a database, choose one from the **Path** list, or click **Browse** to navigate to the database you wish to use as your local workspace, and then click **OK**.



Once the database has completed loading, XEdit's main application window appears.



Note: Once it has been installed from the multiviewer, XEdit remains on your PC or laptop, and can be launched from the  shortcut that was added to your desktop, Apps view, or Start screen (see [page 17](#)), or from the Start menu. Whenever you install a new version of the Kaleido-X software on the multiviewer, the next time you open XEdit, your installed copy of the application will be automatically updated from the multiviewer.

For more information about calibrating your system, configuring rooms, creating layouts, and operating the monitor wall, refer to the *Kaleido-X User's Manual*, available on the DVD that shipped with your system, and from Grass Valley's support portal.

Step 4: System Setup

Before you can proceed with monitor wall operation, you must use XEdit to add transport streams to your Kaleido-IP system configuration, define logical sources based on the signals you wish to monitor, configure monitor wall destinations (if desired), and configure the required rooms and layouts for your purposes. Although it is possible to partly configure your system by using XEdit in offline mode, you may initially prefer to work in online mode, to take advantage of the predefined room and layouts that are available in the default configuration. In any case, you must work in online mode, at least once, to obtain the list of programs and elementary streams under each transport stream. The supported stream types are source-specific multicast, source-filtered multicast (filtering limited to a single source IP in include mode only), any-source multicast, and unicast. The procedures in this section apply to the online mode.

Opening XEdit in Online Mode

To open XEdit in online mode

- 1 From a workstation on the same subnet as the multiviewer, open a Web browser window and enter the *management* IP address of your Kaleido-IP multiviewer in the address bar.
The Kaleido-X home page appears.
- 2 Click the **XEdit** button.
- 3 When prompted to specify a database, choose one from the **Path** list, or click **Browse** to specify another location, and then click **OK** to continue.
The main application window appears.
- 4 On the **Configure** menu, click **Connect**.
- 5 In **Connect to Multiviewer**, Enter the *management* IP address for the Kaleido-IP you wish to configure, and then click **OK**.
The selected system's hierarchical list appears in the main pane, showing the multiviewer type, system name and IP address, and the status bar shows the connection status.

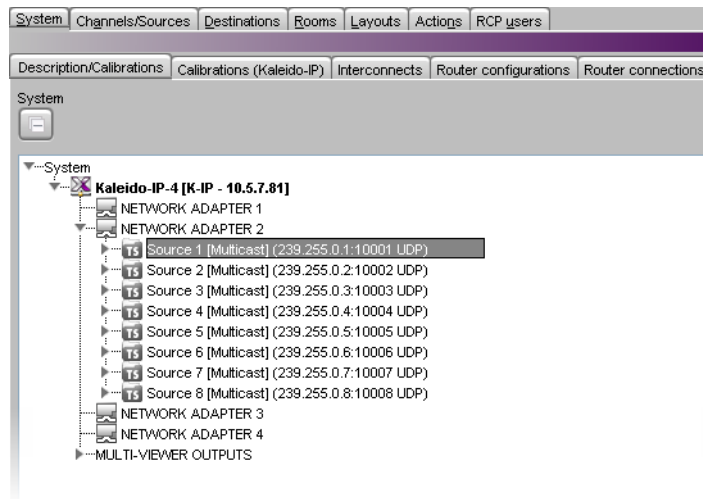
Configuring Transport Streams

The default configuration for a Kaleido-IP system includes eight predefined any-source multicast (ASM) streams, under NETWORK ADAPTER 2. Before you can use these streams, you must adjust their settings to match the actual transport streams you wish to monitor. Depending on your monitoring purposes and Kaleido-IP model, you may also need to add transport streams (see [Adding Stream Sources](#), on page 22).

Modifying the Set of Predefined Streams

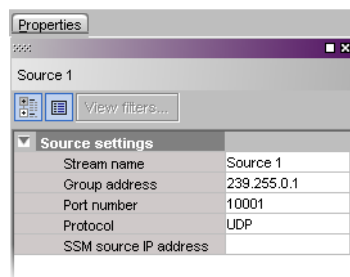
To modify settings for a multicast transport stream

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, and then navigate to the multicast transport stream you wish to configure, under **NETWORK ADAPTER 2**.



Note: Under the network adapter elements, transport streams are listed in alphabetical order.

The settings for the selected multicast stream appear in the **Properties** pane.

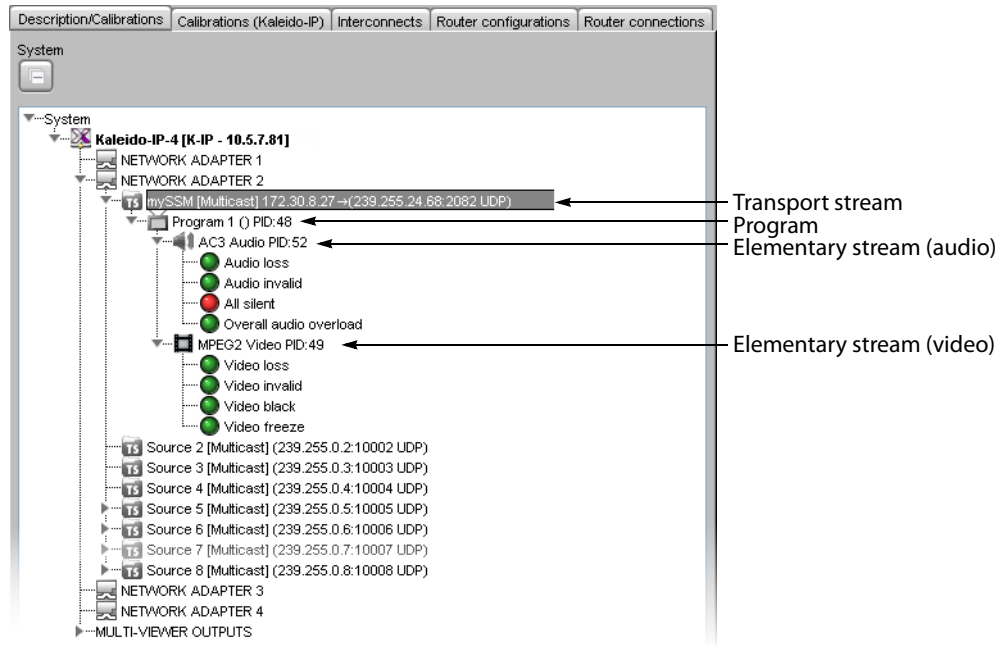


- 3 Replace the default stream name if desired, select the appropriate protocol (RTP, UDP), and enter the multicast group IP address, and port number associated with the actual transport stream you wish to monitor. In the case of an SSM (or SFM) stream, enter the IP address associated with the specific source you wish to monitor in the **SSM source IP address** box.

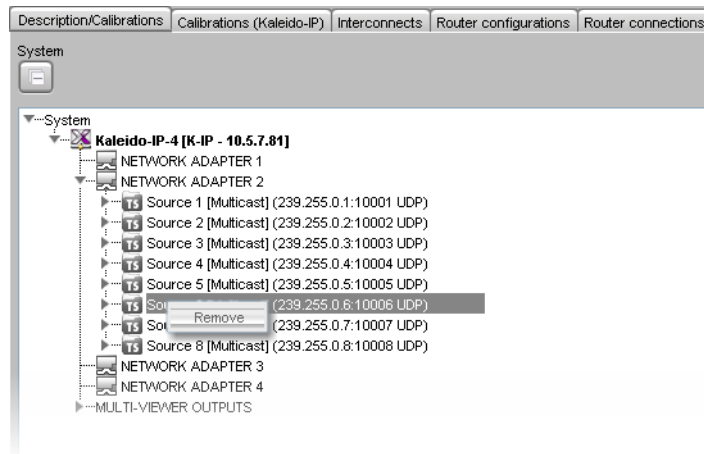
Notes

- The Kaleido-X Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
 - Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
-

The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element in the System list.



- 4 Repeat this until you have completed the required configuration changes to match the set of transport streams you wish to monitor.
- 5 If there are default transport streams left, which you will not use, right-click them, and then click **Remove**.



- 6 On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar. Changes to the system are saved.

Adding Stream Sources

If you have connected your Kaleido-IP to more than one *data* network, and wish to monitor sources from Unicast streams, or more sources from Multicast streams, then you need to add transport streams to the basic system configuration. See [Adding a Multicast Transport Stream](#) below, and [Adding a Unicast Transport Stream](#), on page 24.

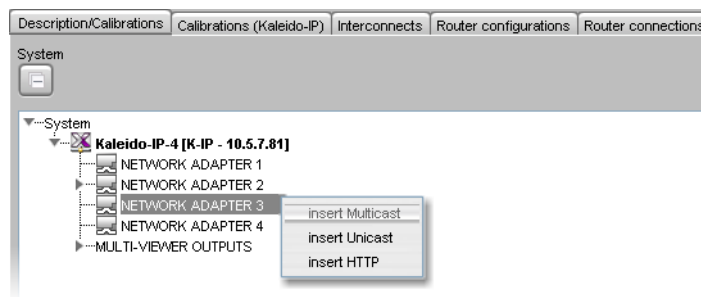
Refer to *Managing Transport Streams in a Kaleido-IP System Representation*, in the Kaleido-X User's Manual, for instructions on:

- importing transport stream configuration information, from a spreadsheet
- adding HLS transport streams
- adding source-specific or source-filtered multicast (SSM or SFM) transport streams
- adding any-source multicast (ASM) transport streams

Adding a Multicast Transport Stream

To add a multicast transport stream

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, right-click the appropriate network adapter for the source you wish to add, and then click **insert Multicast**.



The **Multicast Stream Configuration** window appears.

- 3 In **Multicast Stream Configuration**, replace the default stream name if desired, select the appropriate protocol (RTP, UDP), and type the multicast group address and port number associated with the transport stream you wish to add.

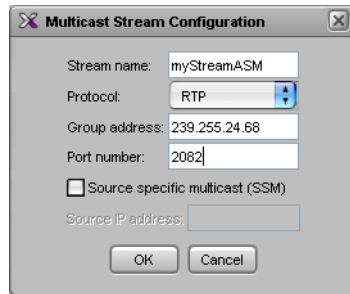
Notes

- The Kaleido-X Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.

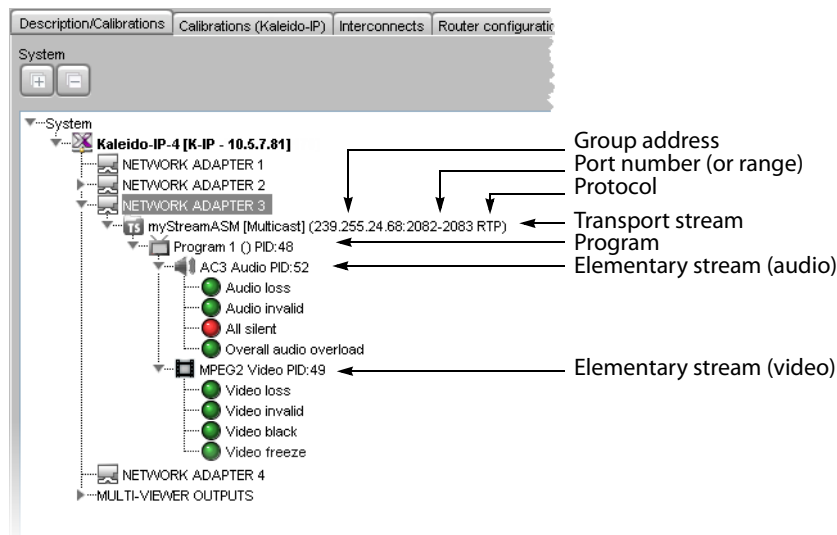
- 4 In the case of an SSM (or SFM) stream, select the **Source specific multicast (SSM)** check box, and then type the IP address associated with the specific source you wish to monitor in the **Source IP address** box.

Note: In the case of streams that are available from the same multicast group address and port number, you must enter the source IP address associated with a stream before you can add the next one.

- 5 Click **OK**.



The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element in the System list.



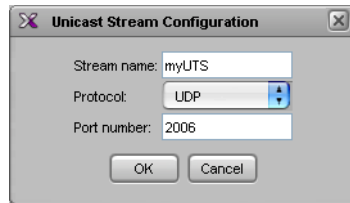
Note: Under the network adapter elements, transport streams are listed in alphabetical order.

- 6 Repeat this procedure until you have added all required multicast transport streams to your system configuration.
- 7 On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar. Changes to the system are saved.

Adding a Unicast Transport Stream

To add a unicast transport stream

- 1 In the main window, click the **System** tab, and then click **Description/Calibrations** on the second level tab bar.
- 2 Expand the System hierarchical list, right-click the appropriate network adapter for the source you wish to add, and then click **insert Unicast**.
The **Unicast Stream Configuration** window appears.
- 3 In **Unicast Stream Configuration**, replace the default stream name if desired, select the appropriate protocol (RTP, UDP), type the port number associated with the transport stream you wish to add, and then click **OK**.



The Kaleido-IP establishes a connection with the selected stream. All programs that are part of the stream, and the elementary streams included in these programs, automatically appear under the transport stream element in the System list.

Notes

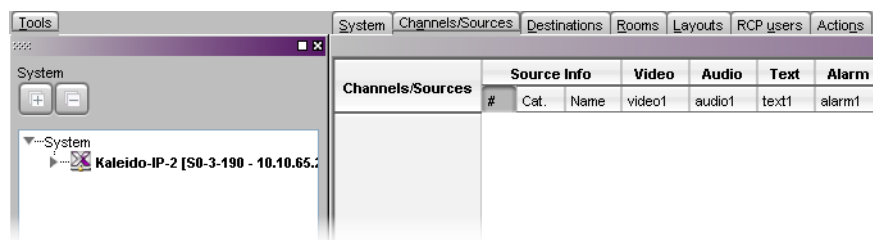
- The Kaleido-X Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor wall.
- When adding unicast transport streams do not specify consecutive port numbers.
- Under the network adapter elements, transport streams are listed in alphabetical order.

- 4 Repeat this procedure until you have added all required unicast transport streams to your system configuration.
- 5 On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar. Changes to the system are saved.

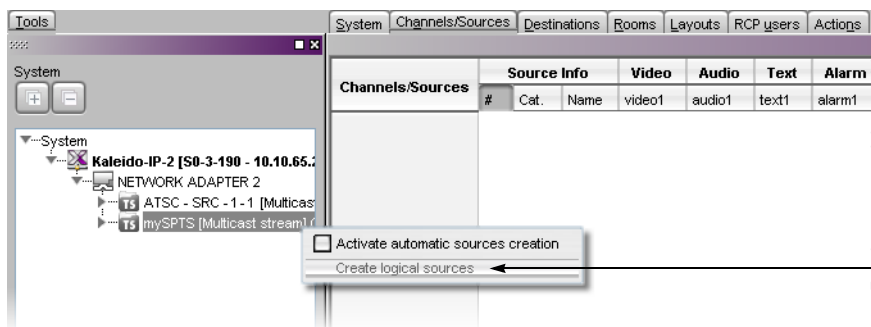
Defining Logical Sources

To define logical sources for a transport stream

- 1 In the main window, click the **Channels/Sources** tab.



- 2 In the **Tools** pane, expand the multiviewer, and navigate to the transport stream for which you wish to define logical sources.
- 3 Right-click the transport stream, and then click **Create logical sources** on the menu.



Logical sources are automatically created for every program signal found in the selected transport stream.

Channels/Sources	Source Info			Video	Audio	Program Number
	#	Cat.	Name	video1	audio1	
mySPTS/PG-NUM1		mySPTS	PG-NUM1	PG-NUM:1 ES-IDX:1	PG-NUM:1 ES-PID:52	PG-Num: 1

- Repeat until you have added logical sources for every stream you wish to monitor.
- If your system involves a control panel from which you will control your multiviewer as a router, then configure source numbers for the *KX Router* logical router, by typing the appropriate numbers in the first column (#) under **Source info**, and using the incremental copy tool as needed.

Channels/Sources	Source Info			Video
	#	Cat.	Name	video1
/ATSC - SRC - 1/PG-NUM2	1	ATSC - SRC - 1	PG-NUM2	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM3	2	ATSC - SRC - 1	PG-NUM3	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM4	3	ATSC - SRC - 1	PG-NUM4	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM6	4	ATSC - SRC - 1	PG-NUM6	PG-NUM:1 ES-IDX:1
/ATSC - SRC - 1/PG-NUM7	5	ATSC - SRC - 1	PG-NUM7	PG-NUM:1 ES-IDX:1

- On the **File** menu, click **Save**. Alternatively, click the Save button on the toolbar.

Step 5: Testing the Monitor Wall Operation

Using the Kaleido-RCP2 with Default Settings

Note: The Kaleido-RCP2 unit is optional and is not included in the standard Kaleido-IP package.

To start using the Kaleido-RCP2 with its default settings

- Physically connect the Kaleido-RCP2 unit to the management network using an Ethernet cable (see [Cabling Diagram](#), on page 7).
By default, the Kaleido-RCP2 is configured with DHCP enabled, so it will automatically be assigned an IP address by a DHCP server. If no DHCP server can be found, the

Kaleido-RCP2 will fall back to its default static IP address, subnet mask, and gateway settings:

Default IP address	10.0.3.191
Default subnet mask	255.255.0.0
Default gateway	0.0.0.0

Notes

- If you need to operate with a fixed IP address, you must use the Configuration menu to disable DHCP and set up the correct IP address, Network Mask, and Gateway (see the “Enabling or Disabling DHCP” and “Setting an IP Address, Subnet Mask and Gateway” sections in the *Kaleido-RCP2 Guide to Installation and Operation*, available on the DVD that shipped with your system.)
- To access Kaleido-X rooms located in other subnets, the Kaleido-RCP2 must be configured with the appropriate unicast IP addresses (see the “Configuring Unicast IP Addresses” section in the *Kaleido-RCP2 Guide to Installation and Operation*, available on the DVD that shipped with your system.)

- 2 On the Kaleido-RCP2 unit, press the ENTER button and hold it until the ESC button lights up.

The following message appears on the LCD display:

Configuration
ROOM SELECTION

- 3 Press ENTER again to obtain the room list from the Kaleido-X systems that are currently available on the network.

The message **ROOM Select** followed by the name of the first room available appears on the LCD display.

- 4 Press the **2** key (to move up in the list) or the **8** key (to move down the list) until **ROOM** is displayed.

- 5 Press ENTER, and then press ESC to exit the configuration menu.

- 6 Press the LOGIN button.

The following message appears on the LCD display:

LOGIN Position
Admin

- 7 Press ENTER to log on to your system as “Admin”.

A message prompting you for a password appears on the LCD display.

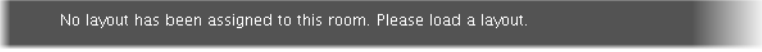
- 8 Press ENTER again (by default, there is no password).

The message “Access granted” will appear on the LCD display if the login is successful. If a mouse is connected to the Kaleido-RCP2, then you should be able to see and move the mouse pointer on the monitor wall.

- 9 Press any of the LAYOUT PRESETS buttons to load a predefined layout on the monitor wall.

If your system was configured prior to shipment, then a layout will appear on all displays. Otherwise, a gray screen will appear with the following message in the middle:

“No layout has been assigned to this room. Please load a layout.”



No layout has been assigned to this room. Please load a layout.

Note: To access other layouts, press the LOAD button. To assign a layout to a preset button, press and hold the button for more than six seconds while the desired layout is showing on the monitor wall.

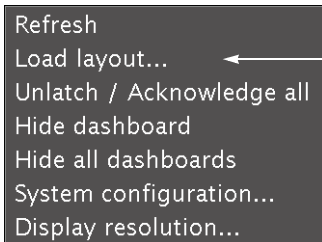
Loading a Layout

To load a layout on the monitor wall

- 1 Connect a mouse to the Kaleido-RCP2 (if available) and log on to the Kaleido-IP from the Kaleido-RCP2, if you have not already done so (see [Using the Kaleido-RCP2 with Default Settings](#), on page 26).

Alternatively, connect the mouse directly to one of the USB ports on the Kaleido-IP frame.

- 2 Right-click anywhere on the monitor wall, point to **Monitor Wall** (if you clicked a monitor), and then click **Load layout** on the shortcut menu.



A layout browser appears on the displays associated with the current room.

- 3 Select the layout you wish to load from the list of available layouts for this room, and then click **OK**.

The selected layout appears on the room displays.

3 Specifications

Kaleido-IP Inputs

IP INPUTS

Kaleido-IP X310 physical	4 Gigabit Ethernet with RJ-45 connector (MGMT and DATA) 2 additional data Gigabit Ethernet with RJ-45 connector (optional)
Kaleido-IP X110 physical	4 Gigabit Ethernet with RJ-45 connector (MGMT and DATA)
Transport	MPEG transport streams over UDP or RTP Multicast/Unicast IGMPv3 SSM/SFM Multi Program Transport Streams (MPTS) Single Program Transport Streams (SPTS)
Performance	Up to 1 Gbps

OTHER INPUT FORMATS

ASI	Densité IRD-3802 (optional)
ATSC RF	Densité IRD-3811-VQ (optional)
DVB-S/S2 RF	Densité IRD-3811-DVB-S2 (optional)
Set-top box	EdgeVision (optional)

VIDEO DECODERS

Standard	MPEG-2 H.264/AVC (ITU-T H.264)
Chroma format	4:2:0 and 4:2:2
Kaleido-IP X310 performance	Concurrent decoding of 128 SD MPEG-2, or 64 HD MPEG-2, 64 SD H.264, or 32 HD H.264 video programs.
Kaleido-IP X110 performance	Concurrent decoding of 48 SD MPEG-2, or 16 HD MPEG-2, or 24 SD H.264 or 12 HD H.264 video programs

AUDIO DECODERS

Standard	MPEG-1 Layer 1 MPEG-1 Layer 2 MPEG-2 Layer 1 MPEG-2 Layer 2
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AUDIO DECODERS (continued)

Dolby Digital AC-3 (optional)
Dolby Digital Plus (DD+) (optional)
AAC Audio (optional)

Kaleido-IP Display Outputs

The Kaleido-IP supports two independently configurable and operable display outputs.

Connectors	HDMI or DisplayPort
Standard	DisplayPort 1.1a HDMI 1.3a
Resolution	Up to 1920 × 1200 @ 60 Hz

Kaleido-IP X310 Frame

Height	43 mm (1.7 in) 1 RU
Width	437 mm (17.2 in)
Depth	710 mm (28 in)
Weight	12.7 kg (28 lbs)
Power supply	750 W (1+1) hot-swappable, redundant power supply, 10-4 amp
Nominal power	550 W
AC	100-240 V, 60-50 Hz
Operating temperature	10-35 °C (50-95 °F)
Max. storage humidity	90% RH non-condensing
Max. functional humidity	65% RH non-condensing

Kaleido-IP X110 Frame

Height	43 mm (1.7 in) 1 RU
Width	437 mm (17.2 in)
Depth	710 mm (28 in)
Weight	12.7 kg (28 lbs)
Power supply	750 W (1+1) hot-swappable, redundant power supply, 10-4 amp
Nominal power	170 W
AC	100-240 V, 60-50 Hz
Operating temperature	10-35 °C (50-95 °F)

Max. storage humidity	90% RH non-condensing
Max. functional humidity	65% RH non-condensing

Operation and Configuration

On-screen control	Kaleido-RCP2 (optional)
Source and layout configuration	XEdit
Alarms management	iControl (optional)

Display Output Extender via Fiber Optic

Device	DXF-200 (optional)
Distance	1 km (3280 ft)
Fiber optic cable	Multi-mode 50 or 62.5/125 SC
Connector	SC

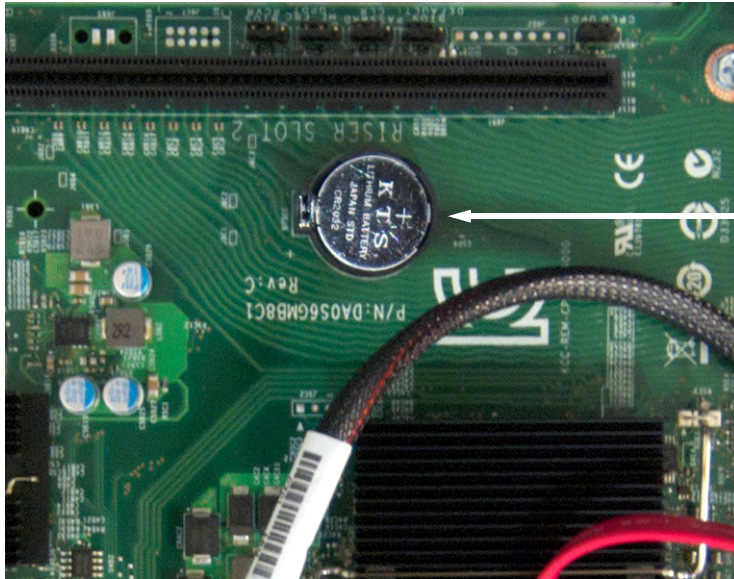
Remote Video Display Output via Streaming

Device	EdgeVision (optional)
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Disposal and Recycling Information



Your Grass Valley equipment comes with at least one lithium button battery (Li-MnO₂) located on the main printed circuit board.



Before disposing of your Grass Valley equipment, please remove the battery as follows:

- 1 Make sure the equipment's AC adapters are unplugged from the power outlet.
- 2 Remove the protective cover from your equipment.
- 3 Gently remove the battery from its casing using a blunt instrument for leverage such as a screwdriver if necessary.
- 4 Dispose of the battery and equipment according to your local environmental laws and guidelines.

IMPORTANT

Be careful not to short-circuit the batteries by adhering to the appropriate safe handling practices. Do not dispose of batteries in a fire as they may explode. Batteries may explode if damaged or overheated. Do not dispose of batteries as household waste. Do not dismantle, open or shred batteries. Keep batteries out of the reach of children.

IMPORTANT *(continued)*

The electrolyte of the batteries contains 1,2-dimethoxyethane (DME) (CAS 110-71-4, EINECS 203-794-9) above 0.1% by weight. DME is listed as a Substance of Very High Concern (SVHC) by the regulation (EC) No 1907/2006 of the European Parliament and of the Council. It is classified as a reprotoxic of category 2 in the European Union. Accordingly, exposure to DME may impair fertility and may cause harm to the unborn child. DME is also classified as harmful by inhalation.

Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a cell vents. In the event of a battery leak, do not allow battery liquid to come in contact with skin or eyes. Seek medical help immediately in case of ingestion, inhalation, skin or eye contact, or suspected exposure to the contents of an opened battery.

For more information about recycling, please contact Grass Valley.



Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 514 333 1772.

To obtain a local phone number for the support center nearest you, please consult the Product Support section of Grass Valley's Web site, at <http://www.grassvalley.com/support/contact>.

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

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