



# PRIVATE CELLULAR NETWORKS

## for Smart Education Campuses

### The Challenge

University connectivity needs to go beyond classroom education. Students and faculty interact using multiple technologies, including live video collaboration, smart whiteboards, augmented reality: all demand high-performance network connectivity. Campus administrators must meet the diverse communication needs of sports stadiums, research labs, administrative offices, student housing, transportation, push-to-talk communications for first responders, and IoT sensors for managing infrastructure.

Legacy wired, Wi-Fi and public cellular networks fall short as they do not have the propagation range for campus-wide communications. They often encounter quality issues due to network congestion. University CIOs need a single cellular network that gives them control over their data and applications.

### Private Cellular Networks Provide Campus-wide Connectivity

Universities and colleges can now deploy private cellular networks that use newly available, shared CBRS spectrum. CBRS is a band of radio-frequency spectrum that the Federal Communications Commission made available for commercial use. Private networks are custom designed for university needs, taking advantage of the reliability, quality, and security of networking technologies such as 4G/LTE and 5G.



#### SINGLE CAMPUS-WIDE NETWORK

CTS designs, builds, runs, and supports private networks that meet the diverse needs of multiple university buildings and campuses. We integrate Wi-Fi and private cellular networks and implement policies to distribute traffic according to application needs.



#### DIFFERENTIATED QUALITY OF SERVICE

With a CTS private network, advanced network slicing and service quality are customized for user, device, application, and protocol. The best-in-class 4G/5G wireless network core combined with our unique Total Traffic Manager ensures optimal performance for all your applications.



#### HIGH PERFORMANCE FOR UNIVERSITY VENUES

CTS's private networks and edge computing meet the performance needs of bandwidth-hungry mobile video sharing, tweeting, and video surveillance in university sports and entertainment venues. CTS provides managed services to meet your custom needs.



#### SECURING R&D ON UNIVERSITY INNOVATION

CTS private cellular networks provide a secure environment for commercializing university research. Establishing much fewer entry points and stringent authentication helps ensure cyber-security.



## A CTS Private Cellular Campus Network Operates at Peak Performance

**Best-in-class network Design Center:** The CTS Design Center offers best-in-class RF and 3D modeling for multi-operator and multi-technology solutions. Our team will create a custom design based on your exact needs.

**Comprehensive network construction services:** CTS has completed 12,000 wireless projects nationwide ranging from arenas, airports, universities, hospitals, commercial real estate, outdoor solutions, and more.

**Flexible deployment options:** CTS offers options for cloud-hosted networks that are quick to deploy, and options for a variety of on-premises networks for greater security and higher performance.

**Ongoing monitoring and management services:** CTS offers 24-hour monitoring, uptime analysis, firmware upgrades, remote troubleshooting, and emergency dispatch from our Network Operations Center (NOC).

CTS offers enterprises comprehensive private cellular network solutions that leverage LTE and 5G technologies. Our networks provide secure communications to process growing traffic volumes from bandwidth-hungry and time-sensitive university applications. CTS services are available as a complete end-to-end solution or in any combination so that you can get all the benefits of a private wireless network without the complexities of installation and ongoing maintenance.

Your Network. Your Data. Your Rules.



Delivering Mission-Critical Communications



WHY CTS

CTS provides custom, carrier-grade, in-building and campus connectivity solutions for enterprises and mobile network operators, solving and managing the most complex networking challenges. Leveraging our advanced design and network operations centers, CTS provides our customers with industry-leading customer service. Our ability to design, build, run and support connectivity solutions that power our customers' mission-critical applications is unmatched. CTS only provides one solution: the one that's right for the customer. CTS is vendor agnostic, allowing customer requirements to drive the right design, using the right equipment, to fit each customer's specifications, anywhere across the country. From conception to construction to operations, CTS is the trusted connectivity partner.