

Why Every Public Safety Operation Needs IP-Video

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Introduction

In the high-stakes world of public safety, every second is crucial. The difference between life and death often hangs on the ability of professionals to make split-second, well-informed decisions, so agencies need every tool at their disposal to respond effectively to emergencies.

Video footage has long been a crucial asset in public safety operations but maintaining reliable connectivity across challenging environments and fluid situations in real-time, with low latency, has posed significant challenges. To properly address their work's complex and demanding nature, teams across law enforcement, fire departments, homeland security, and border protection require dependable video solutions that can deliver reliable visual intelligence, swiftly establishing a common operational picture (COP) and meeting the exacting requirements needed for Intelligence, Surveillance, and Reconnaissance (ISR) operations. These advanced Situational Awareness deployments allow Public Safety professionals to make timely, well-informed decisions helping them increase mission performance and safety, while improving outcomes.

This is where IP-video comes in.



The Flexibility, Scalability, and Reliability of IP-Video

By harnessing the power and scale of internet connectivity and combining it with LiveU's cutting-edge technology, video-over-bonded-IP technology revolutionizes the way surveillance and overwatch footage is viewed and shared. The technology offers significant benefits for real-time crime centers, dispatch centers, and field agents due to its resilience and easy-to-use design.

In a typical command center, a multitude of monitors display feeds from numerous cameras installed in public spaces like street corners and parks. Reach and coverage can be exponentially increased if closed circuit camera systems can also be accessed in a remote and secure manner, however this is not what CCTV is designed for. Closed means closed.

IP-video technology breaks through these barriers, enabling the bidirectional sharing of video footage between camera sources and field personnel. Agents on the ground can access real-time feeds from drones, surveillance systems, and mobile devices, while command centers can receive live updates from the field and easily include CCTV feeds into the picture. This enhances collaboration and informed decision-making in real time.

Moreover, LiveU's IP-video is designed to work over various available connectivity options such as cellular, Ethernet, Low Earth Orbit Satellite, MESH radio and WiFi, ensuring that teams can respond rapidly and coordinate effectively, regardless of their location or network conditions. Cellular bonding makes this connectivity valuable for public safety agencies, delivering high mobility and availability, plus the reassurance around resiliency and quality that comes from utilizing a number of individual connections and bonding them together to create a stable link. Bringing flexibility, scalability, and reliability, IP bonded video technology helps overcome the limitations of traditional video systems and adapts to the unpredictable challenges faced daily.



How IP-Videos Can be Used for Public Safety Operations

Real-time IP-video stands out as a powerful tool, offering diverse applications for improved operational efficiency.

Situational Awareness



With video-over-bonded-IP, public safety agencies have a reliable toolkit at their disposal to assess and mitigate risks more effectively than ever before. Aviation units like Pegasus Aviación in Spain and Chile, for example, use IP technology and LiveU field units to stream high quality video in real-time from helicopters, giving them a comprehensive view of incidents and terrain.

But the benefits of IP-video extend far beyond aerial surveillance. During large events and protests, IP-video solutions allow for the transmission of multiple video feeds from observation trailers and other units, giving first responders a clearer picture of crowd movements. The superior visual quality offered by IP-video also makes it ideal for AI-powered monitoring and alerting, advanced content analysis, facial recognition, enabling public safety teams to proactively identify potential threats and issues.





Moreover, LiveU's bonded IP solution can be used to transport more than 'just' video. LiDAR, heat mapping, temperature sensors, and robotics remote control command instructions, as well as large data files can also be safely and efficiently transported. With easy integration, often as simple as plugging in an Ethernet or HMDI cable this next-level of interoperability allows for the ability to share the video and data feeds securely and ushers in more effective internal and inter-agency collaboration. As you can see, bonded IP can open up a world of possibilities for in-depth analysis, proving useful for other public service applications such as construction analysis and site safety inspections.

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Field and Intel Gathering

In high-risk instances like SWAT operations, speed and adaptability are paramount. Unmanned Aerial Systems (UAS) or drones equipped with IP-video capabilities can provide command centers with a 360-degree view of the scene, enabling them to make informed decisions quickly.

Law enforcement agencies worldwide, such as the Derbyshire Constabulary, also leverage IP-video technology for evidence gathering, remote surveillance, and tactical operations. In aviation, maritime, and border control, footage from on-board cameras aids in coordinating search and rescue missions and other critical operations.

IP-video is also transformative in emergency scenarios like school safety incidents. In the face of active shooter situations, it allows the quick and secure sharing of live feeds from school camera systems with first responders, enabling more effective response efforts. Drone as First Responder (DFR), a fully automated air support system, utilizes remotely piloted drones to be deployed and flown beyond visual line of sight (BVLOS) to enhance community safety. This program is set to revolutionize innovative, rapid response policing, with its heavily reliance on resilient, reliable and easy to deploy connectivity provided by bonded IP.

Disaster Management and Recovery

When natural disasters strike, access to reliable video streams becomes a lifeline for managing response efforts and coordinating recovery operations. Bonded IP-video technology has proven its mettle even in extreme conditions, such as during hurricane seasons, by providing critical visuals to weather forecasters like The Weather Channel and on-field first responders. This allows them to plan and execute response strategies efficiently.



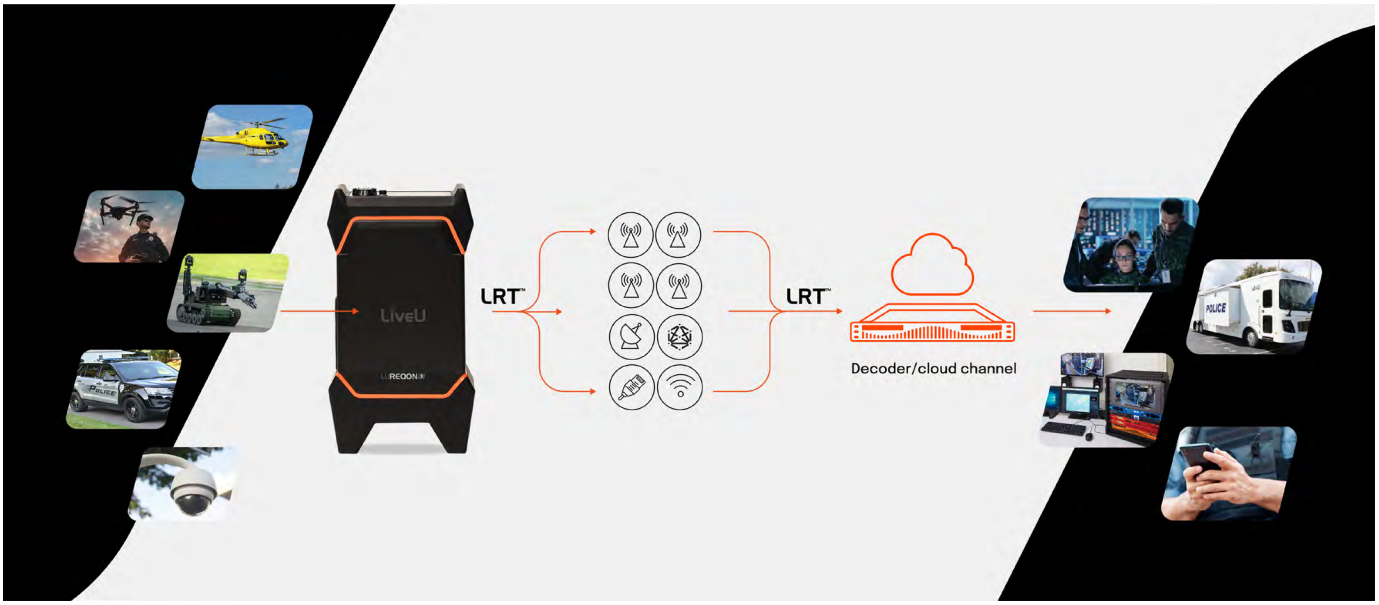


The Los Angeles Fire Department harnessed the power of IP-video while battling the relentless California wildfires, using the technology to keep their emergency operations teams updated in real-time as they worked tirelessly in the impacted areas. Similarly, the Groupe de Secours Catastrophe Français (GSCF) leveraged real-time drone footage to assess disaster scenes and deliver aid where it was needed most.

Why Use LiveU IP-Video Solutions

At the core of LiveU's IP-video solutions lies the **LiveU Reliable Transport™ (LRT)** technology, a powerful IP protocol that guarantees resilient, low-latency, real-time video streaming. This advanced technology allows remote control of all video feeds through a secure unified management platform, enabling real-time, critical operational feeds to reach decision makers anywhere, anytime from everywhere. By bonding multiple connections at the same time, including cellular, WiFi, Ethernet, and satellite from a single field unit, the protocol splits all feeds into several unreadable packages and encodes them before being deployed, which prevents security breaches.

LiveU's solutions ensure resilient and secure connectivity, allowing teams to access critical video feeds wherever they are deployed. LiveU provides the most flexible, holistic and empowering solution, all included within our cutting-edge products. We like to say, we ride on existing networks, converting them into a safe ride for public safety organizations. Hundreds of military and law enforcement operatives worldwide trust the LiveU solution in real-world situations.



LiveU's IP bonding solution

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At LiveU, we understand that many organizations, from police and fire departments to school systems, have already invested in existing video solutions. Our public safety solution includes an encoder and decoder in one solution, so an organization doesn't need to worry about more parts and pieces to communicate with its existing technology infrastructure. Our IP-video solutions are designed with compatibility in mind, integrating seamlessly with various formats and systems such as video management systems (VMS) and drones to ensure teams can easily adopt our technology without disrupting their established processes.



We pride ourselves on being a trusted partner, not just a vendor. We listen to our clients' needs, understand their challenges, and help them maximize the value of their existing assets while identifying areas where our solutions can complement and enhance their capabilities. And with our 24/7 technical support team, clients can count on us to address any concerns and provide assistance whenever they need it.

To learn more about enhancing your public safety operations with the power of IP-video technology, reach out to our team.

www.liveu.com/public-safety

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