



OmniView™

1U Rack-Mount Console with 8-Port KVM Switch

*Control up to eight servers from one integrated
console and KVM Switch*



- Expandable to control up to 256 servers from four consoles

User Manual
ENTERPRISE Quad-Bus Series

F1DC108B

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INTRODUCTION

Congratulations on your purchase of this Belkin ENTERPRISE Quad-Bus Series Rack-Mount Console with 8-Port KVM Switch (the Switch). Our diverse line of KVM solutions exemplifies the Belkin commitment to delivering high-quality, durable products at a competitive price.

Designed to give you control over multiple computers and servers from the Rack-Mount Console, Belkin has designed and developed this Rack-Mount Console with the server administrator in mind. The result is designed to outperform any other rack-mount console with KVM switch on the market. The Rack-Mount Console is engineered to work with the most advanced server room and laboratory environments, offering:

- Dual rail system allowing the LCD panel to be displayed by itself
- Video resolution support of up to 1024x768
- PS/2 and USB mix-and-match support for input and output devices
- Multi-console support
- IntelliView Graphical On-Screen Display (OSD)
- Computer and group naming
- Multilevel security
- Computer connection status and diagnosis
- Flash-upgradeable firmware
- Dual-port connectors (cables sold separately)
- Belkin Two-Year Warranty
- Free technical support

This User Manual will provide details about your new Switch, from installation and operation to troubleshooting—in the unlikely event of a problem.

For quick and easy installation, please refer to the Quick Installation Guide included in your packaging.

Thank you for purchasing the Belkin OmniView ENTERPRISE Quad-Bus Series Rack-Mount Console with 8-Port KVM Switch. We appreciate your business and have confidence that you will soon see for yourself why over 1 million Belkin OmniView products are being used worldwide.

Package Contents

- OmniView ENTERPRISE Quad-Bus Series Rack-Mount Console with 8-Port KVM Switch
- Rack-Mount Brackets with Screws
- User Manual
- Quick Installation Guide
- Registration Card

OVERVIEW

Product Features

PS/2 and USB Mix-and-Match Keyboard

The KVM Switch enables you to use either USB or PS/2-type keyboard and mouse to control computers via either their USB or PS/2 interfaces.

Video Resolution

The KVM Switch offers support for video resolutions up to 2048x1536@85Hz through a 400MHz video bandwidth.

Multi-Console Support

By daisy-chaining additional KVM Switches or Expander units to the Primary console, the number of users can expand up to as many as four consoles. All four users can simultaneously control up to 128 computers when used with additional 8-Port KVM Switches, or as many as 256 when using the 16-Port KVM Switches.

IntelliView Graphical On-Screen Display (OSD) with Mouse Support

The IntelliView Graphical OSD feature simplifies server management by allowing you to assign individual names to each connected server throughout the system. Groups of computers can also be created, allowing you to efficiently organize your enterprise. IntelliView also provides a visual means of switching between computers, enables the user to check computer connection status, offers multilevel security, and enables the time interval to be adjusted for the AutoScan function.

Hot Keys

Hot key functionality allows you to select a desired port using designated key commands. By using a simple hot key sequence on your keyboard, selecting one computer from as many as 256 computers is instantaneous.

AutoScan

The AutoScan feature allows you to set your KVM Switch to scan and monitor the activities of all computers connected to it—one by one. The time interval allotted for each computer can be defined or adjusted through the IntelliView menu.

AutoUpdate™

Our exclusive AutoUpdate system and flash-upgradeable firmware allow you to obtain the latest firmware upgrades for your KVM Switch, when necessary. This enables your KVM Switch to maintain consistent compatibility with the latest devices and computers. Firmware updates are free for the life of your KVM Switch. Refer to the enclosed AutoUpdate instruction document, or visit us at belkin.com for complete update information and support.

OVERVIEW

Equipment Requirements

Cables

To connect to the Switch, each computer requires a specialized Belkin OmniView ENTERPRISE Series Dual-Port KVM Cable.

One Dual-Port KVM Cable connects two computers per KVM port.

OmniView ENTERPRISE Series Dual-Port KVM Cables:

F1D9400-XX PS/2 Style; 6, 10, 15, and 25 ft.

F1D9401-XX USB Style; 6 and 12 ft.

F1D9402-XX Daisy-Chain Cable

(-XX denotes length in feet)

Operating Systems

OmniView ENTERPRISE Quad-Bus Series Rack-Mount Consoles with 8-Port KVM Switches are for use with computers running:

Platforms

- Windows® 95, 98, 2000, Me, NT®, XP
- Red Hat® Linux® 7.0, 7.1, 7.2 and other Linux distributions
- Novell® NetWare® 5.x, 6.x
- Apple® Macintosh® products (requires USB support or the OmniView Mac Adapter™ F1D080)

OVERVIEW

Specifications

Part No.: F1DC108B

KVM Specifications

Power: 90–264VAC @ 47–63Hz, single phase
 Daisy-Chain: Maximum of 16 BANKS
 Max. Number of PCs: 8 per BANK, 128 total
 Keyboard Emulation: PS/2 & USB
 Mouse Emulation: PS/2 & USB
 Monitors Supported: VGA, SVGA, MultiSync®, LCD monitors that accept analog input

Keyboard Inputs: 6-pin miniDIN (PS/2), USB type A
 Mouse Inputs: 6-pin miniDIN (PS/2), USB type A
 Computer Ports: High-density, 50-pin, SCSI 2-style connector (requires Belkin ENTERPRISE Series Cable F1D9400-XX or F1D9401-XX)

VGA Ports: 15-pin HDDB type
 Operating Temp: 32° to 104° F (0~40° C)
 Storage Temp: -4° to 140° F (-20~60° C)
 Humidity: 0-80% RH, non-condensing
 Maximum Altitude: 10,000 feet

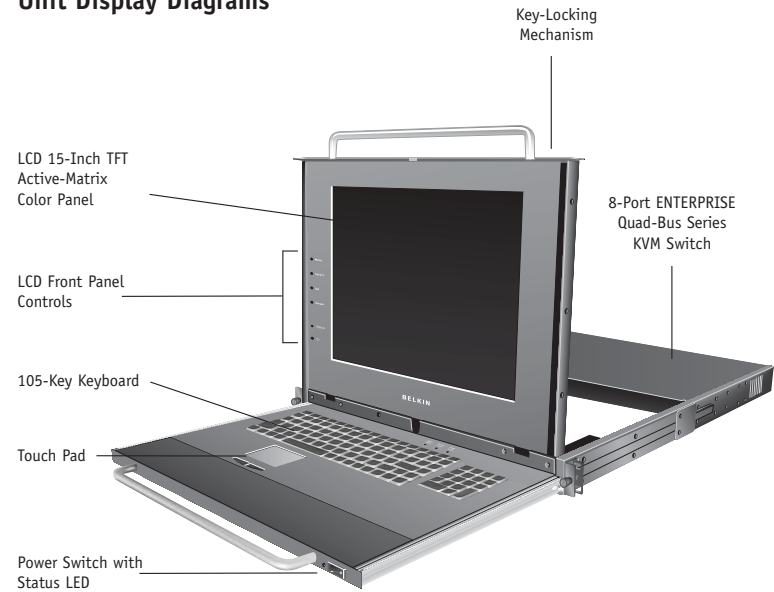
Console Specifications

Max. LCD Resolution: 1024x768
 Keyboard Type: 105-key, PS/2-compatible
 Mouse Type: PS/2-compatible touch pad
 Enclosure: Metal enclosure
 Dimensions: 19 (W) x 1.75 (H) x 29 (L) in. (482.6 x 44.5 x 736.6mm)
 Weight: 29.2 lbs. (13240g)
 Warranty: 2-Year Limited Warranty

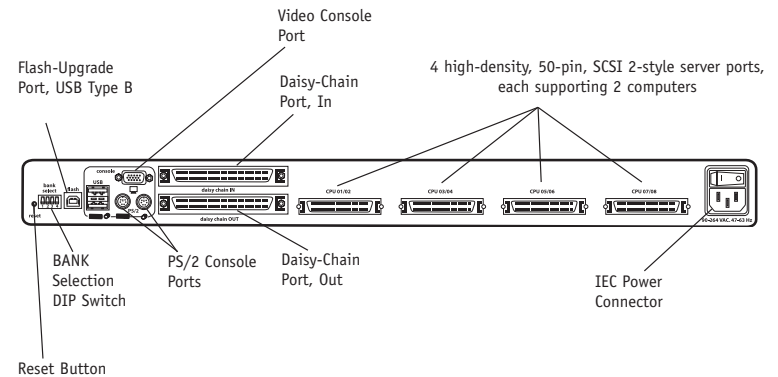
Note: Specifications are subject to change without notice.

OVERVIEW

Unit Display Diagrams



Back of Console



OVERVIEW

Glossary of Terms

The following definitions are used throughout the User Manual:

AutoScan A mode of operation where the KVM Switch sequentially monitors all attached servers.

BANK The address of a KVM Switch when used in a daisy-chain configuration (BANK numbers range from 0 to 15); typically set by adjusting the DIP Switch to the appropriate setting.

Console The keyboard, video monitor, and mouse.

Console Ports The connectors on the back of the KVM Switch for connection of the console.

Control In terms of switching between ports, “control” means that the console is capable of sending input to the computer; requires that the console also has “focus” on the port, and is “viewing” it.

Daisy-Chaining The process of connecting multiple KVM Switches together in a sequence with cables. Daisy-chaining allows the KVM Switches to interact with each other to expand control over servers.

Human Interface Device (HID) A USB device class that includes keyboards and mice.

IntelliView Graphical On-Screen Display (OSD) A graphical user interface that can be used to control and configure the KVM Switch.

KVM or KVM Switch A keyboard, video, and mouse switch.

Port Receptacle in the KVM Switch for plugging in a computer or input device.

Primary Switch A KVM Switch with a console attached to it and set to BANK address 0–3.

Secondary Switch Switches not assigned as “Primary Switch” that are connected in a daisy-chained KVM configuration. These are set to BANK addresses 4–15 and do not have a console connected directly to them.

Select Mode The mode of operation a daisy-chained KVM Switch enters when it receives the first button press from the front panel, in Static mode. Select mode allows the user to select BANKs, hosts, etc. with the next button press.

Standalone A single KVM Switch configured to function independently of other KVM Switches.

Static Mode The KVM Switch’s predominant mode of operation, into which it enters whenever it has not received a button press for at least five seconds.

View In terms of switching between ports, “viewing” means that the console is receiving video from the computer. Viewing requires that the console also has “focus” on the port.

INSTALLATION

Pre-Configuration

The enclosure of the Switch is designed for rack-mount configuration in a standard 19-inch server rack. Rack-mount hardware is included for a sturdy rack installation. Consider the following when deciding where to place the Switch:

- The location of your computers in relation to where you would like to install your Switch; and
- The lengths of the cables you use to connect your computers to the Switch.

Cable Distance Recommendations

For PS/2 Computers

We recommend that PS/2 cable length be limited to 25 feet for best video performance. Beyond that length, the probability of video degradation increases.

For USB Computers

We recommend that USB cable length be limited to 12 feet for best performance. Beyond 12 feet, the probability of signal failure is likely, and this may cause the device to fail.

Installing the Switch into a Server Rack

The included mounting brackets feature adjustable positions that allow the Switch to fit in virtually any four-post, 19-inch server rack.

1. Remove the adjustable brackets from the box.
2. Select a bracket-hole scheme based upon your server rack’s dept.
3. Attach the bracket to the side of your Switch with the Phillips screws provided.
4. Mount the Switch to the rack rail assemblies.

Note: If this Switch will be daisy-chained to another KVM Switch, set the BANK address prior to installing on a rack. Refer to the section in this User Manual labeled “Multiple KVM Switch—Installation (Daisy-Chaining)”.



*** Cautions and Warnings ***

Before attempting to connect anything to the Switch or your computer(s), please ensure that everything is powered off. Belkin Corporation is not responsible for damage caused by these actions.

INSTALLATION

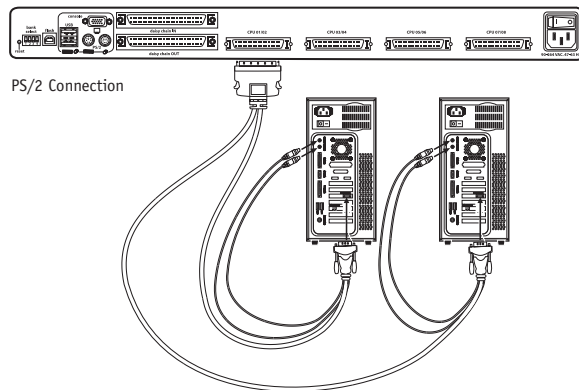
Standalone KVM Switch—Installation

This section provides complete instructions for the hardware setup of a single Rack-Mount Console with 8-Port KVM Switch.

Before you begin, determine the type of connection that will be used to connect the computer to the Switch on each port and select the appropriate KVM cable.

Connecting Computers to the Switch (PS/2 Connection)

1. Using the OmniView ENTERPRISE Series Dual-Port PS/2 Style KVM Cable (F1D9400-XX), connect the high-density, 50-pin, SCSI 2-style connector to the next free KVM port, starting with the port for the first two computers (for best results, screw the connectors into the Switch and the computer, when possible).
2. Connect the VGA and PS/2 connectors of your KVM cable to the server (make sure that you connect the keyboard and mouse cables to the correct ports on your server).
3. Repeat steps 1 through 2 for each additional server you wish to connect.



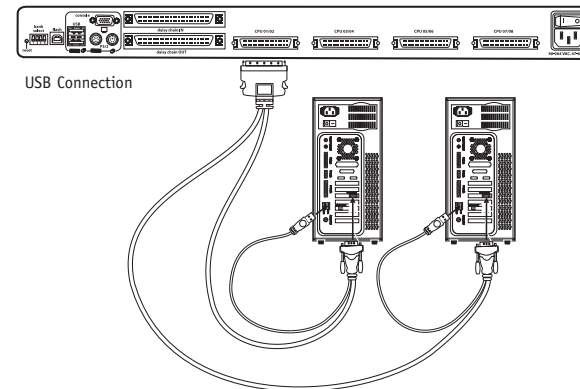
Connecting Computers to the Switch (USB Connection)

Note: Early versions of Windows operating systems do not automatically install HID devices. Manual installation of the HID driver may be required.

1. Using the OmniView ENTERPRISE Series Dual-Port USB Style KVM Cable (F1D9401-XX), connect the high-density, 50-pin, SCSI 2-style connector to the next free KVM port, starting with the port for the first two computers (for best results screw the connectors into the Switch and the computer, when possible).

INSTALLATION

2. Connect the USB connector of your KVM cable to the computer. If your computer is running Windows Me or later, skip to step 6. Otherwise, continue with step 3.
3. Boot up the computer you wish to connect via USB, as you would normally, with the keyboard, mouse, and monitor connected directly to the computer.
4. Take the USB cable attached to the Switch and connect it to an available USB port on your computer.
5. Your computer should detect and identify the Switch as a generic mouse and keyboard. Manually install the HID device driver by selecting "Next" through the Windows Hardware Wizard until the HID devices are completely installed (the Switch will install four devices if not previously installed on your system: an HID keyboard, an HID mouse, a generic keyboard, and a generic mouse). The driver installation only needs to be done once for each computer; the Switch will be detected automatically in the future. When driver installation is complete, power down the computer and disconnect the keyboard, mouse, and monitor.
6. Connect the male VGA HDDB15 connector located on one end of the KVM cable to the VGA port on the computer.
7. Repeat steps 1 through 6 for each additional computer you wish to connect to the Switch via USB.



Note: For USB installation, we recommend you attach the KVM cable directly to a free USB port on your computer, not through a USB hub.

INSTALLATION

Multiple KVM Switches—Installation (Daisy-Chaining)

You can daisy-chain up to 16 ENTERPRISE Quad-Bus Series KVM Switches together, giving a server administrator control over a maximum of 256 servers. In addition, when multiple units are daisy-chained together, three additional consoles can be added, creating a configuration of up to four consoles.

When daisy-chained together, each unit is referred to as a “BANK” and is assigned an address. The Rack-Mount Console with KVM Switch is referred to as a “Primary” Switch. BANKs 00 through 03 can be configured as Primary Switches, allowing up to four consoles. BANKs 04 through 15 can only be configured as Secondary Switches (without console support). If BANKs 00 through 03 do not have a console attached, they function as the Secondary. However, the connections are hot swappable, so if a console is added to one of the first four BANKs, it will immediately become a Primary Switch.

Note: A Daisy-Chain Cable (F1D9402-XX) is required to daisy-chain each Switch and is available through your Belkin reseller or online at belkin.com.

All ENTERPRISE Quad-Bus Series KVM Switches feature a “BANK DIP” Switch. The BANK DIP Switch is used for proper identification of the KVM Switch, either in a standalone or multiunit configuration.

- For a single-unit configuration, set the BANK DIP Switch on the KVM Switch to the “Standalone” (BANK address 00) setting. This is the factory default setting.
- For multiunit configuration, the BANK DIP Switch on the Primary Switches must be set to BANK address 00 to 03. Secondary Switches must be set to a unique BANK address (from 00 through 15). Refer to the chart on the next page for DIP Switch settings.

INSTALLATION

DIP Switch Configuration Chart

| DIP SWITCH # | | | | BANK ADDRESS |
|--------------|------|------|------|---------------------------|
| 1 | 2 | 3 | 4 | |
| DOWN | DOWN | DOWN | DOWN | BANK 00 (Default) |
| UP | DOWN | DOWN | DOWN | BANK 01 PRIMARY/SECONDARY |
| DOWN | UP | DOWN | DOWN | BANK 02 PRIMARY/SECONDARY |
| UP | UP | DOWN | DOWN | BANK 03 PRIMARY/SECONDARY |
| DOWN | DOWN | UP | DOWN | BANK 04 SECONDARY |
| UP | DOWN | UP | DOWN | BANK 05 SECONDARY |
| DOWN | UP | UP | DOWN | BANK 06 SECONDARY |
| UP | UP | UP | DOWN | BANK 07 SECONDARY |
| DOWN | DOWN | DOWN | UP | BANK 08 SECONDARY |
| UP | DOWN | DOWN | UP | BANK 09 SECONDARY |
| DOWN | UP | DOWN | UP | BANK 10 SECONDARY |
| UP | UP | DOWN | UP | BANK 11 SECONDARY |
| DOWN | DOWN | UP | UP | BANK 12 SECONDARY |
| UP | DOWN | UP | UP | BANK 13 SECONDARY |
| DOWN | UP | UP | UP | BANK 14 SECONDARY |
| UP | UP | UP | UP | BANK 15 SECONDARY |

Example:

Four KVM Switches (F1DC108B and three F1DE108C) are daisy-chained together to control 32 computers. The DIP Switch on the Primary Switch is set to “BANK address 00” and the Secondary Switches are each set to a unique BANK (between 01 and 15).

INSTALLATION

Installation

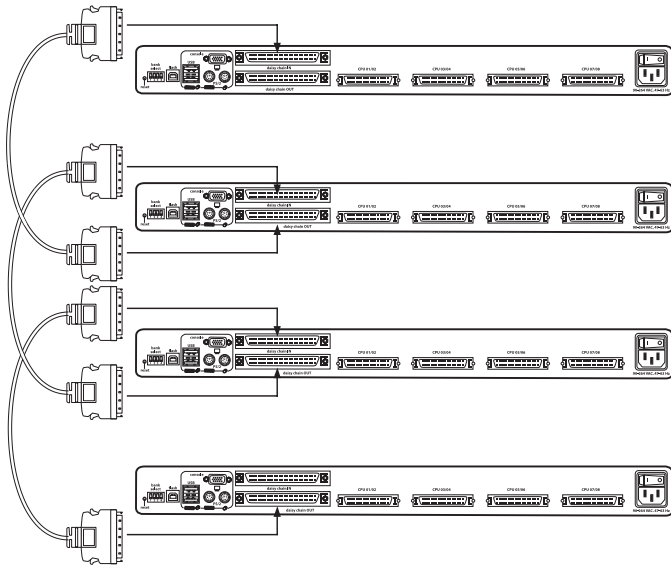
Before you begin:

1. Make sure that all computers and Switches are powered off and that each Switch has been assigned a unique BANK address.
2. Place all Primary and Secondary Switches in the desired location.
3. Connect the servers to the Switch as previously described for a standalone configuration.

Example of Daisy-Chain Configuration: Connecting the Daisy-Chain Cable

4. Using the Daisy-Chain Cable (F1D9402-XX), connect one end of the cable to the "Daisy-Chain OUT" port on the first Switch.
5. Connect the other end of the Daisy-Chain Cable to the "Daisy-Chain IN" port of the second Switch.

Note: It does not matter which unit is the Primary Switch, only that the cables are always connected "OUT to IN" or "IN to OUT".



INSTALLATION

Adding Additional Units

6. Continuing in the same manner, using the Daisy-Chain Cable (F1D9402-XX), connect "Daisy-Chain IN" to "Daisy-Chain OUT" on all subsequent units.

*** Cautions and Warnings ***

Never connect "Daisy-Chain IN" to "Daisy-Chain IN" or "Daisy-Chain OUT" to "Daisy-Chain OUT". This may produce unpredictable results and may cause damage to the Switch.

Connecting the Computers

7. Power on the Switches in whatever order is convenient. You should see them light up and display the digits "XX", where XX denotes their respective BANK addresses.

Note: If the Switches still do not enumerate correctly, check that all Switches have the correct BANK address assigned to them and that all daisy-chain cables are connected properly.

Enabling Daisy-Chain Mode on BANK 00

8. Primary BANK 00 must be configured to daisy-chain mode by the administrator. This is only to be set on BANK 00.
 - a) Open IntelliView and enter "Setup". Refer to the section "IntelliView On-Screen Display Menu Control" in this manual for instruction on operating IntelliView.
 - b) Navigate to the "Options" page, and check the "Allow this box to join a cluster" box.
 - c) A dialog box will appear that says "You must power cycle the KVM for this to take effect." Click "OK" to clear the dialog box and power cycle the Switch.
 - d) When the Switch reboots, it will interact with the remainder of the other daisy-chained Switches as expected. You can verify this by opening IntelliView and scrolling through the list of computers. If any of the other daisy-chained computers appear in BANK 00's list, then it is working properly.

Note: If you don't configure BANK 00 for use on the daisy-chain, then it will not be able to interact with any of the other Switches and they will not be able to interact with it. In addition, the unit's front panel will not act the same as the other units' front panels. Finally, there could be some unpredictable interactions caused by connecting an improperly configured BANK 00 to a daisy-chain.

INSTALLATION

Powering Up the Systems

Once all cables have been connected, power up the connected computers. All computers can be powered on simultaneously. The Switch emulates both a mouse and keyboard on each port and allows your computer to boot normally.

The computer connected to port "01" of the Primary Switch will be displayed on the monitor. Check to see that the Switch is working normally by use of mouse, keyboard, hot keys, and/or IntelliView. Proceed to do this with all occupied ports to verify that all computers are connected and responding correctly. If you encounter an error, check your cable connections for that computer and reboot, if necessary. If the problem persists, please refer to the "Troubleshooting" section of this User Manual.

Now that you have connected your computers to your Switch, it is ready for use. You can select connected computers by key commands or the On-Screen Display. It takes approximately 1–2 seconds for the video signal to refresh (depending on monitor and graphics card used) after switching computers.

Note: For hot keys (e.g. up and down arrows) and AutoScan, the order of progression, when switching from one computer to the next, is dictated by the order of the computers in the list box (on the main page of IntelliView).

USING YOUR SWITCH

Selecting a Computer Using Keyboard Hot Key Commands

Command the Switch to switch ports through simple keyboard key sequences. To initiate a keyboard command to the Switch, press the "Scroll Lock" key twice within one second (you will hear a beep), then input the key sequence for the specific command. Below is a list of the different keyboard commands:

Note: You will have approximately two seconds after the beep to complete each hot key sequence.

For hot keys (e.g. up and down arrows) and AutoScan, the order of progression from one computer to the next is dictated by the order of the computers in the list box (in the main view of IntelliView).

Note: Alternatively, the control keys can be used to enter commands (usage is identical to the Scroll Lock key); this provides compatibility for keyboards that don't have Scroll Lock keys.

Using the AutoScan Function

In AutoScan mode, the Switch remains on one port for a configured interval (1–99 seconds) before switching to the next computer. The time interval is configured in IntelliView.

To enter AutoScan mode, press the AutoScan button in IntelliView:

- AutoScan mode will continue indefinitely until terminated by pressing any valid hot key sequence.
- When the Switch is in AutoScan mode, it is also in View-Only mode. This means that input from the console will not be transmitted to the server in focus. Cancel AutoScan to regain control of the computer.
- The AutoScan time varies by computer, and is configured in IntelliView.
- AutoScan will skip any servers that the user does not have permission to view.

Using the MultiView Feature

This Switch is capable of allowing multiple users to view the same server simultaneously; however, only the first console to focus on that server will have control (be capable of input). When a second console focuses on the same server, the View-Only console's banner will display "View-Only". If the banner is enabled on the viewing console, then the "View-Only" banner will be displayed as long as that console is focused on a computer it can't control. If the banner is disabled on the viewing console, then the "View-Only" banner will be displayed for five seconds.

If the controlling console switches focus to another computer, then control will be granted to another console.

USING YOUR SWITCH

IntelliView Graphical On-Screen Display (OSD) Menu Control

IntelliView is intended to have a look and feel similar to Windows-based operating systems popular on personal computers. To bring up IntelliView, press on “Scroll Lock + Scroll Lock + Space Bar”.

General IntelliView Features

The main page is the initial screen that will appear after opening IntelliView. The graphical OSD screen layout is similar to many Windows-based systems that exist. The user will see a window with a title bar containing some controls and a main area where the user accesses the features of the Switch. The top-right side of the OSD title bar identifies the console that is being used and the user that is currently logged in. Selecting the “?” button will display the help screen. The help screen will show a description of the current page and will describe all available controls. Selecting the “X” button will close the page the user is viewing. The main page also has an “Exit” button that closes IntelliView. The exit button is the default key, so pressing “Enter” will also exit IntelliView, unless another button has focus.

Note: All changes to IntelliView are written and saved to memory as soon as the focus changes; there is no method of canceling or undoing actions once they have been entered. However, in the case of edit boxes (e.g. the “Computer Name” edit box), ESC will exit the control and revert the contents to their original form.

Input and Navigation Features

- Clicking on the “Group”, “Computer Name”, or “ID” column headers will sort the list box entries in ascending order, by the column header selected.
- Single-clicking on a computer line will select that computer line.
- Double-clicking on a computer line will select that computer line and switch the console’s focus to the selected port. If the user is restricted from accessing the computer selected, an error message will be displayed. When the error dialog box is cleared, the console’s focus will remain on the previously selected port.
- Pressing the up or down arrow keys, while IntelliView is up, will move the computer cursor (the row highlighted blue) up or down. If the cursor moves outside of the visible area, the list will scroll by one line. The scroll wheel on the mouse can also be used to perform this function.
- The up/down double arrows, to the right of the computer list, scroll the list up and down one page at a time. The “Page Up” and “Page Down” keys on the keyboard will also perform this function.
- Pressing the space bar will activate IntelliView’s control in focus (same as clicking on the control). If the list box is in focus, then pressing the space bar will give the console control of the highlighted computer.

USING YOUR SWITCH

- Pressing “Enter” will activate the control in focus if the control is on a button or inside an edit box. However, if the focus is on another type of control (e.g. the list box), the Enter key will activate the default control (“Close” or “Exit”, depending on the current IntelliView screen).
- If the administrator presses “Ctrl+TAB” while viewing one of the setup pages, IntelliView will switch to the next page.
- Accelerator keys that have been enabled will activate their respective controls (i.e. pressing “Alt+{A-Key}”, where the A key corresponds with a character that is underlined in a control label).
- When IntelliView is active, keyboard and mouse input is routed to IntelliView; nothing is sent to the computer that the console controls.
- Selecting the “Close” button (or pressing “Alt+C”) on any of the setup pages will return the user to the main page.
- The “Tab” key can be used to cycle through the controls on the current IntelliView page.
- IntelliView’s window can be repositioned by clicking on the title bar and dragging the window with the mouse.
- To reposition the banner, press “Ctrl+Alt” while IntelliView is up. The cursor will jump from IntelliView’s window to the banner; clicking and dragging the mouse will allow the user to reposition the banner.
- The size and position of the IntelliView window and banner vary with the resolution and refresh rate of the video card. To improve the user’s ability to position the IntelliView window where they desire, the Switch preserves the position of the IntelliView window for several different resolution/refresh rates. This feature will help the user to position the IntelliView window and the banner where they want them, but the user may have to set the positions of the IntelliView window and banner windows multiple times during KVM setup before they remain in a consistent location.

The Main Page

Group Column

The “Group” column displays the name of the group to which the server has been assigned. The group name is assigned by the Switch’s administrator (see the “Administrator Setup Page” section for information on changing the group name). The “Computer Name” list can be sorted on this field by clicking on the column header.

Computer Name Column

The “Computer Name” column displays the name of each connected computer/server. The computer name can be set by the Switch’s administrator (see the “Server Page” section for information on changing the computer name). The computer list can be sorted on this field by clicking on the column header.

USING YOUR SWITCH

ID Column

This column displays the BANK and port number of the Switch where the computer is connected. The computer list can be sorted on this field by clicking on the column header.

Keyboard Column

The “Keyboard” column shows the status of the current keyboard connection, and is updated in real time. If the connection to the computer is via a PS/2 cable, a small keyboard icon is displayed. If the keyboard connection to the computer is via USB, the USB trident symbol is displayed. If no keyboard is detected, the cell will be empty.

Mouse Column

The “Mouse” column shows the status of the current mouse connection, and is updated in real time. If the connection to the computer is via a PS/2 cable, a small mouse icon is displayed. If the mouse connection to the computer is via USB, the USB trident symbol is displayed. If no mouse is detected, the cell will be empty.

Security Column

This column displays the security settings for the current user. If this user is blocked from accessing a computer, a closed-padlock symbol is displayed. If the user is allowed to access the computer, the cell is empty.

Note: The KVM administrator can prevent computers from appearing in the Main View if the user doesn't have rights to access them. (For additional information, see the “Options Page” section.)

Console Column

The Console currently viewing the computer is indicated in this column by its corresponding letter (A-D). If multiple consoles are focused on the same computer, the letter of one that has control of the computer will appear in the console cell.

Scan Button

Click the “Scan” button or press “Alt+A” on the keyboard to activate the AutoScan feature. This will not close IntelliView.

Setup Button

Click the “Setup” button or press “Alt+S” on the keyboard to access IntelliView's setup pages. If the user is not logged in as the administrator, the setup button will not be selectable (will appear gray). The setup pages are only accessible to one console at a time. If two administrators attempt to access the setup pages simultaneously, the second administrator will be presented with an error message.

USING YOUR SWITCH

Login Button

Click on the “Login” button or press “Alt+L” on the keyboard to display the login dialog box, which lets the user switch to a different “account” (see the “Login Dialog” section).

Logout Button

Click on the “Logout” button or press “Alt+T” on the keyboard to return to “Guest” level access. If the administrator has removed guest access, video will go black when the user logs out of the computer, and that port will lose control of the computer. The hot keys and the front panel are also disabled; the only command sequence the Switch will accept is “Scroll Lock + Scroll Lock + Space” (open IntelliView), which will present the user with the login dialog box.

Exit Button

The “Exit” button (or “Alt+X”) closes IntelliView, allowing the user an unrestricted view and control over the computer in focus.

Administrator Setup Page

The setup page is only available to the admin user and is used to set the group name, computer name, and computer scan times. The scan time is dependent on the port being scanned, and is global (i.e. it's independent of the console or user). While scan times are independent of the user, AutoScan will skip computers that the user does not have permission to view.

Group Column

The “Group” column displays the name of the group to which the computer has been assigned. The group name is arbitrary text, purely for organizational purposes. The group name can be up to eight alphanumeric characters and is assigned by the KVM administrator. The default group name of a computer is “Group X”, where X is the BANK number of a KVM Switch as determined by the BANK address DIP Switch. To change the group name, click in the desired cell.

Computer Name Column

The “Computer Name” column displays the name of each connected computer. The computer name can be up to 15 alphanumeric characters and is assigned by the KVM administrator. The computer list can be sorted on this field by clicking on the column header. By default, all computer names will be named BANK XX-Port YY, where XX is a two-digit BANK address number from 00 to 15 and YY is a two-digit computer number from 01 to 16. To input the computer name, click in the desired cell.

USING YOUR SWITCH

ID Column

This column displays the BANK and port number of the Switch where the computer is connected. The computer list can be sorted on this field by left-clicking the mouse on the column header.

Scan Column

The “Scan” column displays the current setting for how long the console views each computer during AutoScan. To change the viewing duration for a computer, click in the desired cell.

Scan Time and Change All Button

The user can reset the scan time for all computers by entering a value from 1–99 in the edit box and clicking on the “Change All” button. The user will be asked to confirm the action before the new time is applied.

Console Column

The console currently viewing the computer is indicated in this column.

Security Page

The “Security” page allows the administrator to restrict computer access for the Switch’s users. There are three levels of user access to the Switch: administrator, user, and guest. The administrator is the only user that can access the setup pages to configure the Switch. The administrator can restrict users and guests from accessing specific computers. All users can switch computers and toggle the AutoScan function in the main page. In addition, the guest is the default user (you never have to login as “Guest”), so all users log off to “Guest” when the account is enabled. If the administrator has removed guest access, video will go black when the user logs out the computer, and that port will lose control of the computer. The hot keys and the front panel are also disabled; the only command sequence the Switch will accept is “Scroll Lock + Scroll Lock + Space” (open IntelliView), which will present the user with the login dialog box. The “User” accounts defined in the Switch can be used by individuals or groups of individuals; the names of the users are fixed.

Group Column

The “Group” column displays the name of the group to which the computer has been assigned. The computer list can be sorted on this field by clicking the mouse on the column header.

Computer Name Column

The “Computer Name” column displays the name of each connected computer. The computer list can be sorted on this field by clicking on the column header.

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User Columns (1, 2, 3, G)

These columns allow administrators to set the access rights to each computer for each of the “User” groups (1, 2, 3, and Guest). To restrict a user from a particular computer, click in the corresponding cell in the list box. The padlock indicates that the user (column) will be restricted from accessing that computer (row). Empty cells indicate that the user has full access to that computer.

Console Column

The console currently viewing the computer is indicated in this column.

Passwords Page

The “Passwords” page allows the administrator to change user passwords, enable or disable user accounts, and set the Auto Logout time.

Password Entry Fields

There is a “Change Password” button associated with each user; clicking the button displays the “Password Entry” dialog box. The administrator is required to type the password and then confirm it; the new password will not be accepted until the entries match (passwords are up to eight characters long and case-sensitive). Canceling the “Change Password” dialog box will return to the passwords page without changing the existing password. In a daisy-chain configuration, clicking “OK” automatically synchronizes this password with the other consoles.

Enable Check Boxes

The check boxes next to the user names allow the administrator to disable user accounts with a single mouse click. This removes the need to alter the security settings of each host individually when it is necessary to remove a user’s access.

Auto Logout Enable and Time

The Auto Logout feature logs off the user after a specified period (1–99 minutes) of console inactivity. Generally, this will return the Switch to “Guest” level access, but if guest access has been disabled, all access rights will be revoked until a valid user logs on to the console. The edit box sets the length of inactivity required before the logout occurs.

Broadcast Passwords

This check box forces all other consoles to overwrite all of their user passwords with the passwords contained in the current console. This makes it simple for the administrator to synchronize the passwords of all consoles (e.g. when adding a new console to an existing configuration).

USING YOUR SWITCH

Options Page

The controls on this page affect several of the Switch's miscellaneous features.

Display Banner

This check box enables a banner to be displayed for system events: hot key switching, powering on the Switch, etc. The banner is either always displayed, or displayed for a configured time (1–99 seconds). If the timed selection is enabled, the time input determines how long the banner will remain on-screen after the system event occurs.

Display Inactive Ports

Enabling this feature will cause ports that do not have an active computer attached to appear in the computer list box (on the main page of IntelliView). By default, inactive ports are displayed.

Display Restricted Ports

Enabling this feature will cause ports that the current user is restricted from accessing to appear in the computer list box (on the main page of IntelliView). By default, restricted ports are displayed.

Daisy-Chain this KVM

Checking this box allows Switches set to BANK 00 to communicate with other BANKS in a daisy-chain configuration. This affects front-panel operations and a few other miscellaneous operational parameters. Whenever the state of this check box is changed, a message will be displayed requiring the user to reboot the Switch. The Switch will continue to operate correctly without rebooting, but the setting of this check box will not take effect until the Switch is rebooted. By default, Switches set to BANK 00 are configured as standalone (the check box is cleared). This is only required for BANK 00.

Display Version Numbers

This screen displays product information, including the model number and the firmware revisions.

Restore Factory Defaults

Clicking on this button will restore all user-configurable settings to their default values. The user is presented with a confirmation screen before this action is applied.

USING YOUR SWITCH

Error Messages and Dialogs

From time to time, it will be necessary to display messages to the user indicating errors or requesting simple answers to questions. These pop-up screens will have the familiar format of title bar and window body, which will contain the text of the message. There will also be appropriate response controls such as "OK" and "Cancel" buttons, based on the nature of the message.

Login Dialog

The "Login Dialog" box is a simple window with radio buttons to select the user, and an edit box for users to enter their password. If users are already logged in, pressing "Cancel" will return them to their current login (or "Guest" if the account is enabled). If the user is not logged in, and "Guest" is disabled, pressing "Cancel" will close IntelliView.

Help Screens

Extensive help is available within IntelliView; simply press the F1 key, or click on the "?" button on the right side of the title bar.

Banner

The banner is a small window that is displayed to inform the user of the console's focus. The banner looks like a line of text surrounded by a gray frame with the typical 3D look. The banner will display the following:

- Group Name
- Host Name
- BANK and port in focus

Splash Screen

When the Switch powers on, it will display a splash screen with the product name and copyright information. This screen will remain for several seconds before it disappears. Calling up IntelliView will dispel this screen immediately.

FAQs

What operating systems does the Switch support?

The Switch will support any operating system that runs on a PS/2 and USB platform. Operating systems include, but are not limited to, DOS, Windows 95, 98, 2000, Me, NT, XP, Linux, and Mac OS.

What does flash-upgradeable mean?

With flash-upgrade capability, you can update your Switch at any time through a simple parallel connection. Internet-upgrade capability ensures that your Switch is always the most current version on the market with the latest features and enhancements.

Does the Switch support Microsoft IntelliMouse?

The Switch supports mice from Microsoft, Logitech®, Kensington®, and Belkin. Please contact Belkin Technical Support for compatibility issues you may encounter.

How does the Switch allow the user to switch between ports?

The Switch supports two methods of port selection. The user can select computers using specially designated keyboard hot keys or IntelliView.

How far can the computer be from the Switch?

When using PS/2 connections, the Switch can be up to 25 feet away from your computer. If your computer needs to be more than 25 feet (7.5 meters) from the Switch, you can use the Belkin CAT5 Extender to place your monitor and PS/2 keyboard and PS/2 mouse up to 500 feet away using a standard CAT5 UTP cable. When using a USB connection between your Switch and computer, we recommend that your computer be no more than 12 feet (4 meters) from the Switch.

What is the maximum video resolution that the LCD panel supports?

The LCD panel supports a resolution of 1024x768.

Do I have to install any software to use the Switch?

No, the Switch does not require any drivers or software to be installed in your computers. Simply connect all your computers to the PC ports on the Switch and it is ready for use.

Can I use the Switch on my Sun™ computer that supports USB?

Yes, the Switch works with any USB-capable computer.

Can I daisy-chain my Switch with a Belkin PRO2 or MATRIX2 Series KVM Switch?

No, the Switch cannot be daisy-chained to the PRO2 and MATRIX2 Series KVM Switches. You may only daisy-chain the Switch with other ENTERPRISE Quad-Bus Series KVM units (F1DE108C, F1DE116C, F1DE208C, F1DE216C, F1DE008C, and F1DE016C)

TROUBLESHOOTING

General

My Switch doesn't appear to be on.

- Make sure that the power switch located at the front of the keyboard drawer is "on" and that the power cable is properly plugged in.

Video

I am getting ghosting, shadowing, or fuzzy images on my monitor.

- Check that all video cables are inserted properly.
- Check that your computer isn't set to a resolution above 1024x768.
- Check that the graphics card you are using supports the resolution and refresh-rate setting on your computer.
- Connect a monitor directly into the computer you are having trouble with to see if the problem still appears.

I am getting a black screen on my monitor.

- Check that all video cables are inserted properly.
- Connect a monitor directly into the computer you are having trouble with to see if the problem still appears.

Keyboard

The computer does not detect a keyboard and I get a keyboard error reported at boot up.

- Check that the cable between the Switch and the computer is completely connected. Tighten any loose connections.
- Try connecting the computer to a different port.

USB

I am connecting my computer to the Switch via USB and my keyboard and mouse do not work.

- Prior to connecting the Switch, make sure that the HID USB driver is installed on each computer. (To install the HID USB driver, connect a USB mouse and USB keyboard to the computer. A Windows operating system should automatically install the drivers.)

INFORMATION

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin Corporation, of 501 West Walnut Street, Compton, CA 90220, declare under our sole responsibility that the products:

F1DC108B

to which this declaration relates:

Comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Declaration of Conformity

We, Belkin Corporation, declare under our sole responsibility that the products F1DC108B to which this declaration relates, are in conformity with Emissions Standard EN55022 and with Immunity Standard EN55024, LVP EN61000-3-2, and EN61000-3-3.

ICES

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Belkin Corporation Limited Five-Year Product Warranty

Belkin Corporation warrants this product against defects in materials and workmanship for its warranty period. If a defect is discovered, Belkin will, at its option, repair or replace the product at no charge provided it is returned during the warranty period, with transportation charges prepaid, to the authorized Belkin dealer from whom you purchased the product. Proof of purchase may be required. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication; if the product has been modified without the written permission of Belkin; or if any Belkin serial number has been removed or defaced.

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belkin.com

Belkin Corporation
501 West Walnut Street
Compton • CA • 90220 • USA
Tel: 310.898.1100
Fax: 310.898.1111

Belkin Components, Ltd.
Express Business Park • Shipton Way • Rushden
NN10 6GL • United Kingdom
Tel: +44 (0) 1933 35 2000
Fax: +44 (0) 1933 31 2000

Belkin Components B.V.
Starparc Building • Boeing Avenue 333
1119 PH Schiphol-Rijk • The Netherlands
Tel: +31 (0) 20 654 7300
Fax: +31 (0) 20 654 7349

Belkin, Ltd.
7 Bowen Crescent • West Gosford
NSW 2250 • Australia
Tel: +61 (0) 2 4372 8600
Fax: +61 (0) 2 4372 8603

Belkin Tech Support
US: 310.898.1100 ext. 2263
800.223.5546 ext. 2263
Europe: 00 800 223 55 460
Australia: 1800 666 040

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