# IQ Fire Station Alerting System

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## FASTER TURNOUT SAVES LIVES

## GET OUT THE DOOR FASTER WITH THE IQ FIRE STATION ALERTING SYSTEM

In fire emergencies, every second counts. Fire departments need to be alerted the moment an incident is reported for the absolute quickest response. Shortening the emergency response cycle requires a dispatch and alerting system that is not only reliable but also intuitive and easy to maintain.

RadioMobile's IQ Fire Station Alerting System sets the standard for speed, accuracy and accountability when you need it most. It can be customized to meet your department's needs, helping to ensure safety, streamline communication, and improve response times.

# IQ FIRE STATION ALERTING SYSTEM HELPS YOU MEET YOUR RESPONSE TIME GOALS

858-444-1330

# BENEFITS

*Technology is the key to meeting your response time goals while, at the same time, ensuring the health and safety of your team members. IQ Fire Station Alerting System (IQ FSAS) is a fully integrated, Windows-based, programmable system that provides simultaneous alerts to multiple stations instantaneously, shaving valuable seconds off critical response times. Below are just a few of the benefits IQ FSAS provides.*

## SPEED

IQ FSAS helps fire departments meet critical response requirements, helping you remain in compliance with local policies and NFPA. IQ FSAS sends simultaneous, instantaneous alerts to multiple stations as identified by the CAD system. Text-to-speech technology reads CAD text information and plays it over the station PA system or the radio channel, eliminating the dispatcher's time to voice alert the stations. The fire station's control unit and command terminal receive the alert and initiate a sequence of events that have been configured for each individual fire station.

## ACCURACY

IQ FSAS makes certain that everyone responding to a dispatch has the exact details of the incident regardless of their location. The details of the dispatch are displayed on supervisor's terminal as well as remote displays and printed in less than one second on a "rip and run" printer so they can take it with them, eliminating guessing in case MDC is not available.

## ACCOUNTABILITY

IQ FSAS seamlessly integrates with RadioMobile's in-vehicle mobile data computers (MDCs), so supervisors and responders know the exact location and status of emergency apparatus and personnel at all times. IQ FSAS ensures that everyone is visible and accounted for throughout the entire incident cycle.

## FLEXIBILITY

IQ FSAS is an end-user programmable system with customizable alerting. Lights and tones or voice messages can identify each apparatus required for the call, whether it is an engine, truck, battalion chief, specialty apparatus or medics. Alert lights and tones also correspond to particular crew rooms, so responders are only alerted to calls if they are needed for the specified apparatus required by the incident dispatch message. Tones, voice messages, and colored lighting are used to identify only the exact emergency personnel who need to respond.

## INTEROPERABILITY

IQ FSAS interfaces with multiple CAD systems, CAD vendors and dispatch centers allowing you to alert other agency stations and vice versa. IQ FSAS optimizes connectivity over multiple networks and types including IP, LTE, LMR and satellite.
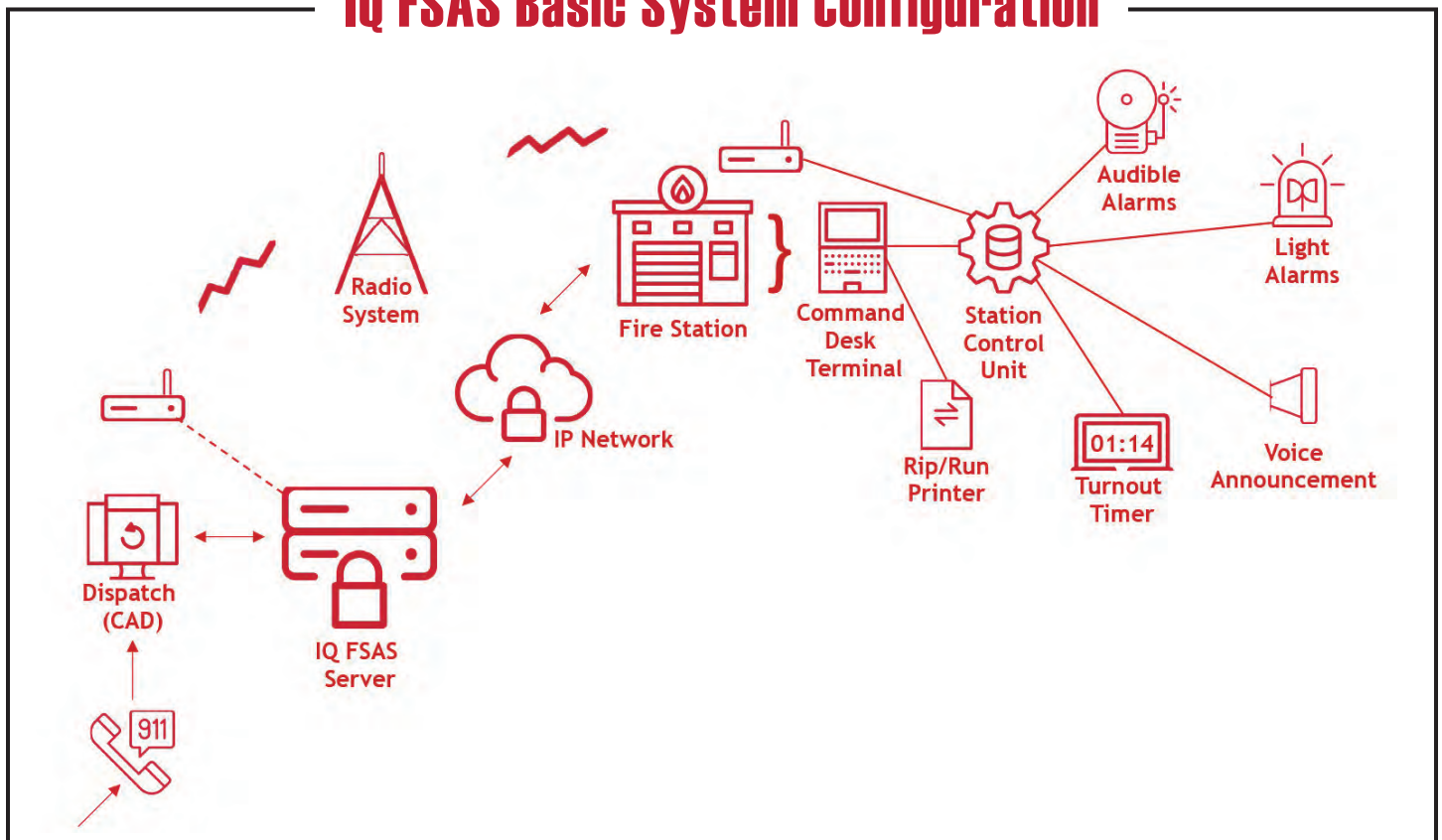
# SYSTEM DESIGN & COMPONENTS

*IQ FSAS is designed to meet your needs now and well into the future. It features standard peripherals as well as general purpose inputs and outputs (I/O) for system expansion into additional auxiliary station functions. The modular design makes it possible to add apparatus and fire stations as well as future technologies without service disruption and without having to replace the entire system or its components.*

The IQ FSAS high-level system diagram below demonstrates a basic system configuration consisting of the dispatch center (911/CAD), the communication networks, one or more fire stations, and the IQ Station Control Unit (SCU) and the corresponding peripherals.

## IQ FSAS Basic System Configuration



The CAD can communicate with the fire stations over traditional RF networks or over wired or wireless IP networks. The IQ FSAS Server provides an IP interface to the CAD and relays dispatch messages and status updates between the CAD and the fire station, specifically the Command Desk Terminal and the IQ Station Control Unit. These, in turn, control the peripherals including lights, speakers, turnout timers, bay doors and other equipment.

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# CORE COMPONENTS

## IQ FSAS SERVER

This Windows-based server handles data between one or more CADs using IP communications that generate the proper formatted incident messages to the fire station's Command Desk Terminal over wired or wireless IP networks. The server also logs information such as location data and reports.

## COMMAND DESK TERMINAL

Typically located in the supervisor's office or command location, this Windows-based computer runs the application to execute user-defined sequences for each incident type or message. these sequences contain step-by-step commands to the IQ Station Control unit as well as prerecorded voice messages for equipment status such connection status, main power status and other conditions, like an incoming phone call or paging.

Features include:
- Touch screen interface for ease of use
- Alert message decoding from dispatch systems
- Drives remote display terminals via ethernet or HDMI
- Customizable codes compatible with agency's current alert system
- Reports status and failures
- Messaging between fire station CDT and mobile units when using IQ Mobile application.

## IQ STATION CONTROL UNIT

The IQ Station Control unit (SCU) is the core of the IQ FSAS. The SCU utilizes IP-based or LMR-based digital communications, I/O for external control, PA for driving speakers, and interface to the Command Desk Terminal for user interface. An integrated internal battery system supplies backup power for up to 1 hour of emergency operation while the station's backup power comes online or is maintained. It is expandable and customizable to meet agency and station needs.

Features include:
- Relay controlled outputs (general purpose use)
- Opto-isolated inputs
  (alert switches, indicators, doorbell, etc.)
- External audio inputs (telephone interface, mic input, LMR radio inputs, PA inputs)
- Speaker zones (independently selected audio zones)
- 200-watt (max) audio power amplifier feeds 4, 8 ohm or 70v speaker with individual volume control
- Supports multiple wireless interfaces for voice, tone alert and data messaging use

## CORE COMPONENTS (cont)

### RIP-N-RUN PRINTER (RnR)

A printer with 4" paper that immediately prints out the dispatch information in less than a second. The printer guarantees that responders have the exact detail of the incident available to them as they are heading out the door, including the first turns out of the station.

# OPTIONAL STATION COMPONENTS

### TURNOUT TIMER (ToT)

A digital, count-up timer that is started when the dispatch alert is received. It can be set to stop at any point during the Incident sequence condition based on requirements. Available in different size numerals.

### REMOTE DISPLAYS

Remote displays may be added to the IQ FSAS to display incoming dispatch messages or other Incident Information in a variety of locations throughout the station.

Display options include:
- Extended monitor via Ethernet or HDMI
- Incident map
- Resource status

### CREW ALERT MODULE (CAM)

A configurable light and speaker fixture that contains a speaker, bright LED illumination and colored LEDs that indicate the required crew for response.

Features include:
- Response unit identifiers (5 colored LEDs)
- Speaker and multi-color lights configurable for pathway/space lighting
- Crew-specific or all call
- Rapid flash option
- Heart-saver audio
- Eye-saver red light strips

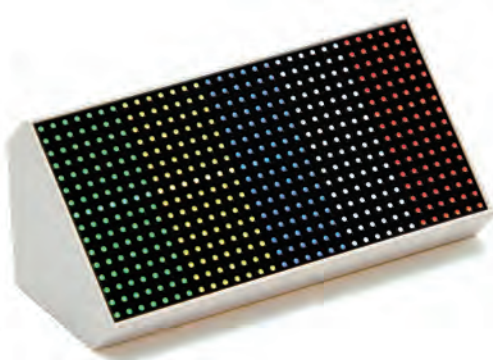## OPTIONAL STATION COMPONENTS (cont)

### CREW ALERT LIGHT (CAL)

Same as the CAM without the speaker and includes multi-color lights configurable for pathway/space lighting, crew specific or all call alerts, and rapid flash option.

### CREW ALERT SPEAKER (CAS)

Includes configurable volume and on/off control within audio zone(s).

### CREW ALERT PANEL (CAP)

A 16 x 32 RGB LED panel with definable colors indicating which crews are being alerted.

Features include:
- Response unit identifiers (LED bars) coinciding with CAM indicators
- Layout provides for rapid identification of unit

### ZONE SELECTOR PANEL (ZSP)

A selector placed like a wall switch at the room door allows personnel to select the crew occupying that room for that shift, so they are only alerted when dispatched.

Features include:
- Touch panel LCD screen
- Brightness control
- Works with CAM and CAL

### VOLUME CONTROL (VC)

Volume Control (VC) rotary switch that adjusts volume for a specific speaker. Allows for configuration to be set for lowest volume or off. Works with CAM and CAS.

### EXTERIOR/LARGE AREA SPEAKER

Used in apparatus bay and outside locations where additional volume is needed. Configured in audio zones and for specific shift requirements such as "good neighbor."

## OPTIONAL STATION COMPONENTS (cont)

### ACKNOWLEDGEMENT (ACK) BUTTON

Simple button interfaced to SCU to acknowledge alert from multiple locations within the station.



### EMERGENCY (EMER) BUTTON

Simple button interfaced to SCU to activate emergency alert within the station.



### RADIO MUTE (MUTE) BUTTON

Simple button interfaced to SCU to mute the radio audio in the SCU. (Alert configuration overrides this function.)



### DOORBELL (DB) BUTTON

Simple button interfaced to SCU to activate doorbell from exterior location(s).



# OPTIONAL CORE SYSTEM COMPONENTS

### Backup Dispatch Alerting Console

Enables system-wide backup and stand-alone alert dispatch functionality at dispatch positions. Provides dispatch position with ability to bypass CAD and alert stations directly.

Features include:
- CAD maintenance support
- Unplanned CAD unavailability
- Remote operations (EOC, Mobile Command, etc.)





### Web Monitor

IQ Web Monitor is a web-based application used for monitoring and/or troubleshooting the key components of a station alerting system or mobile data network. It provides information about alarms generated from the equipment along with key statistics across the entire system at a channel level and/or mobile level.

# SEAMLESS INTEGRATION

## IQ MOBILE EMERGENCY RESPONSE SOFTWARE

RadioMobile's IQ Mobile software application integrates seamlessly with the IQ FSAS, keeping mobile units and fire station personnel operating in complete harmony. IQ Mobile software runs on both Windows and iOS making it easy for responders to switch between devices without the need to learn two different systems.

Features include:
- Real-time incident dispatching
- Mapping including custom layers
- Navigation including turn-by-turn directions
- Automatic vehicle locations (AVL)
- Automatic and time-stamped status updates
- Messaging between fire station CDT and mobile units
- Access to critical data such as hydrants, power lines, fire history, etc.

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# FEATURES

*The IQ FSAS is a fully automated, digital fire alerting system capable of interpreting and converting CAD dispatch data into Fire Station actions such as alert tones, lights, message displays, dispatch voice, etc. Below is a list of key features.*

## DISPATCH OPERATIONS

- Reduces dispatch-processing time by sending digital alert data over a high-speed network
- Notification of multiple stations simultaneously in less than a second
- Automated text-to-speech voice announcements, with the goal of reducing critical response times
- Direct interface with most Computer-Aided Dispatch systems (CAD) allows for two-way communications and status updates
- Manual dispatch backup options available allowing for alerting in the event CAD is unavailable
- Interfaces with multiple CAD systems, CAD vendors and dispatch centers allowing you to alert other agency stations and vice versa
- Receive a positive acknowledgment at dispatch that the alert was successful
- Automatically log and time stamp all system events, alarms and dispatch operator actions for post analysis

## COMMUNICATIONS SYSTEM

- Multiple data communication links mean that an alert will get through even if one link is down
- Automatic monitoring and notification of system health gives you the confidence that the system is ready to perform
- Multiple levels of system redundancy thanks to 100% independent backup alert option
- Continuously and automatically monitors and records system status and issues spoken warnings on equipment concerns
- All alarms and events are time and date-stamped, stored, and available for review and printing
- In the event of primary power loss, an internal battery system provides up to 1 hour of emergency backup power allowing alert system to continue functioning

## FEATURES (cont)

### STATION EQUIPMENT

- Incident details are simultaneously displayed on the Command Desk Terminal, external display monitors (if installed), and spoken over station speaker system
- Alerts, triggers, actions, sequences, tones, timers can be easily configured locally and remotely
- Unlimited user-defined response sequences
- User-defined tones and voices
- Custom alert tones by type of alert
- Easily scheduled pre-recorded voice announcements
- Controls station lighting during an alert sequence
- Ability to strobe in high noise environments or to attract attention
- Provides ramped night vision supported lighting for nighttime dispatch.

- Day/night operation of an outside light and speaker may be controlled independently from other station equipment
- Up to six audio inputs
- High-power audio amplifier drives station overhead speakers during an alert.
- Integration with station appliances, bay doors and other devices during an alert sequence.

### STATION ZONING

- Heart-saver alert tone precedes all alerts
- Zone control alerts (lighting and audio) only the crew(s) and/or spaces needed for the call
- Provides colored indicators to confirm dispatched equipment types
- Zone Selector Panel allows flexibility in room assignments

# PROFESSIONAL SERVICES

*RadioMobile provides a complete array of professional services ensuring that IQ FSAS meets your requirements from start to finish. All services are provided by qualified technicians in accordance with established industry standards and codes with the goal of minimizing disruption to current operations and safeguarding personnel.  Services include:*

- Project Management
- System Engineering
- Consulting
- Software Development
- System integration
- Acceptance Test Procedures (ATP)
- Complete Operational Manual

- On-site training
- CAD integration
- Customization
- Proof-of-Concept
- Simulation and test capability of alerts/actions
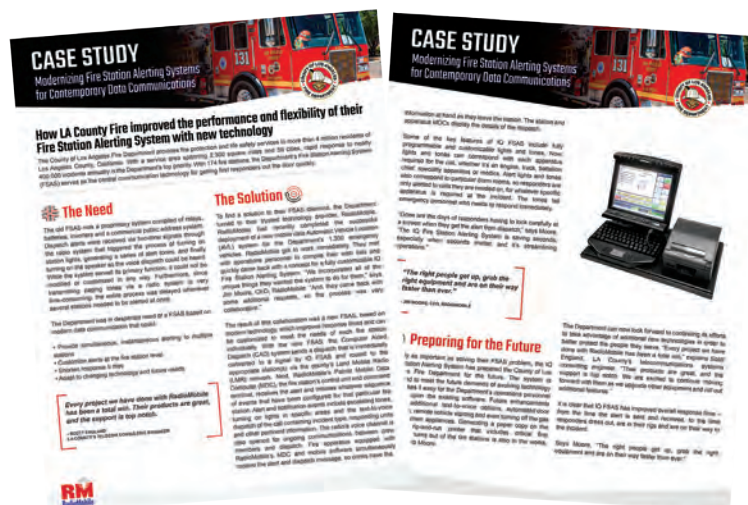- 24/7/365 customer support

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"Every project we have done with RadioMobile has been a total win. Their products are great, and the support is top notch."

- SCOTT ENGLAND, LA COUNTY'S TELECOM CONSULTING ENGINEER

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# WHO WE SERVE

*RadioMobile partners with leading fire departments and other agencies to make a difference throughout their operations with customized solutions that address their unique challenges.*

To learn more about IQ FSAS click below to read the
Los Angeles County Fire FSAS Case Study.

https://www.radiomobile.com/la-county-fire-case-study

# COMPLIANCE AND WARRANTIES

## NFPA 1221 Compliance for Emergency Services Communication Systems:

IQ FSAS technology supports NFPA 1221 (2019) compliance in the following areas:

- Multiple means of dispatching
- Multiple CAD integration
- Alerts within seconds
- Unique alarms for specific crews
- Continuous response time improvement
- Integration beyond the fire station and into the mobile units supporting the entire incident lifecyle
- Support for ruggedized in-vehicles mobile data computers
- Support for wired and wireless dispatching of different types
- Independent backup power sources
- Integrity monitoring and 2-way status reporting

- Network security and user authentication and role-based access
- System backup and redundancy

## NFPA 1710 Compliance

IQ FSAS technology supports NFPA 1710 (2020) compliance in the following areas:

- Logging and reporting for evaluation and continuous improvement
- Improvements in quality management
- Reliable and redundant communications system
- Support for training mode

## WARRANTY

IQ FSAS includes a 3-year equipment warranty.

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