(Approx. 1427 words)

Windows 11 Compatibility – Things to Know

By Tom Burt, Vice-President, Sun City Summerlin Computer Club
<https://www.scscc.club>

tomburt89134 (at) cox.net

On October 5, 2021, Microsoft officially released its newest Windows operating system, Windows 11. Based on Windows 10, Windows 11 is a free upgrade to existing Windows 10 users. But there's a caveat; Windows 11 has some demanding hardware requirements that many older Windows 10 PCs cannot meet. This month, we'll look at what those requirements are, what options you have if your PC doesn't meet the criteria, and how to manage the timing of your upgrade to Windows 11.

## Windows 11 System Requirements

Here's a link to Microsoft's Windows 11 Minimum System Requirements:
[Windows 11 Specs and System Requirements | Microsoft](https://www.microsoft.com/en-us/windows/windows-11-specifications).

Key among these are TPM (Trusted Platform Module - a special security chip) 2.0, UEFI BIOS, Secure Boot, 4GB of RAM, DirectX 12 video, and a *compatible* 64-bit dual-core CPU. In addition, the main requirements page above contains links to lists of supported AMD and Intel CPUs.

## How Urgent is the Upgrade to Windows 11?

In the first release of Windows 11, the user-visible differences are modest. For details, check out the notes of my recent Windows 11 presentation to our club at:
<https://www.scscc.club/smnr/Windows11EarlyLook.pdf>.

Microsoft will continue to support Windows 10 until October of 2025. So, there's no need to worry about your Windows PC suddenly being an orphan. Further, Microsoft says over 1.3 billion existing Windows 10 devices exist, so I believe it's highly likely that the October 2025 end-of-life date will be extended.

If you buy a new Windows PC, it will have Windows 11 preinstalled or will be able to perform an in-place update to Windows 11, retaining all data, settings, and installed programs. If you bought your current Windows 10 PC within the past three years, it will very like already be compatible with Windows 11. But run the PC Health Check to be sure. In addition, you may have to turn on TPM 2.0 and Secure Boot in the UEFI BIOS.

## My PC *IS* Compatible – How Do I Upgrade?

If your Windows 10 PC is compatible with Windows 11, Windows Update will eventually offer Windows 11 as a feature update to Windows 10. Once it's available, you click "Download and Install" to install it.

If you **don't want to upgrade to Windows 11**, you can ignore the upgrade offer until you're ready.

## My PC *IS NOT* Compatible – Can I Upgrade Anyway?

If you've run Windows Update since October 5, you may have seen a message like the one on the left, indicating your PC doesn't meet all Windows 11 system requirements.

You can download and run the **PC Health Check** tool to learn the details. Click this link to download the
[Windows PC Health Check](https://aka.ms/GetPCHealthCheckApp) installer.

There were originally two problems on my desktop PC: My AMD Ryzen 5 2400G CPU was not supported, and my CPU/motherboard did not support either TPM 2.0 (Intel) or PSP 11.0 (AMD).

Here's a screenshot of the final report from the PC Health Check. I resolved the TPM 2.0 issue by changing a setting in my motherboard's UEFI BIOS to enable a software version of TPM 2.0.

However, my CPU remains incompatible. So, for now, if I stick with "official" ways of updating to Windows 11, my current PC is out of luck.

There are various things you can do to try to make your PC compliant. For example, some registry edits may allow you to bypass Microsoft's official requirements when running the Windows 11 setup.

## Resolving Compatibility Issues

If your PC is incompatible, but you want to upgrade to Windows 11 as soon as you can, and you don't want to plunk for a new PC, you can try to make your current PC compatible. Some compatibility issues may be resolved relatively easily and inexpensively, especially on a desktop PC where you have easy access to the motherboard.

#### Add Memory

Even if your PC has the required 4 GB of RAM, you may want to upgrade it to 8GB for Windows 11. The tricky part is you will have to determine what type and speed of dynamic RAM is currently installed on your PC motherboard and order one or more matching RAM sticks. Unfortunately, if your PC is more than five years old, it may not be easy to find compatible RAM for sale. However, most websites of online PC memory vendors now offer a memory checker that can tell you exactly how much and what type of memory is currently installed.

#### Ensure Your Boot Drive is Larger Than 64 GB

This is almost a given on desktop and laptop PCs unless the boot drive is a small solid-state drive. On some tablets and 2 in 1 PCs, the onboard solid-state drive may be smaller than 64GB. Also, to install Windows 11 as an in-place upgrade over Windows 10, the boot drive will require about 40 GB of free space. This may be a show-stopper.

#### Convert Your Boot Drive's Partition Table from Master Boot Record to GUID Partition Table

For commercial PCs, this is almost certainly already the case. For example, suppose your PC's boot drive is formatted using the older Master Boot Record (MBR) partition table. In that case, it needs to be converted to the GUID Partition Table format before upgrading to Windows 11. This is a precursor to enabling UEFI mode and Secure Boot in the BIOS. Here's a link to an article with the details of how to do this conversion while preserving your programs, data, settings, and operating system:

<https://www.windowscentral.com/how-convert-mbr-disk-gpt-move-bios-uefi-windows-10> .

#### Ensure Your BIOS is UEFI and Enable Secure Boot

For commercially sold PCs, these settings are almost certainly already in place. However, if the PC Health Check cites either of these as issues, you must change the BIOS settings.

In Windows 10, the best way to boot into the BIOS settings is to go to **Settings > Update and Security > Recovery > Advanced startup** and click the **Restart Now** button. This will take you to an options screen that includes an option to boot into the BIOS settings. Select that, and the PC will reboot into the BIOS settings. Each PC maker's BIOS settings interface is slightly different, so look around.

First, make sure your BIOS is in **UEFI mode** (instead of Legacy mode). Then enable Secure Boot. Exit and save your BIOS changes. When the PC has restarted, run the PC Health Check again to see if your PC is now compliant.

#### Check Your UEFI BIOS to Enable TPM 2.0

Follow the directions above to enter your BIOS setup. Next, look for a checkbox or dropdown to enable TPM or a setting for FTPM (firmware TPM). Select the setting to enable TPM and then exit and save the changes if the option is present. After the PC reboots, re-run the PC Health check to see if the TPM requirement is satisfied.

#### Buy a TPM 2.0 Add-on Module

Many motherboards that do not already support TPM 2.0 (Intel) or PSP 11.0 (AMD) have a jack that will accept an add-on plug-in module to implement TPM 2.0. Each motherboard vendor may have its version of the add-on module. Typical pricing is $15 to $20. Order the correct module, plug it into the jack on the motherboard, and reboot. Then, run the PC Health Check again to see if your PC now passes.

## Registry Edits and Other Ways to Bypass Support Checks

#### Microsoft's Official Registry Edit

Microsoft has provided an "official" registry edit that will allow you to install Windows 11 on a PC with an unsupported CPU or with only TPM 1.2. After making the registry edits to your current Windows 10, you will need to run the setup.exe from a downloaded ISO image or flash drive of the Windows 11 setup. Details and examples are provided in the following articles:

<https://www.theverge.com/22715331/how-to-install-windows-11-unsupported-cpu-intel-amd-registry-regedit>

<https://www.tomsguide.com/news/windows-11s-system-requirements-can-be-bypassed-with-this-official-microsoft-workaround>

#### Article on Other Ways to Install Windows 11 on Unsupported Systems

The following article details several registry edits and workarounds to install Windows 11 on unsupported PC hardware configurations.

<https://appuals.com/bypass-windows-11-installation-requirements/>

These may be challenging for non-technical users and may not work if your current PC is more than three years old. However, our Computer Club's Tuesday Repair SIG may be able to help you if you want to try.

## Conclusion

As noted earlier, there's no reason to hurry to upgrade to Windows 11. For most, if your current PC is not compatible, your best bet is to stand pat until you're ready to purchase a new PC and you will get Windows 11 already installed.

