

Frequently Asked Questions

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If you haven't already, please watch the Commander X16 project video(s): <https://youtu.be/ayh0qebfD2g>

What CPU/sound/video chip will you be using?

Please see the [Features & Specifications](#) doc.

Why BASIC? Why Commodore BASIC?

This entire computer is meant to be a close relative of the Commodore systems. While technically Commodore BASIC is actually Microsoft BASIC, I want it to be as similar as possible to programming on a VIC-20, C64, or Plus/4.

What about other languages?

There's no reason you couldn't program in C++ or whatever on this computer if somebody wants to port over a compiler. Alternatively, you can use a cross-compiler.

Why PS/2 Keyboard and not USB?

USB is tremendously more difficult to implement than PS/2. A good analogy is like the difference between implementing RS-232 or Ethernet. PS/2 keyboards are still manufactured, easy to find, and inexpensive. And, since the kernel is going to handle keyboard input, there's no reason we can't upgrade to USB later when we have the resources for that and it shouldn't break compatibility.

Why VGA instead of Composite or HDMI?

I would love for it to have composite as a secondary option. But it can't be the only option. I'd prefer something that could handle more than 40 columns clearly. VGA is fairly easy to implement as compared to HDMI. And worst case, there are low-cost chips that can convert VGA to HDMI. And if you have to convert to HDMI, far better to convert from VGA than from composite.

Why don't you shoot for a 100% compatibility with the C64?

There are already plenty of products and emulators that do this. And while it would be nice, it would make this project considerably more complicated, expensive, and most likely would never get finished.

What sort of expansions would be possible?

There will be 4 expansion slots that could be used for just about anything. One drawback of running at 8 Mhz will be that many chips like SID chips will not run that fast, so additional logic would have to be implemented on the card in order to communicate with the chip.

What sort of joysticks will you use?

At the moment, the plan is to go with NES style game controllers. There are numerous reasons for this:

- The controllers, or at least clones are still manufactured.
- They offer more buttons, allowing more complex games.
- They require fewer I/O lines to operate them.
- Joysticks have sort of fallen out of favor and most people these days prefer controllers.

What do you need help with the most?

At the moment we need software development. The emulator is now available and people can start writing their own code.

Will it be sold as a kit or pre-assembled?

Most likely both. The problem with selling it as a kit is that the design team will not have time for being end-user tech support. So, while the kit may end up being cheaper, it will also be sold with zero warranty or support. If people assemble it and it doesn't work, they will have to ask for community support on the facebook group or other forums to figure out what they did wrong.

Will there be a case, keyboard, controllers?

The current plan is to offer a case and separate PS/2 keyboard (and maybe mouse/gamepad) as either a Kickstarter stretch goal or perk option. Initially the prototype case will likely be Micro ATX, but might reduce to Mini ITX. We already have artwork completed and will share when the time is right. The design will be an ideal balance of retro & modern visuals, with equal emphasis on functionality.

Will user guides be included?

In the Kickstarter we hope to offer a traditional spiral bound Getting Started guide, including a BASIC programming guide. The working title is "Just the BASICS: Getting started with the Commander X16". The guide is already being written. PDFs will be an option too.

Why not use the Parallax Propeller chip?

We will not be using the Propeller for these reasons:

- Most of its capabilities are on par with or inferior to our custom FPGA.
- There are issues when putting it on the system bus related to CPU read attempt speed call and answer
- The Propeller costs the same as if not more than the faster FPGA

Please see here for a more detailed answer: <https://www.facebook.com/groups/CommanderX16/permalink/413315816086185/>

Will there be a GUI?

This is not planned to be built-in, although we anticipate the community may produce one. The ideal GUI would use the text character set, rather than graphics - see <http://www.c64os.com/c64os> as a reference.

Will there be an emulator?

Yes, you can download it here along with the source code:

<https://github.com/commanderx16/x16-emulator>

When will the computer be released?

There is no release date set. 'It'll be ready when it's ready' 😊 Once we have a viable prototype, we will announce a Kickstarter campaign.

Will there be a software library webpage?

Yes, this will become part of www.CommanderX16.com

Who is involved at the moment?

At the moment it is somewhat disorganized. And this may change over time as we figure out what aspects people want to do. But the main people on board right now are:

- David Murray aka The 8-Bit Guy - Ringleader and software development
- Kevin Williams - Board Design/Prototyping/Manufacturing
- Christian Simpson aka Perifractic - Visual Design, case, keyboard.
- Michael Steil - Kernel design and Emulator.
- Frank Van de Hoef - Video chip design
- Michael Allison - Assembler environment

