

Belkin SKVM/SKM Remote Control with Integrated Keyboard

Q. Why is it named “remote control with integrated keyboard?”

A. NIAP’s Protection Profile for Peripheral Sharing Devices version 4.0 included the notion of a remote control to a secure KVM or KM. Belkin is leveraging NIAP’s definition of a KVM remote control to address additional user pain points and further enhance the user experience by truly declutter the desk by integrating a standard USB keyboard along with the remote control. Using the Belkin KVM Remote Control with Integrated Keyboard, customers get an integrated, NIAP-compliant remote control and keyboard in a single physical device.

Q. What is different about NIAP PP4.0 that allows remote control devices to be approved?

A. The notion of a remote control was absent from the NIAP PP3.0 specification. Without a definition of a remote control, no requirements were available as to how to test and certify remote operation of the KVM. The NIAP PP PSD4.0 base module now designates the remote control as an extension of the secure KVM and certification test criteria is now available and required as part of the conformance certification process.

Q. Is this USB implementation any different from a standard keyboard?

A. Yes. The USB implementation in the “remote control with integrated keyboard” is a composite device with separate RS232 and HID channels. A ‘standard’ keyboard does not have the RS232 device channel to control the KVM’s channel selection.

Q. What is technically happening with the switch control buttons?

A. The remote control with integrated keyboard is a composite USB device which incorporates an independent HID channel for keyboard commands and an independent RS232 channel for remote control. The remote control (via the RS232 channel) sends the KVM commands to select a port. Per PP PSD4.0 requirements, if the KVM detects an RS323 remote control device, the local front panel push buttons are deactivated and cannot be reactivated until the KVM is power cycled. This assures that only one control interface exists for the KVM.

Q. How is the color selection communicated to the keyboard?

A. The KVM sends status and events to the remote control via the RS232 device. This in turn informs the remote control and Keyboard the color and the active channel from the front panel status and configuration of the KVM.

Q. Why is there no security threat introduced by using the keyboard?

A. The implementation of a composite device with one USB HID channel and one RS232 channel is fully compliant with NIAP requirements for both a remote control and a keyboard. The remote control is seen as an alternative Front Panel. When the Remote Control is connected the Front Panel is disabled and locked out, thus limiting control to a single interface. Once configured with the remote control, disconnecting the remote control triggers an error state on the KVM that renders it inoperable until it is power cycled. The KVM itself contains the NIAP required vulnerability protections, including HID filter and emulation, along with optical data diodes to block known threat vectors.

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