

## World's Largest Electronics Connector Supplier Improves Data Center Performance by Adding Remote Management Control

### Overview

Chances are that if you stretch out your arms, you will most likely touch a product that contains a component from Molex, one of the world's largest manufacturers of electronic connectors. Molex's innovative products — used by leading original equipment manufacturers (OEMs) throughout the world — can be found in mobile phones, cameras, scanners, printers, DVD players, automobiles, computers, televisions and most major appliances.

In fact, the company designs, manufactures and sells to many industries and has more than 100,000 products, including terminals, connectors, planar cables, cable assemblies, interconnection systems, backplanes, integrated products and mechanical and electronic switches.

### The Challenge

The data center at Molex's regional headquarters in Singapore provides IT services to the company's entire Asia Pacific region. Among the mission-critical applications supported by the data center are email services, region-wide WLAN authentication service, Internet and VPN access for the entire region. The data center houses more than 50 servers, including virtual servers and about 10 switches.

Demands on the data center, however, required new IT management tools. The IT team needed to replace outdated traditional KVM switches, which could only support a limited number of servers and could not provide remote access and other key capabilities required by the IT administrators. The Molex IT team began the process of evaluating a number of KVM-over-IP solutions in the market that provide remote access to servers over IP networks.

The solution requirements identified by the Molex team included:

- Good access response time to servers and devices connected to the KVM-over-IP switch when users employed VPN connections
- Ability to remotely power cycle connected devices
- Integration with serial consoles to enable remote management of switches, routers and other products that do not have KVM ports
- Ability to sign on to the KVM-over-IP switch via Active Directory® authentication, and grant different levels of access to connected devices based on existing Active Directory user profiles
- Proven technology from a key player in the KVM industry
- Competitive pricing



### CUSTOMER

Molex is one of the world's largest manufacturers of electronic connectors. Established in 1938, the company operates 39 manufacturing locations in 16 countries.

### CHALLENGES

- The company needed a more responsive way to manage the data center servers that support operations in the Asia Pacific region.
- The IT department also wanted to move to a lights-out data center for added security.

### SOLUTION

Integrated remote management of servers and other devices using:

- Dominion® KX II KVM-over-IP switches
- Dominion SX console servers
- Dominion PX™ intelligent rack power distribution units

### RESULTS

Molex now has a secure IT management solution on an out-of-band network that has significantly simplified maintenance, increased uptime and improved security.



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**Daniel Ong**  
Regional Infrastructure Manager  
Molex-Singapore

"After comparing the pros and cons of each of the KVM-over-IP products from various vendors and ensuring that our wish list of requirements were all met, we chose Raritan," said Daniel Ong, Regional Infrastructure Manager at Molex-Singapore.

Molex chose to standardize a combination of Raritan's remote access-and-control solutions, including Dominion KX II KVM-over-IP switches, Dominion SX serial server consoles and Dominion PX intelligent rack power distribution units (PDUs) that power on and off connected devices remotely. The intelligent PDUs also enable administrators to monitor power status of attached equipment.

## The Solutions at Work

"The Dominion KX II, SX and PX solution proposed by Raritan met all our requirements," said Ong. "We now have BIOS-level access and control to all our data center servers from anywhere using a Web browser."

Raritan solutions enable Molex's IT administrators to simultaneously and securely manage multiple types of servers and devices from anywhere. They also provide a dashboard view of the status of all connected equipment in the data center. The region's IT infrastructure and technical applications support group use Raritan solutions to access servers from outside the data center either from their workstations or from a VPN connection.

As plug-and-play appliances that install in minutes, Dominion KX II and SX are completely self-contained with all key features preloaded — including internal authentication and Web access. Since the KX II provides BIOS-level access, servers are accessible even if a server's operating system is not working or the network interface card has failed. Dominion SX provides anytime, anywhere out-of-band serial control via any Web browser or SSH/Telnet connections.

To ensure always-available access to devices, the KX II and SX also provide dual LAN, dual power and an integrated dedicated modem port for emergency dial-up access.

Dominion solutions enable the IT team to respond quickly to any issues that may affect service, as well as help improve productivity by eliminating the need to physically walk to each server. In the past, if there was an off-hour emergency, such as a server operating system or network card failure, IT personnel had to travel to the site of the failure. As a result, there was an exposure to downtime, overtime cost and travel expenses.

"A typical example of how the KVM-over-IP solution helps us is by enabling us to setup an OS on a physical server via a VPN connection," said Ong. "Also, remote access to the console view of connected devices provides an alternative means to confirm the status of the current operational state of equipment."

Another feature used regularly by Molex administrators is Dominion KX II's Universal Virtual Media™, which they use to install software, run hardware diagnostics and transfer files on remote servers.

To protect servers from unauthorized access, Dominion provides multiple tiers of security, including built-in authentication and server audit logs and other tracking reports. In addition, with remote management capabilities, personnel no longer need to enter the data center to perform work on servers. IT equipment can now be located in a locked, "lights-out" data center, yet be accessible over the KVM-over-IP network by authorized personnel.

"The ability to power cycle connected equipment, switches and servers remotely ensures that administrators do not need to be on-site to perform this simple operation," adds Ong.

## Results

"Raritan solutions are helping Molex's data center staff streamline work processes and ensure system availability. With easy-to-access BIOS-level controls — as well as virtual media support for accessing the drives of remote servers — Raritan's products help simplify administrative tasks, such as software installation, patch management, troubleshooting and reconfiguring network cards," said Ong.

"Whether inside or outside the data center, Molex admins can troubleshoot, configure, maintain and even reboot their IT equipment — just as if they were physically present at the rack. In addition to being able to handle problems far more responsively, Raritan's solutions enable a greater level of preventive maintenance."

"Raritan's solutions have definitely helped the IT staff to access connected devices more efficiently and reliably," said Ong. "With Web-based remote access, we are also able to leverage the expertise of our IT staff no matter where they happen to be located. With Raritan's remote management solutions, we are able to respond to support requests more quickly and efficiently."

"The ability to power cycle devices connected to the PX through the KX II is also another feature that we intend to exploit fully in the future since it allows the IT staff to remotely power cycle connected devices from anywhere."

**Ready to find out more? Contact Raritan today.  
Call 1.800.724.8090 or visit [www.raritan.com](http://www.raritan.com)**