

Fiber Optic Cabling has been around for decades. It is the backbone of our modern connected world. There isn't a phone call we make that doesn't involve a conversion from audio to electrical to light and back again. However, the general sentiment in most technology markets outside of DataComm and Telecommunications is that fiber is some mythical, difficult medium that should be avoided.

The truth is, fiber is easier to work with than you think. In fact, it is easier than ever before thanks to Cleerline SSF™ fiber. We're here now to bust common myths about fiber optics and explain why adopting fiber for use today allows for easier transitions to new technology tomorrow. It simply doesn't have to scare you.

It's a paradigm shift in thought about connectivity. With Category or UTP infrastructure, cable is constantly being reinvented to accommodate the need for more bandwidth. Over the last decade, we have gone through coax, to Cat5e, to Cat6, to Cat6a, to Cat7, and we will see Cat8 soon. In contrast, fiber optic cable has remained relatively constant in terms of its available bandwidth. It has been the hardware on each end that has been enhanced to utilize more of the cable's native bandwidth potential. What do you want to replace in just a few years? The cable in the walls, or the boxes it is connected to?

Has fiber improved? Yes! Mechanically, we at Cleerline Technology Group have made a Stronger, Safer, and Faster-to-terminate fiber optic cable that helps bust all of the fiber optic adoption's mythical hurdles. Let's start with basics:

1. Fiber is difficult to terminate - **BUSTED** - A better way of saying this is: "Fiber was difficult to terminate." Previously, working with fiber there was a lot to worry about: it was fragile; you had to limit the amount of exposed glass during the process; shards of glass were dangerous. Terminating fiber was also a skill that took hours if not days of training and practice. Cleerline SSF has removed every one of these challenges. You can now say terminating fiber with SSF is easier than any Category or coax solution available today. We've even trained Installers over the phone to terminate our fiber to Fiber Optic Association standards. It's just that easy.
2. Fiber is fragile (pull & bend) - **BUSTED** - Fiber is stronger and more durable than you can possibly imagine. 225lbs/102kg short-term load-on pull compared to Category's 25lbs/11.3kg. On bend, the minimum bend radius can be 8mm during pulling vs. 60+mm for Category. Fiber is much more forgiving with SSF than Coax or Category cables.
3. Fiber Termination tools are expensive - **BUSTED** - There are economical solutions available. To terminate fiber you do need tools, and just as with terminating Category the correct tools cost money. With fiber termination today, a onetime investment of \$500 to \$1000 will pay for itself for years to come.
4. All equipment that utilizes fiber is expensive - **DEPENDS** - Are fiber hardware components more expensive than copper equivalents? For the most part, yes they are, but the greater initial output can save you huge amounts of time. We have found equipment solutions in the market that range only 10-20% more in cost. That 10-20% can easily be made up by not having to replace the cable in the walls within the next 5 years to accommodate increasing bandwidth requirements.
5. Fiber infrastructures are totally different than copper - **BUSTED** - The various parts and pieces are pretty similar. Wall plates, in-wall components, wall boxes, patch cables, etc. are all available... Fiber connectivity is a very well developed marketplace, and there are lots of solutions available. The topography or layout is very similar to Category UTP infrastructures.
6. Fiber is not really needed - **DEPENDS** - Can you engineer around fiber today? Yes, you can. Should you? No! The reality is that in order to transmit 4k2k 60hz 4.4.4., a system will require an 18Gbps link. Will there be solutions to accommodate that in the near future over copper? Yes, but they will initially be two Cat6 or 6a cables with distance limitations. Quickly approaching on the horizon is a 40Gbps link, and at that level every system will require Cat7 (not a TIA specification) or Cat8, the next TIA certified cable solution. Using fiber today will prevent hundreds of Category upgrades tomorrow.