DOMINION® KX III G2 Frequently Asked Questions

QUESTIONS	ANSWERS
Dominion KX III G2 Overview	
What is the Dominion KX III G2?	Dominion KX III G2 is a digital KVM (keyboard, video, mouse) switch that provides four or eight IT administrators with Java-free access and control of up to 64 servers over the network with BIOS-level functionality. Dominion KX III G2 is completely hardware- and OS-independent; users can troubleshoot and reconfigure servers even when servers are down. At the rack, Dominion KX III G2 provides the same functionality, convenience, and space and cost savings as traditional analog KVM switches. However, Dominion KX III G2 also integrates the industry's highest performing KVM-over-IP technology, allowing multiple administrators to access servers from PC, laptop, the User Station, as well as from Apple iPhone® and iPad®. True serial-over-IP access for up to eight serial devices is available with the new Dominion Serial Access Modules [DSAM].
How is KX III G2 different from KX III?	The KX III G2 is the next generation version of the KX III. Featuring a modern hardware design with increased computing power and storage, the KX III G2 provides KVM-over-IP access for IT administration, as well as substantially higher performance IP access for broadcast and real-time applications. KX III G2 includes virtually all KX III features with the following advancements: The KX III G2's sophisticated video processing engine supports a broad range of applications from traditional computer applications to the most dynamic broadcast applications requiring 60 frames-per-second 1920x1200 video, 24-bit color, 50 ms latency, digital audio, dual monitors and DVI, HDMI, DisplayPort and VGA video. All KX III G2 models feature a tiering port to connect multiple Dominion KX III G2 switches together and access the attached servers. Up to 1024 servers can be accessed via a consolidated port list. NOTE: Tiering will be included in follow up release.
Can the Dominion KX III G2 be rack mounted?	Yes. The Dominion KX III G2 ships standard with 19" rack mount brackets. It can also be reverse rack mounted so the server ports face forward.
How large is the Dominion KX III G2?	The Dominion KX III G2 64 port models are 2U high and are 13.3" deep.

Remote Access	
How many users can remotely access servers on the KX III G2?	Dominion KX III G2 models offer remote connections for up to eight users per user channel to simultaneously access and control a unique target server, up to an overall maximum of 64 users across the eight channels.
Can I remotely access servers from my iPhone or iPad?	Yes. Users can access servers connected to the KX III G2 using their iPhone or iPad directly.
Can two people look at the same server at the same time?	Yes, up to eight people can access and control any single server at the same time.
Can two people access the same server, one remotely and one from the local port?	Yes, the local port is completely independent of the remote ports. The local port can access the same server using the PC-Share feature.
In order to access Dominion KX III G2 from a laptop or PC, what hardware, software or network configuration is required?	Because Dominion KX III G2 is completely web-accessible, it doesn't require customers to install proprietary software on laptops and PCs used for access. Dominion KX III G2 can be accessed through major Web browsers, including: Internet Explorer®, Firefox®, Safari and Chrome. Dominion KX III G2 can be accessed on Windows, Linux and Mac® desktops, via Raritan's Active KVM Windows Client, the new Java-free HTML KVM Client and the Java™-based Virtual KVM Client™. Dominion KX III G2 administrators can also perform remote management (set passwords and security, rename servers, change IP address, etc.) using a convenient browser-based interface.
Is Java required?	The KX III G2's KVM Client Software does sophisticated video processing which was originally built on the powerful Java platform. Non-Java KVM Clients are now available for Windows (AKC), Apple iOS and Linux/Mac (HKC). The HTML-based HKC provides basic KVM-over-IP access, runs in the browser and does not require a separate applet or browser plugin.
Does the KX III G2 support a User Station?	Yes. The User Station is a self-contained user appliance that provides users with high-performance IP access to remote servers and workstations. Connecting via IP to the Dominion KX III G2 switches, the User Station features exceptional video performance, supporting two 1080p (1920x1080) streaming video sessions at up to 30 frames-per-second with 50ms of latency. The User Station is similar in concept to other thin clients, with enhancements for simultaneous access and control of eight or more servers, dual monitors, audio and virtual media.

Where is the User Station best utilized?	It is perfect for labs, studios, control rooms, offices and data centers in a wide range of industries, including broadcast, government, military, energy, transportation, and manufacturing. The User Station uses standard Cat5 cabling and Ethernet/IP technology. It provides flexible LAN/WAN access over the corporate network or a separate LAN. The User Station can sit on a desk, be mounted in a standard 19" rack or VESA-mounted on the back of a monitor. It's ideal for replacing outdated analog matrix switches, replace/supplement expensive broadcast systems or anywhere hassle-free IP access is needed. Larger customers can use CommandCenter Secure Gateway with the User Station for centralized access to hundreds of servers.
How do I access servers connected to Dominion KX III G2 if the network ever becomes unavailable?	You can access servers at the rack or via Ethernet based modem. Note that the KX III G2 can be configured with two IP addresses for redundant connection to two different networks.
Do you have a Windows KVM Client?	Yes. We have a native .NET Windows Client called the Raritan Active KVM Client (AKC) for use on Windows systems. This KVM Client does not utilize Java.
Do you have a non-Windows KVM Client?	Yes, there are two non-windows clients: the Java-based VKC and the Java-free HKC. Please refer to Raritan's Dominion KX III G2 and KVM Client User Guides for more information.
Do you have a HTML5 KVM Client?	Yes, the new HTML KVM Client runs in the browser and does not use a downloaded applet or a browser plugin.
Do your KVM Clients have multi-language support?	Yes. The Dominion KX III G2's remote HTML User Interface and the AKC and VKC Clients support the Japanese, Simplified Chinese and Traditional Chinese languages. This is available stand-alone as well as through CC-SG.
How can I minimize my use of Java?	The Active KVM Client (AKC), which runs on Windows platforms, does not use Java. AKC is a full-featured KVM Client with the same features as the Java-based VKC KVM Client. Launch AKC via /akc. A new HTML KVM Client is now available for Linux and Mac platforms. For customers looking to minimize their use of Java, this KVM Client runs in the browser and does not utilize Java or .NET. The HTML KVM Client supports virtual media and audio output. For Java-free administration of the KX III G2 (no server access), aunch via IP Address>/admin.

Do your KVM Clients support dual LCD monitors?	Yes, both AKC and VKC support it. For customers wishing to enhance their productivity by using multiple LCD monitors on their desktops, the Dominion KX III G2 can launch KVM sessions to multiple monitors, either in full-screen or standard modes.
Do you support servers with dual video cards?	Yes, servers with dual video cards are supported via AKC and VKC with an extended desktop configuration available to the remote user.
Universal Virtual Media	
Which Dominion KX III G2 models support virtual media?	All Dominion KX III G2 models support virtual media. It is available stand-alone and through CommandCenter® Secure Gateway, Raritan's centralized management appliance.
Which types of virtual media does the Dominion KX III G2 support?	Dominion KX III G2 supports the following types of media: internal and USB-connected CD/DVD drives, USB mass storage devices, PC hard drives, and ISO images.
What is required for virtual media?	A Dominion KX III G2 virtual media CIM is required. There are two VGA-based CIMs: the D2CIM-VUSB and the D2CIM-DVUSB. The D2CIM-VUSB has a single USB connector and is for customers who will use virtual media at the OS level. The D2CIM-DVUSB has dual USB connectors and should be purchased by customers who wish to utilize virtual media at the BIOS level. The D2CIM-DVUSB is also required for smart card authentication, tiering/cascading and digital audio. Both support virtual media sessions to target servers supporting the USB 2.0 interface. Available in economical 32 and 64 quantity CIM packages, these CIMs support Absolute Mouse Synchronization™ as well as remote firmware updates. Our CIMs have traditionally supported analog VGA video. Three new dual virtual media CIMs support digital video formats, including DVI, HDMI and DisplayPort. These are the D2CIM-DVUSB-DVI, D2CIM-DVUSB-HDMI and D2CIM-DVUSB-DP.
Is virtual media secure?	Yes. Virtual media sessions are secured using 256-bit AES, 128-bit AES or 128-bit RC4 encryption.
Which KVM Clients support virtual media?	The existing VKC and AKC KVM Clients support the full range of virtual media options. The new HKC supports remote and local ISO images.

Does virtual media really support audio?	Yes. Audio playback and recording to a server connected to the Dominion KX III G2 is supported. You can listen to sounds and audio playing on a remote server in the data center using the speakers connected to your desktop PC or laptop. You can also record on the remote server using a microphone connected to your PC or laptop. The D2CIM-DVUSB dual virtual media CIM is required.
What is a USB profile?	Certain servers require a specifically configured USB interface for USB-based services such as virtual media. The USB profile tailors the KX III G2's USB interface to the server to accommodate these server-specific characteristics.
Why would I use a USB profile?	USB profiles are most often required at the BIOS level where there may not be full support for the USB specification when accessing virtual media drives. However, profiles are sometimes used at the OS level, for example, for mouse synchronization for Macintosh and Linux servers.
How is a USB profile used?	Individual ports or groups of ports can be configured by the administrator to use a specific USB profile in the KX III G2's port configuration page. A USB profile can also be selected in the KX III G2 Client when required. See the user guide for more information.
Do I always need to set a USB profile when I use virtual media?	No. In many cases, the default USB profile is sufficient when using virtual media at the OS level or operating at the BIOS level without accessing virtual media.
What profiles are available? Where can I find more information?	Consult the user guide for the available profiles and for more information.
How is bandwidth used in KVM-over-IP systems?	Dominion KX III G2 offers KVM-over-IP technology — enhanced video processing that provides flexible, high-performance video, efficient use of bandwidth and anytime/anywhere access via LAN, WAN or Internet. The Dominion KX III G2 digitizes compresses and encrypts the keyboard, video and mouse signals from the target server and transmits IP packets over the IP network to the remote KVM client to create the remote session to the user. The KX III G2 provides an at the-rack experience based on its industry-leading video processing algorithms. Screen changes, i.e. video accounts for the majority of the bandwidth used, and keyboard and mouse activity are significantly less. It is important to note that bandwidth is only used when the user is active. The amount of bandwidth used is based on the amount of change to the server's video display screen.

How is bandwidth used in KVM-over-IP systems? (Continued)	If there are no changes to the video — the user is not interacting with the server — there is generally little, or no bandwidth used. If the user moves the mouse or types a character, then there is a small amount of bandwidth used. If the display is running a complex screen saver or playing a video, then there can be a larger amount of bandwidth used.
How does bandwidth affect KVM-over-IP performance?	In general, there is a trade-off between bandwidth and performance. The more bandwidth available, the better performance can be. In limited bandwidth environments, performance can degrade. The Dominion KX III G2 has been optimized to provide strong performance in a wide variety of environments.
What factors affect bandwidth?	There are many factors that determine how much bandwidth will be used. The primary factor, noted above, is the amount of change in the target server's video display. This is dependent on the user's task and actions. Other factors include the server's video resolution, networking speed and characteristics, client PC resources and video card noise.
How much bandwidth does KX III G2 use for common tasks?	Bandwidth primarily depends on the user's tasks and actions. The more the server's video screen changes, the more bandwidth is utilized.
How do I optimize performance and bandwidth?	KX III G2 provides a variety of settings in our remote clients for the user to optimize bandwidth and performance. The default settings will provide an at-the-rack level of performance in standard LAN/WAN environments with economical use of bandwidth. The Connection Properties dialog box can be used to manage the tradeoff between video quality and low bandwidth. With three simple settings you can operate in a wide variety of environments. **Optimize For:** Use this setting to configure the video engine for standard IT/ computer applications or for video/broadcast applications. **Compression:** Move the slider to the left for the highest possible video quality and to the right for the least amount of bandwidth. **Noise Filter:** In most cases, the default setting will work best, however you can move to the left for more responsive video and to the right for lower bandwidth. For slow Internet connections, the use of 8-bit color or lower bit depths can reduce bandwidth and improve performance.

How do I optimize performance and bandwidth? *(Continued)*	Other tips to decrease bandwidth include: ▪ Use a solid desktop background instead of a complex image ▪ Disable screensavers ▪ Use a lower video resolution on the target server ▪ Uncheck the "Show window contents while dragging" option in Windows ▪ Use simple images, themes and desktops (e.g. Windows Classic)
I want to connect over the Internet. What type of performance should I expect?	It depends on the bandwidth and latency of the internet connection between your remote client and the KX III G2. With a cable modem or high-speed DSL connection, your performance can be very similar to a LAN/WAN connection. For lower speed links, use the suggestions above to improve performance.
I have a high bandwidth environment. How can I optimize performance?	The default settings will work well. You can move the Connection Properties settings to the left for increased video performance.
What is the maximum remote (over IP) video resolution supported?	The Dominion KX III G2 is a KVM-over-IP switch that supports full high definition (HD) remote video resolution — 1920x1200 at frame rates up to 60 frames per second with digital audio. In addition, popular widescreen formats are supported, including 1920x1080, 1920x1200, 1600x1200, 1680x1050 and 1440x900, so remote users can work with today's higher resolution monitors.
How much bandwidth is used for audio?	It depends on the type of audio format used, but to listen to CD quality audio, approximately 1.5 Mbps is used.
I'm in the broadcast industry, how can I minimize the latency of the KVM connection?	Using the User Station, the latency of the KVM-over-IP connection has been measured at 50 milliseconds.
What about servers with DVI ports?	Servers with DVI ports that support DVI-A (analog), and DVI-I (integrated analog and digital) can use Raritan's ADVI-VGA inexpensive, passive adapter to convert the server's DVI port to a VGA plug that can be connected to a KX III G2 CIM's VGA plug. Servers with DVI ports that support DVI-I or DVI-D (digital) can use the D2CIM-DVUSB-DVI CIM.

Ethernet and IP Networking	
What is the speed of Dominion KX III G2's Ethernet interfaces?	Dominion KX III G2 supports gigabit as well as 10/100 Ethernet. KX III G2 supports two 10/100/1000 speed Ethernet interfaces, with configurable speed and duplex settings (either auto detected or manually set) and optionally with independent IP addresses.
Can I access Dominion KX III G2 over a wireless connection?	Yes. Dominion KX III G2 not only uses standard Ethernet, but also very conservative bandwidth with very high-quality video. Thus, if a wireless client has network connectivity to a Dominion KX III G2, servers can be configured and managed at the BIOS level wirelessly.
Does the Dominion KX III G2 offer dual gigabit Ethernet ports to provide redundant failover or load balancing?	Yes. Dominion KX III G2 features dual gigabit Ethernet ports that can be configured to provide redundant failover capabilities or to simultaneously connect to two different networks. If configured for failover, should the primary Ethernet port (or the switch/router to which it is connected) fail, Dominion KX III G2 will failover to the secondary network port with the same IP address — ensuring that server operations are not disrupted. The KX III G2 can also be configured with two different IP addresses to connect to dual networks.
Can I use Dominion KX III G2 with a VPN?	Yes. Dominion KX III G2 uses standard Internet Protocol (IP) technologies from Layer 1 through Layer 4. Traffic can be easily tunneled through standard VPNs.
Can I use KX III G2 with a proxy server?	Yes. KX III G2 can be used with a SOCKS proxy server, assuming the remote client PC is configured appropriately. Contact the user documentation or online help for more information.
How many TCP ports must be open on my firewall in order to enable network access to Dominion KX III G2?	Two ports are required: TCP port 5000 to discover other Dominion devices and for communication between Raritan devices and CC-SG; and, of course, port 443 for HTTPS communication.
Are these ports configurable?	Yes. Dominion KX III G2's TCP ports are configurable by the administrator.
Can Dominion KX III G2 be used with Citrix®?	Dominion KX III G2 may work with remote access products like Citrix if configured appropriately, but Raritan cannot guarantee it will work with acceptable performance. Customers should realize that products like Citrix utilize video redirection technologies similar in concept to digital KVM switches so that two KVM over-IP technologies are being used simultaneously.
Can the Dominion KX III G2 use DHCP?	DHCP addressing can be used out of the box; however, Raritan recommends fixed addressing since the Dominion KX III G2 is an infrastructure device and can be accessed and administered more effectively with a fixed IP address.

I'm having problems connecting to the Dominion KX III G2 over my IP network. What could be the problem?	The Dominion KX III G2 relies on your LAN/WAN network. Some possible problems include: ▪ **Ethernet auto-negotiation:** On some networks, 10/100 auto-negotiation does not work properly, and the Dominion KX III G2 unit must be set to 100 Mb/full duplex or the appropriate choice for its network. ▪ **Duplicate IP address:** If the IP address of the Dominion KX III G2 is the same as another device, network connectivity may be inconsistent. ▪ **Port 5000 conflicts:** If another device is using port 5000, the Dominion KX III G2 default port must be changed (or the other device must be changed). ▪ When changing the IP address of a Dominion KX III G2, or swapping in a new Dominion KX III G2, sufficient time must be allowed for its IP and MAC addresses to be known throughout the Layer 2 and Layer 3 networks.
IPv6 Networking	
What is IPv6?	IPv6 is the acronym for Internet Protocol Version 6. IPv6 is becoming the IP protocol standard which will replace the current IP Version 4 (IPv4) protocol. IPv6 addresses a number of problems in IPv4, such as the limited number of IPv4 addresses. It also improves IPv4 in areas such as routing and network autoconfiguration. IPv6 is expected to gradually replace IPv4, with the two coexisting for a number of years. IPv6 treats one of the largest headaches of an IP network from the administrator's point of view – configuring and maintaining an IP network.
Why does Dominion KX III G2 support IPv6 networking?	U.S. government agencies and the Department of Defense are now mandated to purchase IPv6-compatible products. In addition, many enterprises and foreign countries, such as China, will be transitioning to IPv6 over the next several years.
What is "dual stack" and why is it required?	Dual stack is the ability to simultaneously support both IPv4 and IPv6 protocols. Given the gradual transition from IPv4 to IPv6, dual stack is a fundamental requirement for IPv6 support.
How do I enable IPv6 on the Dominion KX III G2?	Use the "Network Settings" page, available from the "Device Settings" tab. Enable IPv6 addressing and choose manual or auto-configuration. Consult the user guide for more information.

What if I have an external server with an IPv6 address that I want to use with my Dominion KX III G2?	The Dominion KX III G2 can access external servers via their IPv6 addresses, for example, an SNMP manager, syslog server or LDAP server. Using the Dominion KX III G2's dual-stack architecture, these external servers can be accessed via: (1) an IPv4 address, (2) IPv6 address or (3) hostname. So, the Dominion KX III G2 supports the mixed IPv4/IPv6 environment many customers will have.
What if my network doesn't support IPv6?	The Dominion KX III G2's default networking is set at the factory for IPv4 only. When you are ready to use IPv6, then follow the above instructions to enable IPv4/IPv6 dual-stack operation.
Where can I get more information on IPv6?	See www.ipv6.org for general information on IPv6. The Dominion KX III G2 user guide describes the Dominion KX III G2's support for IPv6.
Servers	
Does Dominion KX III G2 depend on a Windows server to operate?	Absolutely not. Because users depend on the KVM infrastructure to always be available in any scenario whatsoever (as they will likely need to use the KVM infrastructure to fix problems), Dominion KX III G2 is designed to be completely independent from any external server.
What should I do to prepare a server for connection to Dominion KX III G2?	Set the mouse parameter options to provide users with the best mouse synchronization and turn off screensavers and any power management features that affect screen display.
What about mouse synchronization?	In the past, KVM-over-IP mouse synchronization was a frustrating experience. The Dominion KX III G2's Absolute Mouse Synchronization provides for a tightly synchronized mouse without requiring server mouse setting changes on Windows and Apple® Mac servers. For other servers, the Intelligent Mouse mode or the speedy, single mouse mode can be used to avoid changing the server mouse settings.
What comes in the Dominion KX III G2 box?	The following is included: (1) Dominion KX III G2-unit, (2) standard 19" rack mount brackets, (3) localized AC line cord and (4) set of 4 rubber feet (for desktop use).
Blade Servers	
Can I connect blade servers to the Dominion KX III G2?	No. Dominion KX III G2 no longer supports popular blade server models from the leading blade server manufacturers: HP®, IBM®, Dell® and Cisco®.
Does the Dominion KSX II or the KX II-101 support blade servers?	At this time, these products do not support blade servers.

Installation	
Besides the unit itself, what do I need to order from Raritan to install Dominion KX III G2?	Each server that connects to Dominion KX III G2 requires a Dominion computer interface module (CIM), an adapter (server dongle) that connects directly to the keyboard, video and mouse ports of the server.
Which kind of Cat5 cabling should be used in my installation?	Dominion KX III G2 can use any standard UTP (unshielded twisted pair) cabling, whether Cat5, Cat5e or Cat6. Often in our manuals and marketing literature, Raritan will simply say "Cat5" cabling for short. In actuality, any brand UTP cable will suffice for Dominion KX III G2.
Which types of servers and PCs can be connected to Dominion KX III G2?	Dominion KX III G2 is completely vendor agnostic. Any server with standards compliant keyboard, video and mouse ports can be connected. In addition, servers with serial ports can be controlled using the P2CIM-SER CIM.
How do I connect servers to Dominion KX III G2?	Servers that connect to the Dominion KX III G2 require a Dominion CIM, which connects directly to the keyboard, video and mouse ports of the server. Then, connect each CIM to Dominion KX III G2 using standard UTP (unshielded twisted pair) cable such as Cat5, Cat5e or Cat6.
How far can my servers be from Dominion KX III G2?	In general, servers can be up to 150 feet (45 m) away from Dominion KX III G2, depending on the type of server. (See user manual or help on the Raritan website.) For the D2CIM-VUSB CIMs that supports virtual media and Absolute Mouse Synchronization, a 100-foot (30 m) range is recommended.
Some operating systems lock up when I disconnect a keyboard or mouse during operation. What prevents servers connected to Dominion KX III G2 from locking up when I switch away from them?	Each Dominion computer interface module (DCIM) dongle acts as a virtual keyboard and mouse to the server to which it is connected. This technology is called KME (keyboard/mouse emulation). Raritan's KME technology is data center grade, battle-tested and far more reliable than that found in lower-end KVM switches: it incorporates decades of experience and has been deployed to millions of servers worldwide.
Are there any agents that must be installed on servers connected to Dominion KX III G2?	Servers connected to Dominion KX III G2 do not require any software agents to be installed because Dominion KX III G2 connects directly to the servers' physical keyboard, video and mouse ports.
How many servers can be connected to each Dominion KX III G2 unit?	Dominion KX III G2 models support up to 64 server ports in a 2U chassis. This is the industry's highest digital KVM switch port density.

What happens if I disconnect a server from Dominion KX III G2 and reconnect it to another Dominion KX III G2 unit, or connect it to a different port on the same Dominion KX III G2 unit?	Dominion KX III G2 will automatically update the server port names when servers are moved from port to port. Furthermore, this automatic update does not just affect the local access port, but propagates to all remote clients and the optional CommandCenter Secure Gateway management appliance.
Serial-over-IP Access	
How do I connect a serial (RS-232) device, such as a Cisco router or a headless server, to Dominion KX III G2?	With the Dominion Serial Access Modules [DSAM], users can connect to up to 8 serial devices with Java-free serial access. The 2 and 4 port DSAM connect to the KX III G2 switch's USB ports. They provide "true serial access" with copy and paste capability for up to 8 simultaneous connections to serial devices like LAN switches, routers and Linux/Unix servers. However, if there are many serially controlled devices, we recommend the use of Raritan's new Dominion SX II line of secure console servers. Dominion SX II offers the most advanced serial functionality with emergency access through telephone or cellular modem. This SX II is easy to use, configure and manage, and can be completely integrated via Raritan's CommandCenter.
What type of serial connection does the DSAM provide?	The DSAM provides a "true" serial connection, similar to that of a Dominion SX II connection. Copy and paste is supported, as well as a port history. The DSAM serial connection does not have all of the advanced features of the full-featured Dominion SX II. Check the KX III G2 documentation for more information on the DSAMs.
How many DSAM's can I connect to a KX III G2 switch?	A maximum of two DSAMs (6 or 8 ports) can be connected to the KX III G2 switch. As the USB connections on the KX III G2 switch are fixed, there are limits on the total number of USB devices that can be connected. For example, if you connect two 4-port DSAMs to the KX III G2, then you cannot connect other USB devices. Check the documentation for more information.
How does the DSAM compare to the Paragon serial CIM (P2CIM-SER)?	The P2CIM-SER is a single port serial CIM, when connected to a KX III port, that provides a simulated serial session (not a true serial connection). The P2CIM-SER is an older device that requires power from the server or from an adapter. It also uses up a KVM port on the KX III and requires an IP session to operate. This CIM is not supported on DKX III G2. The DSAM is superior to the P2CIM-SER in almost every way. For example, the DSAM provides a true serial connection, supports higher baud rates, does not require power from the server (or adapter) and does not use up a KVM port or IP session.

How does the DSAM compare to other vendor's serial CIMs?	Like other vendors, the DSAM provides a true serial connection. The DSAM's main advantages are: (1) the DSAM doesn't require power from a device or power adapter, (2) the DSAM does not use up expensive KVM ports, and (3) the DSAM supports auto DTE/DTC so it doesn't require rollover cables.
Local Port	
Can I access my servers directly from the rack?	Yes. At the rack, Dominion KX III G2 functions just like a traditional KVM switch — allowing control of up to 64 servers using a single keyboard, monitor and mouse. You can switch between servers by the browser-based user interface or via a hotkey. Raritan's T1700G2-LED & T1900-LED keyboard drawers can be used for at-the-rack access to the KX III G2's DVI-based local port.
Can I consolidate the local ports of multiple KX III G2s?	Yes. You can connect the tiering ports of multiple KX III G2 switches to another KX III G2 using the "tiering" feature of the KX III G2. You can then access the servers connected to your KX III G2 devices from a single point in the data center via a consolidated port list. NOTE: Tiering coming soon for Dominion KX III G2.
When I am using the local port, do I prevent other users from accessing servers remotely?	No. The Dominion KX III G2 local port has a completely independent access path to the servers. This means a user can access servers locally at the rack – without compromising the number of users that access the rack remotely at the same time.
Can I use a USB keyboard or mouse at the local port?	Yes. The Dominion KX III G2 has USB keyboard and mouse ports on the local port. Dominion KX III G2 switches do not have PS/2 local ports. Customers with PS/2 keyboards and mice should utilize a PS/2 to USB adapter.
Is there an onscreen display (OSD) for local, at-the-rack access?	Yes, but Dominion KX III G2's at-the-rack access goes way beyond conventional OSDs. Featuring the industry's first browser-based DVI interface for at-the-rack access, Dominion KX III G2's local port uses the same interface for local and remote access. Moreover, most administrative functions are available at the rack.
How do I select between servers while using the local port?	The local port displays the connected servers using the same user interface as the remote client. Users connect to a server with a simple click of the mouse or via a hotkey.

How do I ensure that only authorized users can access servers from the local port?	Users attempting to use the local port must pass the same level of authentication as those accessing remotely. This means that: ▪ If the Dominion KX III G2 is configured to interact with an external RADIUS, LDAP or Active Directory® server, users attempting to access the local port will authenticate against the same server. ▪ If the external authentication servers are unavailable, Dominion KX III G2 fails over to its own internal authentication database. Dominion KX III G2 has its own stand-alone authentication, enabling instant, out-of-the-box installation.
Extended Local Port	
What is the extended local port?	The Dominion KX2-808, KX2-832 and KX2-864 featured an extended local port. The corresponding Dominion KX III G2 models do not have an extended local port. Instead, all KX III G2 models have a tiering port. To extend the KX III G2's digital local port, you can use the Raritan Cat5 Reach DVI product for local and remote access up to 500 meters.
Dual Power Supplies	
Does Dominion KX III G2 have a dual-power option?	Yes. All Dominion KX III G2 models come equipped with dual AC inputs and power supplies with automatic failover. Should one of the power inputs or power supplies fail, then the KX III G2 will automatically switch to the other.
Does the power supply used by Dominion KX III G2 automatically detect voltage settings?	Yes. Dominion KX III G2's power supply can be used in AC voltage ranges from 100–240 volts, at 50–60 Hz.
If a power supply or input fails, will I be notified?	The Dominion KX III G2 front panel LED will notify the user of a power failure. An entry will also be sent to the audit log and displayed on the KX remote client user interface. If configured by the administrator, then SNMP or syslog events will be generated.
Intelligent Power Distribution Unit (PDU) Control	
What type of remote power control capabilities does Dominion KX III G2 offer?	Raritan's intelligent PDUs can be connected to the Dominion KX III G2 to provide power control of target servers and other equipment. For servers, after a simple one-time configuration step, just click on the server name to power on, off or to recycle a hung server.

What type of power strips does Dominion KX III G2 support?	Raritan's Dominion PX™ and Remote Power Control (RPC) power strips. These come in many outlet, connector and amp variations. Note that you should not connect the PM series of power strips to the Dominion KX III G2 as these power strips do not provide outlet-level switching.
How many PDUs can be connected to a Dominion KX III G2?	Up to eight PDUs can be connected to a Dominion KX III G2 device.
How do I connect the PDU to the Dominion KX III G2?	Dominion KX III G2 manages the PDU via SNMP.
Does Dominion KX III G2 support servers with multiple power supplies?	Yes. Dominion KX III G2 can be easily configured to support servers with multiple power supplies connected to multiple power strips. Four power supplies can be connected per target server.
Does the Dominion KX III G2 display statistics and measurements from the PDU?	No. Only generic PDU information such as PDU model, serial number, firmware version and IP address is displayed.
Does remote power control require any special configuration of attached servers?	Some servers ship with default BIOS settings such that the server does not automatically restart after losing and regaining power. For these servers, see the server's documentation to change this setting.
What happens when I recycle power to a server?	Note that this is the physical equivalent of unplugging the server from the AC power line and reinserting the plug.
How do I physically connect multiple Dominion KX III G2 devices together into one solution?	To physically connect multiple KX III G2 devices together for consolidated local access, you can connect the tiering ports of multiple tiered (cascaded) KX III G2 switches to a base KX III G2 using the tiering ports of the KX III G2. You can then access the servers connected to your KX III G2 devices from a single point in the data center via a consolidated port list. The tiering port must be used to connect the tiered KX III G2 switch to the base switch. *NOTE: Tiering will follow shortly after initial release.* Access via the consolidated port list is available in the data center or even from a remote PC. All servers connected to the tiered KX III G2's can be accessed via a hierarchical port list or via search (with wildcards). Two levels of tiering are supported; up to 1024 devices can be accessed in a tiered configuration. Remote power control is also supported.

How do I physically connect multiple Dominion KX III G2 devices together into one solution? *(Continued)*	Virtual media, smart card and blade server access via tiered access will be supported in a future release. Of course, these features are available when accessed via a standard remote connection. While remote IP server access via the consolidated port list is available as a convenience, remote accessing a tiered server from CommandCenter or via the KX III G2 the server is connected to, is recommended for optimal performance.
Do I have to physically connect Dominion KX III G2 devices together?	Multiple Dominion KX III G2 units do not need to be physically connected together. Instead, each Dominion KX III G2 unit connects to the network, and they automatically work together as a single solution if deployed with Raritan's CommandCenter Secure Gateway (CC-SG) management appliance. CC-SG acts as a single access point for remote access and management. CC-SG offers a significant set of convenient tools, such as consolidated configuration, consolidated firmware update and a single authentication and authorization database. Customers using CC-SG for centralized remote access can make good use of the KX III G2's tiering (cascading) feature to consolidate the local ports of multiple KX III G2 switches and locally access up to 1024 servers from a single console when in the data center.
Is CC-SG required?	For customers wanting stand-alone usage (without a central management system), multiple Dominion KX III G2 units still interoperate and scale together via the IP network. Multiple Dominion KX III G2 switches can be accessed from the KX III G2 web-based user interface.
Can I connect an existing analog KVM switch to Dominion KX III G2?	Yes. Analog KVM switches can be connected to one of Dominion KX III G2's server ports. Simply use an USB computer interface module (CIM) and attach it to the user ports of the existing analog KVM switch. Analog KVM switches supporting hotkey-based switching on their local ports can be tiered to a Dominion KX III G2 switch and switched via a consolidated port list, both remotely and in the data center. Please note that analog KVM switches vary in their specifications and Raritan cannot guarantee the interoperability of any particular third-party analog KVM switch. Contact Raritan technical support for further information.

Computer Interface Modules (CIMs)	
What type of video is supported by your CIMs?	Our CIMs have traditionally supported analog VGA video. We can also support digital video formats, including USB, DVI, HDMI and DisplayPort. These are the D2CIM-DVUSB-DVI, D2CIM-DVUSB-HDMI and D2CIM-DVUSB-DP.
Can I use computer interface modules (CIMs) from Paragon, Raritan's analog matrix KVM switch, with Dominion KX III G2?	No. Please check the Raritan Dominion KX III G2 Release Notes on the website for the latest list of certified CIMs.
Does Dominion KX III G2 support Paragon Dual CIMs?	No. Please check the Raritan Dominion KX III G2 Release Notes on the website for the latest list of certified CIMs.
Security	
Is the Dominion KX III G2 FIPS 140-2 Certified?	The Dominion KX III G2 uses an embedded FIPS 140-2 validated cryptographic module running on a Linux platform per FIPS 140-2 implementation guidelines. This cryptographic module is used for encryption of KVM session traffic consisting of video, keyboard, mouse, virtual media and smart card data.
What kind of encryption does Dominion KX III G2 use?	Dominion KX III G2 uses industry-standard (and extremely secure) 256-bit AES, 128-bit AES or 128-bit encryption, both in its SSL communications as well as its own data stream. No data is transmitted between remote clients and Dominion KX III G2 that is not completely secured by encryption.
Does Dominion KX III G2 support AES encryption as recommended by the U.S. government's NIST and FIPS standards?	Yes. The Dominion KX III G2 utilizes the Advanced Encryption Standard (AES) for added security. 256-bit and 128-bit AES is available. The weaker RC4 encryption is no longer supported. AES is a U.S. government-approved cryptographic algorithm that is recommended by the National Institute of Standards and Technology (NIST) in the FIPS Standard 197.
Does Dominion KX III G2 allow encryption of video data? Or does it only encrypt keyboard and mouse data?	Unlike competing solutions, which only encrypt keyboard and mouse data, Dominion KX III G2 does not compromise security — it allows encryption of keyboard, mouse, video, and virtual media data.

How does Dominion KX III G2 integrate with external authentication servers such as Active Directory, RADIUS or LDAP?	Through a very simple configuration, Dominion KX III G2 can be set to forward all authentication requests to an external server such as LDAP, Active Directory or RADIUS. For each authenticated user, Dominion KX III G2 receives from the authentication server the user group to which that user belongs. Dominion KX III G2 then determines the user's access permissions depending on the user group to which he or she belongs.
How are usernames and passwords stored?	Should Dominion KX III G2's internal authentication capabilities be used, all sensitive information, such as usernames and passwords, is stored in an encrypted format. Literally no one, including Raritan technical support or product engineering departments, can retrieve those usernames and passwords.
Does Dominion KX III G2 support strong passwords?	Yes. The Dominion KX III G2 has administrator-configurable, strong password checking to ensure that user-created passwords meet corporate and/or government standards and are resistant to brute force hacking.
Can I upload my own digital certificate to the Dominion KX III G2?	Yes. Customers can upload self-signed or certificate authority-provided digital certificates to the Dominion KX III G2 for enhanced authentication and secure communication. We recommend this for fewer browser messages and higher security.
Does the KX III G2 support a configurable security banner?	Yes. For government, military and other security-conscious customers requiring a security message before user login, the KX III G2 can display a user-configurable banner message and optionally require acceptance.
My security policy does not allow the use of standard TCP port numbers. Can I change them?	Yes. For customers wishing to avoid the standard TCP/IP port numbers to increase security, the Dominion KX III G2 allows the administrator to configure alternate port numbers.
Is the SSL protocol supported?	SSLv1, SSLv2 and SSLv3 are disabled for security reasons. The more secure TLS protocol is used. Furthermore, the KX III G2 administrator has control over which TLS versions can be used.
Is two factor authentication supported to log into the KX III G2?	Yes, RSA SecureID is supported via RADIUS for two factor authentication to log into the Dominion KX III G2. This is also supported for CommandCenter.
Smart Cards and CAC Authentication	
Does Dominion KX III G2 support smart card and CAC authentication?	Yes. Smart cards and DoD common access cards (CAC) authentication to target servers is supported.

What is CAC?	Mandated by Homeland Security Presidential Directive 12 (HSPD-12), CAC is a type of smart card created by the U.S. government and used by U.S. military and government staff. The CAC card is a multi-technology, multipurpose card; the goal is to have a single identification card. For more information, see the FIPS 201 standards.
Which KX III G2 models support smart cards/CAC?	All Dominion KX III G2 models are supported. The Dominion KSX II and KX II-101 do not currently support smart cards and CAC.
Do enterprise and SMB customers use smart cards, too?	Yes. However, the most aggressive deployment of smart cards is in the U.S. federal government.
Which CIMs support smart card/CAC?	The D2CIM-DVUSB, D2CIM-DVUSB-DVI, D2CIM-DVUSB-HDMI and D2CIM-DVUSB-DP are the required CIMs.
Which smart card readers are supported?	The required reader standards are USB CCID and PC/SC. Consult the user documentation for a list of certified readers and more information.
Can smart card/CAC authentication work on the local port and via CommandCenter?	Yes. Smart card/CAC authentication works on both the local port and via CommandCenter. For the local port, connect a compatible smart card reader to the USB port of the Dominion KX III G2.
Manageability	
Can Dominion KX III G2 be remotely managed and configured via web browser?	Yes. Dominion KX III G2 can be completely configured remotely via web browser. Besides the initial setting of Dominion KX III G2's IP address, everything about the solution can be completely set up over the network. (In fact, using a crossover Ethernet cable and Dominion KX III G2's default IP address, you can even configure the initial settings via web browser.) Java is not required for KX III G2 administration if launched using /admin.
Does the KX III G2 have an API or SDK?	Yes, an optional Dominion KX III G2 Software Development Kit (SDK) and Application Programming Interface (API) is available for customers wanting integration with their internal systems, customized KVM-over-IP access or want an automated KVM Client session. The new KX III G2 SDK/API, running on Windows using Microsoft's .NET framework, is available free of charge on our support site.

Can I backup and restore Dominion KX III G2's configuration?	Yes. Dominion KX III G2's device and user configurations can be completely backed up for later restoration in the event of a catastrophe. Dominion KX III G2's backup and restore functionality can be used remotely over the network, or through your web browser.
What auditing or logging does Dominion KX III G2 offer?	For complete accountability, Dominion KX III G2 logs all major user events with a date and time stamp. For instance, reported events include: user login, user logout, user access of a particular server, unsuccessful login, configuration changes, etc.
Can Dominion KX III G2 integrate with syslog?	Yes. In addition to Dominion KX III G2's own internal logging, Dominion KX III G2 can send all logged events to a centralized syslog server.
Can Dominion KX III G2 integrate with SNMP?	Yes. In addition to Dominion KX III G2's own internal logging, Dominion KX III G2 can send SNMP traps to SNMP management systems. SNMP v2 and v3 are supported.
Can KX III G2 send events via email?	Yes, the KX III G2 can send events via email to an administrator. The administrator can configure the specific events to be sent by email.
Can an administrator log off a user?	Yes, administrators can view which users are logged into which ports and can log off a user from a specific port or from the device if required.
Can Dominion KX III G2's internal clock be synchronized with a timeserver?	Yes. Dominion KX III G2 supports the industry-standard NTP protocol for synchronization with either a corporate timeserver, or with any public timeserver (assuming that outbound NTP requests are allowed through the corporate firewall).
Documentation and Support	
Where do I find documentation on the Dominion KX III G2?	The documentation is available at raritan.com on the KX III G2 firmware and documentation page. The documentation is listed by firmware release.
What documentation is available?	A Quick Setup Guide, User Guide and a KVM and Serial Client Guide, as well as Release Notes and other information are available.
Is online help available?	Yes. Online help is available at raritan.com with the documentation and from the KX III G2 user interface.
What CIM should I use for a particular server?	Consult the CIM Guide available with the KX III G2 documentation. Note that DVI, HDMI, DisplayPort and USBC video standards are supported with digital video CIMs.
How long is the hardware warranty for the KX III G2?	The Dominion KX III G2 comes with a standard two-year warranty, which can be extended to 5 years of warranty coverage.

Miscellaneous	
What is Dominion KX III G2's default IP address?	DHCP
What is Dominion KX III G2's default username and default password?	The Dominion KX III G2's default username and default password are admin/raritan (all lower case). However, for the highest level of security, the Dominion KX III G2 forces the administrator to change the Dominion KX III G2 default administrative username and default password when the unit is first booted up.
I changed and subsequently forgot Dominion KX III G2's administrative password; can you retrieve it for me?	Dominion KX III G2 contains a hardware reset button that can be used to factory reset the device, which will reset the administrative password on the device to the default password.
How do I migrate from the Dominion KX III to Dominion KX III G2?	In general, KX III customers can continue to use their existing switches for many years. As their data centers expand, customers can purchase and use the new KX III G2 models. Raritan's centralized management appliance, CommandCenter Secure Gateway (CC-SG) supports KX II, KX III and KX III G2 switches seamlessly.
Will my existing KX III CIMs work with Dominion KX III G2 switches?	Yes. Existing KX II CIMs will work with the Dominion KX III G2 switch. Please check the Raritan Dominion KX III G2 Release Notes on the website for the latest list of certified CIMs.

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