

MISSION CRITICAL INTERNET OF THINGS

EARLY WARNING ALERTING SOLUTIONS



SOUND THE ALARM

NATURAL AND MANMADE DISASTERS ARE ON THE RISE

Providing early, clear, and continuous communication during an emergency is key to preventing loss of life and minimizing panic.

Extreme weather events are on the rise, such as tornadoes, hurricanes, floods, tsunamis, and earthquakes. These extreme weather events, along with threats from terrorism and disasters from human negligence, create an urgent need for early warning systems that can provide community members with timely notifications to help them stay informed and take appropriate action.

When emergencies strike, it is imperative to reliably deliver the right information to the right people, fast, in order to best protect residents and minimize the impact to individuals, structures, and the environment.

Mission Critical Internet of Things (MC-IoT) from Motorola Solutions can help, allowing you to collect, analyze, and share real-time information from your mass notification and alert systems. With event-specific emergency communications sent to targeted audiences, messages are more effective. Motorola Solutions MC-IoT enables smarter, more efficient, and more proactive communications, to keep communities as safe as possible.



SIREN SYSTEMS EXPOSED

to increasing number of cyber attacks



SOLUTION BRIEF | SIREN SOLUTIONS PAGE 2



INTELLIGENT SIREN SOLUTIONS IN ACTION

MOTOROLA SOLUTIONS DELIVERS

Motorola Solutions enables operators and system maintenance personnel to pro-actively manage and maintain community wide siren and emergency alert systems. Our MC-Edge™ gateway enables exceptional remote monitoring capabilities and instant siren activation over the ASTRO P25 network.

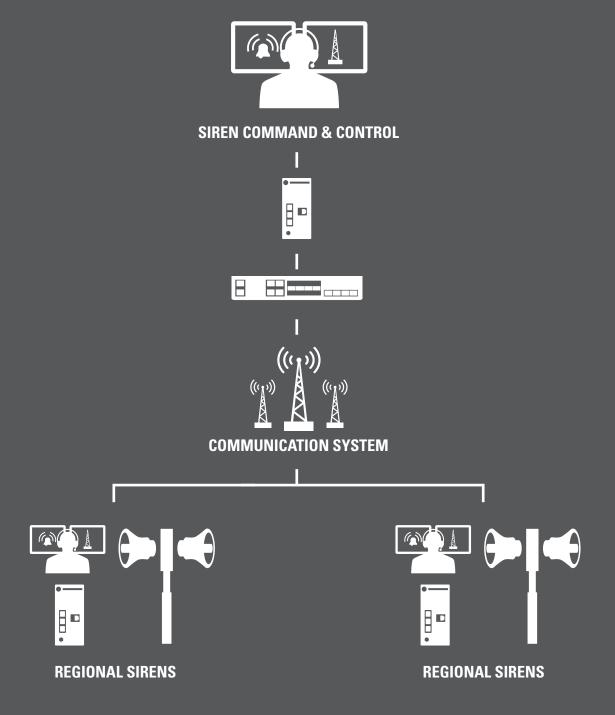
Essential Services help ensure peak system performance and system uptime. Our services provide access to technical support resources for troubleshooting and maintenance, plus system and application software upgrades.



HIGH LEVEL SYSTEM ARCHITECTURE

FIVE PRIMARY COMPONENTS MAKE UP THE EMERGENCY WARNING SYSTEM.

- **1. Activation Control Point** Provides the user interface for the operator to monitor and control the sirens.
- 2. Field Interface Unit (FIU) Acts as the communication gateway to the sirens
- **3. Communications Network** ASTRO P25 and additional parallel communication link.
- **4. Siren MC-Edge (APX4000) Controller** Integrates to the sirens in order to provide monitor and control capabilities.
- **5. Sirens** Provide the audible alerting mechanism. Exisitng or new sirens will be supported.



MC-EDGE

YOUR GATEWAY TO MISSION-CRITICAL IOT

As the hub for seamless IoT connections, MC-Edge is P25 ready, capable of handling inputs from hundreds of low-power wireless sensors up to 10 km. And with extensive security and ultra-reliable communication capabilities, MC-Edge makes it easy to implement, support and grow your IoT systems to fully support all your mission-critical operations.



ROLE-BASED ACCESS CONTROL

Assign specific roles and permissions to perform certain operations based on those roles — i.e. security admin could define roles and assign permission to each user.



ENCRYPTION

Data-at-Rest (DAR) protection ensures all sensitive data stored on devices or applications is encrypted with FIPS 140-2 validated AES 256 bit encryption significantly reducing the threat of lifting confidential data from compromised devices. Secure data in transit with end to end encryption with AES 256 bit encryption.



FIREWALL

Permit or deny data transmission into your system or device based on rules and established criteria. All IP messages must pass through a firewall which examines each one and blocks those not meeting security criteria.



AUDITING

Monitor suspicious activity such as deviations from the set security policy. Any attempt of unauthorized access to a secured MC-Edge will be blocked and logged. The security log is encrypted and saved in FLASH memory to prevent malicious alteration and can be retrieved for forensic purposes after the event.



TIME-WINDOW COMMANDS

Add additional layers of defense to limit the risk of replay attacks such as a disgruntled employee with legitimate access. Timestamps are added to the command messages. The subsequent "action" must be received within a designated time and contain elements that match otherwise the action will be rejected.



INTRUSION DETECTION SYSTEM

Automatically look for malicious activity or violations of security policies. The MC-Edge will only allow legitimate traffic to enter and block malicious activity. Unauthorized activity is logged and can be reported to a designated control center.





UNUSED PORT DEACTIVATION

The MC-Edge enables unused ports to be disabled, reducing its vulnerability to unauthorized access.



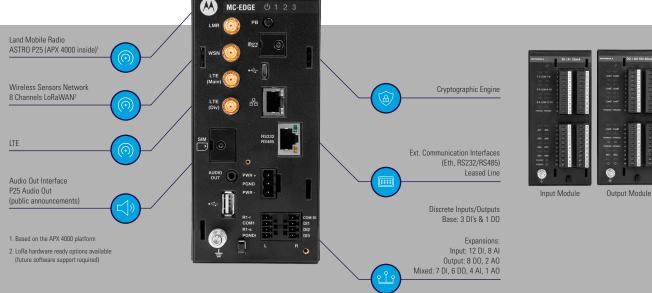
ACCESS CONTROL

Verify access to an MC-Edge is legitimate from both other edge devices or system users with authentication.



SERVICE AND SUPPORT

Essential Services (a one year services commitment is required with MC-Edge purchase) provides 24x7x365 remote technical support, software updates, software upgrades and hardware repair at regional authorized repair facilities.



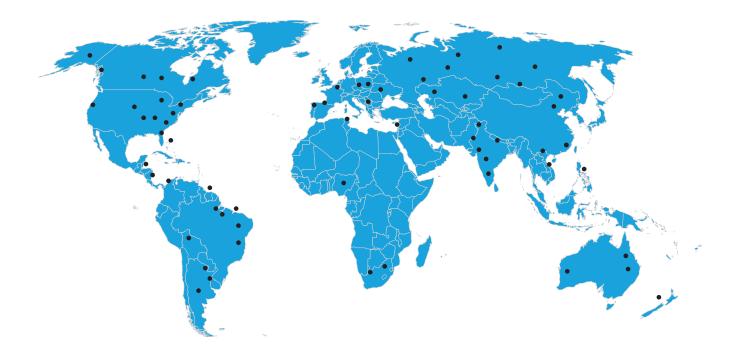
Mixed I/O Module

WHY MOTOROLA SOLUTIONS?

Motorola Solutions Mission Critical IoT enables smarter, more efficient emergency communications, so you can proactively and reliably safeguard your community, extend the life of your emergency systems, and optimize operating efficiencies. Our MC-IoT solutions help you better collect, analyze, and share real-time event-specific information from your mass notification and alert systems.

Our extensive partner ecosystem is certified to develop, integrate, and deploy MC-IoT systems. With Motorola Solutions MC-IoT, you can more reliably deliver the right information to the right people in any situation, minimizing an emergency's impact on residents and keeping communities safe and informed.

- Over 200,000 Mission Critical IoT and Telemetry communication controllers installed worldwide
- Mission Critical Security -Lock down your network with end-to-end encryption, access control and logging of events and information flow
- Benefit from multiple layers of network resilience and Motorola Solutions proven experience in building mission critical networks
- Process data and trigger actions at the edge, increasing response times and automating workflows



For more information, please visit motorolasolutions.com/mciot to learn more on how you can enable smart and secure siren and early warning notification systems.

