



Transforming Education and Connectivity in Wicomico County Public Schools



Overview

Wicomico County Public Schools (WCPS) embarked on a transformative journey to meet the digital needs of its 15,000 students and 3,500 staff across 26 school locations. To support robust digital learning, secure online testing, and the growing demand for connected devices, WCPS deployed its entire network infrastructure with Cambium Networks' advanced Wi-Fi 6E solutions. With 2,000 access points (APs) operating across district campuses, WCPS is able to deliver fast, reliable Wi-Fi in classrooms and common areas, as well as enabling multiple IoT-based applications. The network provides a future-proof foundation that allows WCPS to focus on enhancing student learning and campus security.

Business Challenge

Wicomico County faced the challenge of transitioning to digital learning platforms which would connect 15,000 students and 3,500 staff. The 26 school locations required stable, high-capacity network infrastructures



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- Jeremy Ford, Technology Infrastructure Manager, Wicomico County Public Schools

to support approximately 25,000 electronic devices. They would also need to support multiple simultaneous connections for online testing. It was clear they had to support an ever-increasing number of connected devices and data-intensive applications without compromising network performance or security—essentially, ensuring that technology enhances rather than hinders the learning experience.

Technology Solution

To address these challenges, WCPS selected Cambium Networks' Wi-Fi 6E solutions, known for their reliability, scalability, and management ease. Cambium's solutions provided the robust connectivity and seamless management the district needed for its extensive use cases:

- **Wi-Fi 6E Access Points (APs):** Deploying 2,000 high-density APs using the new 6 GHz band, which offers increased spectrum and reduced interference, allowed WCPS to accommodate high device density and support future IoT demands.
- **cnMatrix Switches:** This advanced switch solution enables smooth network access, robust security, and consistent device management across the district. As Cambium's dedicated access switch, cnMatrix enables policy-based automation, enhancing network control and reducing maintenance time.
- **EasyPass Access Services:** EasyPass integrates directly with Microsoft Azure and Google, simplifying secure access for IoT and BYOD (Bring Your Own Device) users. WCPS utilized EasyPass to onboard IoT devices, allowing network administrators to create unique keys and securely connect IoT devices without disrupting the broader network.
- **Application Control and Monitoring:** Application Control enables WCPS to monitor and prioritize applications critical for learning and operations, including online testing platforms and the school's hall pass monitoring system provided by vendor Securly. This visibility ensures essential applications receive priority bandwidth, contributing to a smooth learning experience.

Field Results

The implementation of Cambium's Wi-Fi 6E and network management solutions has enabled WCPS to deliver a high-performance, adaptable network that supports digital learning and future IoT expansion. Specific achievements include:

- **Comprehensive Wi-Fi Coverage:** Coverage expanded to all classrooms, hallways, and common areas, supporting educational tools and providing uninterrupted internet access for students and staff. Students benefit from reliable connectivity for online testing and resource access.
- **Seamless IoT Integration:** The network supports various IoT applications, including automated cleaning devices, projectors, and energy management systems. This IoT-ready setup has simplified building maintenance and enhanced operational efficiency across the district.
- **Enhanced Application Control:** Through Cambium's Application Control feature, WCPS can allocate network resources strategically, ensuring crucial applications for learning and campus management are prioritized. The district can also respond proactively to emerging network demands, ensuring the reliability and security of digital testing and classroom tools.

Business Value

The shift to Cambium Networks' Wi-Fi 6E has driven substantial improvements in WCPS's operational efficiency and digital experience:

- **Improved Learning Outcomes:** By providing a reliable and high-speed network, WCPS can support digital learning tools and foster an interactive, student-centered learning environment. This infrastructure allows teachers to implement dynamic digital curricula with confidence, knowing that the network can support these tools without disruption.
- **Reduced IT Workload:** Cambium's integrated management platform reduces troubleshooting time and simplifies network operations. This consolidation allows WCPS's small IT team to maintain high service standards across the district's campuses with minimal resource strain.
- **Scalable, Future-Proof Network:** The Wi-Fi 6E setup ensures WCPS is well-positioned for future network expansions and technology integrations, supporting its mission of providing a modern, connected educational environment.

Jeremy Ford, Technology Infrastructure Manager at **Wicomico County Public Schools**, noted the transformative impact of the upgrades: "The challenges of digital learning stretched our legacy networks to their limits. By partnering with Cambium Networks, we significantly boosted the network's capacity and reliability, which has been crucial for supporting our expansive educational goals in Wicomico."

Cambium's ONE Network Advantage

The Cambium ONE Network platform unifies network management, security, and SD-WAN in a single framework, enabling organizations like WCPS to manage their networks more efficiently. With seamless automation, application visibility, and intelligent troubleshooting, Cambium ONE Network empowers educational institutions to focus on their core mission while benefiting from streamlined IT operations and minimized total cost of ownership.



About Cambium Networks

Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences, and device connectivity, with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.