



PRIVATE CELLULAR NETWORKS

for Flexible Manufacturing

The Challenge

Existing wired and Wi-Fi mobile communications are increasingly untenable as manufacturing plants have more moving parts that are frequently reconfigured. Hours and money are lost as unionized workers arduously shift heavy equipment and reconnect it to communication cables as their production needs change. Autonomous vehicles running on magnetic tapes with wired connections must move concurrently.

Industrial Ethernet and best-effort Wi-Fi connectivity are unsustainable since they cannot scale to cope with the exponentially increasing volumes of traffic among people and devices. Autonomous vehicles carry goods over longer distances, across multiple assembly lines, and far away warehouses. Wi-Fi's propagation range and reliability fall well short of current requirements.

Private Cellular Networks Enable Untethered Modern Plants

Manufacturing plants can deploy private cellular networks with a shared CBRS spectrum made available by FCC for commercial use. With the reliability, quality, and security of 4G/LTE and 5G, private networks can process growing traffic volumes from business-critical applications like video inspection, video surveillance, predictive maintenance, Autonomous Mobile Robots (AMR), and mission-critical push-to-talk. They have a propagation range across multiple buildings and yards.



INTEGRATED NETWORK

Wi-Fi and private cellular networks can co-exist to securely transfer valuable data (e.g., SCADA) to a database for analysis. CTS networks establish policies that distribute non-mission-critical traffic to Wi-Fi and mission-critical traffic to private LTE or 5G networks.



HIGH PERFORMANCE AND DATA SECURITY

CTS's private network and on-premises multi-access edge computing ensures high performance for mission-critical applications, data security, and privacy.



DIFFERENTIATED QUALITY OF SERVICE

CTS's 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.



FLEXIBILITY

CTS is radio-vendor agnostic, allowing customer requirements to drive the right design, using the right Radio Access Network (RAN) equipment, to fit each customer's specifications, anywhere across the country.



A CTS Private Cellular 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 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 cellular 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.