Multi-Screen Computer Buyers Guide

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CPU / Processors

CPU's or processors are the heart of any computer system, they are the main chips which carry out instructions to make software run.

Processors are inserted into motherboards, these are basically large boards inside your computer which all other components are connected to.

Motherboards are required to be of the same 'architecture' as the CPU and if you were looking to upgrade your CPU then you would most likely also have to change your motherboard at the same time.

How Modern Processors Work

When looking at a particular CPU you will usually see a listed clockspeed, something like 3.8GHz, this is an indication of how fast the processor is. Alongside clockspeed will be something called Cores, these also impact performance levels. Let's learn a bit more about these two items.

Clockspeed

This is essentially how fast the processor can run, 1GHz means that the CPU can complete 1 billion cycles per second, a cycle is basically the term which describes how a CPU executes instructions, so if it can process 1 instruction per cycle then a 4GHz processor can execute 4 billion instructions per second.

The problem with looking just at the clockspeed of a processor is that we don't know how many instructions it can process per cycle and manufacturers like Intel or AMD do not publish this information.

Why does the instructions per cycle (or IPC) matter? Imagine you have two processors, one runs at 3.8Ghz and one runs at 4GHz. On the face of it the 4GHz CPU is faster, but if the 3.8GHz processor has a better IPC then it could easily execute more instructions in a shorter time than the 4GHz CPU.

How do you know which processor is faster then? You need to look at reviews and benchmark tests to gauge performance differences.

At Multiple Monitors we do all these benchmark tests and publish them in full on our separate TraderSpec.com website, they are then converted into star ratings which we display on all of our computer product pages for you.

CPU Cores

The next big consideration when looking at processors are the number of CPU cores it has. Imagine a CPU core as it's own processor, it can execute instructions and the speed is dictated by clockspeed and IPC as already discussed.

CPU / Processors Continued...

So if a processor has four cores then it can process four sets of instructions simultaneously, obviously having more CPU cores can be really beneficial to your computers performance.

The caveat here is that software has to be designed to use multiple CPU cores, and most software will only make use of 1 or 2 cores.

Software that regularly processes a lot of data, things like video rendering, or financial data back testing jobs are usually optimised for multi-core use, we call this multi-threaded software.

If your software isn't multi-threaded though, and most isn't, then it will perform better on a processor with a faster IPC / clockspeed rather than on a CPU which is slower but has more CPU cores.

Windows will distribute workloads across available CPU cores, so even if your software isn't multi-threaded, if you run lots of programs simultaneously then you still may find performance advantages going with more CPU cores.

Yes you can get processors with lots of CPU cores, fast clockspeeds ,and high IPC numbers but these can get very expensive.

Multiple Monitor PCs:

- *The Ultra & Trader PCs uses Intel 14th Generation CPUs*
- *The Extreme & Trader Pro PCs use Intel 14th Gen, Intel Core Ultra 200 Series or AMD Zen 5 CPUs.*

Note: All CPU's can be upgraded on each PC or bundle using the upgrade options.

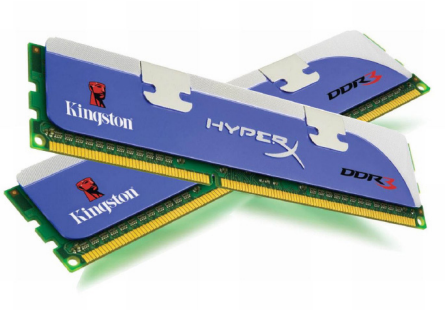
View our PC range online: *www.multiplemonitors.co.uk/computers/*

Further Reading:

You can read more about CPU's on our websites:

- *https://www.multiplemonitors.co.uk/blog/new-intel-amd-cpu-2025/*
- *https://www.multiplemonitors.co.uk/blog/cpu-comparisons-2025/*

RAM / Memory



RAM modules are sticks with chips on them that slot into your motherboard. They generally work in pairs so standard levels of RAM would be 8GB, 16GB or 32GB.

Essentially RAM is ultra high speed storage for a PC, when you open a program such as Google Chrome or Microsoft Word your computer reads the files for the program off the hard drive and transfers them into RAM. As you use the program the files needed are read quickly from the RAM.

If your PC runs out of free RAM it then begins transferring this program data back to the hard drive, this is a much slower process and leads to system slowdowns. Having more RAM available prevents this from happening and improves PC performance.

You can get different speeds of RAM, faster speeds means faster operation however in real world usage this often doesn't make too much of a difference to perceived operation.

There are different types of RAM, DDR5 is the latest version and can be used on some Intel 14th generation motherboards, it is the only option on the newer Intel Core Ultra series motherboards and on the latest AMD systems. Prior to this DDR4 was used pretty much everywhere and is still a good option for some Intel 14th gen. systems if you wish to cut down on costs.

Multiple Monitor PCs:

- *The Ultra PC comes with a 16GB of DDR4 RAM this is upgradable to 32 or 64GB.*
- *The Trader PC comes with 16GB of DDR4 RAM also expandable right up to 64GB.*
- *The Extreme & Trader Pro PC range uses DDR5 RAM and comes with 16GB & 32GB respecitvely, this is upgradable to 32, 64 or a massive 128GB.*

View our PC range online: *www.multiplemonitors.co.uk/computers/*

SSD's / Solid State Drives

An SSD or Solid State Drive is a type of hard drive available to use in PC's and laptops.

Traditional hard drives have magnetic platters inside them to store data on, this data was read by a spindle, kind of like an old style record player.

SSD drives store data on electronic chips rather than magnetic disks, this results in far superior operational speeds as you are not waiting for mechanical components to locate and read data.

The other major benefits are that they are silent in operation and due to the lack of moving parts are deemed far more reliable.

In real world usage a PC with an SSD installed will boot up and launch software much faster, opening your programs feels instant and there is very little time waiting for the PC to do something.

The main drawback of SSD's is the price, although they are coming down they are still far more expensive per Mb of storage than traditional drives.

If you require a large amount of storage space then you can use an SSD for your C drive, this is where Windows and your programs are installed and they get the speed benefit of the SSD. You can then install a second hard drive, this can be a more traditional style drive with a much larger capacity than you could achieve with an SSD.

There are different types and speeds of SSDs, M.2. drives look more like a RAM module than a traditional drive and are typically faster than standard SSDs, we use them regularly now.

Newer and faster drives are being released pretty consistently however over a certain point the speed becomes less impactful to your overall systems performance.

You would hardly notice any 'real-world' difference between a PC fitted with a 2000MB/s speed SSD and one with 7000MB/s because they are both so fast that they don't really ever act as a bottleneck on performance.

Multiple Monitor PCs:

- *The Ultra & Trader PC use fast M.2. 500GB SSD Drives, both can be upgraded to 1TB, 2TB or 4TB capacities.*
- *Our Extreme & Trader Pro PCs now use the very fastest rated 1TB M.2 SSD's with capacities up to 4TB available.*
- *All computers offer the option of a second SSD drive or a traditional stlye storage drive with up to 8TB capacities.*

View our PC range online: *www.multiplemonitors.co.uk/computers/*

Graphics Cards

Graphics cards are components that slot into your motherboard and are responsible for displaying the output on your screen('s).

Although they are physically connected inside your computer, they have an external facing section which has video outputs on it, you then connect up your screen to this to see the output from the PC.

There are 4 main types of monitor connection, VGA, DVI, HDMI & DisplayPort and you need to make sure the video input type on your screen is compatible with the outputs on your cards. Some of the monitor outputs can be converted into other types using adapters, but not all of them.

Gaming & Professional Graphics Cards

As far as the graphics cards themselves go you have two main types, gaming and professional class cards.

Gaming cards are optimised for playing computer games and come with their own on-board processors and RAM which is solely for the video cards use.

Gaming graphics cards tend to be noisy because they require extra cooling fans to stop them overheating, they also usually require bigger power supplies and are physically bigger cards.

A gaming card will only make your PC run faster if you are actually playing games on it, for all non-gaming usage they offer no extra performance advantage despite the sometimes sky-high cost of them.

Professional graphics cards are more aimed at the desktop type of applications and offer good performance on standard Windows applications. Some Pro cards are optimised for CAD and video rendering type work but they can get very expensive.

Multiple Monitor Support

To support more than one monitor you need more than one monitor output.

Most graphics cards come with a couple of monitor outputs on them as standard meaning they will connect up to two separate screens.

To achieve more than this you have a couple of different routes to go down.

You can either have multiple graphics cards installed or you can use one card which has more monitor outputs on it.

Running 2, 3, or 4 Screens

In the past we would have recommended using multiple dual monitor capable graphics cards to run up to 6 monitors but this has changed recently.

Four monitor capable cards are now available at decent pricing and performance levels so we recommend using one of them rather than multiple cards with fewer outputs on them.

Graphics Cards Continued...

Running 6 or More Screens

There are a couple of six monitor capable cards on the market but we don't recommend using them as they are very expensive and performance wise some of them are not great.

You will end up with a faster performing computer at a much lower cost by running two or three graphics cards to achieve higher levels of screen support.

For 5 or 6 monitors we now use a quad monitor capable card, combined with the Intel CPU graphics, for 7 or 8 monitors we use two quad monitor cards, and for up to 12 monitors it would be three quad monitor cards.

When running multiple graphics cards you do have to ensure your computers motherboard can run all the required cards, some motherboards can only run one graphics card. When we build a multi-screen PC we ensure to use the right kit to make sure everything works properly.

Supporting Higher Resolution Screens

The final consideration when looking into graphics is assessing what screen resolutions it can support.

Higher resolution screens are becoming more popular as they can offer more usable space and better image quality if you get the right size and resolution combination.

They can cause a higher strain on the graphics card and some lower end cards simply can't handle them, or may only be able to run one or two of them, despite potentially being a 3 or 4 monitor capable card.

Our range of graphics cards can support resolutions right up to 5K off all the monitor ports on our 4 screen cards, this allows connection of pretty much any monitor type available to buy right now.

AI Workloads

Newer AI software also runs off the graphics card and a more powerful graphics setup will result in faster AI performance levels.

We include TOPS scores for each graphics setup we recommend which show the realtive performance difference between them for AI type workloads.

Multiple Monitor PCs:

- *All our computers now use Intel graphics cards with some higher powered nVidia cards for certain use cases. These cards can run resolutions right up to 5K, and can support any digital video port using the right cable or adapter.*

View our PC range online: *www.multiplemonitors.co.uk/computers/*

Further Reading:

- *https://www.multiplemonitors.co.uk/blog/ai-computer-performance/*
- *https://traderspec.com/what-size-screen-is-the-best-for-trading/*

The Computer Range

Ultra PC Series

The Ultra series of PC's have been designed to offer great performance at an attractive price point.

Featuring fast Intel 14th generation CPUs as standard, you can choose between 4 – 24 core processors, paired with your choice of between 16 – 64GB of DDR4 RAM, meaning that you can really design something that meets your every need with an Ultra PC.

We use a fast M.2. style solid state hard drive and build them up using quality Antec cases and BeQuiet power supplies and cooling systems, no matter what spec you go for our build quality is ultra high.

In terms of monitors all Ultra PCs can now support up to 4 high resolution screens by default, you can change this to 6, 8, or 10 screen compatibility in the options.

Ultra PCs are virtually silent and are the quietest of all spec levels.

The Ultra's should be considered by people who are looking for a multi-screen PC which is good at multi-tasking and offers responsive performance.

View and Buy online:
https://www.multiplemonitors.co.uk/products/ultra-multi-monitor-pc/

Extreme PC Series

The Extreme PC range are at the top of the tree for multi-threaded performance.

Choose from Intel 14th generation, Core Ultra Series or AMD Zen 5 chips which offer lightening fast performance and can excel in more data heavy workloads.

16GB DDR5 RAM is used and is upgradable right up to 128GB for those that need it.

To round out performance we use the faster style M.2. SSD drives with capacities up to 4Tb and speeds of over 7000MB/s available.

Noise levels are low, however the liquid CPU cooler, used on the AMD chips and the Intel i9, has a pump which makes them ever so slightly louder than the Ultras, in intensive workloads fan noise can increase further.

Like the Ultra's a four monitor high resolution card is the default option here with the chance to support right up to 12 monitors if you need it.

For serious multi-taskers, content producers, or anyone looking to do some serious backtesting there is no better option available.

View and Buy online:
https://www.multiplemonitors.co.uk/products/extreme-multi-screen-computer/

The Computer Range

The Trader PC

Many of our customers are Traders so back in 2017 we introduced our first dedicated trading computer, the Trader PC.

The Trader is pre-configured to offer fantastic performance levels for traders using packages like MT4, TradeStation, NinjaTrader and all other web based platforms.

Featuring a fast and highly capable Intel 14th generation i5 CPU with 10 cores, this can handle programs which require both responsive performance and still offer good multi-tasking support. Faster Intel i5, i7 or i9 chips are available options to boost performance levels further.

16GB of fast DDR4, upgradable to 64GB, and fast NVMe M.2 SSDs ensure that this machine is highly responsive.

The default spec allows connection of four digital high res monitors, this can be adjusted to 6, 8, or 10 screen capable.

Since it's introduction the Trader PC has become our best selling computer, it is bought by home traders and professional financial institutions alike.

View and Buy online:
https://www.multiplemonitors.co.uk/products/trader-pc/

The Trader Pro PC

The Trader Pro is your premium trading computer offering unmatched performance in even the most demanding trading sessions.

A premium build based off the fantastic Intel 14th generation i5 14600KF this machine can do it all. This i5 chip is faster for virtually all trading software than all previous generation i5s, i7s, and i9s.

If you do a lot of backtesting or run multiple highly intensive software than the enhanced multi-threaded performance of the i7 / i9 or the latest Intel Core Ultra 200 series CPUs are available options.

32GB of fast DDR5 (upgradable to 128GB!) and the fastest rated M.2 SSDs ensure that this machine is highly responsive.

The default spec allows connection of four digital high res monitors, this can be adjusted to 6, 8, or 12 screen capable.

The Trader Pro sets new standards of what a trading computer can do, power users shouldn't settle for anything less.

View and Buy online:
https://www.multiplemonitors.co.uk/products/trader-pro-pc/

Further Reading

If you are interested in learning more about the latest processors we have some guides available here:

https://www.multiplemonitors.co.uk/blog/do-you-need-the-i7/

https://www.multiplemonitors.co.uk/blog/insist-on-a-new-cpu/

If you are looking for further details on monitor sizes and resolutions our sister website TraderSpec.com has some in-depth guides here:

https://traderspec.com/what-size-screen-is-the-best-for-trading/

https://traderspec.com/ultrawide-monitors/

If you are looking at computers online here are a couple of articles to make you aware of things to watch out for:

https://www.multiplemonitors.co.uk/blog/false-economy/

https://traderspec.com/shady-and-dishonest-tactics-to-avoid-when-buying-a-new-computer/

Get In Touch:

If you would like any advice on computers, monitors, or anything else related just let us know.

You can reach us on **0330 223 66 55** or email enquiries through to us on **sales@multiplemonitors.co.uk**

All of our products are available to purchase directly online here:

https://www.multiplemonitors.co.uk/