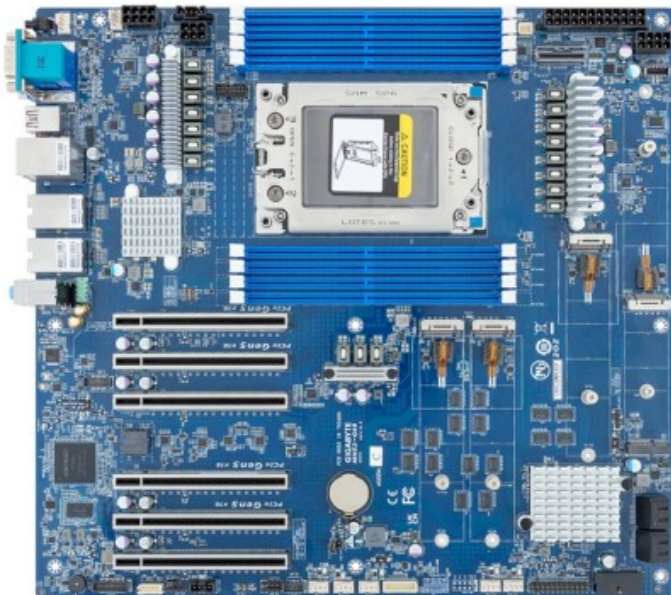


Gigabyte MH53-G40, 1xSKT LGA 4844, AMD Ryzen Threadripper PRO 9000, WRX90, SATA, NVMe, 4xM.2, 2x10GbE, IPMI

Part number: MH53-G40




Category	Workstation
Form Factor	E-ATX
Dimensions	12" x 13"
CPU Socket	LGA 4844 (Socket sTR5)
# of CPU sockets	1
Supported CPU's	AMD Ryzen TR PRO 9000WX AMD Ryzen TR PRO 7000WX
Max CPU TDP	350 W
Chipset	WRX90
Memory Type	DDR5 ECC RDIMM
Memory Speed	6400 MT/s 4800 MT/s
# of DIMM's	8
Max Memory Size	2048 GB
Integrated GPU	ASPEED AST2600
# of PCIe x16 5.0	6
# of USB Ports	3 x USB 3.2 (rear) 1 x USB 3.2 Type-C (rear) 1 x USB 3.2 Gen1 (header) 1 x USB 3.2 Gen2 (header)
# of SATA Ports	4
# of NVMe ports	1
Integrated RAID	0/1/10/5
# of M.2 22110	4
# of Serial Ports	1 x DB9 (COM)
# of 10GbE Ports	2 x RJ45
Network Controllers	Broadcom BCM57416
Integrated BMC	IPMI Dedicated RJ45
BMC chip	ASPEED AST2600
TPM	1 x TPM 2.0 13-pin Header

MH53-G40

Gigabyte MH53-G40 is an **E-ATX** server motherboard designed for **AMD Ryzen™ Threadripper™ PRO 9000WX / 7000WX series processors** (sTR5 socket). It supports **DDR5 ECC RDIMM memory**, delivering top performance and stability for professional workloads.

Featuring **PCIe 5.0 slots, M.2 NVMe connectors, SATA ports**, and advanced networking options

including **10GbE ports** plus integrated **ASPEED AST2600 BMC** for remote management. Perfect for workstations, rendering, HPC, and enterprise servers.

AMD Ryzen™ Threadripper™ PRO 9000 WX-Series Processors  AMD Ryzen™ Threadripper™ PRO 9000 WX-Series processors build on the legacy of the 7000-WX Series with even greater performance, efficiency, and platform capabilities. Powered by the advanced 4nm “Zen 5” architecture, this new generation delivers industry-leading core counts, higher boost frequencies, and improved IPC across the stack—bringing exceptional performance to artists, architects, engineers, and other professionals working with lightly threaded applications. For heavily threaded workloads such as simulation, generative design, rendering, and large-scale compilation, Ryzen™ Threadripper™ PRO 9000 WX-Series processors continue to lead the workstation market with the highest core counts available. With class-leading L3 cache per core and memory bandwidth, these processors are built to accelerate demanding workflows and reduce latency in memory-intensive applications. [Zen 5](#)




architecture [AMD WRX90](#)

chipset [Up to 96](#)

CPU cores [8-channel](#)

DDR5 memory [Up to 128](#)




PCIe 5.0 lanes [AST2600](#)

BMC [MH53-G40 Block Diagram](#)  [MH53-G40 Product Overview](#)  High Performance Supports up to 4 x Dual-slot Accelerators AMD Ryzen™ Threadripper™ PRO 9000/7000 WX-Series with up to 128 PCIe 5.0 lanes for multi-GPU support gives creators more configuration flexibility to equip the variety combination of hardware accelerators. MH53-G40 equips several new components to ensure the best PCIe 5.0 signal bandwidth and quality, including low-loss PCB, PCIe Slots, Re-drivers, Switches that are specifically designed for PCIe 5.0. There will be no compromise on PCIe 5.0 performance on PCIe interface.  Multiple Storage Interface Plentiful NVMe and SATA Storage interface can fulfill your hot and cold data processing requirement at once.

- 4 x M.2 2280/22110 slots (PCIe 5.0 x4)

- 1 x MCIO 8i connector (2 x Gen5 NVMe or 8 x SATA 6Gb/s)

- 4 x SATA 6Gb/s ports


 Connectivity Dual 10GbE LAN The Broadcom® BCM57416 controller supports 2 x 10GbE configuration which is the foundation for workstation connectivity, providing broad interoperability, critical performance optimizations, and increased agility for Communications, Cloud, and Enterprise IT network solutions.  Hardware Security Optional TPM 2.0 Module For hardware-based authentication, the passwords, encryption keys, and digital certificates are stored in a TPM module to prevent unwanted users from gaining access to your data. GIGABYTE TPM modules come in either a Serial Peripheral Interface or Low Pin Count bus. 

Value-added Management GIGABYTE offers free-of-charge management applications via a specialized small processor built on the server. GIGABYTE Management Console For management and maintenance of a server or a small cluster, users can use the GIGABYTE Management Console, which is pre-installed on each server. Once the servers are running, IT staff can perform real-time health monitoring and management on each server through the browser-based graphical user interface. In addition, the GIGABYTE Management Console also provides:

Support for standard IPMI specifications that allows users to integrate services into a single platform through an open interface

Automatic event recording, which can record system behavior 30 seconds before an event occurs, making it easier to determine subsequent actions

Integrate SAS/SATA/NVMe devices and RAID controller firmware into GIGABYTE Management Console to monitor and control Broadcom® MegaRAID adapters.

 GIGABYTE Server Management (GSM) GSM is a software suite that can manage clusters of servers simultaneously over the internet. GSM can be run on all GIGABYTE servers and has support for Windows and Linux. GSM can be downloaded from GIGABYTE website and complies with IPMI and Redfish standards. GSM includes a complete range of system management functions that includes the following utilities:

GSM Server: A software program that provides real-time, remote control using a graphical user interface through an administrator's computer or through a server in the cluster. The software allows ease of maintenance for large clusters of servers.

GSM CLI: A command-line interface for monitoring and managing remotely.

GSM Agent: A software program installed on each GIGABYTE server node that retrieves information from each system and devices through the OS, and this software integrates with GSM Server or GSM CLI.

GSM Mobile: A mobile app for both Android and iOS that provides admins with real-time system information.

GSM Plugin: An application program interface that allows users to use VMware vCenter for real-time monitoring and management of server clusters.



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[#2] Advertised performance is based on maximum theoretical values as specified by the respective chipset vendors or standards organizations. Actual performance may vary depending on system configuration.

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