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CrossTalk

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NEWSLETTER
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› US

In September, Leviton announced its climate change goal to achieve company-wide carbon neutrality by 2030 (CN2030) and its ambition to achieve net zero carbon by 2050.

The company also announced its CN2030 program which is based on the company's refreshed commitment to address its environmental impact in six focus areas: carbon, energy, waste, recycling, water, and innovation.

What does carbon neutral mean? Carbon neutral refers to a balance that organizations strike between produced emissions and offsets for those emissions. To achieve carbon neutral status, all the CO_2 and greenhouse gasses that are released into the atmosphere by an organization must first be accurately measured, then the emissions are offset through projects that avoid, remove, or absorb carbon. Leviton has set a goal to reach carbon neutrality across all of its business units by 2030.

What is net zero? Net zero is the balance between the continually emitted carbon emissions being equally removed or absorbed from the atmosphere to achieve a net value of zero. Net zero is achieved by both reducing emissions and implementing methods of removing and absorbing carbon from the atmosphere.

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Single-Pair Ethernet for Smart Building Connections

In previous newsletter issues we gave you **status updates** on the state of Single Pair Ethernet (SPE) development. Currently, standards organizations like IEEE, TIA, and ISO actively working on defining this important emerging technology. In the future, SPE will become an ideal solution for applications that require limited power and low bandwidth but need a longer distance.

SPE technology is well suited for smart building applications where it could replace legacy fieldbus technology, such as RS485-based systems that traditionally support access and heating, ventilation, and air-conditioning (HVAC) controls. Devices such as sensors for air quality, occupancy, ambient light levels, temperature, and even lighting control are well suited for a single-pair infrastructure because they require limited power and low bandwidth.

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IN THIS **ISSUE**

LEVITON **POLL**

What is your preferred method of managing fiber connector mismatches?

From a June 2022 survey of 105 network professionals.

UPCOMING **EVENTS**

BICSI Winter | Tampa, FL
February 5-9, 2023

Leviton Announces Sustainability Goals

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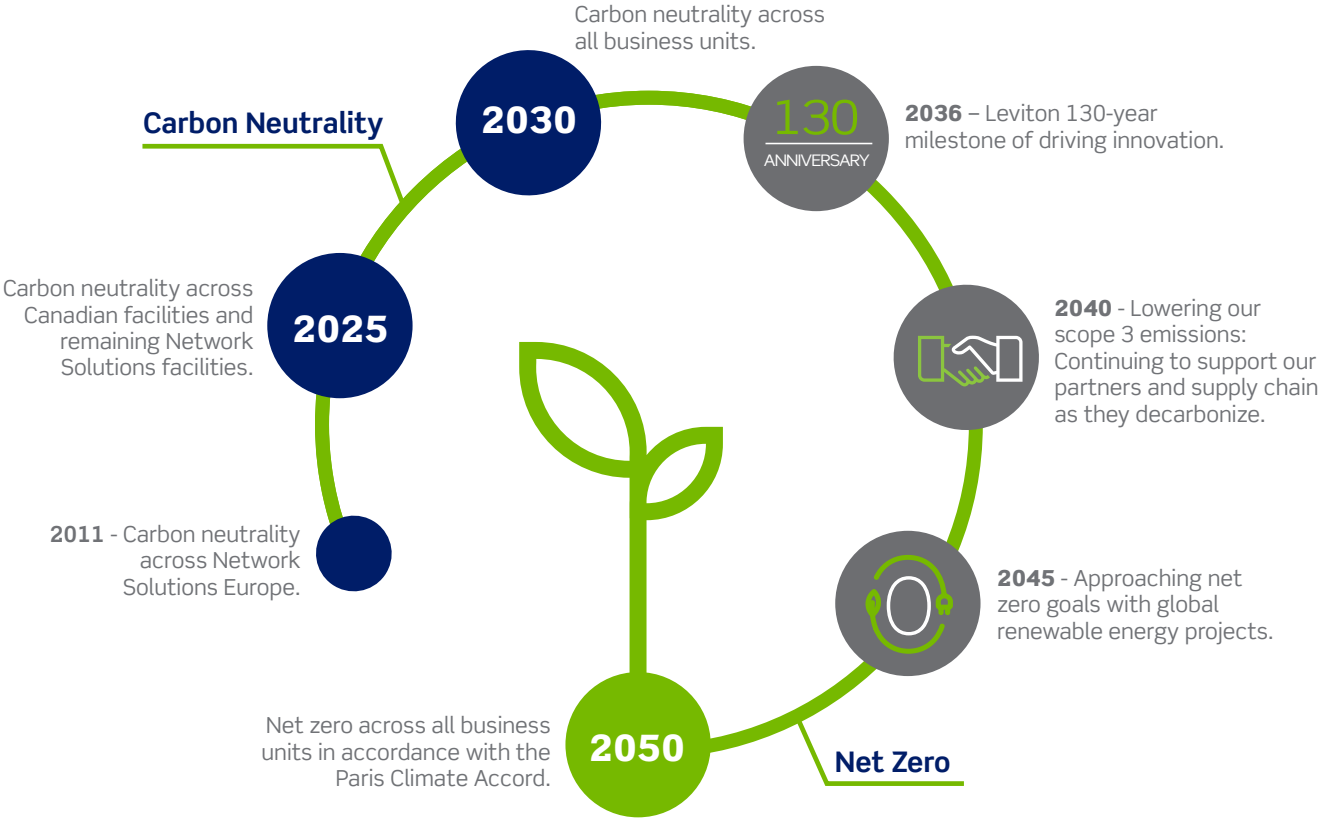
Net zero goes beyond carbon neutral by incorporating and reducing all value chain greenhouse gas emissions into reduction and removal efforts by greater than 90%, with the global goal of limiting warming to 1.5°C above pre-industrial levels. Leviton has set the goal to reach net zero across all business units by 2050.



Even further, Leviton established a Global Sustainability Steering Committee (GSSC) in 2021, which comprises executives from across the company to provide direction, resources, and funding. At the same time, Ross Goldman was appointed as Leviton's first chief sustainability officer. Mr. Goldman takes on this role in addition to his current role as executive vice president and general manager of Leviton's Network Solutions business unit.

> *Every day, Leviton manufactures products that help our customers create more sustainable buildings, factories, and homes, and we are proud to formalize our company's sustainability commitment through our CN2030 program.*
>
> **Leviton's President and CEO Daryoush Larizadeh.**

"From earning factory ISO-14001 certifications to developing LED driven energy-saving products, to recyclable packaging, and much more, we have already made major strides in sustainability as a company. As chief sustainability officer, Ross will accelerate our efforts across all of Leviton."

Mr. Goldman stated he is very proud to have the world's first network infrastructure business to achieve third-party verified carbon neutral status in accordance with PAS2060 since 2011. The European data business is headquartered in Glenrothes, Scotland and manufactures high-quality copper and fiber cabling products. He went on to say that the same factory is now operating on 100% renewable energy.

"At Leviton, we pride ourselves on being a future-focused company, engineering products that help our customers succeed not only in today's environment but also tomorrow's. Being future focused also means being environmentally sustainable and am excited by the challenge we face to reach carbon neutrality by 2030," said Goldman. "With the launch of CN2030, we have great momentum to build on in the next eight years. I look forward to what we will achieve through implementing CN2030 and we will share our progress with our customers and the industry as we move forward."

For more information, visit **Leviton.com/Sustainability**.

Single Pair Ethernet for Smart Building Connections

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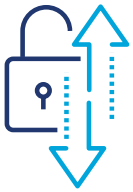
One question we hear is "Why not just go with wireless for these smart devices?" Many people view wireless solutions as the primary alternative to SPE. For devices that remain in a fixed position, wireless proves flexible enough to place the device without having to consider the proximity of a data port. A quick and easy way to increase the intelligence and control within the building is to replace legacy devices with smart devices that communicate wirelessly.

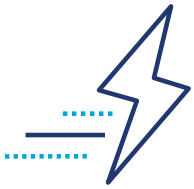
Still, SPE will offer some important advantages relative to wireless technology:

Security of data transmission

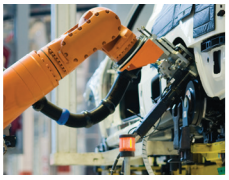


Reliability of the connection

Power delivery



SPE devices will support critical infrastructure for commercial buildings and industrial process control operations, so security of the data and reliability of the connection will be paramount. The reliability of device data, especially sensor data, is highly dependent on the reliability of the device connection to the network and its power source. Connection loss can mean the loss of critical building system operation.



Many of these devices will be in environments which are challenging for wireless communication. Some settings can have high levels of electromagnetic interference and radio frequency interference, while building automation devices are likely to be located behind walls or in enclosed spaces.

The biggest advantage SPE offers relative to wireless technology is the capability for remote power delivery. For the quantity and size of the sensors and controls, the use of a battery as a power source may seem advantageous. But having to replace thousands of batteries in a building would be a maintenance nightmare, as the devices could be enclosed and in hard-to-reach locations. Plus, a dead battery could lead, again, to the loss of a critical building system function.

One hidden cost that is frequently overlooked when deploying battery operated devices is the responsible disposal of used batteries. The sheer quantity of devices anticipated for IoT applications makes battery use a significant consideration. Businesses are looking for ways to increase use of sustainable materials and lower their carbon footprint. Deploying many thousands of devices with single-use batteries isn't feasible when a more sustainable alternative is available.

Learn more about SPE in the Leviton white paper **"Advantages of Single Pair Ethernet"**, which covers SPE cabling standards, typical deployments, and its advantages versus fieldbus and wireless.

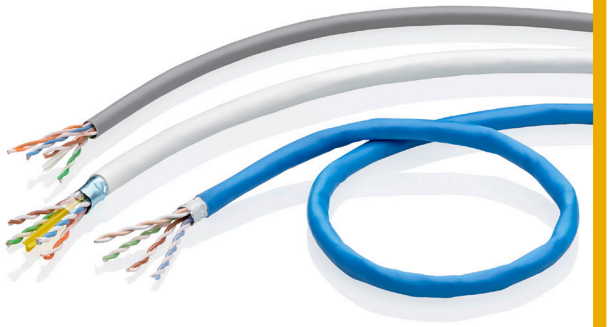
Leviton Wins **Two GOLD Innovator Awards** from Cabling Installation & Maintenance

Leviton's **FLX-1™ technology** and **VXC™ Coupler and Plenum Assemblies** were recognized among the best in the industry by the 2022 Cabling Installation & Maintenance Innovators Awards. The stellar third-party judging panel included cabling and communications system specifiers, designers, integrators, and managers with vast professional experience. See more of Leviton's awards at **Leviton.com/ns/innovations**.

2022 Cabling Installation & Maintenance Gold Innovators Awards

FLX-1™ Technology

Leviton engineers developed FLX-1, an advanced polymer technology, to improve cable jacket flexibility, making cables kink less and bend more easily.



VXC™ Coupler and Plenum Assemblies

These innovations create a cost-effective method for terminating cables, and creating durable connections, for WAPs and other ceiling mounted devices.

CASE STUDY:

Connecting the University of Westminster

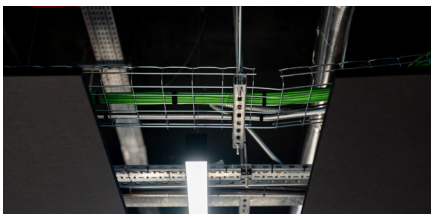
The University of Westminster educates roughly 19,000 students at its four London campuses. The university is an attractive force to a diverse new generation of learners, recently named as one of the top 100 most international universities in the world, teaching students from 169 different nationalities.

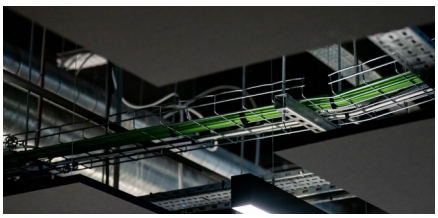
In the School of Computer Science and Engineering, the learning environment needed a complete overhaul. Beyond the outdated technology, the design of this lab prevented students and lecturers from utilizing the space to its fullest potential, limiting educational outcomes.

The new space needed to attract new students to the University of Westminster's School of Computer Science and Engineering Innovation Space with its high-tech capabilities, while also being a highly flexible space to foster student collaboration, facilitate showcase events, and enable interactive learning sessions.

Also, this project was important for the campus, not only to satisfy their immediate needs, but the project functioned as a pilot room for other projects at the university. The refurbishment and consolidation of these outdated computer labs would create a new space called the Center of Innovation, a place for current students and prospective students alike. If successfully executed, other rooms would follow this design throughout the campus.

With the initial needs of the university understood, Leviton provided site visits, product assistance, reassurance of performance, and site inspections to develop the network architecture that would meet the needs of the Center of Innovation.





In cable trays along the ceilings, Leviton connectivity seamlessly connected computers and displays, even tying in the lectern area to allow lecturers to present in a fully interactive way. Through the groundbreaking application AV over IP, the lecturer can control what is shared with different tables of students, split into groups by color, at the touch of a screen.

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NEWS YOU CAN USE

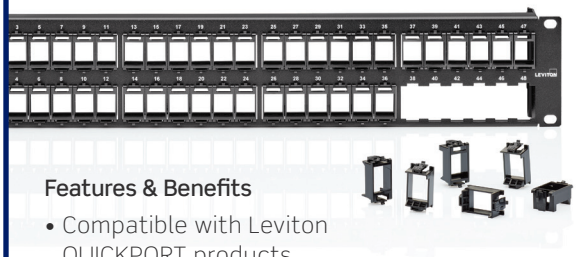
COMPANY

Recent market analysis from Dell'Oro Group found that **global data center switch sales saw double-digit growth across all major market segments**, including large enterprises, cloud service and telecommunications providers. An excess of 20 percent growth in the second quarter of 2022 is a robust and record-level revenue figure, encompassing all regions.

Record growth appears to be driven by an accelerated adoption of 200 and 400 Gbps switches by large cloud service providers.

PRODUCT

Leviton's new **Front Loading QUICKPORT™ UTP Patch Panel** offers a global solution for dense racks and cabinets with an easy and efficient way to add network connections without network downtime with an innovative front-loading bezel.



Features & Benefits

- Compatible with Leviton QUICKPORT products
- Front-loading convenience when rear access is limited
- The only QUICKPORT panel with dual rear management bar option

YESTERDAY'S NEWS

Fifty years ago, **in 1972, the compact disk was invented** by James Russell to store and play digital audio recordings.

Connecting the University of Westminster

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There is a new sound system, and new lighting, which can be adjusted based on the occasion. The prominent innovation space is now capable of switching its use between a 40-seat programming lab for group work, to a collaborative working space where Leviton cabling and connectivity enables a cutting-edge, and interactive learning experience for today's computing and science students.

Peter Crouch, Network Engineer at the university, had used Leviton cabling and connectivity for previous projects, but the primary reason Peter reached out to his Leviton sales manager about building the right network infrastructure was the proven and trusted relationship he had with Leviton.

The relationship was key on this project with Leviton sales teams going the extra mile with the customer. With full manufacturing capability in the UK, Leviton produces cables and connectivity to supply its customers with the full end-to-end system from one manufacturer, as opposed to buying from a supplier in China. Leviton's Glenrothes, Scotland location is also third-party verified Carbon Neutral since 2011, making a sustainable difference in network solutions.

> With Leviton, I know I'll get a high-quality solution. More importantly, **I know I can rely on experts** who will respond right away, whether it's product assistance, site inspection, or troubleshooting. That relationship is critical.

Peter Crouch
Network Engineer
University of Westminster

With the use of high-quality and high-spec products, flawless installation, and tireless customer support, Leviton embedded the Center of Innovation with the best possible infrastructure to future-proof the University of Westminster for years to come.

For more information, visit Leviton.com/NS.

ASK THE **EXPERTS**

Q: What are co-packaged optics?

A:

The use of fiber optics to distribute signals between devices has been popular in data centers for a long time. However, within the switch, the chip still operates electrically. Among other functions, a transceiver converts the electrical signal needed on the chip to the optical signals used by the external cabling. Though this process has many advantages, one of the considerations is the amount of power needed to convert the electrical signal to optical (E-O conversion).

Work is underway to integrate the optics directly onto the chip. There may be some intermediate versions, but when fully realized, co-packaged optics (CPO) will eliminate the pluggable transceiver by moving the electrical to optical conversion onto the core chip. The promise of a reduction in power, improvement in signal integrity, and higher density has garnered a lot of attention, especially in the hyperscale community where each of these issues have become impediments to continued growth. While there have been demonstrations of the technology already, further testing and validation is planned in the industry to prove its capability and reliability before wide adoption.

Questions? Comments? Ideas?

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