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Frequently Asked Questions: Enhanced CAT6 Capabilities

Do all of Berk-Tek's products have Tek-Twist Technology?

No, only Berk-Tek's LANmark™-1000, LANmark™-2000, and our 10G UTP products are manufactured using Tek-Twist Technology. Several years ago, Berk-Tek recognized that the market was quickly shifting towards IP Convergence. This would mean that the cabling infrastructure would need to support ever increasing amounts of VOICE, DATA, and POWER. Tek-Twist Technology was developed specifically to optimize performance of VOICE, DATA, and POWER using our premium products to support this growing trend. Berk-Tek developed proprietary algorithms (set of instructions) to employ during the cabling operation that continually adjust the twist induced into the cable. The algorithms were developed to achieve optimum performance for VOICE, DATA, and POWER running simultaneously through the cable versus maximizing DATA only performance. Today's IP networks are connecting and powering a growing number of devices. Simultaneous operation of VOICE, DATA, and POWER will become the norm, and the amount of VOICE and DATA traffic will continue to grow, as will the power requirements of attached devices.

PoE uses DC power, and I didn't think that DC power was that noisy?

There are several noise types associated with the generation and supply of DC power. Inferior or aging power supplies may generate noise internally or upon adjacent twisted pair cables. Additionally, sudden changes in current draw such as device startup, servo movement and fan cycling generate electric fields which Tek-Twist Technology helps to isolate, protecting voice and data signals.

How does heat affect the transmission quality of cable?

Increasing heat decreases the transmission capabilities of the cable. As the temperature increases, more power is lost through the cable due to increasing resistance. Berk-Tek developed proprietary insulating material compounds to minimize the effects of heat.

Why does Berk-Tek stress the cable so much? Is that real world?

As a leader in the industry, Berk-Tek owes our customers the very best product possible. If our solutions perform under stress, they will perform even better when not stressed. Additionally, our products are installed all over the world, and because

of this fact, they can be installed in extreme environments. In a commercial office building in Arizona for example, where the summertime temperatures typically reach 110°F (43°C), the temperatures in a typical plenum space with no air conditioning can reach 140°F (60°) or more. Berk-Tek's rigorous testing ensures that your network will continue to work flawlessly when the cabling is exposed to these conditions.

Can I get an ETL third party verification of your test results?

The testing used to redevelop, refine and verify the effectiveness of Tek-Twist Technology is not available anywhere else at the time of this writing. Berk-Tek is again leading the industry and developed this new test to measure how effective our product enhancements have been with delivering VOICE, DATA, and POWER simultaneously in Real World environments. This is similar to a situation several years ago when Berk-Tek developed the six (6) around one (1) bundle testing for Category 6A products. Berk-Tek introduced this testing to the industry as "worst case" testing for Category 6A alien crosstalk testing and over time, the industry adopted this practice as the new standard.

In lieu of 3rd party testing, we invite our customers and those considering investing in Berk-Tek products, to visit our facility and witness the testing first hand. Alternatively, we are happy to arrange calls with our engineers to discuss the testing in greater detail.

I was going to install Cat 5e or maybe a minimally compliant Cat 6 for my business network, why do I need your LANmark-1000 or LANmark-2000?

Do you:

- Expect to be using your current (or soon to be installed) network infrastructure for more than the next five (5) years?
- Plan to connect multiple devices (IP Convergence) to your network like VoIP phones, cameras, and/or various other IP devices?
- Expect to power some or all of these devices using PoE, PoE+ or future PoE technology?

If you answered "yes" to any of the above, then you should strongly consider Berk-Tek's LANmark-1000 or LANmark-2000. Category 5e has been a workhorse since 1999, and has performed well. Category 6 was ratified in 2002, so it is getting older too. However, with ever increasing VOICE, DATA, and POWER being transmitted simultaneously over your network to support emerging applications, you need structured cabling designed and built to accommodate this added stress both now, and well into the future.