CrossTalk

Your Source for Industry News & Insight

Green Practices
to look for from a Cabling Manufacturer

When evaluating network infrastructure products and partners, IT and facility managers are **increasingly prioritizing sustainability** in their selection process. This priority is gaining impetus in Europe, with the EU and UK striving for net-zero greenhouse gas emissions by 2050. Companies are increasingly asking about manufacturers' green practices and giving those initiatives greater weight when choosing network infrastructure.

When selecting a cabling system provider, it's important to consider manufacturers who take a holistic approach to reducing their carbon footprint. That means they go beyond simply using more sustainable materials here and there — they consider sustainability throughout the product lifecycle, in design, manufacture, delivery, use and disposal.

CLUE IN TO 2022:
Insights
for the Year to Come

To start off the new year, we talked to Brett Hanson, RCDD, for his outlook on the state of the ICT industry. Brett is the Director of Technical Sales for Leviton Network Solutions and oversees Leviton's team of U.S. specification engineers — industry experts who help customers through the network specification process, from initial design to move in.

IN THIS **ISSUE**

LEVITON **POLL**

For 40, 100, 200, or 400 Gb/s deployments in an existing network, what would be your structured cabling choice?

Multimode   Single-Mode

10%	24%	45%	21%
Install New MM	Use Exsting OM3 or OM4	Install New SM	Use Existing SM
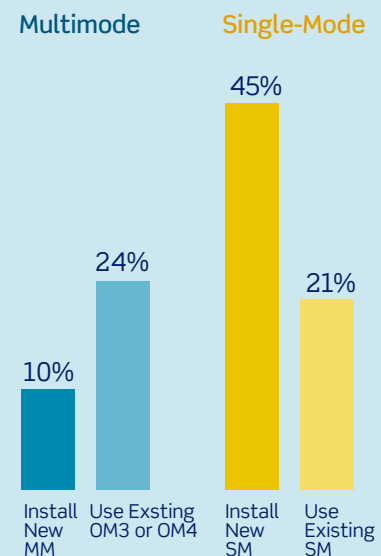
From a November 2021 poll of 125 data center network professionals.

Green Practices to Look for from a Cabling Manufacturer

Below are some key areas to consider when evaluating a more sustainable approach to network cabling systems.

Ask about certification and regulatory compliance

Certification and adherence to environmental standards provides assurance of an organization's commitment to maintaining sustainable practices. These may include certification in ISO 14001 Environmental Management and ISO 50001 Energy Management Systems, assuring focus on monitoring and measuring continual improvements in environmental performance and energy efficiencies.

In addition to the standards above, Leviton maintains carbon neutral certification for its European manufacturing facility through the British Standards Institution (PAS 2060) or the Carbon Neutral Protocol. This certification confirms that companies are taking the extra step to address climate change through lowering their own carbon footprint, while balancing any remaining carbon emissions through supporting other carbon reduction projects.

Choose cabling providers that integrate green practices into their manufacturing

Cabling manufacturers can reprocess and re-use materials in the factory, and work with re-use partners who will purchase others, such as short lengths of aramid, plastic purge waste, aluminium and other scrap metal.

Cabling manufacturer should address water and chemical management in factories. This may include onsite treatment systems that thoroughly clean manufacturing water before release, and having stormwater pollution prevention checks performed regularly. And of course, manufacturers should ensure careful containment and disposal of all chemicals.

Does the cabling provider seek greater energy efficiencies in its facilities? For example, Leviton uses LED lights and automated sensors instead of fluorescent lights. Even better our light panel replacement program to utilise natural light can reduce energy consumption by up to 55%. Additional energy reduction efforts include smart air compressor systems, improved heating management systems, smart building technologies and ongoing equipment energy monitoring.

Also, manufacturers should work to integrate sustainability into research and development efforts, using computer modeling, analysis, and prototyping prior to physical modeling, greatly reducing the amount of material waste. At Leviton, our prototypes are verified through several layers of quality control before they can continue to each next step, ensuring that incorrect iterations are revised prior to committing large amounts of raw materials.

Look for Innovative Products and Packaging

Manufacturers should be able to tell you about ways that their cabling systems and packaging can reduce material use.

- Ask about eco-friendly materials. How much of the product packaging comes from recycled materials? Are cable reels made from FSC-sourced plywood or timber?

- Leviton offers smaller cabling solutions and higher-density systems that reduce the amount of materials used and conserve space. A smaller diameter cable or patch cord can be particularly helpful in data centers, as it can improve airflow in racks and cabinets for better cooling and less energy consumption. Reduced cable size is also important in existing pathways where additional channels are added and space can become an issue — smaller cables may avoid the need for additional cable trays and associated mounting materials.

- Choosing high density, higher-count fiber cabling in data centers can offer even greater advantages. Array cables with 12- or 24-fiber MPO / MTP® connectors potentially reduce the amount of cable jacketing materials by employing fewer cables, fewer breakout pigtails, and less bundling material.

- Leviton pre-terminated fiber and copper trunk cables create very little product packaging or termination waste at the jobsite. Since they are factory terminated, waste is easily contained and recycled, and there is no termination scrap material created at the jobsite.

- Shutters on components like fiber cassettes, adapter plates and copper jacks eliminate the need for dust plugs or caps that are typically thrown away at the jobsite.

- Products shipped in bulk packs can eliminate thousands of single-use bags on a project jobsite.

Green Practices to Look for from a Cabling Manufacturer

Consider Transportation and Shipping Methods

Sustainability efforts should include more than just manufacturing practices and innovative products. Transportation and shipping should also be taken into consideration.

For example, cabling manufacturers who increase packing density can reduce the number of pallets, and in-turn reduce the number of trucks needed for transportation, while combined shipments and pallet sharing can reduce the number of roadway and air freight shipments that leave the factory. For example, when Leviton Network Solutions Europe revised its packing method for optical cable, it halved the number of containers required and reduced shipping-related emissions by 50%.

Similarly, smart cabling system providers will evaluate and optimize their supply chain network throughout all product development projects to ensure the most energy efficient transportation model globally.

Most importantly, you should know where the products you install have come from. Are you buying directly from a local manufacturer who makes their own cable and connectivity? Or are you buying from a manufacturer who has outsourced the manufacture of their products and is potentially adding thousand of transport miles, and the associated carbon to the footprint of their products? Leviton manufactures its cable in the UK for the European market, and in the US for the US market.

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Choose a Trusted Advisor

With the right solutions and designs, you can significantly extend the lifecycle of your structured cabling system and create a more environmentally responsible network. Remember, you don't have to do it alone. Leviton network experts can help with more efficient infrastructure designs. Take advantage of consultants, specification engineers, or our data center infrastructure experts who can find ways to meet your environmental objectives.

Learn more about **Leviton's sustainable network infrastructure.**

NEWS YOU CAN USE

EVENT

UPCOMING WEBINAR

Rising Star: Wi-Fi 6E Gives Enterprise Networks a Jump on the Future

Wi-Fi 6E
RISING STAR
Wi-Fi 6E Gives Enterprise Networks a Jump on the Future

TUESDAY
APRIL 5
4:00 - 5:00 p.m. GMT

COMPANY

IN DECEMBER 2021, Daryoush Larizadeh was appointed Chief Executive Officer of Leviton. A 20-year veteran at Levtion, Larizadeh had been President and COO of Leviton for the past six years, overseeing Leviton's continued growth and building on the company's successful history and culture of innovation. He is only the fourth person to hold the CEO position in 115 years since the company's inception in 1906. He assumes the role of CEO from Don Hendler, who now has the role of Chairman of the Board for Leviton.

PRODUCT

WE'VE INTRODUCED a new **Low-Profile QuickPort Zone Enclosure**, designed to be a versatile consolidation point for enterprise networks. This space-saving zero-U solution mounts to walls or ceilings and is stackable to support network growth.

YESTERDAY'S NEWS

1977 – 45 years ago, ARCnet, the world's first commercially available LAN, went live at Chase Manhattan Bank in Manhattan. It supported data rates of 2.5 Mbps and connected to 255 computers.

Clue in to 2022: Insights for the Year to Come

Over the past two years, many of our "trends" conversations have been shaped by the global pandemic. What are you and your team seeing? Are things getting back to normal?

The pandemic is still ever-present and disruptive, putting many businesses in a state of flux. As more companies allow employees to work from home permanently or on a hybrid schedule, some office buildings will remain empty and leases will not be renewed. We are seeing some companies transition from larger facilities to smaller facilities or expand to satellite offices. Smaller office spaces will continue to be sought after in the future. And of course, supply chain issues continue to disrupt many project schedules.

While data center construction slowed in 2020 due to the pandemic, the last year saw robust expansion. We can expect more growth and network upgrades in the coming year, with demand from 5G rollouts, cloud services, and expansion of edge data computing leading to more frequent data center tech refreshes.

What notable trends are you seeing with enterprise network projects?

In new enterprise network installations, we see more facilities moving to Category 6A systems to address higher PoE and new wireless applications like Wi-Fi 6 (802.11ax). Also, larger enterprise network managers have been more likely to consider Cat 6A for enterprise campus builds due to lighter and smaller diameter cabling available on the market.

At the same time, building owners and facility managers are increasingly interested in ways to integrate smart building technologies. They are connecting more utility applications to their networks, incorporating things like HVAC, lighting, security systems, and energy management systems into the LAN.

How about in data centers? What kind of larger changes do you see happening with data center network infrastructure?

More data centers are moving to 100 Gb/s speeds for switches, and some of the big cloud service providers are even installing 100 Gb/s at servers. 100 Gb/s will soon surpass 10 Gb/s as the most widely deployed optical Ethernet connection speed, and it will remain the most popular transceiver speed in the foreseeable future.

There are now so many types of 100 Gb/s transceivers available: nearly 15 options and growing. 100G-SR10, 100G-SR4, 100G-LRL4, and 100G-LR4 are the IEEE compliant options; the rest are all defined by multi-service agreements (MSAs). Several were just introduced to the market in 2021 — 100G-SR-BD, 100G-FR, and 100G-DR — providing breakout options to 400 Gb/s for applications both in the server and the switch.

These transceiver choices will drive the network infrastructure design in a data center, but with so many options this can seem overwhelming. That's where we come in. Leviton understands the transceiver trends and next-generation standards in development, and we have tools to help confirm channel performance for those systems that might operate outside of industry standards.
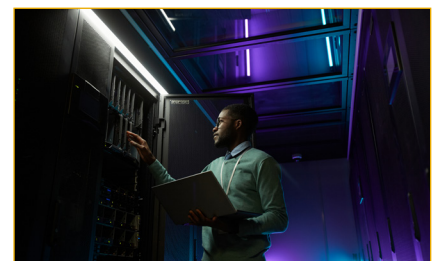
One of the other notable trends for data centers is the continued adoption of single-mode fiber (OS2) instead of multimode. Some of the shorter reach connections installed are still predominantly multimode, such as in Top-of-Rack switches to servers or out to the aggregation layer switches, but as single-mode OS2 costs continue to drop, it will find its way into more networks, especially when addressing speeds at 100 Gb/s, 200 Gb/s, 400 Gb/s and beyond.

TECH TIPS

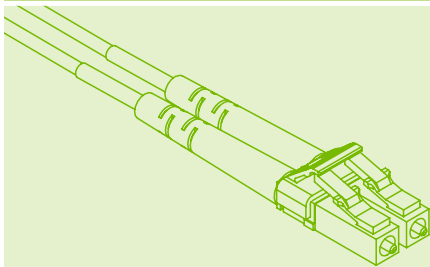## Get a Data Center Fiber Link Walkthrough

See how Leviton connects a data center spine-leaf fiber link. This overview includes a video walkthrough that covers solutions from patching at the core switches to end-of-row patching, as well as additional resources and video demos of the products included.

The Opt-X® HDX connectivity platform, including cassettes, enclosures, and fiber distribution frame — along with Leviton trunk cables and patch cords — provides pre-terminated solutions for simple deployment and manageability, while creating an ideal migration path for handling future data center tech refreshes.

Get this helpful walkthrough at **Leviton.com/dcwalkthrough**.

Core Switch Patching Hub

Core Switch

End-of-Row Patching Hub

Aggregation Switch
(or other active hardware)
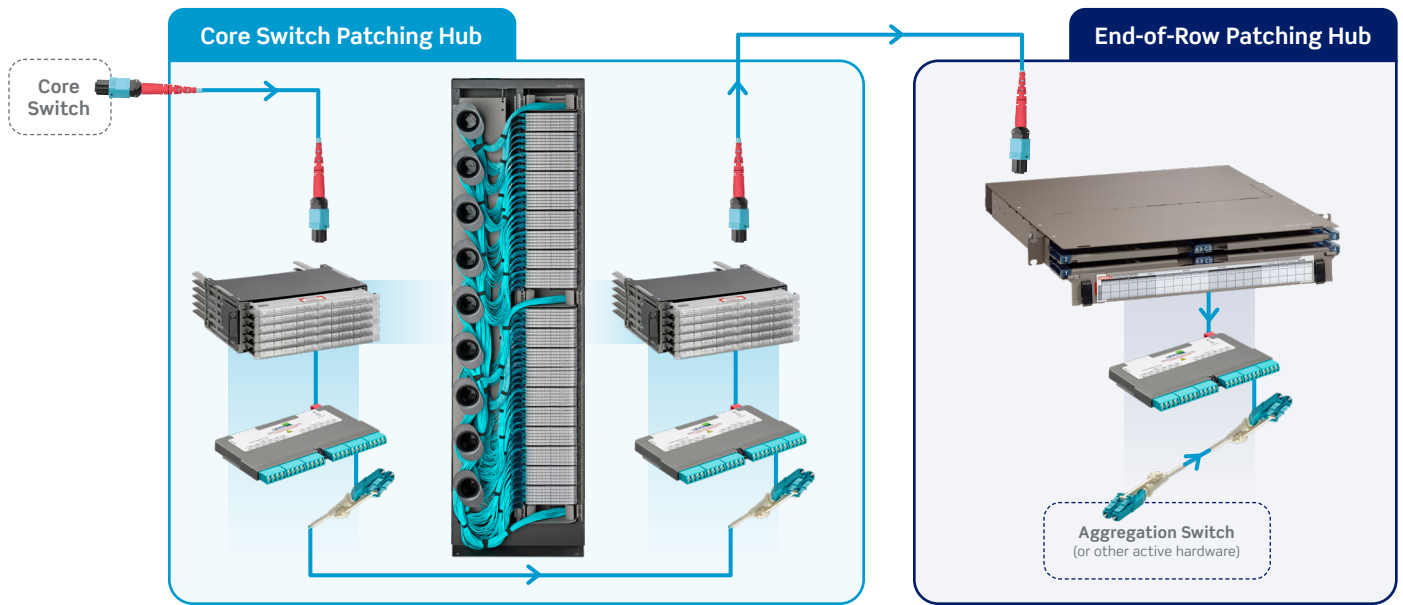
ASK THE EXPERTS

Q: If I install OM5, will it extend the life of my multimode cabling plant?

A: Yes and no. OM5 will offer some extended distances beyond OM4 performance, but only for multi-wavelength transceivers. For example, when addressing 100 Gb/s speeds, the 100G-SR-BiDi transceiver — a QSFP bidirectional option that uses wavelength division multiplexing — can extend the supported length to 150 meters over OM5, instead of 100 meters over OM4. But for most options, such as standards-based 100G-SR4, OM5 will not provide any advantage over OM4, as both support up to 100-meter distances.

Questions?
Comments?
Ideas?

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