



BOSCH

Invented for life

Innovation in progress

DriveOhio takes the lead in
intelligent transportation systems

Ohio is home to dozens of public and private entities involved in the design, development, testing, use, and regulation of autonomous and connected technologies. DriveOhio, the state's center for smart mobility, brings these organizations together under one umbrella, serving as the hub for all things autonomous and connected in Ohio. Smart projects driving the state's preparation and leadership for the future of mobility are ongoing across Ohio, and Bosch is a key partner.

I-670 SmartLane

The Ohio Department of Transportation (ODOT) has created the state's first SmartLane, a nine-mile stretch of I-670 between downtown Columbus and the John Glenn Columbus International Airport. Thirty Bosch IP cameras, including DINION IP 7000 fixed cameras and ruggedized MIC IP pan-tilt-zoom cameras with built-in Intelligent Video Analytics detect anomalies on the road, such as stopped or slow vehicles. During peak congestion, traffic monitors can open a SmartLane – the eastbound shoulder – after performing a visual check using the MIC IP cameras to ensure it is free from debris or other hazards.



33 Smart Mobility Corridor

The 33 Smart Mobility Corridor is a 35-mile stretch of U.S. 33 between Dublin and East Liberty through Marysville that will serve as a real-world proving ground for autonomous and connected vehicles. An interchange on the corridor is equipped with Bosch DINION IP 8000 thermal cameras and MIC IP cameras with built-in Video Analytics for automatic incident detection of a queue at the exit ramp, slow or stopped vehicles, objects in the road, or wrong-way drivers. Integration with MH Corbin technology for the highway information

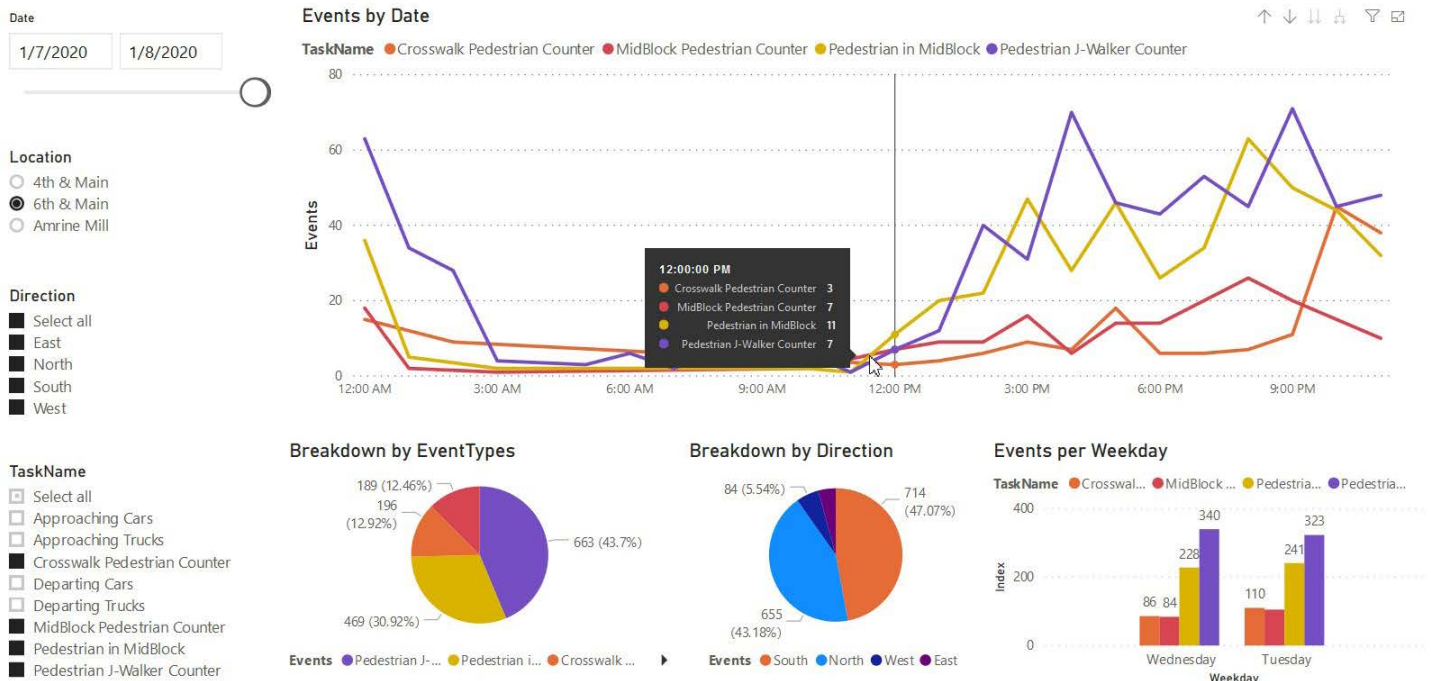
system enables events detected by the cameras to trigger messages about these incidents to be sent automatically to smart vehicles or to dynamic message signs to provide advanced notice to drivers entering the area. Plans include installing more Bosch IP cameras along the Smart Mobility Corridor once additional infrastructure – poles, power, cabling, and roadside units – are in place.

Connected Marysville

At three different intersections in the city of Marysville, DINION IP 8000 thermal cameras with built-in Video Analytics are detecting pedestrians in the road – at both crosswalks and as jaywalkers. Once detected, the cameras trigger MH Corbin technology to send messages to approaching smart vehicles via dedicated short-range communications (DSRC) to improve safety for the pedestrians. At the same time, the cameras transmit real-time GPS coordinate data of classified objects through the MH Corbin Roadside Controller to a live map display in an approaching vehicle's on-board unit, which shows aggregated information on traffic signal state and phase timing alongside vehicle and pedestrian movements in the area. An online dashboard provides DriveOhio staff with graphs depicting the number of cars, trucks, and pedestrians approaching and departing the intersections for easier data analysis.



Marysville Intersection Data





Ohio Department of Transportation Headquarters

At the central office location of the Ohio Department of Transportation in Columbus, 11 Bosch IP cameras with built-in Video Analytics are installed on and around the facility. The Video Analytics are configured for pedestrian detection, speed warnings, and more. Integration with MH Corbin technology triggers messages to smart vehicles driving around the facility. With both thermal and optical cameras installed, DriveOhio is testing the detection performance of the cameras for selecting the best model for future projects throughout the state.

More to come

A team of Ohio industry, academia, and community partners led by the Ohio Department of Transportation's DriveOhio has been awarded a highly competitive federal grant to develop and deploy automated transportation solutions focused on Ohio's rural roads and highways. As a result, the team is launching a four-year initiative to test the safe integration of automated driving systems into the nation's on-road transportation system. Bosch will continue to be an important partner in this exciting initiative.

