



EVERYTHING **IP**

Connect. Control. Converge.

LIGHT THE WAY

Berk-Tek[®]
A NEXANS COMPANY

The Evolving Enterprise Network

The building backbone needs to support a 10X transition from 1Gbps wall outlets to 10Gbps ceiling drops.

Several years ago, standard practice was to drop four 1-gigabit-per-second (Gbps) network drops to each wall outlet. Back then, wireless was considered a convenience and it was purely an optional overlay.

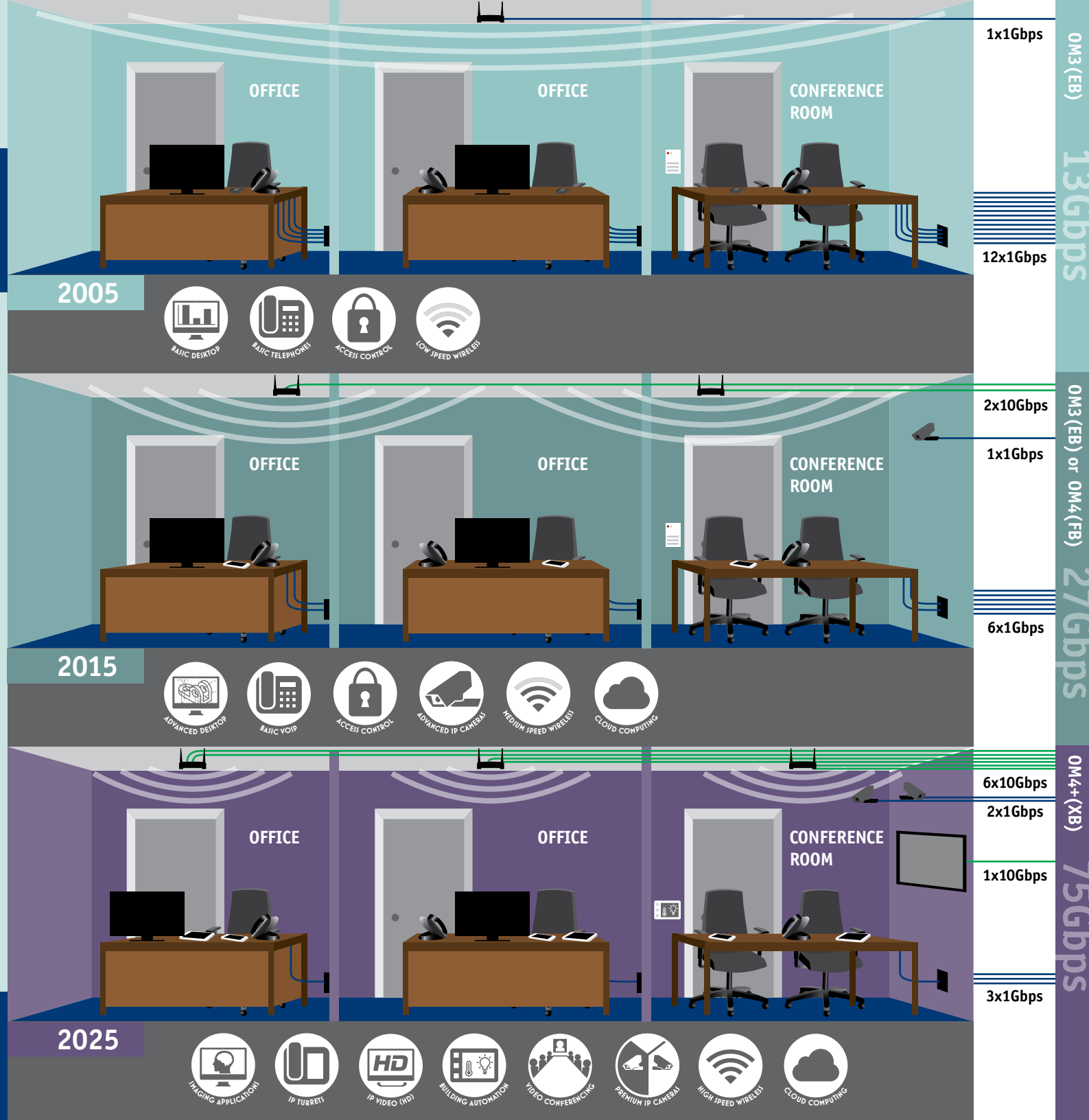
Today, we are witnessing fewer 1Gbps network drops to each wall outlet and many more 10Gbps ceiling drops to support wireless growth. Wireless has evolved from an optional convenience, to an expected service.

Moving forward, the ceiling will become digitized with connected sensors to control building automation systems. Additionally, bandwidth demands will ultimately require Wireless Access Point (WAP) density of one WAP per room. Like any medium (fiber, copper, wireless), there is an inverse relationship between bandwidth and reach. WAPs will need to broadcast using higher frequencies (5GHz and beyond), where it becomes more difficult to penetrate walls, doors, and other barriers.

Graphics are for illustrative purposes only.

There will be nearly a threefold increase in global IP traffic from 2015 to 2020.

Source: Cisco VNI, June 2016.



OM3 (EB Optical Fiber)

Recommended for short-term installations (~5 years) supporting a limited number of 10Gbps network drops and a relatively low density of IP devices.



BERK-TEK

40Gbps 100 meters \$

\$ Relative link cost including

| | | |
|------|----------------|------|
| TxRx | Fiber Assembly | TxRx |
|------|----------------|------|

Assumes 100m @ 40Gbps with Berk-Tek transceivers

OM4 (FB Optical Fiber)

A good choice for longer-term installations (5-10 years) supporting a sizable number of 10Gbps network drops, and a medium density of IP devices.



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40Gbps 150 meters \$ +3%

OM4+ (XB Optical Fiber)

A better choice for long-term installations (10yrs+) supporting a high concentration of 10Gbps network drops and IP devices. *500m with XB Fiber + Enhanced TxRx. 300m without Enhanced TxRx.



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40Gbps 500 meters* \$ +6%

OS2 (Single-Mode)

The ultimate choice for long-term installation (10yrs+) and supporting extremely high bandwidth with reach requirements up to 10,000 meters.



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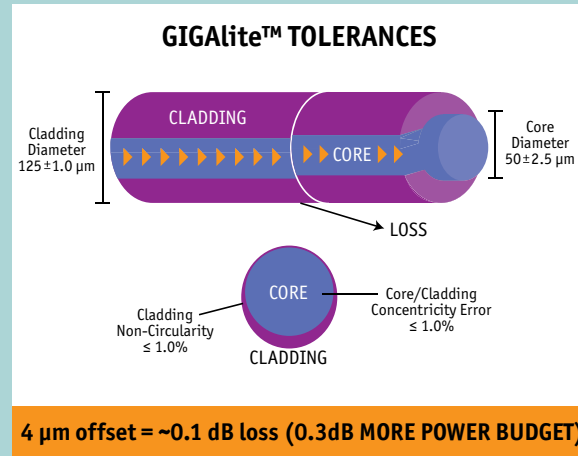
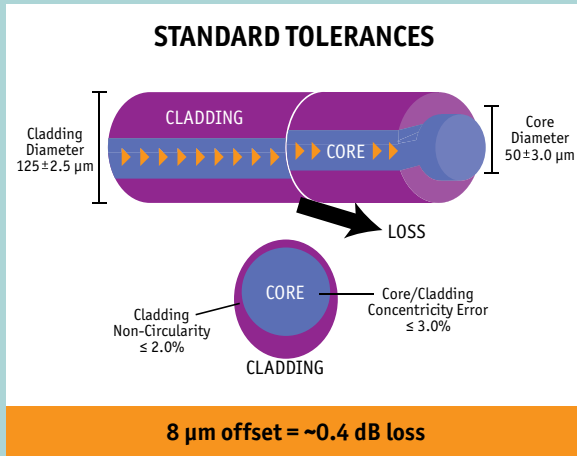
40/100/400Gbps 10,000 meters \$\$\$

BANDWIDTH

REACH

COST

The standards aren't enough, so why be limited by them? Berk-Tek's proprietary GIGAlite glass is uniquely designed with tighter tolerances than the standards. These unique specifications fully optimize the interactions between the transmitter, optical fiber, fiber connectors, and receivers. When further combined with lower cable attenuation, the result is less insertion loss and up to 20% more power budget. Maximize your network infrastructure with a complete Berk-Tek solution.

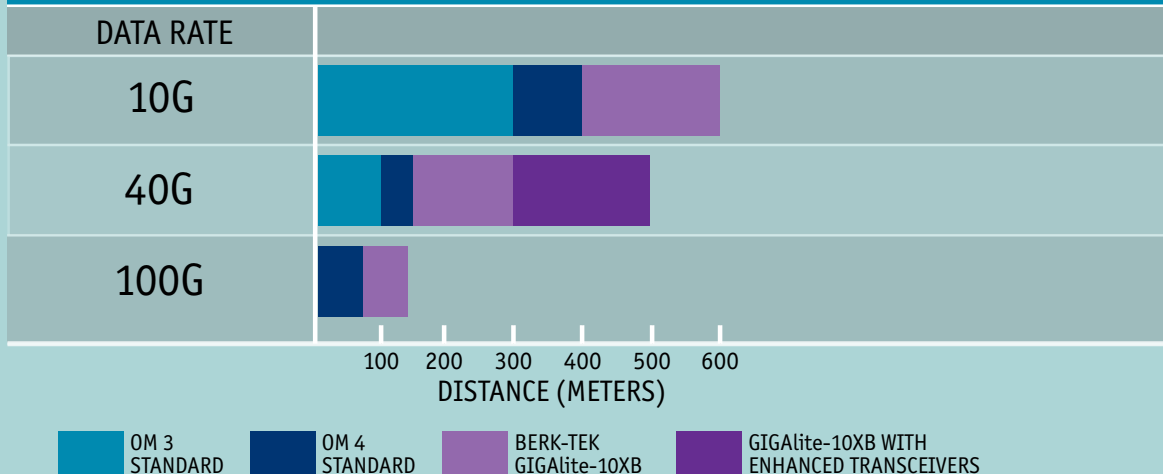


GIGAlite-10XB provides an extra 0.3dB of power budget. That equates to a 20% increase!

But why stop at the glass? For maximum flexibility, add Berk-Tek Transceivers and you get unsurpassed power budget. Berk-Tek Transceivers are specified using a proprietary formula developed over years of research and real world testing.

REDEFINE THE LIMITS

GIGAlite-10XB and Enhanced Transceivers




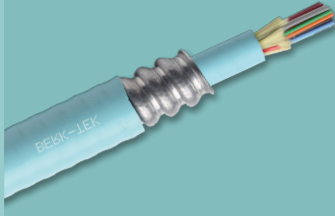
For more information on Berk-Tek Transceivers, visit www.berktektransceivers.com

Simplify with Indoor/Outdoor Cables




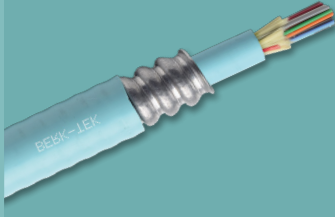
Tight Buffer, Indoor/Outdoor, OFNP or OFCP, Water Blocked, UV Resistant

OM3 (EB)


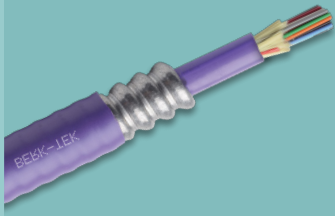
PDP024EB3010/25-I/O-C4(AQU)
PDPK024EB3010/25-I/O-C4C5(AQU)

OM4 (FB)


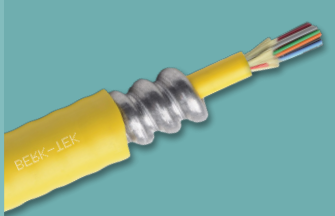
PDP024FB3010/F5-I/O-C4(AQU)
PDPK024FB3010/F5-I/O-C4C5(AQU)

OM4+ (XB)

PDP024XB3010/X5-I/O-C4(VIO)
PDPK024XB3010/X5-I/O-C4C5(VIO)

OS2 (SM)

PDP024AB0707-I/O(YEL)
PDPK024AB0707-I/O-C4C5(YEL)

The Evolving Campus Network

The campus backbone needs to support 10X bandwidth from building-to-building and building-to-cloud.

The backbone connecting buildings to other buildings and to the cloud will need to support growing bandwidth demand. In order to take full advantage of cloud computing, there are three basic necessities:

1. High Bandwidth
2. Low Cable Attenuation
3. Total Reliability

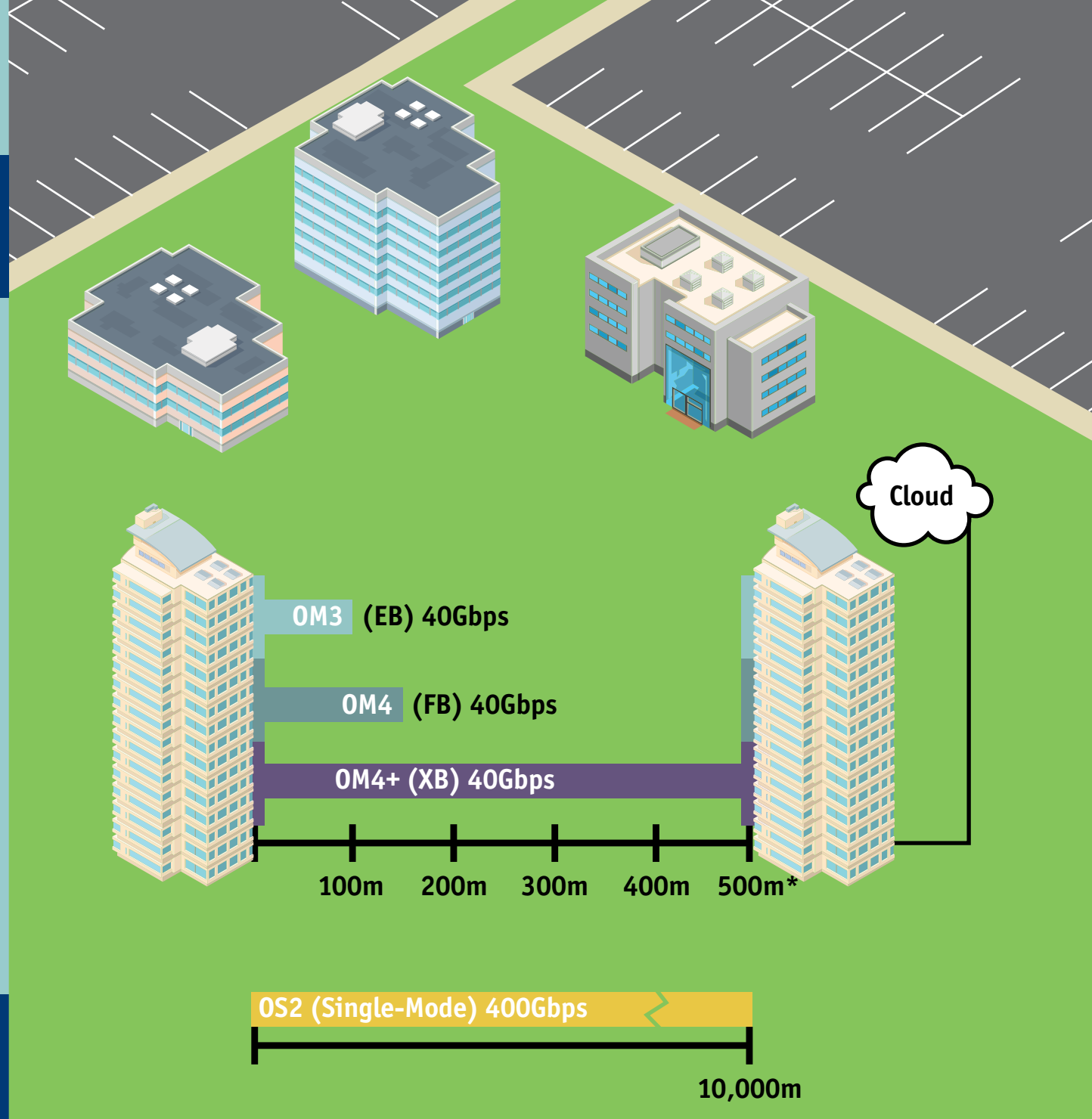
Several companies can provide you with a reliable fiber solution, but the difference is really in the bandwidth. Higher bandwidth means less power budget and that means:

1. Less Reach
2. Fewer Connection Points

This is where Berk-Tek steps in. Our OM4+ GIGALite-10XB solution solves the problem associated with moving to 40Gbps with a reach of 300m (covers 80% of intrabuilding backbones). Berk-Tek also offers an enhanced transceiver solution that provides up to 500m at 40Gbps (covers 80% of all building-to-building backbones) when used with GIGALite-10XB.

In the near future, the current network environment will need a massive overhaul because of all the connected devices and resulting data that needs to be processed.

Source: Intel President, Client and IOT Business and Systems Architecture Group Venkata Renduchintala at Intel's Developers Forum; August 17, 2016



*With Berk-Tek enhanced transceivers. For more information and to access Berk-Tek's easy-to-use Own the Link Cost Savings Calculator, visit www.berktektransceivers.com

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