

Mini PC Revolution

May 11, 2016



What is a Mini PC?

Mini PCs are a result of System-on-Chip (SoC) technology. Basically SoC means manufacturers have shrunk down a whole PC motherboard into a tiny silicon chip about the size of a quarter. This has allowed manufactures to produce tiny computers about the size of a cell phone that are full Windows 64 bit computers. Computers up to the 7th generation are not very impressive. They have growing pain problems like Wan-Bluetooth incompatibilities, overheating, poor performance, and poor reliability. The latest generation, 8th, is very impressive and is faster than your typical laptop or desktop in many aspects. We have been testing Mini PCs for some time and are excited to share our experiences.

8th Generation Mini PC Voyo V3 Specs:

Quad 2.4 Ghz CPU	4 GB RAM	120 GB SSD Drive
WLAN/Bluetooth	USB 2.0 and 3.0	HDMI video & Audio
Onboard HD Video	Hardware Video decoding	Draws less than 24 watts of power

Cost: \$350 CDN

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WINDOWS

Most mini PCs come with Windows 8 or Windows 10. Microsoft has created a special version of its operating systems to fit on these PCs. The best part is the cost. Normally a new copy of Windows is about \$120. For the Mini PC it's free! Microsoft did this to compete with the Google Chromebook which also has a free OS. The PCs with Windows 8 are upgradable to Windows 10 through the free upgrade program. Windows only uses about 1 GB of RAM for the OS, so you can use the remaining memory for apps. The 8th generation has 4 GB of RAM, plenty for running a few apps/programs at a time.



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APPS/PROGRAMS

These mini PCs can run all your standard PC programs like QuickBooks, Office, email clients and pretty much anything a normal size computer can do. One of the most popular uses for a Mini PC is a multimedia streaming computer for your TV. Programs like Kodi (a Netflix-type interface) with add-ons like “One Channel” allow you to access thousands of TV programs and Movies quickly and easily. One of the best features is the price, since the software is “open source”, it’s free!

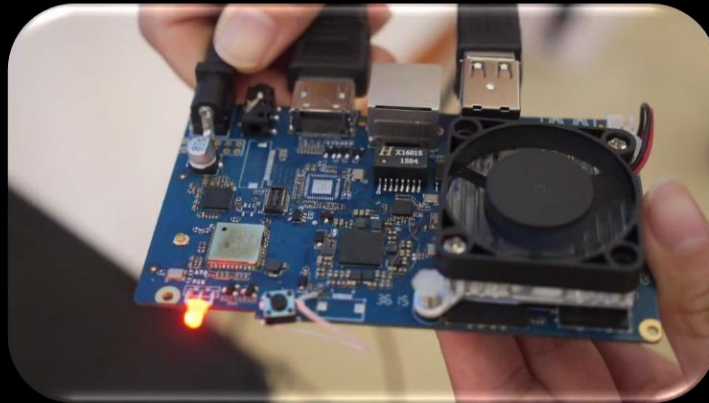


VIDEO

One of the most powerful features of the Intel Mini PCs is the onboard video. It has been optimized for streaming high quality feeds up to 4K! 4k means four times the resolution of 1080P. 1080P is the current standard of HD on most TVs. The onboard chips also feature hardware decoding of most common standards, that means your video will be high quality, fast, and no stuttering. Some common standard codecs are H.264, MPEG, VC and WMV.

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HEATING

One thing to consider when installing or using a Mini PC is heat. Most of these computers do not have fans or heat sinks. When they are idling they run cool. As soon as they start working they will heat up fast. If they are not setup in a place they can cool the Mini PC will overheat and can crash or even suffer heat damage to its components. Make sure air is getting to them or they are sitting on a metal or heat conductive surface to draw the heat away from them. If you make sure they cool well they will be more reliable and have higher performance.



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GAMING

These Mini PCs have very impressive onboard video; however, they are not designed for gaming. They heat up too fast and the video is not as powerful as a standard gaming computer. If you play games, best to stick to a full sized tower with a high end gaming video card or a specially designed gaming laptop instead.

CAN IT REPLACE MY DESKTOP?

If you have an older desktop computer that is over 3 years old, likely the 8th Generation Mini PC will perform faster. The main issue with Mini PCs is space and RAM. The 7th generation and older units come with 2 GB of RAM and 32 GB Hard drives. This is barely enough for anything more than basic internet surfing and email programs. The newer 8th generation units come with 4 GB of RAM and 120 GB SSD drives. These computers are very similar to laptop performance. Make sure if you are going to replace your old desktop computer that you talk to a computer consultant before buying anything to make sure you are ordering something that will work for you and your apps.

We hope you found this edition of The Black Paper to be useful and informative.

Michael Schulz
Owner

Ashley Fulks
IT Technician

Chris Jeberg
Office Manager