



# NETWORKING WHITE PAPER: WHY USE SHIELDED CABLES?

## WHY CHOOSE SHIELDED CAT6 CABLES?

Cat6 has slowly been taking over as the dominant Category cable to use in new or refresh cable installs. Cat6 cables are tested to pass a bandwidth of 1Gb and are capable of supporting higher bandwidths when used with certain equipment. Cat6 is the best Category cable to use when trying to “future proof” an install.

While speaking with your customer, there are some qualifying questions to ask when determining the best network cable for their application.

- Are the cables being installed in an area that has a high EMI (Electromagnetic Interference)?
- Will the cables be ran near light fixtures, other cables or power sources?
- Is there a large number of cables (network or other) being ran through the same location?

All of these questions need to be taken into consideration when choosing the correct network cable to install and use in your building.

## DIFFERENCES BETWEEN UTP AND STP CABLES

UTP (Unshielded Twisted Pair) cables do not have any shielding around the pairs or inside the jacket. UTP cables are typically used for connecting directly from the PC to a wall plate.

STP (Shielded Twisted Pair) cables have shielding that surrounds each of the individual pairs, and a second shield around all of the pairs underneath the outer cable jacket. STP cables are typically used when running through high EMI areas, or in walls where they would be close to other objects that may cause interference such as lighting and power, and in situations where minimal signal loss from connections between networked devices is required.

## KEYWORDS TO LISTEN FOR

There are a few different keywords that are very important to listen for when qualifying the type of network cable required by a customer. Anytime they mention a concern about losing signal strength or are concerned with signal quality is a perfect time to explain to them the benefits of using fully shielded cables and infrastructure.

If they mention that the cables are being run in a “crowded area” or in an area that has many other types of cables—such as power cables—this would be a great time to suggest using shielded cables instead of standard UTP cables. Another area of concern is when cables are being run near light fixtures, power sources or industrial equipment. The use of shielded Cat6 cables in these areas protects the network signals and ensures that the Cat6 bandwidth is maintained.

If the current infrastructure (such as the network panels, cables run in-wall, etc.) is fully shielded, suggest the use of shielded Cat6 patch cables all the way to the final point in the run. This ensures that the entire line stays fully shielded and helps to prevent data loss.

