EVERYTHING IP

Connect. Control. Converge.

Berk-Tek®

A NEXANS COMPANY

Is your network ready for the future?

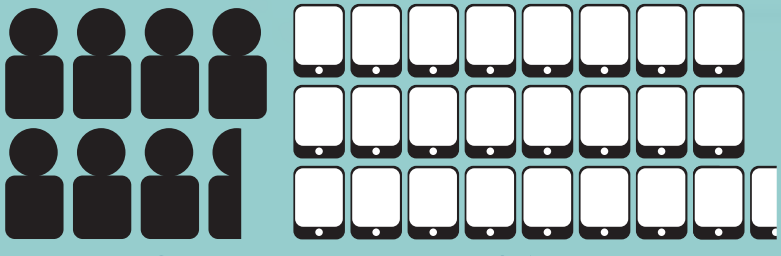
In just a few short years, the connected world will experience explosive growth in bandwidth demand, an evolution in wireless technology, and a threefold increase in the amount of power transmitted through IP networks. Is your infrastructure designed and built with advanced technology that will hold up to these future demands?

By The Year 2019...

EVERY MONTH, mobile data traffic will be equivalent to 6 million DVDs worth of data (24.3 Exabytes). Stacked on top of each other, that would be as tall as

17 Empire State Buildings.

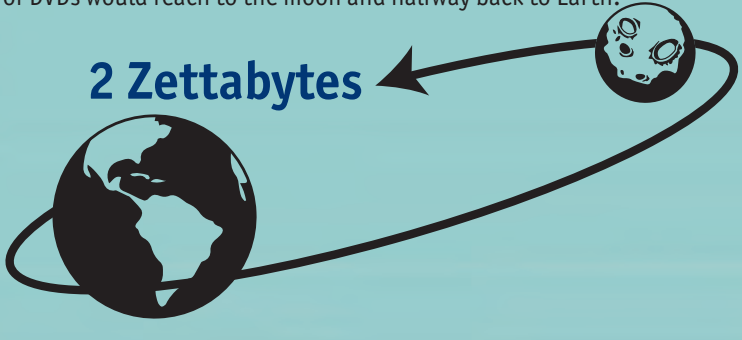
There will be **3.2X** more networked devices than there are people in the world.



7.6 billion

24.5 billion

EACH YEAR, global IP networks will carry **2 Zettabytes** of data. That stack of DVDs would reach to the moon and halfway back to Earth.



If you were to sit down to watch the amount of video that will cross global IP networks in **1 MONTH**, it would take you more than

5 million years.

Source: Cisco Visual Networking Index: Forecast and Methodology, May 2015

Converged Application Score

Berk-Tek recognized early on that the world was moving towards **Everything IP** and that in order to measure our cabling products' performance in real world scenarios, we need to do more than just count decibels. That's why we've developed rigorous applications-based testing that goes far beyond what the rest of our peers are doing.

Our testing has supported the development and investment of many advanced technologies and materials. Examples include:

- Proprietary materials that enable our solutions to protect your IP traffic from heat.
- TEK-Twist Technology which optimizes the cable twist for simultaneous transmission of voice, data, video, and high power PoE.
- Premium jacketing materials which allow us to provide a 75˚C rating on our solutions, well above the 60˚C the rest of the industry provides.

Another important factor in Berk-Tek's testing protocol is the development of a **Converged Application (CA) Score**. The CA Score goes beyond standard decibel-based testing to measure how well our cables perform under the stress of converging applications. The CA Score is calculated using a proprietary algorithm that combines the results of the following tests conducted over a specially designed 100-meter, four-connector channel:

Mean Opinion Score (MOS) – A quality of service metric used to measure VoIP.
Frame Error Rate (FER) – A very rigorous test for IP data applications.
Media Loss Rate (MLR) – A quality of service metric used mainly to measure IP video.
Heat Rise from PoE - A measurement of how efficiently the cabling dissipates heat.

A cable's CA Score is an indicator of how well IP traffic is protected and how much heat rise there is when the cable undergoes PoE testing. The score is represented by a numeric value between 1 and 10, with 1 being the lowest and 10 being the highest.

CA score							
	Score	**< 3.6**	**3.6 - 5.5**	**5.6 - 6.5**	**6.6 - 7.5**	**7.6 - 8.5**	**8.6 +**
	Performance	Unacceptable	Poor	Limited	Good	Better	Best
	Heat Rise	Severe	Significant	Moderate	Moderate	Moderate	Low

Note: Before CA Score testing was performed, all channels were tested with Fluke and passed with margin.

What does the CA Score tell you? A performance rating of "Unacceptable" (less than 3.6) means that there were consistent noticeable flaws (dropped frames, media loss, etc) in the applications tested. As you move towards higher scores, you would notice fewer flaws. PoE testing is also an important factor; cables that experienced less temperature rise achieve higher CA Scores.

TEK Center Certified

Located in New Holland, PA, the TEK Center at Berk-Tek is comprised of several world-class laboratories equipped with state of the art equipment. But our TEK Center's most important differentiator is our people. The TEK Center is staffed with experienced engineers and technicians you can trust. At Berk-Tek, we understand that the network infrastructure decision you make today will have lasting effects for your business years from now. This is why we employ only the best and brightest, and give them one focus – you. The TEK Center is a part of an extensive global R&D network with similar laboratories found throughout Nexans Inc.

This stamp certifies that testing was performed, reviewed, and approved by highly trained, experienced engineers dedicated to studying and developing solutions for future network infrastructures.

LANmark™-6

CA score 6.4

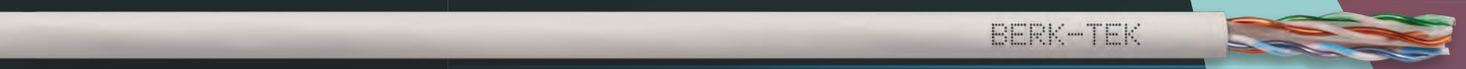
1G

Recommended for short-term installations, basic desktop and phone applications, and a low density of connected devices.

BASIC DESKTOP · BASIC VOIP · BASIC IP CAMERAS · BUILDING AUTOMATION

LANmark™-1000

CA score 7.3



2.5G

A good choice for high bandwidth applications and to support a network with more devices using PoE.

ADVANCED DESKTOP · ADVANCED VOIP · ADVANCED IP CAMERAS · BUILDING AUTOMATION · NURSE CALL · IPTV

LANmark™-2000

CA score 8.0

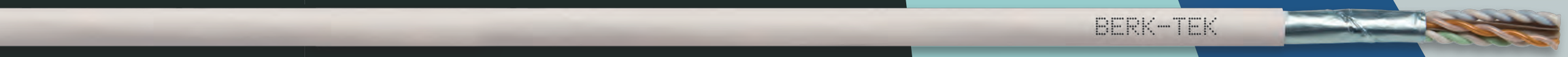
5G

A better choice for high bandwidth applications and to support a network with even more devices using PoE.

ADVANCED DESKTOP · ADVANCED VOIP · ADVANCED IP CAMERAS · BUILDING AUTOMATION · NURSE CALL · IPTV

LANmark™-XTP

CA score 8.6



The best choice for high bandwidth requirements, with excellent PoE performance, and the only choice for HD Video and 802.11ac wireless.

IMAGING APPLICATIONS · IP TURRETS · PREMIUM IP CAMERAS · BUILDING AUTOMATION · NURSE CALL · HD IP VIDEO (HD) · VIDEO CONFERENCING · WIRELESS

10G

0101110011001000001

BANDWIDTH

100W

POWER

802.11ac

WIRELESS