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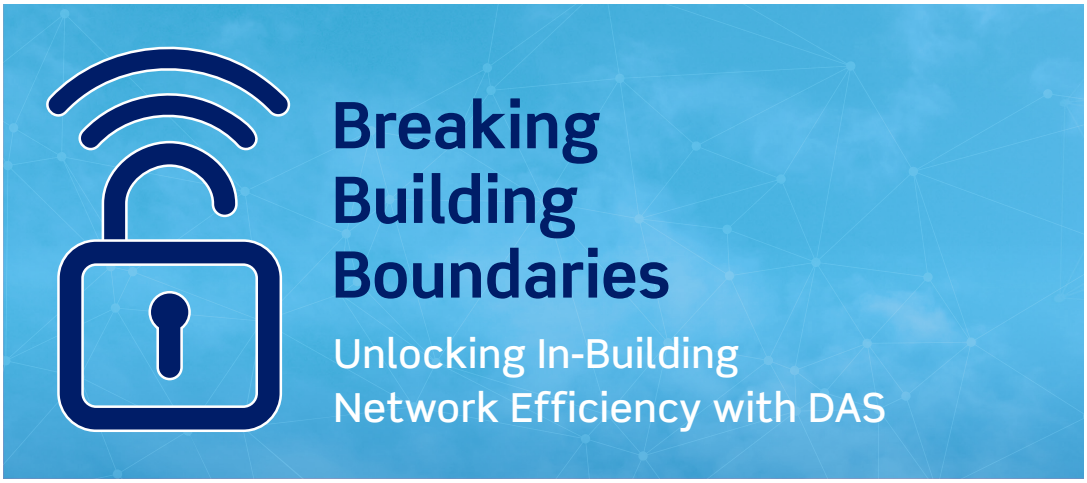

Breaking Building Boundaries

Unlocking In-Building Network Efficiency with DAS

Mike Connaughton

Wi-Fi and Ethernet networks have long provided critical connectivity for enterprises and commercial spaces, while reliable cellular service in commercial spaces was seen as only a convenience for these settings. However, advances in cellular capability have created an entirely new landscape of services that are ingrained into everyday life, making cellular service a business requirement.

With the growth of IoT devices and smart vehicles, the cellular network is emerging as critical infrastructure for live feedback on integral business functions, from smart factory floors that are equipped with real-time data and predictive maintenance, to health care settings with remote patient monitoring.

Even though the technological landscape of the workplace is changing, many of the buildings in which this work takes place are ill-equipped for cellular reliability.

Distributed Antenna Systems (DAS) are a means to bring reliable cellular connectivity into buildings. There are many types of DAS, and our recent white paper primarily focuses on indoor DAS and the network infrastructure required to support it. Some indoor DAS installations provide better coverage, others also add capacity, but at its core a DAS captures outdoor signals and brings them inside for devices to connect. Importantly though, for building owners, tenants, and network users, DAS may complicate networks as they coexist with pre-existing Wi-Fi networks. In this new normal it is vital to streamline network architectures in buildings for network manageability and security.

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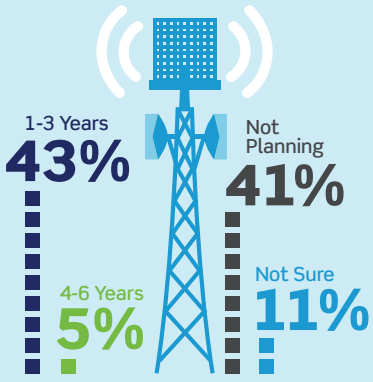
IN THIS ISSUE

LEVITON POLL

When do you plan to install an in-building wireless system to support 5G connectivity?



From a Sept 2023 survey of 233 network professionals.

UPCOMING EVENTS

BICSI Winter Conference
January 28 - February 1, 2024
Orlando, FL

CISCO Live! EMEA
February 5-9, 2024
Amsterdam

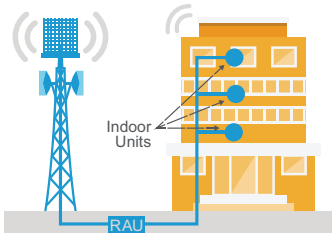
Breaking Building Boundaries With DAS

continued from pg. 1

Distributed Antenna Systems

As a form of cellular technology, DAS was originally developed in the telecommunications arena to allow untethered access to the telecom network. Car phones were the first popular implementation of untethered telecoms access, but it quickly evolved into handheld phones and other portable devices. A few of the key advantages of cellular technology are low latency, secure connections, and maintaining connection while in motion.

As stated, a DAS extends the features of cellular technology into the premises where various elements can cause poor signal quality, especially building materials like steel, concrete, and high-efficiency glass which significantly attenuate cellular signals. Depending on the user density and the number of carriers (or frequency bands), the design of the DAS is highly versatile in its applications. DAS implementations vary in their technology and topology, depending on the user, data volume, and venue. For example, large structures can have either very high densities of people as in a larger stadium, or lower densities of people as in a retail store. There are also situations where a high number of users would only need access to a single carrier as in an office building, versus the need for many carriers as in an airport



Indoor Small Cell /DAS

Leviton can support DAS installations and bring your business the connectivity it needs. Looking to learn more about how DAS and Wi-Fi systems will coexist in buildings? **Check out our on-demand webinar!**

Webinar Roundup: 2023

This year we've covered many topics in our webinars. Here's a collection of what's available for you as you research what's new in networking. All on-demand webinars are worth one (1) BICSI Continuing Education Credit.

COPPER CABLING Moving Beyond the 100m Standard: Network Design as Links get Longer

The 100-meter distance limitation for copper cabling channels has long been the industry standard for network designers, installers, and managers to get the most reliable and consistent performance out of their networks. However, as smart building device deployments and PoE applications push network devices farther away from telecommunications rooms, the 100-meter limit is being challenged in enterprise and industrial environments.

5G AND DAS Bridging the Gap: Enabling 5G in the Wireless Future

As networks are being built all around the world, 5G is becoming a necessity to keep businesses running. 5G already provides many consumers with fast and reliable connections in our everyday lives, keeping our shopping apps up to date in a grocery store or providing us timely updates in an airport, however for many industries and enterprises there are still gaps in connectivity. Learn how properly equipped enterprises with DAS systems can enable 5G applications so your business can stay competitive today and tomorrow.

EDGE DATA CENTERS Honing the Edge: Understanding Edge Data Center Applications

For many emerging technologies like autonomous vehicles and smart devices, data is needed fast—so fast that centralized data-processing warehouses can't adequately capture, process, and analyze the data fast enough. Edge data centers provide data storage at intermediate points in the network, allowing for faster data access. However, edge data center applications are not universal, and require the right network design to simplify installations, ensure scalability, and ease technology migration. In this webinar, we cover types of edge data center applications, simple and scalable network design, and how to add security and reduce risk.

US & CANADA PRODUCT SPOTLIGHT

Simplify Your Fiber System With Indoor/Outdoor Tight Buffer Plenum Cable

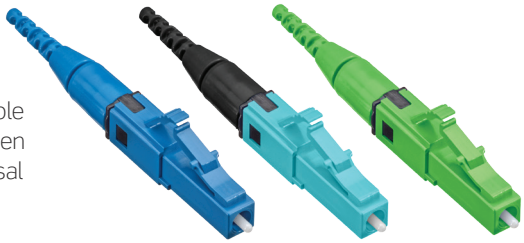
For US customers, request Quick Ship and your order up to 10,000' and 5 cuts ships within one business day!

One cable construction can replace cabling in plenum, riser, indoor, outdoor, and interbuilding backbone connections, reducing inventory, scrap, and material handling by 75%. Looking for the right I/O fiber optic cable? **Check out this guide.**

Fusion Splicing Made Easy with FASTSPLICE™

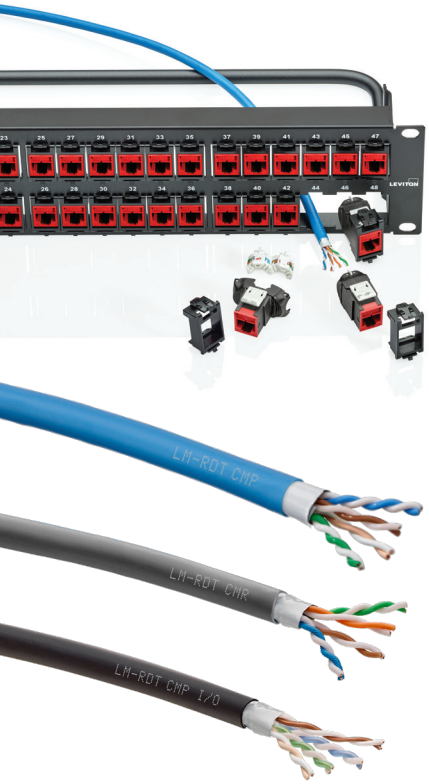
Leviton offers a wide range of **fusion splicing solutions**, including splice modules, splice trays, fiber pigtails, and now FASTSPLICE 900 µm Splice-On Connectors.

Unlike some competitive fiber fusion splice solutions that lock you into proprietary splicers, FASTSPLICE connectors are compatible with most popular fusion splicers when terminated using FASTSPLICE Universal Ferrule Holders.



GLOBAL PRODUCT SPOTLIGHT

2023 Cabling Installation & Maintenance Innovators Awards



The 2023 Cabling Installation & Maintenance Innovators Awards recognized two of Leviton's products as among the best in the Information and Communications Technology (ICT) industry!

PLATINUM HONOREE

Front-Loading QUICKPORT™ UTP Patch Panel

This panel offers a global solution for dense racks and cabinets with an easy and efficient way to add network connections without network downtime.

GOLD HONOREE

LM-RDT UTP Cables

These cables are the smallest Cat 6A cables in the industry, able to be used in all enterprise environments, including plenum (CMP), riser (CMR), and indoor/outdoor (I/O) applications.

CABLING INNOVATORS AWARDS

Learn more about these and other award-winning innovations at **Leviton.com/NS/Awards**.

NEWS YOU CAN USE

COMPANY

Inaugural Sustainability Report

Leviton released its first Sustainability Report highlighting progress through fiscal year 2022 toward the company's goal of achieving Carbon Neutrality by 2030. This goal serves as the central focus of Leviton's unified sustainability program, developed in 2022 and termed CN2030.

CN2030

Carbon Neutral by 2030

Ross Goldman, Leviton's Chief Sustainability Officer, Executive Vice President and General Manager of Leviton Network Solutions said, **"We place great importance on not only lessening our own environmental impact but also empowering our customers to do the same**. Our report elaborates on the significant potential of our lighting controls, sensor technologies, and top tier LED lighting brands in facilitating considerable carbon reductions and energy savings for our valued customers."

Check out the **2022 Sustainability Report**.

YESTERDAY'S NEWS

1983—The Internet's Birthday. 40 years ago, a new communications protocol was established called Transfer Control Protocol/Internetwork Protocol (TCP/IP) which allowed different types of computers to communicate with one another.

TECH TIPS

How to Make the Most of Cat 6A

Cat 6A's amazing performance benefits have made it a compelling technology for users, and 6A installations are only becoming more common, but what's so different about Cat 6A installations?

In terms of running Cat 6A cable, make your projects easier by understanding the following tips to streamline installation:

1

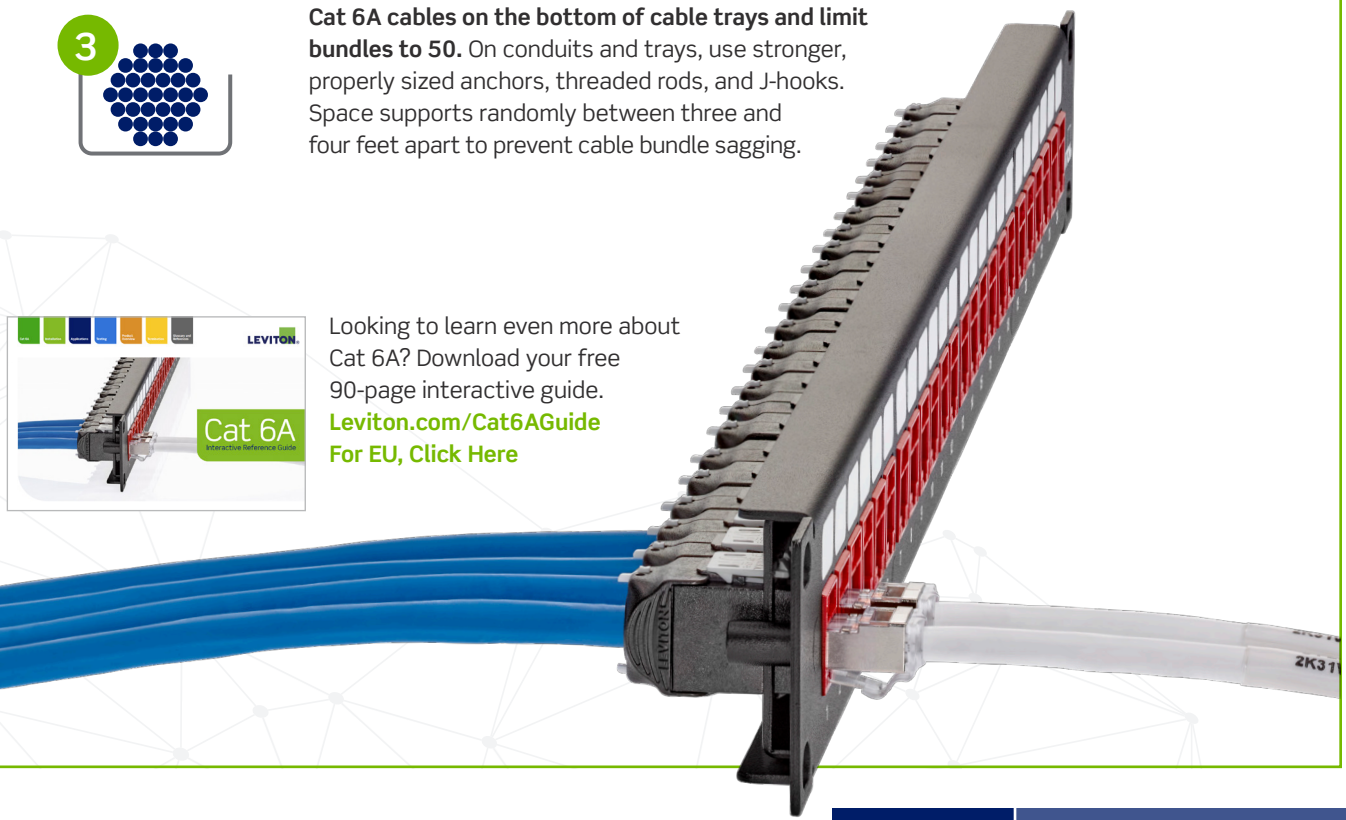
Originally, Cat 6A cables were much larger and heavier than Cat 6 cables, so Cat 6A traditionally came on large reels. However, recent innovations in cable construction methods have greatly reduced the size and weight of Cat 6A cables. New, smaller Cat 6A cables may come in either pull boxes or on reels. **For a quick start on your job, know how your product is packaged and have the proper cable pulling setup in place.**

2

Some Cat 6A products are still larger than their Cat 6 equivalents and may require larger trays and conduits in the cabling pathways. **Know the size and weight of your intended cabling to be sure that your cabling pathways are adequately designed to support the size and weight of the cables.**

3

Prevent crushing lighter weight cables by positioning Cat 6A cables on the bottom of cable trays and limit bundles to 50. On conduits and trays, use stronger, properly sized anchors, threaded rods, and J-hooks. Space supports randomly between three and four feet apart to prevent cable bundle sagging.



Looking to learn even more about Cat 6A? Download your free 90-page interactive guide.
Leviton.com/Cat6AGuide
For EU, Click Here

Questions? Comments? Ideas?

We want to hear from you!
Email: crosstalk@leviton.com