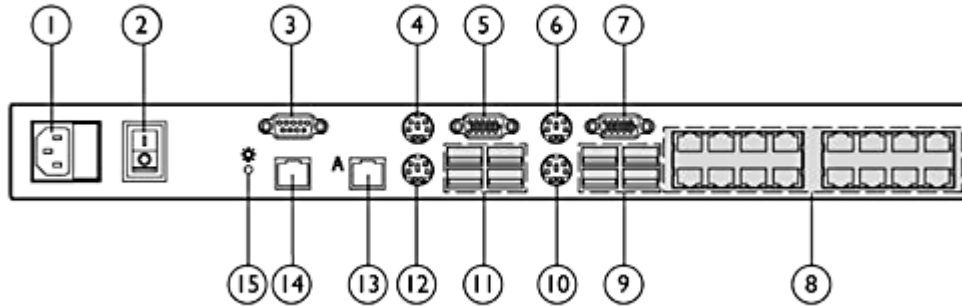*Overview*

HP's Server Console Switch with Virtual Media is a key component in managing the data center. Connections for two local consoles (a console represents one keyboard, monitor and mouse) allow access to multiple servers running various operating systems. Virtual Media capability allows a USB drive attached directly to the server console switch to be mapped to an attached server for installations and upgrades. The intuitive On-Screen Display (OSD) provides menus for configuration, virtual media, display, and even security and upgrades.

In cascaded environments the Server Console Switch with Virtual Media can allow an administrator to manage up to 4096 servers across three tiers from a single console. When tiered with additional HP Server Console Switches with Virtual Media application installations and upgrades can be pushed through to any server on any of the three tiers from a single console.

The HP Server Console Switch with Virtual Media is backwards compatible with all HP Cat5 based Server Console Switches and interface adapters that do not support virtual media.

Standard rack mounting of the HP Server Console Switches will take up 1U (1.75") of front panel rack space. However, the Switches can also be mounted in a "zero U" profile by mounting in the side rails of the rack, or behind the HP 1U Rackmount Keyboard or the 1U TFT7600 Rackmount Keyboard Monitor.

1. AC power connection	9. Console B USB ports (for keyboard and mouse only)
2. Power switch	10. Console B PS2 keyboard connection
3. Serial port	11. Console A USB ports (for keyboard, mouse or virtual media)
4. Console A PS2 mouse connection	12. Console A PS2 keyboard connection
5. Console A VGA monitor connection	13. Designated tiering port
6. Console B PS2 mouse connection	14. RJ-45 network connection
7. Console B VGA monitor connection	15. Power and staus LED
8. Server ports	

QuickSpecs

HP Server Console Switch with Virtual Media

Overview

At A Glance

- Virtual media
  - An USB CD-ROM, USB DVD, USB floppy drive, or USB key can be attached directly to the HP Server Console Switch with Virtual Media and mapped to an attached server to easily perform application installations or upgrades
  - When used with the HP 1U Rackmount Keyboard with USB or the HP TFT7600 RKM USB drives can be connected to the front USB port directly at the keyboard for increased ease of use
  - Virtual media support requires the use of Virtual Media Interface Adapters connected directly to a Server Console Switch with Virtual Media
  - Virtual media interface adapter: New interface adapter to support virtual media on ProLiant servers
  - Supports KVM functionality also
- Improved tiering support:
  - Three levels of cascading are available to support up to 4096 servers. When all tiers are comprised of virtual media compatible console switches and interface adapters, virtual media can be mapped to a server on any tier

Models

HP Server Console Switch 2x16 Server Console Switch with Virtual Media   AF600A

![HP invent logo]

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Product Features

Target Applications and Markets

Network Administrators, System Administrators, Engineering Managers, Chief Information Officers, and Managers of Information Systems are all among the users who will see benefits from using the HP family of server console switches.

- Easy access to multiple servers (any server with PS2 or USB I/O connection port)
- Multi-platform management from one console (Microsoft® Windows®, Novell, UNIX®, Linux etc)
- Non-intrusive control and management of servers HP Server Console Switches are "**out-of-band**," allowing server activity to be viewed on multiple systems without interfering in any way

Features

- **On-Screen Display** (OSD) - Displays system-related information on the console monitor, such as selected server name, status, power-up test data, configuration menus and virtual media.
- **Programmable Scanning** - An evaluation of system performance can be made by sequentially scanning any or all of the computers in the system. Programmable scanning allows you to determine which computers to include as well as the duration of the connection.
- **Configuration NVRAM** - NVRAM (non-volatile RAM) makes it easy to set configuration information using commands entered from the keyboard. The NVRAM stores the resulting configuration until a user decision is made to change the information, even if the unit loses power.
- **Password Protection** - For protection against unauthorized users, the switch box provides a password option for security purposes.
- **Switch Firmware Update** - The application code of the switch can be quickly and easily updated via FLASH ROM. Updates can be accomplished over the LAN eliminating the need to carry a notebook into the data center to perform firmware upgrades.
- **Multiple Space Saving 0U Installation Methods**
  - **Side Mount** - Rails are provided for mounting the unit to the side of rack cabinets with side mounting capability.
  - **Rear Rack Mount** - HP Console Switches may be mounted behind a HP 1U Rackmount Keyboard, or the TFT7600 rack mounted keyboard and monitor with slide rails provided with the switch.
- **PS2 Virtual Media Interface Adapter** support servers with PS2 mouse and keyboard connection and a USB port for virtual media (recommended for ProLiant servers).
- **USB Virtual Media Interface Adapter** supports servers without PS2 mouse and keyboard connections such as Integrity servers running Microsoft Windows.
  - USB 2.0 protocol and speed supported on both Virtual Media Interface Adapters.
- Support for a variety of server connections with Interface Adapters where virtual media is not needed.
  - PS/2
  - USB mouse and keyboard
  - VT100 serial console support
  - BladeSystems p-Class support via front diagnostics connector
- **The following input devices provide a convenient front USB pass through port for connecting USB media to the Server Console Switch with Virtual Media**
  - HP 1U Rackmount Keyboard with USB
  - HP TFT7600 Rackmount Keyboard Monitor

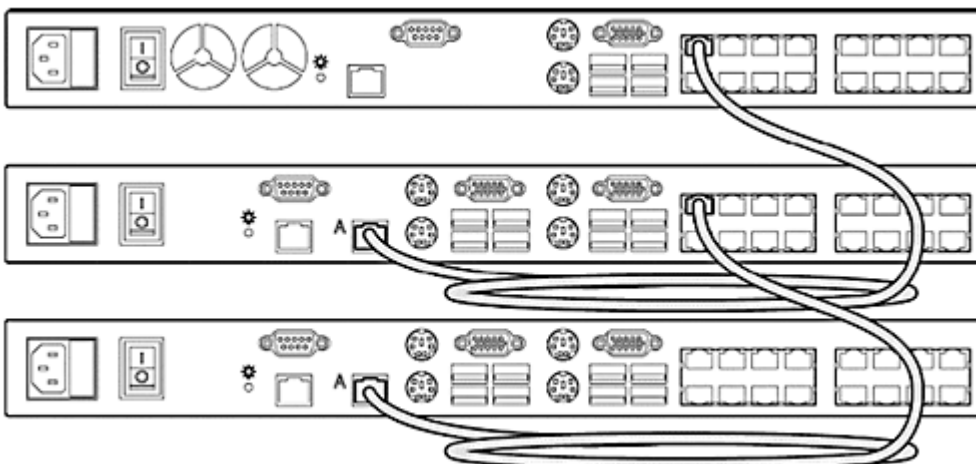NOTE: For more information please visit: http://www.hp.com/go/kvm.

Product Features

Cascaded Configurations

- Cascading, also called tiering, is the ability to connect one or more switches under a single switch at the top as in a pyramid. Cascading allows an administrator to access larger numbers of servers from a single local console. The Server Console Switch with Virtual media allows connection of 2 local consoles. Server Console Switches with Virtual Media will support up to 3 levels of tiering under certain conditions
- HP Server Console Switches with Virtual Media may be cascaded to HP Server Console Switches with Virtual Media or any Cat5 based HP Server Console Switch by connecting a Cat5 cable from a server port on the top switch to the dedicated tiering port on the switch below. Interface adapters are not needed to cascade HP Server Console Switches.
- HP Server Console Switches with Virtual Media may be placed at the top and tiered to up to 16 Server Console Switches with Virtual Media or any Cat5 based HP Server Console Switch for a maximum of 256 servers in the cascade.
- If the first and second tiers contain HP Server Console switches with Virtual Media then a third level may be added comprised of either HP Server Console Switches with Virtual Media or any Cat5 based HP Server Console Switches for a maximum of 4096 servers in the cascade.
- Virtual media can be mapped to servers on any tier but only if the server is connected to a HP Server Console Switch with Virtual Media using a Virtual Media Interface Adapter.
- A HP Server Console Switch with Virtual Media can not be cascaded under a legacy Cat5 based HP Server Console Switch.
- Legacy Cat5 based HP Server Console Switches, Interface Adapters, and Expansion Modules do not support virtual media.
- To perform a firmware upgrade for a cascaded HP Server Console Switch and all attached Interface Adapters; you must locally connect the keyboard, monitor, and mouse to the cascaded HP KVM Server Console Switch to access the local OSD.
- HP Server Console Switches do not support Compaq KVM PCI Cards or HP legacy console switches.
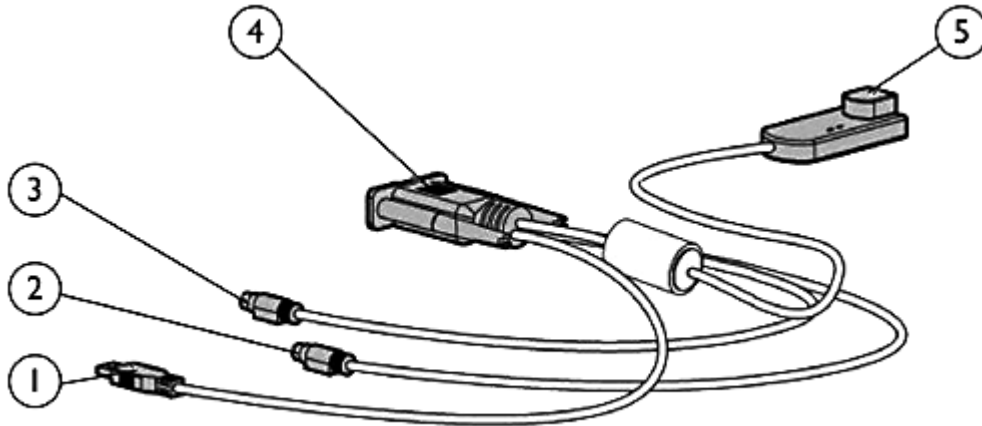
NOTE: For more information on cascading HP Server Console Switches please visit: http://www.hp.com/go/kvm.

Cascading HP Console Switches with Virtual Media using the designated tiering port
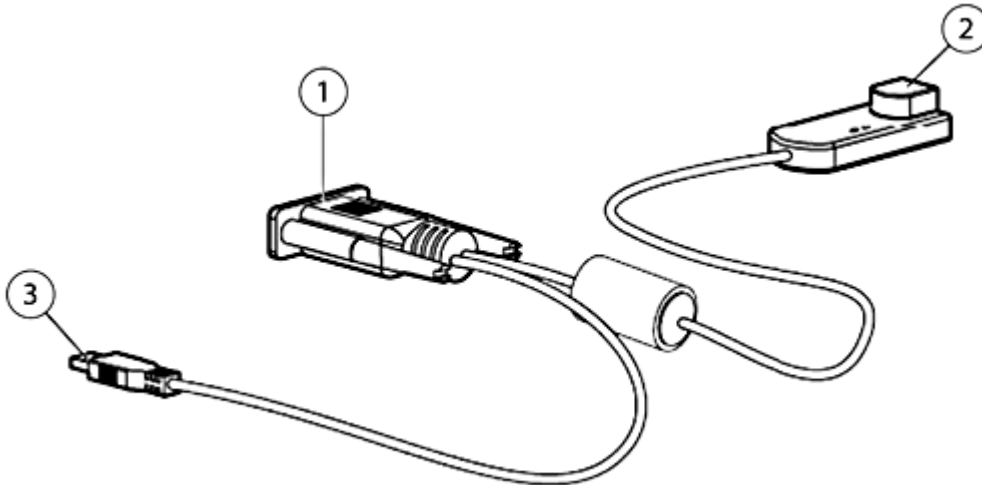
QuickSpecs

Product Features

Virtual Media Interface Adapter (PN: AF604A)

1. USB connection for virtual media
2. PS2 keyboard connection
3. PS2 mouse connection

4. SVGA connection
5. RJ-45 connection to switch

USB Virtual Media Interface Adapter (PN: AF603A)

1. SVGA connection
2. RJ-45 connection to switch

3. USB 2.0 connection for mouse, keyboard, and virtual media

HP Server Support

KVM Support
HP ProLiant Server Support

All HP ProLiant servers running any operating system are supported on all HP Server Console Switches.

HP Integrity Server Support

Integrity Server support is dependent on operating system and hardware configurations. For systems capable of displaying VGA graphics the USB Interface Adapter (PN 336047-B21) may be used. Some Integrity Servers may require an optional graphics adapter.
With some operating systems the Serial Interface Adapter (PN 373035-B21) may be connected to the RS-232 management port to provide VT100 terminal emulation through the HP Server Console Switch.

HP Unix Server Support

HP9000 Servers can be managed using the Serial Interface Adapter (PN 373035-B21) connected to the RS-232 management port to provide VT100 terminal emulation through the HP Server Console Switch.
NOTE: For additional information on supported options for the HP Integrity and HP9000 Servers please consult the HP9000, Integrity and carrier-grade servers Configuration Guide.

HP Serial Console Servers may also be used to support serially managed servers and devices.

KVM Support with virtual media (requires Virtual Media Interface Adapter)
HP ProLiant Server Support for virtual media

All HP ProLiant servers capable of supporting USB storage devices and USB drive keys and running Microsoft Windows 2000 (SP4 or later) or later, RedHat 4, or SLES 9 are supported. Requires Virtual Media Interface Adapter (PN: AF604A recommended) connected to a HP Console Switch with Virtual Media.

HP Integrity Server Support for virtual media

For systems running Microsoft Windows 2003 (SP4 or later) capable of displaying VGA graphics the USB Virtual Media Interface Adapter (PN: AF603A) may be used. Some Integrity Servers may require an optional graphics adapter.
NOTE: Some hardware configurations and/or operating systems may only transfer virtual media at USB 1.1 speeds.

NOTE: Please see the following URL for additional information regarding USB support:
http://h18004.www1.hp.com/products/servers/platforms/usb-support.html.

Service and Support, HP Care Pack, and Warranty Information

Three-year limited warranty, including hardware diagnostic support, pre-failure warranty (coverage of hard drives, memory and processors). The warranty is fully supported by HP Services and a worldwide network of resellers and service providers. In addition 90-day's getting started software telephone support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services.

NOTE: Limited warranty is 3 year parts only.

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.
A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP Care Pack Services include HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3KVA. 22" and smaller external monitors will be covered at the same service level and coverage period as the server. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/carepack
NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at: http://www.hp.com/hps
NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

Related Options

Interface Adapters for Virtual Media	USB Virtual Media Interface Adapter	AF603A
	NOTE: For use only with servers that have no PS/2 mouse and keyboard connections.	
	PS/2 Virtual Media Interface Adapter, 1 pack	AF604A
	NOTE: Requires PS/2 mouse and keyboard connections and one USB port on server.	
Interface Adapters (support KVM functionality only)	PS/2 Interface Adapter - 1 pack	262588-B21
	PS/2 Interface Adapter - 8 pack	262587-B21
	USB Interface Adapter - 1 pack	336047-B21
	BladeSystem c-Class KVM Interface Adapter - 1 pack	AF605A
	NOTE: Supports HP BladeSystems c-Class products only.	
	BladeSystem p-Class KVM Interface Adapter - 1 pack	AF100A
	NOTE: Supports HP BladeSystems p-Class products only.	
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: VT100 terminal emulation.	
CAT5e Cables	CAT5e Cable 3', 4 pack	263474-B21
	CAT5e Cable 6', 8 pack	263474-B22
	CAT5e Cable 12', 8 pack	263474-B23
	CAT5e Cable 20', 4 pack	263474-B24
	CAT5e Cable 40', 1 pack	263474-B25
Service and Support Offerings (HP Care Pack Services)	Hardware Installation (Electronic)	U2871E

QuickSpecs

Technical Specifications

HP Server Console Switch with Virtual Media	Dimensions	Height	1.72 in (4.36 cm)
		Width	17 in (43.8 cm)
		Depth	8.3 in (21.08 cm)
		Weight	5.75 lb (2.61 kg)
	Power Requirements	Rated Voltage	100 to 240V AC
		Rated Frequency	50 to 60 Hz
		Rated Input Current	0.5 to 0.25A
		Input Power	60W (max)
		Heat	200 BTU/hr (max)
	Temperature Range	Maximum Ambient Operating Temperature	50° to 122° F (10° to 50° C)
		Ambient Storage and Shipping Temperature	86° to 140° F (30° to 60° C)
	Temperature	Operating	50° to 122° F (10° to 50° C)
		Transit	-22° to 140° F (-30° to 60° C)
		Storage	-4° to 140° F (-20° to 60° C)
	Relative Humidity (non-condensing)	Operating	20% to 80%
		Non-operating	5% to 90%
	Video Modes Supported	VGA, SVGA, XGA	

CAT 5 Cable lengths and Video Resolution Restrictions

	1280 x 1024	1024 x 768	800 x 600
75 ft (22m) cable length	Y	Y	Y
100 ft (30m) cable length	-	-	Y

| Environment-friendly Products and Approach | End-of-life Management and Recycling | Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. |
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Technical Specifications