

MHW-WZ4R0-NG Management Workstation

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BOSCH
Invented for life



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

This HP Z400 management workstation with its revolutionary new architecture and power is designed for video-oriented applications that require high performance and most advanced visualization. With a smart new chassis that is easy to service, liquid cooling, and quiet operation this workstation is focusing on minimizing power and cooling costs with ENERGY STAR® qualified configurations featuring 85% efficient power supplies and HP WattSaver while taking on bigger computing challenges with the new Intel® QuickPath technology and the latest Intel® Xeon® quad-core processor:

- Intel® Xeon® W3520 (2.66 GHz, 8 MB cache, 1066 MHz memory, 4.8 GT/s QPI, Quad-Core, HT, Turbo)
- 6 GB (3 x 2 GB) DDR3-1333 ECC unbuffered RAM

HP Z400 is a workstation solution based on the Intel® X58 Express Chipset using Intel's QPI (Quick Path Interconnect) technology between the CPU and the X58 chipset with a speed of up to 4.8 GT/s (Giga Transfers per second).

With dual PCIe x16 Gen2 graphics interfaces and additional 1 PCIe x4 Gen2 and 1 PCIe x4 Gen1 slots, the HP Z400 delivers high performance bandwidth interfaces and future expandability:

- The architecture of this management workstation delivers next generation I/O throughput to handle future high throughput and visualization requirements.
- A graphics card is not included in the MHW-WZ4R0-NG specification. You can choose the type of graphics card when ordering to drive up to four 2D or four 3D (entry 3D or mid-range cards) displays.

The convertible minitower chassis allows for Minitower or Desktop orientation.

System overview

MHW-WZ4R0-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 (Nehalem) offers the latest in processor innovation, including:

- Dynamic scalability, managed cores, threads, cache, interfaces, and power for energy-efficient performance on demand.

- 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® Hyper-Threading Technology brings high-performance applications into mainstream computing with 1-16+ threads optimized for a new generation multi-core processor architecture.
- Scalable shared memory of Intel® QuickPath technology features memory distributed to each processor with integrated memory controllers and high-speed point-to-point interconnects to unleash the performance of future versions of next generation Intel® multi-core processors.

Certifications and approvals

RoHS	Compliant with the Restrictions of Hazardous Substances (RoHS) directive–2002/95/EC
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

Region	Certification	
Global	DOC	Z400 Declaration of Conformity (CE + UL)
	RoHS	HP Compliance with RoHS directives

Installation/configuration notes

Language selection

This management workstation comes in three standard localizations:

MHW-WZ4R0-NGDE German localization/keyboard

MHW-WZ4R0-NGUK British English localization/keyboard

MHW-WZ4R0-NGRU Russian localization/keyboard

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

Notice

The Bosch management workstation provides a MUI (Multilingual User Interface). With MUI installed the language of the workstation may be changed after initial installation (for details see document “Installation Note MUI on Bosch Platforms”).

Graphics Card

A graphics card is not included in MHW-WZ4R0-NG specification. You can choose from a variety of graphics cards when ordering:

MHW-AWGC-Q600 Entry 3D Graphics Card	NVIDIA Quadro 600 (1 GB) 1 or 2 of these cards are supported—2nd card must match 1st
MHW-AWGC-ATIV38 Entry 3D Graphics Card	ATI FirePro V3800 (512 MB) No 2nd card supported
MHW-AWGC-Q2000 Mid-range 3D Graphics Card	NVIDIA Quadro 2000 (1 GB) 1 or 2 of these cards are supported—2nd card must match 1st
MHW-AWGC-Q4000 High-end 3D Graphics Card	NVIDIA Quadro 4000 (2 GB) No 2nd card supported
MHW-AWGC-Q5000 High-end 3D Graphics Card	NVIDIA Quadro 5000 (2.5 GB) No 2nd card supported
MHW-AWGC-NVS295 Professional 2D Graphics Card	NVIDIA Quadro NVS 295 (256 MB) 1 or 2 of these cards are supported—2nd card must match 1st
MHW-AWGC-NVS450 Multi-display 2D Graphics Card	NVIDIA Quadro NVS 450 (512 MB) No 2nd card supported Graphics Card offers 4 x Display ports. 4 x Display > DVI Adapters are part of shipment. Note: Do not use Multiview mode as selectable in: Display Properties > Settings > Display

Parts included

Quantity	Components
1	HP Z400 6-DIMM Workstation
1	• HP Z400 localization kit (select desired language)
1	• HP Z400 475 W, 85% efficient chassis
1	• HP 250 GB SATA 7200, 1st HDD
1	• HP USB standard keyboard
1	• HP USB optical scroll mouse
1	• HP 16X DVD± RW SuperMulti SATA
1	• Intel® Xeon® W3520 (2.66/8 MB/1066 QC CPU)
1	• HP 6 GB (3 x 2 GB) DDR3-1333 ECC RAM
1	• Selectable graphics card option
1	Microsoft Windows 7 Ultimate Edition, 64-bit OS
1	HP 3-year Next Business Day on-site hardware support

Technical specifications

Electrical	
Power supply	475 W, wide ranging, Active Power Factor Correction, 85% efficient

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	10 A at 100 to 127 VAC
	6 A at 200 to 240 VAC
	10 A at 118 VAC
Power consumption in sleep mode (defined by ENERGY STAR®)—suspend to RAM (S3) (instantly available PC)	<6 W
Heat dissipation (configuration and software dependent)	1419 BTU/h typical (358 kcal/h)
	2027 BTU/h max (511 kcal/h)
Power supply fan	92 x 25 mm variable speed
ENERGY STAR® qualified	Yes
80 PLUS compliant	Yes
Mechanical	
Form factor	Convertible minitower
Chassis dimensions (H x W x D) Minitower or desktop orientation	45.53 x 45.02 x 16.79 cm (17.9 x 17.7 x 6.6 in)
Environmental	
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%
• non-operating	8 to 90%
Maximum altitude (non-pressurized)	
• operating	3,000 m (10,000 feet)
• non-operating	9,100 m (30,000 feet)

Notes:

- General technical specifications for the workstation are provided in the HP Z400 QuickSpecs (Worldwide—Version 28—January 1, 2011).
- Configuration specifications are supplied in the Parts Included section.

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Ordering information**MHW-WZ4R0-NGDE Management Workstation**

High-performance workstation, German localization included; graphics card must be ordered separately
Order number **MHW-WZ4R0-NGDE**

MHW-WZ4R0-NGUK Management Workstation

High-performance workstation, British English localization included; graphics card must be ordered separately
Order number **MHW-WZ4R0-NGUK**

MHW-WZ4R0-NGRU Management Workstation

High-performance workstation, Russian localization included; graphics card must be ordered separately
Order number **MHW-WZ4R0-NGRU**

Accessories**MHW-AWLCK-CZ**

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

MHW-AWLCK-DE

Localization (Keyboard): Germany—German
Order number **MHW-AWLCK-DE**

MHW-AWLCK-DK

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

MHW-AWLCK-ESP

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

MHW-AWLCK-FR

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

MHW-AWLCK-IT

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

MHW-AWLCK-NL

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

MHW-AWLCK-NO

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

MHW-AWLCK-RU

Localization (Keyboard): Russia—Russian
Order number **MHW-AWLCK-RU**

MHW-AWLCK-SE

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

MHW-AWLCK-SUI

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

MHW-AWLCK-UK

Localization (Keyboard): United Kingdom—British
English
Order number **MHW-AWLCK-UK**

MHW-AWLCK-US

Localization (Keyboard): USA – American English
Order number **MHW-AWLCK-US**

MHW-AWGC-Q600 Entry 3D Graphics Card

NVIDIA Quadro 600 (1 GB)
Order number **MHW-AWGC-Q600**

MHW-AWGC-ATIV38 Entry 3D Graphics Card

ATI FirePro V3800 (512 MB)
Order number **MHW-AWGC-ATIV38**

MHW-AWGC-Q2000 Mid-range 3D Graphics Card

NVIDIA Quadro 2000 (1 GB)
Order number **MHW-AWGC-Q2000**

MHW-AWGC-Q4000 High-end 3D Graphics Card

NVIDIA Quadro 4000 (2 GB)
Order number **MHW-AWGC-Q4000**

MHW-AWGC-Q5000 High-end 3D Graphics Card

NVIDIA Quadro 5000 (2.5 GB)
Order number **MHW-AWGC-Q5000**

MHW-AWGC-NVS295 Professional 2D Graphics Card

NVIDIA Quadro NVS 295 (256 MB)
Order number **MHW-AWGC-NVS295**

MHW-AWGC-NVS450 Multi-display 2D Graphics Card

NVIDIA Quadro NVS 450 (512 MB)
Order number **MHW-AWGC-NVS450**

MHW-AWSP-PCI

HP Serial Port Adapter z-Series (not built-in)
Order number **MHW-AWSP-PCI**

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