

INFOBrief

Avocent® Digital Access KVM Switch for the Dell™ Modular Server Chassis



Dell™ PowerEdge™ blade servers – including a built-in keyboard, video, mouse (KVM) switch – are optimized for the high-density computing environments of today's data center.

Key Points

- The Dell Modular Server Enclosure features either an integrated Avocent analog or digital KVM switch option. The Avocent digital KVM switch provides many robust management features.
- The Avocent Digital KVM switch provides flexible connectivity options:
 - Allows connections to a local keyboard, monitor and mouse
 - Seamless tiering to external Dell and Avocent analog KVM switches
 - Seamless tiering to external Dell and Avocent KVM over IP switches
- Provides remote graphical console redirection via a web browser.
- Allows remote users to map local media (floppy, CD, USB key, DVD) or .ISO images on a shared network drive to a blade server.

Background

Many enterprise data centers are increasing server density in an effort to keep pace with ever expanding business needs. To maximize the use of costly floor space, many organizations are introducing blade servers into their environments such as the high-performance, high-density Dell PowerEdge 1855 blade server. High-density computing can benefit from connectivity to a keyboard, video monitor, and mouse integrated into a single form factor.

Many administrators implement keyboard, video, mouse (KVM) switches to save space, help reduce management costs, and eliminate as much cable clutter as possible. KVM switches provide control for multiple servers and other devices from a keyboard, video monitor, and mouse. Using a KVM solution, administrators can control hundreds of servers from a single console such as the Dell 1U keyboard, video monitor, and mouse tray. Both blade servers and KVM switches are optimal for corporate data centers, Internet service providers (ISPs) and application service providers (ASPs), and high-performance computing (HPC) cluster environments where space is often at a premium.

The PowerEdge 1855 is an optimal solution for dense server environments. The Dell Modular Server Chassis houses as many as 10 server blades in a 7U form factor and incorporates a built-in KVM switch that provides control of server functions, including local operating system (OS) installation, server blade configuration, daily maintenance, and troubleshooting. In addition, the KVM switch is completely independent of the OS, so the server blades can run whatever OS is required.

The Avocent Digital Access KVM switch captures signals from a keyboard, video, and mouse, converting them to digital packets, and then compressing the signals so they may be transmitted securely over TCP/IP connections. KVM over IP switching technology can provide remote control of blade servers from any location. All an administrator needs to completely manage the server systems is an Internet connection and a Web browser.

This module also supports a “virtual” connection to two remote media devices at a time, which can be mapped via the management Ethernet network to a blade server from a remote management station. The Digital Access KVM switch supports one generic mass storage device or file system (such as a floppy drive, USB flash drive or a floppy image) and one CD/DVD type device or file system, such as a CDROM, DVD, or .ISO image. This virtual connection to remote media is referred to as ‘virtual Media’ or vMedia. Virtual media is simulated media that performs the same function of a mass storage device, such as a hard drive, CD drive, or USB device without physically being connected to the server.

This is important to businesses that are trying to control physical access to data centers for security reasons. An administrator can install new software—even provision a whole new operating system on a server—from a remote location. By giving an administrator the capability to stay in his or her chair and perform tasks remotely, virtual media eliminates unnecessary trips into the data center. Since the digital access KVM switch operates independently of the OS, the individual blade servers can run whatever OS is required.

Target Market

The Avocent Digital Access KVM Switch is designed for seamless integration into the Dell Modular Server Enclosure. It is ideal for customers who:

- Perform system installation and software upgrades remotely.
- Remotely control servers using OS independent, graphical console redirection
- Require seamless integration into existing Dell/Avocent KVM infrastructure.

Key Customer Benefits

- **Easy Remote Management** – Customers can install and upgrade software on blade servers in their corporate datacenter from any management station on their corporate network. In addition, customers now have the capability to control their blade servers via remote, OS independent graphical console redirection.
- **Seamless Integration** – The Dell Digital KVM integrates into existing Dell and Avocent KVM infrastructures with full interoperability and consistent look and feel.

Features and Benefits

Feature	Customer Benefit
External Ethernet Port	Utilizes the existing corporate network for transporting KVM data and remote USB media connectivity, helping to eliminate the need for specialized hardware or cabling. Allows users to remotely access blade servers for installation and maintenance, helping to lower the cost of ownership.
External PS2/Video Ports	Provides an easy and convenient method for local KVM access. Since it is built using industry leading Avocent technology, it can also be seamlessly tiered into external Dell and Avocent KVM switches.

Virtual Media Support	Increases user efficiency by not requiring the use of directly attached removable media for installation and maintenance of blades.
Native Dell/Avocent Support	Helps eliminate the threat of interoperability issues.

Technical Specifications:

- **Server Module Slots**
 - Number 10
 - Plug and Play DDC2B
 - Video Resolution Analog Port Maximum 1600x1200@ 75Hz.
- **Ethernet Port**
 - Number 1
 - Connectors RJ45
- **Analog Port**
 - Number 1
 - Type PS/2 and VGA
 - Connectors PS/2 MiniDIN, 15 Pin D
- **Software Requirements**
 - BIOS: Blade Server BIOS version A04 or greater
 - Firmware: DRAC/MC firmware 1.2 or greater
 - Management Station Browser:
 - Internet Explorer 6.0
 - Mozilla 1.7 or greater
 - Mozilla Firefox 1.0 or greater

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