

# Certificate of Volatility

**Model Number:** KV0416A-R2, KV0424A-R2

**Product Name:** ServSwitch CX KVM Switch

**Authorized Manufacturer:** Black Box Corporation  
2701 Dallas Pkwy  
Plano , TX 75093  
USA  
877-877-2269

## **Statement of Volatility:**

The KV0416A-R2 and KV0424A-R2 are non-IP CATx KVM switches that switch analog video and audio signals along with keyboard and mouse commands. Analog signals are handled by dedicated circuitry and are not able to be held in memory. Although the unit includes USB ports these are for keyboard and mouse only and do not support any other device.

The unit includes seven microcontrollers with internal volatile and non-volatile memory, and three additional non-volatile memory devices. These are detailed below. The processors and memories communicate via internal circuits which are not accessible to the user.

## **A Processors: A1 and A2**

Two microcontrollers handle communications with the switch's users, both local and remote. Each includes the following memory:

- 368 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 8192 × 14 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered in one of two ways: by using specialised equipment requiring physical access to the interior of the unit, or via a manufacturer-supplied application which requires the unit to be run in a dedicated upgrade mode.
- 256 bytes of non-volatile EEPROM, which may be used for holding microprocessor data which is required to persist during power down, and is not accessible to the user.

## **B Processor**

This microcontroller handles communications with the computers connected to the switch. Each includes the following memory:

- 368 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 8192 × 14 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered in one of two ways: by using specialised equipment requiring physical access to the interior of the unit, or via a manufacturer-supplied application which requires the unit to be run in a dedicated upgrade mode.

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- 256 bytes of non-volatile EEPROM, which may be used for holding microprocessor data which is required to persist during power down, and is not accessible to the user.

### **C Processor**

This microcontroller is in overall control of the unit. It includes the following memory:

- 3840 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 32768 × 16 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered in one of two ways: by using specialised equipment requiring physical access to the interior of the unit, or via a manufacturer-supplied application which requires the unit to be run in a dedicated upgrade mode.
- 1024 bytes of non-volatile EEPROM.

The above internal EEPROM is supplemented by 65536 bytes of external non-volatile EEPROM, contained in two devices. This memory is used to hold user configuration information which may be programmed via the user console port in conjunction with on-screen menus. This information is not accessible by other means, and may be cleared if required by following procedures documented in the user manual.

### **S Processors**

Two microcontrollers are used to control video synchronisation tasks. The first includes the following memory:

- 368 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 8192 × 14 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered in one of two ways: by using specialised equipment requiring physical access to the interior of the unit, or via a manufacturer-supplied application which requires the unit to be run in a dedicated upgrade mode.
- 256 bytes of non-volatile EEPROM, which may be used for holding microprocessor data which is required to persist during power down, and is not accessible to the user.

The second includes the following memory:

- 64 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 1024 × 14 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered by using specialised equipment requiring physical access to the interior of the unit. It is not user upgradeable.
- 128 bytes of non-volatile EEPROM, which may be used for holding microprocessor data which is required to persist during power down, and is not accessible to the user.

### **U Processor**

This processor is used to control a USB mouse and keyboard which may be optionally used on the local console port. It includes the following memory:

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- 3840 bytes volatile RAM, used for general microprocessor operation. The contents are lost at power down.
- 32768 × 16 bit words of non-volatile Flash program memory used to hold microprocessor firmware. This memory is not accessible to the user and may only be altered in one of two ways: by using specialised equipment requiring physical access to the interior of the unit, or via a manufacturer-supplied application which requires the unit to be run in a dedicated upgrade mode.
- 1024 bytes of non-volatile EEPROM, which may be used for holding microprocessor data which is required to persist during power down, and is not accessible to the user.

The above internal Flash memory is supplemented by an external Flash memory device containing 1,048,576 × 16 bit words. This memory is dealt with in the same way as the internal Flash memory.

Authorized signature     *D. Shamir*      
David Shamir, Vice President Product Management

**Date:** April 10, 2025

**Place:** Plano, TX, USA