MANDLI COMMUNICATIONS

TELEDYNE OPTECH

MAVERICK

PORTABLE • POWERFUL

Maverick provides a robust, multi-functional dataset that can be utilized for a wide range of applications. Maverick has collected data in the transportation, safety, construction, asset management, rail, utilities, and 3D modeling industries.

PORTABLE

- Weighs less than 20 pounds
- Easily installed and removed by a single individual
- Mounts on a variety of platforms, including vehicles, ATVs/ UTVs, Segways, trains, and backpacks
- Case meets checked baggage weight requirements for airline travel
- Hard-shell carrier case allows for cost-effective shipping anywhere for project work
- Easy to operate user-interface
- Portable Plug and Play system operates in a wide range of conditions and can be utilized for projects of any scope

POWERFUL

- High-resolution 360° imaging
- High-definition LiDAR
- Integrated position and orientation system
- Collects up to 700,000 data points per second
- Captures high-resolution images using six 5-MP sensors
- Comes packaged with real-time data display and feedback, along with Distillery software to provide imaging, LiDAR, and GPS post-processing
- Data collection interface can be controlled by any device with a WiFi connection, no expensive technology required

SPECS:

CAMERAS

Ladybug5 spherical imaging system captures high-resolution images using six high quality 5-MP sensors for a 90% of full sphere field-of-view.

LIDAR

Velodyne HDL-32 LiDAR sensors collect high-definition, 3D representations of the surrounding environment in a 360° field-of-view.

WIRELESS CONTROL

Maverick is controlled wirelessly through WiFi connection. The Maverick data collection interface can be accessed by any device with a WiFi connection.

EASY MOUNTING

Maverick can be easily mounted on a wide range of vehicles, and can be both installed and removed by a single individual.

GPS

NovAtel SPAN-IGM-S1 Global Positioning System provides accurate location information.

PORTABILITY

Maverick weighs under 20 lbs. and is 13.60" × 8.50" × 14.28", making it ideal for transportation.

HARD DRIVES

Removable hard drives store the collected data in a compact format.

CASE STUDY EAU CLAIRE COUNTY, WISCONSIN

BACKGROUND

Eau Claire County manages assets for approximately 450 miles of county highway. Their prior method of data collection was sending interns out into the field to collect information via windshield survey and geolocators. This method provided limited functionality and produced data that could not be reprocessed or checked for quality and accuracy.

MAVERICK SOLUTION

The Mandli solution to this problem was providing Eau Claire County with about 450 driving miles, and collecting 10 unique assets. To ensure we provided a cost-effective solution, we used the portable Maverick technology for 3D imaging and LiDAR collection. All data was collected at once and the whole County was collected in less than a week. This provided the county with a full baseline instead of giving them small pieces of data over several years.

RESULTS

Mandli delivered pictures along with a full point cloud to Eau Claire County. This gave the County engineers the ability to verify the data accuracy and actually go into the data and drive the routes from their computer anytime they wanted, without having to leave the office. The data is now verified as accurate and repeatable, and personnel across multiple departments have strong confidence in using the data.

CASE STUDY SAN DIEGO MTS

BACKGROUND

San Diego Metropolitan Transit System (MTS) serves approximately 3 million people across San Diego County and manages 106 miles of track and almost 100 bus routes. To better understand their routes, they planned to collect information for all of the rail and bus routes in their county. The biggest challenge for MTS was getting a mapping unit onto the rail line without affecting travel time for any passengers.

MAVERICK SOLUTION

Mandli's solution was to use our portable Maverick for 3D imaging and LiDAR collection. Maverick allows measurements of objects with +/- 2 cm relative accuracy and is capable of recording objects within a 300-foot range. When deploying the Maverick, Mandli developed a prototype suction cup mount designed to attach to the windshield of any commuter train. This removed a key hurdle and provided a way to collect and map information with no traffic interruption or service delays.

RESULTS

Mandli collected all of the data along the 106 miles of track in less than a day. As part of the solution, San Diego MTS now has the ability to inspect and monitor track conditions from the safety of their offices and receive accurate GIS inventory of all trackside assets, all without disrupting service.

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MOBILE LIDAR • 3D PAVEMENT • GEOSPATIAL DATA