COMMSCOPE®

The issue

Climate change will be the defining issue of our age. When it comes to mitigating the damage created by decades of environmental degradation, there are no quick fixes. If we are to avert the worst effects, we must rethink business as usual, including how we design, deploy and maintain enterprise and data center networks.

We have work to do.

Focusing on the built environment

Currently, residential and business structures account for nearly 40 percent of global greenhouse gas (GHG) emissions. Within that environment, enterprise technology—which includes building and data center networks—emits about 350 to 400 megatons of CO_2e [i] annually. That's about 1 percent of global GHG emissions.[ii] Data centers alone account for about 1 percent of the world's energy consumption.[iii]

The enterprise network—the next frontier

Current sustainability actions such as reducing single-use plastics and increasing materials transparency are important, but their net effect on the environment is negligible. To significantly impact network sustainability over time, solution providers must create more substantive change.

To meaningfully lower the building's embodied and operational carbon impact, we must:

- **Streamline the building network architecture**
- **Improve network capabilities and re-usability**
- **Extend the lifecycle of network components**

New challenges

The need for greener networks coincides with disruptive changes affecting IT managers and teams.

Device densification

By the end of 2023, the number of IoT, network-connected devices will reach an estimated 16.7 billion[iv] —many of which will be deployed across enterprise and campus networks, particularly at the edge.

Challenges:

- Deliver reliable bandwidth and power
- Extend to the network edge
- Support multiple systems—converged and segmented, IT/OT/IoT/IIoT

Fewer skilled installers

For every 10,000 electricians who retire each year, only 7,000 join the field.[v] For network managers trying to keep up with Web 4.0 and Industry 4.0, the lack of skilled installers is a critical issue.

Challenges:

- Develop infrastructure designs that can be installed faster, with fewer techs
- Incorporate more modular components that scale easily and effortlessly
- Use architectures that simplify Day 2 moves, adds and changes

Constellation™

the edge is no longer the limit

The Constellation infrastructure platform is a streamlined, modular and adaptable power/data solution specifically designed for today's hyperconnected enterprise networks.

It combines:

- Fault-managed power
- Hybrid power/data fiber
- Ceiling-based Constellation Points
- Distributed star topology

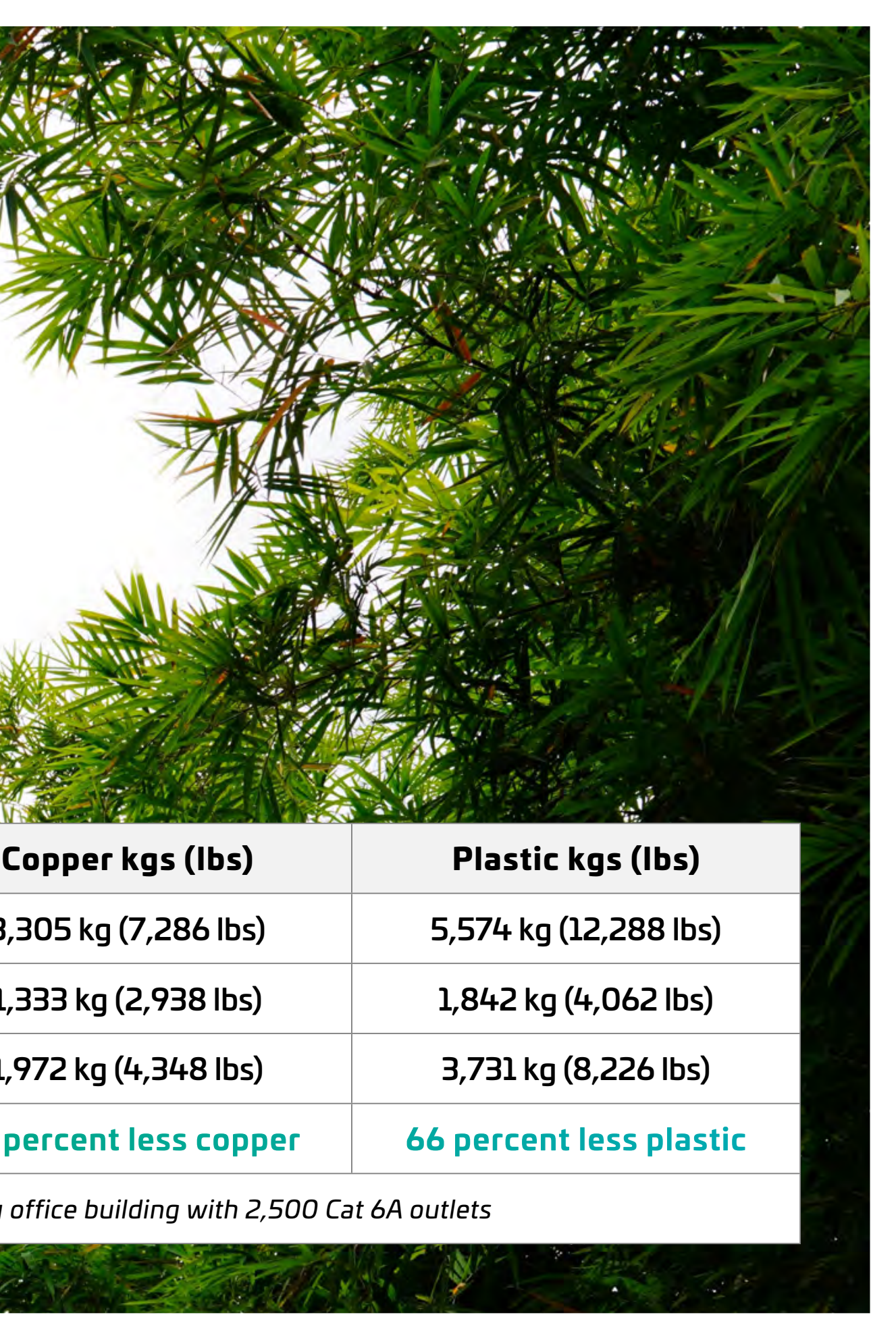
As a result, Constellation dramatically reduces the time, cost and complexity of supporting connected devices and systems—wherever they are.

Operational efficiency? Check!

Operationally, Constellation checks all the boxes:

- ☑ **10x the power and 5x the distance of conventional LAN architectures**
- ☑ **500-meter reach from main equipment room to area service hubs**
- ☑ **Each service hub provides unified power and data to up to 50 devices**
- ☑ **One platform supports converged and segmented IT/OT/IIoT/IoT networks**
- ☑ **Speeds and simplifies installation, upgrades and changes**

Greener from the get-go



From the beginning, CommScope prioritized meaningful sustainability as one of the key design principles of the Constellation building edge infrastructure platform.

This included focusing on the following:

- ↓ **Reducing network complexity**
- ↓ **Reducing space requirements**
- ↓ **Reducing mined and non-renewable materials**
- ↔ **Extending the life of the infrastructure**

The result is a unified platform that supports multiple upgrades and power/data increases while eliminating 59 percent of the copper and 65 percent of the plastics from the network.

	Copper kgs (lbs)	Plastic kgs (lbs)
Traditional Cat 6A	3,305 kg (7,286 lbs)	5,574 kg (12,288 lbs)
Constellation	1,333 kg (2,938 lbs)	1,842 kg (4,062 lbs)
Raw materials reduction	1,972 kg (4,348 lbs)	3,731 kg (8,226 lbs)
Percent savings	59 percent less copper	66 percent less plastic

Based on a 10-story office building with 2,500 Cat 6A outlets

Simplified architecture

Constellation uses a distributed star topology that radically streamlines the network architecture, creating an immediate impact on your network's environmental footprint:

- Requires less than half the number of components
- Shorter copper links reduce PoE power loss and energy consumption
- Reduces raw material requirements manufacturing impacts

Reduced space requirements

Not just fewer components, Constellation uses smaller modular components that can be re-used.

- Eliminates need for telecom rooms on each floor
- Compact service hubs are located in the ceiling to free up additional space
- Fewer components are in the main equipment room, reducing size requirements

Low-impact installation

Faster, easier installation and upgrades reduce the total number of hours on site.

- Decreases labor cost and installation time up to 57 percent.[vi]
- Moves/adds/changes are faster, less invasive
- Fewer truck rolls, less fuel consumption, reduced GHG emissions

Echoing a deeper environmental commitment

As a global industry leader, CommScope recognizes the critical role we play in combating the climate crisis. Sustainability is a strategic pillar—company-wide and for each of our industry segments. This includes our efforts in the enterprise building, campus and data center markets, where we are actively developing solutions to support our customers and partners in this important work.

2022 highlights:[vii]

100 percent of manufacturing facilities certified ISO 45001:2018 (Health and Safety Management)

100 percent of manufacturing facilities certified ISO 14001:2015 (Environmental Management)

13 CommScope sites now 100 percent renewably powered

16 percent decrease in location-based scope 1 and 2 CO_2 emissions (compared to 2019)

22 percent decrease in market-based scope 1 and 2 CO_2 emissions (compared to 2019)

Over 12 percent of purchased electricity from renewables

82.8 percent of nonhazardous waste and e-waste diverted from landfills globally in 2022

We're all in

"I'm proud of our employees' incredible efforts to meet our partners' and customers' needs—all while embracing sustainability as a fundamental business value. CommScope's industry leadership, commitment to sustainability and role in developing the networks of tomorrow humbles me every day."

Chuck Treadway

-Chuck Treadway,
President and Chief Executive Officer

For more on how CommScope is working to create more connected and sustainable building and data center environments, visit our Enterprise Sustainability page >>>

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[i] CO_2e: Carbon dioxide equivalent or CO_2e means the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas.
[ii] The green IT revolution: A blueprint for CIOs to combat climate change; McKinsey; September 15, 2022
[iii] 5 ways Big Tech could have big impacts on clean energy transitions; IEA; March 25, 2021
[iv] State of IoT 2023; IOT Analytics; May 24, 2023
[v] Developing the next generation of ICT professionals; Cabling Installation & Management; June 23, 2022
[vi] As compared to a traditional CAT6A network for a 10-story office building with 2500 outlets
[vii] CommScope 2023 Sustainability Report; CommScope, Inc.; May 2023

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Visit our website or contact your local CommScope representative for more information.

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