

# Z440 NG Management Workstation

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**BOSCH**

Invented for life



- ▶ High-performance workstation with Intel's next-generation microarchitecture
- ▶ Choice of professional 2D or 3D graphics card
- ▶ Silent running with HP low acoustics chassis
- ▶ Protected by HP Services, including a 3 years Next Business Day on-site support

This HP Z440 management workstation with its latest processing and I/O power from Intel, is designed for video-oriented applications that require high performance and most advanced visualization. HP Z440 features a sleek 4U chassis with built-in handles that offers tool-less access to the inside and easy configurability for seamless deployment. This brand new tool-free chassis boasts low acoustics and single integrated Gigabit Ethernet to deliver whisper-quiet performance. HP Z440 is built to minimizing power and cooling costs with ENERGY STAR qualified configurations featuring 90% efficient power supplies while taking on bigger computing challenges with the latest Intel vPro technology and the next generation Intel Xeon quad-core processor:

- Intel Xeon E5-1620 v3 (3.5 GHz, 10 MB cache, 2133 MHz memory speed, Quad-Core, HT, Turbo)
- 8 GB (2 x 4 GB) DDR4 2133 ECC Registered Memory

HP Z440 is a workstation solution based on the Intel C612 Chipset using Intel's vPro technology and on 8 DIMM slots in 4-channel memory architecture.

With 2 x PCI Express Gen3 x16, 1 x PCI Express Gen3 x8, 1 x PCI Express Gen2 x4, 1 x PCI Express Gen2 x1 and 1 x Legacy PCI slots, HP Z440 delivers high performance bandwidth interfaces and future expandability:

- The architecture of this management workstation delivers next generation I/O throughput to achieve high throughput and visualization requirements.
- A graphics card is not included in the Z440 NG Management Workstation specification. You can choose the type of graphics card when ordering to drive up to four 2D or four 3D displays.

## System overview

Z440 NG Management Workstation is the high-performance workstation suitable for running the security systems software applications offered by Bosch.

Please refer to the respective application data sheets to get detailed information.

Intel Microarchitecture offers the latest in processor innovation, including:

- Design and performance scalability with **Intel Hyper-Threading Technology** (Intel HT Technology), scalable cache sizes, system interconnects, and integrated memory controllers.

- **Intel Turbo Boost Technology** delivers additional performance automatically when needed by taking advantage of the processor's power and thermal headroom. Intel Xeon E5-1620 v3 with 1.1 turbo boost stepping (3.6 GHz max).
- **Intel Hyper-Threading Technology** brings high-performance applications into mainstream computing with 1 - 16+ threads optimized for new generation multi-core processor architecture. Intel Xeon E5-1620 v3 provides up to 8 threads.
- **Intel vPro Technology** for maximized, hardware-assisted security and manageability.

### Certifications and approvals

RoHS	Compliant with the European Union's Restrictions of Hazardous Substances (RoHS) Directive 2011/65/EU
WEEE	Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive—2002/96/EC
ISO 11469 ISO 1043	Plastic parts used in the product weighing over 25 g are marked per ISO 11469 and ISO 1043
	Contains 0% recycled materials (by weight)
	Product is >90% recyclable when properly disposed of at end-of-life

### Approvals

Region	Certification
Europe	CE Z440 Declaration of Conformity

### Installation/configuration notes

#### Language selection

This management workstation comes in three standard localizations:

MHW-WZ4R4-NGDE German localization/keyboard

MHW-WZ4R4-NGUK British English localization/keyboard

MHW-WZ4R4-NGRU Russian localization/keyboard

Additional optional keyboards listed under **Ordering Information** are available.



#### Notice

The Bosch management workstation comes with Microsoft Windows 8 pre-installed.

If Windows 7 Professional is required as OS the **Windows 7 Downgrade Option** must be ordered together with the management workstation. If this option is ordered the shipment will contain the Windows 7 DVD media kit only, the workstation will still come with Windows 8 pre-installed.



#### Notice

The Bosch management workstation provides a MUI (Multilingual User Interface) option. The language of the workstation selected during initial

installation may be changed at any point in time during operations according to Microsoft Windows 8 guidelines.

### Graphics Card

A graphics card is not included in Z440 NG Management Workstation specification. You can choose from a variety of graphics cards when ordering:

NVIDIA Quadro K620 2 GB graphics card Entry 3D Graphics Card	MHW-AWGC-K620 1 or 2 of these cards are supported —2nd card must match 1st
NVIDIA Quadro K2200 4 GB graphics card Mid-range 3D Graphics Card	MHW-AWGC-K2200 1 or 2 of these cards are supported —2nd card must match 1st
AMD FirePro W5100 4 GB graphics card Mid-range 3D Graphics Card	MHW-AWGC-ATIW51 1 or 2 of these cards are supported —2nd card must match 1st
NVIDIA Quadro K4200 4 GB graphics card High-end 3D Graphics Card	MHW-AWGC-K4200 No 2nd card supported
NVIDIA Quadro M4000 8 GB graphics card High-end 3D Graphics Card	MHW-AWGC-M4000 No 2nd card supported

### Parts included

Quantity	Components
1	HP Z440 8-DIMM Workstation
1	• HP Z440 localization kit (see supported language)
1	• HP Z440 700 W, 90% efficient chassis
1	• 500 GB, 7200 RPM SATA, 1st HDD
1	• HP USB standard keyboard
1	• HP USB optical scroll mouse
1	• HP 16X DVD± RW SuperMulti SATA
1	• Intel Xeon E5-1620 v3 (3.5 GHz/10 MB/2133 4C CPU)
1	• 8 GB (2 x 4 GB) DDR4-2133 Registered RAM
1	• HP serial port adapter kit
1	Microsoft Windows 8.1 Professional Edition, 64-bit OS
1	HP 3-year Next Business Day on-site <b>hardware</b> support

**Notice**

The Next Business Day on-site service level can only be provided if the respective system has been registered within eight weeks after receipt. Otherwise, service will be provided based on best effort.

Information about registration details is available in every shipment (registration form) or from the Bosch online product catalogue.

Next Business Day Services cannot be provided in every country everywhere. For limitations and exceptions see the registration details in the registration form.

**Technical specifications**

<b>Electrical</b>	
Power supply	700 W, 90% efficient, custom PSU (wide ranging, active Power Factor Correction)
Operating voltage range	90 to 269 VAC
Rated voltage range	100 to 240 VAC
	118 VAC
Rated line frequency	50/60 Hz (at 100 to 240 VAC)
	400 HZ (at 118 VAC)
Operating line frequency range	47 to 66 Hz (at 100 to 240 VAC)
	393 to 407 HZ (at 118 VAC)
Rated input current	100 to 240 V at 9.5 A
	118 V at 9.5 A
Power consumption in sleep mode (as defined by ENERGY STAR) - Suspend to RAM (S3) (instantly available PC)	<15 W
Heat dissipation (configuration and software dependent)	1648 BTU/h typical (415 kcal/h)
	2746 BTU/h max (692 kcal/h)
Power supply fan	92 x 25 mm variable speed
ENERGY STAR qualified	Yes
80 PLUS compliant	Yes, 90% efficient
FEMP standby power compliant at 115 V (<2 W in S5 – power off)	Yes
EuP compliant at 230 V	Yes

<b>Mechanical</b>	
Form factor	Rackable minitower
Chassis dimensions	
• Standard minitower orientation (H x W x D)	43.2 x 16.9 x 44.5 cm (17.0 x 6.65 x 17.5 in)
• Rack dimensions	4U
<b>Environmental</b>	
Temperature	
• operating	5 °C to 35 °C (40 °F to 95 °F)
• non-operating	-40 °C to 60 °C (-40 °F to 140 °F)
Humidity	
• operating	8 to 85% relative humidity, non-condensing
• non-operating	8 to 90% relative humidity, non-condensing
Maximum altitude (non-pressurized)	
• operating	3,048 m (10,000 feet)
• non-operating	9,144 m (30,000 feet)

**Notes:**

- General technical specifications for the workstation are provided in the HP Z440 QuickSpecs (DA-15077 Worldwide QuickSpecs - Version 5 - 2.1.2015).
- Configuration specifications are supplied in the Parts Included section.

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AMD FirePro is a registered trademark of Advanced Micro Devices Inc., all rights reserved.

Energy Star is a registered trademark of U.S. Environmental Protection Agency, all rights reserved.

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**Ordering information****Z440 NG Management Workstation DE**

High-performance workstation. Graphics card must be ordered separately; German  
Order number **MHW-WZ4R4-NGDE**

**Z440 NG Management Workstation UK**

High-performance workstation. Graphics card must be ordered separately; British English  
Order number **MHW-WZ4R4-NGUK**

**Z440 NG Management Workstation RU**

High-performance workstation. Graphics card must be ordered separately; Russian  
Order number **MHW-WZ4R4-NGRU**

**Accessories****Windows 7 Downgrade Option**

Windows 7, 64-bit professional edition media kit.  
This option has to be ordered together with the initial order of a workstation; it cannot be ordered as a stand-alone item.  
Order number **MHW-AWDGO-WIN7**

**Localization CH**

Localization (Keyboard): Switzerland–French/German  
Order number **MHW-AWLCK-SUI**

**Localization CZ**

Localization (Keyboard): Czech Republic–Czech  
Order number **MHW-AWLCK-CZ**

**Localization DK**

Localization (Keyboard): Denmark–English  
Order number **MHW-AWLCK-DK**

**Localization ES**

Localization (Keyboard): Spain–Spanish  
Order number **MHW-AWLCK-ESP**

**Localization FR**

Localization (Keyboard): France–French  
Order number **MHW-AWLCK-FR**

**Localization IT**

Localization (Keyboard): Italy–Italian  
Order number **MHW-AWLCK-IT**

**Localization NL**

Localization (Keyboard): Netherlands–Dutch  
Order number **MHW-AWLCK-NL**

**Localization NO**

Localization (Keyboard): Norway–Norwegian  
Order number **MHW-AWLCK-NO**

**Localization SV**

Localization (Keyboard): Sweden–Swedish  
Order number **MHW-AWLCK-SE**

**NVIDIA Quadro K620 Graphics Card**

Entry-level 3D graphics card (2 GB)  
Order number **MHW-AWGC-K620**

**NVIDIA Quadro K2200 Graphics Card**

Mid-range 3D graphics card (4 GB)  
Order number **MHW-AWGC-K2200**

**AMD FirePro W5100 Graphics Card**

Mid-range 3D graphics card (4 GB)  
Order number **MHW-AWGC-ATIW51**

**NVIDIA Quadro K4200 Graphics Card**

High-end 3D graphics card (4 GB)  
Order number **MHW-AWGC-K4200**

**NVIDIA Quadro M4000 Graphics Card**

High-end 3D graphics card (8 GB)  
Order number **MHW-AWGC-M4000**

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