ComX Computers
Product Specification Sheet

MB-GA520MDS3HV2

Gigabyte A520M-DS3H V2 AMD Ryzen 5000 Series Socket AM4 mATX Motherboard

Product Overview

Gigabyte A520M-DS3H V2 AMD Ryzen 5000 Series Socket AM4 mATX Motherboard, AMD A520 Chipset, 4x DDR4 DIMM Memory slots, 1x DisplayPort, 1x HDMI Port, GbE LAN Chip, 1x PCI Express x16 slot, 1x PCI Express x1 slot, 1x M.2 connector, 4x SATA 6Gb/s connectors, USB 3.2 Gen 1 Ports, USB 2.0/1.1 Ports, 1x PS/2 Keyboard/Mouse Port, 3x audio jacks







Specifications

Overview:

A520M DS3H V2 (rev. 1.0)
AMD A520 Ultra Durable Motherboard with Digital VRM Solution, GbE LAN, Smart Fan 5 with FAN STOP

- Supports AMD Ryzen 5000 Series/ Ryzen 5000 G-Series/ Ryzen 4000 G-Series and Ryzen 3000 Series Processors
- Dual Channel ECC/ Non-ECC Unbuffered DDR4, 4 DIMMs
- Ultra Durable PCIe 3.0 x16 Slot
- NVMe PCIe 3.0 M.2 Connectors
- High Quality Audio Capacitors and Audio Noise Guard for Ultimate Audio Quality
- GbE LAN with Bandwidth Management
- Rear DisplayPort and HDMI for Multi-display Support

- Smart Fan 5 Features Multiple Temperature Sensors, Hybrid Fan Headers with FAN STOP
- Anti-Sulfur Resistors Design

Features:

PERFORMANCE
GIGABYTE UD series motherboards use pure digital PWM + Low RDS(on) MOSFETs design to support the 3rd Gen AMD Ryzen CPUs by offering incredible precision in delivering power to the motherboard's most power-hungry and energy-sensitive components as well as delivering enhanced system performance and ultimate hardware scalability.

Benefits of Low RDS(on)MOSFETs

- Optimized gate charge to minimize switching losses.
- Lower temperature, smaller size, better thermal characteristics.

NVMe PCIe Gen3 x4 M.2 Connector
GIGABYTE Motherboards are focused on delivering M.2 technology to enthusiasts who want to maximize their systems potential.

GbE LAN with Bandwidth Management
GbE LAN features a network bandwidth management application which helps to improve network latency and maintain low ping times to deliver better responsiveness in crowded LAN environments.

HDMI 2.1 for 4K / 60P / 21:9 / HDCP 2.3 Support
HDMI 2.1, which is backwards compatible with HDMI 2.0/ 1.4 and offering 48 Gb/s of bandwidth - twice times more than previous generation. This unlocks the potential for users to transfer multiple video streams, as well as a native cinematic 21:9 ratio (which most movies are shot in), Full HDR and HDCP 2.3 support, to offer the best visual experience for viewers.

Note: Only New Gen AMD Ryzen with Radeon Graphics processors support displaying function.

The Industry's Leading LAN Static-Electricity & Surge Protection
GIGABYTE motherboards use ICs with up to 3 times the ESD resistance levels compared to traditional ICs. This helps to better protect the motherboard and its components against potential damage caused by static electricity. GIGABYTE motherboards also feature special anti-surge ICs that protect your motherboard, and your PC from any surge in power delivery that may occur, helping to ensure that your PC is equipped to deal with any potentially irregular and inconsistent power delivery.

Smart Fan 5
With Smart Fan 5 users can ensure that their gaming PC can maintain its performance while staying cool. Smart Fan 5 allows users to interchange their fan headers to reflect different thermal sensors at different locations on the motherboard. Not only that, with Smart Fan 5 more hybrid fan headers that support both PWM and Voltage mode fans have been introduced to make the motherboard more liquid cooling friendly.

High-End Audio Capacitors
GIGABYTE motherboards use high-end audio capacitors. These high quality capacitors help deliver high resolution and high fidelity audio to provide the most realistic sound effects for gamers.

Audio Noise Guard
GIGABYTE motherboards feature an audio noise guard that essentially separates the boards sensitive analog audio components from potential noise pollution at the PCB level.

Solid Pin Power Connectors
GIGABYTE motherboards feature solid plated ATX 12V 8pin power connectors for offering stable power supply while CPU overloading.

Solid Pin Power connector advantages

1. Larger contact area for electricity
2. More metal quantity to sustain higher power and generated heat
3. Ultra durable and longer lifespan

START SULFURIZATION PROTECTION
Sulfur compounds in the air can penetrate tiny onboard resistors creating chemical change and causing these resistors to open or short. If either of these occurs the motherboard will fail to function. By equipping resistors with an Anti-Sulfur Design GIGABYTE gives Ultra Durable Motherboards a whole new meaning.

The Industry's Leading Surge Protection
GIGABYTE motherboards also feature special anti-surge IC that protect your motherboard, helping to ensure that your PC is equipped to deal with any potentially irregular electrical spikes.

Humidity Protection Glass Fabric PCB
There is nothing more harmful to the longevity of your PC than moisture, and most parts of the world experience moisture in the air as humidity at some point during the year. GIGABYTE motherboards have been designed to make sure that humidity is never an issue, incorporating a new Glass Fabric PCB technology that repels moisture caused by humid and damp conditions. Glass Fabric PCB technology uses a new PCB material which reduces the amount of space between the fiber weave, making it much more difficult for moisture to penetrate compared to traditional motherboard PCBs. This offers much better protection from short circuit and system malfunction caused by humid and damp conditions.

High Temperature Protection Lower RDS(on) MOSFETs Design
GIGABYTE motherboards use Low RDS(on) MOSFETs which reduce energy wastage through unnecessary residual heat dissipation. This all amounts to tangible energy savings which are beneficial for both end-users and the environment without impacting system performance.

GIGABYTE EXCELLENCE
The BIOS is essential for users during initial setup to allow for the most optimal settings. With a new GUI and easier to use functionalities, GIGABYTE has been able to reinvent the BIOS to give users a better experience while setting up their new system.

Specifications:

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Specifications	
Product Code	MB-GA520MDS3HV2
CPU	1. AMD Socket AM4, support for: AMD Ryzen 5000 Series/ Ryzen 5000 G-Series/ Ryzen 4000 G-Series and Ryzen 3000 Series Processors
Chipset	1. AMD A520

Memory	1. 4 x DDR4 DIMM sockets supporting up to 128 GB (32 GB single DIMM capacity) of system memory
	2. Support for DDR4 4733(O.C.) / 4600(O.C.) / 4400(O.C.) / 4266(O.C.) / 4133(O.C.) / 4000(O.C.) / 3866(O.C.) / 3733(O.C.) / 3600(O.C.) / 3466(O.C) / 3400(O.C.) / 3200 / 2933 / 2667 / 2400 / 2133 MHz memory modules
	3. Dual channel memory architecture
	4. Support for ECC Un-buffered DIMM 1Rx8/2Rx8 memory modules
	5. Support for non-ECC Un-buffered DIMM 1Rx8/2Rx8/1Rx16 memory modules
	6. Support for Extreme Memory Profile (XMP) memory modules
Onboard Graphics	Integrated Graphics Processor:
	1. 1 x DisplayPort, supporting a maximum resolution of 5120x2880@60 Hz
	* Support for DisplayPort 1.4 version, HDCP 2.3, and HDR.
	2. 1 x HDMI port, supporting a maximum resolution of 4096x2160@60 Hz
	* Support for HDMI 2.1 version, HDCP 2.3, and HDR.
	Maximum shared memory of 16 GB
Audio	1. Realtek Audio CODEC
	2. High Definition Audio
	3. 2/4/5.1/7.1-channel
	* You can change the functionality of an audio jack using the audio software. To configure 7.1-channel audio, access the audio software for audio settings.
LAN	1. Realtek GbE LAN chip (1 Gbps/100 Mbps)
Expansion Slots	1 x PCI Express x16 slot, integrated in the CPU:
	1. Supporting PCIe 3.0 x16 mode
	1 x PCI Express x1 slot, integrated in the Chipset:
	1. Supporting PCIe 3.0 x1 mode
Storage Interface	1 x M.2 connector, integrated in the CPU, supporting Socket 3, M key, type 2280 SSDs:
	1. Supporting SATA and PCIe 3.0 x4/x2 SSDs
	4 x SATA 6Gb/s connectors, integrated in the Chipset:
	1. Supporting for RAID 0, RAID 1, and RAID 10
USB	CPU:
	1. 4 x USB 3.2 Gen 1 ports on the back panel
	Chipset:
	1. 2 x USB 3.2 Gen 1 ports available through the internal USB header
	2. 6 x USB 2.0/1.1 ports (4 ports on the back panel, 2 ports available through the internal USB header)

Internal I/O Connectors	1. 1 x 24-pin ATX main power connector
	2. 1 x 8-pin ATX 12V power connector
	3. 1 x CPU fan header
	4. 1 x system fan header
	5. 1 x M.2 Socket 3 connector
	6. 4 x SATA 6Gb/s connectors
	7. 1 x front panel header
	8. 1 x front panel audio header
	9. 1 x USB 3.2 Gen 1 header
	10. 1 x USB 2.0/1.1 header
	11. 1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only)
	12. 1 x Clear CMOS jumper
Back Panel Connectors	1. 1 x PS/2 keyboard/mouse port
	2. 1 x DisplayPort
	3. 1 x HDMI port
	4. 4 x USB 3.2 Gen 1 ports
	5. 2 x USB 2.0/1.1 ports
	6. 1 x RJ-45 port
	7. 3 x audio jacks
I/O Controller	1. iTE I/O Controller Chip
H/W Monitoring	1. Voltage detection
	2. Temperature detection
	3. Fan speed detection
	4. Fan fail warning
	5. Fan speed control
	* Whether the fan speed control function is supported will depend on the cooler you install.
BIOS	1. 1 x 128 Mbit flash
	2. Use of licensed AMI UEFI BIOS
	3. PnP 1.0a, DMI 2.7, WfM 2.0, SM BIOS 2.7, ACPI 5.0

Unique Features	1. Support for APP Center
	* Available applications in APP Center may vary by motherboard model. Supported functions of each application may also vary depending on motherboard specifications.
	@BIOS
	EasyTune
	Smart Backup
	System Information Viewer
	2. Support for Q-Flash
	3. Support for Xpress Install
Bundled Software	1. Norton Internet Security (OEM version)
	2. LAN bandwidth management software
Operating System	1. Support for Windows 11 64-bit
	2. Support for Windows 10 64-bit
Form Factor	1. Micro ATX Form Factor, 24.4cm x 24.4cm

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/MB-GA520MDS3HV2-Gigabyte-A520M-DS3H-V2-AMD-Ryzen-5000-Series-Socket-AM4-mATX-Motherboard-p-279223.php

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