RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE IP KVM Console Switch G2 with Virtual Media & CAC

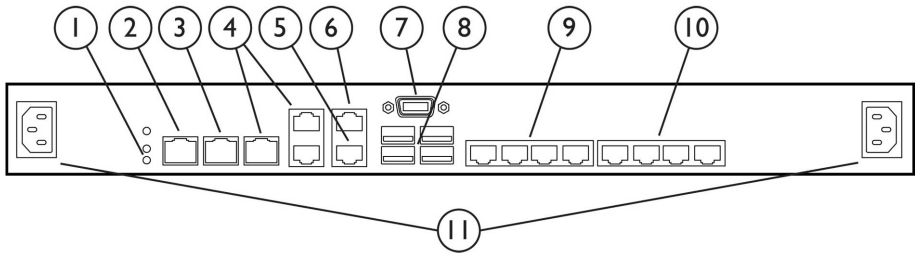
The HPE IP Console Switch G2 with Virtual Media and Common Access Card (CAC) support is a key component in managing the heterogeneous data center and along with the IP Viewer software allows remote access to multiple servers running various operating systems. Virtual Media capability allows a removable 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 tiered environments the HPE 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 HPE 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 HPE IP Console Switch G2 with Virtual Media & CAC is backwards compatible with all HPE Cat5 based Server Console Switches and interface adapters that do not support virtual media.

Standard rack mounting of the HPE 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 HPE 1U Rackmount Keyboard or the 1U LCD8500 Console.

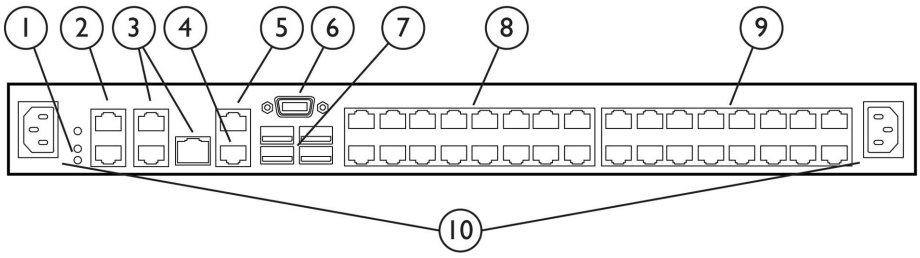
1x1Ex8 HPE IP Console Switch G2 with Virtual Media & CAC



1. Power supply status indicator LEDs
2. LAN 1
3. LAN2
4. S1, S2, and S3 (reserved for future use)
5. Tiering chain port
6. RJ-45 serial setup port
7. Local console VGA
8. Local console USB ports
9. Target device ports (1-4)
10. Target device ports (5-8)
11. Power Connectors A & B

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

Overview



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

HPE IP Console Switch G2	HPE 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
	HPE 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A

Additional HPE IP KVM Console Switch G2 with Virtual Media and CAC models

HPE 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 perform application installations or upgrades
  - A USB CD-ROM, USB DVD, USB floppy drive, or USB key can be attached directly to the HPE IP Console Switch G2 with Virtual Media & CAC and mapped to an attached server

Overview

  - When used locally with the HPE 1U Rackmount Keyboard with USB or the HPE LCD8500, 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 tiering 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 HPE IP Console Switches with Virtual Media, HPE Server Console Switches G2 with Virtual Media, HPE Serial Console Servers, and legacy Cat5 based HPE 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 HPE family of console switches.

- **24/7 data centers** - The HPE 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 HPE 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 HPE 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
- 1local 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 tiering) 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.
- **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 0U Installation Methods** -
    - Rear Rack Mount - HPE Console Switches may be mounted behind a HPE 1U Rackmount Keyboard, or the LCD8500 rack mounted console 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**

Standard Features

- **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 HPE IP Console Switch G2 with Virtual Media & CAC**
  - HPE 1U Rackmount Keyboard with USB
  - HPE LCD8500 Rackmount Keyboard Monitor

Notes: For more information please visit: **https://www.hpe.com/us/en/integrated-systems/rack-power-cooling.html**

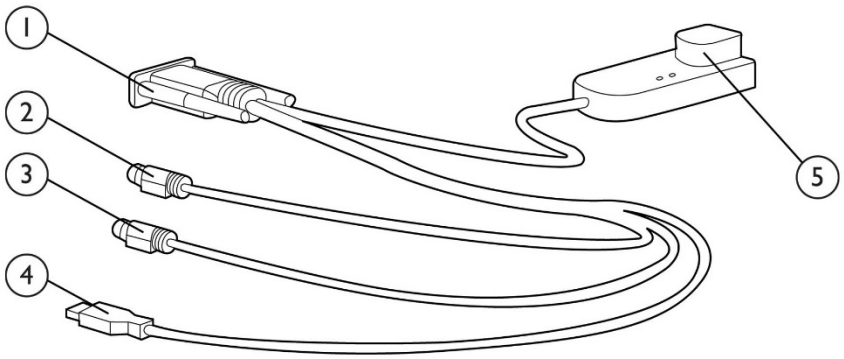
Tiered Configurations

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

- HPE IP Console Switch G2 can now be on the second tier of a tiered configuration.
- HPE IP Console SwitchG2 with Virtual Media may be tiered to HPE Server Console Switches with Virtual Media or any Cat5 based HPE 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 tier HPE Server Console Switches.
- Virtual media can be mapped to servers on any tier but only if the server is connected to a HPE Server Console Switch with Virtual Media using a Virtual Media Interface Adapter. Virtual media operation requires a Virtual Media Interface Adapter connected to a HPE Console Switch with Virtual Media.
- An HPE IP Console Switch G2 with Virtual Media & CAC cannot be tiered under a legacy Cat5 based HPE Server Console Switch.
- To perform a firmware upgrade for a tiered HPE Server Console Switch G2 with Virtual Media and all attached Interface Adapters; you must connect to the tiered HPE Server Console Switch G2 On Board Web Interface (OBWI).

Notes: For more information on tiering HPE IP Console Switches please visit: **https://www.hpe.com/us/en/integrated-systems/rack-power-cooling.html**.

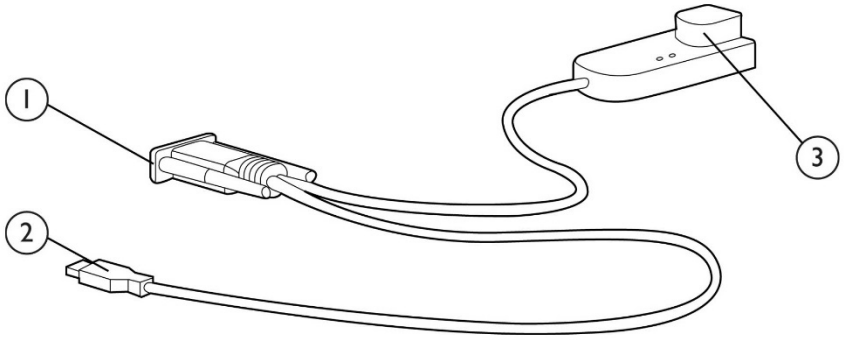
PS2/USB Virtual Media, CAC Interface Adapter (PN: AF624A)



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)

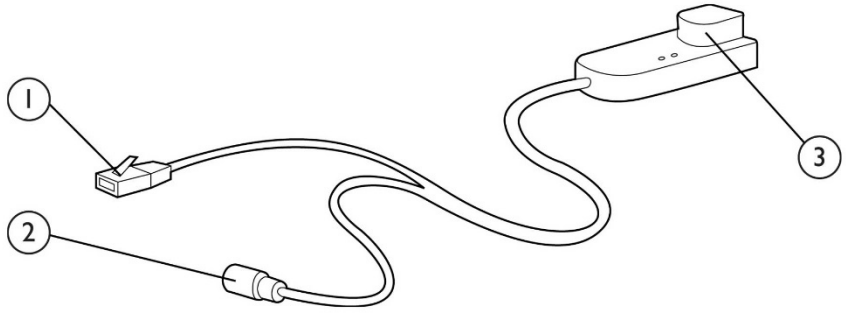
Standard Features



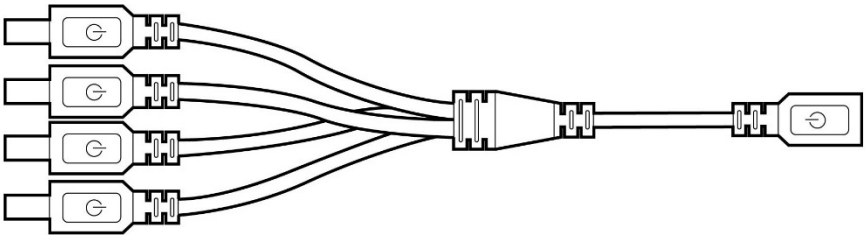
1. Video connector
2. USB connector
3. RJ-45 connector

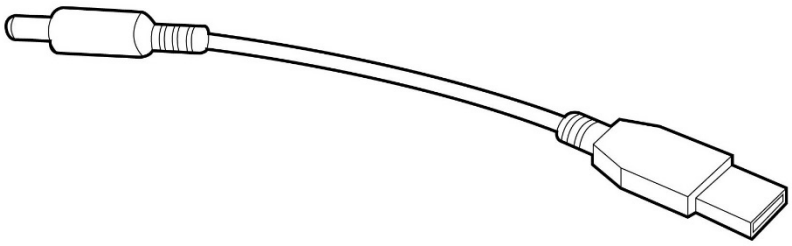
Standard Features

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



USB Coax Power Connector Cable which replaces AC Power Adapter





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)

HPE Server Support

KVM Support

HPE ProLiant Server Support

All HPE ProLiant servers running any operating system are supported on all HPE IP Console Switches.

HPE 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 HPE IP Console Switch.

HPE 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 HPE IP Console Switch.

Notes: For additional information on supported options for the HPE Integrity and HP9000 Servers please consult the HP9000, Integrity and carrier-grade servers Configuration Guide.

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

KVM Support with virtual media (requires Virtual Media Interface Adapter)

HPE ProLiant Server Support for virtual media

All HPE 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 HPE Console Switch with Virtual Media.

HPE 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.
HPUX with USB 2.0 support is also compatible with virtual media.

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

Service and Support

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No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

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Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

https://www.hpe.com/services/operational

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:

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Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

Service and Support

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Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
https://support.hpe.com/hpesc/public/home/signin

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- Scale quickly, meet unpredictable demand
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https://www.hpe.com/us/en/contact-hpe.html

For more information
www.hpe.com/services

Related Options

Interface Adapters for Virtual Media and CAC	HPE KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
Interface Adapters for Serial Connectivity	HPE KVM Console Serial/Power G2 Interface Adapter	AF625A
Interface Adapters (support KVM functionality only)	HPE KVM Console USB/Display Port Interface Adapter	AF654A
HPE LCD8500 1U Rackmount Console Kit Models	HPE LCD8500 1U US Rackmount Console Kit	AF630A
	HPE LCD8500 1U UK Rackmount Console Kit	AF631A
	HPE LCD8500 1U FR Rackmount Console Kit	AF633A
	HPE LCD8500 1U JP Rackmount Console Kit	AF642A
	HPE LCD8500 1U INTL Rackmount Console Kit	AF644A
CAT5e Cables	HPE 6ft Qty 8 KVM CAT5 Cable	263474-B22
	HPE 12ft Qty 8 KVM CAT5 Cable	263474-B23
HPE Tech Care	HPE Install Rack and Rack Options Service	U2871E

Technical Specifications

HPE 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 Operating Temperature**	50° to 122° F (10° to 50° C)
		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

Environment-friendly Products and Approach - End-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life **product return, trade-in, and recycling programs**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.
The EU WEEE Directive (2012/19/EU) 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 Enterprise web site**. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2023	Version 16	Changed	Service and Support Section was updated
15-Nov-2021	Version 15	Changed	Service and Support Section was updated
01-Oct-2018	Version 14	Changed	Overview were revised.
02-Jul-2018	Version 13	Changed	Models Section was Updated
05-Mar-2018	Version 12	Changed	Overview and Standard Features were revised.
23-Oct-2017	Version 11	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
31-Mar-2016	Version 10	Changed	Related Options section was revised.
31-Mar-2014	Version 9	Changed	The part number for HP KVM Console USB Virtual Media CAC Interface Adapter was changed and HP KVM USB2 1-pack Interface Adapter was removed from Interface Adapters for Virtual Media.
20-Nov-2013	Version 8	Changed	The title has changed.
27-Jan-2011	Version 7	Removed	Removed a NOTE.
20-Jun-2011	Version 6	Changed	Model and Related Options product descriptions were revised Product Features was changed to Standard Features HPE Services operational, and Warranty Information was removed from Service and Support
06-Apr-2011	Version 5	Changed	Corrected a part number on one of the Images.
16-Feb-2011	Version 4	Removed	BladeSystem p-Class KVM Interface Adapter - 1 pack and Serial Interface adapter - 1 Pack with power supply were removed from Interface Adapters.
05-Apr-2010	Version 3	Changed	The Overview text was updated
24-Mar-2010	Version 2	Changed	QuickSpecs was updated
16-Nov-2009	Version 1	New	New QuickSpecs

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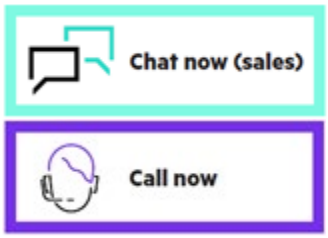

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