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A **BELDEN** BRAND

XMEDIA SERVER

VX-MS-PRO-E4

Installation and Service Manual

M854-9002-100

2015-12-23

www.grassvalley.com

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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.



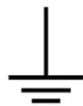
Indicates that the user, operator or service technician should refer to the product manuals for important operating, maintenance, or service instructions.



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 anti-static 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.

Cautions for LCD and TFT Displays



Excessive usage may harm your vision. Rest for 10 minutes for every 30 minutes of usage.

If the LCD or TFT glass is broken, handle glass fragments with care when disposing of them. If any fluid leaks out of a damaged glass cell, be careful not to get the liquid crystal fluid in your mouth or skin. If the liquid crystal touches your skin or clothes, wash it off immediately using soap and water. Never swallow the fluid. The toxicity is extremely low but caution should be exercised at all times.

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-UL-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 modules d'alimentation auto-adaptables, 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, débrancher 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*.

Précautions pour les écrans LCD et TFT



Regarder l'écran pendant une trop longue période de temps peut nuire à votre vision. Prenez une pause de 10 minutes, après 30 minutes d'utilisation.

Si l'écran LCD ou TFT est brisé, manipulez les fragments de verre avec précaution au moment de vous en débarrasser. veillez à ce que le cristal liquide n'entre pas en contact avec la peau ou la bouche. En cas de contact avec la peau ou les vêtements, laver immédiatement à l'eau savonneuse. Ne jamais ingérer le liquide. La toxicité est extrêmement faible, mais la prudence demeure de mise en tout temps.

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.

Safety of Laser Modules



This equipment incorporates modules containing Class 1 lasers. These modules are certified by the manufacturer to comply with:

- IEC/EN 60825-1 Safety of laser products
- IEC 60950-1 Safety of information technology equipment

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:

- EN 55022 Class A Radiated and conducted emissions
- EN 61000-3-2 Limits for harmonic current emissions
- EN 61000-3-3 Limitation of voltage fluctuations and flicker
- EN 61000-4-2 Electrostatic discharge immunity
- EN 61000-4-3 Radiated, radio-frequency, electromagnetic field immunity
- EN 61000-4-4 Electrical fast transient immunity
- EN 61000-4-5 Surge transient immunity
- EN 61000-4-6 Conducted disturbances immunity
- EN 61000-4-8 Power frequency magnetic field immunity
- EN 61000-4-11 Voltage dips, short interruptions and voltage variations immunity

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1 Introduction

The Xmedia Server (XMS) is the central graphical asset management server for Vertigo™ Suite channel branding and playout systems. The Xmedia Server allows all branding assets to be ingested once, centrally archived, and automatically moved to the desired graphics device using rule-based publishing.

This document provides an overview of the product's physical components and guides you through the procedures for installing and setting up of a new, factory-configured Xmedia Server unit.

Additional Vertigo Suite system documentation can be downloaded from the Documentation Library on the Grass Valley, A Belden Brand, website (www.grassvalley.com).

Overview of the Xmedia Server



This chapter provides information and details about the physical characteristics of the Xmedia Server, including system specifications, chassis components and software components.

Summary

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System specifications

The following table provides a summary of the product and technical specifications for the Xmedia Server.

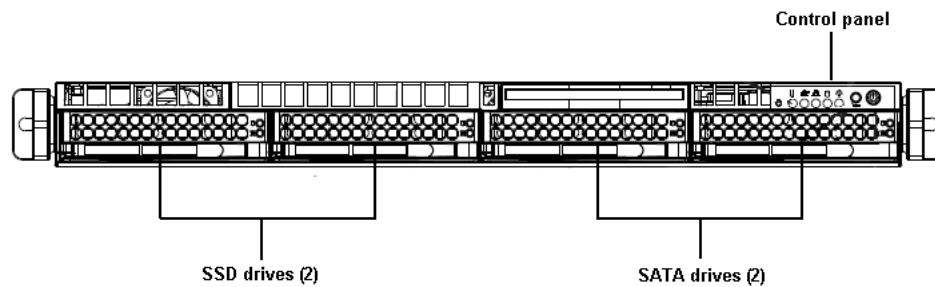
Chassis dimensions	Form: 1U rackmount chassis Height: 1.7" (27.8 mm) Width: 17.0" (432 mm) Depth: 25.6" (650 mm) Weight: 43 lbs. (19.5 kg)
Processors	Single Intel E5-2600 v3 Series processor
Memory	16 GB main memory (RAM)
Media storage	4 TB of usable RAID 1 storage
System disk storage	120 GB SSD RAID1
Power consumption	Number of power supplies: 2 AC input voltage: 100 - 240V, 50/60Hz Input current: 1.4A - 0.6A Input power: 150W max.
Temperature	Ambient temperature: 35° C (95 ° F) Note: This shall be the maximum internal temperature within the rack in which the Xmedia server is installed.
Operating system	Microsoft® Windows® Server 2012 R2 for Embedded Systems Standard edition

Factory-installed software	<ul style="list-style-type: none"> • Xmedia Server service • Data Server service • Xplorer • Work Order Management • Microsoft SQL Server 2014
Onboard controllers/ports	<ul style="list-style-type: none"> • USB 2.0 ports (2) • USB 3.0 ports (2) • Dedicated IPMI LAN port (1) • COM port (1) • VGA monitor port (1) • Gigabit Ethernet ports (2)

Front panel components





A removable bezel covers the front panel of the chassis and identifies the unit as an Xmedia Server.





Behind the bezel are the unit's front panel components, which includes two SSD drives, two SATA hard drives and a control panel with utility buttons and status monitoring LEDs.



Control panel buttons and status monitoring LEDs

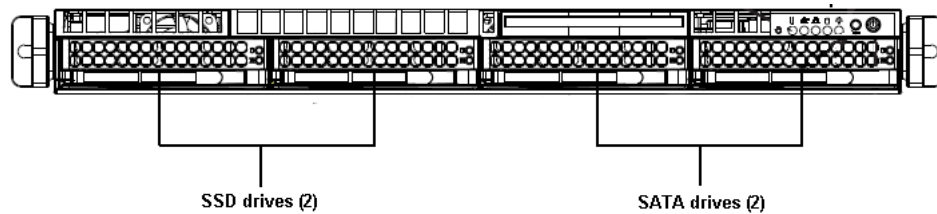
The upper right-hand corner of the Xmedia Server chassis features a control panel, which provides system monitoring LEDs, a unit identifier button, a Reset button and a main power control button.

	UID (Unit Identifier) button illuminates a blue light on the front and rear of the chassis for easy system location in large stack configurations.
	The Information LED alerts operators to specific system states: <ul style="list-style-type: none"> • Continuous red: Overheat condition • Fast blinking red: Fan failure • Slow blinking red: Power failure • Solid blue: Local UID has been activated • Blinking blue: IPMI - Remote UID is on
	Blinking green LED indicates network activity on LAN2 connection.
	Blinking green LED indicates network activity on LAN1 connection.

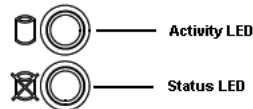
	Blinking amber LED indicates activity on the hard drive.
	The Power LED indicates whether the unit is powered on or off. <ul style="list-style-type: none"> • green: The unit is powered on • off: The unit is off, but standby power is still supplied to the unit.
	Pressing the Reset button reboots the Xmedia Server.
	The Power button is the main power switch used to power on / off the Xmedia Server unit. Note that turning off system power with this button removes the main power, but keeps standby power supplied to the system.

SSD and SATA drives

The front panel provides access to four drive carrier bays, which are populated by two SSD drives and two SATA hard drives.



Each drive carrier has an Activity LED and a Status LED.



The LED's color and illumination behavior indicates a specific status.

For example, the most commonly observed activities are:

- Activity LED > Green > Blinking = I/O activity
- Status LED > Red > Solid On = Failed drive

Please consult the *SuperServer® 5018R-WR Series User's Manual* for a complete listing of the drive carrier LED's behavior.

The drives are hot-swappable, meaning that a single drive can be replaced without having to stop the system or remove power from the unit (see [Replacing a hard drive](#), on page 20).

Managing the RAID arrays on the Xmedia Server

The **Intel Rapid Storage Technology (RST)** software is used to manage RAID arrays on the Xmedia Server. This software is pre-installed and running on the unit.

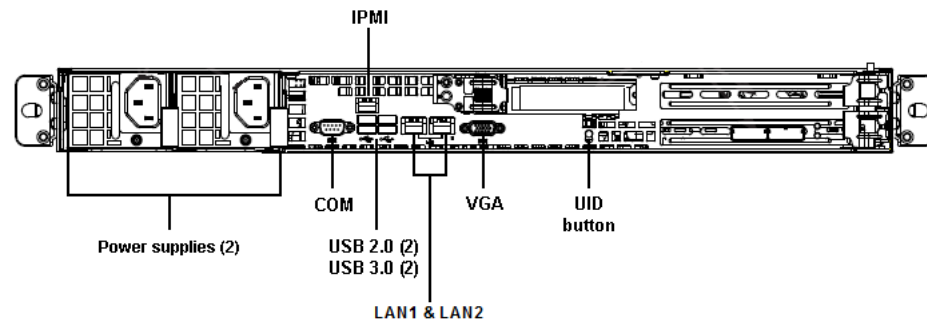
When operating properly, the Intel RST icon in the Windows system tray appears as a hard drive with a green check mark over it. If there is any problem with a RAID array, the same icon appears with a yellow explanation mark over the hard drive icon along with a pop-up dialog that explains the problem.

To more closely monitor and manage the RAID arrays, you can open the Intel RST software window by double clicking its icon in the Windows system tray.

For more information about using the Intel RST software, please click the **Help** icon on the Intel RST window.

Rear panel components

The rear panel of the Xmedia Server chassis provides access to two power supply units, as well as the server's input and output connectors.



Power supply modules

The rear panel provides access to two redundant 500 watt power supply modules. If either of the power supply module fail, the other module supports the full load and allows the system to operate without interruption. The Information LED on the control panel will blink slowly and remain so until the failed module has been replaced (see [Replacing a power supply module](#), on page 20).

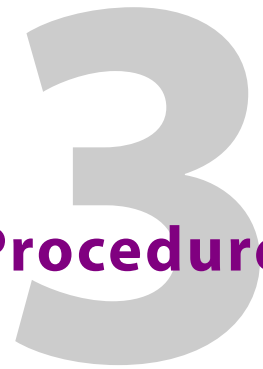
Software components

The Xmedia Server is factory configured to run Microsoft® Windows® Server 2012 R2 for Embedded Systems Standard edition as its operating system. Additional software applications and services that are factory installed include:

- **Xmedia Server Control Panel:** The Xmedia Server Control Panel is the user interface for configuring and controlling the Xmedia Server.
- **Data Server Control Panel:** The Data Server Control Panel is the user interface for configuring and controlling the Data Server. The Data Server is a service application that manages data coming from various feeds, provides live updates of data values when requested and distributes the data out to the appropriate recipients.
- **Microsoft SQL Server 2014:** The Xmedia Server uses a Microsoft SQL Server database to store asset details, categories, work order processing data, publish processing data, and other relational information and data.
- **Work Order Management:** The work order workflow module fully integrates into the Vertigo Suite and is used for requesting, completing, tracking and approving graphics work orders. See the *Xmedia Server Configuration Guide* for more information.

- **Xplorer:** The **Xplorer** application is a graphical content management system for viewing and managing the asset and file contents of the Xmedia Server and the devices to which the XMS has published assets. See the ***Xplorer User Manual*** for more information.

Installation and Start-up Procedures



This chapter provides information about the installation and setup of the Xmedia Server.

IMPORTANT - Please read this chapter in its entirety before beginning the installation procedure.

Summary

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Network integration guidelines

We recommend that the Xmedia Server be installed on a dedicated LAN, using the existing security infrastructure. A qualified system administrator should verify that the setup adheres to your organization’s security standards. Specific recommendations regarding proper virus strategies, that won’t compromise performance, are provided in this chapter.

As the centralized server for the Vertigo Suite of products, you can connect to the Xmedia Server from any client PC on the network. All connections used by the Vertigo Suite applications are over TCP and UDP.

The following sections provide guidelines for integrating the Xmedia Server into your network:

- [Xmedia Server virus protection guidelines](#), on page 9
- [Xmedia Server network ports](#), on page 11

Xmedia Server virus protection guidelines

Proper network setup and anti-virus software are key components of any virus protection strategy. As such, we highly recommend that you adhere to specific rules outlined in this section to avoid adversely affecting your production equipment’s on-air performance. Our virus protection strategy, relies on anti-virus software protection combined with the following:

- **Network Setup and Configuration** – A best case scenario for configuring your network for maximum protection against infection.
- **Standard Anti-Virus Protection** – Standard anti-virus practices for machines and applications not directly used for putting material on-air.

- **Institution of Policies** – Policies that all users must follow in order to avoid introducing infected files into the system.

Network setup and configuration

Ideally, the Xmedia Server and other non-critical components should be running anti-virus software, while the Vertigo XGs reside on a separate network. In such a case, the Vertigo XGs would not be running anti-virus software, which leaves them potentially vulnerable. Therefore, to provide proper protection and minimizing potential performance issues, we recommend that restricted access be available by means of switch. We also recommend that all other Vertigo equipment be kept on a separate network isolated from other machines in the facility.

Standard anti-virus protection

While critical for the on-air production process, many of the Vertigo Suite products do not put material directly on air. We therefore recommend that these products be configured with the same high level of anti-virus protection used for other machines on the broadcaster's network.

The following Vertigo Suite products should be configured with the highest level of anti-virus protection:

- Xmedia Server
- Data Server
- Xstudio
- Xbuilder

Institution of policies

While the guidelines outlined in the previous sections are critical to your broadcast network's protection from infection, end users must accept some responsibility. We therefore recommend that your IT department enforce the following policies:

- Any machine that will be attached to the same network as the Xmedia Server must undergo a complete system scan.
- Any external file storage devices or external media used to copy or run files on the Xmedia Server must undergo a complete scan.
- Material to be used in 24/7 operation should not be copied to the Xmedia Server. Instead, it should be transferred only during maintenance periods.
- Do not download Internet files directly onto the Xmedia Server.

Xmedia Server network ports

Users can connect to the Xmedia Server from any client PC on their network. All of connections used by the Vertigo Suite applications are over TCP and UDP, using the configurable range of ports listed below:

Description	Port #	Protocol
Client application connection (Primary connection)	14050	TCP
Client application connection (Back channel)	14051	TCP
Publish connection (Back channel)	14052	TCP
DataServer primary connection	10460	TCP
XPublish Agent publishing port	15000	TCP
MOS low port	10540	TCP
MOS high port	10541	TCP
Discovery port	15098	UDP
Discovery port	15099	UDP
Device connections (client apps to device)	4000	TCP

Installing the Xmedia Server chassis in a rack

Included in the shipping package is a rack mounting kit, which contains the rail assemblies and screws required to mount the Xmedia Server chassis in an equipment rack.

Complete instructions for installing the Xmedia Server chassis in a rack are provided in the "Server Installation" section of the *SuperServer 5018R-WR Series User's Manual*.



IMPORTANT - Server Chassis Installation

- Xmedia Server units are intended to be installed in restricted locations by qualified personnel.
 - Due to the heavy weight of the unit, the rack in which the Xmedia Server will be installed should be anchored to the building's structure.
 - All health and safety regulations and precautions must be observed as identified in [Important Safeguards and Notices](#), on page iii and in the *SuperServer 5018R-WR Series User's Manual*.
-

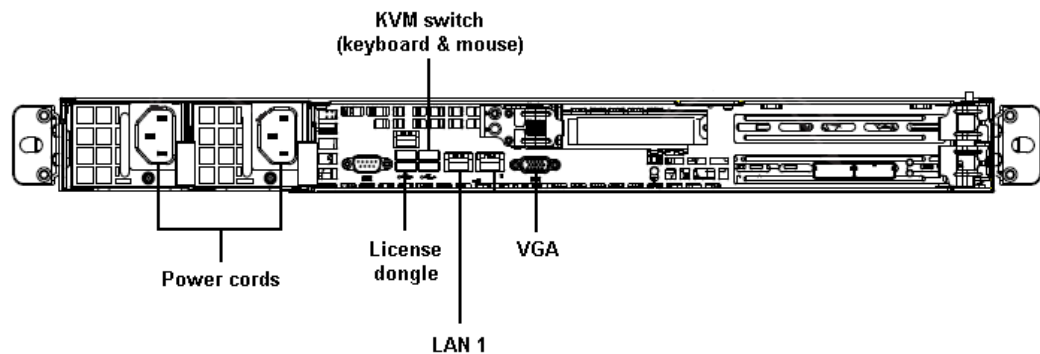
Cabling the Xmedia Server

Once the Xmedia Server chassis is securely mounted in an equipment rack, you can make the required connections to the rear panel connectors.



WARNING - Power cables

Use the provided or designated power cables. Using any other cables and adapters could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL or CSA -certified cables (that have UL/CSA shown on the code) for any other electrical devices, other than products designated by Grass Valley.



To make the required cable connections to the Xmedia Server:

- 1 Insert the two AC power cords into the unit's power supply sockets.
- 2 Connect the unit's power cords to a power output.
- 3 Insert a KVM switch cable for the mouse and keyboard into one of the USB ports.
- 4 Insert a graphics monitor cable in the VGA port.
- 5 Insert the Vertigo license dongle into one of the USB ports.
- 6 Insert an Ethernet cable that is connected to the LAN into the LAN1 port.

Starting the Xmedia Server

Once the Xmedia Server unit is properly racked and cabled, you can power up the unit by pressing the **Power** button on the front control panel.

The Power LED on the front control panel illuminates (green) to indicate that the unit is powered on.

It is normal for the connected graphics monitor to remain blank for up to one minute after the pressing the Power button, so please wait patiently.

Upon startup, the Xmedia Server automatically logs on as *vertigo-user*.

Configuring Windows and system settings

When the Xmedia Server is powered up for the first time, the local user is configured to automatically log on to Windows.

Since factory-configured units are initially configured with generic Windows and system settings, you must configure some settings to ensure that they are appropriate for your geographic location and local network configuration.


To configure the Windows and system settings:

- 1 **Open the Clock, Language and Region window and set the clock, date, time zone and regional settings to correspond with your local geography.**
Also ensure that the following settings are applied:
 - **Enable the Automatically Adjust clock for Daylight Savings time setting in the Time Zone Setting window.**
 - **If the server is part of a workgroup, disable the Synchronize Time with... setting on the Data and Time window's Internet tab.**
- 2 **Change the default DHCP assigned IP address to a static IP address using the Internet Protocol Version 4 (TCP/IPv4) Properties window.**
 - a **Open the Windows Control Panel and select the Network and Internet category.**
 - b **Click Network and Sharing Center.**
 - c **Click the Change adapter settings link in the left pane.**
 - d **Right-click the Ethernet icon and select Properties.**
 - e **From the connections list, select Internet Protocol Version 4 (TCP/IPv4) and then click the Properties button.**
 - f **Enable the Use the following IP address radio button and complete the IP address information.**
 - g **Enable the Use the following DNS server addresses radio button and complete the DNS server address information.**
 - h **Click OK.**
 - i **Close the Ethernet Properties dialog, but leave the Network Connections dialog open for the next step.**
- 3 **Change the order of the network protocol bindings.**
 - a **In the Network Connections dialog, select the Advanced > Advanced Settings menu option to open the Advanced Settings dialog.**
 - b **Select the Adapters and Bindings tab.**
 - c **Move the adapter that you want to be the active connection to the top of the Connections list.**
 - d **Ensure that IPv6 options are disabled in the Bindings for Local Area Connections 4 list.**
 - e **Click OK.**
- 4 **Set the server's Hostname and Domain membership using the System Properties window.**
 - a **Right-click the This PC desktop icon and select the Properties.**

- b In the Computer name, domain, and workgroup setting section, click Change settings.
- c Select the Computer Name tab and click the Change button.
- d Complete the Computer name field and/or the domain or workgroup fields.
- e Click OK.

For Domain membership, you may need to consult with your IT department to obtain the user name and password for a user that has permission to join the server to the domain.

Note: You may be prompted to restart the computer. Do not restart at this time. Continue this procedure and only reboot as instructed in step 8 of these instructions.

- 5 Add the Domain User as Local Administrator using the Computer Management window.
 - a Open the Server Manager by clicking the Server Manager shortcut  in the lower-left Desktop tray.
 - b From the Server Manager's Dashboard, select Tools > Computer Management.
 - c In the Computer Management window, click System Tools > Local Users and Groups > Groups.
 - d Right-click the Administrators group and select Add to Group.
 - e In the Administrators Properties dialog, click Add.
 - f In the Select Users dialog, under Enter the object names to select, type the name of the user account that you want to add to the group.
 - g Click OK.
- 6 Optional - Configure Windows to log on to the domain user account automatically.
 - a Click Start and type `Regedit.exe` in the search field.
 - b Select the `Regedit.exe` program, which opens the Registry Editor window.
 - c Navigate to:
`HKEY_Local_Machine>SOFTWARE>Microsoft>Windows NT>CurrentVersion>Winlogon`
 - d Edit the following string values: (Value Name, Value Data)
 - `AutoAdminLogon, 1`
 - `DefaultUserName, <username>`
 - `DefaultPassword, <password>`
 - `DefaultDomainName, <DomainName>`

The `DefaultDomainName` should be the hostname for workgroups and the Windows domain for a domain.

Note: If these values do not exist, create them as follows:

- Right-click in the right-hand pane and select New>String Value.
 - Enter the name.
 - Double-click this new value and enter the value data as listed above.
 - Click OK.
-

- 7 Disable the Windows Firewall by enabling the Turn Off Windows Firewall setting for all network locations listed in the Windows System and Security panel.

- 8 Restart the server to apply all of the changes.
- 9 Once the system has restarted, verify that the clock, language and region settings are correct. If they are still incorrect, make the appropriate changes before proceeding to the next step.

Configuring the Xmedia Server

The **Xmedia Server Control Panel** features contains the parameters and settings related to the configuration and functioning of the Xmedia Server. Complete instructions for configuring the Xmedia Server are provided in the *Xmedia Server Configuration Guide*, which can be downloaded from the Documentation Library on the Grass Valley website.

4

Servicing the Xmedia Server

This chapter provides information about service procedures that can be performed on-site in cases where a faulty component must be replaced.



WARNING All health and safety regulations and precautions must be observed as identified in [Important Safeguards and Notices](#), on page iii.

IMPORTANT: To ensure performance and preserve support and warranty agreements, only Grass Valley approved replacement parts must be used when servicing the Xmedia Server. Contact Grass Valley's Technical Support for precise part specifications and additional servicing guidance.

Summary

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Removing power from the system

Before performing a service or maintenance task, we recommend using the following procedure to ensure that power has been removed from the system.

To completely remove power from the system:

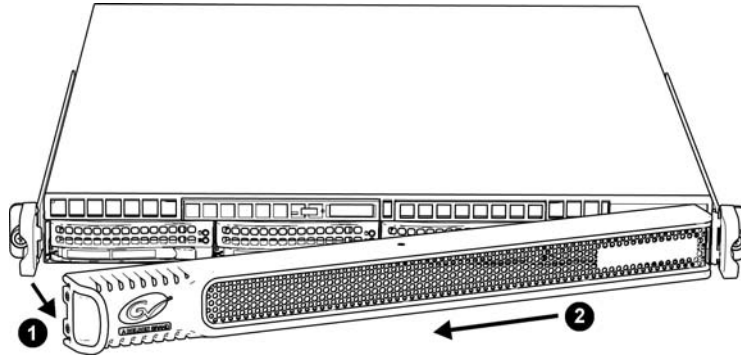
- 1 Use the operating system's **Shutdown** command to power down the system.
- 2 Disconnect the unit's two AC power cords from their power source (i.e. wall socket or power bar).
- 3 Remove the AC power cords from the two power supply modules on the rear of the unit.

Removing and replacing the bezel

The Xmedia Server has a front bezel which protects the drives and other front panel components from accidental removal or damage. The bezel can be completely removed from the unit to expose the unit's front panel components.

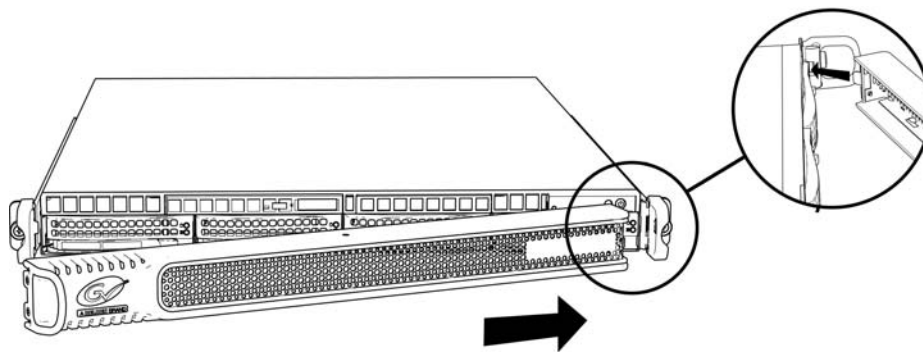
To remove the front bezel:

- 1 Pull the left handle of the bezel slightly forward, away from the unit so that the bezel is angled.
- 2 Pull the right handle of the bezel to the left to dislodge the bezel tab and completely detach the bezel from the chassis.

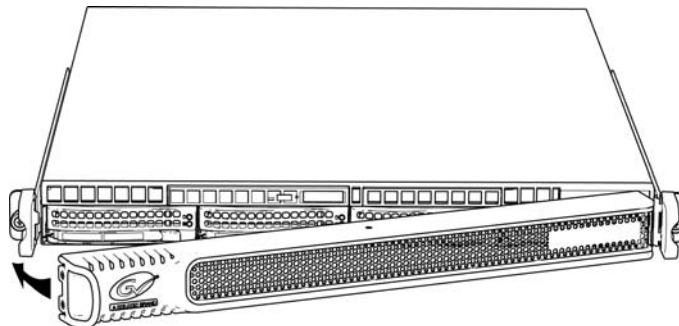


To install a new bezel:

- 1 Insert the bezel's right-side tab into the bracket on the front of the chassis.



- 2 Push the bezel's left handle back toward the unit until the bezel clips onto the chassis.



Removing the chassis cover

You can access the internal components of the Xmedia Server by removing the cover on the top side of the chassis.



WARNING - Power Disconnection

The system must be disconnected from all sources of power and the power cord removed from the power supply module(s) before accessing the chassis interior to install or remove system components. This unit has more than one power supply connection. All connections must be removed to de-energize the unit.

To remove the top cover from the chassis:

- 1 Press the two release buttons along the front of the cover.
- 2 Slide the cover towards the rear.
- 3 Lift the cover upwards to completely remove it from the chassis.



Replacing a hard drive

The front panel provides access to four drive carrier bays, which are populated by two SSD drives and two SATA hard drives.

The drives are hot swappable, meaning that you do not have to halt and shutdown the unit when replacing a single drive.

Complete instructions for removing and replacing a drive are provided in the “Hard Drive Installation” section of the *SuperServer 5018R-WR Series User's Manual*.

Replacing a power supply module

The rear panel provides access to two redundant 500 watt power supply modules. They automatically sense the input voltage between 100v to 240v, and operate at that voltage. An amber light on the power supply is illuminated when the power is switched off. An green light indicates that the power supply is operating.

If either of the power supply modules fail, the other module supports the full load and allows the system to operate without interruption. The unit's **Information** LED, located in the front control panel, blinks slowly in red when a power supply failure is identified and turns solid red if an overheat condition is sensed.

Complete instructions for removing and replacing a power supply are provided in the “Power Supply” section of the *SuperServer 5018R-WR Series User's Manual*.

Replacing a system fan

A series of six fans provide the cooling for the system by circulating the air through the inside of the chassis.

If a fan fails, the system continues to operate and the remaining fans ramp up to compensate for the faulty fan. If the system detects that a fan is inoperable, the **Information** light on the unit's front control panel begins to blink quickly in red. In such a case, we recommend replacing the fan at your earliest convenience.



WARNING - Hot swap fan

The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

Complete instructions for removing and replacing a fan are provided in the “System Fans” section of the *SuperServer 5018R-WR Series User's Manual*.



Grass Valley Technical Support

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

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

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

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