# Beyond Security

## The adoption of body worn cameras by commercial markets

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Johnson Controls

# The case for body worn cameras
## New capabilities and VMS integration expands uses

### Introduction

What once began as technology typically reserved and embraced by law enforcement, wearable video continues to find applications and use cases in a host of new industries. Adding a body worn camera solution into an existing surveillance system allows businesses to centralize video footage and manage it all from their Video Management System (VMS). This adds yet another layer to security detection and protection with adoption leading to numerous other benefits.

Police departments, government security agencies and private security personnel were among the early adopters of body worn camera technology. Now other markets are moving to take advantage of these surveillance systems for cost savings, training, validation, deterrence, documentation, incident review, transparency and employee safety. With many realized benefits to deployment, users are spanning many verticals, including retail, private security, commercial, healthcare, stadiums/event venues, education, public transportation, casinos and banking.

### Market snapshot

The body worn cameras global market was valued at nearly $444 million in 2020 and is expected to reach $1.05 billion by 2025 according to a report, "Body Worn Camera Market Research Report", from marketresearchfuture.com. These wearable cameras offer various advantages to the end user, such as simple mechanics, robust design, wide field of view, portability and functionality to be worn on the body, and providing high-quality videos. According to the report, the technological advances in sharing options, such as GPS functions and WiFi connectivity that enables the users to keep track of their position and speed, have also led to the market's growth.

The market for wearable cameras gained momentum after federal funding programs for law enforcement body worn cameras were announced by the Justice Department in 2015. The Body Worn Camera Pilot Implementation Program provided millions for the purchase of devices, training and impact studies.

The ability to connect to the internet and enable data exchange between the network and device is also among the major driving factors leading to the technology's increasing popularity. In security, safety and other applications, adding a body worn solution to an existing surveillance system allows users to centralize security video footage and manage it all from their network video recorder (NVR) and VMS.

Body worn cameras eliminate the 'he said, she said' interactions that can occur between customers and employees or workers and team members. Audio-enabled video recordings verify incidents and situations and can be integrated with other onsite cameras for an even more complete, holistic view of events and interactions. As they can be deployed with on-premise servers as a local recording solution or hosted in the cloud, the user has flexibility in deployment and easy scalability. In every market, body worn cameras provide an additional, higher level of situational awareness for the wearer, the user and the facility.

### Technology overview

Body worn cameras are lightweight wearable recording devices that can be affixed to clothing or belts and accessories. The video, which includes time/date indicators and GPS coordinates, directly integrates into NVRs/VMS through open platforms.

Solutions typically consist of cameras and docking station, system controller and the video storage and include a variety of mounting accessories to tailor the unit to the wearer and the application. The docking station, in single or multiple bays, provides the mechanism for offloading video from the camera and recharging the camera battery. The system controller works in conjunction with the docking station, storing video temporarily until it can be uploaded to the VMS for local recording or sent to the cloud for storage. To ensure a clear image quality, body worn units are often available in high-resolution format with wide dynamic range and a 140-degree field of view (FOV) to capture other activity in proximity to the event. An SD memory card provides both onboard storage and dual microphones. When a body worn camera records video at 30 frames per second it provides fluid event capture in daytime or night in low-light conditions. A single battery charge should also be able to last a typical work day, whether that is a shift of eight or 12 hours. Finally, look for fast, reliable video and data offloading and end-to-end encryption (AES 256, AES TMP, HTTPS, TLS) to ensure the device is cyber-secure both during data transfer and at rest.

Video is imported into the NVR and accessible for viewing after downloading. The NVR talks to the controller and relies on it to push video to the recorder. Camera time is burned into the captured video exports, with bookmarks, search, timeline view and smart search features available only after import into the NVR/VMS platform.

Multiple system controllers can be easily integrated for applications with numerous users and body worn cameras.

**Other benefits:**

· Asynchronous (digital) video offloading at gigabit speeds
· Separated intelligence from docking stations
· Open ecosystem with easy integration
· Supports large on-premise installations

**Deployment best practices**

Like other technologies, proper installation and implementation are necessary to get the most out of the solution. Consider these best practices and tips for body worn cameras:

· Default the system controller to factory settings before preparing the system for configuration.
· Disable the default proxy setting during manager setup to ensure easy connection to the NVR.
· Ensure the camera time in the body worn manager is set to your local time before connecting to the NVR. Also make sure the imported video has the intended timestamp burned to help facilitate searching in the NVR.
· Back up configuration settings regularly to facilitate the import of the latest updates on demand.
· Remember that body worn camera usernames are the cameras' names in the system - but they have no permissions.
· Looks for units with advanced fall protection that won't activate upon shaking but will automatically engage if the wearer falls. Automatic activation via a Bluetooth sensor on the holster as an option can trigger the camera to turn on when a firearm is drawn.

## Integration carves a total solution

Support for body worn cameras through VMS integration provides more robust capabilities, scalability and best-in-class cybersecurity practices and yields a holistic, unified solution. In addition to the importance of video quality, storing and managing recorded video from body worn cameras is critical. It needs to be securely stored and maintained to retain integrity of the video and associated data for future retrieval – that's where the importance of the VMS enters. The VMS and its software need to seamlessly interact with the unit – while providing functionality like the ability to organize and search through footage from multiple sources arranged by time, date, location and user.

Managed as part of the network, body worn cameras become another security asset that can correspond to other surveillance, such as video captured by a fixed camera outside a retail location or at campus sports stadiums or public venues. When an incident occurs, video from the body worn camera, surveillance inside the store, and any other acquired footage provides a complete picture of the event from multiple vantage points and devices.

In addition, recordings are tamper-proof and video remains intact from recording in-camera until upload into the VMS or cloud. In many systems, the data is encrypted during transfer and at rest in the cloud or VMS.

VMS integration with body worn cameras offers these key features:

- The ability to securely and quickly transfer video and audio, assisting with evidence management and providing a lower total cost of ownership
- Streamlined searches for body worn footage using smart search capabilities based on the user of the camera, date and time
- Security and privacy through encryption, access rights and storage infrastructure
- Better evidence gathering by effectively transferring video to VMS in a centralized storage location

**Coverage and optimization**
Partial incident video coverage is an overriding concern when deploying body worn cameras, especially when initiating the device or turning it off is left solely to the discretion of the user. Consider proper optimization of your body worn specification and establish policies and practices to ensure coverage extends from the first interaction to final resolution.

### Consider these five use cases for body worn cameras:

#### 1. Healthcare

Leveraged in healthcare, assisted living or other patient-oriented facilities, body worn surveillance protects both patients and personnel. Hospital security officers, who are often first responders to incidents, need to detail interactions. In addition, body worn cameras can be used by healthcare workers for patient monitoring, management and documentation of patient interactions.

#### 2. Education

Providing greater overall situational awareness to campus security and school resource personnel, wearable video devices document security tours and assist at sports arenas during events. This helps crowd management, controlling of attendees and handling issues with confrontational crowds or duress situations. In our video-centric society where students might be recording incidents on their smartphones, body worn cameras provide an equal tool to capture encounters accurately for greater transparency, accountability and liability protection. In addition, they often prevent events from escalating when cameras are known to be observing situations.

#### 3. Retail and customer service

Offering an opportunity for users to evaluate and optimize service, body worn cameras create more responsive customer engagement and an overall improved experience in many different businesses. They can assess and monitor curbside pickup efficiencies. Things like 'no mask' events, delivery problems, retail point-of-sale transactions and other areas where a disagreement or problem may arise can benefit from video documentation to ensure smoother interactions with the public.

#### 4. Commercial

Body worn cameras run the gamut of use cases in commercial markets and facilities. Assisting security personnel with general tasks, crowd management and behavior management for public interaction, these devices also provide liability protection and maintain information transparency for follow up or evidence. These devices can confirm a slip and fall for insurance purposes, identify individuals trespassing at a commercial warehouse, or detect theft of goods. In transportation logistics, body worn cameras add checks and balances to procedures and provide real-world training tools.

#### 5. Policy and procedure compliance

Body worn cameras visually monitor policy adherence and evaluate risks. In the energy sector, utilities, mining operations or for lone-worker safety, body worn cameras protect workers and document adherence to regulatory compliance. In general operations safety, video provides recording of incidents or can be used for training personnel. Lone workers at remote sites can use these devices for real-time support and documenting maintenance or site work challenges.

### Four interesting use cases

1. **Zoo and livestock husbandry:** Document interactions to manage animal welfare.
2. **Curbside pick-up:** Now a staple because of the pandemic, managers can monitor and assess employee interactions with customers.
3. **Delivery drivers:** To protect themselves and their customers' orders, body worn cameras track orders and drop-offs to customers.
4. **Construction inspection:** Hands-free with video and audio, crews can document important findings during maintenance and service while lone workers get enhanced safety protection.

### Privacy and policy discussions

Deploying body worn cameras at your organization requires an execution policy and clear directives on video subject usage. Some organizations may be subject to General Data Protection Regulation (GDPR), which prohibits comprehensive monitoring of areas or spaces without a reason that serves the public interest. In addition, as with any other surveillance, it must not be conducted where a reasonable expectation of privacy exists and without appropriate signage indicating possible video capture and recording. Consult your local jurisdiction's regulations for more information.

### New users emerging

Traditional video surveillance has become an indispensable and multi-purpose tool. It can be deployed for intrusion detection and identification or in facility operations to assure proper procedures and regulations are followed. It can also be used as video evidence for workforce injury or other potential points of liability.

Body worn cameras are now emerging as another essential component of security, safety and enhanced situational awareness, presenting new use cases and opportunities for systems integrators. Bolstered by the ability to integrate, control and manage these devices like other surveillance assets through a centralized NVR and VMS platform creates the potential for numerous business expansion possibilities.
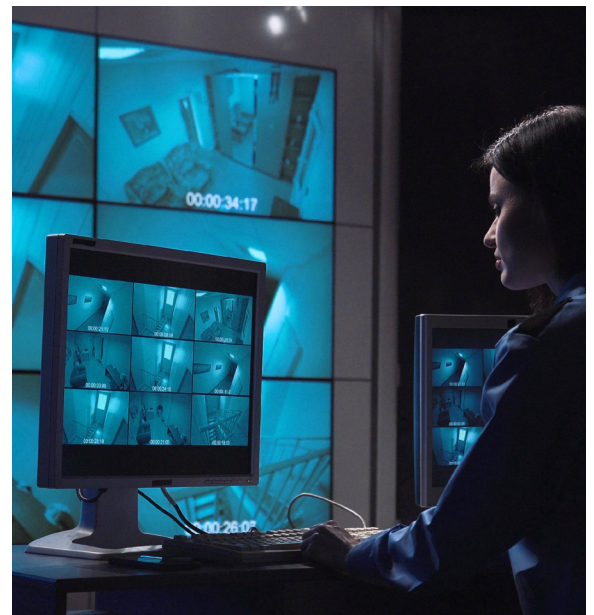


## For more information on body worn cameras or to get started, visit www.illustracameras.com

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