

BadgeR+ 5

Technical Specifications

BadgeR+ Overview

BadgeR+ 5 is the wearable panic button endpoint for the 911Cellular Safety Platform. Operating over existing enterprise 2.4/5 GHz Wi-Fi without requiring additional hardware, it delivers proximity and Wi-Fi RSSI-based positioning, live audio streaming and automated 911 dispatch integration.



Physical Device and Power

Dimensions	78 mm × 52 mm × 7 mm
Weight	1.04 oz
Form Factor	Mount vertically or horizontally on a standard badge reel or lanyard
Charging Interface	USB-C rechargeable; USB-C cable included
Battery Life	Up to 6 months per full charge, depending on usage
Warranty	1-year limited warranty covering manufacturer defects
Operating Environment	Designed for indoor commercial environments

Network

Badge Data Transmission	HTTPS and WSS over TLS 1.2 with certificate-chain validation
RF Bands	Dual-band 2.4/5 GHz Wi-Fi (802.11 a/b/g/n/ac/ax)
Enterprise Security (802.1X)	WPA2/WPA3-Enterprise credential-based EAP with optional PEM CA certificate; CA certificate required for WPA3; 192-bit mode unsupported
Personal Security	WPA2/WPA3-Personal (WPA2 minimum) with AP-dependent PMF support
Network Footprint	Deep-sleep default; wakes for health heartbeats, status checks, configuration/OTA operations, location tracking and active alerts

Data Security, Storage and Integrations

In-Transit Security	Enforced TLS 1.2 via HTTPS/WSS with certificate-chain validation
Cloud and Portal Security	AES-256 cloud storage at rest; HTTPS-enforced portal access
On-Device Storage	Encrypted NVS and XTS-AES-128 flash encryption
Encryption Architecture	Transport encryption in transit plus server-side encryption at rest; non-E2EE
Platform Integrations	Centralized cloud portal, remote OTA firmware updates, open REST APIs, webhooks, RSS and CAP protocols (VMS/ACS/PBX)

Fleet Deployment and Management

Centralized Management	Device configuration, status checks and fleet health monitoring through the 911Cellular Safety Platform
Proactive Battery Alerting	Automated email and SMS notifications to platform administrators when a badge falls below the defined battery threshold
Remote Firmware Updates	Remote OTA firmware deployment across managed badges; no physical access to individual devices required

Audio

Protocol	Binary WebSocket (WSS) over TLS 1.2 with certificate-chain validation
Audio Format	Mono I ² S mic; 16 kHz / 24-bit sampling converted to 16-bit PCM
Signal Pipeline	Raw ambient capture; no ANC, AGC or digital filtering
Privacy	Event-triggered only; no passive background listening or continuous local recording during normal operation
Active Duration	Up to 10 minutes per active alert

Location

Indoor Positioning	Access Point (AP) proximity sensing and Wi-Fi RSSI metrics
Location Data Flow	Location data transmitted over facility Wi-Fi to the 911Cellular Safety Platform via HTTPS/WSS over TLS 1.2
Privacy	Event-triggered only; no continuous location tracking during normal operation
Active Duration	Up to 10 minutes per active alert



See BadgeR+ 5 in Action

See how the 911Cellular Safety Platform works and discuss your deployment requirements with our team.