

“We’ve worked with Siemon for a long time, and any time I have questions, they get answered quickly. The Z-PLUG gland solution for our outdoor WAPs was a prime example of this customer service.”

– Andrew Abernethy, Network Technician, UNC Charlotte



**Education**

## Outdoor Campus Wi-Fi Supported with Siemon Innovation

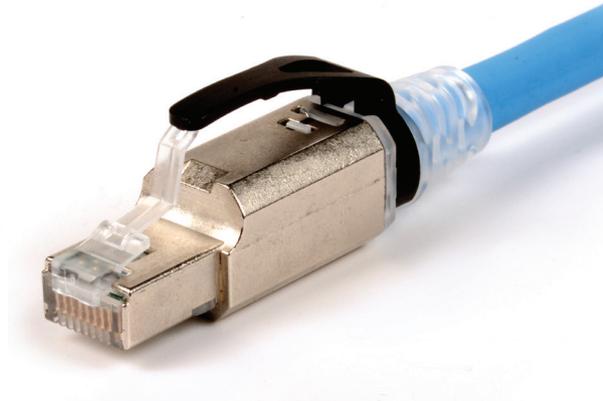
- LOCATION:** University of North Carolina Charlotte
- PRODUCTS:** Category 6A OSP cable, Z-PLUG™ Field-Terminated Plug and Protective Metal Gland
- APPLICATION:** Wi-Fi
- OVERVIEW:** UNC Charlotte is North Carolina’s urban research university that offers internationally competitive programs to more than 29,000 students, and its College of Computing and Informatics is the largest computing college in North Carolina. The University strives to address the educational and social needs of the greater Charlotte region, and part of that commitment is ensuring an infrastructure that makes learning accessible and supports the scholarly activities of the faculty. Every year, UNC Charlotte conducts a wireless survey that assesses internal and external Wi-Fi capacity and capability, academic impact and growing/changing technology. As part of the budget planning process, the University’s Information Technology Services (ITS) team leverages information from this survey to determine which buildings receive upgrades each year. As a result of the survey, the University embarked on a campus-wide Wi-Fi upgrade to deliver faster connection speeds. The upgrade project included 24 academic and administrative campus buildings and added 440 WAPs, delivering a Wi-Fi coverage net increase of 44% for the buildings and 20% for the entire campus. A key part of the campus initiative was increased outdoor Wi-Fi coverage. To support the new higher-throughput WAPs and future capacity, ITS ran two category 6A connections to each WAP. When it came to the outdoor WAPs, the team was presented with some challenges. “The original desire was to use an outdoor-rated gel-filled patch cord for connecting the WAPs, but nobody offers such a cord so we decided to purchase the cable separately and terminate it to Siemon’s Z-PLUG field terminated plug,” says Andrew Abernethy, Network Technician at UNC Charlotte. “Our WAP manufacturer left it up to us to figure out how to protect the connection, so we reached out to Siemon and they worked with us to provide the protective metal gland that slides over the cable before termination and then threads onto the WAP.”



The solution ultimately allowed the University's ITS team to easily connect the outdoor WAPs, maintain protection of the connection and still achieve the category 6A performance they needed for adequate throughput. The same solution was also used for WAPs located in harsh environments, such as pool areas and locker rooms subject to moisture and humidity. UNC Charlotte now has approximately 250 outdoor WAPs to deliver ample coverage for today's students to remain connected wherever they are on campus.

Siemon's patented Z-PLUG field-terminated plug offered UNC Charlotte a quick, reliable high-performance field termination for custom length patch connections to WAPs. Z-PLUG exceeds all category 6A performance requirements to easily support the latest high-throughput, high-efficiency Wi-Fi applications. It also terminates to shielded and UTP, solid and stranded cable in conductor sizes from 22 to 26 gauge – all with a single part number, making it easy to create a variety of patch cords for different applications. as their software provider. The next step is for Siemon to be the go-to choice for their structured cabling for security equipment installation projects making us a household name when it comes to connecting security equipment, ultimately leading to more sales opportunities.

The shorter plug design with rounded edges makes it ideal for connecting to devices with limited space, and the user-friendly Z-PLUG termination tool and intuitive hinged lacing module eliminates cable feed through and enables best-in-class termination speed and repeatable performance. "We find the Z-PLUG to be much easier and more cost-effective than standard crimp-on plugs, and while we primarily use them for the access points, anytime we need a direct connection to an IP camera, access panel or other device, it's a simple solution for bringing a category 6 or 6A connection straight into a device or piece of equipment," say Abernethy. "We've worked with Siemon for a long time, and any time I have questions, they get answered quickly. The Z-PLUG gland solution for our outdoor WAPs was a prime example of this customer service."



Z-PLUG Field-Terminated Plug



WAP Protective Gland



Z-PLUG with WAP Protective Gland

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