

# Wireless Network Infrastructure



## End-to-End Wireless Network Design and Implementation

CACI experts provide of network integration services and technologies for secure wireless network infrastructures, including fixed/mobile radio sites supporting critical law enforcement operations. Our wireless expertise and technology capabilities include full-system integration, radio frequency (RF) modeling, solution design, program management, deployment planning, provisioning, testing, monitoring, training, operations, and maintenance.

Our team has extensive experience deploying various RF technologies and our engineering expertise helps solve complex problems for customers and their mission critical networks. CACI's long history of integrating and managing complex U.S. Government networks and communications programs – to include secure wireless solutions, advanced telecommunications, 4G/5G, and data networks – assures fully compliant, secure, and high-functioning mission critical networks for our customers.

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For more information about our expertise and technology, visit:

[www.caci.com](http://www.caci.com)

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## Features

- Full, turn-key wireless network solutions
- Wireless LAN, point-to-multipoint wireless mesh networks, and cellular technology
- Network design and architecture, to include site survey, heat mapping, RF modeling, and spectrum planning
- Vendor and technology agnostic design that supports refresh cycles for technology insertion
- System integration services to include two-way land and mobile radio installations
- Management of infrastructure upgrades including radio tower installation, tower maintenance, antenna replacement and maintenance, shelter installations, solar and wind power solutions, back haul communications and grounding/guying/cabling/ice bridges
- Wireless LAN survey, installation, security, access points, configuration, and maintenance
- Network operations and sustainment services for remote site monitoring via the enterprise area network, logistics, and warranty support

## Benefits

- Wireless infrastructure enhances mobile access and collaboration
- Wireless networks provide access beyond limits of wired infrastructure
- Wireless networks reduce costs of installing new cable infrastructure
- Wireless networks provide guest access without compromising enterprise network
- Wireless solutions enable rapid restoration of communications after natural disasters

## Case Study - Point to Multi-Point Network Deployment

CACI provided network integration services for fixed radio sites supporting a U.S. Government customer's operations. Our team successfully supported a deployment that featured 15 DTC NETNode robust tri-band radios across four sites that supplied rapidly deployable wireless over a customer-defined 200-square-mile area. This deployment also featured:

- Infrastructure nodes supporting DTC NetNode2x2W-5RMT (Robust Tri-Band) radios for rapidly deployable wireless Ethernet transport
- Carrier-class U.S. Government X-band microwave equipment that provided the Ethernet backhaul network in a linear, single-hop hub-and-spoke design
- Radio management and support server installation and integration
- Expert system validation and detailed coverage testing

## Deep Expertise in Reliable and Secure Land Mobile Radio (LMR) Networks

CACI supports over 20,000 U.S. Government personnel throughout the United States and overseas territories, providing interoperable, encrypted wireless communications systems engineered and maintained for round-the-clock mission operations. Our team sustains a network that can support standard operations, major incidents, disaster communications, and can scale to support additional users.

## Tailored Capabilities for Critical Missions

CACI also develops specific RF and network integration capabilities that facilitate and secure vital U.S. Government missions. Using features such as zero trust architecture and Commercial Solutions for Classified (CSfC) capabilities, we provide robust, secure systems that address complex missions. Our Spectral Vision capability uses artificial intelligence-based optimization to dynamically and autonomously manage spectrum and network resources and ensure quality-of-service for mission-critical communications in congested and contested spectrum environments. Spectral Vision delivers frequency-agile operation in multiple bands, and persistent robust wireless connection with immediate communication anytime and anywhere.

- Real-time situational awareness of the electromagnetic spectrum (EMS) and efficient evasive response. Spectral Vision features autonomous classification, identification, localization, and response to emitters in the EMS.
- Provides resilient communications with automated, optimized dynamic spectrum management while ensuring low probability of intercept/low probability of detection in support of radio access network operations.

This material consists of CACI International Inc general capabilities information that does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-10. (PR ID675)



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CACI's approximately 22,000 talented employees are vigilant in providing the unique expertise and distinctive technology that address our customers' greatest enterprise and mission challenges. Our culture of good character, innovation, and excellence drives our success and earns us recognition as a *Fortune* World's Most Admired Company. As a member of the *Fortune* 1000 Largest Companies, the Russell 1000 Index, and the S&P MidCap 400 Index, we consistently deliver strong shareholder value. Visit us at [www.caci.com](http://www.caci.com).

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