# How To: PC Building Parts

## PC Case

Small Form Factor | Mini-Tower | Mid-Tower | Full-Tower

Supported Motherboard Size:

| Small Form Factor | Mini-Tower | Mid-Tower | Full-Tower |
|---|---|---|---|
| •Mini-ITX | •Mini-ITX | •Mini-ITX | •Mini-ITX |
| | •MicroATX | •MicroATX | •MicroATX |
| | | •ATX | •ATX |
| | | | •EATX |

## Storage

HDD (Hard Disk Drive) — Read/Write Speed — $$$
SSD (Solid State Drive) — Read/Write Speed — $$$
NVMe (Nonvolatile Memory Express) — Read/Write Speed — $$$

## RAM - Random Access Memory

**8GB — Casual User**
• Internet Browsing
• Email
• Videos
• Music

**16GB — Intermediate User**
• Internet Browsing
• Email
• Videos
• Music
• Spreadsheets
• Simple Graphics Programs
• Flash Games
• Music

**32GB — Professional User**
• Internet Browsing
• Email
• Videos
• Music
• Spreadsheets
• Simple Graphics Programs
• Flash Games
• Music
• High Performance Gaming
• Graphic Design

## Motherboard
(Most components connect to this)

Mini-ITX | Micro ATX (mATX) | ATX | Extended ATX (EATX)

| Mini-ITX | Micro ATX (mATX) | ATX | Extended ATX (EATX) |
|---|---|---|---|
| + Compact | + Adequate ports | + Complete set of ports | + Possibly more RAM slots |
| − Limited ports (USB, Ethernet, etc.) | | | − More expensive without much added value |

## CPU Cooler

**Custom Water Cooling** (Tank of Liquid in PC) — Cooling Performance — $$$
**All-in-One (AIO) Water Cooling** — Cooling Performance — $$$
**Air Cooler** — Cooling Performance — $$$
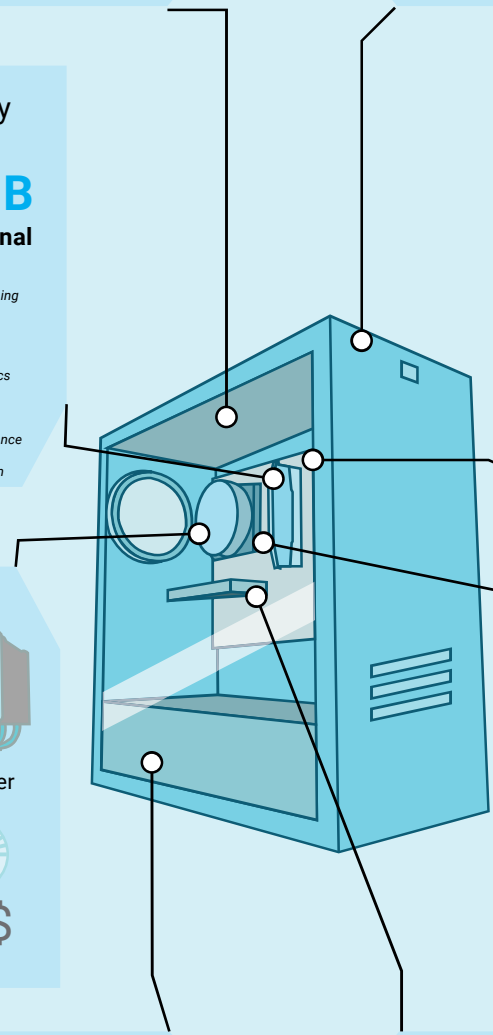
## CPU - Central Processing Unit
(More Speed = Higher Speed for Productivity Applications)

PROCESSING SPEED ↑

| Intel | AMD |
|---|---|
| i9 | Ryzen 9 |
| i7 | Ryzen 7 |
| i5 | Ryzen 5 |
| i3 | Ryzen 3 |

## PSU - Power Supply Unit

**Power Efficiency Rating**

Best ↑
• 80 PLUS Titanium
• 80 PLUS Platinum
• 80 PLUS Gold
• 80 PLUS Silver
• 80 PLUS Bronze
Worst • 80 PLUS

## GPU - Graphics Processing Unit
(Higher Performance Tier = Higher Gaming Capability)

**NVIDIA**
GTX 9**50**
GTX **40**90
Performance Tier (Higher = Faster)
Generation Number (Higher = Newer)

**AMD**
RX 2**50**
RX **65**00
Performance Tier (Higher = Faster)
Note: '50' = '500'
Generation Number (Higher = Newer)

## Monitor

### Panel Technology Types

**TN** (Recommended for Gaming) — $$$ — Worst Color
**VA** (Recommended for General Use) — $$$ — Best Color Contrast
**IPS** (Recommended for Professional Use) — $$$ — Best Color

Hz (FPS)    0:00s — 1:00s
60
144
240