Top 10 Reasons to Use Category 6A Cables

Inside buildings and across campuses, network demands and economics are changing. As applications like IoT, 10GBASE-T, multigigabit Wi-Fi 6/6E/7, and PoE++ become more common, infrastructure requirements are getting tougher.

Today's enterprise networks must support:

- Increasing bandwidth and power demands
- Ubiquitous cellular and Wi-Fi, requiring multigigabit backhauls
- Migration to a converged IT/OT network
- More flexible, cost-efficient design and deployment

As a result, enterprise network managers designing greenfield projects are looking beyond Category 6 cabling to Category 6A. With 10 times the bandwidth of Category 6, a much longer lifecycle, and no need to replace the cabling for years to come, Category 6A offers a tremendous upside.

Here are our top 10 reasons to choose Category 6A cabling for your next infrastructure deployment.

#10: Category 6A is recommended for new installations in healthcare facilities.
For over 10 years, TIA has recommended Category 6A as the standard for new installations in healthcare facilities. TIA-1179 is also the first standard to recommend Category 6A for new installations outside the data center.

#9: Category 6A is recommended for new installations in educational facilities.
Due to the bandwidth requirements in teaching our highly technical children, TIA has recommended Category 6A in new education facility buildouts since 2014. The TIA-4966 standard recommends Category 6A for new education facilities based on the need for high-performance infrastructure required for wired and wireless connectivity.

#8: Category 6A supports 10GBASE-T to 100 meters.
Buildings come in all shapes and sizes, and the only reliable means of providing 10G to all relevant end points (up to 100 m) is to use Category 6A cables. The support of 10GBASE-T to 100 m ensures it can handle the fastest Ethernet application on the market to the full channel length specified in the standards.

#7: 10GBASE-T improves price performance and lowers power consumption.
Ten years ago, 10G struggled to adopt initially as the active connections to the passive infrastructure were expensive and power consuming versus other alternatives. Dramatic improvements to 10GBASE-T over the past few years have resulted in significantly lower overall price and power efficiency per gigabit than 1000BASE-T. So much so that the long-term option of potentially ripping and replacing is far more costly than making an initial investment in Category 6A and 10G actives. The power to drive those solutions has also decreased. The old industry saying, "Today's server is tomorrow's desktop," may be applicable to 10GBASE-T.

#6: Category 6A provides enhanced performance for power over Ethernet (PoE) applications.
PoE is a massively important component to every building these days. From remote powering phones, access points, lighting and other key building applications, PoE will continue to be a major driver of 6A infrastructure. At a time when the PoE standards are updated to double the power delivered to devices utilizing all four pairs in the cable, Category 6A offers enhanced thermal dissipation performance over its Category 5e and Category 6 predecessors.

#5: Category 6A supports new in-building wireless systems that rely on 10G technology.
Contrary to popular belief, wireless doesn't work without wires. With the increased use of mobile devices and their massive bandwidth consumption, maximizing the throughput to in-building wireless systems is a necessity. There is no easier way to do this than with Category 6A infrastructure that supports multi-operator and multi-technology coverage and capacity solutions in buildings already in the market.

#4: Category 6A supports Wi-Fi technologies already exceeding 1 Gbps.
Wi-Fi access points also have capabilities well beyond where they did just a few short years ago. Today's 802.11ax access points can have a maximum speed of 6.77 Gbps, which require a 10GBASE-T connection to operate at the highest data rate they are capable of running. With Wi-Fi 6 and 802.11ax driving the way, TIA recommends Category 6A or higher cabling to adequately support the bandwidth requirements of today's access points.

#3: Category 6A is globally available in unshielded and shielded versions.
End users and installers don't have to choose—because Category 6A allows for both. Customers can dictate their needs and wants and Category 6A solves their problems with a best-of-breed option for either.

#2: Category 6A supports the familiar and backwards-compatible RJ45 user interface.
Perhaps taken for granted is the footprint on which our 6A solutions run. The RJ45 has been around for over 30 years, demonstrated the power of standardization, enabled the global growth of Ethernet as we know it, and became a universal interface for a broad range of applications. It's the most tried-and-true footprint in the enterprise market. Add to all of this, forwards and backwards compatibility make it the simplest option for our customers and installers to utilize.

#1: Category 6A offers simple and cost-effective provisioning to support current and emerging applications.
Category 6A offers the most cost-effective and simple provisioning to prepare today's buildings for current and future applications. With 10-gigabit applications starting to emerge, the time is right to consider provisioning the building with the right copper cabling infrastructure based on Category 6A twisted pair connectivity. It is, after all, the lowest cost per transmitted gigabit.

Vextra Category 6A cabling is built to exacting standards, tested extensively for quality, and proudly made in the USA. Our solutions are priced smart so you can design smart—and deploy fast.

In the years ahead, nothing less that Category 6A will do. With Vextra, you'll never have to make that choice.