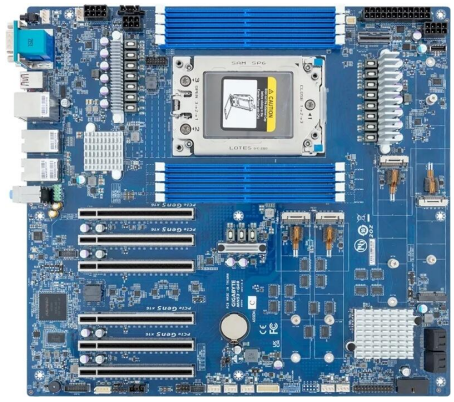
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Product Specification Sheet

MH53-G40

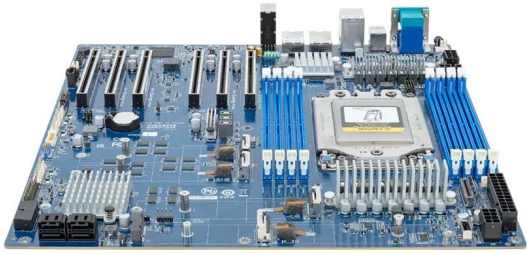
Gigabyte AMD MH53-G40 WRX90 for AMD ThreadRipper Pro 9000 WX-Series Processor E-ATX Motherboard

Product Overview

Gigabyte AMD MH53-G40 WRX90 for AMD ThreadRipper Pro 9000 WX-Series Processor E-ATX Motherboard, 1x sTR5 Socket, AMD WRX90 Chipset, 8x DDR5 RDIMM DIMM slots, 2 x 10Gb/s LAN, 1x 10/100/1000 Mbps Management LAN, 1x VGA Port, 3x audio jacks, 4x M.2 supports up to PCI-e Gen5 x4, 4x SATA, 6x PCI-e x16 (Gen5 x16) slots, USB 3.2 Gen2x2 Port (Type-C), USB 3.2 Gen2 Ports (Type-A), 1x Serial Port, 1x MLAN Port, 3x audio jacks









Specifications

Overview Summary:

The Gigabyte MH53-G40 is a high-performance WRX90 workstation motherboard built for AMD Ryzen Threadripper PRO 9000 and 7000 WX-Series processors. With eight DDR5 RDIMM slots, six PCIe 5.0 x16 slots, Gen5 M.2 storage and dual 10GbE networking, it provides a powerful foundation for demanding professional systems.

Ideal for creators, engineers, architects and enterprise users, the MH53-G40 supports advanced multi-GPU, rendering, simulation and data-intensive workloads. Buy now in South Africa and build a capable professional workstation, or shop now for a robust E-ATX platform.

Performance tier: Professional workstation

Uses:3D rendering, engineering, CAD, simulation, content creation, AI workloads, multi-GPU computing, data processing

Overview:

The Gigabyte AMD MH53-G40 is a high-performance E-ATX motherboard designed for professional workstations powered by AMD Ryzen Threadripper PRO 9000 and 7000 WX-Series processors. Built around the AMD WRX90 chipset, it provides extensive PCIe 5.0 expansion, eight-channel DDR5 RDIMM memory support and high-speed 10GbE networking, making it well suited to demanding professional applications such as 3D rendering, simulation, engineering, content creation, generative design and large-scale software development.

Description:

The MH53-G40 combines a powerful workstation platform with extensive expansion and storage options. Its single sTR5 CPU socket supports AMD Ryzen Threadripper PRO processors with high core counts and substantial memory bandwidth, while six PCIe Gen5 x16 slots provide the flexibility needed for multiple graphics cards, accelerators and other high-bandwidth expansion hardware.

Storage connectivity is equally versatile, with four PCIe Gen5 x4 M.2 slots, four SATA 6Gb/s ports and an MCIO 8i connector that can support additional NVMe or SATA devices. Dual 10GbE LAN ports provide fast network connectivity for professional environments, while the dedicated management controller enables remote monitoring and administration.

The board also incorporates an AST2600 BMC and GIGABYTE management technologies to simplify system maintenance. Administrators can monitor hardware health, manage systems remotely and integrate server management into larger IT environments.

Features:

AMD Threadripper PRO Workstation Platform
Designed for AMD Ryzen Threadripper PRO 9000 and 7000 WX-Series processors, the MH53-G40 provides a workstation platform for users who need exceptional multi-core performance and high-speed I/O. Threadripper PRO 9000 WX-Series processors use AMD Zen 5 architecture and can deliver up to 96 CPU cores, making the platform suitable for complex professional workloads.

The combination of high core counts, large L3 cache capacity and eight-channel DDR5 memory helps reduce processing bottlenecks when working with large datasets, complex simulations, professional rendering projects and other demanding applications.

Key platform capabilities include:

- AMD Ryzen Threadripper PRO 9000/7000 WX-Series processor support
- AMD WRX90 chipset
- Single sTR5 CPU socket
- Up to 96 CPU cores supported by the processor platform
- 8-channel DDR5 RDIMM memory
- Up to 128 PCIe 5.0 lanes
- AST2600 BMC for remote system management

PCIe Gen5 Expansion for Professional Workstations
The Gigabyte MH53-G40 is built for systems requiring substantial expansion capacity. Six PCIe Gen5 x16 slots allow multiple GPUs, accelerators and other high-performance PCIe devices to be installed.

The platform supports configurations of up to four dual-slot accelerators, giving workstation builders greater flexibility when configuring systems for GPU rendering, AI workloads, engineering applications and other compute-intensive tasks. PCIe Gen5-focused components, including a low-loss PCB, PCIe slots, re-drivers and switches, are used to maintain signal quality and bandwidth across the expansion interface.

High-Speed NVMe and SATA Storage
The motherboard provides a broad range of storage connections for applications requiring fast local data access as well as larger capacity storage.

- 4 x M.2 2280/22110 slots with PCIe Gen5 x4 interfaces
- 1 x MCIO 8i connector supporting 2 x Gen5 NVMe or 8 x SATA 6Gb/s
- 4 x SATA 6Gb/s ports
- 1 x M.2 slot with PCIe Gen3 x1 interface for Wi-Fi add-in cards

This combination allows the MH53-G40 to accommodate high-speed NVMe drives alongside conventional SATA storage, making it suitable for workflows involving large project files, datasets and frequently accessed working data.

Dual 10GbE Network Connectivity
Two 10GbE LAN ports powered by the Broadcom BCM57416 controller provide high-speed network connectivity for professional workstations and enterprise environments. The dual 10GbE configuration is useful when transferring large files, accessing network storage, working with shared project data or connecting the workstation to high-performance business infrastructure.

A dedicated 10/100/1000 Mbps management LAN is also included for system administration.

Remote Management and Administration
The built-in AST2600 BMC provides dedicated hardware management capabilities. GIGABYTE Management Console allows IT administrators to monitor system health and perform maintenance through a browser-based graphical interface.

Management functions include:

- Standard IPMI support for integration with compatible management platforms
- Automatic event recording to assist with troubleshooting system events
- Monitoring and control of supported SAS, SATA and NVMe devices
- Integration with supported Broadcom MegaRAID adapters
- Real-time system health monitoring and remote administration

For larger deployments, GIGABYTE Server Management (GSM) provides tools for managing multiple systems across a network. GSM supports Windows and Linux environments and is designed to work with IPMI and Redfish standards.

Security and Hardware Protection
An optional TPM 2.0 module can be used to provide hardware-based security for authentication and data protection. TPM technology can store passwords, encryption keys and digital certificates in dedicated hardware, helping protect sensitive system resources against unauthorised access.

Connectivity and I/O
The MH53-G40 provides a practical selection of connectivity for professional workstation and server environments, including:

- 2 x 10GbE LAN ports
- 1 x 10/100/1000 Mbps management LAN
- 1 x VGA port
- USB 3.2 Gen2x2 Type-C port
- USB 3.2 Gen2 Type-A ports

- 1 x serial port
- 1 x MLAN port
- 3 x audio jacks

GIGABYTE Server Management Software
GIGABYTE Server Management provides a range of utilities for monitoring and administering multiple systems. GSM Server provides graphical remote management, while GSM CLI enables command-line based monitoring and administration. GSM Agent runs on individual server nodes to collect system information, and GSM Mobile provides administrators with access to real-time system information through supported mobile devices.

For virtualised environments, GSM Plugin can integrate with VMware vCenter to assist with real-time monitoring and management of server clusters.

Gigabyte MH53-G40 Key Specifications

- Form factor: E-ATX
- CPU socket: 1 x sTR5
- Processor support: AMD Ryzen Threadripper PRO 9000/7000 WX-Series
- Chipset: AMD WRX90
- Memory: 8 x DDR5 RDIMM DIMM slots
- Memory architecture: 8-channel DDR5
- PCIe expansion: 6 x PCIe Gen5 x16
- M.2 storage: 4 x PCIe Gen5 x4 plus 1 x PCIe Gen3 x1 slot
- SATA: 4 x SATA 6Gb/s
- Network: 2 x 10GbE LAN plus dedicated management LAN
- BMC: AST2600
- TPM: Optional TPM 2.0 module
- Part Number / SKU: MH53-G40

Built for Demanding Professional Workloads
With Threadripper PRO processor support, eight-channel DDR5 RDIMM memory, six PCIe Gen5 x16 slots, extensive NVMe connectivity and dual 10GbE networking, the Gigabyte MH53-G40 is designed for high-end professional workstation and compute environments. It provides the expansion capacity and management capabilities needed for applications ranging from professional content creation and rendering to engineering, simulation, AI acceleration and enterprise computing.

Specifications:

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Specifications	
Product Code	MH53-G40
Form Factor (WxD, mm)	E-ATX
	304.8 x 330.2
CPU	AMD Ryzen Threadripper PRO 9000 WX-Series Processors
	AMD Ryzen Threadripper PRO 7000 WX-Series Processors
	Single processor, TDP up to 350W
Socket	1 x sTR5

Chipset	AMD WRX90
Memory	8 x DIMM slots
	Support DDR5 RDIMM
	8-channel memory per processor
	Ryzen Threadripper PRO 9000 WX:
	Up to 6400 MT/s
	Ryzen Threadripper PRO 7000 WX:
	Up to 5200 MT/s
LAN	2 x 10Gb/s LAN (1 x Broadcom BCM57416)
	- Support NCSI function
	1 x 10/100/1000 Mbps Management LAN
Video	Integrated in ASPEED AST2600
	- 1 x VGA port
Audio	Realtek ALC897 HD Audio Codec
	Supports 2/4/5.1/7.1 channel configurations
	3 x Audio jacks (Audio in/Audio out/Mic)
Storage Interface	MCIO:
	1 x MCIO 8i for 2 x Gen5 NVMe or 8 x SATA, from CPU
	SATA 7-pin:
	4 x SATA, from FCH
	M.2:
	4 x M.2 (2280 / 22110), PCIe Gen5 x4, from CPU
RAID	RAID 0/1/10/5
PCIe Expansion Slots	Slot_7: PCIe x16 (Gen5 x16)
	Slot_6: PCIe x16 (Gen5 x16)
	Slot_5: PCIe x16 (Gen5 x16)
	Slot_3: PCIe x16 (Gen5 x16)
	Slot_2: PCIe x16 (Gen5 x16)
	Slot_1: PCIe x16 (Gen5 x16)
	1 x MCIO 8i (Gen5 x8 or SATA) [1]
	1 x M.2 (2230), E-key (Wi-Fi), PCIe Gen3 x1, from FCH
	[1] The connector supports SATA by default. To enable the other option, please refer to the manual and adjust the settings in the BIOS.

Internal I/O	1 x 24-pin ATX main power connector
	2 x 8-pin ATX 12V power connectors
	1 x 6-pin ATX 12V power connector
	1 x CPU fan header
	6 x System fan headers
	1 x Front audio header
	1 x USB 3.2 Gen2 header (from FCH)
	1 x USB 3.2 Gen1 header (from FCH)
	4 x M.2 slots for storage
	1 x M.2 slot for Wi-Fi
	1 x MCIO 8i connector
	4 x SATA 7-pin connectors
	1 x Front panel header
	1 x Backplane board header
	1 x PMBus header
	1 x IPMB header
	1 x TPM header
Rear I/O	1 x USB 3.2 Gen2x2 port (Type-C) (from FCH)
	3 x USB 3.2 Gen2 ports (Type-A) (from CPU)
	1 x VGA port
	1 x Serial port
	2 x RJ45 ports
	1 x MLAN port
	3 x Audio jacks (Audio in/Audio out/Mic)
	1 x ID button with LED
Security Modules	1 x TPM header with SPI interface
	- Optional TPM2.0 kit: CTM010
OS Compatibility	Red Hat Enterprise Linux
	Ubuntu
	Windows 11

Board Management	ASPEED AST2600 Baseboard Management Controller
	GIGABYTE Management Console web interface
	Dashboard
	HTML5 KVM
	Sensor Monitor (Voltage, RPM, Temperature, CPU Status ...etc.)
	Sensor Reading History Data
	FRU Information
	SEL Log in Linear Storage / Circular Storage Policy
	Hardware Inventory
	Fan Profile
	System Firewall
	Power Consumption
	Power Control
	Advanced power capping
	LDAP / AD / RADIUS Support
	Backup & Restore Configuration
	Remote BIOS/BMC/CPLD Update
	Event Log Filter
	User Management
	Media Redirection Settings
	PAM Order Settings
	SSL Settings
	SMTP Settings
PSU Connectors	1 x 24-pin ATX main power connector
	2 x 8-pin ATX 12V power connectors
	1 x 6-pin ATX 12V power connector
Operating Properties	Operating temperature: 10degreesC to 40degreesC
	Operating humidity: 8% to 80% (non-condensing)
	Non-operating temperature: -40degreesC to 60degreesC
	Non-operating humidity: 20% to 95% (non-condensing)
Retail Packaging Content	1 x MH53-G40
	1 x I/O shield
	1 x Quick start guide
	Single Box dimensions: 409 x 355 x 78 mm
	Carton dimensions: 729 x 415 x 432 mm
	Quantity: 10 x single boxes in one carton

Bulk Packaging Content	10 x MH53-G40
	10 x I/O shields
	Carton dimensions: 600 x 473 x 517 mm
Reference Numbers	Retail: 9MH53G40MR-000-3*/1
	Bulk: 9MH53G40NR-000-3*/1
	Part Numbers:
	- I/O shield: 12AIO-MW83RP-00R

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:
https://www.comx-computers.co.za/MH53-G40-Gigabyte-AMD-MH53-G40-WRX90-for-AMD-ThreadRipper-Pro-9000-WX-Series-Processor-p-340273.php

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