ULTIMATE PC PERFORMANCE

GAMING | CODING | DEVELOPMENT

DESIGNED BY AMAR SMART INDIA

THE BRAIN: CPU

The Processor (Central Processing Unit) dictates how fast your PC "thinks."

- **Cores & Threads:** Vital for Coding/Dev. More cores = better multitasking (compiling code while running a server).
- **Clock Speed (GHz):** Vital for Gaming. Higher speed = smoother gameplay.
- **Best Companies:**
  - INTEL (Core i7/i9 13th/14th Gen)
  - AMD (Ryzen 7/9 7000 Series)

SHORT-TERM MEMORY: RAM

RANDOM ACCESS MEMORY

RAM stores data that is currently being used. For a smooth experience, speed and capacity are key.

Gaming Sweet Spot: 16GB to 32GB (DDR4/DDR5)

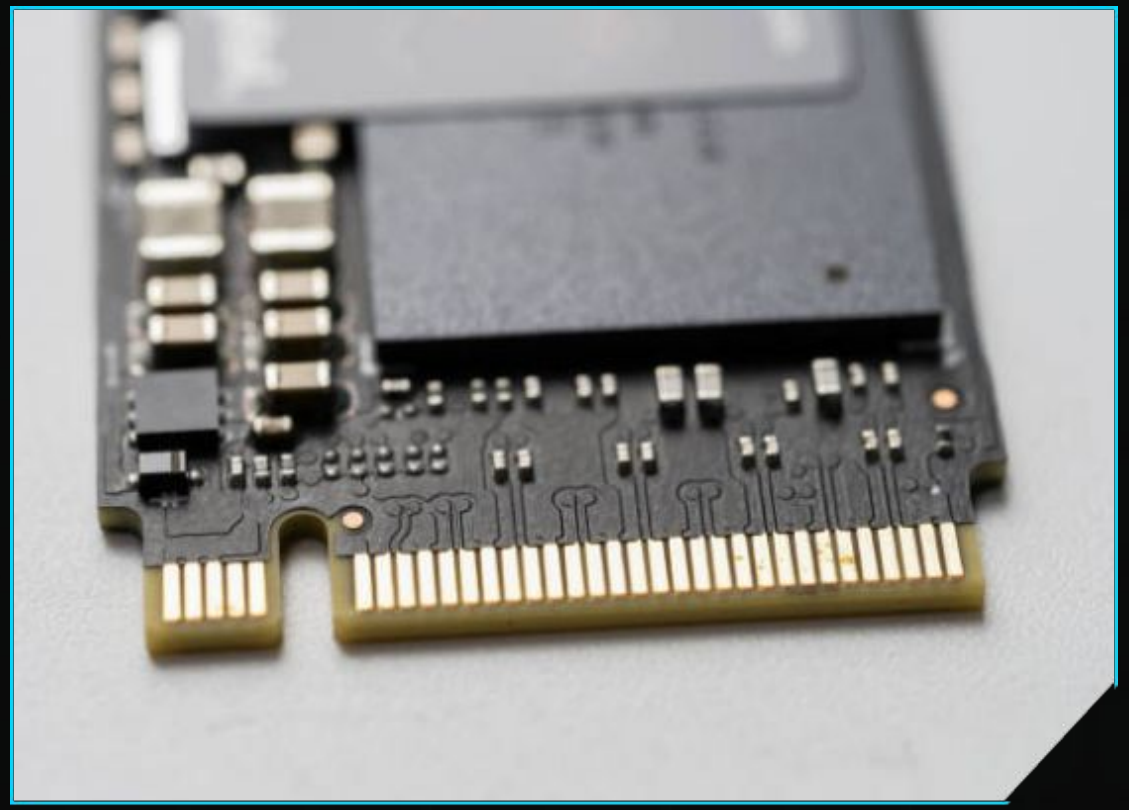
Coding/Dev Sweet Spot: 32GB to 64GB (Crucial for running Virtual Machines & Docker)

VISUAL POWER: GPU

The Graphics Processing Unit renders images. It is the heart of a Gaming PC and crucial for AI/ML Development.

- **For Gaming:** Ensures high FPS (Frames Per Second) and Ray Tracing.
- **For Dev:** CUDA cores speed up machine learning tasks and video rendering.
- **Best Pick:** NVIDIA RTX 40 Series (Best all-rounder). AMD Radeon RX 7000 (Great value for pure gaming).

STORAGE: NVME SSD



FORGET HDDS (HARD DRIVES)

Old "ROM" or Hard Drives are too slow. For a smooth PC, you need an **NVMe M.2 SSD**.

- **Speed:** NVMe SSDs are 30x faster than old HDDs. This means Windows loads in seconds.
- **Game Loading:** Games load instantly, no more long waiting screens.
- **Recommendation:** Get at least 1TB Samsung 980 Pro or WD Black SN850X.

THERMAL MANAGEMENT

Heat is the enemy of performance. If your PC gets too hot, it "throttles" (slows down) to protect itself.

AIR COOLING

Reliable, cheaper, zero leak risk.
Best: Noctua NH-D15

LIQUID (AIO)

Better aesthetics, quiet, handles high heat.
Best: Corsair / NZXT

THE SILENT HEROES

MOTHERBOARD

Connects everything. Don't cheap out here. For High-End chips, get a board with good VRMs (Voltage Regulator Modules) to ensure stable power delivery.

Look for: Z790 (Intel) or X670 (AMD)

PSU (POWER SUPPLY)

The heart that pumps electricity. A bad PSU can fry your smooth PC.

Rule: Always buy Gold or Platinum rated units from reputable brands (Corsair, Seasonic, EVGA).

RECOMMENDED SPECS

Component	For Pure Gaming	For Heavy Coding/Dev
PROCESSOR	AMD Ryzen 7 7800X3D (Best Gaming CPU)	Intel Core i9-14900K (More Cores)
GRAPHICS	NVIDIA RTX 4070 Ti Super	NVIDIA RTX 4080 / 4090 (For AI/ML)
RAM	32GB DDR5 6000MHz	64GB DDR5 5600MHz
STORAGE	2TB NVMe Gen 4 SSD	4TB NVMe Gen 4 (Multiple Drives)

BUILD YOUR DREAM

A smooth PC is a balance of all these components working in harmony.

AMAR SMART INDIA

QUESTIONS?