

Overview

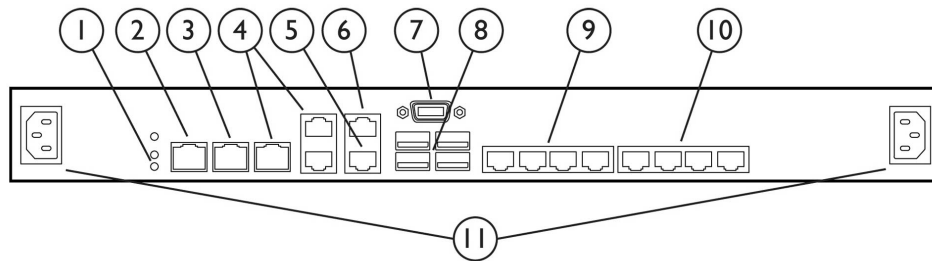
HP's IP Console Switch G2 with Virtual Media and Common Access Card (CAC) support is a key component in managing the heterogeneous data center and along with the IP Viewer software allows remote access to multiple servers running various operating systems. Virtual Media capability allows a removable drive or ISO image to be remotely mapped to an attached server in the data center or a remote office for software installations and upgrades. An intuitive User Interface provides menus for configuration, virtual media, display, and even security and upgrades from the local console. The term CAC stands for Common Access Card, also known as "Smart Cards". The CAC allows government agency and other company employees to keep all of their network access information on a card (about the size of a credit card) that is read by either an external USB reader or a port on the PC/server. These appliances adds support for reading and transmitting USB CCID Generic Smart Card/CAC data from user station (local or remote) to end server.

In cascaded environments the HP IP Console Switch G2 with Virtual Media & CAC can allow an administrator to manage up to 1024 servers across two 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 two tiers from a single console.

The HP IP Console Switch G2 with Virtual Media & CAC 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 IP 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.

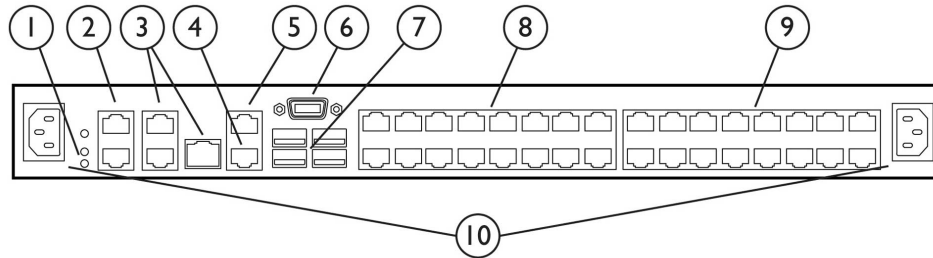
1x1Ex8 HP IP Console Switch G2 with Virtual Media & CAC



- | | |
|---|-------------------------------|
| 1. Power supply status indicator LEDs | 7. Local console VGA |
| 2. LAN 1 | 8. Local console USB ports |
| 3. LAN 2 | 9. Target device ports (1-4) |
| 4. S1, S2, and S3 (reserved for future use) | 10. Target device ports (5-8) |
| 5. Tiering chain port | 11. Power Connectors A & B |
| 6. RJ-45 serial setup port | |

Overview

2x1Ex16 or 4x1Ex32 HP IP Console Switch G2 with Virtual Media & CAC



1. Power supply status indicator LEDs
2. LAN 2 and LAN 2
3. S1, S2, and S3 (reserved for future use)
4. Tiering chain port
5. RJ-45 serial setup port
6. Local console VGA
7. Local console USB ports
8. Target device ports (1-16)
9. Target device ports (7-32)
10. Power connectors A & B

What's New

New high speed USB interface adapter with CAC and virtual media compatibility

Models

HP IP Console Switch G2	HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
	HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
	HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A

At A Glance

- Increased target server port counts:
 - Up to 32 target server ports per switch increases flexibility
- Improved video support:
 - New video compression allows 1600x1200 @ 60hz or 1680 x 1050 @ 60hz 16-bit color for remote sessions without impacting performance
 - Increases cable distances at higher resolutions
- Improved security:
 - CAC support to the server
 - Dual-stack IPv6 with stateless auto configuration
 - Keyboard, video, mouse and virtual media activity is fully encrypted using 128-bit SSL, AES, DES, or DES3 for remote sessions
 - Remote console sessions to the data center can be shared by other remote users. Stealth mode can also be used by administrators to monitor remote sessions without announcing it for security reasons
- LDAP included:
 - Microsoft Active Directory integration using LDAP is standard
 - Local security database on switch is also available for non LDAP implementations
- Remote and local virtual media:
 - Administrators can map local media on a workstation to a remote server in the data center or remote office to easily

Overview

- perform application installations or upgrades
- A USB CD-ROM, USB DVD, USB floppy drive, or USB key can be attached directly to the HP IP Console Switch G2 with Virtual Media & CAC and mapped to an attached server
- When used locally with the HP 1U Rackmount Keyboard with USB or the HP TFT7600 RKM USB drives can be connected to the front USB port on the keyboard for increased ease of use
- Virtual media support requires the use of Virtual Media Interface Adapters
- Virtual media interface adapter with CAC:
 - New interface adapters support virtual media and provide CAC on ProLiant servers
 - Virtual Media Interface Adapters support USB 1.1 full speed.
- Tiering support:
 - Two levels of cascading are available to support up to 1024 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
- IP Viewer 4.1 software:
 - Supports HP IP Console Switches with Virtual Media, HP Server Console Switches G2 with Virtual Media, HP Serial Console Servers, and legacy Cat5 based HP IP Console Switches
 - Supports remote virtual media sessions
 - Compatible with Windows and Linux clients
 - No software to install on target servers

Standard 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 console switches.

- **24/7 data centers** - The HP IP Console Switch enables staffed data centers to move people out of computer rooms while still maintaining server accessibility. Technicians can load the IP Viewer software on their local workstation at a desk or cubicle and access the servers in the computer room through a LAN/WAN connection.
- **Staffed remote sites** - The HP IP Console Switch provides users with access to local KVM functions over their LAN or WAN. Remote users can access servers and perform actions as if they are standing at a local console.
- **Heterogeneous environments** - The HP IP Console Switch connects to any type of server that has a standard PS/2 or USB KVM connection and will also connect to BladeSystems and serial devices.

Features

New Features:

- Common Access Card (CAC) support
- True Serial
- DVD Support
- Video resolution supporting up to 1600 x 1200 on the local port
 - Widescreen video support modes include; 1680 x 1050, 1440 x 900, 1280 x 800, 1024 x 640, 800 x 500
- 1 local port and 1 tiering port.
 - For the digital appliances, the local ports will be represented by one Tiering connection and one local KVM connection. The two ports will be independent of one another (i.e. not pre-emptive or shared).
- Supports Virtual Media (VM), Tiering (or cascading) up to 2 levels (base plus one lower level) through the Tiering port.
- Supports existing ITFC server modules, backward compatible.
- Dual-stack IPv6 with stateless auto configuration
- Support for DVD-ROM data over virtual media
- Syslog support
- BladeSystem c-Class KVM Interface Adapter for supporting BladeSystem c-Class servers.

Standard Features:

- **The 4x1Ex32 model** will support up to 6 users as 4 remote users and 1 local user and 1 Tiered user. The 2x1Ex16 model will support 4 users simultaneously as 2 remote users, 1 local user and 1 Tiered user.
- **Full remote KVM functionality** - Remote KVM control of servers and serially attached devices at near local performance.
- **Remote virtual media** - Easily load and update software and firmware from anywhere on the LAN or WAN when used with Virtual Media Interface Adapters.
- **iLO compatibility** - Easily switch between remote KVM and iLO sessions directly from the IP Viewer software.
- **Local Console User Interface** - Displays all system-related information on the console monitor. Same look and feel as the remote On-Board Web Interface (OBWI).
- **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 local password option for security purposes as well as individual user authentication and access rights for remote users.

Standard Features

- **Switch Firmware Update** - The application code of the switch can be quickly and easily updated via FLASH ROM. Updates can be accomplished remotely over the LAN using the IP Viewer 3.0 or higher software.
- **Multiple Space Saving OU Installation Methods** -
 - 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.
 - Side Mount - Rails are provided for mounting the unit to the side of rack cabinets with side mounting capability
- **PS2 Virtual Media Interface Adapter supports servers with PS2 mouse and keyboard connection and a USB port for virtual media. This is the recommended interface adapter for virtual media**
- **USB Virtual Media Interface Adapter supports servers without PS2 mouse and keyboard connections such as Integrity servers running Microsoft Windows**
 - USB 1.1 full speed protocol on both Virtual Media Interface Adapters
 - System also supports AF603A and AF604A
- **Support for a variety of server connections with Interface Adapters where virtual media is not needed**
 - PS/2
 - USB mouse and keyboard
 - True VT100 Serial Console Support
 - BladeSystems support via front diagnostics connector
- **The following input devices provide a convenient front USB pass through port for connecting USB media locally to the HP IP Console Switch G2 with Virtual Media & CAC**
 - HP 1U Rackmount Keyboard with USB
 - HP TFT7600 Rackmount Keyboard Monitor

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

Cascaded Configurations

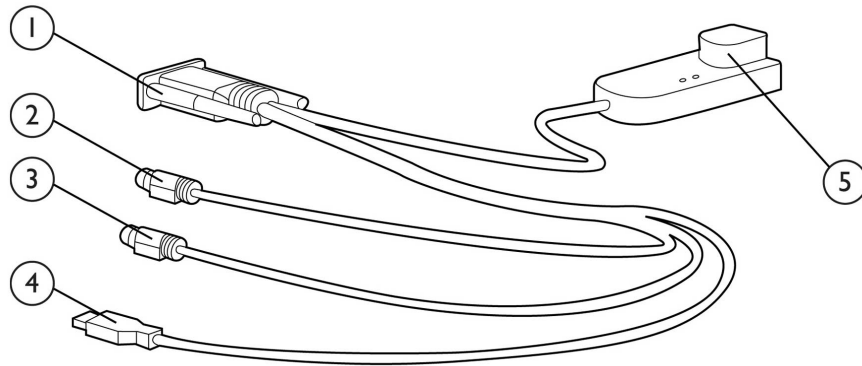
Cascading, also called tiering, is the ability to connect one or more switches under a single switch at the top as in a pyramid. Cascading allows an administrator to access larger numbers of servers from a single local or remote console. The HP IP Console Switch G2 with Virtual Media & CAC will support up to 2 levels of tiering under certain conditions

- HP IP Console Switch G2 can now be on the second tier of a cascaded configuration.
- HP IP Console Switch G2 with Virtual Media may be cascaded to HP Server Console Switches with Virtual Media or any Cat5 based HP Server Console Switches 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.
- 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. Virtual media operation requires a Virtual Media Interface Adapter connected to a HP Console Switch with Virtual Media.
- An HP IP Console Switch G2 with Virtual Media & CAC can not be cascaded under a legacy Cat5 based HP Server Console Switch.
- To perform a firmware upgrade for a cascaded HP Server Console Switch G2 with Virtual Media and all attached Interface Adapters; you must connect to the cascaded HP Server Console Switch G2 On Board Web Interface (OBWI).

NOTE: For more information on cascading HP IP Console Switches please visit: <http://www.hp.com/go/kvm>.

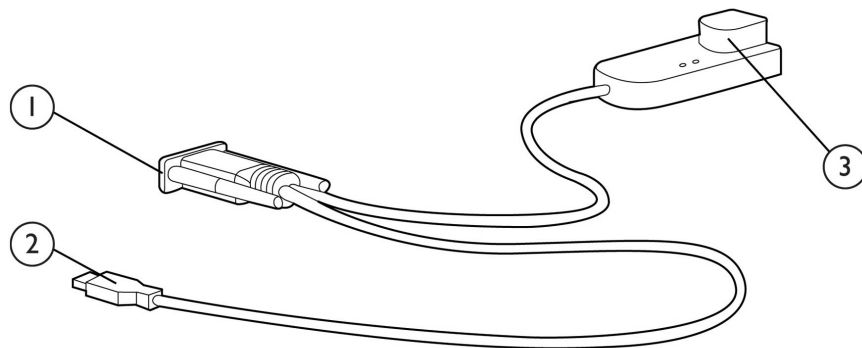
PS2/USB Virtual Media, CAC Interface Adapter (PN: AF624A)

Standard Features



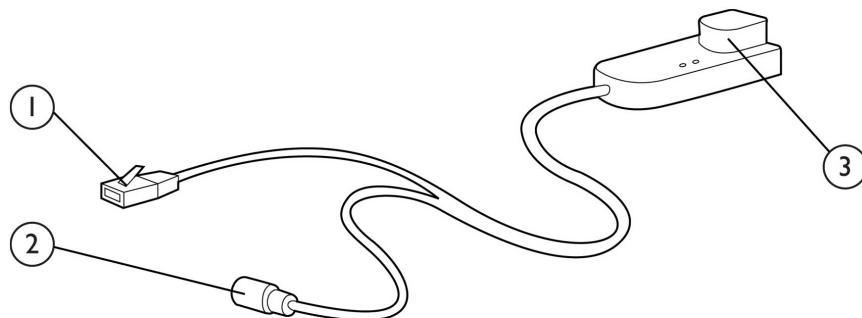
- 1. Video connector
- 2. Mouse connector
- 3. Keyboard connector
- 4. USB connector (for Virtual Media only)
- 5. RJ-45 connector

USB Virtual Media, CAC Interface Adapter (PN: AF629A)



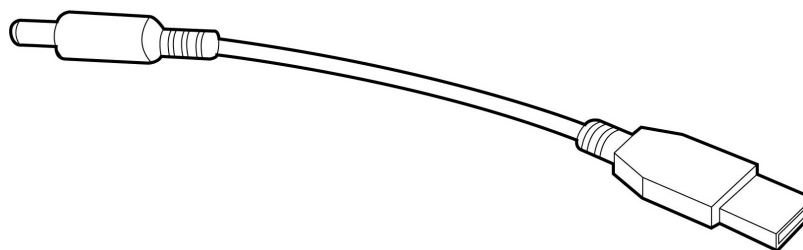
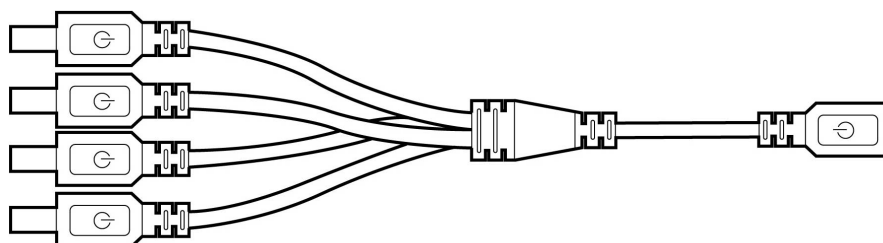
- 1. Video connector
- 2. USB connector
- 3. RJ-45 connector

HP KVM CNSL SRL/PWR G2 ITFC ADPTR (PN: AF625A)



USB Coax Power Connector Cable which replaces AC Power Adapter

Standard Features



1. RJ-45 serial connector (to RJ-45/DB9 adapter or to a Cisco appliance)
2. Power connector (mate to USB power connector or power supply)
3. RJ-45 connector (for CAT5 to switch)

HP Server Support

KVM Support

HP ProLiant Server Support

All HP ProLiant servers running any operating system are supported on all HP IP 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 Adapters may be used. Some Integrity Servers may require an optional graphics adapter. With some operating systems the Serial Interface G2 Adapter (PN: AF625A) may be connected to the RS-232 management port to provide serial connection through the HP IP Console Switch.

HP Unix Server Support

HP9000 Servers can be managed using the Serial Interface G2 Adapter (PN: AF625A) connected to the RS-232 management port providing serial connection through the HP IP 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 2003 or later, RedHat 4 or later, or SLES 10 or later are supported. Requires Virtual Media Interface Adapter connected to a HP Console Switch with Virtual Media.

HP Integrity Server Support for virtual media

For systems running Windows 2003 capable of displaying VGA graphics the USB Virtual Media Interface Adapter may be used. Some Integrity Servers may require an optional graphics adapter.

HP-UX with USB 2.0 support is also compatible with virtual media.

NOTE: Some hardware configurations and/or operating systems may only transfer virtual media at USB 1.1 speeds.

Service and Support

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 and CAC	HP KVM Console USB Virtual Media CAC Interface Adapter	AF629A
	HP KVM Console PS2/USB Virtual Media CAC Interface Adapter NOTE: Requires PS/2 mouse and keyboard connections and one USB port on server.	AF624A
Interface Adapters for Serial Connectivity	HP KVM Console Serial/Power G2 Interface Adapter NOTE: VT100 true serial.	AF625A
Interface Adapters for Virtual Media	HP 1-pack PS/2 Virtual Media Interface Adapter NOTE: Requires PS/2 mouse and keyboard connections and one USB port on server.	AF604A
Interface Adapters (support KVM functionality only)	HP KVM CAT5 1-pack PS/2 Interface Adapter	262588-B21
	HP KVM CAT5 8-pack PS/2 Interface Adapter	262587-B21
	HP KVM CAT5 1-pack USB Interface Adapter	336047-B21
	HP BladeSystem c-Class KVM Interface Adapter NOTE: Supports HP BladeSystems c-Class products only.	AF605A
CAT5e Cables	HP 3ft Qty 4 KVM CAT5 Cable	263474-B21
	HP 6ft Qty 8 KVM CAT5 Cable	263474-B22
	HP 12ft Qty 8 KVM CAT5 Cable	263474-B23
	HP 20ft Qty 4 KVM CAT5 Cable	263474-B24
	HP 40ft Qty 1 KVM CAT5 Cable	263474-B25
HP Care Pack Services	HP Install Rack and Rack Options Service	U2871E

Technical Specifications

HP IP Console Switch G2 with Virtual Media & CAC	Dimensions	Height	1.72 in (4.36 cm)
		Width	17 in (43.8 cm)
		Depth	9.2 in (23.68 cm)
		Weight	7.0 lb (3.2 kg) 8 & 16 Port, 7.6 lb (3.4 kg) 32 Port
	Power Requirements	Rated Voltage	100 to 240V AC
		Rated Frequency	50 to 60 Hz
		Rated Input Current	0.5 to 0.25A
		Input Power	100W (max)
		Heat	340 BTU/hr (max)
	Temperature Range	Maximum Ambient	50° to 122° F (10° to 50° C)
		Operating Temperature	
		Ambient Storage and Shipping Temperature	68° to 158° F (20° to 70° C)
	Temperature	Operating	50° to 122° F (10° to 50° C)
Transit		-22° to 158° F (-20° to 70° C)	
Storage		-4° to 158° F (-20° to 70° C)	
Relative Humidity (non-condensing)	Operating	20% to 80%	
	Non-operating	5% to 95%	
Video Modes Supported	VGA, SVGA, XGA		
Network Speed	10/100/1000 Mb/s		

CAT 5 Cable lengths and Video Resolution Restrictions

Standard 4x3				
Total Cable Length	1600x1200 @85Hz	1280x1024 @85Hz	1024x768 @85Hz	800x600 @85Hz
10'	X	X	X	X
50'	X	X	X	X
100'				X

Wide Screen 16x9 / 16x10					
Total Cable Length	1680x1050 @60Hz	1440x900 @60Hz	1280x800 @60Hz	1024x640 @60Hz	800x500 @60Hz
10'	X	X	X	X	X
50'	X	X	X	X	X
100'					X

Technical Specifications

**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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