ComX Computers
Product Specification Sheet

MB-GTRX40D+W

Gigabyte TRX40 Aorus Designare AMD TRX40 Chipset Socket AMD sTRX4 Motherboard

Product Overview

Gigabyte TRX40 Aorus Designare + Wifi: AMD sTRX4 (Threaderipper 3 series only) mb - with 16+3 phase digital VRM, pre-mounted I/O shield with thermal armor + RGB Fusion 2.0 with on-board RGB display (multi zones), Addressable LED Strip Support, on-board buttons (power + reset + clear CMOS+ Q-Flash), 2x copper PCBs design, MoSFET heatsinks with 4x DTH fins-array copper heatpipe, SmartFan5 with 9x temperature sensors + 8x hybrid fan headers, solid pin power connectors (ATX 24+8+8pin), memory armor with stainless steel shielding, PCIe armor with stainless steel shielding+double locking bracket, with bundled Aorus Gen4 Aic adapter + 40Gb/s GC-Titan Ridge thunderbolt add-In Card - 8x Quad channel DDR4-4400(O.C)/3200 up to 256Gb (ECC or non-ECC), 8x SATA6G + 4x Gen4x4 M.2/NGFF with thermal guards (PCIe or SATA mode), with NVME raid 0/1//0+1/5/10, on-board Realtek ALC4050H + ALC1220-VB + ESS ES9118 sabre DAC 7.1 HD audio with DTS-X ultra (with 120 dB SNR playback + headphone AMP, with WiMA+Nichicon audio capacitors + optical s/pdif out), dual Intel 210AT gigabit LAN, Intel WiFi6 AX200 802.11AX dual band 2.4Gbps WiFi + bluetooth, with cFosSpeed Internet Accelerator; 1x pci-e (1x), 4x pci-e 4.0 (16x+16x+8x+8x up to 88 lanes) for Quad-GPU SLi/CrossfireX, 1x USB3 type-C (Gen2) + 5x USB3 type-A (Gen2) + 2x USB2, bundled norton internet security + XSplit Gamecaster + Broadcaster - XL-ATX (33x28cm)



Specifications

Features:

16 + 3 Direct Digital Power Design
TRX40 DESIGNARE motherboard uses latest new generation Infineon multiphase PWM controller, and a total 16+3 phase for vCore and SOC, all with Infineon TDA21472 Power Stage MOSFET which is capable of providing at least 70A of power from each phase, for a total of amazing 1330A. Power design is no longer a bottleneck for this motherboard.

Fins-Array
Fins-Array increases the heat dissipation surface by 300% compared to traditional heatsinks of the same size.

Extended Heatpipe
Heatpipes transfer heat between heatsinks to get thermal balance more quickly.

3X PCIe 4.0 M.2 Heatsink
Enlarged M.2 heatsink prevents new generation PCIe 4.0 SSD from throttled performance under overheat condition.

LAIRD Thermal Pad

By using 1.5mm thicker 5 W/mK thermal conductivity pad, it can transfer 2.7x more heat than usual thermal pad in the same time.

Ultra Durable Baseplate
Aluminum baseplate is 3x thermal conductivity than steel one ensuring efficient thermal dissipation.

TRX40 Chipset Heatsink
Reactive chipset heatsink with grooves ensures TRX40 chipset run cool and quiet.

5cm Ball Bearing Silent Fan
Built-in 5cm ball bearing fan to cool down TRX40 chipset, it will completely stop under idle condition to extend fan life cycle.

2x Copper PCB
GIGABYTE's exclusive 2X Copper PCBs design provides sufficient power trace paths between components to handle greater than normal power loads and to remove heat from the critical CPU power delivery area. This is essential to ensure the motherboard is able to handle the increased power loading that is necessary when overclocking.

Support for DDR4 to 4400MHz and Beyond
GIGABYTE is offering a tested and proven platform that ensures proper compatibility to 4400MHz and beyond.

Bundled 40Gb/s GC-Titan Ridge Add-In Card
The fastest 40Gb/s single-wire connection With bundled GC- Titan Ridge AIC, It delivers speeds of up to 40Gb/s transfer speed that's 2 times faster than previous generation. It provides the fastest connection to any dock, display and device. A single port can daisy-chain up to 3 Thunderbolt devices without an additional hub or switch. In addition, it supports quick charging with the latest technology PD3.0.

AORUS Gen4 AIC Adaptor

- 4 x PCIe 4.0/3.0 M.2 Slots
- Full PCI Express 4.0 ready Design
- Advanced Thermal Solution for PCIe 4.0 SSD
- Easy Software RAID with Single Click to Get Amazing Performance
- Custom AORUS Storage Manager

Advanced Thermal Solution
AORUS Gen4 AIC Adaptor equips very advanced thermal solution, including 5.5mm pure copper heatsink, 5cm double ball bearing fan, M.2 SSD baseplate and multiple thermal pads to cool down both sides of 4 M.2 high performance SSD with active cooling. Users can choose 3 different fan profile based on hardware configuration to reach perfect balance of high storage performance and low noise.

AORUS Storage Manager
AORUS Storage Manager, a dedicated software for AORUS Gen4 AIC Adaptor, allows users to enable RAID 0 on multiple M.2 SSD in a single click, also monitor overall temperature on SSD and PCB to change different fan profile based on users' hardware configuration.

PCIe 4.0 Design
TRX40 DESIGNARE equips several new components to ensure the best PCIe 4.0 signal quality, including PCB, PCIe Slots, M.2 Connectors, Re-drivers, Switches that are specifically designed for PCIe 4.0. There will be no compromised on PCIe 4.0 performance.

4X PCIe 4.0 Slot
Reinforced PCIe 4.0 x16/x8/x16/x8 with lower impedance

PCIe 4.0 Re-driver
Boost & strengthen PCIe 4.0 signal to longer length

4X M.2 PCIe 4.0 Connector
M.2 PCIe 4.0 x4 slot with lower impedance

4 Way Dual Configuration
TRX40 DESIGNARE equips full 4 X PCIex16 slot with specialized location supports up to 4 Dual Slot wide graphics cards or other add-on cards. This 4-Way wide configuration is ideal for high-end workstation that need tremendous 3D processing and computing power.

Quad PCIe 4.0 x4 M.2
GIGABYTE Motherboards are focused on delivering M.2 technology to enthusiasts who want to maximize their systems' potential.

Extreme Performance with PCIe 4.0 x4 NVMe PCIe SSDs
GIGABYTE TRX40 motherboards offer the industry's best compatibility in terms of NVMe storage for users who demand high capacity and seek the best performance. AORUS' unique design can be configured in RAID for record speeds of up to 14991 MB/s (Sequential Read), making AORUS the obvious choice for the ultimate PC.

Dual Intel® GbE LAN with cFosSpeed Internet Accelerator Software
Dual Intel® Gigabit LAN features cFosSpeed, a network traffic management application which helps to improve network latency and maintain low ping times to deliver better responsiveness in crowded LAN environments.

New Introduce Intel® WiFi 6 802.11ax + BT 5 Module
Intel Wireless solution supports 802.11ax, enables gigabit wireless performance, provides smooth video streaming, better gaming experience, few dropped connections and speeds up to 2.4Gbps*. Moreover, Bluetooth 5 provides 4X range over BT 4.2 and with faster transmission.

Benefit of WiFi 6:

- 5.5X throughput than 802.11ac 1x1*
- 4X better network capacity, no traffic jams especially in those dense area with lots of devices
- Network efficiency increase for better user experience

AORUS Antenna Supports Dual Band with Better WIFI Signal

- All new antenna supported dual band 802.11ax/ac 2.4GHz & 5GHz.
- better signal strength compared to traditional antenna design
- AORUS Antenna with smart antenna function for the best WIFI signal transmitting
- Multiple angle tilt and magnetic base for the best signal strength direction and location

USB TurboCharger
GIGABYTE patent pending USB TurboCharger technology allows users to recharge their mobile devices with stunning speed, up to 50% in less than 30 minutes*. By connecting Front USB 3.2 Gen1 Type-A cable of chassis to our motherboard, USB TurboCharger can recharge both Android devices with QC 3.0 and Apple devices with Apple Fast-Charge function.

Smart Fan 5
With Smart Fan 5 users can ensure that their 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.

Fan Stop

Achieve fan silence. With Fan Stop, map any fan to stop completely when temperatures drop below a specified threshold. Which fan stops, based on readings from which sensor, and at what temperature-all of it can be customized to your liking.

New Smart Fan 5 Software
Choose from different modes, Quiet to Full Speed, to match your system usage preferences.
For each fan or pump, you can use the intuitive fan curve to define trigger thresholds and corresponding fan speeds.

All New Realtek High-End HD Audio Codec
ALC1220 120dB(A) SNR HD Audio with Smart Headphone Amp automatically detects impedance of your head-worn audio device, preventing issues such as low volume and distortion. With the new VB series audio controller, stream your voice to the world vibrantly with both front/rear microphone SNR up to 110/114dB(A).

High-End WIMA & Audio Capacitors
TRX40 motherboards feature Hi-Fi grade WIMA FKP2 capacitors which are used as feedback signal processing to deliver crystal and balanced sound and are also being used widely in premium grade Hi-Fi systems. The addition of this to the exclusive AORUS AMP-UP Audio technology makes for the ideal onboard sound solution for the most demanding audiophiles.

DTS :X® Ultra
Recreates an authentic, spatially accurate 3D audio experience for gaming over any headphones or speakers. Supports channel-based, scene based and object-based audio. Provides out-of-the-box calibration for a range of headphones and speakers. Provides post-processing enhancements and device level tuning for DTS® codecs. DTS Sound Unbound* leverage Microsoft Spatial, enabling the the most believable, 3D audio experience for games. Immersion through DTS Headphone:X means in the sonic landscape, stationary and moving sounds can be heard from above, below or around the listener. Sounds pass around the listener with amazing externalization and accurate localization.

No More Confusion During In-Game Voice Chat
Microphone input with higher front dynamic range allows gamers to hear more clearly. No more misunderstandings, no more confusing GO! GO! GO! as NO! NO! NO!

Durable Design And Easy Installation
With an integrated I/O shield, building a GIGABYTE Ultra Durable PC is even easier and convenient. Users can expect excellent durability with the durable design of the pre-installed I/O shield.

Solid Pin Power Connectors
TRX40 DESIGNARE feature solid plated ATX 24pin & ATX 12V 8pin +8pin power connectors to offer a stable power supply during CPU overloading.

Solid Pin Power connector advantages

- Larger contact area for electricity
- More metal quantity to sustain higher power and generated heat
- Ultra durable and longer lifespan

Ultra Durable™ Memory Armor
GIGABYTE exclusive one piece stainless steel shielding design prevents against PCB distortion/twisting and plate bending, in addition to preventing any possible ESD interference.

Industry Leading Ultra Durable™ PCIe Armor
The innovative one piece stainless steel shielding design from GIGABYTE reinforces the PCIe connectors to provide the extra strength required to support heavy graphics cards.

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.

Update the BIOS easily without installing the CPU, memory and graphics card.
With GIGABYTE Q-Flash Plus, you don't need to install the CPU, memory and graphics card nor enter the BIOS menu to flash the BIOS. Just download and save a new BIOS file (rename to gigabyte.bin) on the USB flash drive, then press the dedicated Q-Flash Plus button and you're good to go!

GIGABYTE Patented DualBIOS™ Design
GIGABYTE Ultra Durable™ motherboards feature GIGABYTE DualBIOS™, an exclusive technology from GIGABYTE that protects arguably one of your PC's most crucial components, the BIOS. GIGABYTE DualBIOS™ means that your motherboard has both a 'Main BIOS' and a 'Backup BIOS', protecting users from BIOS failure due to virus, hardware malfunction, improper OC settings or power failure during the update process.

Support RGB Lighting Effect in Full Color
Personalize your next PC rig to your liking by selecting the color of your choice to illuminate the external RGB light strip.

RGB Fusion 2.0 Software
With an integrated intuitive user interface, the RGB Fusion 2.0 provides you a better solution for customizing the lighting effects across all supported devices. From motherboards, graphics cards to the peripheral products, you can personalize your gaming rig with your own style and show off your build by sharing the profiles. In addition, the new gaming mode makes the lighting effects interactive with selected games to bring you the most immersive gaming experience.

BIOS

- New User Interface - All new EASY MODE shows important hardware information in one page including CPU clock, Memory, Storage, Fan.
- My Favorites - Add constantly used items into the favorite menu for quick access.
- Storage Information - Show all kinds of storage information including SATA, PCIE and M.2 interface.
- Changelog - List all changes before saving and exiting bios. Quickly review overall settings modification.
- Intuitive Load Line Curve - Clearly show each loadline calibration setting in an intuitive curve graph.

APP CENTER
GIGABYTE APP CENTER is an useful portal of all GIGABYTE MB utilities and drivers, you can choose any utility you want to install from APP CENTER and keep you updated with latest utilities and drivers version.

EasyTune™
GIGABYTE's EasyTune™ is a simple and easy-to-use interface that allows users to fine-tune their system settings or adjust system and memory clocks and voltages in a Windows environment. With Smart Quick Boost, one click is all it takes to automatically overclock your system, giving an added performance boost when you need it the most.

System Information Viewer
GIGABYTE System Information Viewer is a central location that gives you access to your current system status. Monitor components such as the clocks and processor, set your preferred fan speed profile, create alerts when temperatures get too high or record your system's behavior; these are the possibilities of the System Information Viewer.

XSplit Gamecaster + Broadcaster: Cast Your Game Anytime, Anywhere
Now set up your stage and share the greatest gaming moments with XSplit Gamecaster + Broadcaster! Fully optimized social media integration is ready for real-time chats-keeping you notified yet focused in the game. It takes just one click to stream your gameplay to Twitch. Host your game like a pro!

Specifications:

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Specifications	
Product Code	MB-GTRX40D+W
CPU	1. AMD Socket sTRX4:
	Support 3rd Generation AMD Ryzen Threadripper processors
Chipset	1. AMD TRX40
Memory	1. 8 x DDR4 DIMM sockets supporting up to 256 GB (32 GB single DIMM capacity) of system memory
	2. Quad Channel memory architecture
	3. Support for DDR4 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.) / 3333(O.C.) / 3300(O.C.) / 3200 / 2933 / 2667 / 2400 / 2133 MHz memory modules
	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
Audio	1. Realtek ALC4050H codec+ Realtek ALC1220-VB codec
	2. Support for DTS:X Ultra
	3. High Definition Audio
	4. 2/4/5.1/7.1-channel
	5. Support for S/PDIF Out
LAN	1. 2 x Intel GbE LAN chip (10/100/1000 Mbit)
Wireless Communication module	Intel Wi-Fi 6 AX200
	1. Wi-Fi 802.11a/b/g/n/ac/ax, supporting 2.4/5 GHz Dual-Band
	2. BLUETOOTH 5.0
	3. Support for 11ax 160MHz wireless standard and up to 2.4 Gbps data rate
	* Actual data rate may vary depending on environment and equipment.
Expansion Slots	1. 2 x PCI Express x16 slots, running at x16 (PCIEX16_1, PCIEX16_2)
	2. 2 x PCI Express x16 slots, running at x8 (PCIEX8_1, PCIEX8_2)
	3. 1 x PCI Express x1 slot
	(All of the PCI Express slots conform to PCI Express 4.0 standard.)
Multi-Graphics Technology	1. Support for AMD Quad-GPU CrossFire and 4-Way/3-Way/2-Way AMD CrossFire technologies
	2. Support for NVIDIA Quad-GPU SLI and 4-Way/3-Way/2-Way NVIDIA SLI technologies

Storage Interface	CPU:
	1. 1 x M.2 connector (Socket 3, M key, type 2260/2280/22110 SATA and PCIe 4.0 x4/x2 SSD support) (M2M)
	2. 1 x M.2 connector (Socket 3, M key, type 2280 SATA and PCIe 4.0 x4/x2 SSD support) (M2Q)
	Chipset:
	1. 1 x M.2 connector (Socket 3, M key, type 2280/22110 SATA and PCIe 4.0 x4/x2 SSD support) (M2P)
	2. 1 x M.2 connector (Socket 3, M key, type 2280 PCIe 4.0 x4/x2 SSD support) (M2C)
	3. 8 x SATA 6Gb/s connectors
	Support for RAID 0, RAID 1, and RAID 10
USB	CPU:
	1. 4 x USB 3.2 Gen 2 Type-A ports (red) on the back panel
	Chipset:
	1. 1 x USB Type-C port on the back panel, with USB 3.2 Gen 2 support
	2. 1 x USB Type-C port with USB 3.2 Gen 2 support, available through the internal USB header
	3. 1 x USB 3.2 Gen 2 Type-A port (red) on the back panel
	4. 4 x USB 3.2 Gen 1 ports available through the internal USB headers
	Chipset+2 USB 2.0 Hubs:
	1. 6 x USB 2.0/1.1 ports (2 ports on the back panel, 4 ports available through the internal USB headers)

Internal I/O Connectors	1. 1 x 24-pin ATX main power connector
	2. 2 x 8-pin ATX 12V power connectors
	3. 1 x OC_PEG power connector
	4. 1 x CPU fan header
	5. 1 x water cooling CPU fan header
	6. 2 x system fan headers
	7. 4 x system fan/water cooling pump headers
	8. 2 x addressable LED strip headers
	9. 2 x RGB LED strip headers
	10. 4 x M.2 Socket 3 connectors
	11. 8 x SATA 6Gb/s connectors
	12. 1 x front panel header
	13. 1 x front panel audio header
	14. 1 x USB Type-C header, with USB 3.2 Gen 2 support
	15. 2 x USB 3.2 Gen 1 headers
	16. 2 x USB 2.0/1.1 headers
	17. 1 x GIGABYTE GC-TITAN RIDGE Add-in Card Connector
	18. 1 x Trusted Platform Module (TPM) header (2x6 pin, for the GC-TPM2.0_S module only)
	19. 1 x power button
	20. 1 x reset button
	21. 2 x temperature sensor headers
	22. 1 x Clear CMOS jumper
Back Panel Connectors	1. 1 x Q-Flash Plus button
	2. 1 x Clear CMOS button
	3. 1 x USB Type-C port, with USB 3.2 Gen 2 support
	4. 5 x USB 3.2 Gen 2 Type-A ports (red)
	5. 2 x USB 2.0/1.1 ports
	6. 2 x RJ-45 ports
	7. 2 x SMA antenna connectors (2T2R)
	8. 1 x optical S/PDIF Out connector
	9. 5 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. Water cooling flow rate detection
	5. Overheating warning
	6. Fan fail warning
	7. Fan speed control
	* Whether the fan (pump) speed control function is supported will depend on the fan (pump) you install.
BIOS	1. 2 x 128 Mbit flash
	2. Use of licensed AMI UEFI BIOS
	3. Support for DualBIOS
	4. 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
	AutoGreen
	Cloud Station
	EasyTune
	Fast Boot
	Game Boost
	RGB Fusion
	Smart Backup
	Smart Keyboard
	Smart Survey
	System Information Viewer
	USB Blocker
	USB TurboCharger
	2. Support for Q-Flash Plus
	3. Support for Q-Flash
	4. Support for Xpress Install
Bundled Software	1. Norton Internet Security (OEM version)
	2. cFosSpeed
	3. XSplit Gamecaster + Broadcaster (12 months license)
Operating System	1. Support for Windows 10 64-bit
Form Factor	1. XL-ATX Form Factor; 32.5cm x 26.9cm

Remark	1. Due to different Linux support condition provided by chipset vendors, please download Linux driver from chipset vendors' website or 3rd party website.
	2. Most hardware/software vendors may no longer offer drivers to support Win9X/ME/2000/XP. If drivers are available from the vendors, we will update them on the GIGABYTE website.

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-GTRX40D-W-Gigabyte-TRX40-Aorus-Designare-AMD-TRX40-Chipset-Socket-AMD-sTRX4-Motherboard-p-236099.php

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