Raritan Dominion® KX3-216

EXPANDED VIDEO PROCESSOR CAPABILITY SUPPORTS 1080P VIDEO AT 30 FRAMES PER SECOND

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InfoWorld Magazine
March 2016

Pros

- Works for Linux, Mac or Windows.
- VGA, Serial, DVI, HDMI, DisplayPort and dual screen support.
- FIPs mode, and CAC card support.
- Dual USB DCIM for USB media support on BIOS or older systems.
- Full 1080p and 30fps support and variable frame rate with sliders.
- Bi-Directional Audio over the KVM supported.
- Local console is DVI and MUCH faster than the old KX2 series.
- Rack kit is full length for strength, and lacing bar to hold cables in place is a lifesaver.
- DCIMs save the configured device name internally, so you can move them around without caring about which port they're plugged into.

Cons

- Number of simultaneous users NOT upgradeable, each user gets dedicated hardware inside switch.
- You must leave space above and below the unit in the rack or you're not going to be able to get your hand in. Lacing bar is fabulous, but blocks easy access for folks with big hands. This is a problem on ALL IP KVMs I've worked on; wish they had a breakout panel to mount on the back of the rack, but that's easy to build.

Cost breakdown:

DKX3-216 — 16-port KVM-over-IP switch, 2 remote users, DVI local port, virtual media, dual power **$4,399 MSRP**

DCIMs and other accessories at:
www.raritan.com/products/accessories

DCIMs vary by quantity (multipacks available) and configuration, standard DVI with dual USB $170 MSRP

NOTE: Old KX2 DCIMs do still work with the KX3.

In my conversations with the Raritan folks, it became clear that while out-of-band service processor daughter board systems like IPMI, iLO and DRAC are revolutionizing data center management, they are also currently quite vulnerable to attack since their original intent was for out of band infrastructure (OOBI) with little or no network security. (See blog post by HD Moore in regards to vulnerabilities found by Dan Farmer.) Raritan's newest offering in the 3rd generation of Dominion KX IP KVM switch that goes a whole lot further than remote consoles, and they claim also dramatically more secure than their service processor competition with full FIPs 140-2 compliance.

The exact numbers are 243,552 internet-reachable IPMI hosts from the last scan, down from 312,357 last year.

– HD Moore @hdmoore

Familiar features like dual power, dual Ethernet, remote OS agnostics and a cable-lacing bar that's the gold standard in the business all add up to the KVM of choice for a huge number of shops.

The ability to have multiple people sharing the same remote session was indeed handy as my ex-student Warren Togami (his peers call him Mr. Fedora: Warren helped bootstrap the project as an undergraduate directed research project) used this feature to work remotely with some Red Hat engineers on a troublesome fiber channel HBA BIOS issue.

I've had a LOT of experience with Avocent's solution because of Interop and it's very clear these two remote access competitors are going to jockey for the top spot to their last breath. In my opinion the BIG difference between them is that Raritan has been dedicated to supporting the Mac, *nix and Windows world, whereas Avocent is still ONLY supporting Windows for remote console sessions with no signs of changing.

First and foremost the bread and butter of any IP KVM is providing a way to reach out to remote machines while preserving the sitting at the console feel and features. Missing has been the ability to handle remote BIOS upgrades from USB, and that's what Raritan's new dual USB DCIM is there to put the KVM functions on one USB and the virtual media on the other. This way even something as primitive as a BIOS won't become confused when you try to combine media and human interface devices (HID) on a single USB port. Choices are: PS/2, Sun (USB and traditional keyboards), DVI, VGA, HDMI, DisplayPort, and an enhanced version that supports smartcards like military CAC cards. The list of variations is quite extensive as you combine options for dual USB to separate the KVM functions from the virtual media, so that BIOS upgrades will work. Add to this a selection of video adapters to hookup legacy analog KVMs and you've got the kitchen sink. I should also point out that you could use the last generation KX2 DCIMs on the KX3.

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What really sets this apart from the KX2 series (and many of their competitors) is that Raritan has greatly expanded their video processor capability and now can support 1080p video at 30 frames per second.

The video control provides text or movie mode with sliders to tweak frame rate (lower bandwidth) and noise levels if picture quality isn't optimal. New to the KX3 DCIMs is the ability to also support bi-directional audio that gets you around the MS Lync/Skype/etc. audio codec problems — where the audio inputs are too far away from the codecs and breaks the echo cancellation and noise reduction algorithms.

Another BIG difference is the remote and local console interface are now identical, and gets configuration options up front instead of hiding them in obscure sub menus. I've got an inexpensive 1080p DVI monitor on my console and it looks just marvelous, or you can use Raritan's T1700-LED or T1900-LED pull-out DVI+USB monitors if you're willing to use up one rack space for a pull-out monitor.

All this is fine if you have perhaps a half dozen racks, but what happens if you're running a 1,000 rack data center? You can start off by using the tiering port that connects switch ports on a Raritan base unit to tiering ports on slave units. Once that gets cumbersome, you can aggregate a whole lot of KX2s,

KX3s, IPMI, iLO, DRAC, power and environmental devices together under a single interface with either the appliance or VM versions (VMware, HyperV and XenServer) of Raritan's CommandCenter offering. Once you've made that leap, you also get iPhone/iPad remote console capability for your mobile users as icing on the cake.

It's not always wise to put a full PC in someplace like a shared tenant data center; but you still need to provide your clients/users with a way to get console access to their servers. The answer is the new KX III User Station that provides single or dual monitor console capability to any number of IP KVMs. With six USB2.0 and two USB3.0 ports along with analog inputs/output, the KX III User Station could just as easily replace a large workstation for stock traders, physicians, lab workers or any number of people that need lots of computing power in a small space. IP KVMs aren't just for servers anymore, but should even be considered for applications requiring remote access to rack-mounted workstations.

The bottom line is that IP KVMs are not just for the data center. With remote dual-monitor support this could just as easily reduce the counter clutter in a lab, control room, or even in shipboard engineering spaces. It's very clear that Raritan has been reading their community blog and tech support logs, because the KX3 series is even better than the KX2s in all my racks. I've also saved the best for last, because you can take advantage of KX2 and competitor trade-ins for a while at: http://www.raritan.com/trade-in

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