# LANTRONIX®



## INDUSTRY: Smart Building

### Lantronix Helps Power the World's Largest DC-Powered Warehouse

## Success Highlights

- Reduced labor and installation costs
- Reduced energy consumption and costs
- Minimized environmental impact
- Enhanced lighting flexibility
- Simplified lighting control and reduced maintenance

## Case Study Overview

Mouser Electronics' new 413,000-square-foot, three-story Global Distribution Center in the Dallas-Fort Worth area chose Lantronix's PoE++ switches (SM24TBT2DPB and SM24TBT2DPB-DE) as a vital part of its PoE lighting installation. The winner of the IBCon 2024 Digie Award for the Most Intelligent DC-Powered Building, Mouser has been recognized as a pioneer in large-scale PoE lighting installation.

## Challenge: Deliver Efficient and Sustainable Lighting Throughout the Warehouse

Mouser was challenged to find lighting technology that would drive both efficiency and sustainability to reduce energy consumption, minimize environmental impact and enhance flexibility across its expanded warehouse facility. Mouser turned to Authorized Value-Added Reseller (VAR) Sinclair Digital Services for its intelligent building implementation and PoE lighting expertise. Lantronix, widely known for having the widest selection of PoE++ switches in the industry, was selected by Sinclair to provide switches to power the PoE lighting throughout the Mouser warehouse, resulting in the world's largest Class 4 power installation.

> "Using Lantronix PoE++ switches, we distributed power and controls throughout the Mouser warehouse by using low-voltage DC, which is the best way to create a sustainable building that reduces energy costs while providing a lower carbon footprint and more comfortable work environment."
>
> – Hannah Walker
>  COO
>  Sinclair Digital
>  Authorized Lantronix Value-Added Reseller



### Lantronix SM24TBT2DPB PoE++ Switch

The Lantronix SM24TBT2DPB Smart Managed Gigabit Ethernet PoE++ high-performance Layer 2 managed switch is the only UL-certified switch with true 24x90-watt power and direct high-voltage DC power. It features 52 Gbps switching capacity and complies with the latest IEEE 802.3bt PoE++ standards.

The SM24TBT2DPB can be powered by low-line and high-line AC or DC power and Digital Electricity™ from VoltServer, making it ideal for use in a wide variety of smart building applications. This innovative and flexible switch can provide full PoE++ output on all 24 ports when equipped with the dual hot-swappable PS-ACDC-1200 power supplies, meeting immediate needs and providing flexibility for growth, or can be configured in "redundant mode," offering 1080 watts of backed-up power.

For more information, visit: https://www.lantronix.com/products/sm24tbt2dpb/

## SOLUTION: Lantronix PoE++ Switches

Mouser's dedication to environmental responsibility and adoption of innovative technologies played a role in its decision to incorporate PoE technology, which delivers DC power to devices over copper Ethernet cabling without the need for separate power supplies or outlets, and fault managed power, a DC power infrastructure that eliminates losses associated with AC-to-DC conversion.

Within enclosures at the ceiling of the new facility, power distribution modules transfer the fault managed power to high voltage DC power for the Lantronix SM24TBT2DPB-DE switches, in turn delivering up to 90W of PoE++ power per port to lighting fixtures, occupancy sensors and other PoE-enabled endpoints. The SM24TBT2DPB switches are also used in racks within the facility to connect more lighting, cameras and wireless access points.

The PoE lighting system was designed by Baird, Hampton & Brown, a leading electrical engineering firm using Sinclair Digital's DC digital solution package. Installed by TriCO Electric and Polarity Networks, the PoE lighting fixtures were provided by HE Williams using PoE lighting drivers from MHT Technologies with fault managed power from VoltServer. This DC power infrastructure reduces Mouser's carbon footprint while improving lighting control and operational costs.

> **"Our distribution center now operates on the world's largest Class 4 power system, providing state-of-the-art lighting for our employees while helping us reduce our energy usage over the long term. Moreover, it provides scalability and flexibility to move or add devices as our needs change, further reducing our long-term costs."**
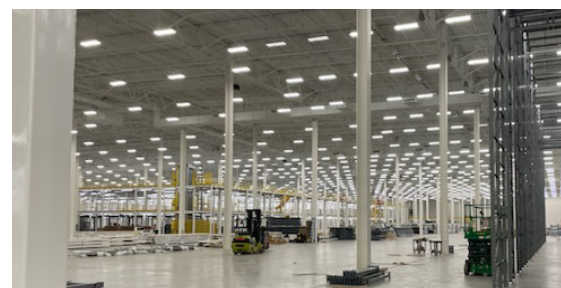>
> – Pete Shopp
> Senior Vice President, Business Operations
> Mouser Electronics

## RESULTS: Reduced Energy Usage and Costs, Minimized Carbon Footprint

Mouser is revolutionizing warehouse operations with its innovative, DC-powered lighting solution. Its 413,000-square-foot warehouse expansion is a great example of how technology drives both efficiency and sustainability. For Mouser, moving to PoE lighting delivered a fast return on investment through better efficiency, control, maintenance and flexibility gains.

Benefits of Mouser's all DC-powered PoE lighting solution include:

- Reduced energy consumption and related cost savings
- Minimized environmental impact
- Enhanced flexibility by improving lighting control
- Reduced operational costs with fewer maintenance requirements
- Improved lighting environment for warehouse employees
- Ability to move and change lighting as warehouse needs change

### About Mouser Electronics

Mouser Electronics, a TTI Inc./ Berkshire Hathaway Company, is a global authorized global distributor offering the widest selection of the newest semiconductors, electronic components and industrial automation products.

For more information, visit https://www.mouser.com/

### About Sinclair Digital Services, Inc.

Sinclair Digital Services, Inc. is an authorized Lantronix Value-Added Reseller (VAR) based in Fort Worth, Texas. Its services include design, consulting, installation and support of traditional and advanced low-voltage solutions for a variety of industries including hospitality and historic buildings.

For more information, visit https://sinclair-digital.com

### About Lantronix

Lantronix Inc. is a global leader of compute and connectivity IoT solutions that target high-growth markets, including Smart Cities, Enterprise, and Transportation. Lantronix's products and services empower companies to succeed in the growing IoT markets by delivering customizable solutions that enable AI Edge Intelligence.

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