



Remote Management Options

HP Workstations



Introduction

HP Workstations provide new options and levels of remote management capabilities through the support of Intel® vPro™ technology, on newer models, and DASH 1.1. These new capabilities include full remote power on/off control, Out-Of-Band (OOB) management, USB media redirection, text console redirection, and sensor information.

The HP Z400, HP Z600, and HP Z800 Workstation models also support the ASF 2.0 standard via their on board LAN. These manageability solutions are supported on Windows® operating systems. For Linux manageability support, contact your HP representative.

The table below illustrates what HP's most recent workstations support.

HP Z400, HP Z600, and HP Z800 Workstations	LOM*	ASF 2.0
	Broadcom NIC ¹ (FS215AA)	DASH 1.1
HP Z1, HP Z210, HP Z420, HP Z620, and HP Z820 Workstations	LOM*	AMT 7.0 and DASH 1.1**

* LOM indicates LAN on motherboard.

** No DASH 1.1 support with Broadcom add-in card

What is DASH?

DASH (Desktop and mobile Architecture for System Hardware) is an initiative to define standards and processes for over-the-wire management of desktops, workstations, and laptops. It is defined by the Distributed Management Task Force (DMTF), an industry organization leading the development of management standards.

The DASH specification currently defines 2 versions: 1.0 and 1.1. The latter provides additional features like USB media redirection or text console redirection, for instance. By using the auxiliary power present when the system is plugged into an AC outlet, the Management Controller is independent from the system's state and can monitor LAN traffic for DASH requests, and perform OOB tasks like power control, inventory, reporting system state, etc. Once the system is powered on, additional services become available like remoting the BIOS post screen, additional event alerts, alternate boot paths, etc.

HP recommends Windows® 7.

Setup



What is Intel vPro Technology?

Intel vPro technology is a collection of platform capabilities that integrate robust hardware-based security and enhanced maintenance and management capabilities for secure remote access to the platform for diagnostics and repair regardless of platform state.

- The new HP Z420, HP Z620, and HP Z820 Workstations support Intel vPro Technology. The Intel C602 chipset coupled with an Intel 82579 LAN and Intel Xeon® processor E5-1600 or E5-2600 family featuring Intel vPro Technology give these HP Workstations the same manageability features as a commercial PC with the Intel vPro brand.
- The HP Z210 and HP Z1 Workstations support Intel vPro Technology when properly configured. The Intel® C206 chipset coupled with an Intel 82579 LAN and Intel Xeon processor E3 family featuring Intel vPro Technology give these HP Workstations the same manageability features as a commercial PC with the Intel vPro brand.
- Some of the capabilities of an Intel vPro Technology supported platform include Intel Active Management Technology (Intel AMT), Intel Virtualization Technology (Intel VT-x), Intel Virtualization Technology for Directed I/O (Intel VT-d), Intel Trusted Execution Technology (Intel TXT), and TPM 1.2.
- Intel vPro also provides DASH 1.1 support. IT managers now have increased flexibility in optimizing their enterprise manageability strategy across HP Commercial Notebooks, Desktops, and Workstations.

What is Intel AMT?

Intel AMT (Intel Active Management Technology) is an Intel developed platform manageability solution unique to Intel chipsets. Intel AMT is supported within the HP Z210, HP Z1, HP Z420, HP Z620, and HP Z820 Workstations' internal circuitry and no additional add-in card is required.

AMT is part of Intel vPro Technology and Intel Standard Manageability and provides compatibility with the DASH standard (AMT 6.0 and above). AMT 7.0 adds Host Based Setup and ME Firmware Roll Back.

Similar to DASH, AMT's dedicated Management Engine stays up on auxiliary power independent of the system state as long as the system is plugged into AC power and can monitor network traffic for special management commands via an independent path to the LAN port. When booted to an operating system, Intel's AMT drivers provide additional runtime management functionality.

With Intel® AMT, customers can utilize many of the same features for DASH 1.1 to remotely manage their workstations in order to reduce IT costs and minimize the down time of the systems being managed. Both DASH and AMT can also be used to cost effectively control systems in embedded applications.

HP recommends Windows® 7.

The following table shows some of the differences between the various standard manageability solutions offered on HP Workstations. This table does not cover all of the differences but is intended to offer a glimpse of the capabilities of each.

Feature	ASF 2.0	Broadcom NIC DASH 1.1	AMT 7.0/ DASH 1.1
Remote power on/off and reset	•	•	•
System alerts	•	•	•
Hardware and software inventory		•	•
Text console redirection		•	•
USB redirection		•	•
Remote Firmware update		•	
Remotely change BIOS settings		•	•
Remote alerts outside of firewall			•
Out-of-band web server		•	•
OOB IPv6 support		•	
Network defense filters			•
Host based setup			•
ME Firmware roll back			•

The Broadcom NetXtreme Gigabit Ethernet Plus LAN card supports some of the optional DASH 1.1 profiles. See the "Implementing Out-of-Band Desktop Management With Dash" whitepaper at hp.com for details.

Solutions

HP both develops and enables a large set of tools and applications to take advantage of DASH and Intel vPro Technology on both HP Workstations and HP Business PCs. The solutions available cover a large spectrum of customer profiles, from the single professional user to large enterprises, and a large set of needs, from global turn-key solutions to programmable interfaces for custom applications. For more information, please visit hp.com/go/easydeploy.

Software Solutions

LANDesk Management Suite

LANDesk Management Suite is HP's recommended manageability solution for all commercial products. LANDesk Management Suite combines remote management of inventory, systems, power and server in one console.

HP Client Automation Enterprise

HP Client Automation Enterprise is a true desired-state client management solution for highly complex and ever changing enterprise environments. By automating management across your physical and or virtual client fleet from assessment, to acquisition, deployment, management, and retirement you can improve availability, security, and compliance. HP Client Automation Enterprise has unlimited scalability providing continuous policy enforcement, monitoring, alerting, remediation, and reporting on hardware, applications, and operating systems.

HP Client Catalog for Microsoft System Center Configuration Manager

The HP Client Catalog for Microsoft System Center products automates the acquisition and deployment of HP software updates (Softpaqs) to HP systems in a Microsoft System Center products environment. The catalog file contains detailed platform information on HP commercial desktops, notebooks, and workstations. It can be used in conjunction with the custom inventory and update features of Microsoft System Center products to provide automated driver and patch updates to managed HP Clients.

HP recommends Windows® 7.

HP Hardware Management Tools

HP System Software Manager

The HP System Software Manager (SSM) is a utility that automatically detects and updates BIOS, device drivers, and management agent versions on your networked PCs.

HP SoftPaq Download Manager

HP SoftPaq Download Manager provides a simple, powerful way to download software updates for the HP client PC models in your environment. HP SDM can significantly reduce the amount of time it takes to locate and download updates. SoftPaqs can be downloaded in as few as three easy steps from a single user interface after initial setup.

HP Client Manager Interface

With the HP Client Management Interface (HP CMI), new HP client PCs seamlessly integrate into your managed IT environment giving you flexibility in choosing how you manage your HP computers. HP CMI provides an interface that simplifies the integration of HP business computers with popular industry system management tools (including Microsoft Systems Management Server, IBM Tivoli Software, and HP OpenView) and custom in-house developed management applications.

Managing HP Workstations

Using the tools and technologies previously mentioned, you can now more effectively manage your entire deployment of HP Workstations. Some of the client management features available include, but are not limited to, the following:

- Full Web user interface based system management via software console
- Limited Web user interface based system management via management engine Web server
- Remote BIOS or firmware update
- Remote power cycling
- Remote operating system update/repair
- Email alerting for system/component failures
- System configuration inventory reporting
- Remote graphics KVM control (with CPU integrated graphics on HP Z1 and HP Z2x0 platforms only)

More information

hp.com and hp.com/go/whitepapers

Enabling DASH on HP Workstations: see the instructions in the HP Accessory Kit for the Broadcom NetXtreme Gigabit Ethernet Plus LAN card, or download that card's white paper; or for Intel® vPro Technology setup on HP Workstations, download the appropriate Intel® vPro Processor Technology Setup and Configuration document

hp.com/go/easydeploy

HP Management central resource (information, downloads, papers)

dmtf.org/standards/mgmt/dash/

DMTF web site (DASH spec, papers, DASH 1.1 features and benefits)

intel.com/AMT

Intel® AMT at the Intel® website

¹ The HP Z210, HP Z420, HP Z620, and HP Z820 Workstations do not support DASH 1.1 management through the Broadcom NetXtreme Gigabit Ethernet Plus LAN, which uses the Broadcom 5761 controller.

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