

Assisting law enforcement agencies with their surveillance operations

Law enforcement personnel have the requirement for obtaining real-time, high-definition video in low light conditions during surveillance operations. This results in large volumes of data that often requires secure transmission to remote locations. Therefore, law enforcement personnel require surveillance data to be compressed and encrypted to reduce the wireless transmission costs and ensure data security. An encoder that meets the law enforcement requirements of securely transmitting compressed high definition video and audio streams was not commercially available. Therefore, personnel from Immigration and Customs Enforcement – Homeland Security Investigations (ICE-HSI) brought the requirement for the development of a digital encoder with data compression and encryption capabilities to the First Responders Group for assistance.

Equipment Development Effort

Due to the time required to transmit the data using existing video surveillance technology, law enforcement agencies were experiencing high monthly bills from their wireless providers. This cost was anticipated to greatly increase with the larger data stream generated by HD cameras. To address this requirement, the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) partnered with Digital Barriers, a leading manufacturer of digital encoder equipment. Working closely with S&T, operational personnel from ICE-HSI, and the manufacturer of a low-light, high-definition video camera manufacturer, Digital Barriers developed a new Television Interface (TVI) Encoder to meet the requirements of the law enforcement community.

Benefits of using this technology to law enforcement agencies

TVI combines resilient real-time streaming, low-power requirements, low latency, and inbuilt security features to meet the needs of surveillance operatives. TVI ensures a more efficient representation of detail at lower network bandwidths, particularly where motion levels are high. In addition to the benefits of TVI, the equipment that was developed supports the streaming and archiving of high-definition (HD) video captured from HD-SDI cameras. It

includes a corresponding TVI Decoder that can generate an Open Network Video Interface Forum (ONVIF) compliant IP stream, high-definition serial digital interface (HD-SDI) video out, or high-definition multimedia interface (HDMI) out from a TVI stream. It includes dual microSD cards for local archiving supports dual channel audio to support archiving and streaming of two audio sources.

Commercially Available



The TVI Encoder developed under this project is commercially available from Digital Barriers (<https://www.digitalbarriers.com/tvi-encoders>) as the Model HD-S600.