This Belkin product is compliant with latest NIAP Protection Profile PSS Ver. 3.0, which exceeds EAL4 and PP PSS Ver. 2.1.
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Thank you for purchasing this Belkin Advanced Secure Keyboard/Mouse (K/M) Switch. This KM Switch is designed for use in secure environments across wide security gaps. This product provides the highest security safeguards and features, meeting current and future cyber prevention requirements.

This User Manual provides all the details you'll need to install and operate your new product, and also to troubleshoot it in the unlikely event of a problem.

What is a KM (Keyboard / Mouse) Switch?

There are many cases where one user needs to work simultaneously with more than one computer. In some cases users have multiple displays attached to multiple computers. The challenge is how a single user can interact with multiple computers with multiple displays each. KVMs are not suitable for these users as they are designed to switch displays; allowing the user to only see and manage one target device at a given time. Using the Belkin Secure KM users can see all the connected computers at the same time and easily decide on which computer they may want to work on.

A KM switch is a device that switches a single keyboard and mouse between multiple computers. A KM switch is essentially a KVM switch without the video switching - all displays are continuously connected to their respective computers; so that all connected devices can be managed seamlessly, in real time. Multiple displays can be connected to each computer that is connected to the Belkin Secure KM. The Belkin Secure KM is designed to have up to 8 computers connected and working simultaneously in a wide array of monitor presets.

The Belkin Secure KM supports Windows, Linux and Mac operating systems. Switching is done simply by dragging your mouse from one monitor to another having it disappearing from one machine and appearing on another. Multi displays connected to the same computers are only supported by Windows based operating systems.
Package Contents

- Belkin Advanced Secure KM Switch
- 12V 1.5A DC Power Supply (F1DN104K-3 only)
- AC Power Cord (F1DN108K-3 only)
- Interchangeable Port Color Chips
- Port-Naming Labels
- Belkin USB configuration cable
- User Manual

**Important:** This product is equipped with an always-on active anti-tamper system. Any attempt to open the enclosure will activate the anti-tamper system and render the unit permanently inoperable. If the unit’s enclosure appears disrupted or if all the port LEDs flash continuously, please call Belkin Technical Support toll-free at (800) 282-2355.

**Please note:** Belkin Secure KM Products do not support firmware upgrade options.

**Important Security Note:** If you are aware of potential security vulnerability while installing or operating this product, we encourage you to contact us immediately at the following email address: gov_security@belkin.com
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Safety Precautions

Please read the following safety precautions carefully before using the product:

- Before cleaning, disconnect the product from any electrical power supply.
- Do not expose the product to excessive humidity or moisture.
- Do not store or use for extensive period of time in extreme thermal conditions – it may shorten product lifetime.
- Install the product only on a clean secure surface.
- If the product is not used for a long period of time, disconnect it from electrical power.
- If any of the following situations occurs, have the product checked by a qualified service technician:
  - Liquid penetrates the product’s case.
  - The product is exposed to excessive moisture, water or any other liquid.
  - The product is not working well even after carefully following the instructions in this user’s manual.
  - The product has been dropped or is physically damaged.
  - The product shows obvious signs of breakage or loose internal parts.
  - In case of external power supply – If power supply overheats, is broken or damaged, or has a damaged cable.
- The product should be stored and used only in temperature and humidity controlled environments as defined in the product’s environmental specifications.
- Never attempt to open the product enclosure. Any attempt to open the enclosure will permanently damage the product.
- The product contains a non-replaceable internal battery. Never attempt to replace the battery or open the enclosure.
- This product is equipped with an always-on active anti-tampering system. Any attempt to open the product enclosure will activate the anti-tamper triggers and render the unit inoperable and warranty void.
User Guidance & Precautions

Please read the following User Guidance & Precautions carefully before using the product:

1. As product powers-up it performs a self-test procedure. In case of self-test failure for any reason, including jammed buttons, the product will be Inoperable. Self-test failure will be indicated by the following abnormal LED behavior:
   a. All channel-select LEDs will be turned ON and then OFF;
   b. A specific, predefined LED combination will be turned ON;
   c. The predefined LED combination will indicate the problem type (jammed buttons, firmware integrity).

Try to power cycle product. If problem persists please contact your system administrator or technical support.

2. By default, after product power-up, the active channel is #1.

3. The appropriate usage of peripherals (e.g. keyboard, mouse, display, authentication device) is described in detail in this User Manual’s appropriate sections. Do not connect any authentication device with an external power source to product.

4. For security reasons products do not support wireless keyboards and mice. In any case do not connect wireless keyboard/mouse to product.

5. For security reasons products do not support microphone/line-in audio input. In any case do not connect a microphone to product audio output port, including headsets.

6. Product is equipped with an always-on active anti-tampering system. Any attempt to open product enclosure will activate the anti-tamper system indicated by all channel-select LEDs flashing continuously. In this case, product will be inoperable and warranty void. If product enclosure appears disrupted or if all channel-select LEDs flash continuously, please remove product from service immediately and contact technical support.

7. Connecting external USB devices to product CAC port:
   a. When connecting a USB device that is not qualified or rejected for security reasons to product’s CAC port, the CAC LED will flash green and USB device will be inoperable.
   b. When connecting a USB device that is undetectable for any reason (e.g. failed device, non-standard device etc.) to product’s CAC port, the CAC LED will not illuminate at all and device will be inoperable.

8. Do not connect product to computing devices:
   a. That include telecommunication equipment;
   b. That include frame grabber video cards;
   c. That include special audio processing cards.

9. Product has a remote control port in the back panel labeled DCU. Do not use this port - it is inoperable and for future use.
User Guidance & Precautions (Con.)

10. **Important!** Before re-allocating computers to channels, it is mandatory to power cycle product, keeping it powered OFF for more than 1 minute.

11. Product log access and administrator configuration options are described in product Administrator Guide.

12. If you are aware of any potential security vulnerability while installing or operating product, please remove product from service immediately and contact us in one of the ways listed in this manual.
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Security Features

Product is designed, manufactured and delivered in security-controlled environments. Below is a summary of the main advanced features incorporated in product:

Advanced isolation between computers and shared peripherals

The emulations of keyboard, mouse and display EDID, prevent direct contact between computers and shared peripherals. Product design achieves maximal security by keeping the video path separate with keyboard and mouse switched together, purging keyboard buffer when switching channels. All these features contribute to strong isolation between computer interfaces, maintained even when product is powered off.

Unidirectional data flow: USB, audio and video

Unique hardware architecture components prevent unauthorized data flow, including:

- Optical unidirectional data flow diodes in the USB data path that filtrate and reject unqualified USB devices;
- Secure analog audio diodes that prevent audio eavesdropping with no support for microphone or any other audio-input device;
- Video path is kept separate from all other traffic, enforcing unidirectional native video flow. EDID emulation is done at power up and blocks all EDID/MCCS writes. For DisplayPort video, filtration of AUX channel exists to reject unauthorized transactions.

Isolation of power domains

Complete isolation of power domains prevents signaling attacks.

Secure administrator access & log functions

Product incorporates secure administrator access and log functions to provide auditable trail for all product security events, including battery backup life for anti-tampering and log functions. Non-reprogrammable firmware prevents the ability to tamper with product logic.

Always-on, active anti-tamper system

Active anti-tampering system prevents hardware implants and wireless key-loggers. Any anti-tampering attempt causes isolation of all computers and peripheral devices rendering product inoperable and showing clear indications of tampering event to user.

Holographic security tamper-evident labels are placed on the enclosure to provide a clear visual indication if product has been opened or compromised.

Metal enclosure is designed to resist mechanical tampering with all microcontrollers protected against firmware-read, modification and rewrite.
Secure Packaging
“Tear away” packaging ensures secure delivery of the Switch as it is routed to the end user. The recyclable packaging also breaks down flat, simplifying the cleanup process.

LED Indicators
Each port button number illuminates to indicate that the console currently controls the corresponding computer. As a port selector is pushed, or if the mouse cursor crosses between displays associated to different computers or networks, the LED number will light up.

Tamper Evident Labels
Belkin Secure Switch uses holographic tamper evident labels to provide visual indications in case of enclosure intrusion attempt.

If for any reason the tamper evident seal is missing, appears disrupted, or looks different than the example shown here, please avoid using product and call Belkin Technical Support at: (800) 282-2355.

Active Anti-Tampering System
Belkin Secure Switch is equipped with an always-on active anti-tampering system. If mechanical intrusion is detected by this system, the Switch will be permanently disabled and LED will blink continuously.

If product indication tampered state (all LEDs blinking) - please call Technical Support and avoid using that product

Product Enclosure Warning Label
Belkin Secure Switch has the following warning printed next to the location of the product Asset Tag and Tamper Evident labels on product enclosure:  

WARNING: This enclosure is tamper proof. The unit will self destruct if opened.

Tamper Evident Label
Do not use if disturbed.
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Operational Features

The Belkin Secure KM was designed with the user in mind and for today’s secure IT environments. Below is a summary of some key operational features incorporated into the Product.

Support for multiple head
The Belkin Secure KM can be easily configured to support dual, triple and up to 16 head computers through a signed software driver. Note that single head installation does not need any software installation.

Extensive monitor layout presets
Multiple presets support common monitor layouts to support most all deployment models.

Seamless Cursor Switching (SCS)
SCS allows the Belkin Secure KM to switch automatically between computers once mouse cursor crosses display borders. The switching is seamless between multiple computers with cursor movement.

Integrated Mounting Rails
The Belkin Secure KM features an integrated mounting system for easy under-the-desk, or side-wall mounting.

Audio Support
The Belkin Secure KM supports audio out switching. Microphone switching is not supported to prevent analog leakages through audio ports.

Port Coloring
The included color chips can be inserted into each port-selector button. Colors can be associated with an established network to facilitate port identification and reduce user switching error.

Port Naming
The included network-name labels can be placed in the area underneath the port-selector button to facilitate port identification and reduce user switching error. Blank labels are also provided for network names that are not listed on the included network-name labels.

Increased Reliability
Using a new, advanced anti-tampering battery with extremely low self-discharge rate the life expectancy of the switch has been increased dramatically to over 25 years.
What is Seamless Cursor Switching?

Seamless Cursor Switching (SCS) is implemented in Belkin Secure KMs to enable seamless cursor and keyboard switching between multiple displays. SCS allows administrators to configure any desired multiple display configuration using the same, or different size displays and resolutions. Simply move the mouse cursor across neighboring displays to switch between connected computers.

Refer to the example in the figure on the right. Assume that computer #1 is connected to the left display, computer #2 is connected to the top display, computer #3 is connected to the center bottom display and computer #4 is connected to the display on the right side. In this example all four displays are identical. SCS allows the user to move the mouse cursor across the four displays while automatically switching the shared peripherals (keyboard, mouse and audio) based on the current cursor location. For example, when the user moves the cursor from the left display to the center bottom display, the KM identifies the display border crossing between these two displays and switches the keyboard and mouse to computer #3.

SCS is now further enhanced with the inclusion of pointing device drivers to support dual, triple and up to 16 head computers. With this technology, user workstations may be integrated with any combination of single, dual, triple and quad head computers. SCS Configurator software enables the user administrator to easily configure any set of display sizes, resolutions, geometry and physical arrangements.
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Equipment Requirements

Cables
Belkin highly recommends you use Belkin Cable Kits for your product to help ensure superior security and performance. These cables offer the highest quality possible and optimal data transmission. One Cable Kit is required per connected computer.

Note: Due to USB signal limitations, the cable length cannot exceed 15 feet (4.6m) unless a USB extender is used.

Belkin USB with Audio Cables:
- F1D9022b06 – 6 ft (1.8m)
- F1D9022b10 – 10 ft (3m)

Belkin USB Cables:
- F3U133-06 – 6 ft (1.8m)
- F3U133-06 – 10 ft (3m)

Belkin Audio Cables:
- F8V203tt06-E3-P– 6 ft (1.8m)

User Operating-System (OS) Support
The Belkin Secure KM is compatible with computers running on the following OS platforms:
- Microsoft® Windows®
- Red Hat®, Ubuntu® and other Linux® platforms
- Mac OS® X v10.3 and higher.

User Multiple-head Operating-System (OS) Support
The Belkin Secure KM multiple-head driver is compatible with computers running on the following OS platforms:
- Microsoft® Windows®

Administrator setup Operating-System (OS) Support
The Belkin Secure KM administrator setup software suite is compatible with computers running on the following OS platforms:
- Microsoft® Windows®
USB Keyboard console port
The product console USB keyboard port is compatible with Standard USB keyboards.

Notes:

a. Console USB keyboard and mouse ports are switchable, i.e. you can connect keyboard to mouse port and vice versa. However, for optimal operation it is recommended to connect USB keyboard to console USB keyboard port and USB mouse to console USB mouse port.

b. For security reasons products do not support wireless keyboards. In any case do not connect wireless keyboard to product.

c. Non-standard keyboards, such as keyboards with integrated USB hubs and other USB-integrated devices, may not be fully supported due to security policy. If they are supported, only classical keyboard (HID) operation will be functional. It is recommended to use standard USB keyboards.

USB Mouse console port
The product console USB mouse port is compatible with standard USB mice.

Notes:

a. Console USB keyboard and mouse ports are switchable, i.e. you can connect keyboard to mouse port and vice versa. However, for optimal operation it is recommended to connect USB keyboard to console USB keyboard port and USB mouse to console USB mouse port.

b. Console USB mouse port supports Standard KVM Extender composite device having a keyboard/mouse functions.

c. For security reasons products do not support wireless mice. In any case do not connect wireless mouse to product.

PS/2 Mouse and Keyboard console ports (F1DN104K-3)
The product console PS/2 keyboard and mouse ports are compatible with standard PS/2 keyboards and mice.
User Audio Devices
Product is compatible with the following types of user audio devices:

- Stereo headphones;
- Amplified stereo speakers.

**Note:** In any case do not connect a microphone to product audio output port including headsets.

Programming Cable
Special programming cable is needed to connect the product to the administrator PC and configure it. Cable is supplied with each product. If needed, please contact Belkin Sales or Technical Support for additional cable.
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F1DN104K-3 Front Panel Features

1. Port Selector
2. LED Indicator
3. Name Label Guide
4. Color Chip
5. Tamper-Evident Seal

F1DN104K-3 Back Panel Features

1. DCU port - non operable, for future use
2. DC power input jack
3. Console Audio Out port
4. Console USB mouse port
5. Console USB keyboard port
6. Console PS/2 keyboard port
7. Console PS/2 mouse port
8. Computer USB KM port
9. Computer audio port

NOTICE!
This DCU port has not been certified by Common Criteria.
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F1DN108K-3 Front Panel Features

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1 LED Indicator
2 Port Selector
3 Color chip
4 Name Label Guide
5 Tamper Evident Label

F1DN108K-3 Back Panel Features

1  2  3  4

1 DCU port - non operable, for future use
2 Console Audio Out port
3 Console USB mouse port
4 Console USB keyboard port
5 USB KM port
6 Computer audio port
7 AC power switch
8 AC power input jack

NOTICE!
This DVI port has not been certified by Common Criteria.
### Product Specifications

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<th>F1DN108K-3 (8-port version)</th>
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<td>Enclosure</td>
<td>Metal enclosure with high-impact aluminum faceplate</td>
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<td>Power Requirements</td>
<td>(F1DN104K-3) 12V DC, 1.5A (maximum) power adapter with center-pin-positive polarity, 100–240VAC, 0.9A Freq. 50/60Hz</td>
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<td>AC Input Voltage</td>
<td>100 to 240VAC</td>
<td></td>
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<td>No. of Computers Supported</td>
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<td>Console Keyboard Input</td>
<td>(F1DN104K-3) USB Type A + PS/2 Mini-DIN 6-pin female connector, (F1DN108K-3) USB Type A connector</td>
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<tr>
<td>Console Mouse Input</td>
<td>(F1DN104K-3) USB Type A + PS/2 Mini-DIN 6-pin female connector, (F1DN108K-3) USB Type A</td>
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<tr>
<td>Console Headset / Speaker output jack</td>
<td>1/8&quot; (3.5mm) female</td>
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<td>Computer Keyboard/Mouse Ports</td>
<td>USB Type B</td>
<td></td>
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<tr>
<td>Computer Audio Input Jack</td>
<td>1/8&quot; (3.5mm) female</td>
<td></td>
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<tr>
<td>Port Selector push-buttons</td>
<td>(F1DN104K-3) 4, (F1DN108K-3) 8</td>
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| Channel Selected LED Indicators | (F1DN104K-3) 4, (F1DN108K-3) 8 |
| User Channel Selection Methods | Front panel push-buttons, SCS |
| Settings | Display physical size, display resolution X / Y, display orientation (portrait / landscape), display head (1st, 2nd, 16th), display location (coordinates), mouse speed (1-10), mouse acceleration (1-10), SCS enable / disable, prevent transition while dragging – enable / disable |
| Operating Temp | 32° to 104° F (0° to 40° C) |
| Storage Temp | -4° to 140° F (-20° to 60° C) |
| Humidity | 0-80% RH, non-condensing |
| MTBF | 14 years (per MIL-HDBK-217E) |
| Warranty | 3 years |
| Dimensions | (F1DN104K-3) 12.5 (W) x 6.4 (D) x 1.7 (H) inch / 317.5 (W) X 162.56 (D) X 43.18 (H) mm |
| | (F1DN108K-3) 17.25 (W) x 7.95 (D) x 1.7 (H) inch / 438.15 (W) X 201.93 (D) X 43.18 (H) mm |
| Weight | (F1DN104K-3) 4 lbs. / 1.81 KG |
| | (F1DN108K-3) 9 lbs / 4.08KG |
| Security Accreditation | Common Criteria Validated To Niap Protection Profile PSS Ver. 3.0 |
INSTALLATION

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Before Installation

Unpacking the Product

Before opening the product packaging, inspect the packaging seal condition to assure that product was not accessed or tampered during delivery. If the packaging seal looks suspicious, contact Belkin Technical Support and do not use the product.

After removing the packaging seal, please inspect packaging content to verify that required components included as listed in the Package Contents of this manual.

After the Belkin Secure KM is removed from its packaging materials, inspect the four tampering-evident labels to assure that product is properly sealed. If one or more label is damaged or missing, contact Belkin Tech Support and do not use that product.

Where to place the Switch:

The enclosure of the Switch is designed for desktop or under-the-desk mount configurations. An optional Mount Kit (Belkin part number F1D006) is available for the F1DN104K-3. Rack-mount brackets are included with the F1DN108K-3.

Consider the following when deciding where to place the Switch:

- Access to the front-panel push buttons is not required, since the switching can be done through the Seamless Cursor Switching (SCS) interface.
- The lengths of the cables attached to your keyboard and mouse
- The location of your computers in relation to your console
- The lengths of the cables you use to connect your computers to the Switch

Warning: Avoid placing cables near fluorescent lights, air-conditioning equipment, or machines that create electrical noise (e.g., vacuum cleaners).

Important:

1. If the unit’s enclosure appears disrupted or if all channel-select LEDs flash continuously, please remove product from service immediately and contact Belkin Technical Support at (800) 282-2355.
2. Do not connect switch to computing devices:
   a. That include telecommunication equipment;
   b. That include frame grabber video cards;
   c. That include special audio processing cards.
Connection and Installation

For security reasons products do not support wireless keyboards and mice. In any case do not connect wireless keyboard and mouse to product.

Step 1 – Connecting the Console Devices to the Belkin Secure KM

Warning: Before attempting to connect anything to the Switch, or your computers, please ensure that all computer equipment and devices are powered off.

1.1 Connect each monitor directly to the computers. Optionally for easier referencing, label each computer and monitor coupled together.

1.2 Connect the user keyboard to the Console section of the Switch. For USB-type keyboards, connect to the USB port marked “Keyboard.” For PS/2-type keyboards, connect to the PS/2 port marked “PS2 K.”

1.3 Connect the user mouse to the Console section of the Switch. For USB-type mice, connect to the USB port marked “Mouse.” For PS/2-type mice, connect to the PS/2 port marked “PS2 M.”

Note: The Switch will not operate properly if the keyboard and mouse are not connected to their respective locations as listed on the steps above. Additionally, keyboards with integrated USB hubs, card-readers, storage devices or multimedia extensions are not supported. Only keyboard functions are supported for devices connected to the keyboard ports while mouse USB console port supports both keyboard and mouse.

Step 2 – Connecting Computers to the Belkin Secure KM

2.1 Connect each computer to the Switch ports marked “K/M” with standard USB A to B cables (Belkin part number F3U133-06 or F3U133-10). Each USB cable can be connected to any free USB port in the computer.

Notes: If the quantity of computers is less than the number of K/M ports, connect the computers sequentially (K/M port 1, K/M port 2, etc.). The USB cable must be connected directly to a free USB port on your computer with no USB hubs or other devices in between.

2.2 Connect each audio cable (Belkin part number F8V203tt06-E3-P) from the Switch to each computer’s audio output (lime green color) or line output (blue color) jacks.

Connect a user headphone or amplified speakers to the audio output port marked “Audio” on the Console section of the Switch.

Caution: Do not connect a microphone or headset to the audio output port.
Step 3 – Powering Up

3.1 Power on all of the monitors.

3.2 Connect the Belkin Secure KM to the cable DC plug of the 12V 1.5A external AC/DC power supply (F1DN104K-3).

3.3 Connect the power cable IEC power plug to KM switch AC power inlet and then the power plug to a nearby wall outlet. Turn on the power switch located near the AC power inlet.

3.4 Power up all the attached computers, and check for display and peripheral functionality. All computers can be powered on.

Notes: Your computers should recognize the Belkin Secure KM and automatically install the HID USB driver if necessary.

You should be able to move the mouse cursor on the primary display connected to computer #1. Check to see that the keyboard and mouse are working normally on each computer. Repeat this check 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 the problem persists, please refer to the Troubleshooting section in this User Manual.

Color Code Chip Installation

The Belkin Advanced Secure KM Switch’s port-selector buttons can be color-coded for easier identification. Refer to the installation instructions below.

Note: You may have to remove the existing black color chip first.

Port Name Label

The included network-name labels can be placed in the area underneath the port-selector buttons for port identification. Blank labels are also provided.
F1DN104K-3 Typical system installation

![Diagram of F1DN104K-3 Typical system installation](image-url)
F1DN104K-3 typical installation with multiple displays per connected PC
Advanced Setup

Once the Belkin Secure KM is connected and powered on, essential operational settings need to be configured.

The first and most important setting of the Switch is the monitor positioning. It is essential that the Switch configuration will match the actual positioning on the monitors.

Selecting one of the predefined setups

To load one of the default settings available in the non-volatile memory of the Switch:

1. Select a default configuration type by pressing the following keys in sequence on the console keyboard: CTRL, CTRL, F11, Fx (refer to the Pre-Defined Configuration List). For example: The key sequence CTRL, CTRL, F11, F2 will set the displays laid out horizontally, with the left-most display to computer #1, the second display as computer #2, the third display as computer #3, and the fourth display to computer #4.
2. Power-cycle the Switch by disconnecting the power plug and reconnecting to the Switch.
3. The Switch will boot with the new configuration.

The loaded configuration will also include the following settings by default:
- All displays are 1920 x 1200 resolution, same size (26” diagonal)
- Mouse acceleration is set to 6
- Mouse speed is set to 5
- SCS is enabled
- Prevent transition while dragging feature is Enabled

Note:
- The “+” key referred to is the “=” key located next to the “backspace” on EN-US keyboards.
- The “-”key referred to is located next to the “0” key on EN-US keyboards.
- The CTRL key referred to in this manual is the LEFT CTRL key.
### INSTALLATION

**Pre-Defined Configuration List - Using CTRL, CTRL, F11, Fx**

<table>
<thead>
<tr>
<th>F11, F1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>(Factory Default)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F11, F2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>F11, F3</td>
<td>1P</td>
<td>1S</td>
<td>3P</td>
<td>3S</td>
<td></td>
</tr>
<tr>
<td>F11, F4</td>
<td>1P</td>
<td>3P</td>
<td>1S</td>
<td>3S</td>
<td></td>
</tr>
<tr>
<td>F11, F5</td>
<td>1</td>
<td>2</td>
<td>3P</td>
<td>3S</td>
<td></td>
</tr>
<tr>
<td>F11, F6</td>
<td>1</td>
<td>2P</td>
<td>2S</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>F11, F7</td>
<td>1P</td>
<td>1S</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>F11, F8</td>
<td>1P</td>
<td>1S</td>
<td>3P</td>
<td>3S</td>
<td></td>
</tr>
<tr>
<td>F11, F9</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F11, F10</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

| F11, 1, 1 | 1 | 2 | 3 |   |                   |
| F11, 1, 2 | 1 | 2 | 3 |   |                   |
| F11, 1, 3 | 1 | 2 | 3 |   |                   |
| F11, 1, 4 | 1 | 2 | 3 |   |                   |
| F11, 1, 5 | 1 | 2 | 3 |   |                   |
| F11, 1, 6 | 1 | 2 | 3 | 4 |                   |
| F11, 1, 7 | 1 | 2 | 3 | 4 |                   |
| F11, 1, 8 | 1 | 2 | 3 | 4 |                   |
| F11, 1, 9 | 1 | 2 | 3 | 4 |                   |
| F11, 1, 0 | 3P | 3S | 1 | 2 |                   |

**Pre-Defined Configuration List - Using CTRL, CTRL, F11, x, y**

| F11, 2, 1 | 1 | 3P | 2 | 3S |                   |
| F11, 2, 2 | 3P | 1 | 2 | 3S |                   |
| F11, 2, 3 | 2 | 3 | 4 | 1P | 1S |                   |
| F11, 2, 4 | 1 | 2 | 3P | 1S |                   |
| F11, 2, 5 | 1 | 2 | 3 |   |                   |
| F11, 2, 6 | 1 | 2 | 3 |   |                   |
| F11, 2, 7 | 1 | 2 | 3 |   |                   |
| F11, 2, 8 | 2 | 3 | 1 |   |                   |
| F11, 2, 9 | 2 | 3 | 1 |   |                   |
| F11, 2, 0 | 3 | 2 | 1 |   |                   |

| F11, 3, 1 | 1P | 2P | 2S | 3 |                   |
| F11, 3, 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | (8-Port Only) |
| F11, 3, 3 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | (8-Port Only) |
| F11, 3, 4 | 1 | 2 | 3 | 4 | 5 |                   |
| F11, 3, 5 | 5 | 6 | 1 | 2 | 3 |                   |
| F11, 3, 6 | 4 | 5 | 6 | 1 | 2 | 3 |                   |
| F11, 3, 7 | 1P | 1S | 2 | 3 | 4 | 5 |                   |
| F11, 3, 8 | 1 | 2 | 3 | 4 | 5 | 6 |                   |
| F11, 3, 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| F11, 3, 0 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | (8-Port Only) |
**Mouse Speed Setting**

Constant mouse cursor speed is essential for system usability. Having several systems each with a different cursor “ground speed” is detrimental for the user. Belkin’s Belkin Secure KM calculates and adjusts the cursor speed across different displays and computers using the geometry and display settings entered by the administrator.

In addition, the Switch settings include a global speed setting with input values between 1 and 10, which can be changed to adjust the cursor speed for all displays. Typical initial setting of cursor speed is 5. After initial use, the exact value can be set based on user inputs.

To increase mouse speed, press `CTRL, CTRL, F11, +`

To decrease mouse speed, press `CTRL, CTRL, F11, -`

**SCS Enabled / Disabled Setting**

Through the SCS enabled / disabled setting, you can disable the mouse cursor tracking function. Once SCS is disabled – the Switch will enable channel selection only through:

1. Front panel push-buttons;
2. Keyboard shortcuts; and:

   **Note:** This setting is enabled by default.

---

**Multiple-Head Display Driver Installation**

To enable proper KM interaction with computers having multiple heads (more than one display), the Belkin Secure KM Mouse Filter driver software must be installed. This driver is available in an executable .EXE file that can be installed on the target computer. Driver can be loaded from Belkin website. If internet access is not allowed - contact Belkin to order the KM Switch programming Kit (software CD is included in that kit).

**Keyboard Shortcuts**

The following table describes the keyboard shortcuts available:

<table>
<thead>
<tr>
<th>Key Sequence</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>CTRL, CTRL, F11, r</code></td>
<td>Reset to Factory defaults</td>
<td>Device will reset to factory defaults with all settings and configuration deleted completely.</td>
</tr>
<tr>
<td><code>CTRL, CTRL, F11, f</code></td>
<td>Freeze</td>
<td>Disable SCS. Switching between systems will not be possible via mouse movement.</td>
</tr>
<tr>
<td><code>CTRL, CTRL, F11, U</code></td>
<td>Unfreeze</td>
<td>Enable SCS. Switching between systems will be possible via mouse movement.</td>
</tr>
<tr>
<td><code>CTRL, CTRL, F11, +</code></td>
<td>Increase mouse speed</td>
<td>Mouse speed will be increased.</td>
</tr>
<tr>
<td><code>CTRL, CTRL, F11, -</code></td>
<td>Decrease mouse speed</td>
<td>Mouse speed will be decreased</td>
</tr>
</tbody>
</table>
OPERATION

Operating the Secure KM Switch

Self-Test Procedure:
As product powers-up it performs a self-test procedure. In case of self-test failure for any reason, including jammed buttons, the product will be Inoperable. Self-test failure will be indicated by the following abnormal LED behavior:

- All channel-select LEDs will be turned ON and then OFF;
- A specific, predefined LED combination will be turned ON;
- The predefined LED combination will indicate the problem type (jammed buttons, firmware integrity).

Try to power cycle product. If problem persists please contact your system administrator or technical support.

Now that product, computers and peripherals are connected and powered up, it is ready for use.

Cursor Tracking (SCS Enabled)
Upon powering up, the cursor will be positioned at the center of the primary display of computer #1. The keyboard and audio will be coupled to the same PC where the cursor is active. Once the user moves the cursor to another display, the keyboard and audio will follow that computer.

Front Panel Push Buttons
The default channel is #1 upon powering up. The user can select any other channel by pressing the appropriate front panel push button. The mouse cursor will be positioned at the center of the selected computer display. If computer has multiple heads, then the cursor will be positioned at the center of the primary display. The selected channel is indicated by LED illuminated in the appropriate push button. The keyboard and audio will follow the selected channel.

Prevent transition while dragging feature
The Belkin Secure KM offers a unique feature that further improves usability – Prevent Transition while Dragging. If the user drags an object on one display (while left mouse key pressed), the cursor would not leave that display.

This feature prevents the loss of that dragging action while accidentally crossing display border line.
Cursor Acceleration and Speed

Cursor speed and acceleration is a combination of few factors such as display size, resolution and static settings. If the current settings are not constant across the different displays or not working properly, please ask your system administrator for assistance. Both cursor acceleration and speed can be set by the administrator to reach desired settings.

Important:
If you are aware of potential security vulnerability while installing or operating this product, we encourage you to contact us immediately at the following email address: gov_security@belkin.com

The gov_security@belkin.com email address is not intended to reach technical support on Belkin products or services.
TROUBLESHOOTING

Table of Contents  |  SECTIONS 1  |  2  |  3  |  4  |  5  |  6

**General**

As product powers-up all channel-select LEDs are turned ON and then OFF. After that a specific, predefined LED combination is turned ON. Product is inoperable.

- The product did not pass self-test procedure. Try to power cycle product. If problem persists please contact your system administrator or our technical support.

No power, and none of the front panel LEDs is illuminating.

- Check that the power supply or power cable is properly connected to the mains socket.
- Check that DC plug is fully inserted into the switch DC jack (F1DN104K-3)
- Check that the power cable IEC plug is properly inserted into the AC power inlet jack (F1DN108K-3).
- Check that the device is powered by using optical mouse with visible red light. If power is not available, change the power supply.
- Check that the power switch at the back of the KM switch (F1DN108K-3 only) is on.

Channel select LEDs are blinking with audible repeating clicking sounds.

- This occurs after the configuration is set. Power cycle the unit (disconnect and re-plug the power adapter).
- If the blinking and clicking still persist after power cycling the unit, it is possible that the device anti-tampering system was triggered. Change the unit and call Belkin technical support.

**Keyboard**

**Mouse not working (all channels)**

- Check that the mouse is not plugged into keyboard port, and vice-versa.

**The computer does not detect my keyboard, or my keyboard does not work when I switch computers or reboot.**

- Check that the keyboard you are using is connected properly to the KM Switch.
- Check that the USB cable between the KM Switch and the computer is completely connected.
- Try connecting to a different USB port on the computer.
- Make sure the keyboard works when directly plugged into the computer (the HID USB driver is installed on the computer). Rebooting may be necessary when trying this.
- Make sure you are not using a keyboard with an integrated USB hub or other USB-integrated devices.
- If the computer is coming out of standby mode, allow up to one minute to regain mouse function.
- Try a different keyboard.
The CAPS, NUM, and Scroll Lock lights on my keyboard do not function when I connect to the Switch.
This is normal operation. The lock-state information is fully functional. Due to the security of the Switch and known exploitation of lock-state information for leakages, the LED status is not supported. Please refer to the operating system for verification of the lock-state information for CAPS, NUM, and Scroll Lock.

Certain keyboard functions are not working
Some non-standard keyboard functions are disabled by the switch to prevent security risks. Contact Belkin Tech Support for latest compatibility list.

Video

Grayed-out Windows in non-selected sources (inactive computers):
• Windows become grayed-out in inactive Windows 7/8 computers.
  
  Note: Inactive computers are all sources except for the currently selected computer.

• To resolve this, right click display bottom right corner and uncheck "Peek at desktop" feature in the window that opens.
  
  Note: The "Peek at desktop" feature is enabled by default.

Mouse

Mouse cursor does not leave primary display to secondary display in multiple-head computer.
Driver was not installed on that computer or not installed properly. Reinstall driver.

The computer does not detect my mouse, or my mouse does not work when I switch computers or reboot.
• Check that the mouse you are using is connected properly to the Switch.
• Check that the USB cable between the Switch and the computer is completely connected.
• Try connecting to a different USB port on the computer.
• Make sure the mouse works when directly plugged into the computer (the HID USB driver is installed on the computer). Rebooting may be necessary when trying this.
• Make sure you are not using a wireless mouse or a mouse with an integrated USB hub or other USB-integrated devices. These are not supported by the switch due to security policy.
• If the computer is coming out of standby mode, allow up to one minute to regain mouse function.
• Try a different mouse.

For extending USB, use only active USB extenders (over CAT5 cable).
INFORMATION

Table of Contents

<table>
<thead>
<tr>
<th>Sections</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

Safety Statement

INFORMATION TO USER

- USE INDOORS AND IN DRY LOCATION ONLY.
- This product may only be plugged in to socket outlets that are easily accessible.

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin International, Inc., of 12045 E. Waterfront Drive, Playa Vista, CA 90094, declare under our sole responsibility that the product, F1DN104K-3 and F1DN108K-3, to which this declaration relates, complies 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.

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.
IMPORTANT NOTE:

Industry Canada Statement

This device complies with ICES-003 of the Industry Canada Rules. Operation is subject to the following two conditions:
1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Ce dispositif est conforme a la norme CNR- standards d’Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage prejudiciable, et (2) ce dispositif doit accepter tout brouillage susceptible de provoquer un fonctionnement indésirable.

IC Statement:

This digital apparatus complies with CAN ICES-3(B)/NMB-3 (B).

CE Declaration of Conformity


We further declare that the product meets the essential requirement of the above Directives. The limits contain in these articles are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.

A copy of the European Union CE marking “Declaration of Conformity” may be obtained at the website: www.belkin.com/doc.

For information on product disposal please refer to www.belkin.com/environmental.
Australia Declaration of Conformity

We, Belkin International, Inc., declare under our sole responsibility that the product F1DN104K-3 and F1DN108K-3, to which this declaration relates, are in conformity with the requirements of AS/NZS regulations for Class B Information Technology Equipment (ITE).

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Warranty

Belkin International, Inc., Limited 3-Year Product Warranty

What this warranty covers.

Belkin International, Inc. (“Belkin”) warrants to the original purchaser of this Belkin product that the product shall be free of defects in design, assembly, material, or workmanship.

What the period of coverage is.

Belkin warrants the Belkin product for three years.

What will we do to correct problems?

Product Warranty.

Belkin will repair or replace, at its option, any defective product free of charge (except for shipping charges for the product). Belkin reserves the right to discontinue any of its products without notice, and disclaims any limited warranty to repair or replace any such discontinued products. In the event that Belkin is unable to repair or replace the product (for example, because it has been discontinued), Belkin will offer either a refund or a credit toward the purchase of another product from Belkin.com in an amount equal to the purchase price of the product as evidenced on the original purchase receipt as discounted by its natural use.
**What is not covered by this warranty?**

All above warranties are null and void if the Belkin product is not provided to Belkin for inspection upon Belkin’s request at the sole expense of the purchaser, or if Belkin determines that the Belkin product has been improperly installed, altered in any way, or tampered with. The Belkin Product Warranty does not protect against acts of God such as flood, lightning, earthquake, war, vandalism, theft, normal-use wear and tear, erosion, depletion, obsolescence, abuse, damage due to low voltage disturbances (i.e. brownouts or sags), non-authorized program, or system equipment modification or alteration.

**How to get service.**

To get service for your Belkin product you must take the following steps:

1. Contact Belkin International, Inc.,
   at 12045 E. Waterfront Drive, Playa Vista, CA 90094,
   Attn: Customer Service, or call (800)-282-2355,
   within 15 days of the Occurrence.
   Be prepared to provide the following information:
   a. The part number of the Belkin product.
   b. Where you purchased the product.
   c. When you purchased the product.
   d. Copy of original receipt.

2. Your Belkin Customer Service Representative will then instruct you on how to forward your receipt and Belkin product and how to proceed with your claim.

Belkin reserves the right to review the damaged Belkin product. All costs of shipping the Belkin product to Belkin for inspection shall be borne solely by the purchaser.

If Belkin determines, in its sole discretion, that it is impractical to ship the damaged equipment to Belkin, Belkin may designate, in its sole discretion, an equipment repair facility to inspect and estimate the cost to repair such equipment. The cost, if any, of shipping the equipment to and from such repair facility and of such estimate shall be borne solely by the purchaser. Damaged equipment must remain available for inspection until the claim is finalized. Whenever claims are settled, Belkin reserves the right to be subrogated under any existing insurance policies the purchaser may have.
How state law relates to the warranty.

THIS WARRANTY CONTAINS THE SOLE WARRANTY OF BELKIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR, EXCEPT AS REQUIRED BY LAW, IMPLIED, INCLUDING THE IMPLIED WARRANTY OR CONDITION OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SUCH IMPLIED WARRANTIES, IF ANY, ARE LIMITED IN DURATION TO THE TERM OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

IN NO EVENT SHALL BELKIN BE LIABLE FOR INCIDENTAL, SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR MULTIPLE DAMAGES SUCH AS, BUT NOT LIMITED TO, LOST BUSINESS OR PROFITS ARISING OUT OF THE SALE OR USE OF ANY BELKIN PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. Some states do not allow the exclusion or limitation of incidental, consequential, or other damages, so the above limitations may not apply to you.

GS 5/15/2013
Reporting Belkin Product Security Vulnerability

If you are aware of potential security vulnerability with any Belkin Government product, we encourage you to contact us immediately at the following email address: gov_security@belkin.com or our technical support line at: 1-800-282-2355

After your communication is received, Belkin Government personnel will contact you to follow up. To ensure confidentiality, Belkin encourages you to use PGP encryption key for secure communications.

The gov_security@belkin.com email address is not intended to reach technical support on Belkin Government products or services.