

## PARTNER SOLUTION OVERVIEW

# ARUBA & AMBERBOX

## A Shot in the Dark: Next-Generation Gunshot Detection

One of the most dangerous situations faced by first responders is arriving onsite where a live shooter is inside the building. Without knowing the location of, and weapons used by the shooter, first responders are in jeopardy of the unknown. Situational awareness can help save lives and assist in apprehending the perpetrator more quickly.

Emerging technologies for public safety sit at the cutting edge of the detection and mitigation of threatening situations, with gunshot detection being an essential element in that toolbox. Despite claims about sophisticated machine learning algorithms, older generation gunshot detection systems based on acoustic sensor arrays were notoriously prone to false alarms.

The most current generation of gunshot detection relies on multiple sensing mechanisms – muzzle flash, impulse, and pattern matching – to validate the presence, type, and even barrel length of discharged firearms. The result is fewer false alarms and more efficient routing of first responders to active shooter involved incidents.

While firearm-related fatalities are more than twenty times higher in North America than in other countries, the balance is shifting as this problem becomes global in scale. As a result – schools, sports facilities, enterprise workplaces, and government institutions worldwide are looking to improve situational awareness through the deployment of gunshot detection systems.

Some barriers to keep in mind are - installing a dedicated network to support gunshot detectors is not economically viable, and many IT departments will not permit such overlay networks. Additionally, battery-operated sensors on wireless networks present cybersecurity risks by bypassing standard IT security monitoring tools. There are also maintenance issues associated with battery replacement.

### WHY ARUBA & AMBERBOX?

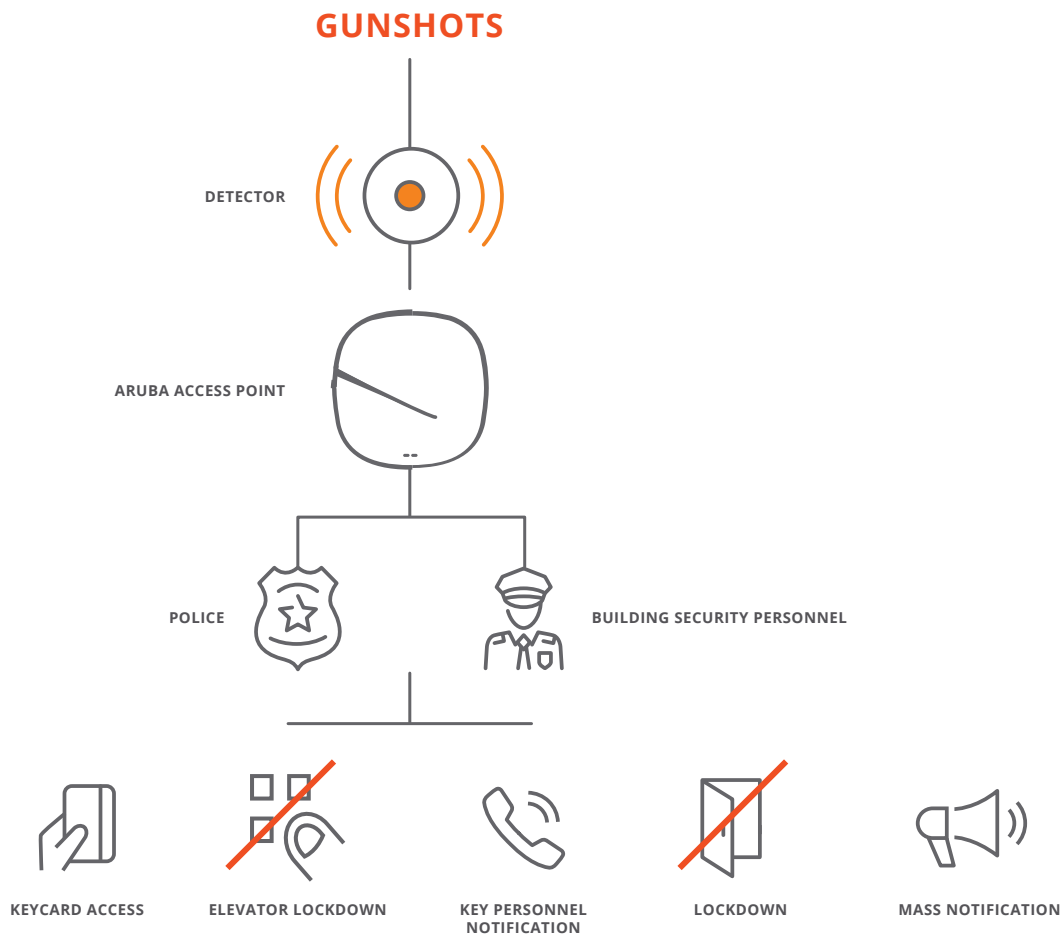
- Tri-factor authentication sensor provides enhanced gunshot detection with near-zero false alarms
- Leverages Aruba's secure Wi-Fi mobility infrastructure and can be used with 802.11ac and 802.11ax access points
- Eliminates the cost of purchasing, deploying, and maintaining a separate overlay network
- Secure tunneling protects communications
- Simple set-up and adds/moves/changes

Aruba's Wi-Fi 6 access points overcome these issues by providing a USB port that supplies power and data communications for gunshot detectors. Standard Aruba security mechanisms then help protect against malicious or unintentional security breaches.

### ACCESS POINTS AS AN IOT PLATFORM

AmberBox, a leading provider of next-generation gunshot detectors, and Aruba have partnered to ensure that first responders can be reliably notified that an active incident is in process. Applications include private and public institutions of all types and sizes.

The joint solution works with Aruba Wi-Fi 6 (802.11ax) or Wi-Fi 5 (802.11ac) access points already deployed on-site, avoiding the need for a separate overlay network. AmberBox sensors interface with the access points' USB ports, which provide both power and data access. Sensor spacing matches the access point spacing required for voice applications. The use of AmberBox sensors does not interfere with the access point's ability to deliver high performance data and other IoT services – including voice, video, location, and telemetry.



The sensors use acoustic and infrared data to recognize when firearms are discharged. Within roughly 3.6 seconds, the sensor identifies the actual gunshot signature and relays an alert using the USB port. Access points use secure tunnels to relay data to the AmberBox monitoring application. Automatic alerts can then be sent to law enforcement via the AmberBox cloud-based e911-certified platform, with additional notifications to building security or other responding parties. A conference call line is automatically established to share information and coordinate efficiently.

AmberBox can also immediately activate building security systems while alerting personnel with SMS, email and call notification. Real-time shooter location tracking can be viewed through the Web or a mobile response platform.

Aruba's Dynamic segmentation of IoT traffic is maintained throughout the Aruba infrastructure, protecting the rest of the network against compromised devices. Aruba switches automatically set-up secure connections with Aruba access points without the need for separate VLANs, regardless of the switch port into which they're connected. This feature simplifies the initial deployment of the access points, and minimizes opportunities for miswiring during adds, moves, and changes over the life of the deployment.

## UNIQUE VALUE PROPOSITION

Key benefits of a jointly deployed solution include:

- Gunshot detectors can be placed where needed without new cabling or PoE injectors
- No maintenance required, unlike with battery operated systems
- Retrofits into existing Aruba campus and hospitality access points
- Supplements security solutions from Aruba and other partners including occupant safety monitoring, video surveillance, door locking controls, and wayfinding solutions
- Leverages and does not circumvent Aruba cybersecurity solutions

## CERTIFIED INTEROPERABILITY

We've taken the guesswork out of deploying this joint solution by certifying the interoperability of AmberBox sensors with Aruba infrastructure. Set-up is also a breeze. Just select "AmberBox" from a drop-down menu on the access point configuration page, select the IP address of the software, and you're done. This allows for joint deployments to be setup more quickly and simplifies the maintainance of the complete solution.

## SUMMARY

The ability to leverage an Aruba wireless infrastructure as a platform for supporting gunshot detectors and other public safety devices is ideal for today's public and enterprise workplace environments. Jointly deployed with AmberBox sensors, Aruba access points dramatically improve situational awareness so first responders better know what they're facing on arrival. Contact your local Aruba sales representative for more information or to schedule a joint demonstration.

To learn more about Aruba wireless, please visit:

<https://www.arubanetworks.com/products/networking/access-points/>

To learn more about AmberBox, please visit:

<https://amberbox.com/>