

Coca-Cola's new hub goes multigig—built for automation and growth

Coca-Cola's 170,000-square-foot distribution center in Raleigh, NC—the company's first new build in decades—represented a strategic opportunity to deploy a modern network infrastructure capable of supporting a new wave of technologies. The company needed a solution that could not only handle its immediate requirements, such as IP-based security cameras and wireless access points (APs), but also scale to enable advanced automation, robotic lifts and loaders in the years ahead.

The facility's previous Category 6 infrastructure couldn't keep up with the power requirements of modern edge devices or the bandwidth needed for automation and real-time data. To move forward, Coca-Cola required a system that could support gigabit and multigigabit edge devices over extended distances while delivering reliable power. In addition, Coca-Cola wanted the ability to monitor and provide backup power for edge devices across the network.



One hub, limitless potential

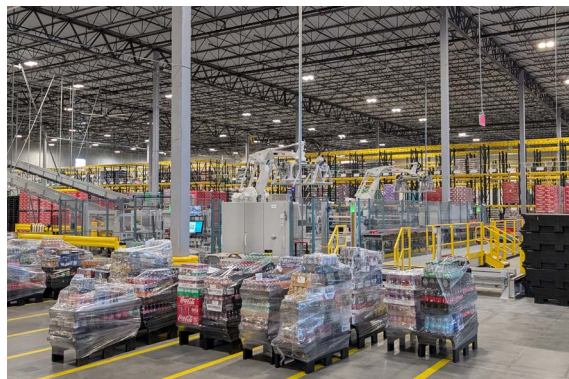
CommScope collaborated with Pavion, a systems integrator, to deploy its Constellation® platform as a high-capacity, long-distance solution. The deployment replaced three traditional intermediate distribution frames (IDFs) with a single main distribution frame that supports all office spaces and acts as the power and connectivity headend for the Constellation system. This change reduced the scope of work and the materials needed compared to a traditional installation. Instead of requiring dedicated rooms with doors, lighting, locks and cooling, each Constellation Point eliminated the need for a rack and a small backup power unit.

From this hub, the distribution center was divided into four Constellation zones, each served by ceiling- or beam-mounted

"With Constellation, we streamlined the entire network and eliminated redundant infrastructure. Instead of maintaining multiple IDFs scattered across the building, we now have a centralized design that's easier to manage and less expensive to expand."

Fred Anderson
Vice President Operations

Constellation Points. The result was significant savings during construction. By removing the need for dedicated 110-volt circuits, local surge protection and associated cabling, Coca-Cola reduced its material and labor costs by approximately \$45,000.



Collaboration ensures smooth deployment

The project was completed in phases, with Pavion leading the installation and coordinating closely with Coca-Cola's IT team. CommScope engineers were onsite during the final system startup to ensure smooth commissioning and provide hands-on support.

"Since Constellation is still new across the industry, close coordination was critical," said Matt Knowles, Director of Sales, at CommScope. "Even after in-person training at Pavion's office before the project began, Pavion's installers and Coca-Cola's IT staff valued having us onsite during final connections and system startup. That teamwork ensured a smooth launch and gave everyone confidence that technical support was available if needed."

Built to go the distance

At the heart of Constellation's design is its hybrid fiber/power cabling, with each Constellation Point providing up to 1 kilowatt of managed power at distances up to 500 meters (1,640 feet). For Coca-Cola, this eliminated the 100-meter (328-foot) limitation of traditional cabling—and the need to compromise on device placement.

Two warehouse zones use extended hybrid power trunks, coiled into slack loops near roof beams, giving the system flexibility to adapt as needs change.

The current headend operates at roughly 60% capacity, leaving

ample room to support a wide range of edge devices, such as wireless APs, IP-based security cameras and IP building sensors, as they come online. The network can scale and integrate new technology seamlessly, without disruptive retrofits.

"We knew we were building this facility for the long haul," Anderson said. "We needed a system that could meet today's needs and adapt as we add advanced machinery, robotic lifts and loaders. Constellation gives us that flexibility to handle increasing complexity without overhauling our infrastructure. It lets us integrate new technology seamlessly and keeps operations running smoothly as our demands grow."

The Constellation infrastructure has become a standard for this bottling division, with plans to replicate the model in other facilities.

Key benefits and outcomes

The Constellation deployment at Coca-Cola's Raleigh distribution center has delivered measurable value:

- Saved approximately \$45,000 in capital expenditures during construction
- Eliminated three IDFs and associated power systems
- Extended reach—up to 500 meters (1,640 feet) of power and bandwidth over hybrid cabling
- Built-in scalability with 40% head-end capacity available for growth
- Supports high-power edge devices, including APs, cameras and building systems
- Modular design simplifies future expansion

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