ComX Computers

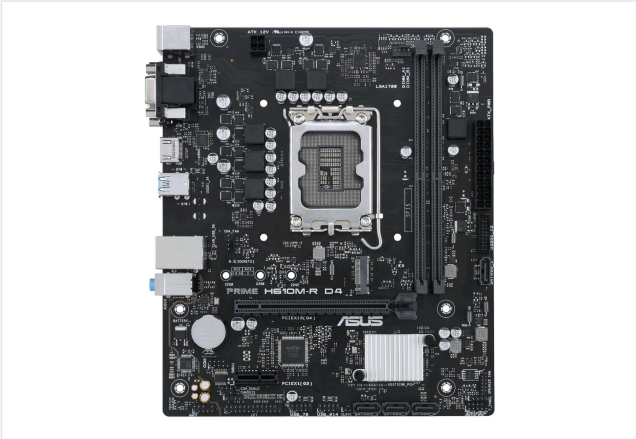
Product Specification Sheet

PRIME H610M-R D4

Asus PRIME H610M-R D4 Intel 12th / 13th / 14th Gen Socket LGA 1700 mATX Motherboard

Product Overview

Asus PRIME H610M-R D4 Intel 12th / 13th / 14th Gen Socket LGA 1700 mATX Motherboard, Intel H610 Chipset foundation, 2x DDR4 DIMM slots with Max capacity of 96GB, Single M.2 slot (Key M) supports PCI-e 3.0 x4 mode storage, 1x PCI-e 4.0 x16 slot, 1x PCI-e 3.0 x1 slot, 1 x DisplayPort, 4x SATA 6Gb/s Ports, 1 x VGA Port, 1x HDMI Port, Realtek 1GB Ethernet LAN connectivity, Realtek 7.1 Surround Sound High Definition Audio Codec, 2x USB 3.2 Gen 1 Type-A Ports, 2x USB 2.0 Type-A Ports, 3x audio jacks, 1x PS/2 Keyboard (Purple) Port, 1x PS/2 Mouse (Green) Port



Specifications

Overview Summary:

Upgrade your home or office setup with the ASUS Prime H610M-R D4, a reliable LGA1700 Micro-ATX motherboard designed for South African users seeking value without compromising on performance. This board supports Intel 12th, 13th, and 14th Gen processors along with DDR4 memory, making it an ideal choice for building cost-effective yet capable desktop PCs. Whether you need a system for everyday tasks, study work, or light gaming, this motherboard offers essential features like PCIe 4.0 support, fast M.2 storage slots, and multiple USB ports to keep your setup modern and responsive.

The compact Micro-ATX design ensures it fits perfectly into smaller cases while still providing enough room for expansion and cooling. With built-in protections and user-friendly installation tools, setting up your system is straightforward even for first-time builders. Ready to start building Buy now and enjoy a seamless PC experience tailored for efficiency and reliability.

Performance tier: Entry-level to Mid-range

Uses: Home desktops, Office PCs, Study computers, Budget builds, Basic gaming setups

Overview:

Brief Product Overview:

The ASUS Prime H610M-R D4 is a reliable Micro-ATX motherboard designed for South African builders who need a sensible foundation for home, study, or office PCs. Built on the Intel LGA1700 socket with an H610 chipset, this board offers a clear and straightforward platform without unnecessary complexity. Finished in a classic black color, it blends seamlessly with most case and component color schemes while maintaining a compact footprint that suits space-conscious builds.

Description:

This motherboard delivers essential performance for everyday computing tasks, combining the latest Intel LGA1700 support with DDR4 memory technology to ensure cost-effective upgrades. The inclusion of an M.2 slot allows for rapid boot times and snappy application loading, while the PCIe 4.0 expansion slot provides room for future graphics card or storage additions. With a practical array of rear USB ports including high-speed USB 3.2 Gen 1 options, it connects all your peripherals efficiently.

Features:

Key Selling Points

- LGA1700 socket compatible with Intel Core 14th, 13th, and 12th Gen processors as well as Pentium Gold and Celeron models
- Compact Micro-ATX design ideal for smaller desktop cases without sacrificing build quality
- Dual DDR4 DIMM slots supporting up to 96GB of memory with Intel XMP profile support
- High-speed M.2 slot accommodating PCIe 3.0 x4 mode SSDs for responsive storage performance
- Rear connectivity featuring two USB 3.2 Gen 1 ports and two USB 2.0 Type-A ports for versatile peripheral use

System Build Foundation
If you are tired of oversized boards that dictate your case choice, this Micro-ATX layout offers a streamlined solution. It makes it easier to assemble an everyday desktop without paying for more board capacity than is actually needed. For anyone assembling a budget-conscious Intel system, it provides a straightforward way to keep the build simple and manageable.

The design includes two DDR4 memory slots that let you equip the board with standard DDR4 modules, which is a sensible choice if you are building on a budget or reusing compatible memory from previous upgrades. The single M.2 slot gives you a dedicated place to install modern NVMe storage, helping your system boot and load applications more responsively than older SATA-based approaches.

For connectivity needs, the board supports PCIe 4.0 expansion standards for current-generation components as your requirements evolve. At the back panel, users get fast external drive support via USB 3.2 Gen 1 alongside standard ports for keyboards and mice, creating a simple yet practical mix for a working desktop environment.

Technical Specifications:

- CPU Socket: LGA1700 supporting Intel Core i9/i7/i5/i3, Pentium Gold, and Celeron (up to 65W)
- Chipset: Intel H610 chipset with support for Turbo Boost Technology 2.0
- Memory Support: Dual Channel DDR4 architecture with two DIMM slots, maxing at 96GB capacity
- Graphics Output: Integrated display options including one DisplayPort, one VGA port, and one HDMI port supporting up to 4K resolution
- Expansion Slots: One PCIe 4.0 x16 slot for graphics cards and one PCIe 3.0 x1 slot for additional peripherals
- Storage Capacity: One M.2 Key M slot plus four SATA 6Gb/s ports for hard drives or SSDs
- Audio Solution: Realtek 7.1 Surround Sound High Definition Audio CODEC with dedicated PCB layers and premium capacitors
- LAN Connectivity: Built-in Realtek 1Gb Ethernet controller for reliable network speeds

What's in the Box

- 1 x ASUS Prime H610M-R D4 LGA1700 M-ATX Motherboard
- 2 x SATA 6Gb/s cables for connecting storage devices
- 1 x I/O Shield to protect rear connections
- 1 x M.2 ANCHOR bracket for securing solid state drives
- 1 x User guide with detailed installation instructions

Choosing this motherboard ensures access to clearly documented capabilities and specifications, making it easier to select the right fit with confidence. The ASUS Prime series includes protection mechanisms like SafeSlot Core for robust PCIe connections, LANGuard for network safety, and 5X Protection III standards that cover everything from voltage regulation to thermal management.

The board also features ASUS Q-Design elements such as Q-DIMM and Q-Slot to simplify the installation of memory and expansion cards. Software support includes Armoury Crate and AI Suite 3 for system monitoring, along with a UEFI BIOS featuring EZ Flash 3 for easy updates and an EZ Mode interface for quick configuration.

This model is designated by part number PRIME H610M-R D4 and supports operating systems including Windows 11 64-bit and Windows 10 64-bit. It measures 8.9 inches x 7.7 inches (22.6 cm x 19.5 cm) to fit perfectly into standard Micro-ATX cases.

Specifications:

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Specifications	
Product Code	PRIME H610M-R D4
Model	PRIME H610M-R
CPU	IntelSocket LGA1700 for Intel Core 14th & 13th Gen Processors, Intel Core 12th Gen, Pentium Gold and Celeron Processors
	Supports up to Intel 65W CPU
	Supports Intel Turbo Boost Technology 2.0 and Intel Turbo Boost Max Technology 3.0
	** Intel Turbo Boost Max Technology 3.0 support depends on the CPU types.
Chipset	IntelH610 Chipset
Memory	2 x DIMM, Max. 96GB, DDR5 5600 / 5400 / 5200 / 5000 / 4800 Non-ECC, Un-buffered Memory
	Dual Channel Memory Architecture
	Supports IntelExtreme Memory Profile (XMP)
	* Supported memory types, data rate (speed), and number of DRAM modules vary depending on the CPU and memory configuration, for more information please refer to CPU/Memory Support list under the Support tab of product information site or visit
	* Non-ECC, un-buffered DDR5 memory supports On-Die ECC function.
Graphics	1 x DisplayPort
	1 x VGA port
	1 x HDMIport
	** Supports max. 4K@60Hz as specified in DisplayPort 1.4.
	*** Supports 4K@60Hz as specified in HDMI2.1.
Expansion Slots	Intel Core Processors (14th & 13th & 12th Gen)
	1 x PCIe 4.0 x16 slot
	IntelH610 Chipset
	1 x PCIe 3.0 x1 slot
Storage	Total supports 1 x M.2 slot and 4 x SATA 6Gb/s ports
	Intel H610 Chipset
	M.2 slot (Key M), type 2242/2260/2280 (supports PCIe 3.0 x4 mode)
	4 x SATA 6Gb/s ports
Ethernet	1 x Realtek 1Gb Ethernet

USB	Rear USB (Total 4 ports)
	2 x USB 3.2 Gen 1(5G) ports (2 x Type-A)
	2 x USB 2.0 ports (2 x Type-A)
	Front USB (Total 6 ports)
	1 x USB 3.2 Gen 1(5G) header supports additional 2 USB 3.2 Gen 1 ports
	2 x USB 2.0 headers support additional 4 USB 2.0 ports
Audio	Realtek 7.1 Surround Sound High Definition Audio CODEC
	- Supports: Jack-detection, Multi-streaming, Front Panel Jack-retasking
	- Supports up to 24-Bit/192 kHz playback
	Audio Features
	- Audio Shielding
	- Premium audio capacitors
	- Dedicated audio PCB layers
	* A chassis with an HD audio module in the front panel is required to support 7.1 Surround Sound audio output.
Back Panel I/O Ports	2 x USB 3.2 Gen 1(5G) ports (2 x Type-A)
	2 x USB 2.0 ports (2 x Type-A)
	1 x DisplayPort
	1 x VGA port
	1 x HDMIport
	1 x Realtek 1Gb Ethernet port
	3 x Audio jacks
	1 x PS/2 Keyboard (purple) port
	1 x PS/2 Mouse (green) port

Internal I/O Connectors	Fan and Cooling related
	1 x 4-pin CPU Fan header
	1 x 4-pin Chassis Fan header
	Power related
	1 x 24-pin Main Power connector
	1 x 4-pin +12V Power connector
	Storage related
	1 x M.2 slot (Key M)
	4 x SATA 6Gb/s ports
	USB
	1 x USB 3.2 Gen 1(5G) header supports additional 2 USB 3.2 Gen 1 ports
	2 x USB 2.0 headers support additional 4 USB 2.0 ports
	Miscellaneous
	1 x Clear CMOS header
	1 x Chassis Intrusion header
	1 x COM Port header
	1 x Front Panel Audio header (AAFP)
	1 x LPT header
	1 x Speaker header
	1 x SPI TPM header (14-1 pin)
	1 x 10-1 pin System Panel header
Special Features	ASUS 5X PROTECTION III
	- DIGI+ VRM
	- LANGuard
	- Overvoltage Protection
	- SafeSlot Core
	- Stainless-Steel Back I/O
	ASUS Q-Design
	- Q-DIMM
	- Q-Slot
	- Q-LED Core
	ASUS Thermal Solution
	- Aluminum heatsink design

Software Features	ASUS Exclusive Software
	Armoury Crate
	AI Suite 3
	EPU
	DIGI+ VRM
	PC Cleaner
	ASUS CPU-Z
	Norton 360 for Deluxe (60 Days Free Trial)
	WinRAR
	UEFI BIOS
	ASUS EZ DIY
	- ASUS CrashFree BIOS 3
	- ASUS EZ Flash 3
	- ASUS UEFI BIOS EZ Mode
BIOS	128 Mb Flash ROM, UEFI AMI BIOS
Manageability	WOL by PME, PXE
Accessories	Cables
	2 x SATA 6Gb/s cables
	Miscellaneous
	1 x I/O Shield
	1 x M.2 ANCHOR
	Documentation
	1 x User guide
Operating System	Windows 11 64-bit, Windows 10 64-bit
Form Factor	mATX Form Factor
	8.9 inch x 7.7 inch (22.6 cm x 19.5 cm)

FAQ

Which Intel processors are compatible with this motherboard?
The ASUS Prime H610M-R D4 supports Intel Core 13th & 14th Gen, Intel Core 12th Gen, Pentium Gold, and Celeron Processors via the LGA1700 socket.

Does this board use DDR4 or DDR5 memory?
This motherboard features two DIMM slots designed for DDR4 modules, with a maximum capacity of 96GB per system. Note that while the specification table lists DDR5 speeds in one section, the product description explicitly states it supports DDR4 memory.

What form factor does this board use and will it fit my case?
This is a compact Micro-ATX (mATX) motherboard measuring 8.9 inches by 7.7 inches, making it suitable for space-conscious builds and smaller PC cases.

Does the ASUS Prime H610M-R D4 include built-in video outputs?
Yes, the board includes integrated graphics with one DisplayPort, one HDMI port, and one VGA port on the rear panel, though specific capabilities may vary depending on the CPU used.

What storage and expansion options are available on this motherboard?
The board provides one M.2 slot for fast modern storage (supporting 2242/2260/2280 lengths) and four SATA 6Gb/s ports. For expansion, it includes a PCIe 4.0 x16 slot when used with Intel Core processors and a PCIe 3.0 x1 slot.

Product Information Online

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

Product page:
https://www.comx.co.za/PRIME-H610M-R-D4-Asus-PRIME-H610M-R-D4-Intel-12th-13th-14th-Gen-Socket-LGA-1700-mATX-p-341735.php

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