



Motherboard Buying Guide Quick Reference Handout

If you think about your computer's motherboard in terms of the human body, it'd be one of the most vital organs you have, like the heart or the brain. Without a motherboard, all of the important peripherals in your PC wouldn't have a connection point or a way for data and resources to be properly distributed and balanced.

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Table of Contents

- Understanding Motherboard Basics
- Key Components of the Motherboard
- Motherboard Sizes
- Choosing the right Motherboard
- Features to Consider



Understanding CPU basics

What is a Motherboard?

The motherboard is the main printed circuit board (PCB) in your computer.

Centralizes functions, including:

- Allocating power to peripherals
- Communication between components like the CPU, RAM, GPU, and hard drive.

Without a functioning motherboard, your PC won't work.

Motherboard Sizes (Form Factors)

ATX : Typically 12 x 9.6 inches. Most common motherboard types with the widest variety of selections

MicroATX : Measures up to 9.6 x 9.6 inches. Fewer PCIe and RAM slots. Suitable for compact desktops

Mini-ITX : Measures up to 6.7 x 6.7 inches. Usually only 1 PCIe and 2 RAM slots. Made for portable setups

Extended-ATX (EATX) : Around 13 x 12 inches. Suited for high performance builds, but limited selection

Choosing the right Motherboard

Consider the activities your PC will support early in the planning process (ie. Gaming, video editing, office work)

Determine desired PC functionality to select the right motherboard.

For graphic-intensive applications (video editing / gaming) or complex processing: Might need external graphics cards, more RAM, and larger hard drives. Motherboard has to accommodate this.

ATX motherboard is a minimum requirement for gaming and media professionals.

Features to consider



Form Factor: Size and capability are crucial based on intended PC use. Must also fit inside your case.

Number of PCIe Slots: Make sure the Motherboard has the right number of PCIe slots with the enough data lanes available

Number of RAM Slots: Ensure compatibility with motherboard specifications.

Compatibility: Ensure motherboard compatibility with CPU and other peripherals. Confirm the board type, slot number, and size fit your case.

Additional Features: Check USB slots, network connectivity, VRM capabilities and availability to hook up extra Power Supply unit if required

Some gaming and Media Professional Motherboard recommendations for 2024

ASUS ROG Maximus Z790 series

ASUS ROG Strix X670 series

MSI MAG Z790 Tomahawk

ASRock X670E series