



Transparency. Accountability. Trust.

Article

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TRANSPARENCY. ACCOUNTABILITY. TRUST.

David O'Connor, i-PRO Americas Inc., lists the essential features to consider when evaluating body-worn cameras for law enforcement

The adoption of body-worn cameras by law enforcement has surged, driven by the need for enhanced transparency, accountability and trust between officers and the communities they serve. Body-worn cameras capture unbiased audio

and video footage of public interactions, crucial for fair investigations and legal proceedings.

This article will explore five core features to evaluate when selecting body-worn cameras for law enforcement agencies, incorporating cutting-edge technological

advancements and addressing ethical considerations.

Durability and reliability

Body-worn cameras must withstand the daily rigors and harsh elements encountered both indoors and outdoors. Military-grade durability and weather-resistant capabilities are essential.

They should be made from durable materials, handle common types of shock or impact and withstand the elements with MIL-STD 810H military-grade testing and an IP67 weather-resistant rating. Innovative approaches, such as modular designs with replaceable components, can extend the life of body-worn cameras and reduce long term costs.

Because officers typically have a known workflow with an important piece of equipment, they're not fond of changing the instinctual "muscle memory" they've developed over time with such gear. Consistency within an agency (equipment and process) is an important means of achieving dependable, high quality results.

Some body-worn camera manufacturers offer a lifetime warranty and will readily replace defective units. However, the replacement may include a newer model with additional/different support requirements or user interface. Because officers typically have a known workflow with a piece of important equipment, they're not fond of changing the instinctual "muscle memory" they've developed over time with such important gear.

Consistency within an agency (equipment and process) is important for achieving dependable, high quality results. Frequent breakdowns may indicate potential failures to capture critical

incidents. Manufacturers should guarantee consistent device performance through rigorous testing and robust warranty support, ensuring devices rarely fail when capturing crucial evidence.

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Battery runtime

Ensuring body-worn cameras maintain power throughout extended shifts is essential. Developments in battery technology, such as higher density power cells and energy efficient operation modes, can significantly enhance operational readiness.

More than any other factor, battery runtime is directly impacted by how the unit is used during a given shift, including the base configuration, persistent connectivity, features activated and ambient conditions. A 12-hour operation target is useful as it covers most shifts, allowing users to record multiple incidents with periods of standby.

Ambient temperature impacts battery performance, with most batteries lasting longer in warmer temperatures. Clear data from manufacturers showing battery runtime against features and temperature is vital. Systems should be designed for quick battery swaps to address continuous field use challenges and the camera and battery should be sufficiently water-resistant to ensure functionality during battery swaps.

Choosing a unit with a field-replaceable battery pack is beneficial, as most battery packs are capable of delivering a usable service life of two to three years before needing replacement.

Lightweight and flexible mounting options

Ergonomics and comfort are paramount in body-worn camera design. A well-balanced device ensures good functionality with minimal distraction or discomfort. If the unit is too heavy, it will become a distraction. If it's too light, it might not have a battery that lasts long enough or could be too fragile for fieldwork. Different body types wearing different types of uniforms, even within the same department, for different times of the year based on climate, also need to be considered.

Industry standards like the Klick Fast mounting system provide flexibility and ease of use, adapting to different uniforms and body types across varying climates. It's essential to select a body-worn camera that offers flexible placement and captures a useful recording from each wearer's point of view, regardless of their height, uniform or equipment requirements.

Choose a camera with an adjustable field of view, such as 16 x 9 (more panoramic) or 4 x 3 (more vertical), to ensure it can meet specific operational needs.

Video and audio quality

High quality video recording is essential for capturing clear, actionable footage. The overall video quality is influenced by factors including the lens, sensor sensitivity and resolution, frames per second rate (FPS) and the type of image compression employed. Compression algorithms, while ▶



standards-based, can be unique to each manufacturer. H.264 is a tried and true standard for video, while H.265 can result in more efficient use of space but requires more processing power, impacting battery life.

Full HD video quality at 1080p or 720P and high bitrates may overwhelm existing network infrastructure, especially when multiple officers upload video to the cloud. Bitrate ultimately dictates the size of a video file and impacts the smoothness of motion capture. Format flexibility is key. By allowing for a range of resolutions and bitrates, agencies can balance quality and efficiency within the capabilities of existing infrastructure.

“DETAILED SYSTEM LOGGING AND AUDIT FEATURES ARE REQUIRED.”

Clear audio recordings are equally crucial for understanding the context of interactions. Cameras

need to handle a wide dynamic range in audio levels and have an omnidirectional pickup pattern. Digital evidence management systems (DEMS), like i-PRO's UDE or ClouDE Powered by Genetec, can automatically time-align all video and audio feeds, allowing for muting or isolating audio feeds during evidence review.

Video storage, management and integration

One of the most significant differentiators between body-worn camera systems is how they store, manage and integrate digital evidence. The recordings contain sensitive data, requiring strong privacy and security features to protect the evidence and users of the system. Managing digital evidence is complex and tedious without a DEMS that provides useful tools for organising, classifying, accessing and retaining videos consistently.

Integrating body-worn cameras and DEMS with a Computer-Aided Dispatch (CAD) and Record Management System (RMS) can

automate certain management procedures, reducing risk and resource requirements. CAD integration allows a body-worn camera system to tag video events with useful metadata based on time, date, location and other information, ensuring valuable evidence is properly classified, processed and stored.

Automating body-worn camera recording in response to specific events, such as drawing a weapon, ensures the camera captures crucial moments without requiring the officer to activate it manually. Officers must remain focused entirely on protecting the public interest and themselves during such an event. Automating Bluetooth triggering of the body-worn cameras from the holster is a reliable way to ensure the camera is recording when a weapon is drawn.

Detailed system logging and audit features are required to establish a clear chain of custody for sensitive recordings, support the judicial process and enforce policies. Video and audio data must be encrypted at rest and in motion using FIPS-and-CJIS-compliant methods.

When evaluating body-worn camera systems, clear differentiators separate the many available options. Referring to these categories helps define what is essential, ensuring everyone benefits from the protection and accountability this powerful technology provides. ■

