



Computers

Hardware Recommendations – Q3 2024

Philosophy behind these recommendations:

These recommendations are designed with the following attributes in mind:

- Stability
- Longevity
- Durability

Why?

The hardware and components JV Computers recommends are designed to compliment each other in order to bring you Stable, Long-lasting, Durable computing performance. A computer is something you and your employees use every day, and for many varied tasks. The recommendations below respect that the stability and performance of your computer is tantamount to the stability and performance of your and your employee's productivity every day.

A common mistake is to seek out the cheapest thing you can find and end up quickly frustrated at poor performance you're stuck with, or having to replace too early. These recommendations are designed to provide the user with a machine that will perform well and last for between 5 and 6 years. Even if you don't purchase through JV Computers, it is recommended that machines are replaced on a rotating, scheduled basis so that no machines in your organization are ever older than this, helping to prevent sudden and unexpected hardware failures / crashes while keeping a manageable and reasonable IT budget.

Any component series or models not listed below are not recommended, but feel free to ask questions about specific use-cases for more information.

Definitions

Minimum: Will yield long-lasting, satisfactory results for most users working with basic functions, such as

internet browsing, e-mail, and word processing.

Better: For users working with higher resource-use applications such as QuickBooks and other

database programs, presentation work, and moderate to heavy multi-tasking

Even Better: For users with heavy multi-tasking, higher resolution content creation, CAD programs, etc.

Desktop / Mini PC and Laptop Workstations

Processors: (in order of performance)

- AMD Ryzen 3000 / 4000 series (preferred)
 - **Minimum:** Ryzen 3 or 3G (G = integrated graphics)
 - **Better:** Ryzen 5 or 5G (G = integrated graphics)
 - **Even Better:** Ryzen 7 and a discrete graphics card
- Intel Core i series 12th, 13th series (Avoid sub-series, such as P or U series processors)
 - **Minimum:** Core i3
 - **Better:** Core i5
 - **Even Better:** Core i7

RAM: DDR 4

- **Minimum:** 8 GB
- **Better:** 16 GB
- **Even Better:** 32 GB

Storage: Solid-State Drive (SSD)

- **Minimum:** 256 GB
- **Better:** 512 GB is *highly recommended* or more, (dependent upon your specific needs).

A minimum 256 GB SSD is recommended as the primary storage device for any desktop / laptop workstation. This is due to the size of Windows Updates which, upon installation, will expand many large temporary files as part of the install and will prevent smaller drives from properly functioning. Legacy, spinning platter storage Hard Disk Drives (HDD), are not recommended for workstation / laptop storage due to lack of speed and durability. SSDs have no moving parts and are nearly 10 times as fast for read/write access compared to HDDs. (HDDs still have their place in redundant array file servers and long-term archival.)

OS: When it comes to the Operating System, Windows 11 Pro is the recommended OS for business machines and is often a requirement of either your existing network (Windows domain Server), or for many industry-specific business software applications. In other situations, Windows 11 Home will work fine, though you will have less control over which operating system optional updates are done and when.

Keyboard & Mouse:

Most people prefer wireless for the convenience. **Lenovo**, **Logitech** and **Microsoft** have been making reliable and ever more power-efficient keyboard and mouse sets for many years. Both brands have reasonably priced products for their respective performance and durability.

Office Productivity Software:

Despite a long-held assumption, a full license for Microsoft Office or other commercially licensed office productivity software has never been included with a computer unless specified in a bundle sale. There are a few different ways to purchase the software you need and several different license configurations to suit your needs. However, there are free alternatives available, as well, such as LibreOffice.

Laptop – specific:

Screen Size and resolution: 15.6" (minimum 1920x1080)

Most users will prefer the standard 15.6" screen size which strikes a good balance between visibility and portability. Alternatively, a 16" 16:10 aspect ratio (WQXGA) is a great choice. It's not too large, while still allowing for a keyboard with regularly sized keys with familiar spacing and a number pad on the side.

However, a note about screen resolution: All manufacturers have varying specifications when it comes to screen resolution. A resolution of no less than 1920 x 1080 is recommended. Lower resolution screens will only appear sharp when set at their native resolution in the operating system which can sometimes make things appear too small to for comfortable viewing. When magnifying things in Windows to 125% or 150%, lower resolution screens will pixelate causing fonts and objects to appear jagged or blurry.

Mouse: Bluetooth

Some users are not comfortable using a touch pad and prefer a mouse, instead. While wireless mice are a dime a dozen, laptops have only a few USB ports to spare and a standard 2.4 GHz wireless mouse will require a USB port to be used for its transmitter. However, most laptops include a built-in Bluetooth receiver, so why not take advantage of it by using a Bluetooth mouse?

Carrying Case:

Don't forget a carrying case. Lenovo and Targus are tried and true brands which have been making high-quality laptop cases in various configurations for many years.

What can JV Computers do to help?

Following the recommendations, you find a well-performing and durable machine to last you the next several years. If you'd prefer, JV Computers can do the research for you and provide you with a recommended purchase for a consultation fee of **\$150**.

What about setup?

JV Computers offers a flat-rate setup fee of **\$600**. This includes:

- Initialization of the new machine, including:
 - Creation of user account and safety administrative user account
 - Join to Windows domain, (if necessary)
 - Download and installation of all currently available Microsoft Windows updates
 - Installation and configuration of Office productivity software
 - Installation of other necessary software and printer drivers
 - Data transfer from old machine (if recoverable, depending on state of old machine's storage)