

## [Why Do Screens Need Ugly Borders?](#)

When it comes to modern technology, minimalism is the name of the game. The light weight sleek devices we use today look nothing like the clunky boxes of yesteryear. However, there is still some noticeable limitation in humanity's quest to build the most futuristic looking gadgets possible. **Bezels**, are those bulky frames that surround our screen that companies seem to be tripping over themselves to get rid of it. Not for aesthetic, but to cram as much screen as possible in small packages.

When we're talking about a TV, monitor or a phone, it seems like bezels are still a necessity for the time being.



### [But why?](#)

Let's start with the simplest reason we still have bezels. The edges of modern LED and LCD displays need to be protected because they are made up of multiple layers that need to be sealed up somehow. Think of trying to take a triple decker sandwich home from the deli without wrapping up in plastic. But that's not the end of it. Beyond structural protection and support, it turns out that bezels often house the equipment that drive the display itself. Such as traces and circuits that run up to the screen. If you're talking about a monitors or TVs, these components are often stored in the bottom bezel that's why that particular one is usually quite a bit bigger now. It is certainly possible to put the components behind the display. But this can add a fair amount of thickness which may impact the products appeal to the consumers.

On the contrary, phones have a greater need to be more portable than other everyday electronics. So it makes sense that quite a bit of work has gone into eliminating phone bezels. Also they have the benefit of receiving extra structural support from having the logic board built in. Although profit margins on phone is higher than **TV or laptops** because panels get produced in large batches. It means that you can make many phones from one batch than you can make larger displays. Also phones tend to be relatively expensive for their size meaning that manufacturer can invest more in developing ways to reduce their bezels.

### [What's Next?](#)

In some cases, the driver can actually be folded behind the display. Something that is much more difficult to do in gaming laptops. You see quickly switching pixels on and off to get high refresh rates and

fast pixel response times require a lot of current. This means thicker wires or traces are required to carry it.

Eventually we look to be on a slow march towards gadgets with very minimal bezels even on phones that are all screen. But as for the larger displays, well it's certainly possible to make a very thin bezel out of a transparent display like glass so it's less obvious. But to get a truly bezel less display the most promising technology right now looks like **Micro LED**. It can get away without using bezels. This is because the circuitry that drives the LED is embedded in an extremely thin substrate that forms part of the display itself. So it doesn't need bezels either for structural support or to hold electronic components.