

Bastille

Cell Phone Detection: Buyer’s Guide

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Cell Phone Detection: Buyer's Guide

Cell Phone Detection - The Elephant in the Room

With all the apps on our phones, and how much we use them, we tend to think of cell phones as chatty devices that reveal their presence frequently due to their frequent radio/wireless/cellular transmissions. However, this is simply not the case. If all cell phones were transmitting all the time, the cellular networks would fail. Think of emergencies. During these periods of many users trying to use their phone at once, cellular networks often fail. As such, cell phones are designed to not clog-up the cellular networks by transmitting as infrequently as possible.

In the Bastille Radiolabs, we have seen phones make no transmissions for between eight and ten minutes. Any product, including Bastille's solutions, might have to wait for several minutes before they see a cellphone and can alert on its presence. As such, cell phone detection devices that are located only outside a room or facility can miss many phones that do not transmit at the moment they are carried into a facility. Imagine how far you could get inside a facility with a phone if you had 8 to 10 minutes...

With this context in mind, the question becomes: how can I choose the best cell phone detection solution to keep my facility secure? In the following sections, we dive into some of the key considerations to make when deciding on a cell phone detection solution for your organization.


Cell Phone Detection Solution Buyer's Guide Criteria

Organizations seek to accurately detect cell phones, and detect hidden cell phones within their premises for a variety of reasons including:

- **Security:** Locating cell phones inside secure and sensitive areas such as C-Suites, SCIFs, SAPFs, R&D labs, Data Centers & Correctional Facilities.
- **Safety:** Excluding cell phones from clean rooms, chemical plants, warehouses, loading docks.
- **Regulatory Compliance:** Identifying personal cell phones on trading floors or within government regulated and/or controlled facilities.

Consider the following questions to help define the ideal approach and solution for you:

Topic	Ask Yourself:
False Alarm Tolerance	Can we handle alarms for cell phones which are actually not in our building or in the area where phones are not allowed? What will happen if the system has too many false positives?
False Negative Tolerance	What is the cost of a phone entering the area/facility that the technology does not see and alert upon?
Standalone vs. Integrated Solution Requirements	Do we need the cell phone detector to integrate with any existing security systems e.g. a SIEM (Splunk, Sentinel etc), or alert via a physical security management system (e.g. Lenel OnGuard, Genetec, etc.)?
Location Accuracy	Do we need to locate cell phones within 1-3 meters to diminish false alarms and allow the phones to be found and removed?
Ability to Locate All Wireless Devices, not Just Find Hidden Cell Phones	In addition to cell phone detection, do we need to detect and locate Wi-Fi, Bluetooth, Bluetooth Low Energy, and IoT devices and transmitters on all frequencies (e.g. laptops, tablets, fitbits and other personal health monitors, hearing aids and other medical wearables, rogue networks, Wi-Fi devices including Access Points, covert wireless cameras and audio bugs, IoT based building infrastructure and other authorized and unauthorized wireless devices, infrastructure and networks)?



After considering your answers to these questions, you should be at the point of evaluating different solutions that best meet your needs. While the choice of the best cell phone detector depends on the range of priorities as detailed above, it also depends on your budget.

While hand held scanners and devices installed only at the door cost a fraction of the investment required to install a system like Bastille throughout a facility, bad actors attempting to actively evade detection are hard to find with a single cell phone detection device attempting to be a complete hidden cell phone detector; whether it's placed at the entry doorway or in the hand of a roaming security guard. The following sections will provide insight into some further considerations when it comes to deciding on the cell phone detection system that is most appropriate for your organization.

Cell Phone Detector for SCIFs and SAPFs

SCIFs (Sensitive Compartmented Information Facilities) are accredited areas, rooms, or buildings where sensitive compartmented information can be handled in a secured manner. The ability for a cell phone detection system to detect and manage unauthorized cell phone usage in such environments is crucial for preventing unintended information leaks and ensuring operational security.

SAPFs (Special Access Program Facilities) handle access to Special Access Program (SAP) information, which pertains to highly classified projects and missions. The enhanced security measures required for SAPFs necessitate robust surveillance and detection capabilities via a robust cell phone detection solution, such as those provided by Bastille, to mitigate risks from electronic devices.

In June 2023, the United States Secretary of Defense issued policy guidance for use of personal or portable electronic devices within SCIFs and SAPFs. Included within the guidance were the following specifics:

- “Issue policy guidance for use of personal or portable electronic devices within SCIFs and SAPFs by September 30, 2023.”
- “DoD Components will then program for appropriate electronic device detection systems and mitigation measures in all DoD SCIFs and SAPFs by September 30, 2024.”

With this timeline established by the SECDEF, finding an appropriate electronic device detection solution is imperative for those working in sensitive facilities. When thinking about a cell phone detector for governments, and their most secure spaces such as SCIFs and SAPFs, Bastille has the right qualifications. Bastille has NIAP Common Criteria (CC) accreditation, multiple ATOs, and customers throughout the DoD, IC, and Law Enforcement. Bastille also has the cleared personnel to discuss and manage your most sensitive projects.

Ferromagnetic Cell Phone Detector vs Continuous Monitoring

A ferromagnetic cell phone detector is a device designed to detect the presence of cell phones by identifying the ferromagnetic materials (like iron, nickel, cobalt) present in their components.

A ferromagnetic cell phone detector has a very short range of only 1-2 feet. This means they are best suited for screening at the entrance to an area, and not for cell phone detection for an entire building. Further, while these detectors will typically find a device in a jacket or pocket, a determined bad actor could easily place the phone in a body location highly likely to avoid detection by a manual scan. In addition, environmental factors (e.g. the presence of other magnetic sources in areas with high metal content), can make tuning hard and lead to high rates of false negatives - not detecting cell phones when in fact there is a cell phone present.

To give a clearer picture of the difference between ferromagnetic cell phone detection and a continuous monitoring system, like Bastille, consider the following:

Topic	Continuous Monitoring	Ferromagnetic Detection
Detection via Magnetic Properties of Physical Device Components		✓
Device Detection Upon Entry to a Facility	✓	Possible
Short range device detection (1-2 ft.)	✓	✓
Long range device detection (10ft. +)	✓	
Real-time device tracking and location data	✓	
Telemetry on device activity	✓	
Disambiguation of individual cell phone signals (for accurate device detection and localization data)	✓	
Effective facility-wide deployment	✓	
Integration with existing security infrastructure	✓	

The Bastille Cell Phone Detection Solution

Bastille's advanced software defined radio (SDR) based sensors are placed throughout a facility to enable cell phone detection. Even if a cell phone makes no transmissions for 5, 8, or 10 minutes, Bastille will immediately see the phone when it does transmit, locate it, and create an alert.

Bastille is an ideal cell phone RF signal detector due to the use of SDRs. Bastille's advanced technology doesn't use simple "power detection" to find cell phones. Power detection cannot distinguish between one quiet phone a few feet away and a loud phone 50 meters away, nor can it distinguish between 1 phone and 10 phones. Bastille finds individual cell phone signals, disambiguates them, and shows an individual dot on a floor plan map for every phone in a facility. Bastille therefore has zero false positives, compared to the many false positives seen with cellular power based cell phone detectors.

Since Bastille detects and locates individual cell phones anywhere, there are no missed cell phones, meaning no false negatives. Bastille's cell phone detection system of patented algorithms and technology lead the industry in accurate device location for cell phones and all other wireless devices. Devices are located within 1-3 meters to permit identification and removal as required

Security is a team sport. Bastille's APIs and our proven and certified integrations permit our system to integrate with your existing network and security infrastructure from SIEMs, to physical and video camera systems, through to your networking infrastructure.

Bastille's cell phone detection solutions are trusted and in production use with the world's largest companies, in addition to government customers in DoD, IC and Law Enforcement. Bastille provides both portable solutions and fixed building solutions. We have sensors which operate in climate controlled environments, and others which are IP67 rated to be used outdoors and in harsh environments. Bastille protects millions of square feet of critical and sensitive locations every day.

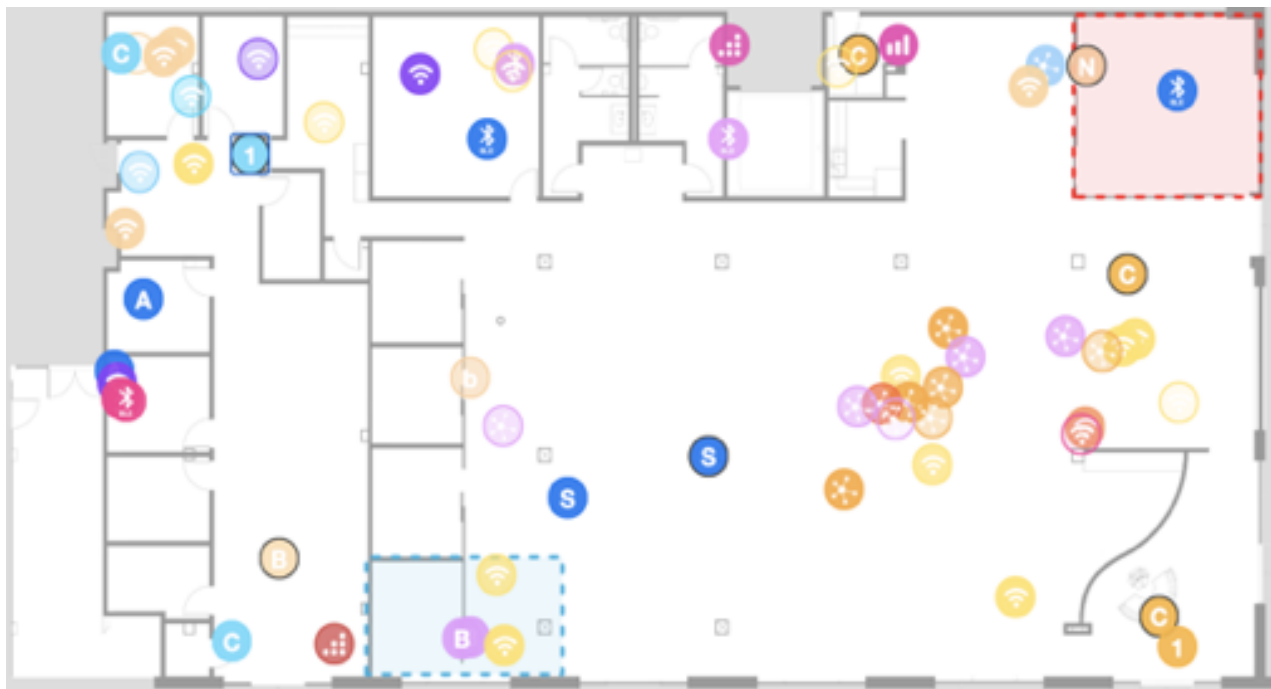
Ultimately, our commitment is to providing you with the best security solutions for your unique use case. To discuss your cell phone detection solution needs further, reach out to us at info@bastille.net, or visit our website at bastille.net for more information.

About Bastille

Bastille specializes in providing security solutions for wireless environments. Bastille uses a network of Software-Defined Radios (SDRs) to continuously monitor a facility's entire wireless environment, including cellular, Bluetooth Classic, Bluetooth Low Energy (BLE), Wi-Fi, Zigbee, and other protocols. Our sensors detect, analyze, and localize transmissions in real time, providing a comprehensive view of wireless activity.

Bastille's system goes beyond just identifying signals; it analyzes data to uncover real-time and long-term threats. By capturing the entire wireless spectrum, Bastille offers unparalleled visibility into potential security risks, empowering organizations to proactively safeguard their wireless infrastructure.

To learn more please visit <https://www.bastille.net> or follow us on [LinkedIn](#).



Bastille UI: The dots on the floor plan represent each individual device located by Bastille