



Canadian Armed Forces



National
Defence

VITEC MGW Diamond TOUGH Encoders used in Canadian Armed Forces' Armoured Vehicles

In a recent project, the Canadian Department of National Defence (DND) needed to upgrade its fleet of Land Armored Vehicles (LAVs) with rugged, reliable, and versatile encoders. LAVs are used to transport Canadian infantry on the battlefield while providing defensive protection and firepower.

The encoders are used to encode video captured for situational awareness, patrolling information, and intelligence-gathering missions aboard the state-of-the-art LAVs. Not only did the encoders need to be available commercially off-the-shelf, but they needed the ability to encode video in a format that could be distributed easily on the military IP network with all relevant information.



Winning this DND contract demonstrates VITEC's position as a leading provider of IP video streaming technologies and its successful strategy in designing and delivering high-quality, low-bandwidth tactical video solutions that meet the highly stringent specifications of surveillance and military markets. The Canadian LAV project required a rugged, reliable, and versatile encoder, of which our MGW Diamond TOUGH was the perfect solution. It provides every capability for processing and distributing ISR or situational awareness video generated by military vehicles.

Richard Bernard
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How VITEC's Solution Overcame the Challenges and the results

Following a competitive process, Public Services and Procurement Canada (PSPC) on behalf of the DND, awarded the contract to VITEC. As a worldwide leader in advanced video encoding and streaming solutions, VITEC was able to meet all the requirements of the request for proposal. Through this contract, DND acquired over 1,500 of the company's MGW Diamond TOUGH HEVC and H.264 quad-channel video encoders. Housed in ruggedized enclosures, these military-grade appliances are designed specifically to support intelligence, surveillance, and reconnaissance (ISR) from ground vehicles, manned or unmanned airborne platforms, and marine vessels operating in extreme conditions. Each MGW Diamond TOUGH enables IP video delivery over RF or satellite links from multiple analog and digital sources.

Through the LAV upgrade program, MGW Diamond encoders are installed in the hulls of LAV's, most of which will have an additional unit in their rotating turrets. This meets the DND's requirement for two independent encoders of the same model on the turret-equipped vehicles. Each encoder provides up to four 3G/HD/SD-SDI or composite inputs for video capture and live streaming. In addition to providing H.264 encoding, the MGW Diamond TOUGH offers an option for advanced HEVC compression for streaming HD/SD video (up to 1080p60) with bandwidth savings up to 50 percent compared to current H.264 standards.

Designed to meet the growing demand for real-time imagery in the most demanding environments, the MGW Diamond TOUGH includes extensive capabilities for supplying ISR or situational awareness video generated by military craft and vehicles working in extreme conditions. The MGW Diamond TOUGH is one of the industry's first ruggedized encoders to bring bandwidth-efficient HEVC compression technology into field video streaming applications, and it's one of the newest members of VITEC's family of encoding and decoding appliances, IPTV solutions for desktops and mobile devices, and PCI cards with SDK for integration projects.

