

Kaleido-IP X310

Kaleido-IP X110

High quality IP video multiviewers

Quick Start Guide

M926-9405-101

22 May 2014



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Title	Kaleido-IP X310/X110 Quick Start Guide
Part Number	M926-9405-101
Revision	22 May 2014, 5:07 pm

Safety Compliance



- This equipment complies with the requirements of CSA/UL/IEC/EN 60950-1, 2nd Ed. + AM1, Safety of information technology equipment.
- c us** The power cords supplied with this equipment meet the appropriate national standards for the country of destination.

[fr] **Conformité aux normes de sécurité**

Cet équipement est conforme aux exigences de CSA/UL/IEC/EN 60950-1, 2^e éd. + AM1, Sécurité du matériel informatique.

Les cordons d'alimentation fournis avec l'appareil répondent aux normes nationales appropriées du pays destinataire.

[es] **Conformidad en seguridad eléctrica**

Este equipo cumple con las exigencias de la CSA/UL/IEC/EN 60950-1, 2^a ed. + AM1, Seguridad de los equipos de tecnología de la información.

Los cables de alimentación incluidos con el equipo cumplen con las normas nacionales apropiadas para el país de destino.

[pt] **Conformidade de segurança elétrica**

Este equipamento está em conformidade com os requisitos da CSA/UL/IEC/EN 60950-1, 2^a ed. + AM1, Segurança de equipamento de tecnologia da informação.

Os cabos de alimentação fornecidos com este equipamento encontram as normas nacionais adequadas para o país de destino.

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.

[fr] **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.

[es] **Medidas de seguridad y avisos importantes**

Esta sección proporciona pautas de seguridad importantes para los operadores y el personal de servicio. Advertencias y precauciones específicas aparecen en el manual para su aplicación. Por favor, lea y siga esta importante información, especialmente aquellas instrucciones relacionadas con el riesgo de descarga eléctrica o lesiones a las personas.

[pt] **Salvaguardas e avisos importantes**

Esta seção fornece diretrizes de segurança importantes para os operadores e pessoal de serviço. Avisos e cuidados específicos estão listados no manual para sua aplicação. Por favor, leia e siga esta informação importante, especialmente aquelas instruções relacionadas ao risco de choque elétrico ou ferimentos.

Symbols and Their Meanings



The lightning flash with arrowhead symbol within an equilateral triangle alerts the user to the presence of dangerous voltages within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle alerts the user to the presence of important operating and maintenance/service instructions.



The earth ground symbol represents a protective grounding terminal. Such a terminal must be connected to earth ground prior to making any other connections to the equipment.



The fuse symbol indicates that the fuse referenced in the text must be replaced with one having the ratings indicated.



The presence of this symbol in or on Grass Valley equipment means that it has been designed, 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 designed, 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 designed, tested and certified as essentially complying 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.
- Heed all warnings on the unit and in the operating instructions.
- Do not use this equipment in or near water.
- 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.
- 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.
- Do not wear rings or wristwatches when troubleshooting high current circuits such as the power supplies.
- To avoid fire hazard, use only the specified fuses with the correct type number, voltage and current ratings as referenced in the appropriate locations in the service instructions or on the equipment. Always refer fuse replacements to qualified service personnel.
- To avoid explosion, do not operate this equipment in an explosive atmosphere.
- Have qualified service personnel perform safety checks after any service.

[fr] **Avertissements**

- 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.
- Respectez tous les avertissements figurant sur l'appareil et dans les instructions d'utilisation.
- Ne pas utiliser cet appareil dans l'eau ou à proximité d'un point d'eau.
- 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.
- 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 visant des circuits à courant élevé (e.g., les blocs d'alimentation), enlevez tous vos bijoux (notamment vos bagues et votre montre).
- Pour éviter tout risque d'incendie, utilisez uniquement les fusibles du type et du calibre indiqués dans la documentation ou sur l'équipement. Confiez le remplacement de fusibles au personnel technique qualifié.
- Ne pas utiliser cet appareil dans une atmosphère explosive.
- Après tout travail d'entretien ou de réparation, faites effectuer des contrôles de sécurité par le personnel technique qualifié.

[es] **Advertencias**

- Un cable de alimentación aprobado deberá ser utilizado para la conexión del equipo a la tensión de red de 120 V CA o 240 V CA.
- Este producto depende de la instalación del edificio para la protección de cortocircuitos (sobre-corriente). Asegúrese que un fusible o un interruptor térmico de 120 V CA o 240 V CA se utiliza en los conductores de fase.
- Todas las instrucciones de este manual que requieren abrir la tapa del equipo se llevará a cabo por personal técnico calificado.
- Respete todas las advertencias en el equipo y las instrucciones de funcionamiento.
- No utilice este producto en el agua o cerca de este.
- Este equipo está conectado a tierra a través del conductor de puesta a tierra de los cables de alimentación. Para evitar una descarga eléctrica, enchufe el cable de alimentación a un tomacorriente debidamente instalado antes de conectar las entradas y salidas del equipo.
- Instale los cables de alimentación y otros cables de forma de evitar ser dañados.
- Desconecte la alimentación antes de limpiar el equipo. No use limpiadores líquidos o aerosoles, utilizar un paño húmedo.
- Pueden existir tensiones peligrosas en varios puntos de este equipo. Para evitar lesiones, no toque las conexiones y componentes expuestos cuando la unidad está con alimentación.
- No use anillos o relojes al solucionar problemas de circuitos de alta corriente como fuentes de alimentación.
- Para evitar el riesgo de incendios, utilice sólo el fusible indicado con el número de tipo correcto, el voltaje y la corriente que se hace referencia en los lugares apropiados en las instrucciones de los servicios o el equipo. Siempre consulte el reemplazo del fusible a personal calificado.
- Para evitar explosiones, no utilice este equipo en una atmósfera explosiva.
- Deje al personal calificado realizar las verificaciones de seguridad después de un servicio.

[pt] Advertências

- Um cabo de alimentação aprovado deve ser utilizado para ligar o equipamento à tensão da rede de 120 V CA ou 240 V CA.
- Este produto baseia-se na instalação do edifício para proteção por curto-circuito (sobrecarga de corrente). Certifique-se de que um fusível ou disjuntor para 120 V CA ou 240 V CA é utilizado nos condutores de fase.
- Todas as instruções contidas neste manual, que exigem a abertura da tampa do equipamento será realizada por pessoal qualificado.
- Preste atenção a todos os avisos no equipamento e instruções de operação.
- Não use este produto em ou perto da água.
- Este equipamento é aterrado através do condutor de aterramento do cabo de alimentação. Para evitar choque elétrico, conecte o cabo de alimentação a uma tomada devidamente instalada antes de ligar as entradas e saídas do dispositivo.
- Instale os cabos de alimentação e os outros cabos de modo a evitar danos.
- Desligue a alimentação antes de limpar o equipamento. Não use detergentes líquidos ou aerossóis, usar um pano úmido.
- Tensões perigosas podem existir em vários pontos deste equipamento. Para evitar ferimentos, não toque as conexões e componentes expostos quando o aparelho está ligado.
- Não usar anéis ou relógios ao solucionar problemas de circuitos de alta tensão, tais como fontes de alimentação.
- Para evitar o risco de incêndio, utilize apenas o número especificado de fusível de tipo correto de tensão e corrente a que se refere o manual de serviço adequado. Referem-se sempre trocar o fusível por pessoal qualificado.
- Para evitar a explosão, não utilize este equipamento em uma atmosfera explosiva.
- Deixe o pessoal qualificado executar verificações de segurança depois de um serviço.

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.
- 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 has more than one power supply cord. Disconnect both power supply cords before servicing to avoid electric shock.
- To prevent damage to equipment when replacing fuses, locate and correct the problem that caused the fuse to blow before re-applying power.
- Use only the specified replacement parts.
- Follow static precautions at all times when handling this equipment.

- 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.

[fr] **Mises en garde**

- 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.
- 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 comporte plus d'un cordon d'alimentation. Afin de prévenir les chocs électriques, débrancher les deux cordons d'alimentation avant toute opération d'entretien.
- Pour éviter d'endommager l'équipement lors du remplacement de fusibles, localisez la source de la panne et corrigez la situation avant de rétablir le courant.
- Employez uniquement les pièces de rechange recommandées par le fabricant.
- Veillez à toujours prendre les mesures de protection antistatique appropriées quand vous manipulez l'équipement.
- 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.

[es] **Precauciones**

- Este equipo está destinado a ser instalado en un lugar de acceso restringido.
- Al instalar este equipo, no sujete el cable de alimentación a la superficie del edificio.
- No realice reparaciones que no se encuentren en las instrucciones de funcionamiento a menos que esté calificado para hacerlo. Confíe las reparaciones a personal técnico calificado. El mantenimiento debe realizarse en un ambiente libre de estática.
- Esta unidad incluye dos cables de alimentación. Desconecte ambas fuentes de alimentación antes de dar servicio, para reducir el riesgo de descarga eléctrica.
- Para evitar daños en el equipo al sustituir los fusibles, primero localizar y corregir el problema que causó que el fusible se funda antes de aplicar la alimentación de nuevo.
- Utilice únicamente repuestos específicos.
- Siga las precauciones DES en todo momento al manipular este equipo.
- Los productos que no tienen interruptor de encendido/apagado, y utilizan una fuente de alimentación externa deben instalarse cerca de una toma de corriente de fácil acceso.

[pt] **Precauções**

- Este material destina-se a ser instalado em um acesso restrito.
- Quando instalar o equipamento, não fixar o cabo de alimentação em superfícies do edifício.

- Não faça reparações que não estão no manual de instruções, a menos que você estiver qualificado. Solicite a assistência de pessoal qualificado. A manutenção deve ser realizada em um ambiente livre de estática.
- Esta unidade inclui dois cabos de alimentação. Desligue ambas as fontes de alimentação antes de manutenção para reduzir o risco de choque elétrico.
- Para evitar danos ao equipamento ao substituir fusíveis, primeiro localize e corrija o problema que causou o fusível fundir antes de aplicar energia novamente.
- Use unicamente partes específicas.
- Siga as precauções DES em todos os momentos ao manusear este equipamento.
- Os produtos que não têm um interruptor de ligar/desligar, e usam uma fonte de alimentação externa devem ser instalados perto de uma tomada elétrica de fácil acesso.

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.

[fr] 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.

[es] **Protección contra descargas electrostáticas (DES)**

La descarga electrostática se produce cuando los componentes electrónicos se manipulan de forma incorrecta pudiendo causar una falla intermitente o total afectando un circuito eléctrico. Al quitar y reemplazar una tarjeta de un chasis siempre siga los procedimientos para prevenir la DES:

- Asegúrese de que el chasis está conectado eléctricamente a tierra a través del cable de alimentación o cualquier otro medio si está disponible.
- Use una pulsera de DES asegurando que tiene buen contacto con la piel. Conecte la pinza de puesta a tierra a una *superficie sin pintar* del chasis para desviar a tierra cualquier voltaje de DES indeseable. Si ninguna pulsera está disponible, conéctese a tierra tocando la parte metálica *sin pintar* del chasis.
- Para su seguridad, verifique periódicamente el valor de la resistencia de la pulsera antiestática, que debe estar entre 1 y 10 megaohmios.
- Al guardar temporalmente una tarjeta electrónica asegúrese que está colocado en una bolsa de DES.
- Las tarjetas que están conectadas a un chasis de o caja de metal a tierra, no requieren una protección especial para la DES.

[pt] **Proteção contra descargas eletrostáticas (DES)**

DES ocorre quando os componentes eletrônicos são manipulados de forma inadequada e pode causar falha intermitente ou completa afetando um circuito elétrico. Remover e substituir um cartão eletrônico do chassi siga sempre os procedimentos para evitar DES:

- Certifique-se de que o chassi é eletricamente aterrado através do cabo de alimentação ou qualquer outro meio, se disponível.
- Utilize uma pulseira DES assegurando que você tenha um bom contato com a pele. Conecte o clipe à terra a uma *superfície não pintada* do chassi para desviar qualquer tensão indesejável de DES. Se nenhuma pulseira está disponível, faça o aterramento tocando a parte metálica *não pintada* do chassi.
- Por segurança, verificar periodicamente o valor da resistência da pulseira antiestática, que deve ser entre 1 e 10 megohms.
- Por temporariamente salvar um cartão eletrônico, certifique-se de que ele é colocado em um saco de DES.
- As cartas que estão ligados a um chassis ou caixa de metal ligada à terra, não necessitam de proteção especial para o DES.

Electromagnetic Compatibility

FC 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.

CE 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)

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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. Different models of Kaleido multiviewers are available: the Kaleido-IP, Kaleido-MX, Kaleido-X, and Kaleido-X16 frames, as well as the Kaleido-Modular KMV-3901/3911, and Kaleido-Modular-X KMX-3901-OUT and KMX-3901-IN Densité 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 new **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 two 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 system, from your PC or laptop.

Getting Organized

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 running Windows XP (or Windows 7) is required to access the XAdmin Web client, as well as to run the XEdit application.

Recommended	At least 2 GB of RAM Core 2 Duo at 2 GHz, or better
Hard Disk	At least 125 MB 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

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Overview

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.

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 5).
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 any 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 5).

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).
-

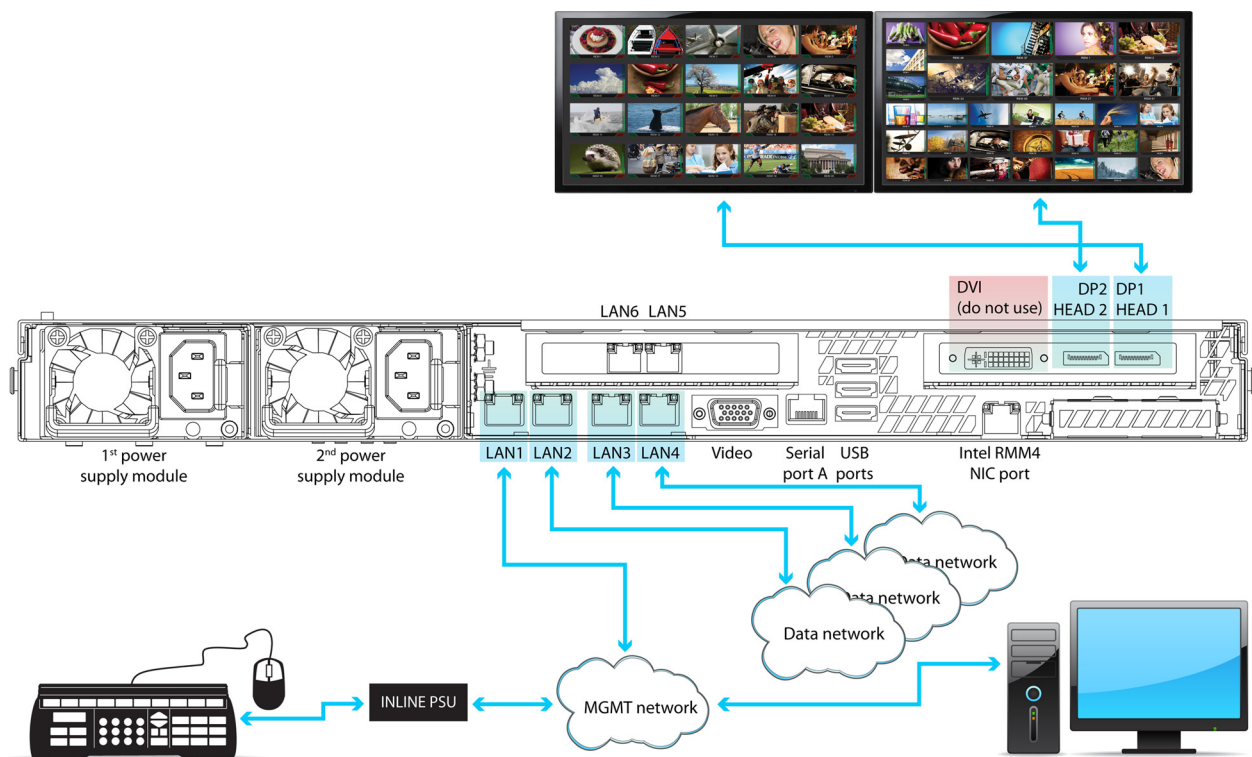
- 6 Connect the power cords, and then turn the power on. The power switch is located on the front panel.

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.

- 7 If you wish to use a different display resolution, see [Changing the Output Resolution](#), on page 5, for detailed instructions.

Cabling Diagram

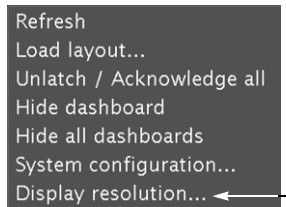


Cabling diagram for a Kaleido-IP X310 with two additional DATA ports (LAN5–LAN6, not connected). The Kaleido-IP X110 rear panel is identical, except for LAN5 and LAN6, which are not available for this model.

Changing the Output Resolution

To change a display's resolution from the monitor wall

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



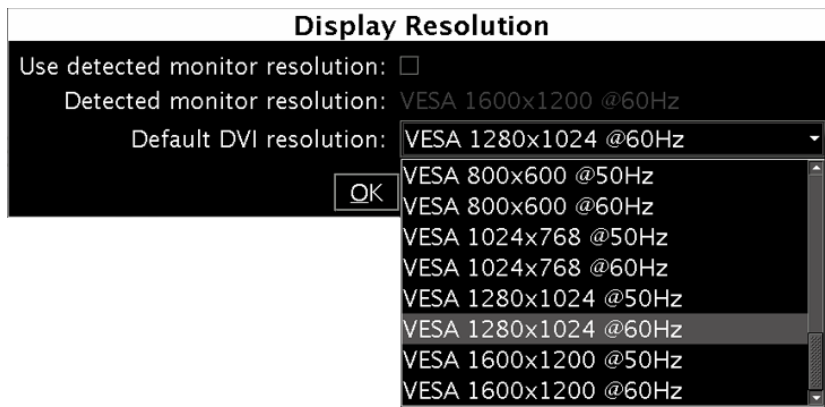
The **Display Resolution** window appears.



- 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 to communicate with the multiviewer (within the management network). 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		

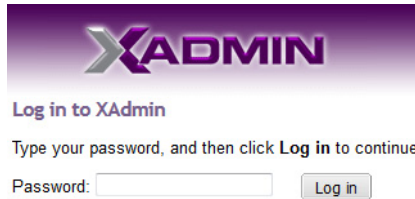
Note: If the management IP address of your Kaleido-IP has been changed (i.e. it no longer corresponds to the as-shipped configuration), it is still possible to determine the current *management* IP address setting. See [Finding the Management IP Address and Application Version](#) on page 10.

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

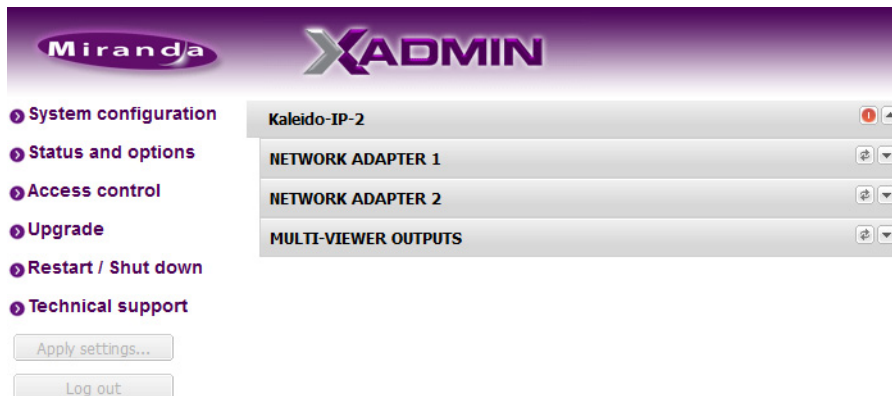
- 1 Configure your client PC or laptop with an IP address in the same range as the current *management* IP address of the multiviewer (see [Configuring a Client PC](#), on page 11).
- 2 Open a Web browser window and type the multiviewer's management IP address in the address bar.
- 3 The Kaleido-X home 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.

The screenshot shows the Miranda XADMIN web interface. On the left is a navigation menu with options: System configuration (selected), Status and options, Access control, Upgrade, Restart / Shut down, and Technical support. Below the menu are 'Apply settings...' and 'Log out' buttons. The main content area is titled 'General' and contains several sections:

- System name:** A text input field containing 'K-IP'.
- Ethernet:**
 - Management IP address: 10.0.3.70
 - Network mask: 255.255.0.0
 - Default gateway: 10.0.0.1
 - Detected link mode: 100Mbps full-duplex
 - Configured link mode: Auto-negotiate (1000Mbps full-duplex)
- Data port:**
 - Enabled
 - IP address: 172.30.3.70
 - Network mask: 255.255.0.0
 - Detected link mode: 1000Mbps full-duplex
 - Configured link mode: Auto-negotiate (1000Mbps full-duplex)
- Date and Time:**
 - Current date and time: Thursday October 13, 2011 11:49:18 AM UTC-4
 - Date and time format: English (Canada)
 - Time zone: Canada/Eastern
 - NTP synchronization: Enabled Disabled
 - New date: October 13, 2011
 - New time: 11:49:18 AM

At the bottom, there is a message: 'Click Save to save your settings and continue.' followed by a 'Save' button.

- 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.

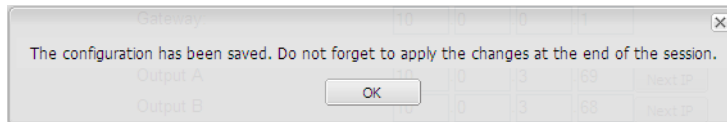
- 10 Under **Ethernet**, type the appropriate IP addresses, network masks, and gateway settings, and review the detected connection speeds and duplex modes for your Kaleido-IP's network adapters.

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.

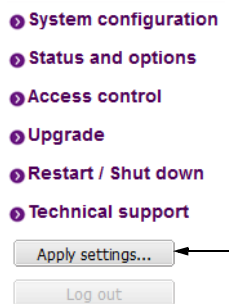
11 Click **Save**.

The new settings are saved locally.



12 Click **OK**.

13 The **Apply settings** button becomes available.



14 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.

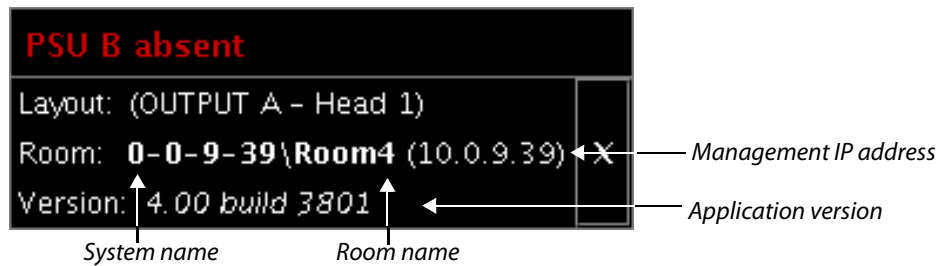
15 Click **OK**.

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.

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

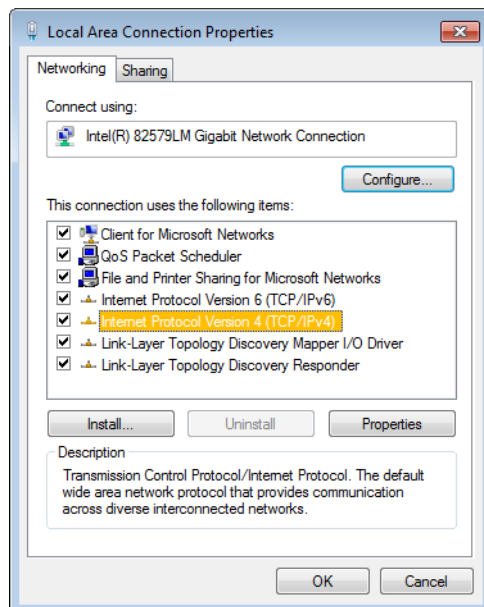
The client PC that you will use to communicate with the Kaleido-IP multiviewer (via XAdmin and XEdit) and the multiviewer's gigabit Ethernet port associated with the *management* network must have IP addresses within the same subnet. The following procedure applies to a typical Windows 7 system. For Windows XP, see [Changing an IP Address on Windows XP](#), on page 12.

Changing an IP Address on Windows 7

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

- 1 Click the **Start** button, and then click **Control Panel**. In the search box, type "adapter", and then, under **Network and Sharing Center**, click **View network connections**.
- 2 In **Network Connections**, right-click **Local Area Connection**, and then click **Properties**. If the system prompts you for an administrator password or confirmation, type the password or provide confirmation.

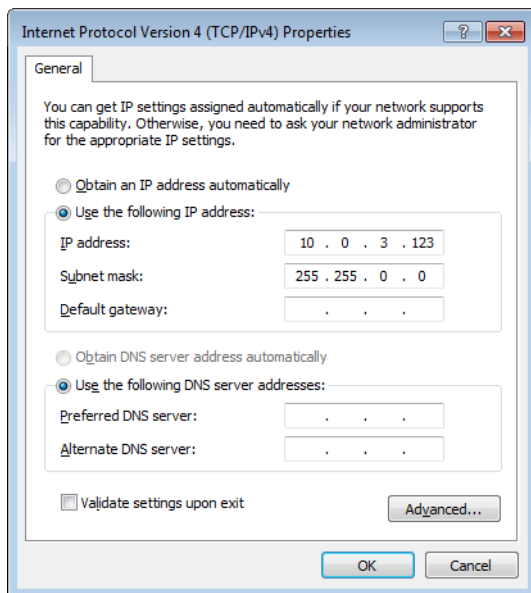
The **Local Area Connection Properties** window opens.



- 3 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.

- 4 On the **General** tab, click **Use the following IP address**.
- 5 Type an IP address in the same range as the default management IP address of the multiviewer. For example, if the IP address of the multiviewer 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 Kaleido-IP.



- 7 Click **OK**.
- 8 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 shortcut 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 default management IP address of the Kaleido-IP. For example, if the management IP address of the Kaleido-IP 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 Kaleido-IP.
- 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 Kaleido-X home page appears.



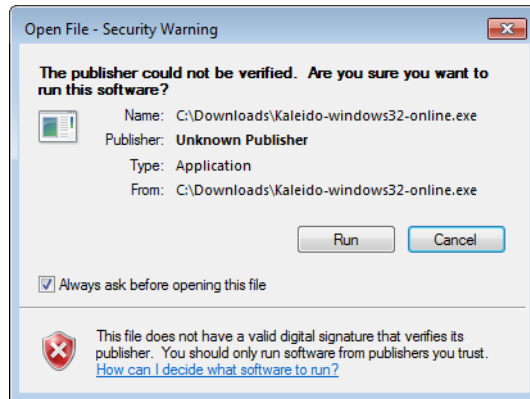
- 2 Click the **XEdit** button.

The browser prompts you to save an executable file to your hard drive (Kaleido-windows32-online.exe¹). 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.

A security warning appears.


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

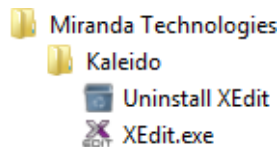


4 Click **Run**.

A window appears, showing the download and installation progress.



At the end of the installation process, launcher icons () are added to your desktop and to the Start menu (under **All Programs**).



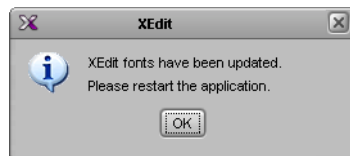
Once the installation has completed, the XEdit startup screen appears.



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

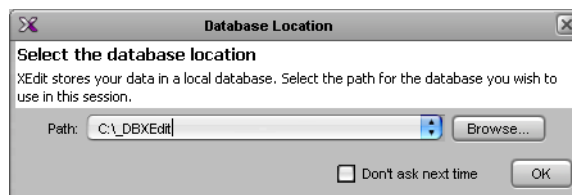
- Click **Allow access** to unblock the application.

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.

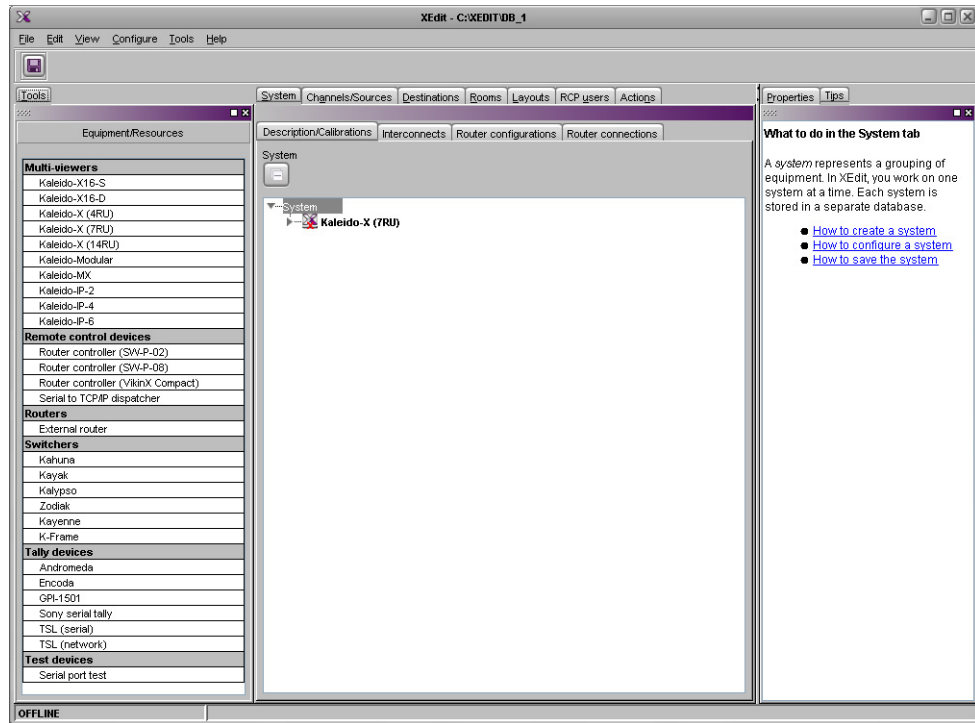



- Click **OK** to continue, and then open XEdit again, by using the launcher icon on your desktop (or on the Start menu).

5 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**.



6 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  icon that was added to your desktop (see [page 14](#)). 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.

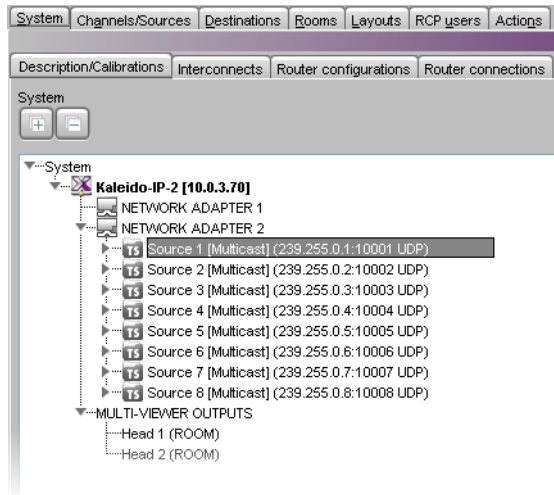
Configuring Transport Streams

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 19). Refer to "Managing Transport Streams in a Kaleido-IP System Representation" in the Kaleido-X User's Manual, for more information.

Modifying the Set of Predefined Streams

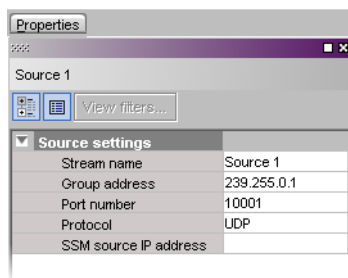
To modify settings for a multicast transport stream

- 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.

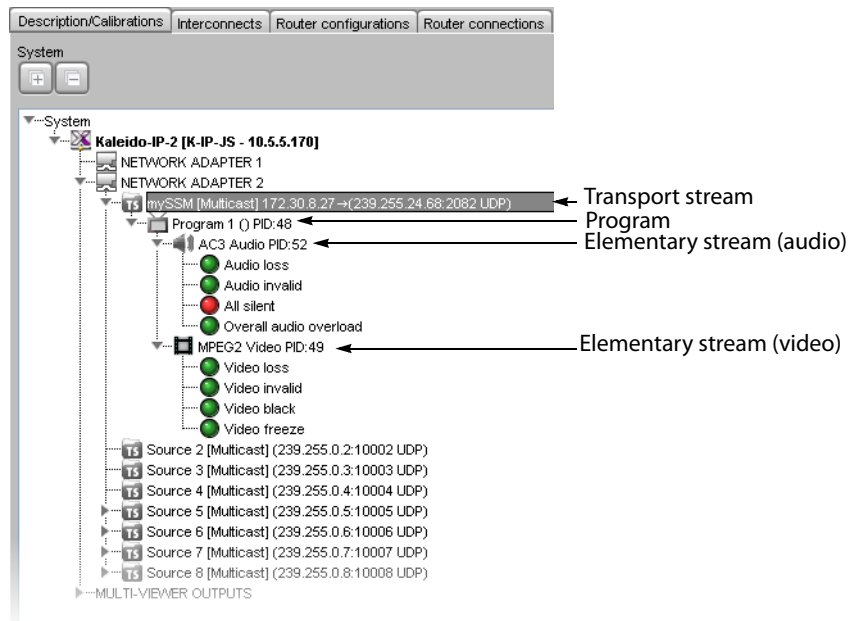


- 3 Replace the default stream name if desired, select the appropriate protocol (RTP, UDP), and enter the multicast group IP address, and port number associated with the actual transport stream you wish to monitor. In the case of an SSM (or SFM) stream, enter the IP address associated with the specific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

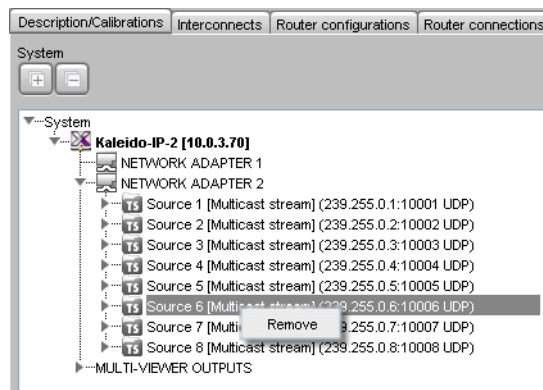
Notes

- 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

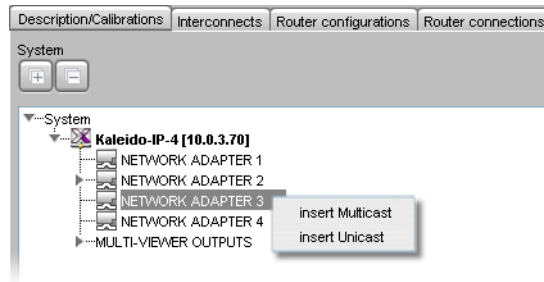
If you have connected your Kaleido-IP to more than one *data* network, and wish to monitor sources from Unicast streams, or more sources from Multicast streams, then you need to add transport streams to the basic system configuration.

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.

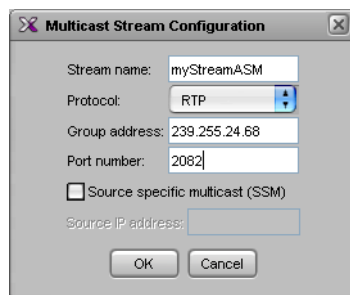
Notes

- 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.

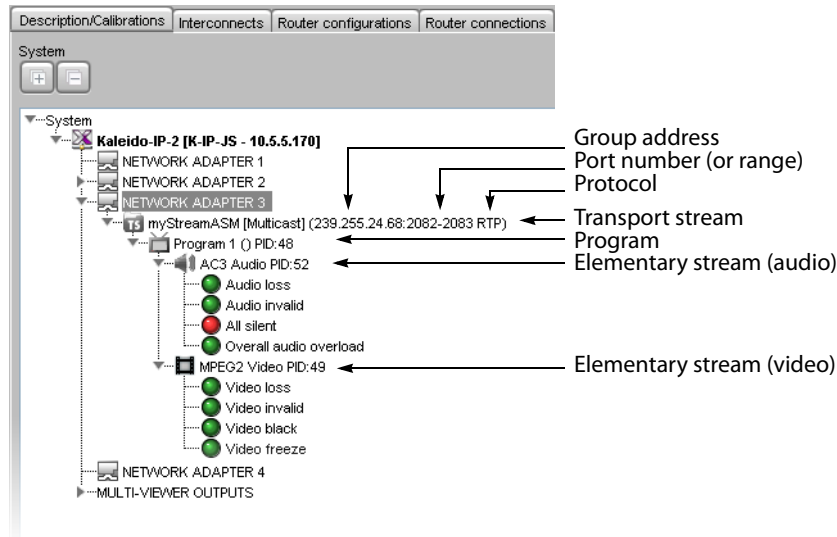
- 4 In the case of an SSM (or SFM) stream, select the **Source specific multicast (SSM)** check box, and then type the IP address associated with the specific source you wish to monitor in the **Source IP address** box.

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.

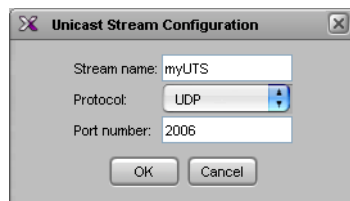
Adding a Unicast Transport Stream

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

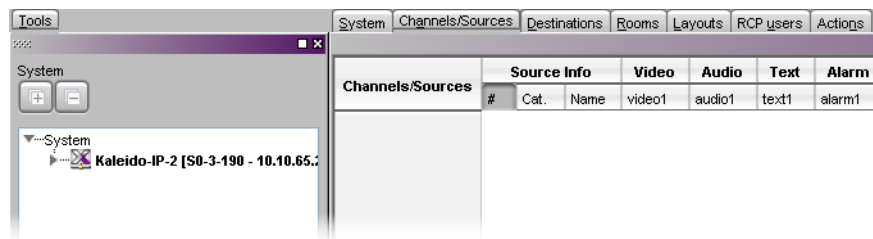
- The Kaleido-X Software supports UTF-8 encoded stream names. The only characters, which cannot be used in a stream name are: @ / \ ' and ".
- Verify the protocol you selected. Registering an RTP stream as UDP instead of RTP may result in the decoded video appearing jerky or accelerated on the monitor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

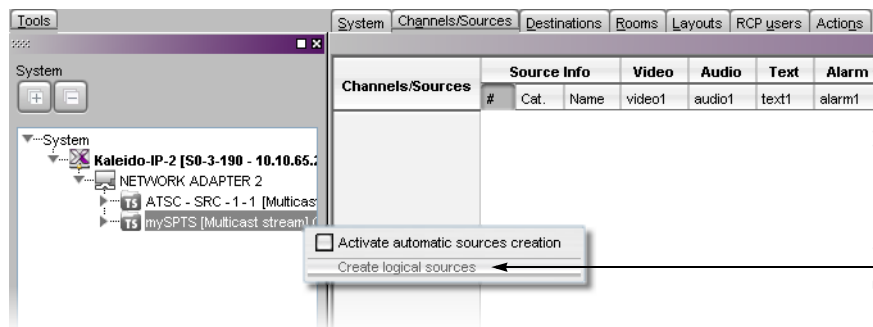
Defining Logical Sources

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 5).

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.)

Notes (continued)

- 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.

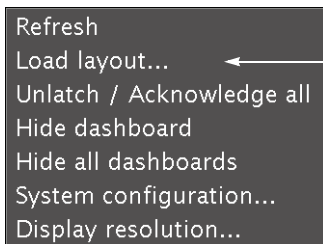
Loading a Layout

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 23).

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

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

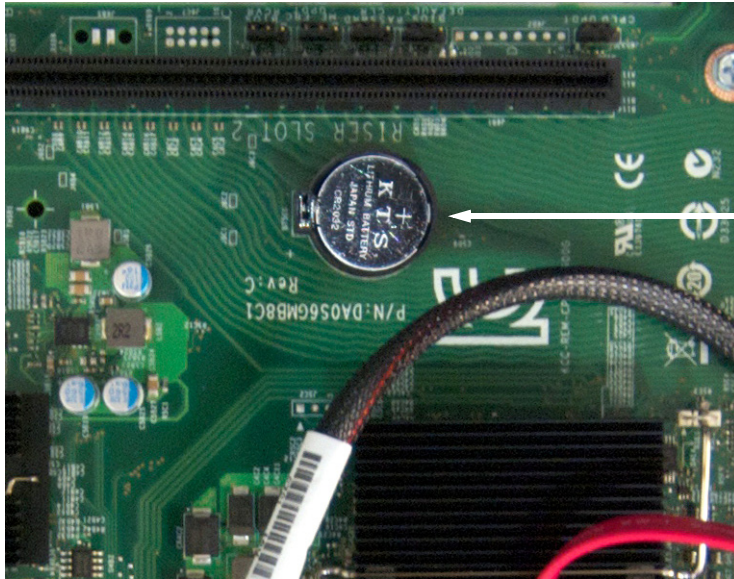
Remote Video Display Output via Streaming

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, please contact the Grass Valley Technical Support center nearest you:

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