

Detroit PD Adopts Dual Sharkee Solution

Case Focus

The Challenge

In early 2015, Detroit PD purchased new equipment for their patrol vehicles. The equipment includes the Motorola XTL 5000 W5 (Radio), Sierra wireless GX440 (Router/Modem) and the Data911 computer system. The Motorola XTL operates at 700/800 MHz, which would normally require an NMO mount with a ¼ wave antenna. The Sierra Wireless GX440 requires cellular diversity, one WiFi and GPS antenna(s). To ensure the best performance and have the GX440 operate to its full capability, you would normally use four antennas. The Data911 computer equipment needs MIMO WiFi, one cellular and GPS antenna(s). The Data911 computer equipment needs four antennas total. As you can imagine, space and separation of the antennas would become an issue with a total of nine antennas per vehicle. The installation specialist at Canfield Equipment Service, Inc. would then need to drill nine separate holes in the vehicle, which not only degrades the resale value of the vehicle, but ends up costing not only time but money as well. Detroit PD then had the task of sourcing the antennas and dealing with lead times.



The Client

Detroit Police Department covers twelve precincts across Detroit and was the first police department in the country to utilize radio dispatch in their cars. Now looking to their current generation of police vehicles, the department has faced fresh challenges in fitting out their cars with an ever-expanding shopping list of technology that depends on wireless technology. In addition, as with all police departments, the resell value of their vehicles is an important factor in the upfitting process, so keeping vehicles free of unnecessary holes remains a priority.



In all Panorama Antennas replaced nine antennas with a dual Sharkee® setup



The Antenna GPSB Sharkee®

Developed specifically to meet the need for an ever-increasing amount of wireless equipment inside vehicles, the GPSB Sharkee® antenna accommodates multiple devices by incorporating the functions of wideband cellular, WLAN and GPS into an automotive shark fin style housing, as well as a stud mount to fit a wide variety of removable two way radio whips. This solution offers the key benefits of a reduced number of vehicle antennas, reduced installation time and cost, and can increase the vehicle's residual value - all while maintaining a discreet profile. Sold worldwide to public safety, transportation and utility industries for P25 applications and more, the GPSB Sharkee® is a mobile antenna that is revolutionizing the industry.

Element 1	1575 MHz
Element 2	698-960 MHz, 1710-2170 MHz, 2500-2700 MHz
Element 3	2200-2700 MHz & 4900-6000 MHz
Element 4	Dependent on selected whip

The Solution

Canfield Equipment Services, Inc. and Panorama Antennas, Inc. worked together to build a totally custom solution using the GPSB Sharkee® all-in-one antenna. We built the first evaluation Sharkee® kit, shipped the same day and started the testing process. In all Panorama Antennas replaced nine antennas with a dual Sharkee® setup.

The first Sharkee® connects to the Motorola XTL 5000 W5 and the Sierra Wireless GX440. We had to use our internal on-glass cellular antenna for the GX440's diversity. The second Sharkee® runs the complete Data911 system.

By installing Panorama Antennas, Inc. dual Sharkee® kit, the end user, Detroit PD, has a more visually appealing patrol vehicle, without sacrificing performance. On the contrary, the police officers report better performance. Canfield Equipment Services, Inc. not only has the luxury of phenomenal customer service and technical support from Panorama Antennas. But, by using the Sharkee® they report a substantial drop in install time.

