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Market Report:
Cannabis

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Cannabis at a Glance

About the author

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Market Report: Cannabis

The cannabis industry in the United States has unique requirements, and presents distinctive opportunities, when it comes to video surveillance systems. Currently a roughly $13.6 billion industry, the cannabis market is enjoying a compound annual growth rate (CAGR) of around 30% and is on track to be a $30 billion industry by 2025.

Cannabis is fully legal in 11 states and the District of Columbia. It is legal to some extent, either for medical uses and/or now "decriminalized," in 33 states (including use of non-psychoactive CBD oil in some states).

"As more and more states become legal, there will be a quick jump in market growth," comments a Hikvision spokesperson who guides the cannabis industry initiatives for video system company Hikvision USA. "It is still in its infancy. There is a lot of growth and investment, and more opportunity in the market."

A Need for Compliance

Each individual state where cannabis has been legalized has developed its own set of regulations governing the industry, and cannabis businesses manage their finances largely in cash. State regulations generally require strict record-keeping and tracking of product from "seed to sale." Detailed procedures are mandated to control and protect assets, and internal accounting methods are required for accuracy and reliability.

State regulators oversee cannabis operations and enforces state laws. Some states use a software system called Metrc to track and trace cannabis plants and products from the seed to the final customer sale. The system allows cannabis industry operators to report required events and information and enables regulators to oversee license holders' activities to monitor and enforce compliance. Using Radio Frequency Identification (RFID) technology and serialized item tracking, the system gives regulatory bodies real-time visibility into industry operators' inventories.

Requirements for video surveillance are specified in some states, including particular areas that must be monitored, minimum retention times for video (e.g., 90 days), minimum frame-per-second video capture and recording rates, and even minimum camera resolutions.

Requirements for video surveillance are specified in some states... including minimum FPS video capture and camera resolution.

Compliance is a basic requirement of doing business in the cannabis market–even a higher priority than security. Each cannabis facility must be compliant in order to operate, a starting point onto which additional video surveillance benefits of security, loss prevention and operations efficiency are added.

Security. Cannabis companies need to provide perimeter protection, entrance and exit detection, and access control to authorized areas. Cannabis retailers are as vulnerable to robbery and burglary as any retailer, even more so because of the need to store cash on the premises.

Loss prevention. "Shrinkage" is the bane of any retailer's existence, and the high value of cannabis products makes the issue even more urgent.

Business intelligence. Like other retailers, cannabis companies need data to guide their management of the business. Useful data includes understanding how customers move around a retail store, which retail items attract the most attention, and what hours tend to be peak shopping time for customers.

Challenges for the Industry

Specifically, cannabis companies face additional challenges:

- **Managing a cash-only business.** Because banks are federally regulated, cannabis companies do not have access to banking services and therefore must manage their finances largely on a cash basis. Keeping cash on hand requires a higher level of security.

- **Optimizing the retail environment.** Cannabis retailers face many of the challenges of any specialty retailer, including a need to manage workforce levels to address peak business times; to analyze customer traffic patterns to leverage merchandising opportunities; to minimize shrinkage, especially internal theft; and to provide a high level of customer service.

- **Monitoring processes to avoid loss.** Temperature, humidity and other conditions in cannabis grow rooms must be closely tracked to avoid product loss from process failures.

- **Controlling access.** There are areas where employees and/or customers require access and other areas where they are prohibited (server room, cash room, etc.).

- **Avoiding theft.** Theft is a problem for retailers; addressing the challenge is even more urgent given the possibility of "under-the-counter" sales in the cannabis industry.

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- **A higher level of control.** Cannabis companies can ensure efficiency and profitability by closely tracking and monitoring plant growth, transportation and sale.
- **Cost-effective solutions.** Bandwidth and storage can be expensive, so cannabis companies depend on video compression to minimize costs while providing high-resolution video. Connection using existing coaxial cabling infrastructure can also save costs.
- **Unified management of multiple sites.** A central management system enables owners of multiple cannabis locations the ability to manage their business from one centralized location.
- **Embracing cybersecurity best practices.** Network attacks over the Internet have the potential to disrupt a cannabis business, disable or redirect technology assets, and/or disclose unauthorized data.

Technology Solutions for the Cannabis Market

Broad area surveillance. Video systems provide situational awareness and operational data for cannabis retailers. Dual benefits are to deter internal and/or external threats and to simultaneously view operational efficiencies to improve the customer experience. Use of 360° or 180° panoramic view cameras cover large areas, such as loading docks, parking lots and stock rooms, with an ability to zero in on areas of interest.

Detection of images in the dark. Video technology can now provide enhanced image detail and color, even in extreme lighting conditions, to provide sharp details.

Business intelligence solutions. New features on security cameras provide data that can direct business operations for greater efficiency. Heat mapping displays customer movements through a store, identifying hot spots where higher-value goods might be displayed. People counting data helps a business owner ensure that adequate staff is on hand to provide better customer service and can be combined with sales data to highlight conversion rates. Video analytics such as line queuing can alert business owners about excessive wait times.

Integration with point-of-sale (POS) systems. Video systems integrated with POS systems can provide associated video for each recorded transaction. POS exception reporting can highlight suspicious transactions, and associated video can clarify and/or confirm the situation. Centralized systems can manage transactions at multiple locations.

Video analytics. License plate recognition and other video content analytics are helpful to cannabis business operations and help reduce false alarms. Smart analytics such as line crossing and exit/entrance detection provide early warning capabilities.

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Access control. Who is allowed where and when? Which employees accessed certain areas when an incident occurred? Controlled access to specific areas, such as the grow room, packing room, cash room, etc., is required in some states, and is a benefit to any cannabis business. Analytics can "fence off" critical areas, creating alarm notifications when an area is breached.

Process control using thermal and visible cameras. Thermal technology provides early warning for fire detection and to detect moisture levels in grow areas. Accurate monitoring data ensures plant safety.

Leveraging existing infrastructure. HD-over-coax takes advantage of existing coaxial cable infrastructure to transmit high-definition video, thus reducing costs associated with system upgrades to high definition.

Looking to the Future

Cannabis is becoming a mainstream business, with a geographically expanding market and expanding variety of products, including edibles, oils and concentrates. Cannabis companies may also have multiple locations to manage.

More than 20 states designated the cannabis industry as essential during the coronavirus outbreak, a dramatic reflection of the growing profile of an industry that has essentially developed from nothing since 2012, when the first states legalized marijuana. Some marijuana advocates expressed hope that up to 40 states would have some form of legal cannabis by the end of the year.

With a bright future on the horizon, the video surveillance needs of the cannabis market will also grow exponentially. Video will continue to be a critical tool to ensure compliance, security, loss prevention and more effective management of cannabis companies.

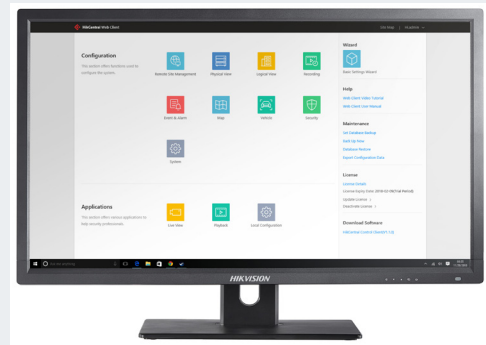# Hikvision Products for the Cannabis Industry

1) Performance Thermal: Hikvision's DS-2TD2617 series thermal camera can detect temperature changes, providing early warnings for fire detection, as well as detect moisture levels in grow areas. Paired with high quality video and images, it provides accurate monitoring data and ensures product/asset integrity.

2) ColorVu Technology: Hikvision's ColorVu cameras gather maximum light in order to provide full color imaging in extremely dark or low-light settings. The (DS-2CD2T47G1-L) ColorVu cameras are particularly useful after hours, and in situations such as "Dumpster Diving."

3) Fisheye Camera: Hikvision's (DS-2CD63C5G0-IVS) fisheye can provide effective broad-area surveillance, especially in open floor settings. Coupled with Hikvision's heat mapping feature, this product will indicate high traffic areas in a cannabis retail facility, delivering data for product marketing optimization, effective product placements and effective product upselling.

4) HikCentral: The HikCentral CMS (centralized management system) allows a cannabis owner/operator to manage multiple facilities from one location. Fully scalable, HikCentral integrates with disparate systems giving cannabis facility owners an effective, efficient security system which supports cutting-edge analytics. With the ability to support License Plate Recognition, human/vehicle detection, and even third-party cloud support; HikCentral is an advanced business intelligence system designed to maximize profit , and optimize customer service, as well as safety and security.