

# **Overview** | Cellular Networking Solutions

**Connecting What's Critical:** Unleashing the Power of 5G Networking within Fixed and Mobile Government and Commercial Applications

In the rapidly evolving landscape of today's digital age, cellular communication technologies have become essential infrastructure elements across a wide spectrum of government and commercial sectors. These technologies are critical for supporting robust, secure, and reliable data, voice, and video communications, facilitating seamless connectivity and operational continuity.

At MCA, our Cellular Networking Solutions (CNS) team, *formerly known as USAT*, is at the forefront of providing expertly tailored cellular networking solutions to meet the diverse needs of industries ranging from public safety to retail operations, healthcare, and beyond.

Our CNS team, enriched by MCA's *Service-First DNA*, is renowned for its exceptional expertise in designing and implementing comprehensive solutions that span the full spectrum of cellular and LoRaWAN communications technologies.

This includes sophisticated IoT, branch-specific applications, and mobile

integrations essential for modern business and mission-critical operations.

We offer a holistic service approach covering the entire solution life-cycle from planning and design, procurement, and implementation to integration and ongoing maintenance. This ensures not only the functionality but also the future-proof scalability of the networking solutions we deploy.

Equipped with longstanding partnerships with industry-leading manufacturers, our CNS team provides premium-quality devices, management platforms, and accessories that cater to the specific needs of various applications and environments.

Whether simplifying complex data transmissions or integrating multi-faceted communication systems, MCA's CNS professionals stand ready as your trusted partner to navigate the complexities of modern cellular networking, ensuring your communications infrastructure is both resilient and adaptable to the changing technological landscape.



LTE and 5G Networking Solutions for Public Agencies and Private Enterprises

Ruggedized Modems, Routers, and Gateways

Custom Antenna and Jumper Cable Assemblies

Device Configuration and Activation Services

Rapidly Deployable Day-One Connectivity

Embedded Application Development

Weather Hardened NEMA Enclosures

Portable Networking Devices and Kits



Discover the breadth of our CNS teams offerings, designed to enhance your communications infrastructure. Our range includes rugged routers, antennas, device management applications, and custom-built solutions. We provide comprehensive professional services, from device configuration and activation to ongoing maintenance and bespoke application development, ensuring reliable and efficient cellular connectivity tailored to meet diverse needs

### **Cellular Routers and Gateways**

MCA's Cellular Networking Solutions (CNS) team offers a comprehensive array of rugged routers, gateways, modems, and wideband adapters tailored for a diverse range of applications across IIoT, branch, and mobile environments.

Our robust device lineup is engineered to meet the stringent demands of industrial and mobile operations, ensuring reliable connectivity even in the most challenging conditions.

Partnering with industry leaders such as Semtech (formerly Sierra Wireless), Cradlepoint (part of Ericsson), Digi International, and MultiTech Systems, we provide cutting-edge technology that is ruggedized to withstand harsh environmental factors.

These devices feature varying degrees of shock, vibration, temperature, and ingress protection to ensure performance stability. For operations in hazardous environments, a select range of our devices also comes with Class 1 Div 2 and ATEX certifications, making them ideal for industries requiring stringent safety measures.

Our solutions include single and dual radio configurations, supporting both cellular and Wi-Fi connectivity. This flexibility allows for tailored communication strategies that fit the specific needs of any deployment area, from remote IIoT sites to dynamic mobile settings.

Moreover, the majority of our devices are equipped with dual SIM options, offering multi-carrier support which ensures continuous connectivity. This feature allows for automatic failover and fallback between carriers, enhancing network reliability and uptime.

This redundancy is crucial for maintaining seamless operations, especially in critical communication environments where connectivity interruptions cannot be afforded Additionally, many of our devices incorporate GPS capabilities, enhancing tracking and management of mobile assets.

The shift towards 5G networking is central to our offerings, with modern devices designed to leverage the speed and capacity of 5G networks, though 4G models remain available to support lower data needs. For very low data requirements, legacy technologies like NB-IoT and CAT M1, along with newer options like LoRaWAN, are also available, providing efficient and cost-effective solutions for wide-area network applications.

This comprehensive portfolio ensures that our team can equip any organization with the tools needed for secure, reliable, and scalable data communications.

### **Custom Antenna and Cable Jumper Assemblies**

We offer a comprehensive selection of rugged directional and omni antennas, crafted to meet the stringent demands of mobile and outdoor deployments. Our manufacturing partnerships with industry leaders like Mobile Mark and Poynting Antennas ensure access to high-quality solutions that are tailored to the unique challenges faced by our clients.

Our antenna solutions are designed for resilience, featuring robust protections against wind, UV radiation, sea spray, and physical impacts. This makes them ideal for demanding environments, whether on land or at sea. To accommodate specific installation requirements, we also provide customized jumper cable assemblies — precisely cut, crimped, and capped according to exacting specifications. Each antenna in our portfolio offers varying degrees of shock, vibration, temperature, and ingress protection, ensuring reliable performance under harsh conditions.

Our antennas are available in compact enclosures that house multiple antennas, allowing for concurrent cellular, Wi-Fi, and GPS connections through a single compact unit. For locations with limited cellular coverage, we offer long-range models that extend the reach of network connectivity in remote areas.

#### **Centralized Device Management**

We provide a robust array of device management applications designed to facilitate over-the-air device monitoring and updates, including out-of-band management capabilities. Our collaborations with leading manufacturers such as Cradlepoint, SemTech, Digi International, and MultiTech ensure that we offer cutting-edge software platforms tailored to the needs of diverse organizational environments.

Our team exists to serve our nations critical infrastructure by creating secure communication networks that pass data wirelessly between key systems linking remote personnel, facilities, and machine assets.

Cradlepoint NetCloud offers comprehensive management through a cloud-based platform, enabling users to maintain and update their devices remotely, ensuring continual network integrity and security with IoT, Mobile, and Branch plans.

Digi Remote Manager by Digi International offers a secure platform for device management, allowing for real-time updates and alerts, ensuring that all devices operate at peak performance with minimal downtime.

SemTech's ALMS and AMM offer robust tools for efficiently monitoring and managing large router deployments. With ALMS providing essential data on device health and network status, while AMM enhances mobile connectivity solution management.

MultiTech's DeviceHQ and LENS platforms specialize in managing a range of MultiTech devices, offering user-friendly interfaces that support device configuration, firmware updates, and advanced troubleshooting tools.

Each software platform is uniquely tied to its corresponding hardware from these manufacturers, featuring varying levels of reporting, diverse feature sets, and different user interfaces to cater to specific organizational needs. Our CNS team excels in assisting clients to choose the most suitable software solution that aligns with both their existing infrastructure and new deployments, ensuring optimal performance and ease of management.



#### **Fixed Enclosures and Portable Kits**

Our team expertly crafts and provides two highly specialized solutions: Custom Built NEMA Enclosures and Rapidly Deployable Portable Communications Kits, tailored to meet the stringent requirements of diverse operational environments.

- NEMA Enclousures: Our custom-built NEMA enclosures are engineered to exact client specifications, providing a robust and secure housing for cellular routers and antennas. These enclosures are also designed to integrate solar arrays for off-grid power solutions and have the capacity to include client-specific equipment such as switches, relays, RTUs, and PLCs. This makes them particularly suitable for industries like electric and power, oil and gas, and mining, where durable and weather-resistant protection is critical for effective lloT device management and control.
- Portable Kits: Our Tactical Rapid Advanced Communications Kit (TRaCK Box) is a versatile solution designed to support field operations ranging from government to public safety applications. These portable and hardened communication kits can be equipped with various router options to support a client base of 50 to over 250 end-user devices. The TRaCK Box is ideal for both small and large-scale operations, providing a reliable and quickly deployable system that enhances coordination and communication in remote or temporary field setups.

Both solutions underscore MCA's commitment to delivering state-of-the-art communications infrastructure that is both scalable and adaptable to the unique demands of our clients' critical operations. Whether it's a static installation in a challenging environment or a mobile setup for field operations, our CNS team ensures that every solution not only meets but exceeds the operational requirements with precision and reliability.



Our team specializes in the design of custom NEMA enclosures, expertly tailored to safeguard and integrate vital communications and control equipment in demanding settings.



Our TRaCK box delivers robust, portable cellular communication solutions, effortlessly supporting field operations with scalable connectivity for diverse governmental and public safety scenarios.

#### **Value-Added Services**

We offer an extensive range of Standard and Professional Services that elevate us beyond the level of simple equipment resellers, cementing our reputation as a leader in comprehensive connectivity solutions.

Our *Standard Services*, branded under the **DevProv+ Suite**, ensure robust connectivity for business and mission-critical operations. DevProv+ encompasses device provisioning, configuration, template loading, device kitting, and ongoing technical support. Additionally, our **ExpressM2M** plans provide gated and semi-gated cellular data solutions tailored for customers with dynamic data needs, enhancing the value of our DevProv+ offerings. Other standard services include on-site installations, custom cable and antenna solutions, ensuring a tailored fit for each of our customers deployments.

Our *Professional Services* are designed for organizations seeking extensive product life-cycle management and include system implementation, customer-specific training, proof of concept testing, system auditing, engineering maintenance, and RF site surveying. These services are crafted to deploy and maintain sophisticated enterprise-grade networks in both fixed and mobile settings, ensuring that each aspect of your communications infrastructure meets the highest standards of performance and reliability.

With MCA, you gain a dedicated partner committed to the seamless operation and ongoing excellence of your critical communication systems.





## **Our Cellular Networking Team**

Our overview of MCA's Cellular Networking Solutions (CNS) team highlights our unwavering commitment to expertise and excellence, which are fundamental to every solution we deliver.

From rugged routers and antennas designed for the toughest environments, to our innovative device management applications, and our portable TRaCK boxes tailored for rapid deployment—each solution is meticulously crafted to ensure reliable, secure, and efficient communications.

Our DevProv+ Suite of Services and ExpressM2M gated cellular data plans exemplify our commitment to providing flexible, robust services that adapt to your unique requirements. Our professional services extend this commitment by offering end-to-end life-cycle support for your network — from initial deployment to ongoing maintenance and training.

MCA's CNS team, evolved from USAT with a legacy of excellence since 1996, is your trusted partner in building and maintaining resilient communication networks. Our in-house experts are dedicated to helping you **Connect What's Critical™**, ensuring your remote personnel, facilities, and machine assets are always within reach.

Whether you're looking to enhance communication in rugged industrial settings, manage sprawling IoT networks, or ensure seamless data flow across mobile fleets, MCA stands ready to bring your connectivity solutions to life with unparalleled expertise and a service-first approach.

#### >> Contact Us Today



# **About MCA**

MCA is one of the largest and most trusted technology integrators in the United States, offering world-class voice, data, and security solutions that enhance the quality, safety, and productivity of customers, operations, and lives.

More than 65,000 customers trust MCA to provide carefully researched solutions for a safe, secure, and more efficient workplace. As your trusted advisor, we reduce the time and effort needed to research, install, and maintain the right solutions to make your workplace better.

Our team of certified professionals across the United States delivers a full suite of reliable technologies with a service-first approach. The MCA advantage is our extensive service portfolio to support the solution life-cycle from start to finish.

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