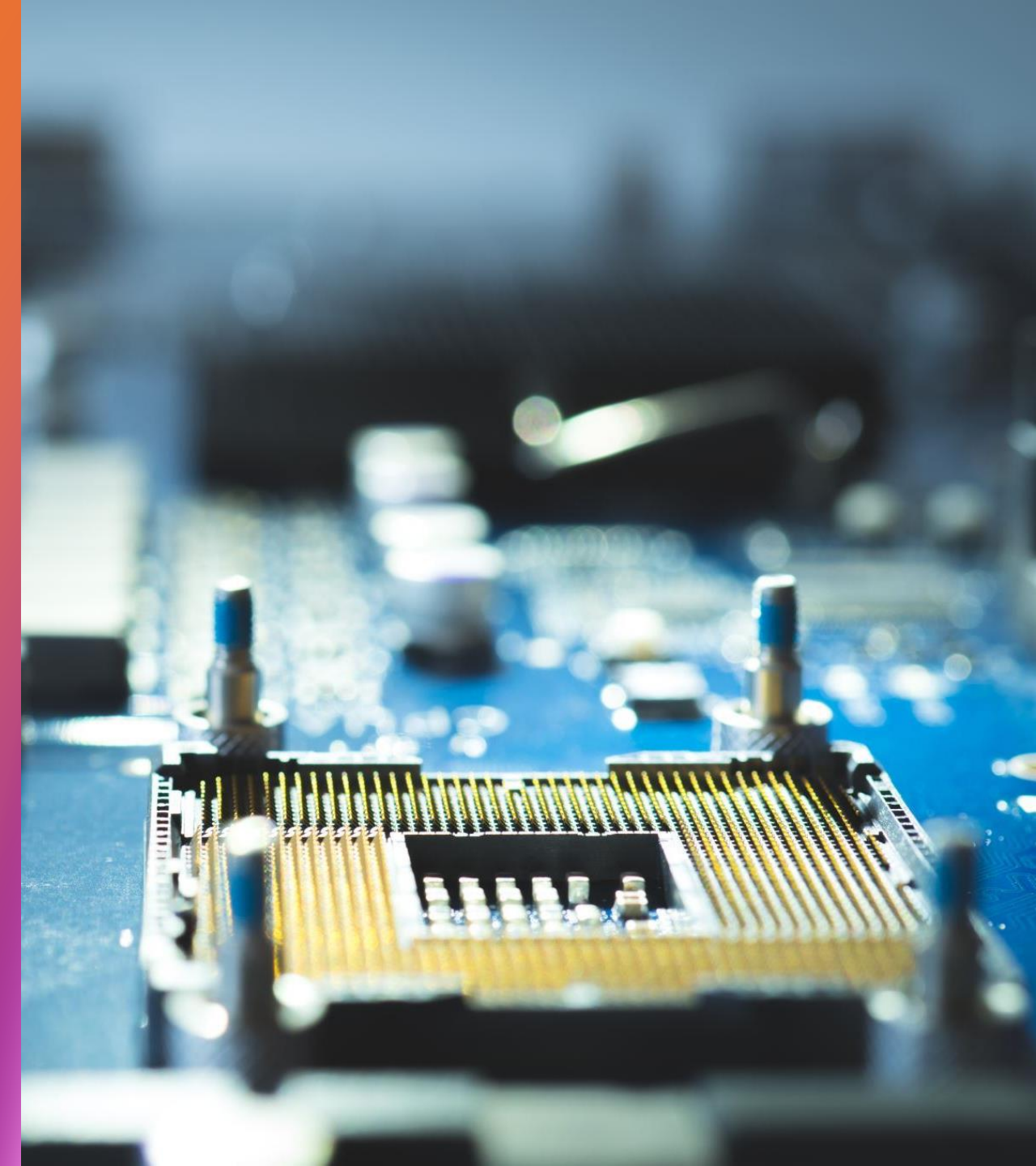# Comparative Study On Different Types Of Motherboards

Portfolio#5

Introduction:

The motherboard is a single, all-in-one board that connects and supports all the parts needed for the system to work. It's self-sufficient and takes care of all the functions, which is why it's called the "mother" board – because it controls everything connected to it.

Table:

Form Factor	Build	CPU Slots	Memory Slots	Chipsets	BIOS	PCI Slots	SATA	Built-in Features
AT Motherboard	12" x 13"	1 CPU	2-4 DIMM slots	IBM	Legacy	2 – 4 PCI slots	None(uses IDE)	Fast data transfer, Versatile expansion options
ATX Motherboard	12" x 9.6"	1 CPU	4 DIMM slots	Intel, AMD	UEFI	4 - 6 PCIe slots	4 - 6 slots	Multiple GPU & SATA support, Dual Channel RAM
BTX Motherboard	10.5" x 12.8"	1 CPU	4 DIMM slots	Intel	UEFI	1 – 7 PCIe slots	3 – 6 slots	Better cooling, Reduced latency

Table:

Form Factor	Build	CPU Slots	Memory Slots	Chipsets	BIOS	PCI Slots	SATA	Built-in Features
Extended-ATX Motherboard	12" x 13"	1 CPU	4-12 DIMM slots	Intel, AMD	UEFI	6-8 PCIe slots	6-8 slots	SCSi, Multiple GPU, Multi CPU & SATA support, Quad/Dual Channel RAM
LPX Motherboard	9" x 13"	1 CPU	2-4 DIMM slots	IBM	Legacy	2-3 PCI slots	None(uses IDE)	Low height

Table:

Form Factor	Build	CPU Slots	Memory Slots	Chipsets	BIOS	PCI Slots	SATA	Built-in Features
Micro-ATX Motherboard	9.6" x 9.6"	1 CPU	2-4 DIMM slots	Intel, AMD	UEFI	3-4 PCIe Slots	4-6 slots	Dual Channel RAM, Multi GPU
Mini ITX Motherboard	6.7" x 6.7"	1 CPU	2 DIMM slots	Intel, AMD	UEFI	1 PCI slot	2-4 slots	Dual Channel RAM
Mini-ATX Motherboard	11.2" x 8.2"	1 CPU	2-4 DIMM slots	Intel, AMD	UEFI	1 PCIe slot	2 – 6 slots	Less heat, Low noise, DC to DC(No PSU)
Pico BTX Motherboard	8" x 10.5"	1 CPU	2 DIMM slots	Intel	UEFI	1 – 2 PCIe slots	1-4 slot	Better cooling, Reduced latency, Compact(lightweight)
Standard-ATX Motherboard	12" x 9.6"	1 CPU	4 DIMM slots	Intel, AMD	UEFI	4 - 6 PCIe slots	4 – 6 slots	Multiple GPU & SATA support, Dual Channel RAM

Table:

Form Factor	Build	CPU Slots	Memory Slots	Chipsets	BIOS	PCI Slots	SATA	Built-in Features
Pico BTX Motherboard	8" x 10.5"	1 CPU	2 DIMM slots	Intel	UEFI	1 – 2 PCIe slots	1-4 slot	Better cooling, Reduced latency, Compact(lightweight)
Standard-ATX Motherboard	12" x 9.6"	1 CPU	4 DIMM slots	Intel, AMD	UEFI	4 - 6 PCIe slots	4 – 6 slots	Multiple GPU & SATA support, Dual Channel RAM

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